# 4.2 Biological Resources

This section evaluates the potential for impacts relating to biological resources resulting from implementation of OC River Walk Project (project).

The analysis in this section is based in part on the OC River Walk Project Biological Resources Technical Report prepared by Harris & Associates included in Appendix D of this Draft EIR.

## 4.2.1 Environmental Setting

### 4.2.1.1 Regulatory Setting

This section describes the federal, state, and local regulatory framework adopted to address biological resources.

#### Federal

##### *Clean Water Act (U.S. Code, Title 33, Sections 1251–1376)*

The federal Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 requires a project proponent to obtain a federal license or permit that allows activities resulting in a discharge to waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The State Water Resources Control Board (SWRCB) administers the certification program in California. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States. Section 404 establishes a permit program administered by the U.S. Army Corps of Engineers (USACE) that regulates the discharge of dredged or fill material into waters of the United States, including wetlands.

##### *Federal Endangered Species Act (U.S. Code, Title 16, Sections 1531–1543)*

The federal Endangered Species Act (FESA) and its subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems on which they depend. In addition, FESA defines species as "threatened" or "endangered" and provides regulatory protection for listed species. FESA also provides a program for the conservation and recovery of threatened and endangered species and the conservation of designated critical habitat that the U.S. Fish and Wildlife Service (USFWS) determines to be required for the survival and recovery of these listed species.

##### *Migratory Bird Treaty Act (U.S. Code, Title 16, Sections 703–712)*

All migratory bird species that are native to the United States or its territories are protected under the federal Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty

Reform Act of 2004 (Senate Bill [SB] 2547). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is now used to place restrictions on disturbance of active bird nests during the nesting season (generally February 1 to August 31). In addition, USFWS commonly places restrictions on disturbances allowed near active raptor nests.

#### *Wetlands and Other Waters of the United States*

Aquatic resources, including riparian areas, wetlands, and certain aquatic vegetation communities, are considered sensitive biological resources and can fall under the jurisdiction of several regulatory agencies. In accordance with the Navigable Waters Protection Rule, effective June 22, 2020, the USACE exerts jurisdiction over waters of the United States, including the territorial seas and traditional navigable waters; perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters (33 CFR Part 328; 40 CFR Parts 110, 112, 116, 117, 120, 122, 230, 300, 302, and 401).

### State

#### *California Endangered Species Act (California Fish and Game Code, Section 2050 et seq.)*

The California Endangered Species Act (CESA) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no state agency consultation procedures under CESA. For projects that would affect a listed species under both CESA and FESA, compliance with FESA would satisfy CESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with CESA under the California Fish and Game Code, Section 2080.1. For projects that would result in take of a species only listed under CESA, the project proponent must apply for a take permit under Section 2081(b).

#### *California Environmental Quality Act Guidelines, Section 15380(b)*

Although threatened and endangered species are protected by specific federal and state statutes, California Environmental Quality Act (CEQA) Guidelines, Section 15380(b), provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the rare or endangered species definition in FESA and Sections 2050 through 2059.26 of the California Fish and Game Code dealing with rare or endangered plants and wildlife. This section was included in CEQA primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a candidate species that has

not been listed by either the USFWS or CDFW. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agencies have an opportunity to designate the species as protected, if warranted. CEQA also calls for the protection of other locally or regionally significant resources, including natural communities. Although natural communities do not currently have legal protection of any kind, CEQA calls for an assessment of if any such resources would be affected and requires findings of significance if there would be substantial losses. Natural communities listed as sensitive by the California Natural Diversity Database are considered by the CDFW to be significant resources and fall under the CEQA Guidelines to address impacts. Local planning documents, such as General Plans, often identify these resources as well.

#### *California Fish and Game Code, Section 1602*

Under this section of the California Fish and Game Code, the project proponent is required to notify the CDFW before the start of any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Pursuant to the California Fish and Game Code, a "stream" is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel that has banks and supports fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that supports or has supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial watercourses valuable to fish and wildlife are subject to CDFW jurisdiction. The CDFW also has jurisdiction over dry washes that carry water during storm events.

Preliminary notification and project review generally occur during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, the CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a streambed alteration agreement, which becomes part of the plans, specifications, and bid documents for the project.

#### *California Fish and Game Code, Sections 2080 and 2081*

Section 2080 of the California Fish and Game Code states that "no person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission [California Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act." Pursuant to Section 2081 of the California Fish and Game Code, the CDFW may authorize individuals or public agencies to import, export, take, or possess state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or Memoranda of Understanding if the take is incidental to an otherwise lawful activity, the impacts of the authorized take are minimized and fully mitigated, the permit is

consistent with any regulations adopted pursuant to any recovery plan for the species, and the project operator ensures adequate funding to implement the measures required by the CDFW.

### *California Fish and Game Code, Sections 3503, 3503.5, 3513, and 3800*

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptor (i.e., species in the orders Falconiformes and Strigiformes), including nests or eggs. Typical violations of the California Fish and Game Code include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction. This statute does not provide for the issuance of any type of incidental take permit.

Section 3513 of the California Fish and Game Code upholds the MBTA by prohibiting any take or possession of birds that are designated by the MBTA as migratory nongame birds except as allowed by federal rules and regulations promulgated pursuant to the MBTA.

Section 3800 of the California Fish and Game Code affords protection to nongame birds, which are birds occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds.

### *California Fish and Game Code, Sections 3511, 4700, 5050, and 5515*

California fully protected species are described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species. The CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species.

### *California Wetland Definition*

Unlike the federal government, California has adopted the Cowardin et al. (1992) definition of "wetlands." For this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (at least 50 percent of the aerial vegetative cover); (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is non-soil and saturated with water or covered by shallow water at some time during the growing season of each year.

Under normal circumstances, the federal definition of wetlands requires all three wetland identification parameters to be met, whereas the Cowardin et al. (1992) definition requires the presence of at least one of these parameters. For this reason, identification of wetlands by state agencies consists of the union of all areas that are periodically inundated or saturated or in which at least seasonal dominance by hydrophytes may be documented or in which hydric soils are present.

### *Natural Communities Conservation Planning Act (California Fish and Game Code, Section 2800)*

The Natural Communities Conservation Planning (NCCP) program is a cooperative effort to protect habitats and species. It began under the state's NCCP Act of 1991 and is broader in its orientation and objectives than CESA or FESA. These laws are designed to identify and protect individual species that have already declined significantly in number. The primary objective of the NCCP program is to conserve natural communities at the ecosystem level while accommodating compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

This voluntary program allows the state to enter into planning agreements with landowners, local governments, and other stakeholders to prepare plans that identify the most important areas for a threatened or endangered species and the areas that may be less important. These NCCP Plans may become the basis for a state permit to take threatened and endangered species in exchange for conserving their habitat. The CDFW and USFWS worked to combine the NCCP program with the federal Habitat Conservation Plan process to provide take permits for state and federally listed species. Under the NCCP Act, local governments can take the lead in developing these NCCP Plans and become the recipients of state and federal take permits.

### *Native Plant Protection Act (California Fish and Game Code, Sections 1900–1913)*

California's Native Plant Protection Act requires state agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of the act prohibit the take of listed plants from the wild and require notification to the CDFW at least 10 days in advance of any change in land use. This allows the CDFW to salvage listed plant species that would otherwise be destroyed. The project proponent is required to conduct botanical inventories and consult with the CDFW during project planning to comply with the provisions of the act and sections of CEQA that apply to rare or endangered plants.

### *Porter-Cologne Water Quality Control Act (California Water Code, Division 7)*

The SWRCB works in coordination with the nine Regional Water Quality Control Boards (RWQCBs) to preserve, protect, enhance, and restore water quality. Each RWQCB makes decisions related to water quality for its region and may approve, with or without conditions, or deny projects that could affect waters of the state. Their authority comes from the CWA and the state's Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The Porter-Cologne Act broadly defines "waters of the state" as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code, Section 13050[e]).

Under the Porter-Cologne Act, the SWRCB and the nine RWQCBs also have the responsibility of granting CWA National Pollutant Discharge Elimination System permits and waste discharge

requirements for point-source and nonpoint-source discharges to waters. These regulations limit impacts on aquatic and riparian habitats from a variety of urban sources.

## Local

### *County of Orange Central and Coastal Subregion Natural Communities Conservation Plan/Habitat Conservation Plan*

The County of Orange Central and Coastal Subregion Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) was approved in 1996. It provides a planning framework for development projects within the program's planning area to avoid, minimize, and compensate for impacts to wildlife (County of Orange 1996). The purpose of the NCCP/HCP is to sustain and restore species and their habitat identified by CDFW as necessary to maintain the continued viability of biological communities impacted by growth and development.

The City of Anaheim is enrolled in the NCCP/HCP. According to the City of Anaheim General Plan Green Element, a portion of the City, generally south of State Route (SR-) 91 and east of SR-55, falls within the NCCP/HCP boundary in the City of Anaheim (City of Anaheim 2004). The City of Orange is enrolled in the NCCP/HCP. A portion of the City near SR-241, SR-261, and Santiago Canyon Road falls within the NCCP/HCP boundary in the City of Orange (ARCGIS 2025). The project site is not within the boundaries of the NCCP/HCP. Therefore, the project is not subject to the requirements of the NCCP/HCP.

### *Cities of Anaheim and Orange General Plans*

The project is in the Cities of Orange and Anaheim and, therefore, subject to the goals and policies of the City of Orange General Plan and the City of Anaheim General Plan.

#### City of Anaheim

The City of Anaheim General Plan element most applicable to biological resources includes the Green Element and applicable goals and policies are listed below:

- **Goal 4.1:** Maximize the recreational and scenic potential of existing reservoirs, basins and waterways.
  - **Policy 1:** Support the County of Orange to continue in their efforts to upgrade and maintain the Santa Ana River Trail.
  - **Policy 2:** Work with the County of Orange and the Orange County Water District to maintain and improve the recreational and scenic resources of the Anaheim Lakes and Five Coves areas and other appropriate water resource areas, including regarding basins and reservoirs.
- **Goal 7.1:** Reduce urban run-off from new and existing development.

- **Policy 1:** Ensure compliance with the Federal Clean Water Act requirements for National Pollutant Discharge Elimination System (NPDES) permits, including developing and requiring the development of Water Quality Management Plans for all new development and significant redevelopment in the City.
- **Policy 2:** Continue to implement an urban runoff reduction program consistent with regional and federal requirements, which includes requiring and encouraging the following:
  - Increase permeable areas and install filtration controls (including grass lined swales and gravel beds) and divert flow to these permeable areas to allow more percolation of runoff into the ground;
  - Use natural drainage, detention ponds or infiltration pits to collect runoff; and,
  - Prevent rainfall from entering material and waste storage areas and pollution-laden surfaces.
- **Policy 4:** Require new development and significant redevelopment to utilize site preparation, grading and best management practices that provide erosion and sediment control to prevent construction-related contaminants from leaving the site and polluting waterways.
- **Policy 5:** Coordinate with appropriate Federal, State, and local resource agencies on development projects and construction activities affecting waterways and drainages.

**City of Orange**

The City of Orange General Plan element most applicable to biological resources includes the Natural Resources Element and applicable policies are listed below:

- **Goal 1.0:** Provide recreational use, scenic enjoyment, and the protection of natural resources and features in open space areas.
  - **Policy 1.1:** Conserve open space through various public-private funding mechanisms and management strategies including, but not limited to, conservation easements.
  - **Policy 1.2:** Actively seek out new public open space opportunities through land recycling.
  - **Policy 1.3:** Promote development of additional open spaces and access points adjacent to waterways and planned trails.
- **Goal 2.0:** Protect air, water, and energy resources from pollution and overuse.
  - **Policy 2.3:** Reduce the amount of water used for landscaping through the use of native and drought-tolerant plants, proper soil preparation, and efficient irrigation systems as parks and other City facilities are built or renovated.

  - **Policy 2.4:** Encourage the production, distribution, and use of recycled and reclaimed water for landscaping projects, while maintaining urban runoff water quality objectives.
  - **Policy 2.6:** Encourage sustainable building and site designs for new construction and renovation projects.
  - **Policy 2.8:** Encourage development that incorporates pedestrian- and transit-oriented design and landscape elements.
  - **Policy 2.11:** Protect the ecological integrity and overall health of Orange's watersheds.
  - **Policy 2.12:** Cooperate with water supply agencies to protect the quantity and quality of local groundwater supplies.
  - **Policy 2.13:** Control surface runoff water discharges into the stormwater conveyance system to comply with the City's National Pollutant Discharge Elimination System (NPDES) Municipal Permit and other regional permits issued by the Santa Ana Regional Water Quality Control Board.
  - **Policy 2.14:** Reduce pollutant runoff from new development by requiring use of the most low development impact practices and effective Best Management Practices (BMPs) currently available.
  - **Policy 2.15:** Minimize the amount of impervious surfaces and associated urban runoff pollutants in new development and significant redevelopment throughout the community.
  - **Policy 2.16:** Protect in-stream habitat and natural stream and channel features.

- **Goal 4.0:** Conserve and protect wildlife habitat, plant and animal species of concern, and general biodiversity.
  - **Policy 4.1:** Preserve and protect native and habitat-supporting plant resources throughout the City.
  - **Policy 4.3:** Reduce the impact of urban development on important ecological and biological resources.
  - **Policy 4.4:** Repair or improve ecological and biological conditions in the urban and natural environments when reviewing proposals for site development and redevelopment, as well as public improvements.
  - **Policy 4.5:** Protect the Santiago Creek and Santa Ana River corridors from premature urbanization to ensure the continued availability of important sand and gravel, flood control, water recharge, biological, and open space resources.
- **Goal 5.0:** Provide recreational facilities and programs that adequately serve the needs of residents.

- **Policy 5.4:** Develop new public parks and open space resources by establishing incentives to use creative techniques available to property owners and developers that support public-private open space partnerships.
- **Policy 5.5:** Explore and pursue new approaches to new park development and to providing a balanced mix of amenities and facilities.

#### 4.2.1.2 Existing Conditions

A Biological Resources Technical Report (BRTR) was prepared by Harris & Associates in July 2023 and is included as Appendix D to this Draft EIR. As part of the BRTR, a general biological reconnaissance survey and a formal aquatic resources delineation survey were conducted on May 16, 2023. During the survey, the biologists mapped vegetation communities, documented observed plant and wildlife species, and evaluated the potential for occurrence of sensitive plant and wildlife species by walking slowly along the meandering transects throughout the survey area. No in-water surveys were conducted. An Aquatic Resources Delineation Report (ARDR) was prepared in 2023 and is included as an appendix in the BRTR. Based on the lack of suitable habitat, no focused or protocol wildlife surveys or rare plant surveys were conducted during this survey effort.

##### Topography and Soils

The project site is in a relatively flat urban setting, with the greatest elevation decreases occurring in the Santa Ana River corridor, Burris Basin, and Former Ball Road Basin. The on-site elevation ranges from approximately 133 to 190 feet above mean sea level. The project site is underlain by three soil types: Metz loamy sand (zero to 2 percent slopes), Pits (zero to 5 percent slopes), and Riverwash (refer to Appendix D, Figure 4, Soils). The northeastern corner of the survey area that cannot be characterized by soil type is water. Metz loamy sand occurs along the eastern edge of the project site and consists of somewhat excessively drained soils that formed in alluvial material from mixed, but dominantly sedimentary rocks, typically found in alluvial fans and floodplains. Pits constitutes a small portion in the northwestern corner of the project site and consists of poorly drained soils that formed in fine-textured alluvium weathered from igneous rocks that are found on floodplains and in basins. Riverwash represents the majority of the survey area and consists of very recent depositions of gravel, sand, and silt alluvium along major streams and their tributaries (USDA 2019). The Riverwash and Pits soil types that occur on the project site are classified as hydric (wetland) soils and have the potential to contain hydric inclusions (USDA 2019).

##### Hydrology

The project site is in the Santa Ana River Watershed (Hydrologic Unit 18070203) (USGS 2025). The Santa Ana River Watershed is the largest in Southern California and encompasses 2,840 square miles within portions of Riverside and Orange Counties and a small part of eastern Los Angeles County (USGS 2025). The total length of the Santa Ana River and the streams that drain

into it is approximately 700 miles, starting from its northernmost reaches at the crest of the San Bernardino Mountains out to the coast near Huntington Beach. This network of waterways includes features that are both natural and channelized in concrete. The Santa Ana River is defined by the U.S. Army Corps of Engineers (USACE) as a traditional navigable water (USACE 2025). Portions of the Santa Ana River are on the CWA Section 303(d) List for impaired waters; however, the reach in the survey area is not listed as impaired (SWRCB 2025).

The portion of the Santa Ana River within the survey area also contains the USACE constructed Santa Ana River 1 Levee System (SAR1 Levee System) (Upstream Reach) (USACE 2015). The National Wetlands Inventory (NWI) results identify several mapped aquatic features in the survey area (Figure 4.2-1, National Wetlands Inventory Results) (USFWS 2021). The Santa Ana River within the boundary of the project site is identified as a lake but is more accurately characterized as having a lacustrine system,[1] as is also Burris Basin in the northwestern portion of the survey area (NWI 2025). The Former Ball Road Basin, west of the Santa Ana River and south of Burris Basin, is identified on the NWI results as both freshwater emergent wetland and freshwater pond. One riverine feature (Collin's Channel) is identified connecting to the east side of the Santa Ana River in the central portion of the survey area. No other aquatic features are identified in the survey area by the NWI results.

Based on a review of the U.S. Geological Survey (USGS) National Hydrography Dataset (NHD), the survey area contains several mapped aquatic resources, including those that have hydrologic connections to the Santa Ana River (USGS 2025). The Santa Ana River is identified as a stream/river with an artificial path, likely because of the concrete channelization of the river and construction of the SAR1 Levee System (Upstream Reach). Both basins are identified as reservoirs with intermittent connections to each other and the Santa Ana River. Collin's Channel is identified as a canal/ditch that is connected to the Santa Ana River from the east. No other aquatic features are identified in the survey area by the USGS NHD results.

### Vegetation Communities and Land Cover Types

The project site is located along the Santa Ana River corridor, generally between Orangewood Avenue and Ball Road, extending to the existing Anaheim Coves at Burris Basin. It generally encompasses approximately a 2-mile stretch of the Santa Ana River, covering approximately 111 acres. The existing land uses and associated acreage on the project site are described in Table 4.2-1, Existing Land Use Acreages.

[1] The lacustrine system includes wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, and emergent mosses or lichens with 30 percent or greater areal coverage; and (3) total area of at least 8 hectares (ha) (20 acres) (NMI 2025).

**Table 4.2-1. Existing Land Use Acreages**

| Land Use | Acres |
|---|---|
| Aquatic area (including rivers/creeks/open water) | 77.81 |
| Urban/commercial land (including roads) | 28 |
| Vegetated land | 5.07 |
| **Total** | **110.88** |

**Notes:** Acreages rounded to one-hundredth of an acre.

As shown in Table 4.2-2, Vegetation Communities and Land Cover Types, the entire survey area comprises 110.88 acres of the project site (approximately 111 acres) plus 51.01 acres of survey buffer area, for a total of 161.89 acres. The entire survey area contains a total of nine vegetation community types: freshwater, emergent wetland, non-vegetated channel, Diegan coastal sage scrub, mule fat scrub (disturbed), southern willow scrub, non-native woodland, disturbed habitat, and developed land, as shown on Figure 4.2-2, Vegetation Communities and Land Cover Types.

**Table 4.2-2. Vegetation Communities and Land Cover Types**

| Vegetation Community and Land Cover Type | Project Site (acres)[1] | Survey Buffer (acres)[1] | Survey Area (acres)[1] |
|---|---|---|---|
| **Aquatic** | | | |
| Fresh water[2] | 3.48 | 3.15 | 6.63 |
| Freshwater emergent wetland[2] | 0 | 0.97 | 0.97 |
| Non-vegetated channel[2] | 74.33 | 1.95 | 76.28 |
| *Subtotal* | *77.81* | *6.07* | *83.88* |
| **Scrub and Riparian Scrub** | | | |
| Diegan coastal sage scrub[2] | 0.21 | 0.95 | 1.16 |
| Mule fat scrub (disturbed)[2] | 0.38 | 0 | 0.38 |
| Southern willow scrub[2] | 0.66 | 0.97 | 1.63 |
| *Subtotal* | *1.25* | *1.92* | *3.17* |
| **Woodland and Forest** | | | |
| Non-native woodland | 0.22 | 0 | 0.22 |
| **Disturbed/Developed** | | | |
| Disturbed habitat | 3.60 | 2.75 | 6.35 |
| Developed land | 28 | 40.27 | 68.27 |
| *Subtotal* | *31.60* | *43.02* | *74.62* |
| **Total** | **110.88** | **51.01** | **161.89** |

**Sources:** CDFW 2025c; Holland 1986.

**Notes:**

[1] Acreages rounded up to one-hundredth.

[2] Considered a sensitive vegetation community by the CDFW.

### *Aquatic Communities*

The aquatic vegetation community types within the survey area are shown on Figure 4.2-2 and described below.

**Fresh Water:** Fresh water includes year-round bodies of fresh water in the form of lakes, streams, ponds, or rivers. Fresh water includes those portions of water bodies that are usually covered by water and contain less than 10 percent vegetated cover (Holland 1986). A total of approximately 6.63 acres of fresh water was documented, with 3.48 acres occurring on the project site and the remaining 3.15 acres in the survey buffer. Fresh water in the survey area occurs within Burris Basin, the Former Ball Road Basin, The Islands Golf Center, and the Orange County Water District (OCWD)-owned and -operated water distribution plant in the northwestern portion of the survey area. Both basins have direct surface water connectivity to the Santa Ana River, directly east of the basins.

**Freshwater Emergent Wetland:** Freshwater emergent wetlands are dominated by low-growing perennial wetland species. These can be found in channels, seeps and springs, floodplains, margins of lakes and rivers, and various basins such as pools and ponds, palustrine lakes, montane meadows, and dune swales. A total of approximately 0.97 acre of freshwater emergent wetland was documented within the survey buffer area but none on the project site.

**Non-Vegetated Channel:** Non-vegetated channel consists of predominantly sandy, gravelly, or rocky channels lacking or with reduced vegetation. Variable water lines inhibit the growth of vegetation, although some weedy species of grasses may grow along the outer edges of the channel. Vegetation may exist here but is usually less than 10 percent of the total cover (Holland 1986). Non-vegetated channel comprises the majority of the survey area. A total of approximately 76.28 acres of non-vegetated channel was documented, with 74.33 acres occurring on the project site and the remaining 1.95 acres in the survey buffer. The Santa Ana River and Collin's Channel are both defined as non-vegetated channels. The extent of the Santa Ana River that runs northeast to southwest through much of the survey area is a fully concrete- and riprap-lined channel and does not support any vegetation. Collin's Channel is a riprap- and concrete-lined channel that enters the eastern edge of the survey area and connects to the eastern side of the Santa Ana River. Sparse grasses and weeds were observed growing through the rock riprap in Collin's Channel; however, no substantial vegetation community was observed in the channel during the survey.

### *Scrub and Riparian Scrub Communities*

**Diegan Coastal Sage Scrub:** A total of approximately 1.16 acres of Diegan coastal sage scrub was documented, with 0.21 acre occurring on the project site and 0.95 acre in the survey buffer. Diegan coastal sage scrub was observed in the northwest corner of the survey area, bordering the Burris Basin, The Islands Golf Center, and the OCWD facilities. The Diegan coastal sage scrub in the survey area appears to be part of restoration efforts and shows evidence of purposefully planted

(installed) vegetation. Dominant species in the Diegan coastal sage scrub include California sagebrush, California buckwheat, Cleveland sage (*Salvia clevelandii*), and mule fat.

**Mule Fat Scrub (Disturbed):** Approximately 0.38 acre of mule fat scrub (disturbed) occurs on the project site, along the southwest shoreline of Burris Basin in the northwestern portion of the survey area. No mule fat scrub was documented in the survey buffer. This habitat is relatively sparse, with patchy coverage of mule fat and has encroachment of black mustard (*Brassica nigra*) from nearby disturbed areas.

**Southern Willow Scrub:** A total of approximately 1.63 acre of southern willow scrub was documented, with 0.66 acre occurring in the northwestern portion of the project site and 0.97 acre in the western edge of the survey buffer. The 0.66 acre of southern willow scrub on the project site is within and along the western shore of Burris Basin. This area is dominated by Goodding's willow, with mule fat and a small stand of bulrush (*Typha* sp.) in the understory. The 0.97 acre of southern willow scrub along the western edge of the survey buffer within the Former Ball Road Basin is densely vegetated with Goodding's willow with mule fat and black mustard (*Brassica nigra*) in the understory and outer edges.

### *Woodland and Forest Communities*

**Non-Native Woodland:** Approximately 0.22 acre of non-native woodland occurs on the project site, in a narrow stand between The Islands Golf Center putting green and Burris Basin in the northwestern portion of the survey are). This area is dominated by arundo and tamarisk, with a small number of young Goodding's willows in the northern edge bordering the southern willow scrub to the northwest.

### *Disturbed/Developed Land Cover Types*

**Disturbed Habitat:** A total of approximately 6.35 acres of disturbed habitat was documented, with 3.60 acres occurring on the project site and 2.75 acres in the survey area. Disturbed habitat was documented bordering the western, southern, and southeastern edges of Burris Basin and the northern and eastern edges of the Former Ball Road Basin in the northern portion of the survey area, as well as along the northeastern edge of the Santa Ana River. Alteration of these areas from apparent mechanical disturbance was observed. These areas are dominated by black mustard, star thistle (*Centaurea calcitrapa*), and fountain grass (*Pennisetum* sp.), with patches of bare dirt throughout.

**Developed Land:** A total of approximately 68.27 acres of developed land was documented, with 28 acres occurring on the project site and 40.27 acres in the buffer survey area. The developed land in the survey area is the second most prevalent land cover type in the survey area, after non-vegetated channel. In the survey area, developed land includes roadways, parking lots,

concrete sidewalks and bike paths, commercial and industrial buildings, The Islands Golf Center putting green, and areas of ornamental landscaping and decorative hardscape.

## Jurisdictional Aquatic Resources

The results of the 2023 ARDR determined that a total of 84.54 acres of non-wetland waters occur in the survey area that are potentially under the jurisdiction of the USACE, RWQCB, and CDFW, pursuant to Sections 404 and 401 of the CWA and Section 1602 of the California Fish and Game Code. In addition, the reach of the Santa Ana River in the survey area contains the Santa Ana River 1 Levee System (Upstream Reach) and therefore is potentially under the jurisdiction of the USACE pursuant to the Rivers and Harbors Act Section 408.

Of the total 84.54 acres of aquatic resources documented in the survey area, 78.47 acres occur on the project site. These include aquatic and riparian vegetation communities (i.e., fresh water, non-vegetated channel, freshwater emergent wetland, and southern willow scrub) that occur in the survey area, which may fall under the regulatory jurisdiction of the USFWS, RWQCB, or CDFW (refer to Figure 4.2-3, Aquatic Resources). The regulatory agencies categorize aquatic resources into two types of 'waters': wetland waters (i.e., delineated areas that contain hydrophytic plants, hydric soils, and wetland hydrology) and non-wetland waters (i.e., delineated areas that do not meet the criteria for wetlands, as previously defined). In the survey area, freshwater emergent wetland is considered a wetland water, while fresh water and non-vegetated channel are considered non-wetland waters.

Potentially jurisdictional aquatic resources mapped in the survey area are shown on Figure 4.2-3. Table 4.2-3, Jurisdictional Aquatic Resources, provides a summary of these aquatic resources potentially under the jurisdiction of the USACE, RWQCB, and CDFW.

**Table 4.2-3. Jurisdictional Aquatic Resources**

| Feature | Project Site (acres) | Survey Buffer (acres) | Jurisdiction |
|---|---|---|---|
| Santa Ana River | 74.33 | 1.63 | USACE[1]/RWQCB/CDFW |
| Collin's Channel | <0.01 | 0.32 | USACE/RWQCB/CDFW |
| Burris Basin | 3.48 | 3.15 | USACE/RWQCB/CDFW |
| Burris Basin southern willow scrub | 0.66 | 0.97 | USACE/RWQCB/CDFW |
| Former Ball Road Basin (including freshwater emergent wetland) | 0 | 0.97 | USACE/RWQCB/CDFW |
| **Total[2]** | **78.47** | **7.04** | **—** |

**Notes:** CDFW = California Department of Fish and Wildlife; RWQCB = Regional Water Quality Control Board; USACE = U.S. Army Corps of Engineers

[1] Potentially subject to both the CWA Section 404 and Rivers and Harbors Act Section 408.

[2] Total rounded to one-hundredth of an acre.

## Sensitive Species

Sensitive species are those recognized by federal, state, or local agencies as being potentially vulnerable to impacts because of rarity, local or regional reductions in population numbers,

isolation/restricted genetic flow, or other factors. Special-status plants include those listed as threatened or endangered, proposed for listing, or candidates for listing by the USFWS and CDFW; those considered sensitive by the CDFW; those species included in the California Rare Plant Rank (CRPR) inventory maintained by the CNPS. Sensitive wildlife species include those listed as threatened or endangered, proposed for listing, or candidates for listing by the USFWS and CDFW; those considered sensitive by the CDFW; California Watch List (WL).

The list of potentially occurring sensitive plant and wildlife species is provided in Table 4.2-4, Sensitive Plant and Wildlife Species with Potential to Occur, along with an assessment of their potential for occurrence in the survey area. For the purposes of this biological resources analysis, those species that are known to occur or have some potential to occur within 1 mile of the survey area are included.

**Table 4.2-4. Sensitive Plant and Wildlife Species with Potential to Occur**

| Scientific Name | Common Name | Status Federal/State/CRPR | Habitat | Potential to Occur |
|---|---|---|---|---|
| **Plants** | | | | |
| *Abronia villosa* var. *aurita* | Chaparral sand-verbena | None/None/1B.1 | Occurs in sandy soils in coastal sage scrub, chaparral, and desert dune habitats at elevations between 245 and 5,250 feet above mean sea level (amsl). Blooms January to September. | *Not Expected.* The survey area is out of elevation range for this species. Diegan coastal sage scrub is present only in northwestern portion; however, it is likely a planted restoration area. A historical location (from 1924) in the Santa Ana River exists; however, this occurrence is likely extirpated (Appendix D, Figure 8, Sensitive Species with Potential to Occur) (CDFW 2025b; Calflora 2025). |
| *Eriastrum densifolium* ssp. *sanctorum* | Santa Ana River woollystar | FE/SE/1B.1 | Occurs in sandy or gravelly soils in chaparral and coastal sage scrub at elevations between 300 and 2,000 feet amsl. Blooms April through September. | *Not Expected.* The survey area is out of elevation range for this species. Diegan coastal sage scrub is present only in northwestern portion; however, it is likely a planted restoration area. A historical location exists; however, this occurrence is documented within the Orange County Quadrangle, and the exact location is not known (CDFW 2025b; CNPS 2025). |

**Table 4.2-4. Sensitive Plant and Wildlife Species with Potential to Occur**

| Scientific Name | Common Name | Status Federal/State/CRPR | Habitat | Potential to Occur |
|---|---|---|---|---|
| **Wildlife** | | | | |
| **Fish** | | | | |
| *Oncorhynchus mykiss irideus* (Southern California Distinct Population Segment) | Southern California steelhead | FE/SSC/None | Occurs in cool, well oxygenated freshwater streams, primarily in the upper watersheds of most rivers year-round. | *Not Expected*. The Santa Ana River, the only potentially suitable habitat, is completely concrete lined, with concrete spillways making fish passage unlikely. Water levels are too low for fish passage, and mechanical disturbance is currently preventing higher potential for likelihood. A historical location within 1 mile of the survey area exists; however, the point is not specific but mapped to the quadrangle and therefore could be farther away than 1 mile (Appendix D, Figure 8) (CDFW 2025b). |
| **Reptiles** | | | | |
| *Phrynosoma blainvillii* | Blainville's horned lizard | None/SSC/None | Occurs in open areas of sandy soil and low vegetation in foothills, valleys, and semi-arid mountains in grasslands coniferous forests, woodlands, and chaparral. Also found in lowlands within sandy washes with scattered shrubs and long dirt roads. | *Not Expected*. No suitable habitat is present in the survey area. A historical location within 1 mile of the survey area exists but is not known in the survey area (Appendix D, Figure 8) (CDFW 2025b). |
| **Birds** | | | | |
| *Falco peregrinus anatum* | American Peregrine falcon | None/FP, BCC/None | Occurs in open landscapes with cliffs (or skyscrapers) for nest sites, as well as along rivers and coastlines or in cities. | *High Foraging. Not Expected Nesting.* High potential exists for the species to be observed foraging in the survey area, however, no suitable nesting habitat is present. A historical location within 1 mile of the survey area exists but is not known in the survey area (Appendix D, Figure 8) (CDFW 2025b). |
| *Laterallus jamaicensis* ssp. *coturniculus* | California black rail | FP/ST/None | Occurs in tidal salt marshes or grassy marshes with dense strands of grasses, rushes, and sedges for nesting. | *Low Foraging. Not Expected Nesting.* Suitable foraging habitat is limited to the small wetland areas in Burris Basin and the Former Ball Road Basin. No suitable nesting habitat is present in the survey area. A historical location (from 1986) in the Santa Ana River exists; however, this occurrence is likely extirpated (Appendix D, Figure 8) (CDFW 2025b; Calflora 2025). |

**Table 4.2-4. Sensitive Plant and Wildlife Species with Potential to Occur**

| Scientific Name | Common Name | Status Federal/State/CRPR | Habitat | Potential to Occur |
|---|---|---|---|---|
| ***Pelecanus erythrorhynchos*** | **American white pelican** | **BCC/SSC/None** | **Occurs in coastal bays, inlets, estuaries, and sloughs and inland freshwater lakes. Nests on isolated islands in freshwater lakes or ephemeral islands in shallow wetlands. Breeding range in California is limited to the northeastern corner of the state.** | ***Present. High Foraging, Not Expected Nesting.*** **Observed in the Santa Ana River in the northern portion of the survey area (Appendix D, Figure 9, Sensitive Species Observed). Suitable foraging habitat occurs in the Santa Ana River, Burris Basin, and the Former Ball Road Basin. No suitable nesting habitat occurs in the survey area.** |
| ***Phalacrocorax auritus*** **(nesting colony)** | **Double-crested cormorant** | **None/WL/None** | **Occurs in salt and freshwater habitats. Nests on the ground, on cliff edges, trees, shrubs, and in artificial surfaces on and near Channel Islands and coast lines and lakes elsewhere in the United States.** | ***Present. High Foraging, Moderate Nesting.*** **Observed during 2023 survey foraging in the Santa Ana River and sunning on sediment piles in the river channel in the northern survey area (Appendix D, Figure 9). Suitable foraging habitat occurs in the Santa Ana River and Burris Basin. Suitable nesting habitat is present, but lower likelihood to nest due to high levels of human activity and frequent disturbance.** |
| ***Setophaga petechial*** | **Yellow warbler** | **None/SSC/None** | **Nests in well-developed riparian woodlands and montane scrub.** | ***Present. High Foraging, Moderate Nesting.*** **Observed in the southern willow scrub in the Former Ball Road Basin (Appendix D, Figure 9). No nests were observed directly. Suitable southern willow scrub is limited to Burris Basin and the Former Ball Road Basin in the survey area, which provide suitable foraging and moderate quality, limited nesting habitat. No historical locations for this species occur in the survey area.** |
| *Sternula antillarum browni* | California least tern | FE, FP/SE/None | Nests on open sandy dunes and flats lacking vegetation in colonies along California coastlines in lagoons, bays, and estuaries. | *Low Foraging. Not Expected Nesting.* Low potential exists for the species to be observed foraging in the Santa Ana River in the survey area because of the far distance to nesting habitat. Not expected for nesting within the survey area, and no established colony has been documented in the survey area. Historical locations within 1 mile of the survey area exists but are not known in the survey area (Appendix D, Figure 8) (CDFW 2025b). |

**Table 4.2-4. Sensitive Plant and Wildlife Species with Potential to Occur**

| Scientific Name | Common Name | Status Federal/State/CRPR | Habitat | Potential to Occur |
|---|---|---|---|---|
| ***Vireo belli pusillus*** | **Least Bell's vireo** | **FE/SE/None** | **Occurs in riparian scrub and riparian forest and is a summer resident in Southern California below 2,000 feet.** | ***Present. High Foraging, Moderate Nesting*. At least one individual was observed in the southern willow scrub in the Former Ball Road Basin (Appendix D, Figure 9). No nests were observed directly. Suitable southern willow scrub is limited to Burris Basin and the Former Ball Road Basin in the survey area, which provides suitable foraging and moderate quality nesting habitat. No historical locations for this species occur in the survey area.** |
| **Mammals** | | | | |
| *Eumops perotis californicus* | Western mastiff bat | None/SSC/None | Occurs in open, semi-arid woodlands, coastal scrub, grasslands, palm oases, chaparral, desert scrub, and urban habitats with abundant roosting locations. | *Low Roosting; High Foraging*. An abundance of overpasses, bridges, and buildings provide crevices suitable for temporary roosting during foraging. Foraging habitat is present above the open water in the Santa Ana River and Burris Basin. A historical location within 1 mile of the survey area exists, but none are known in the survey area (Appendix D, Figure 8) (CDFW 2025b). |

**Notes:** BCC = Bird of Conservation Concern; FC = federal candidate; FP = federally protected; FE = federally endangered; FT = federally threatened; SE = state endangered; None = No status indicated for species; SE = state endangered; SSC = state species of special concern; WL = state watch list

**CNPS CRPR Rare Plant Ranking:** 1B = rare, threatened, or endangered in California and elsewhere; 2B = rare, threatened, or endangered in California but more common elsewhere; 3 = a watch list of species about which more information is needed; 4 = a watch list of species of limited distribution

**Bold text:** Species observed within the survey area.

### *Critical Habitat*

There is no critical habitat for sensitive plant or wildlife species in or within 1 mile of the survey area (CDFW 2025a, 2025b; USFWS 2025b).

### *Sensitive Plant Species Observed*

No sensitive plant species were observed during the survey. The list of plant species observed in the survey area during the biological resources survey is included in Appendix B of the BRTR (refer to Appendix D of the Draft EIR). A total of 34 plant taxa were observed on the project site, 19 (56 percent) of which were native and 15 (44 percent) of which were non-native.

### *Sensitive Wildlife Species Observed*

A total of 48 wildlife species, including five invertebrates, three fish, one amphibian, one reptile, 36 birds, and two mammals, were observed in the survey area during the biological resources

survey. Of the 48 wildlife species observed in the survey area, the following four species are designated as sensitive:

- American white pelican (*Pelecanus erythrorhynchos*)
- Double-crested cormorant (*Phalacrocorax auritus*)
- Least Bell's vireo (*Vireo bellii pusillus*)
- Yellow warbler (*Setophaga petechia*)

These sensitive wildlife species observed in the survey area are shown on Figure 9, Sensitive Species Observed, of the BRTR included as Appendix D to this Draft EIR.

**American White Pelican (*Pelecanus erythrorhynchos*), BCC, SSC:** An American white pelican was observed foraging in the Santa Ana River in the northern portion of the survey area during the 2023 biological survey (Appendix D, Figure 9). Suitable foraging habitat occurs in the Santa Ana River and Burris Basin in the northwestern portion of the survey area. No suitable nesting habitat occurs in the survey area, and no known nesting sites have been documented in or surrounding the survey area (Shuford and Gardali 2008).

**Double-Crested Cormorant (*Phalacrocorax auritus*), WL:** Double-crested cormorants were observed foraging in the Santa Ana River and perching on the sediment piles in the center of the river channel in the northern portion of the survey area during biological surveys. Suitable foraging habitat occurs in the Santa Ana River and Burris Basin in the northwestern portion of the survey area. No suitable nesting habitat occurs in the survey area.

**Least Bell's Vireo (*Vireo bellii pusillus*), FE, SE:** Least Bell's vireo was observed calling in the survey buffer, outside the project site, in the southern willow scrub in in the Former Ball Road Basin during the 2023 survey. The suitable nesting and foraging habitat for least Bell's vireo in the survey area is limited to the small stands of southern willow scrub in Burris Basin and the Former Ball Road Basin. There is potential for the species to move between the two stands of southern willow scrub over Ball Road and through the concrete box culvert that runs under the road connecting the two basins. No least Bell's vireo nests were observed during the survey.

**Yellow Warbler (*Setophaga petechial*), SSC:** Yellow warbler was observed in the survey buffer, outside the project site, in the southern willow scrub in the Former Ball Road Basin during the 2023 survey. The suitable nesting and foraging habitat for yellow warbler in the survey area is limited to the small stands of southern willow scrub in Burris Basin and the Former Ball Road Basin. The potential for this species to nest in the survey area is low because the available southern willow scrub does not have a well-developed canopy and is disturbed from apparent OCWD maintenance and the presence of unhoused encampments. Similar to least Bell's vireo, there is potential for the species to move between the two stands of southern willow scrub in the basins. No nests were observed during the survey.

### *Sensitive Wildlife Species Not Observed with a High Potential to Occur*

Based on the literature and database review, six sensitive wildlife species were considered for their potential to occur in the survey area but were not observed during the biological resources surveys (refer to Table 4.2-4). Two sensitive wildlife species, including American peregrine falcon (*Falco peregrinus anatum*) and western mastiff bat (*Eumops perotis californicus*), were determined to have a high potential to occur in the survey area but were not observed during the biological resource survey. These sensitive wildlife species with high potential to occur are shown on Figure 8, Sensitive Species with Potential to Occur, of the BRTR included as Appendix D to this Draft EIR.

**American Peregrine Falcon (*Falco peregrinus anatum*), FDL, BCC/SDL:** Suitable foraging habitat and prey is present in the Santa Ana River and Burris Basin and the Former Ball Road Basin in the survey area. However, no cliffs or high skyscrapers and bridges suitable for nesting are present in the survey area. One historical location for American peregrine falcon exists within 1 mile of the survey area, however, this species is not known to occur in the survey area (Appendix D, Figure 8, Sensitive Species with Potential to Occur) (CDFW 2025b).

**Western Mastiff Bat (*Eumops perotis californicus*), SSC:** Western mastiff bat, a CDFW Species of Special Concern, is North America's largest bat, with a long tail, dark gray fur, long narrow wings, and large ears that are oriented forward and joined at the midline above the forehead. Western mastiff bat typically roosts colonially in rock crevices on the face of steep rocky cliffs, rock outcrops, and abandoned quarries. This species has been known to occasionally roost in buildings and palm trees; however, roosting in these structures appears to occur temporarily during migration. Western mastiff bat forages primarily on large moths, also eating other insects including beetles, crickets, bees, dragonflies, cicadas, and plant bugs. This species forages over open habitats, including meadows, grasslands, ponds, reservoirs, bays, riparian zones, sometimes in urban environments opportunistically while traveling between higher quality habitats. Threats to this species include loss and fragmentation of rocky habitat through mining, water impoundments, and road construction, as well as poisoning from pesticide use.

Suitable foraging habitat is present above the open water in the Santa Ana River and Burris Basin and the narrow riparian fringes around Burris Basin and the Former Ball Road Basin. The survey area offers an abundance of overpasses, bridges, and buildings with crevices suitable for temporary roosting by the western mastiff bat during foraging. A historical location for this species exists within 1 mile of the survey area, but none are known in the survey area (Appendix D, Figure 8) (CDFW 2025b).

### *Nesting Birds*

The survey area contains suitable nesting habitat for several bird and raptor species protected under the California Fish and Game Code and MBTA. The majority of the survey area is developed, and specific to the Santa Ana River, lined with concrete and riprap, devoid of vegetation suitable for

most nesting birds and raptors. However, the survey area, particularly the Santa Ana River corridor, contains large expanses of open areas over slowly moving water suitable for insect- and aquatic-foraging bird species that may be attracted to the area for feeding and, therefore, may have higher potential to be found nesting within the survey area. The highest-quality suitable nesting habitat for riparian species occurs in the northwestern portion of the survey area, specifically the southern willow scrub, non-native woodland, disturbed mule fat scrub along the fresh open water of Burris Basin, and within the emergent wetland and southern willow scrub in the Former Ball Road Basin. Suitable nesting habitat for cavity nesters is present in the trees, both native and ornamental, and structures throughout and surrounding the survey area. A large amount of avian activity was observed in the southern willow scrub of the Former Ball Road Basin, including red-winged blackbirds (*Agelaius phoeniceus*), a yellow warbler, and a least Bell's vireo. The riprap-lined banks of the Santa Ana River channel and the shores of Burris Basin and the Former Ball Road Basin also serve as suitable nesting habitat for ground-nesting shorebirds, such as killdeer (*Charadrius vociferus*), of which many were observed perching on the deposited sediment "islands" and banks in the river channel during the 2023 surveys. Forster's terns (*Sterna forsteri*) were observed hunting mosquitofish within the Santa Ana River channel and could be using the deposited sediment islands or other shoreline habitats in the survey area for nesting. Additionally, human-made infrastructure, such as light posts, building ledges, and overpasses provide potential nesting habitat for birds and raptors. Large colonies of cliff swallows (*Petrochelidon pyrrhonota*) were observed nesting under the Ball Road overpass in the survey area. Nesting materials were observed on parking lot light posts immediately west of the survey area in the Honda Center parking lot and were likely used by nesting osprey (*Pandion haliaetus*) hunting in the Santa Ana River corridor or the basins.

### *Roosting Bats*

The survey area contains suitable roosting and foraging habitat for both common and sensitive bat species. Several concrete bridge overpasses span the width of the Santa Ana River channel and provide crevices suitable for structure-dwelling bats, including Mexican long-tongued bat (*Choeronycteris mexicana*) and big brown bat (*Eptesicus fuscus*). Ornamental and native tree species present on either side of the river channel also provide suitable roosting habitat for tree-roosting bats, such as such as the hoary bat (Lasiurus cinereus), western red bat (*Lasiurus blossevillii*), and western yellow bat (*Lasiurus xanthinus*). Further, these potential roosting sites are within proximity to open water where bats that forage on insects over sources of open water, such as the western mastiff bat. No bats were observed using the survey area for roosting or foraging during the biological resource surveys. However, the availability of suitable habitat indicates bats are likely roosting and foraging in the survey area.

### *Wildlife Corridors and Habitat Linkages*

Wildlife corridors provide routes for local movement and also regional linkages and corridors, often following linear topographic, vegetation, or water features. These corridors can be continuous habitats features or "steppingstone" areas, providing critical rest and foraging areas for, for example, birds traveling along migratory routes. Local routes of movement provide constant connections to resources that include sources of water, home/cover sites, and foraging areas. Regional linkages and movement corridors provide larger patches of open space to allow relatively free movement of wildlife species along multiple paths between important resources. These areas allow for not only long-term genetic flow between subpopulations but also critical pathways of seasonal/migratory movements. Larger predatory mammals often use regional corridors for hunting and reproduction needs. Potential wildlife corridors can include streams, riparian areas, and culverts under roadways. Habitat characteristics considered in the 2023 survey included topography, habitat quality, and adjacent land uses.

The survey area is likely to be used as a wildlife movement corridor and provides suitable nesting, foraging, and dispersal areas primarily for highly mobile species like bats and birds, and some movement opportunities for mammals. The area surrounding the survey area consists of dense urban development which restricts movement for many small mammals, amphibians, and reptiles. Mesocarnivores and medium-sized mammals, such as raccoon (*Procyon lotor*), coyote (*Canis latrans*), or bobcat (*Lynx rufus*), have some potential to use the access roads that border the Santa Ana River channel for movement and may use the channel as a water source when moving through the area. The Santa Ana River flows from the northeast and has upstream connection to large open space preserves such as Chino Hills State Park and Santiago Oaks Regional Park, approximately 8 and 5 miles northeast, respectively. The Santa Ana River channel is one of the widest and longest uninterrupted paths to these open space areas through the dense urban sprawl of Orange County, and while high-quality native habitat is scarce, it presents a viable route of movement through these areas.

The survey area also holds value for migrating birds flying through to wintering grounds that are protected by the MBTA. The survey area is within the path of the Pacific Flyway, along which millions of birds, especially waterfowl, migrate annually between Alaska and Canada, through California, to Mexico and South America. The Santa Ana River corridor and surrounding freshwater basins provide an important stopover area for a large variety of birds during their annual migration. Open water attracts shorebirds including various terns, stilts, and egrets that use waterways to forage.

## 4.2.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the project would have a significant impact on biological resources if it would:

- **Threshold BIO-1:** Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- **Threshold BIO-2:** Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- **Threshold BIO-3:** Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- **Threshold BIO-4:** Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- **Threshold BIO-5:** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- **Threshold BIO-6:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The Initial Study (Appendix A to this EIR) determined that the following thresholds would have less than significant or no impact, and these environmental topics will not be addressed further in this section of the Draft EIR.

- Threshold BIO-5
- Threshold BIO-6

### 4.2.3 Plans, Programs, and Policies

This section addresses plans, programs, and policies relevant to the project.

**PPP BIO-1** Potential direct/indirect impacts to common and sensitive bird and raptor species will require compliance with the California Fish and Game Code Section 3503.

**PPP BIO-2** The project is required to comply with the NPDES Municipal Permit and other regional permits issued by the Santa Ana RWQCB regulations through implementation of site design, source control, and incorporation of construction and permanent BMPs.

**PPP BIO-3** The project is required to comply with the California Building Code and all other applicable laws, rules, and regulations governing grading as required by the Cities of Anaheim and Orange.

**PPP BIO-4** The project is required to comply with regulatory permit requirements under CWA Sections 404 and 401, Rivers and Harbors Act Section 408, and California Fish and Game Code Section 1602 administered by CDFW.

## 4.2.4 Environmental Impacts

Direct impacts to biological resources occur when significant alterations or destruction occurs during the course of, or because of, project implementation. Examples of such impacts include removing, disturbing, or grading vegetation; dredging or grading a stream bank; filling wetlands with any materials; erecting any structures, including in a stream; and severing or physically restricting wildlife corridors and the distribution of individual species or resources. Other direct impacts may include loss of foraging or nesting habitat and loss of individual species as a result of habitat clearing.

Indirect impacts may include elevated levels of noise or lighting, change in surface water hydrology within a floodplain, and increased erosion or sedimentation. These types of indirect impacts can affect vegetation communities or their potential use by sensitive species. They can also cause the disruption of normal wildlife functions or activities, impacting individual species.

The following sections address various potential impacts relating to biological resources that could result from implementation of the project.

### 4.2.4.1 Threshold BIO-1: Candidate, Sensitive, or Special-Status Species

#### Impact Analysis

#### Sensitive Plant Species

##### *Direct Impacts*

No sensitive plant species were identified during the survey conducted as part of the BRTR. None of the sensitive plant species analyzed in the literature and database review were determined to have a high potential to occur in the survey area. Implementation of the project would result in impacts primarily to developed land and non-native habitats, including the concrete and riprap-lined Santa Ana River channel, that do not provide suitable habitat for sensitive plant species. The native and aquatic habitats in the northern end of the project site are disturbed and have little to no potential to support sensitive plant species. Therefore, direct impacts to sensitive plant species are considered less than significant.

##### *Indirect Impacts*

No sensitive plant species were identified during the survey within the survey area, therefore, no temporary construction or long-term operational indirect impacts to sensitive plant species are anticipated. Temporary indirect impacts to sensitive plant species, if present, could result during

construction of the project and may include dust, which could disrupt plant vitality in the short term, or construction-related soil erosion and runoff that may permanently impact plant viability. Permanent edge effects may include intrusions by humans and therefore possible trampling of individual plants, invasion by exotic plant and wildlife species, exposure to urban pollutants (fertilizers, pesticides, herbicides, and other hazardous materials), soil erosion, litter, and hydrologic changes (e.g., surface and groundwater level and quality). However, the project site and surrounding area already consist of disturbed habitat and urban uses subject to these edge effects. Additionally, the required compliance with the NPDES regulations through implementation of site design, source control, and incorporation of construction and permanent BMPs would ensure that indirect impacts are reduced to a less than significant level. Indirect impacts to sensitive plants during construction activities and operation of the project are less than significant.

## Sensitive Wildlife Species

### *Direct Impacts*

As described in Section 4.2.1.2, Existing Conditions, four sensitive wildlife species were observed during survey, and two additional wildlife species have a high potential to forage in the survey area:

- American white pelican (observed)
- Double-crested cormorant (observed)
- Least Bell's vireo (observed)
- Yellow warbler (observed)
- American peregrine falcon (high potential to forage)
- Western mastiff bat (high potential to forage)

Therefore, the project has the potential to directly impact these species during construction activities through temporary displacement of individual wildlife or temporarily disrupt portions of their habitat (foraging habitat for American white pelican, double-crested cormorant, American peregrine falcon, and western mastiff bat, and suitable nesting and foraging habitat for least Bell's vireo and yellow warbler). While implementation of the project could result in temporary direct loss of habitat, including nesting and foraging habitat, for many of the sensitive wildlife species observed or with a high potential to occur in the survey area, the project proposes improvements to the Santa Ana River corridor, including aquatic and upland habitat restoration. Therefore, implementation of the project would result in a permanent increase in potentially suitable nesting and foraging habitat for sensitive wildlife species after project completion. Therefore, direct impacts to these species would be less than significant.

### *Temporary Direct Impacts*

Potential temporary direct impacts on sensitive wildlife species observed or determined to have a high potential to occur are discussed below. Acreage estimates for temporary direct impacts on

sensitive wildlife species within the survey area will be determined based on site-specific assessments as project details are refined. Because the timing of construction for different components and associated precise disturbance areas are currently unknown, the Draft EIR analysis assumes a conservative estimate of disturbing the entire project site. Prior to start of construction activities, the City of Anaheim will be required to implement Mitigation Measures BIO-1 through BIO-4 to ensure that temporary direct impacts related to wildlife species are reduced to a less than significant level. Mitigation measures include biological resources monitoring and reporting, pre-construction surveys, habitat restoration and/or compensation, and avoidance measures, ensuring impacts remain less than significant. Temporary direct impacts on these sensitive wildlife species would be mitigated to a less than significant level.

**Aquatic Communities:** Approximately 83.88 acres of aquatic communities, including fresh water, freshwater emergent wetland, and non-vegetated channel, occur in the survey area (refer to Table 4.2-2). Of this total, approximately 77.81 acres of aquatic communities occur on the project site and have the potential to be temporarily impacted during project implementation. These aquatic communities provide suitable foraging habitat for sensitive American white pelican and double-crested cormorant, both observed using the Santa Ana River corridor in the northern portion of the survey area. These habitats also provide suitable foraging habitat for American peregrine falcon and western mastiff bat, both determined to have a high potential to occur in the survey area. The Santa Ana River (defined as a non-vegetated channel) provides a wide, open area above fresh water which American peregrine falcon and western mastiff bat can use as foraging habitat. Direct temporary impacts to fresh water, freshwater emergent wetland, and non-vegetated channel could result in direct impacts to American white pelican double-crested cormorant, American peregrine falcon, and western mastiff bat in the form of temporary loss of foraging habitat. Therefore, potential temporary direct impacts to these sensitive wildlife species would be potentially significant without mitigation. However, prior to start of construction activities, the City of Anaheim will be required to implement Mitigation Measures BIO-1 through BIO-3 to ensure that temporary direct impacts to aquatic communities are reduced to a less than significant level.

**Scrub and Riparian Scrub Vegetation Communities:** The 3.17 acres of scrub and riparian scrub vegetation communities, including Diegan coastal sage scrub, mule fat scrub (disturbed), and southern willow scrub. Although they are of low quality, these communities have the potential to provide some suitable nesting and foraging habitat for sensitive wildlife species. Of this total, approximately 1.25 acres of scrub and riparian scrub vegetation communities occur on the project site and have the potential to be temporarily impacted during project implementation. Least Bell's vireo and yellow warbler were observed using the southern willow scrub in the Former Ball Road Basin in the northwestern portion of the survey area. There is potential for least Bell's vireo and yellow warbler to use these vegetation communities in Burris Basin and the Former Ball Road Basin by moving across Ball Road, which separates the two stands of southern willow scrub. Direct

temporary impacts to Diegan coastal sage scrub, mule fat scrub (disturbed), and southern willow scrub could result in direct impacts to least Bell's vireo and yellow warbler in the form of temporary loss of foraging habitat. Therefore, potential temporary direct impacts to these sensitive wildlife species would be potentially significant without mitigation. However, prior to start of construction activities, the City of Anaheim will be required to implement Mitigation Measures BIO-1 through BIO-3 to ensure that temporary direct impacts to scrub and riparian scrub vegetation communities are reduced to a less than significant level.

**Non-Native Woodland:** The 0.22 acre of non-native woodland is limited to a narrow stand between The Islands Golf Center putting green and Burris Basin in the northwestern portion of the project site and does not provide high-quality nesting, roosting, or foraging habitat for the sensitive wildlife species observed or with a high potential to occur in the survey area. Therefore, potential impacts to sensitive wildlife species from removal of the non-native woodland would be less than significant, and no mitigation is required.

**Developed Land:** The 6.35 acres of disturbed habitat and 74.62 acres of developed land throughout the survey area provides little to no suitable habitat value for the sensitive species observed or with a high potential to occur in the survey area. However, a large number of overpasses, bridges, and buildings with crevices are present within the developed land that could provide suitable temporary roosting habitat for the western mastiff bat foraging on the project site. Potential impacts to western mastiff bat roosting habitat are discussed further under Sensitive Roosting Bats section below. Therefore, direct temporary impacts to other sensitive wildlife species are unlikely. Potential impacts to sensitive wildlife species would be less than significant, and no mitigation is required.

### *Indirect Impacts*

Temporary construction-related and long-term operational indirect impacts to wildlife generally include lighting, increased human activity, hydrologic quality (increased turbidity, excessive sedimentation, flow interruptions, and changes in water temperature), noise, vibration, and trash and garbage, which can attract both introduced terrestrial and native terrestrial and avian predators (such as American crows [*Corvus brachyrhynchos*], common ravens [*Corvus corax*], coyotes, domestic dogs [*Canis familiaris*], raccoons, and striped skunks [*Mephitis mephitis*]). These indirect impacts in the form of habitat disturbance and potential predation could have a significant impact on the sensitive wildlife species observed or determined to have a high potential to occur in the survey area. However, the project would be required to comply with the NPDES regulations through implementation of site design, source control, and incorporation of construction and permanent BMPs. Furthermore, the project would provide improvements to the Santa Ana River corridor, which would ultimately result in a permanent increase in potentially suitable nesting and foraging habitat for sensitive wildlife species. The project is designed to implement sustainable project elements that would transform the Santa Ana River to create a visually appealing asset and provide recreational amenities while improving the ecology of the river corridor. Therefore,

indirect impacts to sensitive wildlife during construction activities and operation of the project would be less than significant, and no mitigation is required.

**Nesting Birds:** The project site consists primarily of the concrete- and riprap-lined Santa Ana River channel, which provides limited habitat suitable for nesting birds protected under the California Fish and Game Code and MBTA. Much of the highest-quality suitable nesting habitat occurs in the northwestern portion of the survey buffer, outside the project site boundary, specifically the southern willow scrub, non-native woodland, and disturbed mule fat scrub along the fresh open water of Burris Basin, and within the emergent wetland and southern willow scrub in the Former Ball Road Basin. A large amount of avian activity was observed within the vegetation in the survey buffer, including red-winged blackbird, least Bell's vireo, and yellow warbler, in the southern willow scrub of the Former Ball Road Basin. In addition, the ornamental trees within the non-native woodland surrounding Burris Basin in the northwestern portion of the project site may provide suitable nesting habitat for bird and raptor species. No active nests or nesting behavior were observed during the 2023 biological survey.

The project would be required to implement regulations protecting sensitive nesting birds, including the California Fish and Game Code and MBTA. Due to the known presence of federal and state endangered bird species, potential indirect impacts to these sensitive nesting birds protected under the California Fish and Game Code and MBTA are considered potentially significant without mitigation. However, prior to start of construction activities, the City of Anaheim will be required to implement Mitigation Measures BIO-1 through BIO-4 to ensure that indirect impacts related to nesting birds are reduced to a less than significant level.

**Sensitive Roosting Bats:** Suitable roosting habitat for sensitive bat species, including western mastiff bat, Mexican long-tongued bat, hoary bat, big brown bat, and western red bat, occurs in the structures and ornamental trees within the developed land throughout the survey area. Although roosting bats were not observed during the biological surveys, the availability of suitable roosting with nearby foraging habitat suggests that roosting is likely occurring in the survey area. The majority of the developed land uses currently in the survey area would remain in place, and no impacts would result to the potential roosting habitat provided by the trees or structures in those areas. Any potential direct impacts to the developed land in the survey area, particularly the removal of bridges, overpasses, or ornamental trees, could result in indirect impacts to sensitive bats as permanent and temporary roosting habitat loss. Potential indirect impacts to sensitive roosting bat species during construction are considered potentially significant without mitigation. However, prior to start of construction activities, the City of Anaheim will be required to implement Mitigation Measures BIO-1 to ensure that temporary indirect impacts related to wildlife species, including sensitive roosting bats are reduced to a less than significant level.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** Mitigation Measures BIO-1 through BIO-4 are required.

#### 4.2.4.2 Threshold BIO-2: Riparian Habitat and Other Sensitive Natural Communities

### Impact Analysis

#### *Direct Impacts*

Nine vegetation communities and/or land cover types occur in the survey area (refer to Table 4.2-2) that cover 161.89 acres. Construction of the project has the potential to impact six sensitive vegetation communities that occur in the survey area, including 6.63 acres of fresh water, 0.97 acre of freshwater emergent wetland, 76.28 acres of non-vegetated channel, 1.16 acres of Diegan coastal sage scrub, 0.38 acre of mule fat scrub (disturbed), and 1.63 acres of southern willow scrub.

Acreage estimates for temporary direct impacts on sensitive vegetation communities within the survey area will be determined as project details are refined. Because the timing of construction for different components and associated precise disturbance areas are currently unknown, the Draft EIR analysis assumes a conservative estimate of disturbing the entire project site. Prior to start of construction activities, the City of Anaheim will be required to implement Mitigation Measures BIO-1 through BIO-3 to ensure that temporary direct impacts related to sensitive vegetation communities are reduced to a less than significant level. Mitigation measures include biological resources monitoring and reporting, pre-construction surveys, habitat restoration and/or compensation, and avoidance measures, ensuring impacts remain less than significant with mitigation incorporated.

#### *Indirect Impacts*

Most indirect impacts to sensitive plant species described in Section 4.2.4.1 would also result in potentially significant indirect impacts to sensitive vegetation communities. As previously discussed in Section 4.2.4.1, the project is required to comply with the NPDES regulations through implementation of site design, source control, and incorporation of construction and permanent BMPs. The project is designed to implement sustainable project elements that would transform the Santa Ana River to create a visually appealing asset and provide recreational amenities while improving the ecology of the river corridor. Therefore, indirect impacts to sensitive vegetation communities during construction activities and project operation would be less than significant, and no mitigation is required.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** Mitigation Measures BIO-1 through BIO-3 are required.

#### 4.2.4.3 Threshold BIO-3: Jurisdictional Aquatic Resources

### Impact Analysis

#### *Direct Impacts*

As discussed in Section 4.2.1.2, a total of 85.51 acres of non-wetland waters, freshwater emergent wetland, and riparian potentially under the jurisdiction of the USACE, RWQCB, and CDFW occur in the survey area. These potentially jurisdictional aquatic resources in the survey area include approximately 82.91 acres of non-wetland waters (Santa Ana River, Collin's Channel, Burris Basin, and the Former Ball Road Basin), 0.97 acre of wetland (emergent wetland in the former Ball Road Basin), and 1.63 acre of riparian (southern willow scrub in Burris Basin). As discussed in Section 4.2.4.1 (Threshold BIO-1) under Sensitive Vegetation Communities, the project would result in direct impacts to the aquatic and riparian vegetation communities potentially under the jurisdiction of the USACE, RWQCB, and CDFW. Further, the reach of the Santa Ana River in the survey area contains the SAR1 Levee System (Upstream Reach) and, therefore, is under the jurisdiction of the USACE pursuant to the Rivers and Harbors Act, Section 408.

Acreage estimates for temporary direct impacts to the aquatic and riparian vegetation communities within the survey area will be determined based on site-specific assessments as project details are refined. Because the timing of construction for different components and associated precise disturbance areas are currently unknown, the Draft EIR analysis assumes a conservative estimate of disturbing the entire project site. Prior to start of construction activities, the City of Anaheim will be required to implement Mitigation Measures BIO-1 through BIO-3 to ensure that temporary direct impacts related to jurisdictional aquatic resources are reduced to a less than significant level. Mitigation measures include biological resources monitoring and reporting, pre-construction surveys, habitat restoration and/or compensation, and avoidance measures, ensuring impacts remain less than significant.

As previously discussed in Section 4.2.1.1, Regulatory Setting, and in Section 2.5.1, Other Agency Approvals, the project is required to comply with federal, state, and local regulations protecting biological resources. This includes complying with applicable federal and state regulations that ensure no net loss of aquatic resources, such as Sections 404 and 401 of the federal CWA, Section 408 of the Rivers and Harbors Act, Section 1602 of the California Fish and Game Code, and Porter-Cologne Act. The project is required to obtain appropriate regulatory permits from the USACE, RWQCB, and CDFW and provide compensatory mitigation for impacts prior to the start of construction that would ensure that no net loss of resources would result from implementation of the project. Therefore, direct impacts to jurisdictional aquatic resources would be less than significant with mitigation incorporated.

#### *Indirect Impacts*

Most of the indirect impacts to sensitive plant species and sensitive vegetation communities described in Section 4.2.4.1 would also result in potentially significant indirect impacts to jurisdictional aquatic resources. As previously discussed in Section 4.2.4.1, the project would be required to comply with the NPDES regulations, through implementation of site design, source control, and incorporation of construction and permanent BMPs. The project is designed to implement sustainable project elements that would transform the Santa Ana River to create a visually appealing asset and provide recreational amenities while improving the ecology of the river corridor. Therefore, indirect impacts to jurisdictional aquatic resources during construction activities and project operation would be less than significant, and no mitigation is required.

**Level of Significance Before Mitigation:** Potentially significant.

**Mitigation Measures:** Mitigation Measures BIO-1 through BIO-3 are required.

### 4.2.4.4 Threshold BIO-4: Wildlife Corridors and Habitat Linkages

### Impact Analysis

#### *Direct Impacts*

As discussed in Section 4.2.1.2, the survey area is likely used as a wildlife movement corridor and provides suitable nesting, foraging, and dispersal areas primarily for highly mobile species like bats and birds, and some movement opportunities for mammals. The dense urban development surrounding the survey area restricts movement opportunities for many small and large mammals, amphibians, and reptiles. However, mesocarnivores and medium-size mammals, such as raccoons, coyotes, or bobcats, could use the access roads that border the Santa Ana River channel for movement and may use the channel as a water source when moving through the area. The Santa Ana River channel, the widest and longest uninterrupted path through the dense urban sprawl of Orange County connecting to open space areas to the north, presents a viable route of wildlife movement through the survey area. The survey area also holds value for migrating birds, protected by the MBTA, flying within the Pacific Flyway to their wintering grounds.

Project impacts are proposed primarily in areas adjacent to and within existing development and would only be temporary impacts that occur during construction activities in the survey area. Existing wildlife corridors would remain in place, and their quality would increase after implementation of the project. Therefore, significant direct long-term impacts to wildlife corridors and habitat connectivity provided by the survey area are not expected to occur. While project activities may temporarily disrupt wildlife movement through the survey area, the project is not expected to have a significant impact on habitat linkage over the long term because the overall habitat quality of the existing corridors would be maintained and improved following project implementation. Therefore, impacts to wildlife corridors and habitat connectivity would be less than significant.

***Indirect Impacts***

Wildlife movement corridors and habitat connectivity would be impacted by many of the other indirect effects discussed in Section 4.2.4.1, for impacts to sensitive wildlife species. As previously discussed in that section, the project is required to comply with the NPDES regulations through implementation of site design, source control, and incorporation of construction and permanent BMPs. The project is designed to implement sustainable project elements that would transform the Santa Ana River to create a visually appealing asset and provide recreational amenities while improving the ecology of the river corridor. Therefore, indirect impacts to wildlife movement corridors and habitat connectivity during construction activities and operation of the project would be less than significant.

**Level of Significance Before Mitigation:** Less than significant.

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

## 4.2.5 Cumulative Impacts

This section addresses various potential cumulative impacts relating to biological resources that could result from implementation of the project.

### 4.2.5.1 Cumulative Threshold BIO-1: Candidate, Sensitive, or Special-Status Species

Nearby surrounding areas with similar biological resources defined the cumulative survey area specific to biological resources. Cumulative projects in the vicinity of the survey area would have the potential to result in impacts to sensitive plant and wildlife species, including loss of habitat. Cumulative projects that are proposed in the cities of Anaheim and Orange would impact primarily developed land covers but could potentially include portions of undeveloped open space. Implementation of these cumulative projects have the potential to result in impacts to sensitive plant and wildlife species. However, as with the project, all other cumulative projects are required to comply with CEQA, including limiting impacts to biological resources. Through implementation of Mitigation Measures BIO-1 through BIO-4, the project would reduce temporary and permanent impacts to sensitive plant and wildlife species to less than significant and would therefore not contribute to cumulative impacts. Once the project is completed, the project would improve the river and riverbed's groundwater recharge potential and improve the river corridor's ecology (flora and fauna), resulting in net benefit pertaining to biological resources. Therefore, cumulative impacts to sensitive plant and wildlife species would be less than significant with mitigation incorporated.

#### 4.2.5.2 Cumulative Threshold BIO-2: Riparian Habitat and Other Sensitive Natural Communities

As discussed in Section 4.2.5.2, the project's implementation of Mitigation Measures BIO-1 through BIO-3 would ensure that the project, in combination with other cumulative projects in the cities of Anaheim and Orange, would not result in cumulatively considerable impacts to biological resources, specifically sensitive vegetation communities. In fact, the project would provide a net benefit to the vegetation communities in the survey area by protecting and restoring the functions of the Santa Ana River aquatic and adjacent habitats. Therefore, because the project minimizes impacts to sensitive vegetation communities, it would not result in a cumulatively considerable impact to sensitive vegetation communities.

#### 4.2.5.3 Cumulative Threshold BIO-3: Jurisdictional Aquatic Resources

As discussed in Section 4.2.5.2, the project's implementation of Mitigation Measures BIO-1 through BIO-3 would ensure that the project, in combination with other cumulative projects in the cities of Anaheim and Orange, would not result in cumulatively considerable impacts to biological resources, specifically jurisdictional aquatic resources. In fact, the project would provide a net benefit to the vegetation communities in the survey area by protecting and restoring the functions of the Santa Ana River aquatic and adjacent habitats. Therefore, because the project minimizes impacts to jurisdictional aquatic resources, it would not result in a cumulatively considerable impact to jurisdictional aquatic resources. In addition, cumulative projects with potential impacts to jurisdictional aquatic resources would be required to comply with applicable federal and/or state regulations that ensure no net loss of resources, such as Section 404 of the federal CWA; Sections 9, 10, and 408 of the Rivers and Harbors Act; Section 1602 of the California Fish and Game Code; and the Porter-Cologne Act. Therefore, because the project would minimize impacts to jurisdictional aquatic resources and would comply with federal and state permitting regulations, the project would not result in a cumulatively considerable impact to jurisdictional aquatic resources.

#### 4.2.5.4 Cumulative Threshold BIO-4: Wildlife Corridors and Habitat Linkages

As discussed in Section 4.2.4.4, the project is not expected to significantly impact wildlife corridors and habitat linkages over the long term because the overall habitat quality of the existing corridors would be maintained following project implementation. Therefore, the project would not result in a cumulatively considerable impact to wildlife corridors and habitat linkages.

### 4.2.6 Level of Significance Before Mitigation

Upon implementation of the plans, programs, and policies, the following threshold would be less than significant.

- **Threshold BIO-4:** Implementation of the project would not adversely impact wildlife corridors and habitat linkages.

Without mitigation, the following thresholds would be potentially significant:

- **Threshold BIO-1:** Implementation of the project could adversely impact special status wildlife species.
- **Threshold BIO-2:** Implementation of the project could adversely impact sensitive vegetation communities.
- **Threshold BIO-3:** Implementation of the project could adversely impact state or federally protected wetlands.

## 4.2.7 Mitigation Measures

### 4.2.7.1 Threshold BIO-1: Candidate, Sensitive, or Special-Status Species

**BIO-1:** **Qualified Monitoring Biologist.** Before the start of construction activities, the City of Anaheim project manager (or designee) shall retain a qualified monitoring biologist to implement required monitoring and document the names and resumes of the people involved in the biological monitoring of the project and a schedule for the proposed work.

The qualified monitoring biologist shall be responsible for the following monitoring and reporting tasks:

- **Biological Construction Mitigation/Monitoring Exhibit.** Before the start of construction within the future site-specific proposed survey area, the qualified monitoring biologist shall submit a Biological Construction Mitigation/Monitoring Exhibit, which includes limits of work, proposed monitoring schedule, bird, focused sensitive species, or other wildlife surveys/survey schedules (including general avian nesting and U.S. Fish and Wildlife Service protocol), timing of surveys, bird construction avoidance areas/noise buffers/barriers, other impact avoidance areas, and any subsequent requirements determined by the qualified monitoring biologist. The Biological Construction Mitigation/Monitoring Exhibit shall include the construction site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule for construction activities. Where the potential for impacts to biological resources is limited (e.g., construction within a footprint that consists entirely of previously developed or disturbed lands), the Biological Construction Mitigation/Monitoring Exhibit may be limited to a pre- and post-maintenance verification inspection. For highly sensitive resource areas, full-time biological monitors may be required. The Biological Construction Mitigation/Monitoring Exhibit shall be approved by the City of Anaheim project manager (or designee) before the start of construction.
- **Avian Protection.** To avoid any direct impacts to raptors and/or any migratory birds protected under the Migratory Bird Treaty Act, removal of habitat that supports active nests on the proposed area of disturbance should occur outside the breeding

season for these species (January 15 to August 31). If removal of habitat on the proposed area of disturbance must occur during the breeding season, the monitoring biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey must be conducted within 10 calendar days before the start of construction, the results of which must be submitted to the City of Anaheim project manager (or designee) for review and approval before initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan as deemed appropriate by the City of Anaheim shall be prepared and include proposed measures to be implemented to ensure that disturbance of raptor and bird breeding activities are avoided. The report or mitigation plan shall be submitted to the City of Anaheim for review and approval and implemented to the satisfaction of the City of Anaheim. The monitoring biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

- **Resource Marking/Protection.** Prior to the start of construction activities within the future site-specific proposed survey area, the qualified monitoring biologist shall supervise the placement of orange construction fencing or similar visible marker, staking, or flagging along the limits of the construction area, particularly where adjacent to sensitive biological avoidance areas, as shown on the Biological Construction Mitigation/Monitoring Exhibit to ensure crews remain within the approved construction limits. These demarcations shall not be required for areas with existing barriers, such as chain-link fencing, along the limits or facilities that are within and/or adjacent to developed and non-sensitive habitat areas. This task shall include flagging plant specimens and delineating buffers to protect sensitive biological resources (e.g., habitats, sensitive plant and wildlife species, including nesting birds) prior to construction.
- **Cover Trenches.** The qualified monitoring biologist shall oversee the construction site so that cover and/or escape routes for wildlife from excavated areas shall be provided daily. Steep trenches, holes, and excavations during construction shall be covered at night with backfill, plywood, metal plates, or other means, and if plastic sheeting is used, the edges must be covered with soils such that small wildlife cannot access the excavated hole. Soil piles shall be covered at night to prevent wildlife from burrowing in. Sandbags shall weigh down the edges of the sheeting. These areas may also be fenced to prevent wildlife from gaining access. Exposed trenches, holes, and excavations shall be inspected twice daily (i.e., each morning and before sealing the exposed area) by the qualified monitoring biologist to monitor for wildlife entrapment. Excavations shall provide an earthen ramp to allow for a wildlife escape route. The qualified monitoring biologist shall verify that the contractor has covered all steep-walled trenches or excavations prior to the end of construction daily. If

wildlife species are encountered within any trenches or excavated areas, the qualified monitoring biologist shall remove them, if possible, or provide them with a means of escape (e.g., a ramp or sloped surface at no greater than a 30-degree angle) and allow the species to disperse. In addition, the qualified monitoring biologist shall train construction personnel to increase awareness of the possible presence of wildlife beneath vehicles and equipment and to use best judgment to avoid killing or injuring wildlife (refer to Pre-Construction Meeting/Education).

- **Structure Clearance.** Before the issuance of any permit to allow for the removal or demolition of trees on the project site (particularly any ornamental trees in the developed land areas), the qualified monitoring biologist shall conduct clearance surveys to flush out any wildlife species nesting, roosting, or otherwise occupying the trees. If wildlife species are encountered within any of the trees (outside the general bird nesting season), the qualified monitoring biologist shall remove them, if possible, or provide them with a means of escape and allow the species to disperse. If tree-roosting bats are suspected, slow removal by gently pushing the tree over with heavy equipment is required.
- **Pre-Construction Meeting/Education.** Before the start of any construction activity where the site plan for the construction area indicates that significant impacts to biological resources may occur, a pre-construction meeting shall be held on site with the following in attendance: City of Anaheim project manager (or designee), the construction contractor (if applicable), and the qualified monitoring biologist. At this meeting, the qualified monitoring biologist shall identify and discuss the construction protocols that apply to the proposed activities and the sensitive nature of the adjacent habitat with appropriate project personnel.

  At the pre-construction meeting, the qualified monitoring biologist shall submit to the construction contractor a copy of the Biological Construction Mitigation/Monitoring Exhibit that identifies areas to be protected, fenced, and monitored. This data shall include all buffer limits, if applicable.

  Before the start of construction activities, the qualified monitoring biologist shall meet with the construction contractor and crew and conduct an on-site educational session regarding the need to avoid impacts outside the approved construction footprint and to protect sensitive plants and wildlife that may occur at the specific facility. This may include but not be limited to explanations of the avian and aquatic resource buffers, the flag system for retention of sensitive plants, and clarification of acceptable access routes/methods and staging areas.
- **Biological Monitoring and Reporting.** The qualified monitoring biologist shall inspect/monitor the project construction area in accordance with the approved Biological Construction Mitigation/Monitoring Exhibit. This may be limited to pre-

and post-maintenance inspections, weekly visits, or full-time monitoring, as determined by the qualified monitoring biologist.

The qualified monitoring biologist shall document monitoring events via a Consultant Site Visit Record. This record shall be sent to the project manager each month. However, if weekly reports are submitted as part of a separate agency permit requirement, these reports may be forwarded to the project manager in place of Consultant Site Visit Record submittals.

If no deviations from the construction site plan occur during maintenance, no additional documentation is required. However, if deviations from the site plan do occur, such as unanticipated impacts to sensitive vegetation communities or unanticipated discharge of pollutants, a Final Monitoring Report shall be prepared within 3 months following the completion of mitigation monitoring detailing maintenance and monitoring that occurred and any remedial or compensatory measures taken.

**BIO-2:** **Sensitive Vegetation Communities and Jurisdictional Aquatic Resources Impacts Mitigation.** Any direct impacts to sensitive vegetation communities or jurisdictional aquatic resources would require mitigation to comply with state and/or federal authorizations in accordance with the minimum ratios described in the following table and the ratios defined in any state and/or federal permit(s) issued for the project.

**Mitigation Ratios for Potential Impacts to Sensitive Vegetation Communities and Jurisdictional Aquatic Resources**

| Vegetation Community | Jurisdiction | Minimum Mitigation Ratio |
|---|---|---|
| Fresh Water | USACE/RWQCB/CDFW | 2:1 |
| Freshwater Emergent Wetland | USACE/RWQCB/CDFW | 2:1 |
| Non-Vegetated Channel | USACE/RWQCB/CDFW | 2:1 |
| Diegan Coastal Sage Scrub | CDFW | 2:1 |
| Mule Fat Scrub (Disturbed) | CDFW | 2:1 |
| Southern Willow Scrub | USACE/RWQCB/CDFW | 2:1 |

**Notes:** CDFW = California Department of Fish and Wildlife; RWQCB = Regional Water Quality Control Board; USACE = U.S. Army Corps of Engineers

- Potential direct impacts to sensitive vegetation communities, including jurisdictional aquatic resources, resulting from project implementation shall be mitigated through one of the following two options:
  - Project compensatory mitigation for proposed impacts to sensitive vegetation communities, including jurisdictional aquatic resources, shall be provided through in-kind and on-site creation, enhancement, and/or restoration. A Habitat Mitigation and Monitoring Plan shall be provided and prepared in accordance with the City of Anaheim and regulatory agency requirements.

- Compensatory mitigation requirements that are not able to be satisfied through on-site creation, enhancement, and/or restoration shall be satisfied through the acquisition of mitigation bank credits via a resource agency-approved mitigation site within the Santa Ana River Watershed or by acquisition of other approved off-site mitigation credits. Prior to implementation of project construction impacts that would require compensatory mitigation, documentation demonstrating the availability of mitigation credits (i.e., credit ledger) at the approved mitigation site must be submitted to the City of Anaheim project manager (or designee) for confirmation.

When proposed mitigation involves habitat enhancement, restoration, or creation, the Habitat Mitigation and Monitoring Plan shall include the following information:

- Conceptual planting plan including planting zones, grading, and irrigation.
- Seed mix/planting palette.
- Planting specifications.
- Monitoring program including success criteria.
- Long-term maintenance and preservation plan.

For mitigation that involves habitat acquisition, the Habitat Mitigation and Monitoring Plan shall include the following:

- Location of proposed acquisition.
- Description of the biological resources to be acquired, including support for the conclusion that the acquired habitat mitigates for the specific maintenance impact and satisfies the requirement of no net loss.
- Documentation that the mitigation area would be adequately preserved and maintained in perpetuity.

The identification of mitigation site credits shall be provided to the City of Anaheim project manager (or designee) and shall include the following:

- Location of approved mitigation site.
- Description of the mitigation credits to be acquired, including support for the conclusion that the acquired habitat mitigates for the specific maintenance impact and satisfies the requirement of no net loss.
- Documentation of the credits that are associated with a mitigation bank, which has been approved by the appropriate resource agencies.
- Documentation in the form of a current mitigation credit ledger.

**BIO-3:** **Habitat Restoration in Temporary Impact Areas.** Temporary direct impact areas shall be restored to pre-construction topographic contours and conditions, including the

revegetation of native plant communities, where appropriate. Habitat restoration and erosion control treatments shall be installed within these short-term impact areas. Habitat revegetation shall feature native species that are typical of the area, and associated erosion control best management practices shall include silt fence and microplastic- and weed-free straw fiber rolls, where appropriate. The revegetation areas shall be monitored and maintained for 25 months to ensure adequate establishment and sustainability of the plantings/seedings.

Where a project activity involves potential disturbance of non-native invasive plant species (as identified by the California Invasive Plant Council), these plants shall be entirely removed where feasible, and the removal shall be monitored by the qualified monitoring biologist to ensure that dispersal of propagules (e.g., seeds, stems, etc.) are avoided or minimized. Where removal of plant roots is not feasible (e.g., where erosive flows are predicted), aboveground plant material shall be fully removed and monitored by the qualified monitoring biologist. Where aboveground plant material cannot be removed (e.g., due to limited access), herbicides shall be applied by a licensed pest control advisor, using chemicals permitted as safe within aquatic environments.

**BIO-4:** **Least Bell's Vireo and Yellow Warbler Pre-Construction Surveys.** For any work proposed in or near suitable habitat between February 15 and August 15 (March 15 and September 15 for least Bell's vireo), a pre-construction survey for least Bell's vireo and yellow warbler shall be performed to reaffirm the presence and extent of occupied habitat. The pre-construction survey area for the species shall encompass all potentially suitable habitat within the project work zone and a 300-foot survey buffer. The pre-construction survey shall be performed to the satisfaction of the City of Anaheim project manager (or their designee) by a qualified biologist familiar with the species. The results of the pre-construction survey shall be submitted in a report to the City of Anaheim project manager (or their designee) for review and approval before initiating any construction activities. If least Bell's vireo or yellow warbler are detected, a minimum 300-foot buffer delineated by orange biological fencing shall be established around the detected species. In addition, on-site noise reduction/attenuation techniques shall be incorporated, as appropriate, to avoid impacts to breeding least Bell's vireo and yellow warbler from elevated construction noise levels during the breeding season. The City of Anaheim project manager (or their designee) shall have the discretion to modify the buffer width depending on site-specific conditions. In addition, noise monitoring may be required to ensure that the elevated construction noise levels are appropriately attenuated at the edge of occupied habitat to a level that is not expected to adversely affect nesting bird

behavior (i.e., not to exceed an hourly average of 60 A-weighted decibels or ambient whichever is greater, at the edge of occupied habitat).

#### 4.2.7.2 Threshold BIO-2: Riparian Habitat and Other Sensitive Natural Communities

Refer to Mitigation Measure BIO-1 through Mitigation Measure BIO-3.

#### 4.2.7.3 Threshold BIO-3: Jurisdictional Aquatic Resources

Refer to Mitigation Measure BIO-1 through Mitigation Measure BIO-3.

### 4.2.8 Level of Significance After Mitigation

#### 4.2.8.1 Threshold BIO-1: Candidate, Sensitive, or Special-Status Species

Implementation of Mitigation Measure BIO-1 through Mitigation Measure BIO-4 would mitigate potential direct impacts to sensitive wildlife species and their habitats to below a level of significance through monitoring by a qualified biologist, providing mitigation ratios for acreage impacts, the creation and restoration of impacted vegetation communities, and pre-construction sensitive nesting bird surveys.

Implementation of Mitigation Measure BIO-1 would mitigate potential direct impacts to sensitive nesting birds and roosting bats to below a level of significance. This mitigation measure would require monitoring by a qualified biologist responsible for conducting pre-construction nesting bird surveys and identifying and flushing any roosting bats from trees before construction. No significant and unavoidable impacts would remain.

#### 4.2.8.2 Threshold BIO-2: Riparian Habitat and Other Sensitive Natural Communities

Implementation of Mitigation Measure BIO-1 through Mitigation Measure BIO-3 would reduce potential direct impacts to sensitive vegetation communities to below a level of significance through monitoring by a qualified biologist, adhering to required mitigation ratios for acreage impacts, and creating new vegetation communities and restoring impacted ones. No significant and unavoidable impacts would remain.

#### 4.2.8.3 Threshold BIO-3: Jurisdictional Aquatic Resources

Implementation of Mitigation Measure BIO-1 through Mitigation Measure BIO-3 would mitigate potential direct impacts to jurisdictional aquatic resources to below a level of significance through monitoring by a qualified biologist, adhering to required mitigation ratios for acreage impacts, and restoring temporary impact areas. No significant and unavoidable impacts would remain.


*Source: USFWS 2023; Maxar Imagery 2021.*

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N

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**Figure 4.2-1**

National Wetlands Inventory Results

OC River Walk Project

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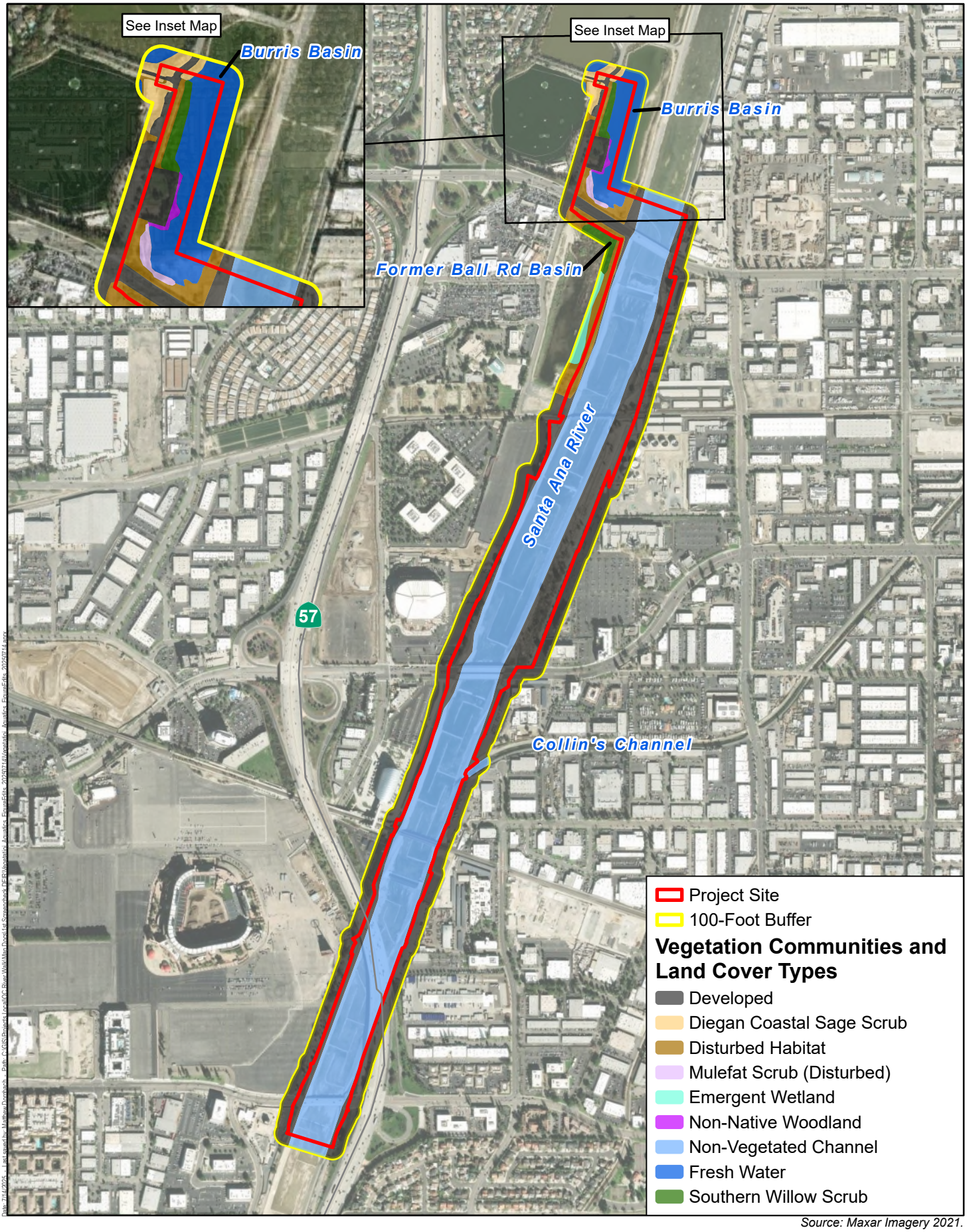


*Source: Maxar Imagery 2021.*

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**Figure 4.2-2**

Vegetation Communities and Land Cover Types

OC River Walk Project

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*Source: Maxar Imagery 2021.*

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**Figure 4.2-3**

Aquatic Resources

OC River Walk Project

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