

3.7 HAZARDS AND HAZARDOUS MATERIALS

This section discusses the potential presence of hazardous materials and conditions within the Project Area and analyzes the potential risk of these conditions to existing and proposed receptors. The analysis is based primarily on a screening-level environmental assessment, which included site visits by BSK Associates (BSK) technical staff, review of aerial photographs and topographic maps and relevant environmental documents, and review of regulatory agency databases and web sites.

Thresholds for measuring a project's environmental impacts in this PEIR are drawn from California Environmental Quality Act (CEQA) Guidelines Appendix G (OPR, 2013). The following Appendix G impact topics are not addressed in this PEIR because the Project has no potential to affect them:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25-mile of an existing or proposed school.
- Be located within an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area.
- Be located within the vicinity of a private airstrip, and result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

3.7.1 Setting

Environmental Setting

Project Area Conditions

A screening environmental assessment was conducted to evaluate conditions in the Project Area and adjacent properties that could represent a potential public health and safety hazard (BSK, 2014) (see **Appendix G** of this EIR). The focus of the screening environmental assessment was to determine the presence or likely presence of any current conditions that indicate an existing release, a past release, or a material threat of a release of hazardous substances and/or petroleum products into the ground, groundwater, or surface water.

The Project Area was assessed for material evidence of current and/or past use or storage of toxic or hazardous materials; including visible on-site ponds, landfills, or other disposal units; above ground or underground storage tanks (USTs) or other chemical storage containers; electrical transformers containing polychlorinated biphenyls (PCBs); and, where field review occurred, visible soil discoloration. Surrounding properties were screened to evaluate any potential impacts to the Project Area or associated site restoration activities from a known or an indicated release of hazardous substance or petroleum products. Non-point sources were not considered in the evaluation, because the primary objective of the assessment was to identify potential point source release of hazardous substances or petroleum products, and no indication of non-point source releases was identified in the initial review of State and federal documentation. As described below, based on the results of the screening environmental assessment, no known hazardous materials or a history of hazardous material usage or contamination within the Project Area were identified (BSK, 2014). Documented hazardous material sites in the Project Vicinity are described below in the Environmental Setting.

Materials Storage

During the assessment no evidence of hazardous materials storage was identified within the Project Area including:

- Underground Storage Tanks (USTs).
- Aboveground Storage Tanks (ASTs).
- Potential Polychlorinated Biphenyl (PCB)-containing equipment.

Pits, Ponds, and Lagoons

No readily identifiable hazardous storage pits, ponds, or lagoons associated with were noted during the Project Area reconnaissance, and no evidence was seen in historical photographs or topographic maps of the Project Area obtained through Environmental Data Resources, Inc. (EDR).

Other Physical Evidence of Contamination

Rural farms may contain underground fuel tanks associated with fueling farm vehicles and above ground tanks for storing agricultural products including pesticides and herbicides. Project Area reconnaissance identified a few locations that were visible features on the banks above, but well outside, the Project Area that may be storage tanks for agricultural refueling or chemical storage (BSK, 2014, pp. 3-4).

Agency Record Review

BSK reviewed the following regulatory agencies websites to obtain reasonably ascertainable and practically reviewable documentation regarding environmental conditions present in the site area and nearby properties (BSK, 2014, p. 2).

Databases reviewed include:

- State Water Resources Control Board (SWRCB), GeoTracker Website
- Department of Toxic Substances Control (DTSC), EnviroStor Website and Record Search

These databases did not list any locations in the Project Area subject to past or present environmental remediation related to hazards or hazardous substances. The databases identified several off-site properties outside of the Project Area as former Leaking Underground Storage Site (LUST) Cleanup Sites. All are located north of the Winters Putah Creek Nature Park Reach:

- Lowrie Truck: 9 Main Street E, Winters CA. approximately 700 feet north of the Project Area
- Barbos'a Auto Center, 400 Railroad Ave, Winters California, approximately 715 feet north of the Project Area
- Winters Fire Department 10 Abbey Street, Winters , approximately 725 feet north of the Project Area

All three sites underwent remediation and were issued no further action (NFA) letters, indicating that clean-up actions were complete (BSK, 2014, pp. 2-3).

The Laboratory for Energy-Related Health Research (LEHR) site is located on Old Davis Road, Davis, approximately 355 feet north of the Project Area on approximately 15 acres. The LEHR site is northeast of the eastern edge of the Interstate 80 (I-80) to Old Davis Road reach and directly north of the western end of the Old Davis Road to Mace reach. The LEHR site was placed on the federal Superfund list in May 1994. The University of California at Davis (UCD) disposed of University wastes in separate landfills and trenches from 1940s through the mid-1960s. For approximately 35 years, Department of Energy (DOE) conducted radiological studies on laboratory animals. Laboratory and animal wastes generated by those experiments were disposed of in trenches, pits, and septic systems. Initial remedial actions to address the contamination included the removal of "bioparts," waste sludge and other radioactive materials and

containers. Approximately 8,500 cubic yards of contaminated soil and debris were removed by 2008. The DOE and UCD have entered into agreements with State and federal environmental agencies (DTSC, RWQCB, and U.S. Environmental Protection Agency [US EPA]) to address the contamination (BSK, 2014, pp. 3-4). The US EPA has determined that the LEHR site does not pose an immediate risk to people or the environment (US EPA, 2015).

Other Environmental Hazards

Pipelines and Pipes

For discussion and analysis of potential Project impacts related to pipelines, see Section 3.14, *Utilities*.

Impacts on an Emergency Response Plan or Emergency Evacuation Plan

For discussion and analysis of potential Project impacts on emergency access, see Section 3.12, *Transportation/Traffic*.

Hazards from Mosquitos

Mosquitos breed in ponds, wet meadows, and slow-moving creeks and ditches where ponding occurs due to obstructions, overflow of banks, excessive siltation and back-eddies created from low water flow during the dry months. Mosquitos have been linked to both wildlife and human health risks associated with West Nile virus. Consequently modification of drainage ways (digging, and filling, etc.) is often necessary to allow free flow of water (Sacramento-Yolo Mosquito and Vector Control District – Mosquito Reduction Best Management Practices, 2008, p. 16).

Illicit Methamphetamine Production

Methamphetamine labs are dangerous sources of toxic chemicals in the State of California. These chemicals are typically flammable and explosive (Office of the Attorney General, 2014, p. 16). Furthermore, these chemicals have long-lasting effects within the facilities where they are created. There have been documented reports of methamphetamine production in both Yolo and Solano Counties. The closest documented occurrence to the Project Area occurred in Winters in 2001 (DTSC, 2011, p. 496).

Illicit Marijuana Cultivation

Illegal marijuana cultivation occurs throughout California and has been documented along Putah Creek near Winters. In 2013, Department of Fish and Wildlife officials

discovered an illegal marijuana cultivation consisting of 2,658 plants hidden in dense foliage near the banks of Putah Creek. Newspaper accounts of the event state only that the cultivation area was “west of Winters” and “near the banks of the creek,” and so it is unclear whether the cultivation area was within the Project Area (Woodland Daily Democrat, 2013; Davis Enterprise, 2013). Marijuana cultivation requires a variety of measures to maintain and preserve the plants. This creates the potential for growers to use harmful pesticides, rodenticides, and fertilizers (Office of the Attorney General, 2014, p. 12). Improperly disposed chemicals are deposited in the area with the potential to enter rivers or forms of drinking water. For example, in the Putah Creek cultivation incident described above, law enforcement authorities discovered at the site an illegal pesticide, “Furnan” (Carbofuran) (Woodland Daily Democrat, 2013).

Project Area Conditions by Reach

NAWCA/Mariani, Duncan-Giovannoni

No hazards or hazardous materials sites have been identified within or in the vicinity of these reaches.

Winters Putah Creek Nature Park

As discussed above, SWRCB and DTSC databases identify three off-site properties north of the Project Area in this reach as former LUST cleanup sites. All three sites underwent remediation and were issued no further action (NFA) letters, indicating that clean-up actions were complete (BSK, 2014, pp. 2-3).

East of 505, Warren, Upper McNamara, Lower McNamara, MacQuiddly (Lester), Russell Ranch, Stevenson Bridge, Glide Ranch, Nishikawa, Olmo-Hammond-UCD

No hazards or hazardous materials sites have been identified within or in the vicinity of these reaches.

I-80 to Old Davis Road, Old Davis Road to Mace

Both of these reaches are in the vicinity of the former Laboratory of Energy-related Health Research (LEHR) (UC Davis, 1995, p. 48, Figure 2). The LEHR site is northeast of the eastern edge of the I-80 to Old Davis Road reach and directly north of the western end of the Old Davis Road to Mace reach. As discussed above, UCD and DOE disposed of laboratory and animal wastes, including from radiological studies, in trenches, pits, and septic systems. DOE and UCD have entered into agreements with State and federal environmental agencies (DTSC, RWQCB, and US EPA) and remediation of the site is

ongoing (BSK, 2014, pp. 3-4). The US EPA has determined that the LEHR site does not pose an immediate risk to people or the environment (US EPA, 2015).

Mace to Road 106A, Road 106A to Yolo Bypass Wildlife Area

No hazards or hazardous materials sites have been identified within or in the vicinity of these reaches.

Regulatory Setting

Definition of Hazardous Materials

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, State, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in the California Health and Safety Code and Title 22 of the California Code of Regulations (CCR) as:

(A)ny 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 that 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 (Health and Safety Code section 25501, subdivision (p) cited in 22 CCR Section 66260.10, “Hazardous Material”).

Chemical and physical properties cause a substance to be considered hazardous, including the properties of toxicity, ignitability, corrosivity, and reactivity. These terms are defined in the CCR, Title 22, Sections 66261.20-66261.24.

Federal Regulations

U.S. Environmental Protection Agency

The US EPA is responsible for researching and setting national standards for a variety of environmental programs and in certain cases, it delegates responsibility to states and tribes for issuing permits and monitoring and enforcing compliance.

Historically, US EPA the principal agency at the federal level enforcing standards for the generation, transport, and disposal of hazardous waste, acting under the authority of

the Resource Conservation and Recovery Act (RCRA). As of August 1, 1992, however, the US EPA authorized the DTSC to implement the State's hazardous waste management program for the US EPA. The US EPA continues to enforce regulation of hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Comprehensive Environmental Response, Compensation, and Liability Act

CERCLA, commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified.

The law authorizes two kinds of response actions: short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response, and long-term remedial response actions. Long-term remedial response actions permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening. These actions can be conducted only at sites listed on US EPA's National Priorities List (NPL).

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), 42 U.S.C Sections 6901 et seq. (1976), gave US EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste, as well a framework for the management of specific non-hazardous wastes.

The 1986 amendments to RCRA enabled US EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. RCRA focuses only on active and future facilities and does not address abandoned or historical sites (see CERCLA).

The Federal Hazardous and Solid Waste Amendments (HSWA) are 1984 amendments to RCRA that required phasing out land disposal of hazardous waste. Some of the other

mandates of this law include increased US EPA enforcement authority, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.

Federal Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) authorizes the US EPA to secure information on all new and existing chemical substances and to control any of these substances determined to cause an unreasonable risk to public health or the environment. TSCA also includes requirements for the storage, use, and disposal of polychlorinated biphenyl (PCB)-containing materials.

Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), United States Code sections 136 et seq., provides federal control of pesticide distribution, sale, and use. US EPA was given authority under FIFRA not only to study the consequences of pesticide usage but also to require users (farmers, utility companies, and others) to register when purchasing pesticides. Through later amendments to the law, users also must take exams for certification as applicators of pesticides. All pesticides used in the U.S. must be registered (licensed) by the US EPA. Registration assures that pesticides will be properly labeled and will not cause unreasonable harm to the environment if used in accordance with specifications.

State Regulations

The California Environmental Protection Agency (Cal/EPA) and the SWRCB establish rules governing the use of hazardous materials and the management of hazardous waste. Within Cal/EPA, the DTSC has primary regulatory responsibility for the management of hazardous materials and the generation, transport, and disposal of hazardous waste. DTSC also delegates enforcement to local jurisdictions that enter into agreements with the agency.

California Health and Safety Code

Hazardous materials release response plans and inventory requirements are set forth in Chapter 6.95 of Division 20 of the California Health and Safety Code (Section 25500 et seq.). Response plans and inventories are implemented by local governments. In Solano County, this function is performed by the Solano County Department of Resource Management, Environmental Health Services Division (County of Solano, 2015a). In Yolo County, the Yolo County Environmental Health Services Division implements response plans and inventories (County of Yolo, 2015).

California Water Code

California Water Code section 231 requires the California Department of Water Resources (DWR) to develop well standards to protect California's groundwater quality. DWR published two bulletins that encompass the complete minimum requirements for constructing, altering, maintaining, and destroying water wells, monitoring wells, and cathodic protection wells. The standards in DWR Bulletin 74-81 (December 1981) and DWR Bulletin 74-90 (June 1991 supplement to 74-81) apply to all water well drillers in California and the local agencies that oversee them.

Hazardous Waste Control Laws

The California Hazardous Waste Control Law (HWCL) is the State's equivalent to RCRA and closely parallels RCRA by regulating the generation, storage, transportation, treatment, and disposal of hazardous waste in the State. The primary authority for enforcement of HWCL and RCRA lies with the DTSC, which has been authorized by the US EPA to administer all regulations issued under both statutes.

Government Code Section 65962.5 ("Cortese List" Statute)

Government Code section 65962.5 was originally enacted in 1985 and provides for identification of hazardous waste facilities and land designated as hazardous waste property. The list, or a site's presence on the list, affects the local permitting process as well as compliance with CEQA. While Government Code Section 65962.5 makes reference to the preparation of a "list," technology has changed since the law's enactment, and this information is now largely available on the Internet sites of the responsible State agencies. Parties requesting a copy of the Cortese "list" are now referred directly to the appropriate Internet web sites of the boards or departments that are referenced in the statute (Cal/EPA, 2007).

Regional Regulations

Yolo –Solano Air Quality Management District (YSAQMD)

The Yolo-Solano Air Quality Management District protects human health and property from air pollution and was established in 1971 by a joint powers agreement between the Yolo and Solano County Boards of Supervisors. The District's jurisdiction extends over all of Yolo County and the northeast portion of Solano County, from Vacaville on the west, to Rio Vista on the south (YSAQMD, 2015). Under District Rule 4002, the YSAQMD adopted regulations and policies implementing asbestos demolition and renovation requirements developed by the US EPA, known as the National Emission Standards for Hazardous Air Pollutants (NESHAP). NESHAP requires that a thorough

inspection for asbestos-containing material be conducted before any regulated facility is demolished or renovated (CARB, 2013).

Mosquito Vector Control Districts

The two Mosquito Vector Control Districts that have jurisdiction over the Project Area include the Sacramento-Yolo Mosquito and Vector Control District (SYMVCD) and the Solano County Mosquito Abatement District (SCMAD). These agencies create and implement policies and strategies to control and prevent mosquitos in their respective jurisdictions.

SCMAD requires that construction of new ditches must be undertaken to maintain adequate circulation of water (Solano County Mosquito Abatement District- Mosquito Prevention Criteria 2015a). SYMVCD established the following Best Management Practices (BMPs) to promote mosquito reduction:

1. Prevent or eliminate unnecessary standing water that stands for more than 72-96 hours during mosquito season which can start as early as March and extend through October depending on weather.
2. Maintain access for District staff to monitor and treat mosquito breeding sources.
3. Minimize emergent vegetation and surface debris on the water.
4. Contact the District for technical guidance or assistance in implementing mosquito reduction BMPs.

(SYMVCD, 2008, p. 16)

Additionally, the California Department of Public Health (CDPH) and the Mosquito and Vector Control Association of California have developed recommended BMPs that may be voluntarily adopted by property owners and managers to manage this naturally occurring risk (CDPH, 2012, pp. iv, 4-6, 14-17).

Local Regulations

County Environmental Health Services Departments

The Solano County Department of Resource Management, Environmental Health Services Division is the Certified Unified Program Agency (CUPA) for all cities and unincorporated areas within Solano County (County of Solano, 2015a). The corresponding Yolo County entity is Yolo County Environmental Health County (County of Yolo, 2015).

These agencies conduct site inspections of all hazardous materials programs (e.g., aboveground and underground tanks, hazardous waste treatment, hazardous waste generators, hazardous materials management plans, etc.). They also provide emergency response to chemical events to furnish substance identification; health and environmental risk assessment; air, soil, water, and waste sample collection; incident mitigation and cleanup feasibility options; and on-scene coordination for State Superfund incidents. The agencies provide the oversight, investigation, and remediation of unauthorized releases from underground tanks.

Solano County General Plan

The following the Solano County General Plan policies relate to hazardous materials and the proposed Project (County of Solano, 2008, pp. HS-51 to HS-52):

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

Policy HS.P-27: Work to reduce the health risks associated with naturally occurring hazardous materials such as radon, asbestos, or mercury.

Policy HS.P-28: Encourage the use of programs and products by businesses that will result in a reduction of hazardous waste and materials.

Policy HS.P-29: Promote hazardous waste management strategies in this order of priority: source reduction, recycling and reuse, on-site treatment, off-site treatment, and residuals disposal.

Yolo County General Plan

The following the Yolo County General Plan policies relate to hazardous materials and the proposed Project (County of Yolo, 2009):

Policy HS-4.1 Minimize exposure to the harmful effects of hazardous materials and waste.

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

Solano County Code

The following section from the Solano County Code is relevant to hazardous materials and the proposed Project (County of Solano, 2015b):

Except as provided in Chapter 2.2, any use of land or buildings must meet the applicable performance standards listed below:

All uses are prohibited from discharging liquid, solid, toxic, or hazardous wastes onto or into the ground and into streams, lakes, or rivers except as allowed by applicable local, State and federal laws and regulations.

The handling and storage of hazardous materials, the discharge of hazardous materials into the air and water, and the disposal of hazardous waste in connection with all uses shall be in conformance with all applicable local, State, and federal regulations.

3.7.2 Significance Criteria

The following thresholds for measuring a project's environmental impacts are based on CEQA Guidelines Appendix G standards of significance (OPR, 2013). For the purposes of this PEIR, impacts are considered significant if any of the following could result from implementation of the proposed Project:

1. 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.
2. Be located on a site that 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.
3. 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 where residences are intermixed with wildlands.

3.7.3 Impacts and Mitigation Measures

Impacts and mitigation measures are described below both generally and by reach. Applicable impacts and mitigation measures for each reach are summarized in **Table 3.7-1**, at the end of this section.

General Impacts and Mitigation Measures

Impact 3.7-1: Hazards from Existing Contaminated Sites.

The Project Area is not included on a list of hazardous materials sites pursuant to Government Code section 65962.5 (Cortese List) and a screening level environmental hazard assessment did not identify any on-site hazards or hazardous substances. Three former LUST Cleanup Sites are located near the Project Area, but all three sites underwent remediation and were issued no further action (NFA) letters, indicating that clean-up actions are complete (BSK, 2014, pp. 2-3). The LEHR Superfund site is located near the Project Area. The responsible parties for this site, DOE and UCD, have entered into agreements with State and federal environmental agencies and remediation of the site is ongoing (BSK, 2014, pp. 3-4). The US EPA has determined that the LEHR site does not pose an immediate risk to people or the environment (US EPA, 2015). Project activities would have no effect on these off-site areas and would not increase potential environmental hazards potentially associated with these sites.

If soil or groundwater contamination were encountered in the Project Area during the course of construction, project workers could be affected, and, if contaminated soil were placed in the streambed, water quality impacts may occur. This potentially significant impact would be mitigated to a **less-than-significant** level through implementation of the following mitigation measure.

Mitigation 3.7-1: Procedures if Hazardous Materials Discovered.

If evidence of hazardous materials is discovered during Project activities, the Applicant shall notify the appropriate County Environmental Health Services. The Applicant shall test and analyze the materials following proper protocols to determine the presence of hazardous substances prior to making arrangements for off-site reuse/recycling or disposal. Testing shall be performed according to one of the following methods:

1. The method recommended by the County Environmental Health Services in the county in which the materials are located.
2. If the County Environmental Health Services does not specify a method, then the potentially hazardous material shall be tested as follows:
 - a. Conduct representative sampling of the material in accordance with procedures specified in Section One of “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” SW-846, 3rd Edition, US EPA (US EPA, 2014; US EPA, 2013).

- b. Arrange for testing of the material by a laboratory following the analytical procedures outlined in CCR Title 22, Division 4.5. The laboratory performing the testing shall be certified to perform the specific waste analysis by the State of California Department of Environmental Health.
 - c. Deliver samples to the testing laboratory with a "Chain of Custody" type document which indicates the sample type, date and time sample was taken, sample size, source of the waste, quantity of the waste, the type of sample container, place and address of collection, and the name and signature of collector.
3. If testing indicates the presence of contamination, then the contaminated materials shall be excavated and disposed of in a permitted off-site disposal facility prior to completion of construction.

Impact 3.7-2: Contamination from Construction Equipment.

The use of construction vehicles and equipment, such as trucks and excavators, could result in minor contamination releases from gasoline, oil, antifreeze, grease, or other equipment fluid drips or leaks within the Project Area. Implementation of Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential Project impacts related to hazardous materials release to **less than significant**.

Impact 3.7-3: Hazards from Misapplication of Herbicides

As is analyzed in Section 3.2, *Water Quality*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential human health impacts. However, as detailed in Impact 3.2-4, proper application of the limited quantities of these herbicides as proposed by the Project would result in less-than-significant human health risks. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Impact 3.7-4: Fire Hazards.

Proposed Project construction and maintenance activities would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. In the long term, reduction of invasive riparian vegetation (such as Arundo and tamarisk) along the creek channel would reduce the risk of fire. Nonetheless, because construction and maintenance activities would be conducted using power equipment and vehicles, a potential exists for an accidental ignition of a wildland fire. Implementation of Mitigation Measure 3.7-2 would reduce this impact to **less than significant** by requiring

on-site fire suppression equipment and spark arrestors on all equipment with internal combustion engines and restricting activities on high fire danger days.

Mitigation Measure 3.7-2: Fire Prevention Measures.

1. All earthmoving and portable equipment with internal combustion engines shall be equipped with spark arrestors.
2. Work crews shall have appropriate fire suppression equipment available at the work site.
3. On days when the fire danger is high and a burn permit is required (as issued by the Yolo-Solano Air Quality Management District), flammable materials, including flammable vegetation slash, shall be kept at least 10 feet away from any equipment that could produce a spark, fire, or flame.

Site-Specific Impacts and Mitigation Measures

NAWCA/Mariani

Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impact 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

*Duncan-Giovannoni*Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impact 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

Winters Putah Creek Nature Park

Because restoration activities have already been completed for this reach, proposed Project activities would only involve maintenance. Thus, there is **no impact** in this reach related to hazardous materials being discovered in this reach during the course of construction. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

*East of 505*Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the

course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impacts 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

Warren

Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impacts 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

Upper McNamara

Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impacts 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

Lower McNamara

Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impacts 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

MacQuiddy (Lester)

Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impacts 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

Russell Ranch

Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impacts 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

Stevenson Bridge

Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impacts 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

Glide Ranch

Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure

3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impacts 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

Nishikawa

Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impacts 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

*Olmo-Hammond-UCD*Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impacts 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

*I-80 to Old Davis Road*Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impacts 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

Old Davis Road to Mace

Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impacts 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

Mace to Road 106A

Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impact 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

Road 106A to Yolo Bypass Wildlife Area

Hazardous Materials

No hazards or hazardous materials sites have been identified within or in the vicinity of this reach. However, if hazardous materials were discovered in this reach during the course of construction, a potentially significant impact could arise. This impact would be mitigated to a **less-than-significant** level through implementation of Mitigation Measure 3.7-1. Mitigation Measure 3.2-2 (Section 3.2, *Water Quality*) would reduce potential risks related to construction vehicle and equipment fluid drips, spills, or leaks to a **less-than-significant** level.

As is analyzed in Section 3.4, *Biological Resources*, misapplication of herbicides during activities to reduce invasive species and weeds could result in potential environmental impact. Implementation of Mitigation Measure 3.4-12 would reduce this potential impact to **less than significant**.

Fire Hazard

There are no additional potential impacts of proposed Project activities in this reach besides those analyzed in Impacts 3.7-4 above. Implementation of Mitigation Measure 3.7-2 would reduce this potential impact to **less than significant**.

Table 3.7-1 Summary of Hazard Impacts and Mitigation Measures

Site	Impact 3.7-1 Hazardous Materials	Impact 3.7-2 Construction Equipment	Impact 3.7-3 Herbicides Hazards	Impact 3.7-3 Fire Hazards	Applicable Mitigation Measures
NAWCA/Mariani	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
Duncan-Giovannoni	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
Winters Putah Creek Nature Park	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
East of 505	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
Warren	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
Upper McNamara	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
Lower McNamara	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
MacQuiddy (Lester)	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
Russell Ranch	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
Stevenson Bridge	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
Glide Ranch	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
Nishikawa	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
Olmo-Hammond- UCD	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
I-80 to Old Davis Road	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
Old Davis Road to Mace	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
Mace to Road 106A	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2
Road 106A to YBWA	SM	SM	SM	SM	MM 3.2-2, 3.4-12, 3.7-1, 3.7-2

NI = no impact, LS = LTS = Less than Significant Impact, SM = Significant but mitigatable to less than significant with measures identified in this section, and SU = Significant and Unavoidable, even after mitigation.

