# Routine Maintenance of Stream Channels

# California Environmental Quality Act Initial Study And Mitigated Negative Declaration

## January 13, 2016

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**Department of Utilities**
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# Routine Maintenance of Stream Channels

# CEQA Initial Study & Mitigated Negative Declaration

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# Limitations

Services provided by Blankinship & Associates, Inc. related to the Initial Study and Mitigated Negative Declaration the City of Sacramento, Department of Utilities' routine maintenance of stream of channels subject to jurisdiction by the California Department of Fish and Wildlife under Fish and Game Code (FGC) section 1602 and related documents were prepared consistent with the level of care and skill ordinarily exercised by other professionals under similar circumstances at the same time the services were performed under the terms of agreement with the City of Sacramento, Department of Utilities, Contract No. 2014-0035. No warranty, guarantee or certification, express or implied, is included.

# 1 EXECUTIVE SUMMARY

Under the California Environmental Quality Act, the lead agency for this Project (The City of Sacramento Department of Utilities) has prepared a Mitigated Negative Declaration, along with an Initial Study for the Routine Maintenance of Stream Channels (Project). The purpose of this document is to investigate potential impacts the Project may have on the environment. Impacts of the Project may be classified as: Potentially Significant Impact, Less Than Significant with Mitigation Incorporated, Less Than Significant Impact, or No Impact. The Lead Agency has determined that the Project would not result in significant or potentially significant impacts. The content and format of this document meets the standards of the California Environmental Quality Act (CEQA).

A description of the Project's environmental and regulatory setting, and a description of the proposed activities are included in this document. The initial study is guided by an environmental checklist, which examines key aspects of 18 environmental resource factors. The impact to each aspect is classified as described above, and a response justifying the classification is provided. Where necessary, Project specific mitigation measures are prescribed to reduce impacts that are not otherwise mitigated by the observance of existing laws, regulations, policies, or permit conditions.

The Project would not result in impacts to Agriculture Resources, Land Use Planning, Mineral Resources, Population and Housing, Public Services, Recreation, Transportation/Traffic, or Utilities and Service Systems.

By adherence to existing standard operating procedures and/or best management practices; through compliance with existing laws, regulations, or permit conditions; or through the adoption of Project specific mitigation measures, the Project would result in less than significant impacts to Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology and Soil, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, and Noise.

The Project would not result in significant impacts to environmental resource factors reviewed as part of the initial study.

## 1.1 Regulatory Setting

The California Department of Fish and Wildlife (CDFW) issued the City of Sacramento Department of Utilities (Department) current Routine Maintenance Agreement (RMA) for routine maintenance of stream channels (Project) on October 28, 2010. This agreement was granted an extension through April 28, 2017. CDFW requires that California Environmental Quality Act (CEQA) procedures be followed before they will grant a new RMA. CEQA procedures call for the Lead Agency to conduct an initial study (IS) that considers all phases of the Project. If the Lead Agency determines through the initial study that the Project may cause a significant effect on the environment, then an environmental impact report (EIR) shall be prepared as outlined in CEQA Guidelines Section 15080. If the Lead Agency determines that there is no substantial evidence that the Project may cause a significant effect to the environment, then a negative declaration (ND) or mitigated negative declaration (MND) shall be prepared as outlined in CEQA Guidelines Section 15070.

The City of Sacramento, Department of Utilities is the Lead Agency for the Project and has determined that there are revisions and mitigation measures that can be applied to the project plan that would avoid or mitigate effects to the environment to the point where they would be less than significant, and that the preparation of a MND is appropriate.

## 1.2 Required Approvals

Before work can commence on the Project, a number of permits and approvals from local, state, and federal agencies would be required. Potential approvals and approving bodies could include, but are not limited to:

- CDFW – Fish and Game Code Section 1600 Lake and Streambed Alteration Agreement
- City of Sacramento – City Council Approval
- California Regional Water Quality Control Board Central Valley Region – Coverage Under Waste Discharge Requirements Order R5-2015-0023, Sacramento County and Associated Cities Municipal Separate Storm Sewer System, Sacramento County, NPDES No. CAS082597
- United States Army Corps of Engineers – Section 404 Dredge and Fill Permit
- California Regional Water Quality Control Board – Section 401 Water Quality Certification

## 1.3 Existing Conditions

The Department currently maintains its system of channels, including natural drainages and modified or engineered channels, under the 2010 CDFW RMA. Under the 2010 RMA, authorized maintenance work includes the removal of debris or other obstructions, the removal of sand, silt or sediment, vegetation control in channels, the repair of previous erosion control work, minor new erosion control work, and bridge washing and painting.

## 1.4 Environmental Setting

The City of Sacramento (“City”) covers approximately 100 square miles, with a population of about 475,000 people. Sacramento is the county seat of Sacramento County and the state capital of

California. The City is does not have a well-defined eastern boundary, but is generally bound to the east by Interstate 80 as it extends from the north, and State Highway 99 from the south, except where the boundary extends eastward of those highways along State Highway 50 and Jackson Road. The City is bounded at its southernmost extent by Sheldon Road, and at its western edge by the Sacramento River. In the north, two areas extend north of Interstate 80 to West Elkhorn Blvd in the west and Ascot Ave in the east. In the northeast is an approximate rectangle that encompasses the areas of Robla, Raley Industrial Park, Glenwood Meadows, and small neighborhoods. In the northwest is the Natomas Basin. See **Figure 1a** through **Figure 1c** for a map of the City and stream channels that may be subject to Project activities.

The Natomas Basin is a low lying land area east of the Sacramento River and north of the American River. Though historically prone to regular flooding, land reclamation since the early 1900s has allowed over 80% of the Basin to be converted to agricultural production. However, even with the network of pumps and canals, portions of the Basin are still subject to flooding (NBHCP 2003). Nearly 13,000 acres of the Natomas Basin are within the boundaries of the City of Sacramento. Development within the Natomas Basin is regulated by the Natomas Basin Habitat Conservation Plan (Plan). The Plan Area consists of land bounded by Garden Highway to the south, the Sacramento River on to the west, the Natomas Cross Channel to the north, and Steelhead Creek (formerly Natomas East Main Drain Canal, NEMDEC) to the east. The purpose of the Plan is to "promote biological conservation in conjunction with economic and urban development within the Permit Areas" (NBHCP 2003). The goal of the Plan is to minimize incidental take and provide mitigation for impacts of incidental take of Covered Activities on the Covered Species and their habitat (NBHCP 2003). Plan Permittees include Sutter County, Natomas Central Mutual Water Company, the Natomas Basin Conservancy, Reclamation District Number 1000, and the City of Sacramento. The Permitors include the US Fish and Wildlife Service (USFWS) and CDFW. The Natomas Basin Conservancy is the Plan Operator. As a permittee of the NBHCP, the City of Sacramento has coverage under the NBHCP incidental take permit (ITP) and agreements with USFWS and CDFW for development and activities within the Plan Area, and requires that development in the Natomas Basin, within the City's Permit Area, demonstrate suitable mitigation for project impacts. Because of its coverage under the NHBCP, Project activities performed in the Natomas Basin Plan Area is subject to the NBHCP, and is not covered under the proposed RMA discussed in this document.

The City, notably the city's downtown, urban center, lies at the confluence of the Sacramento and American Rivers at the southern end of the Sacramento Valley, which drains approximately 27,500 square miles of land between the Coastal and Sierra Nevada Ranges. Since settled in the 1840's, Sacramento has been threatened by floods, including major floods in 1850 and 1861-62 which prompted officials to raise city streets, improve embankments, and re-channelize the American River. Another flood in 1878 led to the first comprehensive flood control plan which called for a system of levees, weirs, and bypass channels throughout the Sacramento River Basin. The City annually receives approximately 18 inches of rainfall, about 40% less precipitation than the national average[1] (NOAA 2016), with very little precipitation falling in the summer months. Sacramento frequently receives over two-thirds (and often receives over half) of its annual rainfall between November and February[2] (NOAA 2016) and is sometimes affected by weather patterns such as the El Niño Southern Oscillation (El Niño) and the Madden-Julian Oscillation (Pineapple Express). It is not uncommon for Sacramento to experience high intensity rainfall in the winter

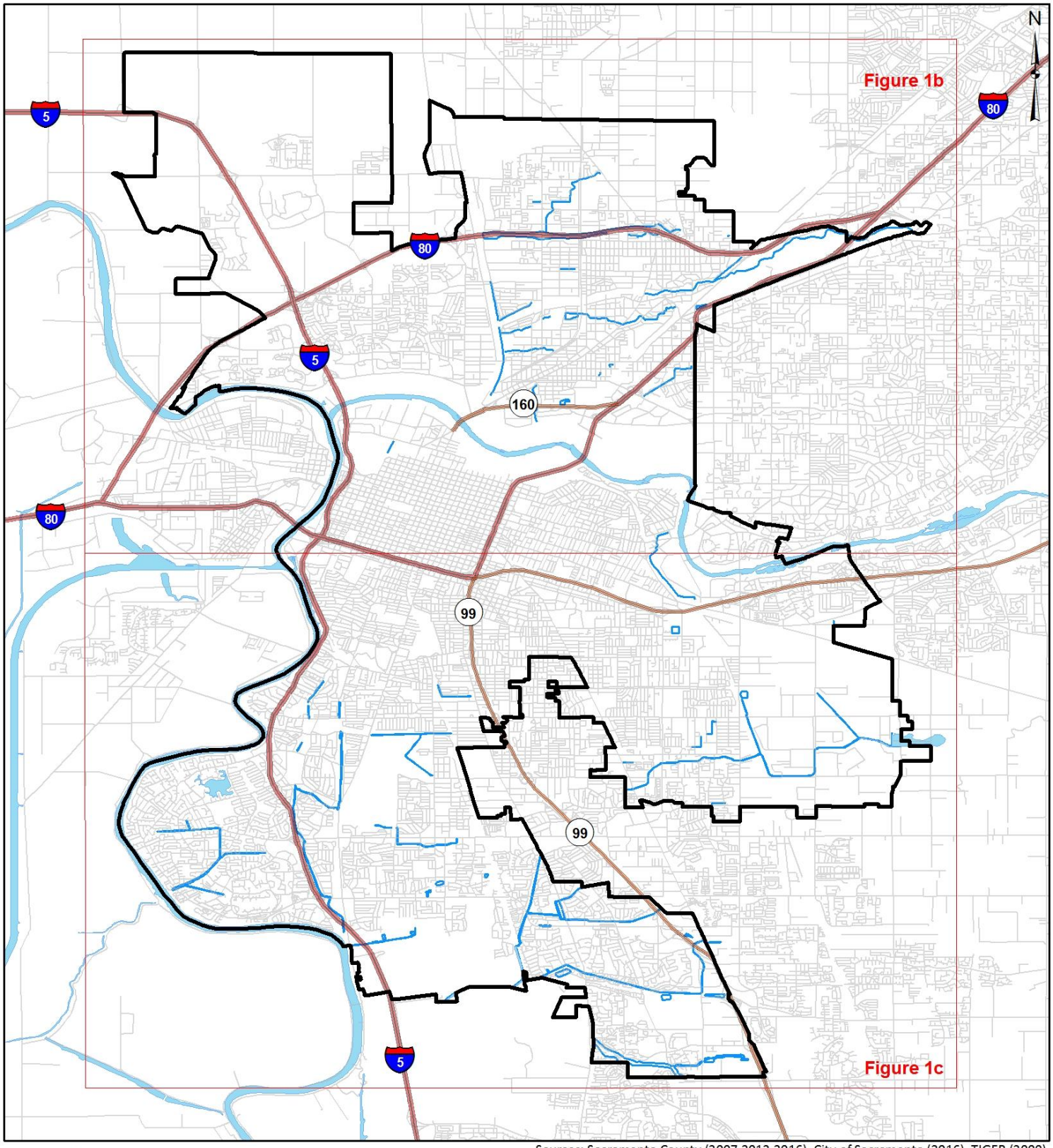
[1] Based on data from NOAA National Center for Environmental Information, 1948 – 2015 annual data.
[2] Based on data from NOAA National Center for Environmental Information, 1948 – 2015 monthly data – 87% of the time >50% of the annual precipitation fell between November and February, 59% of the time >66% of the annual precipitation fell between November and February.

months which has the potential to cause damage to health and property if flood control infrastructure is inadequate.

The Department of Utilities is an entity responsible for water, storm drainage, and sewer services within the City. The Department operates and maintains the City's drainage system, which directs overland flow into defined channels and collection points. The Department relies on both gravity and mechanical systems to convey water downstream, through facilities consisting of a large network of storm drains, ditches, canals, creeks, streams, subterranean pipes, and pumping stations. Refer to **Figure 1a** through **Figure 1c** for maps of channels that may be subject to Project activities.

The Department's drainage system receives urban runoff throughout the year and stormwater runoff during wet months. The Department maintains canals, streams, ditches, detention basins, and pump stations for adequate conveyance and sufficient capacity in drainage system facilities. Efficient conveyance of urban runoff and stormwater is critical to the Department's mission of flood control. Flood control is an essential service in urban areas and is necessary to protect property and human health. Proper planning and management is required for a drainage system to properly function. Facilities that convey water ("channels") are engineered or measured for their conveyance capacity (volume/time) and facilities that hold water ("basins") are engineered or measured for their storage capacity (volume). An effective drainage system must have the capacity to move and store water during unusually intense storm events, and these facilities must be maintained to retain their engineered or measured capacity.

The Department's channels consist of a variety of lined and unlined ditches, canals, creeks, and streams. These channels terminate at larger channels (i.e. a small road-side ditch that runs into a creek), detention basins, pump basins, or at natural waterways (i.e. ponds, lakes, or rivers). Some of the channels are perennial or intermittent natural waterways that have been incorporated into the Department's facilities. Many of the channels have been channelized, re-aligned due to urban development, partially or completely lined with concrete, engineered, are located within urban landscapes, and have been otherwise significantly disturbed as a result of years of increased development, urbanization and flood prevention design and repair. See **Appendix A** for example cut sheets of the types of channels and maintenance activities described in Section 1.5.




Sources: Sacramento County (2007,2012,2016), City of Sacramento (2016), TIGER (2000)

**Legend**

- Sacramento Boundary
- Major Waterbodies
- Department Creeks, Streams, Channels
- State Highways
- US Highways
- Roads
- Matchline

**Figure 1a:**
**Project Location Map**

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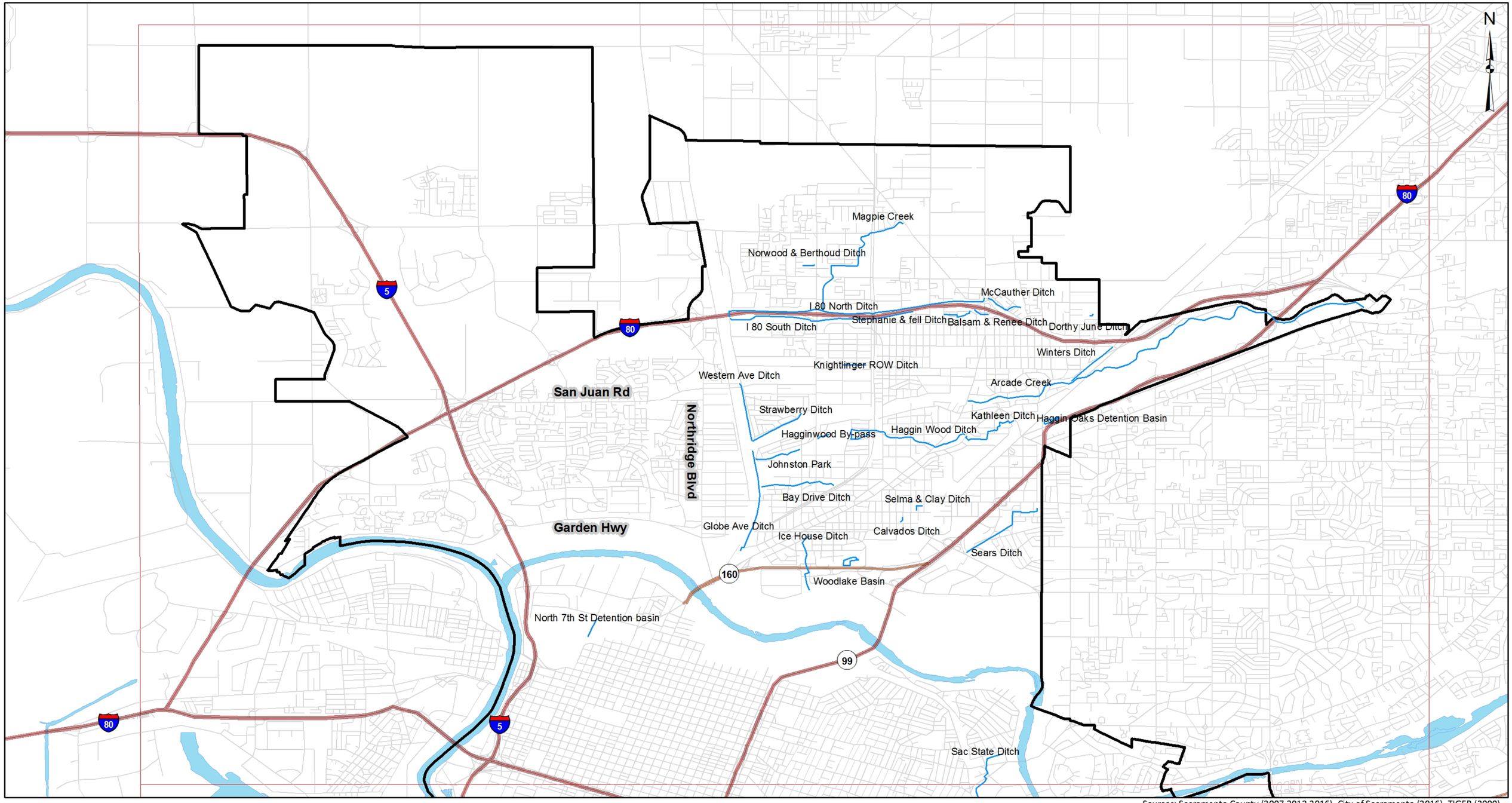


Sources: Sacramento County (2007,2012,2016), City of Sacramento (2016), TIGER (2000)

**Legend**

- Sacramento Boundary
- Major Waterbodies
- Department Creeks, Streams, Channels
- State Highways
- US Highways
- Roads
- Matchline

**Figure 1b:**
**Northern Sacramento Project Location Map**

0 0.5 1 2 3 Miles

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N

Sac State Ditch
Cascade Ditch
Redding Ave. Basin
Freeport Blvd
99
16
Upper South Sacramento Canal
5
Deeble Ditch
Proctor Gamble Basin Power ridge
Fruitridge Rd
Del Rio Basin
Proctor & Gamble Ditch
PG & E Ditch
Popper Draw Ditch
Alder Ditch
Jumbo Ditch
Airport Ditch
Stockton Blvd
Upper Morrison Creek
Belleauwood Ditch
Riza Ditch
Lakehouse Acres Ditch
Willow Slough
99
Pocket Canal
Anderson Slough
Florin Rd
South Sacramento Canal
Elder Creek N / Florin Creek
Casa Linda Basin
Hampton Basin
Morrison Creek
Pocket Canal
Buena Park Basin
Laguna Blvd
Franklinn Boyce Basin
Elder Creek S
Meadowview Basin 4
Meadowview Basin 1
Liberty Lane Basin
Kaiser Basin
John Still Ditch
Steamboat Basin
Lower Morrison Creek
Deerlake Lot
Union House Creek
Basin 69
Strawberry Ditch
Union House Basin
99
Laguna Vista Basin
5
Laguna Creek
Laguna Vega Basin N
Sheldon Basin
Jacinto Creek
Laguna Vega Basin S

Sources: Sacramento County (2007,2012,2016), City of Sacramento (2016), TIGER (2000)

**Legend**

- Sacramento Boundary
- Major Waterbodies
- Department Creeks, Streams, Channels
- State Highways
- US Highways
- Roads
- Matchline

# Figure 1c:
# Southern Sacramento Project Location Map

0 0.5 1 2 3 Miles

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## 1.5 Project Description

The "Project" is defined as the Department's routine maintenance of stream channels subject to jurisdiction by CDFW under Fish and Game Code (FGC) section 1602 (FGC 2016a). This section of the FGC requires the Department to obtain a Streambed Alteration Agreement ("Agreement") prior to conducting routine maintenance if the activities may adversely affect existing fish or wildlife resources. This Initial Study/Mitigated Negative Declaration analyzes potential adverse impacts and cumulative effects of the Project.

Project activities may include the following:

### Debris or Obstruction Removal

The Department may remove debris, beaver dams, flood-deposited woody and herbaceous vegetation, downed trees, dead trees which are in clear danger of falling in or across a channel, branches, and associated debris that substantially obstructs (or could obstruct) water flow, reduce channel capacity, accelerate erosion, damage concrete box culverts, metal culverts, bridge structures, or cause pump damage or interfere with pump operation. Removed material will be taken off site and properly disposed of.

### Silt, Sand or Sediment Removal

The Department may remove or displace silt, sand, gravel or sediment in the immediate vicinity (i.e. within 100 feet) of man-made facilities or structures that substantially obstruct water flow, reduce channel capacity, accelerate erosion, damage concrete box culverts, metal culverts, or bridge structures, or could do so. The Department may remove silt, sand, gravel, or sediment throughout concrete lined channels. The Department may remove silt, sand, gravel or sediment in areas upstream of pumps to prevent damage to pumps or interference with pump operation; the extent of removal upstream of pumps is typically no more than 100 feet. Typically, sediment is left at the removal site until it dries. Once dried, it is hauled to a green waste facility if the sediment does not contain trash; if trash is mixed in with the sediment, it is hauled to the landfill.

### Vegetation Control in Channels

The Department may need to control grass, shrubs, brushy or woody vegetation and/or trees from the channels. Methods for vegetation control include, but are not limited to, hand-cutting, mowing, chain sawing, discing, and/or bulldozing to maintain the designed capacity of channels and facilitate access for site inspections. The Department may cut, trim or remove the lower branches of large trees to facilitate site access, and maintain channel capacity. The Department may remove dead trees, dying trees, or trees that have fallen or are in danger of falling across the channel, and new trees less than 4-inches diameter at breast height (DBH) (diameter of trunk when measured 4.5 feet above ground level) to maintain channel capacity, prevent potential flow obstruction and prevent erosion.

### Non-native Vegetation Removal

The Department may remove terrestrial and aquatic non-native vegetation (e.g., giant reed (*Arundo donax*), Chinese tallow, red sesbania, Spanish broom, tree-of-heaven, black locust, tree tobacco, pampas grass, tamarisk, water hyacinth, acacia, parrotfeather, giant Asian dodder, water primrose, water lettuce, ivy, and Himalayan blackberry) to maintain channel capacity, improve native habitat and facilitate site inspections.

**Repair of Previous Erosion Control Work**

The Department may repair previous erosion control work, including, but not limited to, failed rock, sacked concrete, or gabion sections. Such work shall not extend beyond 50 linear feet of the existing revetted area. This work may require the placement of new material using equipment such as dump trucks, backhoes, and bulldozers. Fill materials include commercially sourced rip rap, gravel, soil, sand, and/or other materials as needed.

**Minor Erosion Control Work**

The Department may slope, place earthen fill, install rocks or gabions, or take other necessary measures to control erosion on previously unrevetted areas. Such work shall not extend beyond 50 linear feet. Equipment and materials used would be similar to those used for the repair of existing erosion control structures discussed above.

**Bridge Washing and Painting**

The Department may clean, wash and paint structures within a stream zone, provided containment measures are used to prevent deleterious material from entering state waters and avoid adverse impacts to fish and wildlife resources.

**Trash Removal**

The Department may remove trash from its channels to prevent flow obstruction, water quality issues or habit degradation and to improve aesthetics. Trash refers to any refuse or items intentionally or unintentionally deposited within stream channels, and includes household waste, appliances, furniture, cars, or other refuse. The removal of cars is typically overseen by the Sacramento Police Department; repairs to channel and fencing, or revegetation needed to reduce impacts of disturbance cause by the vehicle entering the channel may be conducted by the Department. Trash will be removed from the site and disposed of appropriately.

These activities will be performed in compliance with the Agreement in terms of timing and methods. Routine maintenance activities may require sloping, excavating, placement of fill, placement of rock slope protection materials, other small-scale earth moving activity, and installation of erosion control materials. Methods used may include the use of hand tools, as well as light and heavy machinery including, but not limited to: shovels, rakes, loppers, shears, mowers, weed-whackers, chainsaws, backhoes, bulldozers, and graders.

# 2 INITIAL STUDY

This document was prepared in a manner consistent with Section 21064.5 of the California Public Resources Code and Article 6 of the State CEQA Guidelines (14 California Code of Regulations). This Initial Study, Environmental Checklist, and evaluation of potential environmental effects were completed in accordance with Section 15063 of the *State CEQA Guidelines* to determine if the proposed Project could have potentially significant effect on the physical environment, and if so, what mitigation measures would be imposed to reduce such impacts to less-than-significant levels.

An explanation is provided for all determinations, including the citation of sources as listed in Section 5. A "No Impact" or a "Less-than-Significant Impact" determination indicates that the proposed Project would not have a significant effect on the physical environment for that specific environmental category.

Mitigation measures will be implemented to reduce the potentially significant impacts to less-than-significant levels.

## 2.1 CEQA Initial Study & Environmental Check List Form

| | |
|---|---|
| **1. Project Title:** | Routine Maintenance of Stream Channels |
| **2. Lead Agency Name and Address:** | City of Sacramento<br>Department of Utilities<br>1395 35th Avenue<br>Sacramento, California 95822 |
| **3. Contact Person & Phone Number:** | William Roberts<br>Superintendent of Drainage Collection<br>(916) 808-6955 |
| **4. Project Location:** | Sacramento County, California |
| **5. Project Sponsor's Name and Address:** | See #2. above |
| **6. General Plan Land Use Designation:** | Airport/Residential/<br>Flood Control/Commercial |
| **7. Zoning:** | Industrial/Commercial/Residential |
| **8. Description of Project:** | See Section 1.5 |
| **9.Surrounding Land Uses and Setting:** | Agriculture/Airport/Residential/<br>Commercial |
| **10. Other Agencies Whose Approval is Required**: | See Section 1.2 |

## 2.2 Environmental Factors Potentially Affected

The environmental factor checked below would be potentially affected by the proposed Project, involving at least one impact that is a 'Potentially Significant Impact" as indicated by the checklist on the following pages:

| | | |
|---|---|---|
| ☐ Aesthetics | ☐ Agriculture Resources | ☐ Air Quality |
| ☒ Biological Resources | ☐ Cultural Resources | ☐ Geology/Soils |
| ☐ Hazards & Hazardous Materials | ☒ Hydrology/Water Quality | ☐ Land Use/Planning |
| ☐ Mineral Resources | ☐ Noise | ☐ Population/Housing |
| ☐ Public Services | ☐ Recreation | ☐ Transportation/Traffic |
| ☐ Utilities/Service Systems | ☒ Mandatory Findings of Significance | |

## 2.3 Determination (To be completed by lead agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect because appropriate mitigation measures are in place. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An EIR is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature — Date: 4/12/17

William Roberts
Printed Name

City of Sacramento, Department of Utilities
For

# 3 EVALUATION OF ENVIRONMENTAL IMPACTS

## 3.1 Aesthetics

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project:*** | | | | |
| a) Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ☐ | ☒ |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | ☐ | ☐ | ☒ | ☐ |
| c) Substantially degrade the existing visual character or quality of the site and its surrounding? | ☐ | ☐ | ☐ | ☒ |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | ☐ | ☐ | ☐ | ☒ |

### Discussion

Item a): ***No Impact.***

The Project would not result in the development of new structures that have the potential to block or adversely affect scenic vistas. Scenic amenities referred to in the City of Sacramento's 2035 General Plan Background Report, including natural and urban open spaces, topographic formations, landscapes, built elements (historical buildings, bridges, and other structures), landmarks, parks (City of Sacramento 2015), would not be adversely affected.

Item b): ***Less Than Significant Impact.***

The only designated scenic highway within the Project Area is State Route 160 (River Road) which starts near the southern limit of the City and extends southwest to the eastern boundary of Contra Costa Country. No rock outcroppings or buildings would be altered, damaged or destroyed. No trees are expected to be trimmed or removed along this scenic highway, and the impacts of work involving tree removal or alteration or work done within the dripline of trees would be minimized by mitigation measure **AES-1**. **AES-1** protects native trees and trees of local significance. Both Sacramento City Code and Sacramento County Code contain regulations regarding tree preservation and protection; routine

channel maintenance completed by Department staff would be performed in compliance with these regulations.

Sacramento City Code 12.56 “Tree Planting, Maintenance, and Conservation” (City of Sacramento 2016) determines that trees are a signature of the city, promote the wellbeing of citizens, enhance the natural and scenic beauty, increase oxygen levels, promote ecological balance, provide natural ventilation and air filtration, provide temperature and erosion controls, increase property values, and improve quality of life. Regulations are outlined that provide a standard for protection, removal, and replacement of city trees (any tree the trunk of which is greater than 4 inches DBH is partially or completely located in a city park, on real property the city owns in fee, or on a public right of way) and private protected trees (any tree that is designated by city council to have special historical, environmental or community value, native Valley Oak, Blue Oak, Interior Live Oak, Coast Live Oak, California Buckeye, or California Sycamore that has a DBH of twelve of more inches, tree with a DBH of 24 inches or more located on private property that is an undeveloped lot or does not include single unit or duplex dwelling, or a tree that has a DBH of 32 inches of more located on private property that includes a single unit or duplex dwellings). Wherever possible, the city shall modify the design of public projects to avoid the removal or damage to city trees. For public projects, city council approval is required for the removal of a city tree except when the tree constitutes an imminently dangerous condition to public health, safety, or welfare or the tree is a threat to the health of other trees because of pests or disease. For private protected trees, except when trees constitute a threat to structures or public safety as outlined in SCC 12.56.050, no person shall perform regulated work without a tree permit (Sacramento City Code § 12.56).

Sacramento County Code 19.12 “Tree Preservation and Protection” (Sacramento County 2016) recognizes that the preservation of trees enhances the natural scenic beauty, sustains the long term potential increase in property values, maintains the original ecology, retains the original tempering effect of extreme temperatures, increases the attractiveness of the County, helps to reduce soil erosion, and increases oxygen output of the area. The ordinance was adopted in order to promote the health, safety, and general welfare, to preserve and protect significant heritage values, and to enhance the beauty of the County of Sacramento. No person shall trench, grade, or fill within the dripline of, or destroy, kill, or remove living native oak tree (Valley Oak, Interior Live Oak, Blue Oak, or Oracle Oak) having at least one trunk of six inches or more DBH, or a multi-trunked native oak tree having an aggregate diameter or ten inches or more DBH in the designated urban area of Sacramento County, on property, public or private without a tree permit, unless authorized as a condition of a discretionary project approval by an appropriate Board, Commission, Administrator, or Committee or in case of emergency as described Sacramento County Code 19.12.170 (Sacramento County Code § 19.12).

> **AES-1**: Work will be conducted in compliance with Sacramento City Code 12.56 “Tree Planting, Maintenance, and Conservation” and Sacramento County Code 19.12 “Tree Preservation and Protection”.
>
> *Timing/Implementation*: When work will remove or alter a protected tree, or when work will be conducted within the dripline of a protected tree.
>
> *Enforcement*: City of Sacramento Department of Utilities

No routine maintenance activities are expected to adversely impact the scenic resources along State Route 160.

Item c): ***No Impact.***

Project work would include the removal of trash, debris, non-native plant growth, dead or dying trees, accumulated sediment, and/or other obstructions, as well as maintenance to structures within the channels such as bridges and culverts and minor erosion control work. These activities would curtail the effects of litter accumulation, vandalism, illegal dumping, and storm damage. The Project would not degrade the visual character of the Project site, and could potentially increase the aesthetic value of the Project area by removing eyesores such as trash, debris and overgrown vegetation.

Item d): ***No Impact.***

Project work would occur only during daylight hours, and no artificial light sources would be used that could produce glare. Additionally, the Project would not result in the installation of permanent structures or the prolonged presence of equipment with reflective surfaces that could produce glare in the daylight. Note that the Agreement and this IS/MND is not applicable to immediate emergency work to protect life or property, as described in Fish and Game Code section 1610, which may require nighttime work using artificial light to illuminate a work area (FGC 2016a).

## 3.2 Agriculture Resources

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project:*** | | | | |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | ☐ | ☐ | ☐ | ☒ |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | ☐ | ☐ | ☐ | ☒ |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 1220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | ☐ | ☐ | ☐ | ☒ |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | ☐ | ☐ | ☐ | ☒ |

### Discussion

Item a) and b): ***No Impact.***

Sacramento contains 1,175 acres of Prime Farmland, 577 acres of Farmland of Statewide Importance, and 67 acres of Unique Farmland (City of Sacramento 2015). Project activities would occur only in existing channels. No new channels would be created, therefore no

Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would be converted to non-agricultural use.

There are several Williamson Act parcels adjacent to the City of Sacramento, but none within the Project Area (California Department of Conservation 2015). The Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract, or otherwise convert Farmland to non-agricultural use.

Item c) and d): ***No Impact.***

The City of Sacramento does not contain designated forestland or areas zoned for forestland, timberland, or timberland production (CDFW 2015, City of Sacramento 2014). The Project would not conflict with existing zoning, cause rezoning, nor convert land zoned for forestland to non-forest use, nor would it result in the loss of forestland.

Item e): ***No Impact.***

Project activities would be restricted to existing channels and would not involve changes to the environment that would result in conversion of farmland to non-agricultural use or forestland to non-forest use.

## 3.3 Air Quality

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project:*** | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | ☐ | ☐ | ☐ | ☒ |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | ☐ | ☐ | ☐ | ☒ |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal and state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | ☐ | ☐ | ☒ | ☐ |
| d) Expose sensitive receptors to substantial pollutant concentrations? | ☐ | ☐ | ☐ | ☒ |
| e) Create objectionable odors affecting a substantial number of people? | ☐ | ☐ | ☐ | ☒ |

### Discussion

Items a) and b): ***No Impact.***

The Project would require the use of pick-up trucks or other Department vehicles for purposes of transporting personnel and equipment to work sites and would require the use of fuel-powered equipment including chainsaws, mowers, excavators, etc. Short-term vehicle and equipment emissions would be generated during maintenance activity; however, they would be minor and only be utilized on an "as-needed" basis. As a standard practice, equipment shall be properly tuned and muffled, and unnecessary idling shall be minimized to reduce impacts to air quality. Generally, one or two vehicles would be used at a work site. As needed, the Department might use gasoline or diesel fueled tools and equipment. None of the above vehicle or equipment use is expected to conflict with air quality plans or violate air quality standards.

The Department is located in the Sacramento Valley Air Basin (SVAB), which includes the following counties: Butte, Colusa, East Solano, Glenn, Placer, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba. Project activities would not conflict with the Sacramento Metro Region 2013 Air Quality Management Plan, violate air quality standards, or contribute to an existing or projected violation based on data available from the Sacramento Metropolitan Air Quality Management District.

Item c): ***Less Than Significant Impact.***

Health and Safety Code section 39608 requires the California Air Resources Board ("CARB") to provide area designation maps for each of the ten state criteria pollutants designated for state standards and 7 national criteria pollutants for national standards, and must update the maps annually. As of December 2015, levels of ozone and PM10 in Sacramento County have exceeded California Clean Air standards, and therefore the area is considered a "nonattainment" area for these pollutants. As of December 2015, levels of ozone and PM2.5 in Sacramento County have exceeded the National Ambient Air Quality Standards, and is therefore considered a "nonattainment" area for those pollutants. **Table 1** summarizes the status of Sacramento County for state and national standards.

**Table 1. Sacramento County Air Quality Status**

| Pollutant | National Status | State Status | Date |
|---|---|---|---|
| Ozone | Non-attainment | Non-attainment | December 2015 |
| PM2.5 | Non-attainment | Attainment | December 2015 |
| PM10 | Attainment | Non-attainment | December 2015 |
| Carbon Monoxide | Unclassified | Attainment | December 2015 |
| Nitrogen Dioxide | Unclassified | Attainment | December 2015 |
| Sulfur Dioxide | Unclassified | Attainment | December 2015 |
| Sulfates | - | Attainment | December 2015 |
| Lead | Unclassified | Attainment | December 2015 |
| Hydrogen Sulfide | - | Unclassified | December 2015 |
| Visibility Reducing Particles | - | Unclassified | December 2015 |

Source: California Air Resources Board, Air Quality Planning and Science Division (2015)

PM2.5 are fine particles measuring 2.5 micrometers or less in diameter. PM2.5 is mainly produced from combustion, including wood burning, motor vehicles, and industrial processes. PM10 are coarse particles, 2.5 to 10 micrometers in diameter. Sources of PM10 include release from the crushing and grinding of material such as stone and metal, and the release of dust particles into the atmosphere when earth is disturbed. Ozone is the byproduct of reactions between nitrogen oxides and volatile organic compounds in the presence of sunlight.

Project activities may produce PM2.5 or PM10; sources include vehicle and equipment emissions and dust stirred up during soil or erosion control work. The Department would utilize a variety of tools equipped with internal combustion engines, including vehicles (passenger cars and trucks), gas-powered equipment like lawn mowers, string trimmers/weed eaters, chainsaws, etc., and heavy equipment (front-loaders, backhoes, etc.) which may produce PM2.5, PM10, VOCs, and nitrogen oxides. Travel in vehicles to and from work sites would not be significant, as maintenance sites are within the City limits, encompassing about 100 square miles.

The Project would generally require only one or two vehicles at a work site at a time. Department equipment is routinely serviced and maintained consistent with manufacturers' recommendations and emissions control systems are used where applicable. As appropriate, light machinery equipment is tuned to run efficiently, and unnecessary idling would be avoided whenever possible. Gas-powered equipment would only be utilized when practical and where the use of hand tools would be inefficient. Most uses of power equipment for activities such as mowing, weed whacking, and chain-sawing, would be minimal and infrequent; typically once or twice a year in each channel. Heavy equipment may be needed to repair existing erosion control structures and to establish small sections

of new erosion control structures infrequently, and only on an "as-needed" basis. Erosion control work has the potential to contribute PM10 emissions if slope or excavation work is required, but this kind of work is generally limited by the CDFW Agreement to 50 linear feet and would apply to a small number of work sites in channels each year.

The nature of the Project is long term maintenance (e.g. 12-year Agreement), and activities producing pollutant emissions would be sporadic, short in duration, and spatially distributed throughout the City of Sacramento's channels. Even when considered cumulatively, the Project is not expected to contribute significantly to the output of these criteria pollutants.

Items d) & e): ***No Impact.***

All work would take place in Department channels. While some work may take place adjacent to residential areas, near schools, health care facilities, or day care facilities, Project activities are typically brief in duration and infrequent (i.e. one or two days per year). The infrequent and short duration of Project activities would not result in exposure to sensitive receptors of substantial pollutant concentrations, thereby creating no impact. Similarly, there would be no objectionable odors that affect a substantial number of people as a result of Project activities.

## 3.4 Biological Resources

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project:*** | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | ☐ | ☐ | ☒ | ☐ |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | ☐ | ☐ | ☒ | ☐ |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☐ | ☒ | ☐ |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation | ☐ | ☐ | ☒ | ☐ |

| | | | | |
|---|---|---|---|---|
| Plan, or other approved local, regional, or state habitat conservation plan? | | | | |

## Discussion

Item a): ***Less Than Significant with Mitigation Incorporated.***

A list of current special status species was compiled from the CDFW California Natural Diversity Database (CNDDB) and the USFWS Information for Planning and Conservation (IPaC) sensitive species list for areas potentially impacted by the Project. Once this list was compiled, a preliminary assessment of the Project area was performed to characterize the actual habitats present on-site and the likelihood of special status species occurrence.

A summary of the listed species, their conservation status, and whether or not they were considered for evaluation of potential impact is presented in **Table 2.** Species habitat and rationale for removal from further consideration is also presented in **Table 2** and more detailed species life history information can be found in **Appendix B.**

**Table 2. Species and Habitat Summary**

| **Common Name** | ***Scientific Name*** | **Status** | **Habitat** | **Habitat is not Present in Project Area; Species Eliminated from Further Consideration** | **Habitat is Present in Project Area; Species Eliminated from Further Consideration for Reasons Given (see numbered notes)** | **Habitat is Present in Project Area** |
|---|---|---|---|---|---|---|
| tricolored blackbird | *Agelaius tricolor* | SCSC | Fresh-water marshes of cattails, tule, bulrushes and sedges; Cropland/hedgerow, Grassland/herbaceous | | | X |
| Sacramento perch | *Archoplites interruptus* | SCSC | Historically found in the sloughs, slow-moving rivers, and lakes of the central valley | X | | |
| Ferris' milk-vetch | *Astragalus tener var. ferrisiae* | CRPR-1 | Grassland | X | | |
| burrowing owl | *Athene cunicularia* | SCSC | Agriculture/rangeland, grassland, parks with open ground squirrel burrows | | | X |
| vernal pool fairy shrimp | *Branchinecta lynchi* | FT | Vernal pools | X | | |
| Swainson's hawk | *Buteo swainsoni* | ST, SCSC | Cropland/hedgerow, Desert, Grassland/herbaceous, Savanna, Woodland - Mixed | | | X |
| bristly sedge | *Carex comosa* | CRPR-2 | Marshes and swamps | | X (1) | |

| **Common Name** | ***Scientific Name*** | **Status** | **Habitat** | **Habitat is not Present in Project Area; Species Eliminated from Further Consideration** | **Habitat is Present in Project Area; Species Eliminated from Further Consideration for Reasons Given (see numbered notes)** | **Habitat is Present in Project Area** |
|---|---|---|---|---|---|---|
| western yellow-billed cuckoo | *Coccyzus americanus occidentalis* | SE | Open woodland parks, deciduous riparian woodland; requires patches of at least 10 hectares (25 acres) of dense riparian forest with a canopy cover of at least 50 percent in both the understory and overstory | X | | |
| Peruvian dodder | *Cuscuta obtusiflora var. glandulosa* | CRPR-2 | Freshwater marshes and swamps | | X (1) | |
| valley elderberry longhorn beetle | *Desmocerus californicus dimorphus* | FT | Riparian areas; on valley elderberry plants | | | X |
| dwarf downingia | *Downingia pusilla* | CRPR-2 | Valley and foothill grassland (Mesic sites), vernal pools | X | | |
| white-tailed kite | *Elanus leucurus* | SFP | Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland | | | X |
| western pond turtle | *Emys marmorata* | SCSC | Thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation | | | X |
| Boggs Lake hedge-hyssop | *Gratiola heterosepala* | SE, CRPR-1 | Clay soils at the margins of lakes and vernal pools | X | | |
| woolly rose-mallow | *Hibiscus lasiocarpos var. occidentalis* | CRPR-1 | Freshwater Marsh | | | X |
| Ricksecker's water scavenger beetle | *Hydrochara rickseckeri* | None | Aquatic, vernal pool habitat | X | | |
| Ahart's dwarf rush | *Juncus leiospermus var. ahartii* | CRPR-1 | Vernal pools, valley and foothill grassland | X | | |
| legenere | *Legenere limosa* | CRPR-1 | Vernal pools | X | | |
| Heckard's pepper-grass | *Lepidium latipes var. heckardii* | CRPR-1 | Grassland, Vernal Pools | X | | |

| **Common Name** | ***Scientific Name*** | **Status** | **Habitat** | **Habitat is not Present in Project Area; Species Eliminated from Further Consideration** | **Habitat is Present in Project Area; Species Eliminated from Further Consideration for Reasons Given (see numbered notes)** | **Habitat is Present in Project Area** |
|---|---|---|---|---|---|---|
| vernal pool tadpole shrimp | *Lepidurus packardi* | FE | Vernal pools | X | | |
| Mason's lilaeopsis | *Lilaeopsis masonii* | CRPR-1 | Freshwater and brackish marshes, riparian scrub | X | | |
| song sparrow ("Modesto" population) | *Melospiza melodia* | SCSC | Fresh-water marshes and riparian thickets | | X (2) | |
| steelhead - Central Valley DPS | *Oncorhynchus mykiss irideus* | FT, S2 | Sacramento River and San Joaquin Rivers and their tributaries | | X (3) | |
| chinook salmon - Sacramento River winter-run ESU | *Oncorhynchus tshawytscha* | FE, SE | Sacramento river below Keswick Dam; spawns in the Sacramento River but not in tributary streams | X | | |
| chinook salmon - Central Valley spring-run ESU | *Oncorhynchus tshawytscha* | FT, ST | Sacramento River and tributaries | X | | |
| Sacramento Orcutt grass | *Orcuttia viscida* | FE, SE, CRPR-1 | Vernal pools | X | | |
| Sacramento splittail | *Pogonichthys macrolepidotus* | SCSC | Lakes, Slow-moving Rivers with Vegetated Floodplain, Tidal Estuarine Marsh | X | | |
| purple martin | *Progne subis* | SCSC | Inhabits woodlands, low elevation coniferous forest of douglas-fir, ponderosa pine, & Monterey pine | X | | |
| bank swallow | *Riparia riparia* | ST | riparian and other lowland habitats; requires vertical banks/cliffs with fine soils | X | | |
| Sanford's arrowhead | *Sagittaria sanfordii* | CRPR-1 | Marshes and swamps | | | X |
| western spadefoot | *Spea hammondii* | SCSC | Lowlands to foothills; grasslands, open chaparral, pine-oak woodlands. Prefers shortgrass plains, sandy or gravelly soil. Fossorial. Breeds in temporary rain pools and slow-moving streams | X | | |

| **Common Name** | ***Scientific Name*** | **Status** | **Habitat** | **Habitat is not Present in Project Area; Species Eliminated from Further Consideration** | **Habitat is Present in Project Area; Species Eliminated from Further Consideration for Reasons Given (see numbered notes)** | **Habitat is Present in Project Area** |
|---|---|---|---|---|---|---|
| longfin smelt | *Spirinchus thaleichthys* | ST, SCSC | Found in open waters of estuaries, prefer salinities of 15-30 ppt, but may be found in completely freshwater to almost pure seawater | X | | |
| Suisun Marsh aster | *Symphyotrichum lentum* | CRPR-1 | Marshes and swamps (brackish and freshwater) | | X (1) | |
| American badger | *Taxidea taxus* | SCSC | Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils | X | | |
| giant garter snake | *Thamnophis gigas* | FT, ST | prefers freshwater marsh and low gradient streams, has adapted to drainage canals and irrigation ditches | | | X |
| saline clover | *Trifolium hydrophilum* | CRPR-1 | Marshes and swamps, valley and foothill grassland, vernal pools | | X (1) | |
| least Bell's vireo | *Vireo bellii pusillus* | FE, SE | Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; nests placed along margins of bushes or on twigs projecting into pathways, usually willow, *Baccharis*, mesquite | X | | |
| yellow-headed blackbird | *Xanthocephalus xanthocephalus* | SCSC | Nests in freshwater emergent wetlands with dense vegetation and deep water; often along borders of lakes or ponds | | | X |
| Northern California black walnut | *Juglans hindsii* | CRPR-1 | Riparian woodlands, mixed with oak species and Fremont cottonwood on slopes in canyons and valleys. Tolerates sandy and clay soils. | | X (1) | |

Source: CNDDB 2016, USFWS 2016

**Table 2 Numbered Notes:**

(1) According to the CalFlora and/or CNDDB Database, no reported occurrences of these species exist within the Project area.
(2) Species not considered because while suitable habitat may be present, the only known occurrence in the CNDDB Database within the Project area was on June 9, 1900.
(3) Central Valley Steelhead have critical listed habitat in close proximity to Arcade Creek, where maintenance work is expected. It is possible for steelhead to enter Arcade Creek, but due to siltation,

water quality degradation, and bank destabilization Arcade Creek does not provide suitable habitat for steelhead. Thus, steelhead is excluded from consideration.

**Table 2 Status Abbreviation:**

FE = Federally Listed as Endangered
FT = Federally Listed as Threatened
SCSC = State Listed Species of Concern
SE = State Listed as Endangered
SFP = State Fully Protected
ST = State Listed as Threatened
S2 = State Listed as Imperiled
CRPR-1 = California Native Plant Society Listed, Rare, Threatened, or Endangered in CA only
CRPR-2 = California Native Plant Society Listed Rare, Threatened, or Endangered

(*Item a continued)*

There are ten special status species that could have habitat in or near Department stream channels, or are otherwise at risk of being affected by proposed Project activities. These species are: tricolored blackbird, burrowing owl, Swainson's hawk, valley elderberry longhorn beetle, white-tailed kite, western pond turtle, wooly rose-mallow, Sanford's arrowhead, giant garter snake, and yellow-headed blackbird.

To minimize accidental disturbance of special status species, mitigation measure **BIO-1** would require Department workers to attend annual environmental awareness education training. Additionally, workers would have access to special status species reference cards when working in channels to aid with species and habitat identification in the field. See **Appendix D** for example special status species reference cards.

**BIO-1**: Prior to conducting Project activities, Department employees working on the project site shall receive training from a CDFW approved biological monitor that discusses the identification of the ten special status species identified as having the potential to be present in the Project area. Training will also include information about the distribution and behavior of the species, habitat identification, avoidance measures, legal protections and penalties for violations. The Department will also distribute reference cards with this information and make these cards available to workers on-site. As needed, interpretation shall be available for non-English speakers. Employees who complete the training shall sign a form indicating that they have received the training and understand the content, and the forms will be retained by the Department.

*Timing/Implementation:* Annually, prior to commencing work within channels, with refresher training as needed.

*Enforcement*: City of Sacramento Department of Utilities

*Special Status Plant Species (wooly rose-mallow and Sanford's arrowhead):*

Wooly rose-mallow (*Hibiscus lasiocarpos var. occidentalis*) is a perennial dicot in the genus Hibiscus, threatened by habitat disturbance, development, agriculture, recreational activities, and channelization (CNPS 2016). Its preferred habitat is freshwater marshes and swamps. During its blooming period (June to September), it is easy to identify due to its tall stature and large blossom. CNDDB reports only one occurrence of this species within the Project area, with an occurrence date of 1988 in an area not subject to routine maintenance activities (CNDDB 2016). Due to its overall scarcity, lack of recent local observations, and the ease of

identification, mitigation measure **BIO-1** would lessen the potential impact to this species to less than significant levels.

Sanford's arrowhead is an aquatic perennial monocot in the water plantain family (*Alismataceae*) that is threatened by grazing, development, recreational activities, displacement by non-native plants, road widening, and channel alteration (CNPS 2016). It grows in freshwater marshes and swamps, ponds, ditches, and other standing or slow moving water bodies. There are several reported occurrences of the species within the Project area, including some locations where Project work is anticipated (CNDDB 2016).

If wooly rose-mallow or Sanford's arrowhead are identified at a work site, Project activities that could adversely impact either of the plant species would be suspended while avoidance and/or mitigation alternatives are considered. A qualified biologist would be called in to confirm species identification and clearly mark the locations of special status plant species by flagging, staking, or fencing the plants, and, as necessary, a buffer area to prevent disturbance as described in mitigation measure **BIO-2**. If work cannot be completed without harming the special status plants, the Department would consult with CDFW, as described in mitigation measure **BIO-3**.

> **BIO-2**: If Department staff encounter or suspect the presence of special status plant species that may be impacted from Project activities, a qualified biologist will be contacted to confirm the species identification. If confirmed, the consultant and/or Department staff will clearly mark the locations of special status plant species by flagging, staking, or fencing the plants, and, as necessary, a buffer area to prevent disturbance.
>
> *Implementation/Timing*: Upon discovery of, or suspected presence of special status plant species that may be adversely impacted by Project activities.
>
> *Enforcement*: City of Sacramento Department of Utilities
>
> **BIO-3**: A consultation with CDFW shall be initiated if Project activities will disturb individual or populations of a special status plant species within the Project area. If the special status plant cannot be avoided, mitigation including transplanting of affected plants to nearby suitable habitat will be considered. Transplanting will be overseen by a qualified biologist and information including the number of plants, their condition, site conditions at the removal and transplant locations will be documented. The Department shall work with CDFW to establish a relocation plan that includes a monitoring plan that establishes criteria for success.
>
> *Implementation/Timing*: When special status plant species are present in an area subject to Project activities that cannot otherwise be avoided.
>
> *Enforcement*: City of Sacramento Department of Utilities, CDFW

*Special Status Invertebrate Species (valley elderberry longhorn beetle):*

The valley elderberry longhorn beetle ("VELB") (*Desmocerus californicus dimorphus*) is a subspecies of longhorn beetle endemic to California with patchy distribution throughout the Central Valley. The VELB is host plant specific; it requires the elderberry bush to complete its lifecycle (Barr 1991). Elderberry bushes and VELB may be found along rivers, streams and other riparian areas. Threats to the VELB include habitat loss (i.e. removal of host plants) and predation. Occurrences of the species are reported in the CNDDB and one section of critical habitat is located within the Project area. Most of the occurrences and the critical habitat lie

within the riparian corridor of the American River, and are not in locations where Project activities are expected to occur.

USFWS has issued guidelines for minimizing or avoiding adverse effects to the VELB. The guidelines include measures for avoiding and protecting habitat, and for restoring disturbed areas. Mitigation Measure **BIO-4** requires that Project work is conducted in accordance with the USFWS VELB conservation guidance. These guidelines state that elderberry plants with no stems measuring 1.0 inch or greater diameter at ground level are unlikely to be suitable habitat for the VELB because of the plant's small size and/or immaturity. As such, no minimization measures are required for removal of elderberry plants with no stems measuring 1.0 inch or greater in diameter at ground level (USFWS 1999). Along with **BIO-1**, this measure would reduce potential impacts of Project activity to the VELB to less than significant levels.

> **BIO-4**: Project activities must be conducted in accordance with the 1999 USFWS Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999).
>
> *Implementation/Timing*: When Project activities has the potential to disturb elderberry (*Sambucus spp.*) plants.
>
> *Enforcement*: City of Sacramento Department of Utilities, USFWS

*Special Status Aquatic Vertebrate Species (western pond turtle, giant garter snake):*

The western pond turtle (*Emys marmorata*) is found from the Puget Sound to Baja California, living in a variety of aquatic habitats including natural and altered environments such as ponds, reservoirs, streams, and canals, most often found in areas with low flow (Holland 1994). No occurrences have been reported within the Project area on CNDDB, but suitable habitat exists in areas Project activity is expected to occur. **BIO-5** establishes guidelines for actions to take when encountering western pond turtle or other special status species during project activity. **BIO-1** and **BIO-5** minimize the potential for disturbing western pond turtles and reduces the impact to less than significant levels. Mitigation measure **BIO-5** shall also apply to any other special status species encountered during project activities.

> **BIO-5**: If a special status species is encountered during Project activities, work shall stop immediately and may only resume when the species has moved out of the area on its own volition, or has been moved by a qualified biologist.
>
> *Implementation/Timing:* During maintenance activity, upon encountering a special status species.
>
> *Enforcement:* City of Sacramento Department of Utilities

The giant garter snake ("GGS") (*Thamnophis gigas*) is an aquatic garter snake endemic to wetlands in the Central Valley, its historic range extends from Butte County to Kern County (Hansen 1980), but habitat alteration due to urban and agricultural development has contributed to the loss of much of the species original habitat. Present habitat for giant garter snake includes rice fields, drainage and irrigation canals and ditches, marshes, and slow moving creeks. Upland areas adjacent to channels are also potential habitat for the GGS. GGS overwinter in ground squirrel, rodent or other burrows. There are reported occurrences of GGS within the Project area, and suitable habitat exists in areas where Project activity is expected.

Generally, the potential for GGS occurrence and/or suitable habitat may be found in the Natomas Basin north of Interstate 80 and west of the Natomas East Main Drainage Canal

(NEMDC) and in the very southern extent of the City near Laguna Creek. See **Appendix C** for a map of recommended areas for implementation of GGS mitigation measures; gray areas defined in the map legend as "GGS Preliminary Mitigation Area" indicate where GGS mitigation measures will be implemented. The preliminary mitigation area is based on CNDDB occurrences and expected GGS distribution. During the new agreement, GGS habitat surveys may be completed within this area prior to some project activities when appropriate. The Department will consult with CDFW as surveys are completed to refine which channels or sections of channels may support GGS, and identify areas that are marginal or unsuitable habitat.

Within the areas labeled GGS Preliminary Mitigation Area in the Figure in **Appendix C**, mitigation measure **BIO-6** will be followed to minimize impacts from grass trimming when using lawn mowers within potential GGS habitat areas. Mitigation measure **BIO-5** provides guidance on actions to take if a GGS is encountered during maintenance activity.

> **BIO-6**: When using a mower to cut vegetation in Project areas with potential GGS habitat, the deck of the mower must be set to a height of no less than 6 inches above the ground.
>
> *Timing/Implementation:* When using a mower to cut vegetation in giant garter snake sensitive habitat.
>
> *Enforcement*: City of Sacramento Department of Utilities

For project activities like minor erosion control, sediment removal or repair of previous erosion control activities, mitigation measure **BIO-7** limits the time frame for ground disturbance in potential GGS habitat to avoid impacts to snakes in hibernacula.

> **BIO-7**: Sub-surface ground disturbance, (i.e. excavation) associated with repair of previous erosion control work, minor erosion control work, obstruction removal or channel slope repair activities will be done during the GGS active season (May 1 through October 1). If activities fall outside of this period, CDFW and/or the USFWS Sacramento Office will be consulted to determine if additional measures are necessary to minimize and avoid impacts to GGS.
>
> *Timing/Implementation*: During project planning, prior to work involving sub-surface ground disturbance.
>
> *Enforcement*: City of Sacramento Department of Utilities

Alternatively, project activities within the GGS Preliminary Mitigation Area may be scheduled for the late summer or early fall when the channel is dry and would not provide suitable habitat for GGS.

An option the Department may consider, where feasible, is to dewater areas where sand, silt or sediment removal is needed for a period of not less than two weeks prior to commencing work. Typically, areas subject to this project activity are concrete lined and do not provide suitable GGS habitat. However, dewatering will help avoid direct impact of sediment removal to GGS as individuals would not likely be present. Sediment removal results in long-term habitat benefits including improved water flow and channel capacity, and improved aquatic habitat in-channel by reducing amounts of accumulated sediment. Therefore, compensatory mitigation for permanent or temporary habitat impacts due to sediment removal in channels in not necessary.

If water is present in the channel, and after consulting with CDFW and/or USFWS as described by mitigation measure **BIO-7**, it is determined that time limits to work activity may not adequately the GGS, a qualified biologist will conduct a site visit to assess the habitat in and adjacent to the work area to determine if suitable GGS habitat exists on site. The assessment will include evaluation of connectivity and proximity to known GGS occurrences, and:

1) Sufficient water during the active summer season. Waterbody must be able to sustain populations of prey items, including bullfrogs and fish;
2) Presence of emergent, herbaceous aquatic vegetation accompanied by vegetated terrestrial banks to provide basking and foraging habitat;
3) Burrows, holes and crevices in banks to provide short-term aestivation sites;
4) Accessible surrounding land to provide habitat during the dormant winter season.

If no suitable habitat is found at or near the proposed area of sub-surface ground disturbance, work may proceed. If potential habitat is present at or near the site, the Department will consult with CDFW. If project activities are to proceed, the Department will determine if the project will cause any impacts to GGS habitat, and if those impacts are temporary or permanent in nature. Mitigation measure **BIO-8** provides that the Department shall have a qualified biologist on-site, and will follow mitigation measure **BIO-5**. Also, see the discussion below and mitigation measure **BIO-9**.

> **BIO-8**: Prior to sub-surface ground disturbance, (i.e. excavation) associated with repair of previous erosion control work, minor erosion control work, obstruction removal or channel slope repair activities where a survey has found suitable GGS habitat, the Department will have a qualified biologist on-site. The qualified biologist will have the authority to stop work if a GGS is encountered. Prior to commencing any ground-disturbing activities, the qualified biologist will conduct a pre-construction survey of the project site and a 100-foot buffer around the project site. If a GGS is encountered, CDFW will be immediately notified and work will be stopped until the snake has moved out of the area on its own. If the GGS does not leave, CDFW will be consulted.
>
> *Timing/Implementation*: During project planning, prior to, and during work involving sub-surface ground disturbance.
>
> *Enforcement*: City of Sacramento Department of Utilities

Where project activity timing may not adequately protect sensitive species, or where potential GGS habitat is present at or near the project site, the Department may elect to obtain coverage under an incidental take permit (ITP) from the USFWS and CDFW. The USFWS issues ITPs under Section 10 of the Endangered Species Act (ESA § 10; 16 U.S.C § 153), and CDFW issues ITPs under Fish and Game Code Sections 2081 (FGC 2016b) (b) and (c). Both entities require that measures be taken to minimize and mitigate the impacts of incidental take. In these cases, compensatory mitigation may be required at a rate that is dependent on the nature of the impact and the quality of the habitat. Mitigation measure **BIO-9** provides mitigation for sub-surface ground disturbance where work timing, dewatering, and/or habitat surveys do not adequately protect sensitive species.

> **BIO-9:** Where project activity timing, dewatering, do not adequately protect sensitive species from sub-surface ground disturbance, and habitat surveys

determine suitable habitat is present, the Department may obtain coverage under an incidental take permit from the USFWS and CDFW.

*Timing/Implementation:* Prior to activities involving sub-surface ground disturbance, where project activity timing, dewatering does not adequately protect sensitive species where suitable habitat is present.

*Enforcement:* City of Sacramento Department of Utilities, USFWS, CDFW

Mitigation measures **BIO-1**, **BIO-5**, **BIO-6**, **BIO-7**, **BIO-8**, and **BIO-9** would reduce the impact to giant garter snakes to less than significant with mitigation incorporated.

*Special Status Avian Species (tricolored blackbird, burrowing owl, Swainson's hawk, white-tailed kite, yellow-headed blackbird) and Nesting Birds*:

Special status avian species including tricolored blackbird, burrowing owl, Swainson's hawk, white-tailed kite, yellow-headed blackbird may have potential habitat present within the Project area. Riparian habitat and dense vegetation occurring on the banks and within channels may offer suitable habitat to species like the tricolored blackbird and yellow-headed blackbird. Disturbances within this habitat during the nesting season could lead to the direct removal of nesting habitat, destruction of nests or could result in nest abandonment.

The Department will be responsible for developing a Nesting Bird Mitigation and Monitoring Plan with CDFW during the first years of the Agreement. This plan will be developed in cooperation with CDFW and will identify areas to be surveyed for nesting birds, species-specific no-work buffer zones around active nests, and will evaluate the sensitivity of nesting birds to various types of Project activities. Nests encountered during surveys or Project activity will be recorded and reported to CDFW. The Department will retain observation records, and implement additional mitigation measures as needed; the Plan will describe the actions that the Department has taken to implement buffers or other mitigation measures, the timing of those actions, and the entities responsible for monitoring and enforcing those actions. The Department will consult with CDFW on an as-needed basis while developing the Nesting Bird Mitigation and Monitoring Plan to review modifications to buffer areas, time limits on work, and nesting periods for species that are encountered.

Raptors, such as the Swainson's hawk, and white-tailed kite may find suitable nesting habitat in mature trees within or adjacent to the Project area. These species may also forage in habitat within and adjacent to channels where Project activities occur. Consistent with **AES-1** and city and county codes regulating work to and around, and the removal of trees, the Department will, where possible, modify the implementation of projects to avoid the removal of or damage to city trees except where the tree constitutes an imminently dangerous condition to public health, safety, or welfare, or the tree is a threat to the health of other trees because of pests or disease. Where healthy, mature, native trees must be removed that provide nesting habitat to sensitive species, the Department will be responsible for the replacement of those trees. Mitigation measure **BIO-10** mitigates the impacts of habitat alteration when healthy, mature trees must be removed. This mitigation measure does not apply to the removal of trees that are under 4 inches DBH.

**BIO-10**: Where healthy, mature trees must be removed that provide nesting habitat for sensitive species, the Department shall be responsible for the replacement of those trees at a 1:1 rate (1" DBH of tree replaced to 1" DBH of tree removed). If practical, the replacement planting should be located near the area of the removed tree and be of the same species. If the tree cannot be replaced on-site, a

replacement site should be selected that provides similar surrounding habitat to the area where the tree was removed. No replacement is required for non-native trees or trees that are less than 4 inches DBH. A plan for monitoring and protecting the replacement tree shall be implemented by the Department until the tree becomes established.

*Implementation/Timing*: After removal of healthy, mature trees that provide habitat to sensitive species.

*Enforcement*: City of Sacramento Department of Utilities.

Disturbance by Project activities involving equipment use and noise, such as vegetation control and non-native vegetation removal, may adversely impact nesting raptors.

Ground disturbing work could adversely affect burrowing owls or other ground-nesting birds. These activities are generally limited to areas of previous erosion control work or small (50 linear feet) sections of new erosion control activities, on an infrequent and as-needed basis. Workers would be trained in burrowing owl identification, active burrow identification, and avoidance measures (**BIO-1**), so the direct destruction of active burrowing owl nest is unlikely. However, disturbances from equipment movement and noise at maintenance sites could lead to nest abandonment.

Routine maintenance activities conducted during the nesting bird season shall require adherence to **BIO-11**.

**BIO-11**: Upon encountering an active bird nest or burrow in the maintenance area during the nesting bird season, work will stop. A qualified biologist will be consulted to conduct a survey of the work site for active nests/burrows in and adjacent to the maintenance area. Work will only resume when the biologist has determined that no active nests are present and/or has established a buffer to prevent nest disturbance.

*Timing/Implementation*: During maintenance activities, when sensitive bird species are observed nesting within the maintenance area.

*Enforcement*: City of Sacramento Department of Utilities

During the nesting bird season, which generally occurs between February 1 to August 31 and may extend to September 15 for the Swainson's hawk, the Department will attempt to schedule work to minimize activities that could adversely impact nesting birds (**BIO-12**).

**BIO-12**: Routine maintenance activities shall be timed so that activities with potential to adversely affect native and special status avian species are conducted outside of the nesting season, which generally occurs between February 1 and August 31. In the event that work cannot be scheduled outside of this timeframe, mitigation measure **BIO-11** will be followed to minimize impacts to nesting birds.

*Timing/Implementation*: During Project planning.

*Enforcement*: City of Sacramento Department of Utilities

Adherence to **BIO-1**, **BIO-10**, **BIO-11**, and **BIO-12**, in addition to development of a Nesting Bird Mitigation and Monitoring Plan would reduce impacts to special status birds and nesting birds to less than significant levels with mitigation incorporated.

Item b): ***Less Than Significant with Mitigation Incorporated.***

Project activities would take place in channels maintained by the Department, including natural and engineered channels, and could impact riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS. Maintenance work would be conducted within riparian habitats and could result in modification of these habitats.

Many channels throughout the Project area have previously been channelized, re-aligned due to urban development, partially or completely lined with concrete, engineered, are located within urban landscapes, and have been otherwise significantly disturbed as a result of years of increased development, urbanization and flood prevention design and repair, and project activities are not likely to have any substantial adverse effects due to the lack of undisturbed riparian communities in these areas. However, channels in the Project area less affected by disturbance contain riparian habitat that could be adversely affected by routine maintenance activities, including potential temporary or permanent impacts.

Work would be limited to only what is required to maintain access to sites for channel and levee inspection, and to maintain flood control capacity in the channels. As typical with routine activities like vegetation control, impacts are temporary. Grasses, shrubs, bushes and emergent riparian vegetation regrows each year.

Trimming or “limbing up” branches of larger trees may result in temporary impacts. Where practical, trimming is preferred to removal of living trees in order to maintain existing tree canopy within the channel, thereby minimizing or eliminating permanent impacts due to in-channel removal of trees that could a substantial adverse effect on riparian habitat. To further reduce permanent impacts, work to and around trees would be performed in compliance with the Sacramento City Code 12.56 “Tree Planting, Maintenance and Conservation” (City of Sacramento 2016), and Sacramento County Code 19.12 “Tree Preservation and Protection” (Sacramento County 2016) which protects ‘city trees’, trees with special historical or environmental value or significant community benefit, Valley Oak, Blue Oak, Interior Like Oak, Coast Live Oak, California Buckeye, or California Sycamore that has a diameter of 12 inches or more DBH, and private protected trees (see Mitigation measure **AES-1**).

If living trees like those described in the Sacramento City Code 12.56 or Sacramento County Code 19.12 (Sacramento County 2016) cannot be avoided and must be removed from within the channel, the Department will mitigate the loss of trees consistent with mitigation measure **BIO-10**. This mitigation measure provides for a replacement of the removed tree(s) at a ratio of 1:1 to maintain densities of trees that may provide habitat similar to existing conditions. For example, 1 inch DBH of tree shall be replaced for each 1 inch DBH of tree removed. The Department will attempt to replace the trees on-site, but may need to place planted trees on the top of bank, above the waterline or outside slopeo prevent flow obstruction by the planted tree(s). This mitigation measure does not apply to trees less than 4 inches DBH.

Mitigation measures would be established for requisite host plants for special status species like the VELB (see discussion in Item a, **BIO-4**), and special care would be taken

to avoid disturbing those plants. Primarily, only vegetation within the channels that has potential to block flow, or interfere with levee or channel inspections, access, structure maintenance, erosion control activities, or threaten public safety would be removed.

The Department will be responsible for developing a Habitat Mitigation and Monitoring Plan with CDFW during the first years of the Agreement. This plan will be developed in cooperation with CDFW and will identify potential mitigation options to offset temporary or permanent habitat impacts from the Project. Offsets can include habitat creation activities (i.e. tree planting), habitat enhancement activities (i.e. non-native vegetation removal), payments to mitigation banks, and other actions as approved by CDFW.

Adherence to mitigation measures, and development, tracking and mitigation of impacts to sensitive habitat through the Habitat Mitigation and Monitoring Plan would reduce impacts to riparian habitat to less than significant levels with mitigation incorporated.

Item c): ***Less Than Significant Impact.***

Project activities would take place in the Department's channels, some of which may be considered federally protected wetlands under Section 404 of the Clean Water Act. Work within "Waters of the United States" that removes or places material may be subject to jurisdiction under the United States Army Corps of Engineers ("USACE") and may require a Clean Water Act Section 404 permit from the USACE and/or a Clean Water Act Section 401 Water Quality Certification from the California Regional Water Quality Control Board ("RWQCB") if the work could affect water quality within the jurisdictional waters. As necessary, routine maintenance work would be performed in compliance with appropriate USACE and RWQCB permits. Dredge or fill activity would be in support of the routine maintenance, repair, or replacement of pre-existing structures, and material removed would typically be limited to recently deposited materials. No work would re-shape channel floors or banks beyond what would be considered a 'baseline state'. Siltation in creeks and streams is considered a threat to natural habitats and can interfere with a species ability to forage, find shelter, migrate, and reproduce. As necessary, work would be performed in compliance with applicable permits, and is expected to enhance habitat. The impact of Project activities would be less than significant.

Item d): ***Less Than Significant Impact.***

Water present in the Department's channels is typically comprised of stormwater and urban runoff. The Department's channels are not directly connected to natural perennial watercourses, except where Arcade Creek flows into Steelhead Creek (also known as the Natomas East Main Drainage Canal or NEMDC). Project work would not permanently block existing migratory corridors, alter flows, or remove substantial habitat that could significantly impact aquatic or terrestrial species ability to move within waterways or the riparian corridor or use the area as a nursery site.

Sections of Steelhead Creek and its tributary, Dry Creek, are listed as critical habitat by the USFWS for Central Valley Steelhead Trout ("steelhead") (*Oncorhynchus mykiss irideus)*. Only winter run (ocean maturing) steelhead are currently found in Central Valley streams and rivers (Moyle 2002), so steelhead present within the Project area would be migratory or their presence would likely be transitory, not a resident population. Arcade Creek is a natural drainage subject to the CDFW Agreement, which enters Steelhead Creek about 3 miles downstream of the Dry Creek confluence, and about 3 miles upstream of where Steelhead Creek enters the Sacramento River. Arcade Creek shares an uninterrupted connection to Steelhead Creek (e.g. no pumps, gates, grates, siphons, etc.). During periods of high flow, steelhead could potentially travel up Arcade Creek instead of continuing north up Steelhead Creek to Dry Creek. Due to stressors including degraded

water quality, altered flow regime, loss of natural morphology, and loss of instream cover (NMFS 2014), Arcade Creek does not provide suitable habitat for spawning. No occurrences of steelhead within Arcade Creek have been reported in CNDDB. Further, a section of Arcade Creek that the Department maintains is lined, providing unsuitable habitat conditions, particularly during low- to no-flow conditions that exist when routine maintenance activity may take place. Considering the low likelihood of steelhead entering Arcade Creek, and the unsuitable habitat conditions present in Arcade Creek, the Project would not substantially interfere with the movement of this or other species nor would it substantially interfere with the use of native wildlife nursery in the Project area.

Items e) and f): ***Less Than Significant Impact.***

Applicable policies protecting biological resources within the Project area include The American River Parkway Plan, The Sacramento River Parkway Plan, and the Natomas Basin Habitat Conservation Plan. Project would not conflict with, and would have no impact to these local policies, ordinances, or plans protecting biological resources.

The American River Parkway Plan provides guidance for preserving and improving the American River Parkway ("ARP"). The ARP is an open space greenbelt which extends approximately 29 miles from Folsom Dam to the American River's confluence with the Sacramento River. It is adopted as a portion of both the City of Sacramento and the County of Sacramento General Plans. Section 4 of the Plan establishes general policies for flood control. Generally, the plan allows for "vegetation control that is appropriately managed to maintain integrity and channel capacity in a manner that preserves the environmental, aesthetic, and recreational quality of the Parkway." (County of Sacramento Municipal Services Agency 2008). Maintenance of Department facilities within the ARP are expected to be minimal, and are consistent with policies outlined in the Plan.

The Sacramento River Parkway Plan provides for habitat preservations and restoration, and recreation development for land adjacent to the Sacramento River. The Plan identifies current conditions, and identifies actions and programs for future visions. The Sacramento River Parkway ("SRP") currently extends from Interstate 80 to the southern tip of Sacramento city limits along the Sacramento River, with large gaps where private property cuts off public access. The Plan indicates that, although the Parkway is intended for human use, the environment shall be protected, preserved, and enhanced to the fullest extent possible, especially within riparian areas. Maintenance of Department facilities within the Sacramento River Parkway are expected to be minimal, and consistent with policies outlined in the plan.

The Natomas Basin Habitat Conservation Plan was aims to "promote biological conservation in conjunction with economic and urban development within the Permit Areas" (NBHCP 2003). The goal of the Plan is to minimize incidental take and provide mitigation for impacts of incidental take of Covered Activities on the Covered Species and their habitat (NBHCP 2003). Plan Permittees include Sutter County, Natomas Central Mutual Water Company, the Natomas Basin Conservancy, Reclamation District Number 1000, and the City of Sacramento. The Permitors include the US Fish and Wildlife Service and the CDFW. The Natomas Basin Conservancy is the Plan Operator. As a permittee of the NBHCP, the City of Sacramento has coverage under the NBHCP incidental take permit (ITP) and agreements with USFWS and CDFW for development within the Plan Area, and requires that development in the Natomas Basin, within the City's Permit Area, demonstrate suitable mitigation for project impacts. Because of its coverage under the NHBCP, project activities performed in the Natomas Basin Plan Area is subject to the NBHCP, and is not covered under the proposed RMA discussed in this document.

## 3.5 Cultural Resources

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project:*** | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | ☐ | ☐ | ☐ | ☒ |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | ☐ | ☐ | ☒ | ☐ |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☐ | ☐ | ☐ | ☒ |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | ☐ | ☐ | ☒ | ☐ |

### Discussion

Item a): ***No Impact.***

California Code of Regulations 14 §15064.5 defines a substantial adverse change in the significance of a historical resource as the demolition, destruction, relocation, or alteration of the resource or its immediate surroundings, that impairs its historical significance. There are a number of historical resources listed in either in the National Register of Historic Places or California Register of Historic Places within the city limits of Sacramento including historic residences, churches, schools, districts, cemeteries, and other sites. The Project would not involve activities that would demolish, relocate or alter existing structures.

Project activities may take place within channels throughout the city, including within historical districts (such as the Alkali Flat Historic District), near historic sites, or near historic structures, but would only affect existing structures with no historical significance (i.e. channels, sumps, culverts, etc.). Project activities are not expected to create features that would significantly impact an historical resource or its surroundings, or impair its significance.

Item b): ***Less Than Significant Impact.***

Early settlements within the Project area were framed by Sacramento's location at the confluence of the Sacramento River and the American River. According to the Sacramento 2035 General Plan, surveys since 1930 have recorded approximately 80 archaeological sites within city limits (City of Sacramento 2015). The Sacramento 2035 General Plan has

classified their Policy Area into three sensitivity areas: High, Moderate, and Low Archaeological Sensitivity. The majority of High sensitivity area is found around the banks of the Sacramento and American Rivers, the remainder located where archaeological artifacts have been recovered, or are likely to be recovered. The Moderate area is primarily located along creeks and other watercourses, situated in places that seem likely to have been used as settlements. The City of Sacramento General Plan 2035 Background Report states that "the chance of discovering artifacts on such sites is substantially lower" but that "small villages, campsites, or special use sites are more likely to be found along waterways" (City of Sacramento 2015). Areas within the General Plan Policy Area not designated High or Moderate sensitivity are designated Low archaeological sensitivity. It is unlikely that archeological sites occur in Low sensitivity areas, but sites could exist that have been concealed by natural processes or anthropogenic activities.

It is possible, but unlikely, that Project activities would cause an adverse change in the significance of an archeological resource. Activities would take place in urban creeks, streams, and drainage channels that have been previously maintained, channelized or otherwise manipulated to some degree, in which no existing sites have been reported. Many of the Project sites have been channelized, re-aligned due to urban development, partially or completely lined with concrete, engineered, and are located within urban landscapes. If a site were to exist within a work area, it is not likely that Project activities would uncover, destroy, damage, or alter the site. Hand tools and machinery may be used to remove shallow layers of recently accumulated sediment along concrete lined section of channels, and near structures like pumps and gates, repair existing erosion control features, and implement small sections (<50 linear feet) of new erosion control features, but no major excavation work is planned. If an archaeological resource is discovered during the course of Project activities, Department crews would comply with minimization measure **CUL-1**.

> **CUL-1**: If an archeological resource or suspected archeological resource is uncovered during Project activities, work will stop and an archeological expert will be consulted. Work will resume when cleared by the expert.
>
> *Timing/Implementation*: During Project activities, when an archeological resource is discovered.
>
> *Enforcement*: City of Sacramento Department of Utilities

In accordance with Assembly Bill 52 (AB-52), the Native American Heritage Commission (NAHC) was consulted during the drafting of this IS/MND. The NAHC provided a contact list of eight (8) tribes that have identified potential cultural resources within the project area. Consultation was initiated with all eight tribes prior to the submission of the document for public comment and will continue through the review process, as needed. The AB-52 consultation process will conclude prior to the adoption of the IS/MND.

Item c): ***No Impact.***

No major excavation work would occur within Department-maintained channels as part of Project activities; therefore, the potential for a paleontological or geological resource to be destroyed is low. Most of the Project activities would be performed above ground, and in-stream removal of material would be limited to recently deposited sediments and debris, generally within lined section of channel, or near conveyance structures.

Item d): ***Less Than Significant Impact.***

Project activities would not occur in known cemeteries or burial sites. Consistent with California Public Resources Code §5097.5, "no person will willingly excavate upon, or remove, destroy, injure, or deface, historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site." If human remains were uncovered, work would stop and the County Coroner would be notified pursuant to State Health and Safety Code Section 7050.5. If the remains are suspected to be Native American, the Native American Heritage Commission would be contacted as outlined in CEQA Section 15064.5. These conditions are included in mitigation measure **CUL-2**. When conducted in compliance with these existing regulations, the impact of Project work would be less than significant.

**CUL-2:** If human remains are uncovered during Project activities, all work within the vicinity of the site will stop and the County Coroner will be contacted. Upon inspection by the coroner, if the remains are suspected to be Native American, the coroner is to contact the Native American Heritage Commission within 24 hours. Work is only to resume once the site has been fully inspected and cleared by an authorized official.

*Timing/Implementation:* During maintenance work, immediately upon discovery of remains that are not obviously identifiable as non-human.

*Enforcement/Monitoring:* City of Sacramento Department of Utilities

## 3.6 Geology and Soils

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project:*** | | | | |
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | ☐ | ☐ | ☐ | ☒ |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | ☐ | ☐ | ☐ | ☒ |
| ii) Strong seismic-related ground shaking? | ☐ | ☐ | ☐ | ☒ |
| iii) Seismic-related ground failure, including liquefaction? | ☐ | ☐ | ☐ | ☒ |
| iv) Landslides? | ☐ | ☐ | ☐ | ☒ |
| b) Result in substantial soil erosion or the loss of topsoil? | ☐ | ☐ | ☒ | ☐ |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | ☐ | ☐ | ☐ | ☒ |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | ☐ | ☐ | ☐ | ☒ |

| | | | | | |
|---|---|---|---|---|---|
| e) | Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | ☐ | ☐ | ☐ | ☒ |

## Discussion

Items a) i-iv: ***No Impact.***

The Project area is not located in an area delineated as a known earthquake fault zone as indicated by maps prepared by the California Department of Conservation and the California Geological Survey (CGS 2015). Maps displaying earthquake shaking potential for California, based on data from the California Seismic Safety Commission, California Geological Survey, Governor's Office of Emergency Services, and the United States Geological Survey place the Project area in a zone of low to moderate earthquake hazard (CSSC 2003). Only very strong earthquakes along faults outside of the Project area would produce intense ground shaking within the Project area. Furthermore, the Project would not produce new structures or areas where the public might congregate that would increase risk to nearby people or existing structures in the event of ground shaking, ground failure, or landslides.

Item b): ***Less Than Significant Impact.***

Project activities may include some work, specifically sediment removal, repair of previous erosion control work and minor new erosion control work, that may temporarily allow for increased erosion potential or remove topsoil. Work areas are generally limited to the immediate vicinity of man-made structures, and only material that substantially affects flow, reduces capacity, or damages structures would be removed. Heavy equipment (bulldozers, excavators, etc.) might be employed to aid in the removal of accumulated sediment, vegetation, and debris where warranted or to repair channel structures, repair existing erosion control structures, or install new erosion control structures. Department staff generally avoids the removal of native material, but there is potential for topsoil removal or disturbance. Inadvertent, incidental or unintentional topsoil disturbance would be mitigated with mitigation measure **GEO-1**.

> **GEO-1**: Significant loss of topsoil resulting from Project activities shall be replaced with stockpiled topsoil or imported topsoil. In areas where soil has been replaced or restored, but still has potential to erode, Department staff will implement mitigation measure **GEO-2** to minimize further erosion.
>
> *Timing/Implementation*: Upon determination that maintenance activities have resulted in a significant loss of topsoil.
>
> *Enforcement/Monitoring*: City of Sacramento Department of Utilities

In non-lined channels, mechanical removal of vegetation or erosion repair work may leave areas of barren, exposed soils that could result in significant erosion if not mitigated. If it is determined that Project activities have exposed a significant area to risk of erosion, the impact would be mitigated with mitigation measure **GEO-2**.

> **GEO-2**: Significant areas of barren, exposed soils shall be covered with non-plastic, non-monofilament, biodegradable, natural fiber geotextile fabrics and/or re-seeded

and covered with such natural fiber geotextile fabrics until vegetation has returned and the soil is no longer at risk of increased erosion.

*Timing/Implementation*: Upon determination that Project activities have resulted in a significant area of barren, exposed soil that is at increased risk of erosion.

*Enforcement/Monitoring*: City of Sacramento Department of Utilities

Work would be done, where applicable, in compliance with the applicable National Pollution Discharge Elimination System Municipal Separate Storm Sewer System (MS4) Permit (NPDES No. CAS082597 Order R5-2015-0023) (herein referred to as "MS4 Permit") and Technical Procedures Manual for Grading and Erosion and Sediment Control.

The MS4 Permit is a region-wide general permit covering the Cities of Citrus Heights, Elk Grove, Folsom, Galt, Rancho Cordova, Sacramento, and some areas of the County of Sacramento, that allows and regulates stormwater discharges into surface waters. As a condition of the permit the permittees must, among other actions, "protect against increased erosion of channel beds and banks, sediment pollution generation, or other impacts to beneficial uses and stream habitat due to increased erosive forces" (CVRWQCB 2015), and requires adherence to best management practices (BMPs) that control sediment and pollution, and reduce erosion.

The City of Sacramento Department of Utilities has developed the City of Sacramento Department of Utilities Administrative and Technical Procedures Manual for Grading and Erosion and Sediment Control. The manual details the City's policies and design standards for grading, erosion, and sediment control measures, which are "driven collectively by the regulations within the Regional MS4 Permit" (City of Sacramento 2013). Procedures for slope design, temporary erosion and sediment control measures, as well as post construction BMPs are established including detailed fact sheets for site planning and management, erosion control, sediment control, runoff control, and good housekeeping/materials management. Erosion control practices include task scheduling and sequencing, hydroseeding, mulching, drill seeding, grassy swales and buffers, rolled erosion control products, soil binders, and soil preparation/roughening (City of Sacramento 2013).

Erosion and loss of top soil would be largely controlled when work is performed in observance of these guidance documents and implementation of appropriate BMPs. Substantial losses of topsoil would be mitigated by **GEO-1**, and potential erosion would be mitigated by **GEO-2**. Thus, the impacts of erosion and topsoil loss from the Project would be less than significant.

Item c) through e): ***No Impact.***

The Project is limited to maintenance work in existing channels. None of the work would take place on slopes or in areas with potential for landslides. The Project does not involve activities that could cause lateral spreading, subsidence, liquefaction, or collapse. No new construction would occur that could be affected by expansive soil. The Project would not require the installation of a septic tank.

## 3.7 Greenhouse Gas Emissions

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project:*** | | | | |
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | ☐ | ☐ | ☒ | ☐ |
| b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | ☐ | ☐ | ☒ | ☐ |

### Discussion

Item a) & b): ***Less Than Significant Impact.***

The Project would require the use of pick-up trucks or other service vehicles for purposes of transporting personnel and equipment to locations where they are needed. Pick-up trucks would also be used for purposes of site reconnaissance before, during, and after maintenance work. Work is typically brief in duration and preformed infrequently. Although short-term vehicle equipment emissions would be generated; these emissions would be minor and account for a small additional contribution to emissions. As a result, Project activities are not expected to be cumulatively considerable. To minimize impacts, equipment shall be properly tuned and muffled, and unnecessary idling would be minimized. Generally, one or two vehicles are used at one time at a work site. As needed, the District may use gas and diesel fuel equipment. The use of vehicles and fuel powered equipment described above are not expected to conflict with or violate greenhouse gas emission standards.

## 3.8 Hazards and Hazardous Materials

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project:*** | | | | |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | ☐ | ☐ | ☒ | ☐ |
| b) 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? | ☐ | ☐ | ☒ | ☐ |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | ☐ | ☐ | ☒ | ☐ |
| d) 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 it create a significant hazard to the public or the environment? | ☐ | ☐ | ☐ | ☒ |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ |

| | | | | | |
|---|---|---|---|---|---|
| g) | Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☐ | ☒ |

| | | | | | |
|---|---|---|---|---|---|
| h) | 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? | ☐ | ☐ | ☐ | ☒ |

## Discussion

Item a) and b): ***Less Than Significant Impact.***

Project activities would utilize fuel-powered equipment, requiring the use of gasoline, diesel fuel, oil, grease, and other hazardous materials that are required for vehicle and equipment maintenance. The Department would comply with the regulations outlined in the Sacramento City Code 8.60.010 (SCC 2016) for hazardous materials, that the Department would bear the responsibility of hazardous material release including the voluntary cleanup of manageable spills, or the incurred costs of cleanup if necessary.

When possible, workers would avoid performing maintenance, including re-fueling, of equipment or vehicles outside of Department facilities. If refueling or maintenance must take place outside of Department facilities, it would occur outside of environmentally sensitive areas to the extent practicable (e.g. away from riparian habitat, away from slopes that could direct spills into waterways, etc.). Hazardous materials would be handled with care, appropriate containment devices would be used, and spills would be handled in accordance with good housekeeping procedures. Department employees who use or maintain fuel-powered equipment would be trained to contain spilled material and would carry absorbent materials such as vermiculite, diatomaceous earth, kitty litter, etc. and/or petroleum sorbents (“pigs”, “pillows”, etc.). Spills would be reported, as required, and affected material would be properly disposed of or decontaminated.

Item c): ***Less Than Significant Impact.***

There are schools located within ¼ mile of locations where maintenance work may occur. However, Department personnel would be present at maintenance sites and would keep unauthorized people (including students) a safe distance away from the site. Access to many Project sites is restricted by fences and/or gates. Hazardous materials such as fuels, oils, and equipment maintenance materials would be kept out of reach from children and removed from the site at the end of the workday. These materials are commonly present on school grounds and do not pose a significant risk for children when properly handled and stored.

Item d): ***No Impact.***

No maintenance sites are listed on hazardous waste site lists compiled in Government Code Section 65962.5.

Item e) through f): ***No Impact.***

There are channels within 2 miles of public and/or private airstrips where routine maintenance activities may occur. The airports include: Sacramento International Airport, Sacramento Executive Airport, Lake Park Helistop Heliport, McClellan Airfield, and UC Davis Medical Center Life Flight Base Heliport. Project activities would not, under normal

conditions, result in a safety hazard for people residing or working in the Project area. No work would take place within an airport or airstrip that would affect normal operations of that facility. No routine maintenance work would create obstructions taller than the maximum height of pre-existing objects or result an obstruction of views for incoming or outgoing aircraft.

Item g): ***No Impact.***

No roadways would be affected by the Project and so could not affect emergency evacuation routes.

Item h): ***No Impact.***

The Project would not increase fire hazard at Project sites. Vehicle and equipment access and parking near or at Project sites would be organized in a manner to minimize contact with naturally occurring, potentially combustible materials such as dry grass. Further, Project activities such as mowing are done to maintain the channels consistent with local fire code requirements to reduce property damage by fires.

## 3.9 Hydrology and Water Quality

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project:*** | | | | |
| a) Violate any water quality standards or waste discharge requirements? | ☐ | ☐ | ☒ | ☐ |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | ☐ | ☐ | ☐ | ☒ |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | ☐ | ☐ | ☒ | ☐ |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site? | ☐ | ☐ | ☒ | ☐ |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | ☐ | ☐ | ☒ | ☐ |
| f) Otherwise substantially degrade water quality? | ☐ | ☐ | ☒ | ☐ |
| g) Place housing within100-year flood | ☐ | ☐ | ☐ | ☒ |

| | | | | | |
|---|---|---|---|---|---|
| | hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | | | | |

| | | | | | |
|---|---|---|---|---|---|
| h) | Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | ☐ | ☐ | ☐ | ☒ |

| | | | | | |
|---|---|---|---|---|---|
| i) | Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | ☐ | ☐ | ☐ | ☒ |

| | | | | | |
|---|---|---|---|---|---|
| j) | Inundation by seiche, tsunami, or mudflow? | ☐ | ☐ | ☐ | ☒ |

## Discussion

Item a): ***Less Than Significant Impact.***

Project activities are not expected to result in conditions that would exceed water quality standards or violate waste discharge requirements. Potential short-term water quality issues may include, but are not limited to: a) increased turbidity and TSS; b) pollutant release from sediment and/or soil bound constituents; and c) contributions of oil and grease and/or petroleum hydrocarbons from gas or diesel powered equipment used in or around channels.

Sediment removal activities conducted as part of Project activities would be short in duration. As necessary, the Department would obtain appropriate USACE and RWQCB permits (Section 404 and Section 401 permits). Sediment removal work could temporarily increase turbidity and TSS if sand, silt or sediment in the channel is disturbed. Pollutants bound within sediments could also be stirred up, exposed to the water column, and transported downstream. Typically, sand, silt and sediment removal would be done in areas that have been dewatered, or would be completed during the summer or early fall when channels are dry or mostly dry. Further, sediment removal would typically be limited to the immediate vicinity of man-made facilities or structures, or within lined channels. If sediment removal must be completed when water is present, the impacts to water quality would be short in duration and measures would be taken to avoid and minimize impacts. Examples of BMPs used to reduce impacts include using the least invasive equipment necessary to achieve the desired result, and minimizing the area of disturbance and the amount of time spent disturbing the channel bed. Due to the timing of work, dewatering of the channel and/or implementation of avoidance and minimization BMPs, there would be no significant impact to water quality.

Slope and erosion repair or erosion control activities could have a temporary impact on water quality. The removal of vegetation by bulldozing or excavating may expose soils to increased risk of erosion and transport of sediment and sediment-bound pollutants within the channel. Slope work may be performed to repair areas of channel erosion; if necessary, a Sacramento County Grading Permit would be obtained and work would be subject to pertinent BMPs. The Department would schedule slope work and/or erosion

control activities so that permanent soil stabilization and erosion control measures have been fully implemented prior to the wet season.

The potential of pollution from spills of gas and diesel powered equipment is low, but possible. Power tools would only be used within channels where necessary, and hand tools would be used where practical. Some equipment would require gasoline, diesel fuel, oil, grease, and/or other petroleum based products for operation and maintenance. Workers would avoid performing maintenance (including refueling) on these tools outside of Department facilities. If refueling or maintenance must take place outside of Department facilities, it would occur outside of environmentally sensitive areas to the extent practicable (e.g. away from riparian habitat, away from slopes that could direct spills into waterways, etc.) and potential polluting materials would be handled with care, appropriate containment devices would be used, and spills would be handled in accordance with good housekeeping procedures. Department employees who use or maintain fuel-powered equipment would be trained to contain spilled material and would carry vermiculite, diatomaceous earth, kitty litter, and/or petroleum sorbents ("pigs", "pillows", etc.). Spills would be reported, as required, and affected material would be properly disposed of or decontaminated. Power equipment would be properly tuned, muffled, cleaned, and checked for leaks prior to use.

Item b): ***No Impact.***

The Project would not require the use of groundwater and would not result in the creation or destruction of impervious ground surface, and therefore there has no impact on groundwater recharge or supplies.

Items c), d), & e): ***Less Than Significant Impact.***

The Project would not significantly alter drainage patterns. Channel alteration is limited to the removal of vegetation, debris, trash and sediment to increase channel capacity and conveyance effectiveness, and is subject to CFDW Streambed Alteration Agreement conditions. No impervious ground surfaces would be created, and there would be no change in runoff rate or volume. No changes would be made to the flow path or course of a channel. Mitigation measures would be implemented where appropriate to reduce erosion and siltation (see Mitigation Measure **GEO-2**). Slope and erosion repair work, if necessary, would be minimal and would not substantially increase the rate or amount of surface runoff directed to a channel or create flooding.

Item f): ***Less Than Significant Impact.***

See response to item a).

Items g), h), i), & j): ***No Impact.***

Since the Project involves no new construction, no housing or other structures would be placed within a designated 100-year floodplain. The Project would not alter the floodplain or have the potential to redirect flood flows. The Project would not be subject to tsunami or inundation due to mudflows, nor would the Project expose personnel to a substantial risk due to seiche waves or from flooding as a result of a catastrophic levee or dam failure.

## 3.10 Land Use Planning

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project:*** | | | | |
| a) Physically divide an established community? | ☐ | ☐ | ☐ | ☒ |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☐ | ☒ |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | ☐ | ☐ | ☐ | ☒ |

### Discussion

Item a): ***No Impact.***

The Project would be implemented within the Department's existing stream channels. Nearby housing would not be affected. The Project would not result in the division of an established community.

Item b): ***No Impact.***

The Project would not create new land uses or alter the existing uses and would not conflict with applicable land use plan, policy or agency regulation.

Item c): ***No Impact.***

Work would only take place in existing channels and would not convert land for other use. The Project does not conflict with known plans.

## 3.11 Mineral Resources

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project:*** | | | | |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | ☐ | ☐ | ☐ | ☒ |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan other land use plan? | ☐ | ☐ | ☐ | ☒ |

### Discussion

Items a) and b): ***No Impact.***

The Project would remove only targeted material such as accumulated sediment, debris, trash, and overgrown vegetation from Project sites. No mineral resources would be impacted by the Project.

## 3.12 Noise

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project result in:*** | | | | |
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | ☐ | ☐ | ☐ | ☒ |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | ☐ | ☐ | ☐ | ☒ |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☐ | ☒ |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☒ | ☐ |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☐ | ☒ |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☐ | ☒ |

## Discussion

Items a): ***No Impact.***

The City of Sacramento 2035 General Plan includes established standards for the highest level of noise exposure that is regarded as "normally acceptable" for different land use types. The plan also establishes a standard for penalizing noise that occurs during night-time hours when people tend to be more sensitive to sound. Noise exposure is the measure of noise over a period of time, whereas noise level is the measure of noise at a given instant in time.

Noise may be created by the use of vehicles and maintenance equipment that exceed these limits on a temporary and infrequent basis (e.g. noise level) but are not likely to exceed the limits on a time-weighted basis (e.g. noise exposure). Given that exceedances in acceptable noise levels would be temporary and occur during daytime hours, the effects are inconsequential and thus have no impact.

Items b): ***No Impact.***

The Project would not drill, core, or otherwise drive through topsoil to the underlying bedrock or employ percussive tools that would impact bedrock and would not generate groundborne noise or vibration, thus no person could be exposed to groundborne noise or vibration.

Items c): ***No Impact.***

Noise generated by the Project would be temporary and infrequent. Noise would be intermittent while work is being performed and would stop completely upon completion of the maintenance activity at that site. Upon completion, ambient noise levels would return to their pre-existing levels. Therefore, the Project would not result in a substantial increase in ambient noise levels.

Item d): ***Less Than Significant Impact.***

Noise generated by the Project would be at ambient levels similar to those produced by road traffic or landscaping equipment. If heavy equipment is utilized, noise may exceed pre-existing ambient levels on a temporary and infrequent or periodic basis, and would occur during regular day-time work hours. Noise-producing equipment would be properly tuned and muffled to reduce operational noises and unnecessary idling would be avoided. Increases in ambient noise level associated with Project activities are expected to be minor and infrequent (e.g. a few days per year at each site), resulting in a less than significant impact to ambient noise levels in the Project vicinity.

Items e) and f): ***No Impact.***

Sacramento International Airport, Sacramento Executive Airport, Lake Park Helistop Heliport, McClellan Airfield, and UC Davis Medical Center Life Flight Base Heliport are located within the Project area and may be within 2 miles of a work site. However, the Project would not result in excessive noise levels for people working or living within these areas.

## 3.13 Population and Housing

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project:*** | | | | |
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | ☐ | ☐ | ☐ | ☒ |
| b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ |

### Discussion

Items a) through c): ***No Impact.***

No new homes, business areas, roads or other infrastructure would be created nor would new homes, business areas, roads or other infrastructure be required. No displacement of existing homes or people would occur.

## 3.14 Public Services

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | ☐ | ☐ | ☐ | ☒ |
| Fire protection? | ☐ | ☐ | ☐ | ☒ |
| Police protection? | ☐ | ☐ | ☐ | ☒ |
| Schools? | ☐ | ☐ | ☐ | ☒ |
| Parks? | ☐ | ☐ | ☐ | ☒ |
| Other public facilities? | ☐ | ☐ | ☐ | ☒ |

### Discussion

Item a): ***No Impact.***

No new homes, business areas, roads or other infrastructure would be created. The Project would not alter or require the construction of new schools, parks, governmental facilities, or other public facilities, nor would it increase the need for police or fire services, or other public service infrastructure.

## 3.15 Recreation

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | ☐ | ☐ | ☐ | ☒ |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse effect on the environment? | ☐ | ☐ | ☐ | ☒ |

### Discussion

Items a) and b): ***No Impact.***

Project sites might be within, or in the immediate vicinity of existing parks or other recreational facilities, but would not expand facilities or create new features that would result in the increased the use of, or the acceleration of the deterioration of these facilities. The Project does not include recreational facilities, and would not create the need for the construction or expansion of recreational facilities which might have an adverse effect on the environment.

## 3.16 Transportation/Traffic

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project:*** | | | | |
| a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | ☐ | ☐ | ☐ | ☒ |
| b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? | ☐ | ☐ | ☐ | ☒ |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks? | ☐ | ☐ | ☐ | ☒ |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | ☐ | ☐ | ☐ | ☒ |
| e) Result in inadequate emergency access? | ☐ | ☐ | ☐ | ☒ |
| f) Result in inadequate parking capacity? | ☐ | ☐ | ☐ | ☒ |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? | ☐ | ☐ | ☐ | ☒ |

### Discussion

Items a) and b): ***No Impact.***

The Project would involve the use of vehicles for transporting personnel and equipment from Department facilities to work sites. Generally, activity would be limited to one of two vehicles at a given time and would not directly lead to a substantial increase in traffic

relative to the existing traffic load. The Project would be limited to routine maintenance activities and would not create new features that could indirectly lead to increased traffic related to members of the general population coming to or leaving from Project sites.

Item c:) ***No Impact.***

The Project would be limited to activities at the ground level and would have no impact on air traffic.

Item d:) ***No Impact.***

The Project would not involve new construction of, or alteration to, roads. It would not create new land use that would change the existing patterns and types of traffic on adjacent and nearby roads (e.g. farm equipment).

Item e:) ***No Impact.***

The Project would not destroy, modify, or block roadways in a manner that would result in inadequate emergency access.

Item f:) ***No Impact.***

The Project would not decrease the availability of parking nor would it create a demand for increased parking.

Item g:) ***No Impact.***

The Project would not impact or conflict with policies, plans, or programs that support alternative transportation.

## 3.17 Utilities and Service Systems

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| ***Would the Project:*** | | | | |
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | ☐ | ☐ | ☐ | ☒ |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☐ | ☒ |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☐ | ☒ |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | ☐ | ☐ | ☐ | ☒ |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | ☐ | ☐ | ☐ | ☒ |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | ☐ | ☐ | ☐ | ☒ |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | ☐ | ☐ | ☐ | ☒ |

### Discussion

Items a) & b), and e) through g): ***No Impact.***

The Project would not discharge to a wastewater treatment plant and does not generate solid waste.

Item c): ***No Impact.***

The Project would not require the construction of new storm water drainage facilities or expansion of existing facilities; project activities include the routine maintenance of existing storm water drainage facilities.

Item d): ***No Impact.***

The Project has no known influence on the entitlements or resources utilized by the Department.

## 3.18 Mandatory Findings of Significance

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? | ☐ | ☒ | ☐ | ☐ |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | ☐ | ☐ | ☒ | ☐ |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | ☐ | ☐ | ☐ | ☒ |

### Discussion

Item a): ***Less Than Significant with Mitigation Incorporated.***

The Project could result in degradation to the environment without the incorporation of avoidance, minimization or mitigation measures. Potential environmental effects are discussed in Section 3.3 (Air Quality), Section 3.6 (Geology and Soil), and Section 3.9 (Hydrology and Water Quality). By adhering to the Department's standard operation

procedures and best management practices presently utilized by the Department, impacts to air quality would be less than significant. Mitigation measures **GEO-1** and **GEO-2** reduce potential impacts from erosion and soil loss to less than significant levels. Project activities that could impact water quality and hydrology would be subject to Department implemented BMPs and, where applicable, regulation by County Grading Permits, USACE 404 and/or RWQCB 401 permit conditions and would result in less than significant impact.

The Project could impact biological resources including plants, animals, and critical habitat, but impacts would be reduced to less than significant levels by adherence to mitigation measures **BIO-1** through **BIO-12**. These measures establish guidelines for staff training, planning, timing, completion, and monitoring of routine maintenance activities. They set fourth procedures for identifying and avoiding sensitive species and habitat, and prescribe actions for responding to encounters with sensitive species. Development of a Nesting Bird Mitigation and Monitoring Plan and a Habitat Mitigation and Monitoring Plan, and implementation of mitigation measures will reduce the impacts to riparian habitat, nesting birds and special status species to less than significant with mitigation incorporated.

There is a low potential for cultural resources to be impacted by the Project. Mitigation measures **CUL-1** and **CUL-2** further reduce the likelihood of significant impacts in the event that archeological resources or human remains are encountered during routine maintenance activities. In accordance with Assembly Bill 52 (AB-52), the NAHC was consulted during the drafting of this IS/MND. The NAHC provided a contact list of eight (8) tribes that have identified potential cultural resources within the project area. Consultation was initiated with all eight tribes prior to the submission of the document for public comment and will continue through the review process, as needed. The AB-52 consultation process will conclude prior to the adoption of the IS/MND.

Item b): ***Less Than Significant Impact.***

Impacts of the Project would be cumulatively less than significant. The routine maintenance activities associated with the Project include temporary impacts (i.e. tree trimming on access roads, mowing) With the exception of the modification of habitat along channels (i.e. erosion control work that requires the installation of rock or gabions), most of the impacts discussed in the above sections are temporary. Proposed Project activities include the removal of non-native species, sediment removal and erosion control repairs; these activities are beneficial to channel habitat and water quality. Further, keeping track of incremental effects from activities over the duration of the Project through the Habitat Mitigation and Monitoring Plan will allow the Department to reduce the cumulative effect of the Project by offsetting impacts through mitigation, if necessary. The majority of the impacts would be caused by the activity itself, not by the product of the activity. Since the Project is channel and drainage infrastructure maintenance, no new structures would be produced, no land would be converted to a different use, and generally, once maintenance work is completed the area would return to its baseline condition.

Item c): ***No Impact.***

The Project would not have effects to the environment that would cumulatively cause substantial adverse effects to humans, either directly or indirectly.

# 4 MITIGATION MEASURES

## 4.1 Summary of Mitigation Measures

| Mitigation Measure | Description | Enforcement | Timing |
|---|---|---|---|
| **Aesthetics** | | | |
| AES-1 | Work will be conducted in compliance with Sacramento City Code 12.56 “Tree Planting, Maintenance, and Conservation” and Sacramento County Code 19.12 “Tree Preservation and Protection”. | City of Sacramento Department of Utilities | When work will remove or alter a protected tree, or when work will be conducted within the dripline of a protected tree. |
| **Biological Resources** | | | |
| BIO-1 | Prior to conducting Project activities, Department employees working on the project site shall receive training from a CDFW approved biological monitor that discusses the identification of the ten special status species identified as having the potential to be present in the Project area. Training will also include information about the distribution and behavior of the species, habitat identification, avoidance measures, legal protections and penalties for violations. The Department will also distribute reference cards with this information and make these cards available to workers on-site. As needed, interpretation shall be available for non-English speakers. Employees who complete the training shall sign a form indicating that they have received the training and understand the content, and the forms will be retained by the Department. | City of Sacramento Department of Utilities | Annually, prior to commencing work within channels, with refresher training as needed. |
| BIO-2 | If Department staff encounter or suspect the presence of special status plant species that may be impacted from Project activities, a qualified biologist will be contacted to confirm the species identification. If confirmed, the consultant and/or Department staff will clearly mark the locations of special status plant species by flagging, staking, or fencing the plants, and, as necessary, a buffer area to prevent disturbance. | City of Sacramento Department of Utilities | Upon discovery of, or suspected presence of special status plant species that may be adversely impacted by Project activities. |

| Mitigation Measure | Description | Enforcement | Timing |
|---|---|---|---|
| BIO-3 | A consultation with CDFW shall be initiated if Project activities will disturb individual or populations of a special status plant species within the Project area. If the special status plant cannot be avoided, mitigation including transplanting of affected plants to nearby suitable habitat will be considered. Transplanting will be overseen by a qualified biologist and information including the number of plants, their condition, site conditions at the removal and transplant locations will be documented. The Department shall work with CDFW to establish a relocation plan that includes a monitoring plan that establishes criteria for success. | City of Sacramento Department of Utilities, CDFW | When special status plant species are present in an area subject to Project activities that cannot otherwise be avoided. |
| BIO-4 | Project activities must be conducted in accordance with the 1999 USFWS Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999). | City of Sacramento Department of Utilities, USFWS | When Project activities has the potential to disturb elderberry (*Sambucus spp.*) plants. |
| BIO-5 | If a special status species is encountered during Project activities, work shall stop immediately and may only resume when the species has moved out of the area on its own volition, or has been moved by a qualified biologist. | City of Sacramento Department of Utilities | During maintenance activity, upon encountering a special status species. |
| BIO-6 | When using a mower to cut vegetation in Project areas with potential GGS habitat, the deck of the mower must be set to a height of no less than 6 inches above the ground. | City of Sacramento Department of Utilities | When using a mower to cut vegetation in giant garter snake sensitive habitat. |
| BIO-7 | Sub-surface ground disturbance, (i.e. excavation) associated with repair of previous erosion control work, minor erosion control work, obstruction removal or channel slope repair activities will be done during the GGS active season (May 1 through October 1). If activities fall outside of this period, CDFW and/or the USFWS Sacramento Office will be consulted to determine if additional measures are necessary to minimize and avoid impacts to GGS. | City of Sacramento Department of Utilities | During project planning, prior to work involving sub-surface ground disturbance within potential giant garter snake habitat. |

| Mitigation Measure | Description | Enforcement | Timing |
|---|---|---|---|
| BIO-8 | Prior to sub-surface ground disturbance, (i.e. excavation) associated with repair of previous erosion control work, minor erosion control work, obstruction removal or channel slope repair activities where a survey has found suitable GGS habitat, the Department will have a qualified biologist on-site. The qualified biologist will have the authority to stop work if a GGS is encountered. Prior to commencing any ground-disturbing activities, the qualified biologist will conduct a pre-construction survey of the project site and a 100-foot buffer around the project site. If a GGS is encountered, CDFW will be immediately notified and work will be stopped until the snake has moved out of the area on its own. If the GGS does not leave, CDFW will be consulted. | City of Sacramento Department of Utilities | During project planning, prior to, and during work involving sub-surface ground disturbance within potential giant garter snake habitat. |
| BIO-9 | Where work timing does not adequately protect sensitive species from sub-surface ground disturbance, the Department shall obtain coverage under an incidental take permit from the USFWS and CDFW. | City of Sacramento Department of Utilities, USFWS, CDFW | Prior to work involving sub-surface ground disturbance, where work timing does not adequately protect sensitive species. |
| BIO-10 | Where healthy, mature trees must be removed that provide nesting habitat for sensitive species, the Department shall be responsible for the replacement of those trees at a 1:1 rate (1” DBH of tree replaced to 1” DBH of tree removed). If practical, the replacement planting should be located near the area of the removed tree and be of the same species. If the tree cannot be replaced on-site, a replacement site should be selected that provides similar surrounding habitat to the area where the tree was removed. No replacement is required for non-native trees or trees that are less than 4 inches DBH. A plan for monitoring and protecting the replacement tree shall be implemented by the Department until the tree becomes established. | City of Sacramento Department of Utilities | After removal of healthy, mature trees that provide habitat to sensitive species. |

| Mitigation Measure | Description | Enforcement | Timing |
|---|---|---|---|
| BIO-11 | Upon encountering an active bird nest in the maintenance area during the nesting bird season, work will stop. A qualified biologist will be consulted to conduct a survey of the work site for active nests in and adjacent to the maintenance area. Work will only resume when the biologist has determined that no active nests are present and/or established a buffer to prevent nest disturbance. | City of Sacramento Department of Utilities | During maintenance activities, when sensitive bird species are observed nesting within the maintenance area. |
| BIO-12 | Routine maintenance activities shall be timed so that activities with potential to adversely affect native and special status avian species are conducted outside of the nesting season, which generally occurs between February 1 and August 31. In the event that work cannot be scheduled outside of this timeframe, mitigation measure **BIO-11** will be followed to minimize impacts to nesting birds. | City of Sacramento Department of Utilities | During Project planning. |
| **Cultural Resources** | | | |
| CUL-1 | If an archeological resource is uncovered during maintenance activities, work will stop and an archeological expert will be consulted. Work will resume when cleared by the expert. | City of Sacramento Department of Utilities | During maintenance activities, when an archeological resource is discovered. |
| CUL-2 | If human remains are uncovered during Project activities, all work within the vicinity of the site will stop and the County Coroner will be contacted. Upon inspection by the coroner, if the remains are suspected to be Native American, the coroner is to contact the Native American Heritage Commission within 24 hours. Work is only to resume once the site has been fully inspected and cleared by an authorized official. | City of Sacramento Department of Utilities | During maintenance work, immediately upon discovery of remains that are not obviously identifiable as non-human. |
| **Geology and Soils** | | | |
| GEO-1 | Any significant loss of topsoil resulting from maintenance activities shall be replaced with stockpiled topsoil or imported topsoil. In areas where soil has been replaced or restored, but still has potential to erode, Department staff will implement mitigation measure **GEO-2** to minimize further erosion | City of Sacramento Department of Utilities | Upon determination that maintenance activities have resulted in a significant loss of topsoil. |

| Mitigation Measure | Description | Enforcement | Timing |
|---|---|---|---|
| GEO-2 | Any significant areas of barren, exposed soils shall be covered with non-plastic, non-monofilament, biodegradable, natural fiber geotextile fabrics or re-seeded and covered with such natural fiber geotextile fabrics, until vegetation has returned and the soil is no longer at risk of increased erosion. | City of Sacramento Department of Utilities | Upon determination that maintenance activities have resulted in a significant area of barren, exposed soil that is at increased risk of erosion. |

## 4.2 Mitigation Monitoring and Reporting Program

To maintain compliance with mitigation measures over the course of the Project, a Mitigation Monitoring and Reporting Program ("MMRP") would be implemented by the Department to track the utilization frequency and efficacy of the proposed mitigation measures. Records shall be kept by Department supervisors and reviewed annually by. Examples of the records to be kept include training seminar dates and attendance, survey dates and findings, sensitive species occurrence incident forms or reports, and other applicable records. Upon review, the Department may consult with CDFW regarding the addition, discontinuation, or modification of mitigation measures.

# 5 REFERENCES

Barr, C. 1991. The Distribution, Habitat, and Status of the Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus*. US Fish and Wildlife Service. Sacramento, CA.

California Air Resources Board (CARB). 2015. Area Designation Maps / State and National [maps]. (scale not specified). Air Quality Planning and Science Division. Available online: https://www.arb.ca.gov/desig/adm/adm.htm. [Accessed 11/7/16].

California Code of Regulation (CCR) Title 14 CCR, § 753 Chapter 3, § 15064.5 Available online: http://resources.ca.gov/ceqa/guidelines/art5.html.

California Department of Conservation. 2015. Division of Land Resource Protection. Sacramento County Williamson Act FY 2015/2016 [map]. (ca. 1:100,000). Sacramento, CA. Available online: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Sacramento_15_16_WA.pdf. [Accessed 11/7/16].

California Department of Fish and Wildlife (CDFW). 2015. California Forests and Timberlands [map]. (scale not specified). Available online: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109917&inline. [Accessed 11/7/16].

California Fish and Game Code (FGC). 2016a. Chapter 6 §1600. Fish and Wildlife Protection and Conservation.

California Fish and Game Code (FGC). 2016b. Chapter 1.5, Article 3 § 2081. Taking, Importation, Exportation, or Sale.

California Geological Survey (CGS). 2015. CGS Information Waterhouse Regulatory Maps [online interactive map]. Available online: http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps. [Accessed 11/3/16].

California Government Code § 65962.5. Available online: http://codes.findlaw.com/ca/government-code/gov-sect-65962-5.html.

California Health & Safety Code (HSC) § 7050.5 Available online: http://codes.findlaw.com/ca/health-and-safety-code/hsc-sect-7050-5.html.

California Natural Diversity Database (CNDDB). 2016. Wildlife & Habitat Data Analysis Branch, Department of Fish and Wildlife. [Accessed June 2016].

California Public Resources Code (PRC) §5097.5. Available online: http://codes.findlaw.com/ca/public-resources-code/prc-sect-5097-9.html.

California Regional Water Quality Control Board Central Valley Region (CVRWQCB). 2015. Water Quality Order R5-2015-0023; Cities of Citrus Heights, Elk Grove, Folsom, Galt, Rancho Cordova, Sacramento, and County of Sacramento Storm Water Discharges from Municipal Separate Storm Sewer System; NPDES No. CAS082597.

California Seismic Safety Commission (CSSC). 2003. Earthquake Shaking Potential for the San Francisco Bay Region [map]. (scale not specified). Available online: http://www.seismic.ca.gov/pub/intensitymaps/sfbay_county_print.pdf. [Accessed 11/7/16].

City of Sacramento. 2013. Administrative and Technical Procedures Manual for Grading and Erosion and Sediment Control. Department of Utilities. Sacramento, CA. October 2013.

City of Sacramento. 2014. Planning and Development Code. Base Zones [map]. (scale not specified) Available online: http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Maps/Sacramento_Zoning_Ev10.pdf. [Accessed 11/7/16].

City of Sacramento. 2015. Sacramento 2035 General Plan Background Report. Available online: http://www.cityofsacramento.org/Community-Development/Resources/Online-Library/General-Plan. [Accessed 10/11/16].

City of Sacramento. 2016. Sacramento City Code Section 4 Chapter 12.56. Trees Generally. Available online: http://www.qcode.us/codes/sacramento/view.php. [Accessed 10/29/16].

CNPS, Rare Plant Program. 2016. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Available online: http://www.rareplants.cnps.org. [Accessed November 2016].

County of Sacramento. 2008. American River Parkway Plan 2008. Prepared by the County of Sacramento Municipal Services Agency, Planning and Community Development Department. Available online: http://www.regionalparks.saccounty.net/Parks/Documents/Parks/ARPP06-021909_sm.pdf. [Accessed 11/7/16].

ESA § 10; 16 U.S.C § 153 “Exceptions”. Available online: http://codes.lp.findlaw.com/uscode/16.

Hansen, G. E. and J. M. Brode. 1980. Status of the giant garter snake, *Thamnophis couchi gigas* (Fitch). California Department of Fish and Game. Inland Fisheries Endangered Species Program Special Publication Report No. 80-5.

Holland, D.C. 1994. The Western Pond Turtle: Habitat and History. Oregon Department of Fish and Wildlife. Wildlife Diversity Program. Portland Oregon.

Moyle, P. B. 2002. Salmon and Trout, Salmonidae - Rainbow Trout, (*Oncorhynchus mykiss*) in Inland Fishes of California. Los Angeles, California: University of California Press, 271-282.

National Marine Fisheries Service (NMFS). 2014. West Coast Region. Central Valley Chinook Salmon and Steelhead Recovery Plan. Appendix A: Central Valley Watershed Profiles. July 2014.

National Oceanic and Atmospheric Administration (NOAA). 2016., Climate at a Glance: U.S. Time Series. National Centers for Environmental Information. Published November 2016. Available online: http://www.ncdc.noaa.gov/cag/. [Accessed 11/22/2016].

Natomas Basin Habitat Conservation Plan (NBHCP). 2003. City of Sacramento, And Sutter and Sacramento Counties, California: Adoption And Implementation Of The Natomas Basin Habitat Conservation Plan: EPA number: 030188F, Final EIS (Volume I). 776 pages, Draft EIS

(Volume II)--321 pages, Habitat Management Plan (Volume 1)--401 pages, Habitat Management Plan (Volume 2)--298 pages, April 24, 2003.

Sacramento City Code. Section 4. Chapter 12.56. Tree Planting, Maintenance, and Conservation. Ordinance No. 2016-0026. Adopted by City Council August 4, 2016. Available online: http://www.qcode.us/codes/sacramento/view.php?topic=12-12_56.

Sacramento City Code. (SCC) Title 8, Chapter 8.600.10 "Hazardous Materials Cleanup". Ordinance 2016-0042. Available online: http://www.qcode.us/codes/sacramento/.

Sacramento County. 2016. Sacramento County Code, Title 19, Chapter 12: Tree Preservation and Protection. Sacramento, CA. Available online: http://qcode.us/codes/sacramentocounty/.

U.S. Fish and Wildlife Service (USFWS). 1999. Conservation Guidelines for the Valley Elderberry Longhorn Beetle. Sacramento Fish and Wildlife Office. Sacramento, CA.

U.S. Fish and Wildlife Service (USFWS). 2016. IPaC Trust Resources Report. Information for Planning and Conservation. Available online: https://ecos.fws.gov/ipac. [Accessed October 2016].

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5.) Crystal Martinez-Alire, Ione Band of Miwok Indians
6.) Cosme Valdez, Nashville-El Dorado Miwok
7.) Nicholas Fonseca, Shingle Springs Band of Miwok Indians
8.) Grayson Coney, Tsi Akim Maidu
9.) Don Ryberg, Tsi Akim Maidu
10.) Gene Whitehouse, United Auburn Indian Community of the Auburn Rancheria
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12.) Marcos Guerrero, United Auburn Indian Community of the Auburn Rancheria
13.) Raymond Hitchcock, Wilton Rancheria

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6.) Stephen Burkholder, Project Scientist, Blankinship & Associates, Inc.
7.) Steve Metzger, Staff Scientist, Blankinship & Associates, Inc.
8.) Kenny Tanaka, EIT, Blankinship & Associates, Inc.

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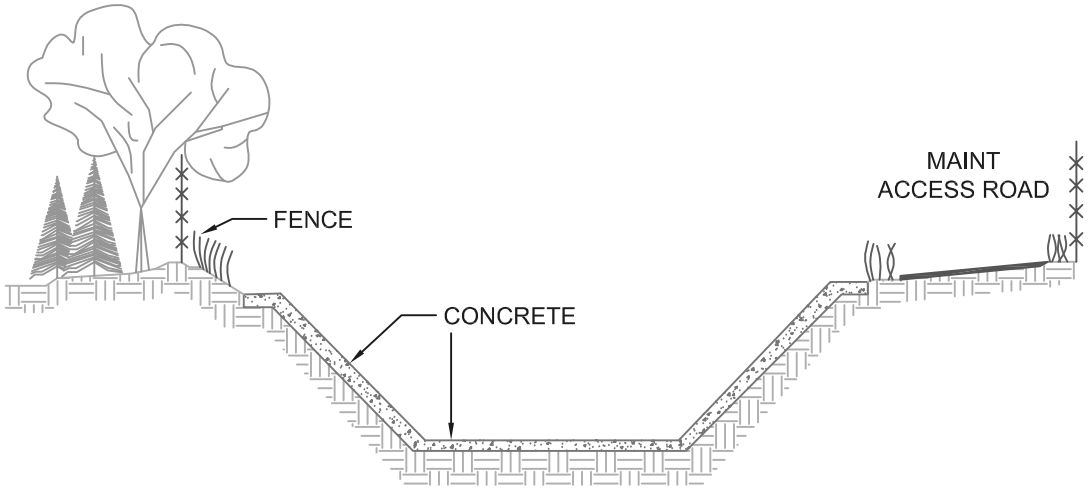
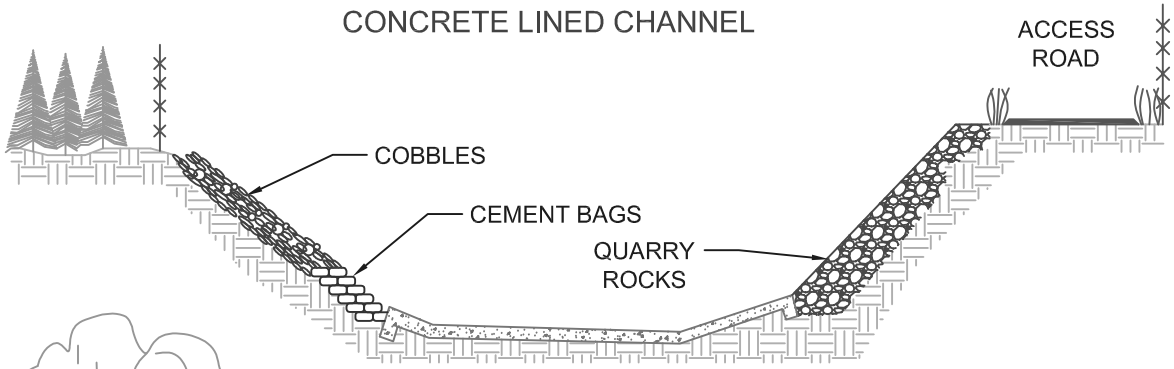
# Appendix A

Project Activity Example Cut Sheets




CONCRETE LINED CHANNEL

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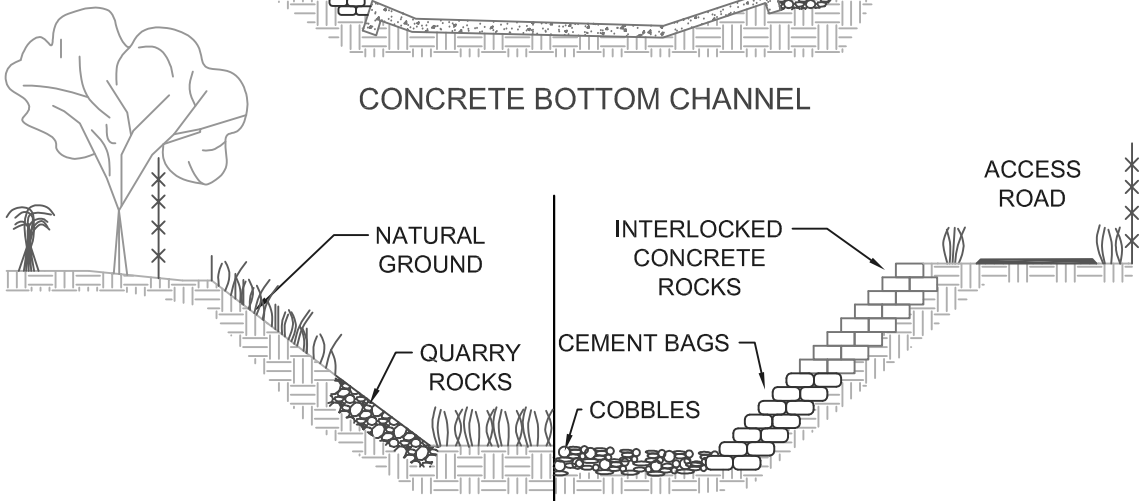


IMPROVED CHANNEL WITH DIFFERENT TREATMENTS

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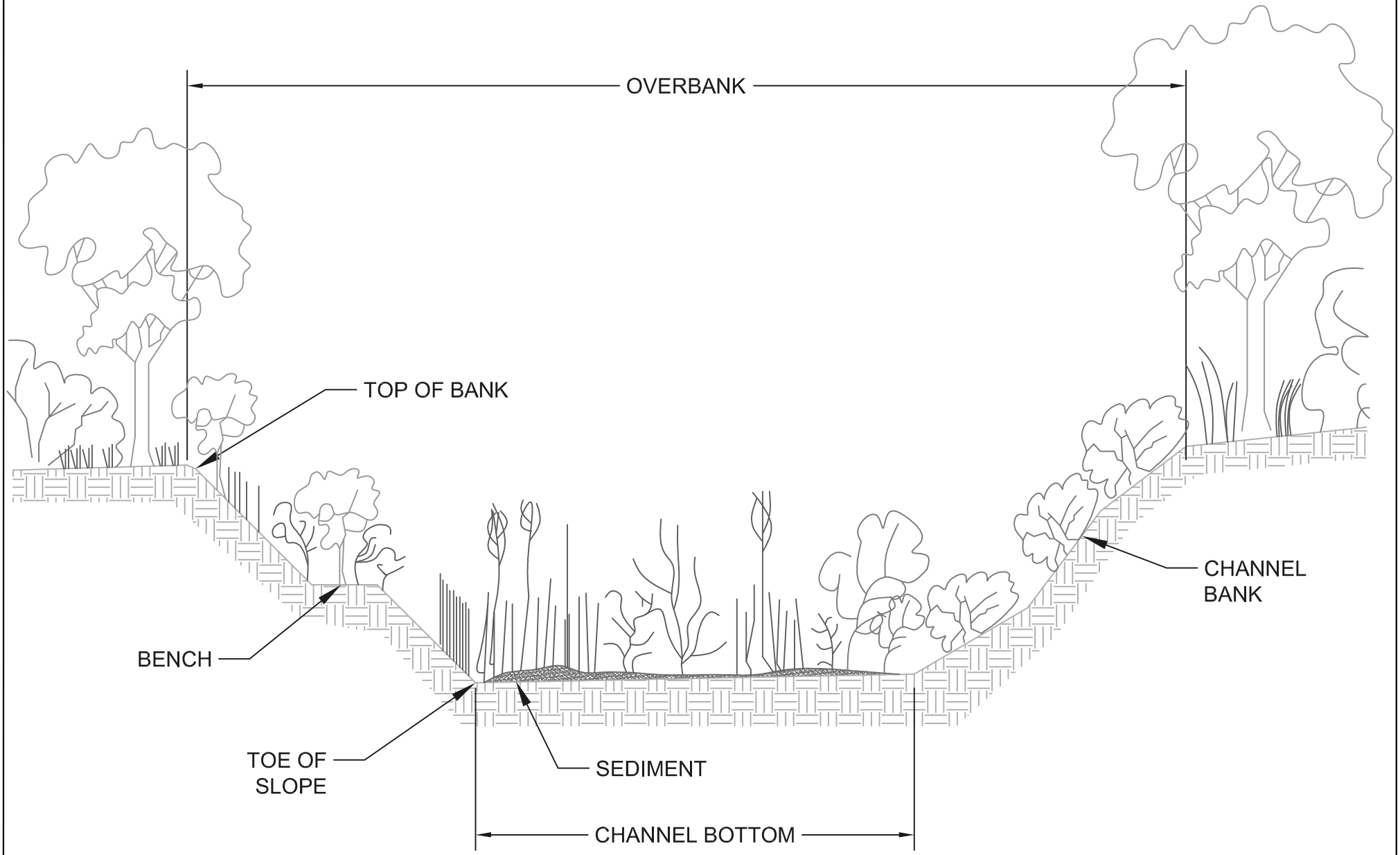
|---|---|---|




CHANNEL TYPE 2 - TYPICAL
IMPROVED CHANNEL WITH SIGNIFICANT RIPARIAN HABITAT

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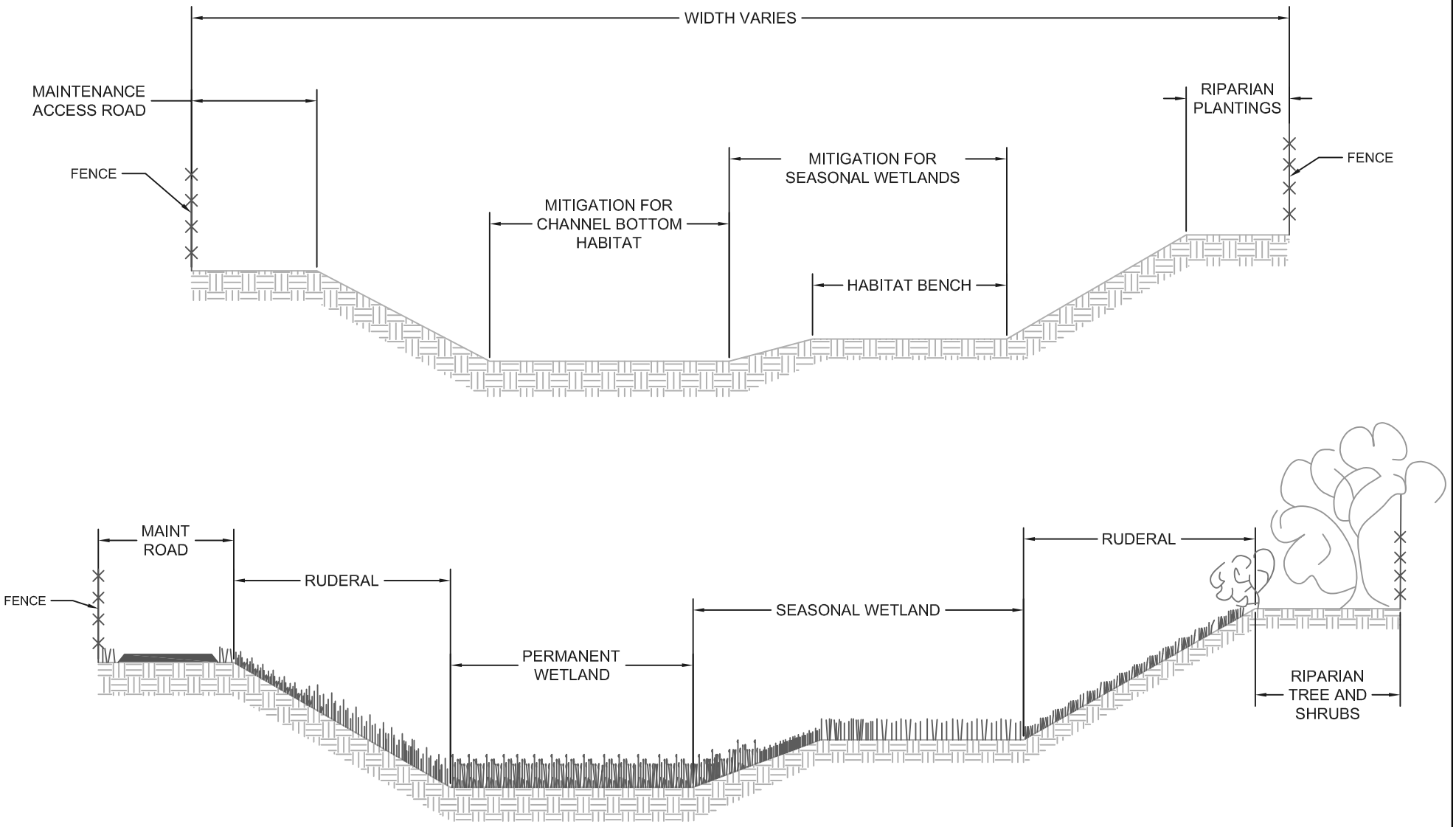


CHANNEL TYPE 3 - TYPICAL

IMPROVED CHANNEL

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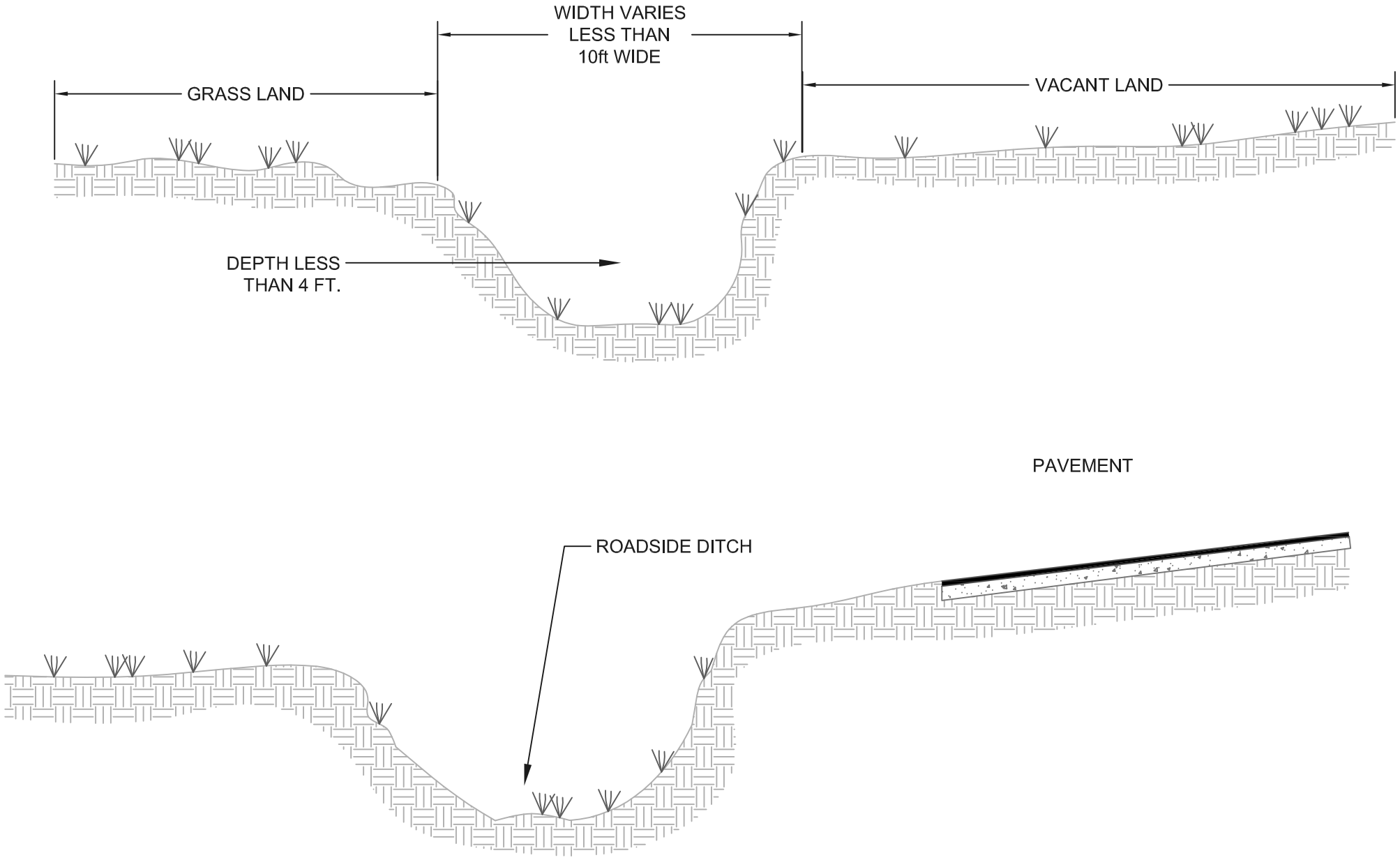


CHANNEL TYPE 4 - TYPICAL

UNIMPROVED CHANNEL WITHOUT SIGNIFICANT RIPARIAN HABITAT

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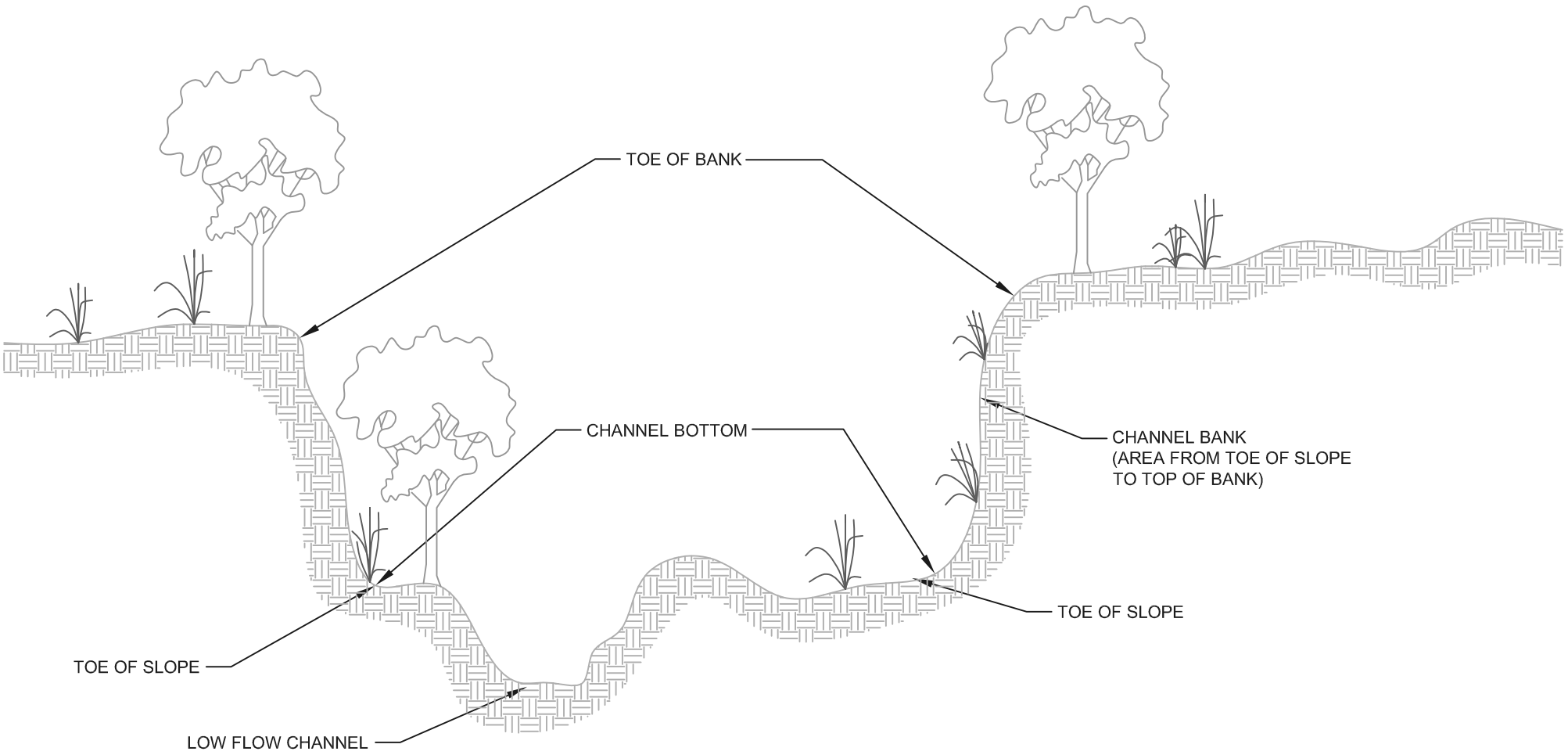


CHANNEL TYPE 5 - TYPICAL

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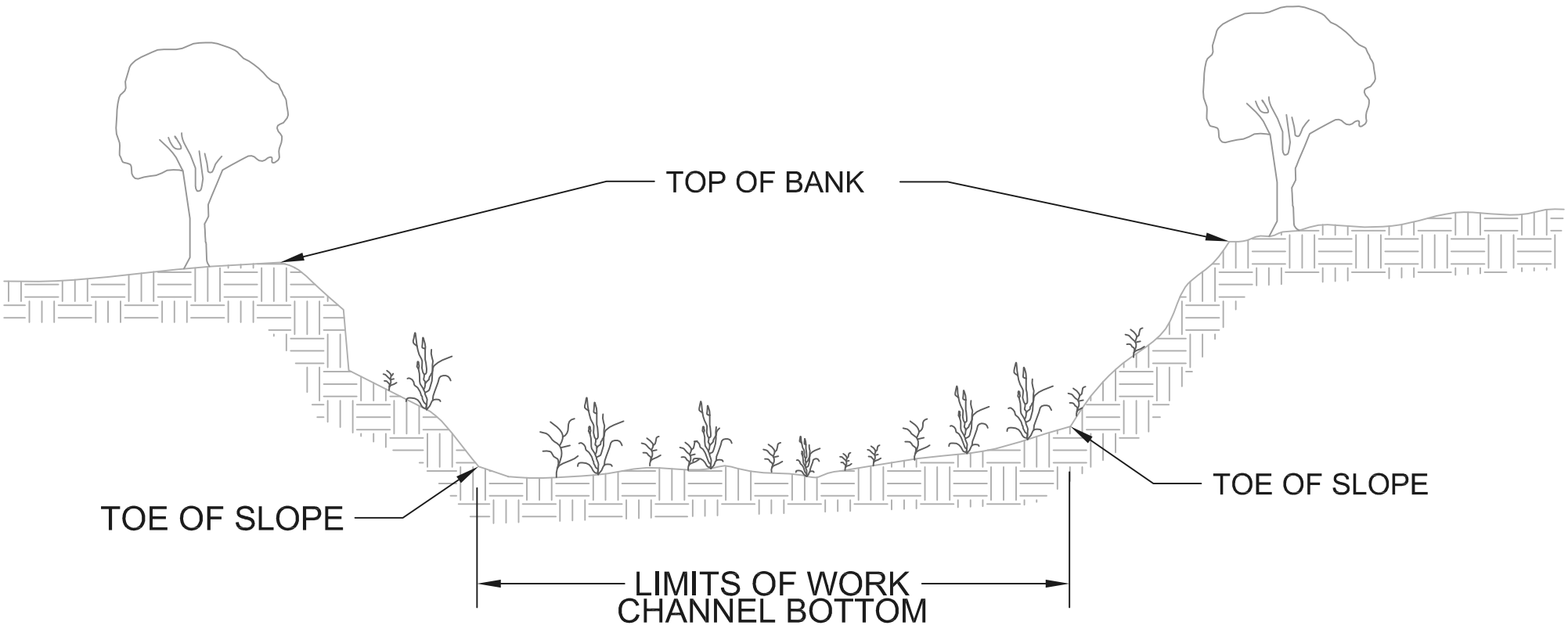


EXHIBIT 6
CONTROL OF AQUATIC AND WOODY GROWTH

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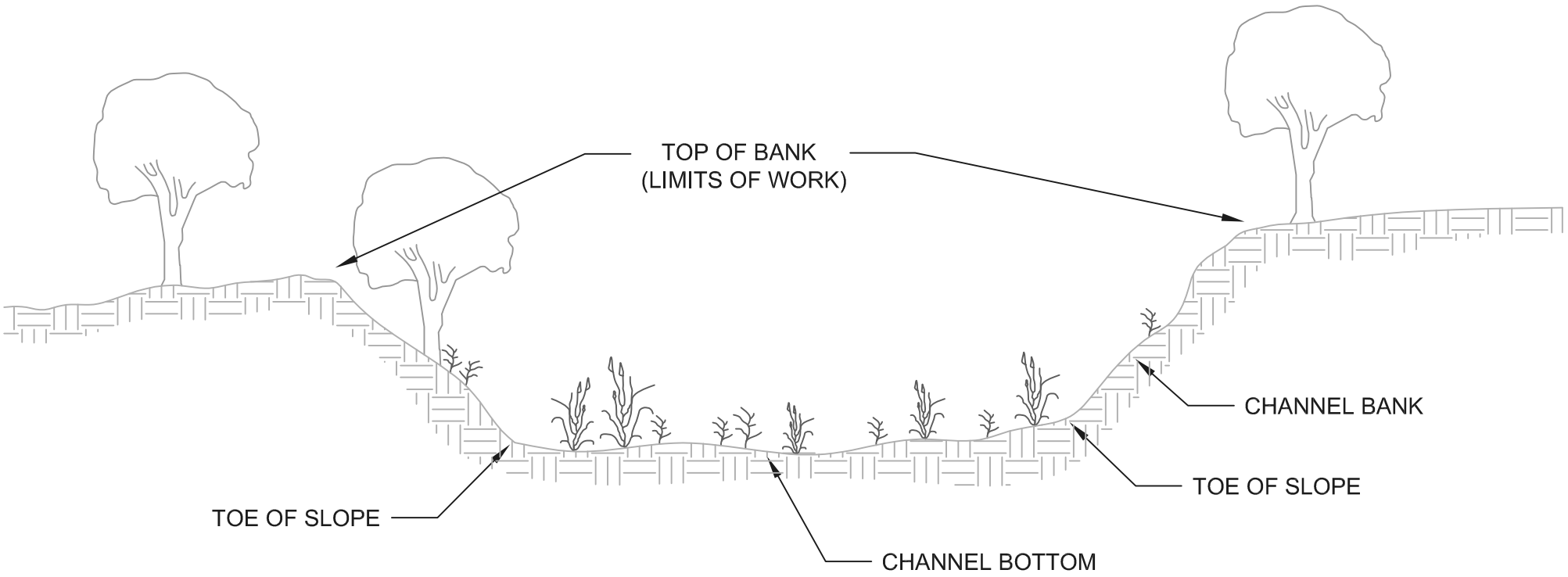


# EXHIBIT 7
## CONTROL OF NON-NATIVE VEGETATION

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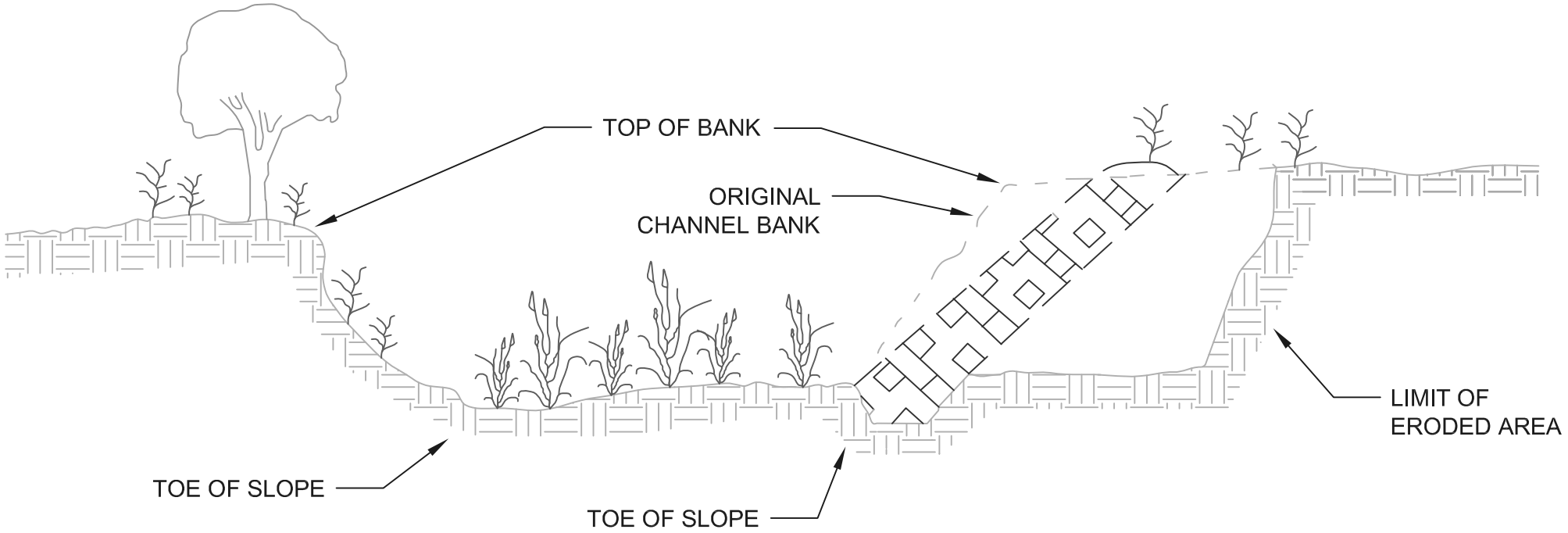


# EXHIBIT 8
## MINOR EROSION CONTROL WORK

| | | |
|---|---|---|
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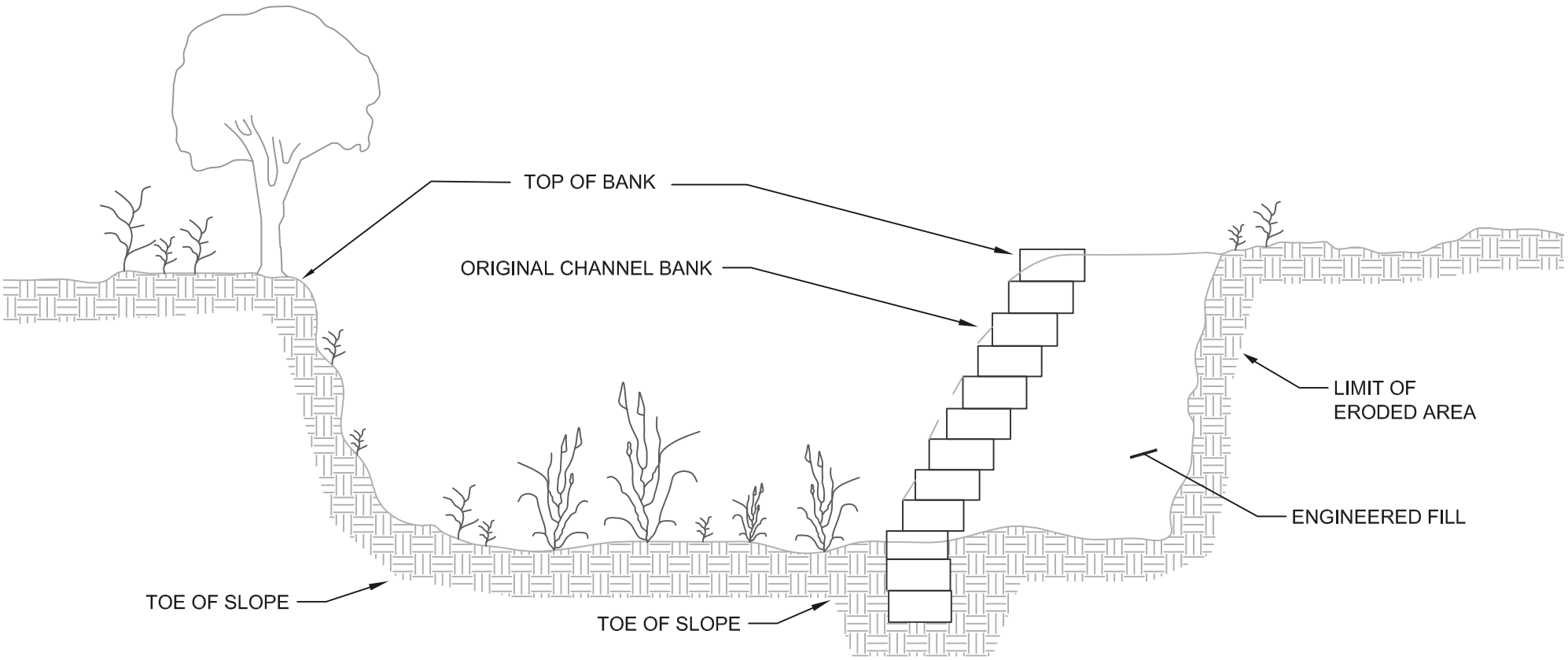



EXHIBIT 9
MINOR EROSION CONTROL WORK

| CITY OF SACRAMENTO<br>DEPARTMENT OF UTILITIES | EXHIBIT 9 | DATE: DECEMBER 2016 |
|---|---|---|

# Appendix B

Species Descriptions

## Approach

A Habitat Assessment of the City of Sacramento Department of Utilities project site was conducted by Blankinship & Associates, Inc. staff to characterize the habitats present on-site and the likelihood of special status species occurring on the project site.

A list of these special species was compiled using a records search of the California Natural Diversity Database (CNDDB 2016), and current species information from the U.S. Fish and Wildlife Service (USFWS), Sacramento Office Information for Planning and Conservation (IPaC) database (USFWS 2016). Location specific species data is available from both of these sources, and organized geographically into 7.5 minute U.S.G.S. quads. The CNDDB database was queried using the boundary map for the Department drainage facilities and stream channels, and selecting the eight quads in which the City is located.

Habitat requirements of each of the species were reviewed to determine whether habitat existed within the project area that would meet that species' needs. **Table 2** of the Initial Study & Mitigated Negative Declaration (IS/MND) shows a comprehensive list of species' considered, their conservation status, and whether or not they were considered for evaluation of potential impacts. The life history, including breeding and/or foraging habitat(s) of non-plant species, and the habitat requirements of plant species are described below. Based on **Table 2** of the IS/MND text, if a species' potential habitat was present in the project area, a brief summary of that species is presented below.

### Amphibians

The Department's channels are not suitable habitat for any of the amphibians found in the CNDDB query. As such, project activities are not likely to adversely impact amphibians.

### Birds

Tricolored Blackbird (*Agelaius tricolor*)

Tricolored blackbird was listed as a candidate threatened species (SCT) on December 11, 2015 (ICE 2015). Breeding habitat of tricolored blackbirds includes large marshes (Payne 1969 in Beedy and Hamilton 1999). Nesting colonies are generally in emergent aquatic vegetation, but may also be found in trees along streams, weed patches, and grain and alfalfa fields, mustard, safflower, thistle, along an irrigation ditch, or in trees along a river (Orians 1960, 1961). In the Central Valley of California, breeding colonies were described where nests were placed in cattail-bulrush in dry and irrigated pasture; cattail in dry grassland, along a creek, rice and wheat fields, or dry and irrigated pasture; and in blackberry in dry grassland and along a creek (Crase and DeHaven 1977). Tricolored blackbirds forage in cultivated row crops, orchards, vineyards, and heavily grazed rangelands, but these are considered low-quality forage habitats. High quality forage areas included irrigated pastureland, lightly grazed rangeland, dry seasonal pools, mowed alfalfa fields, feedlots, and dairies (Beedy and Hamilton 1997 in Beedy and Hamilton 1999). In the Central Valley of California, nestling tricolored blackbirds were fed 86% animal matter on a volumetric basis, 11.2% plant matter, and 2.7% grit. The animal matter was primarily insects (79% of total diet) with the majority being beetles (61% of total diet). Plant matter was split evenly between cultivated grains such as oats, wheat and miscellaneous plant matter (Crase and DeHaven 1977).

Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)
Yellow-headed blackbirds are listed as species of special concern by the California Department of Fish and Wildlife. They are most numerous in prairie wetlands, and otherwise found in emergent wetlands throughout non-forested regions of western North America (Twedt and Crawford 1995). They forage in fields, open pasture, plowed fields, and feedlots, in the summer they feed primarily on insects, especially beetles, caterpillars, and grasshoppers, but also eat seeds. Generally, probably two-thirds of their diet consists of seeds, including grass, weed seeds and waste grain (Kaufman 1996). They nest in marshes, with nests lashed to standing vegetation (typically cattails, bulrushes, or reeds) usually no more than 3 feet above the water surface (Kaufman 1996).

Burrowing Owl (*Athene cunicularia*)
Burrowing owls inhabit dry, open, shortgrass, treeless plains, and are often associated with burrowing mammals. They can also be found at golf courses, cemeteries, road allowances within cities, airports, vacant lots in residential areas and university campuses, and fairgrounds. The presence of a nest burrow seems to be a critical requirement for western burrowing owls (Thomsen 1971 in Haug *et al.* 1993, Martin 1973 in Haug *et al.* 1993, Zarn 1974 in Haug *et al.* 1993, Wedgwood 1978 in Haug *et al.* 1993, Haug 1985 in Haug *et al.* 1993). They typically forage in shortgrass, mowed, or overgrazed pastures; golf courses and airports (Thomsen 1971 in Haug *et al.* 1993). They are opportunistic feeders, eating primarily arthropods, small mammals, and birds. Amphibians and reptiles constitute a minor component to the diet and possibly only in Florida (Wesemann and Rowe 1987 in Haug *et al.* 1993).

Swainson's Hawk (*Buteo swainsoni*)
Swainson's hawks forage in open stands of grass-dominated vegetation, sparse shrublands, and small, open woodlands. They have adapted well to foraging in agricultural areas (e.g., wheat and alfalfa), but cannot forage in most perennial crops or in annual crops that grow much higher than native grasses (Bechard 1982 in England et al. 1997, Estep 1989 in England et al. 1997, Woodbridge 1991 in England et al. 1997). In Central Valley, CA, they forage in row, grain, and hay crop agriculture, particularly during and after harvest, when prey are both numerous and conspicuous. They also are attracted to flood irrigation, primarily in alfalfa fields, when prey take refuge on field margins, and to field burning, which forces prey to evacuate (J.A. Estep per. comm. in England et al. 1997). During breeding season, Swainson's hawks mainly feed on vertebrates, including mammals, birds, and reptiles (Schmutz et al. 1980 in England et al. 1997, Bednarz 1988 in England et al. 1997). Invertebrates (especially grasshoppers and dragonflies) are commonly eaten at other times (McAtee 1935 in England et al. 1997, Sherrod 1978 in England et al. 1997, Jaramillo 1993 in England et al. 1997).

White-Tailed Kite (*Elanus leucurus*)
White-tailed kites inhabit low elevation grassland, agricultural, wetland, oak-woodland, or savannah habitats. Riparian areas adjacent to open areas are also used. Lightly grazed or un-grazed fields generally support larger prey populations, and are therefore preferred. Intensively cultivated areas are also used (Dunk 1995). Nests in trees (Stendell 1972 in Dunk 1995). They prefer to forage in un-grazed grasslands (Bammann 1975 in Dunk 1995). Wetlands dominated by grasses, and fence rows and irrigation ditches with residual vegetation adjacent to grazed lands (Bammann 1975 in Dunk 1995). They primarily eat small mammals (Dunk 1995).

## Fish

Central Valley Steelhead Trout (Oncorhynchus mykiss irideus)
Central Valley Steelhead Trout are a distinct population segment of the West Coast Steelhead, and is listed as threatened nationally and as imperiled at the state level. Generally, steelhead are an anadromous rainbow trout, young hatch in freshwater stream, migrate to the ocean where they grow and mature. Steelhead return to their natal stream to spawn, but unlike pacific salmon, steelhead do not necessarily die after spawning are able to spawn more than once. In California, most steelhead spawn from December through April in small, cool, well oxygenated streams and tributaries (McEwan and Jackson 1996). Steelhead have selective habitat for spawning, hatching, and larval development. Appropriate depth, velocity, substrate, and temperature are all necessary for optimal spawning conditions. Steelhead prefer 6 to 24 inches of water, velocities of 1 to 3.6 ft/s, substrate between 0.2 to 4 inches in diameter which contain less than 5% silt or sand, and temperatures between 39 and 56 degrees Fahrenheit (Bovee 1978). Juvenile steelhead feed primarily on zooplankton, aquatic and terrestrial insects, insect larvae, and other small invertebrates (Moyle 2002). Adult steelhead also feed on terrestrial and aquatic insects, insect larvae, amphipods, snails, and small fish (Moyle 2002).

## Invertebrates

Valley Elderberry Longhorn Beetle (*Desmocerus californicusdimorphus*)
The valley elderberry longhorn beetle occurs throughout California's Central Valley and associated foothill areas (U.S. Fish and Wildlife Service, 1999). This species of insect is completely dependant upon its host plant, elderberry (*Sambucus* spp.). The beetle spends most of its larval stage within the stems of the elderberry plant, and emerges after a two-year period, from mid-March to mid-May (U.S. Fish and Wildlife Service, 1999). Adult males live for only a few of days after emergence, while the adult females will live for approximately 3 or 4 weeks (PlacerData 2003). Valley elderberry longhorn beetles feed exclusively on the stems, leaves and flowers of elderberry plants (PlacerData 2003). The project area is located in an area that is potential habitat for the valley elderberry longhorn beetle. However, no risk is anticipated given that this species lives and forages on a terrestrial plant, and copper and acrolein-containing aquatic pesticides will not be applied to terrestrial areas. In addition, the adult stage of the beetle is brief and little time over-lap exists between their emergent life span and the typical application period for aquatic pesticides in the District.

## Mammals

The Department's drainage conveyance system is not suitable habitat for any of the mammals found in the CNDDB query. As such, project activities are not likely to adversely impact mammals.

## Plants

Sanford's Arrowhead (*Sagittaria sanfordii*)
Sanford's arrowhead is a rhizomatous monocot that is native and endemic to California (CalFlora 2015). It is an aquatic perennial herb that occurs in freshwater wetlands, marshes, swamps, and other assorted shallow freshwater (CNPS 2012). Sanford's arrowhead is a member of the Water Plantain family; it is an obligate wetland plant. Its habitat includes the margins of wetland areas such as streams, rivers, ponds, drainage channels, or irrigation canals. It is native to California

and is endemic (limited) to California alone. It is included in the CNPS Inventory of Rare and Endangered Plants on list 1B.2 (rare, threatened, or endangered in CA and elsewhere).

Wooly Rose-mallow (*Hibiscus lasiocarpos var. occidentalis*)
Wooly rose-mallow (*Hibiscus lasiocarpos var. occidentalis*) is a perennial dicot in the genus Hibiscus, endemic to California, with a CNPS rare plant rank of 1B.2. (rare, threatened, or endangered in California and elsewhere). It is threatened by habitat disturbance, development, agriculture, recreational activities, and channelization (CNPS 2016). Its preferred habitat is freshwater marshes and swamps, and is sometimes found in riprap on the sides of levees. During its blooming season from June to September, it produces a large blossom.

**Reptiles**

Western Pond Turtle (*Emys marmorata*)
The Western Pond Turtle historically existed from Washington to British Columbia to northern Baja California, west of the Cascade-Sierra crest (Ernst et al 1994). They occupy a wide variety of wetland habitats including lakes, ponds, reservoirs, rivers and streams, stock ponds, and sewage treatment lagoons (Holland 1994). Optimal habitat has adequate emergent basking sites, emergent vegetation, refugia in the form of banks, submerged vegetation, mud, rocks, and logs (Holland 1994). Populations are in decline mainly due to habitat destruction. The species diet consists of a variety of food items including algae, various plants, snails, crustaceans, isopods, insects, fish, and frogs (Bury 1986).

Giant Garter Snake (*Thamnophis gigas*)
Giant garter snakes occur in streams and sloughs, usually with mud bottom (Stebbins 1985 in NatureServe 2004). One of the most aquatic of garter snakes; usually in areas of freshwater marsh and low-gradient streams with emergent vegetation, also drainage canals and irrigation ditches (CDFG 1990 in NatureServe 2004) and ponds and small lakes (USFWS 1993 in NatureServe 2004). Usually in areas of permanent water, sometimes in areas of temporary water such as irrigation/drainage canals and rice fields (Biosystems Analysis, Inc. 1989 in NatureServe 2004, USFWS 1993 in NatureServe 2004). Adult and immature snakes eat small mammals, invertebrates, and fish (NatureServe 2004).

## References


Barbour, R.W. and W.H. Davis. 1969. Bats of America. University Press of Kentucky, Lexington, 286 pp.

Bechard M.J. 1982. Effect of vegetative cover on foraging site selection by Swainson's hawk. Condor 84:153-159.

Bednarz, J.C. 1988. A comparative, study of the breeding ecology of Harris' and Swainson's hawks in southeastern New Mexico. Condor 90: 311-323.

Beedy, E.C. and W.J. Hamilton, III. 1997. Tricolored blackbird status update and management guidelines. September (Jones and Stokes Associates, Inc. 97-099.) Sacramento, CA. Prepared for U.S. Fish and Wildlife Service, Portland, Oregon, and California Department of Fish and Game, Sacramento, CA.

Beedy, E.C. and W.J. Hamilton, Jr. 1999. Tricolored blackbird (*Agelaius tricolor*). In The Birds of North America, No. 423 (Poole, A.; Gill, F., Eds.). The Birds of North America, Inc., Philadelphia, PA. 24 pp.

Biosystems Analysis, Inc. 1989. Endangered Species Alert Program Manual: Species Accounts and Procedures. Southern California Edison Environmental Affairs Division.

Bury, R.B. 1986. Feeding ecology of the turtle, *Clemmys marmorata*. J. Herpeton. 20:515-521

CalFlora: Information on California plants for education, research and conservation. [web application]. 2015. Berkeley, California: The CalFlora Database [a non-profit organization]. Available: http://www.calflora.org/. (Accessed: December 28, 2015)

California Department of Fish and Game (CDFG). 1990. 1989 annual report on the status of California's state listed threatened and endangered plants and animals. 188 pp.

California Native Plant Society (CNPS). 2016. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Available: http://www.rareplants.cnps.org/. (Accessed: November 2016)

California Natural Diversity Database (CNDDB). 2016. Wildlife & Habitat Data Analysis Branch, Department of Fish & Game. (Accessed: November 2016).

Crase, F.T. and R.W. DeHaven. 1977. Food of nestling tricolored blackbirds. Condor 79(2): 265-269.

Dalquest, W.W. 1947. Notes on the natural history of bats Corynorhinus rafinesquii in California. Journal of Mammalogy 28:17-30.

England, A.S., M.J. Bechard, and C.S. Houston. 1997. Swainson's hawk (*Buteo swainsoni*). *In* The Birds of North America, No. 265 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, PA, and The American Ornithologists' Union, Washington, D.C. 28 pp.

Ernst, C.H., J.E. Lovich, and R.W. Barbour. 1994. Turtles of the United States and Canada. Smithsonian Institution Press, Washington, D.C.

Estep, J.A. 1989. Biology, movements, and habitat relationships of the Swainson's hawk in the Central Valley of California, 1986-87. California Department of Fish and Game, Nongame Bird and Mammal Section Report.

Graham, R.E. 1966. Observations on the roosting habits of the big-eared bat, *Plecotus townsendii* in California limestone caves. Cave Notes 8:17-22.

Haug, E.A. 1985. Observations on the breeding ecology of burrowing owls in Saskatchewan. M.Sc. thesis, University of Saskatchewan, Saskatoon.

Haug, E.A., B.A. Millsap, and M.S. Martell. 1993. Burrowing owl (*Speotyto cunicularia*). *In* The Birds of North America, No. 61 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia and The American Ornithologists' Union, Washington, DC. 20 pp.

Holland, D.C. 1994. The western pond turtle: habitat and history. U.S. Department of Energy, Bonneville Power Administration, Portland, Oregon. 11 chapter + appendices.

Information Center for the Environment (ICE). 2015. California Fish and Game Commission Advances Tricolored Blackbird to Candidacy under CESA. University of California, Davis. Available: http://tricolor.ice.ucdavis.edu/content/california-fish-and-game-commission-advances-tricolored-blackbird-candidacy-under-cesa (Accessed: December 30, 2015)

Jaramillo, A.P. 1993. Wintering Swainson's hawks in Argentina: food and age segregation. Condor 95: 475-479.

Kim, Yoon-Dong. 1996. Characterization of Water and Sediment Environment in Water Shield (*Brasenia schreberi*) Habitats. Korean J. Ecol. 19(3): 209-216

Kunz, T.H. and R.A. Martin. 1982. *Plecotus townsendii*. Mammalian Species, 175: 1-6.

Martin, D.J. 1973. Selected aspects of burrowing owl ecology and behaviour in central New Mexico. Condor 75: 446-456.

McAtee, W.L. 1935. Food habits of common hawks. U.S. Department of Agriculture Circular 370.

NatureServe. 2004. NatureServe Explorer: An online encyclopedia of life [web application]. Version 3.0. NatureServe, Arlington, Virginia. Available: http://www.natureserve.org/explorer. (Accessed: April 23, 2004).

NatureServe. 2015. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://explorer.natureserve.org. (Accessed: December 31, 2015 ).

Orians, G.H. 1960. Autumnal breeding in the tricolored blackbird. Auk 77(4): 379-398.

Orians, G.H. 1961. The ecology of blackbird (*Agelaius*) social systems. Ecological Monographs 31(3): 285-312.

Payne, R. 1969. Breeding seasons and reproductive physiology of tricolored blackbirds and red winged blackbirds. University of California Publications of Zoology 90: 1-137.

Pearson, O.P., M.R. Koford, and A.K. Pearson. 1952. Reproduction of the lump-nosed bat (*Corynorhinus rafinesquii*) in California. Journal of Mammalogy 33: 273-320.

Schmutz, J.K., S.M. Schmutz, and D.A. Boag. 1980. Coexistence of three species of hawks (*Buteo* spp.) in the prairie parkland ecotone. Canadian Journal of Zoology 58: 1075-1089.

Sherrod, S.K. 1978. Diets of North American falconiformes. Journal of Raptor Research 12: 49-121.

Stebbins, R.C. 1985. A field guide to western reptiles and amphibians. Second edition. Houghton Mifflin Company, Boston, Massachusetts. 336 pp.

Thomsen, L. 1971. Behavior and ecology of burrowing owls on the Oakland municipal airport. Condor 73: 177-192.

U.S. Fish and Wildlife Service (USFWS). 1993. Determination of threatened status for the giant garter snake. Federal Register 58(201):54053-66

U.S. Fish and Wildlife Service (USFWS). 2016. Environmental Conservation Online System (ECOS) Information for Planning and Conservation (IPaC). [Online] https://ecos.fws.gov/ipac/. (Accessed: January 2016).

Washington State Department of Ecology (WSDE). 2014. Floating Leaved Rooted Plants: *Brasenia schreberi*. Available: http://www.ecy.wa.gov/programs/wq/plants/plantid2/descriptions/brasch.html (Accessed: September 5, 2014)

Wedgwood, J. A., 1978. The status of the Burrowing Owl in Canada. Committee on the Status of Endangered Wildlife in Canada, Ottawa, Ontario.

Wesemann, T. and M. Rowe. 1987. Factors influencing the distribution and abundance of burrowing owls inCape Coral, Florida. Pp. 129-137 *in* Integrating man and nature in the metropolitan environment (L.W. Adams and D.L. Leedy, eds.). National Institute of Urban Wildlife, Columbia, MD.

Williams, D.F. 1986. Mammalian species of concern in California. State of California, The resource Agency, Department of Fish and Game. 111 pp.

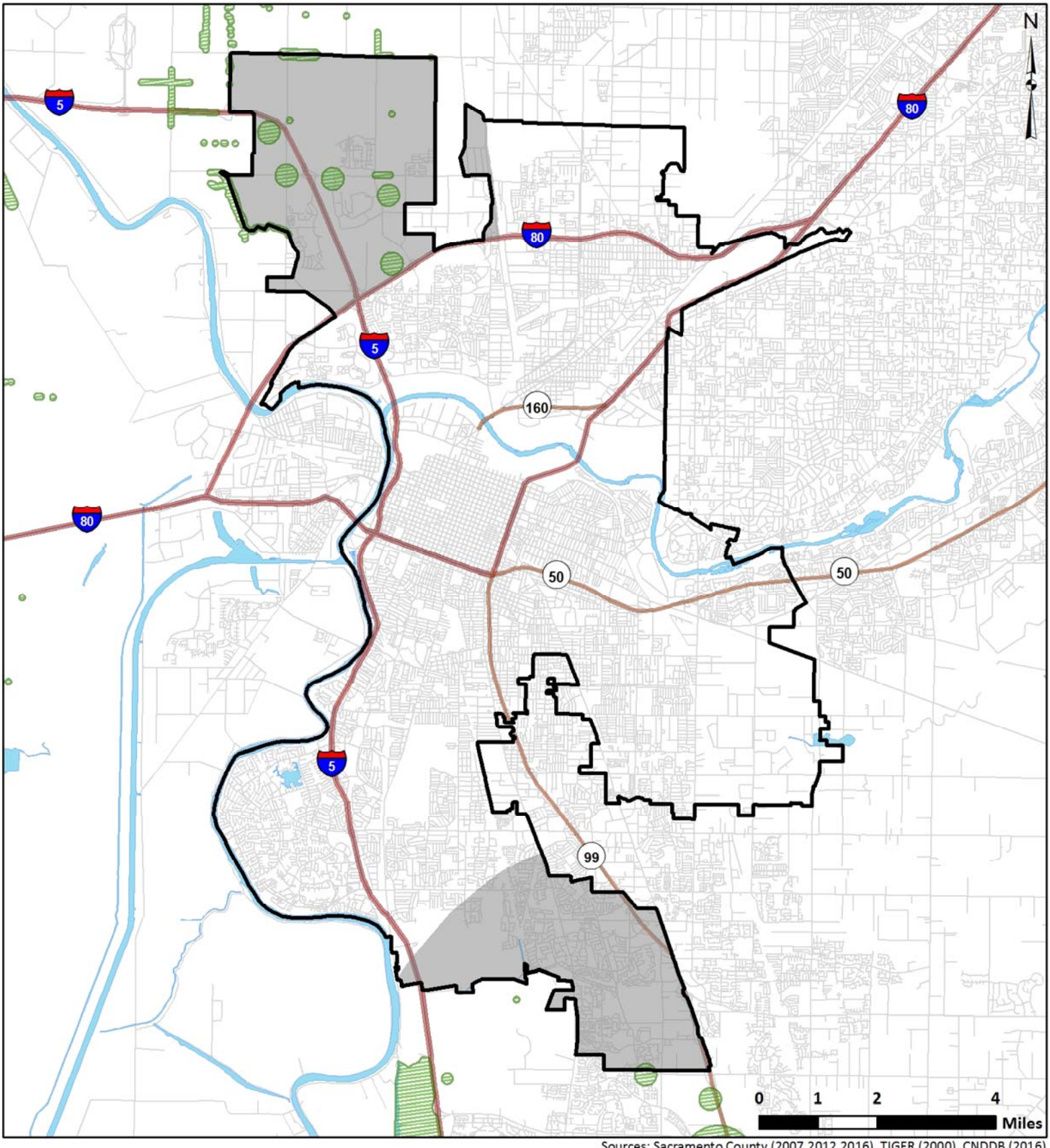
Woodbridge, B. 1991. Habitat selection by nesting Swainson's hawks: A hierarchical approach. M.S. Thesis , Oregon State University, Corvallis, OR.

Zarn, M. 1974. Burrowing owl, Report No. 11. Habitat management series for unique or endangered species. Bureau of Land Management, Denver, CO.

Zeiner, D.C., W.F.Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Department of Fish and Game, Sacramento, California. Life History Account for Western Red Bat. Available: http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2339. (Accessed: July 16, 2012)

# Appendix C

Giant Garter Snake CNDDB Occurrence and Mitigation Maps




Sources: Sacramento County (2007,2012,2016), TIGER (2000), CNDDB (2016)

**Legend**

- US Highways
- State Highways
- Major Waterbodies
- Sacramento City Boundary
- CNDDB Giant Garter Snake Occurences
- Giant Garter Snake Preliminary Mitigation Area

**Figure 1: Giant Garter Snake CNDDB Occurence and Mitigation Map**

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# Appendix D

Special Status Species Reference Cards

# BURROWING OWL

City of
SACRAMENTO
Department of Utilities

## Burrowing Owl (*Athene cunicularia*)
## Status - State Species of Special Concern

### Appearance

- 5-7 inches tall with long legs
- Active both day and night
- Rounded head without ear tufts
- Face has a notable white eyebrow stripe
- Head, neck, back and wings brown to reddish-brown with bold white spots
- Pale underside with brown barring

### Habitat Preferences

- Ground squirrel burrows for nesting
- Open often sparsely vegetated fields
- Roosts at the mouth of burrows
- Often first detected when flushed from a burrow

### Management

- Do not disturb nest during the breeding season (February-August)
- Do not perform work within 250 ft of a nest without first consulting with CDFW
- Pre-maintenance surveys may be required by CDFW prior to maintenance activities
- Follow-up survey required if habitat is suitable and to determine if owls are present

## Questions

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# GIANT GARTER SNAKE

City of
SACRAMENTO
Department of Utilities

## Giant Garter Snake (*Thamnophis gigas*)
## Status - Federal Threatened and State Threatened

### Appearance

- Dark brown to olive or tan with three stripes running down back; stripes can be pale, yellow or orange
- Rows of black dots along its side can appear checkered or blotched
- Snakes emerging from dormancy are often muddy and can appear to be solid in color or dark
- Very difficult to distinguish from valley garter snake

### Habitat Preferences

- Cattail/tule marshes, sloughs, canals, flooded rice fields, streams and other aquatic habitats with slow moving water and muddy bottoms
- Often basks on banks near water
- Over winters in small mammal burrows, rock piles and other upland habitat areas
- Most active from mid-March to early November; reduced activity in winter months

### Management

- Do not attempt to catch or handle the snake
- Maintenance activities within 200 feet of banks or aquatic habitat should be avoided between October 1 and April 30
- Pre-maintenance surveys may be required by CDFW prior to maintenance activities

## Questions

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# TRICOLORED BLACKBIRD


City of
SACRAMENTO
Department of Utilities

## Tricolored Blackbird (*Agelaius tricolor*)
## Status - State Species of Special Concern

### Appearance

- Medium-sized mostly dark brown to black bird
- Males have distinctive bright red and pronounced white wing patches; females are lighter in color and lack wing patches
- Distinguished from the common red-winged blackbird by wing patch color which is lighter red to orange and the "white" is more like yellow
- Tricolored blackbirds and red-winged blackbirds can occur together

### Habitat Preferences

- Can form dense breeding colonies in cattail/tule marshes
- Can also breed in blackberry thickets, grain fields, willows, thistles and in other tall herbaceous vegetation
- Nests generally located near water
- Builds open-cup nests

### Management

- Pre-maintenance surveys may be required by CDFW during breeding season (April-July) prior to any work within potential breeding habitat
- Avoid capturing, harassing or otherwise disturbing nest colonies

### Questions

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# VALLEY ELDERBERRY LONGHORN BEETLE

City of
SACRAMENTO
Department of Utilities

## Valley Elderberry Longhorn Beetle
(*Desmocerus californicus dimorphus*)
Status - Federal Threatened

### Appearance
- Stout beetle with cylindrical body and long antenne
- Approximately 0.5-1.0 inch long from head to toe with antenne as long as body
- Males have red with black spots and females metallic green with red margins

### Habitat Preferences
- Almost entirely depend and exclusively associated with elderberry shrubs
- Spends most of life as larvae in stems of elderberry shrubs; adults emerge briefly in spring for mating
- Elderberry shrubs are common in the Central Valley and often associated with riparian habitat but also occur in upland settings
- Elderberry shrubs can grow to 20-feet tall, have rounded crown, white flowers in spring and purple fruits in summer

### Management
- Avoid all elderberry shrubs
- Elderberry shrubs with any stems 1 inch or larger in diameter at ground level are considered occupied habitat
- If there is any question concerning the species of shrub present, biologist should confirm shrub species prior to starting work

### Questions

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# Appendix E

(CEQA Documentation-To Be Completed)

CEQA NOI
CEQA NOC
State Clearinghouse Letter
Comments and Response to Comments
City Council Resolution & MMRP
CEQA NOD
CDFW Filing Fee Receipts

# Appendix F

Comments and Response to Comments