

SECTION 4.3

Biological Resources

This section examines the potential significant impacts of the proposed projects on biological resources and identifies mitigation measures to avoid or reduce those impacts. The discussion includes a summary of the current regulatory status relevant to biological resources potentially present within and near the RSP Area. The analysis was based upon a review of potentially occurring special-status species,¹ wildlife habitats, vegetation communities, and jurisdictional waters of the U.S. and of the State. The results of this assessment are based upon field reconnaissance, literature searches, and queries of the California Department of Fish and Wildlife's (CDFW) Natural Diversity Database (CNDDDB), the U.S. Fish and Wildlife Service (USFWS) list of federal endangered and threatened species, and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants. Site reconnaissance surveys were conducted on September 8-10, 2015, and February 24, 2016. While a formal wetland delineation was not conducted at each of the project sites, potential wetlands and other waters of the U.S. were noted and informally mapped. The sources of reference data reviewed for this evaluation included the following:

- 2007 Railyards Specific Plan Draft and Final EIRs (2007 RSP EIR);²
- Sacramento West,³ Sacramento East,⁴ California U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles;
- Federal Endangered and Threatened Species that may occur in the proposed project location, and/or may be affected by the proposed project;⁵

1 Species that are protected pursuant to Federal or State endangered species laws, or have been designated as Species of Special Concern by the CDFW, or species that are not included on any agency listing but meet the definition of rare, endangered or threatened species of the CEQA Guidelines section 15380(b), are collectively referred to as "special-status species."

2 City of Sacramento. 2007. Railyards Specific Plan Environmental Impact Report. Certified December 11, 2007.

3 U.S. Department of the Interior, Geological Survey, 2015. Sacramento West, California 7.5-minute Quadrangle Series. Available:
[http://store.usgs.gov/b2c_usgs/usgs/maplocator/\(ctype=areaDetails&xcm=r3standardpitrex_prd&care=%24ROOT&layout=6_1_61_48&uiarea=2\)/.do](http://store.usgs.gov/b2c_usgs/usgs/maplocator/(ctype=areaDetails&xcm=r3standardpitrex_prd&care=%24ROOT&layout=6_1_61_48&uiarea=2)/.do)
<[http://store.usgs.gov/b2c_usgs/usgs/maplocator/\(ctype=areaDetails%26xcm=r3standardpitrex_prd%26care=%24ROOT%26layout=6_1_61_48%26uiarea=2%29/.do](http://store.usgs.gov/b2c_usgs/usgs/maplocator/(ctype=areaDetails%26xcm=r3standardpitrex_prd%26care=%24ROOT%26layout=6_1_61_48%26uiarea=2%29/.do)> . Accessed April 11, 2016..

4 U.S. Department of the Interior, Geological Survey 2015. Sacramento East, California 7.5-minute Quadrangle Series. Available:
[http://store.usgs.gov/b2c_usgs/usgs/maplocator/\(ctype=areaDetails&xcm=r3standardpitrex_prd&care=%24ROOT&layout=6_1_61_48&uiarea=2\)/.do](http://store.usgs.gov/b2c_usgs/usgs/maplocator/(ctype=areaDetails&xcm=r3standardpitrex_prd&care=%24ROOT&layout=6_1_61_48&uiarea=2)/.do). Accessed April 11, 2016.

- CNDDDB list of special-status species occurrences within the Sacramento East and Sacramento West and ten surrounding USGS 7.5-minute topographic quadrangles (Grays Bend, Taylor Monument, Rio Linda, Citrus Heights, Carmichael, Elk Grove, Florin, Clarksburg, Saxon, and Davis);⁶
- CNPS list of rare and endangered plants known to occur within the Sacramento East and Sacramento West and ten surrounding USGS 7.5-minute topographic quadrangles;⁷
- Special Vascular Plants, Bryophytes, and Lichens List;⁸ and
- Special Animals List.⁹

No comment letters related to biological resources were received in response to the NOP circulated for the proposed project.

The analysis below examines the potential impacts of the proposed projects on biological resources. The analysis included in this section was developed based on project-specific construction and operational features, and information provided by the City of Sacramento 2035 General Plan, City of Sacramento 2035 General Plan Master EIR, literature and database searches, field reconnaissance data collected in 2015 and 2016, and the 2007 RSP EIR.

Issues Addressed in the 2007 RSP EIR

The 2007 RSP EIR addressed several potential impacts to biological resources resulting from the implementation of the Specific Plan, as proposed at that time. The potential impacts included:

- loss of potential foraging habitat for Swainson's hawk (less than significant);
- loss of potential nesting habitat for Swainson's hawk, white-tailed kite, and other sensitive riparian-nesting species, and burrowing owls (less than significant with mitigation);
- effects to endangered and threatened fish species (endangered Sacramento River winter-run Chinook salmon; threatened Central Valley spring-run Chinook salmon, Central Valley steelhead, threatened delta smelt, and green sturgeon) and degradation of designated critical habitat (less than significant with mitigation);

5 U.S. Fish and Wildlife Service, 2015. List of Threatened and Endangered Species that May Occur in the Proposed Project Location, and/or May be Affected by the Proposed Project. Available: www.fws.gov/sacramento/es_species/Lists/es_species_lists-overview.htm. Accessed on: December 2, 2015.

6 California Department of Fish and Wildlife. 2015. California Natural Diversity Database RareFind 5 personal computer program. www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp. Accessed on: September 8, 2015.

7 California Native Plant Society, 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Accessed September 8, 2015.

8 California Department of Fish and Wildlife. 2016. State and Federally Listed Endangered and Threatened Plants of California. California Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento, CA. Data dated January 2016.

9 California Department of Fish and Wildlife. 2016. State and Federally Listed Endangered and Threatened Animals of California. California Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento, CA. Data dated January 2016.

- removal of habitat for the valley elderberry longhorn beetle (VELB) (less than significant when project is in compliance with federal regulatory requirements for the recovery of VELB);
- effects to habitat for the western pond turtle (less than significant);
- loss of roosting site(s) for a sensitive bat species (less than significant with mitigation);
- increase mortality and decrease reproductive success of purple martins (less than significant with mitigation);
- reduce sensitive habitats including protected wetland habitat as defined in Section 404 of the Clean Water Act, riparian vegetation, and state jurisdictional waters/wetlands (less than significant with mitigation);
- isolate or interrupt contiguous habitat which could interfere with the movement of resident or migratory fish or wildlife species, migratory wildlife corridors, or impede the use of native wildlife nursery sites (less than significant with mitigation); and
- conflict with local policies protecting trees (less than significant with mitigation).

The 2007 RSP EIR addressed several cumulative impacts to biological resources resulting from the implementation of the 2007 RSP, as proposed at that time. The potential cumulative impacts included:

- contribution to the cumulative loss of special-status plant and wildlife or their habitat in the region (less than significant); and
- contribution to the cumulative reduction in open space or impact to riverine habitat, which would interfere substantially with the movement of resident migratory fish or wildlife, or impede the use of native wildlife nursery sites in within the region (less than significant).

4.3.1 Environmental Setting

The biological resources setting is described Section 6.2 of the 2007 RSP Draft EIR (pages 6.2-1 through 6.2-23). Since the certification of the 2007 RSP EIR, environmental conditions within the RSP Area have changed. This section describes the habitat types, plant species, and wildlife species observed within or adjacent to the RSP Area during biological surveys conducted on September 8-10, 2015, and February 24, 2016.

Surveys were conducted by driving and walking meandering transects across the entire site to identify potential wetlands, special-status species habitat, and document the general biota associated with the RSP Area. Areas within 100 feet of the RSP Area were also evaluated for the potential occurrence of sensitive species and habitats. The location of any observed special-status species or any signs indicating that such species could nest, forage, or otherwise use the RSP Area (e.g., scat, prints, or sounds), as well as boundaries of wetlands and other waters of the U.S.,

were recorded using an iPad® tablet equipped with ArcGIS Collector Application, Version 10.3.5.

Railyards Specific Plan Update

Regional Setting

The RSP Area is located in the City of Sacramento, within the Sacramento Valley floristic province of the Great Central Valley¹⁰ (see Figure 2-1 in Chapter 2, Project Description). Historically, this region supported extensive marshes and riparian woodland intermixed with oak woodland, vernal pool complexes, and native grasslands. Intensive agricultural and urban development has resulted in substantial changes and conversions of these habitats. The remaining native vegetative communities exist now as isolated remnant patches within urban and agricultural landscapes. **Table 4.3-1** provides a summary of existing biological resources for each of the project sites.

**TABLE 4.3-1.
SUMMARY OF BIOLOGICAL RESOURCES WITHIN THE RSP AREA**

Project Site	Existing Habitat Types	Potentially Jurisdictional Wetlands and other Waters of the U.S.	Potential to Support Special-Status Species	Protected Trees
Kaiser Permanente (KP) Medical Center	Vacant	None	Low (nesting and foraging habitat for Swainson's hawk and other bird species)	Present
Major League Soccer (MLS) Stadium	Vacant and developed	None	Low (nesting and foraging habitat for Swainson's hawk and other bird species)	Present
Stormwater Outfall	Valley-foothill riparian, and developed	None	Moderate (special-status fish species, nesting habitat for Swainson's hawk and other bird species, and special-status bat species)	Present
Other Areas Proposed For Development	Vacant, developed, constructed basin, and annual grassland	None	Moderate (nesting and foraging habitat for Swainson's hawk and other bird species; Valley elderberry longhorn beetle; and other species)	Present

Source: ESA, 2016.

Specific Plan Area Setting

The RSP Area has been extensively disturbed by past and ongoing transportation, commercial, and industrial activities, as well as soil remediation work. In the 2007 RSP EIR, the majority of the RSP Area was classified as vacant, with small areas of remnant riparian, valley-foothill riparian, and emergent wetland habitats. In the 2007 RSP EIR, vacant habitat was defined to

¹⁰ Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.

include commercial, industrial, transportation land uses, or other hardscaped areas. Vacant habitat also included disturbed areas associated with soil remediation activities.

Vegetation in vacant areas predominantly included ornamental vegetation and ruderal weed species.

Due to past and ongoing environmental remediation activities, between 2007 and 2016 habitats present onsite have undergone change. Some remnant riparian trees have since grown from saplings into mature trees in areas where remediation have been completed. It should be noted that ongoing remediation of the RSP Area is a separate project that has already been authorized and granted necessary permits. **Figure 4.3-1** illustrates habitats and sensitive biological resources observed onsite in 2015. Habitats observed onsite in 2015 and 2016 include annual grassland, constructed basin, developed, vacant, and valley foothill riparian. Emergent wetland and remnant riparian habitats described in the 2007 RSP EIR are no longer present in the RSP Area.

Existing development within the RSP Area present in both 2007 and 2016 include the Amtrak Sacramento Valley Station (including the historic depot building and the associated rail platforms, the Steve Cohn Passageway, Sacramento Regional Transit light rail station, and associated walkways, and parking lots), office and retail uses in the adjacent Railway Express Annex (REA) building, parking lots that front on 7th Street between F and H streets, and the historic Central Shops. The 2007 RSP EIR classified these areas as vacant habitat; however, it is more accurate to classify permanent structures and associated parking lots and walkways as developed. Currently, there are also several portable buildings placed on the site for the use of workers involved in the ongoing hazardous materials remediation activities.

Since the certification of the 2007 RSP Draft EIR, several streets planned for in the 2007 RSP were constructed, including 5th and 6th streets, between H Street and Railyards Boulevard, as well as Railyards Boulevard from 7th Street to Bercut Drive. These streets are classified as developed habitat.

Soils in the RSP Area consist of alluvial deposits of the Sacramento and American Rivers. Prior to human development, the dominant geomorphic feature at the RSP Area was China Lake (also known as Sutter Slough, Sutter Lake, or China Slough), which was filled in by the early 20th Century. The RSP Area previously contained another lake (Willow Lake) on the north end of the property. The two lakes and associated marshland covered a portion of the RSP Area. Dredging and filling of the RSP Area continued until 1913 when the entire area was filled. Fill material consists of river sand, coarse gravel, cobbles and granite brought from Rocklin, California, as well as discarded railroad equipment such as boilers and miscellaneous pieces of iron. Near the surface and to a depth of 30 to 50 feet are deposits of silt and sand (commonly referred to as the upper sand unit), including fill placed over the area in the past 130 years. Underlying the upper sand unit is a layer of sandy gravel. The top of the gravel unit is between 60 and 80 feet below the ground surface.

KP Medical Center

The proposed KP Medical Center site is located on the northwest portion of the RSP Area and is comprised of vacant habitat. This is consistent with conditions described in the 2007 RSP EIR, in which this area was described as “vacant land.”¹¹ Remediation activities have decreased significantly in this area since the 2007 RSP EIR and there are no longer soil stockpiles in the Medical Center project footprint. One blue elderberry (*Sambucus nigra* subsp. *caerulea*) shrub cluster occurs adjacent to the eastern side of the northern I-5 bridge abutment, within 100 feet of the KP Medical Center footprint (Figure 4.3-1).

MLS Stadium

The proposed MLS Stadium site is located in the eastern portion of the RSP Area and is characterized by vacant habitat, which includes disturbed/ruderal habitat, barren access roads, soil and rock stockpiles, and small patches of remnant riparian plant species. Elderberry shrub clusters occur north of the site along the RSP Area boundary adjacent to SIMS Metal Management, and east of the site near 12th Street, just south of North B Street (Figure 4.3-1). Current habitat character is consistent with the 2007 RSP EIR; however, it should be noted that vegetation cover has decreased significantly since 2007 due to remediation activities that have increased disturbance and stockpiling in this area.

Stormwater Outfall

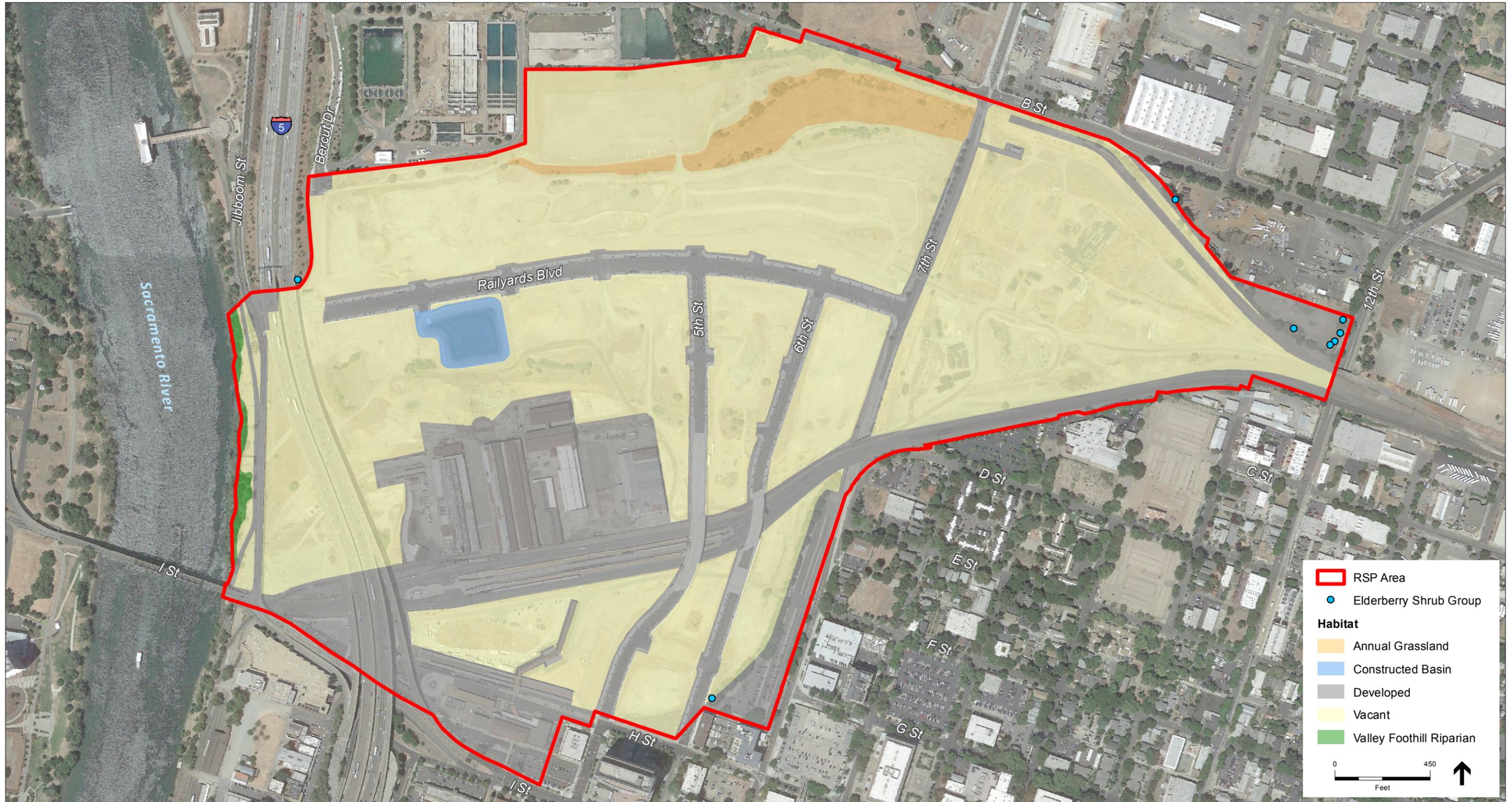
The site of the proposed Stormwater Outfall would be located along the western boundary of the RSP Area and is comprised of valley-foothill riparian and developed habitats (Figure 4.3-1). Site conditions at this location are relatively unchanged from conditions described in the 2007 RSP Draft EIR.

Wildlife Habitat and Vegetation Types

Wildlife habitats are generally described in terms of vegetation types along with landform, disturbance regime, and other unique environmental characteristics. Vegetation types are assemblages of plant species that occur together in the same area and are repeated across landscapes, and are defined by species composition and relative abundance. Wildlife habitats generally correspond to vegetation types. This section is organized into habitats based on Section 6.2 of the 2007 RSP Draft EIR (see pages 6.2-5 through 6.2-8). Where a new habitat is referenced, classification conforms to CDFW’s *A Guide to Wildlife Habitats of California*¹² that is used in CDFW’s California Wildlife Habitat Relationships System. Habitat types described in the 2007 RSP EIR that remain consistent with current site conditions include vacant, valley-foothill riparian, and riverine. Remnant riparian and emergent wetland habitat types no longer

¹¹ Section 6.2 of the 2007 RSP DEIR classifies vacant habitat to include areas that support ruderal weedy vegetation, bare earth, and hardscape.

¹² Mayer, K. E., and W.F. Laudenslayer, Jr., 1988. *A Guide to Wildlife Habitats of California*. State of California Resources Agency, California Department of Fish and Game. Sacramento, CA. Available: www.dfg.ca.gov/whdab/html/wildlife_habitats.html. Accessed August 4, 2015.



occur onsite. Developed and annual grassland habitats are added in this section of the SEIR based on surveys conducted in 2015 and 2016 (Table 4.3-2). A total of 47 plant species were observed during the 2006 surveys and 47 species were observed in September of 2015 (Table 6.2-2 of the 2007 RSP Draft EIR and Appendix D.1 of this Draft SEIR, respectively).

**TABLE 4.3-2.
HABITATS PRESENT WITHIN THE RSP AREA**

Habitat/Land Cover	Area (acres)	Area within the Medical Center (acres)	Area within the Stadium (acres)	Area within the Outfall (acres)
Vacant	155.54	17.06	13.26	0.55
Developed	76.10	0.75	-	0.06
Annual Grassland	7.59	0.02	-	-
Constructed Basin	2.54	-	-	-
Valley-Foothill Riparian	1.06	-	-	0.04
Total	242.83	17.83	13.26	0.65

Source: ESA, 2016; City of Sacramento, 2007¹³

Vacant

Due to past and ongoing remediation activities, most of the vacant habitat is void of vegetation. Vacant habitat occupies most of the 244-acre RSP Area (155.54 acres). These areas are currently undergoing succession from barren to annual grassland. Where vegetation has been removed during remediation activities, new species of plants have begun to colonize the area by means of either intentional plantings (ornamental species), or volunteer weed species.

Dominant herbaceous species in vacant areas include wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), yellow star-thistle (*Centaurea solstitialis*), vetch (*Vicia* sp.), field bindweed (*Convolvulus arvensis*), milk thistle (*Silybum marianum*), and tarweed (*Holocarpha* sp.), cutleaf geranium (*Geranium dissectum*), wild mustard (*Brassica* spp.), Italian thistle (*Carduus pycnocephalus*). Common emergent trees in the vacant habitat include tree of heaven (*Ailanthus altissima*) and Fremont cottonwood (*Populus fremontii*).

Common wildlife species that occur within this habitat include killdeer (*Charadrius vociferous*) which rely on open ground covered with sand or gravel for constructing small scrape nests. Species found within annual grassland habitat, and developed habitats are also likely to occur in the vacant habitat within the RSP Area.

At the northern edge of the RSP Area, there is an area the 2007 RSP EIR identified as seasonal wetland/willow-cottonwood riparian habitat. Subsequent to the 2007 RSP EIR, as part of the remediation-related permitted fill of the wetlands in the Former Oil Storage Area, seasonal

¹³ City of Sacramento. 2007. Railyards Specific Plan Environmental Impact Report. Certified December 11, 2007.

wetland/willow-cottonwood riparian habitat in this area was removed. This area is now void of vegetation and has been classified as vacant habitat.

Developed

Developed habitat consists of buildings, roadways, and other built infrastructure. Urban and developed habitat (76.10 acres) in the RSP Area include the Amtrak Sacramento Valley Station (including the historic depot building and the associated rail platforms, the Steve Cohn Passageway, Sacramento Regional Transit light rail station), office and retail uses in the adjacent REA building, parking lots that front on 7th Street between F and H streets, and the historic Central Shops. Typically, urban vegetation associated with developed habitat consists of landscaping, including lawns, ornamental shrubs, shade trees and hedges.

Wildlife use of landscaped areas increases with the distance from urban areas. The RSP Area is in close proximity to the downtown Sacramento area, and surrounded to the north, east, and south by urban areas. Mammals typically found in this habitat include raccoon (*Procyon lotor*), opossum (*Didelphis marsupialis*), striped skunk (*Mephitis mephitis*), house cat (*Felis silvestris catus*), house mouse (*Mus musculus*), and black rat (*Ratus ratus*). Common birds found within developed areas include rock dove (*Columba livia*), house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), western scrub jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), Brewer's blackbird (*Euphagus cyanocephalus*), yellow-billed magpie (*Pica nuttalli*), and starling (*Poeyptera kenricki*).

In 2006, six bat roosts were observed under the elevated sections of I-5 and I Street Bridge within the urban habitat. Purple martins (*Progne subis*), a state species of concern, have historically used weep holes on the I Street Bridge for nesting. To date, these species continue to use the I-5 and I Street Bridge structures as roosting/nesting habitat.

Annual Grassland

Annual grassland habitat (approximately 7.59 acres) occurs in the northern portion of the RSP Area, west of 7th Street and is primarily dominated by Bermuda grass (*Cynodon dactylon*) and nonnative Mediterranean annual grasses such as wild oats, soft chess (*Bromus hordeaceus*), and rigput brome. Forb species noted in annual grassland habitat include yellow star-thistle and stinkwort (*Dittrichia graveolens*).

Common wildlife species that occur in this habitat include the western fence lizard (*Sceloporus occidentalis*) and common garter snake (*Thamnophis sirtalis*). Mammals typically found in this habitat include black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), and coyote (*Canis latrans*). Common birds found in annual grassland habitats include horned lark (*Eremophila alpestris*), western meadowlark (*Sturnella neglecta*), red-winged blackbird (*Agelaius phoeniceus*), and barn owl (*Tyto alba*).

Constructed Basin

One constructed basin (2.54 acres) occurs within the RSP Area, south of Railyards Boulevard. The constructed basin within the RSP Area does not retain water throughout the year, as evident during field reconnaissance in September 2015. Due to routine maintenance, such as mowing or spraying to maintain or remove vegetation, the constructed basin provides limited habitat for wildlife species. When water is present, the constructed basin has the potential to provide suitable habitat for waterfowl, and shore bird species. The constructed basin does not likely support western pond turtle (*Emys marmorata*), a state species of concern, due to its isolation from other suitable western pond turtle habitat, and because it does not retain water during the summer months.

Valley-Foothill Riparian Habitat

Within the RSP Area, valley-foothill riparian habitat exists along the bank of the Sacramento River (1.06 acres). Valley-foothill riparian habitat is found regionally in valleys bordered by sloping alluvial fans, terraces, and lower foothills. It generally occurs where there are deep alluvial soils and a high water table, such as on floodplains or on flat to gently sloping areas adjacent to low-velocity streams. The tree species typically associated with this habitat type include cottonwood, willows, California sycamore (*Platanus racemosa*), and valley oak. Sub-canopy trees include white alder (*Alnus rhombifolia*), boxelder (*Acer negundo*), Oregon ash (*Fraxinus latifolia*), and the invasive tree of heaven (*Ailanthus altissima*).

Valley-foothill riparian habitats provide food, water, migration, and dispersal corridors, escape, nesting, and thermal cover for many species of wildlife. Trees within the valley-foothill riparian area provide suitable nesting habitat for the state threatened Swainson's hawk, white-tailed kite, and other protected bird species, and roosting habitat for special-status bat species.

Riverine

The Sacramento River (open-water, riverine habitat) is located adjacent to the RSP Area and the proposed Stormwater Outfall project has the potential to impact this habitat type. This habitat type is distinct from valley-foothill riparian habitat which occurs on the riverbanks, adjacent to riverine habitat.

The open water zones of the Sacramento River provide cover and foraging for bird species. Many species of waterfowl, such as American coot (*Fulica americana*), use the open water for resting and escape. Gulls (*Larus* sp.) forage on open water, and species of insectivorous birds, such as black phoebe (*Sayornis nigricans*) and violet-green swallow (*Tachycineta thalassina*), hunt insect prey over the water.

In addition to the terrestrial species identified above, native and non-native, resident and migratory fish species use the Sacramento River. Fish species residing within the Sacramento River include native channel hardhead (*Mylopharodon conocephalus*), Sacramento sucker (*Catostomus occidentalis*), Sacramento pikeminnow (*Ptychocheilus grandis*), and tule perch

(*Hysterocarpus traski*); and non-native channel catfish (*Ictalurus punctatus*), white catfish (*Ictalurus catus*), largemouth bass (*Micropterus salmoides*), and redeared sunfish (*Lepomis microlophus*). The native Sacramento splittail (*Pogonichthys macrolepidotus*) spawns in the Sacramento River near the RSP Area, but occupies habitat in the Sacramento-San Joaquin Delta (Delta) for much of its life history. The native delta smelt primarily inhabit tidally influenced brackish water of the mixing zone, but migrate upstream to spawn in freshwater sloughs and shallow edge-waters of the Delta. Anadromous fish species use the Sacramento River as migration corridors between the ocean and spawning areas upstream. These species include native Central Valley steelhead distinct population segment (DPS) (*Oncorhynchus mykiss*), Sacramento River winter-run Chinook salmon Evolutionarily Significant Unit (ESU) (*Oncorhynchus tshawytscha*), Central Valley spring-run Chinook salmon ESU, Central Valley fall-/late fall-run Chinook salmon ESU, southern DPS of North American green sturgeon (*Acipenser medirostris*), and white sturgeon (*Acipenser transmontanus*); and non-native striped bass (*Morone saxatilis*) and American shad (*Alosa sapidissima*). Although striped bass is an anadromous species, young striped bass are present in the Sacramento River area year-round.

Near shore waters, riverbanks, and adjacent riparian vegetation provide several specialized habitats for a variety of bird species. Steep banks provide nesting habitat for northern rough-winged swallow (*Stelgidopteryx serripennis*). In the near shore waters, mallard (*Anas platyrhynchos*) and wood duck (*Aix sponsa*) feed on plants, and green heron (*Butorides striatus*) and belted kingfisher (*Ceryle alcyon*) forage for fish. Additionally, fish feed on insects that drop from riparian vegetation overhanging the water, and rocky substrates provide habitat for crayfish, sunfish, and bass.

Wildlife Movement Corridors

Terms such as habitat corridors, linkages, crossings, and travel routes are used to describe physical connections that allow wildlife to move between patches of suitable habitat in undisturbed landscapes, as well as environments fragmented by urban development. Wildlife corridors are essential to the regional ecology of a species because they provide avenues of genetic exchange and allow animals to access alternative territories as dictated by fluctuating population densities. Fragmentation of open space areas by urbanization creates “islands” of wildlife habitat that are more or less isolated from each other. Wildlife corridors are typically relatively small, linear habitats that connect two or more habitat patches that would otherwise be fragmented or isolated from one another.

The RSP Area is surrounded on three sides by urban development and is not situated between areas of higher quality wildlife habitat, therefore the majority of the RSP Area does not function as a terrestrial wildlife movement corridor.

Riparian habitats typically function as migration corridors because they provide food, water, and cover for a wide variety of wildlife species, and often link other habitats. However, due to the narrowness of the riparian corridor, high levels of human disturbance, and because riparian

habitat ends at the southern border of the RSP Area in Old Sacramento, the quality of the habitat to be used as a migration corridor is low.

As discussed above, the Sacramento River is a regional wildlife corridor for fish including steelhead, Chinook salmon, green sturgeon, and white sturgeon, nonnative striped bass, and American shad.

Special Status Species and Sensitive Biological Resources

This section addresses special-status biological resources observed, reported, or having the potential to occur on the site. These resources include plant and wildlife species and habitats that have been afforded special status and/or recognition by federal and state resource agencies, or private conservation organizations and special interest groups. Special-status species are legally protected under the California and federal Endangered Species Acts (CESA and FESA, respectively) or other regulations or are species that are considered sufficiently rare by the scientific community to qualify for such listing. These species are in the following categories:

1. Species listed or proposed for listing as threatened or endangered under FESA (50 Code of Federal regulations [CFR] 17.12 [listed plants], 17.11 [listed animals] and various notices in the Federal Register [FR] [proposed species]);
2. Species that are candidates for possible future listing as threatened or endangered under the FESA (61 FR 40, February 28, 1996);
3. Species listed or proposed for listing by the State of California as threatened or endangered under the CESA (14 California Code of Regulations [CCR] 670.5);
4. Plants listed as rare or endangered under the California Native Plant Protection Act (NPPA) (California Fish and Game Code, Section 1900 et seq.);
5. Animal species of special concern to CDFW;
6. Animals fully protected under Fish and Game Code (California Fish and Game Code, Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]);
7. Species that meet the definitions of rare and endangered under CEQA. CEQA Section 15380 provides that a plant or animal species may be treated as “rare or endangered” even if not on one of the official lists (State CEQA Guidelines, Section 15380); and

8. Plants considered under the CNPS to be “rare, threatened or endangered in California” (Rank 1A, 1B, and 2 in CNPS, 2013) as well as CNPS Rank 3 and 4¹⁴ plant species.

Information on sensitive species and habitats occurring in the vicinity of the RSP Area was compiled based on data obtained from the USFWS,¹⁵ CNDDDB,¹⁶ and CNPS.¹⁷

Database queries identified 81 special-status species records and six sensitive natural communities (Appendix D.2). Of these, 56 species were eliminated from further consideration based upon a lack of suitable habitat in the RSP Area, or because the RSP Area is located outside of the species’ known range. None of the 56 species have been documented in the RSP Area.¹⁸ A total of 12 special-status wildlife species have medium or high potential to occur in the RSP Area and 13 species have low potential to occur in the RSP Area; species with a medium or high potential to occur are identified in **Table 4.3-3** and are described in detail below. Only species classified as having a medium or high potential for occurrence were considered in the impact analysis. One sensitive natural community occurs adjacent to the RSP Area. **Figure 4.3-2** shows locations of where special-status species have been observed within five miles of the RSP Area.¹⁹

The “Potential for Occurrence” category is defined as follows:

- **Unlikely:** The project site and/or surrounding area do not support suitable habitat for a particular species, or the project site is outside of the species known range.
- **Low Potential:** The project site and/or immediate area only provide limited amounts and low quality habitat for a particular species. In addition, the known range for a particular species may be outside of the immediate project area.

¹⁴ Rank 3 and 4 plants may be analyzed under CEQA §15380 if sufficient information is available to assess potential impacts to such plants. Factors such as regional rarity vs. statewide rarity should be considered in determining whether cumulative impacts to a Rank 3 or 4 plant are significant even if individual project impacts are not. CNPS Rank 3 and 4 may be considered regionally significant if, e.g., the occurrence is located at the periphery of the species’ range, or exhibits unusual morphology, or occurs in an unusual habitat/substrate. For these reasons, CNPS Rank 3 and 4 plants should be included in the special-status species analysis. Rank 3 and 4 plants are also included in the California Natural Diversity Database’s (CNDDDB) Special Plants, Bryophytes, and Lichens List. [Refer to the current online published list, available: www.dfg.ca.gov/biogeodata.]

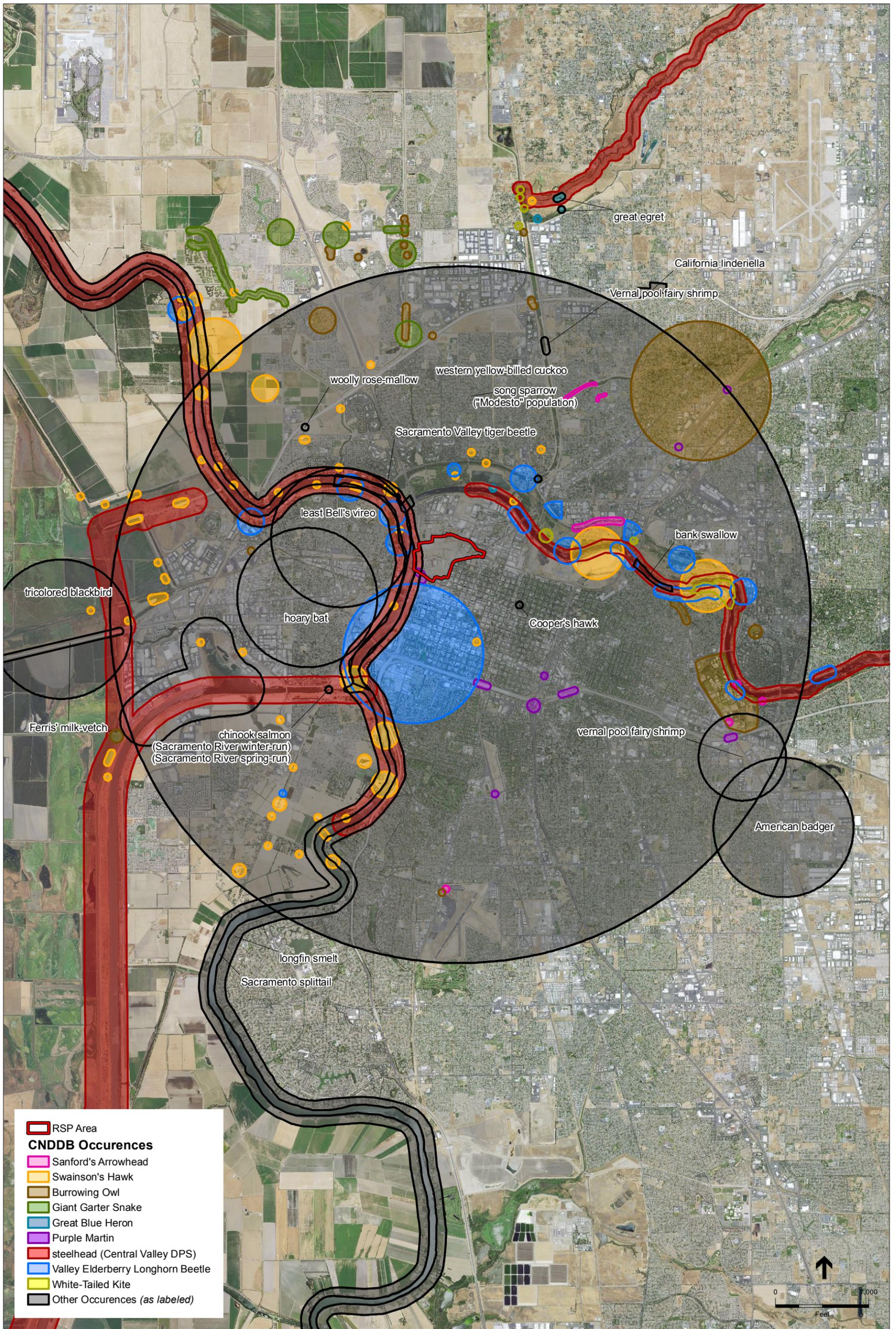
¹⁵ U.S. Fish and Wildlife Service, 2015. List of Threatened and Endangered Species that May Occur in the Proposed Project Location, and/or May be Affected by the Proposed Project. www.fws.gov/sacramento/es_species/Lists/es_species_lists-overview.htm. Accessed December 2, 2015.

¹⁶ California Department of Fish and Wildlife. 2015. California Natural Diversity Database RareFind 5 personal computer program. Available: www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp. Accessed September 8, 2015.

¹⁷ California Native Plant Society, 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Accessed September 8, 2015.

¹⁸ California Department of Fish and Wildlife. 2015. California Natural Diversity Database RareFind 5 personal computer program. www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp. Accessed September 8, 2015.

¹⁹ California Department of Fish and Wildlife. 2015. California Natural Diversity Database RareFind 5 personal computer program. www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp. Accessed September 8, 2015.



SOURCE: USDA, 2014; CDFW, 2016; ESA, 2016

Sacramento Railyards Specific Plan Update . 150286

Figure 4.3-2
Special-status Species Occurrences (CNDDB) in the Vicinity of the RSP Area

**TABLE 4.3-3.
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE RSP AREA**

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the RSP Area
Invertebrates				
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	FT/--/--	Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus nigra</i> ssp. <i>caerulea</i>). Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown for "stressed" elderberries.	High. Several elderberry shrubs and shrub clusters are known to occur within or directly adjacent to the RSP Area. A few elderberry shrub clusters occur along 12 th Street, just south of N. B Street; one shrub occurs on the southern portion of the RSP Area near 6 th and F streets, and one shrub occurs just outside of the project footprint on the northwest corner of the RSP Area between Bercut Drive and the I-5 right of way. CNDDDB records show several occurrences of valley elderberry longhorn beetle along the Sacramento and American River within one mile of the RSP Area. No elderberry shrubs were observed within Valley Foothill Riparian habitat along the Sacramento River on the western side of the RSP Area.
Reptiles				
<i>Emys marmorata</i>	Western pond turtle	FSC/CSC/None	Streams, rivers, ponds, marshes and other aquatic habitats. Requires secure basking area where they can easily escape to water. Upland nesting sites can be as much as 300 feet from aquatic habitat, but are usually closer.	Medium. The Sacramento River provides suitable aquatic habitat. While the constructed basin onsite provides suitable aquatic and upland habitat, western pond turtle is unlikely to occur. Potential for occurrence in the constructed basin is low due to its recent construction in 2013, its isolation from the Sacramento River, or other suitable aquatic sites.
Fish				
<i>Hypomesus transpacificus</i>	Delta smelt	FT/CT/-	Occurs in Sacramento-San Joaquin Delta most of the year. Spawns in tidally influenced freshwater wetlands and seasonally submerged uplands along the Sacramento River, downstream from its confluence with the American River.	Medium. No suitable habitat exists within the project boundaries. However, adult delta smelt are known to occur in the Sacramento River as far upstream as its confluence with the American River. As of 1993, delta smelt were known to spawn in the Sacramento River as far upstream as the City of Sacramento.
<i>Oncorhynchus mykiss</i>	Central Valley steelhead DPS	FT/--/--	Requires cold, freshwater streams with suitable gravel for spawning; rears seasonally inundated floodplains, rivers, tributaries, and Delta.	High. No suitable habitat exists within the project boundaries. However, suitable migration habitat exists within the Sacramento River adjacent to the RSP Area.
<i>Oncorhynchus tshawytscha</i>	Central Valley spring-run Chinook salmon ESU	FT/CT/--	Requires cold, freshwater streams with suitable gravel for spawning; rears seasonally inundated floodplains, rivers, tributaries, and Delta.	High. No suitable habitat exists within the project boundaries. However, suitable migration habitat exists within the Sacramento River adjacent to the RSP Area.
<i>Oncorhynchus tshawytscha</i>	Sacramento River winter-run Chinook salmon ESU	FE/CE/--	Requires cold, freshwater streams with suitable gravel for spawning; rears seasonally inundated floodplains, rivers, tributaries, and Delta.	High. No suitable habitat exists within the project boundaries. However, suitable migration habitat exists within the Sacramento River adjacent to the RSP Area.

**TABLE 4.3-3.
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE RSP AREA**

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the RSP Area
<i>Oncorhynchus tshawytscha</i>	Central Valley fall- / late fall-run Chinook salmon ESU	--/CSC/--	Requires cold, freshwater streams with suitable gravel for spawning; rears seasonally inundated floodplains, rivers, tributaries, and Delta.	High. No suitable habitat exists within the project boundaries. However, suitable migration habitat exists within the Sacramento River adjacent to the RSP Area.
<i>Pogonichthys macrolepidotus</i>	Sacramento spittail	--/CSC/--	Spawning and juvenile rearing from winter to early summer in shallow weedy areas inundated during seasonal flooding in the lower reaches and flood bypasses of the Sacramento River including the Yolo Bypass.	High. No suitable habitat exists within the project boundaries. However, suitable habitat exists within the Sacramento River adjacent to the RSP Area.
<i>Acipenser medirostris</i>	Southern DPS of North American green sturgeon	FT/--/--	Requires cool, freshwater streams with suitable substrate for spawning; rears in rivers, tributaries, and Delta.	High. No suitable habitat exists within the project boundaries. However, suitable migration habitat exists within the Sacramento River adjacent to the RSP Area.
Birds				
<i>Buteo swainsoni</i>	Swainson's hawk	--/ST/--	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Medium. Suitable nest trees are present along the Sacramento River. Open areas of the project site and patchy ruderal vegetation provides limited foraging opportunities for this species.
<i>Elanus leucurus</i>	white-tailed kite	--/FP/--	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Medium. Suitable nest trees are present along the Sacramento River. Open areas of the project site and patchy ruderal vegetation provides marginal foraging habitat for this species.
<i>Progne subis</i>	purple martin	--/CSC/--	Inhabits woodlands, low elevation coniferous forest of Douglas-fir (<i>Pseudotsuga menziesii</i>), ponderosa pine (<i>Pinus ponderosa</i>), and Monterey pine (<i>Pinus radiata</i>). Nests primarily in old woodpecker cavities, also in human-made structures. Nest often located in tall, isolated tree/snag.	High. Known occurrence identified in the CNDDDB at the I-Street Bridge and elevated structure of I-5 in the vicinity of the Railroad Museum.
Mammals				
<i>Antrozous pallidus</i>	Pallid bat	--/CSC/--	Deserts, grasslands, shrublands, woodlands & forests. Most common in open, dry habitats with rocky, or cavity areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Medium. Suitable roosting habitat for this species within the RSP Area, specifically under the I Street Bridge, the elevated structure of I-5, and within the historic train depot buildings associated with the Central Shops Historic District and the Sacramento Valley Station. ²⁰ No CNDDDB record of species within five miles of the RSP Area. ²¹ This species was not observed during reconnaissance surveys.

²⁰ City of Sacramento. 2007. Railyards Specific Plan Environmental Impact Report. Certified December 11, 2007.

**TABLE 4.3-3.
SPECIAL-STATUS SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE RSP AREA**

Scientific Name	Common Name	Listing Status: Federal/State/Other	Habitat Description	Potential for Occurrence within the RSP Area
<i>Lasiurus blossevillii</i>	Western red bat	--/CSC/--	Preferred roosting habitat includes forests and woodlands. Feeds over grassland, shrubland, open woodland, forests, and cropland	High. Species was documented in the vicinity of RSP Area. ²²
<i>Lasiurus cinereus</i>	hoary bat	--/--/--	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths.	Medium. Species may roost within riparian habitat along the Sacramento River and forage within the RSP Area. Recorded occurrence in West Sacramento, west of the RSP Area and the Sacramento River.
<i>Myotis yumanensis</i>	Yuma myotis	--/--/--	Prefers open forests and woodlands with sources of water over which to feed. Roosts in buildings, mines, caves, and crevices.	High. Species was documented in the vicinity of the RSP Area. ²³
Sensitive Vegetation Communities				
Great Valley Valley Oak Riparian Forest	--	--	Medium to tall (rarely to 100 feet) broadleaved, winter deciduous, closed-canopy riparian forest dominated by Valley oak (<i>Quercus lobata</i>). Understories include scattered Oregon ash, Northern California black walnut, and western sycamore as well as young valley oaks. Vines are relatively scattered throughout the shady understory but quickly become conspicuous occupying gaps where light is available.	High. Habitat occurs adjacent to the RSP Area along the Sacramento River.

KEY:**Federal: (USFWS)**

FE = Listed as Endangered by the Federal Government
 FT = Listed as Threatened by the Federal Government
 FC = Candidate for listing by the Federal Government

State: (CDFW)

SE = Listed as Endangered by the State of California
 ST = Listed as Threatened by the State of California
 SR = Listed as Rare by the State of California (plants only)
 CSC = California Species of Special Concern
 WL = Species on the CDFW Watch List

CNPS: (California Native Plant Society)

Rank 1A = Plants presumed extinct in California
 Rank 1B = Plants rare, threatened, or endangered in California and elsewhere
 Rank 2 = Plants rare, threatened, or endangered in California but more common elsewhere
 Rank 3 = Need more information
 Rank 4 = Limited distribution – a watch list
 0.1 = Seriously endangered in California
 0.2 = Fairly endangered in California
 0.3 = Not very endangered in California
 -- = No Listing

SOURCES: CDFW, 2015 and USFWS, 2015

²¹ California Department of Fish and Wildlife. 2015. California Natural Diversity Database RareFind 5 personal computer program. www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp. Accessed on: September 8, 2015.

²² California Department of Transportation, 2016. I Street Bridge Replacement Project Natural Environment Study. Sacramento and Yolo Counties, Federal Project No.: BRLS 5002(164). February.

²³ California Department of Transportation, 2016. I Street Bridge Replacement Project Natural Environment Study. Sacramento and Yolo Counties, Federal Project No.: BRLS 5002(164). February.

- **Medium Potential:** The project site and/or immediate area provide suitable habitat for a particular species.
- **High Potential:** The project site and/or immediate area provide ideal habitat conditions for a particular species and/or known populations occur in immediate area and/or within the project site.

Conclusions regarding habitat suitability and species occurrence are based on the reconnaissance surveys, as well as the analysis of existing literature and databases described previously.

The following species descriptions have been referenced from the 2007 RSP Draft EIR (pages 6.2-17 through 6.2-23) and updated to reflect current conditions.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*) is listed as a threatened species under FESA. It occurs throughout the year in riparian woodlands and other Central Valley habitats containing elderberry shrubs (*Sambucus* spp.), upon which the VELB are completely dependent for all stages of their life cycle. The females lay their eggs in crevices in the bark. After hatching, the larvae burrow into the stems of the tree where they feed on the interior wood for the next one to two years until they form pupae, from which the adults emerge. The adults bore their way out of the stems, leaving a distinctive oval-shaped hole. As the larvae and adults are rarely seen, these borer holes are often the only evidence of this species' presence. After emergence from the stems, the adults remain in association with the elderberry shrub, where they will feed on the elderberry foliage and eventually reproduce. All elderberry shrubs within the known range of the VELB that have one or more stems with diameters of one inch or greater at ground level, are considered potential habitat for this species. This potential habitat (i.e., elderberry shrub) occurs primarily in the Elderberry Savanna along the American River Parkway, although isolated individual elderberry shrubs also occur along the Sacramento River and within the RSP Area (Figure 4.3-1). Critical habitat for the VELB was designated by the USFWS in 1980 (45 FR 58803) but it does not include the RSP Area.²⁴

Within the RSP Area, elderberry shrubs were observed at the locations listed below (Figure 4.3-1). One shrub that was previously identified west of 7th Street and north of E Street was not observed during the 2015 biological surveys. No potential VELB exit holes were observed in any other areas during the 2006, 2015, and 2016 surveys. None of the shrubs are located within riparian habitat.

- One shrub with five stems over 3-inches is located along the western boundary of the RSP Area adjacent to Interstate-5 (I-5).

²⁴ U.S. Fish and Wildlife Service, 2002. Valley Elderberry Longhorn Beetle, Final Critical Habitat, Sacramento County, California, Available: www.fws.gov/sacramento/ES/Critical-Habitat/Data/es_critical-habitat_data.htm. Accessed December 9, 2015.

- One shrub with five stems over 3-inches is located in the south eastern portion of the RSP Area between 6th and 7th streets.
- One shrub with one stem over 1-inch is located along the northern boundary of the RSP Area in the western area of SIMS Metal Management.
- One shrub with 13 stems over 1-inch is located along the northern boundary of the RSP Area along the southern area of SIMS Metal Management.
- Four elderberry shrub clusters, with a combined 34 stems over 1-inch, are located in the eastern portion of SIMS Metal Management, along 12th Street. The largest concentration of elderberries was in the metal debris yard in the far eastern side of the RSP Area adjacent to 12th Street.

Four elderberry shrubs were observed west of 12th Street, south of North B Street, and north (outside) of the RSP Area. These shrubs are located within private property and access was not granted, thus a USFWS protocol level survey was not conducted. The shrubs appeared to be healthy and have stems at ground level greater than one inch in diameter. These shrubs are surrounded by other vegetation such as walnut trees, tree of heaven, milk weed, wild oats and prickly ox tongue. Two large shrubs were observed on the north of the RSP Area on either side of I-5. The number of stems and size could not be determined; however, due to the shrubs' large size they are likely to be greater than one inch in diameter.

The USFWS has issued a renewable take permit for the Railyards Remediation Project (TE023739). The take permit allows the remediation project (a separate and independent project) to remove 87 plants with up to 261 stems greater than one (1) inch, and then maintain the property to prevent regrowth and/or recolonization.

Western Pond Turtle

The western pond turtle (*Emys marmorata*) is an aquatic turtle that ranges throughout much of the state from the Sierra Nevada foothills to the coast - and in coastal drainages from the Oregon border to Baja California. It occurs in suitable habitat throughout the region in ponds, slow moving streams and rivers, irrigation ditches, and reservoirs that have abundant emergent and/or riparian vegetation. The turtle requires adjacent (i.e., within 600-1,200 feet of water) uplands for nesting and egg-laying - typically in soils with high clay or silt component on unshaded, south-facing slopes. The northwestern pond turtle is a State Species of Special Concern and known to occur in the Sacramento River. However, there are no CNDDDB occurrences within five miles of the RSP Area.

Delta Smelt

Delta smelt (*Hypomesus transpacificus*) is a state threatened species and was listed as a federal threatened species in 1993 (58 FR 12854). The reach of Sacramento River adjacent to the RSP Area was designated as critical habitat for this species in 1994 and became effective on

18 January 1995 (59 FR 65256). Delta smelt is a euryhaline (tolerant of a wide salinity range) species that spawns in freshwater dead-end sloughs and shallow edge-waters of channels of the Sacramento-San Joaquin Delta (59 FR 65256) between February and June. Adult smelt migrate upstream from the brackish water habitat of the mixing zone to spawn in freshwater areas, beginning in December to July and August (59 FR 65256). After hatching, larvae are transported downstream toward the mixing zone where they mature. The location of the mixing zone varies. When the mixing zone is contained within Suisun Bay, young delta smelt are dispersed throughout a large expanse of shallow-water and marsh habitat. However, when the mixing zone is located upstream, it becomes confined in deep river channels that have smaller total surface area, fewer shoal areas, and swifter, more turbulent water currents (59 FR 65256).

Historically, delta smelt congregated in upper Suisun Bay and Montezuma Slough (mainly during March to mid-June when the Sacramento and San Joaquin river flows are high (58 FR 12854). It is thought to have occurred from Suisun Bay to the City of Sacramento in the Sacramento River and Mossdale in the San Joaquin River (59 FR 65256). Spawning has been recorded in Montezuma and Suisun sloughs and their tributaries north of Suisun Bay, in the Sacramento River up to Rio Vista, and in Barker, Lindsey, Cache, Georgiana, Prospect, Beaver, Hog, and Sycamore sloughs (Radtke 1966 and Wang 1986 in 58 FR 12854; Wang 1991 in 59 FR 65256).

Critical Habitat. The RSP Area is outside but immediately adjacent to the upstream extent of delta smelt critical habitat in the Sacramento River. The northern boundary of critical habitat occurs at the I Street Bridge, which is the southern boundary of the river portion of the RSP Area. Critical habitat is designated as Suisun Bay (including the contiguous Grizzly and Honker Bays); the length of Goodyear, Suisun, Cutoff, First Mallard (Spring Branch), and Montezuma sloughs; and the existing contiguous waters contained within the Delta, as defined in Section 12220 of the California Water Code (59 FR 65256).

The primary constituent elements of critical habitat for this species are physical habitat, water, river flow, and salinity concentrations required to maintain Delta smelt habitat for spawning, larval and juvenile transport, rearing, and adult migration (59 FR 65256). This critical habitat designation would be applicable to any in-water activity associated with construction or operation of the proposed projects.

Chinook Salmon

Chinook salmon (*Oncorhynchus tshawytscha*) consists of four ESUs: winter-run, spring-run, fall-run, and late fall-run. The different runs of Chinook salmon are distinguished based on the timing of the adult return to freshwater on their spawning migration. Adult and juvenile salmon migrate in the Sacramento River adjacent to the RSP Area on their way to and from the ocean, but spawning does not occur in this section of river because there is no suitable spawning habitat.²⁵

²⁵ Moyle, P. B. 2002. *Inland Fishes of California, Revised and Expanded*. University of California Press.

Sacramento River winter-run Chinook salmon ESU are listed as endangered under CESA and FESA. They spawn in the Sacramento River and are distinguishable from other Chinook salmon runs found in the river based on the timing of both upstream migration and the spawning season. Prior to the construction of Shasta and Keswick dams in 1943 and 1955, respectively, winter-run Chinook salmon spawned in the upper reaches of the Sacramento River, the McCloud River, the lower Pit River,²⁶ and Battle Creek. Presently, all winter-run Chinook salmon spawning occurs on the mainstem of the Sacramento River downstream of Keswick Dam located near the town of Redding. Approximately 95 percent of the spawning occurs between Keswick Dam and the Red Bluff Diversion Dam.²⁷ Designated critical habitat extends from Keswick Dam to the mouth of San Francisco Bay at the Golden Gate Bridge, including the Sacramento River adjacent to the RSP Area.

Physical and biological features that are essential for the conservation of winter-run Chinook salmon include: (1) unimpeded access from the ocean to the spawning areas, in this case the upper Sacramento River, (2) the availability of clean gravel for spawning substrate, (3) adequate river flows for successful spawning, incubation of eggs, fry²⁸ development and emergence, and downstream transport of juveniles, (4) suitable water temperatures for successful spawning, egg incubation, and fry development, (5) habitat and prey free of contaminants, (6) riparian habitat for juvenile rearing, and (7) unimpeded passage of juveniles from their natal riffles to the ocean.²⁹

Central Valley spring-run Chinook salmon ESU are listed as a threatened species under CESA and FESA. Spring-run Chinook salmon enter the Sacramento River between March and September and move upstream into the headwaters, where they hold in pools until they spawn between August and October. Juveniles emigrate from the tributaries from mid-November through June; however, some juveniles spend a year in the streams and emigrate as yearlings the following October.³⁰ Typically, spring-run Chinook salmon utilize mid-to high-elevation streams that provide compatible temperatures and sufficient flow, cover, and pool depth to allow over summering. Spawning occurs between September and October and, depending on water temperature, emergence occurs between November and February. Although spring-run Chinook salmon emigration is highly variable, the emigration period extends from November to early May, with up to 69 percent of young-of-the-year out migrants passing through the lower Sacramento River between mid-November and early January.³¹

²⁶ Moyle, P. B. 2002. *Inland Fishes of California, Revised and Expanded*. University of California Press.

²⁷ Moyle, P. B. 2002. *Inland Fishes of California, Revised and Expanded*. University of California Press.

²⁸ Fry is the term used for small fish just after hatching. Most fry do not have well developed swimming capabilities.

²⁹ National Marine Fisheries Service, 1997. *Proposed recovery plan for the Sacramento River winter-run Chinook salmon*. NMFS, Southwest Region, Long Beach, California.

³⁰ Moyle, P. B. 2002. *Inland Fishes of California, Revised and Expanded*. University of California Press.

³¹ Snider, B., and R.G. Titus. 2000. Timing, composition, and abundance of juvenile anadromous salmonid emigration in the Sacramento River near Knights Landing.

Central Valley fall- and late fall-run Chinook salmon ESU are not listed under CESA or FESA but are classified as a species of concern due to specific risk factors. The fall-run Chinook salmon is the most abundant ESU, documented to comprise about 80 percent of the Sacramento Basin stock in the early 1980s. The ESU includes all naturally spawned populations of fall-run Chinook salmon in the Sacramento and San Joaquin River Basins and their tributaries, east of Carquinez Strait.

Critical Habitat. The portion of the Sacramento River immediately adjacent to the RSP Area is designated critical habitat for the Central Valley winter-run and spring-run Chinook salmon ESUs. Critical habitat has been designated for both winter and spring-run Chinook salmon ESUs. These critical habitat designations identify those physical and biological features of the habitat that are essential to the conservation of the species and that may require special management consideration or protection. The primary constituent element of critical habitat found within the Sacramento River is freshwater migration corridors free of obstruction with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival” (69 FR 74582). Within the Sacramento River this includes the river water, river bottom (including those areas and associated gravel used by Chinook and steelhead as spawning substrate), and adjacent riparian zone. The lateral extent of the critical habitat includes the stream channels within the designated stream reaches, and includes a lateral extent as defined by the ordinary high-water line (33 CFR 329.11). In areas where the ordinary high-water line has not been defined, the lateral extent will be defined by the bankfull elevation. Bankfull elevation is the level at which water begins to leave the channel and move into the floodplain and is reached at a discharge which generally has a recurrence interval of one to two years on the annual flood series.

Central Valley Steelhead

Central Valley steelhead (*Oncorhynchus mykiss*) DPS includes all naturally spawned populations of steelhead in the Sacramento and San Joaquin rivers and their tributaries, including the Sacramento River adjacent to the RSP Area. This species was listed as threatened under FESA in March of 1998 (63 FR 13347).

Steelhead begin their migration from the ocean when winter rains provide large amounts of cold water for migration and spawning. Peak migration periods for adult fish in the Sacramento River are in mid-winter. They typically spawn in tributaries to mainstream rivers, often long distances from the ocean. Juvenile steelhead generally spends one to three years in freshwater before migrating to the ocean.³² Suitable steelhead conditions primarily occur in mid to high elevation streams. Because access to large areas of suitable rearing habitat has been blocked by dam construction, juvenile rearing is generally confined to lower elevation stream reaches where water temperatures during late summer and early fall can be high. While steelhead migrate along this

³² Moyle, P. B. 2002. *Inland Fishes of California, Revised and Expanded*. University of California Press.

section of the Sacramento River, the RSP Area does not support spawning habitat for adult fish, or rearing habitat for juvenile steelhead.³³

Critical Habitat. The portion of the Sacramento River immediately adjacent to the RSP Area is designated critical habitat for Central Valley steelhead DPS. The primary constituent elements of critical habitat for this species are freshwater spawning, rearing, and migration areas; estuarine areas free of obstructions and of sufficient quality to support adult and juvenile rearing; and nearshore and offshore marine areas. The lateral extent of the critical habitat includes the stream channels within the designated stream reaches, and includes a lateral extent as defined by the ordinary high-water line (33 CFR 329.11). This critical habitat designation would be applicable to any in-water activity associated with construction or operation of the proposed projects.

Sacramento Splittail

Sacramento splittail (*Pogonichthys macrolepidotus*) was listed under FESA as a threatened species in 1999 (64 FR 5963). The listing was prompted by long-term population declines and a corresponding reduction in range. The listing was challenged in court and in subsequent review, the USFWS determined that listing was not warranted and removed splittail from the list of threatened species (68 FR 55139). The species is a federal and State species of concern.

Sacramento splittail are primarily freshwater fish, but are tolerant of moderate salinity and can be found in brackish waters of the lower Sacramento-San Joaquin Delta. Typically, adults migrate upstream in January and February and spawn on seasonally inundated floodplains in March and April. In May, the juveniles migrate back downstream to shallow, brackish water rearing grounds, where they feed on detritus and invertebrates for one to two years before migrating back upstream to spawn.³⁴ Larvae remain in the shallow, weedy inshore areas near their spawning sites and move into the deeper offshore habitat as they mature.

Historically, splittail were found as far north as Redding on the Sacramento River and as far south as the Friant Dam on the San Joaquin River. They were also common in San Pablo Bay and Carquinez Strait, but now appear to be largely confined to the Delta, Suisun Bay, Suisun Marsh, Napa River, Petaluma River, and other parts of the Sacramento-San Joaquin Estuary. Although this species has lost considerable habitat through much of its former range, it appears that the splittail has benefited from habitat-restoration and water-management actions currently underway to benefit Central Valley fish, including several federally protected species. The principal spawning areas of splittail – the Yolo Bypass and the Cosumnes River – are largely protected and being further enhanced and restored. This species is likely to be present in the American and Sacramento Rivers and their tributaries, but the nearest significant breeding habitat is in the Yolo Bypass. Thus, the portion of the Sacramento River adjacent to the RPS Area does not support spawning habitat for adult fish, or rearing habitat for juveniles.

³³ Moyle, P. B. 2002. *Inland Fishes of California, Revised and Expanded*. University of California Press.

³⁴ Moyle, P. B. 2002. *Inland Fishes of California, Revised and Expanded*. University of California Press.

Green Sturgeon

North American green sturgeon (*Acipenser medirostris*) have been separated into two DPSs: the northern DPS (all populations that spawn in rivers north of and including the Eel River) and the southern DPS (coastal and Central Valley populations spawning south of the Eel River). The southern DPS is federally listed as threatened under FESA.³⁵

Green sturgeon is a large, bottom-dwelling, anadromous fish that is widely distributed along the Pacific coast of North America. North American green sturgeon is the most broadly distributed, wide ranging, and marine-oriented species of the sturgeon family; however, it is not abundant in comparison to white sturgeon. San Francisco Bay, San Pablo Bay, Suisun Bay, the Delta, and the Sacramento River support the southernmost reproducing population of green sturgeon.

Habitat requirements of green sturgeon are poorly understood, but spawning and larval ecologies are probably similar to those of white sturgeon. Indirect evidence indicates that green sturgeon spawn mainly in the Sacramento River. They are slow growing and late maturing, spawning every 3–5 years between March and July. Adult fish spawn in freshwater and then return to estuarine or marine environments. Preferred spawning habitat occurs in large rivers that contain large cobble in deep and cool pools with turbulent water. Larval and juvenile green sturgeon may rear for up to 2 years in freshwater and then migrate to an estuarine environment, primarily during summer and fall. They remain near estuaries at first but may migrate considerable distances as they grow larger.³⁶ Both adult and juvenile North American green sturgeon are known to occur in the lower reaches of the Sacramento (adjacent to the RSP Area) and San Joaquin Rivers and in the Delta.

Critical Habitat. Critical habitat has been designated to include the Sacramento River (including portions adjacent to the RSP Area); the lower Feather and Yuba rivers; Yolo and Sutter bypasses, the Delta; and Suisun, San Pablo, and San Francisco bays.³⁷

Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) is listed as a threatened species under CESA. This raptor is found primarily in open country, foraging in grasslands and agricultural fields, especially after disking or harvest. They use tall riparian trees (typically oaks or cottonwoods) for nesting, but will occasionally nest in large eucalyptus or other large ornamental trees if there is suitable foraging habitat nearby. The species has lost much of its former nesting habitat as a result of the significant reduction in riparian woodland and forest habitat throughout the state over the last 100 years, and is losing foraging habitat to urban development. Swainson's hawks can forage as far as 20 miles from the nest, but nests are generally more successful if suitable foraging habitat is present within an approximate ten-mile radius. Suitable foraging habitat is defined as annual

³⁵ 71 Federal Register 17757, April 7, 2006.

³⁶ Moyle, P. B. 2002. *Inland Fishes of California, Revised and Expanded*. University of California Press.

³⁷ 71 Federal Register 17757, April 7, 2006.

grasslands, fallow fields, dry and irrigated pasture, and a variety of croplands including alfalfa, beet, tomato and other low growing row or field crops, rice (when not flooded), and cereal grain crops (including corn after harvest). When forced to travel greater distances from the nest, the adults must expend much more time and energy gathering food, leaving the eggs and young in the nests much more vulnerable to predation and the elements. The greatest concentration of nesting records for Swainson's hawks within the region occurs along the Sacramento and American rivers, within the foraging range of numerous Swainson's hawk nests. The closest Swainson's hawk occurrence to the RSP Area is located approximately one mile to the north near the confluence of the American and Sacramento Rivers.³⁸ No Swainson's hawks were observed within the RSP Area during biological surveys conducted in 2006, 2015, and 2016. Overall, it is unlikely that the discontinuous patches of ruderal vegetation within the RSP Area provide substantial foraging habitat for this species due to the high level of disturbance that occurs onsite.

White-Tailed Kite

The white-tailed kite (*Elanus leucurus*) is listed as a "fully protected" raptor under Section 3511 of the California Fish and Game Code. White-tailed kites feed on rodents, small reptiles, and large insects in fresh emergent wetlands, annual grasslands, pastures, and ruderal vegetation. They breed between February and October. Although, like other raptors, kites build solitary nests, they often roost, and occasionally nest communally, especially during the non-breeding season.

Disturbance of a relatively small roost or nesting area could affect a large number of birds. The white-tailed kite can commonly be observed foraging in open grasslands throughout the region, but breeding sites are primarily located near riparian corridors along the Sacramento and American Rivers. No white-tailed kites were observed during the biological surveys in 2006, 2015, and 2016 but suitable nesting habitat occurs along the Sacramento River adjacent to the RSP Area.

Purple Martin

The purple martin (*Progne subis*) can be found throughout nearly the entire United States east of the Rocky Mountains. Although declining in many western states, it is also found in isolated areas of Canada, Oregon, Washington, California, Utah, Colorado, Arizona, New Mexico and Mexico. In California it is a state species of special concern. It is an early spring migrant from its wintering grounds in South America. Generally, purple martins inhabit open areas with an open water source nearby. Martins adapt well in and around people, but are out-competed by starlings (*Sturnus vulgaris*) and sparrows in urban areas. Purple martins are colonial cavity nesters in abandoned woodpecker holes, human-made nest boxes, or cavities in other structures such as bridges and overpasses. Once established at a nest location, martins usually come back to the same site every year.

³⁸ California Department of Fish and Wildlife. 2015. California Natural Diversity Database RareFind 5 personal computer program. www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp. Accessed on: September 8, 2015.

Regional Population

Since the mid-1900s, purple martin has been eliminated from most of California's Central Valley. The last known population of purple martin in the Central Valley nests in elevated roadways (i.e., bridges) in the City of Sacramento. The colony of martins known to use the underside of the I Street on-ramp to I-5, adjacent to the RSP Area, is one of four known nesting colonies in the greater Sacramento region in 2015,³⁹ and seems to have been used by purple martins since 1974.⁴⁰ Systematic monitoring of martins at the I Street colony has documented a 73 percent decline in nesting pairs from 2002 to 2015. In the larger Sacramento region, there has been a 71 percent decline in breeding pairs since 2002.⁴¹

Many factors are thought to be contributing to the current downward trend in the Sacramento region martin population. A major factor is thought to be the alteration of habitat around known nest sites including localized predation by feral cats and/or American kestrels (*Falco sparverius*), removal of perch sites, loss of nest material collection sites, and exclusion of nest sites during construction projects. Other factors contributing to the decline in martin populations in the Sacramento region may include mortality due to West Nile virus, increased nest site competition with starlings, and mortality of individuals from vehicle collisions with light rail and freight trains, and motor vehicles. In addition, experts have recently begun to analyze the possible negative effects of neonicotinoid pesticides on martins and their food source (i.e., flying insects). Without significant reversal of current trends, it is predicted that the Sacramento region purple martin population could disappear in as little as five years.⁴²

Special-Status Bats

Special-status bat species with the potential to occur within the RSP Area include the pallid bat (*Antrozous pallida*) and Western red bat (*Lasiurus blossevillii*), state species of concern, and the hoary bat (*Lasiurus cinereus*) and Yuma myotis (*Myotis yumanensis*), species considered uncommon within the State.⁴³ The hoary bat roosts in woodlands and forests with medium to large-size trees and dense foliage. Habitat for this species is present in dense-foliaged trees within the RSP Area, including trees the riparian area along the Sacramento River. The pallid bat and Western red bat roosts in caves, crevices, mines, and occasionally in hollow trees and buildings. Habitat for foliage-roosting species is present in the RSP Area in the riparian area along the Sacramento River. Habitat for cavity-roosting species is present under the elevated structure of

³⁹ Airola, D.A and D. Kopp, 2015. Sacramento Purple Martin in 2015: When a Population Increase May be Misleading. Central Valley Bird Club Bulletin. Fall 2015.

⁴⁰ California Department of Fish and Wildlife. 2015. California Natural Diversity Database RareFind 5 personal computer program. www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp. Accessed on: September 8, 2015.

⁴¹ Airola, D.A. and J. Grantham, 2003. Purple Martin Status, Nesting Habitat +Characteristics, and Management in Sacramento, California. Western Birds. 34:235-251.

⁴² Airola, D.A., B. Cousens, and D. Kopp, 2014. Accelerating Decline of the Sacramento Purple Martin Breeding Population in 2014: What are the Possible Causes? Central Valley Bird Club Bulletin, Winter 2014.

⁴³ California Department of Fish and Wildlife, 2016. *State and Federally Listed Endangered and Threatened Animals of California*. California Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento, CA. Data dated January 2016.

I-5, I Street viaduct, and Jibboom Street viaducts, and within historic Central Shops or Sacramento Valley Station buildings. In 2007, six roosts of unknown bat species were observed under the elevated section of I-5 and under the I Street Bridge and its approaches.⁴⁴ In addition, several occupied and potential bat roosts were observed under the I Street viaduct and Jibboom Street viaduct during surveys in 2015. Surveys in the vicinity of the RSP Area in May and June of 2015 recorded Yuma myotis and Western red bat.⁴⁵

4.3.2 Regulatory Setting

Federal

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) regulates and protects take of threatened and endangered plants and animals and their critical habitat. Candidate species are those formally proposed for listing; these species are usually treated by resource agencies, and for the purposes of this EIR are treated, as if they were actually listed during the environmental review process. Procedures for addressing impacts to federally listed species follow two principal regulatory pathways, both of which require consultation with the USFWS, which administers the FESA for all terrestrial species. The first regulatory pathway, FESA Section 10(a) incidental take permit pursuant to an approved habitat conservation plan (HCP), applies to situations where a non-federal government entity must minimize and mitigate for potential adverse impacts to species protected under the FESA. The second regulatory pathway, consultation under Section 7 of FESA, applies to projects directly undertaken by a federal agency or private project requiring a federal permit or approval. As an example, a private project requiring a permit from the U.S. Army Corps of Engineers for fill of wetlands or waters of the U.S. pursuant to section 404 of the Clean Water Act may address its potential impacts on federally-listed endangered species through a Section 7 consultation. If the project has no requirement for a federal permit or approval, it would require a Section 10(a) incidental take permit pursuant to an approved HCP.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs. Most actions that result in a taking or in permanent or temporary possession of a protected species constitute violations of the MBTA. Examples of permitted actions that do not violate the MBTA are the possession of a hunting license to pursue specific game birds, legitimate research

⁴⁴ City of Sacramento. 2007. Railyards Specific Plan Environmental Impact Report. Certified December 11, 2007.

⁴⁵ California Department of Transportation, 2016. I Street Bridge Replacement Project Natural Environment Study. Sacramento and Yolo Counties, Federal Project No.: BRLS 5002(164). February 2016.

activities, display in zoological gardens, bird banding, and other similar activities. USFWS is responsible for overseeing compliance with the MBTA.

Sustainable Fisheries Act

In response to growing concern about the status of fisheries in the United States, Congress passed the Sustainable Fisheries Act of 1996 (Public Law 104-297). This law amended the Magnuson-Stevens Fishery Conservation and Management Act (Public Law 94-265), the primary law governing marine fisheries management in the federal waters of the United States. Under the Sustainable Fisheries Act, consultation is required by NMFS on any activity that might adversely affect Essential Fish Habitat (EFH). EFH consists of those habitats that fish rely on throughout their life cycles. It encompasses habitats necessary to allow sufficient production of commercially valuable aquatic species to support a long-term sustainable fishery and contribute to a healthy ecosystem.

The Pacific Fishery Management Council (PFMC) has designated the Sacramento River as EFH to protect and enhance habitat for anadromous and coastal marine fish and macroinvertebrate species that support commercial fisheries, such as Pacific salmon.

Clean Water Act

The federal Clean Water Act (CWA) was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the United States. The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands.

Section 404

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the United States. Waters of the United States refers to oceans, bays, rivers, streams, lakes, ponds, and wetlands. Applicants must obtain a permit from the U.S. Army Corps of Engineers (USACE) for all discharges of dredged or fill material into waters of the United States, including wetlands, before proceeding with a proposed activity. Waters of the United States are under the jurisdiction of the USACE and the Environmental Protection Agency (EPA).

Compliance with CWA Section 404 requires compliance with several other environmental laws and regulations. The USACE cannot issue an individual permit or verify the use of a general nationwide permit until the requirements of FESA and the National Historic Preservation Act (NHPA) have been met. In addition, the USACE cannot issue or verify any permit until a water quality certification or a waiver of certification has been issued pursuant to CWA Section 401.

Section 401

Under CWA Section 401, applicants for a federal license or permit to conduct activities which may result in the discharge of a pollutant into waters of the United States must obtain certification from the state in which the discharge would originate or, if relevant, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge

would originate. Therefore, all projects that have a federal component and may affect State water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401.

Rivers and Harbors Act

Section 14 of the Rivers and Harbors Act of 1899 and codified in 33 USC 408 (commonly referred to as “Section 408”) authorizes the Secretary of the Army, on the recommendation of the Chief of Engineers of the US Army Corps of Engineers (USACE), to grant permission for the alteration or occupation or use of a USACE civil works project if the Secretary determines that the activity will not be injurious to the public interest and will not impair the usefulness of the project.

On July 31, 2014 USACE issued Engineer Circular 1165-2-216, Policy and Procedural Guidance for Processing Requests to Alter U.S. Army Corps of Engineers Civil Works Projects Pursuant to 33 USC 408. The policy outlines a process that is scalable to be commensurate with the anticipated impacts of an alteration, and provide those seeking alteration a clear understanding of information required by them in seeking alteration to a USACE project. Engineering Circular 1165-2-216 provides the policies and procedural guidance for an overall review process that can be tailored to the scope, scale, and complexity of individual proposed alternations, and provides infrastructure specific considerations for dams, levees, floodwalls, flood risk management channels, and navigation projects.

State

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) (together “Boards”) are the principal State agencies with primary responsibility for the coordination and control of water quality. In the Porter-Cologne Water Quality Control Act (Porter-Cologne), the Legislature declared that the “state must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation...” (California Water Code section 13000). Porter-Cologne grants the Boards the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface waters of the State. Waters of the State determined to be jurisdictional would require, if impacted, waste discharge permitting and/or a Clean Water Act Section 401 certification (in the case of the required USACE permit). The enforcement of the State's water quality requirements is not solely the purview of the Boards and their staff. Other agencies (e.g., the CDFW) have the ability to enforce certain water quality provisions in State law.

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). Sections 2050 through 2098 of the California Fish and Game Code outline the protection

provided to California's rare, endangered, and threatened species. Section 2080 of the California Fish and Game Code prohibits the taking of plants and animals listed under the CESA. Section 2081 established an incidental take permit program for State-listed species. CDFW maintains a list of "candidate species" which are species that CDFW formally notices as being under review for addition to the list of endangered or threatened species.

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 determine whether the proposed project will have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under California Fish and Game Code Section 206.591. Authorization from CDFW would be in the form of an Incidental Take Permit.

Other California Fish and Game Code Provisions

Fully Protected Species

Certain species are identified as "fully protected", meaning that the Code explicitly prohibits all take of individuals of these species except for take permitted for scientific research. Section 5050 lists fully protected amphibians and reptiles, Section 5515 lists fully protected fish, Section 3511 lists fully protected birds, and Section 4700 lists fully protected mammals.

Protection of Birds and Their Nests

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 of the code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs. Migratory non-game birds are protected under Section 3800, while other specified birds are protected under Section 3505.

Stream and Lake Protection

CDFW has jurisdictional authority over streams and lakes and the wetland resources associated with these aquatic systems under California Fish and Game Code Sections 1600 et seq. through administration of lake or streambed alteration agreements. Such agreements are not a permit, but rather a mutual accord between CDFW and the project proponent. California Fish and Game Code Section 1600 et seq. was repealed and replaced in October of 2003 with the new Section 1600–1616 that took effect on January 1, 2004 (Senate Bill No. 418 Sher). Under the new code, CDFW has the authority to regulate work that will "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled,

flaked, or ground pavement where it may pass into any river lake or stream.” CDFW enters into a streambed alteration agreement with the project proponent and can impose conditions in the agreement to minimize and mitigate impacts to fish and wildlife resources. Because CDFW includes under its jurisdiction streamside habitats that may not qualify as wetlands under the federal CWA definition, CDFW jurisdiction may be broader than USACE jurisdiction.

A project proponent must submit a notification of streambed alteration to CDFW before construction. The notification requires an application fee for streambed alteration agreements, with a specific fee schedule to be determined by CDFW. CDFW can enter into programmatic agreements that cover recurring operation and maintenance activities and regional plans. These agreements are sometimes referred to as Master Streambed Alteration Agreements (MSAAs).

Under Fish and Game Code Section 1602 (Streambed Alteration Agreements), CDFW takes jurisdiction over the stream zone which is defined top of bank or outside extent of riparian vegetation, whichever is the greatest. Within the stream zone, waters of the State of California are typically delineated to include the streambed to the top of the bank and adjacent areas that would meet any one of the three wetland parameters in the USACE definition (vegetation, hydrology, and/or soils). Whereas federal jurisdiction requires meeting all three parameters, in practice meeting one parameter, or even the presence (rather than dominance) of wetland plants in an area associated with a jurisdictional streambed would qualify an area as waters of the State of California. CDFW jurisdiction is not limited to navigable waters or tributaries to navigable waters, however, isolated wetlands and wetlands not associated with a streambed are not subject to CDFW jurisdiction.

Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California NPPA, which directed the CDFW to carry out the legislature’s intent to “preserve, protect, and enhance endangered plants in this state.” The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants (Fish and Game Code Sections 1900-1913). CESA expanded on the original NPPA and enhanced legal protection for plants. CESA established threatened and endangered species categories, and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, three listing categories for plants are employed in California: rare, threatened, and endangered.

California Native Plant Society Plant Lists

The California Native Plant Society (CNPS) maintains a list of plant species native to California that are known to exist in low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular

Plants of California.⁴⁶ Potential impacts to populations of CNPS-listed plants may receive consideration under CEQA review. The following identifies the definitions of the CNPS listings:

- Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere.
- Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere.
- Rank 2A: Plants presumed extirpated in California, but more common elsewhere.
- Rank 2B: Plants Rare, Threatened, or Endangered in California, but more common elsewhere.
- Rank 3: Plants about which more information is needed - A Review List.
- Rank 4: Plants of limited distribution - A Watch List.

Local

City of Sacramento 2035 General Plan

The following goals and policies from the 2035 General Plan are relevant to biological resources. These policies guide the location, design, and quality of development to protect biological resources such as wildlife habitat, open space corridors, and ecosystems.

Goal ER 2.1 Natural and Open Space Protection. Protect and enhance open space, natural areas, and significant wildlife and vegetation in the City as integral parts of a sustainable environment within a larger regional ecosystem.

Policies

- ER 2.1.4 **Retain Habitat Areas.** The City shall retain plant and wildlife habitat areas where there are known sensitive resources (e.g., sensitive habitats, special-status, threatened, endangered, candidate species, and species of concern). Particular attention shall be focused on retaining habitat areas that are contiguous with other existing natural areas and/or wildlife movement corridors.
- ER 2.1.5 **Riparian Habitat Integrity.** The City shall preserve the ecological integrity of creek corridors, canals, and drainage ditches that support riparian resources by preserving native plants and, to the extent feasible, removing invasive nonnative plants. If not feasible, adverse impacts on riparian habitat shall be mitigated by the preservation and/or restoration of this habitat at a 1:1 ratio, in perpetuity.
- ER 2.1.6 **Wetland Protection.** The City shall preserve and protect wetland resources including creeks, rivers, ponds, marshes, vernal pools, and other seasonal wetlands, to the extent feasible. If not feasible, the mitigation of all adverse impacts on wetland resources shall be required in compliance with State and Federal regulations protecting wetland resources, and if applicable, threatened or endangered species. Additionally, the City shall require either on- or off-site permanent preservation of an equivalent amount of wetland habitat to ensure no-net-loss of value and/or function.
- ER 2.1.9 **Wildlife Corridors.** The City shall preserve, protect, and avoid impacts to natural, undisturbed habitats that provide movement corridors for sensitive wildlife species. If corridors are adversely affected, damaged habitat shall, be replaced with habitat of equivalent value or enhanced to enable the continued movement of species.

⁴⁶ California Native Plant Society, 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Available: www.rareplants.cnps.org/.

ER 2.1.10 **Habitat Assessments.** The City shall consider the potential impact on sensitive plants and wildlife for each project requiring discretionary approval. If site conditions are such that potential habitat for sensitive plant and/or wildlife species may be present, the City shall require habitat assessments, prepared by a qualified biologist, for sensitive plant and wildlife species. If the habitat assessment determines that suitable habitat for sensitive plant and/or wildlife species is present, then either (1) protocol-level surveys shall be conducted (where survey protocol has been established by a resource agency), or, in the absence of established survey protocol, a focused survey shall be conducted consistent with industry-recognized best practices; or (2) suitable habitat and presence of the species shall be assumed to occur within all potential habitat locations identified on the project site. Survey Reports shall be prepared and submitted to the City and the California Department of Fish and Wildlife (CDFW) or the United States Fish and Wildlife Service (USFWS) (depending on the species) for further consultation and development of avoidance and/or mitigation measures consistent with state and federal law.

Goal ER 3.1 Urban Forest. Manage the city's urban forest as an environmental, economic, and aesthetic resource to improve Sacramento resident's quality of life.

Policy

ER 3.1.3 **Trees of Significance.** The City shall require the retention of trees of significance (such as heritage trees) by promoting stewardship of such trees and ensuring that the design of development projects provides for the retention of these trees wherever possible. Where tree removal cannot be avoided, the City shall require tree replacement or suitable mitigation.

The proposed projects would be consistent with each of the 2035 General Plan goals and policies listed above. Implementation of the proposed projects would contribute to regional reductions in undeveloped open space; however, existing habitat in the RSP Area is relatively poor in quality for wildlife and its loss would not be inconsistent with City policies. Thus, the proposed projects are consistent with the General Plan policies, as discussed in further detail in Section 4.3.3 Analysis, Impacts, and Mitigation.

Consistent with Policy ER 2.1.4 and ER 2.1.5, the proposed projects would mitigate for any impacts to sensitive resources and riparian habitat (Impacts 4.3-3 and 4.3-7). As discussed under Impact 4.3-7, the projects would mitigate for any impacts to potentially jurisdictional wetland resources in compliance with State and federal regulations and, therefore, would not result in a conflict with Policy ER 2.1.6. Riparian and riverine habitat impacted by the proposed projects has the potential to provide movement corridors for wildlife; the proposed projects would mitigate for any impacts to wildlife corridors as discussed under Impact 4.3-8. Pre-construction surveys for special-status species are discussed under Impacts 4.3-1, 4.3-2, and 4.3-6, thereby demonstrate consistency with Policy ER 2.1.10. Consistent with Policy 3.1.3, and as discussed under Impact 4.3-9, trees of significance shall be protected or replaced.

Street Trees

The City recognizes that the planting and preservation of trees enhances the natural scenic beauty, increases life-giving oxygen, promotes ecological balance, provides natural ventilation, air filtration, and temperature, erosion, and acoustical controls, increases property values, improves

the lifestyle of residents, and enhances the identity of the City. City Code 12.56⁴⁷ provides provisions to protect City street trees. All removal, trimming, pruning, cutting, or other maintenance activities on any city street tree requires a permit from the director of the department of transportation pursuant to City Code 12.56.070. A City street tree is defined as any tree growing on a public street right-of-way and is maintained by the City. The director may require, where appropriate, the replacement of street trees proposed for removal. In such case, the City is responsible for the full cost of tree removal and replacement.

Heritage Trees

Heritage trees promote scenic beauty, enhance property values, reduce soil erosion, improve air quality, abate noise, provide shade to reduce energy consumption, and are a resource for nesting birds. City Code 12.64⁴⁸ provides provisions to protect significant specimen trees existing in the city known as “heritage trees.” The City Code defines “heritage trees” as follows:

1. Any tree of any species with a trunk circumference of one hundred (100) inches or more, which is of good quality in terms of health, vigor of growth and conformity to generally accepted horticultural standards of shape and location for its species.
2. Any native *Quercus* species, *Aesculus californica* or *Platanus racemosa*, having a circumference of thirty-six (36) inches or greater when a single trunk, or a cumulative circumference of thirty-six (36) inches or greater when a multi-trunk, which is of good quality in terms of health, vigor of growth and conformity to generally accepted horticultural standards of shape and location for its species.
3. Any tree thirty-six (36) inches in circumference or greater in a riparian zone. The riparian zone is measured from the centerline of the water course to thirty (30) feet beyond the high water line.
4. Any tree, grove of trees or woodland trees designated by resolution of the city council to be of special historical or environmental value or of significant community benefit.

⁴⁷ City of Sacramento. Municipal Code Chapters 12.56 and 12.64, *Trees Generally and Heritage Trees*. www.qcode.us/codes/sacramento. Accessed December 10, 2015.

⁴⁸ City of Sacramento. Municipal Code Chapters 12.56 and 12.64, *Trees Generally and Heritage Trees*. www.qcode.us/codes/sacramento. Accessed December 10, 2015.

4.3.3 Analysis, Impacts, and Mitigation

Significance Criteria

The significance criteria below are the same as those identified in the 2007 RSP EIR and have been incorporated by reference (Section 6.2, pages 6.2-30 to 6.2-1).⁴⁹ An impact would be significant if the following conditions result due to the implementation of the proposed projects:

- (1) Take of an endangered species or unauthorized take of a threatened species under the CESA or FESA;
- (2) Have a substantial adverse effect on or result in increased mortality or reduced reproductive success that would lead to the local extirpation of, or reduction in the population below self-sustaining levels of any species identified or published as an endangered, threatened, rare, candidate, sensitive, or special-status species by CDFG or USFWS, and meets the definition of Section 15380 (b), (c) or (d) of the CEQA guidelines.
- (3) Result in the net reduction of protected wetland habitat as defined in Section 404 of the CWA or result in alteration of desirable functions and values through direct removal, filling, hydrological interruption, or other means;
- (4) Result in a net loss of riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations; or by the California Department of Fish and Game; or by the U.S. Fish and Wildlife Service;
- (5) Result in the isolation or interruption of contiguous habitat which would disrupt animal movement patterns such that it would interfere substantially with the movement of resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; or
- (6) Conflict with any local policies or ordinances protecting biological resources, such as the current City of Sacramento tree protection ordinance.

Methodology and Assumptions

This section assesses the potential for the proposed projects to adversely change biological resources in or around the RSP Area. The impact analysis focuses on foreseeable changes to the baseline condition and compares those changes to the significance criteria presented above. Potential impacts are analyzed using information presented above regarding habitats present in and around the RSP Area, and potential occurrence of special status and protected species.

⁴⁹ City of Sacramento. 2007. *Railyards Specific Plan Environmental Impact Report*. Certified December 11, 2007.

In the impact analysis, three principal factors were considered: (1) magnitude of the impact (e.g., substantial/not substantial); (2) uniqueness of the affected resource (i.e., rarity of the resource); and (3) susceptibility of the affected resource to perturbation (i.e., sensitivity of the resource). The evaluation of the significance considered the interrelationship of these three factors. For example, a relatively small magnitude impact to a State or federally listed species would be considered significant if the species is exceptionally rare or believed to be highly susceptible to disturbance. Conversely, a plant community such as California annual grassland is not necessarily rare or sensitive to disturbance. Therefore, a much larger magnitude of impact would be necessary to result in a significant impact.

This analysis assumes the entire RSP Area east of Jibboom Street would be disturbed by construction and development activities. It is assumed that the only construction and development activities west of Jibboom Street would be within the Stormwater Outfall site.

The following findings include text excerpted and summarized from the 2007 RSP EIR. As relevant, the information has been updated to reflect the current site conditions.

Impacts and Mitigation Measures

Impact 4.3-1: Development of the proposed projects could result in the loss of potential foraging habitat for Swainson's hawk.

Railyards Specific Plan Update

The 2007 RSP EIR discussed impacts to Swainson's hawk foraging habitat under impact 6.2-1 (page 6.2-31). Impact 6.2-1 of the 2007 EIR found that the 2007 RSP would have a less-than-significant impact related to loss of Swainson's hawk foraging habitat. This determination was based on recognition that habitats within the RSP Area are not recognized as significant foraging habitat by CDFW. Swainson's hawks require large, open grasslands with abundant prey in proximity to suitable nest trees. Suitable foraging areas include native grasslands or lightly grazed pastures, alfalfa, and other hay crops, and certain grain and row croplands.

While habitats within the RSP Area have changed since certification of the 2007 RSP EIR, the site remains in a highly altered state. Although annual grassland is sometimes considered suitable foraging habitat, the annual grassland within the RSP Area is comprised mainly of weedy species and is disconnected from other Swainson's hawk foraging areas. The proposed projects could result in loss of a small quantity of low quality Swainson's hawk foraging habitat; however, extensive areas of higher quality habitat are located to the north, west, and south of the RSP Area in western Sacramento, Yolo, and Sutter Counties. Therefore, conversion of the RSP Area from vacant to urban habitat would not result in the conversion of an area recognized as significant Swainson's hawk foraging habitat by the CDFW. Consistent with the 2007 RSP EIR, impacts to Swainson's hawk foraging habitat are considered **less than significant**.

Railyards Specific Plan Update Land Use Variant

Under the RSPU Land Use Variant, potential impacts to Swainson's hawk foraging habitat would be the same as discussed above for the proposed RSPU. As such, the discussion above would be applicable to the RSPU Land Use Variant and effects of the RSPU Land Use Variant would be equal to those of the RSPU, resulting in a **less-than-significant** impact.

KP Medical Center

The proposed KP Medical Center would result in the loss of approximately 17.8 acres of low-quality Swainson's hawk foraging habitat, a portion of that which would be lost as a result of the implementation of the proposed RSPU. The habitat within the KP Medical Center footprint is comprised of a flat graded site with limited weeds present and no habitat that would support Swainson's hawk prey. Because of the low-quality of this habitat, for Swainson's hawk foraging, the effects of development of the KP Medical Center would be a **less-than-significant** impact.

MLS Stadium

The proposed MLS Stadium would result in the loss of approximately 14.7 acres of low-quality Swainson's hawk foraging habitat, a portion of that which would be lost as a result of the implementation of the proposed RSPU. The habitat within the MLS Stadium footprint is comprised of an undulating topography, highly disturbed with ongoing earthmoving activities associated with remediation of other portions of the RSP Area, with limited weeds and scattered shrubs present and very limited habitat that would support Swainson's hawk prey. Because of the low-quality of this habitat, for Swainson's hawk foraging, the effects of development of the MLS Stadium would be a **less-than-significant** impact.

Stormwater Outfall

The proposed Stormwater Outfall site is steep riverbank on the east bank of the Sacramento River, and property located under the elevated section of I-5. These portions of the RSP Area do not constitute foraging habitat for Swainson's hawks; therefore, construction of the proposed Stormwater Outfall would result in **no impact**.

Summary

The proposed project would result in the conversion to urban development areas of low-quality, highly disturbed land that could serve as Swainson's hawk foraging habitat. As such, loss of foraging habitat for Swainson's hawk as a result of development of the proposed projects is considered a **less-than-significant** impact.

Mitigation Measure

None required.

Impact 4.3-2: Development of the proposed projects could result in the loss of potential nesting habitat for Swainson's hawk, white-tailed kite, purple martin, and other sensitive and/or protected bird species.

Railyards Specific Plan Update

Swainson's Hawk, Other Raptors, and Nesting Birds

Portions of the RSP Area may support nesting birds, including, but not limited to, Swainson's hawk, and white-tailed kite (note, purple martin is discussed below). Nesting birds and raptors are protected under Fish and Game Code Section 2080 (i.e., killing of a listed species), Sections 3503, 3503.5, and 3800 (i.e., take, possession, or destruction of birds, their nests or eggs), and Section 3513 of the MBTA (16 USC, Section 703 Supp. I 1989). Vegetation removal could result in the loss of potential nest sites. Additionally, human disturbances and noise from construction activities have the potential to cause nest abandonment and death of young or loss of reproductive success at active nests located near project activities.

Disturbance of active nest sites which results in nest abandonment, loss of young, or reduced health and vigor of eggs and/or nestlings (resulting in reduced survival rates), or the direct removal of vegetation that supports nesting birds which result in killing of nestlings or fledgling bird species would be considered a **potentially significant** impact. This analysis is consistent with impacts 6.2-2 (pages 6.2-31 to 6.2-34) and 6.2-7 (pages 6.2-42 and 6.2-43) of the 2007 RSP EIR.

Purple Martin

As with Swainson's hawk, other raptors and nesting birds, purple martins are protected under the Fish and Game Code and MBTA. For purposes of analysis of projects-related effects on purple martin, any RSPU construction related disturbance that would result in the abandonment of an active nest, or reduced reproductive success would be considered a potentially significant impact.

Purple martin is identified a second priority taxa on the CDFW list of California Bird Species of Special Concern.⁵⁰ The I Street purple martin nesting colony is one of the last nesting colonies in the Sacramento area, and in California's Central Valley, where the species was once widespread.⁵¹ As discussed above, the I Street Bridge colony is only one of four breeding colonies recorded in the Sacramento area in 2015. Due to the small size of the Central Valley purple martin population and the current downward trend of number of breeding pairs in the region, the loss of one individual, or the colony would be considered a substantial adverse effect because any increased mortality or reduced reproductive success could lead to the local extirpation of, or reduction in the population below self-sustaining levels. With regard to significance criterion (2), any potential loss of individual purple martin, or alteration of habitat, within the RSP Area would be considered a potentially significant impact.

⁵⁰ California Department of Fish and Wildlife, 2008. California Bird Species of Special Concern. April 10, 2008.

⁵¹ Airola, D.A., B. Cousens, and D. Kopp, 2014. Breeding Population in 2014: What are the possible causes? Available: <http://cvbirds.org/bulletin-volume17.html>. Accessed March 24, 2016.

This analysis acknowledges the City's proposed I Street Bridge Replacement Project which is currently undergoing environmental review.⁵² The proposed I Street Bridge Replacement Project would include construction of a new bridge for pedestrian, bicycle, and automobile transportation over the Sacramento River upstream of the existing I Street Bridge. The existing bridge would be decommissioned for pedestrian, bicycle, and auto traffic, but would continue to be used by the railroad. The new bridge would be approximately 860 feet long and include two fixed-span approach structures that tie into the Sacramento and West Sacramento banks of the river. The center span of the bridge would be a moveable span that meets U.S. Coast Guard Requirements for navigation.⁵³ The fixed-span approach structures would be 72 feet wide, with a depth of approximately 6 feet. After the new bridge is constructed, the I Street approach viaduct would be demolished. It is anticipated construction would take approximately 30 months to complete and begin in 2018.⁵⁴

According to the California Department of Transportation, purple martin nesting habitat lost during removal of the existing I Street Bridge viaduct would be mitigated with replacement habitat in the new bridge. In order to provide this mitigation, the fixed-span approaches would include a hollow box-girder design with at least 74 weep holes on the underside to allow purple martins to use the new structure for nesting.⁵⁵

Due to lot size and shape, and other development constraints, Block 35 is not likely to be developed until the Jibboom Street viaduct (and potentially the I Street viaduct) is removed, which is a component of the I Street Bridge Replacement Project. As such, breeding purple martins and their current nesting habitat may not be present in the RSP Area when the area is developed. While the proposed I Street Bridge Replacement Project is acknowledged, the analysis presented below examines the existing condition (which includes the current I Street Bridge and viaduct) plus project scenario. Impact 4.3-2 does not account for the removal of the I Street Bridge viaduct, or creation of replacement habitat in the new bridge associated with the proposed I Street Bridge Replacement Project. Construction of the I Street Bridge Replacement Project, in combination with the proposed RSPU projects, is taken into account under cumulative analysis presented in Impact 4.3-11.

Construction Impacts

The portions of the I Street Bridge where the purple martin colony currently nests would not be physically impacted, or removed by the proposed RSPU. While purple martins are known to have

⁵² City of Sacramento, 2016. I Street Bridge Replacement over the Sacramento River (project website). Available www.cityofsacramento.org/Public-Works/Engineering-Services/Projects/Current-Projects/I-Street-Bridge-Replacement. Accessed April 7, 2016.

⁵³ California Department of Transportation, 2016. I Street Bridge Replacement Project Natural Environment Study. Sacramento and Yolo Counties, Federal Project No.: BRLS 5002(164). February.

⁵⁴ Hersh, Alan, Senior Vice President, LDK Ventures, McClellan, CA. March 31, 2016—email cc Brian Boxer of ESA regarding I Street Bridge Replacement.

⁵⁵ California Department of Transportation, 2016. I Street Bridge Replacement Project Natural Environment Study. Sacramento and Yolo Counties, Federal Project No.: BRLS 5002(164). February.

a high tolerance to human disturbance,⁵⁶ the amount of disturbance from nearby project-related construction activity, primarily on Block 35, could result in nest abandonment, loss of young, reduced health and vigor of eggs and/or nestlings, ultimately resulting in reduced survival rates.

As stated above, nesting birds and raptors are protected under Fish and Game Code and the MBTA. Because construction-related disturbance has the potential to result in a reduction in survival rates, this would be considered a **potentially significant** impact.

Operational Impacts

Long-term operational impacts to purple martin are discussed under section 4.5.4 in the Final RSP EIR (pages 4-5-4 to 4.5-11). As stated earlier, the I Street Bridge would not be physically affected or removed by the proposed RSPU. Nevertheless, as discussed under section 4.5.4 in the Final RSP EIR, impacts to purple martin could include the following:

- obstructed flight paths to/from nest sites in weep holes under the I Street bridge,
- loss of nesting material collection sites,
- increased exposure to competition from nesting competitors (i.e., starlings, sparrows, white-throated swifts [*Aeronautes saxatilis*]), and
- increased exposure to predation from feral and domestic cats.

Implementation of the proposed RSPU has the potential to result in alteration of habitat in the vicinity of the I Street Bridge colony, which could reduce purple martin nesting success. Because this I Street purple martin colony is one of only four known nesting sites in the Sacramento region in 2015,⁵⁷ discontinuance, or reduction of numbers of purple martins using the I Street Bridge as a result of the RSPU would be considered a **potentially significant** impact.

Railyards Specific Plan Update Land Use Variant

Under the RSPU Land Use Variant, the potential for tree removal and/or construction-related disturbance to active nest sites is the same as discussed above for the proposed RSPU. As such, the discussion above would be applicable to the RSPU Land Use Variant and effects of the RSPU Land Use Variant would be equal to those of the RSPU, resulting in a **potentially significant** impact.

KP Medical Center

The proposed Medical Center footprint contains, and is adjacent to, vegetation that may support protected nesting birds. Because of the distance of the KP Medical Center site from the existing purple martin colony, construction on the proposed site would not adversely affect the purple

⁵⁶ Airola, D.A., D. Kopp, K. Thomas, and S. Kostka, 2009. Effects of Construction Activities on a Purple Martin Nesting Colony in Sacramento, California. Central Valley Bird Club Bulletin. Winter 2009.

⁵⁷ Airola, D.A and D. Kopp, 2015. Sacramento Purple Martin in 2015: When a Population Increase May be Misleading. Central Valley Bird Club Bulletin. Fall 2015.

martin. Because the construction on the project would have the potential to adversely affect protected nesting birds within the project site, the proposed KP Medical Center would result in a **potentially significant** impact.

MLS Stadium

The proposed Stadium footprint contains, and is adjacent to, vegetation that may support protected nesting birds. Because of the distance of the MLS Stadium site from the existing purple martin colony, construction on the proposed site would not adversely affect the purple martin. Nevertheless, the potential for tree removal and/or construction-related disturbance to active nests of protected bird species on the Stadium site is the same as discussed under the proposed RSPU. As such, the discussion above would be applicable to implementation of the Stadium, resulting in a **potentially significant** impact.

Stormwater Outfall

The location of the proposed Stormwater Outfall contains two (2) mature trees that are suitable to support nesting Swainson's hawk, white-tailed kite, and other protected bird species. As such, the discussion above would be applicable to implementation of the Stormwater Outfall. Given that the Stormwater Outfall site is located over 1,000 feet from the current nesting habitat of the purple martin, construction of the outfall and pump station is not expected to adversely affect that colony that exists under the I Street Bridge viaduct. Nevertheless, the potential for tree removal and/or construction-related disturbance to active nests of protected bird species on the Stormwater Outfall site is the same as discussed under the proposed RSPU. As such, the discussion above would be applicable to implementation of the Stormwater Outfall, resulting in a **potentially significant** impact.

Summary

The RSP Area contains vegetation that may support protected nesting birds, including, but not limited to, Swainson's hawk, white-tailed kite, and purple martin. Potential for tree removal, construction-related disturbance to active nest sites is considered a **potentially significant** impact. In addition, development of the proposed RSPU could result in habitat degradation in the vicinity of the known I Street purple martin colony which is considered a **potentially significant** impact.

Mitigation Measure

Implementation of Mitigation Measures 4.3-2(a) would require surveys for nesting bird species and impact-avoidance measures to ensure that the loss of, or impacts to nesting birds does not occur during construction activities. Mitigation Measure 4.3-2(b) includes the preparation of a purple martin mitigation plan to minimize effects of habitat alteration around the current I Street colony. Mitigation measures below are similar, but not identical, to those within the 2007 RSP EIR. Each mitigation measure has been slightly modified to best mitigate for potential adverse impacts from implementation of the proposed projects, as currently described.

Mitigation Measure 4.3-2(a) (RSPU, KPMC, MLS, SO)

The project applicant shall conduct any tree removal activities required for project construction outside of the migratory bird and raptor breeding season (February 1 through August 31) where feasible. For any construction activities that will occur between February 1 and August 31, the applicant shall conduct preconstruction surveys in suitable nesting habitat within 500 feet of the construction area for nesting raptors and migratory birds. Surveys shall be conducted by a qualified biologist. In addition, all trees slated for removal during the nesting season shall be surveyed by a qualified biologist no more than 48-hours before removal to ensure that no nesting birds are occupying the tree. For Swainson's hawk nesting habitat, surveys shall be conducted in accordance with the Swainson's Hawk Technical Advisory Committee's Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley).⁵⁸

If active nests are found during the survey, the applicant shall implement mitigation measures to ensure that the species will not be adversely affected, which will include establishing a no-work buffer zone as, approved by CDFW, around the active nest.

Measures may include, but would not be limited to:

- 1) *Maintaining a 500-foot buffer around each active raptor nest. No construction activities shall be permitted within this buffer. Maintaining a 100-ft buffer around each active purple martin nest. No construction activities are permitted within this buffer. For other migratory birds, a no-work buffer zone shall be established, approved by CDFW, around the active nest. The no-work buffer may vary depending on species and site specific conditions as approved by CDFW.*
- 2) *Depending on conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the buffer without impacting the breeding effort. In this case (to be determined on an individual basis), the nest(s) shall be monitored by a qualified biologist during construction within the buffer. If, in the professional opinion of the monitor, the project would impact the nest, the biologist shall immediately inform the construction manager. The construction manager shall stop construction activities within the buffer until the nest is no longer active. Completion of the nesting cycle shall be determined by a qualified biologist.*

Mitigation Measure 4.3-2(b) (RSPU)

If three years of consecutive surveys of the suitable habitat (i.e., weep holes) within the I Street Bridge viaduct, I-5 elevated structure within the RSP Area, or the proposed new

⁵⁸ Swainson's Hawk Technical Advisory Committee, 2000. *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*. May 31, 2000.

I Street Bridge over the Sacramento River do not indicate purple martins use of the area as breeding habitat, then no further mitigation is required. The following mitigation shall only be required if purple martin have been documented nesting in the suitable habitat (i.e., weep holes) within the I Street Bridge viaduct, or the I-5 elevated structure within the RSP Area, or the proposed new I Street Bridge for at least one of three previous years prior to development within 500 feet of aforementioned areas.

Prior to construction within 500 feet of an active purple martin colony (active within the past three years), the applicant shall retain a qualified biologist to prepare and then shall implement a Purple Martin Monitoring and Management Plan (PMMMP), to the satisfaction of the City. The PMMMP shall be enforced by the City in areas of suitable habitat (i.e., weep holes) within 500 feet of the I Street Bridge viaduct, or the elevated structure of Interstate 5 within the RSP Area. The PMMMP shall identify land use and building design requirements, landscape design and maintenance requirements, and management actions for the protection, enhancement, creation, and/or replacement of purple martin habitat within the RSP Area. Performance of the PMMMP shall be based on land use, and building design standards, landscape design, and maintenance criteria, and management actions that benefit purple martin. The PMMMP shall be tailored to the status and nesting locations of purple martins onsite at the time of plan creation, and will include at a minimum the criteria below, or equivalent measures to conserve, protect, and restore purple martin habitat.

- ***Land Use and Building Design Criteria:***

- *Prohibit buildings that obstruct flight path to and from nest sites within 120 feet of nesting locations.*
- *Maintain a minimum of 21 feet of vertical space beneath weep holes*
- *Maintain 230 feet of perching wire within 200 feet of the colony*

- ***Landscape Design and Maintenance Requirements:***

- *Prohibit trees taller than nest height within 330 feet of nest sites*
- *Limit tree plantings within 500 feet of the site to those that produce suitable nesting material (pine species). Areas beneath trees shall not be landscaped, and litter material left in place for nest material use by birds*
- *Ensure suitable nesting material is available for martin use. If no nest material is available for martins, place nesting material (straw, pine needles, etc.) within area for use by purple martin during the breeding bird season*
- *Prohibit planting of ornamental fruit bearing trees within 500 feet of purple martin nests, including the colonization of weedy fruit-bearing trees such as privet*

- **Management Actions:**
 - *Install, and/or maintain to ensure good working order, nest guards on weep holes where purple martin are known to nest*

Impact Significance After Mitigation: Implementation of Mitigation Measure 4.3-2(a) would reduce impacts to nesting birds by requiring pre-construction surveys to identify any nesting birds, and if found, observing no-disturbance zones around nest sites, and therefore would reduce impacts to nesting birds during construction activities to **less-than-significant** levels.

Implementation of Mitigation Measure 4.2-2(b) would be enforced as long as the I Street purple martin colony uses habitat within the RSP Area for at least one of the previous three years prior to commencement of development within the Riverfront District. Mitigation Measure 4.2-2(b) would reduce potential impacts to the I Street Bridge purple martin colony by mitigating for habitat alterations (i.e., land use change, development) in the vicinity of nest sites. The Purple Martin Monitoring and Management Plan (PMMMP) would define and implement building setback, and height limitations to preserve flight approaches, define landscape designs and maintenance requirements to preserve availability of nest material near breeding sites, and identify and require habitat enhancement, creation, or replacement to compensate for indirect effects related to habitat alterations associated with development activities. While Mitigation Measure 4.2-2(b) may reduce the effects of potential impacts to purple martin from development there remains considerable uncertainty of factors other than habitat modifications affecting the I Street colony of purple martin (i.e., disease, neonicotinoid pesticides). As such, given the downward trend in population numbers of the I Street Bridge purple martin colony, and because the PMMMP is not guaranteed to mitigate for the potential impacts to habitat surrounding purple martin nest sites, impacts related to the development of the proposed RSPU would remain **significant and unavoidable**.

Impact 4.3-3: The proposed projects could result in impacts to special-status fish species and degradation of designated critical habitat.

While the RSP Area does not contain suitable habitat for special-status fish species, the Sacramento River adjacent to the RSP Area provides habitat (and is designated as critical habitat) for several endangered and threatened fish species. Additionally, the Sacramento River is designated as EFH for four runs (ESUs) of Chinook salmon.

Railyards Specific Plan Update

Construction

The 2007 RSP EIR discussed impacts to endangered and threatened fish species and degradation of designated habitat under Impact 6.2-3 (page 6.2-34 to 6.2-38). Similar to that described in the 2007 RSP EIR, construction of the proposed RSPU would result in land-disturbing activities such as grading, excavation, and trenching for utility and infrastructure installation. When portions of

the RSP Area are excavated or otherwise disturbed by construction activities, the potential for soil erosion and sedimentation in runoff discharging from the site would substantially increase during a rainstorm. In addition, construction equipment would have the potential to leak polluting materials, including oil and gasoline. Improper use of fuels, oils, and other construction-related hazardous materials such as concrete or pipe sealant may also pose a threat to water quality. Through stormwater runoff, these sediments and contaminants may be transported to the Sacramento River and its downstream drainages and water bodies.

Development of the RSPU would include development of a new Stormwater Outfall. A detailed discussion of impacts associated with the proposed Stormwater Outfall is presented below under a separate subsection of this document.

Although activities associated with construction of development consistent with the proposed RSPU would be temporary, on- or offsite soil erosion, siltation, discharges of construction-related hazardous materials could degrade downstream surface waters. As discussed in detail in Section 4.9, Hydrology and Water Quality, and below (see subsection on Stormwater Outfall), compliance with existing regulations, including development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) and best management practices (BMPs) would ensure that construction activities consistent with the RSPU would not substantially degrade water quality. The impact of construction activities under the proposed RSPU would be **less than significant**.

Operation

As discussed in Impact 6.2-3 of the 2007 RSP EIR, the increase in impervious surfaces that would result from implementation of the proposed RSPU would generate stormwater that would be discharged to the Sacramento River. Development of the RSP Area may increase pollutant concentrations and sediment runoff. Extended periods of localized, high suspended sediment concentrations, and increased pollution concentrations could result in decreased water quality, including high suspended sediment concentrations and turbidity. The aforementioned conditions could cause a reduction of feeding opportunities for sight-feeding fish, increased predation opportunities, reduced growth rates, and may cause direct mortality of fish, or their prey.

As discussed in Section 4.9, Hydrology and Water Quality, the federal Clean Water Act (CWA) mandates permits for construction activities and municipal stormwater discharges. The City of Sacramento has coverage under a MS4 General Permit. This permit requires that controls be implemented to reduce the discharge of pollutants in stormwater discharges to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and other measures as appropriate. As part of permit compliance, the City has prepared a Stormwater Quality Improvement Plan (SQIP), which outlines the requirements for municipal operations, industrial and commercial businesses, illegal discharges, construction sites, planning and land development, public education and outreach, and watershed stewardship. These requirements include multiple measures to control pollutants in stormwater discharge. Under the proposed RSPU, all new development in the RSP Area would be required to follow the

guidance contained in the SQIP, including implementation of the RSPU Water Quality Master Plan (see Section 4.9, Hydrology and Water Quality).

Water quality objectives for the Sacramento River are specified in the Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin (Basin Plan) prepared by the CVRWQCB in compliance with the federal CWA and the California Water Code (section 13240). The Basin Plan contains water quality numerical and narrative standards and objectives for rivers and their tributaries within its jurisdiction that were developed to be protective of beneficial uses, including fish habitat.

Regulatory compliance would prevent the substantial degradation of water quality and associated habitat conditions in the Sacramento River, and impacts from the RSPU would be **less than significant**.

Railyards Specific Plan Update Land Use Variant

Under the RSPU Land Use Variant, the potential for impacts to endangered and threatened fish species and degradation of designated critical habitat in the Sacramento River is essentially the same as discussed above for the proposed RSPU. As such, the discussion above would also be applicable to the RSPU Land Use Variant, and the effects of the RSPU Land Use Variant would be equal to those of the RSPU, resulting in a **less-than-significant** impact.

KP Medical Center

As a component of the proposed RSPU, the KP Medical Center would have the potential for impacts to endangered and threatened fish species and degradation of designated critical habitat in the Sacramento River that would be similar to, albeit smaller than, those discussed above for the proposed RSPU. As such, the discussion above would be applicable to the KP Medical Center and effects of the KP Medical Center would be equal or lesser to those of the RSPU, resulting in a **less-than-significant** impact.

MLS Stadium

As a component of the proposed RSPU, the MLS Stadium would have the potential for impacts to endangered and threatened fish species and degradation of designated critical habitat in the Sacramento River that would be similar to, albeit smaller than, those discussed above for the proposed RSPU. As such, the discussion above would be applicable to the MLS Stadium and effects of the MLS Stadium would be equal or lesser to those of the RSPU, resulting in a **less-than-significant** impact.

Stormwater Outfall

Construction

Water Quality (Sedimentation, Turbidity, and Contaminants). Construction of the proposed Stormwater Outfall would occur on the steep eastern bank of the Sacramento River, and could disturb sediments and soils, increase sedimentation and turbidity, result in the release and

exposure of construction-related contaminants, and/or impact fish and fish habitat through direct disturbance within and adjacent to the Sacramento River. Specifically, Outfall construction activities that could affect fish and fish habitat in the Sacramento River include: excavation and backfill, construction of the new outfall, use of staging areas and placement of excavated material, construction of a cofferdam, and dewatering.

Fish population levels and survival have been linked to levels of turbidity and siltation in a watershed. Prolonged exposure to high levels of suspended sediment is known to create a loss of visual capability in fish, leading to a reduction in feeding and growth rates; a thickening of the gill epithelia, potentially causing the decrease of respiratory function; clogging and abrasion of gill filaments; and increases in stress levels, reducing the tolerance of fish to disease and toxicants.⁵⁹ Additionally, high levels of suspended sediments could cause the movement and redistribution of fish populations. Many fish are sight feeders, and turbid waters could reduce the ability of these fish to locate and feed on prey. Some fish, particularly juveniles, could become disoriented and leave areas where their main food sources are located, ultimately reducing their growth rates. Avoidance is the most common result of increases in turbidity and sedimentation. Fish will not occupy areas unsuitable for survival unless they have no other option.

Contaminants such as concrete, fuels, oils, and other petroleum products used in construction activities may be toxic to fish or may alter oxygen diffusion rates and can cause acute and/or chronic toxicity to aquatic organisms, thereby reducing growth and/or survival. Substances contributing to sedimentation, turbidity, or contamination can enter waterways directly during construction activities or through surface runoff.

Prior to construction, the applicant (or its contractor) would be required to develop and submit an application for a Notice of Intent (NOI) of coverage under the National Pollution Discharge Elimination System (NPDES) General Construction Permit, and adherence to permit conditions. The NPDES General Construction Permit requires the development and implementation of spill prevention plans (SPP) and a SWPPP that includes BMPs, water quality monitoring and reporting, post construction-period requirements, and other water quality pollutant-reduction techniques to protect degradation of beneficial uses. Applicable BMPs may include permanent and temporary erosion control measures, including the use of straw bales, mulch or wattles, silt fences, and filter fabric; spill remediation material such as absorbent booms, proper staging of fuel, out of channel equipment maintenance, and ultimately seeding and revegetating. Adherence to the conditions of the NPDES General Construction Permit, and permit requirements would avoid and/or minimize the risk of release of increased sediment loading and pollutants into receiving waters during construction activities and would reduce the risk of adverse impacts to fish habitat and fish populations.

⁵⁹ Waters, T.F. 1995. *Sediment in Streams: Sources, Biological Effects, and Control*. American Fisheries Society Monograph 7. Bethesda, MD.

Direct Disturbance. The construction of the outfall structure, including installation of a sheetpile cofferdam and dewatering at the outfall installation site, could result in underwater sound pressure effects and fish stranding if fish are present in the immediate work area during construction activities.

The applicant has indicated that to the greatest extent possible the proposed cofferdam would be installed using a vibratory pile driver, which would generate relatively low underwater noise levels and is not likely to cause physical injury to special-status fish species. However, if hard substrate is encountered impact pile driving may be required. As opposed to vibratory pile driving, impact pile driving could generate underwater sound levels that exceed injury and harm thresholds for fish.

Assuming the use of impact pile driving, potentially injurious sound levels would be localized, temporary, and intermittent. An in-water work window would be established so that potentially injurious activities are likely to occur when most special-status fish species are absent or only present at low densities. However, while unlikely, some special-status fish species could be present during the in-water work window and during pile-driving activities. Thus, impact pile driving potentially could affect special-status species, as well as other more common fish species that serve as prey for special-status species.

Hydrostatic pressure waves and vibration generated by pile driving can adversely affect fish. Effects on fish from changes in hydrostatic pressure are not related to the distance of the fish from the point of impact, but to the level and duration of the sound exposure. Hydrostatic pressure waves may rupture the swim bladders and other internal organs of fish, and could permanently injure their inner ears and lateral line organs.⁶⁰ These injuries could reduce the ability of fish (including special-status fish species) to orient in the water column, capture prey, and reduce the ability of fish to avoid predators.⁶¹

If impact pile driving is required, there could be periods of time when the underwater sound levels exceed injury and harm thresholds established by NMFS. To avoid direct physical injury, impact driving of sheet piles should be managed (through operational controls) to achieve single-strike sound levels less than 206 decibels (dB) peak (dB_{peak}) and 183 dB sound exposure level

⁶⁰ Fisheries Hydroacoustic Working Group. 2008. Agreement in Principal for Interim Criteria for Injury to Fish from Pile Driving Activities. National Marine Fisheries Service Northwest and Southwest Regions, U.S. Fish and Wildlife Service Regions 1 and 8, California/Washington/Oregon Departments of Transportation, California Department of Fish and Game, and U.S. Federal Highway Administration. Memorandum to Applicable Agency Staff. June 12, 2008.

⁶¹ California Department of Transportation. 2009. *Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish*. Prepared for: California Department of Transportation, Sacramento, CA. Prepared by: ICF Jones & Stokes, Sacramento, CA and Illingworth and Rodkin, Inc., Petaluma, CA.

(dB_{SEL}) measured at a distance of 10 meters.⁶² (Attenuation is assumed at a rate of 4.5 dB per doubling of distance.)

Underwater sound levels were predicted using a spreadsheet model developed by NMFS.⁶³ The calculation assumes that once the single-strike SEL value is attenuated to 150 dB there is no accumulation of sound energy relative to the cumulative SEL effects threshold. The distance at which the SEL value attenuates to 150 dB is therefore the maximum distance at which either of the cumulative SEL criteria can be exceeded. Based on calculations derived from the NMFS spreadsheet, the distance at which sound would attenuate to below 150 dB SEL is about 1,000 meters (3,280 feet), making this the maximum distance within which either the 183 dB or 187 $\text{dB}_{\text{SELcumulative}}$ effects threshold criteria might be exceeded. Assuming an additional attenuation rate of 4.5 dB per doubling of distance, the maximum distance within which the cumulative effects threshold criteria would likely be exceeded is about 136 meters (about 450 feet) from the impact-pile-driving locations. Because this distance is shorter than the estimated width of the river at the outfall site (approximately 205 meters or 675 feet), potentially harmful cumulative underwater sound levels would not extend across the entire river. Therefore, some refuge areas would be present along the opposite shoreline, with the size of the refuge area dependent on the actual number of impact pile strikes occurring during a particular work day. The size of the refuge area would be larger if fewer strikes occur in a day, and smaller if more strikes occur.

Loss of Shaded Riverine Aquatic Habitat. Riparian vegetation adjacent to the river would be removed as a result of construction of the Stormwater Outfall. Riparian vegetation is important as it provides shaded riverine aquatic (SRA) habitat, which is an important habitat component for all salmonids and other fish species because it provides cover, shelter, shade, and contributes to food production. SRA, as defined by the USFWS, is “the near-shore aquatic area occurring at the interface of the river and adjacent woody riparian habitat, where the river bank is composed of eroding, earthen substrate supporting riparian vegetation which overhangs and/or protrudes into the water, and the water may contain woody debris, including logs, branches, leaves, and roots, as well as variable depths, velocities and currents.” The riparian vegetation at the proposed Outfall site is degraded and as a result of flood protection and development activities, and only provides marginal SRA habitat functions.

The removal of valley-foothill riparian habitat at the proposed Outfall site would result in a reduction of 0.05 acres of SRA habitat for Chinook salmon and steelhead. Despite the small

⁶² Fisheries Hydroacoustic Working Group. 2008. Agreement in Principal for Interim Criteria for Injury to Fish from Pile Driving Activities. National Marine Fisheries Service Northwest and Southwest Regions, U.S. Fish and Wildlife Service Regions 1 and 8, California/Washington/Oregon Departments of Transportation, California Department of Fish and Game, and U.S. Federal Highway Administration. Memorandum to Applicable Agency Staff. June 12.

⁶³ National Marine Fisheries Service, Pile Driving Calculation spreadsheet. Available: www.dot.ca.gov/hq/env/bio/fisheries_bioacoustics.htm.

amount of riparian vegetation that would be removed, and the fact that SRA habitat is degraded in this segment of the Sacramento River, the potential food production and shelter provided by this habitat could be lost and, thus, could have a localized impact.

Summary of Construction-related Impacts. The construction of the proposed Stormwater Outfall could result in sedimentation, increased turbidity, or the release and exposure of contaminants could adversely affect fish and aquatic habitats. However, adherence to the conditions of the NPDES General Construction Permit, and permit requirements would avoid and/or minimize the risk of release of increased sediment loading and pollutants into receiving waters during construction activities and would reduce the risk of adverse impacts to fish habitat and fish populations. Furthermore, all construction-related materials stored on site would be done so consistent with regulatory requirements. Other construction activities including pile driving, cofferdam construction and dewatering, and general in-water construction could cause direct disturbance to fish and their aquatic habitats and loss of SRA habitat. Therefore, construction-related impacts associated with the Stormwater Outfall would be **potentially significant**.

Operation

As discussed above and in Section 4.9, Hydrology and Water Quality, the CWA mandates permits for municipal stormwater discharges. As part of permit compliance, the City has prepared a SQIP, which outlines the requirements for municipal operations, industrial and commercial businesses, illegal discharges, construction sites, planning and land development, public education and outreach, and watershed stewardship. These requirements include multiple measures to control pollutants in stormwater discharge. All new development in the RSP Area would be required to follow the guidance contained in the SQIP, including the implementation of the RSPU Water Quality Master Plan (see Section 4.9, Hydrology and Water Quality). Additionally, water quality objectives for the Sacramento River are specified in the Basin Plan prepared by the CVRWQCB in compliance with the federal CWA and the California Water Code (section 13240). The Basin Plan contains water quality numerical and narrative standards and objectives for rivers and their tributaries within its jurisdiction that were developed to be protective of beneficial uses, including fish habitat.

Regulatory compliance would prevent the substantial degradation of water quality and associated habitat conditions in the Sacramento River, and impacts from the RSPU would be **less than significant**.

Summary

Potential sedimentation, increased turbidity, or the release and exposure of contaminants could adversely affect fish and aquatic habitats; however, these impacts would be avoided and/or minimized through the development and implementation of a SWPPP with BMPS. Regulatory compliance would also prevent the substantial degradation of water quality and associated habitat conditions in the Sacramento River as part of long-term operation of the proposed projects. Construction activities, including pile driving, cofferdam construction and dewatering, and

general in-water construction could cause direct disturbance to fish and their aquatic habitats, and loss to SRA habitat. Therefore, these construction-related impacts associated with the Stormwater Outfall would be **potentially significant**.

Mitigation Measures

Mitigation Measure 4.3-3, described below, would be required to reduce the magnitude of impacts to protected and sensitive riverine fish species and critical habitat associated with construction of the proposed Stormwater Outfall. This mitigation measure amends and updates Mitigation Measure 6.2-3 from the 2007 RSP EIR.

Mitigation Measure 4.3-3 (SO):

To avoid, minimize, or compensate for potential impacts to protected and sensitive riverine species and critical habitat, and prevent impacts to special-status fish species the following actions shall be undertaken by the project applicant:

- a) *Unless prior approval is granted by NMFS, USFWS, and/or CDFW, (as applicable) in-water work shall be restricted to the August 1 to October 31 period to avoid/minimize construction impacts to special-status fish species.*
- b) *Project-related impacts to riverine (e.g., valley-foothill) riparian vegetation shall be minimized by replacing lost vegetation onsite at a minimum ratio of 1:1, along the Sacramento River, if feasible. Mitigation and/or restoration plans for all habitats that require revegetation, habitat creation, restoration, and enhancement shall be approved by the regulatory agencies, as applicable, and shall include construction specifications; irrigation schedules; planting palettes (showing container stock/box plantings, cutting specifications, and seed mixes); monitoring, maintenance, and remediation schedules; and success criteria, assurances and contingency measures. Revegetation specifications, species composition and density shall be developed by an experienced restoration ecologist. The restoration sites shall be evaluated to ensure that required revegetation has been performed in areas where temporary construction has been completed. A report documenting restoration efforts shall be submitted by the applicant to the City and applicable regulatory agencies. If necessary, remedial revegetation should occur during the same rainy season that the remedial recommendation is made. Restoration sites shall be monitored by qualified restoration ecologists for three to five years, or until success criteria are achieved. Restoration plans shall be included in the final construction documents. Grading and revegetation activities shall comply with applicable regulations and mitigation measures identified in this EIR pertaining to dust, air emissions, noise, water quality and other potential environmental effects. Alternatively, if approved by regulatory agencies, the applicant may purchase mitigation credits from approved mitigation banks. Final mitigation ratios and locations are to be established in consultation*

with the regulatory agencies prior to riverbed disturbing activities and detailed mitigation requirements will be identified in the final regulatory agency permits.

- c) *To the extent feasible, the project applicant shall plant riparian vegetation and install biotechnical features, such as brush piles, logs, and rootwads, to replace habitat impacted by construction of the outfall structure. These structures shall compensate for potential impacts associated with increased predation around the new structure. Specific measures shall include elements that contribute to nearshore cover in the immediate vicinity of the structure to increase the potential for juvenile fish while discouraging occupancy of the same structures by predaceous species. The precise amount and relative value of affected riparian and cover habitat would be determined during project-level analysis of proposed activities.*
- d) *Mitigation of riverine habitat would occur through creation, restoration, enhancement, and/or preservation of this habitat type within an approved off-site location and/or mitigation bank at a ratio to be established in consultation with the regulatory agencies. Mitigation banking would involve using mitigation credits from mitigation banks approved by the regulatory agencies. Final mitigation ratios and locations are to be established in consultation with the regulatory agencies prior to riverbed disturbing activities and detailed mitigation requirements will be identified in the final regulatory agency permits.*
- e) *The cofferdam sheetpiles at the outfall structure construction site shall be installed using a vibratory hammer where possible to minimize underwater sound pressure levels to the greatest extent feasible and associated effects to sensitive fish species. If impact pile driving is required, sound pressure levels shall be managed (through operational controls) to achieve single-strike sound levels less than 206 dB peak (dB_{peak}) and 183 dB sound exposure level (dB_{SEL}) measured at a distance of 10 meters. Additionally, pile driving shall only be conducted during daytime hours (allowing for regular periods of no impact) and shall commence at low-energy levels and slowly build to impact force (allowing for fish to move away from the construction site).*

The project applicant shall also consult with NMFS, USFWS, and CDFW (as part of obtaining permit approvals, e.g., FESA Section 7 and Fish and Game Code Section 1600) to determine necessary impact minimization actions, which may include surveying the outfall site to determine fish presence prior to installation. The project applicant shall implement any additional measures developed through the FESA Section 7 and Fish and Game Code Section 1600 permit processes, to ensure that impacts are avoided and/or minimized.

- f) *To reduce the potential for fish stranding or minimize the potential for harm during cofferdam dewatering activities, the project applicant or its contractor shall*

implement a fish rescue plan. Prior to the closure of the cofferdam in the Sacramento River, seining by a qualified fisheries biologist will be conducted within the cofferdam using a small-mesh seine to direct and move fish out of the cofferdam area. Upon completion of seining, the entrance to the cofferdam will be blocked with a net to prevent fish from entering the cofferdam isolation area before the cofferdam is completed. Once the cofferdam is completed and the area within the cofferdam is closed and isolated, additional seining will be conducted within the cofferdam to remove any remaining fish. Once most of the fish have been removed from the isolated area, portable pumps with intakes equipped with 1.75 mm mesh screen shall be used to dewater to a depth of 1.5-2 feet. A qualified biologist shall implement further fish rescue operations using electrofishing and dip nets. All fish that are captured will be placed in clean 5-gallon buckets and/or coolers filled with Sacramento River water, transported downstream of the construction area, and released back into suitable habitat in the Sacramento River with minimal handling. After all fish have been removed using multiple seine passes, electrofishing, and dip nets (as necessary), portable pumps with screens (see above) will be used for final dewatering. NMFS, USFWS, and CDFW shall be notified at least 48 hours prior to the fish rescue.

Impact Significance After Mitigation: In addition to previously discussed restrictions and requirements, implementation of **Mitigation Measures 4.3-3(a) through 4.3-3(f)** would restrict in-water work to periods when species are least likely to be present, replace (through restoration, preservation or credit purchase) permanently impacted habitat, and minimize effects associated with pile driving and dewatering. This, in combination with compliance with the FESA, CWA Regulations, National Pollution Discharge Elimination System (NPDES) Regulations, local water quality, and runoff standards would reduce this impact to **less than significant**.

Impact 4.3-4: Development of the proposed projects could result in removal of habitat for the Valley Elderberry Longhorn Beetle.

Railyards Specific Plan Update

Surveys conducted in 2015 and 2016 identified elderberry shrubs at five separate locations within, and at two locations immediately adjacent to the RSP Area. The USFWS considers the removal of elderberry shrubs as having an impact on the valley elderberry longhorn beetle (VELB), including any construction impacts within 100 feet of the dripline an elderberry shrub. Construction activities within 100 feet of an elderberry shrub may affect VELB through ground disturbance, removal of associated vegetation, root compaction, and water quality impacts. Adverse impacts to elderberry shrubs, including the removal of shrubs could result in impacts on suitable habitat for VELB. Mortality, or removal, of elderberry shrubs and the loss of VELB habitat is considered a significant impact. As such the proposed RSPU would have a **significant** impact on VELB.

The 2007 RSP EIR discussed impacts to VELB habitat, the elderberry shrub, under Impact 6.2-4 (page 6.2-40 to 6.2-41). Impact 6.2-4 of the 2007 EIR found that the 2007 RSP would have a less-than-significant impact related to VELB. This determination was based on the assumption that the prior to removal of elderberry shrubs, the proposed projects would have to obtain a federal take permit from USFWS. Analysis in the SEIR does not assume consistency with FESA. This change in assumption has modified significance determinations in the SEIR.

Railyards Specific Plan Update Land Use Variant

Under the RSPU Land Use Variant, potential impacts to VELB are the same as discussed above for the proposed RSPU. As such, the discussion above would be applicable to the RSPU Land Use Variant and effects to the RSPU Land Use Variant would be equal to those of the RSPU, resulting in a **significant** impact.

KP Medical Center

The proposed KP Medical Center is located within approximately 150 feet of an elderberry shrub adjacent to I-5 northern bridge abutment per USFWS *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*,⁶⁴ construction activities that occur greater than 100 feet away from an elderberry shrub are not considered destructive to the shrub. As such, **no impact** to VELB, or its host plant (i.e., elderberry shrubs) would occur due to the construction of the proposed KP Medical Center.

MLS Stadium

The footprint of the proposed MLS Stadium is not located within 100 feet of an elderberry shrub. As such, **no impact** to VELB, or its host plant (i.e., elderberry shrubs) would occur due to the construction of operation of the stadium.

Stormwater Outfall

The Stormwater Outfall is located approximately 200 feet from the closest elderberry shrub. As such, **no impact** to VELB, or its host plant (i.e., elderberry shrubs) would occur due to the construction of operation of the outfall.

Summary

The proposed RSPU, including Land Use Variant, would result in impacts to elderberry shrubs, the host plant for the federally-listed threatened VELB. The proposed KP Medical Center, MLS Stadium, and Stormwater Outfall would have no impact on VELB. However, the proposed RSPU, including the Land Use Variant, would have a **significant** impact on VELB.

⁶⁴ U.S. Fish and Wildlife Service, 1999. *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. July 9, 1999. p. 1-15.

Mitigation Measure

Mitigation Measure 4.3-4, described below, would be required to reduce the magnitude of impacts to VELB and their habitat. This mitigation measure is new (i.e., not part of the 2007 RSP EIR).

Mitigation Measure 4.3-4 (RSPU):

- (1) *Prior to construction within the RSP Area, the site shall be surveyed for the presence of the valley elderberry longhorn beetle and its elderberry host plant by a qualified biologist in accordance with USFWS protocols. If elderberry plants with one or more stems measuring 1.0 inch or greater in diameter at ground level occur on or adjacent to the project site, or are otherwise located where they may be directly or indirectly affected by the Proposed Project, minimization and compensation measures, which include transplanting existing shrubs and planting replacement habitat (conservation plantings), are required (see below). Surveys are valid for a period of two years. Elderberry plants with no stems measuring 1.0 inch or greater in diameter at ground level are unlikely to be habitat for the beetle because of their small size and/or immaturity. Therefore, no minimization measures are required for removal of elderberry plants with all stems measuring 1.0 inch or less in diameter at ground level.*
- (2) *For shrubs with stems measuring 1.0 inch or greater, the City shall ensure that elderberry shrubs within 100 feet of proposed development be protected and/or compensated for in accordance with the “U.S. Fish and Wildlife Services’ (USFWS) Conservation Guidelines for the Valley Elderberry Longhorn Beetle⁶⁵ and the Programmatic Formal Consultation Permitting Projects with Relatively Small Effects on the Valley Elderberry Longhorn Beetle Within the Jurisdiction of the Sacramento Field Office.”*

Impact Significance After Mitigation: With the implementation of Mitigation Measure 4.3-4, elderberry shrubs would be protected and any shrubs that require removal would be compensated for. As a result, the proposed RSPU, including Land Use Variant, would not cause a reduction in VELB habitat. Thus, impacts to VELB from implementation of the proposed RSPU, including the Land Use Variant, would be mitigated to a **less-than-significant** level.

Impact 4.3-5: Development of the proposed projects could result in removal of habitat for the western pond turtle.

⁶⁵ U.S. Fish and Wildlife Service, 1999. *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. July 9, 1999. p. 1-15.

Railyards Specific Plan Update

The western pond turtle has not been documented with the RSP Area. However, the Sacramento River, adjacent to the RSP Area, provides suitable aquatic habitat for the western pond turtle. Upland habitat within the RSP Area is unlikely to support the species because the substrate of the bank is primarily broken concrete and rip-rap with compacted soil, which is not suitable for nesting. Additionally, there are high levels of human disturbance, including homeless encampments, recreational visitors to the Sacramento River, adjacent bike trail, and Jibboom Street which further deter western pond turtles from dispersing from the Sacramento River into the RSP Area.

Habitats east of the river and Jibboom Street are highly modified and subject to ongoing remediation activities. The constructed basin within the RSP Area is unlikely to support western pond turtle due to its recent construction in 2013, isolation from other suitable western pond turtle habitat, and because it only holds water after storm events. As such, western pond turtles are not likely present in the RSP Area and potential impact to this species from any activity east of Jibboom Street would be **less than significant**.

The 2007 RSP EIR discussed impacts to western pond turtle under impact 6.2-5 (page 6.2-41). Consistent with the analysis above, impact 6.2-5 found that habitats within the RSP Area are unsuitable for western pond turtle, therefore impact to this species was considered less than significant. Impacts to western pond turtle from construction of the outfall are discussed below.

Railyards Specific Plan Update Land Use Variant

Under the RSPU Land Use Variant, potential impacts to western pond turtle would be the same as discussed above for the proposed RSPU. As such, the discussion above would be applicable to the RSPU Land Use Variant and effects to the RSPU Land Use Variant would be equal to those of the RSPU, resulting in a **less-than-significant** impact.

KP Medical Center

The proposed KP Medical Center site is located approximately 500 feet east of the Sacramento River, which is considered suitable habitat for the western pond turtle. The site is separated from the river edge by the approximate 30-foot high riverbank, Jibboom Street, and the I-5 right of way, embankment and elevated structure. The proposed KP Medical Center site does not constitute habitat for the western pond turtle. As such, the proposed KP Medical Center would have **no impact** on the western pond turtle.

MLS Stadium

The proposed MLS Stadium is located approximately 3,000 feet east of the Sacramento River, which is considered suitable aquatic habitat for the western pond turtle. The site is separated from the river edge by the 30 foot high riverbank; Jibboom Street; the I-5 right of way, embankment and elevated structure; several additional streets including 7th Street, 6th Street, and 5th Street, the Regional Transit Green Line tracks, and numerous soil piles that are part of the ongoing

remediation activities in the RSP Area. The proposed MLS Stadium site does not constitute habitat for western pond turtle. As such, the proposed MLS Stadium would have **no impact** on the western pond turtle.

Stormwater Outfall

The banks of the Sacramento River in the vicinity of the Outfall are not suitable for nesting western pond turtles. Though unlikely, turtles could use the bank of the river in the vicinity of the proposed Outfall site as basking habitat. Consistent with analysis in the 2007 RSP EIR, alteration of habitat near the Sacramento River could have a potential impact on this species. However, because the quality of basking habitat, the magnitude of impact is small (less than 0.01 acres), and the fact that there is similar habitat in the vicinity of the Outfall, construction of the Outfall would not result in the local extirpation of, or reduction in the western pond turtle populations or habitat below self-sustaining levels. As such, impacts to this species from construction of the Stormwater Outfall would be **less than significant**.

Summary

Upland habitats within the RSP Area are unlikely to support western pond turtle. The Sacramento River adjacent to the RSP Area provides suitable aquatic habitat. However, construction of the portions of the proposed RSPU in the vicinity of the Sacramento River riverbank, including the proposed Stormwater Outfall, would not result in the local extirpation of the western pond turtle, or reduction in the western pond turtle populations below self-sustaining levels. As such, impacts to this species from construction of the proposed projects would be **less than significant**.

Mitigation Measure

None required.

Impact 4.3-6: Development of the proposed projects could result in impacts to bat species.

Railyards Specific Plan Update

Portions of the RSP Area may support habitat for the CSC pallid bat (cavity-roosting) and the hoary bat (foliage-roosting), an animal on the CDFW Special Animals List.⁶⁶ Potential habitat for the hoary bat is present within dense-foliaged trees within the RSP Area. Potential habitat for the pallid bat is present under the I Street Bridge and the elevated structure of I-5, and within the historic train depot buildings associated with the Central Shops Historic District and the Sacramento Valley Station.

⁶⁶ California Department of Fish and Wildlife. 2016. State and Federally Listed Endangered and Threatened Animals of California. California Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento, CA. Data dated January 2016.

This analysis examines the projects impact on potential maternity roosting, special-status Pallid and hoary bats, and regionally occurring bat species such as the Mexican free-tailed bat (*Tadarida brasiliensis*), and the big brown bat (*Eptesicus fuscus*). Removal or disturbance (resulting in abandonment) of a roost containing a maternity colony (special-status or common) could result in loss of a large number of individuals, which is considered a significant impact due to the magnitude of the loss. The loss of one individual special-status bat is not considered a significant impact, as these species are not covered under FESA or CESA, and the loss of one individual not lead to local extirpation of, or reduce populations to below self-sustaining levels.

There have been no documented occurrences of pallid bat or hoary bat within the RSP Area. Surveys conducted in 2007 observed six roosts of unknown bat species under the elevated section of I-5 and under the I Street Bridge.⁶⁷ In addition, several occupied and potential bat roosts were observed under the I Street viaduct and Jibboom Street viaduct during surveys in 2015. Surveys in the vicinity of the RSP Area in May and June of 2015 recorded Mexican free-tailed bats, big brown bats, Yuma myotis (*Myotis yumanensis*), and Western red bat (*Lasiurus blossevillei*), a species of special concern.⁶⁸

Tree-roosting habitat is present along within mature riparian trees along the Sacramento River. However, the quality of potential roosting habitat is low due to the narrowness of the riparian habitat along this segment of the Sacramento River, and high levels of human disturbance near the river. Although the likelihood is low, it is possible trees along the Sacramento River could support a maternity colony of foliage-roosting bats. As a result, the removal of trees, or construction-related disturbance associated with Stormwater Outfall construction could result in the loss of a foliage-roosting bat maternity colony.

Removal, redevelopment, or reconfiguration of the historic train depot buildings associated with the Central Shops Historic District and I Street Bridge could result in removal or construction-related disturbance to cavity-roosting bat species, including the pallid bat. Removal or construction-related disturbance associated with the Central Shops Historic District and I Street Bridge could result in the loss of a cavity-roosting bat maternity colony.

Because the proposed projects could impact a maternity roost site, this impact is **potentially significant**. This determination is consistent with analysis presented in the 2007 RSP EIR under impact 6.2-6 (pages 6.2-41 to 6.2-42).

Railyards Specific Plan Update Land Use Variant

Under the RSPU Land Use Variant, potential impacts to bat species are the same as discussed above for the proposed RSPU. As such, the discussion above would be applicable to the RSPU

⁶⁷ City of Sacramento. 2007. Railyards Specific Plan Environmental Impact Report. Certified December 11, 2007.

⁶⁸ California Department of Transportation, 2016. I Street Bridge Replacement Project Natural Environment Study. Sacramento and Yolo Counties, Federal Project No.: BRLS 5002(164). February.

Land Use Variant and effects to the RSPU Land Use Variant would be equal to those of the proposed RSPU, resulting in a **potentially significant** impact.

KP Medical Center

Vacant and developed habitat within the proposed KP Medical Center site is not suitable for roosting bat species. However, potentially suitable roosting habitat is present under the elevated structure of I-5, approximately 250 feet to the southwest, and within the mature riparian trees along the Sacramento River, approximately 500 feet to the southwest. Construction activities within 50 feet to a maternity colony could result in disturbance or abandonment of the roost site. However, because the closest roosting habitat is greater than 50 feet from the proposed KP Medical Center, and because the area in the recent past has experienced high levels of human disturbance and activity (i.e., noise generated from elevated structure of I-5, and ongoing remediation activities), bat species using these areas as roosting habitat would not likely be disturbed by construction of the proposed KP Medical Center. Therefore, construction of the KP Medical Center would have **no impact**.

MLS Stadium

Habitat within the proposed MLS Stadium site is classified as vacant and developed and not suitable for roosting bat species. Potentially suitable habitat for the foliage-roosting bat species, including the hoary bat, is present within the mature eucalyptus (*Eucalyptus* sp.) trees along the northeastern border of the project site, approximately 125 feet away, adjacent to SIMS Metal Management. However, the quality of potential roosting habitat in the eucalyptus trees is low. Foliage-roosting bats, including the hoary bat, are unlikely to roost in eucalyptus due to the high levels of human disturbance and activity near SIMS Metal Management. Therefore, construction of the MLS Stadium would have **no impact**.

Stormwater Outfall

Approximately 0.04 acres of riparian habitat would be removed during construction of the proposed Stormwater Outfall. Trees within this area provide potentially suitable habitat for foliage-roosting bat species, including the hoary bat. Removal of riparian trees could result in the destruction of a maternity colony. In addition, removal of this habitat would reduce the amount of locally available roosting habitat. Construction activities within close proximity to the elevated structure of I-5 may disturb cavity-roosting bats, including the pallid bat. Direct removal or disturbance (tree removal in riparian habitat), or disturbance (construction related activities near the elevated structure of I-5) to a maternity colony could have a **potentially significant** impact.

Summary

The proposed MLS Stadium and KP Medical Center do not contain suitable habitat for roosting bats. Due to high levels of disturbance adjacent to this area, and because the sites are more than 100 feet from the closest potential roosting habitat, construction in this area is unlikely to cause disturbance to, or abandonment of, a maternity roost. Construction of the proposed Stormwater Outfall and development of the RSPU, including removal, redevelopment, or reconfiguration of

the historic train depot buildings associated with the Central Shops Historic District and I Street Bridge, could result in removal or disturbance to maternity roosts, including those of the pallid bat and hoary bat, both species of special concern.⁶⁹ Removal or disturbance of a special-status or common bat species maternity colony could result in the loss of a large number of individuals; therefore, this would be considered a **potentially significant** impact.

Mitigation Measure

Mitigation Measure 4.3-6 is similar to Mitigation Measure 6.2-6 in the 2007 RSP EIR. The 2007 RSP EIR has been modified to focus on avoidance of maternity roost sites during the pupping season.

Mitigation Measure 4.3-6 (RSPU, SO)

Minimize potential adverse effects to bat species.

Vegetation removal, including tree removal, shall be conducted between September 16 and January 31, to the extent feasible, to minimize the potential loss of bat maternity roosts.

The applicant shall conduct pre-construction surveys for roost sites prior to construction activities within 100 feet of the I-5, I Street Bridge, and riparian habitat along the Sacramento River during the bat pupping season (April 1 through July 31). This survey shall be conducted by a wildlife biologist qualified to identify bat species. If no bats are roosting, then no further mitigation is required.

If a bat maternity roost is identified, buffers around the roost site shall be determined by a qualified biologist and implemented to avoid destruction or abandonment of the roost resulting from tree removal or other project activities.

Impact Significance After Mitigation: Implementation of Mitigation Measures 4.3-6 would require pre-construction surveys to identify any maternity roosting sites within 100 feet of project activities, and if found, observance of no-disturbance zones around those sites. This would reduce impacts to maternity colonies during construction activities to a **less-than-significant** level.

Impact 4.3-7: Development of the proposed projects could result in net reduction of sensitive habitats including protected wetland habitat as defined in Section 404 of the Clean Water Act, riparian vegetation, and state jurisdictional waters/wetlands.

⁶⁹ California Department of Fish and Wildlife. 2016. State and Federally Listed Endangered and Threatened Animals of California. California Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento, CA. Data dated January 2016.

Railyards Specific Plan Update

The 2007 RSP EIR discussed impacts to sensitive habitats, including protected wetland habitat and riparian vegetation, as defined in Section 404 of the Clean Water Act and Section 1602 of the California Fish and Game Code under impact 6.2-8 (pages 6.2-43 to 6.2-45). Consistent with the 2007 RSP EIR, there are no federally-protected wetlands or Other Waters of the U.S. in the RSP Area. Sensitive riparian habitat within the RSP Area includes valley foothill riparian on the east bank of the Sacramento River, which extends approximately 55 to 75 feet wide, specifically between the OHWM and the top of the levee, and runs the entire length of the RSP Area. Other than the proposed Stormwater Outfall (discussed below), all proposed development under the RSPU would occur east of the top of the east levee of the Sacramento River. There is no riparian habitat protected under Section 1602 of the California Fish and Game Code east of the top of the east levee of the Sacramento River. Construction of the proposed Stormwater Outfall is considered a component of the RSPU project, and would require the placement of fill below the OHWM of the Sacramento River, and remove riparian habitat. Because the Stormwater Outfall would be a component of the RSPU stormwater drainage system, the proposed RSPU would have a **significant impact** on sensitive habitats.

Railyards Specific Plan Update Land Use Variant

Under the RSPU Land Use Variant, potential impacts to wetlands, other waters, and riparian vegetation are the same as discussed above for the proposed RSPU. As such, the discussion above would be applicable to the RSPU Land Use Variant and effects of the RSPU Land Use Variant would be equal to those of the RSPU, and is considered a **potentially significant impact**.

KP Medical Center

Construction of the Medical Center will occur in vacant and developed habitats which are not considered sensitive. Therefore, the proposed KP Medical Center would have **no impact**.

MLS Stadium

Construction of the Stadium will occur in vacant and developed habitats which are not considered sensitive. Therefore, the proposed MLS Stadium would have **no impact**.

Stormwater Outfall

Impact 6.2-8 (pages 6.2-43 to 6.2-45) of the 2007 RSP EIR did not include a discussion of impacts to the Sacramento River. However, to provide a conservative estimate of potential impacts, this analysis assumes the Sacramento River is an “other waters of the U.S.,” as defined under Section 404 of the CWA.

Although the final design of the proposed Stormwater Outfall is subject to change, this analysis provides an estimate of potential impacts based on current design drawings. Construction of the Stormwater Outfall is expected to result in the removal of up to 0.05 acres of valley foothill riparian habitat, and fill of 0.01 acres of tidal perennial stream. **Table 4.3-4** details impacts to habitats present within the proposed Stormwater Outfall area.

**TABLE 4.3-4.
IMPACTS TO HABITATS PRESENT WITHIN THE STORMWATER OUTFALL AREA**

Habitat/Land Cover	Area (acres)
Vacant	0.57
Developed	0.07
Valley Foothill Riparian (above OHWM)	0.04
Valley Foothill Riparian (below OHWM)	0.01
Sacramento River Tidal Perennial Stream (below OHWM – and outside the RSP Area)	0.01
Total	0.7

Source: ESA, 2016; ICF, 2015 Draft Request for preliminary jurisdictional determination of the delineation of the proposed I Street Bridge Project, Sacramento County and Yolo County, California Letter. Sacramento, CA. June 23, 2015.

Development of the Stormwater Outfall would result in up to 0.01 acres of fill below the OHWM of the Sacramento River, and removal of up to 0.05 acres of valley foothill riparian habitat. Placement of fill below the OHWM of the Sacramento River, and removal of riparian habitat is considered a **significant impact**.

Summary

The KP Medical Center and MLS Stadium do not occur within sensitive habitats. Therefore, no impact would result from construction of these project components. Proposed development of the proposed RSPU occurs east of the Sacramento River levee, and does not propose development in sensitive habitats. Therefore, no impact would result from construction of the proposed RSPU. Development of the proposed Stormwater Outfall could result in removal of up to 0.05 acres of valley foothill riparian habitat, and fill of 0.01 acres of tidal perennial stream which would be considered a **significant impact**.

Mitigation Measure

Mitigation measures have been adjusted to reflect current understanding of the proposed Stormwater Outfall footprint within the riparian area and removal of discussion of the former oil storage area.

Mitigation Measure 4.3-7 (SO)

The applicant shall prepare a wetland and riparian mitigation plan that ensures no net loss of waters of the U.S. and riparian vegetation. The wetland and riparian mitigation plan shall be based on a wetland delineation verified by USACE. This measure may be implemented through the 404 permit and Streambed Alteration Agreement process. The plan shall include the following:

- 1) *The project proponent shall compensate for the loss of wetland and riparian habitat through a combination of restoration/enhancement, and the purchase of mitigation*

credits at an approved mitigation bank. The ratio of compensation shall be determined in consultation with USACE and California Department of Fish and Wildlife (CDFW), as part of the 404 permit and Streambed Alteration Agreement process, but shall not be less than 1:1.

- 2) *Prior to any construction activities on the site, a protective fence shall be erected around the boundaries of areas that would be disturbed by construction. This fence shall remain in place until all construction activity in the immediate area is completed. No activity shall be permitted within the protected areas except for those expressly permitted by USACE and/or CDFW.*
- 3) *Water quality in the Sacramento River shall be protected using erosion control techniques during construction including, but not necessarily limited to, preservation of existing vegetation, mulches (e.g., hydraulic, straw, wood), and geotextiles and mats, during construction*

Impact Significance After Mitigation: Implementation of Mitigation Measure 4.3-7 would mitigate impacts to the Sacramento River and riparian habitat within the RSP Area, specifically, the proposed Stormwater Outfall site. This would occur through a combination of restoration/enhancement, and/or purchase of restoration credits. By ensuring that the proposed RSPU and Stormwater Outfall achieves no net loss of waters of the U.S. or riparian habitat, this impact would be reduced to a **less-than-significant** level.

Impact 4.3-8: Development of the proposed projects could result in isolation or interruption of contiguous habitat which would interfere substantially with the movement of resident or migratory fish or wildlife species, migratory corridors, or impede the use of native wildlife nursery sites.

Railyards Specific Plan Update

Terrestrial Species

As described in the environmental setting above, and consistent with analysis in the 2007 RSP EIR, terrestrial portions of the RSP Area do not serve as a significant wildlife corridors or linkage for special-status terrestrial species. The proposed projects have the potential to disrupt the movement of common wildlife species such as raccoon, opossum, and skunk. However, these species are adapted to urban environments and construction and operation of the proposed RSPU would not result in the disturbance to the extent it would substantially interfere with the movement of these locally common terrestrial wildlife species.

Riparian vegetation in the RSP Area is narrow, isolated by urban areas to the north, south, and east, and bounded by the river to the west. Consequently, these riparian areas serve as local migratory corridors to common wildlife species, but do not serve as a significant regional

terrestrial wildlife corridor. Therefore, impacts on movement of terrestrial species associated with the proposed RSPU would be considered **less than significant**.

Aquatic Species

The 2007 RSP EIR discussed impacts to migratory corridors for aquatic species under impact 6.2-9 (pages 6.2-45 to 6.2-46). The 2007 RSP determined that the proposed RSP would have a potentially significant impact to migratory fish movements. This determination was based on recognition that the proposed RSP would cause an increase in nighttime light sources which could spillover from the proposed RSP Area onto the Sacramento River and potentially alter behavior of fish such that movements are delayed, disrupted, or subject to increase predation (including shoreline angler access).

The Sacramento riverfront area is already developed with commercial uses, and transportation infrastructure that increase ambient light conditions, including the I Street Bridge, the elevated section of I-5, Old Town Sacramento, and Tower Bridge. Development within the RSP Area associated with the RSPU would result in increases in artificial ambient lighting conditions from landscape lighting, nighttime vehicle traffic, and high-rise buildings in the portion of the RSP Area to the west of I-5 that could spillover onto the Sacramento River. Increases in artificial ambient light could interfere with the movement of migratory fish species within the Sacramento River by creating artificial visual conditions and/or increase predation opportunities for non-native predatory fish species. Therefore, impacts to migratory fish from increases in light spillover onto the Sacramento River from development in the proposed RSPU would be considered **potentially significant**.

Railyards Specific Plan Update Land Use Variant

Under the RSPU Land Use Variant, potential impacts to wildlife migratory corridors would be the same as discussed above for the proposed RSPU. As such, the discussion above would be applicable to the RSPU Land Use Variant and effects of the RSPU Land Use Variant would be equal to those of the RSPU, resulting in a **potentially significant** impact to migratory fish species.

KP Medical Center

As discussed above, the RSP Area does not serve as a significant wildlife corridor for terrestrial wildlife species; therefore, impacts to terrestrial species would be less than significant. The KP Medical Center has the potential to increase artificial ambient light in ways similar to that described above for the RSPU. However, the KP Medical Center would be located east of I-5 and, therefore, the artificial lighting would not be expected to spillover onto the Sacramento River. As a result, impacts to migratory and native fish species would be **less than significant**.

MLS Stadium

As discussed above, the RSP Area does not serve as a significant wildlife corridor for terrestrial wildlife species and the stadium is not in close proximity to the Sacramento River; therefore construction of the Stadium will have **no impact** on migratory corridors.

Stormwater Outfall

Construction and operation of the proposed Stormwater Outfall would not be expected to result in disturbance to the extent that it would permanently and substantially interfere with the movement of resident or migratory terrestrial wildlife species. During construction, potential impacts to terrestrial wildlife movement along the Sacramento River would be temporary and limited to the 0.7 acre footprint of the outfall structure. After construction is complete, the majority of the Stormwater Outfall would be underground and the surface conditions would be restored. Therefore impacts to terrestrial species would be **less than significant**.

There will be no nighttime construction; therefore no impact on migratory and native fish species within the Sacramento River would occur from nighttime lighting. Impacts associated with construction and operation of the proposed Stormwater Outfall are described under Impact 4.3-3 above.

Summary

Terrestrial Species

Upland portions of the RSP Area do not serve as a significant wildlife corridors or linkage for special-status terrestrial species. Riparian vegetation in the RSP Area is narrow, isolated by urban areas to the north, south, and east, and bounded by the river to the west. Consequently, these riparian areas may serve as local migratory corridors to common wildlife species, but would not be expected to serve as a significant regional terrestrial wildlife corridor. The proposed projects have the potential to disrupt the movement of common wildlife species such as raccoon, opossum, and skunk; however, these species are adapted to urban environments and construction and operation of the proposed RSPU would not result in the disturbance to the extent it would substantially interfere with the movement of these locally common terrestrial wildlife species. Construction of the outfall would be temporary and occur in a relatively small area. Therefore, impacts on movement of terrestrial species associated with the proposed projects would be considered **less than significant**.

Aquatic Species

Development within the RSP Area associated with the RSPU would result in increases in artificial ambient lighting conditions from landscape lighting, nighttime vehicle traffic, and high-rise buildings in the portion of the RSP Area to the west of I-5 that could spillover onto the Sacramento River. Increases in artificial ambient light could interfere with the movement of migratory fish species within the Sacramento River by creating artificial visual conditions and/or increase predation opportunities for non-native predatory fish species. Therefore, impacts to

migratory fish from increases in light spillover onto the Sacramento River from development in the proposed RSPU (RSP Area west of I-5) would be considered **potentially significant**.

Mitigation Measure

Mitigation Measure 4.3-8 (RSPU, KPMC, SO)

The applicant shall reduce spillover lighting from the proposed project onto the Sacramento River by implementing the following:

The applicant shall place structural barriers to screen automobile headlights that are directed perpendicular to the river shall be screened along the western project edge. This may be accomplished through the placement of a 3-4 foot vegetated hedge or other structural methods that would not additionally hinder wildlife movement through riverine riparian vegetation.

Outdoor lighting within the RSP Area west of I-5 shall be of the minimum wattage required for the particular use and shall be directed to the specific location intended for illumination (e.g., roads, walkways, or recreation fields) to prevent stray light spillover onto sensitive riverine habitat.

All fixtures on elevated light standards within the RSP Area west of I-5, such as in parking lots or along roadways, shall be shielded to reduce direct exposure to the Sacramento River.

Impact Significance After Mitigation: Implementation of Mitigation Measure 4.3-8 would provide mechanisms to reduce potential night lighting impacts by ensuring no lighting is directed towards the river, and light spillover is minimized in areas within portions of the RSP Area west of I-5, which would reduce impacts to movements of fish species to **less than significant**.

Impact 4.3-9: Development of the proposed projects could conflict with local policies protecting trees.

Railyards Specific Plan Update

The 2007 RSP EIR discussed impacts to locally protected trees under impact 6.2-10 (page 6.2-46). Impact 6.2-10 of the RSP EIR found that the loss of protected trees, including oak trees (*Quercus* species) could conflict with the City tree ordinance and would be considered a potentially significant impact. This determination was based on recognition that the 2007 RSP Area supports trees potentially protected by the City's tree ordinance. Consistent with 2007 conditions, the RSP Area contains mature trees that are protected under the City's tree ordinance within riparian habitat along the Sacramento River, and potentially along the northern edge of the RSP Area. Therefore, construction within the RSP Area has the potential to result in the

disturbance and/or loss of protected trees. The loss of protected trees protected by the City tree ordinance would be considered a **potentially significant** impact.

Railyards Specific Plan Update Land Use Variant

Under the RSPU Land Use Variant, potential impacts to protected trees would be the same as discussed above for the proposed RSPU. As such, the discussion above would be applicable to the RSPU Land Use Variant and effects of the RSPU would be equal to those the proposed RSPU, resulting in a **potentially significant impact**.

KP Medical Center

The proposed Medical Center footprint contains no trees the City tree ordinance defines as “heritage trees.” As such, construction of the proposed Medical Center would have **no impact** to trees protected by the City tree ordinance.

MLS Stadium

The proposed Stadium footprint contains no trees protected under the City tree ordinance. As such, construction of the proposed Stadium would have **no impact** to trees protected by the City tree ordinance.

Stormwater Outfall

The proposed Outfall supports at least two (2) trees that are protected by the City tree ordinance. Construction of the Outfall could damage, or remove protected trees. As such this is considered a **significant impact**.

Summary

Loss of protected trees within the RSP Area, including the site of the proposed Stormwater Outfall, and the trees along the northern edge of the RSP Area would result in a **significant impact**. No protected trees are present within the MLS Stadium and KP Medical Center areas, therefore no impact to protected trees would occur.

Mitigation Measure

Mitigation Measure 4.3-9 is similar to Mitigation Measure 6.2-10 in the 2007 RSP EIR, but has been modified for clarity.

Mitigation Measure 4.3-9 (RSPU, SO)

All tree removal within the RSP Area shall comply with the current City of Sacramento tree protection ordinance. The applicant shall implement mitigation measures to protect retained trees, and replace for the loss of tree resources (tree protection, and replacement measures shall be determined in consultation with the City).

Impact Significance After Mitigation: Implementation of Mitigation Measure 4.3-9 would reduce this impact to a **less-than-significant** level through compliance with the City's established requirements to avoid or mitigate for the loss of protected trees.

Cumulative Impacts

Because the proposed project is an in-fill development surrounded by largely urban land uses, the cumulative context for impacts to special status species focuses on the Sacramento metropolitan area with additional context provided by the larger Sacramento Valley, where appropriate based on species life history and extent of current habitat. Since the 1900s, development of the City of Sacramento, and the larger Sacramento Valley has resulted in modifications of natural habitats, including but not limited to, the loss of wildlife habitat and open space areas due urban and agricultural development, and flood control development along the Sacramento and American rivers.

Impact 4.3-10: Implementation of the proposed projects, in combination with other cumulative development, could/would contribute to the cumulative loss of foraging habitat for Swainson's hawk.

The cumulative context for impacts to Swainson's hawk foraging habitat is Sacramento County. Since the late 1800s, native grasslands (i.e., Swainson's hawk foraging habitat) in the region have been converted to agricultural and urban use, and the trend towards development is projected to continue. This loss of foraging habitat for Swainson's hawk within Sacramento County is a significant cumulative impact.

As discussed under Impact 4.3-1, the RSP Area has a long history of development and use by humans, and habitats within the RSP Area do not have value as foraging habitat for Swainson's hawk. Additionally, the RSP Area is located adjacent to the urban center of the City of Sacramento, therefore development would not fragment, or remove high quality Swainson's hawk foraging habitat. Because the site has been developed for over 150 years, redevelopment of the RSP Area through implementation of the proposed projects would not result in a considerable contribution to the diminishment of foraging habitat available for Swainson's hawk in Sacramento County. Therefore, the proposed projects would have a **less-than-significant** cumulative impact on the loss of Swainson's hawk foraging habitat in Sacramento County.

Mitigation Measure

None required.

Impact 4.3-11: Implementation of the proposed projects, in combination with other cumulative development, could/would contribute to the cumulative harm to, or loss of nesting habitat, for Swainson’s hawk, white-tailed kite, purple martin, and other sensitive and/or protected bird species.

Swainson’s Hawk, Other Raptors, and Nesting Birds

The cumulative context for nesting bird habitat includes Sacramento County. Historic and ongoing loss of natural habitats suitable for nesting birds, including Swainson’s hawk, white-tailed kite, purple martin, and other sensitive and/or protected bird species, has occurred as natural habitats have been converted to urban and agricultural development. Future development within the County is expected to continue. Projects within Sacramento County would be required to comply with local ordinances and policies, in addition to CESA, FESA, CWA, Fish and Game Code of California, and other relevant regulations permits and requirements. Nevertheless, the loss of natural habitats for Swainson’s hawk, other raptors, and nesting birds within Sacramento County is a significant cumulative impact.

The RSP Area contains habitats that have been highly modified or are of relatively low quality due to their urban nature, or proximity to urban developments. Additionally, affected habitats are mostly isolated from other areas of similar habitat due to existing urban development. However, the proposed projects could directly affect special-status, and protected bird species, and their habitat which would result in an incremental contribution to the cumulative loss within Sacramento County; therefore, this is considered a **significant** impact.

Purple Martin

The cumulative context for purple martin includes the Sacramento region. As discussed above, since the mid-1900s, the purple martin has been eliminated from most of California’s Central Valley. The last known breeding population of purple martin in the Central Valley nests in elevated roadways (i.e., bridges) in the City of Sacramento.⁷⁰ Systematic monitoring of martins in the Sacramento area has documented a 73 percent decline in breeding pairs between 2002–2015.⁷¹ A factor of the downward population trend during this period is thought, in part, to be the alteration of habitat around known breeding sites. Threats to purple martin include localized predation by feral cats and/or American kestrels (*Falco sparverius*), loss or removal of perch sites, loss of nest material collection sites, and exclusion of nest sites during construction projects. Other factors contributing to the decline in martin populations in the Sacramento region may include mortality due to West Nile virus, increased nest site competition with starlings, sparrows, or white-throated swifts, and mortality of individuals from vehicle collisions with light rail and freight trains, and motor vehicles. In addition, experts have recently begun to analyze the possible negative effects of neonicotinoid pesticides on martins and their food source (i.e., flying insects).

⁷⁰ Airola, D.A. and J. Grantham, 2003. Purple Martin Status, Nesting Habitat Characteristics, and Management in Sacramento, California. *Western Birds*. 34:235-251.

⁷¹ Airola, D.A and D. Kopp, 2015. Sacramento Purple Martin in 2015: When a Population Increase May be Misleading. *Central Valley Bird Club Bulletin*. Fall 2015.

For this analysis, the proposed RSPU is considered cumulatively with other projects in the Sacramento area in the vicinity of known purple martin breeding colonies. The projects listed below, which are in various stages of planning or implementation, are in areas that support or are immediately adjacent to known purple martin colonies:

- Railyards Specific Plan Update (project analyzed under this SEIR);
- I Street Bridge Replacement Project over the Sacramento River;
- Stockton and T Street Project;
- Sutter Park Neighborhood Project;
- Development of vacant parcel at T Street/30th Street;
- Roseville Road at Interstate 80 Project; and
- Redevelopment in vicinity of 65th/Highway 50 and 65th/Q Street/Redding Avenue.

Implementation of these projects has the potential to create new or exacerbate existing threats and stressors to purple martins. Without significant reversal of current trends, it is predicted that the Sacramento region purple martin population could disappear in as little as five years.⁷² The decline in the purple martin population due to aforementioned factors is a significant cumulative impact.

As discussed under Impact 4.3-2, the proposed I Street Bridge Replacement Project would include construction of a new bridge for pedestrian, bicycle, and automobile transportation over the Sacramento River upstream of the existing I Street Bridge. The existing bridge would be decommissioned for pedestrian, bicycle, and auto traffic, but would continue to be used by the railroad. After the new bridge is constructed, the I Street approach viaduct, which includes current purple martin habitat, would be demolished. The I Street Bridge Replacement Project would incorporate purple martin replacement weep hole habitat into the design of the new bridge.

The I Street Bridge Replacement Project is anticipated to begin in in 2018 and take approximately 30 months to complete. As discussed under Impact 4.3-2, due to lot size and shape, and other development constraints, Lot 35 of the Land Use Plan is not likely to be developed until the Jibboom Street viaduct (and potentially the I Street viaduct) is removed, which is a component of the I Street Bridge Replacement Project. As such, it is probable purple martins will not be using the RSP Area for nesting. In addition, areas within the RSP Area would likely be used to a lesser extent as nest material collection sites, foraging grounds, and perch sites due to the increased distance between nesting habitat in the new bridge and the RSP Area.

⁷² Airola, D.A., B. Cousens, and D. Kopp, 2014. Accelerating Decline of the Sacramento Purple Martin Breeding Population in 2014: What are the Possible Causes? Central Valley Bird Club Bulletin, Winter 2014.

If purple martins successfully colonize replacement habitat in the new I Street Bridge, the new location of the colony would be approximately 300 feet away from the nearest proposed development in the RSP Area. As such, development of the RSPU, and subsequent land use changes unfavorable to purple martin would have a decreased adverse effect on the I Street colony compared to that under the existing condition.

Nevertheless, while the proposed RSPU would not directly result in the loss of nesting habitat for purple martin, if the I Street Bridge Replacement Project is not implemented before development of Lot 35, development could result in a loss of nest material collection sites, loss of perch sites, and an overall decrease in quality of habitat needed to support nesting. Additionally, development of the proposed RSPU could result in an increase in threats to purple martin including, but not limited to, increased exposure to competition from nesting competitors (i.e., starlings, sparrows), increased exposure to predation from feral cats, and/or increased mortality from vehicle collisions. Because the I Street Bridge colony is only one of four breeding colonies recorded in the Sacramento area in 2015, it is especially sensitive to adverse effects. Because of these factors, it has been determined that the proposed RSPU could potentially result in a considerable contribution to the downward population trend of breeding purple martin in the Sacramento area; therefore, this is considered a **significant impact**.

Mitigation Measure

Mitigation Measure 4.3-11(a) and 4.3-11(b) (RSPU):

Implement Mitigation Measure 4.3-2(a) and 4.3-2(b).

Impact Significance After Mitigation: Implementation of Mitigation Measures 4.3-11(a) would reduce impacts to nesting birds by requiring pre-construction surveys to identify any nesting birds, and if found, observing no-disturbance zones around nest sites, and therefore would reduce impacts to nesting birds during construction activities to a **less-than-significant** level.

Implementation of Mitigation Measure 4.2-2(b) would be enforced as long as the I Street purple martin breeding colony is extant within the RSP Area for at least one of the previous three years from the time of commencement of development within the RSP Area. Mitigation Measure 4.2-2(b) would reduce potential impacts to the I Street Bridge purple martin colony by mitigating for habitat alterations (i.e., land use change, development) in the vicinity of the nest sites. The PMMMP would define and implement building setback, and height limitations to preserve flight approaches, define landscape design, and maintenance requirements to preserve availability of nest material near breeding sites, and identify, and require habitat enhancement, creation, or replacement to compensate for indirect effects related to habitat alterations. However, given the downward trend in population numbers of the I Street Bridge purple martin colony (and the Sacramento region population as a whole), and because the PMMMP is not guaranteed to mitigate for the proposed RSPU's cumulative contribution to the I Street Bridge martin colony, the impact development of the proposed RSPU would remain **significant and unavoidable**.

Impact 4.3-12: Implementation of the proposed projects, in combination with other cumulative development, could/would contribute to cumulative impacts to special-status fish species and degradation of designated critical habitat.

The cumulative context for impacts for special-status fish species includes the lower Sacramento River. The Sacramento River has been substantially altered over the past 150 years as a result of legacy mining, flood protection, water management, and conversion and development of the floodplain. The effects of past activities and ongoing management are expected to continue into the foreseeable future. Additionally, riparian habitats have been reduced substantially from their native range, and probable future development within the region would continue to affect these resources. Reasonably foreseeable future projects within the lower Sacramento River would be required to comply with CESA, FESA, CWA, Fish and Game Code of California, and other relevant regulations permits and requirements. The degradation of aquatic habitat in the Sacramento River is a significant cumulative impact.

As discussed under Impact 4.3-3, construction of the Stormwater Outfall could result in increased sedimentation and turbidity, and/or the release and exposure of contaminants, which could adversely affect fish and aquatic habitats. Construction activities including pile driving, cofferdam construction and dewatering, and general in-water construction could cause direct disturbance to fish and their aquatic habitats, and loss to SRA habitat. Therefore, the proposed projects could result in a considerable contribution to a significant cumulative impact. This would be a **potentially significant impact**.

Mitigation Measure

Mitigation Measure 4.3-12 (SO).

Implement Mitigation Measure 4.3-2(a) through 4.3-2(f).

Impact Significance After Mitigation: Implementation of Mitigation Measure 4.3-12 would restrict in-water work to periods when species are least likely to be present, replace (through restoration, preservation or credit purchase) permanently impacted habitat, implement BMPs to prevent substantial increases in sedimentation and turbidity, and the release and exposure of contaminants, and minimize effects associated with pile driving and dewatering. This, in combination with compliance with the CESA and FESA, CWA regulations, NPDES regulations, local water quality, and runoff standards would reduce proposed RSPU's contribution to the regional cumulative impact to a less-than-considerable level and this would be a **less-than-significant** impact.

Impact 4.3-13: Implementation of the proposed project, in combination with other cumulative development, could/would contribute to the cumulative loss of habitat for the Valley Elderberry Longhorn Beetle.

The cumulative context for impacts to Valley Elderberry Longhorn Beetle (VELB) includes elderberry shrubs located within Sacramento Valley, which corresponds to the range of VELB. Elderberry shrubs, habitat for VELB, are most commonly associated with riparian vegetation along waterways. As discussed in the 2035 General Plan, approximately 90 percent of riparian vegetation has been lost to development since the 1800s.⁷³ It is likely that future development will further continue to affect riparian areas where elderberry shrubs and VELB are located. As a result, the loss of VELB habitat in the Sacramento Valley is a significant cumulative impact.

Development of the proposed project would likely result in removal of elderberry shrubs within, and adjacent to, the RSP Area, resulting in further loss of VELB habitat. However, none of the elderberry shrubs located onsite are located within the riparian area along the Sacramento River and no exit holes, indicating presence of VELB, were observed on any of the shrubs. Elderberry shrubs onsite are disconnected from the Sacramento River by urban development and industrial use. As a result, removal of elderberry shrubs within the RSP Area would not result in fragmentation habitat for VELB, or further reduce metapopulation connectivity with known populations of VELB along the American River. Nevertheless, any loss VELB or their habitat is considered to be significant; therefore, the development of the proposed RSPU could have a considerable contribution to the cumulative impact of VELB, and their habitat. This would be a **potentially significant impact**.

Mitigation Measure

Mitigation Measure 4.3-13 (RSPU)

Implement Mitigation Measure 4.3-4.

Impact Significance After Mitigation: With the implementation of Mitigation Measures 4.3-13 and compliance with applicable federal, State, and local policies and regulations, the proposed RSPU's contribution to the regional cumulative impact on VELB and their habitat would be **less than significant**.

Impact 4.3-14: Implementation of the proposed project, in combination with other cumulative development, could/would contribute to the cumulative loss of habitat for the western pond turtle.

⁷³ City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report* (SCH No. 2012122006). Certified March 3, 2015.

Historically, western pond turtles were heavily exploited for food in the Central Valley and thus numbers of this species represent a fraction of their historic levels. Within the Sacramento Metropolitan Area, development has resulted in conversion of natural habitats including, modification of natural drainage patterns, and watersheds, and loss of open space areas. It is likely that future development will further continue to affect western pond turtle habitat. As such, the loss of western pond turtle habitat is considered a significant cumulative impact.

The RSP Area, including the proposed Stormwater Outfall area, within the RSP Area do not provide suitable nesting habitat for western pond turtle. Although unlikely due to high levels of human disturbance, including homeless encampments, recreational visitors to the Sacramento River, adjacent bike trail, and Jibboom Street, turtles could use the bank of the Sacramento River as basking habitat. Additionally, similar basking habitat of equal quality is located along the banks of the Sacramento River in the vicinity of the RSP Area, the proposed projects would not contribute to the cumulative loss of habitat for western pond turtle in Sacramento County, or cause a distinct population of western pond turtle to become isolated. As a result, the development of the proposed RSPU would not have a considerable contribution to the cumulative impact on western pond turtle and their habitat. This impact would be **less than significant**.

Mitigation Measure

None required.

Impact 4.3-15: Implementation of the proposed projects, in combination with other cumulative development, could/would contribute to the cumulative loss of habitat, or impacts to for bat species.

The context for cumulative impacts to bat species is Sacramento County. Roosting habitat for bat species has been lost due to natural habitats being converted to urban uses. As discussed in the 2035 General Plan, loss of habitats within Sacramento County is expected to continue into the reasonably foreseeable future. As a result, the loss of roosting habitat for bat species is a significant cumulative impact.

As discussed in impact 4.3-6, the proposed projects could reduce available foliage-roosting habitat by removing mature riparian trees along the Sacramento River, and renovating, or removing cavity-roosting habitat within historic train depot buildings associated with the Central Shops Historic District and the Sacramento Valley Station. Construction of the Stormwater Outfall would remove 0.04 acres of valley-foothill riparian habitat. Removal of 0.04 acres of riparian habitat, and renovation and exclusion of bats from the historic train depot would be considered a considerable contribution to the cumulative impact of diminishment of roosting habitat available for bat species in Sacramento County. This is a **significant impact**.

Mitigation Measure

Mitigation Measure 4.3-15 (RSPU, SO)

Implement Mitigation Measure 4.3-6.

Impact Significance After Mitigation: With the implementation of Mitigation Measure 4.3-15, in combination with CDFW riparian vegetation mitigation requirements, the proposed projects' contribution to cumulative impact on bat species within Sacramento County would be reduced. Project-related disturbance to bat species would not result in a considerable contribution to the cumulative loss of bats within Sacramento County. This impact is **less than significant**.

Impact 4.3-16: Implementation of the proposed projects, in combination with other cumulative development, could/would contribute to the cumulative loss of sensitive habitats including protected wetland habitat as defined in Section 404 of the Clean Water Act, riparian vegetation, and state jurisdictional waters/wetlands.

The context for cumulative impacts to wetlands is the Central Valley. As a result of human settlement, riparian forests and wetland habitats were cleared and developed for farming, lumber, flood control and riparian development and thus have been reduced substantially from their native range. As discussed in the 2035 General Plan (4.3-21 to 4.3-22), since the 1800s there has been an approximately 95 percent reduction in wetland habitats. It is likely that future development will further continue to affect these sensitive habitats. The loss of wetlands, riparian vegetation, and state jurisdictional waters/wetlands is considered a cumulative impact.

Development of the proposed projects would, in the short term, remove riparian vegetation and potentially impact the Sacramento River considered a water of the U.S. Due to the significant decline in wetland and sensitive riparian habitat, any loss of these sensitive habitat types would have a considerable contribution to the loss of riparian and wetland habitats within the Central Valley. Therefore, this is considered a **significant impact**.

Mitigation Measure

Mitigation Measure 4.3-16 (SO)

Implement Mitigation Measure 4.3-7.

Impact Significance After Mitigation: Implementation of Mitigation Measures 4.3-16 would mitigate impacts to the Sacramento River and riparian habitat within the proposed Stormwater Outfall site. This would occur through a combination of restoration/enhancement, and/or purchase of restoration credits to ensure no net loss. By ensuring that the proposed RSPU and Stormwater Outfall achieves no net loss of waters of the U.S. or riparian habitat, the projects' cumulative impact would be reduced to a **less-than-significant** level.

Impact 4.3-17: Implementation of the proposed projects, in combination with other cumulative development, could/would contribute to the cumulative isolation or interruption of contiguous habitat which would interfere substantially with the movement of resident or migratory fish or wildlife species, migratory corridors, or impede the use of native wildlife nursery sites.

Terrestrial Species

The context for cumulative impacts to terrestrial wildlife movement corridors includes Sacramento County. As discussed in the 2007 RSP EIR (page 6.2-45 to 6.2-50), historically, terrestrial habitats within the region have been fragmented by urban and agricultural development which has resulted in habitat “islands.” It is likely that future development will further continue to affect habitat connectivity in Sacramento County. As such, the loss of terrestrial wildlife movement corridors is considered a significant cumulative impact.

As discussed under impact 4.3-8, the vacant land and fragmented ruderal vegetation that dominates the RSP Area does not serve as a significant regional terrestrial wildlife corridor for migratory wildlife species because it is surrounded by urban development on three sides. The RSP Area has the potential to disrupt the movements of common wildlife species such as raccoon, opossum, and skunk. However, these species are adapted to urban environments and construction and operation of the proposed RSPU would not cause the abandonment, permanent evacuation, or discontinuance of use of the RSP Area. Redevelopment through the implementation of the RSP Area through implementation of the proposed projects would not result in a considerable contribution to the diminishment of habitat connectivity, and availability of wildlife movement corridors in Sacramento County. Therefore, the proposed projects would not result in a cumulatively considerable contribution to the loss of terrestrial wildlife movement corridors in Sacramento County. Therefore, there is **no impact** to the cumulative loss of terrestrial wildlife movement corridors in Sacramento County.

Aquatic Species

As discussed in the 2007 RSP EIR (page 6.2-45 to 6.2-50), the Sacramento River, adjacent to the RSP Area serves as a migratory corridor between upstream (i.e., spawning, feeding) and downstream (i.e., rearing, ocean) habitat for special-status and common fish species. The context for cumulative impacts to aquatic wildlife movement is the Sacramento River between the San Francisco Bay and upstream barriers to anadromous salmonid fish passage (i.e., Keswick and Shasta dams). Chinook salmon, steelhead, and green sturgeon are all migratory fish species with populations on the decline due to a number of factors. While there are no physical impediments to fish movement in the area of the cumulative analysis, survival during migrations is low and influenced by a number of factors including habitat alterations, water management, water temperatures, and predation by non-native predatory fish species. Because of current population trends and a variety of limiting factors, migratory habitat for fish species is considered a significant cumulative impact.

As discussed above, development within the RSP Area associated with the RSPU would result in increases in artificial ambient lighting conditions from landscape lighting, nighttime vehicle traffic, and high-rise buildings in the portion of the RSP Area to the west of I-5 that could spillover onto the Sacramento River. Increases in artificial ambient light could interfere with the movement of migratory fish species within the Sacramento River by creating artificial visual conditions and/or increase predation opportunities for non-native predatory fish species. Therefore, impacts to migratory fish from increases in light spillover onto the Sacramento River from development in the proposed RSPU (RSP Area west of I-5) would be a considerable contribution to a cumulative impact. Therefore, this impact would be **potentially significant**.

Mitigation Measure

Mitigation Measure 4.3-17 (RSPU, SO)

Implement Mitigation Measure 4.3-8.

Impact Significance After Mitigation: With the implementation of Mitigation Measure 4.3-8, light spillover would be minimized in areas within portions of the RSP Area west of I-5, and no lighting would be directed towards the river, which would reduce impacts to riverine habitat and associated movements of fish species. Therefore, project impacts resulting from lighting into the Sacramento River would not contribute considerably to the cumulative loss of migratory habitat within the Sacramento River and this impact would be **less than significant**.

Impact 4.3-18: Implementation of the proposed projects, in combination with other cumulative development, could/would contribute to the cumulative loss of locally protected trees.

The context for cumulative impacts to locally protected trees includes the City of Sacramento. The City of Sacramento is known as the “City of Trees” and there are 6.9 million trees within the Sacramento region.⁷⁴ The City of Sacramento 2035 General Plan includes goals and policies to promote tree planting and protection of the urban forest to increase the City’s tree canopy, and implements a tree ordinance protecting street and heritage trees. As a result, there is no cumulative impact to protected urban trees within the City of Sacramento.

The proposed projects could potentially remove heritage trees at the Outfall site and along the northern edge of the RSP Area. All protected trees will be removed in accordance with current City tree protection ordinances, and will be replaced according to current City standards. As a result, this impact is considered **less than significant**.

⁷⁴ Sacramento Tree Foundation, 2016. Urban Forests for Clean Air. Available: www.sactree.com/pages/471. Accessed March 25, 2016.

Mitigation Measure

None required.