Arcade-Cripple Creek Trail **NES**

(Sylvan Road to Stock Ranch) Extension Project



Natural Environment Study

Discussion of Biological Resources, Aquatic Resources, Impacts, and Mitigation

City of Citrus Heights, Sacramento County, California

District 3-SAC

CRP 5475(053)

April 2026

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

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STATE OF CALIFORNIA

Department of Transportation

Prepared By: _____ Date: 4/10/26

Katie Jacobson, Biologist/Environmental Planner
(916) 858-0642
Dokken Engineering
110 Blue Ravine Road, Suite 200
Folsom, CA 95630

Reviewed By: _____ Date: 4/15/26

Daniel Kehrer, Principal Civil Engineer
(916) 727-4770
City of Citrus Heights General Services Department
6360 Fountain Square Drive
Citrus Heights CA 95621

Approved By: _____ Date: 4/28/2026

Gregory Saiyo, Environmental Scientist
(530) 845-3397
North Region Environmental
California Department of Transportation - District 3

Approved By: Veronica Wilson _____ Date: 4/28/2026

Veronica Wilson, Senior Environmental Scientist, Branch Chief
(530) 649-4871
North Region Environmental
California Department of Transportation - District 3

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Acronyms List

°F	Fahrenheit
ADA	Americans with Disabilities Act
BMP	Best Management Practice
BSA	Biological Study Area
Caltrans	California Department of Transportation
CCTP	Creek Corridor Trail Project
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG	California Fish and Game
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
City	City of Citrus Heights
CWA	Clean Water Act
DBH	Diameter at Breast Height
DOT	Department of Transportation
EFH	Essential Fish Habitat
EO	Executive Order
ESA	Environmentally Sensitive Area
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FR	Federal Register
HAPC	Habitat Areas of Particular Concern
iPaC	Information for Planning and Consultation
ITP	Incidental Take Permit
LiDAR	Light Detection and Ranging
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWPT	Northwestern Pond Turtle
OHWM	Ordinary High-Water Mark
PFMC	Pacific Fishery Management Council
PMP	Pedestrian Master Plan
Project	Arcade-Cripple Creek Trail (Sylvan to Stock Ranch) Extension Project
ROW	Right-of-way
RSP	Rock Slope Protection
RWQCB	Regional Water Quality Control Board
SWRCB	State Water Resources Control Board
U.S.	United States
USACE	U.S. Army Corps of Engineers

USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VELB	Valley Elderberry Longhorn Beetle
WQC	Water Quality Certification

Summary

The City of Citrus Heights (City) proposes to construct the Arcade-Cripple Creek Trail (Sylvan to Stock Ranch) Extension Project (Project), a 0.5-mile addition to the planned 16-mile Creek Corridor Trail Project (CCTP). The purpose of this Project is to close a gap in the existing trail system by replacing dirt and narrow concrete paths with an Americans with Disabilities Act (ADA) compliant Class I multi-use trail. This trail extension is needed to enhance pedestrian and bicycle connectivity, provide a safe recreational facility, and improve access through the Arcade Creek greenbelt.

This Natural Environment Study (NES) provides a review and evaluation of the potential impacts to threatened, endangered, listed, or special status species and protected habitat resources as a result of the proposed Project. Field surveys were conducted within the Biological Study Area (BSA) which encompasses the Project area at the proposed trail alignment with an approximate 165-foot buffer to assess adjacent sensitive vegetation communities.

During biological survey efforts, three vegetation communities were observed within the BSA, including annual grassland, oak woodland, and riparian woodland. In addition, the BSA includes two aquatic features: Arcade Creek and Arcade Creek tributary (perennial stream channel) and portions of, an unnamed ephemeral tributary and two water quality/detention basins. Because these basins are artificial ponds constructed in dry land for stormwater treatment and detention, they fall under the exclusion at 40 Code of Federal Regulations (CFR) § 120.2(b)(5) and therefore do not meet the current definition of waters of the U.S. In addition, permitting under Section 401 of the CWA is not warranted as there is little to no risk of discharge to another water body and there is no potential for the Project improvements to encroach on these features. Arcade Creek and the Arcade Creek tributary are jurisdictional waters of both the United States (U.S.) and the state, whereas the ephemeral tributary. These surface waters are regulated under Section 401 of the Clean Water Act (CWA), as administered by the Regional Water Quality Control Board (RWQCB), and Arcade Creek and its tributary are additionally subject to Section 404 of the Clean Water Act administrated by USACE. The California Department of Fish and Wildlife (CDFW) also asserts jurisdiction over the bed, bank, and channel of these waters, as well as any associated riparian vegetation.

The Project would result in temporary and permanent impacts to jurisdictional waters and vegetation communities within the BSA. Approximately 0.10 acres of Arcade Creek mainstem and its tributary would be temporarily impacted, while approximately 0.01 acres of Arcade Creek will be permanently impacted. In addition, temporary impacts totaling approximately 0.89 acres and permanent impacts totaling approximately 0.20 acres are anticipated within the riparian woodland community. The Project would also affect upland vegetation communities, including approximately 0.17 acres of temporary impacts and 0.02 acres of permanent impacts to oak woodland.

For the purposes of this analysis, “special status species” includes any species that has been afforded special recognition by federal, state or local resources agencies (e.g., United States Fish and Wildlife Service [USFWS], CDFW, etc.), and/or resource conservation organizations (e.g., California Native Plant Society [CNPS]). Literature research, habitat assessments, and biological surveys determined that the BSA was

potentially suitable for five special status species: song sparrow (“Modesto” population) (*Melospiza melodia pop. 1*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*; VELB), Swainson’s hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*) and northwestern pond turtle (*Actinemys marmorata*; NWPT). With the inclusion of appropriate avoidance and minimization measures, the proposed Project is not expected to result in take of any state listed species; and therefore coordination with CDFW under Section 2081 Incidental Take Permit (ITP) is not anticipated. Based on the location of VELB habitat in relation to the BSA and the nature of the Project, it has been determined that the Project will have *no effect* on VELB. The USFWS is currently not providing conference opinions for northwestern pond turtle (based on the timing of this NES). However, given that northwestern pond turtle is proposed to be listed under the FESA, Section 7 consultation will be required with USFWS upon official listing of the species. Though no determination will be made for purposes of Section 7 at this time, once officially listed under FESA, the determination for northwestern pond turtle is proposed to be *may affect, not likely to adversely affect*. Conservation measures are proposed for the species as a show of good faith, to further the protection and recovery of the species, and in anticipation of any future listings.

The following permits will be obtained for the proposed Project prior to construction: Section 401 Water Quality Certification from the RWQCB, non-reporting Section 404 Nationwide Permit 14, and a Section 1602 Streambed Alteration Agreement from CDFW.

The Project is funded through the federal Carbon Reduction Program. The California Department of Transportation (Caltrans) is the lead agency for National Environmental Policy Act (NEPA) compliance. The City will be the lead agency for California Environmental Quality Act (CEQA) compliance.

Chapter 1: Introduction

The Arcade-Cripple Creek Trail is part of a 16-mile trail network identified in the City's CCTP. Planned since 2012, the Creek Corridor Trail is being built segment by segment, starting with 4.2 miles of Priority 1 trails identified in the Creek Corridor Trail Project Feasibility Study. To advance its vision of using the natural Arcade Creek greenbelt as a recreational resource and to enhance connectivity between communities, the City of Citrus Heights, in partnership with the Sunrise Recreation and Parks District, is proposing to construct the 0.5-mile Priority 1 trail segment from Sylvan Road to Stock Ranch. Currently, the trail includes dirt paths through the Stock Ranch Nature Preserve and narrow concrete paths through the Huntington Square apartments. This Project will upgrade these sections to a paved, ADA-compliant Class I multi-use trail, bringing the Priority 1 trail network over 10% closer to completion and providing safe, accessible connections between communities.

The Project is located west of Sylvan Road within the City of Citrus Heights in Sacramento County, California, within the Citrus Heights 7.5-minute U. S. Geological Survey (USGS) quadrangle (**Figure 1. Project Vicinity** and **Figure 2. Project Location**).

Project Purpose and Need

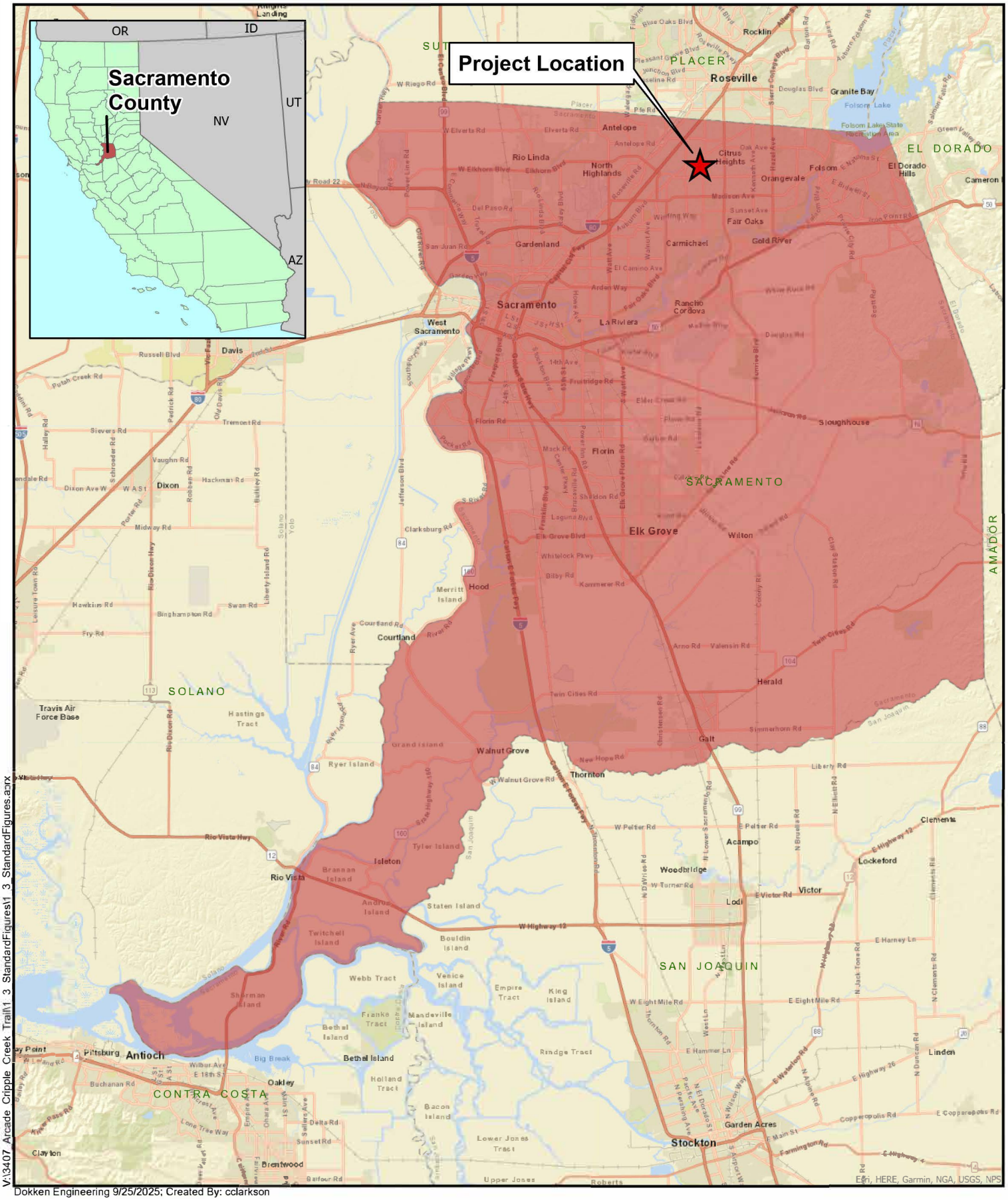
The purpose of this Project is to construct one of the several planned segments of the CCTP by replacing dirt and narrow concrete paths with an ADA-compliant Class I multi-use trail. This trail extension is needed to enhance pedestrian and bicycle connectivity, provide a safe recreational facility, and improve access through the Arcade Creek greenbelt.

Project Description

The City proposes to construct a 0.5-mile addition to the planned 16-mile CCTP as part of the Arcade-Cripple Creek Trail (Sylvan to Stock Ranch) Extension Project (Project). The Project is funded through the federal Carbon Reduction Program.

The Project is located in Citrus Heights and will extend east from the existing Stock Ranch Trail behind the Costco/Walmart shopping center to Sylvan Road. The proposed alignment begins south of the Walmart property boundary and would proceed east through the Stock Ranch Nature Preserve, curving south around Walmart's water quality detention basin. The alignment continues north, crossing a tributary of Arcade Creek, and traverses along the south side of the Huntington Square Apartment complex prior to connecting to Sylvan Road. The alignment terminates east of Sylvan Road with a planned future trail extension segment from Sylvan Road to Mariposa Avenue. The Project has independent utility and would function as a stand-alone improvement.

To accommodate construction, right-of-way (ROW) acquisitions will be required from several parcels. These include a permanent and temporary easement from



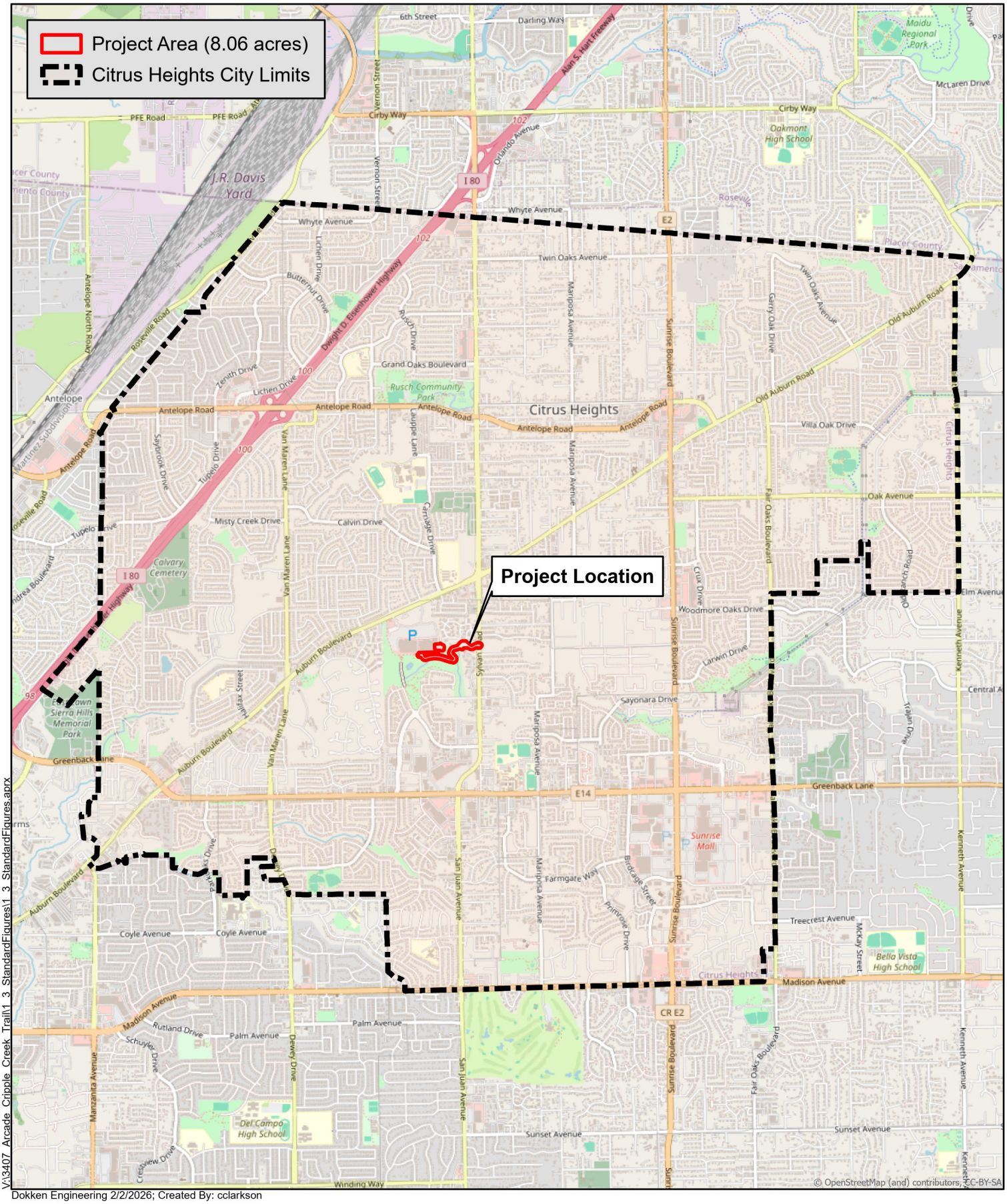
V:\3407 Arcade Cripple Creek Trail\1 3 StandardFigures\1 3 StandardFigures.aprx

Dokken Engineering 9/25/2025; Created By: cclarkson

0 3.5 7 Miles

Figure 1
Project Vicinity

Arcade-Cripple Creek Trail (Sylvan to Stock Ranch) Extension Project
Citrus Heights, Sacramento County, California



V:\3407 Arcade Cripple Creek Trail\1 3 StandardFigures\1 3 StandardFigures.aprx

Dokken Engineering 2/2/2026; Created By: cclarkson

0 1,750 3,500

Feet

Figure 2
Project Location

Arcade-Cripple Creek Trail (Sylvan to Stock Ranch) Extension Project
Citrus Heights, Sacramento County, California

the Sunrise Recreation and Park District, a temporary access easement from Walmart and/or Costco, and a temporary access easement from Huntington Square Apartments. If the existing trail easement across the Huntington Square Apartment property is insufficient to contain the construction activities, an additional temporary construction easement would be needed.

Proposed facilities include a paved trail, a new prefabricated bridge across the unnamed creek tributary, solar lighting, and an at-grade signalized pedestrian crossing at Sylvan Road (**Figure 3. Project Features**). Construction activities will involve grading to achieve ADA-compliant slopes, installing the creek crossing (the prefabricated bridge), paving the trail, erecting the solar lighting, and adding pedestrian signal infrastructure with minor utility adjustments as needed. The Project also includes installation of a gabion basket retaining wall along an actively eroding portion of Arcade Creek to stabilize the bank and prevent further erosion.

Construction access will be provided primarily through the Walmart and/or Costco parking lot under a temporary construction easement, with potential supplemental access from the Huntington Square Apartments parcel. These provisions will allow safe and efficient construction of the trail and its associated improvements.



V:\3407_Arcade_Cripple_Creek_Trail\1_3_StandardFigures\1_3_StandardFigures.aprx

Source: Dokken Engineering 2/4/2026; Created By: kjacobson

0 75 150 Feet

Figure 3
Project Features
Arcade-Cripple Creek Trail (Sylvan to Stock Ranch) Extension Project
Citrus Heights, Sacramento County, California

Chapter 2 – Study Methods

This section describes the federal, state, and local plans, policies, and laws that are relevant to biological resources within the BSA. Applicable federal permits and approvals that will be required before construction of the Project are provided in Chapter 5.

Federal Regulations

National Environmental Policy Act

NEPA provides an interdisciplinary framework for environmental planning by federal agencies and contains action-forcing procedures to ensure that federal agency decisions take environmental factors into account. NEPA is applicable when a federal agency proposes an action, grants a permit, or agrees to fund or otherwise authorize any other entity to undertake an action that could possibly affect environmental resources. Caltrans is the designated NEPA lead agency for this Project acting under delegation from the Federal Highway Administration (FHWA).

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 (16 U.S.C. section 1531 et seq.) provides for the conservation of endangered and threatened species listed pursuant to Section 4 of the Act (16 U.S.C. section 1533) and the ecosystems upon which they depend. These species and resources have been identified by USFWS or National Marine Fisheries Service (NMFS). One federally threatened species, VELB, along with one federally proposed threatened species, NWPT, have potential to occur within the BSA.

Clean Water Act

The CWA was enacted as an amendment to the Federal Water Pollutant Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to Waters of the U.S. The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The CWA empowers the U.S. Environmental Protection Agency to set national water quality standards and effluent limitations and includes programs addressing both point source and nonpoint source pollution. Point source pollution originates or enters surface waters at a single, discrete location, such as an outfall structure or an excavation or construction site. Nonpoint source pollution originates over a broader area and includes urban contaminants in storm water runoff and sediment loading from upstream areas. The CWA operates on the principle that all discharges into the nation's waters are unlawful unless they are specifically authorized by a permit; permit review is the CWA's primary regulatory tool.

Section 401

The RWQCB has jurisdiction under Section 401 of the CWA and regulates any activity which may result in a discharge to surface waters. Typically, the areas subject to jurisdiction of the RWQCB coincide with waters of the U.S. including any wetlands. The RWQCB also asserts authority over "waters of the state"

under WDRs pursuant to the Porter-Cologne Water Quality Control Act. The Project is located within the jurisdiction of the Central Valley RWQCB and would require a Water Quality Certification (WQC) prior to construction. WQCs are issued to applicants for a federal license or permit for activities that may result in a discharge into waters of the U.S., including but not limited to the discharge or dredged or fill material.

Section 402

The California State Water Resources Control Board (SWRCB) regulates construction projects that involve ground disturbance of one acre or greater. These projects must obtain coverage under the SWRCB General Permit for Storm Water Discharges Associated with Construction Activity (General Construction Permit). Operators of regulated construction sites are required to develop a Stormwater Pollution Prevention Plan; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the General Construction Permit.

Section 404

The United States Army Corp of Engineers (USACE) regulates discharges of dredged or fill material into waters of the U.S. These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a direct or indirect connection to interstate commerce. The USACE regulatory jurisdiction pursuant to Section 404 of the CWA is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or may be indirect (through a nexus identified in USACE regulations). Arcade Creek and the Arcade Creek tributary, within the BSA, are jurisdictional waters of the U.S. and will require Section 404 permitting through the USACE.

Executive Order 11990 – Protection of Wetlands

The Executive Order (EO) 11990 established a national policy to avoid adverse impacts on wetlands whenever there is a practicable alternative. The U. S. Department of Transportation (DOT) promulgated DOT Order 5660.1A in 1978 to comply with this direction. On federally funded projects, impacts on wetlands must be identified. Alternatives that avoid wetlands must be considered. If wetland impacts cannot be avoided, then all practicable measures to minimize harm must be included. This must be documented in a specific Wetlands Only Practicable Alternative Finding.

An additional requirement is to provide early public involvement in projects affecting wetlands. FHWA provides technical assistance in the Guidance for Preparing and Processing Environmental and Section 4(f) Documents (Technical Advisory T 6640.8A) and reviews environmental documents for compliance.

Executive Order 13112 – Invasive Species

EO 13112 (signed February 3, 1999) directs all federal agencies to prevent and control introductions of invasive species in a cost-effective and environmentally sound manner. The EO and directives from the FHWA require consideration of

invasive species in NEPA analyses, including their identification and distribution, their potential impacts, and measures to prevent or eradicate them.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act of 1976 was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

Migratory Bird Treaty Act

This treaty with Canada, Mexico and Japan makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season. California Fish and Game Code Sections 3503 and 3503.5 (protection of birds' nests) and 3513 (taking Migratory Bird Treaty Act birds) also prohibit the destruction of any nest, egg, or nestling.

State Regulations

California Environmental Quality Act

CEQA is a California state law designed to inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities and to identify measures to reduce these negative environmental impacts. The City is the CEQA lead agency for this Project.

California Endangered Species Act

The California Fish and Game (CFG) Code Section 2050, henceforth referred to as the California Endangered Species Act (CESA), requires CDFW to establish a list of endangered and threatened species (Section 2070) and to prohibit the incidental taking of any such listed species except as allowed by the Act (Sections 2080–2089). In addition, CESA prohibits take of candidate species (under consideration for listing).

CESA also requires CDFW to comply with CEQA (Pub. Resources Code Section 21000 et seq.) when evaluating incidental take permit applications (CFG Code Section 2081(b) and California Code Regulations, Title 14, section 783.0 et seq.), and the potential impacts the project or activity for which the application was submitted may have on the environment. CDFW's CEQA obligations include consultation with other public agencies which have jurisdiction over the project or activity [California Code Regulations, Title 14, Section 783.5(d)(3)]. CDFW cannot issue an incidental take permit if issuance would jeopardize the continued existence of the species [CFG Code Section 2081(c); California Code

Regulations, Title 14, Section 783.4(b)]. Swainson's hawk listed as threatened under CESA has a low potential to occur within the BSA.

Section 1602: Streambed Alteration Agreement

Under CFG Code 1602, public agencies are required to notify CDFW before undertaking any project that will divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review generally occur during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resources. These modifications are formalized in a Streambed Alteration Agreement that becomes part of the plans, specifications, and bid documents for the project.

Section 3503 and 3503.5: Bird and Raptors

CFG Code Section 3503 prohibits the destruction of bird nests and Section 3503.5 prohibits the killing of raptor species and destruction of raptor nests.

Section 3513: Migratory Birds

CFG Code Section 3513 prohibits the take or possession of any migratory non-game bird as designated in the Migratory Bird Treaty Act (MBTA) or any part of such migratory non-game bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Section 3511: Fully Protected Birds

CFG Code Section 3511 designates certain bird species as fully protected and prohibits the take or possession of these species, or any part thereof, except as expressly authorized for scientific research, species recovery, or limited relocation purposes by CDFW. The white-tailed kite is a fully protected species and has low potential to occur within the BSA.

Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. The act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., such as groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined and this definition is broader than the CWA definition of "pollutant". Discharges under the Porter-Cologne Act are permitted by WDRs and may be required even when the discharge is already permitted or exempt under the CWA.

The RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details regarding water quality standards in a project area are contained in the applicable RWQCB Basin Plan. In California, RWQCBs designate beneficial uses for all water body

segments in their jurisdictions and then set criteria necessary to protect these uses. Consequently, the water quality standards developed for particular water segments are based on the designated use and vary depending on such use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants, which are then state listed in accordance with CWA Section 303(d). If a state determines that waters are impaired, and the standards cannot be met through point source or nonsource point controls (National Pollutant Discharge Elimination System [NPDES] permits), the CWA requires the establishment of Total Maximum Daily Loads which specify allowable pollutant loads from all sources (point, nonpoint, and natural) for a given watershed. The ephemeral tributary within the BSA is considered a jurisdictional water of the state.

Regional Water Quality Control Board

The SWRCB adjudicates water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, Total Maximum Daily Loads, and NPDES permits. RWQCBs are responsible for protecting beneficial use of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

Local Regulations

City of Citrus Heights 2011 General Plan

The City's General Plan contains goals, policies, and actions that embody the City's approach for achieving the community's vision for its future. Goals identify physical, economic, environmental and/or social ends that the community desires. The policies are used directly to guide City decision makers and staff to respond by developing proposals and community actions (City of Citrus Heights 2011).

Compliance with all relevant goals and policies outlined in the General Plan will be required as part of the Project, including but not limited to:

Goal 17: Develop the Stock Ranch property with a mix of uses that enhance the City’s economic base, are compatible with surrounding land uses, and are sensitive to natural resources

Policy 17.3: Promote development in Stock Ranch in a manner that creates an attractive, distinct, cohesive, high-quality place. Features shall include: recognition of site and City history; good automobile and pedestrian connection; compatibility with surrounding land uses; avoids cut-through traffic; and maintains open space.

Policy 17.4: Incorporate trail, park, open space and public access along Arcade Creek.

Policy 29.4: Support safe, complete and well-connected neighborhood street, bicycle, and pedestrian access and connections that balance circulation needs with the neighborhood context.

Goal 38: Establish a system of creekside trails, passive open space and parks for public use

City of Citrus Heights Pedestrian Master Plan

The City Council adopted the first Citrus Heights Pedestrian Master Plan (PMP) on August 11, 2016. The PMP provides a broad vision, strategies, and actions for improving the pedestrian environment in the City by guiding the prioritization of investments in pedestrian infrastructure. It serves as a strategic framework to secure funding for pedestrian safety and livable community initiatives and to encourage more walking trips. The overall goal of the PMP is to enhance personal mobility, promote physical activity, and improve quality of life for City residents. The proposed Project is identified as a Local Priority Pedestrian Corridor Network within the PMP (City of Citrus Heights 2016).

The proposed Project aligns with the following goals and objectives listed in the PMP:

Goal 1: Improve walking safety.

Objective 1.C: Create an environment where people feel safe walking in Citrus Heights.

Goal 2: Increase and improve pedestrian access for all ages and abilities throughout the community.

Goal 4: Develop a walking environment that supports a vibrant community.

Objective 4.A: Create vibrant public spaces that encourage walking.

Objective 4.B: Create vibrant pedestrian friendly street environments in commercial and retail areas.

Objective 4.C: Create pedestrian priority corridors that serve as ‘walksheds’ to direct pedestrians to these safer, convenient paths between key destinations.

City of Citrus Heights Tree Preservation and Protection Regulations

Native oak trees and other mature trees 19 inches or greater in diameter are protected and require a permit for removal.

The following trees are protected and require a tree permit:

- Native oaks 6 inches or more in diameter
- Mature trees 19 inches or more in diameter
- Trees planted as part of a condition of approval or mitigation requirement with a discretionary permit

Studies Required

Online databases from USFWS Information for Planning and Consultation (iPaC), California Natural Diversity Database (CNDDB), NMFS West Coast Region California Species List, and CNPS Inventory of Rare and Endangered Plants of California were queried for presence of potential threatened, endangered, rare, or special status species within the USGS 7.5-minute quadrangles of Rio Linda (3812164), Citrus Heights (3812163), Folsom (3812162), Sacramento East (3812154), Buffalo Creek (3812152)), Carmichael (3812153), Rocklin (3812172), Roseville (3812173), and Pleasant Grove (3812174). These searches identified 23 special status wildlife species and 12

special status plant species with potential to occur in the vicinity of the Project (**Appendix A** through **Appendix D**). These species are described in **Table 2. Special Status Species with Potential to Occur in the Project Vicinity**, which provides a comprehensive list and presents specific characteristics, habitat requirements, and potential for occurrence for each species.

Personnel and Survey Dates

A general biological survey was conducted on October 17, 2025, by Dokken Engineering biologists Caroline Clarkson and Katie Jacobson. The survey consisted of a general assessment of biological conditions of the BSA, with special attention given to sensitive plant and wildlife species that were determined by the literature assessment to have a potential of occurring within the Project vicinity. Methodology involved walking meandering transects throughout the BSA and recording observed vegetation and wildlife species, as well as categorizing existing vegetation communities.

In addition, an aquatic resources delineation was conducted in accordance with technical methods outlined in *A Field Guide to the Identification of the Ordinary High-Water Mark* (OHWM) *in the Arid West Region of the Western United States* (Lichvar & McColley 2008) to determine the boundaries of the OHWM of Arcade Creek and the Arcade Creek tributary. During survey efforts, these aquatic features were mapped in the field using an EOS Arrow 100 Receiver paired with ArcGIS Pro 3.6 software. This fieldwork was supplemented by desktop analysis of current and historical aerial imagery, as well as Light Detection and Ranging (LiDAR) data. The OHWM datasheet is included in the attached appendices (**Appendix F. OHWM Datasheet**).

Agency Coordination and Professional Contacts

United States Fish and Wildlife Service

On September 29, 2025, an official species list was obtained from the USFWS iPaC list for federally endangered and threatened species that could occur in the vicinity of the Project. An updated species list was obtained from iPaC on February 2, 2026 (**Appendix A**).

California Department of Fish and Wildlife

On March 12, 2026, a nine-quadrangle CNDDB search for special status species was obtained and used to create a list of species potentially occurring in the vicinity of the Project (**Appendix B**).

On January 23, 2026, Dokken Engineering contacted Skyler Burson, District Anadromous Fisheries Biologist with CDFW Region 2, to confirm the status of anadromous fish in Arcade Creek within the BSA. Skyler indicated that the potential for listed fish species to occur in this reach of Arcade and Cripple Creeks is very low. While there have been unverified reports of steelhead in the lower portions of Arcade Creek following large flow events, these are likely hatchery-origin fish. In November 2025, a small number of adult fall-run Chinook salmon entered Cripple Creek; however, Cripple Creek functions as a dead-end system with limited to no suitable spawning habitat, and any successful spawning

or juvenile survival is considered highly unlikely (**Appendix G. CDFW Region 2 Fisheries Biologist Coordination**).

California Native Plant Society

On March 12, 2026, a special status plant list was obtained from CNPS Inventory of Rare and Endangered Plants of California (**Appendix C**).

National Oceanic and Atmospheric Administration

On March 12, 2026, a list of federally listed fish species was obtained from NMFS West Coast Region California Species List (**Appendix D**).

Limitations That May Influence Results

Sensitive wildlife species with the potential to occur in the BSA may be cryptic (difficult to detect) or transient, migratory species. The population size and locations of sensitive species may fluctuate through time. Because of this, the data collected for this NES represents a “snapshot” in time and may not reflect actual future conditions. The collection of biological field data is normally subject to environmental factors that cannot be controlled or reliably predicted. Consequently, the interpretation of field data must be conservative and consider the uncertainties and limitations imposed by the environment. However, due to the experience and qualifications of the consulting biologists involved in the surveys, this limitation is not expected to severely influence the results or substantially alter the findings of this NES.

Chapter 3 – Results: Environmental Setting

Description of the Existing Physical and Biological Conditions

The following sections discuss ecological conditions of the region and biological resources present within the BSA.

Study Area

The Project is located south of Auburn Boulevard and west of Sylvan Road within Citrus Heights, California, and partially within the Stock Ranch Nature Preserve, a 47-acre open-space park with over 1.5 miles of walking paths along the Arcade and San Juan creeks. The Project area encompasses approximately 8.06 acres and accounts for all temporary and permanent impacts associated with construction, including proposed construction easements, temporary access roads, cut and fill limits, and potential staging areas. The BSA was defined as the area necessary for Project activities with an approximate 50-meter (165-foot) buffer to evaluate adjacent sensitive habitat resources and to accommodate for potential changes in the Project design. The BSA measures approximately 32.62 acres (**Figure 4. Waters and Vegetation Communities**).

Physical Conditions

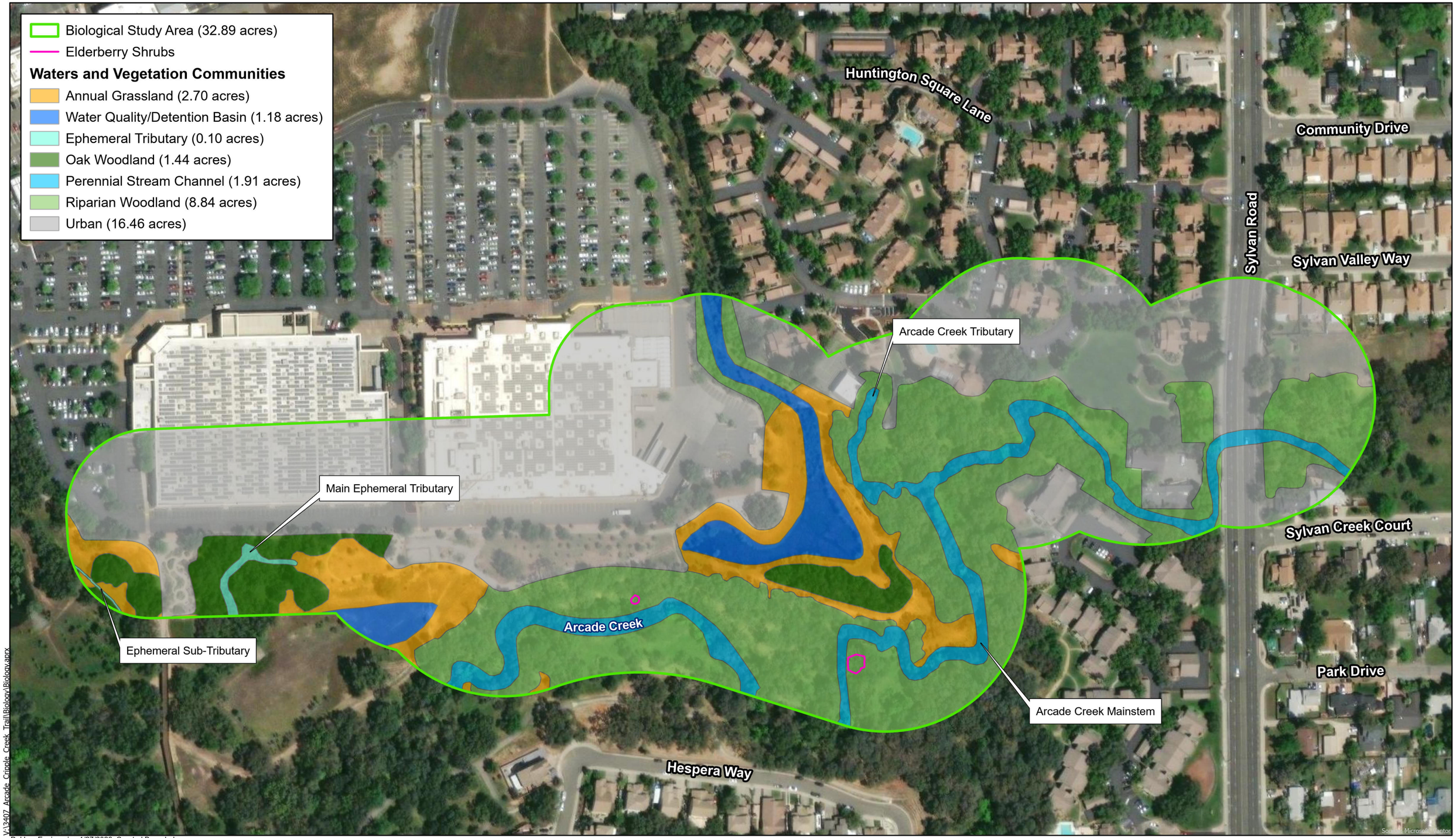
The Project is located in the City of Citrus Heights, Sacramento County, California, approximately 2.4 miles south of Interstate 80. Land use within the vicinity of the trail alignment includes open space, residential and commercial areas. The Project is located in the Sacramento Valley Floristic Province (Jepson 2025). Sacramento County experiences a mediterranean climate consisting of hot, dry summers and cool, wet winters. The average annual high temperature is approximately 75 degrees Fahrenheit (°F), and the average annual low temperature is approximately 49°F. The region averages 18.14 inches of precipitation annually (U.S. Climate Data 2025). The topography within the BSA is flat and the elevation of the BSA ranges between approximately 125 feet to 140 feet above mean sea level. The Natural Resources Conservation Service (NRCS) Custom Soil Resource Report was queried for the Project, and the soil types within the BSA include Fiddyment-Orangevale complex, 2 to 8 percent slopes (95.5% of the BSA) and Fiddyment-Orangevale-Urban land complex, 2 to 8 percent slopes (4.5% of the BSA) (NRCS 2025).

Hydrology

Two aquatic feature types were observed within the BSA during the October 2025 biological survey: Arcade Creek and its tributary (perennial stream channel), an ephemeral tributary to Arcade Creek, and portions of two manmade water quality/detention basins. Each is discussed individually below:

Arcade Creek

Arcade Creek, a perennial stream channel, flows northeast to southwest through the BSA, and holds water year-round.



V:\13407_Arcade_Cripple_Creek_Trail\Biology\Biology.aprx

Dokken Engineering 1/27/2026; Created By: cclarkson

0 175 350 Feet

Figure 4
Waters and Vegetation Communities
Arcade-Cripple Creek Trail (Sylvan to Stock Ranch) Extension Project
Citrus Heights, Sacramento County, California

The mainstem of Arcade Creek, which originates in Orangevale and flows into the Natomas East Main Drainage Canal (also called Steelhead Creek), is approximately 16.2 miles long with a watershed area of about 29.7 square miles. It ultimately discharges to the Sacramento River. Within the BSA, the Arcade Creek channel also includes a perennial tributary which splits off from the mainstem south of Huntington Square Lane (**Figure 4**). Historic aerial imagery indicates that the tributary once flowed south from Auburn Boulevard, but over time residential development shortened the channel, leaving only a remnant of the original tributary. The Arcade Creek channel and its tributary are part of the Arcade Creek watershed, a small, urbanized watershed covering approximately 38 square miles. Surrounding land use in the Arcade Creek watershed is primarily residential and commercial with transportation infrastructure such as roads, trails and parking lots. Historically, Arcade Creek functioned as a seasonal stream that carried water predominantly during the winter and spring months. In some years, portions of the creek and its tributaries would completely dry out during the summer. With increasing urbanization, the creek transitioned to a perennial system, likely beginning around 60 years ago. Today, dry-weather flows are sustained by inputs such as landscape irrigation runoff, car washing, industrial discharges, and other non-stormwater sources, resulting in Arcade Creek maintaining continuous flow throughout the year. A majority of surface water within Arcade Creek is urban runoff (City of Sacramento 2003).

Arcade Creek and its tributary comprise approximately 1.91 acres (6%) of the BSA.

Arcade Creek and its tributary are jurisdictional waters of the U.S. and state that are subject to the Section 401 and 404 of the CWA.

Ephemeral Tributary

During the October 2025 biological survey, an ephemeral tributary to Arcade Creek was observed within the western portion of the BSA. The tributary has two parts, a main larger tributary measuring approximately 5 feet wide, and a sub-tributary measuring approximately 2 feet wide. The ephemeral tributaries collect rainwater and stormwater runoff from Auburn Boulevard and the shopping center north of the project and carry it toward Arcade Creek. The east main tributary splits off Arcade Creek from the west, outside of the BSA and flows southwest from two ponded areas which empty into Arcade Creek. The smaller sub-tributary splits off from the main tributary channel and flows south from a detention basin located northwest of the BSA, eventually merging with the main tributary. At the time of the survey, pooled water was present within the main tributary, but no flows were exhibited. No water was present within the sub-tributary. The boundaries of the ephemeral tributary were mapped in the field in accordance with the following OHWM indicators: change in vegetation species and density, break in bank slope, and presence of a bed, bank and channel. Dominant vegetation observed within the bed, banks, and surrounding area of the ephemeral tributary includes curly dock (*Rumex crispus*), spreading rush (*Juncus patens*), interior live oak, and Himalayan blackberry. The BSA contains approximately 0.10 acres (<1%) of ephemeral tributary.

Because the ephemeral tributary does not meet the “relatively permanent standard” under the current definition of waters of the U.S., it is considered a water of the state subject to Section 401 of the CWA.

Water Quality/Detention Basins

During the October 2025 field survey, portions of two water quality/detention basins were documented within the BSA. These areas are gently sloping, engineered depressions designed to capture and temporarily detain stormwater runoff.

The western basin was completely dry at the time of the survey. However, historic aerial imagery (from November 2023) indicates that the area becomes inundated with water during heavy rain events caused by stormwater runoff from the adjacent commercial and residential areas. The basin supports annual grassland habitat dominated by spikeweed (*Centromadia fitchii*) and wild oat (*Avena fatua*) which appeared to have been recently trimmed.

The eastern basin was full of water at the time of the survey. This basin is supplied by a small stream channel to the north, which collects stormwater runoff from adjacent residential homes to the east and the paved parking lot to the west. The connected stream channel originates at the homes along Gallant Circle and flows south and southeast before reaching the basin. According to historic aerial imagery, this basin tends to hold water longer than the western basin, allowing it to grow hydrophytic vegetation species such as broadleaf cattail (*Typha latifolia*), tule (*Schoenoplectus acutus var. occidentalis*), cottonwoods and willow trees (*Salix lasiolepis*, *Salix gooddingii*). At the time of the survey, the cattails and tules in the channel appeared to be in poor health and recently trimmed. The BSA contains approximately 1.18 acres (4%) of water quality/detention basins.

Because these basins are artificial ponds constructed in dry land for stormwater treatment and detention, they fall under the exclusion at 40 CFR § 120.2(b)(5) and therefore do not meet the current definition of waters of the U.S. In addition, permitting under Section 401 of the CWA is not warranted as there is little to no risk of discharge to another water body and there is no potential for the Project improvements to encroach on these features. As such, these features are not discussed further in the document.

Biological Conditions

Vegetation Communities

Plant and wildlife species observations within the BSA during the October 2025 biological survey efforts were used to define vegetation communities based on composition, abundance, and cover (**Table 1. Species Observed List**). As discussed above in the hydrology section, waters within the BSA include Arcade Creek and the tributary to Arcade Creek as well as two manmade water quality/detention basins. Natural vegetation communities within the BSA include annual grassland, riparian woodland and oak woodland. In addition, the BSA encompasses urban areas including paved parking lots, roadways, a wooden pedestrian bridge, sidewalks, residential homes and commercial businesses (**Figure 4; Appendix E. Reference Photographs**).

Annual Grassland

Annual grasslands are open areas dominated primarily by annual plant species. In the BSA, this vegetation community is found along the edges of the two water quality/detention basins and the ephemeral tributary, bordering the oak woodland vegetation community. Common species observed in this vegetation community include wild oat, dogtail grass (*Cynosurus echinatus*), spikeweed, and common vetch (*Vicia sativa*). Annual grasslands cover approximately 2.70 acres (8%) within the BSA.

Riparian Woodland

The BSA includes a dense, mature riparian woodland that borders the length of Arcade Creek and the Arcade Creek tributary. This vegetation community is dominated by a variety of native tree species including valley oak (*Quercus lobata*), interior live oak (*Quercus wislizeni*), box elder (*Acer negundo*), Oregon ash (*Fraxinus latifolia*), Fremont cottonwood (*Populus fremontii*), and northern California black walnut (*Juglans hindsii*). The understory is comprised of Himalayan blackberry, periwinkle (*Vinca minor*), Harding grass (*Phalaris aquatica*) and tall flat sedge (*Cyperus eragrostis*). Within the riparian woodland, two clusters of elderberry shrubs were observed: one located on the southern bank of Arcade Creek mainstem north of Hesperia Way and the second located on the north bank of Arcade Creek mainstem, south of the Walmart. . Riparian woodland provides suitable habitat for a variety of wildlife species including birds, mammals and insects. Riparian woodland comprises approximately 8.84 acres (27%) of the BSA.

Oak Woodland

The BSA includes mature oak woodland that occupies the upland areas of the site. This community is dominated by native oak tree species such as valley oak, blue oak (*Quercus douglasii*), and interior live oak. The canopy is moderately dense, providing partial shade and contributing to a well-developed litter layer of decomposing oak leaves and twigs. The understory consists primarily of native and non-native grasses and forbs, including wild oat, Italian rye grass (*Festuca perennis*), and English plantain (*Plantago lanceolata*). Seasonal herbaceous growth is most abundant in spring, while the summer understory tends to dry and thin considerably. Shrub species such as poison oak (*Toxicodendron diversilobum*) are also common in this vegetation community. The oak woodland vegetation community provides important foraging, nesting, and cover opportunities for a variety of wildlife species. Oak woodlands comprise approximately 1.44 acres (4%) of the BSA.

Table 1. Species Observed

Common Name	Scientific Name	Native (N) / Non-Native (X) [Cal-IPC Rating]
Plant Species		
American pokeweed	*Phytolacca americana*	X [Limited]
American sweetgum	*Liquidambar styraciflua*	X
Arroyo willow	*Salix lasiolepis*	N
Baltic rush	*Juncus balticus*	N
Bigleaf maple	*Acer macrophyllum*	N

Common Name	Scientific Name	Native (N) / Non-Native (X) [Cal-IPC Rating]
Blue elderberry	*Sambucus mexicana*	N
Blue oak	*Quercus douglasii*	N
Box elder	*Acer negundo*	N
Brazilian vervain	*Verbena litoralis*	X
Broadleaf cattail	*Typha latifolia*	N
Bur chervil	*Anthriscus caucalis*	X
California mugwort	*Artemisia douglasiana*	N
California pipevine	*Aristolochia californica*	N
California sycamore	*Platanus racemosa*	N
California wild grape	*Vitis californica*	N
Callery pear	*Pyrus calleryana*	X
Chicory	*Cichorium intybus*	X
Chinese elm	*Ulmus parvifolia*	X
Chinese photinia	*Photinia serratifolia*	X
Chinese pistache	*Pistacia chinensis*	X
Clustered dock	*Rumex conglomeratus*	X
Common knotweed	*Persicaria lapathifolia*	N
Common vetch	*Vicia sativa*	X
Coyote brush	*Baccharis pilularis*	N
Curly dock	*Rumex crispus*	X [Limited]
Dogbane	*Apocynum cannabinum*	N
Dogtail grass	*Cynosurus echinatus*	X [Moderate]
English ivy	*Hedera helix*	X [High]
English plantain	*Plantago lanceolata*	X [Limited]
Firethorn	*Pyracantha coccinea*	X [Limited]
Fremont cottonwood	*Populus fremontii*	N
French broom	*Genista monspessulana*	X [High]
Goodding's willow	*Salix gooddingii*	N
Harding grass	*Phalaris aquatica*	X [Moderate]
Himalayan blackberry	*Rubus armeniacus*	X [High]
Honey locust	*Gleditsia triacanthos*	X
Interior live oak	*Quercus wislizeni*	N
Italian rye grass	*Festuca perennis*	X [Moderate]
Italian thistle	*Carduus tenuiflorus*	X [Limited]
Johnsongrass	*Sorghum halepense*	X
Northern California black walnut	*Juglans hindsii*	N
Olive tree	*Olea europaea*	X [Limited]
Oregon ash	*Fraxinus latifolia*	N
Pampas grass	*Cortaderia jubata*	X [High]
Periwinkle	*Vinca minor*	X
Poison oak	*Toxicodendron diversilobum*	N
Red willow	*Salix laevigata*	N
Rose clover	*Trifolium hirtum*	X [Limited]
Shumard oak	*Quercus shumardii*	X
Silk tree	*Albizia julibrissin*	X
Silver maple	*Acer saccharinum*	X
Smilo grass	*Stipa miliacea*	X
Southern catalpa	*Catalpa speciosa*	X
Spanish clover	*Acmispon americanus*	N
Spikeweed	*Centromadia fitchii*	N
Spreading rush	*Juncus patens*	N
Tall flat sedge	*Cyperus eragrostis*	N

Common Name	Scientific Name	Native (N) / Non-Native (X) [Cal-IPC Rating]
Toyon	*Heteromeles arbutifolia*	N
Tree of heaven	*Ailanthus altissima*	X [Moderate]
Tule	*Schoenoplectus acutus var. occidentalis*	N
Valley oak	*Quercus lobata*	N
Velvet ash	*Fraxinus velutina*	N
White horehound	*Marrubium vulgare*	X [Limited]
Wild oat	*Avena fatua*	X [Moderate]
Yellow star thistle	*Centaurea solstitialis*	X [High]
Wildlife Species		
Acorn woodpecker	*Melanerpes formicivorus*	N
American robin	*Turdus migratorius*	N
Anna's hummingbird	*Calypte anna*	N
Bewick's wren	*Thryomanes bewickii*	N
Black phoebe	*Sayornis nigricans*	N
Bullfrog	*Lithobates catesbeianus*	X
California scrub jay	*Aphelocoma californica*	N
California towhee	*Melozone crissalis*	N
Canada goose	*Branta canadensis*	X
Cedar waxwing	*Bombycilla cedrorum*	N
Domestic cat	*Felis catus*	X
European starling	*Sturnus vulgaris*	X
House finch	*Haemorhous mexicanus*	N
Lesser goldfinch	*Spinus psaltria*	N
Mallard	*Anas platyrhynchos*	N
Mourning dove	*Zenaida macroura*	N
Northern flicker	*Colaptes auratus*	N
Northern mockingbird	*Mimus polyglottos*	N
Nuttall's woodpecker	*Dryobates nuttallii*	N
Oak titmouse	*Baeolophus inornatus*	N
Pacific chorus frog	*Pseudacris regilla*	N
Red-shouldered hawk	*Buteo lineatus*	N
Spotted towhee	*Pipilo maculatus*	N
Tree squirrel	*Sciurus niger*	N
White-breasted nuthatch	*Sitta carolinensis*	N
Wild turkey	*Meleagris gallopavo*	X

[1]California Invasive Plant Council (Cal-IPC) Rating

Wildlife

The BSA contains a variety of waters and vegetation communities (riparian woodland, oak woodland, water quality/detention basin, perennial stream channel, ephemeral tributary and annual grassland) which support a diversity of native and non-native wildlife species, including birds, mammals and amphibians. During the biological survey conducted on October 17, 2025, a high level of bird activity was observed throughout the BSA, particularly within the riparian woodland and oak woodland vegetation communities. Dominant bird species detected included acorn woodpecker (*Melanerpes formicivorus*), California scrub jay (*Aphelocoma californica*), northern flicker (*Colaptes auratus*), oak titmouse (*Baeolophus inornatus*), and northern mockingbird (*Mimus polyglottos*). The water quality/detention basins also support waterfowl such as Canada geese (*Branta canadensis*) and mallards (*Anas platyrhynchos*). Locally common

amphibian species, pacific chorus frog (*Pseudacris regilla*) and bullfrog (*Lithobates catesbeianus*) were also heard calling throughout the Arcade Creek corridor.

Habitat Connectivity

The CDFW *Biogeographic Information & Observation System* (CDFW 2025a) was reviewed to determine if the BSA is located within an Essential Connectivity Area. The BSA was determined to be within an area of *Terrestrial Connectivity Rank 1 – Limited Connectivity Opportunity*. This ranking indicates that either land-use conditions limit the potential for wildlife or ecological processes to move through that area (urban, agriculture), or that no significant connectivity importance has been identified in relevant models. Rank 1 areas are classified by CDFW as lower priority for connectivity conservation efforts compared to Ranks 2–5.

The Arcade Creek Trail extension will follow an existing informal dirt path that passes through the open space area north of Arcade Creek. The Project will not introduce new barriers or cause additional habitat fragmentation. Upon completion, the Project will allow for the continued movement of terrestrial wildlife across the trail and throughout the surrounding oak woodland, riparian woodland, and grassland habitats. Existing habitat connectivity will be maintained throughout Project implementation.

Regional Species and Habitats and Natural Communities of Concern

Plant and wildlife species are considered to have special status if they have been listed as such by federal or state agencies or by one or more special interest groups, such as CNPS.

Prior to the field surveys, online databases from USFWS, CNDDB, CNPS and NMFS were queried for presence of potential threatened, endangered, rare, or special status species. Database search results identified ten special status or sensitive wildlife species and seven special status or sensitive plant species with potential of occurring in the vicinity of the BSA. **Table 2** below includes a complete list of these special status species along with a discussion and determination of each species' potential of occurring within the BSA. An analysis of habitat requirements, recorded observations, and field surveys determined that the following species have potential to occur within the BSA: song sparrow ("Modesto" population), Swainson's hawk, white-tailed kite, VELB, and NWPT.

Table 2: Special Status Species with Potential to Occur in the Project Vicinity

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Amphibian Species						
Western spadefoot	*Spea hammondii*	Fed: State: CDFW:	PT -- SSC	Inhabits open areas with sandy or gravelly soils within mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Burrows underground for most of the year and is active above ground during rainfall. Requires vernal, shallow, temporary pools formed by heavy winter rains for reproduction. These pools must be free of bullfrogs, fish, and crayfish. Breeds from late winter to March.	A	**Presumed Absent:** The BSA lacks shallow temporary pools required for reproduction of this species. The nearest CNDDB occurrence of the species is located approximately 4.8 miles southeast of the BSA at Phoenix Field Vernal Pools (1995). In addition, no small mammal burrows were observed within the BSA during the October 2025 biological survey. Based on lack of suitable habitat features and lack of nearby occurrences, this species is presumed absent. No impacts are anticipated, and the Project will have *no effect* on the species.
Bird Species						
Bank swallow	*Riparia riparia*	Fed: State: CDFW:	-- T --	A migratory colonial nester inhabiting lowland and riparian habitats west of the deserts during spring through fall. Majority of current breeding populations occur along the Sacramento and Feather Rivers in the north Central Valley. Forages in grassland, brushland, wetlands, and cropland during migration. Requires vertical banks or cliffs with fine textured/sandy soils for nesting (tunnel and burrow excavations). Nests exclusively near streams, rivers, lakes, or the ocean. Breeds from May through July.	A	**Presumed Absent:** The BSA lacks sandy cliffs or vertical banks required for nesting. There is some grassland and riparian habitat present within the BSA that could be used as foraging habitat. However, no individuals of the species have been recorded along Arcade Creek in the vicinity of the Project. The nearest documented CNDDB occurrence is located approximately 4 miles southeast of the BSA, along the north bank of the American River (1990). Based on the lack of suitable nesting habitat and lack of nearby occurrences, this species is presumed absent, and no take will occur.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Burrowing owl	*Athene cunicularia*	Fed: State: CDFW:	-- CE SSC	The species inhabits arid, open areas with sparse vegetation cover such as deserts, abandoned agricultural areas, grasslands, and disturbed open habitats. Can be associated with open shrub stages of pinyon-juniper and ponderosa pine habitats. Nests in old small mammal burrows but may dig own burrow in soft soil. Nests are lined with excrement, pellets, debris, grass, and feathers. The species may use pipes, culverts, and nest boxes, and even buildings where burrows are scarce. Breeding occurs March through August (below 5,300 feet).	A	**Presumed Absent:** The BSA is surrounded by urban development (residential and commercial properties) and lacks open areas with sparse vegetation cover. No large burrows or other evidence of burrowing owl habitation was observed within the BSA during the October 2025 biological survey. The nearest CNDDB occurrence of the species is located approximately 7.7 miles northwest of the BSA near the City of Roseville (1998). Based on lack of suitable habitat and evidence of burrowing owls as well as the lack of nearby occurrences, this species is presumed absent, and no take will occur.
California black rail	*Laterallus jamaicensis coturniculus*	Fed: State: CDFW:	-- T FP	A rare, yearlong California resident of brackish and freshwater emergent wetlands in delta and coastal locations including the San Francisco Bay area, Sacramento–San Joaquin Delta , Morro Bay, the Salton Sea, and lower Colorado River. More than 90% of the species are found in the tidal salt marshes of the northern San Francisco Bay region, predominantly in San Pablo and Suisun Bays. Smaller populations occur in the San Francisco Bay, the Outer Coast of Marin County, and freshwater marshes in the foothills of the Sierra Nevada. The species is extirpated from San Diego County and the majority of coastal southern California. Occurs in tidal emergent wetlands dominated by pickleweed, in brackish marshes	A	**Presumed Absent:** The BSA lacks tidal salt marsh and freshwater wetland habitat. There are also no documented CNDDB occurrences within 10 miles of the BSA. Due to lack of suitable habitat and lack of nearby occurrences, this species is presumed absent, and no take will occur.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
				dominated by bulrushes with pickleweed, and in freshwater wetlands dominated by bulrushes, cattails, and salt grass. Species prefer high wetland areas, away from areas experiencing fluctuating water levels. Requires vegetation providing adequate overhead cover for nesting. Eggs are laid from March through June.		
Golden eagle	*Aquila chrysaetos*	Fed: State: CDFW:	-- -- FP	Inhabits rolling foothills, mountain areas, sage-juniper flats, and desert communities. Requires open terrain for hunting, often utilizing rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, and cliffs and rock outcrops, grasslands and early successional stages of forest and shrub habitats. Territory is estimated to average 36 mi² in southern California and 48 mi² in northern California. Nests on cliffs of all heights and in large trees in open areas may reuse previous nest sites. Breeds from late January through August (0–11,500 feet).	A	**Presumed Absent:** The Project occurs in a highly developed area and lacks open terrain for hunting. Although there are mature trees along the riparian corridor of Arcade Creek within the BSA, they are surrounded by urban development and do not provide optimal nesting habitat for the species. No individuals have ever been recorded nesting in the area. Additionally, no suitable nesting cliffs are present within the Project vicinity. There are no CNDDB occurrences of the species documented within 10 miles of the BSA. Based on the absence of suitable foraging and nesting habitat and the lack of nearby occurrence records, the species is presumed absent, and no take will occur.
Grasshopper sparrow	*Ammodramus savannarum*	Fed: State: CDFW:	-- -- SSC	Inhabits foothills and lowlands with dry, dense, well-drained grasslands with a variety of grasses, tall forbs, and shrubs for perches. In southern California largely utilizes hillsides, and lower mountain slopes. Nests are composed of grasses and forbs on slight depressions in the ground. Species may form small	A	**Presumed Absent:** The BSA is in a highly developed area and lacks large contiguous open grassland habitat. There are also no documented CNDDB occurrences of the species within 10 miles of the BSA. Due to lack of suitable habitat and lack of nearby occurrences,

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
				groups when nesting. Breeds April through July (0-5,000 feet).		this species is presumed absent, and impacts are not anticipated.
Purple martin	*Progne subis*	Fed: State: CDFW:	-- -- SSC	Present in California as a summer migrant, arriving in March and departing by late September. Inhabits valley foothill and montane hardwood, hardwood-conifer, coniferous habitats, and riparian habitats. Associated with closed-cone pine-cypress, ponderosa pine, Douglas-fir, and redwood. Nests in tall, old, isolated trees or snags in open forest or woodland and in proximity to a body of water. Frequently nests within former woodpecker cavities and may nest in human-made structures such as nesting boxes, under bridges and in culverts. Needs abundant aerial insect prey. Breeds April through August.	A	**Presumed Absent:** The BSA contains mature riparian trees along Arcade Creek that may provide suitable nesting sites for the species. The nearest CNDDB occurrence is located approximately 6.1 miles northeast of the BSA, in which a nesting pair was observed at the Highway 65 Overpass over Taylor Road on the south edge of Rocklin (2007). Although it is possible for a purple martin to occur within the BSA, it is unlikely due to their reliance on human-made structures for nesting within Sacramento and Placer Counties (Airola & Grantham 2003). Furthermore, no individuals were observed during the May 2024 biological survey, and the presence of European starlings and acorn woodpeckers, both of which compete with purple martins for nesting sites, further reduces the likelihood of their occurrence. Given the lack of recent sightings in the Secret Ravine area and the presence of competitive species, it is unlikely that purple martins inhabit the Project vicinity. Due to this species pattern of occurrence along with the lack of observations of the species within the BSA, the purple martin is presumed absent, and impacts are not anticipated.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Song sparrow ("Modesto" population)	*Melospiza melodia pop. 1*	Fed: State: CDFW:	-- -- SSC	An endemic bird found exclusively in the north-central portion of the Central Valley, with highest densities in the Butte Sink and Sacramento–San Joaquin River Delta. The species is usually found in open brushy habitats, along the borders of ponds or streams, abandoned pastures, desert washes, thickets, or woodland edges. In addition, there is a strong affinity for emergent freshwater marshes dominated by tules and cattails, riparian willow thickets, and valley oak forests with a blackberry understory. Nests found in base of shrubs or clumps of grass, requiring low, dense vegetation for cover, usually near water. Breeds from March through August.	HP	**Low Potential:** The BSA contains mature riparian habitat along Arcade Creek containing oak trees and blackberry that may provide suitable habitat for the species. There is one CNDDB occurrence within 10 miles of the BSA, located approximately 9.2 miles southwest in which a specimen was collected (1990). The CNDDB occurrence notes indicate that development has replaced much of the wetlands and other suitable habitat in the area, so it is unlikely that this species is still present there. Based on the potentially suitable habitat present onsite, this species has a low potential to occur within the BSA. See Chapter 4 for details and analysis.
Swainson's hawk	*Buteo swainsoni*	Fed: State: CDFW:	-- T --	Inhabits grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable forage areas such as grasslands, alfalfa or grain fields that support a stable rodent prey base. Breeds March to late August.	HP	**Low Potential:** The BSA is highly developed and lacks open grasslands or other suitable foraging habitat. There are mature oak trees along the riparian corridor of Arcade Creek and in the oak woodland habitat that could be utilized as nesting habitat. However, the species has never been recorded nesting in the area. The nearest documented CNDDB occurrence is located approximately 4.8 miles south of the BSA in which a nest was observed in a eucalyptus tree near Ancil Hoffman Park (2004). There is also a nearby iNaturalist occurrence of the species located approximately 2.2 miles southwest of the BSA along Wendal

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
						Lane, recorded in August 2025. Based on the presence of suitable nesting habitat and nearby occurrences, this species has a low potential to occur within the BSA..
Tricolored blackbird	*Agelaius tricolor*	Fed: State: CDFW:	-- T SSC	Inhabits freshwater marsh, swamp and wetland communities, but may utilize agricultural or upland habitats that can support large colonies, often in the Central Valley area. Requires dense nesting habitat that is protected from predators, is within 3–5 miles from a suitable foraging area containing insect prey and is within 0.3 miles of open water. Suitable foraging includes wetland, pastureland, rangeland, at dairy farms, and some irrigated croplands (silage, alfalfa, etc.). Nests in dense cattails, tules, willow, blackberry, wild rose, or tall herbs. Nests mid-March to early August but may extend until October or November in the Sacramento Valley region.	A	**Presumed Absent:** The BSA contains two water quality/detention basins, one of which holds standing water and supports vegetation such as cattails, tules, and willows, which are typically used by tricolored blackbirds for nesting. At the time of the biological survey, however, the cattails and tules appeared recently trimmed and lacked the dense structure required for nesting. Furthermore, there are no agricultural fields or undeveloped open habitats within 3–5 miles that could provide suitable foraging areas. The BSA is surrounded by highly developed residential and commercial areas, which are likely unsuitable for supporting individuals of the species. The nearest CNDDB occurrence is located approximately 5.2 miles northeast of the BSA within Granite Bay (1999). According to the CNDDB occurrence notes, on subsequent surveys of the same area in April 2011 and 2014, no individuals of the species were observed. Based on the absence of dense nesting vegetation, the lack of nearby foraging habitat, and the surrounding urbanized landscape, this species is presumed

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
						absent. No take will occur, and impacts are not anticipated.
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	Fed: State: CDFW:	T E --	Species inhabits riparian forests, along broad, lower flood bottoms of larger river systems. Nests in large blocks of riparian forests, often mixed with cottonwoods. Nesting appears to be preferred in riparian forest habitats with a dense understory; it requires water near nesting site. Breeds June to August.	A	**Presumed Absent:** The BSA contains an approximately 12-acre riparian corridor along Arcade Creek. However, this species prefers large (at least 50 acres), contiguous patches of multilayered riparian habitat for nesting (NPS 2025). In addition, there are no presumed extant CNDDB occurrences of the species within 10 miles of the BSA. Based on the lack of suitable large riparian forest habitat and the lack of nearby occurrences, this species is presumed absent. No take will occur. The Project will have *no effect* on the species.
White-tailed kite	*Elanus leucurus*	Fed: State: CDFW:	-- -- FP	Inhabits rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Prefers open grasslands, meadows or marshes for foraging close to isolated, dense-topped trees for nesting and perching. In southern California, it will roost in saltgrass and Bermuda grass. Often found near agricultural lands. Nests are placed near the tops of dense oak, willow, or other tree stands. Breeds February through October.	HP	**Low Potential:** The BSA is surrounded by urban development and lacks open grasslands, meadows and marshes that could be used as foraging habitat. The riparian corridor along Arcade Creek along with the oak woodland habitat contains mature oak trees that may provide suitable nesting habitat for the species. The nearest CNDDB occurrence is located approximately 3.5 miles northeast of the BSA at Woodbridge Park in Orangevale in which a pair nested in a large tree south of the pond (1992). Due to the presence of potentially suitable nesting habitat, this species has a low potential to occur.
Fish Species						

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Chinook Salmon Central Valley spring-run ESU	*Oncorhynchus tshawytscha pop. 11*	Fed: State: CDFW:	T T --	Spring-run Chinook enter the Sacramento –San Joaquin River system to spawn, requiring larger gravel particle size and more water flow through their redds than other salmonids. The remaining runs occur in Butte, Mill, Deer, Antelope, and Beegum Creeks, tributaries to the Sacramento River. Known to occur in Siskiyou and Trinity counties.	EFH	**Presumed Absent:** Arcade Creek is considered EFH for Chinook salmon as it is within the Lower American-Below Nimbus Watershed (NOAA 2025). However, the BSA encompasses a highly urbanized reach of Arcade Creek with limited flow, poor water quality, and degraded habitat, making it unsuitable for salmon spawning or rearing. In addition, according to the City of Sacramento's "Existing Conditions and Assessment Report and Stream Corridor Management Plan for the Arcade Creek Watershed," Chinook salmon and steelhead trout have not been reported in Arcade Creek for over 20 years. This absence is attributed to the lack of suitable rearing and spawning habitats, as well as low summer flows, which are not conducive to supporting these species (Jones & Stokes 2007). Furthermore, Skyler Burson, District Anadromous Fisheries Biologist with CDFW Region 2 was contacted in January 2026 regarding anadromous fish presence in Arcade Creek within the BSA. They indicated that the likelihood of listed fish occurring in this reach of Arcade and Cripple Creeks is very low; while occasional fall-run Chinook salmon have been observed, these fish are likely hatchery-origin or unable to successfully spawn due to limited habitat. Based on this information, this species is presumed absent.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Chinook Salmon Sacramento River winter-run ESU	*Oncorhynchus tshawytscha pop. 7*	Fed: State: CDFW:	E E --	Winter-run Chinook are currently restricted within the Sacramento River below Keswick dam; species do not spawn in tributaries. Species require cold water over gravel beds to spawn.	A	**Presumed Absent:** Arcade Creek is considered EFH for Chinook salmon as it is within the Lower American-Below Nimbus Watershed (NOAA 2025). However, the BSA encompasses a highly urbanized reach of Arcade Creek with limited flow, poor water quality, and degraded habitat, making it unsuitable for salmon spawning or rearing. According to the City of Sacramento's "Existing Conditions and Assessment Report and Stream Corridor Management Plan for the Arcade Creek Watershed," Chinook salmon and steelhead trout have not been reported in Arcade Creek for over 20 years. This absence is attributed to the lack of suitable rearing and spawning habitats, as well as low summer flows, which are not conducive to supporting these species (Jones & Stokes 2007). Furthermore, Skyler Burson, District Anadromous Fisheries Biologist with CDFW Region 2 was contacted in January 2026 regarding anadromous fish presence in Arcade Creek within the BSA. They indicated that the likelihood of listed fish occurring in this reach of Arcade and Cripple Creeks is very low; while occasional fall- run Chinook salmon have been observed, these fish are likely hatchery-origin or unable to successfully spawn due to limited habitat. In addition, this species is currently restricted to the Sacramento

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
						River below Keswick Dam. Based on this information, this species is presumed absent.
Steelhead California Central Valley DPS	*Oncorhynchus mykiss irideus pop. 11*	Fed: State: CDFW:	T -- SSC	This species is known to occur along most of the California coastline and inhabits freshwater streams and tributaries in northern and central California. The preferred habitat consists of estuaries, freshwater streams and near shore habitat with productive costal oceans. Spawning occurs in small freshwater streams and tributaries occurs from January through March and could extend into spring. Spawning occurs where cool, well oxygenated water is available year-round. Approximately 550-1,300 eggs are deposited in an area with good intergravel flow. The fry emerge from the gravel about 4-6 six weeks after hatching and remain in shallow protected areas associated with stream margin. Juveniles may remain in freshwater for the rest of their life cycle or return to the ocean. The principal remaining wild populations spawn annually in Deer and Mill Creeks in Tehama County, in the lower Yuba River, and a small population in the lower Stanislaus River.	A	**Presumed Absent:** According to the City of Sacramento's "Existing Conditions and Assessment Report and Stream Corridor Management Plan for the Arcade Creek Watershed," Chinook salmon and steelhead trout have not been reported in Arcade Creek for over 20 years. This absence is attributed to the lack of suitable rearing and spawning habitats, as well as low summer flows, which are not conducive to supporting these species (Jones & Stokes 2007). Furthermore, Skyler Burson, District Anadromous Fisheries Biologist with CDFW Region 2 was contacted in January 2026 regarding anadromous fish presence in Arcade Creek within the BSA. They indicated that the likelihood of listed fish occurring in this reach of Arcade and Cripple Creeks is very low; while occasional adult steelhead have been observed, these fish are likely hatchery-origin or unable to successfully spawn due to limited habitat. Critical habitat for this species is also not within the BSA. The nearest critical habitat is approximately 3 miles north of the BSA within Dry Creek. Based on this information, this species is presumed absent.
Invertebrate Species						

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Crotch's bumble bee	*Bombus crotchii*	Fed: State: CDFW:	-- CE --	This species is known to occur in central California, Nevada south to Baja California and into Mexico. Inhabits coastal areas, deserts and the Central Valley. The species nests underground in grassland, shrubland and chaparral habitats. The species has a short tongue and primarily feeds on the following plants *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia* and *Salvia.*	A	**Presumed Absent:** Although there is marginal grassland habitat present within the BSA, it lacks suitable foraging plants for this species including *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia* and *Salvia.* There are also no CNDDB occurrences within 10 miles of the BSA. Due to lack of suitable foraging habitat and lack of nearby occurrences, this species is presumed absent, and no take will occur.
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	Fed: State: CDFW:	T -- --	Species requires red or blue elderberry (*Sambucus sp.*) as host plants. Typically occurs in moist valley oak woodlands associated with riparian corridors in the lower Sacramento River and upper San Joaquin River drainages. Adults are active, feeding, and breeding from March until June (sea level to 3,000 feet).	HP	**High Potential:** There is riparian and oak woodland habitat that could provide suitable habitat for this species. The nearest CNDDB occurrence is located approximately 6 miles northeast of the BSA at a VELB mitigation site (2006). In addition, one elderberry shrub cluster was observed within the BSA during the October 2025 biological survey, with several exit holes observed. Due to the presence of this species host plant, and the presence of exit holes, this species has a high potential to occur. However, given the location of the elderberry shrub in relation to the Project footprint and the nature of the proposed Project there would be *no effect* to the species. See Chapter 4 for details and analysis.
Vernal pool fairy shrimp	*Branchinecta lynchi*	Fed: State: CDFW:	T -- --	In California, the species inhabits portions of Tehama County, south through the Central Valley, and scattered locations in Riverside County and the Coast Ranges. The species is associated with smaller and shallower	A	**Presumed Absent:** There are no vernal pools present within the BSA. Due to lack of suitable habitat, this species is presumed absent. The Project will have *no effect* on the species.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
				cool-water vernal pools approximately 6 inches deep and short periods of inundation. In the southernmost extremes of the range, the species occurs in large, deep cool-water pools. Inhabited pools have low to moderate levels of alkalinity and total dissolved solids. The shrimp are temperature sensitive, requiring pools below 50 F to hatch and dying within pools reaching 75 F. Young emerge during cold-weather winter storms.		
Vernal pool tadpole shrimp	*Lepidurus packardi*	Fed: State: CDFW:	E -- --	Distribution of vernal pool tadpole shrimp is patchy from Shasta County to Tulare County. Inhabits vernal pools and swales containing clear to highly turbid waters such as pools located in grass bottomed swales of unplowed grasslands, old alluvial soils underlain by hardpan, and mud-bottomed pools with highly turbid water. Can also be found in ephemeral drainages, stock ponds, reservoirs, and ditches.	A	**Presumed Absent:** There are no vernal pools present within the BSA. Due to lack of suitable habitat, this species is presumed absent. The Project will have *no effect* on the species.
Mammal Species						

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
American badger	*Taxidea taxus*	Fed: State: CDFW:	-- -- SSC	Prefers treeless, dry, open stages of most shrub and herbaceous habitats with friable soils and a supply of rodent prey. Species also inhabits forest glades, meadows, marshes, brushy areas, hot deserts, and mountain meadows. Species maintains burrows within home ranges estimated between 338-1,700 acres, dependent on seasonal activity. Burrows are frequently re-used, but new burrows may be created nightly. Young are born in March and April within burrows dug in relatively dry, often sandy, soil, usually in areas with sparse overstory cover. Species is somewhat tolerant of human activity, but is sensitive to automobile mortality, trapping, and persistent poisons (up to 12,000 feet).	A	**Presumed Absent:** The BSA is surrounded by urban development and lacks open shrub and/or herbaceous habitats. No large burrows or other evidence such as tracks or scat were observed within the BSA during the October 2025 biological survey. There is only one CNDDB occurrence documented within 10 miles of the BSA, located approximately 8.3 miles east in which 1 dead adult badger was observed in the center median of East Natoma Street (May 2015). Based on the lack of contiguous natural habitat, along with the lack of nearby occurrences and suitable habitat features (burrows), this species is presumed absent, and impacts are not anticipated.
Pallid bat	*Antrozous pallidus*	Fed: State: CDFW:	-- -- SSC	Inhabits low elevations of deserts, grasslands, shrub lands, woodlands and forests year-round. Most common in open, dry habitats with rocky areas for roosting. Forages over open ground within 1-3 miles of day roosts. Prefers caves, crevices, and mines for day roosts, but may utilize hollow trees, bridges and buildings. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites. Maternity colonies form early April and young are born April-July (below 10,000 feet).	A	**Presumed Absent:** The BSA does not provide suitable roosting habitat for this species, including caves, bridges crevices, mines, or buildings. Additionally, the BSA is surrounded by urban development and lacks open, dry areas with rocky substrates that could support the species. There is only one documented CNDDB occurrence within 10 miles of the BSA located approximately 5.0 miles east in which 1 female specimen was collected (1941). Based on the lack of suitable roosting habitat and lack of evidence of bats utilizing the BSA, this species is

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
						presumed absent, and impacts are not anticipated.
Reptile Species						
Giant garter snake	*Thamnophis gigas*	Fed: State: CDFW:	T T --	A highly aquatic species that inhabits marshes, swamps, wetlands (including agricultural wetlands), sloughs, ponds, rice fields, low gradient streams and irrigation/drainage canals adjacent to uplands. Ideal habitat contains both shallow and deep water with variations in topography. The species requires adequate water during the active season (April through November), emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat and mammal burrows estivation. Requires grassy banks and openings in waterside vegetation for basking and higher elevation uplands for cover and refuge from flood waters during winter dormant season. Mating occurs in the spring and females bear live young.	A	**Presumed Absent:** The BSA is outside of the current USFWS-designated range of the species. There are also no CNDDB occurrences within 10 miles of the BSA. Due to this species current range and lack of suitable habitat features and occurrences, this species is presumed absent. No take will occur. The Project will have *no effect* on the species.
Northwestern pond turtle	*Actinemys marmorata*	Fed: State: CDFW:	PT -- SSC	A fully aquatic turtle of ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches with aquatic vegetation. Suitable habitat includes woodland, forests, and grasslands. Requires logs, rocks, cattail mats, and exposed banks for basking. Suitable upland habitat (sandy banks or grassy open field) is required for reproduction, which begins in April and ends with egg laying as late as August (sea level to 4,700 feet).	HP	**Low Potential:** The BSA contains Arcade Creek and water quality/detention basins which provides suitable aquatic habitat for the species. There is also annual grassland habitat present upland of the aquatic habitat which could provide suitable nesting habitat for the species. According to the City of Sacramento's "Existing Conditions and Assessment Report and Stream Corridor Management Plan for the Arcade Creek Watershed",

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
						northwestern pond turtles have been observed in the Arcade Creek stream corridor during spring and summer 2007 field surveys (Jones & Stokes 2007). The nearest CNDDB occurrence is located approximately 6.4 miles northeast of the BSA within the Baldwin Reservoir Wetland and Wildlife Preserve in Granite Bay (1997). Based on the potentially suitable habitat present, this species has a low potential to occur. See Chapter 4 for details and analysis.
Plant Species						
Ahart's dwarf rush	*Juncus leiospermus* var. *ahartii*	Fed: State: CNPS:	-- -- 1B.2	An annual grasslike herb inhabiting grassland swales, gopher mounds, freshwater wetlands, wetland-riparian habitats and foothill grassland communities. Flowers March–May (100–750 feet).	A	**Presumed Absent:** The BSA contains riparian habitat along the banks of Arcade Creek but lacks wetland areas where this species is normally found. There are no CNDDB occurrences within 10 miles of the BSA, and all CNPS occurrences of the species are located south of Highway 50 in a more undeveloped area. Based on lack of suitable wetland habitat along with the lack of nearby occurrences, this species is presumed absent, and impacts are not anticipated.
Big-scale balsamroot	*Balsamorhiza macrolepis*	Fed: State: CNPS:	-- -- 1B.2	A perennial herb inhabiting open grassy or rocky slopes and valleys within chaparral, cismontane woodland, valley and foothill grassland communities; sometimes occurs in serpentinite soils. Flowers March-June (300-5,100 feet).	A	**Presumed Absent:** There is marginal suitable grassland habitat present within the BSA. However, no individuals of the species were observed within the BSA during the October 2025 biological survey. The nearest CNDDB occurrence is approximately 7.1 miles south of the BSA, recorded in 1958. Based on the lack of nearby occurrences and lack of

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
						observation of the species during the biological survey, it is presumed absent, and impacts are not anticipated .
Boggs Lake hedge-hyssop	*Gratiola heterosepala*	Fed: State: CNPS:	-- E 1B.2	An annual herb inhabiting clay soils and shallow waters of marshes, swamps, lake margins, and vernal pools. Flowers April–August (30–7,800 feet).	A	**Presumed Absent:** The BSA lacks marshes, swamps, lake margins and vernal pools. The nearest presumed extant CNDDB occurrence is located approximately 5.8 miles northwest of the BSA in vernal pool habitat (2019). Due to lack of suitable habitat within the BSA, this species is presumed absent. No take will occur, and impacts are not anticipated.
Dwarf downingia	*Downingia pusilla*	Fed: State: CNPS:	-- -- 2B.2	An annual herb inhabiting vernal pools and mesic soils in valley and foothill grassland communities. Flowers March to May (0–1,500 feet).	A	**Presumed Absent:** The BSA lacks vernal pool habitat and mesic soils. The nearest CNDDB occurrence is located approximately 4.8 miles southeast of the BSA within Phoenix Park, east of Fair Oaks (1976). Based on lack of vernal pool habitat, this species is presumed absent, and impacts are not anticipated.
Hispid salty bird's-beak	*Chloropyron molle* ssp. *hispidum*	Fed: State: CNPS:	-- -- 1B.1	An annual herb inhabiting moist alkaline soils of saline marshes and flats, meadows and seeps, playas, and valley and foothill grassland communities. Flowers June-July (0-500 feet).	A	**Presumed Absent:** The BSA lacks alkaline soils within saline marsh, meadows, playas and valley grassland habitat. There is only one documented CNDDB occurrence within 10 miles of the BSA, located approximately 8.9 miles northeast of the BSA, within Stanford Ranch Alkali Seep Preserve (1997). Based on lack of suitable habitat and lack of nearby occurrences, this species is presumed absent, and impacts are not anticipated.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Legenere	*Legenere limosa*	Fed: State: CNPS:	-- -- 1B.1	An annual herb endemic to California occurring in wetlands, vernal pools valley grassland and wetland-riparian areas. Flowers April to June (0-3,500 feet).	A	**Presumed Absent:** The BSA contains riparian habitat along Arcade Creek but lacks wetlands and vernal pools. The nearest CNDDB occurrence is approximately 8.4 miles southeast of the BSA in north Sacramento within wetland habitat (1991). Due to lack of suitable wetland habitat along with the lack of nearby occurrences, this species is presumed absent, and impacts are not anticipated.
Pincushion navarretia	*Navarretia myersii* ssp. *myersii*	Fed: State: CNPS:	-- -- 1B.1	An annual herb native to California inhabiting vernal pool communities, often in acidic soil conditions. Flowers April-May (65-1,080 feet).	A	**Presumed Absent:** The BSA lacks acidic soils and vernal pool habitat. There is only one CNDDB occurrence within 10 miles of the BSA, located approximately 4.9 miles southwest of the BSA at Phoenix Park in Fair Oaks within shallow, dry vernal pools (2015). Due to lack of suitable habitat within the BSA, this species is presumed absent, and impacts are not anticipated.
Red Bluff dwarf rush	*Juncus leiospermus* var. *leiospermus*	Fed: State: CNPS:	-- -- 1B.1	An annual herb inhabiting vernally mesic soils of chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pool communities. Flowers April-June (100-4,100 feet).	A	**Presumed Absent:** The BSA occurs in a dry area and lacks vernally mesic soils. There is also no chaparral, cismontane woodland, meadows, seeps, vernal pools, or valley foothill grassland habitats within the BSA. There is only one CNDDB occurrence within 10 miles of the BSA, located approximately 7.9 miles north (1997). Due to lack of suitable habitat and lack of nearby occurrences, this species is presumed absent, and impacts are not anticipated.
Sacramento Orcutt grass	*Orcuttia viscida*	Fed: State:	E E	An annual herb inhabiting vernal pools, freshwater wetlands, valley grassland	A	**Presumed Absent:** The BSA contains the riparian corridor of Arcade Creek but

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
		CNPS:	1B.1	and wetland-riparian areas. Flowers April to July (100–330 feet).		lacks wetland habitat where this species is normally found. The nearest presumed extant CNDDB occurrence is located approximately 4.9 miles southeast of the BSA within the Phoenix Vernal Pool Complex (2022). Due to lack of suitable wetland habitat, this species is presumed absent. No take will occur, and impacts are not anticipated. The Project will have *no effect* to this species.
Sanford's arrowhead	*Sagittaria sanfordii*	Fed: State: CNPS:	-- -- 1B.2	A perennial rhizomatous herb inhabiting freshwater marshes, swamps, ponds, and ditches. Flowers May to October (0–2,130 feet).	HP	**Low Potential:** Arcade Creek, the Arcade Creek tributary and the water quality/detention basins within the BSA may provide suitable aquatic habitat for this species. The nearest documented CNDDB occurrence of the species is approximately 2.2 miles northeast of the BSA within Sunrise Creek (1994). No individuals of the species were observed during the October 2025 biological survey. Based on the potentially suitable habitat and the nearby occurrences, this species has a low potential to occur within the BSA. See Chapter 4 for details and analysis.
Slender Orcutt grass	*Orcuttia tenuis*	Fed: State: CNPS:	T E 1B.1	An annual herb inhabiting vernal pools, often within gravelly soils. Flowers May to October (115–5,775 feet).	A	**Presumed Absent:** The BSA lacks vernal pool habitat and gravelly soils. There is only one CNDDB occurrence within 10 miles of the BSA, located approximately 9.9 miles southeast near Mather Air Force Base (2012). Based on lack of suitable habitat and lack of nearby occurrences, this species is presumed absent, and impacts are not anticipated.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Spicate calycadenia	*Calycadenia spicata*	Fed: State: CNPS:	-- -- 1B.3	An annual herb endemic to California inhabiting slopes in foothill woodland and valley grassland habitat communities. Blooms May-September (245-2,295 feet).	A	**Presumed Absent:** The BSA contains marginal grassland habitat and oak woodland riparian that may provide suitable habitat for this species. However, it is highly fragmented and surrounded by urban development. There are three CNDDB occurrence within 10 miles of the BSA, with the nearest approximately 6.5 miles southeast, near the City of Folsom (1955). All CNPS occurrences of the species are located south of Highway 50 in more undeveloped areas. No individuals of this species were observed within the BSA during the biological survey. Therefore, this species is not expect to occur within the BSA, and impacts are not anticipated
Suisun marsh aster	*Symphyotrichum lentum*	Fed: State: CNPS:	-- -- 1B.2	A perennial rhizomatous herb endemic to California inhabiting wetlands, freshwater marsh, and brackish-marsh communities. Flowers May to November (0–10 feet).	A	**Presumed Absent:** The BSA lacks wetlands, freshwater marsh and brackish-marsh communities. There are no CNDDB occurrence documented within 10 miles of the BSA. The elevation range where this species is normally found is also below the elevation range within the BSA. Due to lack of suitable habitat and lack of nearby occurrences, this species is presumed absent.

Federal Designations (Fed):
(FESA, USFWS)
E: Federally listed, endangered
PT: Federally listed, proposed threatened
T: Federally listed, threatened
DL: Federally listed, delisted

State Designations (CA):
(CESA, CDFW)
E: State listed, endangered
T: State listed, threatened
CE: State listed, candidate endangered

Other Designations

CDFW_SSC: CDFW Species of Special Concern
CDFW_FP: CDFW Fully Protected

California Native Plant Society (CNPS) Designations:
Note: according to CNPS (Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code. This interpretation is inconsistent with other definitions.
1A: Plants presumed extinct in California.
1B: Plants rare and endangered in California and throughout their range.
2: Plants rare, threatened, or endangered in California but more common elsewhere in their range.
3: Plants about which need more information; a review list.

Plants 1B, 2, and 4 extension meanings:
_.1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
_.2 Fairly endangered in California (20-80% occurrences threatened)
_.3 Not very endangered in California (<20% of occurrences threatened or no current threats known)

Habitat Potential
Absent [A] - No habitat present and no further work needed.
Habitat Present [HP] - Habitat is or may be present. The species may be present.
Critical Habitat [CH] – Project is within designated Critical Habitat.

Potential for Occurrence Criteria:
Present: Species was observed on site during a site visit or focused survey.
High: Habitat (including soils and elevation factors) for the species occurs on site and a known occurrence has been recorded within 5 miles of the site.
Low-Moderate: Either low quality habitat (including soils and elevation factors) for the species occurs on site and a known occurrence exists within 5 miles of the site; or suitable habitat strongly associated with the species occurs on site, but no records were found within the database search.
Presumed Absent: Focused surveys were conducted, and the species was not found, or species was found within the database search but habitat (including soils and elevation factors) do not exist on site, or the known geographic range of the species does not include the survey area.

Source: (CDFW 2025b), (CNPS 2025), (Calflora 2025), (Jepson 2025), (USFWS 2026), (NMFS 2025).

Chapter 4 – Results: Biological Resources, Discussion of Impacts, and Mitigation

Habitats and Natural Communities of Special Concern

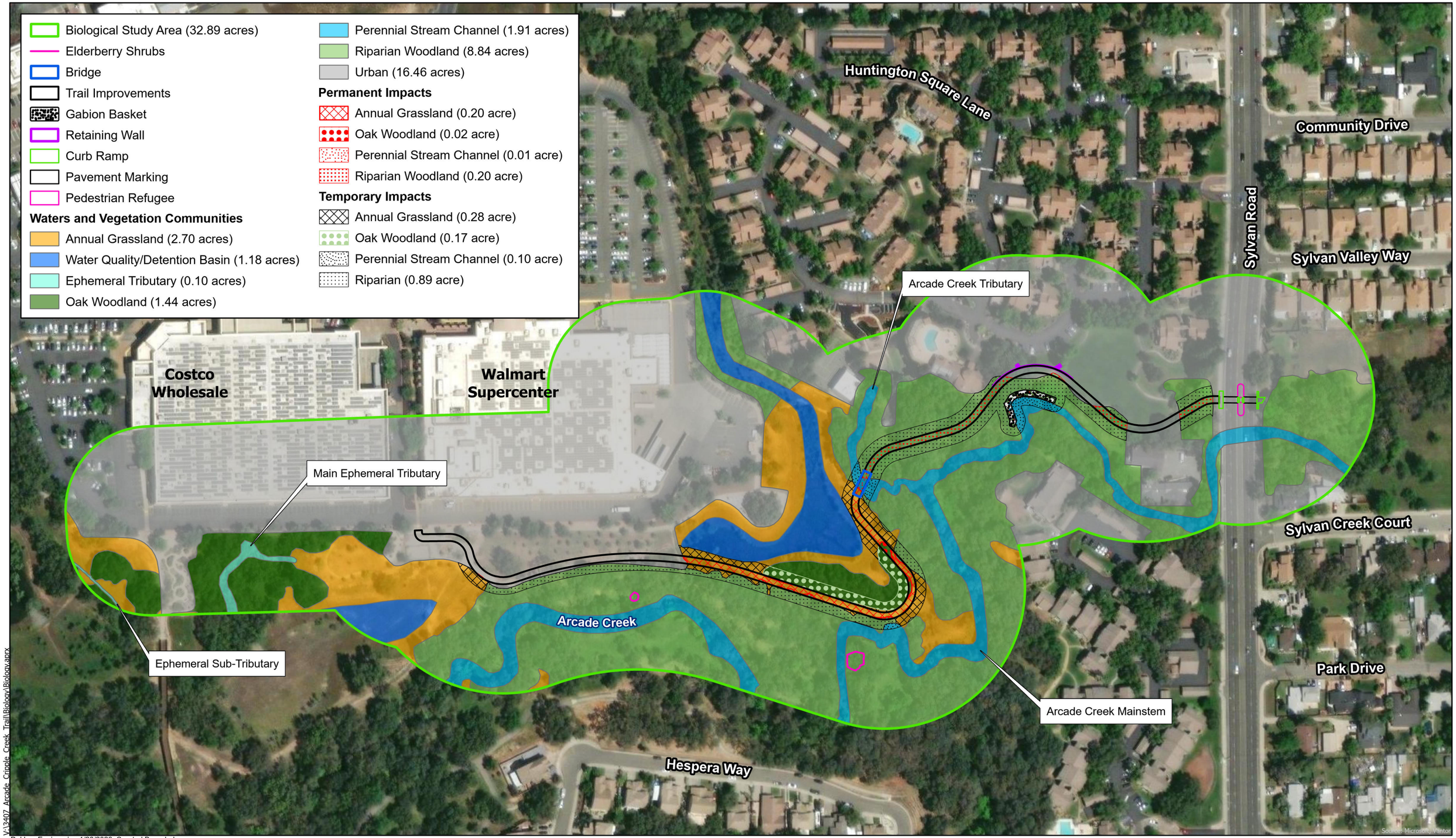
Habitats are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special status plants or animals occurring on site. Wetlands and waters of the United States are also considered sensitive by both federal and State agencies. Within the BSA, Arcade Creek has been identified as a natural community of special concern as it is a jurisdictional water of the U.S. and state. The ephemeral tributary also qualifies as a water of the state and therefore is included as natural community of special concern. Avoidance, minimization, and compensatory mitigation measures for Arcade Creek and its tributary are discussed below. Additionally, oak woodland, and riparian woodland occur within the BSA and are considered natural communities of special concern as they provide potentially suitable habitat for special status plant and wildlife species. These natural communities are shown in **Figure 4**. In addition, **Table 3. Impacts to Sensitive Natural Habitats** and **Figure 5. Project Impacts** summarize the Project's effects on these natural communities.

Table 3. Impacts to Sensitive Natural Habitats

Impact Type	Sensitive Natural Habitat		
	Oak Woodland	**Perennial Stream Channel**	**Riparian Woodland**
Temporary	0.17 acres	0.10 acres	0.89 acres
Permanent	0.02 acres	0.01 acres	0.20 acres
Total	**0.19 acres**	**0.11 acres**	**0.99 acres**

Discussion of Perennial Stream Channel

The perennial stream channel habitat includes Arcade Creek and its tributary. Arcade Creek, a perennial stream channel, flows northeast to southwest through the BSA. Also included in this habitat is the Arcade Creek tributary, which flows southeast into Arcade Creek. The channel originates in Orangevale and flows into the Natomas East Main Drainage Canal, which ultimately discharges to the Sacramento River. The tributary is fed almost entirely by urban stormwater runoff carried through a series of stormwater inlets and culverts from the surrounding development. Within the BSA, the channel has highly incised banks and the width of the channel ranges from approximately 10 to 60 feet. As a perennial channel, water is present year-round. The larger creek watershed is



V:\3407_Arcade_Cripple_Creek_Trail\Biology\Biology.aprx

Dokken Engineering 1/28/2026; Created By: cclarkson

0 175 350 Feet

Figure 5
Project Impacts
Arcade-Cripple Creek Trail (Sylvan to Stock Ranch) Extension Project
Citrus Heights, Sacramento County, California

frequently bisected by roadways and is lined by both residential and commercial developments. Local urbanization has resulted in the proliferation of non-native and invasive species, a degradation in water quality, and a decrease in bank stability as a result of the altered hydrologic flows (DPR 2003).

Survey Results

During the aquatic resource delineation conducted on October 17, 2025, observed OHWM indicators in the mainstem of Arcade Creek and its tributary included a defined break in bank slope, exposed roots along the banks, evidence of slope erosion, formation of benches, accumulation of drift and debris, a defined bed and bank, and observable changes in vegetation species composition and density. Arcade Creek and its tributary contained standing water; however, no active flow was observed. The channel and its tributary exhibited deeply incised banks with evidence of localized erosion, and the width of the channel ranges from approximately 10 to 60 feet. There is a wooden pedestrian boardwalk west of the BSA which crosses over the mainstem of Arcade Creek and runs south to north from Stock Ranch Road to the back parking lot of Costco. There is evidence of human modification within the bed and banks of Arcade Creek near the pedestrian boardwalk including culverts, a pipeline, rock slope protection (RSP) and erosion control matting. In addition, the tributary to Arcade Creek contained a significant amount of trash within the channel, likely attributed to the adjacent residential and commercial developments. The tributary receives water primarily from stormwater runoff generated by impervious surfaces associated with the apartment complex to the north and other surrounding development. All upstream water sources are routed through underground pipes and discharge at the tributary outlet, rather than flowing overland or from natural sources. As a result, the tributary is fed almost entirely by urban stormwater runoff.

Dominant vegetation observed within the bed and banks and riparian area of Arcade Creek and its tributary include southern catalpa trees (*Catalpa speciosa*), common knotweed (*Persicaria lapathifolia*), interior live oak trees (*Quercus wislizeni*) and Himalayan blackberry (*Rubus armeniacus*). Within the BSA, this habitat community comprises approximately 1.91 acres.

Project Impacts

Construction of the trail will result in approximately 0.10 acres of temporary impacts to Arcade Creek and the Arcade Creek tributary due to access during installation of the gabion basket wall and placement of the prefabricated bridge. The bridge crossing over the Arcade Creek tributary will not require dewatering or any in-channel work, as it will be a prefabricated bridge and set over the creek using a crane or other heavy equipment. The bridge abutments will also be constructed outside of the OHWM of the Arcade Creek tributary so no excavation within the channel is anticipated. As a result, temporary impacts associated with prefabricated bridge placement would be limited to short-term increases in noise and vibration within the immediate work area. Approximately 0.01 acres of permanent impacts are also anticipated within Arcade Creek due to the installation of a gabion basket wall along an actively eroding section of the channel (**Figure 5**). RSP is currently not anticipated at the bridge abutments but

may be required based on future refinements in design and hydraulic studies and, if required, would be minimal.

Avoidance and Minimization Efforts

The following avoidance and minimization measures will be incorporated into the Project design and Project construction to reduce potential impacts to perennial stream channel habitat:

BIO-1: Every individual working on the Project must attend a biological awareness training session conducted by the Project biologist. This training program will include information regarding the sensitive habitats and an overview of special status wildlife species that may be encountered within the work area. During biological awareness training, construction personnel will be briefed on topics including, but not limited to, the protected status of the valley elderberry longhorn beetle (VELB) and the northwestern pond turtle (NWPT), as well as the need to protect elderberry shrubs, the host plant of VELB.

BIO-2: Prior to the start of construction activities, the Project limits adjacent to the Arcade Creek, the Arcade Creek tributary and the riparian woodland habitat will be marked with flagging, staking, or high visibility fencing to ensure construction will not further encroach into adjacent sensitive resources.

BIO-3: Best Management Practices (BMPs) will be incorporated into Project construction to minimize impacts on the environment including erosion and the release of pollutants (e.g. oils, fuels):

- Exposed soils and material stockpiles will be stabilized, through watering or other measures, to prevent the movement of dust at the Project site caused by wind and construction.
- Implementation of the Project shall require approval of a site-specific SWPPP or Water Pollution Control Program that will implement effective measures to protect water quality, which may include a hazardous spill prevention plan and additional erosion prevention techniques.
- All construction areas will be properly protected to prevent excess erosion, sedimentation, and water pollution.
- All vehicle and equipment fueling/maintenance will be conducted outside of any surface waters and/or sensitive habitat.
- Equipment used in and around jurisdictional waters must be in good working order and free of dripping or leaking contaminants.
- Raw cement, concrete or concrete washings, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to aquatic life shall be prevented from contaminating the soil or entering jurisdictional waters.
- All erosion control measures, and storm water control measures will be properly maintained until the site has returned to a pre-construction state.

- All construction materials will be hauled off-site after completion of construction.

Compensatory Mitigation

The Project would result in approximately 0.10 acres of temporary impacts to perennial stream channel habitat (Arcade Creek and Arcade Creek tributary), and approximately 0.01 acres of permanent impacts. Avoidance and minimization measures **BIO-1** through **BIO-3** will be implemented to avoid and minimize Project-related impacts to Arcade Creek and the Arcade Creek tributary.

Compensatory mitigation for permanent impacts to the stream channel will be required and will be determined in coordination with CDFW and the RWQCB during the permitting process. Compensatory mitigation measure BIO-4 will be implemented to offset permanent impacts to this aquatic feature.

BIO-4: Permanent effects to stream channel and riparian woodland habitat will be provided compensatory mitigation to result in no net loss of habitat, at an agency-approved mitigation ratio via one of the following compensatory mitigation options:

- payment of an in-lieu fee to an agency-approved mitigation site,
- compensatory off-site mitigation at an agency-approved mitigation site,
- compensatory on-site mitigation, or
- a combination of the above compensatory mitigation options.

Cumulative Impacts

The proposed Arcade-Cripple Creek Trail–Mariposa Extension project is currently in the preliminary design phase and would construct an additional 0.5-mile segment of the trail along Arcade Creek. In combination with previously constructed trail segments and another planned segment which would connect Sylvan Road to Mariposa Avenue, the Project would contribute to minor cumulative effects on the creek corridor. Potential cumulative impacts include slight increases in impervious surfaces, temporary sediment runoff during construction, limited disturbance to riparian vegetation, and minor permanent impacts to the Arcade Creek mainstem associated with installation of a gabion basket wall along an actively eroding section of the channel. These impacts are not anticipated to be cumulatively considerable, as Arcade Creek is already substantially degraded due to long-term urban development. In addition, standard erosion control, sediment management and revegetation measures would be implemented to minimize temporary effects to the channel. The gabion basket wall would also stabilize the streambank and reduce ongoing erosion, further limiting the potential for adverse cumulative impacts. Overall, the Project's temporary and minor permanent impacts are expected to have minimal effects on the Arcade Creek corridor and its ecological functions.

Discussion of Ephemeral Tributary

One ephemeral tributary to Arcade Creek is present within the western portion of the BSA. The tributary has a larger main channel as well as a smaller sub-tributary. Water flow within this tributary only occurs in direct response to rainfall and stormwater runoff from adjacent commercial businesses and residential homes. The main tributary splits off Arcade Creek from the west, outside of the BSA and flows northeast, emptying into two ponded areas. The smaller sub-tributary splits off of the main tributary channel and flows northwest towards a detention basin outside of the BSA.

Survey Results

During the October 2025 biological survey, an aquatic resources delineation was conducted in accordance with technical methods outlined in the USACE *A Field Guide to the Identification of the Ordinary High-Water Mark in the Arid West Region of the Western United States* (Lichvar & McColley 2008) to determine the boundaries of the OHWM. During survey efforts, the ephemeral tributary was mapped in the field using an EOS Arrow 100 Receiver paired with ArcGIS Pro 3.6 software. This fieldwork was supplemented by desktop analysis of current and historical aerial imagery, as well as LiDAR data. The boundaries of the ephemeral tributary were mapped in the field in accordance with the following OHWM indicators: change in vegetation species and density, break in bank slope, and presence of a bed, bank and channel. The main larger tributary measures approximately 5 feet wide, and a sub-tributary measures approximately 2 feet wide. Water was present in the main tributary during survey efforts but was not flowing, and the sub-tributary was dry. Within the BSA, this habitat community comprises approximately 0.10 acres.

Project Impacts

No temporary or permanent impacts to the ephemeral tributary are anticipated as a result of the Project, as trail construction will be confined to the area east of these features. However, construction activities could result in potential indirect impacts, including sedimentation and the introduction of trash, oil, grease, or fuels associated with equipment and construction materials. Furthermore, an increase in impervious surface area may cause an increase in stormwater runoff within the vicinity of the new trail.

Avoidance and Minimization Efforts

Although no direct impacts to the ephemeral tributary are anticipated, avoidance and minimization measures **BIO-1** through **BIO-3** will be implemented into the Project to reduce potential indirect impacts to the ephemeral tributary.

Compensatory Mitigation

With incorporation of measures **BIO-1** through **BIO-3**, impacts to ephemeral tributary habitat will be avoided and minimized to the greatest extent feasible. No compensatory mitigation is required as no permanent impacts to the ephemeral tributary are anticipated.

Cumulative Impacts

The Project will have no temporary or permanent impacts to the ephemeral tributary. The City does not have any future and/or reasonably foreseeable actions that would result in impacts to ephemeral tributary habitat at this location. The implementation of any project occurring within or near this habitat community would be considered separate from the proposed . There are no additional past, current, future and/or reasonably foreseeable actions that are threatening the ephemeral tributary.

Discussion of Riparian Woodland

Riparian woodland habitat is found in valleys and lower foothills, associated with floodplains and gentle topography. This community occurs in corridors along wet areas, usually with abrupt transitions to adjacent habitat types. Mature riparian woodland canopies are dominated by trees such as cottonwoods, sycamores, and oaks. There is typically a subcanopy of species such as white alder and Oregon ash. The usual understory is dominated by shrubs such as willows, wild grape, wild rose, and elderberry. An herbaceous layer may be found in openings in the dense understory, and plants such as sedges, rushes, miner's lettuce, and poison-hemlock can be found here (Grenfell 1988). Riparian habitats are known to have high ecological importance, providing food, water, cover, and movement corridors for a number of wildlife species (CDFW 2025c).

Survey Results

Riparian woodland habitat borders Arcade Creek as it flows through the BSA. Dominant tree species observed within this vegetation community include valley oak, interior live oak, box elder, Oregon ash, Fremont cottonwood, and northern California black walnut. The understory is comprised of Himalayan blackberry, periwinkle, Harding grass, and tall flat sedge. Within the BSA, this habitat community comprises approximately 8.84 acres.

Project Impacts

Paving of the trail will result in approximately 0.18 acres of permanent impacts to riparian woodland habitat. An additional 0.81 acres of temporary impacts are anticipated due to construction access. To estimate the area needed for equipment access, a 20-foot temporary impact buffer was applied along the trail alignment. Tree removal within the riparian woodland habitat will be required; however, the specific trees to be removed have not yet been identified. Field observations during a site visit conducted on December 18, 2025, indicate that most trees within the riparian woodland are likely to be avoided, and impacts would be largely limited to the area around the proposed bridge crossing at the Arcade Creek tributary. Much of the mapped area in **Figure 4** likely represents overstory canopy, and construction would occur within the understory, so major tree removal is not anticipated to be necessary. Some trees may only need to be trimmed to allow equipment access. The temporary and permanent impact estimates represent the maximum anticipated impacts, and final impacts will be further refined during the permitting process. Prior to construction, a tree survey will be conducted within the BSA to document and mark all trees proposed for removal (**Figure 5**).

Avoidance and Minimization Efforts

Avoidance and minimization measures **BIO-1** through **BIO-3**, and **BIO-5** described below, will be implemented as part of the Project to reduce impacts on riparian woodland habitat.

BIO-5: Native vegetation removal will not exceed what is shown on the plans without prior approval from the Project biologist. If trees will be trimmed rather than removed, trimming must comply with ANSI A300 pruning standards and must not:

- leave branch stubs
- make unnecessary heading cuts
- cut off the branch collar (not make a flush cut)
- top or lion's tail trees (stripping a branch from the inside leaving foliage just at the ends)
- remove more than 25 percent of the foliage of a single branch
- remove more than 25 percent of the total tree foliage in a single year
- damage other parts of the tree during pruning
- use wound paint
- climb the tree with climbing spikes

BIO-6: Following the completion of construction, all temporary effects to riparian woodland and oak woodland habitat will be recontoured and re-seeded at a 1:1 ratio, to allow for the habitat to return to its previous function. Tree removal will follow final plans and specifications, and any deviation must be approved by a Project biologist. All temporarily disturbed areas will be seeded with a Project biologist-approved native seed mix.

Compensatory Mitigation

The Project would result in approximately 0.18 acres of permanent impacts to riparian woodland and temporary impacts will consist of approximately 0.81 acres. Mitigation will be required for all trees removed with a diameter at breast height (DBH) greater than 4 inches. Final mitigation requirements will be determined in coordination with CDFW during the acquisition of the 1602 Lake and Streambed Alteration Agreement and City of Citrus Heights Tree Preservation and Protection Regulations.

Compensatory mitigation measures **BIO-6** and **BIO-4**, listed in the perennial stream channel section, will be implemented to offset permanent impacts to this vegetation community.

Any trees removed from the riparian woodland and oak woodland habitat will be appropriately mitigated for through replanting or other methods in coordination with CDFW and the City of Citrus Heights.

Cumulative Impacts

The Project will result in temporary and permanent impacts to riparian woodland habitat from trail construction. In combination with previously constructed Arcade-Cripple Creek Trail segments and other planned segments in the area, the Project would contribute to cumulative impacts on the riparian woodland corridor along Arcade Creek. Potential impacts include the removal or trimming of trees and temporary disturbance to understory vegetation. However, standard erosion control, revegetation, and tree protection measures will be implemented, so these cumulative impacts are expected to be minor.

Discussion of Oak Woodland

Oak woodland is a widely distributed upland habitat in California and is characterized by a multilayered structure composed of a dominant overstory of oak species with an understory of grasses, forbs, and scattered shrubs. Oak woodland typically occurs on well-drained soils in foothill and valley settings, often along slopes, ridgelines, and mixed woodland–grassland ecotones. Tree associates in the Central Valley include California sycamore, Northern California black walnut, interior live oak, boxelder, and blue oak. Oak woodland supports high wildlife diversity due to its structural complexity and acorn production. The habitat provides foraging, nesting, and cover for numerous birds, mammals, reptiles, and invertebrates (Mayer & Laudenslayer 1988). Oak woodlands are considered a natural community of special concern as they provide habitat for nesting birds and raptors, including the Swainson's hawk and white-tailed kite as well as cover and foraging habitat for the song sparrow ("Modesto" population). In addition, native oaks measuring 6 inches DBH or more in diameter are protected under the City of Citrus Heights Tree Preservation and Protection Regulations.

Survey Results

The BSA includes a mature oak woodland habitat that occupies the upland areas of the site. This community is dominated by native oak tree species such as valley oak, interior live oak, and blue oak. The canopy is moderately dense, providing partial shade and contributing to a well-developed litter layer of decomposing oak leaves and twigs. The understory consists primarily of native and non-native grasses and forbs, including wild oat, Italian rye grass, and English plantain. Seasonal herbaceous growth is most abundant in spring, while the summer understory tends to dry and thin considerably. Shrub species such as poison oak were also found in this habitat type. Oak woodland habitat provides important foraging, nesting, and cover opportunities for a variety of wildlife species. Oak woodlands comprise approximately 1.44 acres of the BSA.

Project Impacts

Paving of the trail will result in approximately 0.02 acres of permanent impacts to oak woodland habitat. An additional 0.17 acres of temporary impacts are anticipated due to construction access. To estimate the area needed for equipment access, a 20-foot temporary impact buffer was applied along the trail alignment. Tree removal within the oak woodland habitat will be required; however, the specific trees to be removed have not yet been identified. Field observations during the site visit conducted on December

18, 2025, indicate that most trees within the oak woodland are likely to be avoided, and impacts would be largely limited to the area around the proposed bridge crossing at the Arcade Creek tributary. Much of the mapped area in **Figure 4** likely represents overstory canopy, and construction would occur within the understory, so major tree removal is not anticipated to be necessary. Some trees may only need to be trimmed to allow equipment access. The temporary and permanent impact estimates represent the maximum anticipated impacts, and final impacts will be further refined during the permitting process. A tree survey will be conducted within the BSA to document and mark all trees proposed for removal (**Figure 5**).

Avoidance and Minimization Efforts

Avoidance and minimization measures **BIO-1**, **BIO-3** and **BIO-5** will be implemented as part of the Project to reduce impacts on oak woodland habitat.

Compensatory Mitigation

The compensatory mitigation measure **BIO-6** will be implemented to offset permanent impacts to this habitat community. Final mitigation requirements will be determined in coordination with the City of Citrus Heights Tree Preservation and Protection Regulations.

Cumulative Impacts

The Project will result in temporary and permanent impacts to oak woodland habitat from trail construction. In combination with previously constructed Arcade-Cripple Creek Trail segments and other planned segments in the area, the Project would contribute to cumulative impacts on the oak woodland habitat along Arcade Creek. Potential impacts include the removal or trimming of trees and temporary disturbance to understory vegetation. However, standard erosion control, revegetation, and tree protection measures will be implemented, so these cumulative impacts are expected to be minor.

Special Status Plant Species

The plants listed in Table 2 are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the presence of habitat required by the special status plants occurring on site. Prior to field surveys, a list of regional special status plant species with potential to occur within the Project vicinity was compiled from database searches. The potential for each species to occur within the BSA was determined by analyzing the habitat requirements of each species and comparing the habitat requirements to available habitat within the BSA. After a careful comparison between habitat requirements and the habitat available within the BSA, one special status plant species was found to have low potential to occur within the BSA: Sanford's arrowhead.

Discussion of Sanford's Arrowhead

Sanford's arrowhead is listed under CNPS as a 1B.2, meaning it is rare throughout its range and is moderately threatened in California. Sanford's arrowhead is a perennial rhizomatous herb found in sluggish waterways, swamps, freshwater marshes, ponds,

ditches, and margins of slow flowing streams or sloughs up to 2,132 feet elevation. The blooming season for the species occurs from May–October. The species was once common in irrigation ditches in the Sacramento and San Joaquin valleys. Channelization of natural waterways, changes in seasonal agricultural water use, and water conservation have eliminated much of its previous habitat. Sanford's arrowhead spreads by underground rhizomes and is found preferentially in clay soils.

Survey Results

No Sanford's arrowhead individuals were observed within the BSA during the October 2025 biological survey. However, the BSA contains suitable stream channel and water quality/detention basin habitat that could support individuals of this species. There are 15 documented CNDDB occurrences of the species within 10 miles of the BSA, with the nearest approximately 2.2 miles northeast of the BSA within Sunrise Creek (1994). Based on the suitable habitat and nearby occurrences, this species has a low potential to occur within the BSA.

Project Impacts

Approximately 0.10 acres of temporary impacts and approximately 0.01 acres of permanent impacts to suitable aquatic habitat (Arcade Creek) are anticipated to occur as a result of the proposed Project. To avoid direct impacts to this species during construction, avoidance and minimization measure **BIO-7** will be implemented to ensure that no Sanford's arrowhead individuals are present within the Project area prior to construction.

Avoidance and Minimization Efforts

In addition to avoidance and minimization measure **BIO-1**, the following measure will be incorporated into the Project to avoid and minimize potential Project-related impacts to the species:

BIO-7: A focused rare plant survey will be conducted within the Project area prior to the start of construction. If rare plants are discovered during pre-construction surveys but can be reasonably avoided, an Environmentally Sensitive Area (ESA) fence will be installed to protect the specimens in place.

If a special status plant specimen is present within the Project area and cannot be fully avoided, the Project biologist will relocate individual(s) and/or collect seeds to ensure the continued existence of the local population. Area of relocation or re-seeding will be at the discretion of the Project biologist but will be located within suitable habitat and within the same watershed of the Project, preferably at a location that is protected in perpetuity.

Compensatory Mitigation

No compensatory mitigation for Sanford's arrowhead is proposed, as no direct impacts to the species, or adverse effects to the population, are expected as a result of the proposed Project, with incorporation of avoidance and minimization measure **BIO-7.**

Cumulative Impacts

The Project will result in temporary impacts to suitable Sanford's arrowhead habitat due to trail construction. In combination with previously constructed and planned Arcade-Cripple Creek Trail segments in the area, the Project will contribute to minor cumulative impacts on suitable habitat for the species. No permanent impacts to suitable aquatic habitat are anticipated. The Project could also contribute to cumulative impacts on Sanford's arrowhead individuals if any are present within the work area(s) and are disturbed by construction. However, such impacts are unlikely with implementation of Measure **BIO-7**, which requires pre-construction surveys and protection of individuals using high-visibility fencing. If Sanford's arrowhead individuals are present within the Project area and cannot be fully avoided, the Project biologist will relocate individuals and/or collect seeds to ensure the continued existence of the local population. Based on these measures, cumulative impacts on Sanford's arrowhead individuals are anticipated to be minor.

Special Status Animal Species

Animals are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special status animals occurring on site. Prior to field surveys, a list of regional special status animal species with potential to occur within the Project vicinity was compiled from database searches. The potential for each species to occur within the BSA was determined by analyzing the habitat requirements of each species and comparing the habitat requirements to available habitat within the BSA. After a careful comparison between habitat requirements and the habitat available within the BSA, the following species were determined to have potential to occur within the BSA: song sparrow ("Modesto" population), Swainson's hawk, white-tailed kite, VELB and NWPT.

Discussion of Song Sparrow ("Modesto" Population)

The song sparrow ("Modesto" Population) is not a state of federally listed species but is a CDFW species of special concern (SSC). The ecological requirements of the species are largely undescribed, but the species is known to have an affinity for emergent freshwater marshes dominated by tules and cattails (Grinnell & Miller 1944). Marshall (1948) described the primary habitat requirements of several subspecies of song sparrow in California as being moderately dense vegetation to supply cover for nest sites, a source of standing or running water, semi-open canopies to allow light, and exposed ground or leaf litter for foraging. Nest sites are usually hidden in grasses or weeds, sometimes placed on the ground and occasionally as high as 15 feet and are often near water. Habitat loss, fragmentation, and degradation are the primary threats to the species. Nesting season for the species usually begins in April, and most nesters in California are nonmigratory, with other migrants coming from the north (Shuford & Gardali 2008).

Survey Results

No individuals of this species were observed during the October 2025 biological survey. However, the BSA contains suitable nesting and foraging habitat for this species,

including the easterly water quality/detention basin, which supports tules and cattails, as well as areas of low, dense vegetation such as Himalayan blackberry and periwinkle within the riparian woodland habitat. The oak woodland and riparian woodland habitats also provide potential nesting cover and include open grassland understory with leaf litter suitable for foraging. Arcade Creek and the water quality/detention basins provide a source of standing water, making the area suitable for the song sparrow. There is one CNDDB occurrence within 10 miles of the BSA, located approximately 9.2 miles southwest in which a specimen was collected (1990). The CNDDB occurrence notes indicate that development has replaced much of the wetlands and other suitable habitat in the area, so it is unlikely that this species is still present there. Based on the potentially suitable habitat present onsite, this species has a low potential to occur within the BSA.

Project Impacts

Permanent and temporary impacts to riparian woodland habitat and oak woodland habitat are anticipated to occur as a result of the proposed Project. Paving of the trail will result in approximately 0.20 acres of permanent impacts to riparian woodland habitat, with approximately 0.89 acres of temporary impacts anticipated due to construction access. Paving of the trail will also result in approximately 0.02 acres of permanent impacts to oak woodland habitat, and approximately 0.17 acres of temporary impacts due to construction access. In addition, tree removal within the oak woodland and riparian woodland habitats will be required. However, the specific trees to be removed have not yet been identified, and major tree removal is not anticipated. A tree survey will be conducted within the BSA to document and mark all trees proposed for removal. To avoid direct impacts to this species during construction, avoidance and minimization measure **BIO-8** will be implemented to ensure that no nesting song sparrows are present within the Project area prior to construction.

Avoidance and Minimization Efforts

In addition to avoidance and minimization measure **BIO-1**, the following measure will be incorporated into the Project to avoid and minimize potential Project-related impacts to the species:

BIO-8: Prior to vegetation removal or initial ground disturbance during the nesting bird season (February 1–September 30) a pre-construction nesting bird survey must be conducted by a Project Biologist prior to the start of work. The nesting bird survey must include the Project area plus a 300-foot buffer. Within 1 week of the nesting bird survey, all vegetated areas that are designated for removal must be cleared by the contractor or a supplemental nesting bird survey is required.

An initial 100-foot no-disturbance buffer will be established around any active nest of migratory birds and a minimum 300-foot no-disturbance buffer will be established around any nesting raptor species. The contractor must immediately stop work in the buffer area until the appropriate buffer is established and is prohibited from conducting work that could disturb the birds

(as determined by the Project Biologist and in coordination with wildlife agencies) in the buffer area until a Project Biologist determines the young have fledged. A reduced no-work buffer can be established if determined appropriate by the Project Biologist, and will consider various factors including species of bird, location of nest, stage of nest, existing environment, and type of active work.

Compensatory Mitigation

No compensatory mitigation for the song sparrow is proposed, as no direct impacts to the species are expected as a result of the proposed Project with incorporation of avoidance and minimization measure **BIO-8**.

Cumulative Impacts

The Project will result in temporary and permanent impacts to suitable song sparrow nesting and foraging habitat due to trail construction. In combination with previously constructed and planned Arcade-Cripple Creek Trail segments, the Project will contribute to minor cumulative impacts on the species' suitable habitat in riparian woodland and oak woodland areas adjacent to the trail. The Project could also contribute to cumulative impacts on song sparrow individuals if any are present within the work area and are temporarily disturbed by construction. However, such impacts are unlikely with implementation of measure **BIO-8**, which requires pre-construction surveys and protection of nesting individuals through establishment of a no-work buffer around active nests. Based on this measure, cumulative impacts on song sparrow individuals are anticipated to be minor.

Discussion of Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a raptor species listed as threatened under CESA. This species migrates annually from wintering areas in South America to breeding locations in northwestern Canada, the western U.S., and Mexico. In California, Swainson's hawk nest throughout the Sacramento and San Joaquin Valley in large trees in riparian habitats and in isolated trees in or adjacent to agricultural fields. The breeding season extends from late March through late August, with peak activity from late May through July (England et al. 1997). Swainson's hawks forage in large, open agricultural habitats, including alfalfa and hay fields. The breeding population in California has declined by an estimated 91% since 1900; this decline is attributed to the loss of riparian nesting habitats and the conversion of native grassland and woodland habitats into agriculture and urban development (CDFG 1994).

Survey Results

No individuals of this species were observed during the October 2025 biological survey. The BSA contains suitable nesting habitat for Swainson's hawk within the riparian woodland and oak woodland areas, which include tall, mature oak trees capable of supporting nests. However, the BSA is surrounded by urban development and lacks the open, undeveloped areas typically required for foraging. Although some annual grassland habitat occurs within the BSA, it does not provide the extensive, open

foraging areas preferred by the species. The nearest suitable foraging habitat is located approximately 0.5 miles north of the proposed trail alignment within an open grassland area, north of Auburn Boulevard. The nearest documented CNDDB occurrence is located approximately 4.8 miles south of the BSA in which a nest was observed in a eucalyptus tree near Ancil Hoffman Park (2004). There is also a nearby iNaturalist occurrence of the species located approximately 2.2 miles southwest of the BSA along Wendal Lane, recorded in August 2025. Based on the potentially suitable nesting habitat present onsite, this species has a low potential to occur within the BSA.

Project Impacts

Permanent and temporary impacts to riparian woodland habitat and oak woodland habitat are anticipated to occur as a result of the proposed Project. Paving of the trail will result in approximately 0.20 acres of permanent impacts to riparian woodland habitat, with approximately 0.89 acres of temporary impacts anticipated due to construction access. Paving of the trail will also result in approximately 0.02 acres of permanent impacts to oak woodland habitat, and approximately 0.17 acres of temporary impacts due to construction access. In addition, tree removal within the oak woodland and riparian woodland habitats will be required. However, the specific trees to be removed have not yet been identified, and major tree removal is not anticipated. A tree survey will be conducted within the BSA to document and mark all trees proposed for removal. All trees removed from the riparian woodland and oak woodland habitat will be appropriately mitigated for in coordination with CDFW and the City. To avoid direct impacts to this species during construction, avoidance and minimization measure **BIO-8** will be implemented to ensure that no nesting Swainson's hawks are present within the Project area prior to construction.

Avoidance and Minimization Efforts

Avoidance and minimization measures **BIO-1** and **BIO-9** will be incorporated into the Project to avoid and minimize potential Project-related impacts to the species.

BIO-9: During the spring/summer season prior to construction the Project biologist must conduct pre-construction Swainson's hawk protocol-level surveys within the Project area plus a 0.25-mile buffer in accordance with California Department of Fish and Wildlife's guide for Swainson's Hawk Technical Advisory Committee. Pre-construction surveys will determine if active nests are present within the Project area or within 0.25 mile of Project activities. If an active nest is discovered within the survey area the Project biologist will determine the appropriate avoidance strategies (e.g., monitoring, no-work buffers, work windows, temporary sound/noise barriers, etc.) to avoid take of the nest and will coordinate with CDFW as needed.

Compensatory Mitigation

No compensatory mitigation for the Swainson's hawk is proposed, as no direct impacts to the species are expected as a result of the proposed Project with incorporation of avoidance and minimization measure **BIO-9**.

Cumulative Impacts

The Project will result in temporary and permanent impacts to suitable Swainson's hawk nesting habitat due to trail construction. In combination with previously constructed and planned Arcade-Cripple Creek Trail segments, the Project will contribute to minor cumulative impacts on the species' suitable nesting habitat in riparian woodland and oak woodland areas adjacent to the trail. The Project could also contribute to cumulative impacts on Swainson's hawk individuals if any are present within the work area and are temporarily disturbed by construction. However, such impacts are unlikely with implementation of measure **BIO-9**, which requires protocol-level pre-construction surveys and protection of nesting individuals through establishment of appropriate avoidance strategies including no-work buffers and/or biological monitoring. Based on this measure, cumulative impacts on Swainson's hawk individuals are anticipated to be minor.

Discussion of White-tailed Kite

The white-tailed kite (*Elanus leucurus*) is not listed as threatened or endangered at the state or federal level but is a fully protected species under CFG Code Section 3511. The white-tailed kite is a year-round resident of California and occurs in coastal and valley lowlands, most often in association with agricultural areas. The white-tailed kite forages in undisturbed, open grasslands, meadows, farmlands and emergent wetlands and seldom hunt more than 0.5 miles from nest while breeding. Breeding occurs from February to October, preferably in isolated, dense-topped trees close to open grasslands, meadows or marsh foraging sites (Zeiner et al. 1988–1990).

Survey Results

No individuals of this species were observed during the October 2025 biological survey. The BSA contains suitable nesting habitat for white-tailed kite within the riparian woodland and oak woodland areas, which include tall, mature oak trees capable of supporting nests. However, the BSA is surrounded by urban development and lacks the open, undeveloped areas typically required for foraging including grasslands, meadows, farmlands and emergent wetlands. Although some annual grassland habitat occurs within the BSA, it does not provide the extensive, open foraging areas preferred by the species. The nearest suitable foraging habitat is located approximately 0.5 miles north of the proposed trail alignment within an open grassland area, north of Auburn Boulevard. The nearest CNDDB occurrence is located approximately 3.5 miles northeast of the BSA at Woodbridge Park in Orangevale in which a pair nested in a large tree south of the pond (1992). There is also a nearby eBird occurrence within the Stock Ranch Nature Preserve, southeast of the BSA recorded in 2012. Based on the potentially suitable nesting habitat present onsite, this species has a low potential to occur within the BSA.

Project Impacts

Permanent and temporary impacts to riparian woodland habitat and oak woodland habitat are anticipated to occur as a result of the proposed Project. Paving of the trail will result in approximately 0.20 acres of permanent impacts to riparian woodland

habitat, with approximately 0.89 acres of temporary impacts anticipated due to construction access. Paving of the trail will also result in approximately 0.02 acres of permanent impacts to oak woodland habitat, and approximately 0.17 acres of temporary impacts due to construction access. In addition, tree removal within the oak woodland and riparian woodland habitats will be required. However, the specific trees to be removed have not yet been identified, and major tree removal is not anticipated. A tree survey will be conducted within the BSA to document and mark all trees proposed for removal. All trees removed from the riparian woodland and oak woodland habitat will be appropriately mitigated for in coordination with CDFW and the City. To avoid direct impacts to this species during construction, avoidance and minimization measure **BIO-8** will be implemented to ensure that no nesting white-tailed kites are present within the Project area prior to construction.

Avoidance and Minimization Efforts

Avoidance and minimization measures **BIO-1** and **BIO-8** will be incorporated into the Project to avoid and minimize potential Project-related impacts to the white-tailed kite.

Compensatory Mitigation

No compensatory mitigation for the white-tailed kite is proposed, as no direct impacts to the species are expected as a result of the proposed Project with incorporation of avoidance and minimization measure **BIO-8**.

Cumulative Impacts

The Project will result in temporary and permanent impacts to suitable white-tailed kite nesting habitat due to trail construction. In combination with previously constructed and planned Arcade-Cripple Creek Trail segments, the Project will contribute to minor cumulative impacts on the species' suitable nesting habitat in riparian woodland and oak woodland areas adjacent to the trail. The Project could also contribute to cumulative impacts on white-tailed individuals if any are present within the work area and are temporarily disturbed by construction. However, such impacts are unlikely with implementation of measure **BIO-8**, which requires pre-construction surveys and protection of nesting individuals through establishment of a no-work buffer around active nests. Based on this measure, cumulative impacts on white-tailed kite individuals are anticipated to be minor.

Discussion of Valley Elderberry Longhorn Beetle

VELB is a federal listed threatened species. Critical habitat for the species was designated by the USFWS on August 8, 1980 (45 Federal Register [FR] 52803). Elderberry shrubs are obligate hosts for VELB larvae. Elderberry shrubs are often associated with species common to the riparian forests and adjacent uplands in the Central Valley and foothills the elderberry inhabits, such as, cottonwood (*Populu*s spp.), willow, ash (*Fraxinus* spp.), oak (*Quercus* spp.), and walnut (*Juglans* spp.) (Barr 1991). The VELB's range has been reduced and greatly fragmented due to a loss of elderberry inhabited communities, most especially riparian habitat loss. Habitat loss is derived from agricultural development, urbanization, levee maintenance, and pesticide drift where

aerial application or fogging of crops occurs near riparian habitats (USFWS 1984 and Barr 1991).

Adult VELB feed on elderberry foliage and are present from March through early June. During this time, the adults mate within the canopy and females lay their eggs, either singularly or in small clusters, in living elderberry bark crevices or at the junction of stem/trunk or leaf petiole/stem (Barr 1991). After eggs hatch, the first instar larvae burrow into the host elderberry stems to feed on pith for one to two years. As the larvae become ready to pupate, it chews outward from the center of the stem through the bark. After the larvae plugs the newly constructed emergent hole with shavings, it returns to the pupal chamber to metamorphose and will emerge in mid-March through June as adults. Elderberry stems with emergence holes indicate current and/or previous VELB presence. VELB utilize stems greater than 1-inch diameter and produce circular to oval emergent holes 7–10 millimeters in diameter with the majority occurring 4 feet or less above the ground (Barr 1991).

Survey Results

In accordance with the USFWS *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle*, the Project area was buffered by 50 meters (≈ 165 feet) to identify elderberry shrubs occurring within the BSA (USFWS 2017). During survey efforts, two elderberry clusters, both with stem diameters over one inch were observed within the riparian woodland habitat within the BSA (**Figure 4**). Exit holes were observed on multiple stems within one of the two clusters, located on the southern bank of Arcade Creek (**Appendix E**). . The elderberry cluster without exit holes is approximately 72 feet south of the proposed trail alignment while the cluster with exit holes is approximately 95 feet south of the proposed trail alignment. The presence of exit holes indicates current or historic occupation by VELB, and therefore they have high potential to occur within the BSA.

Project Impacts

No direct or indirect impacts to the elderberry shrubs are anticipated as a result of trail construction. The two elderberry shrubs within the BSA may be located within the USFWS framework guidance buffer; however, they are located across Arcade Creek in an area that is unrelated to and far removed from Project activities. This creates a substantial distance and buffer between the Project and the shrub Two elderberry clusters were identified within the BSA, both of which are located within the USFWS framework guidance buffer. One of the clusters is located across Arcade Creek in an area that is unrelated to and physically separated from Project activities. The intervening creek channel provides substantial distance and buffer between the Project and this cluster such that it would not be subject to stressors such as noise, vibration, exhaust, or dust. The second elderberry cluster, while also located within the USFWS buffer, is situated outside the Project impact area and is not anticipated to be affected by Project activities.

Additionally, the nature of Project activities is such that they would not produce any stressors to a level that would affect the species or its host plant. Ground disturbance

and operation of equipment would be minimal within the 165-foot area surrounding the shrub and is not expected to result in any increases of stressors beyond ambient environmental baseline. Furthermore, construction of the new pedestrian crossing would occur well beyond that distance. Therefore, the Project would have *no effect* to VELB.

Avoidance and Minimization Efforts

Because effects to VELB are not anticipated, no avoidance or minimization measures are proposed.

Compensatory Mitigation

No compensatory mitigation for VELB is proposed, as no effects to the species or its associated habitat are expected as a result of the proposed Project.

Cumulative Impacts

Because no effects or impacts to VELB are anticipated, the Project is not expected to contribute to cumulative impacts on the species.

Discussion of Northwestern Pond Turtle

The NWPT is listed as proposed threatened under FESA and is considered a SSC by CDFW. This species is prevalent throughout California west of the Sierra-Cascade crest and certain desert regions. Individuals are subject to desiccation in hot or dry conditions, meaning this species is found around permanent and near-permanent water sources such as ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Individuals are omnivorous and feed on aquatic plants as well as invertebrates, frogs, and fishes. Predators include certain fishes, garter snakes, wading birds, and some mammals, and the NWPT retreats from basking sites to underwater refuges at the sign of danger. This species is known to hibernate underwater beneath a muddy bottom in colder climates and reproduce from March–August. Nests are generally found in flat areas with low vegetation and dry, hard soil (Zeiner et al. 1988–1990).

Survey Results

Arcade Creek and the eastern water quality/detention basin within the BSA provide suitable aquatic habitat for the NWPT due to the presence of slow-moving or standing water and available basking sites, including logs, rocks, muddy banks, and emergent vegetation. There is also some adjacent annual grassland habitat that may provide suitable upland nesting habitat for the species. According to the City of Sacramento's "Existing Conditions and Assessment Report and Stream Corridor Management Plan for the Arcade Creek Watershed", NWPTs have been observed in the Arcade Creek stream corridor during spring and summer 2007 field surveys (Jones & Stokes 2007). The nearest CNDDB occurrence is located approximately 6.4 miles northeast of the BSA within the Baldwin Reservoir Wetland and Wildlife Preserve in Granite Bay (1997). Due to the potentially suitable aquatic and upland habitat, this species has a low potential to occur within the BSA.

Project Impacts

The Project is anticipated to temporarily impact a total of approximately 0.10 acres of suitable aquatic habitat (Arcade Creek mainstem and tributary) and approximately 0.28 acres of suitable upland habitat (annual grassland) due to access during construction. Additionally, the Project is anticipated to permanently impact a total of approximately 0.01 acres of suitable aquatic habitat (Arcade Creek mainstem) and 0.21 acres of suitable upland habitat (annual grassland) due to paving of the trail.

The USFWS is currently not providing conference opinions for northwestern pond turtle (based on the timing of this NES). However, given that northwestern pond turtle is proposed to be listed under the FESA, Section 7 consultation will be required with USFWS upon official listing of the species. Though no determination will be made for purposes of Section 7 at this time, once officially listed under FESA, the determination for northwestern pond turtle is proposed to be *may affect, not likely to adversely affect*. Conservation measures are proposed for the species as a show of good faith, to further the protection and recovery of the species, and in anticipation of any future listings.

Avoidance and Minimization Efforts

In addition to avoidance and minimization measure **BIO-1**, the following measures will be incorporated into the Project to avoid and minimize potential Project-related impacts to the NWPT:

BIO-10: To avoid impacts to western pond turtles, the Project biologist will conduct a pre-construction survey of the aquatic and upland habitats within the Project area. Surveys will be conducted no more than 24 hours prior to onset of construction. If a western pond turtle is spotted within an active work area the Project Biologist will be contacted, and work activities will immediately cease within 100 feet of the turtle. Work will not recommence until the turtle has left the Project site on its own volition. In addition, if western pond turtle nests are detected within or adjacent to the Project area, the Project biologist will mark the nests with high-visibility flagging or fencing and establish a 25-foot no-disturbance buffer around each nest to prevent disturbance until hatching occurs or the biologist determines the nest is no longer at risk.

BIO-11: To prevent the inadvertent entrapment of NWPT, all excavated, steep-walled holes or trenches more than 3 inches wide and 1 foot deep will be inspected for NWPT then covered at the close of each working day by plywood or similar materials. If it is not feasible to cover an excavation, one or more escape ramps constructed of earthen fill or wood ≥ 6 inches wide shall be installed. Before such holes or trenches are filled, they must be thoroughly inspected by the biologist for trapped NWPT.

Compensatory Mitigation

With implementation of species-specific avoidance and minimization measures, impacts to NWPT are not anticipated as a result of the Project. In addition, the Project would not

result in long-term impacts to potentially suitable NWPT aquatic or upland habitat; therefore, compensatory mitigation is not proposed.

Cumulative Impacts

The Project will result in temporary and permanent impacts to suitable NWPT aquatic and upland habitat due to trail construction. In combination with previously constructed and planned Arcade-Cripple Creek Trail segments in the area, the Project will contribute to minor cumulative impacts on suitable aquatic and upland habitat for the species. The Project could also contribute to cumulative impacts on NWPT individuals if any are present within the work area and are temporarily disturbed by construction. However, such impacts are unlikely with implementation of measures **BIO-10** and **BIO-11**, which require pre-construction surveys, protection of nesting individuals, and entrapment prevention measures. Based on these factors, cumulative impacts on NWPT individuals are anticipated to be minor.

Chapter 5 – Conclusions and Regulatory Determinations

Federal Endangered Species Act Consultation Summary

Based on an analysis of species occurrences and habitat requirements, effect determinations were made for each federally listed, candidate or proposed species as shown in **Table 4. Federally Listed Species Determinations** below. Database research conducted through the USFWS and NMFS identified a total of nine federally listed species, two of which have the potential to occur within the BSA: NWPT and VELB.

The NWPT has a low potential to occur within the BSA due to the presence of suitable aquatic and upland habitat, as well as nearby, recent occurrences. Temporary and permanent impacts to Arcade Creek are anticipated as a result of construction, which provide suitable aquatic habitat for the species. In addition, temporary and permanent impacts to annual grassland habitat are expected, which provide suitable upland nesting habitat for the species. Given that NWPT is proposed to be listed under the FESA, Section 7 consultation will be required with USFWS upon official listing of the species. Though no official determination will be made for purposes of Section 7 consultation at this time, once officially listed under FESA, the determination for NWPT is proposed to be *may affect, not likely to adversely affect.*

Two elderberry shrub clusters occur within the BSA and fall within the USFWS framework guidance buffer of 165 feet. One cluster is located across Arcade Creek and well removed from Project activities. The second cluster is located outside the Project impact area and would not be affected by Project activities. Due to the separation distance and minimal ground disturbance in the area, Project-related stressors such as noise, vibration, exhaust, and dust would not affect the shrubs or VELB individuals. No direct or indirect impacts to elderberry shrubs within the BSA are anticipated. Therefore, the Project would have *no effect* on VELB.

Table 4. Federally Listed Species Determinations

Species Name	Federal Status	Potential	Determination
Northwestern pond turtle (*Actinemys marmorata*)	Proposed Threatened	Low	No Determination
Western spadefoot (*Spea hammondii*)	Proposed Threatened	Absent	No Effect
Monarch butterfly (*Danaus plexippus*)	Proposed Threatened	Absent	No Effect
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	Threatened	Present	No Effect
Vernal pool fairy shrimp (*Branchinecta lynchi*)	Threatened	Absent	No Effect

Species Name	Federal Status	Potential	Determination
Vernal pool tadpole shrimp (*Lepidurus packardi*)	Endangered	Absent	No Effect
Chinook Salmon Central Valley spring-run ESU (*Oncorhynchus tshawytscha* pop. 11)	Threatened	Absent	No Effect
Chinook Salmon Sacramento River winter-run ESU (*Oncorhynchus tshawytscha* pop. 7)	Endangered	Absent	No Effect
Steelhead California Central Valley DPS (*Oncorhynchus mykiss irideus* pop. 11)	Threatened	Absent	No Effect

Essential Fish Habitat Consultation Summary

Essential fish habitat (EFH) is defined as waters and substrate necessary for fish spawning, breeding, feeding, and growth to maturity (Magnuson-Stevens Fishery Conservation and Management Act §3). According to the National Oceanic and Atmospheric Administration habitat conservation *Essential Fish Habitat View Tool*, the BSA falls within the Lower American-Below Nimbus Watershed which is considered EFH for Chinook salmon (NOAA 2025). However, there is no documented evidence of listed Chinook salmon populations currently inhabiting Arcade Creek within the City. According to the City of Sacramento's *Existing Conditions and Assessment Report and Stream Corridor Management Plan for the Arcade Creek Watershed*, Chinook salmon and steelhead trout have not been reported in Arcade Creek for over 20 years. This absence is attributed to the lack of suitable rearing and spawning habitats, as well as low summer flows, which are not conducive to supporting these species (Jones & Stokes 2007). Although Arcade Creek ultimately connects to the Sacramento River, Chinook salmon in the Central Valley are more commonly associated with larger rivers that provide optimal spawning conditions, such as cooler water temperatures and uninterrupted flows during migration. Urban development within the City has likely further reduced Arcade Creek’s viability as habitat for Chinook salmon.

Communication with Skyler Burson, CDFW District 2 Fisheries Biologist, indicates that the potential for listed salmonids to occur in Arcade and Cripple creeks is very low, with only occasional, flow-driven straying of primarily hatchery-origin fish observed. Burson indicated that the system lacks suitable spawning and rearing habitat and functions as a dead-end, making successful reproduction and juvenile survival highly unlikely.

Consistent with these observations, the portion of Arcade Creek within the BSA does not support any of the Habitat Areas of Particular Concern (HAPCs) for Chinook salmon EFH. According to the Pacific Fishery Management Council (PFMC), there are five HAPCs including complex channels and floodplain habitat, thermal refugia, spawning

habitat, estuaries, and marine and estuarine submerged aquatic habitat (PFMC 2014). The reach of Arcade Creek within the BSA does not meet any of the criteria of the identified HAPCs. The BSA encompasses a highly urbanized reach of Arcade Creek with limited flow, poor water quality, and degraded habitat, making it unsuitable for salmon spawning or rearing. Therefore, the Project is not expected to adversely affect Chinook salmon EFH, and consultation with NMFS under the Magnuson-Stevens Fishery Conservation and Management Act is not anticipated.

California Endangered Species Act Consultation Summary

Prior to field surveys, a list of regional state listed plant and animal species was obtained from CDFW on October 1, 2025 (**Appendix B**). The potential for each species to occur within the BSA was determined by analyzing the habitat requirements of each species and comparing the habitat requirements to available habitat within the BSA. After a careful comparison between habitat requirements and the habitat available within the BSA, Swainson's hawk, listed as threatened under CESA, was determined to have a low potential to occur within the BSA during the bird nesting season (**Table 2**). With inclusion of avoidance, minimization, and mitigation measure **BIO-9**, the Project is not anticipated to result in take of this species and coordination with CDFW under Section 2081 is not anticipated.

Wetlands and Other Waters Coordination Summary

The Project will result in temporary impacts to a total of 0.10 acres of waters of the U.S. and state (Arcade Creek and its tributary), as well as approximately 0.01 acres of permanent impacts. Prior to work within jurisdictional waters, the City will obtain a Section 401 WQC from the RWQCB, a Section 1602 Streambed Alteration Agreement from CDFW, and a non-notifying Section 404 Nationwide Permit from the USACE.

Invasive Species

In February 1999, EO 13112 was signed, requiring federal agencies to prevent and control the introduction and spread of invasive species. Measure **BIO-12** will be incorporated into the Project plans to ensure that invasive species are not introduced or spread.

BIO-12: Prior to arrival at the Project site and prior to leaving the Project site, construction equipment that may contain invasive plants and/or seeds will be cleaned to reduce the spreading of noxious weeds.

Other

Best Management Practices

To minimize and avoid potential environmental impacts of construction, measure **BIO-3** has been incorporated into the Project design.

General Wildlife

To minimize and avoid potential effects to local wildlife, the following measures **BIO-13** through **BIO-15** have been incorporated into the Project design.

BIO-13: All food-related trash must be disposed into closed containers and must be removed from the Project area daily. Construction personnel must not feed or otherwise attract wildlife to the Project area.

BIO-14: The contractor must not apply rodenticide or herbicide within the Project area during construction.

BIO-15: If any wildlife is encountered during the course of construction, said wildlife will be allowed to leave the construction area unharmed.

Migratory Birds

Native, migratory, and other non-game birds are protected by the MBTA and CFG Code Sections 3513, 3503.5 and 3503. Because habitats such as oak woodland and riparian woodland are present within the BSA, and impacts would occur to these habitats, bird species protected under these regulations could be impacted. The implementation of measure BIO-8 and BIO-9 would avoid all potential impacts to migratory birds.

Chapter 6 – References

Airola & Grantham 2003	Airola, D. A., & Grantham, J. 2003. Purple Martin population status, nesting habitat characteristics, and management in Sacramento, California. *Western Birds, 34*(4), 235–251.
Barr 1991	Barr, C.B. 1991. The Distribution, Habitat, and Status of the Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus Fisher (Insecta: Coleoptera: Cerambycidae). U.S. Fish and Wildlife Service; Sacramento, California. 134 pp.
Calflora 2025	Calflora. 2025. Plants of California. Available at: http://www.calflora.org/ (accessed 10/31/2025).
CDFG 1994	California Department of Fish and Game. 1994. State Fish and Game Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California.
CDFW 2025a	California Department of Fish and Wildlife. 2025. Biogeographic Information and Observation System Habitat Connectivity Viewer. Available at: https://wildlife.ca.gov/Data/BIOS (accessed 10/31/2025).
CDFW 2025b	California Department of Fish and Wildlife. 2025. California Natural Diversity Database. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/ (accessed 10/1/2025).
CDFW 2025c	California Department of Fish and Wildlife. 2025. Wildlife habitats – California Wildlife Habitat Relationships System. Available at: https://wildlife.ca.gov/Data/Analysis/CWHR/Wildlife-Habitats (accessed 11/7/2025).
City of Citrus Heights 2011	City of Citrus Heights. 2011. General Plan: Goals, policies & actions. Available at: https://www.citrusheights.net/202/General-Plan (accessed 11/4/2025)
City of Citrus Heights 2016	City of Citrus Heights. 2016. Pedestrian Master Plan. Available at: https://www.citrusheights.net/DocumentCenter/View/5909/Adopted-Pedestrian-Master-Plan?bidId= (accessed 11/4/25).

City of Sacramento 2003	City of Sacramento, Department of Parks and Recreation. 2003. Arcade Creek Watershed Plan. https://saccreeks.org/wp-content/uploads/2016/11/Arcade-Creek-Watershed-Plan-Final-Jul-2003-reduced.pdf (accessed 10/31/2025).
CNPS 2025	California Native Plant Society. 2025. Inventory of Rare and Endangered Plants of California. Available at: http://www.rareplants.cnps.org/ (accessed 10/1/25).
DPR 2003	Foothill Associates. 2003. Arcade Creek Watershed Plan. Prepared for: Department of Parks and Recreation. Available at: https://saccreeks.org/wp-content/uploads/2016/11/Arcade-Creek-Watershed-Plan-Final-Jul-2003-reduced.pdf (accessed 11/5/2025).
England et al. 1997	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.
Grenfell 1988	Grenfell Jr., W.E. 1988. A Guide to Wildlife Habitats of California – Valley Foothill Riparian.
Grinnell & Miller 1994	Grinnell, J., and Miller, A. H. 1944. The distribution of the birds of California. Pac. Coast Avifauna 27.
Jepson 2025	Jepson Flora Project. 2025. Jepson eFlora. https://ucjeps.berkeley.edu/eflora/ (accessed 10/31/25).
Jones & Stokes 2007	Jones & Stokes. 2007. Existing Conditions and Assessment Report and Stream Corridor Management Plan for the Arcade Creek Watershed, Sacramento County, California. Draft. October. (J&S 06766.06.) Sacramento, CA. Prepared for: City of Sacramento, Department of Utilities in coordination with State Water Resources Control Board.
Lichvar & McColley 2008	Lichvar, R. W., & McColley, S. M. 2008. A field guide to the identification of the ordinary high-water mark in the arid West region of the western United States: A delineation manual (ERDC/CRREL TR-08-12). U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. Available at: https://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/Ordinary_High_Watermark_Manual_Aug_2008.pdf

Marshall 1948	Marshall, J. T., Jr. 1948. Ecologic races of Song Sparrows in the San Francisco Bay region. Part I. Habitat and abundance. Condor 50:193-215.
Mayer & Laudenslayer 1988	Mayer, K. E., & Laudenslayer, W. F., Jr. (1988). A guide to wildlife habitats of California. California Department of Fish and Game.
NOAA 2025	National Oceanic and Atmospheric Administration (NOAA). 2025. Habitat Conservation Essential Fish Habitat View Tool for Chinook Salmon. Available at: <https://www.habitat.noaa.gov/apps/efhmapper/> (accessed 11/5/2025).
NPS 2025	National Park Service (NPS). 2025. Western Yellow-billed Cuckoo. U.S. Department of the Interior. Available at: https://www.nps.gov/articles/western-yellow-billed-cuckoo.htm (accessed 10/7/25).
NRCS 2025	Natural Resource Conservation Service. 2025. Custom Soil Resources Report for Sacramento County, California. Available at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm (accessed 10/31/25).
PFMC 2014	Pacific Fishery Management Council. 2014. Appendix A to the Pacific Coast Salmon Fishery Management Plan. Available at: <https://www.pcouncil.org/documents/2019/08/salmon-efh-appendix-a.pdf/> (accessed 11/5/2025).
Shuford & Gardali 2008	Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California.
U.S. Climate Data 2025	United States Climate Data. 2025. Sacramento, CA Weather Averages. Available at: https://www.usclimatedata.com (accessed 10/31/25).
USFWS 1984	United States Fish and Wildlife Service. 1984. Recovery Plan for the Valley Elderberry Longhorn Beetle. Dated June 28, 1984. U.S. Fish and Wildlife Service; Portland, Oregon.
USFWS 2017	United States Fish and Wildlife Service. 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn

	Beetle (Desmocerus californicus dimorphus). U.S. Fish and Wildlife Service; Sacramento, California. 28 pp.
USFWS 2026	United States Fish and Wildlife Service. 2026. Official Species List: U.S. Department of the Interior – Fish and Wildlife Service: Sacramento Fish and Wildlife Office. (requested: 2/2/26).
Zeiner et al. 1988-1990	Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Depart. of Fish and Game, Sacramento, California.

Appendix A. USFWS Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: 02/02/2026 21:42:33 UTC
Project Code: 2026-0044243
Project Name: Arcade-Cripple Creek Trail (Sylvan to Stock Ranch) Extension Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

PROJECT SUMMARY

Project Code: 2026-0044243

Project Name: Arcade-Cripple Creek Trail (Sylvan to Stock Ranch) Extension Project

Project Type: Recreation - New Construction

Project Description: The City proposes to construct a 0.5-mile addition to the planned 16-mile CCTP as part of the Arcade-Cripple Creek Trail (Sylvan to Stock Ranch) Extension Project (Project). The Project is funded through the federal Carbon Reduction Program.

The Project is located in Citrus Heights and will extend east from the existing Stock Ranch Trail behind the Costco/Walmart shopping center to Sylvan Road. The proposed alignment begins south of the Walmart property boundary and would proceed east through the Stock Ranch Nature Preserve, curving south around Walmart's water quality detention basin. The alignment continues north, crossing a tributary of Arcade Creek, and traverses along the south side of the Huntington Square Apartment complex prior to connecting to Sylvan Road. The alignment terminates east of Sylvan Road with a planned future trail extension segment from Sylvan Road to Mariposa Avenue. The Project has independent utility and would function as a stand-alone improvement.

To accommodate construction, right-of-way (ROW) acquisitions will be required from several parcels. These include a permanent and temporary easement from the Sunrise Recreation and Park District, a temporary access easement from Walmart and/or Costco, and a temporary access easement from Huntington Square Apartments. If the existing trail easement across the Huntington Square Apartment property is insufficient to contain the construction activities, an additional temporary construction easement would be needed.

Proposed facilities include a paved trail, a new prefabricated bridge across the unnamed creek tributary , solar lighting, and an at-grade signalized pedestrian crossing at Sylvan Road. Construction activities will involve grading to achieve ADA-compliant slopes, installing the creek crossing, paving the trail, erecting the solar lighting, and adding pedestrian signal infrastructure with minor utility adjustments as needed. The Project also includes installation of a gabion basket retaining wall along an actively eroding portion of Arcade Creek to stabilize the bank and prevent further erosion.

Construction access will be provided primarily through the Walmart and/or Costco parking lot under a temporary construction easement, with potential supplemental access from the Huntington Square Apartments parcel. These provisions will allow safe and efficient construction of the trail and its associated improvements.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.68898745,-121.294574044786,14z



Counties: Sacramento County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

REPTILES

NAME	STATUS
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111 General project design guidelines: https://ipac.ecosphere.fws.gov/project/TZS5O3TP3BEZXFPIUZICKRUK7Q/documents/generated/11271.pdf	Proposed Threatened

AMPHIBIANS

NAME	STATUS
Western Spadefoot *Spea hammondii* Population: Northern DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5425 General project design guidelines: https://ipac.ecosphere.fws.gov/project/TZS5O3TP3BEZXFPIUZICKRUK7Q/documents/generated/11271.pdf	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743 General project design guidelines: https://ipac.ecosphere.fws.gov/project/TZS5O3TP3BEZXFPIUZICKRUK7Q/documents/generated/11271.pdf	Proposed Threatened
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

CRUSTACEANS

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498 General project design guidelines: https://ipac.ecosphere.fws.gov/project/TZS5O3TP3BEZXFPIUZICKRUK7Q/documents/generated/11271.pdf	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

NAME STATUS

General project design guidelines:
https://ipac.ecosphere.fws.gov/project/TZS5O3TP3BEZXFPIUZICKRUK7Q/documents/generated/11271.pdf

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Dokken Engineering
Name: Katie Jacobson
Address: 110 Blue Ravine Rd #200
City: Folsom
State: CA
Zip: 95630
Email kjacobson@dokkenengineering.com
Phone: 9168449581

Appendix B. CNDDB Species List

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Rio Linda (3812164) OR Citrus Heights (3812163) OR Folsom (3812162) OR Sacramento East (3812154) OR Buffalo Creek (3812152) OR Carmichael (3812153) OR Rocklin (3812172) OR Roseville (3812173) OR Pleasant Grove (3812174))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Ahart's dwarf rush *Juncus leiospermus var. ahartii*	PMJUN011L1	None	None	G2T1	S1	1B.2
Alkali Meadow *Alkali Meadow*	CTT45310CA	None	None	G3	S2.1	
Alkali Seep *Alkali Seep*	CTT45320CA	None	None	G3	S2.1	
American badger *Taxidea taxus*	AMAJF04010	None	None	G5	S3	SSC
American bumble bee *Bombus pensylvanicus*	IIHYM24260	None	None	G3G4	S2	
An andrenid bee *Andrena subapasta*	IIHYM35210	None	None	G1G2	S1S2	
bank swallow *Riparia riparia*	ABPAU08010	None	Threatened	G5	S3	
big-scale balsamroot *Balsamorhiza macrolepis*	PDAST11061	None	None	G2	S2	1B.2
Boggs Lake hedge-hyssop *Gratiola heterosepala*	PDSCR0R060	None	Endangered	G2G3	S2	1B.2
Brandegee's clarkia *Clarkia biloba ssp. brandegeeae*	PDONA05053	None	None	G4G5T4	S4	4.2
burrowing owl *Athene cunicularia*	ABNSB10010	None	Candidate Endangered	G4	S2	SSC
California black rail *Laterallus jamaicensis coturniculus*	ABNME03041	None	Threatened	G3T1	S2	FP
California linderiella *Linderiella occidentalis*	ICBRA06010	None	None	G2G3	S2S3	
Cooper's hawk *Astur cooperii*	ABNKC12040	None	None	G5	S4	WL
Crotch's bumble bee *Bombus crotchii*	IIHYM24480	None	Candidate Endangered	G2	S2	
double-crested cormorant *Nannopterum auritum*	ABNFD01020	None	None	G5	S4	WL
dwarf downingia *Downingia pusilla*	PDCAM060C0	None	None	GU	S2	2B.2
Elderberry Savanna *Elderberry Savanna*	CTT63440CA	None	None	G2	S2.1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
ferruginous hawk *Buteo regalis*	ABNKC19120	None	None	G4	S3S4	WL
giant gartersnake *Thamnophis gigas*	ARADB36150	Threatened	Threatened	G2	S2	
golden eagle *Aquila chrysaetos*	ABNKC22010	None	None	G5	S3	FP
grasshopper sparrow *Ammodramus savannarum*	ABPBXA0020	None	None	G5	S3	SSC
great blue heron *Ardea herodias*	ABNGA04010	None	None	G5	S4	
great egret *Ardea alba*	ABNGA04040	None	None	G5	S4	
hairy water flea *Dumontia oregonensis*	ICBRA23010	None	None	G1G3	S1	
hispid salty bird's-beak *Chloropyron molle ssp. hispidum*	PDSCR0J0D1	None	None	G2T1	S1	1B.1
legenere *Legenere limosa*	PDCAM0C010	None	None	G2	S2	1B.1
merlin *Falco columbarius*	ABNKD06030	None	None	G5	S3S4	WL
midvalley fairy shrimp *Branchinecta mesovallensis*	ICBRA03150	None	None	G2	S2S3	
Northern Claypan Vernal Pool *Northern Claypan Vernal Pool*	CTT44120CA	None	None	G1	S1.1	
Northern Hardpan Vernal Pool *Northern Hardpan Vernal Pool*	CTT44110CA	None	None	G3	S3.1	
Northern Volcanic Mud Flow Vernal Pool *Northern Volcanic Mud Flow Vernal Pool*	CTT44132CA	None	None	G1	S1.1	
northwestern pond turtle *Actinemys marmorata*	ARAAD02031	Proposed Threatened	None	G2	SNR	SSC
osprey *Pandion haliaetus*	ABNKC01010	None	None	G5	S4	WL
pallid bat *Antrozous pallidus*	AMACC10010	None	None	G4	S3	SSC
pincushion navarretia *Navarretia myersii ssp. myersii*	PDPLM0C0X1	None	None	G2T2	S2	1B.1
purple martin *Progne subis*	ABPAU01010	None	None	G5	S3	SSC
Red Bluff dwarf rush *Juncus leiospermus var. leiospermus*	PMJUN011L2	None	None	G2T2	S2	1B.1
Ricksecker's water scavenger beetle *Hydrochara rickseckeri*	IICOL5V010	None	None	G2?	S2?	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Sacramento Orcutt grass *Orcuttia viscida*	PMPOA4G070	Endangered	Endangered	G1	S1	1B.1
Sanford's arrowhead *Sagittaria sanfordii*	PMALI040Q0	None	None	G3	S3	1B.2
silver-haired bat *Lasionycteris noctivagans*	AMACC02010	None	None	G4	S3S4	
slender Orcutt grass *Orcuttia tenuis*	PMPOA4G050	Threatened	Endangered	G2	S2	1B.1
song sparrow ("Modesto" population) *Melospiza melodia pop. 1*	ABPBXA3013	None	None	G5T3?Q	S3?	SSC
spicate calycadenia *Calycadenia spicata*	PDAST1P090	None	None	G3?	S3	1B.3
steelhead - Central Valley DPS *Oncorhynchus mykiss irideus pop. 11*	AFCHA0209K	Threatened	None	G5T2Q	S2	SSC
stinkbells *Fritillaria agrestis*	PMLIL0V010	None	None	G3	S3	4.2
Swainson's hawk *Buteo swainsoni*	ABNKC19070	None	Threatened	G5	S4	
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	Threatened	G3	S2	SSC
valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	IICOL48011	Threatened	None	G3T3	S3	
Valley Needlegrass Grassland *Valley Needlegrass Grassland*	CTT42110CA	None	None	G3	S3.1	
vernal pool fairy shrimp *Branchinecta lynchi*	ICBRA03030	Threatened	None	G3	S3	
vernal pool tadpole shrimp *Lepidurus packardi*	ICBRA10010	Endangered	None	G3	S3	
western ridged mussel *Gonidea angulata*	IMBIV19010	None	None	G3	S2	
western spadefoot *Spea hammondii*	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
white-tailed kite *Elanus leucurus*	ABNKC06010	None	None	G5	S3S4	FP

Record Count: 57

Appendix C. CNPS Species List

CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

Search Results

13 matches found. Click on scientific name for details

Search Criteria: , CRPR is one of [**1A:1B:2A:2B:3**] , Quad is one of [**3812164:3812163:3812162:3812172:3812173:3812174:3812154:3812153:3812152**]

▲ COMMON NAME	SCIENTIFIC NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Ahart's dwarf rush	*Juncus leiospermus* var. *ahartii*	Juncaceae	annual herb	Mar-May	None	None	G2T1	S1	1B.2	Yes	1984-01-01	 © 2004 Carol W. Witham
big-scale balsamroot	*Balsamorhiza macrolepis*	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	Yes	1974-01-01	 ©1998 Dean Wm. Taylor
Boggs Lake hedge-hyssop	*Gratiola heterosepala*	Plantaginaceae	annual herb	Apr-Aug	None	CE	G2G3	S2	1B.2		1974-01-01	 ©2004 Carol W. Witham
dwarf downingia	*Downingia pusilla*	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2		1980-01-01	 © 2013 Aaron Arthur
hispid salty bird's-beak	*Chloropyron molle* ssp. *hispidum*	Orobanchaceae	annual herb (hemiparasitic)	Jun-Sep	None	None	G2T1	S1	1B.1	Yes	1974-01-01	No Photo Available

legenere	*Legenere limosa*	Campanulaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.1	Yes	1974-01-01	 © 2025 Adam Searcy
pincushion navarretia	*Navarretia myersii* ssp. *myersii*	Polemoniaceae	annual herb	Apr-May	None	None	G2T2	S2	1B.1	Yes	1994-01-01	 © 2020 Leigh Johnson
Red Bluff dwarf rush	*Juncus leiospermus* var. *leiospermus*	Juncaceae	annual herb	Mar-Jun	None	None	G2T2	S2	1B.1	Yes	1974-01-01	 ©2016 Dylan Neubauer
Sacramento Orcutt grass	*Orcuttia viscida*	Poaceae	annual herb	Apr-Jul(Sep)	FE	CE	G1	S1	1B.1	Yes	1974-01-01	 © Rick York and CNPS
Sanford's arrowhead	*Sagittaria sanfordii*	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	Yes	1984-01-01	 ©2013 Debra L. Cook
slender Orcutt grass	*Orcuttia tenuis*	Poaceae	annual herb	May-Sep(Oct)	FT	CE	G2	S2	1B.1	Yes	1974-01-01	 © 2013 Justy Leppert
spicate calycadenia	*Calycadenia spicata*	Asteraceae	annual herb	May-Sep	None	None	G3?	S3	1B.3		2023-04-05	 © 2023 Christopher Bronny

Suisun Marsh aster	*Symphyotrichum lentum*	Asteraceae	perennial rhizomatous herb	(Apr)May-Nov	None	None	G2	S2	1B.2	Yes	1974-01-01	No Photo Available

Showing 1 to 13 of 13 entries

Go to top

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2026. Rare Plant Inventory (online edition, v9.5.1). Website https://www.rareplants.cnps.org [accessed 12 March 2026].

}

Appendix D. NMFS Species List

From: Katie Jacobson
To: nmfs.wcrca.specieslist@noaa.gov
Subject: Arcade Creek Trail Project NMFS List
Date: Thursday, March 12, 2026 1:19:00 PM
Attachments: image001.png

Quad Name **Citrus Heights**

Quad Number **38121-F3**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) - **X**
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - **X**
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult Monica DeAngelis
monica.deangelis@noaa.gov
562-980-3232

MMPA Cetaceans -
MMPA Pinnipeds -

Thank you,

Katie Jacobson
Biologist/Environmental Planner |
Dokken Engineering
Phone: 916.858.0642
Email: kjacobson@dokkenengineering.com
110 Blue Ravine Road, Suite 200 | Folsom, CA 95630
www.dokkenengineering.com

Appendix E. Reference Photographs



Photograph 1. Representative of the eastern ephemeral tributary which flows northeast within the BSA with oak woodland vegetation community upland of the channel (facing southwest, October 17, 2025).



Photograph 2. Representative of the western ephemeral tributary which flows northwest within the BSA with oak woodland and annual grassland vegetation communities upland of the channel (facing northwest, October 17, 2025).



Photograph 1. Representative of the western water quality/detention basin, south of Costco. No water was present at the time of the biological survey, and the vegetation within the basin appeared recently trimmed (facing south, October 17, 2025).



Photograph 2. Representative of the eastern water quality/detention basin, southeast of Walmart. Water was present and the cattails and tules appeared recently trimmed (facing southwest, October 17, 2025).



Photograph 3. Representative of the northern portion of the eastern water quality/detention basin. This area is dominated by willows and cottonwood trees (facing southwest, October 17, 2025).



Photograph 4. Representative of the existing informal dirt trail that runs through the oak woodland vegetation community within the BSA (facing east, October 17, 2025).



Photograph 5. Representative of Arcade Creek within the BSA, water was present but not flowing at the time of the survey. Also shows potentially suitable basking habitat for NWPT (facing east, October 17, 2025).



Photograph 6. Representative of Arcade Creek as it passes beneath the pedestrian bridge in the western portion of the BSA. There is existing RSP along the creek at this location (facing south, October 17, 2025).



Photograph 7. Representative of the riparian woodland vegetation community along Arcade Creek within the BSA (facing northwest, October 17, 2025).



Photograph 8. Representative of one of the elderberry shrub clusters observed within the riparian woodland vegetation community within the BSA (facing west, October 17, 2025).



Photograph 9. Representative of one of the elderberry shrub clusters observed within the riparian woodland vegetation community within the BSA (facing northwest, October 17, 2025).



Photograph 10. Representative of an exit hole found on the above elderberry shrub cluster observed within the riparian woodland vegetation community (facing northwest, October 17, 2025).



Photograph 11. Representative of the urban areas within the BSA, showing the apartment complex in the northeastern portion of the BSA as well as landscaped grass and planted trees (facing west, October 17, 2025).



Photograph 12. Representative of the urban areas within the BSA, showing the back parking lot of Walmart (facing east, October 17, 2025).



Photograph 13. Representative of the urban areas within the BSA, showing Sylvan Road (facing southwest, October 17, 2025).



Photograph 14. Representative of Arcade Creek and its riparian woodland vegetation community (facing southeast, October 17, 2025).

Appendix F. OHWM Datasheet

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Arcade Crk Trail Extension
Project Number: 3907
Stream: Arcade Creek
Investigator(s): Katie Jacobson, Caroline Clarkson
Date: 10/17/25 **Time:** 11am
Town: Citrus Heights **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: Arcade Creek within the Stock Ranch Preserve

Projection: UTM **Datum:** NAD83
Coordinates: 38.687998, -121.295812

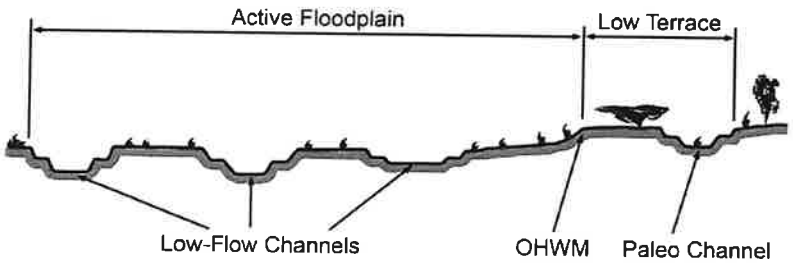
Potential anthropogenic influences on the channel system: Trash + homeless encampments along creek bank; existing RSP near ped. bridge, adjacent development (commercial + residential). Adjacent detention basins

Brief site description: The stream is within the City of Citrus Heights within the Stock Ranch Preserve. Perennial stream channel (Arcade Creek) w an ephemeral tributary. Riparian woodland habitat on banks of channel (mature + dense)

Checklist of resources (if available):

- [X] Aerial photography
  Dates:
- [X] Topographic maps
- [ ] Geologic maps
- [X] Vegetation maps
- [ ] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [X] Global positioning system (GPS)
- [X] Other studies: LIDAR
- [ ] Stream gage data
  Gage number:
  Period of record:
  - [ ] History of recent effective discharges
  - [ ] Results of flood frequency analysis
  - [ ] Most recent shift-adjusted rating
  - [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

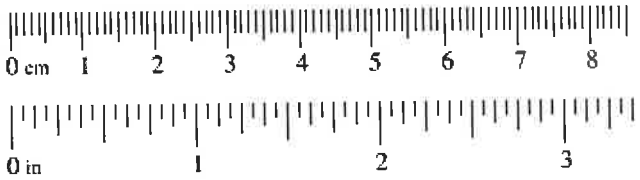


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [X] Mapping on aerial photograph
   - [X] Digitized on computer
   - [X] GPS
   - [X] Other: LIDAR

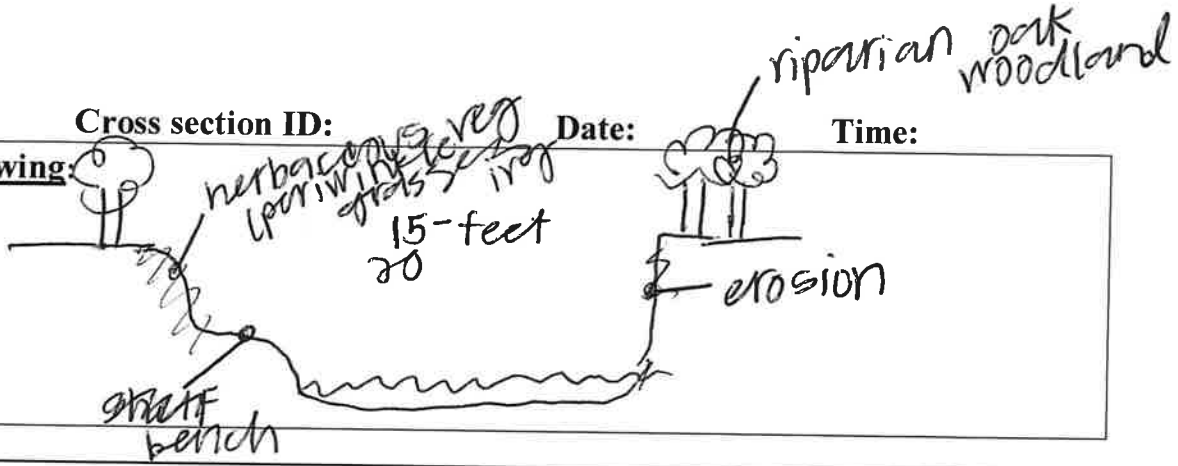
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: **Cross section ID:** **Date:** **Time:**

Cross section drawing:



OHWM

GPS point: 38.689502°N -121.291716°W

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: exposed roots
- ☐ Other: slope erosion

Comments: steeply incised banks (up to 90°); evidence of erosion along banks. Water present but not flowing. Mature riparian woodland dominated by oaks. Apprx. 15-20 feet wide @ OHWM but channel gets up to 60 feet wide. One ephemeral tributary splits off Arcade Creek.

Floodplain unit:

☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: 38.689502°N -121.291716°W

Characteristics of the floodplain unit:

Average sediment texture: silt

Total veg cover: 85 % Tree: 60 % Shrub: 10 % Herb: 15 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments: Defined break in bank slope, catalpa trees in bed of channel, periwinkle + blackberry understory on banks + riparian woodland on upper banks.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Arcade Creek Trail Extension **Date:** 10/17/25 **Time:** 12pm
Project Number: 3407 **Town:** Citrus Heights **State:** CA
Stream: Arcade creek tributary **Photo begin file#:** **Photo end file#:**
Investigator(s): Katie Jacobson, Caroline Clarkson

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: Arcade creek tributary within Stock Ranch Preserve

Projection: UTM **Datum:** NAD83
Coordinates: 36.689164, -121.272972

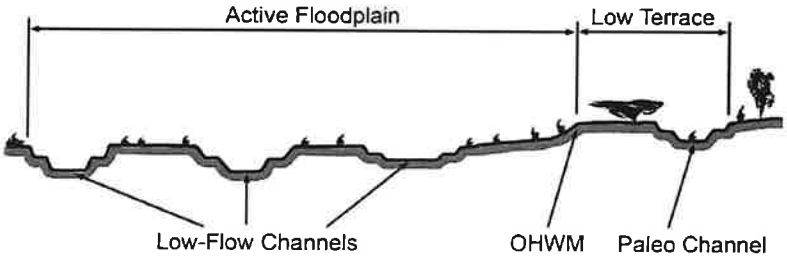
Potential anthropogenic influences on the channel system: Adjacent development (residential + commercial); trash in channel + along banks.

Brief site description: Within the city of Citrus Heights in highly developed area. Tributary to Arcade creek mainstem = perennial channel.

Checklist of resources (if available):

- [X] Aerial photography
  Dates:
- [X] Topographic maps
- [ ] Geologic maps
- [X] Vegetation maps
- [X] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [X] Global positioning system (GPS)
- [X] Other studies: LIDAR
- [ ] Stream gage data
  Gage number:
  Period of record:
  - [ ] History of recent effective discharges
  - [ ] Results of flood frequency analysis
  - [ ] Most recent shift-adjusted rating
  - [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

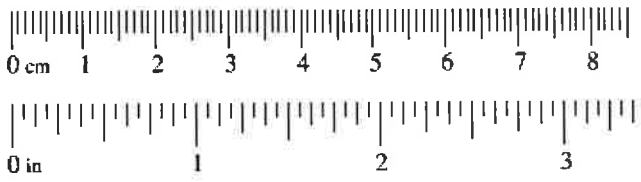


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [X] Mapping on aerial photograph
   - [X] Digitized on computer
   - [X] GPS
   - [X] Other: LIDAR

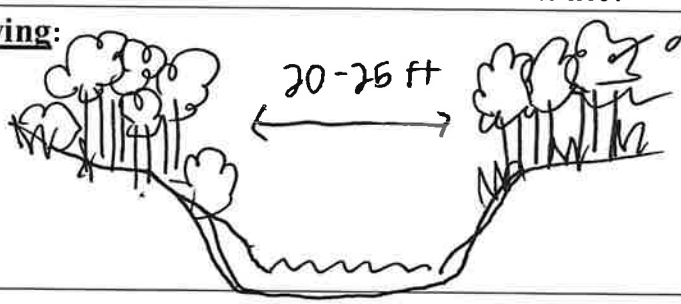
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: **Cross section ID:** **Date:** **Time:**

Cross section drawing:



OHWM

GPS point: 36.689164, -121.292992

Indicators:

- ☐ Change in average sediment texture
- ☒ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope (75°)
- ☒ Other: exposed roots
- ☒ Other: slope erosion

Comments: Steeply incised banks; water present but not flowing; dense, mature oak riparian corridor. Approximately 20-25 ft wide @ OHWM. splits of mainstem Arcade creek + dead ends at residential development to the north.

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: ~~[illegible]~~ 36.689164, -121.292992

Characteristics of the floodplain unit:

Average sediment texture: silt

Total veg cover: 90 % Tree: 80 % Shrub: 5 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☒ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments: Entire tributary ~220 feet long from its confluence w Arcade creek. Defined break in bank slope + dense, mature riparian corridor

Appendix G. CDFW Region 2 Fisheries Biologist Coordination

From:	Burson, Skyler@Wildlife
To:	Katie Jacobson
Cc:	Dorienne Mendoza; Hanna Nottnagel; Tran, Harvey@Wildlife
Subject:	RE: Fish Inquiry Sacramento County - Arcade Creek EFH/Presence of Anadromous Fish
Date:	Friday, January 23, 2026 3:06:15 PM
Attachments:	image002.png image003.png

You don't often get email from skyler.burson@wildlife.ca.gov. Learn why this is important

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thank you for looping me into this string Harvey.

Hi Katie,

The potential for listed fish species to occur in this section of Arcade/Cripple Creeks is very low. I've received unverified reports of steelhead (likely hatchery fish) in the lower portions of Arcade Creek as recent as last November following a large flow event. Regarding non-listed salmonid presence, this past November an unknown number of adult fall-run Chinook salmon did enter Cripple Creek (this is the first time many long-term residents of the creek had seen salmon before). In early December 2025, I rescued one adult and collected a head from one adipose fin-clipped carcass, after extracting the CWT it was determined that specific fish was a 2-year old from Coleman National Fish Hatchery.

I do agree with your assessment of this particular system below. Cripple Creek specifcally is a dead-end for any straying salmonids attempting to spawn there. Given the small chance fish were able to spawn successfully in the limited to no availabe habitat, any juveniles would not survive the spring conditions on their way out to the Sacramento River.

I hope this information helps and please feel free to reach out to me directly if you would like to discuss further.

Thank you,
Skyler Burson
Environmental Scientist – District Biologist
North Central Region (Region 2) – Anadromous Fisheries

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE

1701 Nimbus Road, Rancho Cordova, CA 95670
Skyler.Burson@wildlife.ca.gov | Phone: 1-916-906-2289

From: Tran, Harvey@Wildlife <Harvey.Tran@Wildlife.ca.gov>
Sent: Friday, January 23, 2026 1:22 PM

To: Katie Jacobson <KJacobson@dokkenengineering.com>
Cc: Dorienne Mendoza <DMendoza@dokkenengineering.com>; Hanna Nottnagel <HNottnagel@dokkenengineering.com>; Burson, Skyler@Wildlife <Skyler.Burson@wildlife.ca.gov>
Subject: RE: Fish Inquiry Sacramento County - Arcade Creek EFH/Presence of Anadromous Fish

Hi Katie,

Thank you for reaching out. Skyler is the District Fisheries Biologist for the area, so he will be able to help you out with your question. I have CCed him on this email and he will reach out to you as his convenience.

Thanks,

Harvey Tran
Senior Environmental Scientist (Specialist)
California Department of Fish and Wildlife
Region 2 - North Central Region
1701 Nimbus Road, Rancho Cordova, CA 95670
Habitat Conservation Program
(916) 358-4035
harvey.tran@wildlife.ca.gov

From: Katie Jacobson <KJacobson@dokkenengineering.com>
Sent: Friday, January 23, 2026 12:34 PM
To: Tran, Harvey@Wildlife <Harvey.Tran@Wildlife.ca.gov>
Cc: Dorienne Mendoza <DMendoza@dokkenengineering.com>; Hanna Nottnagel <HNottnagel@dokkenengineering.com>; Wildlife Fisheries <Fisheries@wildlife.ca.gov>
Subject: RE: Fish Inquiry Sacramento County - Arcade Creek EFH/Presence of Anadromous Fish

WARNING: This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Hey Harvey,

I hope you are doing well.

Dokken Engineering is working with the City of Cirtus Heights on the Arcade–Cripple Creek Trail (Sylvan Road to Stock Ranch Road) Extension Project. We are currently in the environmental approval phase of the project, and we are reaching out to better understand the potential for listed anadromous fish species, such as Central Valley spring-run Chinook salmon ESU and California Central Valley steelhead DPS to occur in this section of Arcade Creek (see attached google earth pin).

Based on our research, including review of the City of Sacramento's Existing Conditions

and Assessment Report and Stream Corridor Management Plan for the Arcade Creek Watershed, CNDDB occurrences, and habitat assessments of the site, it is our understanding that Chinook salmon and steelhead trout have not been reported in Arcade Creek for over 20 years. However, we wanted to connect with local CDFW fisheries biologists to confirm this determination and/or inquire about any more recent data that may be available.

This portion of Arcade Creek is also identified as Essential Fish Habitat (EFH) for Chinook salmon, although it lacks key features such as complex channels, spawning habitat, thermal refugia, etc. However, our overall conclusion regarding potential for occurrence for these species will help determine if any consultations will be required for the project.

Would you be able to direct us to the appropriate local fisheries biologist, or advise on the best point of contact to address this question?

Please let me know if you have questions or need more information.

Thank you for your time and assistance,

Katie Jacobson
Biologist/Environmental Planner |
Dokken Engineering
Phone: 916.858.0642
Email: kjacobson@dokkenengineering.com
110 Blue Ravine Road, Suite 200 | Folsom, CA 95630
www.dokkenengineering.com

From: MacLeod, Ian@Wildlife <Ian.MacLeod@Wildlife.ca.gov>
Sent: Friday, January 23, 2026 11:23 AM
To: Katie Jacobson <KJacobson@dokkenengineering.com>; Tran, Harvey@Wildlife <Harvey.Tran@Wildlife.ca.gov>
Cc: Dorienne Mendoza <DMendoza@dokkenengineering.com>; Hanna Nottnagel <HNottnagel@dokkenengineering.com>; Wildlife Fisheries <Fisheries@wildlife.ca.gov>
Subject: RE: Fish Inquiry Sacramento County - Arcade Creek EFH/Presence of Anadromous Fish

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Hi Katie,
thank you for your inquiry. I'm including Harvey Tran in this email. He is the CDFW staff

person who handles permitting for Sacramento County. My work is focused almost exclusively on Butte County but Harvey should be able to assist you.
Regards,

Ian MacLeod, Senior Environmental Scientist
California Department of Fish and Wildlife, Region 2

From: Katie Jacobson <KJacobson@dokkenengineering.com>
Sent: Thursday, January 22, 2026 2:35 PM
To: MacLeod, Ian@Wildlife <Ian.MacLeod@Wildlife.ca.gov>
Cc: Dorienne Mendoza <DMendoza@dokkenengineering.com>; Hanna Nottnagel <HNottnagel@dokkenengineering.com>; Wildlife Fisheries <Fisheries@wildlife.ca.gov>
Subject: Fish Inquiry Sacramento County - Arcade Creek EFH/Presence of Anadromous Fish

Some people who received this message don't often get email from kjacobson@dokkenengineering.com. Learn why this is important

WARNING: This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Hi Ian,

My name is Katie Jacobson, and I am a biologist working with the City of Citrus Heights on the Arcade–Cripple Creek Trail (Sylvan Road to Stock Ranch Road) Extension Project. We are currently in the environmental approval phase of the project, and we are reaching out to better understand the potential for listed anadromous fish species, such as Central Valley spring-run Chinook salmon ESU and California Central Valley steelhead DPS to occur in this section of Arcade Creek (see attached google earth pin).

Based on our research, including review of the City of Sacramento's Existing Conditions and Assessment Report and Stream Corridor Management Plan for the Arcade Creek Watershed, CNDDB occurrences, and habitat assessments of the site, it is our understanding that Chinook salmon and steelhead trout have not been reported in Arcade Creek for over 20 years. However, we wanted to connect with local CDFW fisheries biologists to confirm this determination and/or inquire about any more recent data that may be available.

This portion of Arcade Creek is also identified as Essential Fish Habitat (EFH) for Chinook salmon, although it lacks key features such as complex channels, spawning habitat, thermal refugia, etc. However, our overall conclusion regarding potential for occurrence for these species will help determine if any consultations will be required for the project.

Would you be able to direct us to the appropriate local fisheries biologist, or advise on the best point of contact to address this question?

For reference, I have attached a Google Earth point showing the project reach of Arcade Creek, which extends from the pedestrian bridge to the east side of Sylvan Road.

Thank you for your time and assistance.

Best regards,

Katie Jacobson
Biologist/Environmental Planner |
Dokken Engineering
Phone: 916.858.0642
Email: kjacobson@dokkenengineering.com
110 Blue Ravine Road, Suite 200 | Folsom, CA 95630
www.dokkenengineering.com