

## 5.3 BIOLOGICAL RESOURCES

This section of the Draft Environmental Impact Report (EIR) describes the affected environment and regulatory setting for biological resources and is based upon the *Revised Biological Study Report – North State Pavilion* (January 2018) prepared by ENPLAN, which is included as Appendix 15.3, BIOLOGICAL RESOURCES DOCUMENTATION. It summarizes the results of biological field surveys of the project area and describes the potential impacts on biological resources that would result from implementation of the proposed project. This section also discusses the proposed project in the context of regional and local biological resources and addresses the potential impacts to biological resources that may occur as a result of project implementation. Additionally, this section provides mitigation measures that would reduce the impacts identified. The environmental setting, context, and impact analysis in this section are based on the following sources and technical studies available for review at the City of Redding Development Services Department, Planning Division:

- City of Redding. *2000 – 2020 General Plan*. October 2000.
- ENPLAN. *Dignity Health Project, Tree Survey Report (Candidate Trees)*. September 2018.
- ENPLAN. *North State Pavilion, Wetland Screening Evaluation*. June 2018.
- ENPLAN. *Biological Study Report, North State Pavilion*. January 2018.

Field studies were conducted in conformance with existing protocols for species of interest to identify any plant communities, listed plant species, listed wildlife species, and wildlife habitat present on the proposed biological resource study area, which includes the project site and offsite improvements. In addition to the field surveys, literature reviews were conducted to determine if sensitive biological resources have been recorded on or in the vicinity of the proposed project site. Data sources examined for the literature review included in the California Natural Diversity Database (CNDDDB), California Department of Fish and Wildlife (CDFW) Special Animals List, California Native Plant Society (CNPS) Electronic Inventory, soils records, wetland mapping, United States Fish and Wildlife (USFWS) records, and National Marine Fisheries Service (NMFS) records. The CNDDDB records search covered a 10-mile radius around the site. This entailed review of records for portions of the following quadrangles: Redding, Olinda, Whiskeytown, Shasta Dam, Bella Vista, Igo, Enterprise, Palo Cedro, Cottonwood, Balls Ferry, Project City, and Ono.

### 5.3.1 ENVIRONMENTAL SETTING

#### REGIONAL SETTING

The study area is located in the City of Redding and in Shasta County, California. The study area is characterized as a dissected plain located between Klamath Mountains to the north and the Cascades to the east. The plain is highly dissected by streams that drain towards the Sacramento River. Slopes range from nearly level to very gentle on remnants of depositional surfaces to moderately steep to steep in ravines. The climate of the region is characterized as hot and sub-humid and average precipitation is approximately 20 to 40 inches per year. Mean maximum temperature is approximately 76 degrees Fahrenheit (°F) and mean minimum temperature is approximately 52°F. Predominant upland vegetation communities within the region include: oak woodland, oak-pine woodland, oak savannah, chaparral, and annual grassland. Aquatic environments in the region include: seasonal and perennial streams that drain to the Sacramento River; vernal pools and other seasonal wetlands; freshwater marsh; groundwater seeps; and man-made ponds and reservoirs.

## **EXISTING ONSITE CONDITIONS**

The proposed project site is located within an urban setting and is situated approximately 480 feet above mean sea level (msl). The topography is relatively level; runoff from the site is tributary to the Sacramento River, which flows southward along the western site boundary. The site is highly disturbed and previously supported multiple uses, including, but not limited to, a concrete plant, sand and gravel operation, greenhouse growing operation, and automotive-related businesses. Remnants of the past uses are still present (e.g., partially paved areas, concrete retaining walls, etc.). One building is currently present onsite and houses several small businesses. The climate of the project vicinity is of the Mediterranean type with cool, wet winters and hot, dry summers. Annual precipitation averages approximately 33.68 inches at the Redding Municipal Airport, approximately 5.5 miles to the southeast.

Review of aerial photographs showed that the proposed project site and surrounding areas were essentially devoid of vegetation in 1943, but were undeveloped. In 1955, the project site supported a lumber mill and a gravel plant, with minimal vegetation present onsite. By 1983, a well-developed band of riparian vegetation was present along the Sacramento River, primarily outside the project site boundary. By 1998, several clumps of young cottonwoods are visible within the project boundary. These same cottonwoods continue to be present onsite today.

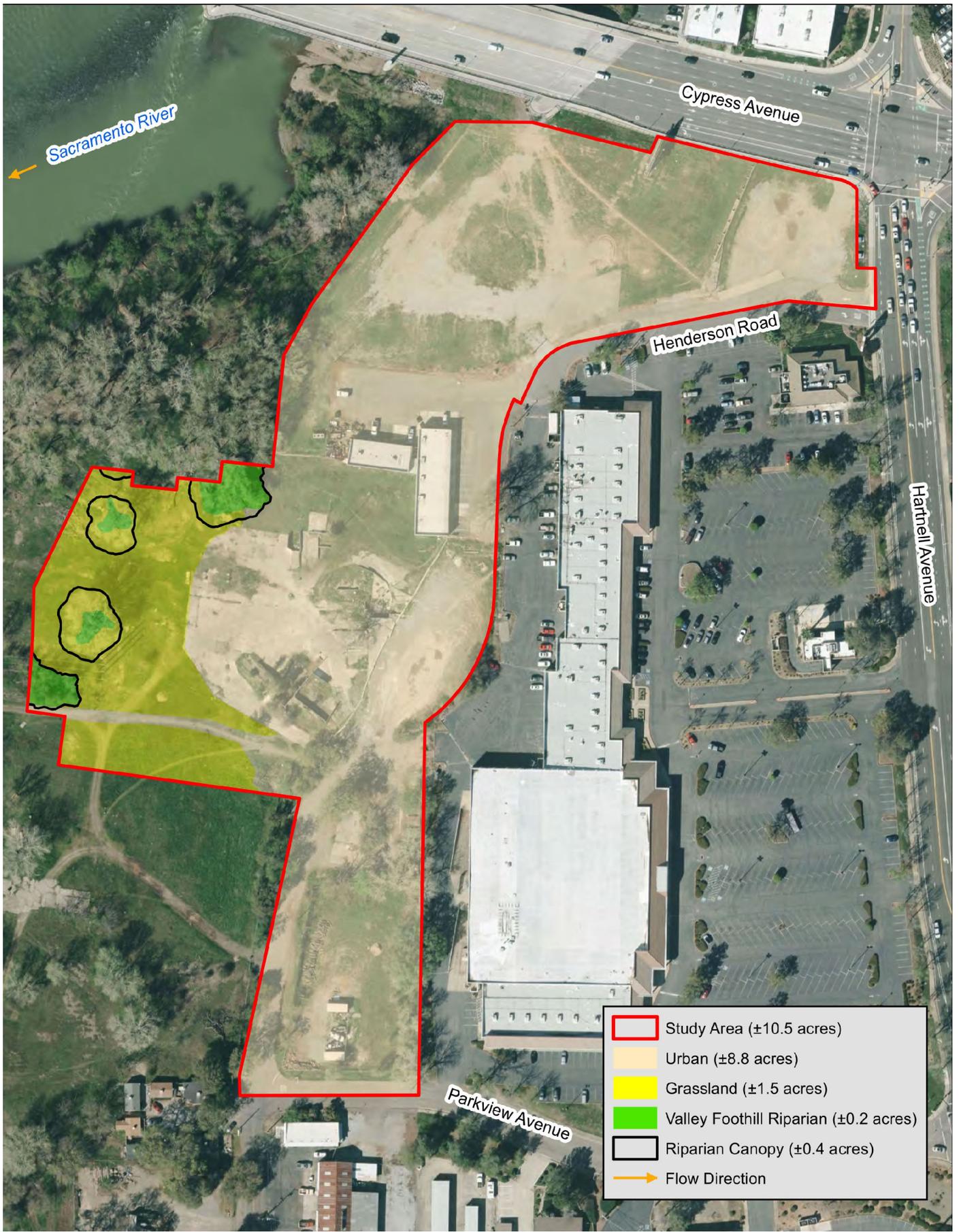
## **ONSITE BIOLOGICAL COMMUNITIES**

The onsite plant communities/wildlife habitats, in order of abundance, consist of urban habitat, annual grassland, and a riparian woodland; small stands or individuals of valley oaks and interior live oaks are present outside the riparian habitat, but do not form a distinct oak woodland community (refer to Figure 5.3-1, PLANT COMMUNITIES AND WILDLIFE HABITATS). Field inspection confirmed that no wetlands are present.

According to CDFW, since the inception of the Natural Heritage Program in 1979, natural communities have been considered for their conservation significance (CDFW, 2017). Unique natural communities were recorded in the CNDDDB. However, in the mid-1990s, funding for the natural community portion of the program was cut. Although no new occurrences of natural communities have been added to the CNDDDB since that time, many of the natural community occurrences maintained in the CNDDDB still have significance for conservation and their existence should be considered in the environmental review process. Review of CNDDDB natural community records showed that a Great Valley valley oak riparian forest has been broadly mapped immediately south of the project site.

Prior to 1999, natural communities in California were generally described using the Holland nomenclature system (California Department of Fish and Game, 1986). Since 1999, CDFW has been standardizing California's vegetation nomenclature to comply with the National Vegetation Classification System. However, there is no direct translation between the two systems, so the Holland nomenclature remains in use in the CNDDDB.

One purpose of vegetation classification is to assist in determining the level of rarity and imperilment of vegetation types. Some conservation groups (e.g., NatureServe), have evaluated natural communities and assigned global (G) and state (S) ranks according to their conservation status (ranging from 1 to 5 [i.e., critically impaired to secure]). CDFW considers ranks S1-S3 as being of special concern and warranting consideration under the California Environmental Quality Act (CEQA).



Dignity Health  
North State Pavilion Project

Plant Communities and Wildlife Habitats

Figure 5.3-1

If a high-priority natural community is present on a specific site, a case-by-case determination must then be made as to whether the project-affected stands can be considered as high-quality occurrences of the given community. Criteria that may be used to determine if the community should be considered as a high-quality occurrence include factors such as lack of invasive exotic species, absence of human-caused disturbances, evidence of reproduction, and absence of insect and disease damage.

In addition to identifying the natural community types present and describing their site-specific characteristics, the wildlife values of the onsite communities are described based on data provided in CDFW's California Wildlife Habitat Relationships (WHR) classification system, which addresses 59 wildlife habitat types in California. The following represents a description of the existing onsite biological communities:

### **Urban Habitat**

Urban habitats are characterized as natural habitats that have been converted to facilitate development or have been substantially altered by planting non-native vegetation. Vegetative components present may include tree groves, street strips, shade trees, lawns, and/or shrub cover. The diversity of wildlife species is lowest in downtown areas and highest in suburbia. Wildlife species commonly found in urban habitats include pigeons, doves, gulls, house sparrows, mockingbirds, raccoons, opossums, and striped skunks. Overall, urban habitat has low value to wildlife species.

Urban habitat is widespread on the proposed project site, covering approximately 8.8 acres and including buildings, roads, and areas that have been previously cleared. This highly disturbed community type is not recognized in the CDFW natural communities classification system or the Holland system, but is described in the WHR system. Urban habitat is not a high-priority natural community.

As previously discussed above, the proposed project site has a long history of urban use, dating back to at least 1955 and continuing through to the present. Only one building is currently present onsite; the building has an asphalt driveway and parking lot on its northern and eastern sides. Lands further north of the building were recently used as a construction staging area for the Cypress Avenue bridge replacement project and are currently devoid of vegetation and covered with gravel. Lands to the south of the building are primarily covered with concrete pads or gravel. The southernmost extension of the proposed project site is enclosed in a chain-link fence and appears to be used for storage and as a plant nursery.

Native valley oaks (*Quercus lobata*) and interior live oaks (*Q. wislizeni*) are present in the urban habitat, primarily along roads, fence lines, and property boundaries, but past site development has fragmented the oak woodland to the degree that these trees do not function as an oak woodland community. Numerous non-native plant species have become established in the urban habitat, including tree-of-heaven, English ivy, yellow star-thistle, filarees, and annual grasses. Wildlife species observed in association with urban habitat included rock dove, European starling, northern mockingbird, Eurasian collared dove, and killdeer. Overall, the onsite urban habitat has low to moderate values for wildlife species.

## Annual Grassland

Annual grasslands occur on the floor and foothills of the Central Valley, and in the interior of the Coast Ranges. Annual grassland species also occur as an understory in oak woodlands. Annual grasslands are composed of mostly non-native annual grass species. Common annual grass species include wild oats, soft chess, ripgut brome, wild barley, and foxtail fescue. Forbs often include filarees and clovers; numerous native forbs can also be present.

Annual grassland is inhabited by a variety of wildlife species. Mammals common in this community include black-tailed jackrabbit, coyote, and several species of mice. Snakes are often abundant in annual grassland, feeding on mice and other rodents. Amphibians are relatively uncommon in this community; however, species such as the western toad and Pacific treefrog may be locally abundant near aquatic habitats. Annual grassland also provides nesting and foraging habitat for certain migratory birds.

Annual grassland is the second-most common community on the project site, covering approximately 1.5 acres in the central western arm of the proposed project site. This highly disturbed community type is somewhat similar to the non-native grassland community described by Holland and the annual grassland community described in the WHR system. None of the alliances or associations described in the CDFW natural communities classification system adequately describe the onsite community, which is not a “natural” or even “semi-natural” community.

The onsite annual grassland occurs in the central western arm of the proposed project site. Based on historical aerial photographs, this area appears to have been subjected to less intensive human activity than the urban habitat. The grassland is fragmented, has compacted soils, is comprised of numerous non-native species, and is highly disturbed; current uses include a power line corridor, access roads, and footpaths. Species present include rose clover, winter vetch, yellow star-thistle, smilo grass (an introduced perennial grass), wild oats, bromes, and other non-native species. No wildlife species were observed in association with the onsite annual grassland. Overall, the annual grassland onsite has low values for wildlife species and is not considered a high-priority natural community.

## Riparian Habitat

Valley foothill riparian habitats occur along drainages on the valley floor and foothills. Such habitats tend to occur along low-gradient streams in deep, alluvial soils that are usually moist throughout the summer and fall. The structure of the habitat generally includes a canopy layer composed primarily of winter deciduous trees (e.g., cottonwood and valley oaks), a subcanopy layer (e.g., box elder and Oregon ash), and an understory shrub layer (e.g., wild grape, poison oak, blue elderberry, willows, and California blackberry). Along larger streams and rivers, the combination of dense vegetation and fallen limbs may make the understory almost impenetrable. Herbaceous plants provide minimal vegetative cover, except in openings where tall forbs and shade-tolerant grasses occur.

Valley foothill riparian habitat is utilized by numerous wildlife species. At least 147 bird species have been recorded as nesters or winter visitors in Sacramento River riparian habitat. Based on data maintained by ebird.org (an online database utilized/updated by bird enthusiasts), 110 bird species were observed over a 14 month period in the Henderson Open Space area located offsite to the west of the project site. Additionally, 55 species of mammals are known to use California’s Central Valley riparian habitats (California Department of Fish and Game, 1988). Streamside vegetation provides important nesting and denning habitat as well as cover and food sources. Riparian habitats serve as important dispersal corridors for amphibians, turtles, and some mammals. Riparian vegetation is also important

because it shades streams, thus lowering water temperatures. This benefits salmonids, which prefer streams with cool, well oxygenated water. Streamside vegetation also introduces coarse woody debris into streams, which provides shelter for fish and amphibians. Leaves and small branches are broken down by numerous species of invertebrates, which in turn, are consumed by fish or amphibians.

Riparian habitat is the least common community onsite, covering approximately 0.4 acres (based on canopy cover). It is represented by a stand of small oaks and cottonwoods under the power lines, by two small clusters of cottonwoods, and by several cottonwoods that are an extension of a larger offsite cottonwood community. As with the rest of the site, this community has been highly disturbed by human activity. The community type is somewhat similar to the Great Valley mixed riparian forest described by Holland and the valley foothill woodland habitat described in the WHR system. None of the alliances or associations described in the CDFW natural communities classification system adequately describe the onsite community, but it is most similar to the Fremont cottonwood association. All associations within the Fremont cottonwood alliance are high-priority natural communities. Great Valley mixed riparian forest has been assigned a priority rank of S2.

A well-developed riparian woodland occurs in the floodplain of the Sacramento River to the west of the project site. The northwestern portion of the project site abuts the riparian woodland and approximately 0.4 acres of riparian woodland (based on canopy cover) occurs within the western extension of the project site. Riparian woodland makes up less than four percent of the 10.55-acre project site. The subject vegetation is on the fringe of the riparian corridor, and is relatively young, dating back only 30 to 50 years. Several homeless camps are present in or near the mapped riparian habitats.

Woody riparian species present include Fremont cottonwood (*Populus fremontii* ssp. *fremontii*) and valley oak (*Quercus lobata*); in addition, some Himalayan blackberry (*Rubus armeniacus*), and a few individuals of wild grape (*Vitis californica*), arroyo willow (*Salix lasiolepis*) and sandbar willow (*Salix exigua*) are associated with the trees. Nutsedge (*Cyperus eragrostis*), curly dock (*Rumex crispus*), and other herbaceous species are present below the woody vegetation. Wildlife species observed in association with the onsite riparian woodland included the turkey vulture, acorn woodpecker, killdeer, northern flicker, western scrub-jay, dark-eyed junco, and red-tailed hawk. Overall, the riparian woodland onsite has very high value to wildlife species, but this is primarily due to the presence of the well-developed offsite riparian vegetation.

### **Wetland Habitat**

Soil records maintained by the Natural Resources Conservation Service were reviewed to determine the soil type onsite and their potential to support wetlands. The records review showed that four soil types are present on the site: Cobbly alluvial land; Reiff fine sandy loam, 0 to 3 percent slopes; Reiff fine sandy loam, deep, 0 to 3 percent slopes; and riverwash. Riverwash is considered hydric, while Cobbly alluvial land may contain hydric inclusions. National Wetland Inventory (NWI) maps were reviewed to determine if wetland features have been previously mapped on the site. According to the NWI data, no wetlands or other waters have been mapped onsite.

A field evaluation conducted onsite concluded that the site does not support wetlands or other waters of the U.S. No evidence of wetland hydrology was observed in the study area, nor was any evidence of an ordinary high water mark observed. Although the site supports small stands of riparian trees, the herbaceous layer is dominated by upland vegetation; these areas do not qualify as "hydrophytic

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vegetation” pursuant to Corps standards. Because the wetland hydrology and hydrophytic vegetation criteria are not met, these areas are not wetlands subject to Corps jurisdiction.

## SPECIAL-STATUS SPECIES

Special-status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, State, or other agencies. Some of these species receive specific protection that is defined by federal or State endangered species legislation. Others have been designated as “sensitive” on the basis of adopted policies and expertise of State resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively as “special-status species” in this Draft EIR following a convention that has been developed in practice but as no official sanction. The various categories encompassed by the term, and the legal status of each, are discussed in the Regulatory Settings section. For the purposes of this assessment, the term “special-status” includes:

- *Species that are federally listed or proposed under the Federal ESA (50 CFR 17.11-17.12);*
- *Species that are candidates for listing under the Federal ESA (61 FR 7596-7613);*
- *Species that are State listed or proposed under the California ESA (14 CCR 670.5);*
- *Species listed by the USFWS or CDFW as a species of concern (USFWS), rare (CDFW), or of special concern (CDFW);*
- *Fully protected animals as defined by the State of California (CDFG Code Sections 3511, 4700, and 5050);*
- *Plants listed as rare or endangered under the California Native Plant Protection Act (State of California CDFG Code Section 1900 et seq.); and*
- *Plants listed by the California Native Plant Society (CNPS) as rare, threatened or endangered (List 1A and List 2 status plants in CNPS 2007).*

### Special-Status Plant Species

The USFWS species list for the proposed project site (September 2016, updated November 2017) identifies one federally listed plant species, slender Orcutt grass, as potentially being affected by work proposed within the USGS Enterprise quadrangle. Review of CNDDDB records (September 2016 and November 2017) showed that no special-status plant species have been mapped as occurring on or near the proposed project site; the nearest recorded extant special-status plant population is nearly three miles to the east-southeast. The following special-status plant species are known to occur within a 10-mile radius: Ahart’s paronychia, Boggs Lake hedge-hyssop, Canyon Creek stonecrop, dubious pea, Henderson’s bent grass, legenera, Nuttall’s ribbon-leaved pondweed, Red Bluff dwarf rush, Sanford’s arrowhead, silky cryptantha, slender Orcutt grass, slender silver moss, Sulphur Creek brodiaea, and woolly meadowfoam (refer to Appendix 15.3, BIOLOGICAL RESOURCES DOCUMENTATION).

A checklist of vascular plant species observed during the botanical field survey is provided in Table 5.3-1, PLANT SPECIES OBSERVED, below. As documented in Table 5.3-2, POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR ONSITE, below, no special-status plant species or suitable habitat for special-status plant species were observed during the botanical survey, nor are any expected to be present. Based on the results of the botanical survey, and the lack of suitable habitat for special-status plants, reference populations for plant species previously reported within the 10-mile radius were not inspected.

**Table 5.3-1  
PLANT SPECIES OBSERVED**

Scientific Name	Common Name	Family Name
<i>Amaranthus albus</i>	Tumbleweed	Amaranthaceae
<i>Pistacia chinensis</i>	Chinese pistache	Anacardiaceae
<i>Torilis arvensis</i>	Field hedge-parsley	Apiaceae
<i>Anthemis cotula</i>	Mayweed	Asteraceae
<i>Baccharis pilularis</i>	Coyote-brush	Asteraceae
<i>Carduus pycnocephalus</i>	Italian thistle	Asteraceae
<i>Centaurea solstitialis</i>	Yellow star-thistle	Asteraceae
<i>Cichorium intybus</i>	Chicory	Asteraceae
<i>Cirsium</i> sp.	Thistle	Asteraceae
<i>Erigeron canadensis</i>	Canadian horseweed	Asteraceae
<i>Grindelia camporum</i>	Valley gumplant	Asteraceae
<i>Hypochaeris glabra</i>	Smooth cat's ear	Asteraceae
<i>Lactuca serriola</i>	Prickly lettuce	Asteraceae
<i>Sonchus oleraceus</i>	Common sow thistle	Asteraceae
<i>Taraxacum officinale</i>	Dandelion	Asteraceae
<i>Tragopogon dubius</i>	Goat's beard	Asteraceae
<i>Heliotropium europaeum</i>	European pulsey	Boraginaceae
<i>Hirschfeldia incana</i>	Shortpod mustard	Brassicaceae
<i>Raphanus raphanistrum</i>	Jointed charlock	Brassicaceae
<i>Petrorhagia dubia</i>	Grass pink	Caryophyllaceae
<i>Silene gallica</i>	Common catchfly	Caryophyllaceae
<i>Spergularia rubra</i>	Ruby sand spurry	Caryophyllaceae
<i>Chenopodium</i> sp.	Goosefoot	Chenopodiaceae
<i>Convolvulus arvensis</i>	Bindweed	Convolvulaceae
<i>Juniperus</i> sp.	Juniper	Cupressaceae
<i>Carex barbarae</i>	Barbara sedge	Cyperaceae
<i>Cyperus eragrostis</i>	Nutsedge	Cyperaceae
<i>Equisetum laevigatum</i>	Smooth scouring rush	Equisetaceae
<i>Chamaesyce maculata</i>	Spotted spurge	Euphorbiaceae
<i>Chamaesyce nutans</i>	Large spurge	Euphorbiaceae
<i>Croton setigerus</i>	Dove weed	Euphorbiaceae
<i>Triadica sebifera</i>	Chinese tallowtree	Euphorbiaceae
<i>Albizia julibrissin</i>	Silk tree	Fabaceae
<i>Acmispon americanus</i>	Spanish lotus	Fabaceae
<i>Lupinus nanus</i>	Valley sky lupine	Fabaceae
<i>Medicago</i> sp.	Bur-clover	Fabaceae
<i>Medicago lupulina</i>	Black medick	Fabaceae
<i>Melilotus albus</i>	White sweetclover	Fabaceae
<i>Robinia pseudoacacia</i>	Black locust	Fabaceae
<i>Trifolium dubium</i>	Little hop clover	Fabaceae
<i>Trifolium glomeratum</i>	Sessile-headed clover	Fabaceae
<i>Trifolium hirtum</i>	Rose clover	Fabaceae
<i>Vicia villosa</i> subsp. <i>villosa</i>	Winter vetch	Fabaceae
<i>Quercus lobata</i>	Valley oak	Fagaceae
<i>Quercus wislizeni</i>	Interior live oak	Fagaceae
<i>Zeltnera muehlenbergii</i>	June centaury	Gentianaceae
<i>Erodium botrys</i>	Long-beaked filaree	Geraniaceae
<i>Erodium cicutarium</i>	Red-stemmed filaree	Geraniaceae
<i>Lamium purpureum</i>	Red henbit	Lamiaceae
<i>Marrubium vulgare</i>	Horehound	Lamiaceae
<i>Malva parviflora</i>	Little mallow	Malvaceae
<i>Mollugo verticillata</i>	Green carpetweed	Molluginaceae
<i>Morus</i> sp.	Mulberry	Moraceae
<i>Eschscholzia californica</i>	California poppy	Papaveraceae
<i>Phytolacca americana</i>	Pokeweed	Phytolaccaceae
<i>Pinus sabiniana</i>	Grey pine	Pinaceae

**Table 5.3-1 Continued**  
**PLANT SPECIES OBSERVED**

Scientific Name	Common Name	Family Name
<i>Plantago coronopus</i>	Cut-leaf plantain	Plantaginaceae
<i>Plantago lanceolata</i>	English plantain	Plantaginaceae
<i>Avena barbata</i>	Slender wild oats	Poaceae
<i>Bromus diandrus</i>	Ripgut grass	Poaceae
<i>Bromus hordeaceus</i>	Soft chess	Poaceae
<i>Bromus madritensis</i> subsp. <i>rubens</i>	Red brome	Poaceae
<i>Cynodon dactylon</i>	Bermuda grass	Poaceae
<i>Dactylis glomerata</i>	Orchard grass	Poaceae
<i>Digitaria</i> sp.	Crabgrass	Poaceae
<i>Elymus caput-medusae</i>	Medusa head	Poaceae
<i>Elymus glaucus</i>	Blue wild rye	Poaceae
<i>Festuca myuros</i>	Foxtail fescue	Poaceae
<i>Festuca perennis</i>	Annual ryegrass	Poaceae
<i>Hordeum murinum</i>	Foxtail barley	Poaceae
<i>Panicum</i> sp.	Panic	Poaceae
<i>Paspalum dilatatum</i>	Dallis grass	Poaceae
<i>Pennisetum</i> sp.	Fountain grass	Poaceae
<i>Sorghum halepense</i>	Johnson grass	Poaceae
<i>Stipa miliacea</i> var. <i>miliacea</i>	Smilo grass	Poaceae
<i>Polygonum aviculare</i> subsp. <i>depressum</i>	Common knotweed	Polygonaceae
<i>Rumex crispus</i>	Curly dock	Polygonaceae
<i>Rumex pulcher</i>	Fiddle dock	Polygonaceae
<i>Portulaca oleracea</i>	Common purslane	Portulacaceae
<i>Prunus</i> sp.	Pinus	Rosaceae
<i>Rubus armeniacus</i>	Himalayan blackberry	Rosaceae
<i>Populus fremontii</i> subsp. <i>fremontii</i>	Fremont cottonwood	Salicaceae
<i>Salix exigua</i>	Sandbar willow	Salicaceae
<i>Salix lasiolepis</i>	Arroyo willow	Salicaceae
<i>Verbascum blattaria</i>	Moth mullein	Scrophulariaceae
<i>Verbascum thapsus</i>	Woolly mullein	Scrophulariaceae
<i>Ailanthus altissima</i>	Tree of heaven	Simaroubaceae
<i>Solanum americanum</i>	American black nightshade	Solanaceae
<i>Vitis californica</i>	Wild grape	Vitaceae
<i>Tribulus terrestris</i>	Puncture vine	Zygophyllaceae

Source: ENPLAN. *Biological Study Report – North State Pavilion*. January 2018.

**Table 5.3-2  
POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR ONSITE**

Species	Habitat Requirements	Potential to Occur on the Site
<b>Wildlife</b>  Bald eagle <i>Haliaeetus leucocephalus</i>	Bald eagles nest in large, old-growth trees or snags in mixed stands near open bodies of water. Adults tend to use the same breeding areas year after year and often use the same nest, though a breeding area may include one or more alternate nests. Bald eagles usually do not begin nesting if human disturbance is evident. In California, the bald eagle nesting season is from February through July.	Although no bald eagles or eagle nests were observed during the wildlife survey, large trees in the onsite riparian woodland provide potentially suitable nest sites for bald eagles. Bald eagles thus have a moderate potential to nest on the site in future nesting seasons.
Bank swallow <i>Riparia riparia</i>	Bank swallows require vertical banks and cliffs with fine-textured or sandy soils near streams, rivers, ponds, lakes, or the ocean for nesting.	No vertical cliffs with fine-textured or sandy soils are present on the site. The bank swallow would thus not nest on the site.
California red-legged frog <i>Rana draytonii</i>	Suitable aquatic habitat for the California red-legged frog (CRLF) consists of permanent water bodies of virtually still or slow-moving fresh water, including natural and man-made ponds, backwaters within streams and creeks, marshes, lagoons, and dune ponds. The CRLF is not characteristically found in deep lacustrine habitats (e.g., deep lakes and reservoirs). Dense, shrubby riparian vegetation, e.g., willow ( <i>Salix</i> ) and bulrush ( <i>Scirpus</i> ) species, and bank overhangs are important features of CRLF breeding habitat. The CRLF tends to occur in greater numbers in deeper, cooler pools with dense emergent and shoreline vegetation.	No suitable habitat for California red-legged frogs occurs on or adjacent to the site. The California red-legged frog was not observed during the wildlife survey and is not expected to be present. Although the California red-legged frog historically occurred in Shasta County, it is now considered to be extirpated in the County.
Central Valley fall-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	The Central Valley fall-run Chinook salmon spawn in the lower reaches of most rivers and streams in the Central Valley. Adults begin their spawning migration between July and December. Spawning occurs between October and December. Spawning habitat is characterized by loose, clean gravel in cold, swiftly flowing water.	No suitable habitat for Central Valley fall-run Chinook salmon occurs on the site. The fall-run would thus not be present. However, fall-run are presumed to be present in the Sacramento River, which is located just west of the site.
Central Valley late-fall-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	The Central Valley late-fall-run spawn in the lower reaches of most rivers and streams in the Central Valley. Adults begin their upstream spawning migration between mid-October and mid-April. Spawning occurs between January and April. Spawning habitat is characterized by loose, clean gravel in cold, swiftly flowing water.	No suitable habitat for Central Valley late-fall-run Chinook salmon occurs on the site. The late-fall-run would thus not be present. However, late-fall-run are presumed to be present in the Sacramento River, which is located just west of the site.
Central Valley spring-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	Central Valley spring-run Chinook salmon enter the Sacramento-San Joaquin Delta in early January, and enter natal streams between mid-March and mid-October. Upon entering fresh water, spring-run are sexually immature and must hold in cold water habitats through summer to mature. Typically, spring-run utilize mid- to high-elevation streams that provide sufficient flow, water temperature, cover, and pool depth to allow over-summering. Spawning occurs between August and mid-October.	No suitable habitat for Central Valley spring-run Chinook salmon occurs on the site. The spring-run would thus not be present. However, spring-run are presumed to be present in the Sacramento River, which is located just west of the site.
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	Conservancy fairy shrimp inhabit large, cool-water vernal pools with moderately turbid water.	No vernal pools or other potentially suitable habitat for vernal pool fairy shrimp occur on or within 250 feet of the site. Conservancy fairy shrimp would thus not be present.

**Table 5.3-2  
POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR ONSITE**

Species	Habitat Requirements	Potential to Occur on the Site
Delta smelt <i>Hypomesus transpacificus</i>	Delta smelt primarily inhabit the brackish waters of Sacramento-San Joaquin River Delta. Most spawning occurs in backwater sloughs and channel edgewater.	The site is well outside of the known range of the Delta smelt. The Delta smelt would thus not be present.
Fisher – West Coast DPS <i>Martes (Pekania) pennanti</i>	Fishers inhabit mixed conifer forests dominated by Douglas-fir, although they also are encountered frequently in higher elevation fir and pine forests, and mixed evergreen/broadleaf forests. Suitable habitat for fishers consists of large areas of mature, dense forest stands with snags and greater than 50 percent canopy closure. Fishers den in cavities in large trees, snags, logs, rocky areas, or shelters provided by slash or brush piles. Fishers are very sensitive to human activities. Den sites are most often found in areas with no human disturbance.	Mature, dense forest stands with snags and greater than 50 percent canopy closure do not occur on the site. Further, the site is subject to moderate levels of human disturbance. No fishers or fisher dens were observed on the site during the wildlife survey, nor is the species expected to den on the site.
Foothill yellow-legged frog <i>Rana boylei</i>	Foothill yellow-legged frogs are typically found in shallow, partly-shaded, perennial streams in areas with riffles and rocky substrates. This frog needs at least some cobble-sized substrate for egg-laying. Foothill yellow-legged frogs generally prefer low- to moderate-gradient streams, especially for breeding and egg-laying, although juvenile and adult frogs may utilize moderate- to steep-gradient streams during summer and early fall.	No suitable habitat for foothill yellow-legged frogs occurs on or adjacent to the site. The foothill yellow-legged frog was not observed during the wildlife survey and is not expected to be present.
Northern spotted owl <i>Strix occidentalis caurina</i>	Northern spotted owls inhabit dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir forests from sea level to approximately 7,600 feet in elevation. Northern spotted owls typically nest in tree cavities, the broken tops of trees, or in snags. The nesting season is March through June.	Dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir forests do not occur on or adjacent to the site. No northern spotted owls or spotted owl nests were observed during the wildlife survey, nor is the species expected to nest on or adjacent to the site.
Pallid bat <i>Antrozous pallidus</i>	Pallid bats inhabit grasslands, shrublands, woodlands, and forests, but are most common in open, dry habitats. Day roosts include caves, rock crevices, mines, and occasionally trees and buildings. Buildings are often used for night roosting. The breeding period is October through February, and pups are born between April and July.	Trees and buildings on the site provide suitable roosting habitat for the pallid bat. The pallid bat thus has a moderate potential to be present.
Ringtail <i>Bassariscus astutus</i>	The ringtail is widespread throughout the Sierra Nevada, Klamath Mountains, Coast Range, and Central Valley. Ringtails have been reported from sea level to 8,800 feet, usually not far from permanent water. Ringtails occur in a variety of habitats within their range, but prefer chaparral, rocky hillsides, and riparian areas. Ringtails are nocturnal and active throughout the year. Females den in rock crevices, tree hollows, logs, snags, abandoned burrows, and woodrat nests.	Potentially suitable habitat for ringtail occurs on the site; however, no records of ringtail sightings in the Redding area were found during project research. The site supports a minor amount of riparian habitat/canopy (±0.4 acres) that could potentially provide cover for ringtails. Given the amount of habitat fragmentation on the site and lack of denning sites, the ringtail is unlikely to be present on the site.

**Table 5.3-2  
POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR ONSITE**

Species	Habitat Requirements	Potential to Occur on the Site
Sacramento River winter-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	Sacramento River winter-run Chinook salmon spawn almost exclusively in the Sacramento River, and not in tributary streams. Spawning generally occurs in swift, relatively shallow riffles or along the edges of fast runs where there is an abundance of loose gravel. Juveniles may rear in tributaries of the Sacramento River.	No suitable habitat for Sacramento River winter-run Chinook salmon occurs on the site. The winter-run would thus not be present. However, winter-run are presumed to be present in the Sacramento River, which is located just west of the site.
Shasta salamander <i>Hydromantes shastae</i>	The Shasta salamander is primarily restricted to limestone outcrops near Lake Shasta. Habitat consists of moist limestone fissures and caves, limestone talus, and under woody debris on the surface near limestone outcrops. Shasta salamanders may be found in all successional stages of valley foothill hardwood-conifer, ponderosa pine, and mixed conifer habitats.	No limestone outcrops occur on or adjacent to the site. The Shasta salamander would thus not be present.
Spotted bat <i>Euderma maculatum</i>	Spotted bats inhabit grasslands, mixed coniferous forests, and deserts. Spotted bats typically roost in cliff crevices, but may also roost in caves, and manmade structures. Roosts usually occur near suitable foraging areas (i.e., open water, meadows, riparian habitat, and forest openings).	Buildings on the site may provide marginally suitable roosting habitat for spotted bats. Spotted bats thus have a low potential to be present.
Steelhead - Central Valley DPS <i>Oncorhynchus mykiss</i>	Central Valley steelhead inhabit cold-water tributaries of the Sacramento and San Joaquin rivers. Adults begin their upstream spawning migration between August and March. Spawning occurs between December and April. Spawning habitat is characterized by loose, clean gravel in cold, swiftly flowing, shallow water.	No suitable habitat for Central Valley steelhead occurs on the site. Central Valley steelhead would thus not be present. However, Central Valley steelhead are presumed to be present in the Sacramento River, which is located just west of the site.
Townsend's big-eared bat <i>Corynorhinus townsendii pallescens</i>	Townsend's big-eared bat is found throughout California except in subalpine and alpine habitats, and may be found at any season throughout its range. The species is most abundant in mesic habitats. The bat requires caves, mines, tunnels, buildings, or other human-made structures for roosting. This bat is especially sensitive to disturbance of roosting sites, and a single disturbance event may result in abandonment of the roost site.	Buildings on the site provide marginal roosting habitat for Townsend's big-eared bats. However, given high level of human activity around these structures, Townsend's big-eared bats have a low potential to be present.
Tricolored blackbird <i>Agelaius tricolor</i>	Tricolored blackbirds are colonial nesters and generally nest near open water. Nesting areas must be large enough to support a minimum colony of about 50 pairs. Tricolored blackbirds generally construct nests in dense cattails or tules, although they can also nest in thickets of willow, blackberry, wild rose and tall herbs.	Scattered individuals of willows and blackberries are present in the onsite riparian woodland. However, these shrubs do not form dense thickets. No tricolored blackbirds or evidence of past nesting by tricolored blackbirds were observed on or adjacent to the site during the wildlife survey. The tricolored blackbird is thus not expected to nest on the site.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	The valley elderberry longhorn beetle is found only in association with elderberry shrubs ( <i>Sambucus</i> spp.). The species' elevational range extends from sea level to 3,000 feet. The species is known to occur in the Central Valley and foothills.	No elderberries occur on or within 50 meters of the site. The valley elderberry longhorn beetle would thus not be present.

**Table 5.3-2  
POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR ONSITE**

Species	Habitat Requirements	Potential to Occur on the Site
<p>Vernal pool fairy shrimp <i>Branchinecta lynchi</i></p>	<p>Vernal pool fairy shrimp inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump or basalt-flow depression pools.</p>	<p>No vernal pools or other potentially suitable habitat for vernal pool tadpole shrimp occur on or within 250 feet of the site. Vernal pool fairy shrimp would thus not be present.</p>
<p>Vernal pool tadpole shrimp <i>Lepidurus packardii</i></p>	<p>Vernal pool tadpole shrimp occur in vernal pools in California’s Central Valley and in the surrounding foothills.</p>	<p>No vernal pools or other potentially suitable habitat for vernal pool fairy shrimp occur on or within 250 feet of the site. Vernal pool tadpole shrimp would thus not be present.</p>
<p>Western pond turtle <i>Emys marmorata</i></p>	<p>The western pond turtle associates with permanent or nearly permanent water in a variety of habitats. This turtle is typically found in quiet water environments. Pond turtles require basking sites such as partially submerged logs, rocks, or open mud banks, and suitable (sandy banks or grassy open fields) upland habitat for egg-laying. Nesting and courtship occur during spring. Nests are generally constructed within 500 feet of a waterbody, but some nests have been found up to 1,200 feet away. Pond turtles leave aquatic sites in the fall and overwinter in uplands nearby. Pond turtles return to aquatic sites in spring.</p>	<p>No open water habitat is present on the project site; however, potentially suitable open water habitat is present offsite. Although no western pond turtles were observed during the wildlife survey, it is possible that they could use portions of the project site for nesting.</p>
<p>Western red bat <i>Lasiurus blossevillii</i></p>	<p>In California, western red bats occur primarily below 200 meters in elevation, although individuals have been detected up to nearly 2500 meters. The bats both forage and roost in riparian habitats and are strongly associated with riparian habitats that are over 50 meters wide. Breeding females are concentrated in the Central Valley. Roosting is expected to occur primarily in the largest riparian trees. Roosting has been observed in orchards, such as walnut orchards flanking the Sacramento River, perhaps due to the loss of gallery riparian forest habitat.</p>	<p>Riparian woodland on the site provides suitable roosting habitat for the western red bat. The western red bat thus has a high potential to be present.</p>
<p>Western spadefoot <i>Spea hammondi</i></p>	<p>Western spadefoots breed from January through May in shallow, temporary pools that persist for at least three weeks. Breeding pools are generally absent of bullfrogs, fish, and crayfish, which are known to prey on tadpoles. After breeding, adults seek shelter underground either by excavating a subterranean burrow or retreating into a small mammal burrow nearby. Tadpoles transform within three weeks. Following transformation, juveniles leave breeding pools and seek shelter underground. Western spadefoots remain underground until breeding pools form the following spring.</p>	<p>The nearest reported location for western spadefoot is approximately 7 miles to the southeast. No shallow temporary pools providing breeding habitat for western spadefoot are present on or adjacent to the project site. Therefore, the western spadefoot would not be present on the site.</p>
<p>Yellow-breasted chat <i>Icteria virens</i></p>	<p>The yellow-breasted chat frequents dense, brushy thickets and tangles near water, and thick understory in riparian woodland.</p>	<p>No suitable habitat for the yellow-breasted chat occurs on the study site; however, potentially suitable habitat is present in adjoining offsite riparian areas. Yellow-breasted chat is infrequently observed along the Sacramento River in the Redding area. Although the species was not observed during our field study, the species could potentially be present in riparian habitat near the study area.</p>

**Table 5.3-2  
POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR ONSITE**

Species	Habitat Requirements	Potential to Occur on the Site
<p>Yellow warbler <i>Dendroica petechia brewsteri</i></p>	<p>In migration, the yellow warbler is found in a variety of sparse to dense woodland and forest habitats. During the breeding season, the yellow warbler generally occupies riparian vegetation in close proximity to water, where they may be found in willows, cottonwoods, and numerous other riparian shrubs or trees. The yellow warbler primarily nests in riparian woodlands from sea level to approximately 8,000 feet in elevation; nesting also occasionally occur in shrubs in open coniferous forests.</p>	<p>Potentially suitable habitat nesting habitat for the yellow warbler occurs on and adjacent to the study site. Yellow warblers have been observed in the adjacent Henderson Open Space as well elsewhere along the Sacramento River throughout the Redding area, often during their migration periods. The species could potentially be present in riparian habitat on or near the study area.</p>
<p><b>Plants</b></p>		
<p>Ahart's paronychia <i>Paronychia ahartii</i></p>	<p>Ahart's paronychia is an annual herb that occurs in valley and foothill grassland, vernal pool, and cismontane woodland habitats. This plant is typically found in nearly barren clay in swales and on higher ground around vernal pools from 100 to 1,700 feet in elevation. It also occurs in rocky soils. The flowering period is March through June.</p>	<p>No suitable habitat for Ahart's paronychia is present on the site. Ahart's paronychia was not observed during the botanical survey and is not expected to be present.</p>
<p>Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i></p>	<p>Boggs Lake hedge-hyssop occurs in marshes, swamps, and vernal pools. The species is reported from sea level to 7,800 feet in elevation. The flowering period is April through August.</p>	<p>No suitable habitat for Boggs Lake hedge-hyssop is present on the site. Boggs Lake hedge-hyssop was not observed during the botanical survey and is not expected to be present.</p>
<p>Canyon Creek stonecrop <i>Sedum paradisum</i></p>	<p>Canyon Creek stonecrop occurs on rock faces or in crevices of exposed granite in the Klamath Mountains of northwestern California. The species is reported between 1,000 and 6,300 feet in elevation. The flowering period is May and June.</p>	<p>No suitable habitat for Canyon Creek stonecrop is present on the site. Canyon Creek stonecrop was not observed during the botanical survey and is not expected to be present.</p>
<p>Dubious pea <i>Lathyrus sulphureus</i> var. <i>argillaceus</i></p>	<p>The dubious pea is a perennial herb that occurs in cismontane woodland and montane coniferous forest. The species is reported between 500 and 1,000 feet in elevation. The flowering period is April and May.</p>	<p>No suitable habitat for the dubious pea occurs on the site. The dubious pea was not observed during the botanical survey and is not expected to be present.</p>
<p>Henderson's bent grass <i>Agrostis hendersonii</i></p>	<p>Henderson's bent grass is an annual herb that occurs along the edges of vernal pools and swales, typically on thin soils overlying a hard pan. Henderson's bent grass is usually found in sparsely vegetated habitats between 200 and 1,000 feet in elevation. The flowering period is April through June.</p>	<p>No suitable habitat for Henderson's bent grass is present on the site. Henderson's bent grass was not observed during the botanical survey and is not expected to be present.</p>
<p>Legenere <i>Legenere limosa</i></p>	<p>Legenere is an annual herb that occurs in moist or wet soil associated with vernal pools, vernal marshes, lakes, ponds and sloughs up to 3,000 feet in elevation. The flowering period is April through June.</p>	<p>No suitable habitat for legenere is present on the site. Legenere was not observed during the botanical survey and is not expected to be present.</p>
<p>Nuttall's ribbon-leaved pondweed <i>Potamogeton epihydrus</i></p>	<p>Nuttall's ribbon-leaved pondweed is a perennial rhizomatous herb that occurs in marshes, swamps, and in shallow lakes, ponds, streams, and irrigation ditches. The species is found between 1,200 and 7,200 feet in elevation. The flowering period is July through September.</p>	<p>No suitable habitat for Nuttall's ribbon-leaved pondweed is present on the site. Nuttall's ribbon-leaved pondweed was not observed during the botanical survey and is not expected to be present.</p>

**Table 5.3-2  
POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR ONSITE**

Species	Habitat Requirements	Potential to Occur on the Site
Sanford's arrowhead <i>Sagittaria sanfordii</i>	Sanford's arrowhead occurs in freshwater ponds, marshes, and ditches with perennial water. The species is reported from sea level to 2,200 feet in elevation. The flowering period is May through October.	No suitable habitat for Sanford's arrowhead is present on the site. Sanford's arrowhead was not observed during the botanical survey and is not expected to be present.
Red Bluff dwarf rush <i>Juncus leiospermus</i> var. <i>leiospermus</i>	Red Bluff dwarf rush is an annual herb that typically occurs along the edges of vernal pools and vernal drainages, or on clay-rich terrace soils. The species is found between 100 and 3,400 feet in elevation. The flowering period is March through May.	No suitable habitat for Red Bluff dwarf rush is present on the site. Red Bluff dwarf rush was not observed during the botanical survey and is not expected to be present.
Silky cryptantha <i>Cryptantha crinita</i>	Silky cryptantha is an annual herb that occurs along low-gradient seasonal streams with broad floodplains, usually on the valley floor, where it is found on gravelly or cobbly substrates. The species also occurs in vernal moist uplands. Less frequently, it occurs along perennial streams, including the Sacramento River. The species is found between 200 and 4,000 feet in elevation. The flowering period is April and May.	No suitable gravel or cobble deposits occur on the site. Silky cryptantha was not observed during the botanical survey and is not expected to be present.
Slender Orcutt grass <i>Orcuttia tenuis</i>	Slender Orcutt grass is an annual herb that occurs in vernal pools and similar habitats, occasionally on reservoir edges or stream floodplains, on clay soils with seasonal inundation in valley grassland to coniferous forest or sagebrush scrub. The species is found between 100 and 5,800 feet in elevation. The flowering period is May through September.	No suitable habitat for slender Orcutt grass is present on or within 250 feet of the site. Slender Orcutt grass was not observed during the botanical survey, and is not expected to be present.
Slender-silver moss <i>Anomobryum julaceum</i>	Slender-silver moss generally is found on damp rocks or soil on exposed roadcuts. The species is found between 300 and 3,300 feet in elevation.	No suitable habitat for slender-silver moss is present on the site. Slender-silver moss would thus not be present.
Sulphur Creek brodiaea <i>Brodiaea matsonii</i>	Sulphur Creek brodiaea, a perennial bulbiferous herb, is reported only from two locations along Sulphur Creek. This plant occurs on metamorphic amphibolite schists in close proximity to streams, meadows, and/or seeps within cismontane woodland. The species is reported between 600 and 700 feet in elevation. The flowering period is May and June.	No suitable habitat for Sulphur Creek brodiaea occurs on the site. Sulphur Creek brodiaea was not observed during the botanical survey and is not expected to be present.
Woolly meadowfoam <i>Limnanthes floccosa</i> ssp. <i>floccosa</i>	Woolly meadowfoam is an annual herb that generally occurs in vernal pools, ditches, seasonal drainages, and ponds in valley foothill and grasslands, cismontane woodland, and chaparral. The species is reported between 200 and 3,600 feet in elevation. The flowering period is March through June.	No suitable habitat for woolly meadowfoam is present on the site. Woolly meadowfoam was not observed during the botanical survey and is not expected to be present.

Source: ENPLAN. *Biological Study Report – North State Pavilion*. January 2018.

**Special-Status Animal Species**

The USFWS species list for the proposed project site identifies eight federally listed animal species as potentially occurring in or being affected by work in the USGS Enterprise quadrangle: California red-legged frog, Conservancy fairy shrimp, delta smelt, northern spotted owl, Central Valley steelhead, valley elderberry longhorn beetle, vernal pool fairy shrimp, and vernal pool tadpole shrimp (refer to Appendix 15.3, BIOLOGICAL RESOURCES DOCUMENTATION).

The CNDDDB records identifies that one special-status animal species, Central Valley steelhead, has been broadly mapped as occurring in the Sacramento River floodplain within the site. Sacramento River winter-run Chinook salmon are mapped as occurring in the Sacramento River adjacent to the site. In addition to these two fish species, the following special-status animals are reported by the CNDDDB to occur within a 10-mile radius of the project site: bald eagle, bank swallow, Central Valley spring-run Chinook salmon, fisher – West Coast distinct population segment (DPS), foothill yellow-legged frog, pallid bat, Shasta salamander, spotted bat, Townsend’s big-eared bat, tricolored blackbird, valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, western pond turtle, western red bat, and western spadefoot.

CNDDDB records also show that the following non-status animal species are known to occur within a 10-mile radius: Antioch Dunes anthicid beetle, California linderiella, great egret, hoary bat, kneecap lanx, long-eared myotis, North American porcupine, Oregon shoulderband, osprey, Sacramento anthicid beetle, Shasta chaparral, silver-haired bat, western pearlshell, and Yuma myotis. The non-status western pearlshell has been broadly mapped as occurring in the Sacramento River floodplain within the site.

Although not reported on the USFWS species list or in CNDDDB records, two additional special-status fish (Central Valley fall-run Chinook salmon and Central Valley late-fall-run Chinook salmon) are known to utilize the adjacent reach of the Sacramento River. Additionally, two bird species of special concern, yellow warbler and yellow-breasted chat, have been reported in close proximity to the site; and one fully protected mammal, ringtail, is known to occur within the 10-mile search radius. The potential for special-status species to occur onsite is provided above in Table 5.3-2, POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR ONSITE. A checklist of wildlife species observed on the project site during the wildlife evaluation is presented in Table 5.3-3, ANIMAL SPECIES OBSERVED.

**Table 5.3-3  
ANIMAL SPECIES OBSERVED**

Common Name	Scientific Name	Status
<b>Birds</b>		
Acorn woodpecker	<i>Melanerpes formicivorus</i>	None
American crow	<i>Corus brachyrhynchos</i>	None
Cliff swallow	<i>Petrochelidon pyrrhonota</i>	None
Common raven	<i>Corvus corax</i>	None
Dark-eyed junco	<i>Junco hyemalis</i>	None
Eurasian collared dove	<i>Streptopelia decaocto</i>	None
European starling	<i>Sturnus vulgaris</i>	None
Killdeer	<i>Charadrius vociferous</i>	None
Northern flicker	<i>Colaptes auratus</i>	None
Northern mocking bird	<i>Minus polyglottos</i>	None
Red-tailed hawk	<i>Buteo jamaicensis</i>	None
Rock dove	<i>Columbia livai</i>	None
Turkey vulture	<i>Cathartes aura</i>	None
Western scrub-jay	<i>Aphelocoma Californica</i>	None

Source: ENPLAN. *Biological Study Report – North State Pavilion*. January 2018.

No special-status animal species were observed onsite during site surveys. However, special-status wildlife taxa may occur on or adjacent to the project site and could potentially be affected by project implementation. The following describes the special-status animal species potentially affected by project implementation.

### **Bats**

*Pallid Bat.* The pallid bat, a state Species of Special Concern, is a wide-ranging bat found throughout western North America. This bat inhabits low-elevation rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and upper montane coniferous forests. Pallid bats roost alone, in small groups, or in large colonies. Day and night roosts include rocky outcrops, cliffs, caves, mines, trees, and a variety of man-made structures. Pallid bats mate between October and February, and young are born between April and July. Females generally produce up to two offspring per year. Maternity colonies disperse between August and October. Trees and structures onsite provide potentially suitable roosting habitat for the pallid bat; the species has a moderate potential to be present.

*Spotted Bat.* The spotted bat, a state Species of Special Concern, inhabits grasslands, mixed-conifer forests, and deserts. Most often, this bat is found in arid desert and in open pine forests in rough, rocky terrain. Spotted bats roost mainly in rock crevices, but are also known to roost in caves and buildings. Spotted bats are not known to roost on bridges. Spotted bats feed over water and along washes (moths are the principal food). The spotted bat is presumed uncommon in California and has a low potential to utilize the project site as roosting habitat. The spotted bat has been recorded in Shasta County on only two occasions, with the nearest observation being in the Palo Cedro vicinity, roughly seven miles to the east of the project site.

*Townsend's Big-Eared Bat.* Townsend's big-eared bat, a state Species of Special Concern, occurs in a variety of habitats from sea level to upper montane coniferous forest, and may be found in any season. Townsend's big-eared bat is most abundant in mesic habitats. Townsend's big-eared bats roost in caves, buildings, mines, tunnels, and other man-made structures. They do not tuck themselves into cracks or crevices for roosting as many bat species do, but instead prefer open roosting areas such as caves. Townsend's big-eared bats occasionally roost on bridges (Erickson et al., 2002). This bat is especially sensitive to disturbance of roosting sites, and a single disturbance event may result in abandonment of the roost site. Mating occurs between November and February, and offspring are born in May or June. Young bats generally are capable of flight around three weeks after birth.

The project site provides foraging habitat for Townsend's big-eared bats, but is unlikely to provide suitable roosting habitat because the onsite buildings do not include attics or other cave-like spaces suitable for roosting and the project site is subject to a high level of human disturbance.

*Western Red Bat.* The western red bat is a state Species of Special Concern. In California, western red bats, particularly breeding females, occur primarily below 200 meters in elevation. Individuals have been detected up to nearly 2,500 meters, but these have been males or non-reproductive females. The bats both forage and roost in riparian habitats and are strongly associated with mature gallery riparian habitats that are over 50 meters wide. Substantially less activity was detected in riparian stands two to three mature trees in width, and even less activity was observed in young riparian stands only one tree in width (Pierson et al., 1998).

During the summer months, breeding females are concentrated in the Central Valley, particularly along the Sacramento and San Joaquin rivers and the lower reaches of large rivers that drain the Sierra Nevada. Over 80 percent of the records of breeding females are from these areas. Breeding occurs in August and September and young are born from May through July. The summer distribution of males is less concentrated, with roughly 50 percent being found in the Central Valley and surrounding foothills, over 25 percent in southern California, and about 20 percent along the coast. During the winter months, nearly 55 percent of the records are from the coast, nearly 25 percent are from the Central Valley, and about 20 percent are in southern California; there is no obvious difference in distribution between males and females during the winter months (Pierson et al., 1998).

Roosting is expected to occur primarily in the largest riparian trees, particularly in cottonwoods and sycamores. Roosting has also been observed in orchards, such as walnut orchards flanking the Sacramento River, perhaps due to the loss of gallery riparian forest habitat. Roosting bats usually shelter on the underside of overhanging leaves. The bats often hang from one foot on leaf petioles, but may occasionally hang from twigs or branches, and may resemble a fruit or dead leaf (Pierson et al., 1998).

The onsite riparian woodland includes small pockets of mature gallery riparian habitat adjacent to the broad belt of riparian habitat along the Sacramento River. This vegetation class provides high-quality foraging and roosting habitat for the western red bat; the species has a high potential to be present.

### **Bald Eagles**

The bald eagle, a federally delisted species, a state Endangered species, and a state Fully Protected species, winters throughout most of California at lakes, reservoirs, river systems, and in some rangelands and coastal wetlands (CDFW, 2001). Bald eagles are opportunistic foragers, usually feeding on fish or waterfowl, but they also feed on other small animals and eat carrion. Most bald eagles migrate from nesting areas in the Pacific Northwest to spend the winter in California, arriving during fall and early winter (CDFW, 2001). California's resident breeding pairs remain in California during winter, typically in the vicinity of their nesting areas.

In California, the breeding season lasts from about January through August. The breeding range is primarily in mountainous habitats near reservoirs, lakes, and rivers, mainly in northern California and in the Central Coast Range. Nests are constructed atop large trees or man-made structures, generally within sight of aquatic habitat. The adults may repair the same nest annually, increasing its size over time, or they may construct a new nest in their territory. Often, the breeding territory of a pair of eagles includes several nests. Between one and three eggs are laid in late winter or early spring. Incubation lasts approximately 35 days. Chicks fledge when they are between 9 and 14 weeks old. Because of a resurgence in the bald eagle population, the species was delisted by the USFWS in 2009. However, the bald eagle is protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act, and is State Endangered and a State Fully Protected species.

Large trees on and near the project site provide potentially suitable nest sites for bald eagles; bald eagles thus have a moderate potential to be present. Although there are no records of bald eagles nesting on the site in past years and no eagles or their nests were observed on or near the project site during the field surveys, it is possible that bald eagles could nest on or near the site in future years.

## **Ringtails**

Ringtail, a State fully protected species, is widely distributed throughout the state, occurring in various riparian habitats and in brush stands of most forest and shrub habitats, usually in close proximity to permanent water. The species is nocturnal and active year round. Foraging on the ground among the rocks and trees, ringtail are primarily carnivorous, eating birds, reptiles, invertebrates, fruits, and nuts. Females nest in rock recesses, hollow trees, logs, snags, abandoned burrows, or woodrat nests. Young are reportedly born in May or June. The ringtail changes den sites frequently, rarely spending more than two or three days in the same shelter. Female ringtails may regularly move their young from den to den.

## **Salmonids**

Salmonids, which include Chinook salmon and steelhead, inhabit clear, cold waters. The various runs of anadromous Chinook salmon and steelhead in California are differentiated primarily by the maturity of adult fish entering freshwater and the time of spawning migrations (Moyle, 2002). Due to their dependency on dissolved oxygen, Chinook salmon and steelhead have strict thermal requirements. According to Armour (1991), the preferred temperature ranges for the different life stages of Chinook salmon are as follows: adult migration (3.3°C to 14.4°C), adult spawning (4.4°C to 13.9°C), egg incubation and fry emergence (5.0°C to 14.4°C), and juvenile rearing (5.0°C to 14.4°C). Carter (2005) summarized previous research conducted by others on the thermal tolerances of salmonids and found that temperature ranges lethal to all life stages of Chinook salmon and Central Valley steelhead are 25°C and 21°C, respectively. Detailed life history information and habitat requirements regarding the Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Central Valley fall-run Chinook salmon, late-fall-run Chinook salmon, and Central Valley steelhead are provided below.

*Sacramento River Winter-Run Chinook Salmon.* The Sacramento River winter-run Chinook salmon is listed as Endangered by both the state and federal governments. The Evolutionary Significant Unit (ESU) is represented by a single naturally spawning population that has been completely displaced from its historical spawning habitat by the construction of Shasta and Keswick dams.

Sacramento River winter-run Chinook salmon are distinguished from other runs of Chinook salmon in the Sacramento River in that adults generally enter freshwater and migrate upstream during winter and spring, then spawn several months later after their gonads have matured (Moyle, 2002). Based on data compiled by Schaffter (1980) and Vogel and Marine (1991), spawning occurs between mid-April and mid-August. The winter-run currently spawns almost exclusively in the Sacramento River between Keswick Dam and Red Bluff, where cold water released from Keswick Dam during summer provides conditions suitable for spawning. Fry emerge between mid-June and mid-October and move to river margins or tributaries to rear. Juveniles rear in freshwater streams and rivers between July and mid-March. Emigration occurs between mid-March and mid-July.

Recent trends in Sacramento River winter-run Chinook salmon abundance indicate some recovery since the listing; however, the population remains well below the recovery goals, and is particularly susceptible to extinction due to loss of genetic variation resulting from the reduction of the ESU to one population. According to NMFS (2011a), the winter-run continues to be at a high risk of extinction. Sacramento River winter-run Chinook salmon population size increased during the early 2000s, but has declined in recent years due to periods of unfavorable ocean conditions (2005-06) and drought (2007-09). Longer term reduction in risk of extinction and improved status of the winter-run will depend on the successful re-establishment of another low-risk population in a historically used area (e.g., Battle

Creek). Sacramento River winter-run Chinook salmon are known to utilize the adjacent reach of the Sacramento River for spawning and/or rearing on a yearly basis.

*Central Valley Spring-Run Chinook Salmon.* The Central Valley spring-run Chinook salmon is listed as Threatened by both the state and federal governments. Historically, the spring-run was the dominant run in the Sacramento River Basin, with runs in excess of 600,000 adults (Moyle et al., 1995). The declining population is mainly attributable to loss of upstream, cold water habitats blocked by impassable dams. In addition to this habitat loss, a spatial and temporal overlap with spawning fall-run has resulted in hybridization and homogenation of some subpopulations (Moyle et al., 1995; CDFW, 1993). Although protective measures have likely led to an increased abundance, Central Valley spring-run Chinook salmon populations are still well below recent historic levels. Threats from hatchery production, habitat loss, overharvesting, disease, predation, and water diversions continue to keep the ESU at moderate risk for extinction.

Adult Central Valley spring-run Chinook salmon begin entering the Sacramento-San Joaquin Delta in early January, and enter natal streams between mid-March and mid-October (Schaffter, 1980; Vogel and Marine, 1991). Upon entering fresh water, spring-run are sexually immature and must hold in cold water habitats through summer to mature. Typically, spring-run utilize mid- to high-elevation streams that provide sufficient flow, water temperature, cover, and pool depth to allow over-summering. Spawning occurs between August and mid-October, mostly within four tributaries of the Sacramento River: Butte, Big Chico, Deer, and Mill Creeks. Embryos hatch following a five- to six-month incubation period and alevins (sac-fry) remain in the gravel for an additional two to three weeks. Some fish begin the downstream migration soon after emergence, while others do so as yearlings. In general, juvenile rearing in streams and rivers occurs between mid-October and mid-May.

Historically, the spring-run was the dominant run in the Sacramento River Basin, with runs in excess of 600,000 adults (Moyle et al., 1995). The declining population is mainly attributable to loss of upstream, cold water habitats blocked by impassable dams. In addition to this habitat loss, a spatial and temporal overlap with spawning fall-run has resulted in hybridization and homogenation of some subpopulations (Moyle et al., 1995; CDFG, 1993). Threats from hatchery production, habitat loss, overharvesting, disease, predation, and water diversions continue to keep the ESU at moderate risk for extinction.

According to NMFS (2011b), with a few exceptions, spring-run populations have declined more recently, particularly since 2006. The recent declines in abundance place the Mill and Deer Creek populations in the high extinction risk category due to their rate of decline. Butte Creek remains in the low extinction risk category, although the rate of decline makes it a borderline case. The only spring-run populations that seemed to have improved in status between 2005 and 2010 are in Battle Creek and Clear Creek. Overall, the status of the ESU has likely deteriorated since 2005, and its extinction risk may have increased. Central Valley spring-run Chinook salmon are known to utilize the adjacent reach of the Sacramento River for spawning and/or rearing on a yearly basis.

*Central Valley Fall-Run / Late Fall-Run Chinook Salmon.* Central Valley fall-run Chinook salmon (a Federal Species of Concern and a state Species of Special Concern) and Central Valley late-fall-run Chinook salmon (a Federal Species of Concern and a state Species of Special Concern) are currently the most abundant of the Chinook runs in the Sacramento River Watershed (CDFW, 1993). Much of the habitat where fall-run/late-fall-run historically spawned is located downstream of major dams on the Sacramento River and San Joaquin River; thus, these runs were not affected to the degree that other Chinook runs were. The fall-run/late-fall-run spawn in the lower reaches (200 to 2,000 feet in elevation) of most rivers and streams in the Central Valley.

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Adult fall-run enter freshwater at an advanced stage of maturity, migrate quickly upstream to spawning sites, and spawn within a few days or weeks of entering freshwater (Healey, 1991). Based on data compiled by Schaffter (1980) and Vogel and Marine (1991), spawning migrations occur from July through December. Spawning occurs between October and December, with peak spawning occurring in November. Embryo incubation occurs between October and early March. Unlike other Chinook runs, juveniles emigrate to the ocean three to seven months after they emerge from the spawning gravel. Downstream emigration to the sea by juveniles occurs between mid-December and mid-June.

Based on data compiled by Schaffter (1980) and Vogel and Marine (1991), adult late-fall-run begin their spawning migrations in the Sacramento River between mid-October and mid-April. Spawning occurs between January and April, with peak spawning occurring in February and March. Embryo incubation occurs between early January and late June. Downstream emigration by juveniles occurs between mid-April and mid-December. Central Valley fall-run/late-fall-run Chinook salmon are known to utilize the adjacent reach of the Sacramento River for spawning and/or rearing on a yearly basis.

*Central Valley Steelhead.* The Central Valley steelhead, an anadromous strain of rainbow trout that emigrates to sea and returns to inland waters as adults to spawn (McEwan, 2001; Moyle, 2002), is listed as Threatened by the federal government. This ESU includes all naturally produced steelhead in the Sacramento-San Joaquin Rivers. Existing wild steelhead stocks in the Central Valley are mostly confined to the upper Sacramento River (below Shasta Dam) and its tributaries.

The majority of the Central Valley steelhead spawning migration occurs between August and March (Schaffter, 1980; Vogel and Marine, 1991). Spawning then occurs between December and April in streams with cool, well-oxygenated water that is available year round. Eggs incubate for one to four months before the fry emerge. Newly emerged fry move to shallow stream margins to escape predation and high water velocities. Steelhead may remain in fresh water for one to four years before emigrating, but typically emigrate after two years in fresh water. Once at sea, adults spend anywhere from one to four years there before returning to fresh water to spawn as four or five year olds.

Factors affecting the survival and recovery of Central Valley steelhead are similar to those affecting winter- and spring-run Chinook salmon and are primarily associated with habitat loss. The most recent biological information suggests that the extinction risk of Central Valley steelhead has increased since 2005; several factors for this change include drought and poor ocean conditions in recent years (NMFS, 2011c). There continue to be threats to the genetic integrity of natural or wild steelhead from hatchery steelhead programs in the Central Valley, but it is unclear if or how this factor has influenced the overall viability of the ESU. The best available information on the biological status of the ESU and continuing and new threats indicate that its status as a Threatened species is appropriate. Long term recovery will require improved freshwater habitat conditions, abatement of a wide range of threats including genetic threats from hatchery populations, and the reintroduction of steelhead to some of its historic habitat. Central Valley steelhead are known to utilize the adjacent reach of the Sacramento River for spawning and/or rearing on a yearly basis.

### ***Western Pond Turtles***

The western pond turtle, a state Species of Special Concern, is found in a variety of habitats (e.g., ponds, reservoirs, streams, rivers, ditches, sloughs) from sea level to approximately 6,000 feet in elevation. Pond turtles prefer ponds or slow-flowing streams with deep pools. Such habitats often have muddy bottoms. The presence of suitable basking sites is often an important habitat component for western

pond turtles. Basking sites may include partially submerged logs, rocks, mats of floating vegetation, or open mud banks.

Courtship and mating occur primarily in late April or early May. Most egg-laying occurs in May and June, although some females may deposit a second clutch of eggs later in summer. Nests may be a considerable distance (1,200 feet or more) from aquatic sites, but are usually within 500 feet of water. Nests are generally found in substrates that have a high sand, clay, or silt component, and are generally located on unshaded, south-facing slopes. Using their hind feet, female turtles excavate a shallow, two- to three-inch-deep, flask-shaped nest with an opening approximately 1.5 inches in diameter. From 1 to 13 eggs are deposited in the nest. Females often cover the nest site with soil and leaf litter to conceal the nest. Eggs hatch approximately 80 to 130 days later. Hatchlings generally emerge from the nest in August and move to aquatic sites, although in some populations in the northern part of the species' range, hatchlings may overwinter and emerge from the nest the following spring. Adult and juvenile western pond turtles generally leave aquatic sites in the fall to overwinter in nearby uplands and return to aquatic sites in the spring.

### ***Yellow-Breasted Chats***

The yellow-breasted chat frequents dense, brushy thickets and tangles near water, and thick understory in riparian woodlands. No suitable habitat for the yellow-breasted chat occurs on the project site; however, potentially suitable habitat is present in adjoining offsite riparian areas. Yellow-breasted chats are infrequently observed along the Sacramento River in the Redding area. Although the species has not been reported on or adjacent to the project site and was not observed during our field study, the species could potentially be present in riparian habitat near the project site.

### ***Yellow Warblers***

In migration, the yellow warbler is found in a variety of sparse to dense woodland and forest habitats. During the breeding season, the yellow warbler generally occupies riparian vegetation in close proximity to water, where they may be found in willows, cottonwoods, and numerous other riparian shrubs or trees. The yellow warbler primarily nests in riparian woodlands from sea level to approximately 8,000 feet in elevation; nesting also occasionally occurs in shrubs in open coniferous forests. Potentially suitable nesting habitat for the yellow warbler occurs on and adjacent to the project site. Yellow warblers have been observed in the adjacent Henderson Open Space as well as elsewhere along the Sacramento River throughout the Redding area, often during their migration periods.

## **CRITICAL HABITAT**

Critical habitat is a specific geographic area that is essential for the conservation of plants and animals federally listed as threatened or endangered. Critical habitat may require special management or protection. Critical habitat can be designated by the USFWS or the National Marine Fisheries Service (NMFS). The USFWS species list does not identify any critical habitat on or near the project site. However, review of the USFWS Critical Habitat Mapper (USFWS, 2016b), NMFS GIS data (NMFS, 2016), and the *Federal Register* (NMFS, 2005) found that NMFS has designated the Sacramento River in the site vicinity as critical habitat for Chinook salmon (winter-run and spring-run) and Central Valley steelhead. Critical habitat for fish includes the river or stream water column, bottom (including those areas and associated gravel used as spawning substrate), and the adjacent riparian zone, which contributes cover, shelter, shade, and food for rearing juveniles.

## 5.3.2 METHODOLOGY

### Biological Study Report

Prior to conducting fieldwork, a biological records search was completed. Records reviewed included the United States Fish and Wildlife Service's (USFWS) species list for the site (USFWS, 2016a), California Department of Fish and Wildlife's (CDFW) California Natural Diversity Data Base (CNDDB) records (CDFW, 2016), critical habitat GIS data maintained by the National Marine Fisheries Service (NMFS, 2016) and USFWS (USFWS, 2016c), and critical habitat information in the Federal Register (NMFS, 2005). The CNDDB records search covered a 10-mile radius around the site. This entailed review of records for portions of the following quadrangles: Redding, Olinda, Whiskeytown, Shasta Dam, Bella Vista, Igo, Enterprise, Palo Cedro, Cottonwood, Balls Ferry, Project City, and Ono.

Upon completion of the pre-field review, a botanical field survey was undertaken in general accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW, 2009). The botanical survey was conducted on June 10, 2016. Most of the special-status plant species potentially occurring on the site would have been evident at the time the fieldwork was conducted. The potential presence of species not readily identifiable during the field survey was determined on the basis of observed habitat characteristics. The survey consisted of an intensive and systematic evaluation of the site. A supplemental survey on December 8, 2017, to verify that site conditions had not changed since the 2016 biological surveys were completed.

The general wildlife evaluation was conducted in two phases. The first phase consisted of the records search described above. Under the second phase, the habitats and special habitat elements on the site were determined through field reconnaissance and their potential to support special-status species was evaluated. Wildlife surveys were conducted on June 24 and November 7, 2016. Many of the special-status animal species potentially occurring on the site would not have been evident at the time the fieldwork was conducted. The potential presence of species not readily identifiable during the field survey was determined on the basis of observed habitat characteristics. Because potentially suitable habitat for special-status bat species was observed onsite, a daytime bat habitat assessment was conducted by a bat specialist. The assessment was conducted on December 12, 2017.

### Candidate Tree Survey Report

The City of Redding requires that subdivisions and other development projects be designed to minimize destruction or damage to trees that exceed six inches in diameter at a breast height (dbh) of 4.5 feet above the ground. Chapter 18.45.030 states that "no tree, regardless of species, that exceeds 6 inches dbh on any developed or undeveloped/vacant property in the city shall be destroyed, killed, or removed unless a tree removal permit is first obtained." An application for a "Discretionary Permit", as described in Chapter 18.45.070, will also serve as "an application for tree removal in those instances where trees will be affected by the development." To secure a Discretionary Permit, "candidate trees" and "candidate tree groupings" must be identified on the site. These trees are classified as "a single healthy tree or group of healthy trees warranting consideration for preservation by virtue of its value to the community, the immediate neighborhood, natural environment in recognition of the existence of one or more of the following attributes:

- *It is an outstanding specimen of its species in terms of aesthetic quality as determined by shape and branch structure.*
- *It is one of the largest or oldest trees in Redding that also has historical or neighborhood interest.*

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- *It adds significantly to the environment of the City because of its location, distinct form, unique species, or other identifying characteristics.*
  - *It is in a location which is connected to a larger natural woodland system, such as a permanent open-space area, and which is likely to be self-supporting over time.*
  - *It serves a desirable function, such as buffering dissimilar land uses, or is a component of an overall landscape plan.”*

The following methodology was used for the tree survey:

- The site was inspected to identify and record all candidate trees and tree groupings.
- Species, dbh, and health were determined for all recorded trees. Health was rated on a scale of 1 – 5 (Poor to Best). Health factors include crown diameter, density and length, trunk defects, epicormics branching, condition of old and new wood, etc.
- Diameters were measured with a diameter tape approximately 4.5 feet above the ground surface.
- Candidate trees were labeled with a numbered metal tree tag.

### 5.3.3 REGULATORY SETTING

The following is a description of federal, State, and local environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process.

#### FEDERAL

##### Endangered Species Act

The Federal Endangered Species Act (FESA) generally prohibits the “taking” of a species listed as endangered or threatened (16 USC 1532, 50 CFR 17.3). Under the FESA, the “take” of a threatened or endangered species is deemed to occur when an intentional or negligent act or omission results in any of the following actions: “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” The term “harm” includes acts that results in death or injury to wildlife. Such acts may include significant habitat modification or degradation if it results in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. For projects with a federal nexus, Section 7 of the FESA requires that federal agencies, in consultation with USFWS or NOAA Fisheries, use their authorities to further the purpose of FESA and to ensure that their actions are not likely to jeopardize the continued existence of listed species or result in destruction or adverse modification of critical habitat. Section 10(a)(1)(B) allows non-federal entities to obtain permits for incidental taking of threatened or endangered species through consultation with USFWS or NOAA Fisheries.

Critical habitat is defined in Section 3(5)(A) of the FESA as “(i) the specific areas within the geological area occupied by a species, at the same time it is listed in accordance with the FESA, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geological area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.” Section 3(3) of the FESA defines “conservation” as “to use and the use of all methods and procedures which are necessary to bring an endangered species or threatened species to the point at which the measures provided pursuant to the FESA are no longer necessary” (i.e., the species is recovered and removed from the list of endangered and threatened species). The

designation of critical habitat directly affects only federal agencies, by prohibiting actions they fund, authorize, or carry out from destroying or adversely modifying critical habitat. Individuals, businesses, and other non-federal entities are not affected by the designation of critical habitat so long as their actions do not require a permit, a license, funding, or other support from a federal agency.

### **Regulation of Activities in Waters of the U.S. and Wetlands**

The Corps has primary federal responsibility for administering regulations that concern “waters of the U.S.,” including jurisdictional wetlands. The Corps acts under two statutory authorities, the Rivers and Harbors Act (Sections 9 and 10) which governs specified activities in “navigable waters of the U.S.” and wetland habitats. The Corps requires that a permit be obtained if a project proposes placing structures within, over, or under navigable waters and/or discharging dredged or fill material into “waters of the U.S.” below the ordinary high-water mark in non-tidal waters. The Environmental Protection Agency (EPA), USFWS, the National Marine Fisheries Services (NMFS), and several other agencies provide comment on Corps permit applications.

### **Migratory Bird Treaty Act**

Migratory birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The MBTA is administered by the USFWS and special permits from the agency are generally required for the “take” of any migratory birds.

### **Federal Magnuson-Stevens Fishery Conservation and Management Act**

The Federal Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), established procedures designed to identify, conserve, and enhance EFH for those species regulated under a federal fisheries management plan (FMP). The MSA requires federal agencies to consult with NOAA Fisheries on all actions, or proposed actions, authorized, funded, or undertaken by the agencies that may adversely affect EFH (MSA Section 305[b][2]). A component of this consultation process is the preparation and submittal of an Essential Fish Habitat Assessment (EFHA). The length of the EFHA will vary, based on project complexity and the magnitude of potential impacts on EFH, but all EFHAs must include the following information: (1) a description of the proposed action; (2) an analysis of the effects, including cumulative effects, of the proposed action on EFH, the managed species, and associated species, such as major prey species, included affected life history stages; (3) the federal agency’s views regarding the effects of the proposed action on EFH; and (4) proposed mitigation, if applicable. In instances where MSA and FESA issues overlap, NOAA Fisheries encourages an integrated approach to consultation. The EFH mandate applies to all species managed under an FMP. For the Pacific Coast (excluding Alaska), there are three FMPs covering groundfish, coastal pelagic species, and Pacific salmon.

## **STATE**

### **California Endangered Species Act**

Under the California Endangered Species Act (CESA), CDFW has the responsibility for maintaining a list of endangered and threatened species (California Fish and Game Code 2070). The CDFW also maintains a list of “candidate species,” which are species that the CDFW formally notices as being under review for addition to the list of endangered or threatened species. In addition, CDFW maintains lists of “species of

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special concern,” which serve as species “watch lists.” Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project study area and, if so, whether the proposed project would have a potentially significant impact on any of these species. In addition, the CDFW encourages informal consultation on any proposed projects that may affect a species that is a candidate for state listing. “Take” of protected species incidental to otherwise lawful management activities may be authorized under Section 2091 of the Fish and Game Code of California. Authorization from the CDFW would be in the form of an Incidental Take Permit.

### **California Native Plant Protection Act**

The California Native Plant Protection Act (California Fish and Game Code Section 1900-1913) prohibits the taking, possessing, or sale within the State of any plants with a state designation of rare, threatened, or endangered, as defined by the CDFW. An exception to this prohibition allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFW and give the agency at least 10 days to retrieve (and presumably replant) the plants before they are plowed under to otherwise destroyed. Fish and Game Code Section 1913 exempts from the “take” prohibition “the removal of endangered or rare native plants from a channel, lateral ditch, building site, or road, or other right-of-way.”

### **California Fish and Game Code**

Raptor species (birds of prey) are protected from “take” according to the California Fish and Game Code (Section 3503.5 1992). Section 3503.5 states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “taking” by the CDFW. California statutes also accord “fully protected” status to a number of specifically identified birds, mammals, reptiles, amphibians, and fish. These species cannot be “taken,” even with an Incidental Take Permit (California Fish and Game Code, Sections 3505, 3511, 4700, 5050, and 5515).

### **Oak Woodlands Conservation Act**

The State of California provides for oak protection through SB 1334, Oak Woodlands Conservation (last amended March 31, 2004), which applies to actions taken within unincorporated county areas in California. Lands within city limits, in this case the City of Redding, are not subject to the Act. SB 1334 requires the California Environmental Quality Act (CEQA) lead agency (when it is a county) to determine whether a county project may result in a conversion of oak woodlands that will have a significant effect on the environment. If an agency determines that the project will have a significant effect on oak woodlands, the agency shall require implementation of one or more oak woodland mitigation alternatives. Oak woodlands supporting oaks exhibiting 5-inch or greater dbh are subject to the Act and must be evaluated.

### **State CEQA Guidelines**

Although threatened and endangered species are protected by specific federal and State statutes, State *CEQA Guidelines* §15380(d) provides that a species not listed on the federal or State list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in the FESA and the Section of the

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California Fish and Game Code dealing with rare or endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or the CDFW (e.g., candidate species, species of concern) would occur. Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

### **Regulation of Activities in Waters of the U.S. and Wetlands**

The State's authority in regulating activities in "waters of the U.S." and wetlands resides primarily with the CDFW and the State Water Resources Control Board (SWRCB). The CDFW is authorized under the California Fish and Game Code to develop mitigation measures and enter into 1602 Streambed Alteration Agreements with applicants who propose projects that would obstruct the flow of, or alter the bed, channel, or bank of a river or stream in which there is a fish or wildlife resource, including intermittent and ephemeral streams. The SWRCB, acting through the Regional Water Quality Control Board (RWQCB), must certify that a Corps permit action meets State water quality objectives. The RWQCB also regulates the discharge of dredged or fill material into drainages and wetlands that are not subject to Corps jurisdiction (e.g., isolated waters).

## **LOCAL**

### **City of Redding Municipal Code –Tree Management**

The City of Redding's *Tree Management Ordinance* was developed based on the following objectives: "(1) protect and enhance the aesthetic qualities of the community provided by native and nonnative trees; (2) promote a healthy and attractive urban landscape as the community grows; (3) recognize the importance of trees as visual and physical buffer; (4) preserve the City's valuable natural features; (5) require the replacement of trees that are removed, where appropriate; (6) establish a program for the planting of trees in new developments; (7) protect trees on undeveloped properties until such time as a development plan/building permit is approved." The RMC provides tree protection through the *Streets and Sidewalks Ordinance*, Chapter 13.40, *Trees and Shrubs*, and through the *Zoning Ordinance*, Chapter 18.45, *Tree Management*. As described in Chapter 13.40.010, trees that are considered unique, outstanding specimens of desirable species, have historic interest, or are of distinct form will be identified and preserved in a Landmark and Heritage Tree Plan developed by the community services advisory commission.

### **City of Redding General Plan**

The City of Redding *2000 - 2020 General Plan*, last amended in 2004 except for the Housing Element, serves as the overall guiding policy document for land use, development, and environmental quality in the City of Redding. The *General Plan* comprises a set of interrelated and internally consistent components ("elements") specific to various attributes of either the physical or cultural environment. These elements are: Community Development and Design, Transportation, Natural Resources, Health and Safety, Noise, Housing, Recreation, Economic Development, Public Facilities and Services, and Air Quality. The *General Plan* provides goals, policies, and implementation measures in order to reduce impacts of projects on biological resources. Applicable goals and policies relative to the proposed project site are listed in Table 5.3-4, CONSISTENCY WITH APPLICABLE CITY OF REDDING GENERAL PLAN GOALS AND POLICIES FOR BIOLOGICAL RESOURCES, followed by a brief explanation of how the proposed project complies with the goals and policies.

**Table 5.3-4  
CONSISTENCY WITH APPLICABLE CITY OF REDDING GENERAL PLAN  
GOALS AND POLICIES FOR BIOLOGICAL RESOURCES**

General Plan Goals and Policies	Consistency Analysis
<u>GENERAL PLAN GOAL CDD3</u>	
<u>ENSURE A PROPER BALANCE BETWEEN DEVELOPMENT AREAS AND THE NATURAL ENVIRONMENT.</u>	
<p><b>Policy CDD3A:</b> Prohibit development in natural floodplains or on hillsides with slope areas exceeding 20 percent. Minor encroachments into these areas for new developments may be authorized without a General Plan amendment if necessary to facilitate installation of infrastructure, provide emergency-access opportunities, or otherwise facilitate construction of the project as approved by the City (See Policy NR 10A). Where an entire site designated for residential use is subject to flooding or has slopes over 20 percent, a density of 1.0 dwelling units per 20 acres may be permitted by use permit subject to appropriate standards.</p>	<p><b>Consistent.</b> Approximately 3.58 acres of the proposed project’s western parking lot area, south of Building ‘A’ and west of Building ‘C’ abutting the Henderson Open Space area, will encroach into the currently mapped FEMA 100-year floodplain as shown on Figures 3-13a and 3-13b, GRADING AND DRAINAGE PLANS. The City of Redding has a “no rise” policy requiring that new development not encroach within the 100-year floodplain and if it does, that the project applicant demonstrate that the new encroachment will not increase the water surface elevation during the most probable 100-year flood either upstream or downstream. A Conditional Letter of Map Revision based on Fill (CLOMR-F) will need to be approved prior to issuing a grading permit for fill in the floodway fringe. A LOMR dated February 14, 2017 was prepared and subsequently submitted to FEMA by the City after their review and approval. Once the LOMR is approved, the CLOMR-F will be prepared and submitted to FEMA. The proposed project would be designed consistent with RMC Chapter 16.12, <i>Clearing, Grading, Fills and Excavation</i>, requirements to minimize the flow of stormwater during project operation. Refer to Section 5.8, HYDROLOGY AND WATER QUALITY.</p>
<p><b>Policy CDD3B:</b> Require buffer areas between development projects and significant watercourse, riparian vegetation, and wetlands in accordance to the Natural Resources Element.</p>	<p><b>Consistent.</b> Land immediately west of the main portion of the proposed project is the Henderson Open Space that is designated “Greenway” (GWY) and zoned “Open Space” (OS) with the Sacramento River further west. Per the RMC, setbacks from the Sacramento River ensure a proper relationship between this water feature and the proposed development. The Henderson Open Space buffers the proposed project from the Sacramento River.</p>
<p><b>Policy CDD3C:</b> Preserve natural corridors and linkages between habitat types through project design, key open-space acquisitions, floodplain and slope dedications and easements, and similar mechanisms.</p>	<p><b>Consistent.</b> A pedestrian walkway commencing approximately 200 feet west of the intersection of Henderson Road (North) and Hartnell Avenue, will provide a linkage to the northerly portion of the Henderson Open Space and Sacramento River. This walkway will also provide pedestrian access linkage from the existing Cypress Avenue stairway to the proposed project site and the Henderson Open Space. The construction of Parkview Avenue (Open Space Access) will provide vehicular linkage and also pedestrian access to the Henderson Open Space. Refer to Figure 3-6a, SITE PLAN, and Figures 3-6b and 3-6c, ENLARGED SITE PLANS.</p>
<p><b>Policy CDD4A:</b> Preserve significant trees and other vegetation along the banks of the Sacramento River, while emphasizing passive recreation and providing opportunities for active uses.</p>	<p><b>Consistent.</b> The project site is not adjacent to the Sacramento River. The City of Redding’s Henderson Open Space is located between the project site and the river, and provides for tree retention and recreational opportunities.</p>
<u>GENERAL PLAN GOAL NR1</u>	
<u>MINIMIZE SOIL EROSION AND SEDIMENTATION PROBLEMS RESULTING FROM DEVELOPMENT ACTIVITIES; IMPROVE THE QUALITY OF STORMWATER RUNOFF.</u>	
<p><b>Policy NR1B:</b> Require development applicants to submit and receive Public Works Department approval for erosion- and sediment-control plans prior to undertaking grading activities.</p>	<p><b>Consistent.</b> As part of the project’s improvement plan design and review and approval process by the City’s Public Works Department, erosion-and sediment control plans are provided by the applicant’s engineer. RMC Chapter 16.12, <i>Clearing, Grading, Fills and Excavation</i>, addresses requirements associated with clearing, grading, fills and excavation and sets forth rules and regulations to prevent erosion and control sediment. Review and approval by the Public Works Department of improvement plans and accompanying grading and erosion control plans assures compliance.</p>

**Table 5.3-5 Continued  
CONSISTENCY WITH APPLICABLE CITY OF REDDING GENERAL PLAN  
GOALS AND POLICIES FOR BIOLOGICAL RESOURCES**

General Plan Goals and Policies	Consistency Analysis
<b>Policy NR1C:</b> Minimize soil erosion and sedimentation created during and after construction activities to the fullest extent practicable, using Best Management Practices (BMPs).	<b>Consistent.</b> Refer to the Consistency Analysis for Policy NR1B. BMPs will be identified in the grading, erosion control plans and SWPPP submitted for approval by the City.
<b>Policy NR1D:</b> Make project monitoring and enforcement activities a priority to ensure that erosion-control measures are in place prior to the start of the rainy season and function properly and effectively: <ul style="list-style-type: none"> <li>- Installed properly.</li> <li>- In place prior to the start of the rainy season.</li> <li>- Functional and effective.</li> </ul>	<b>Consistent.</b> A SWPPP will be prepared and designed, specific to the site, conforming to the required State Stormwater NPDES Construction Permit. The plan covers monitoring and enforcement activities and addresses the prevention of soil loss by storm water run-off and/or wind erosion, of sedimentation and/or of dust/particulate matter air pollution.
<b>Policy NR1E:</b> Aggressively pursue immediate remediation when erosion damage is discovered, and/or initial control measures fail.	<b>Consistent.</b> The SWPPP identifies that immediate remediation be undertaken when erosion damage is discovered and/or initial control measures fail.
<b>Policy NR1F:</b> Establish and levy fines for failure to comply with the requirements of the Grading Ordinance and/or an approved erosion- and sediment-control plan.	<b>Consistent.</b> The RWQCB and the City actively monitor high profile, large projects and particularly those that could impact the Sacramento River, such as the proposed project, and will levy fines on the property owner for failure to comply with the SWPPP, grading ordinance and/or the approved erosion control plan.

GENERAL PLAN GOAL NR2

**DEVELOP AND MAINTAIN ADEQUATE WATER SUPPLIES FOR DOMESTIC AND FIRE SUPPRESSION PURPOSES.**

<p><b>Policy NR2B:</b> Encourage water-conservation practices including, but not limited to, use of:                      A tiered pricing system for water which is tied to the amount consumed by a household or business.</p> <ul style="list-style-type: none"> <li>- Native plants or other plants with low water requirements in public and private development projects.</li> <li>- Drip irrigation systems.</li> <li>- "Gray water" for landscape irrigation if approved by Shasta County.</li> </ul>	<p><b>Consistent.</b> California courts invalidated the use of a tiered pricing system. However, the proposed project does utilize a drip irrigation system, to the maximum extent feasible, and the installation of native trees, plants and groundcover with low water requirements. The proposed project will comply with DWR's Model Water Efficient Landscape Ordinance (MWELO). In addition to MWELO, the City also has water conservation measures that continually encourage limiting water waste and promotes conservation, which will be updated to reflect the newly mandated state-wide prohibitions authorized under the Governor's Executive Order B-37-16 which includes a directive for DWR to permanently prohibit a defined set of practices that waste potable water. Landscape irrigation will include automatic irrigation controllers with soil moisture sensors/rain sensors; run-off prevention, low head drainage, and over spray; utilization of low volume/water efficient drip and rotary heads. Figure 3-11g, IRRIGATION ZONES, identifies the landscape areas throughout the site that have low, low to medium, medium, and high-water use zones. The high-water use zones are very limited turf areas.</p>
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GENERAL PLAN GOAL NR3

**PRESERVE AND PROTECT THE QUANTITY AND QUALITY OF GROUNDWATER RESOURCES WITHIN THE PLANNING AREA.**

<p><b>Policy NR3A:</b> Provide maximum groundwater-recharge opportunities by maintaining the natural condition of waterways and floodplains to the extent feasible, given flood-control requirements.</p>	<p><b>Consistent.</b> Construction and/or operation activities of the proposed project does not require a substantial supply of local groundwater resources or substantially alter existing groundwater recharge, such as through the creation of extensive new impermeable areas. Whereby, the proposed project does increase the amount of temporary and/or permanent impervious surface on the project site (e.g., staging areas, onsite access drives, surface parking areas, proposed structures, and upgrades to the existing water supply and other utilities); however, this increase is not substantial, due to much of the site being previously disturbed and developed and does not hinder local groundwater recharge opportunities. In addition, the proposed project does not adversely impact the natural conditions of the Sacramento River and associated floodplain.</p>
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**Table 5.3-5 Continued  
CONSISTENCY WITH APPLICABLE CITY OF REDDING GENERAL PLAN  
GOALS AND POLICIES FOR BIOLOGICAL RESOURCES**

General Plan Goals and Policies	Consistency Analysis
<p><b>Policy NR3B:</b> Comply with the Regional Water Quality Control Board’s regulations and standards to maintain and improve groundwater quality in the Planning Area.</p>	<p><b>Consistent.</b> Implementation of the proposed project will not result in impacts on the groundwater quality in the Planning Area since the proposed project will comply with City standards and codes and RWQCB regulations.</p>
<p align="center"><u>GENERAL PLAN GOAL NR4</u> <i>PREVENT AND REMEDY SURFACE-WATER, GROUNDWATER, AND SOIL CONTAMINATION.</i></p>	
<p><b>Policy NR4A:</b> Discourage the establishment of any new septic systems, except in areas where residential densities are low (1–5 acres per unit and larger) and soils are suitable for septic system use.</p>	<p><b>Consistent.</b> The proposed project will not utilize a septic system and will connect to the City’s wastewater conveyance and treatment system.</p>
<p align="center"><u>GENERAL PLAN GOAL NR5</u> <i>PRESERVE AND PROTECT THE SIGNIFICANT HABITATS, PLANTS, AND WILDLIFE THAT EXIST IN THE PLANNING AREA.</i></p>	
<p><b>Policy NR5A:</b> Minimize the disruption of sensitive habitat caused by new development by encouraging innovative design and site planning and establishing performance standards for habitat protection.</p>	<p><b>Consistent.</b> Due to the disturbed nature of the project site and the high level of human activity, the onsite riparian habitat does not represent a high-quality occurrence of the community type. Construction activities affecting riparian habitat and/or canopy will be subject to mitigation; however, site disturbance that will occur outside the canopy limit is considered full avoidance and no mitigation is required (refer to Figure 5.3-2, TEMPORARY CONSTRUCTION FENCING LOCATIONS). Potentially significant direct and indirect impacts to riparian habitat can be reduced to a <i>less than significant</i> level through implementation of <b>MM 5.3-2a</b> and offset through implementation of <b>MM 5.3-2b</b>. It is anticipated that the riparian planting called for in <b>MM 5.3-2a</b> will occur on disturbed City-owned lands adjacent to the subject site, which is the Henderson Open Space. Implementation of <b>MM 5.3-2a</b> or <b>MM 5.3-2b</b> will result in <i>less than significant</i> riparian community impacts.</p>
<p><b>Policy NR5B:</b> Work to preserve and enhance fisheries in the Sacramento River and other identified streams.</p>	<p><b>Consistent.</b> The proposed project has the potential to affect local movements of fish and wildlife. Project construction work will not have direct effects on salmonids because no suitable habitat is present in the project area. However, the potential for indirect effects on salmonids downstream in the Sacramento River will be avoided based on utilization of <b>MM 5.3-2a</b> and <b>MM 5.3-2b</b> and through implementation of the SWPPP and BMPs for erosion control and spill prevention in compliance with the State Water Resources Control Board’s required NPDES permit (refer to Section 5.8, HYDROLOGY AND WATER QUALITY).</p>
<p align="center"><u>GENERAL PLAN GOAL NR6</u> <i>PRESERVE WATERCOURSES, VERNAL POOLS, RIPARIAN HABITAT, AND WETLANDS IN THEIR NATURAL STATE TO THE EXTENT FEASIBLE. FULLY MITIGATE UNAVOIDABLE ADVERSE IMPACTS SUCH AS WETLANDS FILLING OR DISTURBANCE.</i></p>	
<p><b>Policy NR6A:</b> Preserve watercourses, vernal pools, riparian habitat, and wetlands in their natural state to the extent feasible. Fully mitigate unavoidable impacts such as wetland filling or disturbance.</p>	<p><b>Consistent.</b> Refer to the Consistency Analysis for Policies NR5A and NR5B regarding the Sacramento River and riparian habitat. There are no vernal pools or wetlands onsite. Any unavoidable loss of riparian habitat will require compensatory mitigation. Refer to <b>MM 5.3-2a</b> and <b>MM 5.3-2b</b>.</p>
<p><b>Policy NR6B:</b> Provide adequate buffering of sensitive habitats whenever necessary. Buffer size should be based upon the type of habitat as well as its size and habitat value.</p>	<p><b>Consistent.</b> Land immediately west of the proposed project is the Henderson Open Space that is designated “Greenway” (GWY) and zoned “Open Space” (OS) with the Sacramento River further west. Per the RMC, setbacks from the Sacramento River will ensure a proper relationship between this water feature and the proposed development. The site plan for the proposed project illustrates how the project’s edges are defined using open space buffers, landscaping and the careful siting of the proposed buildings interspersed throughout the project site. Through the use of distinct landscape, hardscape, and design features</p>

**Table 5.3-5 Continued  
CONSISTENCY WITH APPLICABLE CITY OF REDDING GENERAL PLAN  
GOALS AND POLICIES FOR BIOLOGICAL RESOURCES**

General Plan Goals and Policies	Consistency Analysis
<p><b>Policy NR6C:</b> Ensure that uses allowed within riparian corridors:</p> <ul style="list-style-type: none"> <li>- Minimize the creation of erosion, sedimentation, and increased runoff;</li> <li>- Emphasize retention and enhancement of natural riparian vegetation;</li> <li>- Provide for unimpaired passage of fish and wildlife;</li> <li>- Avoid channelization;</li> <li>- Avoid substantial interference with surface and subsurface flows;</li> <li>- Incorporate natural vegetation buffers.</li> </ul>	<p>throughout the site, open space areas are more clearly defined. Refer to Figure 3-6a, PROPOSED SITE PLAN, Figures 3-6b and 3-6c, ENLARGED SITE PLANS, Figure 3-11a, LANDSCAPE LAYOUT, and subsequent Figures 3-11c through 3-11f, PLANTING PLAN.</p> <p><b>Consistent.</b> As discussed in Section 5.8, HYDROLOGY AND WATER QUALITY, the proposed project is required to implement Best Management Practices (BMPs) to avoid and/or minimize erosion and sedimentation impacts.</p> <ul style="list-style-type: none"> <li>• Refer to the Consistency Analysis for Policy CDD3B and NS5A regarding the project’s effects on natural riparian vegetation.</li> <li>• None of the on and offsite improvements will impair the passage of fish and wildlife.</li> <li>• There will be no channelization of the Sacramento River or tributary drainages.</li> <li>• There will be no interference with subsurface flows since surface excavations will be up to a maximum of between 5 feet and 10 feet. To the maximum extent feasible, the grading plan identifies that the direction of surface flows will generally maintain their existing flow direction.</li> <li>• Refer to the Consistency Analysis for Policy NR6B regarding existing natural and proposed vegetation buffers incorporated into the project design.</li> </ul>
<p><b>Policy NR6D:</b> Continue to require new development to provide minimum river and creek-corridor development setbacks (buffer areas) in accordance with Figure 3-3 and Zoning Code Chapter 18.48. These setbacks may be modified based on project/resource-specific circumstances and appropriate mitigation. These buffer areas should be dedicated or a permanent conservation easement granted to the City as a condition of development approval.</p>	<p><b>Consistent.</b> Refer to the Consistency Analysis discussion for Policy CDD4A. The Henderson Open Space lies between the proposed project and the Sacramento River thereby serving as a setback buffer.</p> <p>RMC Chapter 18.48, <i>River/Creek Corridor Development</i>, calls for waterway corridor setbacks for most properties adjoining certain waterways identified in the <i>General Plan</i>. For the Sacramento River, the average corridor buffer requirement is 75 feet inland from the edge of the riparian zone, or 150 feet inland from the top of bank, whichever is greater. Reduced setbacks are allowed for bluff areas located along the Sacramento River between the North Market Street Bridge and the future Parkview Bridge. Up to a 50 percent buffer reduction is also allowed throughout the City if specific conditions are met.</p> <p>Based on site reconnaissance and aerial photograph review, the average setback of the development site from the east bank of the Sacramento River is approximately 442 feet and the average setback from the riparian zone is approximately 89 feet. Therefore, the proposed project is in compliance with the requirements of RMC Chapter 18.48.</p>
<p><b>Policy NR6E:</b> Strive to conserve all “special status species” within the Planning Area. Ensure implementation of statutory protection of these species.</p>	<p><b>Consistent.</b> Review of CNDDDB records indicate that no special-status plant species have been mapped as occurring on or near the proposed project site; the nearest recorded extant special-status plant population is nearly three miles to the east-southeast. In addition, no special-status plant species or suitable habitat for special-status plant species were observed during the botanical survey, nor are any expected to be present (refer to Table 5.3-2, POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR ONSITE). Therefore, impacts to special-status plant species are not anticipated to occur with implementation of the proposed project.</p> <p>No special-status animal species were observed in the project study area during the wildlife evaluation (refer</p>

**Table 5.3-5 Continued**  
**CONSISTENCY WITH APPLICABLE CITY OF REDDING GENERAL PLAN**  
**GOALS AND POLICIES FOR BIOLOGICAL RESOURCES**

General Plan Goals and Policies	Consistency Analysis
	<p>to Table 5.3-3, ANIMAL SPECIES OBSERVED). As discussed in Table 5.3-2, POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR ONSITE, the following special-status animal species could potentially be affected by the proposed project: pallid bat, spotted bat, Townsend’s big-eared bat, western red bat, ringtail, bald eagle, western pond turtle, yellow-breasted chat, and yellow warbler. Any potential impacts will be minimized through implementation of <b>MM 5.3-1a</b> through <b>MM 5.3-1g</b>. These mitigation measures will reduce potential impacts to less than significant and provide consistency with the <i>General Plan</i> policies.</p> <p>The Sacramento River, located just west of the site, is known to support Chinook salmon (fall-run, late-fall-run, winter-run, and spring-run) and Central Valley steelhead; the river reach is designated as critical habitat for Chinook salmon (winter-run and spring-run) and Central Valley steelhead. Salmonids will not be directly affected by site development but could be indirectly affected. Indirect effects on salmonids could potentially occur if sediments or other pollutants enter the Sacramento River and degrade rearing habitat and/or spawning habitat. Potential indirect effects on salmonids will be minimized through implementation of BMPs for erosion control and spill prevention. The BMPs will be identified in the SWPPP to be prepared in compliance with the State Water Resources Control Board’s NPDES permit for construction stormwater discharge. Indirect impacts to salmonids will be less than significant (refer to Section 5.8, HYDROLOGY AND WATER QUALITY).</p>
<p><b>GENERAL PLAN GOAL NR7</b>  <b>RECOGNIZE THE AESTHETIC AND BIOLOGICAL VALUES OF OAK WOODLANDS AND OTHER NATURAL VEGETATION.</b></p>	
<p><b>Policy NR7A:</b> Promote existing native oaks, especially valley oaks, by establishing standards for the design of development projects. The preservation of stands of trees within developments is preferred over preservation of individual trees, with the exception of special-status species and heritage trees.</p>	<p><b>Consistent.</b> Refer to Figure 3-12, PROPOSED TREE REMOVAL PLAN, which identifies that of the 20 Valley oaks and 8 Interior live oaks located throughout the site, 15 Valley oaks and 5 Interior Live oaks will be removed. The majority will be removed due to their location within or along future ROW improvements and where Building ‘B’ is to be located. Per RMC Chapter 18.45, the project will comply with the City’s <i>Tree Management Ordinance</i> and proposes planting of 210 tree (including 108 locally native trees) in addition to a number of native shrubs and groundcovers. Tree planning includes 47 Valley oaks, 22 Blue oaks, 25 Interior Live oaks, and 14 California Sycamore trees. Refer to Figure 3-12, PRELIMINARY LANDSCAPE PLAN.</p>
<p><b>Policy NR7B:</b> Identify and establish appropriate “tree mitigation areas” to be used for the planting of native trees in concert with development project mitigation.</p>	<p><b>Consistent.</b> Figure 3-11a, LANDSCAPE LAYOUT, identifies the location for the planting of valley oaks. Per RMC Chapter 18.45, <i>Tree Management</i>, the City’s Development Services Department has identified the Henderson Open Space as a “tree mitigation area” where Fremont Cottonwood trees will be planted. The area is not technically a “mitigation area” since tree replacement is also incorporated into the proposed project design.</p>
<p><b>GENERAL PLAN GOAL NR8</b>  <b>RECOGNIZE AND PROTECT HABITAT LINKAGES AND MIGRATORY CORRIDORS.</b></p>	
<p><b>Policy NR8B:</b> Maintain and preserve other natural habitat linkages and wildlife corridors in the City where feasible. Discourage development impacts to these linkages and corridors and fully mitigate associated unavoidable adverse impacts.</p>	<p><b>Consistent.</b> The Consistency Analysis for Policy CDD3C identifies that a pedestrian walkway commencing approximately 200 feet west of the intersection of Henderson Road (North) and Hartnell Avenue, will provide pedestrian linkage to the northerly portion of the Henderson Open Space and Sacramento River. This walkway will also provide pedestrian access linkage from the existing Cypress Avenue stairway to the proposed project site and the Henderson Open Space. The construction of Parkview Avenue (Open Space Access) will provide vehicular linkage and also pedestrian access to the Henderson Open Space. Refer to</p>

**Table 5.3-5 Continued**  
**CONSISTENCY WITH APPLICABLE CITY OF REDDING GENERAL PLAN**  
**GOALS AND POLICIES FOR BIOLOGICAL RESOURCES**

General Plan Goals and Policies	Consistency Analysis
Figure 3-6a, PROPOSED SITE PLAN, and Figures 3-6b and 3-6c, ENLARGED SITE PLANS.	
<b>GENERAL PLAN GOAL NR9</b> <b>PROMOTE AND FACILITATE HABITAT PRESERVATION, RESTORATION, AND ENHANCEMENT.</b>	
<p><b>Policy NR9A:</b> Encourage the acquisition, preservation, restoration, and enhancement of native vegetation with a focus on wetlands and riparian habitat that will improve the biological value and integrity of the City's natural resources. Encourage native landscape in unvegetated, manmade areas, such as along streets and in abandoned lots.</p>	<p><b>Consistent.</b> As discussed in the Consistency Analysis for Policy NR5A, due to the disturbed nature of the project site and the high level of human activity, the onsite riparian habitat is not of high-quality. Construction activities will occur outside the canopy limit and is considered full avoidance and no mitigation is required. It is anticipated that the riparian planting called for in <b>MM 5.3-2b</b>, due to the removal of 20 Fremont Cottonwood trees, will occur within the adjacent Henderson Open Space area as discussed under the Consistency Analysis for Policy CDD4A. Also, the discussion for Policy CDD4C noted that in January 2017, a property line adjustment (PLA) transferred from Dignity Health to the City Parks and Recreation Department portions of three parcels for inclusion in the Henderson Open Space. The transfer increased the City's open space area west of the proposed project and near the Cypress Avenue bridge, and to accommodate a trail from Cypress Avenue to the Henderson Open Space and the Sacramento River through the project site. The transfer provided the City the ability to maximize river core area management. Also refer to the Consistency Analysis for Policy NR7b regarding "tree mitigation areas." Figure 3-11a, LANDSCAPE LAYOUT, and subsequent Figures 3-11c through 3-11f, PLANTING PLAN, that illustrates the location of native vegetation utilized in manmade areas along the proposed streets and within disturbed and developed areas on the project site.</p>
<b>GENERAL PLAN GOAL NR10</b> <b>PRESERVE AREAS CONTAINING EXCESSIVE SLOPES OR 100-YEAR FLOODPLAINS AS OPEN SPACE TO PREVENT LOSS OF LIFE AND PROPERTY DAMAGE AND TO PROVIDE VALUABLE HABITAT AND RECREATIONAL OPPORTUNITIES.</b>	
<p><b>Policy NR10A:</b> Require as a condition of development approval public dedication of flood-prone lands adjacent to the Sacramento River and those tributary streams identified on Figure 3-3. Exceptions to this policy may be made based on: (1) the provisions of any adopted specific plan or (2) approval by the City in consideration of special circumstances unique to a flood-prone area where the extent of flooding is largely dictated by inadequate drainage improvements, where an entire parcel is constrained by floodplain, and/or where the flooding occurs within a developed area.</p>	<p><b>Consistent.</b> The Consistency Analysis for Policy CDD3A discusses how approximately 3.58 acres of the proposed project's western parking lot area, south of Building 'A' and west of Building 'C' abutting the Henderson Open Space area, will encroach into the currently mapped FEMA 100-year floodplain as shown on Figures 3-13a and 3-13b, GRADING AND DRAINAGE PLANS. The City's Development Services Department reviewed the site design and encroachment into the floodplain and determined that based on the proposed project design that the associated encroachment was acceptable due to the transfer of portions of three parcels owned by the applicant to the City for Henderson Open Space as identified in the Consistency Analysis for Policies CDD3A and CDD4C.</p>
<b>GENERAL PLAN GOAL NR11</b> <b>PROMOTE THE PRESERVATION AND APPROPRIATE PUBLIC USE OF KEY OPEN-SPACE LANDS WITHIN THE COMMUNITY.</b>	
<p><b>Policy NR11A:</b> Continue to use the Parks, Trails, and Open Space Master Plan to implement various policies of this General Plan that address the:</p> <ul style="list-style-type: none"> <li>- Framework for open-space lands.</li> <li>- Role of public and private open-space lands.</li> <li>- Preservation of important ecological areas.</li> <li>- Acquisition and management of public open-space land.</li> </ul>	<p><b>Consistent.</b> Refer to the Consistency Analysis for Policies CDD3A and CDD4C.</p>
<p>Source: City of Redding. 2000-2020 General Plan. October 2000.</p>	

## 5.3.4 STANDARDS OF SIGNIFICANCE

### SIGNIFICANCE CRITERIA

In accordance with State *CEQA Guidelines*, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. The following significance thresholds related to biological resources have been derived from Appendix G of the State *CEQA Guidelines*:

- *Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Refer to Impact 5.3-1, below.*
- *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Refer to Impact 5.3-2, below.*
- *Have a substantial adverse effect on State protected wetlands or federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Refer to AREAS OF NO PROJECT IMPACT, below.*
- *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. Refer to Impact 5.3-3, below.*
- *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Refer to Impact 5.3-4, below.*
- *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community, Conservation Plan, or other approved local, regional, or State habitat conservation plan. Refer to AREAS OF NO PROJECT IMPACT, below.*
- *Have the potential to substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare or threatened species? Refer to Impact 5.3-5, below.*

Based on these standards, the effects of the proposed project have been categorized as either a less than significant impact or a potentially significant impact. Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

**AREAS OF NO PROJECT IMPACT**

In June 2018, the City conducted an Initial Study to determine significant effects of the proposed project. In the course of this evaluation, certain impacts of the proposed project were found not to be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the Draft EIR. As such, the following impacts either are not applicable to the proposed project or are not reasonably foreseeable and are not addressed further within this section (refer to Section 10.0, EFFECTS FOUND NOT TO BE SIGNIFICANT):

- *Have a substantial adverse effect on State protected wetlands or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*
- *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community, Conservation Plan, or other approved local, regional, or State habitat conservation plan.*

**5.3.5 POTENTIAL IMPACTS AND MITIGATION MEASURES**

The findings from the various technical reports have been referenced when determining potential impacts of the proposed project. Further information in this section is based on, but not limited to, the City’s *General Plan*, available literature, and other publicly available information from responsible and/or trustee agencies. In accordance with CEQA, the effects of a project are evaluated to determine if they would result in a significant adverse impact on the environment. Biological resource impacts are analyzed below according to topic. Mitigation measures directly correspond with an identified impact.

<p><b>IMPACT</b> 5.3-1</p>	<p><i>The proposed project could have a substantial adverse effect, either directly or through habitat modification, on a natural community or on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.</i></p>
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**Significance: Potentially Significant Impact.**

**Impact Analysis:** The analysis presented below describes potential impacts to special-status species and habitats within the project area (refer to Appendix 15.3, BIOLOGICAL RESOURCES DOCUMENTATION). Impacts to the onsite riparian community are evaluated under Impact 5.3-2, below,

**Urban Community**

Project implementation would result in the redevelopment of approximately 8.8 acres of existing urban habitat. This classification is not considered natural feature of the landscape and is not identified and managed as a special-status natural community. However, the most important biological component of the onsite urban habitat is its mature trees, which may provide nesting habitat for migratory birds and roosting habitat for bats. Refer to Figure 3-12, PROPOSED TREE REMOVAL PLAN, in Section 3.0, PROJECT DESCRIPTION.

Under current project plans, trees with a dbh  $\geq$ 6-inch that would be removed from the urban habitat consist of 14 valley oaks, nine Fremont cottonwoods, five interior live oaks, five trees of heaven, one Chinese pistache, one California sycamore, one mulberry, and one grey pine. Trees to be retained in the urban habitat consist of eight Fremont cottonwoods, four valley oaks, four black willows, two trees of heaven, one Japanese privet, and one California sycamore.

The loss of trees within the urban community will be offset through implementation of the proposed planting plan in accordance with RMC Chapter 18.45, *Tree Management* (refer to Figure 3-11a, LANDSCAPE LAYOUT, and Figure 3-11b, PLANT LIST, in Section 3.0, PROJECT DESCRIPTION). In addition to horticultural specimens, the planting plan calls for installation of 108 trees native to the local area, including valley oaks, interior live oaks, blue oaks, and California sycamore. Refer to Impact 5.3-4, below for a detailed discussion. Impacts are considered *less than significant*.

### **Annual Grassland Community**

Project implementation would result in the conversion of approximately 1.5 acres of annual grassland to urban use. Given that the grassland is comprised of numerous non-native species, is highly disturbed, and is not a special-status natural community, no mitigation is warranted to offset potential impacts to the annual grassland. Impacts are considered *less than significant*.

### **Special-Status Plant Species**

As noted above, review of CNDDDB records (September 2016 and November 2017) indicate that no special-status plant species have been mapped as occurring on or near the proposed project site; the nearest recorded extant special-status plant population is nearly three miles to the east-southeast. In addition, no special-status plant species or suitable habitat for special-status plant species were observed during the botanical survey, nor are any expected to be present (refer to Table 5.3-2, POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR ONSITE, above). Therefore, impacts to special-status plant species are not anticipated to occur with implementation of the proposed project. No mitigation measures are required.

### **Special-Status Animal Species**

No special-status animal species were observed in the project study area during the wildlife evaluation (refer to Table 5.3-3, ANIMAL SPECIES OBSERVED). As seen in Table 5.3-2, POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR ONSITE, and discussed above, the following special-status animal species would potentially be affected by the proposed project: pallid bat, spotted bat, Townsend's big-eared bat, western red bat, ringtail, bald eagle, western pond turtle, yellow-breasted chat, and yellow warbler.

The Sacramento River, located just west of the site, is known to support Chinook salmon (fall-run, late-fall-run, winter-run, and spring-run) and Central Valley steelhead; the river reach is designated as critical habitat for Chinook salmon (winter-run and spring-run) and Central Valley steelhead. In addition, migratory birds could nest in vegetation and/or structures onsite in future nesting seasons. The following assesses special-status animal species potentially affected by project implementation.

**Bat Species.** Special-status bat species potentially affected by the proposed project are limited to the pallid bat, spotted bat, Townsend's big-eared bat, and the western red bat. A daytime assessment of bat habitat on the project site was completed by a qualified bat biologist. The biologist identified bat use in the small room that connects the two wings of the onsite building. Two cottonwoods were also found

to contain small cavities that could potentially support tree-roosting bats, and canopy-roosting could potentially use both the riparian and non-riparian trees for roosting. These locations are identified on Figure 5.3-2, IDENTIFIED BAT ROOSING HABITATS.

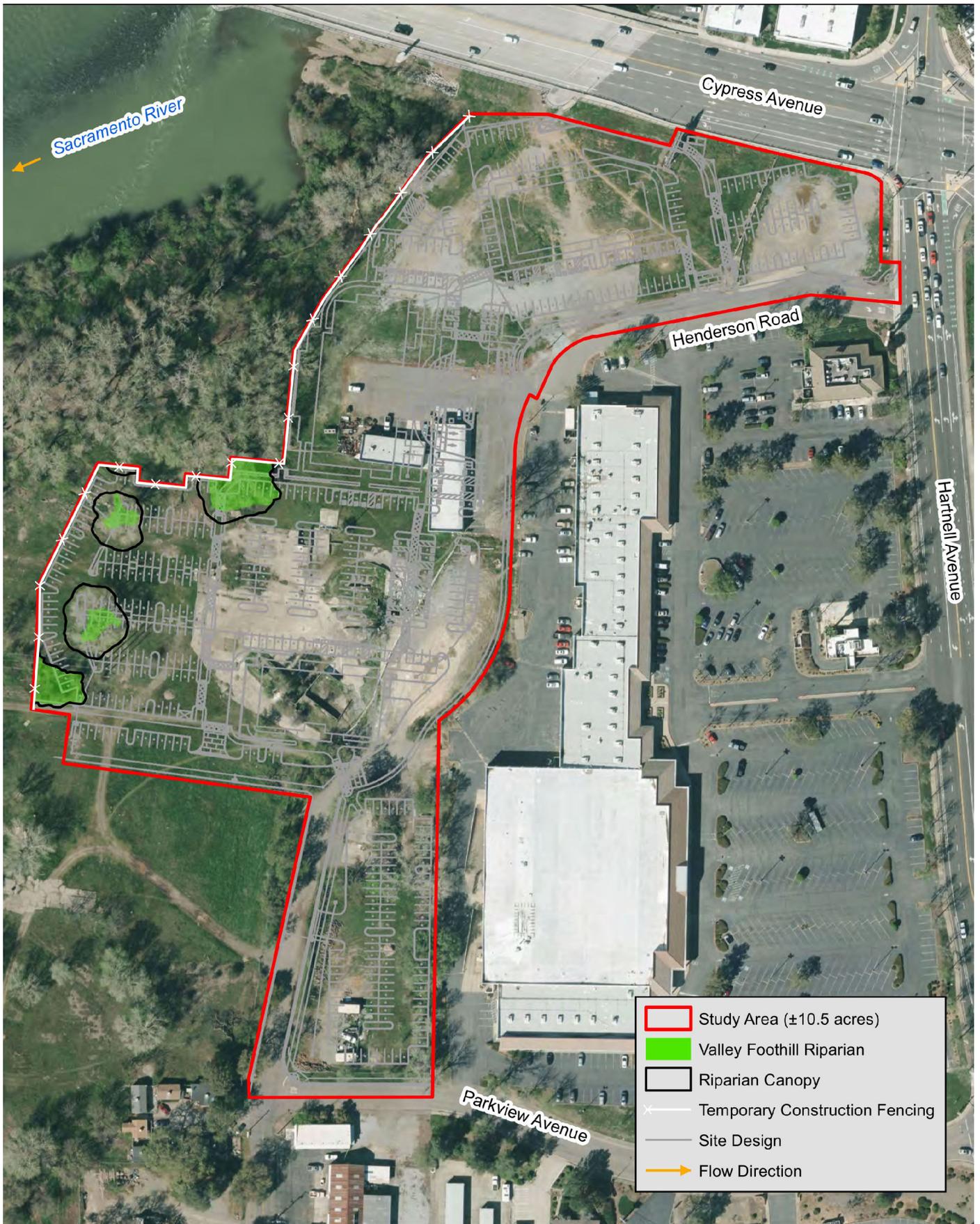
The greatest potential for adverse effects to bat species (including non-status species) associated with the proposed project is for vegetation removal or building demolition to result in the inadvertent death of bats that may be roosting therein. Appropriate avoidance/minimization measures to protect roosting bats (including non-status species) during construction are provided in **MM 5.3-1a** through **MM 5.3-1c**. With implementation of these mitigation measures, potentially significant impacts to roosting bats would be reduced to a *less than significant* level.

**Bald Eagles.** Nesting bald eagles, if present at the time of construction, could be directly or indirectly affected by site development. Direct effects could include mortality resulting from removal of a tree/shrub containing an active nest with eggs or chicks. Indirect effects could include nest abandonment by adults in response to loud noise levels or human encroachment, or a reduction in the amount of food available to young birds due to changes in feeding behavior by adults. In California, the nesting season for bald eagles is between January 1<sup>st</sup> and August 31<sup>st</sup>. Removal of potential nesting habitat or limiting construction activities to other times of the year (before January 1<sup>st</sup> or after August 31<sup>st</sup>) is unlikely to affect nesting bald eagles. Implementation of **MM 5.3-1e** would preclude disturbance to nesting bald eagles. Impacts are considered *less than significant*.

**Ringtails.** Ringtails are very unlikely to den on the project site given the lack of suitable denning habitat, particularly at ground level (no downed logs or rock crevices are present, no active or abandoned burrows were observed, and only minimal groundcover is present). However, if present, ringtails could be directly impacted by tree removal if construction activities do not allow sufficient time for ringtails to move to alternate dens. Mitigation Measures (MM) **5.3-1b** and **MM 5.3-1c** provide standards for the timing and method of tree removal. These measures call for creation of high noise and vibration levels prior to removal of trees containing hollows or other potential den sites. Implementation of these measures would preclude adverse impacts to ringtails during project construction to *less than significant* levels.

**Salmonids.** Salmonids would not be directly affected by site development, but could be indirectly affected. Indirect effects on salmonids could potentially occur if sediments or other pollutants enter the Sacramento River and degrade rearing habitat and/or spawning habitat. In a worst-case scenario, fish could die or be impaired by asphyxiation if sediment-laden water fouls their gills, and developing embryos and/or alevins in spawning gravels downstream could die or be impaired from lack of oxygen resulting from siltation of the streambed.

Potential indirect effects on salmonids will be minimized through implementation of best management practices (BMPs) for erosion control and spill prevention. The BMPs will be identified in the Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the project in compliance with the State Water Resources Control Board's National Pollutant Discharge Elimination System (NPDES) permit for construction storm water discharge. Indirect impacts to salmonids would be *less than significant* (refer to Section 5.8, HYDROLOGY AND WATER QUALITY).



- Study Area (±10.5 acres)
- Valley Foothill Riparian
- Riparian Canopy
- x Temporary Construction Fencing
- Site Design
- ➔ Flow Direction



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Temporary Construction Fencing Locations

Figure 5.3-2

*Western Pond Turtle.* Although no open water habitat is present onsite, suitable open water habitat is present within 500 feet of the site. Western pond turtles could possibly use the project site for overwintering or for nesting. Given the presence of gravel, asphalt, and concrete surfaces throughout most of the project area, as well as the presence of compacted soils, turtle use would most likely be confined to the western arm of the project site. If pond turtles were to enter the project site, they could be trapped within the work area and injured or killed. Additionally, if nests were established within the work area, eggs could be crushed by construction equipment.

Potential direct impacts on western pond turtles can be avoided by having a qualified biologist conduct a preconstruction survey for western pond turtles immediately prior to the start of in-water work each day that in-water work would occur. Any western pond turtles that may be found should be relocated to a safe location upstream or downstream of the work area. With implementation of Best Management Practices for erosion control and spill prevention, potential indirect impacts on western pond turtles would be avoided. Implementation of **MM 5.3-1d** would reduce impacts to western pond turtles to *less than significant*.

*Yellow-Breasted Chats.* Nesting yellow-breasted chats, if present at the time of construction, could be directly or indirectly affected by site development. Direct effects could include mortality resulting from removal of a tree/shrub containing an active nest with eggs or chicks. Indirect effects could include nest abandonment by adults in response to loud noise levels or human encroachment, or a reduction in the amount of food available to young birds due to changes in feeding behavior by adults. In California, the nesting season for yellow-breasted chats is from late April to early August. Removal of potential nesting habitat or limiting construction activities to other times of the year is unlikely to affect nesting yellow-breasted chats. Implementation of **MM 5.3-1e** would reduce impacts to nesting yellow-breasted chats to a *less than significant* level.

*Yellow Warblers.* Nesting yellow warblers, if present at the time of construction, could be directly or indirectly affected by site development. Direct effects could include mortality resulting from removal of a tree/shrub containing an active nest with eggs or chicks. Indirect effects could include nest abandonment by adults in response to loud noise levels or human encroachment, or a reduction in the amount of food available to young birds due to changes in feeding behavior by adults. In California, the nesting season for yellow warblers is from April to late July. Removal of potential nesting habitat or limiting construction activities to other times of the year is unlikely to affect nesting yellow warblers. Implementation of **MM 5.3-1e** would reduce potential impacts to nesting yellow warblers to *less than significant*.

### **Non-Status Wildlife Species**

Project implementation has the potential to directly and indirectly affect non-status wildlife species. Direct effects due to habitat removal are addressed above under Plant Communities/Wildlife Habitats. Other potential adverse effects on wildlife may include increased habitat disturbance due to “edge effects,” interference with wildlife movement, interference with bird nesting activities, and increased bird death due to collisions with windows. Each of these potential effects is addressed below.

*Edge Effects.* The proposed project has the potential to affect adjacent habitats. Although the project site is highly disturbed, the adjacent Sacramento River corridor and Henderson Open Space area provide high habitat values to wildlife. If left unaddressed, factors such as lighting, noise, human activity,

invasive plants, and/or increased numbers of predators could adversely affect adjoining high-value wildlife habitats. These factors are described further below.

- *Nighttime Lighting.* At present, the northern portion of the site is substantially influenced by artificial light sources, including the Cypress Avenue roadway/bridge lighting as well as vehicle headlights from motorists traveling on Cypress Avenue. To a lesser degree, the eastern portion of the site is influenced by exterior lighting associated with the abutting commercial development. The western and southern portions of the site are minimally influenced by artificial light. Artificial lighting has the potential to impact birds and other nocturnal species. These effects can include impacts to singing and foraging behavior, reproductive behavior, navigation, and altered migration patterns. In addition, nocturnal species may be more susceptible to predators due to increased lighting.

The proposed project would introduce new exterior light sources that include parking lot lighting, exterior wall-mounted lighting on the proposed buildings, and security lighting. Parking lot lighting would include exterior pole-mounted light standards of approximately 25 feet located throughout the site to provide safety and security lighting. A photometric plan was prepared to model the anticipated light spill over that would occur at the project's boundary in accordance with RMC requirements (refer to Figure 5.1-6, PHOTOMETRIC PLAN, in Section 5.1, AESTHETICS). As shown in Figure 5.1-6, light spillage is noted in foot-candle power and would occur along all property boundaries.

Some minor light spillover would be experienced along the site's western boundary primarily affecting the parking area of the future Henderson Open Space Trail and Kayak Project. The modeled light spill over would range between 0.1 and 0.9 foot-candles with 0.2 to 1.4 foot-candles intermittently occurring within 10 to 20 feet of the western property boundary. As a frame of reference, a full moonlit night in rural areas with negligible ambient light would equal approximately 0.02 to 0.03 foot-candles. It should also be noted that these levels do not assume additional shielding by the perimeter landscaping which would consist of valley oaks, Afghan pine trees, and California sycamore trees which can grow up to 60 to 100 feet, 40 feet, and 60 feet tall respectively.

Section 5.1, AESTHETICS, includes **MM 5.1-1a** and **MM 5.1-1b** that requires all exterior lighting comply with RMC §18.40.090, *Lighting*, such that all parking area lighting, including building and pole-mounted lighting is required to be fully shielded and directed downward in a manner that would prevent light spillage or glare into the adjacent properties. Shielding of light would reduce impacts on nocturnal wildlife species in adjacent natural habitats. Refer to Section 5.1, AESTHETICS, for further details regarding operation-related light and glare impacts and mitigation. Impacts are considered *less than significant*.

- *Operational Noise.* Increases in ambient noise levels related to site development may result from an increase in traffic volumes, operation of landscape maintenance equipment and tools (e.g., mowers, blowers, trimmers, wood chippers), and loud music from vehicles. Some of these noise sources, such as traffic noise, are relatively constant (although with daily cycles related to peak traffic periods), and some wildlife species may habituate and adapt to increased ambient noise levels, while others may avoid noisy areas. Other noise sources are more occasional or discrete and are more likely to startle wildlife and at least temporarily disrupt their behavior at the time.

Most studies addressing the effects of noise on wildlife have focused on birds. In several studies, traffic noise has been found to reduce the density of nesting birds; this may be due in part to masking of bird calls by traffic noise. Other effects of noise on birds may include physiological and behavioral effects, and damage to hearing from acoustic overexposure. However, birds are more resistant to acoustic overexposure than are humans and other mammals, and are able to recover from acoustic overexposure, and some birds may change their calls to compensate for increased noise levels.

Currently, the project site is significantly influenced by noises in the project vicinity. Sources include vehicle traffic along Cypress Avenue as well as commercial use to the east. Pedestrian trails, boating on the Sacramento River, and homeless use also contribute to noise levels in the area. The increase in ambient noise levels due to project implementation is not expected to substantially interfere with wildlife activity adjacent to the site because the project site has and continues to experience substantial noise from human activity and most uses will be confined to building interiors. No mitigation is warranted with respect to the potential for increased noise levels to adversely affect wildlife.

- *Human Activity.* Increased human activity on the project site may adversely affect wildlife usage in the adjoining riparian habitats. However, as noted above, the surrounding area includes established trails, which are regularly accessed for hiking and walking domesticated pets, and human activity is on-going within the Henderson Open Space area. The increase in human activity anticipated as a result of the proposed project would consist primarily of people walking from parking lots to the buildings. Given current use patterns, this level of human activity is not anticipated to substantially affect the wildlife values of the adjoining riparian habitat.
- *Noxious Weeds.* During construction and other ground disturbance activities, there is the potential for noxious weeds to be introduced to the project site. Such weeds can crowd out existing native vegetation and reduce wildlife habitat values. The potential for introduction and spread of weeds can be avoided/minimized by using only certified weed-free erosion control materials, mulch, and seed; precluding the use of rice straw in riparian areas; limiting any import or export of fill to material known to be weed free; and requiring the construction contractor to thoroughly wash all equipment at a commercial wash facility prior to entering the Shasta County (if the equipment has most recently been used within the County, cleaning would not be required), and requiring the contractor to thoroughly wash all equipment upon completion of its onsite use. With implementation of **MM 5.3-1f** impacts would be *less than significant*.
- *Wildlife Predation/Harassment.* Development projects may increase the potential for harassment and predation of wildlife by introducing domestic pets or by attracting wild species that may prey on other wildlife. Cats can substantially affect bird populations, while dogs can harass a number of wildlife species, including small to large mammals. Given the commercial use of the proposed project, the potential for an increase in free-roaming cats and dogs is minimal. If project development were to attract predators adapted to urban areas (e.g., raccoons, skunks, jays, and crows), these predators could harass or kill other wildlife, and deter use of otherwise suitable habitats by wildlife. The proposed project will include installation/use of trash receptacles in relation to the proposed facility, which could attract predators to the site. However, in accordance with City requirements, trash receptacles will be fenced, covered, and maintained. Compliance with City requirements will minimize the potential for predators to

frequent the site as a direct result of the development. Impacts are considered *less than significant* and no mitigation measures are required.

### **Nesting Migratory Birds**

Although no active bird nests were observed during the wildlife survey, several inactive bird nests were observed in oak trees and remnants of cliff swallow nests were observed on the Cypress Avenue bridge. The presence of woody vegetation is sparse relative to lands to the west (Henderson Open Space). The adjacent open space area supports a dense tree canopy and shrub understory, which provides high habitat values for birds. Comparatively, the project site supports a few pockets of mature trees, and no shrub understory. The limited number of onsite trees, as well as man-made structures that occur on the site, have a high potential to support nesting migratory birds in future nesting seasons. The federal Migratory Bird Treaty Act requires that nesting migratory birds not be adversely affected by human activities.

Nesting migratory birds, if present during the construction period, could be directly or indirectly affected by site development. Direct effects could include mortality resulting from removal of vegetation or structures containing an active nest with eggs or chicks. Indirect effects could include nest abandonment by adults in response to loud noise levels or human encroachment, or a reduction in the amount of food available to young birds due to changes in feeding behavior by adults.

Most birds expected to occur on the site nest between February 1<sup>st</sup> and August 31<sup>st</sup>, although bald eagles may begin nesting as early as January 1<sup>st</sup>. Removal of potential nesting habitat or limiting construction activities to other times of the year (before January 1<sup>st</sup> or after August 31<sup>st</sup>) is unlikely to affect nesting birds. If work occurs during the nesting season, a nesting survey should be conducted in advance of vegetation removal or initiation of construction. If active nests are present, a buffer zone should be established around the nest to ensure that nesting birds are not directly or indirectly affected. The width of the buffer zone is dependent on the bird species present and their sensitivity to human activity. For example, for bald eagles, the USFWS (2007) recommends a 660-foot buffer zone around active nests if the construction activity is visible from the nest, and a 330-foot buffer zone if the construction activity is not visible from the nest and similar types of human activities occur within one mile of the nest. For smaller birds that are habituated to human activity, such as cliff swallows nesting on the Cypress Avenue bridge, a buffer zone of 100 to 200 feet may be sufficient to prevent indirect take. Implementation of **MM 5.3-1e**, above, would reduce potential impacts to nesting migratory birds to *less than significant*.

### **Window Collisions**

Studies have shown that buildings are a biologically significant risk to certain bird species. In daytime, birds crash into windows because they see reflections of clouds or vegetation, or see through the glass to potted plants or vegetation on the other side. At night, nocturnal migrant birds may fly into lighted windows. Annual bird fatalities in North America from window collisions may be as high as 1 billion birds per year. Given the site's proximity to high value riparian habitat, measures should be taken to minimize the potential for bird strikes. Through implementation of various bird-safe building treatments (e.g., glazing selections, building and fenestration strategies, and/or lighting methods), such as those discussed in the San Francisco Planning Department's *Standards for Bird-Safe Buildings*, the potential for bird strikes can be greatly minimized. Implementation of **MM 5.3-1g** would reduce bird window collisions to *less than significant*.

## Offsite Improvements

Several offsite intersection improvements have been identified for the proposed project (refer to **MM 5.14-1**, **MM 5.14-3** and **MM 5.14-4** in Section 5.14, TRAFFIC AND CIRCULATION). These improvements would generally occur at-grade similar to existing roadway elevations within previously improved City roadway right-of-way. As a result, no impacts related to biological resources would occur with implementation of **MM 5.14-1**, **MM 5.14-3** and **MM 5.14-4**.

## Mitigation Measures:

MM 5.3-1a: To prevent direct mortality of bats roosting beneath the roof flashing of the small room connecting the two existing onsite buildings, the following measures shall be implemented prior to building demolition:

- A qualified bat biologist (one possessing a Memorandum of Understanding with CDFW for work with bats) shall either conduct, or supervise, the humane eviction of bats from the onsite structures. Work may consist of installation of appropriate blockage materials and one-way exits at the roof flashing and wood fascia or partial dismantling of the structure in a controlled fashion to eliminate bat roosting habitat.
- Humane bat eviction shall only be conducted within seasonal periods of bat activity during which specific temperature and precipitation criteria are met. Eviction may be conducted between about March 15<sup>th</sup> (or after evening temperatures rise above 45°F) and April 30<sup>th</sup>, or between August 15<sup>th</sup> and about October 1<sup>st</sup> (or before evening temperatures fall below 45°F); no eviction work shall be conducted if more than ½-inch of rainfall has occurred within the preceding 24 hours.

MM 5.3-1b: To avoid the take of colonial bats potentially roosting onsite, removal of Tree B-1 and B-2 as identified on EIR Figure 5.3-3, IDENTIFIED BAT ROOSTING HABITATS, shall be conducted utilizing the following two-step tree removal process during specified seasonal periods:

- Removal of bat habitat trees shall be conducted over two consecutive days. All work shall be conducted or supervised by a qualified bat biologist. On the first day, non-habitat features of the trees (e.g., branches without cavities, crevices, or exfoliating bark) shall be removed with chainsaws and be chipped onsite to create high levels of noise and vibration. On the following day, the trees shall be removed from the site.
- Two-step removal shall only be conducted within seasonal periods of bat activity during which specific temperature and precipitation criteria are met. Tree removal may be conducted between about March 15<sup>th</sup> (or after evening temperatures rise above 45°F) and April 30<sup>th</sup>, or between August 15<sup>th</sup> and about October 1<sup>st</sup> (or before evening temperatures fall below 45°F); no eviction work shall be conducted if more than ½-inch of rainfall has occurred within the proceeding 24 hours.

MM 5.3-1c: Removal of trees with a diameter at breast height (dbh) of 10 inches or greater shall only be conducted within seasonal periods of bat activity during which specific temperature and precipitation criteria are met. Removal of such trees may be conducted between about March 15<sup>th</sup> (or after evening temperatures rise above 45°F) and April 30<sup>th</sup> or between August 15<sup>th</sup> and about October 1<sup>st</sup> (or before evening temperatures fall below 45°F); no eviction work shall be conducted if more than ½-inch of rainfall has occurred within the preceding 24 hours.

One to two days prior to removal of trees with a dbh of 10 inches or greater, smaller trees and shrubs shall be removed using chainsaws to create noise and vibration disturbance. Additionally, the cuttings shall be chipped onsite to further increase noise and vibration levels. Subsequently, trees larger than 10 inches dbh shall be removed, beginning with smaller trees first.

MM 5.3-d: Prior to the initiation of vegetation removal and project construction, the project applicant shall retain a biologist to conduct a pre-construction survey to confirm presence/absence of the western pond turtle onsite. The survey shall be conducted by a qualified biologist (one deemed acceptable by CDFW staff) and shall consist of at least one survey of the project site conducted a maximum of one week prior to the start of vegetation removal. If earth-disturbing construction activities are not initiated immediately following vegetation removal, then a second survey for western pond turtles shall be conducted a maximum of one week prior to the start of earth-disturbing construction activities. If a western pond turtle is found, the biologist shall move it to a safe location within similar habitat. If a western pond turtle nest is found, the biologist shall flag the site and determine if project activities can avoid affecting the nest. If the nest cannot be avoided, it will be excavated and re-buried at a suitable location outside of the active construction zone by a qualified biologist.

MM 5.3-1e: To the extent feasible, vegetation removal and initiation of intensive site construction activities should occur before January 1<sup>st</sup> or after August 31<sup>st</sup> to avoid impacts on nesting bald eagles and migratory birds. If vegetation removal or initiation/re-initiation of intensive site construction occurs during the nesting season, a nesting survey shall be conducted by a qualified biologist (one deemed acceptable by CDFW staff) to identify active nests in and adjacent to the work area. The survey shall be conducted no more than one week prior to the beginning of the onsite activity. If nesting birds are found, the nest shall not be disturbed until after the young have fledged. Further, to prevent nest abandonment and mortality of chicks and eggs, no vegetation removal or construction activities shall occur within 500 feet of an active nest (or no closer than 660 feet from an active bald eagle nest), unless a smaller buffer distance is approved by a qualified biologist.

MM 5.3-1f: Grading plans prepared by the project applicant shall note the following construction specifications designed to avoid the introduction and spread of weeds:

- Using only certified weed-free erosion control materials, mulch, and seed.
- Precluding the use of rice straw in riparian areas.
- Limiting any import or export of fill material to material known to be weed free.

- Requiring the construction contractor to thoroughly wash all equipment at a commercial wash facility prior to entering the County. If the equipment has most recently been used within the County, cleaning is not required.
- Requiring the construction contractor to thoroughly wash all equipment at a commercial wash facility immediately upon termination of its use at the project site.
- The project contractor shall continuously comply with the above stated measures throughout the duration of onsite and offsite construction activities.

MM 5.3-1g: Prior to the issuance of a building permit, the project applicant shall provide written evidence from a licensed architect that the proposed onsite buildings have been designed with features that serve to minimize bird strikes, such as those described in the San Francisco Planning Department’s *Standards for Bird Safe Buildings* (e.g., bird friendly glazing selections, building and fenestration strategies, and/or lighting methods). To ensure compliance, this measure shall be completed to the satisfaction of the City of Redding Development Services Director.

**Level of Significance After Mitigation:** Impacts would be *less than significant* with mitigation incorporated.

<b>IMPACT</b> 5.3-2	<b><i>The proposed project could potentially have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.</i></b>
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**Significance: Potentially Significant Impact.**

**Impact Analysis:** The analysis presented below describes potential impacts to riparian habitat within and adjacent to the project area (refer to Appendix 15.3, BIOLOGICAL RESOURCES DOCUMENTATION).

**Riparian Habitat**

A steep slope extends along the northwestern boundary of the project site, separating most of the highly disturbed project site from the offsite riparian community. The project proposal calls for a lot line adjustment that would transfer all riparian habitat on and below the slope into City of Redding ownership. While no project-related development will occur on or below the slope, approximately 0.4 acres of riparian habitat will be removed from the westernmost extension of the project site.

Due to the disturbed nature onsite and the high level of human activity, the onsite riparian habitat does not represent a high-quality occurrence of the community type. Trees within the riparian habitat slated for removal consist of 20 Fremont cottonwoods and one valley oak. Refer to Figure 3-12, PROPOSED TREE REMOVAL PLAN, and Table 3-7, TREE REMOVAL AND RETENTION, in Section 3.0, PROJECT DESCRIPTION. Impacts to riparian habitat will be minimized and offset through implementation of **MM 5.3-2a** and **MM 5.3-2b**, below.

Construction activities affecting riparian habitat and/or canopy would be subject to mitigation; however, site disturbance that would occur outside the canopy limit is considered full avoidance and no mitigation

would be required (refer to Figure 5.3-3, TEMPORARY CONSTRUCTION FENCING LOCATIONS). Potentially significant direct and indirect impacts to riparian habitat can be reduced through implementation of **MM 5.3-2a** and offset through implementation of **MM 5.3-2b**. It is anticipated that the riparian planting called for in **MM 5.3-2b** will occur on disturbed City-owned lands adjacent to the subject site. Implementation of **MM 5.3-2a** and **MM 5.3-2b** would result in *less than significant* riparian community impacts.

### **Critical Habitat**

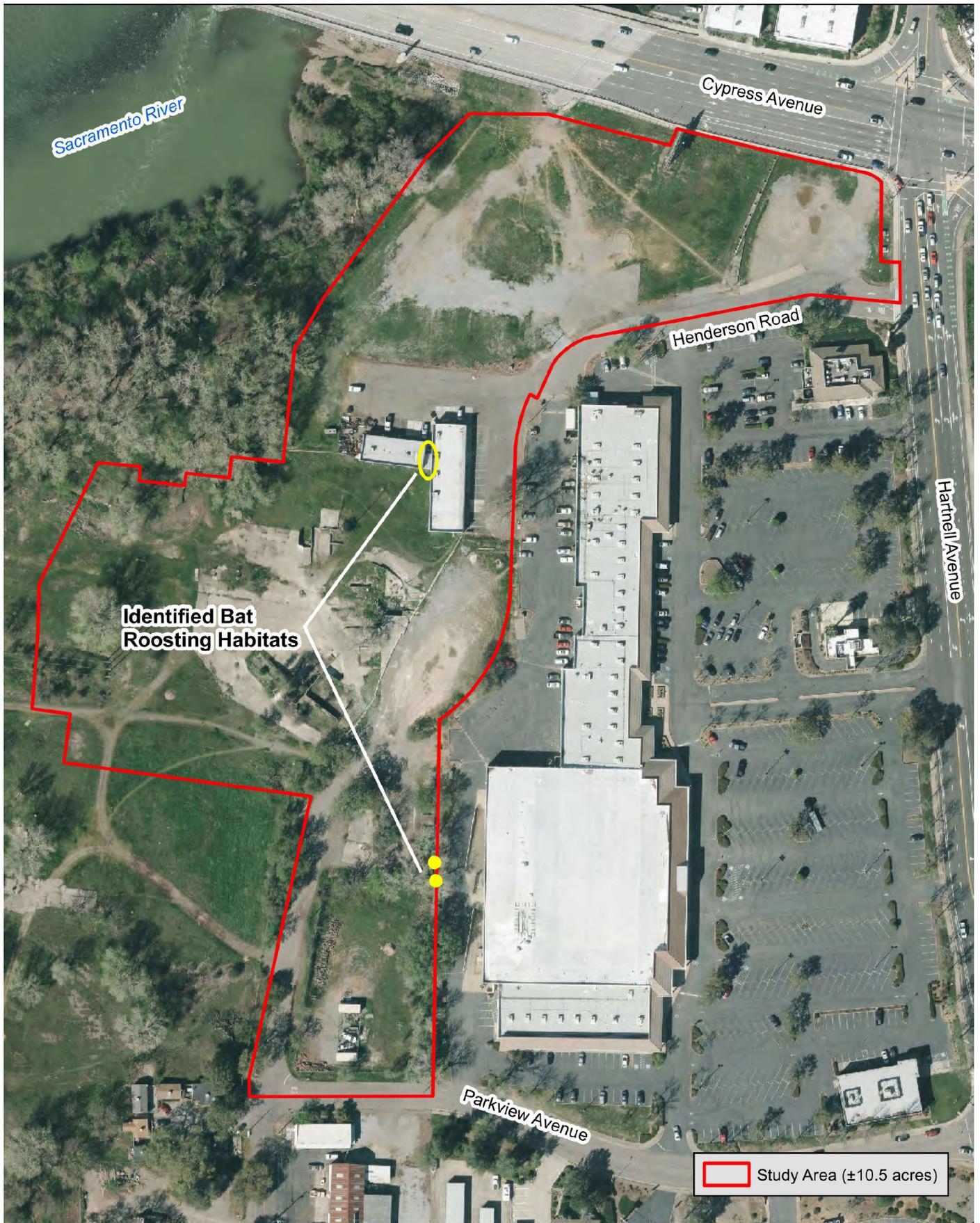
As discussed above, site development would require removal of riparian woodland, which, by definition, is a component of critical habitat designated for Chinook salmon and Central Valley steelhead. Site development could also indirectly affect the riverine component of critical habitat if sediments or other pollutants were to enter the Sacramento River and degrade rearing habitat and/or spawning habitat, or impair water quality.

Because the proposed project would not be federally funded or require federal permits, critical habitat requirements do not apply to the proposed project. However, it should be noted that direct impacts on the riparian component of critical habitat would be minimized through implementation of **MM 5.3-2a** and/or offset through implementation of **MM 5.3-2b**. Potential indirect impacts on the spawning/rearing component of critical habitat would be minimized to the extent practicable through implementation of the SWPPP and BMPs for erosion control and spill prevention in compliance with the State Water Resources Control Board's NPDES permit required for the proposed project (refer to Section 5.8, HYDROLOGY AND WATER QUALITY). With implementation of recommended mitigation measures and adherence to the erosion control and spill prevention requirements prescribed by the State Water Resources Control Board, potentially significant impacts to critical habitat would be reduced to *less than significant*.

### **Mitigation Measures:**

MM 5.3-2a: Direct impacts to riparian habitat and work under the riparian canopy shall be minimized to the extent feasible. Grading plans prepared by the project applicant shall note the following construction specifications designed to avoid to minimize the loss of riparian habitat as well as indirect effects on riparian habitat include the following:

- Erect construction fencing along the outer edges of the construction zone as delineated on EIR Figure 5.3-3, TEMPORARY CONSTRUCTION FENCING LOCATIONS, to prevent accidental entry into riparian habitat and/or under riparian canopy. The fencing shall be regularly inspected and maintained throughout the duration of construction, and shall be removed upon completion of construction.
- Where work must occur under the canopy of riparian vegetation planned for retention, the lower branches of the trees shall be pruned (not broken) as needed to allow access under the canopy.
- Stockpile equipment and materials outside of riparian canopy, in designated staging areas.



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Identified Bat Roosting Habitat

Figure 5.3-3

MM 5.3-2b: Prior to the issuance of a grading permit the project applicant shall submit to the City of Redding Development Services Director a planting plan and implementation schedule that addresses the following riparian habitat mitigation:

- 20 Fremont cottonwood trees and one valley oak replaced at no less than a 3:1 ratio for a total of 63 trees. Planting should occur as close to the project site as possible and be in close proximity to the Sacramento River or to a large perennial stream. A vegetation planting and management plan shall be prepared that identifies the planting area size and location, mitigation site protections (e.g., conservation easement or deed restrictions), planting objectives in terms of acreage or number of plants by species, planting and maintenance methods, success criteria, duration of monitoring, corrective actions to be taken if success criteria are not met, and reporting requirements. The plan shall be reviewed and approved by the City of Redding and the applicant shall be responsible for ensuring that the planting plan is fully implemented; or
- Purchase riparian habitat credits at the Stillwater Plains Mitigation Bank at a 3:1 ratio.

**Level of Significance After Mitigation:** Impacts would be *less than significant* with mitigation incorporated.

<b>IMPACT</b> 5.3-3	<b><i>The proposed project could potentially interfere with the movement of 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.</i></b>
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**Significance: Potentially Significant Impact.**

**Impact Analysis:** The proposed project has the potential to affect local movements of fish and wildlife. As described above, work in and adjacent to streambeds would not have direct effects on salmonids because no suitable habitat is present in the project area. However, the potential for indirect effects on salmonids downstream in the Sacramento River would be avoided based on **MM 5.3-2a** and **MM 5.3-2b** and through implementation of the SWPPP and BMPs for erosion control and spill prevention in compliance with the State Water Resources Control Board’s NPDES permit required for the proposed project.

As noted in Section 5.8, HYDROLOGY AND WATER QUALITY, the paved and impervious surfaces of the proposed project would generate stormwater runoff that would carry with it the roadway and automotive contaminants found on the pavement surface. Storm water management techniques include, but are not limited to, the construction of flow-through planters and bioretention systems within drainage management areas throughout the project site as illustrated in Figure 3-14. Bioretention systems are designed to function in a similar manner as the physical, chemical, and biological processes in the natural environment. They capture runoff, promote infiltration and

evapotranspiration, recharge groundwater, and remove up to 99 percent of the nutrients, sediment, and heavy metals carried in stormwater.<sup>1</sup>

Stream corridors and riparian zones often serve as primary movement and migration routes for wildlife, although any areas providing sufficient cover may provide for local wildlife movement. Terrestrial wildlife would not be significantly affected by the proposed project impeding or displacing seasonal movements. The presence of urban development on and adjacent to the site has compromised its ability to support wildlife movement. Although the project site is on the fringe of the riparian zone, it contains minimal riparian habitat, and ground cover is minimal throughout the project site. For these reasons, the project site does not have a high potential to support wildlife movement, and potential effects on wildlife movement due to project development are *less than significant*.

**Mitigation Measures:** Implement **MM 5.3-2a** and **MM 5.3-2b**, as described above.

**Level of Significance After Mitigation:** Impacts would be *less than significant* with mitigation incorporated.

**IMPACT**  
**5-3-4**

***The proposed project could conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.***

**Significance: Less Than Significant Impact.**

**Impact Analysis:** As previously described above, under Subsection 5.3.3, *Regulatory Setting*, candidate trees are protected under the RMC §18.45.030. The tree protection ordinance requires a tree removal permit (an application for a discretionary permit also serves as an application for tree removal) for the removal of any tree that exceeds 6 inches in dbh. Where all identified candidate trees/groups cannot be preserved, the set-aside of a natural area or areas within a project site that is particularly suitable for the planting, retention, and/or natural regeneration of trees is considered to be a desirable means of accomplishing the goals of the ordinance.

A total of 82 trees with a diameter  $\geq 6$  inch dbh were recorded on the project site; 72 are locally native species, while the remaining 10 are non-natives. As previously described under Impact 5.3-1 and 5.3-2, above, project implementation would result in the removal of 15 valley oaks, 29 Fremont cottonwoods, five interior live oaks, five trees of heaven, one Chinese pistache, one California sycamore, one mulberry, and one grey pine. This includes removal of 12 of the 15 candidate trees identified on the site. Candidate trees to be removed consist of nine Fremont cottonwoods, one valley oak, one California sycamore, and one interior live oak. Candidate trees to be retained onsite consist of two valley oaks and one California sycamore.

The loss of candidate trees will be offset through implementation of the proposed planting plan in accordance with RMC Chapter 18.45, *Tree Management* and **MM 5.3-2b** (refer to Figure 3-11a, LANDSCAPE LAYOUT, and Figure 3-11b, PLANT LIST, in Section 3.0, PROJECT DESCRIPTION). The proposed planting plan identifies the planting of 108 trees native to the local area, which would occur mainly in and along the common areas, within parking islands, and along project frontages. The native

<sup>1</sup> Ahiablame, Laurent M., Bernard A. Engel, and Indrajeet Chaubey. 2012. *Effectiveness of Low Impact Development Practices: Literature Review and Suggestions for Future Research*. Journal of Water, Air, and Soil Pollution. 223:4253-4273.

trees will be planted for their aesthetics, to moderate temperatures, and to provide habitat for wildlife. Native trees to be planted onsite include the following: 47 valley oaks, 22 blue oaks, 25 interior live oaks, and 14 California sycamores. The planting plan also calls for the use of coast redwoods and incense cedars, which are not native to the local area but are native elsewhere in California. Further, various native shrubs and groundcovers will be planted, including western redbud, California coffeeberry, Oregon grape, Emerald Carpet manzanita, California fuchsia, and yarrow. In addition, a minimum of 60 Fremont cottonwoods and three valley oaks would be planted offsite or riparian habitat credits would be purchased, as called for under **MM 5.3-2b**.

RMC §18.45.120(B) requires one 15-gallon tree for every 1,000 square feet of commercial buildings (retail, office, heavy commercial uses) or covered space or one 15-gallon tree for every four parking spaces, whichever is greater. As a result, the proposed project requires a minimum of 138 trees based on the required parking. Based on the proposed planting plan, 210 trees will be planted.

Approval of the proposed general plan amendment, zone change, parcel map, and use permit constitutes the discretionary approval for removal of trees on the site. A separate tree removal permit is unnecessary. Approval of the proposed project constitutes a determination that the proposed project is consistent with the City’s ordinance. Since the project must be consistent with the ordinance before a permit is issued, the proposed project would not result in a conflict with RMC Chapter 18.45. Impacts would be *less than significant*.

**Mitigation Measures:** No mitigation measures are required.

**Level of Significance After Mitigation:** No mitigation measures are required. Impacts would be *less than significant*.

**IMPACT  
5.3-5**

***The project has the potential to substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare or threatened species.***

**Significance:** Potentially Significant Impact.

**Impact Analysis:** The proposed project has been evaluated relative its potential to impact the following biological resources.

***Fish Habitat and Populations***

Because the project site would not directly affect the Sacramento River, there would be no direct effects on fish habitat or fish populations. Indirect effects could occur due to loss of riparian habitat and an increase in sediments or other pollutants entering the Sacramento River. As discussed above under Impact 5.3-2, direct impacts on the riparian component of critical habitat would be minimized and/or offset through implementation of **MM 5.3-2**. Potential indirect impacts due to sediments and other pollutants entering the river would be minimized to the extent practicable through implementation of the SWPPP and BMPs for erosion control and spill prevention in compliance with the State Water

Resources Control Board's NPDES permit required for the proposed project (refer to Section 5.8, HYDROLOGY AND WATER QUALITY). With implementation of recommended mitigation measures and adherence to the erosion control and spill prevention requirements prescribed by the State Water Resources Control Board, project implementation would not substantially reduce the habitat of a fish species or cause a fish population to drop below self-sustaining levels. Impacts to fish habitat and populations would be *less than significant*.

### ***Plant and Animal Communities and Wildlife Habitat and Populations***

As discussed above under Impacts 5.3-1 and 5.3-2, project implementation would result in the redevelopment of 8.8 acres of urban habitat, and conversion of 1.5 acres of annual grassland and 0.4 acres of riparian habitat to urban habitat. Annual grasslands and urban habitats have relatively low values for wildlife, and both of these communities are abundant throughout the project region. Project implementation has no potential to eliminate either of these communities, would not substantially reduce the habitat available to wildlife species that utilize these communities, and would not cause a wildlife population dependent on these habitats to drop below self-sustaining levels.

Riparian habitat has a high value for wildlife. However, this valuable habitat has been removed, degraded, and disturbed since 1850, with statewide losses estimated to be as high as 95% of historical levels (<https://wcb.ca.gov/Programs/Riparian>). Nonetheless, riparian habitat is relatively abundant in the immediate project vicinity, with over 45 acres being present on the east side of the Sacramento River, extending from the Cypress Avenue bridge approximately 0.5 miles to the south. Project implementation would result in the loss of less than 0.1 percent of the adjoining riparian community. As noted above, the loss of riparian habitat will be minimized and offset through the implementation of **MM 5.3-2**. With implementation of this measure, project implementation has no potential to eliminate the local riparian community, would not substantially reduce the habitat available to wildlife species that utilize the riparian community, and would not cause a wildlife population dependent on this habitat to drop below self-sustaining levels. Impacts to plant and animal communities and wildlife habitat and populations would be *less than significant*.

### ***Endangered, Rare or Threatened Species***

As discussed above under Impact 5.3-1, project implementation would not adversely affect endangered, rare, or threatened plant species, but could potentially result in adverse effects to endangered, rare, or threatened animal species. With implementation of recommended mitigation measures and adherence to the erosion control and spill prevention requirements prescribed by the State Water Resources Control Board, project implementation would not reduce the number or restrict the range of endangered, rare, or threatened species. Impacts to endangered, rare or threatened species would be *less than significant*.

**Mitigation Measures:** Implement **MM 5.3-1** and **MM 5.3-2**, as described above.

**Level of Significance After Mitigation:** Impacts would be *less than significant* with mitigation incorporated.

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### 5.3.5 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

The analysis of cumulative impacts focuses on those effects that, when combined together with other similar activities or projects could result in a large enough effect or impact that would be considered cumulatively significant. If the individual project's contribution is substantial enough, it may be considered cumulatively significant. In some instances, a project-specific impact may not combine with effects from other activities, in which case, the project's contribution to a cumulative effect would be less than considerable.

The geographic scope for cumulative impacts to biological resources includes past, present, and reasonably foreseeable projects within the surrounding area, as identified in Table 4-1 in Section 4.0, BASIS OF CUMULATIVE ANALYSIS. Generally, the geographic extent of cumulative impacts on biological resources consists of the City of Redding, Shasta County, and the Central Valley region of California. This geographic context is appropriate because it supports similar biological resource values and functions to those of the project area.

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**IMPACT**  
5.3-6

***The proposed project, along with cumulative development, could have a substantial effect, either directly or through habitat modification, on a natural community or on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.***

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**Significance: Potentially Significant Impact.**

**Impact Analysis:** Project implementation would result in the redevelopment of approximately 8.8 acres of existing urban habitat. As discussed above under Impact 5.3-1, this classification is not considered natural feature of the landscape and is not identified and managed as a special-status natural community. However, the most important biological component of the onsite urban habitat is its mature trees, which may provide nesting habitat for migratory birds and roosting habitat for bats. The proposed project would result in the removal of 37 trees from the urban habitat (including 30 native trees). Based on the proposed planting plan, 210 trees will be planted (including 108 locally native trees) in addition to a number of native shrubs and groundcovers. Impacts on urban habitat would be *less than significant* and the project's incremental contribution to cumulative impacts on urban habitat is not cumulatively considerable. When considered with past, present, and future projects, this impact would be cumulatively *less than significant*.

With regards to the annual grassland onsite, project implementation would result in the conversion of approximately 1.5 acres of annual grassland to urban use. Given that the grassland is comprised of numerous non-native species, is highly disturbed, and is not a special-status natural community, no mitigation is warranted to offset potential impacts to the annual grassland. Impacts would be *less than significant* and the project's incremental contribution to cumulative impacts on annual grasslands is not cumulatively considerable. When considered with past, present, and future projects, this impact would be cumulatively *less than significant*.

The project site does not support any special-status plant species. Therefore, the proposed project would not contribute to cumulative impacts on special-status plant species known to the region. When considered with past, present, and future projects, this impact would not be cumulatively considerable.

The following special-status animal species could potentially be affected by the proposed project: pallid bat, spotted bat, Townsend's big-eared bat, western red bat, ringtail, bald eagle, western pond turtle, yellow-breasted chat, and yellow warbler. In addition, the Sacramento River, located west of the site, is known to support Chinook salmon (fall-run, late-fall-run, winter-run, and spring-run) and Central Valley steelhead. The river reach is also designated as critical habitat for Chinook salmon (winter-run and spring-run) and Central Valley steelhead. In addition, migratory birds could nest in vegetation and/or structures onsite in future nesting seasons. With regard to impacts to special-status species, the proposed project's incremental contribution is cumulatively considerable.

Projects identified in Section 4.0, BASIS OF CUMULATIVE ANALYSIS, would result in the cumulative loss of natural communities and special-status animal species. However, each project would be reviewed under CEQA and be required to comply, as appropriate, with the FESA and CESA, which protect special-status species. With adherence to federal, State, and local regulations, cumulative impacts to candidate, sensitive, and special-status species would be minimized but not completely eliminated. Special-status species impacts associated with the proposed project would be *less than significant* with implementation of **MM 5.3-1a** through **MM 5.3-1g**. The proposed mitigation also would reduce cumulative project impacts when combined with past, present, or reasonably foreseeable projects. Therefore, impacts would be cumulatively *less than significant*.

**Mitigation Measures:** Implement **MM 5.3-1a** through **MM 5.3-1g**, as described above.

**Level of Significance After Mitigation:** With implementation of **MM 5.3-1a** through **MM 5.3-1g** and **MM 5.3-2b**, the proposed project's incremental contribution to this impact would be *less than cumulatively considerable*. Successful implementation of mitigation measures identified for this proposed project, combined with individual environmental reviews and adherence with applicable resource agency permit requirements and mitigation on a project-by-project basis, would result in cumulatively *less than significant* impacts.

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**IMPACT**  
**5-3-7**

***The proposed project, along with cumulative development, could potentially have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.***

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**Significance: Potentially Significant Impact.**

**Impact Analysis:** As discussed under Impact 5.3-2, approximately 0.4 acres of riparian habitat will be removed from the westernmost extension of the project site. Due to the disturbed nature onsite and the high level of human activity, the onsite riparian habitat does not represent a high-quality occurrence of this community type, however, 20 Fremont cottonwood trees and one valley oak would require removal. With regard to the loss of riparian habitat, the proposed project's incremental contribution is cumulatively considerable.

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Riparian habitat is protected by Section 1600 of the Fish and Game Code and Section 404 of the CWA. Additionally, the City’s *General Plan* includes goals and policies to avoid or minimize impacts to riparian areas. Each project is required to comply with federal, State, and local regulations (FESA, CESA, CWA, and the City’s *General Plan* goals and policies). As such, the other projects identified in Section 4.0, BASIS OF CUMULATIVE ANALYSIS, would be subject to individual reviews under CEQA and also be expected to have mitigation measures that would reduce potential impacts on riparian resources through avoidance or mitigation and, therefore, not contribute to a significant cumulative impact.

As discussed above, riparian woodland, by definition, is a component of critical habitat designated for Chinook salmon and Central Valley steelhead. Site development could also indirectly affect the riverine component of critical habitat if sediments or other pollutants were to enter the Sacramento River and degrade rearing habitat and/or spawning habitat, or impair water quality. Because the proposed project would not be federally funded or require federal permits, critical habitat requirements do not apply to the proposed project. However, it should be noted that direct impacts on the riparian component of critical habitat would be minimized through implementation of **MM 5.3-2a** and/or offset through implementation of **MM 5.3-2b**. The proposed mitigation, including compliance with federal, State, and local regulations, would reduce cumulative project impacts when combined with past, present, or reasonably foreseeable projects. Therefore, impacts would be cumulatively *less than significant*.

**Mitigation Measures:** Implement **MM 5.3-2a** and **MM 5.3-2b**, as described above.

**Level of Significance After Mitigation:** With implementation of **MM 5.3-2a** and **MM 5.3-2b**, the proposed project’s incremental contribution to this impact would be *less than cumulatively considerable*. Successful implementation of mitigation measures identified for this proposed project, combined with individual environmental reviews and adherence with applicable resource agency permit requirements and mitigation on a project-by-project basis, would result in cumulatively *less than significant* impacts.

**IMPACT**  
**5.3-8**

***The proposed project, along with cumulative development, could potentially interfere with the movement of 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.***

**Significance:** Potentially Significant Impact.

**Impact Analysis:** As described in Impact 5.3-3, work in and adjacent to streambeds would not have direct effects on salmonids because no suitable habitat is present in the project area. However, the potential for indirect effects on salmonids downstream in the Sacramento River exists due to stormwater runoff that would carry with it the roadway and automotive contaminants found on the pavement surface. With regard to the loss of riparian habitat, the proposed project’s incremental contribution is cumulatively considerable.

Indirect effects on salmonids downstream in the Sacramento River would be avoided with implementation **MM 5.3-2a** and **MM 5.3-2b** and through implementation of the SWPPP and BMPs for erosion control and spill prevention in compliance with the State Water Resources Control Board’s NPDES permit required for the proposed project. As a result, project related impacts would be *less than significant*.

Similar to the proposed project, cumulative projects would be mitigated on an individual basis through compliance with the requirements of the City of Redding, Shasta County, CDFW, RWQCB, Corps, USFWS, NMFS, and other agencies. The proposed mitigation, including agency requirements, would serve to reduce cumulative project impacts when combined with past, present, or reasonably foreseeable projects. Therefore, cumulative impacts to salmonids downstream in the Sacramento River would be cumulatively *less than significant*.

Terrestrial wildlife would not be significantly affected by the proposed project impeding or displacing seasonal movements. The presence of urban development on and adjacent to the site has compromised its ability to support wildlife movement. Although the project site is on the fringe of the riparian zone, it contains minimal riparian habitat, and ground cover is minimal throughout the project site. For these reasons, the project site does not have a high potential to support wildlife movement. In combination with the impacts of past, present, and reasonably foreseeable projects, due to the project site’s limited quality, the proposed project would not result in cumulatively significant impacts to wildlife migration and nursery sites.

**Mitigation Measures:** Implement **MM 5.3-2a** and **MM 5.3-2b**, as described above.

**Level of Significance After Mitigation:** With implementation of **MM 5.3-2a** and **MM 5.3-2b**, the proposed project’s incremental contribution to this impact would be *less than cumulatively considerable*. Successful implementation of mitigation measures identified for this proposed project, combined with individual environmental reviews and adherence with applicable resource agency permit requirements and mitigation on a project-by-project basis, would result in cumulatively *less than significant* impacts.

**IMPACT  
5-3-9**

***The proposed project, along with cumulative development, could conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.***

**Significance: Potentially Significant Impact.**

**Impact Analysis:** As previously described under Impact 5.3-1, above, approximately 0.4 acres of riparian habitat will be removed from the westernmost extension of the project site. Trees within this riparian area to be removed consist of 20 Fremont cottonwoods and one valley oak with a dbh of six inches or greater. In addition, approximately 8.8 acres of existing urban habitat would be impacted resulting in the removal of 14 valley oaks, nine Fremont cottonwoods, five interior live oaks, five trees of heaven, one Chinese pistache, one California sycamore, one mulberry, and one grey pine. Trees to be retained on the site consist of eight Fremont cottonwoods, five valley oaks, three interior live oaks, four black willows, two trees of heaven, one Japanese privet, and one California sycamore. With regard to the loss of trees, the proposed project’s incremental contribution would be cumulatively considerable.

A total of 82 trees with a diameter ≥6 inch dbh were recorded on the project site; 72 are locally native species, while the remaining 10 are non-natives. As previously described under Impact 5.3-1 and 5.3-2, above, project implementation would result in the removal of 15 valley oaks, 29 Fremont cottonwoods, five interior live oaks, five trees of heaven, one Chinese pistache, one California sycamore, one mulberry, and one grey pine. This includes removal of 12 of the 15 candidate trees identified on the site. Candidate trees to be removed consist of nine Fremont cottonwoods, one valley oak, one California

sycamore, and one interior live oak. Candidate trees to be retained onsite consist of two valley oaks and one California sycamore.

The loss of trees within the urban and riparian onsite communities will be offset through implementation of the proposed planting plan in accordance with RMC Chapter 18.45, *Tree Management* and **MM 5.3-2b**. RMC §18.45.120(B) requires one 15-gallon tree for every 1,000 square feet of commercial buildings (retail, office, heavy commercial uses) or covered space or one 15-gallon tree for every four parking spaces, whichever is greater. As a result, the proposed project requires a minimum of 138 trees based on the required parking. Based on the proposed planting plan, 210 trees (including 108 native trees) will be planted in addition to the native groundcovers. Impacts would be *less than significant*.

Similar to the proposed project, cumulative projects identified in Section 4.0, BASIS OF CUMULATIVE ANALYSIS, would also be expected to comply with RMC §18.45.120(B) or other tree preservation and compensation measures similar to **MM 5.3-2b**, and, therefore, not contribute to a significant cumulative impact. As a result, impacts of the proposed project would not have the potential to combine with impacts from past, present, or reasonably foreseeable projects to result in a cumulative impact to the City's tree ordinance. Impacts in this regard would be cumulatively *less than significant*.

**Mitigation Measures:** Implement **MM 5.3-2b**, as described above.

**Level of Significance After Mitigation:** With implementation of **MM 5.3-2b**, the proposed project's incremental contribution to this impact would be *less than cumulatively considerable*. Successful implementation of mitigation measures identified for this proposed project, combined with individual environmental reviews and adherence with the City's tree ordinance, would result in cumulatively *less than significant* impacts.

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<b>IMPACT</b> 5.3-10	<b><i>The project, along with cumulative development, has the potential to substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare or threatened species.</i></b>
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**Significance: Potentially Significant Impact.**

**Impact Analysis:** As discussed above under Impacts 5.3-1, 5.3-2, and 5.3-5, project implementation would result in the redevelopment of 8.8 acres of urban habitat, and conversion of 1.5 acres of annual grassland and 0.4 acres of riparian habitat to urban habitat. Annual grasslands and urban habitats have relatively low values for wildlife, and both of these communities are abundant throughout the project region. Project implementation has no potential to eliminate either of these communities, would not substantially reduce the habitat available to wildlife species that utilize these communities, and would not cause a wildlife population dependent on these habitats to drop below self-sustaining levels. Impacts would be *less than significant* and the project's incremental contribution to cumulative impacts on annual grasslands and urban habitat is not cumulatively considerable. When considered with past, present, and future projects, this impact would be cumulatively *less than significant*.

As discussed above under Impact 5.3-5, because the project site would not directly affect the Sacramento River, there would be no direct effects on fish habitat or fish populations, although the proposed project would result in the loss of less than 0.1 percent of the adjoining riparian community. The project's direct impact on riparian habitat and indirect impact related to increased sedimentation downstream is cumulatively considerable.

As discussed above under Impact 5.3-5, project implementation would not adversely affect endangered, rare, or threatened plant species, but could potentially result in adverse effects to endangered, rare, or threatened animal species. With regard to impacts to endangered, rare, or threatened animal species, the proposed project's incremental contribution is cumulatively considerable.

Cumulative projects identified in Section 4.0, BASIS OF CUMULATIVE ANALYSIS, have the potential to reduce habitat that supports fish and wildlife populations. However, each project would be reviewed under CEQA and be required to comply, as appropriate, with the FESA and CESA, which collectively protect special-status species populations, habitats, and biological communities. With adherence to federal, State, and local regulations, cumulative impacts related to a substantial reduction to these biological resources would be minimized, however, impacts would not completely eliminated. As noted above in Impact 5.3-5, project impacts to fish habitat, plant and animal communities, wildlife habitat, endangered, rare or threatened species, and associated populations would be *less than significant* with implementation of **MM 5.3-1** and **MM 5.3-2**. When combined with past, present, or reasonably foreseeable projects, the proposed mitigation measures would serve to reduce the cumulative effects of this impact. Therefore, impacts would be cumulatively *less than significant*.

**Mitigation Measures:** Implement **MM 5.3-1** and **MM 5.3-2**, as described above.

**Level of Significance After Mitigation:** With implementation of **MM 5.3-1** and **MM 5.3-2**, the proposed project's incremental contribution to this impact would be *less than cumulatively considerable*. Successful implementation of mitigation measures identified for this proposed project, combined with individual environmental reviews and adherence with applicable resource agency permit requirements and mitigation on a project-by-project basis, would result in cumulatively *less than significant* impacts.