4.3 BIOLOGICAL RESOURCES

4.3.1 Introduction

This section describes the environmental setting for biological resources and discusses the potential for occurrence of sensitive or important natural resources within the project site. The project site encompasses approximately 60 acres. It is defined as the area where direct, project-related construction would occur or permanent features would be developed, as well as adjacent areas that may be indirectly affected by project activities.

Information on sensitive biological resources previously recorded in the project site was collected through review of U.S. Fish and Wildlife Service (USFWS) species lists, a search of the California Natural Diversity Database (CNDDB), and other existing documentation pertaining to biological resources in the region. Appendix D of this Draft EIR contains the results of select biological records searches. Resources and data reviewed include the following:

- CNDDB record search for the Roseville, Rocklin, Citrus Heights, and Folsom 7.5-minute quadrangles (California Department of Fish and Wildlife [CDFW] 2017).
- USFWS Information for Planning and Conservation Report for the Roseville, Rocklin, Citrus Heights, and Folsom 7.5-minute quadrangles (USFWS 2017a).
- USFWS National Wetlands Inventory (http://www.fws.gov/wetlands/index.html). GIS Layer Data (USFWS 2016).
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (online edition, v8-03) (CNPS 2017).
- Historical aerial photographs of the project site.
- *Biological Resources Study Report for the Dry Creek Greenway Multi-Use Trail Planning and Feasibility Study* (ICF Jones & Stokes 2009).

A habitat reconnaissance survey was performed to identify the vegetation and habitats present within the project site, known or potentially present special-status species, and areas that may qualify as waters of the United States or waters of the state. Following the reconnaissance survey, it was determined that focused surveys for valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (VELB), a wetland delineation, an aquatic habitat assessment for anadromous fish habitat, and a western pond turtle survey were necessary.

Biological resource technical reports were prepared to address potential impacts of the proposed project on federally listed Central Valley steelhead (ECORP 2016) and VELB (ECORP 2017) and are summarized in this section.

A delineation of waters of the United States within the project site was conducted according to methods described in the USACE Wetlands Delineation Manual (Environmental Laboratory 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008).

Comments received on the Notice of Preparation for the EIR addressed the removal of trees and subsequent effects on the creeks, concern for the 30-year old native oaks in Meadow Oaks neighborhood along the trail, and habitat for existing wildlife.

4.3.2 Environmental Setting

The project site is located within the City of Roseville (City) in Placer County. The project site spans the Citrus Heights U.S. Geological Survey (USGS) 7.5-minute quadrangle Section 11 and 12, Township 10 North, and Range 6 East and the Folsom USGS 7.5-minuie quadrangle, Sections 7, 17, and 18, Township 10 North, and Range 7 East.

The project site is within the Sacramento Valley geographic subdivision of the Great Central Valley in the California Floristic Province (Sawyer et al. 2009), and in the U.S. Department of Agriculture (Natural Resources Conservation Service [NRCS] 2006) Land Resource Region Mediterranean California Subregion. The climate is characterized by hot, dry summers and cool, moist winters. Based on weather data from the nearby Folsom Dam weather station, the mean annual precipitation is 23.92 inches, and the mean annual air temperature is 62ºF (Western Regional Climate Center 2016).

The proposed trail would follow creek corridors along portions of Dry, Cirby, and Linda Creeks (see Exhibit 3-2 in Chapter 3, “Project Description”). These corridors currently contain segments of existing unimproved natural surface paths and paved multi-use paths, some of which do not meet current City design standards. Much of the corridor has been used historically for recreation, infrastructure maintenance access, and transportation, and today it continues to be used for these purposes along both improved and unimproved segments. A number of habitat restoration and mitigation projects have been conducted in the vicinity of the project over the years for both flood control and habitat improvement. The City Flood Control Project of 1999 required a permit from USACE. The USACE permit included a number of mitigation measures, including dedication of conservation easements on certain parcels in the Hurst Way/W. Colonial Parkway area that are proposed for use by the proposed project, and mitigation plantings that may be affected by the proposed project. The conservation easements have not yet been recorded because property purchases pursuant to the Flood Control Project permit are still underway. Upon completion of the property purchases, the City will work with USACE to dedicate a conservation easement or alternative restrictions for use of these parcels. It is anticipated that the proposed project will be a permitted use, consistent with City zoning and land use regulations for other open space areas. If the bike trail construction is anticipated to impact any previously planted Flood Control Project mitigation plantings, then the City will obtain approval of from USACE through a USACE permit process prior to project construction.

PHYSICAL CONDITIONS

The project site is located within a semi-urbanized portion of Roseville (Exhibit 4.3-1). The City has retained over 4,000 acres of designated open space, including riparian corridors along city creeks (City of Roseville 2015). These open space areas support terrestrial and aquatic species and sensitive natural communities. Within more urbanized parts of the City, including the project site, designated open space is generally limited to creek corridors. Habitat quality ranges from disturbed, low-quality to high-quality habitat. The habitat value of the urban creek corridor that comprises the project site is diminished because of adjacent and surrounding development; however, the project site provides year-round and seasonal migratory habitat for a variety of fish and wildlife species. The creek corridor provides important local habitat value (foraging, nesting, and cover) for a variety of species that can tolerate human and domestic animal presence.

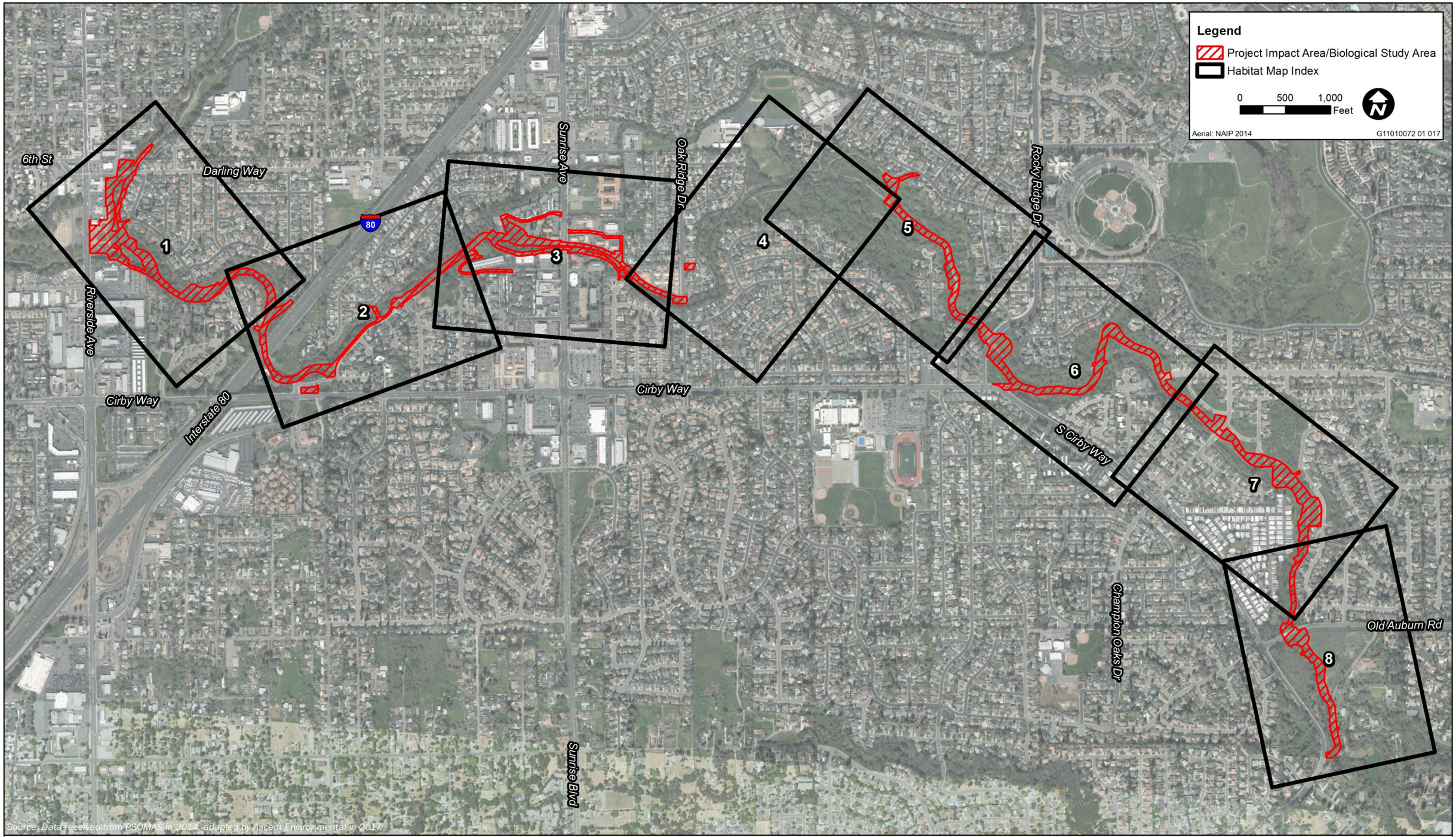


Exhibit 4.3-1

Project Site

The project site is composed of leveled terrain and is situated at an elevation range of approximately 130 to 155 feet above mean sea level. The topography is characterized as gently sloping hills and seasonal streams. The project site is located in the Lower American hydrologic unit (HUC 18020111) (USGS 2017) within the Dry Creek watershed and encompasses portions of Strap Ravine, Linda Creek, Cirby Creek, and Dry Creek. Linda Creek and Cirby Creek are both major tributaries to Dry Creek. Dry Creek drains southwest to Steelhead Creek (i.e., Natomas East Main Drainage Canal), which flows to the Sacramento River. The majority of the project site is within the floodplain and mapped as NRCS soil type Xerofluvents, frequently flooded. Xerofluvents are poorly drained alluvial soils found in drainageways and on slopes, and flood frequently. Other minor soil units include the following: (141) Cometa-Fiddyment complex, 1 to 5 percent slopes; (142) Cometa-Ramona sandy loams, 1 to 5 percent slopes; (146) Fiddyment loam, 1 to 8 percent slopes; (175) Ramona sandy loam, 2 to 9 percent slopes; (193) Xerofluvents, occasionally flooded; (194) Xerofluvents, frequently flooded; (196) Xerothents, cut and fill areas; (229 sa) Urban land- Xerarents-Fiddyment complex, 0 to 8 percent slopes; and (242) Xerofluvents, 0 to 2 percent slopes, flooded.

BIOLOGICAL CONDITIONS

The following sections describe the habitats and wildlife present within the project site.

Aquatic Habitats

Aquatic habitats found within the project site include wetlands (seasonal wetland and freshwater pond), and other waters of the United States (perennial and intermittent streams). A total of 0.20 acre of wetlands and 4.12 acres (5,383 linear feet) of other waters have been mapped within the project site (Table 4.3-1). These include portions of Linda Creek, Dry Creek, Cirby Creek, and Strap Ravine; two unnamed perennial streams; an ephemeral drainage; an intermittent drainage; a wetland; and a freshwater pond. The potentially jurisdictional limits are based on professional judgment and best available data at the time of mapping. Mapped limits are subject to modification during final project design and USACE verification process.

Table 4.3-1 Aquatic Habitats within the Project Site

Aquatic Habitats	Acres	Linear Feet
Total Other Waters	4.12	5,383
Total Wetlands	0.20	NA
Total Wetlands and Other Waters	**4.33**	**5,383**

Notes:
* Wetlands previously verified by the USACE for the Old Auburn Ranch Property
** National Wetlands Inventory mapped wetland.
Source: Compiled by Ascent Environmental 2016

Wetlands

Seasonal wetlands are ephemerally wet because of accumulation of surface runoff and rainwater within low-lying areas. Inundation periods are generally shorter, and they are commonly dominated by low growing, annual hydrophytic herbs. Seasonal wetlands typically occur in swale or concave topography. This type of wetland is generally dominated by annual facultative wetland species (species that grow in wetland conditions 67 to 99 percent of the time) that often form a closed to open canopy and grow in depressional areas that are seasonally flooded by rainwater. In the project site, 0.01 acre of seasonal wetland habitats occur within the Old Auburn Road parcel. Additionally, seasonal wetland habitat exists below the ordinary high-water mark (OHWM) of the perennial streams and is included in the perennial stream habitat discussed below. Seasonal wetlands are dominated by a mix of herbs and forbes, including curly dock (*Rumex crispus*), Italian ryegrass (*Festuca perennis*), Baltic rush (*Juncus balticus*),

ladies thumb (*Polygonum persicaria)*, western vervain (*Verbena lasiostachys*), Bermuda grass (*Cynodon dactylon*), and Johnsongrass (*Sorghum halepense*).

Wetlands provide foraging and breeding habitat for a variety of wildlife species. Wetland ponds provide habitat for amphibians, including western toad (*Anaxyrus boreas*) and Sierran treefrog. (*Pseudacris sierra*). They also provide a valuable food source for amphibians as well as the many birds that overwinter in or migrate through the region. Birds such as killdeer and mallard use wetlands for nesting and foraging in both winter and spring. A freshwater pond was created between 1993 and 1998 as part of the development of adjacent residential properties, and 0.20 acre of the pond falls within the project site. This pond is currently exhibiting functions more typical of a seasonal wetland and is dominated by cattails, (*Typha latifolia)*, dock, dallisgrass (*Paspalum dilatatum*), and ladies thumb.

Other Waters of the United States

Other waters of the United States within the project site include perennial portions of Strap Ravine, Linda Creek, Cirby Creek, and Dry Creek, as well as non-relatively permanent tributaries to these streams. Field indicators of an OHWM included water lines, drift deposits, shelving, sediment sorting, and exposed roots. A total of 4.12 acres of other waters were identified within the project site.

The non-relatively permanent tributaries include an ephemeral drainage with a poorly defined OHWM located north of Cirby Creek and a deeply incised intermittent stream that transmits stormwater flows from neighborhoods south of Cirby Creek into the creek. The ephemeral drainage is minimally vegetated with adjacent areas being dominated by mugwort (*Artemisia douglasiana*)*,* Santa Barbara sedge (*Carex barbarae*), and bedstraw (*Galium aparine*). The intermittent stream is fed by two large culverts. Banks are steep and sparsely vegetated and the adjacent area is dominated by riparian vegetation including willows (*Salix* sp.), common buttonbush (*Cephalanthus occidentalis*), and walnut (*Juglans* sp.).

Linda Creek is a single channel with perennial flow in a southeast to northwestern direction. The channel bottom varies from gravel and sand, to rock amour and rubble, and is primarily unvegetated with patches of emergent wetland vegetation along the banks. Banks are steep and well defined in most locations. Overhanging riparian vegetation is abundant and includes sandbar willow (*Salix exigua*), common buttonbush, boxelder (*Acer negundo*), walnut, Himalayan blackberry (*Rubus armeniacus*), and Fremont cottonwood (*Populus fremontii*). Affected by urbanization, Linda Creek displays a large variety of channel width and structure. At the southeastern end of the project site an old road crossing at Spahn Ranch Road collapsed into Linda Creek. Concrete footings are in place along the bank in this area, and pieces of asphalt road are within the creek. In the northern portion of the creek, a variety of bank stabilization measures have been used, including concrete blocks and bags and gunnite. Exposed banks are typically sparsely vegetated and exhibit active erosion, with overhanging riparian trees and shrubs rooted in the upper bank.

Strap Ravine flows into Linda Creek north of North Cirby Way and McKinley Drive. Goat grazing has recently occurred in this area. The banks and bed of Strap Ravine are unvegetated fine sediments and cobbles. The riparian vegetation consists of heavily browsed willows. The area of Strap Ravine that crosses the project site has an existing paved bridge crossing.

Linda Creek flows into Cirby Creek west of Sunrise Avenue. Cirby Creek is a single thread channel with perennial flow in a southeast to northwestern direction before discharging into Dry Creek just east of Riverside Drive. The channel bottom varies from gravel and sand to boulders and is unvegetated with interspersed pools and riffles. Below the OHWM of the creek, emergent wetland vegetation was observed along benches, including cattails (*Typha latifolia*), California bulrush (*Schoenoplectus californicus*), Baltic rush, tall flatsedge (*Cyperus eragrostis*), dock (*Rumex* sp.), sedges, and cocklebur (*Xanthium strumarium*). The creek displays both emergent wetland and perennial stream characteristics.

Cirby Creek discharges into Dry Creek at the northernmost boundary of the project site, north of Darling Way. Dry Creek flows in a southwestern direction. The channel bottom is primarily sediment, sand, and gravel with steep banks that are sparsely vegetated with scattered boulder outcropping. Multiple side channels and associated riparian plantings were installed west of Dry Creek, south of Darling Way, as part of a flood control and riparian restoration project.

Perennial emergent wetlands habitat occurs within the perennial streams (Strap Ravine, Linda Creek, Cirby Creek, and Dry Creek). This wetland habitat is mapped as part of the other waters of the United States. This type of habitat is generally dominated by perennial emergent wetland species (species that grow in wetland conditions more than 99 percent of the time), which often form a closed canopy and grow in areas that are permanently or seasonally flooded by slow-moving or stagnant fresh water. Emergent wetlands derive water from association with perennial or near perennial surface water sources, such as overland flow from creeks or other surface water sources; ponded seasonal precipitation; and shallow groundwater tables. These wetlands may be entirely vegetated or partially vegetated with an open water component, or may be dry in summer. Emergent wetlands are typically dominated by hydrophytic grasses and grass-like species. Dominant herbaceous hydrophytic vegetation includes bulrush, cattail, curly dock, Baltic rush, smartweed, Bermuda grass, and irrigated pasture grasses. Some emergent wetlands in the project site also contain willows. These wetlands provide food, cover, and water for a variety of species of birds, and numerous mammals, reptiles, and amphibians occupying the open water and adjacent grassland habitats. Vegetation growing along the edges of water bodies also provides nesting habitat for several bird species. Aquatic species known to occur within the vicinity include Sierran treefrog, western toad, muskrat (*Ondatra zibethicus*), red swamp crayfish (*Procambarus clarkii*), American bullfrog (*Lithobates catesbeianus*), beaver (*Castor canadensis*), and river otter (*Lontra canadensis*). Fish species in the project site include bluegill (*Lepomis macrochirus*), green sunfish (*Lepomis cyanellus*), largemouth bass (*Micropterus salmoides*), rainbow trout (*Oncorhynchus mykiss irideus*), mosquitofish (*Gambusia affinis*), Central Valley fall-run Chinook salmon (*Oncorhynchus tshawytscha*), and Central Valley steelhead (*Oncorhynchus mykiss*).

Habitat Types

The project site supports both sensitive and common habitat types. Sensitive natural communities are habitats considered sensitive because of high species diversity, high productivity, unusual characteristics, limited distribution, declining status, or a combination of these attributes. Local, state, and federal agencies consider such habitats important. The USACE and the Environmental Protection Agency (EPA) consider wetland habitats important for water quality and wildlife. The habitat types in the project site that meet the criteria for sensitive natural communities are valley oak riparian woodland, riparian, and the previously described wetlands and other waters of the United States.

Habitat types on the project site are shown in Exhibits 4.3-2a through 4.3-2h. Table 4.3-2 summarizes the acreage of upland (non-aquatic) habitat types in the project site. These upland communities are described in the following sections.

Table 4.3-2 Upland Habitat types within the Project Site

Upland Habitat Types	Area (acres)
Valley Oak Riparian Woodland	17.33
Riparian	3.57
Non-Native Annual Grassland	17.66
Developed/Ruderal	4.92
Total	**43.48**

Source: Compiled by Ascent Environmental 2017

Valley Oak Riparian Woodland

Valley oak riparian woodland dominates upslope vegetation throughout the floodplain and totals 17.33 acres. This community can be broad in places, including at the southeastern terminus of the project site and in the vicinity of Sierra Gardens. Valley oak (*Quercus lobata*), interior live oak (Q. *wislizeni*), and blue oak (Q. *douglasii*) dominate the upland canopy. Other species in the upland canopy include walnut, Western sycamore (*Platanus racemose*), and box elder (*Acer negundo*). Poison oak (*Toxicodendron diversilobum*), privet (*Ligustrum* sp.), coyote bush (*Baccharis pilularis*), sapling oaks, and escaped horticultural species provide an understory. Ground cover under the valley oak riparian woodland includes naturalized grasses and forbs and other species, including mustards (*Brassicacea*e spp.), miner's lettuce (*Claytonia perfoliata*), Bermuda grass, dogtail grass (*Cynosurus echinatus*), mallows (*Malva* spp.), milkweed (*Asclepias californicum*), nightshade (*Solanum marginatum*), horsebane (*Erigeron canadensis*), and poison hemlock (*Conium maculatum*). Reptiles associated with oak woodland include western fence lizard (*Sceloporus occidentalis*), southern alligator lizard (*Elgaria multicarinata*), and gopher snake (*Pituophis catenifer*). Birds documented include white-breasted nuthatch (*Sitta carolinensis*), western scrub-jay (*Aphelocoma californica*), Nuttall's woodpecker (*Picoides nuttallii*), acorn woodpecker (*Melanerpes formicivorus*), and red-shouldered hawk (*Buteo lineatus*). Mammals found in the oak woodland include opossum (*Didelphis virginiana*), brush deermouse (*Peromyscus boylii*), western gray squirrel (*Sciurus griseus*), eastern fox squirrel (*Sciurus niger*), and coyote (*Canis latrans*).

Valley oak riparian woodland is considered a sensitive natural community by CDFW because it provides food and cover for many species of wildlife. Oaks are considered important to some birds and mammals as food resource (i.e. acorns and browse).

Non-Native Annual Grassland

There is a total of 17.66 acres of non-native annual grassland within the project site. Annual grassland within the project site characterized as non-native grassland is a dense to sparse cover of annual grasses. This community is often associated with numerous species of showy-flowered, native annual forbs ("wildflowers"), especially in years of favorable rainfall. Germination occurs with the onset of the late fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. Dominant plant species includes yellow star thistle (*Centaurea solstitialis*), mustard, fennel (*Foeniculum vulgare*), Himalayan blackberry, and bromus (*Bromus* spp.). Non-native annual grassland is a common natural community.

Wildlife species commonly associated with non-native annual grasslands in the project site include western kingbird (*Tyrannus verticalis*), deer mouse (*Peromyscus maniculatus*), western harvest mouse (*Reithrodontomys megalotis*), California ground squirrel (*Otospermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), black-tailed jackrabbit (*Lepus californicus*), western fence lizard (*Sceloporus occidentalis*), California kingsnake (*Lampropeltis getula californiae*), and Pacific gopher snake (*Pituophis catenifer catenifer*). In addition, annual grassland provides foraging habitat for predatory birds that nest in the adjacent woodlands such as red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), white-tailed kite (*Elanus leucurus*), and American kestrel (*Falco sparverius*).

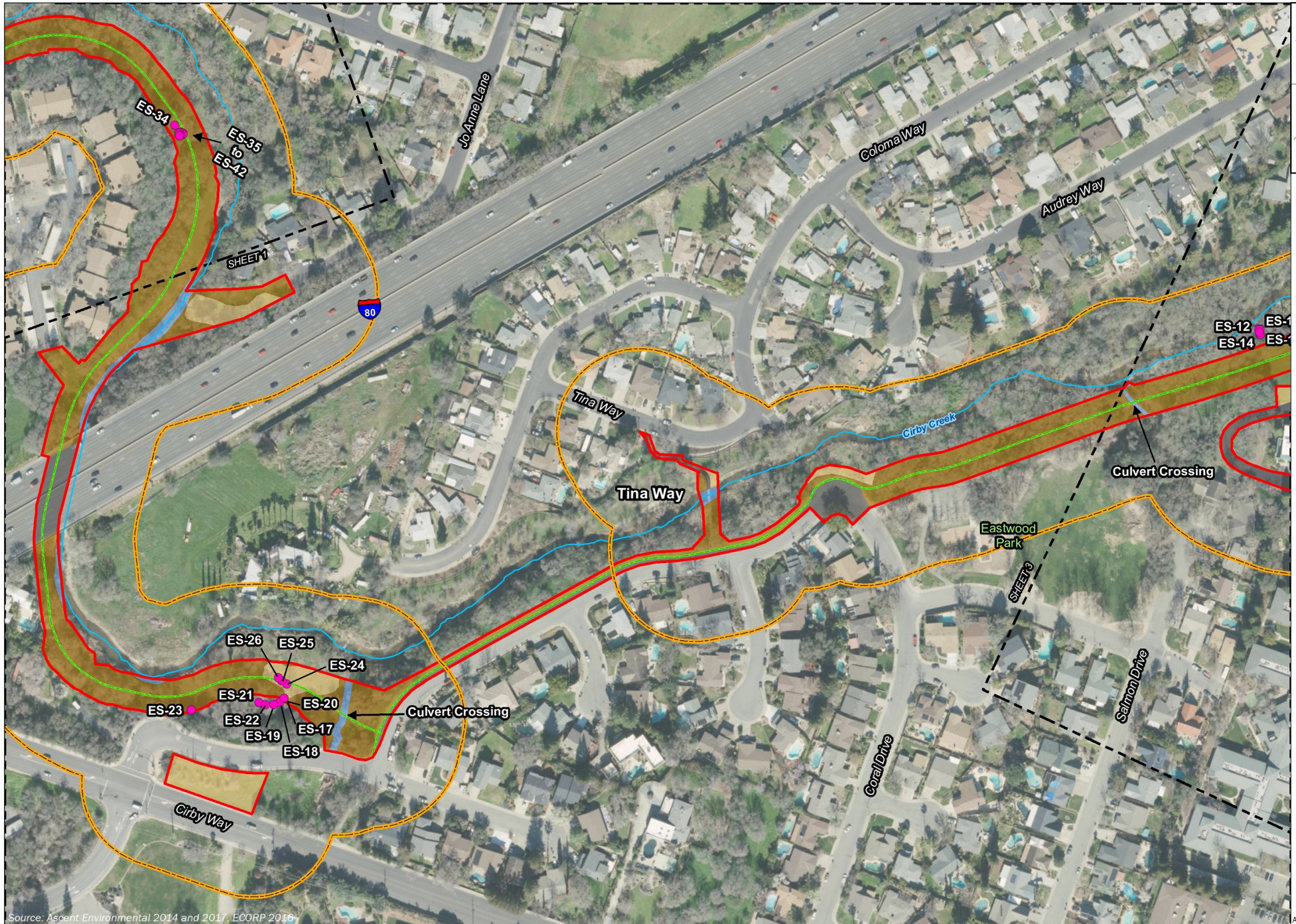
Riparian

There is a total of 3.57 acres of riparian habitat within the project site. Riparian habitat occurs along the upper creek banks and extends into the floodplain and is composed of a mix of native trees and shrubs (valley oak, alder, sycamore, willows) and horticultural and invasive species (catalpa, privet, oleander, Himalayan blackberry, and periwinkle). The understory varies depending on the location of the riparian habitat (creek bank or floodplain). Along the creek banks, the understory is a mix of Himalayan blackberry, sedges, grasses, and wetland forbs, including cattail, umbrella sedge, willow herb, Italian ryegrass, and scattered willow seedlings. In floodplain areas, the forest understory is dominated by annual grassland and horticultural and native shrub and tree species. Birds such as heron (*Ardea* spp.)

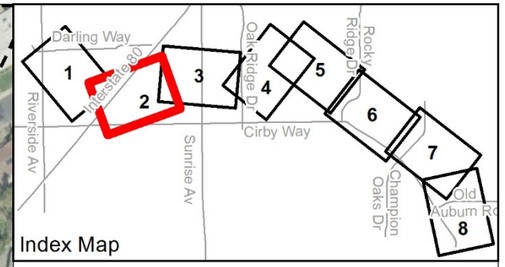
Exhibit 4.3-2a

Habitat Types and Biological Resources in the Project Site

ASCENT ENVIRONMENTAL



Source: Ascent Environmental 2014 and 2017, ECORP 2016



Index Map

Legend

- Elderberry Shrub (ES)
- Proposed Trail Alignment
- Creek
- Project Site
- Elderberry Shrub Survey Area
- Developed/Ruderal
- Non-Native Annual Grassland
- Valley Oak Riparian Woodland
- Wetlands and Other Waters

0 100 200 Feet

Aerial: City of Roseville 2017

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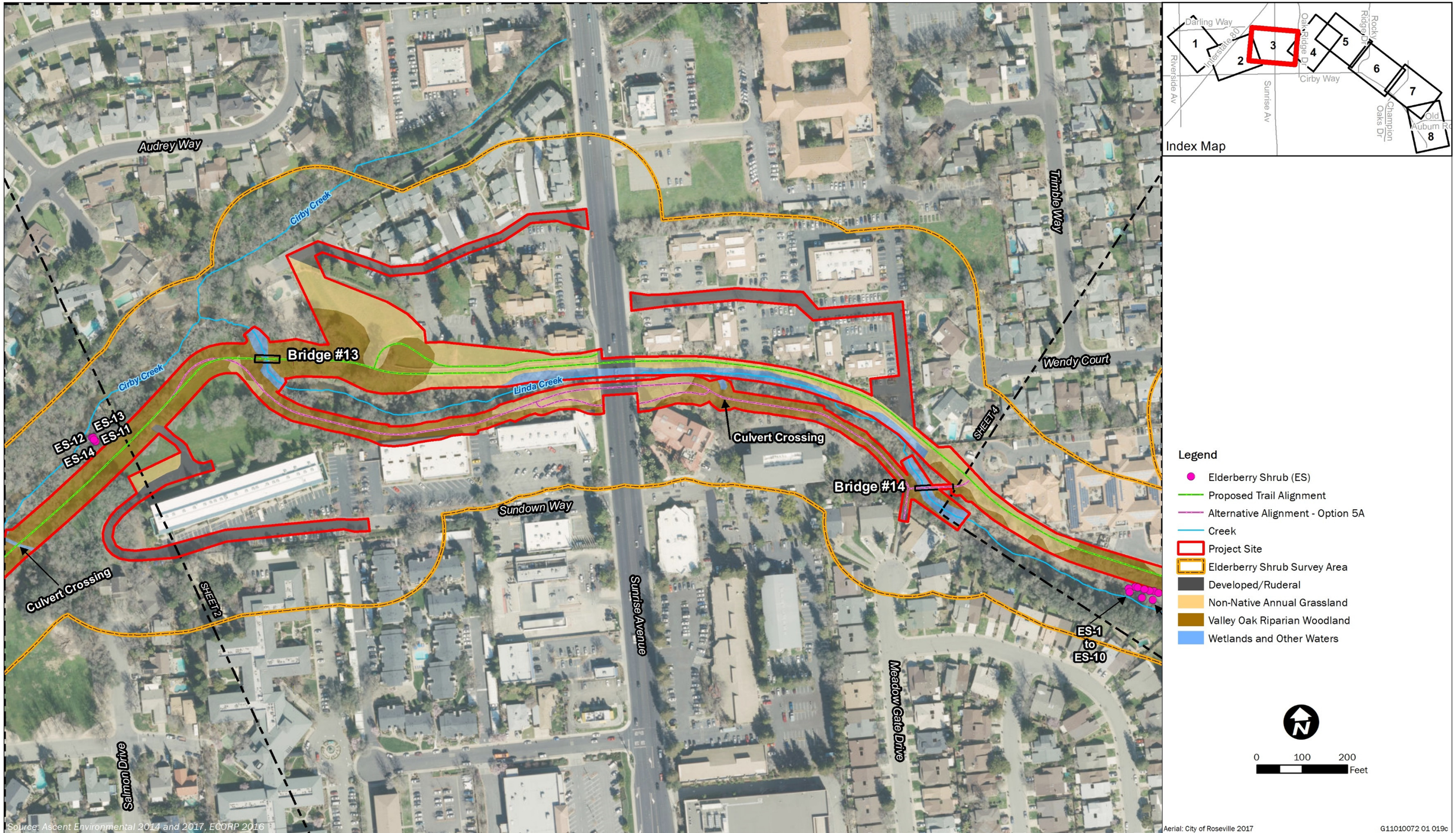
Exhibit 4.3-2b

Habitat Types and Biological Resources in the Project Site

ASCENT ENVIRONMENTAL



Legend

- Elderberry Shrub (ES)
- Proposed Trail Alignment
- Alternative Alignment - Option 5A
- Creek
- Project Site
- Elderberry Shrub Survey Area
- Developed/Ruderal
- Non-Native Annual Grassland
- Valley Oak Riparian Woodland
- Wetlands and Other Waters

N

0 100 200 Feet

Exhibit 4.3-2c

Habitat Types and Biological Resources in the Project Site

ASCENT ENVIRONMENTAL

Exhibit 4.3-2d

Habitat Types and Biological Resources in the Project Site

ASCENT ENVIRONMENTAL

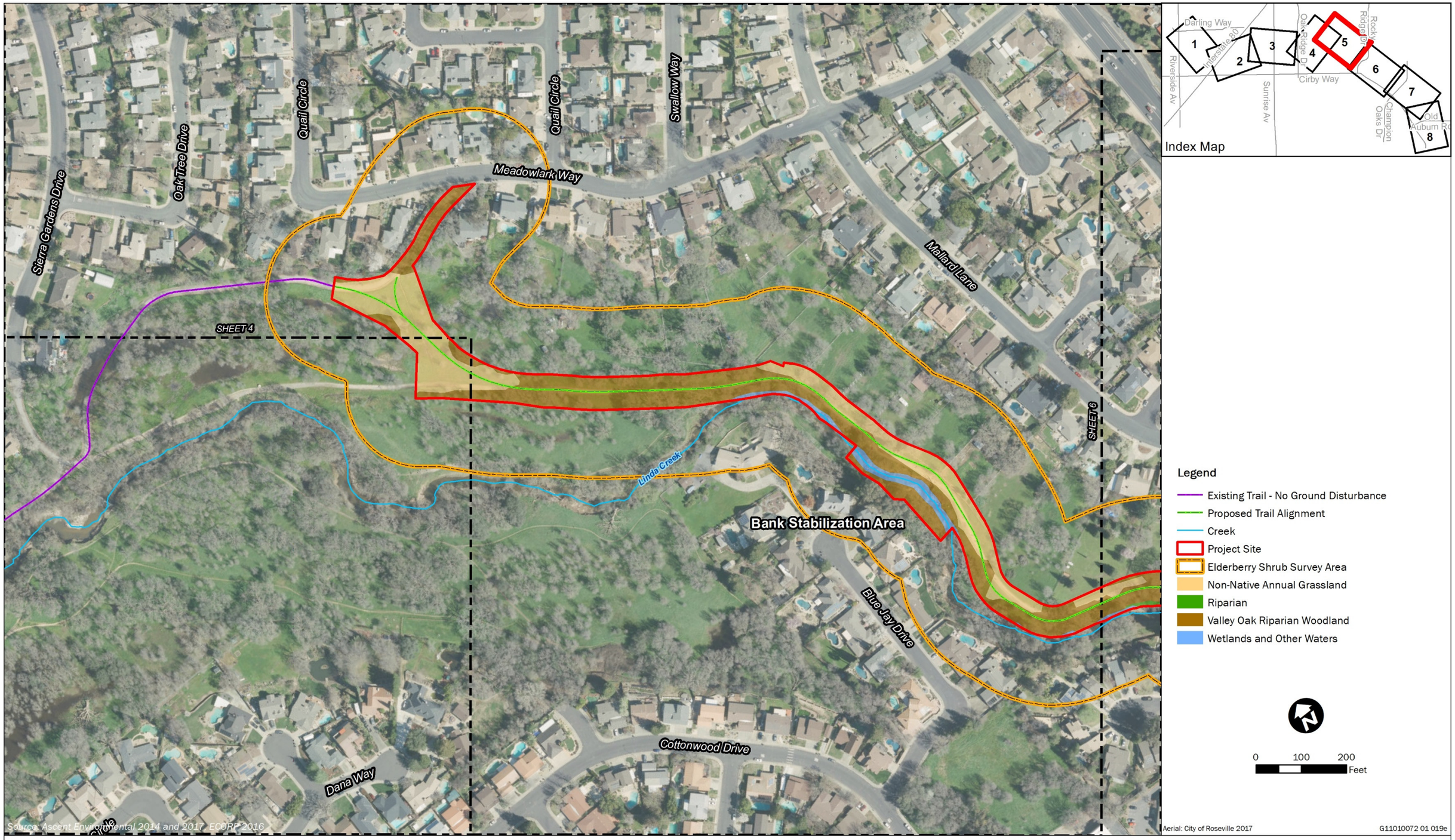
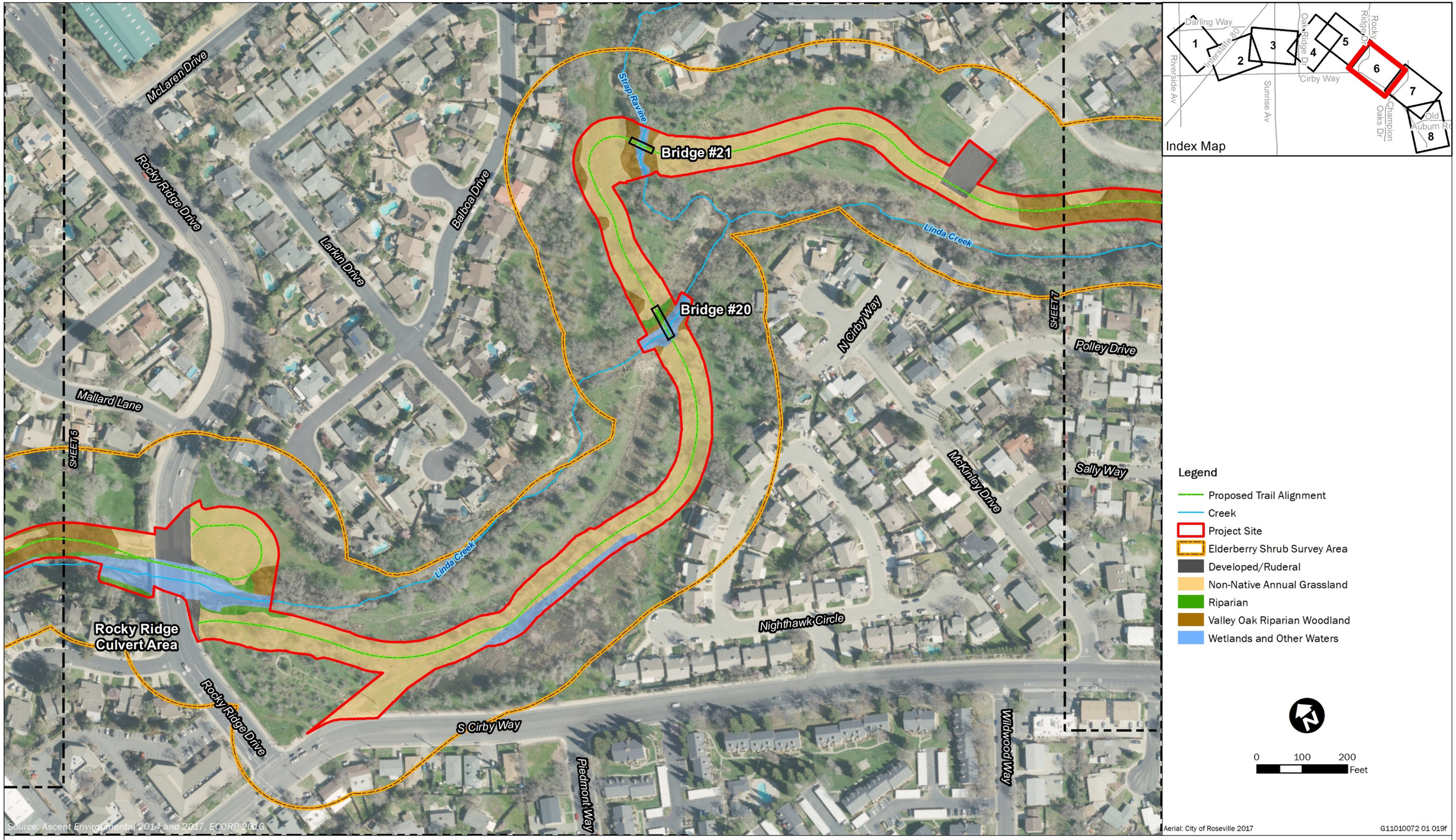


Exhibit 4.3-2e

Habitat Types and Biological Resources in the Project Site



Source: Ascent Environmental 2014 and 2017, ECORP 2016

Aerial: City of Roseville 2017

G11010072 01 019f

Exhibit 4.3-2f

Habitat Types and Biological Resources in the Project Site

ASCENT ENVIRONMENTAL

Exhibit 4.3-2g

Habitat Types and Biological Resources in the Project Site

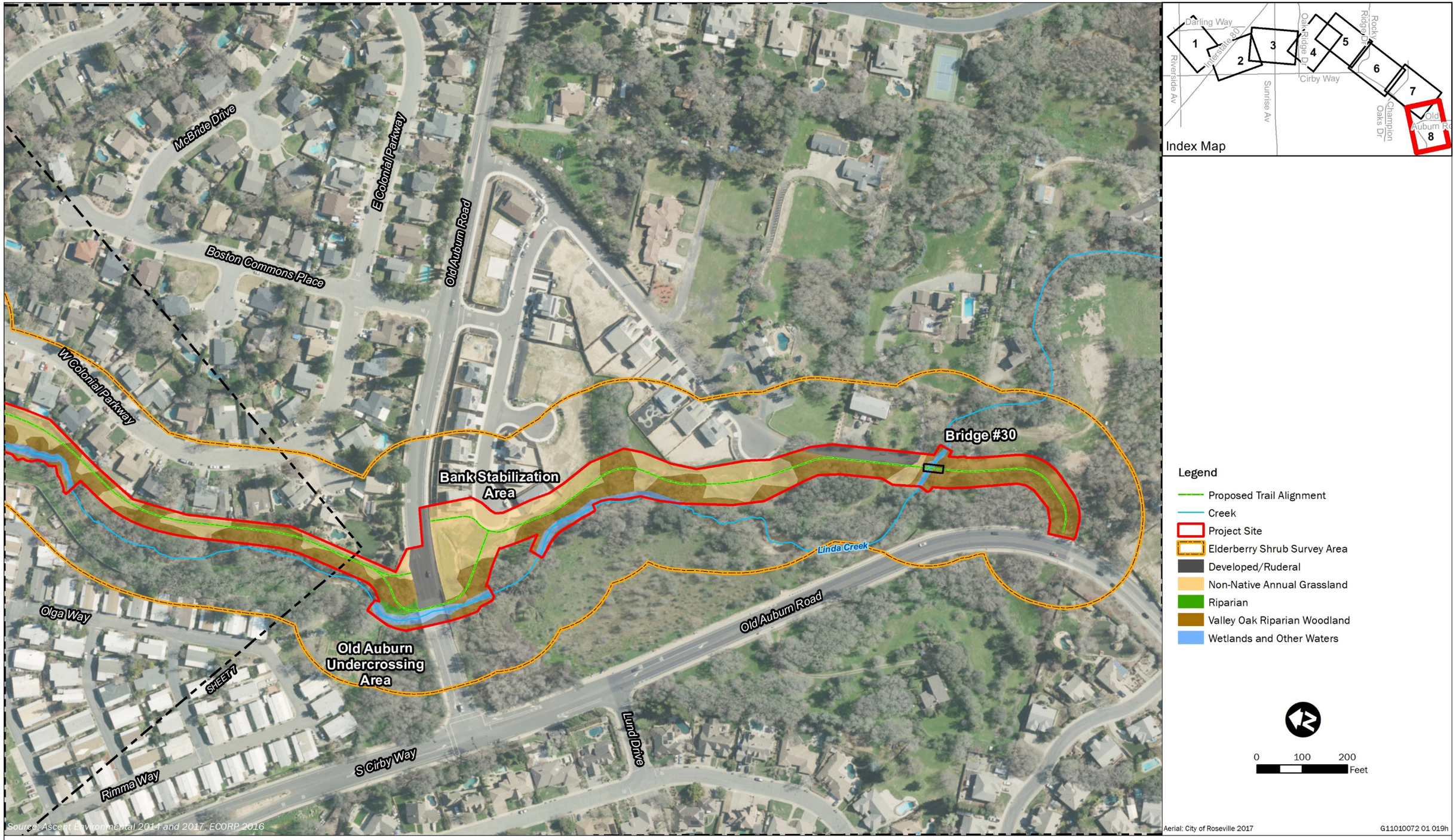


Exhibit 4.3-2h

Habitat Types and Biological Resources in the Project Site

ASCENT ENVIRONMENTAL

and belted kingfisher (*Megaceryle alcyon*) forage in the creek, primarily along the water's edge. Many species of insectivorous birds, such as white-throated swift (*Aeronautes saxatalis*), barn swallow (*Hirundo rustica*), cliff swallow (*Petrochelidon pyrrhonota*), and black phoebe (*Sayornis nigrican*s) catch their prey over open water.

The riparian community is considered a sensitive natural community by CDFW. Riparian vegetation filters pollutants in runoff; supports bank stability; and provides shade, cover, and food sources for aquatic organisms; and habitat and food for non-aquatic species.

Developed/Ruderal

There is a total of 4.92 acres of developed/ruderal habitat within the project site. Developed or ruderal (weedy) areas include dirt roads, paved roadbeds, and commercial and residential development and associated landscaping. Dominant vegetation, where present, is ruderal including yellow star thistle, prickly lettuce (*Lactuca serriola*), and non-native grasses. The developed areas within the project site have been disturbed by humans and have no potential to support special-status species.

Habitat Connectivity

Corridors between habitat concentrations serve important ecological functions related to connectivity, such as species dispersal, genetic exchange, and resilience to habitat effects of climate change. The California Department of Transportation (Caltrans) and CDFW commissioned the California Essential Habitat Connectivity Project which mapped Essential Connectivity Areas throughout California. Although the project site has not been identified as an Essential Connectivity Area, the project site is an urbanized creek corridor bounded by development. The project site functions as a local biological corridor, providing potential for local species migration and dispersal through developed portions of the City to larger open space areas to the west; because of extensive development in the eastern portion there is no connection to other habitat areas to the east. Additionally, the Dry Creek corridor provides migration, spawning, and rearing habitat for federally threatened Central Valley steelhead. Central Valley fall-run Chinook salmon is also known to occur in Dry Creek; however, spawning and summer rearing habitat likely only occurs in Antelope Creek, Miner's Ravine, and Secret Ravine because of excessively high temperatures in Cirby Creek and Linda Creek (ECORP 2016).

SPECIAL-STATUS SPECIES

Special-status species include plants and animals that are legally protected or otherwise considered sensitive by federal, state, or local resource agencies and conservation organizations. Special-status species often have relatively limited distributions and generally require specialized habitat conditions. Special-status species are defined as plants and animals in the following categories:

- listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA) or candidates for possible future listing;
- identified as a Bird Species of Conservation Concern by USFWS;
- listed or candidates for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA);
- listed as rare under the California Native Plant Protection Act;
- listed as Fully Protected under the California Fish and Game Code;
- identified by the CDFW as species of special concern;
- considered by CDFW to be "rare, threatened or endangered in California" (California Rare Plant Ranks (CRPR) (Lists 1A, 1B, and 2) as described below;

- considered a locally significant species, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G); or
- otherwise meets the definition of rare or endangered under CEQA §15380(b) and (d).

CDFW ranks species according to rarity and endangerment and categorizes plant species of concern. The CRPR is summarized as follows:

- CRPR 1A - Plants presumed to be extinct in California;
- CRPR 1B - Plants that are rare, threatened, or endangered in California and elsewhere;
- CRPR 2 - Plants that are rare, threatened, or endangered in California but more common elsewhere;
- CRPR 3 - Plants about which more information is needed (a review list); and
- CRPR 4 - Plants of limited distribution (a watch list).

All plants with a CRPR are considered “special plants” by CDFW. The term “special plants” is a broad term used by CDFW to refer to all of the plant taxa inventoried in CDFW’s CNDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, and 2 may qualify as endangered, rare, or threatened species within the definition of State CEQA Guidelines CCR Section 15380. CDFW recommends, and local governments may require, that CRPR 1A, 1B, and 2 species be addressed in an EIR. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to CEQA Section 15380; however, these species may be evaluated by the lead agency on a case-by-case basis to determine significance criteria under CEQA.

Queries of the USFWS Birds of Conservation Concern List and CNDDB returned 28 special-status birds and two birds tracked by the CNDDB with no status. Of those 30 birds, eight are known to occur at the project site, and 10 have a low to moderate likelihood of occurring at the project site. The project site lacks suitable habitat for the other 12 birds; they have no potential of occurring at the project site, and are not discussed further.

Table 4.3-3a lists the special-status plant and wildlife species identified in the database searches (CNDDB and USFWS Information for Planning and Consultation Report) along with their habitat requirements, status, and potential to occur in the project site. Table 4.3-3b lists the sensitive natural habitats and/or sensitive vegetation alliances identified in the database searches along with their potential to occur in the project site.

Table 4.3-3a Special-Status Species Potentially Occurring or Known to Occur in the Project Site

Common Name	Scientific Name	Legal Status [1]	General Habitat Description	Habitat	Potential to occur	Rationale
Plants						
California balsamroot	*Balsamorhiza macrolepis* var. *macrolepis*	CRPR 1B.2	Cismontane woodland, valley and foothill grasslands, typically found within serpentine soils, blooms March-June	Absent	None	No serpentine soils present within the project site.
Hispid bird's-beak	*Chloropyron (=Cordylanthus) mollis* ssp. *hispidus*	CRPR 1B.1	Alkaline or saline flats in alkali meadows, iodine bush scrub, and alkali grasslands. Blooms June-Sept.	Absent	None	No suitable alkaline habitat present within the project site.
Brandegee's clarkia	*Clarkia biloba* ssp. *brandegeeae*	CRPR 4.2	Foothill woodland, chaparral, cismontane woodland, lower montane coniferous forest, often in roadcuts. Blooms May-July.	Absent	None	No suitable habitat present within the project site.
Dwarf downingia	*Downingia pusilla*	CRPR 2B.2	Vernal pools and swales, valley and foothill grasslands (mesic). Blooms March-May.	Absent	None	No suitable habitat present within the project site.
Stinkbells	*Fritillaria agrestis*	CRPR 4.2	Chaparral, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland with clay substrate, sometimes serpentine. Blooms March-June.	Absent	None	No suitable habitat present within the project site.
Boggs Lake hedge-hyssop	*Gratiola heterosepala*	CRPR 1B.2	Vernal pools, marshes and swamps (lake margins) with clay substrate. Blooms April-August.	Absent	None	No suitable habitat present within the project site.
Red Bluff dwarf rush	*Juncus leiospermus* var *leiospermus*	CRPR 1B.1	Typically found in vernally mesic habitats including chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools. Blooms March-June.	Absent	None	No suitable vernally mesic habitat present within the project site.
Legenere	*Legenere limosa*	CRPR 1B.1	Vernal pools. Blooms April-June	Absent	None	No suitable habitat present within the project site.
Pincushion navarretia	*Navarretia myersii ssp. myersii*	CRPR 1B.1	Edges of vernal pools, often acidic. Blooms April-May.	Absent	None	No suitable habitat present within the project site.
Adobe navarretia	*Navarretia nigelliformis* ssp. *Nigelliformis*	CRPR 4.2	Typically found in clay and sometimes in serpentine soils within valley and foothill grassland (vernally mesic) and vernal pools.	Absent	None	No suitable habitat present within the project site.
Slender Orcutt Grass	*Orcuttia tenuis*	FT, SE CRPR 1B.1	Typically found in vernal pools. Blooms May-September, sometimes till October.	Absent	None	No suitable habitat present within the project site.
Sacramento Orcutt grass	*Orcuttia viscida*	FE, SE CRPR 1B.1	Northern Hardpan and Northern Volcanic Mudflow vernal pools. Blooms April-July, sometimes till September.	Absent	None	No suitable habitat present within the project site.
Sanford's arrowhead	*Sagittaria sanfordii*	CRPR 1B.2	Sloughs and slow-moving streams with silty or muddy substrate, associated with emergent marsh vegetation. Blooms May-Nov.	Present	Medium	Habitat at margins of perennial streams and in pond. Not observed during field surveys.

Table 4.3-3a Special-Status Species Potentially Occurring or Known to Occur in the Project Site

Common Name	Scientific Name	Legal Status [1]	General Habitat Description	Habitat	Potential to occur	Rationale
Animals						
An andrenid bee	*Andrena subapasta*	--	A vernal pool and grassland bee. Collects pollen primarily from California sandwort (*Eremogone =Arenaria californica*) but also butter and eggs (*Orchocarpus erianthus*) and goldfields (*Lastenia* spp.)	Present	None	California sandwort occurs in sagebrush scrub, lodgepole forest, and northern juniper woodland; therefore, it is not expected to occur within the project site. Goldfield flowers could occur at the project site but none were observed during the surveys. Despite that butter and eggs plant was observed during the surveys, this uncommon bee species occurrence dates back to 1932. No new bee occurrences reported within 5-miles of the project site
Conservancy fairy shrimp	*Branchinecta conservatio*	FE	Typically found in vernal pools that are relatively large and turbid.	Absent	None	No suitable vernal pool habitat present within the project site.
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT	Vernal pools; also sandstone rock outcrop pools	Absent	None	No suitable vernal pool or rock outcrop habitat present within the project site.
Venal pool tadpole shrimp	*Lepidurus packardi*	FE	Vernal pools and ephemeral stock ponds	Absent	None	No suitable vernal pool or ephemeral stock pond habitat present within the project site.
California linderiella	*Linderiella occidentalis*	--	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools typically has low alkalinity, conductivity and total dissolved solids.	Absent	None	No suitable habitat present within the project site.
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	FT	Riparian and oak savanna habitats with elderberry shrubs; elderberries are host plant	Present	High	Suitable elderberry shrubs present in several locations within the project site and within the 165-foot buffer around the project site,
California tiger salamander	*Ambystoma californiense*	FT, ST	Typically found in natural ephemeral pools or ponds that mimic them (stock ponds that are allowed to go dry).	Absent	None	No suitable habitat present within the project site.
California red-legged frog	*Rana aurora draytoni*	FT, SSC	Permanent and semipermanent aquatic habitats, such as creeks and coldwater ponds, with emergent and subemergent vegetation and riparian species along the edges; may estivate in rodent burrows or cracks during dry periods	Absent	None	Potential dispersal habitat is present in the study area but no occurrences have been documented in the region. No suitable breeding habitat present within the project site. Presence of predatory fish, crayfish, feral cats likely preclude the presence of this species.
Western spadefoot	*Scaphiopus hammondii*	SSC	Shallow streams with riffles and seasonal wetlands, such as vernal pools in annual grasslands and oak woodlands	Absent	None	No suitable habitat present within the project site.

Table 4.3-3a Special-Status Species Potentially Occurring or Known to Occur in the Project Site

Common Name	Scientific Name	Legal Status [1]	General Habitat Description	Habitat	Potential to occur	Rationale
Giant garter snake	*Thamnophis gigas*	FT, ST	The giant garter snake has specific habitat needs that include summer aquatic habitat for foraging, bankside basking areas with nearby emergent vegetation for cover and thermal regulation, and upland refugia for extended periods of inactivity. Perennial wetlands provide the highest quality habitat for the giant garter snake, and rice lands, with interconnected water conveyance structures, serve as an alternative habitat in the absence of higher quality wetlands.	Absent	None	Suitable habitat is absent and no occurrences have been documented in the region.
Western pond turtle	*Actinemys marmorata*	SSC	Woodlands, grasslands, and open forests; occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation	Present	Present	Observed in the project site, suitable aquatic habitat is present throughout the project site creeks, with suitable adjacent upland habitat in several locations.
Cooper's hawk	*Accipiter cooperi*	CDFW-WL	Typically found in woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, in live oaks.	Present	Present	Observed in the project site, suitable nesting habitat present.
Western grebe	*Aechmophorus occidentalis*	BCC-W	Western Grebes breed on freshwater lakes and marshes with extensive open water bordered by emergent vegetation. During winter they move to saltwater or brackish bays, estuaries, or sheltered sea coasts and are less frequently found on freshwater lakes or rivers.	Absent	None	The project site does not support suitable habitat for this species.
Tricolored blackbird	*Agelaius tricolor*	BCC-YR, SC	Nests in patches of thorny vegetation, including blackberry and thistles, which are protected from predators, and within approximately 1 mile of suitable foraging habitat, including open water with abundant insect populations, crop land, or dairies.	Absent	None	Although this species could migrate through the project site, the project site does not support suitable foraging habitat and nesting is unlikely.
Grasshopper sparrow	*Ammodramus savannarum*	SSC	Typically found in dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with mix grasses, forbs and scattered shrubs. Loosely colonial when nesting.	Absent	None	No suitable habitat present in the project site.
Great egret	*Ardea alba*	--	Colonial nester. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	Present	Present	No rockery sites have been observed during field surveys. Species has been observed foraging within the project site.

Table 4.3-3a Special-Status Species Potentially Occurring or Known to Occur in the Project Site

Common Name	Scientific Name	Legal Status [1]	General Habitat Description	Habitat	Potential to occur	Rationale
Great blue heron	*Ardea herodias*	--	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers, streams, and wet meadows.	Present	Present	No rookery sites have been observed during field surveys. Species has been observed foraging within the project site.
Short-eared owl	*Asio flammeus*	BCC-W	Large areas of open grassland. Nests on ground in prairies, hayfields or stubble fields. In winter, open habitats, such as open grasslands, marshes, landfills and fallow fields, that support large number of small mammals are used.	Absent	None	The project site does not support suitable habitat for this species.
Burrowing owl	*Athene cunicularia*	BCC-YR, SSC	Typically found on open, dry annual or perennial grasslands, deserts and scrublands characterized by low growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	Absent	None	The project site does not support suitable habitat for this species. Presence of feral and domestic cats likely preclude the presence of this species.
Oak titmouse	*Baeolophus inornatus*	BCC-YR	Warm, open, dry oak or oak-pine woodlands. Will use scrub oaks or other brush as long as woodlands are nearby.	Present	Present	Species was heard during field surveys of the project site and oak woodland in project site provide suitable breeding habitat.
Swainson's hawk	*Buteo swainsoni*	BCC-B, ST	Nests in oaks, cottonwoods, and other native and nonnative trees in riparian habitats, roadside trees, and lone trees; forages in grasslands, irrigated pastures, and grain fields	Present	Moderate	Eight active nest sites were detected by CDFW in western Placer County in 2001; suitable nesting (woodlands) and low quality foraging habitat (grasslands) occur in the project site, but there are no known nest sites within or near the project site.
Snowy plover	*Charadrius alexandrines*	BCC-B	Breeds in coastal areas.	Absent	None	The project site does not provide suitable breeding habitat for this species.
Mountain plover	*Charadrius montanus*	BCC-W	Open, flat areas with low, sparse vegetation. Often fallow, grazed, or burned fields. Winters in California and breeds elsewhere.	Absent	None	The project site does not provide suitable habitat for this species.
Northern harrier	*Circus cyaneus*	SSC	Grasslands, meadows, marshes, and seasonal and agricultural wetlands providing tall cover	Present	Low	Grasslands provide low quality suitable nesting or foraging habitat in the project site, however, feral and domestic cats likely preclude nesting in the project site.
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FT, SE, BCC-YR	Typically found in riparian habitat, along broad, lower flood-bottoms of large river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettle, or wild grape.	Absent	None	This species is typically associated with vast riparian habitat such as those in the Sacramento River. Riparian habitat does not provide suitable habitat for this species.

Table 4.3-3a Special-Status Species Potentially Occurring or Known to Occur in the Project Site

Common Name	Scientific Name	Legal Status [1]	General Habitat Description	Habitat	Potential to occur	Rationale
Olive-sided flycatcher	*Contopus cooperi*	BCC-B	Breeds in montane and northern coniferous forests, at forest edges and openings, such as meadows and ponds. Winters at forest edges and clearings where tall trees or snags are present.	Absent	Low during migration and unlikely to nest	No breeding records occur within the valley floor. May be observed occasionally during migration.
California yellow warbler	*Dendroica petechia brewsteri*	SSC	Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral; may also use oaks, conifers, and urban areas near stream courses	Present	Present during migration but unlikely to nest	This species has been observed and could migrate through the project site. Uncommon nester in Placer County (Shuford and Girdali 2008).
White-tailed kite	*Elanus leucurus*	SFP	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging	Present	High	Suitable nesting (riparian woodlands) and foraging habitat (non-native annual grassland) occurs in the project site. One occurrence has been documented southeast of the project site.
Merlin	*Falco columbarius*	CDFW-WL	Typically found in seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands, and deserts, farms and ranches. Clumps of trees or windbreaks are required for roosting in open country.	Present	Low	Species is a winter migrant in the area. Does not breed in California.
Peregrine falcon	*Falco peregrinus*	BCC-W	They winter in the northern limits of their range, including portions of Canada, and are very widespread during migration. Winter in areas with large concentrations of waterfowl.	Present	Low, may be observed flying through the project site.	May occur during migration, but site does not provide suitable wintering foraging habitat because of a lack of large population of waterfowl.
Bald eagle	*Haliaeetus leucocephalus*	BCC-YR	Bald Eagles typically breed and winter in forested areas adjacent to large bodies of water. Throughout its range, selects large, super-canopy roost trees that are open and accessible. The Bald Eagle is an opportunistic forager; food habits highly varied across range and site-specific, based on prey species available. Bald Eagles use carrion of fish, birds, and mammals extensively wherever encountered at sites that provide disturbance-free access from the ground.	Absent	None	The project site does not provide suitable habitat for this species.
Yellow-breasted chat	*Icteria virens*	SSC	Nests in dense riparian habitats dominated by willows, alders, Oregon ash, tall weeds, blackberry vines, and grapevines	Present	Low	This species could migrate through the project site. The riparian community in the study area provides low quality nesting habitat for this species.

Table 4.3-3a Special-Status Species Potentially Occurring or Known to Occur in the Project Site

Common Name	Scientific Name	Legal Status [1]	General Habitat Description	Habitat	Potential to occur	Rationale
Loggerhead shrike	*Lanius ludovicianus*	BCC-YR	Inhabits open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines and thorns. They frequent agricultural fields, pastures, old orchards, riparian areas, desert, scrublands, savannas, prairies, golf course and cemeteries.	Present	Moderate	The project site provides suitable breeding and foraging habitat for this species and has been observed in Maidu Park.
California black rail	*Laterallus jamaicensis coturniculus*	BCC-B, ST, FP,	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about one inch that do not fluctuate during the year and dense vegetation for nesting habitat	Absent	None	The project site does not provide suitable habitat for this species.
Lewi's Woodpecker	*Melanerpes lewis*	BCC-W	Open ponderosa pine forest, open riparian woodland dominated by cottonwood, and logged or burned pine forest. Their breeding distribution is widely associated with ponderosa pine distribution in western North America. Commonly reuse existing nest holes or natural cavities in trees, as they do not use newly excavated ones.	Present	Present during winter, but not expected to breed on site.	Species has been observed in the project site during winter months, but unlikely to breed there.
Long-billed curlew	*Numenius americanus*	BCC-W	Short-grass or mixed prairie habitat with flat to rolling topography while breeding; tidal estuaries, wet pasture habitats and sandy beaches while wintering; wide range of habitats used during migration. Nests are a shallow depression in the ground, with scraping initiated by male.	Absent	None	The project site does not support suitable wintering habitat for this species.
Osprey	*Pandion haliaetus*	CDFW-WL	Typically found in ocean shore, bays, freshwater lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	Absent	None	The project site does not provide suitable habitat for this species.
Fox sparrow	*Passerella iliaca*	BCC-YR	Breed in coniferous forest and dense mountain scrub. They spend winters in scrubby habitat and forest.	Absent	Low, may be observed during migration but not expected to breed on site	The project site does not provide suitable nesting habitat for this species. This species may migrate through the project site.
Double-crested cormorant	*Phalacrocorax auritus*	CDFW-WL	Colonial nester on coastal cliffs, offshore islands and along lake margins. Nests along coast on sequestered islets, usually on grounds with slopping surface, or in tall trees along lake margins.	Absent	None	The project site does not provide suitable habitat for this species.

Table 4.3-3a Special-Status Species Potentially Occurring or Known to Occur in the Project Site

Common Name	Scientific Name	Legal Status [1]	General Habitat Description	Habitat	Potential to occur	Rationale
Yellow-billed magpie	*Pica nuttallii*	BCC-YR	Typically resides in oak savanna, open areas with large trees, and along streams. This species forages in grassland, pasture, fields, and orchards.	Present	Present	This species was observed during field surveys and the riparian and oak woodland provides suitable nesting and foraging habitat.
Nuttall's woodpecker	*Picoides nuttallii*	BCC-YR	Found primarily in oak woodlands, but also found in riparian woodlands. Tree nest cavity excavated by males with little assistance from females; male may roost in cavity as it nears completion.	Present	Present	Species was observed during field surveys. Oak woodland and riparian area provide suitable breeding and foraging habitat.
Purple martin	*Progne subis*	SSC	Inhabits woodlands, low elevation coniferous forest of Douglas fir, Ponderosa pine and Monterrey pine. Nests in old woodpecker cavities mostly, also in human-made structures.	Present	Low	Species in the Sacramento area is known to use weep holes under bridges and underpasses. May forage and migrate through the project site. Unlikely to nest in the project site.
Bank swallow	*Riparia riparia*	ST	Colonial nester, nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Absent	None	The project site does not provide suitable habitat for this species.
Williamson's Sapsucker	*Sphyrapicus thyroideus*	BCC-YR	Inhabits open coniferous and mixed coniferous-deciduous forests. They depend on quaking aspen (*Populus tremuloides*).	Absent	None	The project is outside of the current known range of the species and the project site does not provide suitable habitat for this species.
Pallid bat	*Antrozous pallidus*	SSC	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Relies heavily on trees for roosts when caves, crevices, and mines are not accessible.	Present	Medium	Suitable tree roosting and foraging habitat occurs in project site.
Silver-haired bat	*Lasionycteris noctivagans*	-	Primarily a coastal and montane forest dweller feeding over streams, pond and open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes and rarely under rocks; needs access to drinking water.	Present	Medium	Suitable tree roosting and foraging habitat occurs in project site.
American badger	*Taxidea taxus*	SSC	Inhabits open stages of most shrub, forest, and herbaceous habitats with friable soils. Needs sufficient food (burrowing small mammals), friable soils, and open, uncultivated ground.	Absent	None	Project site does not provide suitable habitat for this species.
Delta smelt	*Hypomesus transpacificus*	FT, SE	Occurs in the Delta in areas that do not surpass 1-12 parts per thousand salinity (about one-third seawater).	Absent	None	Project site is outside of the current known range of the species.

Table 4.3-3a Special-Status Species Potentially Occurring or Known to Occur in the Project Site

Common Name	Scientific Name	Legal Status [1]	General Habitat Description	Habitat	Potential to occur	Rationale
Central Valley steelhead	*Oncorhynchus mykiss*	FT	Nonspawning habitat: mainly oceanic. Most spawning occurs in gravel riffles in main streams where the female forms a nest, in the gravel. Streams with temperatures near the upper tolerance level (77°F) during spawning migrations may be able to provide habitat for if a patchwork of thermal refugia is present.	Present	High	Central Valley steelhead have been documented in Dry Creek (approx. 3.5mile upriver from the project site (CNDDB). Adults and juveniles use Dry Creek for migration to upstream spawning and rearing habitat; adults may use Dry Creek for spawning. In addition, recent observations in Antelope Creek suggest that Central Valley steelhead may also rear in Antelope Creek (The confluence of Antelope and Dry Creek is located approximately 2 miles upriver of the Darling Street Bridge). Although there are no documented occurrences of steelhead in Cirby Creek, adults and downstream juveniles may use Cirby Creek for migration and adults may spawn in Linda Creek if flow conditions allow for passage.
Central Valley Chinook Salmon	*Oncorhynchus tshawytscha*	SC, SSC	Rear and spawn in freshwater in the Sacramento and San Joaquin Rivers and tributaries.	Present	High	Adults and juveniles use Dry Creek for migration, spawning, and rearing. Adults have been observed in Cirby Creek but are not likely to successfully spawn in Cirby or Linda creeks due to passage constraints and high summer water temperatures.

Note: CNDDB = California Natural Diversity Database; USFWS = U.S. Fish and Wildlife Service, NMFS = National Marine Fisheries Service,
1 Legal Status Definitions

Federal:

FE	Endangered (legally protected)
FT	Threatened (legally protected)
SC	Species of Concern (NMFS)
BCC	Bird of Conservation Concern
	YR – Year Around
	W – Winter
	B – Breeding

State:

SFP	Fully protected (legally protected)
SSC	Species of special concern (no formal protection other than CEQA consideration)
SC	Candidate for listing (legally protected)
SE	Endangered (legally protected)
ST	Threatened (legally protected)
WL	Watch List

California Rare Plant Rank

1B	=	List 1B species: rare, threatened, or endangered in California and elsewhere.
2	=	List 2 species: rare, threatened, or endangered in California but more common elsewhere.
3	=	List 3 species: plants about which more information is needed to determine their status.
4	=	List 4 species: plants of limited distribution.
.1	=	seriously endangered in California
.2	=	fairly endangered in California
.3	=	not very endangered in California
–	=	no listing.
?	=	population status within that County uncertain.
*	=	known populations believed extirpated from that County
CNDDB		Listed as a Sensitive Natural Community in the CNDDB
CDFW		Vegetation alliance considered sensitive by CDFW

Sources: CNDDB 2017; ICF J & S 2009, USFWS 2017; CNPS 2017 data compiled by Ascent in 2017

Table 4.3-3b Sensitive Vegetation Alliances Potentially Occurring or Known to Occur in the Project Site

Common Name	Scientific Name	Legal Status [1]	General Habitat Description	Habitat	Potential to occur	Rationale
Sensitive Vegetation Alliances (=Sensitive Natural Communities)						
Alkali Meadow	Alkali Meadow	CNDDB	Alkali meadows are found on moist alkaline soils and are typically characterized by perennial grasses, sedges and forbs.	Absent	None	CNDDB occurrence is from 0.5 mile east of Pleasant Grove Creek, approx. 2.5 miles north of Rocklin.
Alkali Seep	Alkali Seep	CNDDB	Alkali seeps are found in seeps within alkaline soils and are typically characterized by perennial grasses, sedges and forbs.	Absent	None	CNDDB occurrence is from 0.5 mile east of Pleasant Grove Creek, approx. 2.5 miles north of Rocklin.
Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	CNDDB	Northern Hardpan Vernal Pools are formed on alluvial terraces with silicate-cement soil layers. These pool types are on acidic soils and exhibit well-developed mima mound topography found on the eastern margins of the Central Valley.	Absent	None	The project site does not support vernal pool habitat.
Northern Volcanic Mud Flow Vernal Pool	Northern Volcanic Mud Flow Vernal Pool	CNDDB	Northern Volcanic Mud Flow Vernal Pool are formed by an impervious bedrock layer of volcanic origin. These pool types are found on the eastern and coastal portions of the Central Valley, and tend to be small and restricted in distribution.	Absent	None	The project site does not support vernal pool habitat.
Valley Needless Grassland	Valley Needless Grassland	CNDDB	Usually on fine-textured (often clay) soils, moist or even waterlogged during winter, but very dry in summer. Often interdigitates with Oak Woodlands on moister, better drained sites.	Present	Absent	The grassland observed in the project site is characteristic of non-native grassland.
Valley Oak Woodland Alliance	*Quercus lobata* Woodland Alliance	CDFW	On deep, well-drained alluvial soils, usually in valley bottoms, apparently with more moisture in summer than in Blue Oak Woodland	Present	Present	Valley Oak riparian woodland is present on the project site and provides food and cover for many species of wildlife.

Note: CNDDB = California Natural Diversity Database; USFWS = U.S. Fish and Wildlife Service, NMFS = National Marine Fisheries Service,
1 Legal Status Definitions
CNDDB Listed as a Sensitive Natural Community in the CNDDB
CDFW Vegetation alliance considered sensitive by CDFW
Sources: CNDDB 2017; ICF J & S 2009, USFWS 2017a; CNPS 2017 data compiled by Ascent in 2017

The project site contains known occurrences or potential habitat for the following special-status species:

- Potential habitat for VELB, a species listed as threatened under the ESA, occurs in several elderberry shrubs in locations throughout the project site.
- Central Valley steelhead, which is listed as threatened under the ESA have been documented in Dry Creek, approximately 3.5 mile upstream of the project site. Adults and juveniles use Dry Creek for migration to upstream spawning and rearing habitat; adults may use Dry Creek for spawning. In addition, recent observations in Antelope Creek suggest that Central Valley steelhead may also rear in Antelope Creek (The confluence of Antelope Creek and Dry Creek is located approximately 2 miles upriver of the Darling Street Bridge.). Although there are no documented occurrences of steelhead in Cirby Creek, adults and downstream juveniles may use Cirby Creek for migration and adults may spawn in Linda Creek if flow conditions allow for passage. Dry Creek has been designated as critical habitat for steelhead.
- All three creeks potentially provide suitable habitat for fall-run Chinook salmon belonging to the Central Valley fall/late fall–run Chinook salmon evolutionarily significant unit. This anadromous fish is a federal (NMFS) and California species of concern and a commercially valuable species.
- Potentially suitable nesting habitat for Swainson's hawk (listed as threatened under CESA), and nesting and foraging habitat for white-tailed kite (designated as fully protected under the California Fish and Game Code) and other special-status migratory birds and raptors (e.g., Cooper's hawk, great egret, great blue heron, oak titmouse, northern harrier, olive-sided flycatcher, California yellow warbler, Merlin, peregrine falcon, yellow-breasted chat, loggerhead shrike, Lewi's woodpecker, fox sparrow, yellow-billed magpie, Nuttall's woodpecker, and purple martin).
- Some mature trees may provide potential roosting habitat for bats. In the project area, silver-haired bat could use mature oak, cottonwood, sycamore, or other deciduous trees that provide suitable thermal conditions for roosting. Pallid bat, also a species of special concern, roost in trees very rarely, but may forage for insects near the creeks.
- Suitable aquatic and upland habitat along the creek corridors for western pond turtle, a CDFW species of special concern.
- Suitable habitat for Sanford's arrowhead, a CRPR 1B.2 ranked plant species, occurs within Linda, Dry, and Cirby Creeks.
- Riparian, wetlands, valley oak riparian woodland alliances are considered sensitive natural communities or sensitive vegetation alliances by CDFW and occur in the project site.

SENSITIVE HABITATS

Sensitive habitats include: a) areas of special concern to resource agencies; b) areas protected under CEQA; c) areas designated as sensitive natural communities or vegetation alliances by CDFW; d) areas outlined in Section 1600 of the Fish and Game Code; e) areas regulated under Section 404 of the federal CWA; f) areas protected under Section 401 of the CWA; and g) areas protected under local regulations and policies.

Sensitive natural communities occurring in the project site include riparian, valley oak riparian woodland, and wetlands and other potential waters of the United States.

CRITICAL HABITAT

Critical habitat is designated by USFWS or NMFS as a specific geographic area that contains features essential for the conservation of a federally listed species. Federal agencies are required to consult with USFWS or NMFS to ensure their actions will not destroy or adversely modify critical habitat. Mapped boundaries of critical habitat are generally large.

Dry Creek is designated Critical Habitat for Central Valley steelhead. NMFS determined that Dry Creek contains critical habitat for steelhead based on the presence of physical and biological factors that are essential to the conservation of that species (70 FR 52521). Potential critical habitat designations in the vicinity of the project site were identified using the USFWS Critical Habitat Portal (see Appendix D of this Draft EIR) and the National Oceanic and Atmospheric Administration (NOAA) Fisheries ESA Critical Habitat shapefiles. Additionally, the Dry Creek watershed is subject to the Magnuson-Stevens Fishery Conservation and Management Act and regulation by the Pacific Coast Salmon Fisheries Management Plan.

4.3.3 Regulatory Setting

Biological resources are protected and/or regulated by a variety of federal, state, and local laws and policies. Key regulatory and conservation planning issues applicable to the proposed project are discussed below.

FEDERAL

Federal Endangered Species Act

USFWS and NMFS enforce the provisions stipulated within ESA (16 USC Section 1531 et seq.). Threatened and endangered species on the federal list (50 Code of Federal Regulations [CFR] Section 17.11, and 17.12) are protected from take, defined as direct or indirect harm, unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation. Pursuant to the requirements of ESA, a federal action agency reviewing a proposed project within its jurisdiction must determine whether any federally listed species may be present in the project site and determine whether the proposed project may affect such species and if so, consultation with USFWS and NMFS is required. Under ESA, habitat loss that results in harm may be considered take of the species. USFWS and/or NMFS are required to determine whether the project is likely to jeopardize the continued existence of any species that is proposed for listing under ESA or to result in the destruction or adverse modification of critical habitat proposed or designated for such species (16 USC 1536[3], [4]).

Magnuson-Stevens Fishery Conservation and Management Act

In response to growing concern about the status of United States fisheries, Congress passed the Sustainable Fisheries Act of 1996 (Public Law [PL] 104-297) to amend the Magnuson-Stevens Fishery Conservation and Management Act (PL 94-265), the primary law governing marine fisheries management in the Federal waters of the United States. The Magnuson-Stevens Conservation and Management Act, as amended (U.S.C. 180 et seq.), requires that Essential Fish Habitat (EFH) be identified and described in federal fishery management plans. Federal action agencies must consult with NOAA Fisheries on any activity which they fund, permit, or carry out, that may adversely affect EFH. NOAA Fisheries is required to provide EFH conservation and enhancement recommendations to the Federal action agencies. EFH is defined as those waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity.

Executive Order 11990: Protection of Wetlands

Executive Order 11990, signed May 24, 1997, directs federal agencies to refrain from assisting in or giving financial support to projects that encroach on publicly or privately owned wetlands. It further requires that federal agencies support a policy to minimize the destruction, loss, or degradation of wetlands. A project that encroaches on wetlands may not be undertaken unless the agency has determined that (1) there are no practicable alternatives to construction, (2) the project includes all practicable measures to minimize harm to wetlands affected, and (3) the impact will be minor.

Section 404 of the Clean Water Act

Section 404 of the Federal CWA requires a project applicant to obtain a permit before engaging in any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Fill material is material placed in waters of the United States where the material has the effect of replacing any portion of a water of the United States with dry land, or changing the bottom elevation of any portion of a water of the United States. Waters of the United States include navigable waters of the United States; interstate waters; all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce; relatively permanent tributaries to any of these waters, and wetlands adjacent to these waters. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Potentially jurisdictional wetlands must meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology. Wetlands that meet the delineation criteria may be jurisdictional under Section 404 of CWA pending USACE verification.

Section 401 Water Quality Certification

Under Section 401 of the CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state's water quality standards and criteria. In California, authority to grant water quality certification is delegated by the State Water Resources Control Board to the nine regional water quality control boards (RWQCBs).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. The current list of species protected by the MBTA can be found in Title 50 of the CFR, Section 10.13 (50 CFR 10.13). The list includes nearly all migratory birds native to the United States.

STATE

California Endangered Species Act

Pursuant to the CESA, a permit from CDFW is required for projects that could result in the "take" of a plant or animal species that is listed by the state as threatened or endangered. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species, but the CESA definition of take does not include "harm" or "harass," like the ESA definition does. As a result, the threshold for take is higher under CESA than under ESA.

Pursuant to the requirements of CESA, a state or local agency reviewing a proposed project within its jurisdiction must determine whether any state-listed species may be present in the project site and determine whether the proposed project will have a potentially significant impact upon such species. Project-related impacts to species on the CESA list would be considered significant and would require mitigation. Impacts to species of concern and fully protected species would be considered significant under certain circumstances. Authorization for take of state-listed species can be obtained through a California Fish and Game Code Section 2081 incidental take permit.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act requires that each of the nine RWQCBs prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. RWQCB jurisdiction includes waters of the United

States as well as areas that meet the definition of "waters of the state." Waters of the state is defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally protected under Clean Water Act Section 404 provided they meet the definition of waters of the state. Mitigation requiring no net loss of wetlands functions and values of waters of the state is typically required by the RWQCB.

California Fish and Game Code

Section 1602 of the California Fish and Game Code

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Sections 1600 et seq. of the California Fish and Game Code. Under Section 1602, it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by CDFW, or use any material from the streambeds, without first notifying CDFW of such activity and obtaining a final agreement authorizing such activity. "Stream" is defined as a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. CDFW's regulatory authority within altered or artificial waterways is based on the value of those waterways to fish and wildlife.

Fully Protected Species

Protection of fully protected species is described in Sections 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fish) of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species and do not provide for authorization of incidental take. CDFW has informed nonfederal agencies and private parties that their actions must avoid take of any fully protected species.

Protection for Bird Nests and Raptors

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (e.g., hawks, owls, eagles, and falcons), including their nests or eggs. Section 3513 of the California Fish and Game Code codifies the federal Migratory Bird Treaty Act.

LOCAL

City of Roseville Zoning Ordinance – Tree Preservation (Chapter 19.66)

City of Roseville's Section 19.66.050, Arborist Report Chapter 19.66, Article IV, Tree Preservation Code provides protection and preservation for native oak trees with a goal of reforesting urban areas. The ordinance protects native oak trees 6 inches or more in diameter at breast height and specific landmark trees. The ordinance requires a permit for any activity that would harm, destroy, kill, or remove any protected tree. In addition to removal, grading (cut or fill) and trenching within the dripline are subject to permit approval.

As a component of the permit process, protected trees must be replaced or relocated on-site or through payments to an approved in-lieu fund used to purchase, plant, irrigate, and maintain trees within Roseville.

The ordinance states:

> **Section 19.66.030 Tree Permits:** Permit required. No person shall conduct any regulated activities within the protected zone of any protected tree; or harm, destroy, kill or remove any protected tree unless authorized by a tree permit.

B. Type of Permit.

1. Administrative Tree Permit. An administrative tree permit is required for any regulated activity affecting one or more protected trees, when the regulated activity is not associated with a discretionary project, does not include the removal of a protected tree, and the requested encroachment does not exceed 20 percent of the projected zone of any individual protected tree.

2. Tree Permit. A tree permit is required for any regulated activity within the protected zone of a protected tree where the encroachment exceeds 20 percent of the protected zone, or where the regulated activity is related to a discretionary project. In addition, a tree permit is required for the removal of any protected tree, unless otherwise exempted by this chapter. Tree permits may be conditioned to include replacement of trees in kind. The replacement requirement shall be calculated based upon an inch for an inch replacement of the removed trees (an inch being equivalent to a 15-gallon tree). The total of replacement trees shall equal the combined diameter of the trees removed. A minimum of 50 percent of replacement trees shall be native. The preferred replacement alternative is on site.

It should be noted that City projects, programs, and activities do not require issuance of a formal Tree Permit but otherwise comply with all ordinance requirements, including mitigation requirements.

City of Roseville General Plan

The City of Roseville General Plan 2035 establishes goals and policies for the preservation of the value of biological resources in the community (City of Roseville 2016). These policies are specific to vegetation and wildlife. However, other policies intended to preserve water quality, air quality, and other features also benefit and protect biological resources. Those goals and policies applicable to the proposed project are listed below.

GOAL 1: Preserve, protect and enhance a significant system of interconnected natural habitat areas, including creek and riparian corridors, oak woodlands, wetlands, and adjacent grassland areas.

GOAL 2: Maintain healthy and well-managed habitat areas in conjunction with one another, maximizing the potential for compatible open space, recreation, and visual experiences.

GOAL 3: Protect special status species and other species that are sensitive to human activities.

- **Policy 1:** Incorporate existing trees into development projects, and where preservation is not feasible, continue to require mitigation for the loss of removed trees. Particular emphasis shall be placed on avoiding the removal of groupings or groves of trees.
- **Policy 2:** Preserve and rehabilitate continuous riparian corridors and adjacent habitat along the City's creeks and waterways.
- **Policy 4:** Require preservation of contiguous areas in excess of the 100-year flood plain as merited by special resources or circumstances. Special circumstances may include but are not limited to, sensitive wildlife or vegetation, wetland habitat, oak woodland areas, grassland connections in association with other habitat areas, slope or topographical considerations, recreation opportunities, and maintenance access requirements.
- **Policy 5:** Limit recreation activities within the City's Regulatory Floodplain, as defined in the Safety Element, and require appropriate setback areas for trails and other public recreation uses so that natural resource areas are not adversely impacted.
- **Policy 6:** Provide for protection and enhancement of native fishery resources, including continue coordination with the California Department of Fish and Wildlife to release water into Linda Creek.

Placer County Conservation Plan

The Placer County Conservation Plan (PCCP) is currently in preparation. Placer County, CDFW, and USFWS finalized an HCP/NCCP planning agreement in December 2001. The PCCP would encompass western Placer County. The goal of the PCCP is to provide an effective framework to protect, enhance, and restore the natural resources in specific areas of western Placer County, while streamlining the permitting of a range of land development, infrastructure improvements, and habitat restoration actions known as "covered activities." The PCCP would include the Western Placer County Habitat Conservation Plan and Natural Community Conservation Plan and the Western Placer County Aquatic Resources Program, referred to as the CARP. The CARP will protect streams, wetlands, and other water resources and fulfill the requirements of the Federal Clean Water Act (Section 401 and 404) and analogous State laws and regulations. Together, the permits issued under these plans and programs represent all of the major wetland and endangered species act permits that are required for land development activity that may occur on public and private property in Western Placer County (Placer County 2018:4-1 and 4-2).

4.3.4 Impacts and Mitigation Measures

SIGNIFICANCE CRITERIA

Based on Appendix G of the CEQA Guidelines, the proposed project was determined to result in a significant impact to biological resources if it would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- have a substantial adverse effect on federally-protected wetlands, as defined by Section 404 of the Clean Water Act, through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; or
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan.

METHODS AND ASSUMPTIONS

Potential impacts on biological resources resulting from project construction were determined by evaluating the project plans in relation to the habitat characteristics of the project site, quantifying potential loss of common and sensitive habitats, and evaluating potential effects to common and special-status species that could result from this habitat loss. An arborist survey was not conducted to exactly identify the trees within the project site, nor have preliminary engineering plans precisely identified trees or the quantity that would be removed for project construction.

On July 9 and 30, 2014, an elderberry shrub survey was conducted by ECORP biologists according to the USFWS Conservation Guidelines for Valley Elderberry Longhorn Beetle (USFWS 1999). Information collected during the elderberry survey included a visual inspection of all elderberry shrubs documented on the project site and within 100-foot buffer of the project site, a count of each elderberry stem over one-inch in diameter, and observations of exit holes.

In May 2017, USFWS issued the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (VELB framework), which includes an updated protocol for evaluating the potential effects of proposed projects on VELB or its habitat, and updated avoidance, conservation, and compensatory mitigation measures. On October 3 and 4, 2017, the project site was re-evaluated for elderberry shrubs, according to the updated survey methods outlined in the VELB framework (USFWS 2017b). For the 2017 survey, the survey buffer was increased from 100 feet to 165 feet, as per the updated protocol. The locations of elderberry shrubs recorded in 2014 were confirmed and the location of all new elderberry shrubs not previously documented were digitally recorded, using a global positioning system (GPS) data logger (Trimble Geo 7 Series). According to the updated survey methods, only the location of elderberry shrubs located within riparian habitat was recorded as opposed to presence or absence of exit holes because elderberry shrubs located within riparian habitat are automatically assumed to be occupied by VELB. Also, a tally of stems greater than one inch in diameter is not required by the updated survey methods; therefore, data on stem count was not recorded. Areas on the project site or within the buffer that were on steep slopes and inaccessible by foot were visually surveyed from the bottom and top of the slope. Fully developed urban areas and private property on the project site or within the 165-foot buffer were not surveyed.

Shaded riverine aquatic (SRA) habitat within the project site was estimated using existing habitat mapping data. For purposes of the SRA analysis, the SRA was mapped at in-water work locations where adjacent wooded habitats (i.e., riparian and oak riparian woodland) were located adjacent to existing aquatic habitats (e.g., Dry Creek, Cirby Creek, Linda Creek, and Strap Ravine). SRA acreage calculations at these locations included the area from the centerline of a given aquatic feature (e.g., creek centerline) outward to an area of 5 feet up the bank from the features OHWM and along both banks. This method assumes this “footprint” supports overhead vegetation that provides 100 percent shading of the adjacent aquatic feature and, therefore, may overestimate the amount of existing shaded aquatic habitat. It also may overestimate the amount of vegetation removal that contributes to SRA habitat because at some locations SRA habitat is the result of large oak or riparian trees set back more than 5 feet from the creek bank that would not be removed and therefore would continue to provide SRA function. Similarly, this method does not account for SRA impacts that may occur from trail construction. However, trail construction areas, for the most part are further away from creek areas and thus the impacted vegetation, which is typically ruderal grassland or shrubbery, does not contribute to SRA habitat.

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

Subsection 4.3-2, “Environmental Setting,” discusses all special-status plant, animal species, and sensitive habitats evaluated in this analysis, and Tables 4.3-3a and 4.3-3b summarize the potential for each of these species and habitats to occur on the project site. Those sensitive habitats, and plant and animal species not expected to occur, or with a low probability to occur (because of a lack of suitable habitat, or lack of other occurrence records) are not addressed further in this analysis. Additionally, some wildlife species that could occur on the project site or on the project site occasionally are not expected to be affected by construction and use of the project. Although a comprehensive list of special-status species was considered and evaluated for potential effects, the following impact analysis focuses on resources expected to be affected by project implementation.

The project site is outside the proposed PCCP area and the City of Roseville is not a participating City. Because the project is outside of the plan area of the PCCP, an analysis of the project’s consistency with the PCCP is not needed.

IMPACT ANALYSIS

Impact 4.3-1	Disturbance and loss of waters of the United States, waters of the state and riparian habitat.
Applicable Policies and Regulations	Executive Order 11990 Protection of Wetlands Section 404 of the Clean Water Act Section 401 Water Quality Certification Porter-Cologne Water Quality Control Act California Fish and Game Code Section 1602 City of Roseville General Plan Open Space and Conservation Element
Significance with Policies and Regulations	Proposed Project: Significant Alignment Option 1A: Significant Alignment Option 1C: Significant Alignment Option 5A: Significant
Mitigation Measures	Mitigation Measure 4.3-1 (Proposed Project, Option 1A, Option 1C, Option 5A)
Significance after Mitigation	Less than significant (Proposed Project, Option 1A, Option 1C, Option 5A)

Proposed Trail Alignment

Construction Impacts

Construction of the Proposed Trail Alignment would require removal of wetland and riparian vegetation, grading, placement of aggregate base material, and construction of five roadway undercrossings, construction or modification of up to eight bridges (refer to Table 3-2 in Chapter 3, “Project Description”), and approximately 27,000 square feet of retaining walls (refer to Table 3-3 in Chapter 3, “Project Description”). In addition, a maximum of eight temporary stream crossings or stream diversions would be required during construction. These activities would create ground disturbance in the adjacent upland area, along the stream banks, and within the stream channel of Dry, Linda, and Cirby Creeks and other wetlands.

The proposed project has been designed to include the smallest feasible footprint to minimize temporary, indirect, and permanent impacts to wetlands and other waters of the United States, and waters of the state and riparian habitat. Work within waters of the United States and waters of the state is necessary to install bridges and to install stream bank stabilization measures in areas where existing perennial streams are eroding towards homes and private property and could undermine the planned trail. Other waters of the United States and waters of the state temporarily affected by the project activities would be restored and enhanced as a component of stream bank stabilization and bridge installation. Riparian vegetation removal is necessary for the construction of the Proposed Trail Alignment and also for the trail approach to the bridges and to install stream bank stabilization measures.

Implementation of the Proposed Trail Alignment would result in an anticipated permanent fill of 0.26 acre and temporary fill estimated to be 0.58-acre, total wetlands and waters. Implementation of the Proposed Trail Alignment would result in an anticipated removal of up to 0.70 acre of riparian habitat and temporary effects on riparian habitat of up to 0.70 acre. Riparian habitat in the valley and foothill area can be found in association with oak woodland. Implementation of the Proposed Trail Alignment would result in permanent removal of up to 4.30 acres of valley oak riparian woodland habitat and the temporary disturbance of up to 4.90 acres of valley oak riparian woodland habitat.

Wetland acreages are based on the draft Dry Creek Greenway Multi-Use Trail Project Wetland Delineation and Other Waters (Ascent Environmental 2016) and existing habitat mapping data.

Riparian and valley oak riparian woodland habitat acreages are based on the draft Dry Creek Greenway Multi-Use Project Biological Assessment.

As discussed above, the proposed project would require temporary and permanent disturbance below the ordinary high-water mark of Dry, Cirby, and Linda Creeks for the installation of bridges, roadway undercrossings, and stabilization of stream banks. With the exception of the Darling Way Bridge, all proposed bridges would fully span the low flow channel of the stream. Each abutment, at six of the bridges, would be supported by up to four 24-inch diameter piles drilled into the stream bank. The Darling Way bridge would require one pile to be installed within the low flow channel of the stream.

The construction area for all in-water work areas would be isolated from the flow of the creek through the temporary use of a water tight coffer dam. The coffer dam would isolate the construction area, minimize the temporary increase in turbidity within the stream, prevent scour and maintain soil- and water-free footings to allow for in-water work. After in-water work construction, the coffer dam would be removed and the remaining portion of the bridge would be constructed. Additional best management practices (BMPs) such as barriers and silt fencing would be implemented to avoid or minimize fill into waters.

The amount of in-stream disturbance resulting from construction of undercrossings would be minimized through the use of existing structures. Four of the undercrossings would be beneath existing bridges and would require excavation for the installation retaining walls, excavation and removal of soil, and installation of concrete and rock slope protection. The fifth undercrossing (at Rocky Ridge Drive) would add a sixth box culvert to the series of culverts that comprise the stream crossing. This would require excavation for construction of retaining walls and wing walls, and installation of cutoff walls that isolate the work site from groundwater and minimize the need for dewatering.

Streambank stabilization using gabion baskets would be constructed in up to four locations (refer to gabion basket wall #1 on Exhibit 3-5, #2 and #3 on Exhibit 3-6, #4 on Exhibit 3-9, and gabion basket wall #5 on Exhibit 3-12 in Chapter 3, “Project Description”), would result in the permanent loss of 1,236 square feet of stream bed. Installation of the gabions would involve excavation of areas within the stream bed and bank, stream diversions in two locations on Linda Creek and excavation of a sand bar in Cirby Creek to create a secondary low flow channel. Exhibit 4.8-3 (see Section 4.8, “Hydrology and Water Quality”) provides an example of potential streambank stabilization work within Cirby Creek.

It is anticipated that bridge piles would be used for the abutments for all the new pedestrian bridges located within the floodplain. With the exception of the Darling Way Bridge, all of the proposed bridges would span the creeks and no piles would be constructed within the existing creek channel. Pile driving would not be required and piles at Darling Street Bridge will be cast in drilled hole piles. The wet soil (except the bottom 10 feet of soil) and water would then be pumped out of the steel casing of the pile and into a collection system. Water pumped from excavation activities in the stream channel or in areas of high groundwater would contain suspended sediments and other solids and could negatively affect water quality if discharged directly to the adjacent stream, wetlands or municipal storm drains.

The potential effects of dewatering discharge would be minimized through compliance with existing Central Valley Regional Water Quality Control Board regulations such as the General Dewatering Permit (Order No. R5-2013-0073-01, National Pollutant Discharge Elimination System (NPDES) No. CAG995002) as described in Section 4.8, “Hydrology and Water Quality.”

Temporary stream diversions (clear water diversions) would be installed for the construction of the Rocky Ridge and Old Auburn Road undercrossing and for the stream bank stabilization areas. Clear water diversions are used in waterways to enclose a construction area and reduce sediment pollution from construction work taking place in or adjacent to water. The diversions would consist of a temporary dam constructed just upstream of the existing bridge and temporary pipes of sufficient number and size to carry stream flow from the temporary dam, through the construction site, to a point downstream. In addition to a piped diversion, the Cirby Creek bank stabilization area, near Machado

Lane, would also include the excavation of a secondary low flow channel in a sand bar on the opposite side of the stream bed (see gabion basket wall #1 on Exhibit 3-5). This secondary channel would be vegetated with native grasses and would remain after completion of the project. After the completion of in-channel construction, the diversion dams would be removed and the streambed restored.

Use-related Impacts

The long-term maintenance and repair of the multi-use path and bridge structures would require the use of various tools and equipment that have the potential to introduce fill or other materials into Dry, Linda, and Cirby Creeks. In addition, the creation of impervious surfaces associated with the Proposed Trail Alignment could result in indirect impacts to Dry, Linda, and Cirby Creeks and other downstream waters as a consequence of runoff. The City of Roseville Parks Maintenance Division is required to have a fleet and equipment in working order and leak free. Maintenance vehicles would be required to stay within paved portions of the trail or within existing dirt access roads where feasible. Maintenance crews follow BMPs and receive training prior to working in City Preserves or open habitat. Maintenance and monitoring is conducted in accordance with the Roseville Open Space Preserve Overarching Management Plan (and related USFWS Biological Opinion (81420-2008-F-1958-3)) and the California Department of Fish and Wildlife Streambed Alteration Agreement for Routine Maintenance. These indirect impacts would be further minimized through compliance with protective City and state regulations as described in Section 4.8, “Hydrology and Water Quality.” The project would be required to install and maintain permanent post construction water quality BMPs such as revegetation and stabilization of disturbed areas and contouring to mimic natural drainage patterns (as required by the storm water pollution prevention plan [SWPPP]) (see Impact 4.8-2 in Section 4.8).

Conclusion

Project implementation would result in overall permanent loss of 0.26 acre of wetlands and other waters of the United States and waters of the state and associated riparian habitat. Implementation of each phase of the Proposed Trail Alignment would require that the City submit the wetland delineation report to the USACE in advance of a permit application for that phase, and request a preliminary jurisdictional determination. Based on the preliminary jurisdictional determination, the City would determine the exact acreage of waters of the United States and waters of the state that would be filled as a result of each phase of project implementation. Impact acreages could be further refined following final design plans and construction specifications prior to final permitting. The City would require a 404 permit from the USACE. A 401 certification from RWQCB would be required as well. A Section1602 Streambed Alteration Agreement from CDFW would also be required for work in the bed, bank, or channel of the perennial streams. Loss of wetlands and waters of the United States and waters of the state would be a **significant** impact.

Alignment Option 1A

Option 1A (refer to Exhibit 3-13 in Chapter 3, “Project Description”) is the same as the proposed trail alignment until the approach to the Dry Creek/Cirby Creek confluence and the first bridge. Where the Proposed Trail Alignment would cross Dry Creek via Bridge #2 and continue on the northern bank of Cirby Creek, Option 1A would cross Dry Creek via Bridge #3. By remaining on the south bank of Cirby Creek, Option 1A would not require the construction of Bridge #2 or Bridge #4. The streambank of Cirby Creek is moderately erosive in the Option 1A area, and the proximity of private property would require the path to be located near the top of the bank. For this reason, Option 1A would require an additional 765 linear feet of retaining walls or streambank stabilization when compared to the Proposed Trail Alignment (see retaining wall #35, #36, and #37 and rock slope protection #25 and #26 on Exhibit 3-13). However, because this option does not require the construction of Bridge #2 or Bridge #4, the total permanent impacts to wetlands and/or waters is 0.01 acre less than the Proposed Trail Alignment. Similarly, temporary impacts to wetlands and/or waters is 0.03 acre less than the Proposed Trail Alignment. Alignment Option 1A would permanently affect up to 0.75 acre of riparian (0.05 acre more than the Proposed Trail Alignment) and temporarily disturb up to 0.70 acre of riparian. Alignment Option 1A would permanently affect up to 4.10 acres of valley oak riparian woodland (0.2 acre less than the Proposed Trail Alignment) and temporarily disturb up to 4.80 acres of valley oak riparian woodland

(0.10 acre less than the Proposed Trail Alignment). Although Alignment Option 1A would affect less acreage of valley oak riparian woodland than the Proposed Trail Alignment, it would result in permanent loss and temporary disturbance of wetlands and other waters of the United States, waters of the state, and associated riparian habitat. This would be a **significant** impact.

Alignment Option 1C

Option 1C (refer to Exhibit 3-14 in Chapter 3, "Project Description") is the same as the Proposed Trail Alignment and would have the same bridges and undercrossings described above in regards to the Proposed Trail Alignment with the exception that the first portion of the trail near Darling Way would be located on the northeastern side of Dry Creek. The northeastern bank of Dry Creek is steep and erosive with little distance between the top of the bank and the adjacent private property (CBEC 2014). Because of this, implementation of Option 1C would require an additional 1,080 linear feet of streambank stabilization (see retaining walls #38 through #43 and gabion basket wall #6 on Exhibit 3-14). Under Option 1C permanent impacts to wetlands and/or waters would be 0.01 acre less than the Proposed Trail Alignment, and Option 1C temporary impacts would be 0.05 acre less than the Proposed Trail Alignment. Alignment Option 1C would permanently affect up to 1.25 acres of riparian (0.55 acre more than the Proposed Trail Alignment) and temporarily disturb up to 0.90 acre of riparian (0.20 acre more than the Proposed Trail Alignment). Project implementation with Alignment Option 1C would permanently affect up to 4.25 acres of valley oak riparian woodland (0.05 acre less than the Proposed Trail Alignment) and temporarily disturb up to 4.85 acres of valley oak riparian woodland (0.05 acre less than the Proposed Trail Alignment). Although project implementation with Alignment Option 1C would result in less permanent loss and less temporary disturbance of wetlands and other waters of the United States, waters of the state, and associated riparian habitat, than the proposed project, this would be a **significant** impact.

Alignment Option 5A

Implementation of Alignment Option 5A (refer to Exhibit 3-15 in Chapter 3, "Project Description") would require the same permitting and certification procedures as described above under the Proposed Trail Alignment. Option 5A would affect an additional 635 linear feet of stream habitat when compared to the Proposed Trail Alignment because of additional retaining wall construction. The permanent impacts to wetlands and/or waters under Option 5A would be 0.0005 acre more than the Proposed Trail Alignment, and the temporary impacts to wetlands and/or waters would be 0.001 acre less than the Proposed Trail Alignment. Alignment Option 5A would have the same permanent and temporary riparian impact as the Proposed Trail Alignment. However, Alignment Option 5A would permanently affect 4.60 acres of valley oak riparian woodland (0.30 acre more than the Proposed Trail Alignment) and temporarily disturb 5.10 acres of valley oak riparian woodland (0.20 acre more than the Proposed Trail Alignment). Implementation of Option 5A would result in permanent loss and temporary disturbance of wetlands and other waters of the United States, waters of the state, and associated riparian habitat. This would be a **significant** impact.

Mitigation Measures

Mitigation Measure 4.3-1: Wetlands, waters of the United States, and water of the state.

This mitigation would apply for the Proposed Trail Alignment, Alignments Options 1A, 1C, and 5A.

The City shall implement the following measures to compensate for the loss of wetlands, waters of the United States, waters of the state, and riparian habitat:

a. The City shall submit a wetland delineation report to USACE and request a preliminary jurisdictional determination. Based on the jurisdictional determination, the City shall determine the exact acreage of waters of the United States and waters of the state that would be filled as a result of project implementation.

b. The City shall replace on a "no net loss" basis (minimum 1:1 ratio) (in accordance with USACE, CDFW, and/or RWQCB) the acreage and function of all wetlands and other waters that would be removed, lost, or degraded as a result of project implementation. Wetland habitat shall be replaced at an acreage and location agreeable to USACE, CDFW, and the Central Valley RWQCB and as determined during the Section 401, Section 404, and Section 1602 permitting processes. The ratio of stream habitat restoration/replacement shall consider value for Central Valley steelhead and Chinook salmon (as discussed under Mitigation Measure 4.3-2). Habitat shall either be restored on the affected stream and within City property, or at an approved mitigation bank. In either instance, compensatory mitigation will be approved by USACE, CDFW, and RWQCB.

c. The City shall obtain a USACE Section 404 Individual Permit, RWQCB Section 401 certification, and a Section 1602 streambed alteration agreement from CDFW before any groundbreaking activity within 50 feet of any wetland or water of the United States. The City shall implement all permit conditions, which may include contributions to an approved wetland mitigation bank or through the development and implementation of a Compensatory Wetland, Stream and Riparian Mitigation and Monitoring Plan for creating or restoring in-kind habitat in the surrounding area. If mitigation credits are not available, stream and riparian habitat compensation shall include establishment of riparian vegetation on currently unvegetated bank portions of streams affected by the project and enhancement of existing riparian habitat through removal of nonnative species, where appropriate, and planting additional native riparian plants to increase cover, continuity, and width of the existing riparian corridor along streams in the project site and surrounding areas. The ratio of riparian restoration/replacement shall consider value for Central Valley steelhead and Chinook salmon (as discussed under Mitigation Measure 4.3-2) as well as City Protected trees and Oak Woodland Habitat (as discussed under Mitigation Measure 4.3-8). Construction activities and compensatory mitigation shall be conducted in accordance with the terms of a streambed alteration agreement as required under Section 1602 of the Fish and Game Code.

d. The Compensatory Wetland, Stream and Riparian Restoration and Mitigation and Monitoring Plan shall include the following:

    1. identification of compensatory mitigation sites and criteria for selecting these mitigation sites;

    2. in kind reference habitats for comparison with compensatory wetland, stream, and riparian habitats (using performance and success criteria) to document success;

    3. monitoring protocol, including schedule and annual report requirements (Compensatory habitat shall be monitored for a minimum of three (3) years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer.);

    4. ecological performance standards, based on the best available science and including specifications for native riparian plant densities, species composition, amount of dead woody vegetation gaps and bare ground, and survivorship (based on characteristics of the existing impacted habitat); at a minimum, compensatory mitigation planting sites must achieve 80 percent survival of planted riparian trees and shrubs by the end of the three-year maintenance and monitoring period or dead and dying trees shall be replaced and monitoring continued until 80 percent survivorship is achieved;

    5. corrective measures if performance standards are not met;

    6. responsible parties for monitoring and preparing reports; and

    7. responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.

Significance after Mitigation
Implementation of Mitigation Measure 4.3-1 would reduce significant impacts on wetlands, waters of the United States, waters of the state to a **less-than-significant** level because it would require that wetlands and waters be avoided to the extent feasible and that wetlands and waters that cannot be avoided are restored following construction, or if the habitat cannot be restored, that the City compensates for unavoidable losses in a manner that results in no net loss of wetlands and waters.

Impact 4.3-2	Interfere substantially with the movement of Central Valley steelhead and Central Valley fall-run Chinook salmon.
Applicable Policies and Regulations	FESA Magnuson-Stevens Fishery Conservation and Management Act CEQA City of Roseville General Plan Open Space and Conservation Element
Significance with Policies and Regulations	Proposed Project: Significant Alignment Option 1A: Significant Alignment Option 1C: Significant Alignment Option 5A: Significant
Mitigation Measures	Mitigation Measure 4.3-2 (Proposed Project, Option 1A, Option 1C, Option 5A)
Significance after Mitigation	Less than significant (Proposed Project, Option 1A, Option 1C, Option 5A)

The proposed in-water work would occur within critical habitat for Central Valley steelhead and EFH for Central Valley fall/late fall-run Chinook salmon. The following impact discussion focuses on Central Valley steelhead and fall-run Chinook salmon only because late fall–run Chinook salmon are not known to occur in the Dry Creek watershed (ECORP 2017).

Proposed Trail Alignment

Construction Impacts
Construction of the proposed trail alignment would require removal of wetland and riparian vegetation, grading, placement of aggregate base material, and construction of five roadway undercrossings, construction or modification of up to eight bridges (refer to Table 3-2 in Chapter 3, “Project Description”), approximately 27,000 square feet of retaining walls, and streambank stabilization elements (refer to Table 3-3, Exhibit 3-5, Exhibit 3-9, and Exhibit 3-12 in Chapter 3, “Project Description”). In addition, a maximum of eight temporary stream crossings or stream diversions would be require in-water work within the stream channel of Dry, Linda, and Cirby Creeks.

Implementation of the proposed project could result in both permanent and temporary effects to Central Valley steelhead, Central Valley steelhead critical habitat for this species, Central Valley fall-run Chinook salmon, and Central Valley fall-run Chinook salmon EFH. Permanent direct effects would result from the placement of piles/fill in Central Valley steelhead and Central Valley fall-run Chinook salmon aquatic habitat, including Critical Habitat and EFH, and permanent indirect effects could include night lighting adjacent to waterways from bridges and roadway undercrossings, and the loss of riparian vegetation and SRA cover. Lights have the potential to shine onto waters in the project site during night time hours and may facilitate increased predation of juvenile salmonids by visual predators like smallmouth bass, piscivorous birds, and mammals (ECORP 2017a), thereby potentially affecting Central Valley steelhead or Central Valley fall-run Chinook salmon that may occur in the project site. Loss of riparian vegetation and SRA may lead to higher water temperatures that are detrimental to fish. Temporary indirect effects could include sedimentation and turbidity, temporary removal of vegetation, as well as pollution/contamination of project waterways.

Construction-related activities near the channel or banks of Dry Creek, Cirby Creek, Linda Creek, and Strap Ravine include construction, installation, and implementation of: new bridges, bridge widening abutments, placement of aggregate base at low-water crossings, gabion walls, pavement, retaining walls, rock vanes, rock slope protection (RSP), clearing and grubbing, stream diversion structures (cofferdams and/or gravel bag berms), temporary construction access/entrance points, culverts, spoil areas, fiber rolls, fish screens, gabion walls, ingress area, piles, plantings, sidewalk, staging areas, plantings, post and cable fence, and cut/fill of the trail.

Direct disturbance, injury, or mortality is most likely to occur during in-water construction. With the exception of the Darling Way Bridge, all of the proposed bridges would span the creeks and no piles would be constructed within the existing creek channel. The piles at Darling Street Bridge would be cast in drilled hole piles. Construction that involves in-water work (e.g., pile drilling, installation of RSP, and placing dewatering structures) could result in disturbance, injury, or mortality of Central Valley steelhead and/or Central Valley fall-run Chinook salmon that come in contact with equipment or construction materials during their installation. Adult and juvenile steelhead or chinook salmon, however, would be expected to move upstream or downstream of the immediate project site in response to disturbances.

Additional direct effects could result from the proposed construction, installation, and implementation activities (e.g., bridge widening, abutments, aggregate base at low-water crossings, gabion walls, pavement, retaining walls, rock vanes, RSP, stream diversion structures) that cause construction noise, vibrations, and other associated disturbances that have the potential to harass, disrupt normal behavior, or cause injury or mortality to Central Valley steelhead and/or Central Valley fall-run Chinook salmon.

Construction activities/elements within the project site (e.g., clearing and grubbing along stream banks, earthwork, the placement of RSP below the OHWM, construction of temporary low-water creek crossings, construction of staging areas, access roads, and uncovered stockpiles) have the potential to cause mobilization of sediments that could cause turbidity and erosion effects in the project site and the project's waterways (i.e., Dry Creek, Cirby Creek, Linda Creek, and Strap Ravine), resulting in adverse conditions for Central Valley steelhead, Central Valley steelhead critical habitat, Central Valley fall-run Chinook salmon, and and/or Central Valley fall-run Chinook salmon EFH. Turbidity and erosion have the potential to degrade habitat and cause negative physiological and behavioral effects on Central Valley steelhead and Central Valley fall-run Chinook salmon. These effects vary in severity depending on the duration of the effect, the sensitivity of the affected life stage, and the concentration of suspended sediments in the water. Younger life stages are particularly vulnerable to these effects and are documented to avoid chronically turbid streams or move downstream to avoid affected areas (Caltrans 2015a). Increased sedimentation can also degrade foraging habitat by causing mortality (Caltrans 2015a).

Potential pollutants/contaminants commonly used during construction activities and associated with heavy equipment include gasoline, diesel, hydraulic fluid, lubricants, concrete, asphalt, and others. There is potential for accidental discharge of these materials into adjacent waters during construction, which would adversely impact Central Valley steelhead, Central Valley steelhead critical habitat, Central Valley fall-run Chinook salmon, and Central Valley fall-run Chinook salmon EFH. Potential impacts range from a degradation in the quality of habitat (rearing, foraging, shelter) to mortality depending on the substance released, the distance from the water feature and length of exposure.

Loss of Riparian, SRA, and Aquatic Vegetation

The removal of riparian, SRA, and aquatic vegetation as a result of necessary clearing and grubbing activities, slope paving, as well as in-water work such as the placement of RSP, has the potential to directly impact Central Valley steelhead (including Critical Habitat) and Central Valley fall-run Chinook salmon (including EFH). Riparian vegetation that overhangs and shades streams provides areas where

these species can hide from predators and is an important factor in maintaining appropriate water temperature in riverine habitats. Loss of riparian habitat is discussed in Impact 4.3-1.

SRA habitat within the project site was estimated using existing habitat mapping data. For purposes of the SRA analysis, the SRA was mapped at in-water work locations where adjacent wooded habitats (i.e., riparian and oak woodland) were located adjacent to existing aquatic habitats (e.g., Dry Creek, Cirby, Creek, Linda Creek, and Strap Ravine). SRA acreage calculations at these locations included the area from the centerline of a given aquatic feature (e.g., creek centerline) outward to an area of 5 feet up the bank from the features OHWM and along both banks. As explained, above under Methods and Assumptions, this method assumes this "footprint" supports overhead vegetation that provides 100 percent shading of the adjacent aquatic feature and, therefore, may overestimate the amount of existing shaded aquatic habitat. It also may overestimate the amount of vegetation removal that contributes to SRA habitat because at some locations SRA habitat is the result of large oak or riparian trees set back much more than 5 feet from the creek bank which would not be removed and therefore would continue to provide SRA function. Consequently, the estimated SRA impact acreage overlaps with riparian and oak woodland habitats and differs from the acreages reported in the wetland delineation. Based on this methodology, implementation of the Proposed Trail Alignment would result in an anticipated removal of up to 0.35 acre of SRA and temporary effects on SRA of 2.55 acres (ECORP 2016). A more accurate SRA impact calculation will be performed during the permitting phase of the project, and is expected to be less than evaluated in this document.

Central Valley Steelhead Critical Habitat
Designated Critical Habitat for Central Valley steelhead is present within a small portion of the project site that includes Dry Creek (ECORP 2016 - Exhibit 4). Critical Habitat includes the stream channels in the designated stream reaches and the lateral extent as defined by the ordinary high-water line. In areas where the OHWM has not been defined, the lateral extent is defined by the bankfull elevation (defined as the level at which water begins to leave the channel and move into the floodplain; it is reached at a discharge that generally has a recurrence interval of one to two years on the annual flood series).

Critical Habitat for Central Valley steelhead is defined as specific areas that contain the primary constituent elements and physical habitat elements essential to the conservation of the species. The specific primary constituent elements of steelhead Critical Habitat applicable to the project site include freshwater spawning sites, potential freshwater rearing sites, and freshwater migration corridors.

The proposed project would permanently affect 0.00014 acres of Central Valley steelhead Critical Habitat where five (5) 15-inch diameter concrete piles located within the OHWM (aquatic habitat) of Dry Creek would be placed at the proposed Darling Way Bridge widening location (ECORP 2016).

Fall-Run Chinook Salmon Essential Fish Habitat
In accordance with the Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), federal agencies are required to consult with the NOAA/NMFS for activities that may adversely affect EFH. EFH are the waters and substrate necessary for fish spawning, breeding, feeding, or growth to maturity, and include several important components: adequate substrate; water quality; water quantity, depth, and velocity; channel gradient and stability; food; cover and habitat complexity; space; access and passage; and habitat connectivity (Pacific Fishery Management Council 1999). EFH for Chinook salmon could be affected by the proposed project.

Project effects on EFH would be similar to the Central Valley steelhead Critical Habitat and SRA/riparian effects discussed above. With the exception of the minor impacts to Central Valley steelhead Critical Habitat, effects to Central Valley fall-run Chinook salmon EFH would be temporary and minor, resulting from increased turbidity and sedimentation and temporary losses of aquatic

habitat, natural substrates, and overhead SRA cover vegetation. It should be noted that because the Central Valley fall-run Chinook salmon is not a FESA listed species, there is no designated critical habitat for the species.

Use-related Impacts

Potential effects could result from the proposed nighttime lighting on bridges and at trail undercrossings of roadways. Lights have the potential to shine onto waters in the project site during night time hours and may facilitate increased predation of juvenile salmonids by visual predators like smallmouth bass, piscivorous birds, and mammals (ECORP 2017), thereby potentially affecting Central Valley steelhead or Central Valley fall-run Chinook salmon that may occur in the project site.

The long-term maintenance and repair of the multi-use path and bridge structures would require the use of various tool and equipment that have the potential to introduce fill or other materials into Dry, Linda, and Cirby Creeks that could affect Central Valley steelhead and Central Valley fall-run Chinook salmon and their habitat. In addition, the creation of impervious surfaces associated with the Proposed Trail Alignment could result in indirect impacts to Dry, Linda, and Cirby Creeks and other downstream waters as a consequence of runoff that could affect Central Valley steelhead and Central Valley fall-run Chinook salmon. These indirect impacts would be minimized through compliance with protective city and state regulations as described in Section 4.8, “Hydrology and Water Quality,” and Impact 4.3-1, Disturbance and loss of waters of the United States. Both the City of Roseville Grading Permit and the State Water Resources Control Board NPDES permit (which is required for all projects that disturb over one acre of soil), require the preparation of a SWPPP that would help prevent or minimize use-related impacts. Furthermore, the City of Roseville Parks Maintenance Division is required to have fleet and work equipment leak free and in working order. Maintenance vehicles would be required to stay within paved portions of the trail or existing dirt trails and maintenance crews follow industry BMPs, and Park Maintenance crews receive training prior to working on City Preserves or open habitat areas. Maintenance and monitoring is conducted as per the Open Space Preserve Overarching Management Plan (and related USFWS Biological Opinion (81420-2008-F-1958-3)) and the California Department of Fish and Wildlife Streambed Alteration Agreement for Routine Maintenance. Although long term maintenance of the multi-use trail may not result in impacts to Central Valley steelhead, and/or Central Valley fall-run Chinook salmon, potential adverse effects could result from the proposed permanent nighttime lighting on bridges and at trail undercrossings of roads.

Conclusion

Implementation of the proposed project would create construction noise, vibrations, lighting, temporary diversion structures, and temporary creek crossings at Darling Way Bridge, the Cirby Creek Bank Stabilization area near Machado Lane, and Bridge #21 at Strap Ravine.

As discussed under Impact 4.10-1, the City would be required to obtain a USACE Section 404 Individual Permit, RWQCB Section 401 certification, and a Section 1602 streambed alteration agreement from CDFW before any groundbreaking activity within 50 feet of any wetland or water of the United States. The City would implement all permit conditions, which may include contributions to an approved wetland mitigation bank or through the development and implementation of a Compensatory Wetland, Stream and Riparian Mitigation and Monitoring Plan for creating or restoring in-kind habitat in the surrounding area. If mitigation credits are not available, stream and riparian habitat compensation could include establishment of riparian vegetation on currently unvegetated bank portions of streams affected by the project and enhancement of existing riparian habitat through removal of nonnative species, where appropriate, and planting additional native riparian plants to increase cover, continuity, and width of the existing riparian corridor along streams in the project site and surrounding areas. The ratio of riparian restoration/replacement shall consider value for Central Valley steelhead and Chinook salmon. Construction activities and compensatory mitigation shall be conducted in accordance with the terms of a streambed alteration agreement as required under Section 1602 of the Fish and Game Code. Construction activities such as clearing and grubbing along stream banks, earthwork, the placement of RSP below the OHWM, and the construction of temporary creek crossings have the

potential to result in temporary sedimentation and turbidity effects, accidental spills of hazardous materials, potential noise-related disturbances, and temporary loss of SRA. The proposed project would also include the installation of RSP and rock and log vanes, a limited amount of permanent pile placement (limited to the Darling Way Bridge Widening location), and permanent loss of SRA, which can affect Central Valley steelhead (including critical habitat) and/or Central Valley fall-run Chinook salmon (including EFH). This would be a **significant** impact.

Alignment Option 1A
Alignment Option 1A is the same as the Proposed Trail Alignment until the approach to the Dry Creek/Cirby Creek confluence and the first bridge; therefore, similar impacts to Central Valley steelhead and Central Valley fall-run Chinook salmon would be expected. The Proposed Trail Alignment would cross Dry Creek via Bridge #2 and continue on the northern bank of Cirby Creek, while Option 1A would cross Dry Creek via Bridge #3 and remain on the south bank of Cirby Creek. By remaining on the south bank of Cirby Creek, Option 1A would not require the construction of Bridge #2 or Bridge #4. Option 1A would require an additional 765 linear feet of retaining walls or streambank stabilization when compared to the Proposed Trail Alignment. However, because this option does not require the construction of Bridge #2 or Bridge #4, the total permanent impacts to salmonid aquatic habitat (i.e., aquatic habitat) is 0.01 acres less than the Proposed Trail Alignment (or 0.25 acres). Similarly, temporary impacts to aquatic habitat is 0.03 acres less than the Proposed Trail Alignment (or 0.55 acres). Option 1A would permanently impact 0.023 acre of SRA habitat (or 0.017 acre less than the Proposed Trail Alignment) and would temporarily impact 0.034 acre SRA habitat (or 0.109 acre more than the Proposed Trail Alignment).

Because Option 1A would have temporary and permanent impacts to aquatic, riparian, and SRA habitat that could affect Central Valley steelhead (including critical habitat) and/or Central Valley fall-run Chinook salmon (including EFH); this is considered a **significant** impact.

Alignment Option 1C
Option 1C is similar to the Proposed Trail Alignment and would have almost the same bridges and undercrossings described above in regards to the Proposed Trail Alignment; therefore, similar impacts to Central Valley steelhead and Central Valley fall-run Chinook salmon would be expected. As shown in Sheet 1 Segment (Exhibit 3-14), the trail would be located on the northeastern side of Dry Creek under Alignment Option 1C. In Sheet 1 Segment, the northeastern bank of Dry Creek is steep and erosive with little distance between the top of the bank and the adjacent private property (CBEC 2014). Because of this, implementation of Option 1C would require an additional 1,080 linear feet of streambank stabilization. Under Option 1C permanent impacts to salmonid habitat (i.e., aquatic habitat) would be 0.01 acres less than the Proposed Trail Alignment (or 0.25 acres), and Option 1C temporary impacts would be 0.05 acres less than the Proposed Trail Alignment. Implementation of the Alignment Option 1C would result in an anticipated removal of 0.032 acre of SRA (or 0.019 acre more than the Proposed Trail Alignment) and temporary effects on SRA to be 0.25 acre (or 0.072 acre more than the Proposed Trail Alignment).

Because Option 1C would have temporary and permanent impacts on aquatic, SRA, and riparian habitat that could affect Central Valley steelhead (including critical habitat) and/or Central Valley fall-run Chinook salmon (including EFH); this is considered a **significant** impact.

Alignment Option 5A
Option 5A deviates from the Proposed Trail Alignment just west of Bridge #13. Option 5A would remain on the south bank of Cirby Creek until crossing to the north bank via Bridge #14. Option 5A would include both an undercrossing of Sunrise Avenue and connecting paths to both sides of Sunrise Avenue. Both the Proposed Trail Alignment and Option 5A would make extensive use of retaining walls through this section of the path; however, Option 5A would require an additional 635 linear feet of stream habitat because of installation of retaining walls when compared to the Proposed Trail Alignment. The permanent impacts to salmonid habitat under Option 5A would be 0.0005 acre more

than the Proposed Trail Alignment, and the temporary impacts to wetlands and/or waters would be 0.001 acres less than the Proposed Trail Alignment. No riparian impacts are expected from implementation of Option 5A. However, based on the analysis for SRA, implementation of the Alignment Option 5A would result in an anticipated removal of 0.022 acre of SRA (or 0.009 acre more than the Proposed Trail Alignment) and temporary effects on SRA to be 0.16 acre (or 0.059 acre more than the Proposed Trail Alignment).

Because Option 5A would have temporary and permanent impacts on aquatic and riparian habitat that could affect Central Valley steelhead (including critical habitat) and/or Central Valley fall-run Chinook salmon (including EFH); this is considered a **significant** impact.

Mitigation Measures

Mitigation Measure 4.3-2: Central Valley steelhead and Central Valley fall-run Chinook salmon.
This mitigation would apply for the Proposed Trail Alignment, Alignment Options 1A, 1C, and 5A.

The City shall implement the following measures, developed based on past consultations with NMFS, to avoid, minimize and/or mitigate potential effects on Central Valley steelhead and Central Valley fall-run Chinook salmon.

a. Prior to the onset of work, the qualified biologist shall conduct a mandatory worker environmental awareness training. The training shall educate workers about the importance of avoiding impacts to Central Valley steelhead and Central Valley fall-run Chinook salmon and their habitat. The training shall also cover the relevant permit conditions and avoidance and minimization measures that protect sensitive species and habitats, as well as the penalties for non-compliance with state and federal laws, regulations, and permit requirements. The training shall include information about the life history and habitat requirements of Central Valley steelhead and Central Valley fall-run Chinook salmon and their potential to occur in the project site, as well as the terms and conditions of the Project's Biological Opinions or other authorizing documents (i.e. letter of concurrence).

b. Construction activities occurring within creek banks and channel beds shall be limited to the low-flow period (typically June 15 - October 15), unless earlier or later dates are approved by CDFW and NMFS during consultation. By limiting in-water construction activities to this time period, the Project shall limit construction activities to periods when low flow depths and velocities within the project streams are less likely to support Central Valley steelhead or Central Valley fall-run Chinook salmon life stages including adult migration, spawning, and egg incubation periods.

c. Fish screens or temporary stream diversion structures shall be installed to exclude Central Valley steelhead and Central Valley fall-run Chinook salmon from areas where in-water and near-water construction activities would be conducted. Installation of fish screens or temporary diversion structures shall prevent access to affected areas in the unlikely event that Central Valley steelhead or Central Valley fall-run Chinook salmon are present in the project streams during the low-flow period (June 15 - October 15).

d. The City shall retain a qualified biologist to monitor the installation of fish screens or temporary stream diversion structures, as well as any other near or in-water construction activities (e.g., installation of RSP along creek banks or below the OHWM, installation and removal of low water crossings, placement of new abutments, rock walls, gabions, and water diversions). Prior to the installation of fish screens or temporary stream diversion structures the biologist shall visually survey the in-water work area for Central Valley steelhead and Central Valley fall-run Chinook salmon.

e. Once the biologist confirms that no Central Valley steelhead or Central Valley fall-run Chinook salmon are present in the in-water work area, fish screens or temporary diversion devices shall be installed in a downstream direction, installing the upstream fish screen or temporary diversion device. The

biologist shall conduct a second visual survey before the downstream portion of the fish screen or temporary stream diversion is installed. If fish are present within the diversion area, the fish shall be guided out of the in-water work area with nets by the qualified biologist. The need for fish salvage is not anticipated because Central Valley steelhead or Central Valley fall-run Chinook salmon are not likely to be present in the project streams during the low-flow period (June 15 - October 15) – primarily because of excessive summer water temperatures that occur during this period in the Project area. However, fish salvage (or relocation outside of the in-water work areas) shall be conducted as needed should fish be present.

f. Before the onset of construction activities, high visibility orange construction fencing shall be installed along the perimeter of Environmentally Sensitive Areas under the supervision of the qualified biologist. Fencing shall be installed along the limits of construction in riparian habitat, minimizing the disturbance of or encroachment on sensitive aquatic and riparian habitats. The contractor shall maintain the project's Environmentally Sensitive Area fencing for the duration of the project and remove it when the project is complete.

g. Erosion control BMPs shall be implemented during construction to minimize the potential for erosion, and the mobilization of sediments to project waterways and be consistent with the Open Space Preserve Overarching Management Plan (and related USFWS Biological Opinion (81420-2008-F-1958-3). The following erosion and sediment control measures shall be implemented to prevent sedimentation and turbidity, as well as any identified in the SWPPP, 401, 404, or 1602 permits.

    1. Soil exposure shall be minimized by limiting the area of construction and disturbance and through the use of temporary BMPs, groundcover, and stabilization measures. These measures may include mulches, soil binders and erosion control blankets, silt fencing, fiber rolls, temporary berms, sediment de-silting basins, sediment traps, and check dams.

    2. Pursuant to Section 13-4.03C(3) of the Caltrans Standard Specifications, water pollution control practices shall be implemented within 72 hours of stockpiling material or before a forecasted storm event, whichever occurs first. If stockpiles are being used, soil, sediment, or other debris shall not be allowed to enter storm drains, open drainages, and watercourses. Active and inactive soil stockpiles must be covered with soil stabilization.

    3. Plastic mono-filament netting (erosion control matting) or similar material that could trap wildlife shall not be used. Acceptable substitutes include, but are not limited to, jute, coconut coir matting, or tackified hydroseeding compounds.

    4. Energy dissipaters and erosion control pads shall be provided at the bottom of slope drains as needed. Other flow conveyance control mechanisms may include earth dikes, swales, or ditches. Stream bank stabilization measures shall also be implemented.

    5. Existing vegetation shall be protected, to the extent feasible, to reduce erosion and sedimentation. Vegetation shall be preserved by installing temporary fencing, or other protection devices, around areas to be protected. Where complete removal is not necessary, vegetation shall be cut to ground level with the root systems left intact to prevent erosion and facilitate the recovery of riparian vegetation after project activities are complete.

    6. Exposed soils shall be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.

    7. Exposed soils shall be stabilized, through watering or other measures, to prevent the movement of dust at the project site caused by wind and construction activities such as traffic and grading activities.

8. All construction roadway areas shall be properly protected to prevent excess erosion, sedimentation, and water pollution.

9. The contractor shall conduct periodic maintenance of erosion and sediment control measures. All erosion and storm water control measures shall be properly maintained for the duration of the project.

h. A Spill Prevention and Control Plan shall be developed and implemented by the City, or its contractor, for the duration of the project. Pollution prevention and control BMPs shall be implemented during construction to minimize the risk of hazardous materials being released into waters in the project site. The following pollution and contamination prevention measures shall be implemented to prevent the release of hazardous materials during construction:

1. All equipment and materials shall be stored at least 50 feet from wetlands or waters in the project site unless the equipment is on established paved areas. If storage of equipment or materials within 50 feet of wetlands or waters in the project site is necessary, secondary containment shall be utilized to contain the equipment and materials and prevent discharge of any harmful substances into the soil or aquatic resources. Staging and storage areas for equipment, materials, fuels, lubricants, and solvents shall be located outside of the channel and banks of Dry Creek, Cirby Creek, Linda Creek, and Strap Ravine.

2. Secondary containment shall be provided for stationary equipment such as motors, pumps, generators, and compressors located within or adjacent to the Dry Creek, Cirby Creek, Linda Creek, and Strap Ravine. Any equipment or vehicles driven or operated within or adjacent to these creeks shall be checked and maintained daily to ensure proper working conditions to avoid potential impacts such as leaks.

3. No fueling, cleaning or maintenance of vehicles or equipment, or placement of construction debris, spoils or trash should occur within 50 feet of wetlands or waters in the project site unless it occurs in designated refueling/staging areas on existing paved surfaces with secondary containment in place. Refueling of equipment should occur at approved fuel locations. Contractor shall inspect all equipment/vehicles for leaks prior to use and should inspected regularly during Project inspection.

4. For work that is to occur on existing structures over open flowing portions of Dry Creek, Cirby Creek, Linda Creek, or Strap Ravine, a method of containment such as netting, tarps or similar catchments shall be utilized to catch debris or other potential construction materials and prevent such material from falling into the waters.

i. Lighting design shall include measures to limit the amount of light “spill” on water surfaces at night that could lead to predation of juvenile salmonids. To minimize the effects of lighting on salmonids, the City shall prevent lighting that directly shines on the water surfaces of Dry Creek, Cirby Creek, and Linda Creek by minimizing the amount of lighting necessary to safely and effectively illuminate pedestrian areas on bridges and trails, and by shielding and focusing lights on the bridge and trail surfaces and away from water surfaces.

j. The project shall avoid impacts to riparian vegetation and aquatic habitat where feasible, and shall incorporate restoration and enhancement of the riparian corridor into the final design plans and construction specifications and shall develop a riparian and restoration plan (RRP), as part of the Compensatory Wetland, Stream and Riparian Mitigation and Monitoring Plan discussed in Impact 4.3-1, Disturbance and loss of waters of the United States, and Mitigation Measure 4.3-1 that involves onsite enhancements and purchase of mitigation bank credits to compensate for permanent and temporal loss of riparian and SRA cover and Central Valley steelhead aquatic habitat loss. Compensatory mitigation for loss of Central Valley steelhead habitat will be provided by purchase

conservation credits at a conservation bank, as approved by NMFS during the Section 7 consultation. The RRP shall include on-site measures such as enhancing riparian vegetation by the planting of native shrub, tree, and understory species to create a more diverse vegetation structure and thus a higher quality habitat for wildlife. The onsite measures in the RRP may also include the planting of willows and other fast-growing native riparian species, which can quickly compensate for the loss of riparian and SRA cover, and will be planted where erosion control (RSP, slope pavement etc.) is installed along stream banks. Permanent impacts to riparian vegetation can also be mitigated with the purchase of credits (1:1 for riparian and 1.7:1 for SRA cover), and 0.5:1 for temporal loss of riparian vegetation and SRA cover. Restoration and enhancement of the riparian vegetation in the project site (combined with mitigation bank credits) shall result in no net loss of riparian habitat acreage or function and shall increase the quality of habitat for Central Valley steelhead (including Critical Habitat), Central Valley fall-run Chinook salmon (including EFH), and shall be accomplished through development and implementation of the RRP. Permanent impacts to riparian, including SRA, and Central Valley steelhead shall be further analyzed and determined based on final design for each construction phase during Section 7 consultation with NMFS and during CDFW Section 1602 permitting. Consultation with NMFS will also include EFH for Central Valley fall-run Chinook salmon.

k. Construction techniques shall be implemented to isolate near shore work from waterbodies in the project site. It is anticipated that clear water diversion using a cofferdam or gravel bag berm with impermeable layer would be used. Isolating in-water construction areas behind cofferdams would minimize the potential for turbidity and suspended sediments from reaching levels that could harm Central Valley steelhead, degrade existing Critical Habitat, harm Central Valley fall-run Chinook salmon, or degrade existing EFH. The extent of cofferdam footprints and dewatering shall be kept to the minimum necessary to support construction activities, and creek flow shall not be interrupted or reduced as a result of construction activities. Any fill material used in association with the cofferdams, such as sandbag fill, shall be composed of washed, rounded, spawning-sized gravel between 0.4 and 4 inches in diameter. If authorized by applicable state and federal permits, any of this gravel in contact with flowing water shall be left in place, and distributed manually with hand tools to allow passage for all life stages of fish. Installation and removal of cofferdams and/or gravel bag berms would be restricted to the summer low-flow period.

Significance after Mitigation

Implementing Mitigation Measures 4.3-2 would avoid or minimize adverse effects on Central Valley steelhead and Central Valley fall-run Chinook salmon. The mitigation measure limits construction to summer periods (June 15 and October 15) when low flow depths and velocities within the project site are less likely to support Central Valley steelhead and Central Valley fall-run Chinook salmon life stages, including adult migration, spawning, and egg incubation periods. In addition, the mitigation measure would exclude fish from the in-water work areas, in the unlikely event they were present, by installing temporary fish screens or diversion structures. The mitigation measure requires that a qualified biologist be present during the installation of fish screens/temporary diversions to survey and ensure that no special-status fish species are present. Isolating in-water construction areas behind cofferdams and limiting installation and removal of cofferdams and/or gravel bag berms would be restricted to the summer low-flow period would further reduce the potential for turbidity and suspended sediment levels from reaching levels that could harm Central Valley steelhead, Central Valley fall-run Chinook salmon or degrade existing Central Valley steelhead Critical Habitat or Central Valley fall-run Chinook salmon EFH. Mitigation Measure 4.3-2 also requires the project to incorporate night lighting design that does not directly shine light on water surfaces at night that could lead to predation of juvenile Central Valley steelhead and Central Valley fall-run Chinook salmon and their juveniles. This measure limits lighting from directly radiating on the water surfaces of Dry, Cirby, and Linda Creeks by minimizing the amount of lighting necessary to safely and effectively illuminate pedestrian areas on bridges and trail undercrossings, and by shielding and focusing lights on the bridge and trail surfaces and away from water surfaces. With the implementation of the lighting design plan that incorporates these measures, impacts on Central Valley steelhead and Central Valley fall-run Chinook salmon from night lighting on bridges would be avoided. Incorporation of restoration and enhancement of the riparian

corridor into the final design plans and construction specifications and development of a riparian and restoration plan would involve onsite enhancements and purchase of conservation bank credits to compensate for permanent and temporal loss of riparian, SRA cover, and aquatic habitat for steelhead. Restoration and enhancement of the riparian vegetation in the project site (combined with conservation bank credits) would result in no net loss of riparian habitat acreage or function and would increase the quality of habitat for Central Valley steelhead (including Critical Habitat) and Central Valley fall-run Chinook salmon. Therefore, implementation of Mitigation Measures 4.3-2 would reduce significant on Central Valley steelhead and Central Valley fall-run Chinook salmon to a **less-than-significant** level.

Impact 4.3-3	Disturbance or loss of valley elderberry longhorn beetle or its habitat.
Applicable Policies and Regulations	FESA
Significance with Policies and Regulations	Proposed Project: Significant Alignment Option 1A: Significant Alignment Option 1C: Significant Alignment Option 5A: Significant
Mitigation Measures	Mitigation Measures 4.3-3a,4.3-3b, and 4.3-3c (Proposed Project, Option 1A, Option 1C, Option 5A)
Significance after Mitigation	Less than significant (Proposed Project, Option 1A, Option 1C, Option 5A)

A total of 42 elderberry shrubs occur on the project site, including the Proposed Trail Alignment, Alignment Option 1A, Alignment Option 1C and Alignment Option 5A, and a 165-foot buffer around the project site. The Biological Assessment for Valley Elderberry Longhorn Beetle (ECORP 2017) addresses potential impacts of the proposed project on federally-listed valley elderberry longhorn beetle. The proposed project site is not located within critical habitat for VELB, and therefore, impacts to VELB critical habitat would not occur.

As explained above, elderberry surveys were conducted in 2014 and 2017.

Construction (such as trenching and paving) within 20 feet of the dripline of an elderberry shrub could potentially kill the shrub; therefore, project-related construction occurring within 20 feet of the dripline of elderberry shrubs on the project site could potentially result in direct impacts to VELB habitat or VELB if it is present. Table 4.3-4 lists the individual shrubs recorded and the distance of each shrub to proposed project construction limits (also see Exhibits 4.3-2a through 4.3-2d). Removal of elderberry shrubs, ground work within the drip-line of elderberry shrubs, and removal of riparian habitat within 165 feet of other elderberry shrubs could result in direct and indirect adverse impacts to VELB. The approximate acres of habitat that would be removed for each trail option is described below.

Table 4.3-4 Distance of Elderberry Shrubs from Proposed Construction Limits

Shrub ID	Proposed Construction within 165 Feet of Elderberry Shrubs			
	Proposed Trail Alignment	Alignment Option 1A	Alignment Option 1C	Alignment Option 5A
ES1	28.6' from cut/fill, 32.2' from trail, 18.7' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES2	29.6' from cut/fill, 33.1' from trail, 19.8' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment

Table 4.3-4 Distance of Elderberry Shrubs from Proposed Construction Limits

Shrub ID	Proposed Construction within 165 Feet of Elderberry Shrubs			
	Proposed Trail Alignment	Alignment Option 1A	Alignment Option 1C	Alignment Option 5A
ES3	47.5' from cut/fill, 51.1' from trail, 37.6' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES4	30.7' from cut/fill, 34.5' from trail, 20.8' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES5	32.9' from decomposed granite, 35.9' from trail, 39.5' from cut/fill, 22.9' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES6	40.4' from decomposed granite, 43.4' from trail, 53.5' from cut/fill, 30.4' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES7	32.2' from decomposed granite, 35.2' from trail, 35.8' from cut/fill, 22.3' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES8	30.6' from cut/fill, 34.5' from trail, 20.6' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES9	50.2' from cut/fill, 54.2' from trail, 40.2' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES10	47.7' from decomposed granite, 50.7' from trail, 56.5' from cut/fill, 37.7' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES11	46.5' from decomposed granite, 49.5' from trail, 36.2' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES12	57.8' from decomposed granite, 60.8' from trail, 47.5' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES13	56.1' from decomposed granite, 59.2' from trail, 45.9' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES14	51.6' from decomposed granite, 54.6' from trail, 41.4' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES15	27.8' from trail, 22.8' from cut/fill, 12.7' from temp construction	Same as Proposed Trail Alignment	N/A[1]	Same as Proposed Trail Alignment
ES16	61.8' from cut/fill, 60.1' from trail, 16.1' from temp construction	61.7' from cut/fill, 64.7' from trail, 51.7' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment

Table 4.3-4 Distance of Elderberry Shrubs from Proposed Construction Limits

Shrub ID	Proposed Construction within 165 Feet of Elderberry Shrubs			
	Proposed Trail Alignment	Alignment Option 1A	Alignment Option 1C	Alignment Option 5A
ES17	21.1' from cut/fill, 25.58' from trail, 11.1' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES18	33' from cut/fill, 38.4' from trail, 23' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES19	41.5' from cut/fill, 45.3' from trail, 31.5' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES20	20.6' from cut/fill, 24.6' from trail, 10.6' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES21	40.3' from cut/fill, 44.9' from trail, 30.2' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES22	42.6' from cut/fill, 48.7' from trail, 32.7' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES23	21.8' from retaining wall, 24.2' from cut/fill, 27.2' from trail, 11.6' from temp construction	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES24	Within trail	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES25	Within trail	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES26	Within trail	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES27	41.9' from cut/fill, 46.7' from trail, 31.9' from temp construction	N/A[1]	57' from cut/fill, 64' from trail, 47' from temp construction	Same as Proposed Trail Alignment
ES28	23.3' from cut/fill, 27' from trail, 12.4' from temp construction	N/A[1]	38.4' from cut/fill, 36' from trail, 28.3' from temp construction	Same as Proposed Trail Alignment
ES29	45.9' from cut/fill, 54.8' from trail, 40' from temp construction	N/A[1]	71' from cut/fill, 89' from trail, 61' from temp construction	Same as Proposed Trail Alignment
ES30	35.3' from cut/fill, 47' from trail, 26' from temp construction	N/A[1]	54.2' from cut/fill, 77.2' from trail, 43.8' from temp construction	Same as Proposed Trail Alignment
ES31	Within temp construction, 16' from RSP and cut/fill, 38.7' from trail	N/A[1]	Within temp construction, 6' from cut/fill, 25.4' from trail	Same as Proposed Trail Alignment
ES32	Within temp construction, 2.7' from cut/fill, 24.6' from trail	N/A[1]	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment

Table 4.3-4 Distance of Elderberry Shrubs from Proposed Construction Limits

Shrub ID	Proposed Construction within 165 Feet of Elderberry Shrubs			
	Proposed Trail Alignment	Alignment Option 1A	Alignment Option 1C	Alignment Option 5A
ES33	8.5' from bridge, 17.4' from RSP, 7.4' from Temp Bailey Bridge; 10.9' from temp construction	N/A[1]	0.4' from bridge, 15.9' from RSP, 22.5' from temp Bailey Bridge, 5.9' rom temp construction	Same as Proposed Trail Alignment
ES34	Within cut/fill, 6.2' from trail	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES35	Within cut/fill, 2.1' from trail	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES36	Within trail	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES37	Within trail	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES38	Within cut/fill, 3.7' from trail	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES39	Within cut/fill, 4.4' from trail	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES40	Within cut/fill, 5.6' from trail	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES41	Within cut/fill, 8' from trail	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment
ES42	Within cut/fill, 7.6' from trail	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment	Same as Proposed Trail Alignment

Source: [1] N/A - Not Applicable - this portion of the alignment is on the opposite side of the creek.

Proposed Trail Alignment

Construction Impacts

A total of 42 elderberry shrubs with at least one stem equal to or greater than one inch in diameter at ground level were observed along the Proposed Trail Alignment and within the 165-foot buffer around the construction limit for the Proposed Trail Alignment. Based on the preliminary project design, five elderberry shrubs (ES24, ES25, ES26, ES36, ES37,) occur directly within the construction footprint for the paved path; one elderberry shrub, ES33, occurs within approximately 8.5 feet of the proposed Bridge #2; seven elderberry shrubs (ES34, ES35, ES38-ES42) occur within the cut/fill construction boundary for the paved path, approximately eight feet or less from the edge of pavement (Exhibits 4.3-2a and 4.3-2b); and two elderberry shrubs (ES31 and ES32) occur within 16 feet and 2.7 feet, respectively, of cut/fill for temporary construction. These elderberry shrubs could therefore be adversely directly affected by project construction activities, either by direct removal of the elderberry shrubs or by ground disturbance within the dripline of the shrub (e.g. cut/fill and installation of pavement) that could result in the loss of the elderberry shrubs.

Removal of riparian habitat within 165 feet of potentially occupied elderberry shrubs could result in direct or indirect impacts to VELB. Approximately 0.33 acre of riparian and 0.89 acre of valley oak riparian woodland, for a total of 1.22 acres of suitable VELB habitat, would be removed within 165 feet of elderberry shrubs on the project site.

The remaining 27 elderberry shrubs recorded in the survey area for the proposed trail alignment are located between 20 feet and 165 feet of the limit of project construction and therefore could result in indirect effects on VELB habitat including: the removal of protective riparian plants, dust accumulation from equipment during construction that could affect the ability of VELB to forage and deposit eggs; and an increase of water from dust control activities during grading and construction that may attract argentine ants that prey on VELB.

Use-related Impacts

Maintenance and ongoing public use of the project site within 165-feet of elderberry shrubs could potentially directly and indirectly impact VELB habitat. The long-term maintenance and repair of the multi-use path would require the use of various tools and equipment for vegetation maintenance which could include accidental removal, trimming, or spraying of herbicides in proximity to the elderberry shrubs. However, the City of Roseville Park Maintenance Department crews attend training for working within City Preserves (such as elderberry and wetland preserves) and open space habitat and maintenance crews implement industry BMPs. Furthermore, all trail maintenance activities would be conducted consistent with the City's Open Space Preserve Overarching Management Plan and related USFWS Biological Opinion that allows trimming of up to 100 shrubs for the lifetime of the Biological Opinion with a maximum of 10 shrubs in any one year. All trail maintenance activities, including those that may affect elderberry, would be conducted consistent with the City's CDFW Streambed Alteration Agreement for Routine Maintenance. Although the elderberry shrubs in the project site are part of a natural riparian corridor, they are surrounded by urban development and are subject to disturbance from the surrounding development, such as collecting of elderberries by the public, placement of feral cat feeding stations, and/or inadvertent trimming of elderberry branches.

Conclusion

Under the Proposed Trail Alignment, direct and indirect adverse impacts to VELB habitat could occur as a result of construction and ongoing maintenance and public use. Under the Proposed Trail Alignment, a total of 15 elderberry shrubs could be adversely impacted through direct removal of elderberry shrubs, ground-disturbing construction (cut/fill) within the root zone of the shrubs, or permanent removal of riparian habitat within 165 feet of elderberry shrubs. It is anticipated that implementation of the project would result in the removal of a total of 1.22 acres of suitable riparian habitat within 165 feet of elderberry shrubs. Direct and indirect impacts to VELB habitat (individual shrubs and/or riparian habitat) would be considered a **significant** impact.

Alignment Option 1A

Option 1A is the same as the Proposed Trail Alignment until the approach to the Dry Creek/Cirby Creek confluence (Exhibit 4.3-2a). Under Alignment Option 1A, a total of 35 elderberry shrubs are located along the entire trail alignment, of which five elderberry shrubs (ES36, ES37, ES24, ES25, ES26) occur directly within the construction footprint for the paved path and seven elderberry shrubs (ES34, ES35, ES38-ES42) occur within the cut/fill construction boundary for the paved path, approximately eight feet or less from the edge of pavement (Exhibit 4.3-2a). These elderberry shrubs could therefore be adversely directly affected by project construction activities, either by direct removal of the elderberry shrubs or by ground disturbance within the dripline of the shrub (e.g. cut/fill and installation of pavement) that could result in the loss of the elderberry shrubs.

Under Alignment Option 1A, a total of 23 elderberry shrubs are present between 20 feet and 165 feet of the limit of construction for the entire alignment and therefore could be indirectly impacted by project-related construction and ongoing maintenance and public use, described under the proposed trail alignment.

Removal of riparian and valley oak riparian woodland within 165 feet of potentially occupied elderberry shrubs, could result in indirect impacts to VELB because it causes habitat fragmentation and could potentially interrupt the movement and distribution pattern of local populations. Approximately 0.20 acre of riparian and 0.69 acre of valley oak riparian woodland, for a total of 0.89 acres of suitable VELB

habitat, would be removed within 165 feet of elderberry shrubs on the project site as part of the project design.

Under Alignment Option 1A, a total of 12 elderberry shrubs (as compared to 15 elderberry shrubs under the Proposed Trail Alignment) could be adversely impacted through direct removal of elderberry shrubs, ground-disturbing construction (cut/fill) within the root zone of the shrubs, or permanent removal of riparian habitat within 165 feet of elderberry shrubs. It is anticipated that implementation of the project would result in the removal of a total of 0.89 acre (as compared to 1.22 acres under the Proposed Trail Alignment) of suitable riparian habitat within 165 feet of elderberry shrubs. Direct and indirect impacts to VELB habitat (individual shrubs and/or riparian habitat) would be considered a **significant** impact.

Alignment Option 1C

Option 1C is the same as the Proposed Trail Alignment for most of the length of the trail, with the exception of a portion of the trail that would be located on the northeastern side of Dry Creek (see Exhibit 4.3-2a). Under Option 1C, a total of 41 elderberry shrubs are located within the entire project site and 165-foot buffer. Six elderberry shrubs (E33, ES36, ES37, ES24, ES25, ES26) occur directly within the construction footprint for the proposed Bridge #2 and paved path; seven elderberry shrubs (ES34, ES35, ES38-ES42) occur within the cut/fill construction boundary for the paved path, approximately eight feet or less from the edge of pavement (Exhibit 4.3-2a); and one elderberry shrub (ES31) occurs within 6 feet of cut/fill for temporary construction. These elderberry shrubs could therefore be adversely directly affected by project construction activities, either by direct removal of the elderberry shrubs or by ground disturbance within the dripline of the shrub (e.g. cut/fill and installation of pavement) that could result in the loss of the elderberry shrubs.

For the entire trail under Alignment Option 1C, 27 elderberry shrubs are present between 20 feet and 165 feet of the limit of construction and therefore could be indirectly impacted by project-related construction and ongoing maintenance and public use, described under the proposed trail alignment.

Removal of riparian and valley oak riparian woodland within 165 feet of potentially occupied elderberry shrubs, could result in indirect impacts to VELB because it causes habitat fragmentation and could potentially interrupt the movement and distribution pattern of local populations. Approximately 0.54 acre of riparian and 0.87 acre of valley oak riparian woodland, for a total of 1.41 acres of suitable VELB habitat, would be removed within 165 feet of elderberry shrubs on the project site as part of the project design.

Under Alignment Option 1C, a total of 14 elderberry shrubs (as compared to 15 elderberry shrubs under the Proposed Trail Alignment) could be adversely impacted through direct removal of elderberry shrubs, ground-disturbing construction (cut/fill) within the root zone of the shrubs, or permanent removal of riparian habitat within 165 feet of elderberry shrubs. It is anticipated that implementation of the project would result in the removal of a total of 0.87 acre (as compared to 1.22 acres under the Proposed Trail Alignment) of suitable riparian habitat. Direct and indirect impacts to VELB habitat (individual shrubs and/or riparian habitat) would be considered a **significant** impact.

Alignment Option 5A

Alignment Option 5A is the same as the Proposed Trail Alignment for most of the length of the trail, except a portion that crosses over to the southern side of Linda Creek (Exhibit 4.3-2c). There are no elderberry shrubs within a 165-foot buffer along this portion of the alignment; therefore potential direct and indirect impacts to elderberry shrubs under Alignment Option 5A would be identical to potential direct and indirect impacts under the Proposed Trail Alignment.

Removal of riparian and valley oak riparian woodland within 165 feet of potentially occupied elderberry shrubs, could result in indirect impacts to VELB because it causes habitat fragmentation and could potentially interrupt the movement and distribution pattern of local populations. Approximately 0.33 acre

of riparian and 0.89 acre of valley oak riparian woodland, for a total of 1.22 acres of suitable VELB habitat, would be removed for the entire trail alignment as part of the project design.

Adverse impacts to VELB habitat would be the same under Alignment Option 5A as compared to the Preferred Trail Alignment. Under Alignment Option 5A, total of 15 elderberry shrubs could be adversely impacted through direct removal of elderberry shrubs, ground-disturbing construction (cut/fill) within the root zone of the shrubs, or permanent removal of riparian habitat within 165 feet of elderberry shrubs. It is anticipated that implementation of the project would result in the removal of a total of 1.22 acres of suitable riparian habitat. Direct and indirect impacts to VELB habitat (individual shrubs and/or riparian habitat) would be considered a **significant** impact.

Mitigation Measures

Mitigation Measure 4.3-3a: Avoidance and minimization measures.

The following measures shall be implemented to avoid or minimize effects to VELB and/or its habitat during construction of the proposed project.

a. A worker awareness training program for construction personnel shall be conducted by a qualified biologist prior to beginning construction activities. The program shall inform all construction personnel about the life history and status of the beetle, requirements to avoid damaging the elderberry plants, and the possible penalties for not complying with these requirements. Written documentation of the training shall be submitted to the USFWS within 30 days of its completion.

b. If elderberry shrubs can be retained within the project footprint, the City shall avoid indirect impacts by implementing the following measures, to the extent feasible, or equivalent measures agreed to in consultation with USFWS. Minimization measures include:

    1. **Avoidance Area**. An avoidance area shall be established at least 20 feet from the drip-line of an elderberry shrub for any activities that may damage or kill the elderberry shrub (e.g., trenching, paving, etc.).

    2. **Fencing**. All areas to be avoided during construction activities shall be fenced and/or flagged as close to construction limits as feasible.

    3. **Signage**. Signage shall be posted every 50 feet along the buffer area with the following information, “This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment.” The signs shall be clearly readable from a distance of 20 feet, and must be maintained for the duration of construction.

    4. **Timing.** To the extent feasible, all activities that could occur within 165 feet of an elderberry shrub, shall be conducted outside of the VELB flight season (March - July).

    5. **Erosion Control and Revegetation.** Erosion control measures will be implemented to restore areas disturbed within 165 feet of elderberry shrubs and the affected area will be re-vegetated with appropriate native plants.

    6. **Chemical Usage.** Herbicides will not be used within the drip-line of the shrub. Insecticides will not be used within 100 feet of an elderberry shrub. All chemicals will be applied using a backpack sprayer or similar direct application method.

    7. **Mowing**. Mechanical weed removal within the drip-line of the shrub shall be limited to the season when adults are not active (August - February) and shall avoid damaging the elderberry.

8. **Pre-construction and post-construction surveys**. Pre-construction surveys shall document compliance with mitigation measures. The post-construction survey shall confirm that there was no additional damage to any of the elderberry shrubs than as described in this document.

9. **Construction monitoring**. A qualified biologist shall monitor the work area at project-appropriate intervals to assure that all avoidance and minimization measures are implemented. The amount and duration of monitoring will depend on the project specifics and shall be discussed with a USFWS biologist.

10. **Elderberry Shrub Protection and Management Plan.** The City will develop as part of the Section 7 consultation process with USFWS for the Dry Creek Greenway East Trail project an elderberry shrub protection and management plan that will include how the buffer areas are to be protected, restored, and maintained after construction is completed and the City will ensure that ground-disturbing activities on the project site do not alter the hydrology for shrubs to be protected or otherwise affect the likelihood of vigor or survival of elderberry shrubs. The Elderberry Shrub Protection and Management Plan shall be consistent with the City's Open Space Preserve Overarching Management Plan.

Mitigation Measure 4.3-3b: Removing/transplanting individual elderberry shrubs.

a. Elderberry shrubs that are in the path of construction activities and cannot be avoided shall be removed and if feasible, transplanted, according to Table 4.3-5. A Biological Opinion from USFWS will be obtained prior to removal or transplanting of elderberry shrubs. Removal of a shrub may either include the roots or just the removal of the above-ground portion of the plant. If feasible, the entire root ball shall be removed, and the shrub transplanted.

b. Elderberry shrubs requiring removal shall be transplanted as close as feasible to its original location within City-owned property or as approved by USFWS. Elderberry shrubs may be relocated adjacent to the project footprint if: 1) the planting location is suitable for elderberry growth and reproduction; and 2) the City is able to provide long-term protection to the shrub and ensure that the shrub becomes reestablished.

c. If these criteria cannot be met, the shrub may be transplanted to an appropriate USFWS-approved mitigation site.

d. Any elderberry shrub that is unlikely to survive transplanting because of poor condition or location, or a shrub that would be extremely difficult to move because of access problems, may not be appropriate for transplanting. The following transplanting guidelines shall be used to guide removal and transplanting of elderberry shrubs on the project site:

    1. A qualified biologist shall be on-site for the duration of transplanting activities to assure compliance with avoidance and minimization measures and other conservation measures.

    2. Exit-hole surveys shall be completed immediately before transplanting. The number of exit holes found, GPS location of the plant to be relocated, and the GPS location of where the plant is transplanted shall be reported to the USFWS and to the CNDDB.

    3. Elderberry shrubs shall be transplanted when the shrubs are dormant (November through the first two weeks in February) and after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the shrub and increase transplantation success.

    4. Transplanting shall follow the most current version of the ANSI A300 (Part 6) guidelines for transplanting (http://www.tcia.org/).

Table 4.3-5 Mitigation for Loss of Individual Shrubs According to Preliminary Project Design

Shrub ID	Proposed Trail Alignment	Alignment Option 1A	Alignment Option 1C	Alignment Option 5A
ES24	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES25	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES26	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES31	Transplant if feasible	No Impact	Transplant if feasible	Transplant if feasible
ES32	Transplant if feasible	No Impact	No Impact	Transplant if feasible
ES33	Transplant if feasible	No Impact	Transplant if feasible	Transplant if feasible
ES34	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES35	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES36	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES37	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES38	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES39	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES40	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES41	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible
ES42	Transplant if feasible	Transplant if feasible	Transplant if feasible	Transplant if feasible

Mitigation Measure 4.3-3c: Compensatory mitigation for loss of riparian habitat

a. The following compensatory mitigation addresses impacts to VELB habitat through compensating for the permanent loss of riparian habitat within 165 feet of elderberry shrubs. Table 4.3-6 lists the total riparian habitat that is anticipated to be lost, according to the preliminary project design, and the corresponding credits that shall be purchased to replace habitat lost at a 3:1 ratio, as outlined in the VELB framework (USFWS 2017b). The exact amount of compensation shall be as agreed to by USFWS, per Section 7 consultation under the ESA.

Table 4.3-6 Potential Valley Elderberry Longhorn Beetle Habitat-Level Compensation

Project Alternative Options	Compensation Ratio	Loss of Riparian Habitat (acres)	Acres of Credit[1]	Total Credit Purchase[2]
Proposed Trail Alignment	3:1	1.22	3.66	89
Alignment Option 1A	3:1	0.89	2.67	65
Alignment Option 1C	3:1	1.41	4.23	103
Alignment Option 5A	3:1	1.22	3.66	89

[1] Acre(s) of credit = Compensation Ratio X Total Acres of Riparian Habitat Permanently Lost within 165 Feet of Elderberry Shrubs

[2] Formula for Credit Purchase: 1 credit = 0.041 acres

b. If the City chooses not to purchase credits at a USFWS-approved bank, they shall follow USFWS requirements for providing a permanent conservation area that meets USFWS criteria and approval, as described in the VELB Framework (USFWS 2017b).

Mitigation Measure 4.3-3d: Consultation with USFWS.
Caltrans, as the federal designated agency, will consult with USFWS under Section 7 of ESA for approval of transplanting and compensatory measures outlined in Mitigation Measures 4.3-3b and 4.3-3c prior to project construction.

Significance after Mitigation
Implementation of Mitigation Measure 4.3-3a would require that those elderberry shrubs that would not need to be removed would be protected by: installing minimum setbacks; controlling dust and erosion; restoring temporarily disturbed areas within 165 feet of elderberry shrubs; prohibiting use of insecticides, herbicides, fertilizers, or other chemicals within 100 feet of elderberry shrubs during construction; and requiring that after final design plans and construction specifications, new permanent impacts are assessed, minimized, or mitigated for in accordance with conservation and avoidance and minimization measures outlined in the VELB framework (USFWS 2017b).

Through implementation of Mitigation Measure 4.3-3b through 4.3-3c, and in consultation with and under approval of the USFWS, the loss of elderberry shrubs, and potential take of VELB would be mitigated by transplanting elderberry shrubs to a USFWS-approved location within the project site or to a USFWS-approved conservation bank and the purchasing of credits, according to Table 4.3-5 and Table 4.3-6.

Therefore, potential effects on VELB as a result of implementation of the proposed project would either be avoided or compensated for, and the disturbance or loss of elderberry shrubs or VELB would be reduced to a **less-than-significant** level.

Impact 4.3-4	Disturbance or loss of Swainson's hawk, white-tailed kite, and other nesting raptors.
Applicable Policies and Regulations	CESA MBTA, CEQA, CDFG Code Section 3503, 3503.5, 3511, and 3513
Significance with Policies and Regulations	Proposed Project: Potentially significant Alignment Option 1A: Potentially significant Alignment Option 1C: Potentially significant Alignment Option 5A: Potentially significant
Mitigation Measures	Mitigation Measure 4.3-4 (Proposed Project, Option 1A, Option 1C, Option 5A)
Significance after Mitigation	Less than significant (Proposed Project, Option 1A, Option 1C, Option 5A)

Although no Swainson's hawk or white-tailed kite CNDDB records occur within the project site and no observation of nesting Swainson's hawks or white-tailed kites were found during surveys of the project site, trees within the project site provide suitable nesting habitat for these raptors, and it is possible that these hawks or other nesting raptors (i.e., red-tailed hawk, American kestrel, Cooper's hawk, red-shouldered hawk, northern harrier, great-horned owl, barn owl) could move into the project site prior to project implementation. The northern harrier is a ground nesting raptor, and the degraded non-native annual grassland and the presence of feral cats, pedestrian traffic, joggers and dogs likely preclude the presence of this species.

Within five-miles of the project site, the nearest historic CNDDB record of Swainson's hawk is approximately 4 miles northwest of the project site and dates back to 2001. The CNDDB reports the record as possible extirpated. The other record is 5.2 miles southeast in Folsom and dates back to 1962. A 1992 CNDDB record of white-tailed kite is approximately 1,500 feet southeast of the southern terminus of the proposed project within Lake Park in Woodbridge Ranch. A white-tailed kite nesting

occurrence within the Hewlett Packard complex from 1999 is approximately 4 miles to the northwest. Another white-tailed kite nesting occurrence is approximately 4 miles southeast of the site within Norma Hamlin Park. No records of Swainson's hawks were reported on eBird within the project site, but there were some winter (2009–2010) observations of white-tailed kite in the southeastern terminus of the proposed project.

Proposed Trail Alignment

Construction Impacts

No direct impacts to nesting Swainson's hawk habitat or loss of individuals are anticipated to occur as a result of the project because the project site is highly disturbed and degraded in terms of habitat value for Swainson's hawk. While the project site does provide some habitat characteristics as described in the species description (i.e., oak woodlands, riparian habitat for nesting, ruderal grassland for foraging), the potential for Swainson's hawk to use this habitat and actually be present is low. The area around the project site is disturbed and largely developed, and there are little of the large open areas and wooded riparian areas that this species prefers for hunting or nesting.

Similarly, although the white-tailed kite could occur in the project site, the foraging habitat value for this species is also low because of its highly disturbed and degraded nature; therefore, no direct impacts to nesting white-tailed kite habitat or loss of individuals are anticipated to occur because the project site is highly disturbed and degraded.

For most of the Proposed Trail Alignment, non-native annual grassland dominates the grassland habitat, and the height of the grasses is not conducive for hawk foraging. Although some areas of the alignment appear to receive maintenance, this is not the norm for the whole alignment.

Additionally, known nest locations for the Swainson's hawk are located at the fringe of development both in Folsom and Lincoln and have access to vast open agricultural fields. It would be unlikely that these hawks would fly back into the urban core to forage within the Proposed Trail Alignment.

The Proposed Trail Alignment would permanently remove up to 4.30 acres of valley oak riparian woodland and temporarily affect up to 4.90 acres of valley oak riparian woodland. Similarly, 4.69 acres of annual grassland would be permanently affected, and 8.94 acres would be temporarily affected.

Mature trees within the project site provide potential nesting habitat for common raptor species, protected by the Migratory Bird Treaty Act and California Fish and Game Code, that use the project area for roosting, nesting, and foraging year-round. Raptors that could nest within oak woodland habitat within the project site include great-horned owl, barn owl, American kestrel, red-tailed hawk, red-shouldered hawk, and Cooper's hawk. In the Sacramento Valley, most of these raptors have an approximate breeding and nesting season from February 15 to September 15. Tree nesting raptors may nest in the large trees and in riparian habitats within and adjacent to the project site. Although the non-native grassland may provide low quality nesting habitat for ground nesting raptors, it is unlikely that ground nesting raptors would occur because of the presence of feral cat colonies, dogs, and disturbance from pedestrians using the project area.

Use-related Impacts

Future recreational use of the multi-use path could expose nesting raptors to potential disturbances. However, hawks with potential to nests in the area are hawks that are or have been acclimated to the urban environment and thus are likely to become used to pedestrians, joggers, and cyclists. The long-term maintenance and repair of the multi-use path would require the use of various tools and equipment for vegetation maintenance which could include working in close proximity to a nest tree, or accidental removal or trimming of branches that could support a raptor nest. The City of Roseville Parks Maintenance Department provides training to crews that work in City preserves or open habitat, and maintenance and monitoring is performed as per the City of Roseville Open Space Preserve

Overarching Management Plan. All trail maintenance activities would be conducted consistent with the City's Open Space Preserve Overarching Management Plan and related USFWS Biological Opinion and the City's California Department of Fish and Wildlife Streambed Alteration Agreement for Routine Maintenance. The Overarching Plan and Routine Maintenance Agreement include requirements for worker training and pre-maintenance nesting surveys as well as monitoring and reporting when nests are found.

Conclusion

No direct impact to nesting Swainson's hawk or white-tailed kite is expected, because these hawks are unlikely to nest within the project site because of low quality foraging habitat and thus the impact to Swainson's hawk and white-tailed hawk nesting and foraging habitat would be less than significant. The oak woodland habitat provides suitable nesting habitat for other common raptor species protected under the MBTA, and CDFG Code. Construction activities occurring within oak woodland, and riparian habitat would result in removal of trees, leading to the potential direct removal or disturbance of active raptor nests. Although identification of specific trees that would be removed has not occurred, it is anticipated that some trees would be removed as part of project implementation. The loss or disturbance of active common raptor nests would be a **significant** impact.

Alignment Option 1A

No direct impact to nesting Swainson's hawk or white-tailed kite is expected because these hawks are unlikely to nest within Alignment Option 1A because of low quality foraging habitat and thus the impact to Swainson's hawk and white-tailed hawk nesting and foraging habitat is considered less than significant. Since Alignment Option 1A would be a small part of the Proposed Trail Alignment, if selected, similar impacts to nesting raptors could occur as with the Proposed Trail Alignment. However, Alignment Option 1A would permanently remove 0.20 acre less of valley oak riparian woodland, and temporarily affect 0.10 acre less of valley oak riparian woodland than the Proposed Trail Alignment. The loss or disturbance of active common raptor nests would be a **significant** impact.

Alignment Option 1C

No direct impact to nesting Swainson's hawk or white-tailed kite is expected because these hawks are unlikely to nest within Alignment Option 1C because of low quality foraging habitat and thus the impact to Swainson's hawk and white-tailed hawk nesting and foraging habitat is considered less than significant. Alignment Option 1C would be a small part of the Proposed Trail Alignment, if selected, similar impacts to nesting raptors would occur as with the Proposed Trail Alignment. However, Alignment Option 1C would permanently remove 0.05 acre less of valley oak riparian woodland, and temporarily affect 0.05 acre less of valley oak riparian woodland than the Proposed Trail Alignment. The loss or disturbance of active common raptor nests would be a **significant** impact.

Alignment Option 5A

No direct impact to nesting Swainson's hawk or white-tailed kite is expected because these hawks are unlikely to nest within Alignment Option 5A because of low quality foraging habitat and thus the impact to Swainson's hawk and white-tailed hawk nesting and foraging habitat is considered less than significant. Alignment Option 5A would have the same impacts to nesting raptors as the Proposed Trail Alignment. However, Alignment Option 5A would permanently remove 0.30 acre more of valley oak riparian woodland and temporarily affect 0.20 acre more of valley oak riparian woodland than the Proposed Trail Alignment. The loss or disturbance of active common raptor nests would be a **significant** impact.

Mitigation Measures

Mitigation Measure 4.3-4: Nesting raptors.

This mitigation would apply for the Proposed Trail Alignment, Alternative Alignments 1A, 1C, and 5A.

The following measures shall be implemented to avoid, minimize and fully mitigate impacts to Swainson's hawk, white-tailed kite, as well as other raptors.

a. For project activities, including tree removal, that begin between February 15 and September 15, a qualified biologist shall conduct preconstruction surveys for nesting raptors and to identify active nests on and within 0.25 mile of the project site with direct line of sight from public access areas with the use of binoculars and spotting scopes to the proposed work areas. The surveys shall be conducted before the beginning of any construction activities between February 15 and September 15.

b. The City shall attempt to initiate upland construction activities before the nest initiation phase (i.e., before February 15). If breeding raptors establish an active nest site, as evidenced by nest building, egg laying, incubation, or other nesting behavior, near the construction area, they shall not be harassed or deterred from continuing with their normal breeding activities.

c. Impacts to nesting raptors shall be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. No project activity shall commence within the buffer areas until a qualified biologist has determined the young have fledged, the nest is no longer active, or reducing the buffer, in coordination with CDFW, would not likely result in nest abandonment. CDFW guidelines recommend implementation of 500 feet for raptors, but the size of the buffer may be adjusted if a qualified biologist and the City, in consultation with CDFW, determine that such an adjustment would not likely adversely affect the nest. Monitoring of the nest by a qualified biologist during construction activities shall be required if the activity has potential to adversely affect the nest.

d. Trees shall not be removed during the breeding season for nesting raptors unless a survey by a qualified biologist verifies that there are not active nests within the trees or within 500 feet of the trees proposed to be removed. Loss of trees that provide potential nesting habitat shall be compensated by planting replacement trees according to Mitigation Measure 4.3-1 (wetlands/riparian trees) and Mitigation Measure 4.3-8 (protected oak trees).

Significance after Mitigation

With implementation of Mitigation Measure 4.3-4, the potential loss of nesting raptors species as a result of project construction would be avoided by identifying nests, removing vegetation and trees outside of the nesting season, conducting pre-construction surveys if construction activities are to occur during the nesting season, and mitigating for the loss of oaks and riparian trees. Therefore, this impact would be reduced to a **less-than-significant** level.

Impact 4.3-5	Disturbances to special-status song birds.
Applicable Policies and Regulations	Fish and Wildlife Conservation Act FESA MBTA CDFG Code Sections 3503 and 3513 CEQA City of Roseville General Plan Open Space and Conservation Element
Significance with Policies and Regulations	Proposed Project: Significant Alignment Option 1A: Significant Alignment Option 1C: Significant Alignment Option 5A: Significant
Mitigation Measures	Mitigation Measure 4.3-5 (Proposed Project, Option 1A, Option 1C, Option 5A)
Significance after Mitigation	Less than significant (Proposed Project, Option 1A, Option 1C, Option 5A)

Special-status bird species with a likelihood of occurring on the project site include: great egret (CNDDB), great blue heron (CNDDB), oak titmouse (BCC-YR), olive-sided flycatcher (BCC-B), California yellow warbler (SCC), Merlin (WL), peregrine falcon (BCC-W), yellow-billed magpie (BCC-YR), Nuttall's woodpecker (BCC-YR), Lewis' woodpecker (BCC-W), yellow-breasted chat (SCC), loggerhead shrike (BCC-YR) and purple martin (SCC). The great egret and great blue heron belong to the Heron family and although have no proper legal status, they are being tracked by the CNDDB and thus are included in this impact discussion. The USFWS maintains a list of Birds of Conservation Concern that, without additional conservation management actions, are likely to become candidates for listing under the ESA. The BCC list includes seasons as to when these birds receive additional management actions and those include Year Around (YR), Breeding (B), and Wintering (W). CDFW also maintains a list of bird Species of Special Concern (SCC) and Watch List (WL).

Proposed Trail Alignment

Construction Impacts

Construction of the Proposed Trail Alignment could disturb nesting special-status birds (great egret, great blue heron, oak titmouse, California yellow-warbler, yellow-billed magpie, Nuttall's woodpecker, yellow-breasted chat, loggerhead shrike, and purple martin) if construction would occur during the nesting season (typically February 15 – September 15). Project construction would involve grading of ground vegetation, grading for drainage, shrub and tree removal, removal of riparian vegetation for installation of bridge footings, retaining walls, and rock slope protecting and removal of oak woodland for construction of the proposed trail alignment. In addition to potential damage or direct removal of active nests, construction activities (i.e., trail and bridge construction) could result in noise, dust, and other disturbances to nesting birds, resulting in potential nest abandonment and mortality to eggs and chicks. Although project construction would result in the permanent and temporary loss of grassland foraging habitat, riparian habitat, and oak woodland habitat, suitable and more contiguous habitat is available adjacent to the project elements that would not be disturbed by project activities.

Wintering species (Lewis' woodpecker) that may use the project site during migration are not expected to use the site during the proposed window of construction. If project activities were initiated in areas being used by these migrating species, these species would move offsite unharmed. Although loss of foraging and resting habitat for these species would occur, suitable and more contiguous habitat is available adjacent to the project elements that would not be disturbed by project activities. Therefore, the loss of winter habitat within the proposed trail alignment is not expected to affect the local wintering population or viability of these species, and would not be considered substantial.

Use-related Impacts

Future recreational use of the project area is expected to increase because the multi-use path would provide access to more people that otherwise would not venture into the undeveloped open habitat area. This in turn would expose nesting special-status birds to potential disturbances. However, special-status bird species with potential to occur or nest in the area are species that are or have been acclimated to the urban environment and thus are likely to become used to pedestrians, joggers and cyclists. The long-term maintenance and repair of the multi-use path would require the use of various tools and equipment for vegetation maintenance which could include working in close proximity to a nest tree or accidental removal, trimming of branches of that could support a special-status bird nest. The City of Roseville Parks Maintenance Department provides training to crews that work in City preserves or open habitat and maintenance and monitoring is performed as per the City of Roseville Open Space Preserve Overarching Management Plan. All trail maintenance activities would be conducted consistent with the City's Open Space Preserve Overarching Management Plan and related USFWS Biological Opinion and the City's California Department of Fish and Wildlife Streambed Alteration Agreement for Routine Maintenance. The Overarching Plan and Routine Maintenance Agreement include requirements for worker training and pre-maintenance nesting surveys as well as monitoring and reporting when nests are found.

Conclusion

Vegetation clearing and other construction activities for the proposed project could result in the loss of individuals or nests, or disruptions to nesting attempts, special-status bird species if they nest in the project area in the future. The potential disturbance or loss of special-status bird nests would be **significant**. Wintering species, such as Lewis' woodpecker, that may use the project site or during migration are not expected to use the site during the proposed window of construction, as explained above.

Alignment Option 1A

Alignment Option 1A would result in similar impacts to nesting special-status birds as the Proposed Trail Alignment as described above under construction impacts. For the reasons explained above, the potential disturbance or loss of special-status bird nests would be **significant**.

Alignment Option 1C

Alignment Option 1C would result in similar impacts to nesting special-status birds as the Proposed Trail Alignment. Construction of the Alignment Option 1C could disturb nesting special-status birds, as described above for the proposed trail alignment. For the reasons explained above, potential disturbance or loss of special-status bird nests would be **significant**.

Alignment Option 5A

Alignment Option 5A would result in similar impacts to nesting special-status birds as the Proposed Trail Alignment. However, Alignment Option 5A has a slight increase in permanent and temporary impacts to oak woodland habitat as described in Impact 4.3-4. Under Alignment Option 5A, similar impacts to nesting special-status birds would occur as with the Proposed Trail Alignment. Construction of the Alignment Option 5A could disturb nesting special-status birds, as described above for the Proposed Trail Alignment. Therefore, the potential disturbance or loss of special-status bird nests would be **significant**.

Mitigation Measures

Mitigation Measure 4.3-5: Special-status birds.

This mitigation would apply for the Proposed Trail Alignment, Alignment Option 1A, 1C, and 5A.

The following measures shall be implemented and are intended to avoid, minimize, and fully mitigate impacts to nesting special-status birds.

a. The City shall ensure that before any ground-disturbing project activities begin for a given proposed trail segment, a qualified biologist shall identify potential habitat for nesting special-status bird species in areas that could be affected during the breeding season by construction.

b. If vegetation removal or other disturbance related to construction of the trail segment is required during the nesting season, focused surveys for active nests of special-status birds shall be conducted before and within 5 days of initiating construction by a qualified biologist. The appropriate area to be surveyed and timing of the survey may vary depending on the activity and species that could be affected. If no active nests are found during focused surveys, no further action under this measure shall be required.

c. If an active special-status bird nest is located during the preconstruction surveys, the biologist shall notify the City and the City shall notify CDFW. Construction shall be prohibited within a minimum of 25 feet of the nest to avoid disturbance until the nest is no longer active.

d. If construction stops for more than 5 days during the nesting season, a follow up survey shall be conducted to make sure that no birds moved into the area and started nesting.

Significance after Mitigation

With implementation of Mitigation Measure 4.3-5, the potential loss of individuals or nests of special-status bird species as a result of project construction would be avoided. Therefore, this impact would be reduced to a **less-than-significant** level.

Impact 4.3-6	Disturbance or loss of Western pond turtle.
Applicable Policies and Regulations	CEQA City of Roseville General Plan Open Space and Conservation Element
Significance with Policies and Regulations	Proposed Project: Significant Alignment Option 1A: Significant Alignment Option 1C: Significant Alignment Option 5A: Significant
Mitigation Measures	Mitigation Measure 4.3-6 (Proposed Project, Option 1A, Option 1C, Option 5A)
Significance after Mitigation	Less than significant (Proposed Project, Option 1A, Option 1C, Option 5A)

Western pond turtle is designated as a species of special concern by CDFW. This species is found in a wide range of aquatic habitats with emergent structure for basking and feeding. Western pond turtles also use adjacent upland sites for nesting, often travelling great distances over land to potential nesting sites.

Aquatic habitat is present within the streams of the project site and one western pond turtle was documented during project surveys (ECORP 2014). An additional credible sighting and photograph of an adult male western pond turtle was made in February 2010. While exact counts are not available, western pond turtles probably occur in low numbers throughout much of Linda, Dry, and Cirby Creeks. During surveys, eight non-native red-eared slider (*Trachemys scripta elegans*) turtles were also observed and documented.

Nesting and upland overwintering habitat for western pond turtle is present in many areas along the creek corridor. Particularly suitable areas are in the broad floodplain near Sierra Gardens and between Rocky Ridge Drive and Champion Oaks Drive in the Maidu neighborhood. Generally, the western bank and terrace is more tightly constrained by housing, fences, roads, and other infrastructure throughout the project site, and the amount of floodplain and associated upland nesting/overwintering/dispersal habitat is greater on the northern and eastern banks of the creeks.

Proposed Trail Alignment

Construction Impacts

Project construction could result in limited short-term impacts on western pond turtle. Potential adverse impacts on western pond turtle would include: stress, injury, or mortality to individuals or their nests resulting from: site access by project vehicles and equipment, heavy equipment operation, installation of bridge abutments and stream bank stabilization, and excavation activities; temporary loss of habitat and movement corridors during installation of the trail; sedimentation and turbidity resulting from earthwork near the wetlands and perennial streams; and inadvertent fuel and oil spills into wetlands and perennial streams.

Use-related Impacts

Following project construction, increased pedestrian and bicycle use may startle western pond turtles and cause them to move away from basking areas, thus potentially disrupting thermoregulation. Currently, there are limited basking areas available for turtles on the project site and those available have been used by non-native red-eared slider turtles. Restoration work that would take place as part of the construction of the Proposed Trail Alignment may increase basking habitat for western pond turtle. Additionally, the long-term maintenance and repair of the multi-use path would require the use of various tools and equipment for vegetation maintenance that could include working in close proximity to grassland and aquatic habitat where the turtle may be nesting or basking. The City of Roseville Parks Maintenance Department provides training to crews that work in City preserves or open habitat and maintenance and monitoring is performed as per the City of Roseville Open Space Preserve Overarching Management Plan. All trail maintenance activities would be conducted consistent with the City's Open Space Preserve Overarching Management Plan and related USFWS Biological Opinion and the City's California Department of Fish and Wildlife Streambed Alteration Agreement for Routine Maintenance. The Overarching Plan and Routine Maintenance Agreement include requirements for worker training and pre-maintenance nesting surveys as well as monitoring and reporting when nests are found.

Conclusion

Vegetation-clearing and other construction activities could result in the loss of individuals or nests, or disruptions to nesting attempts, of western pond turtle if they nest in the project area in the future. The potential disturbance or loss of western pond turtle and their nests would be **significant**.

Alignment Option 1A

Alignment Option 1A would result in similar impacts to western pond turtle as would occur with the Proposed Trail Alignment. Vegetation clearing and other construction activities for Alignment Option 1A could result in the loss of individuals or nests, or disruptions to nesting attempts, of western pond turtle if they nest in the project site in the future. The potential disturbance or loss of western pond turtle and their nests would be **significant**.

Alignment Option 1C

Alignment Option 1C would result in similar impacts to western pond turtle as would occur with the Proposed Trail Alignment. Vegetation clearing and other construction activities for Alignment Option 1C could result in the loss of individuals or nests, or disruptions to nesting attempts, of western pond turtle if they nest in the project site in the future. The potential disturbance or loss of western pond turtle and their nests would be **significant**.

Alignment Option 5A

Because Alignment Option 5A would result in similar impacts to western pond turtle as the Proposed Trail Alignment. Vegetation clearing and other construction activities for Alignment Option 5A could result in the loss of individuals or nests, or disruptions to nesting attempts, of western pond turtle if they nest in the project site in the future. The potential disturbance or loss of western pond turtle and their nests would be **significant**.

Mitigation Measures

Mitigation Measure 4.3-6: Western pond turtle.
This mitigation would apply for the Proposed Trail Alignment, Alignment Options 1A, 1C, and 5A.

a. Implement Mitigation Measure 4.3-1.

b. Before ground disturbance, all onsite construction personnel shall be instructed by a qualified biologist regarding the potential presence of western pond turtle, the importance of avoiding impacts on this species and its habitat, and recognition of western pond turtle and its habitat(s).

c. Within 24 hours before beginning construction activities within 200 feet of suitable aquatic habitat for western pond turtle, a qualified biologist shall inspect areas of anticipated disturbance for the presence of western pond turtle nests and individuals. If nests are found, a 100-foot no disturbance buffer shall be erected and maintained until the turtles have hatched and no obstructions between the nest and aquatic habitat shall be created. No vegetation clearing will be allowed within the buffer to shelter the turtles from the elements and potential predators.

d. If adult and juvenile turtles are found during preconstruction, dewatering, or fish rescue operations, the biologist shall relocate the western pond turtle to the nearest suitable habitat outside of the area of disturbance. The construction area shall be re-inspected whenever a lapse in construction activity of two weeks or more has occurred. The biologist shall be available thereafter; if a turtle is encountered during construction activities, the biologist shall relocate the western pond turtle to the nearest suitable aquatic habitat outside the area of disturbance. As suitable habitat is located throughout the area, it is not anticipated that turtles would be relocated far from construction areas and that they would recolonize following construction.

e. After completion of project-related construction activities, any temporary fill and construction debris shall be removed, and temporarily disturbed areas shall be restored to pre-project conditions. Restoration of grassland and riparian habitat shall be conducted as applicable under Mitigation Measure 4.3-1 (for riparian vegetation) and Mitigation Measure 4.3-4 (for grassland habitat) in proximity to the stream corridors.

Significance after Mitigation
Implementing Mitigation Measure 4.3-6 would reduce significant impacts on western pond turtle to a **less-than-significant** level because it would require the City to identify and avoid western pond turtle nest sites or temporarily relocate individuals outside of the construction area; because suitable habitat is located throughout the area, it is not anticipated that turtles would be relocated far from construction areas and that they would recolonize following construction.

Impact 4.3-7	Disturbance or loss of special-status bats – pallid bat and silver-haired bat.
Applicable Policies and Regulations	CEQA City of Roseville General Plan Open Space and Conservation Element
Significance with Policies and Regulations	Proposed Project: Significant Alignment Option 1A: Significant Alignment Option 1C: Significant Alignment Option 5A: Significant
Mitigation Measures	Mitigation Measure 4.3-7 (Proposed Project, Option 1A, Option 1C, Option 5A)
Significance after Mitigation	Less than significant (Proposed Project, Option 1A, Option 1C, Option 5A)

Pallid bat is designated as a Species of Special Concern by CDFW and High Priority species by the Western Bat Working Group. Throughout California, pallid bats are usually found in arid climates below 6,000 feet elevation. Pallid bats use a variety of habitats including grasslands, shrublands, woodlands, and coniferous forests. Pallid bats are most common in open, dry habitats that contain rocky areas for roosting. Day roosts may vary but are commonly found in rock crevices, tree hollows, mines, caves, and a variety of human-made structures. Night roosts are usually more open sites and may include unsecured buildings, porches, mines, caves, and under bridges. Tree roosting has been documented in large conifer snags, inside basal hollows of redwoods and giant sequoias, and bole cavities in oaks (Sherwin 1998). They are year-long residents in most of their range and hibernate in winter near their summer roost (Zeiner et al. 1990). This species is highly sensitive to disturbance and highly intolerant of urban development. Though no documented occurrences of pallid bat exist for the project site, the oak woodland and riparian area on the project site and vicinity may provide suitable foraging habitat, as well as roosting habitat in large oak trees and snags and in more open areas.

The silver-haired bat is a Medium Priority species designated by the Western Bat Working Group, and it is being tracked by the CNDDB with no formal status. The silver-haired bat is common but erratic in abundance. During spring and fall migrations, the silver-haired bat may be found anywhere in California. Summer habitats include coastal and montane coniferous forest, valley foothill woodlands, pinyon-juniper woodlands, and valley foothill and montane riparian habitats. Roosts in hollow trees, snags, buildings, rock crevices, caves, and under bark. Females may form nursery colonies or occur as solitary individuals in dense foliage or hollow trees. This species needs access to drinking water.

Proposed Trail Alignment

Construction Impacts

Removal of valley oak riparian woodland as part of the Proposed Trail Alignment would involve the removal of old oak trees that may contain basal hollows that could be used as bat roosting sites. Some of these hollows may provide suitable conditions to serve as maternity sites for the aforementioned bat species. Construction activities (i.e., ground clearing, including tree and shrub removal, and grading) within 250-feet of these roosting sites could temporarily disturb pallid and silver-haired bats that may be roosting, such that breeding could be disrupted or nest abandonment could occur. Project activities within suitable habitat that removes or disturb trees or other structures used for roosting could remove or cause abandonment of these features. Additionally, the removal of trees occupied by bats during removal activities could injure or kill bats. Loss of active roost sites could affect distribution of individuals over time if other suitable roost sites are not available; however, potential roost sites are not limited to the project disturbance footprint; other woodland and riparian habitat with potential roost structures may be present throughout the project site and the surrounding area. Because construction would occur during the day when bats are typically not active, disturbances to foraging behavior and prey would be avoided.

Use-related Impacts

The long-term maintenance and repair of the multi-use path would require the use of various tools and equipment for vegetation maintenance which could include working in close proximity to a roost tree or accidental removal, trimming of branches of that could support a bat roost. The City of Roseville Parks Maintenance Department provides training to crews that work in City preserves or open habitat and maintenance and monitoring is performed as per the City of Roseville Open Space Preserve Overarching Management Plan. All trail maintenance activities would be conducted consistent with the City's Open Space Preserve Overarching Management Plan and related USFWS Biological Opinion and the City's California Department of Fish and Wildlife Streambed Alteration Agreement for Routine Maintenance. The Overarching Plan and Routine Maintenance Agreement include requirements for worker training and pre-maintenance nesting surveys as well as monitoring and reporting when nests are found.

Conclusion

Vegetation clearing and other construction activities for the proposed project could result in the loss of individuals or bat roosts, or disruptions to maternity roosts, of silver-haired bat and pallid bat. The potential disturbance or loss of silver-haired bat and pallid bat individuals or roost sites would be **significant**.

Alignment Option 1A

Since Alignment Option 1A would result in similar impacts to roosting special-status bats as the Proposed Trail Alignment. Vegetation clearing and other construction activities for Alignment Option 1A could result in the loss of individuals or bat roosts, or disruptions to maternity roosts (if present), of silver-haired bat and pallid bat. The potential disturbance or loss of silver-haired bat and pallid bat individuals, roost or maternity sites would be **significant**.

Alignment Option 1C

Alignment Option 1C would result in similar impacts to nesting special-status bats as the Proposed Trail Alignment. Vegetation clearing and other construction activities for Alignment Option 1C could result in the loss of individuals or bat roosts, or disruptions to maternity roosts (if present), of silver-haired bat and pallid bat. The potential disturbance or loss of silver-haired bat and pallid bat individuals, roost or maternity sites would be **significant**.

Alignment Option 5A

Alignment Option 5A would result in similar impacts to nesting special-status bats as the Proposed Trail Alignment. However, Alignment Option 5A has a slight increase in permanent and temporary impacts to oak woodland habitat as described in Impact 4.3-4. Vegetation clearing and other construction activities for Alignment Option 5A could result in the loss of individuals or bat roosts, or disruptions to maternity roosts (if present), of silver-haired bat and pallid bat. The potential disturbance or loss of silver-haired bat and pallid bat individuals, roost or maternity sites would be **significant**.

Mitigation Measures

Mitigation Measure 4.3-7: Special-status bats.

This mitigation would apply for the Proposed Trail Alignment, Alternative Alignments 1A, 1C, and 5A.

a. Bat surveys shall be conducted by a qualified wildlife biologist within 5 days before removal of trees that have suitable roosting habitat for bats. Specific survey methodologies shall be determined in coordination with CDFW, and may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (e.g., Petterson, Anabat, Wildlife Acoustics). Removal of any significant roost sites located shall be avoided to the extent feasible with a non-disturbance buffer of 250-feet. If it is determined that an active roost site cannot be avoided and will be affected, bats shall be excluded from the roost site before the site is removed. The City shall first notify and consult with CDFW on appropriate bat exclusion methods and roost removal procedures. Exclusion methods may include use of one-way doors at roost entrances (bats may leave, but not reenter), or sealing roost entrances when the site can be confirmed to contain no bats. Once it is confirmed that all bats have left the roost, crews shall be allowed to continue work in the area. The City may have to provide temporary suitable bat roosting habitat (i.e. bat boxes), prior, during, and after exclusion to provide bat roosting habitat.

b. Exclusion efforts shall be restricted during periods of sensitive activity (e.g., during winter hibernation or while females in maternity colonies are nursing young [generally, April 15 through August 15]). If a hibernation or maternity roosting site is discovered, the project biologist and the City shall consult with CDFW to establish appropriate exclusionary buffers until all young are determined to be able to fly by the project biologist. Once it is determined that all young are able to fly, passive exclusion devices

shall be installed and all bats will be allowed to leave voluntarily. Once it is determined by a qualified biologist that all bats have left the roost, crews shall be allowed to work within the buffer zone.

Significance after Mitigation

Implementation of Mitigation Measures 4.3-7 would avoid the loss of individuals, occupied roosts, or other active breeding sites of pallid bat, and silver-haired bat. With implementation of these measures, the project would not substantially affect the distribution, breeding productivity, viability, or the regional population of these special-status bat species. Therefore, potential impacts to Pallid bat and silver-haired bat would be reduced to a **less-than-significant** level.

Impact 4.3-8	Disturbance or loss of City protected trees, Valley Oak Woodland, and other Sensitive Vegetation Alliances and Associations.
Applicable Policies and Regulations	CEQA California Fish and Game Code City of Roseville General Plan Open Space and Conservation Element City of Roseville Municipal Code Chapter 19.66-Tree Preservation Ordinance
Significance with Policies and Regulations	Proposed Project: Significant Alignment Option 1A: Significant Alignment Option 1C: Significant Alignment Option 5A: Significant
Mitigation Measures	Mitigation Measure 4.3-8 (Proposed Project, Option 1A, Option 1C, Option 5A)
Significance after Mitigation	Less than significant (Proposed Project, Option 1A, Option 1C, Option 5A)

The proposed project alignment crosses oak woodland and riparian areas with abundant native oaks. Valley Oak Woodland (inclusive of valley oak riparian woodland) is listed as Sensitive Vegetation Alliances and Associations (previously known as Sensitive Natural Communities) by CDFW. Native trees stabilize creek banks, provide wildlife habitat, and improve aquatic habitat by shading and contributing vegetative matter to support aquatic macroinvertebrate species adjacent to streams. Additionally, native trees and oak woodlands provide unique habitat for native insect and wildlife species and preserve other native plants that grow in association with the trees by influencing sunlight, soil moisture, ground temperature, exposure to rain and cold, and soil nutrients.

The City of Roseville Municipal Code Ordinance Section 19.66.070, Oak Tree Planting and Replacement Program regulates removal of oak trees within the City. The ordinance protects native oak trees or the area within the protected zone of a native oak (i.e. any tree of the genus *Quercus* such as valley oak (*Quercus lobata*), blue oak (*Q. douglasii*), and interior live oak (*Q. wislizenii*) measuring equal to or greater than six inches in diameter at breast height measured as a total of a single trunk or multiple trunks).

Proposed Trail Alignment

Construction Impacts

Project construction would involve grading and removal of non-native annual grassland, grading for drainage, shrub and oak tree removal, removal of riparian vegetation for installation of bridge footings, retaining walls, and rock slope protection, and removal of oak woodland for construction of the proposed trail alignment. In addition to potential damage or direct removal of riparian vegetation and oak trees, construction activities (i.e., trail and bridge construction), could result in dust, root damage, branch trimming of trees, and other disturbances to sensitive habitats, resulting in habitat degradation. Preliminary analysis based on initial design of the trail indicates that the Proposed Trail Alignment would permanently impact up to 4.30 acres of valley oak riparian woodland and temporarily affect up to 4.9

acres of valley oak riparian woodland. Valley Oak Woodland (inclusive of valley oak riparian woodland) is listed as an S3* sensitive alliance. Alliances with State ranks of S1-S3 are considered to be highly imperiled. Associations currently designated as being of S3 or rarer are indicated with an asterisk (*), which is the case for the valley oak riparian woodland. This is likely because of reduction of habitat statewide most likely due to habitat conversion because of urbanization. Although the acreage impacted is small in comparison to the estimated total statewide, the ecological service that these oaks provide to birds and local wildlife is important because these oaks provide shelter and food and, if the trees are adjacent to streams, they can also help to shade the streams and help maintain suitable water temperatures for salmonids.

Use-related Impacts

The long-term maintenance and repair of the multi-use path would require the use of various tool and equipment for vegetation maintenance which could include working within sensitive riparian and oak woodland habitat and annual grassland, resulting in vegetation removal or accidental removal, trimming of riparian or oak branches that could lead to habitat degradation. The City of Roseville Parks Maintenance Department provides training to crews that work in City preserves or open habitat and maintenance and monitoring is performed as per the City of Roseville Open Space Preserve Overarching Management Plan. All trail maintenance activities would be conducted consistent with the City's Open Space Preserve Overarching Management Plan and related USFWS Biological Opinion and the City's California Department of Fish and Wildlife Streambed Alteration Agreement for Routine Maintenance. The Overarching Plan and Routine Maintenance Agreement include requirements for worker training and pre-maintenance nesting surveys as well as monitoring and reporting when nests are found.

Conclusion

Vegetation clearing and other construction activities for the proposed project could result in the loss of sensitive vegetation alliances, such as valley oak riparian woodlands and riparian habitat. These sensitive vegetation alliances are in decline and are protected under CEQA and CDFG Code. The potential disturbance or loss of sensitive vegetation alliances, such as oak woodlands, and riparian habitat would be **significant**.

Alignment Option 1A

Under Alignment Option 1A would result in similar impacts to sensitive habitats as the Proposed Trail Alignment. Preliminary analysis indicates that Alignment Option 1A would permanently impact 0.20 acre less of valley oak riparian woodland, and temporarily affect 0.10 acre less of valley oak riparian woodland than the Proposed Trail Alignment. This would be a **significant** impact.

Alignment Option 1C

Alignment Option 1C would result in similar impacts to sensitive habitats as the Proposed Trail Alignment. Preliminary analysis indicates that Alignment Option 1C would permanently impact 0.05 acre less of valley oak riparian woodland, and temporarily affect 0.05 acre less of valley oak riparian woodland than the Proposed Trail Alignment. This would be a **significant** impact.

Alignment Option 5A

Alignment Option 5A would result in similar impacts to sensitive habitat as the Proposed Trail Alignment. Preliminary analysis indicates that Alignment Option 5A has a slight increase in permanent and temporary impacts to oak woodland habitat because Alignment Option 5A would permanently impact 0.30 more acres of valley oak riparian woodland, and temporarily affect 0.20 more acres of valley oak riparian woodland. This would be a **significant** impact.

Mitigation Measures

Mitigation Measure 4.3-8: Avoid impacts or mitigate for impacts to Valley Oak Woodland, and other Sensitive Vegetation Alliances and Associations (previously known as Sensitive Natural Communities).

This mitigation would apply for the Proposed Trail Alignment, Alignment Option 1A, 1C, and 5A.

a. To the maximum extent feasible, oak and riparian trees shall be avoided where possible and protection measures shall be implemented to protect oak woodlands, riparian areas and associated native trees from project-related impacts. The following measures shall be implemented for oak and riparian trees that would be impacted by project activities to avoid and minimize potential impacts to individual oak and riparian trees:

    1. Temporary protective fencing shall be installed at least one foot outside the dripline of the native oak tree before initiating construction to avoid damage to the tree canopy and root system. A circle with a radius measurement from the trunk of the tree to the tip of its longest limb will constitute the dripline protection area for each tree. Limbs must not be cut back to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of each tree. Removing limbs that make up the dripline does not change the protected area.

    2. No vehicles, construction equipment, mobile home/office, supplies, materials or facilities shall be driven, parked, stockpiled or located within the dripline of the native oak trees.

    3. No grading shall be allowed within the dripline of the native oak tree.

    4. No trenching shall be allowed within the dripline of the native oak tree. If it is necessary to install underground utilities within the dripline of the native oak tree, the utility line shall be jacked and bored under the supervision of a certified arborist.

    5. Drainage patterns onsite shall not be modified so that water collects or stands within, or is diverted across, the dripline of any native oak tree.

    6. If ground disturbance must occur within the protected zone of a native oak tree, all work shall occur consistent with the City's Tree Preservation Ordinance requirements.

b. For those trees that cannot be avoided, the City shall comply with any riparian habitat conditions to comply with the Compensatory Wetland, Stream and Riparian Mitigation and Monitoring Plan that will be developed during the Section 404, Section 401, and Section 1602 permitting process as described in Mitigation Measure 4.3-1. Additionally, the City shall implement the following:

    1. An arborist report shall be conducted to identify the species and quantities of trees that will be removed to implement the project.

    2. If native oak trees are removed, they shall be replaced as outlined in the City's Tree Preservation Ordinance 19.66.070. A Tree Planting and Maintenance Plan showing species, size, spacing and location of plantings, and the location and species of established vegetation shall be prepared. A monitoring program shall also be established to ensure compliance with any prescribed mitigation measures established by the project and to monitor the oak woodland restoration area.

    3. Fully implement Mitigation Measure 4.3-1, which requires the City to secure and comply with a CDFW Streambed Alteration Agreement that would include a riparian restoration component.

Significance after Mitigation

Implementing Mitigation Measure 4.3-8 would reduce significant impacts on oak woodlands, riparian habitat and other Sensitive Vegetation Alliances because it would require the City to identify and avoid oaks, oak woodlands and riparian habitat or provide compensation for loss of oaks, riparian trees, oak woodland and riparian habitat through enhancement of existing habitats, creation and management of oak woodland and riparian habitat, conservation easements, or other appropriate measures. Therefore, potential impacts to oak woodlands, riparian habitat or other Sensitive Vegetation Alliances would be reduced to a **less-than-significant** level.

Impact 4.3-9	Disturbance or loss of special-status plants – Sanford's arrowhead.
Applicable Policies and Regulations	CEQA California Native Plant Protection Act City of Roseville General Plan Open Space and Conservation Element
Significance with Policies and Regulations	Proposed Project: Significant Alignment Option 1A: Significant Alignment Option 1C: Significant Alignment Option 5A: Significant
Mitigation Measures	Mitigation Measure 4.3-9 (Proposed Project, Option 1A, Option 1C, Option 5A)
Significance after Mitigation	Less than significant (Proposed Project, Option 1A, Option 1C, Option 5A)

Proposed Trail Alignment

In-Stream Construction Activities Impacts

The project is a 4.25-mile multi-use trail that would follow creek corridors along portions of Dry, Cirby, and Linda Creeks. The multi-use trail would generally consist of a 10-foot wide paved trail with two-foot wide shoulders. Construction of the proposed multi-use trail would require removal of vegetation and existing features, grading, placement of aggregate base material, and construction of five roadway undercrossings, construction or modification of up to eight bridges (refer to Table 3-2 in Chapter 3, "Project Description"), and approximately 27,000 square feet of retaining walls (refer to Table 3-3 in Chapter 3, "Project Description"). In addition, a maximum of eight temporary stream crossings or stream diversions would be required. These activities would create ground disturbance in the adjacent upland area, along the stream banks, and within the stream channel of Dry, Linda, and Cirby Creeks.

No special-status plants have been documented in the project site. Only one special-status plant species, Sanford's arrowhead, was identified as having a moderate potential to occur on the project site because of presence of suitable habitat particularly along the margins of the perennial streams and pond. No protocol-level surveys for special-status plant species have been conducted to confirm presence or absence of Sanford's arrowhead on the project site. Therefore, project implementation could affect Sanford's arrowhead, if present.

Placement of bridge abutments and streambank stabilization work for the proposed project could result in permanent impacts to 0.26 acre of Sanford's arrowhead potential habitat (i.e., wetlands, pond, and stream habitat) and temporary impacts to 0.58 acre of potential Sanford's arrowhead habitat. In addition to direct removal of potential habitat and individual plants, vegetation removal, grading for drainage, or other construction-related disturbances (i.e., dewatering, stream diversions), plants could suffer other direct physical damage, including breaking, crushing, desiccation, and burying. Damaged plants may experience altered growth and development, or reduced or eliminated seed-set and reproduction, and mortality of individuals or populations can eventually result.

Use-related Impacts

The long-term maintenance and repair of the multi-use path would require the use of various tool and equipment for vegetation maintenance which could include direct removal or spraying of herbicides in Dry, Linda, and Cirby Creeks. Additionally, potential users of the trail may inadvertently or purposely collect or remove Sanford's arrowhead. Over time, these activities could adversely affect Sanford's arrowhead. The City of Roseville Parks Maintenance Department provides training to crews that work in City preserves or open habitat and maintenance and monitoring is performed as per the City of Roseville Open Space Preserve Overarching Management Plan. The Overarching Plan and related USFWS Biological Opinion (81420-2008-F-1958-3) includes conditions that address use of herbicides near vernal pools and riparian areas. All trail maintenance activities would be conducted consistent with the City's Open Space Preserve Overarching Management Plan and related USFWS Biological Opinion and the City's California Department of Fish and Wildlife Streambed Alteration Agreement for Routine Maintenance. The Overarching Plan and Routine Maintenance Agreement include requirements for worker training and pre-maintenance nesting surveys as well as monitoring and reporting when nests are found. Additionally, the City of Roseville has developed a brochure entitled "Doing Your Part to Care for Our Open Space," which encourages residents to leave no trace and to not collect plants or cut down trees.

Conclusion

Vegetation clearing and other in-water construction activities for the proposed project could result in the loss of Sanford's arrowhead. The potential disturbance or loss of Sanford's arrowhead would be a **significant** impact.

Alignment Option 1A

Option 1A is the same as the Proposed Trail Alignment until the approach to the Dry Creek/Cirby Creek confluence and the first bridge. Where the Proposed Trail Alignment would cross Dry Creek via Bridge #2 and continue on the northern bank of Cirby Creek, Option 1A would cross Dry Creek via Bridge #3. By remaining on the south bank of Cirby Creek, Option 1A would not require the construction of Bridge #2 or Bridge #4. Option 1A would require an additional 765 linear feet of retaining walls or streambank stabilization when compared to the Proposed Trail Alignment. However, because this option does not require the construction of Bridge #2 or Bridge #4 the total permanent impacts to Sanford's arrowhead habitat is 0.01 acre less than the Proposed Trail Alignment (or 0.25 acre). Similarly, temporary impacts to Sanford's arrowhead habitat is 0.03 acres less than the Proposed Trail Alignment (or 0.55 acres). Vegetation clearing and other in-water construction activities for Alignment Option 1A could result in the loss of Sanford's arrowhead. The potential disturbance or loss of Sanford's arrowhead would be a **significant** impact.

Alignment Option 1C

Option 1C is the same as the Proposed Trail Alignment and would have the same bridges and undercrossings described above for the Proposed Trail Alignment with the exception that in Sheet 1 Segment, the multi–use trail would be located on the northeastern side of Dry Creek. Implementation of Option 1C would require an additional 1,080 linear feet of streambank stabilization. Under Option 1C permanent impacts to Sandford's arrowhead potential habitat would be 0.01 acre less than the Proposed Trail Alignment (or 0.25 acre), and Option 1C temporary impacts would be 0.05 acres less than the Proposed Trail Alignment. Vegetation clearing and other in water construction activities for the Alignment Option 1C could result in the loss of Sanford's arrowhead. The potential disturbance or loss of Sanford's arrowhead would be a **significant** impact.

Alignment Option 5A

Option 5A deviates from the Proposed Trail Alignment just west of Bridge #13. Option 5A would remain on the south bank of Cirby Creek until crossing to the north bank via Bridge #14. Option 5A would include both an undercrossing of Sunrise Avenue and connecting paths to both sides of Sunrise Avenue. Both the Proposed Trail Alignment and Option 5A would make extensive use of retaining walls through this section of the path, however Option 5A would require an additional 635 linear feet when

compared to the Proposed Trail Alignment. The permanent impacts to Sandford's arrowhead potential habitat under Option 5A would be 0.0005 acre more than the Proposed Trail Alignment, and the temporary impacts to Sandford's arrowhead potential habitat would be 0.001 acre less than the Proposed Trail Alignment. Vegetation clearing and other in water construction activities for the Alignment Option 5A could result in the loss of Sanford's arrowhead. The potential disturbance or loss of Sanford's arrowhead would be a **significant** impact.

Mitigation Measures

Mitigation Measure 4.3-9: Special-status plants – Sanford's arrowhead.

This mitigation would apply for the Proposed Trail Alignment, Alternative Alignments 1A, 1C, and 5A.

The City shall implement the following measures to reduce potential impacts on Sanford's arrowhead:

a. Prior to project construction and during the blooming period for Sanford's arrowhead (May – November), a qualified botanist shall conduct floristic-level surveys for Sanford's arrowhead in areas where potentially suitable habitat would be removed or disturbed by project activities. The normal blooming period for Sanford's arrowhead generally indicates the optimal survey period when the species is most identifiable.

b. If no Sanford's arrowhead plants are found, the botanist shall document the findings in a letter report to the City of Roseville and CDFW and no further mitigation shall be required.

c. If Sanford's arrowhead plants are found that cannot be avoided during construction, the City shall consult with CDFW to determine the appropriate mitigation measures for direct and indirect impacts that could occur as a result of project construction and shall implement the agreed-upon mitigation measures to achieve no net loss of occupied habitat or individuals. Mitigation measures may include preserving and enhancing existing populations, creation of offsite (but within the stream reach) populations on project mitigation sites through seed collection or transplantation, and/or restoring or creating suitable habitat in sufficient quantities to achieve no net loss of occupied habitat and/or individuals. Potential mitigation sites could include suitable locations along the stream but outside of the construction areas. A mitigation and monitoring plan shall be developed describing how unavoidable losses of special-status plants will be compensated.

d. If relocation efforts are part of the mitigation plan, the plan shall include details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, monitoring and reporting requirements, success criteria, and remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements.

e. Success criteria for preserved and compensatory populations shall include:

    1. The extent of occupied area and plant density (number of plants per unit area) in compensatory populations shall be equal to or greater than the affected occupied habitat.

    2. Compensatory and preserved populations shall be self-producing. Populations shall be considered self-producing when:

        I. plants reestablish annually for a minimum of five years with no human intervention such as supplemental seeding;

        II. reestablished and preserved habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types in the project vicinity.

3. If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, success criteria such as those listed above and other details, as appropriate to target the preservation of long term viable populations.

Significance after Mitigation

Implementing Mitigation Measure 4.3-9 would reduce significant impacts on Sanford's arrowhead to a **less-than-significant** level because it would require the City to identify and avoid Sanford's arrowhead plants or provide compensation for loss of Sanford's arrowhead plants through enhancement of existing populations, creation and management of offsite populations, conservation easements, or other appropriate measures.

Impact 4.3-10	Impacts on movement of native resident or migratory fish or wildlife species or migratory wildlife corridors or impede the use of native wildlife nursery sites.
Applicable Policies and Regulations	CEQA City of Roseville General Plan Open Space and Conservation Element
Significance with Policies and Regulations	Proposed Project: Significant Alignment Option 1A: Significant Alignment Option 1C: Significant Alignment Option 5A: Significant
Mitigation Measures	Mitigation Measure 4.3-10 (Proposed Project, Option 1A, Option 1C, Option 5A)
Significance after Mitigation	Less than significant (Proposed Project, Option 1A, Option 1C, Option 5A)

Proposed Trail Alignment

Construction Impacts

The project site is an urbanized creek corridor bounded by residential and commercial development. The project site functions as a regional biological corridor, providing potential for local and common terrestrial species adapted to living in an urban environment, and migration and dispersal though developed portions of the City to larger open space areas to the west of the project site. The eastern portion is more developed, and there is no direct connectivity to open space areas to the east of the project site. Thus, the creek corridor acts as a funnel in the eastern area, exposing terrestrial species to urban road hazards. Because not all of the available habitat would be affected by construction activities and because the constructed trail would affect a small portion of the available habitat, temporary movement of common terrestrial species would not result in substantial effects on terrestrial wildlife movement because there would be adjacent habitat that wildlife could use for local movement. Additionally, areas that would be affected by construction in the project site are not known to contain native wildlife nursery sites, such as bird rookeries or bat roosts. Furthermore, implementation of the project would require the undercrossings of five roads (see Chapter 3, "Project Description"). Terrestrial wildlife would be able to continue to use these undercrossings to cross busy roads that include Sunrise Avenue, Rocky Ridge Road, and Old Auburn Road.

However, the creek corridor also provides migration, spawning, and rearing habitat for federally threatened Central Valley steelhead. Central Valley fall-run Chinook salmon is also known to occur in Dry Creek; however, spawning and summer rearing habitat likely only occurs in Antelope Creek, Miner's, and Secret Ravine because of excessively high temperatures in Cirby and Linda Creeks (ECORP 2016).

As discussed in Impact 4.3-2, construction of the Proposed Trail Alignment would impact aquatic and riparian habitat for Central Valley steelhead and Central Valley fall-run Chinook Salmon that help these

migratory fish species reach their breeding and nursery grounds. Permanent direct effects would result from the placement of piles/fill in Central Valley steelhead and Central Valley fall-run Chinook salmon aquatic habitat, and permanent indirect effects could include night lighting "spill" on waterways from bridges, and the loss of riparian vegetation and SRA cover. Temporary indirect effects could include sedimentation and turbidity, temporary removal of vegetation, as well as pollution/contamination of project waterways. Construction of the project would include the temporary use of a water tight coffer dam as discussed under Impact 4.3-1 and 4.3-2.

Use-related Impacts

The long-term maintenance and repair of the multi-use path and bridge structures would require the use of various tool and equipment that have the potential to introduce fill or other materials into Dry, Linda, and Cirby Creeks that could affect Central Valley steelhead and Central Valley fall-run Chinook salmon and their habitat and thus affect their migratory corridor and nursery sites. All trail maintenance activities would be conducted consistent with the City's Open Space Preserve Overarching Management Plan and related USFWS Biological Opinion and the City's California Department of Fish and Wildlife Streambed Alteration Agreement for Routine Maintenance. The Overarching Plan and Routine Maintenance Agreement include requirements for worker training and pre-maintenance nesting surveys as well as monitoring and reporting when nests are found. In addition, the creation of impervious surfaces associated with the Proposed Trail Alignment could result in indirect impacts to Dry, Linda, and Cirby Creeks and other downstream waters as a consequence of runoff that could affect Central Valley steelhead and Central Valley fall-run Chinook salmon. These indirect impacts would be minimized through compliance with protective City and state regulations as described in Section 4.8, "Hydrology and Water Quality," Impact 4.3-1, and Impact 4.3-2. Both the City of Roseville Grading Permit and the State Water Resources Control Board NPDES permit (which is required for all projects which disturb over one acre of soil), require the preparation of a SWPPP that would help prevent or minimize use-related impacts.

Conclusion

As described above, impacts on terrestrial wildlife movement corridors and/or terrestrial wildlife nursery sites would be less than significant, and no mitigation for terrestrial species would be required.

Implementation of the proposed project would create construction noise, vibrations, lighting issues, temporary diversion structures, temporary creek crossings, installation of RSP and rock and log vanes, limited amount of pile placement (limited to the Darling Way Bridge Widening location), and other associated disturbances that have the potential to harass and disrupt migratory behavior of Central Valley steelhead and/or Central Valley fall-run Chinook salmon. Implementation of the proposed project could impact migratory fish and their breeding and nursery sites; however, because the project would have to secure permits from federal and state agencies (i.e. Sections 401, 404, and 1602 permits) that would restrict work windows to those when these species are not expected to be within the stream corridor and would require the City to mitigate for the loss of aquatic and riparian habitat, it would not result in substantial effects migratory fish movement or to their breeding or nursery sites.

Construction activities such as clearing and grubbing along stream banks, earthwork, the placement of RSP below the OHWM, and the construction of temporary creek crossings have the potential to result in temporary sedimentation and turbidity effects, accidental spills of hazardous materials, potential noise-related disturbances, and permanent and temporary loss of SRA, which can affect Central Valley steelhead and/or Central Valley fall-run Chinook salmon spawning sites. This would be a **significant** impact.

Alignment Option 1A

Option 1A would have the similar impacts on migratory fish as the Proposed Trail Alignment because in-water construction could result in impacts to migrating fish if present; and Alignment Option 1A also affects aquatic, riparian, and SRA habitat which in turn could block upstream/downstream passage,

result in siltation that affects spawning grounds, and removal of SRA could lead to an increase in stream temperatures that are unsuitable for salmonids. This would be a **significant** impact.

Alignment Option 1C
Option 1C would have the similar impacts on migratory fish as the Proposed Trail Alignment because in-water construction could result in impacts to migrating fish if present; and Alignment Option 1C also affects aquatic, riparian, and SRA habitat which in turn could block upstream/downstream passage, result in siltation that affects spawning grounds, and removal of SRA could lead to an increase in stream temperatures that are unsuitable for salmonids. This would be a **significant** impact.

Alignment Option 5A
Option 5A would have the similar impacts on migratory fish as the Proposed Trail Alignment, because in-water construction could result in impacts to migrating fish if present; and Alignment Option 5A also affects aquatic, riparian, and SRA habitat which in turn could block upstream/downstream passage, result in siltation that affects spawning grounds, and removal of SRA could lead to an increase in stream temperatures that are unsuitable for salmonids. This would be a **significant** impact.

Mitigation Measures

Mitigation Measure 4.3-10: Movement of native resident or migratory fish or wildlife species or migratory wildlife corridors or impede the use of native wildlife nursery sites.
This mitigation would apply for the Proposed Trail Alignment, Alternative Alignments 1A, 1C, and 5A.

Implementation of Mitigation Measure 4.3-1 and Mitigation Measure 4.3-2 would ensure that impacted habitats are mitigated for or restored, and work windows would prevent impact to migratory fish species. The work windows would allow the fish to freely use the stream corridors during migration to and from the streams. Impacted habitats (i.e., aquatic, riparian and SRA) would be restored or mitigated for and although affected their long-term function as breeding or nursery site would not be impacted.

a. Implement Mitigation Measure 4.3-1 Wetlands, waters of the United States, waters of the state and riparian habitat.

b. Implement Mitigation Measure 4.3-2 Central Valley Steelhead and Central Valley Fall-run Chinook Salmon.

Significance after Mitigation
Implementing Mitigation Measure 4.3-10 would reduce significant impacts on migratory fish, their breeding and nursery habitat to **less-than-significant** level because the City would have to secure permits from Federal and State Agencies (i.e. Sections 401, 404, and 1602 permits) that would restrict work windows to those when these species are not expected to be within the stream corridor, would require the City to mitigate for the loss of aquatic and riparian, and although the aquatic and riparian habitat would be temporarily affected, it would not result in substantial effects migratory fish movement or to their breeding or nursery sites. Implementation of Mitigation Measure 4.3-1 and Mitigation Measure 4.3-2 would ensure that impacted habitats are mitigated for or restored, and work windows would prevent impact to migratory fish species. The work windows would allow the fish to freely use the stream corridors during migration to and from the streams. Impacted habitats (i.e., aquatic, riparian and SRA) would be restored or mitigated for and although affected their long-term function as breeding or nursery site would not be impacted.

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