

4.3 Biological Resources

This section describes the existing biological resources conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed San Diego State University (SDSU) Mission Valley Campus Master Plan (proposed project).

Methods for Analysis

Information contained in this section is based on the Biological Resources Technical Report for the proposed project that was prepared by Dudek in July 2019. This report is included as part of this EIR as Appendix 4.3-1. Please refer to this appendix for the methodology used to perform biological surveys and analysis.

Summary of NOP Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019, to February 19, 2019. Approximately 150 letters were received during this comment period. Comments received related to biological resources raised concerns about potential project impacts to the San Diego River, watershed, sage scrub and riparian plant communities, and wildlife corridors, among others. Other comments focused on bird-strike hazards posed by project structures and potential mitigation strategies. In addition, some comments requested details regarding compatibility between recreational access and biological resources associated with the San Diego River. Further, some comments expressed concerns regarding impacts to the City of San Diego (City) Stadium Wetland Mitigation Site, and edge effects to the riparian buffer of the San Diego River and Multi-Habitat Planning Areas were also raised as a concern. Please see Appendix A, NOP Scoping Comments, for a complete compilation of comments received on the NOP.

4.3.1 Existing Conditions

The project site includes four existing uses: (1) a multipurpose Stadium (San Diego County Credit Union [SDCCU] Stadium) for football and other events, (2) an associated surface parking lot with approximately 18,870 parking spaces, (3) the existing San Diego Metropolitan (MTS) Stadium Trolley Station, accessible via the MTS Trolley Green Line traversing the project site, and (4) Murphy Canyon Creek. Land uses adjacent to the project site consist of the San Diego River, commercial development, and Interstate (I) 8 to the south; Friars Road, steep hillsides, and residential development to the north; retail/commercial development within Fenton Marketplace to the west; I-15, and retail/residential development to the east.

The elevation ranges from approximately 35 feet above mean sea level (amsl) to 300 feet amsl. The project site is composed of developed areas, disturbed habitat, and native habitat. The majority of the project site is relatively flat within the existing large parking area surrounding the Stadium structure. Along the southern boundary of the project site there is a small berm beyond the parking lot, which descends into the lower floodplain of the San Diego River. In the western portion of the project site, there is a flat training field, and beyond that is a storm drain outlet channel that conveys water down into the San Diego River floodplain. Native upland habitat occurs west of the storm drain outlet channel and has a flat grade until sloping down toward the San Diego River floodplain.

There are off-site improvement areas, including a road expansion in the northwest corner of Friars Road and the Stadium and one sewer connection within the San Diego River. The other off-site improvements are confined to existing urban/developed areas.

According to the Natural Resources Conservation Service (USDA 2019a), 10 soil types are found within the project site and off-site areas, which include predominantly made land, but also riverwash, terrace escarpments, Olivenhain cobbly loam (9% to 30% slopes), gravel pits, Olivenhain cobbly loam (2% to 9% slopes), Tujunga sand (0% to 5% slopes), Huerhuero–Urban land complex (2% to 9% slopes), Olivenhain–Urban land complex (2% to 9% slopes), and Salinas clay loam (2% to 9% slopes).

The Olivenhain series is a well-drained soil with slow or medium runoff and very slow permeability (USDA 2019a). These soils are found on gently sloping to strongly sloping hillsides and on marine terraces. Olivenhain soils are generally very cobbly (USDA 2019a). The Tujunga Series consists of very deep, somewhat excessively drained soils that formed in alluvium from granitic sources; these soils occur on alluvial fans or floodplains as well as within urban areas (USDA 2019a). The Huerhuero series, which is now included within the Antioch series, drains moderately well to somewhat poorly, and occurs on nearly level to strongly sloping alluvial fans and terraces at elevations less than 1,100 feet amsl (USDA 2019a).

4.3.1.1 Vegetation Communities

Dudek mapped nine vegetation communities/land covers on the project site. Dudek biologists also mapped vegetation communities/land covers within a 100-foot buffer surrounding the site. The project site supports small amounts of native vegetation communities. These include Baccharis-dominated Diegan coastal sage scrub, Diegan coastal sage scrub, southern willow scrub, southern cottonwood–willow riparian forest, and southern riparian forest. The site also supports four non-native vegetation communities or land cover types—urban/developed, disturbed habitat, disturbed wetland, and unvegetated channel. By far the largest land cover is urban/developed, which composes 165.77 acres and 96.30% of the project site. The vegetation communities and land cover types listed above are described in the following text; their acreages are presented in Table 4.3-1; and their spatial distributions are presented on Figure 4.3-1, Biological Resources – Project Site; Figure 4.3-2, Biological Resources – Fenton Parkway Extension; and Figure 4.3-3, Biological Resources – Off-Site Sewer and Storm Drain Connections.

Table 4.3-1. Vegetation Communities/Land Cover Types on the Project Site and Off-Site Areas

Habitat Types/Vegetation Communities	Oberbauer Code	Project Site (acres)	% of Project Site	Off-Site Areas (acres)
<i>Non-Native Vegetation Community/Land Cover Types</i>				
Disturbed habitat (DH)	11000	0.85	0.50%	0.84
Disturbed wetland (DH)	11200	0.89	0.52	
Urban/developed (DEV)	12000	165.77	96.30%	2.68
Non-vegetated channel or floodway (NVC)	64200	0.75	0.43%	–
<i>Subtotal</i>	–	168.26	97.75%	3.51
<i>Native Vegetation Communities</i>				
Baccharis-dominated Diegan coastal sage scrub (BD-CSS)	32350	0.97	0.56%	–
Diegan coastal sage scrub (CSS)	32500	0.12	0.07%	0.04
Southern willow scrub (SWS)	63320	0.08	0.05%	–
Southern cottonwood–willow riparian forest (SCWRF)	61330	2.59	1.51%	0.04
Southern riparian forest (SRF)	61300	0.10	0.06%	
<i>Subtotal</i>	–	3.87	2.25%	0.08
Total*	–	172.13	100%	3.60

Note:

* Acreages may not sum due to rounding.

Diegan Coastal Sage Scrub: Baccharis-Dominated (32530)

Diegan coastal sage scrub is the most widespread coastal sage scrub in coastal Southern California, extending from Los Angeles into Baja California (Oberbauer et al. 2008). The community mostly consists of drought-deciduous species such as California sagebrush (i.e., coastal sagebrush; *Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), white sage (*Salvia apiana*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*). Diegan coastal sage scrub: Baccharis-dominated is similar to Diegan coastal sage scrub except that it is dominated by Baccharis species, including desertbroom (*Baccharis sarothroides*) and/or coyote brush (*B. pilularis*) (Oberbauer et al. 2008). This community typically occurs on disturbed sites or those with nutrient-poor soils, and is often found within other forms of Diegan coastal sage scrub and on upper terraces of river valleys. This community is distributed along coastal and foothill areas in San Diego County.

Diegan coastal sage scrub and all its variants generally are recognized as sensitive plant communities by local, state, and federal resource agencies. It supports a diversity of sensitive plants and animals, and it is estimated that it has been reduced by 75% to 80% of its historical coverage throughout Southern California.

Diegan coastal sage scrub: Baccharis-dominated vegetation located within the southwestern portion of the project site totals 0.97 acres, and is dominated by coyote brush, desertbroom, with Menzies's golden bush (*Isocoma menziesii*) and California brittle bush (*Encelia californica*) (Figures 4.3-1 and 4.3-2).

Diegan Coastal Sage Scrub (32500)

According to Holland (1986), Diegan coastal sage scrub is composed of a variety of soft, low shrubs, characteristically dominated by drought-deciduous species such as California sagebrush, California buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.), with scattered evergreen shrubs, including lemonade berry (*Rhus integrifolia*) and laurel sumac. It typically develops on xeric (dry) slopes.

Diegan coastal sage scrub and all its variants generally are recognized as sensitive plant communities by local, state, and federal resource agencies. It supports a diversity of sensitive plants and animals, and it is estimated that it has been reduced by 75% to 80% of its historical coverage throughout Southern California.

On site, the Diegan coastal sage scrub vegetation occurs along the berm at the southern edge of the project site. It is a restored coastal sage scrub area associated with off-site restoration work. The Diegan coastal sage scrub totals approximately 0.12 acres and is dominated by California brittle bush with California sagebrush, Menzies's golden bush, and black sage. This land cover is present within the off-site improvement area as well (Figures 4.3-1 through 4.3-3).

Southern Willow Scrub (63320)

Southern willow scrub is a dense, broad-leafed, winter-deciduous riparian thicket dominated by several willow species (*Salix* spp.), sometimes with scattered emergent Fremont cottonwood (*Populus fremontii*) and California sycamore (*Platanus racemosa*). This community was formerly extensive along the major rivers of coastal Southern California, but is now much reduced (Oberbauer et al. 2008).

There is a very small patch of southern willow scrub, totaling 0.08 acres, mapped next to the Recycling Buyback Center southwest of the Stadium. It is created by a storm drain that outlets runoff from the adjacent commercial areas. A review of historical aerials show the storm drain was constructed in uplands and drains surface runoff from upland areas; therefore, it is not regulated by resource agencies. This small patch of vegetation is dominated by black willows (*Salix gooddingii*), with arroyo willow (*S. lasiolepis*), smilgrass (*Stipa miliacea* var. *miliacea*), curly

dock (*Rumex crispus*), Washington fan palm seedlings (*Washingtonia robusta*), fountain grass (*Pennisetum setaceum*), annual yellow sweetclover (*Melilotus indicus*), and petty spurge (*Euphorbia peplus*).

Southern Cottonwood–Willow Riparian Forest (61330)

Southern cottonwood–willow riparian forest generally consists of tall, open, broadleaved forests that are winter-deciduous. This community is typically dominated by cottonwood (*Populus fremontii*, *P. trichocarpa*) with several tree willows (*Salix* spp.), as well as shrubby willows dominating the understory. Dominant species require moist, bare mineral soils for germination and establishment, and are located on sub-irrigated or frequently overflowed lands along rivers and streams (Oberbauer et al. 2008).

There is 2.59 acres of southern cottonwood–willow riparian forest located in the southwestern portion of the project site associated with a storm drain outlet channel that discharges into the San Diego River (Figure 4.3-2). This land cover is present within the off-site improvement areas as well (Figure 4.3-3) and in Murphy Canyon Creek along the eastern side of the project site (Figure 4.3-1). Dominant species in this area are Fremont cottonwood and arroyo willow, with an understory that is sparse but includes pampas grass (*Cortaderia selloana*).

Southern Riparian Forest (61300)

Southern riparian forest is typically dominated by California sycamore and cottonwoods. This community occurs along streams and rivers (Oberbauer et al. 2008).

There are 0.10 acres of southern riparian forest along Murphy Canyon Creek in the eastern side of the project site (Figure 4.3-1). On site, the southern riparian forest is dominated by an overstory of California sycamore with a grassy, disturbed understory.

Disturbed Habitat (11000)

Disturbed habitat is a land cover type characterized by a predominance of non-native species, often introduced and established through human action. Oberbauer et al. (2008) describes disturbed land as areas that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association but continue to retain a soil substrate. Typically, vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species (i.e., weeds).

Within the project site there is 0.85 acres of disturbed habitat, which includes ornamental plantings along parking lot barriers and boundaries. This land cover is present within the off-site improvement areas as well (Figure 4.3-1).

Disturbed Wetland (11200)

Disturbed wetland is characterized by areas that are either permanently or periodically inundated by water and have been significantly modified by human activity. Disturbed wetlands are often underlain by artificial structures, such as concrete lining, barricades, rip-rap, piers, or gates. Disturbed wetland is often unvegetated, but may contain scattered native or non-native vegetation (Oberbauer et al. 2008).

There is 0.89 acres of disturbed wetland within Murphy Canyon Creek along the eastern side of the project site (Figure 4.3-1). This portion of Murphy Canyon Creek has been channelized and is concrete-lined.

Urban/Developed (12000)

Urban/developed land refers to areas that have been constructed upon or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large amount of debris or other materials (Oberbauer et al. 2008).

Within the project site, urban/developed land dominates the overall land cover, totaling 165.77 acres (96% of the site), and includes paved roads, the large Stadium parking lot, training field, and existing semi-permanent Stadium structure. Urban/developed land is mapped within the off-site areas as well (Figure 4.3-1).

Non-Vegetated Channel or Floodway (64200)

According to Oberbauer et al. (2008), non-vegetated channel is the sandy, gravelly, or rocky fringe of waterways or flood channels that is unvegetated on a relatively permanent basis. Vegetation may be present but is usually less than 10% total cover and grows on the outer edge of the channel.

There is 0.75 acres of non-vegetated channel associated with a storm drain outlet located in the southwestern portion of the project site.

4.3.1.2 Flora

A total of 131 species of native or naturalized plants—66 native (50%) and 65 non-native (50%)—was recorded on the project site (see Appendix 4.3-1).

4.3.1.3 Fauna

The project site supports habitat for common upland and riparian species. Scrub and ornamental habitats within the project site provide foraging and nesting habitat for migratory and resident bird species and other wildlife species. Due to the urbanization in the surrounding area, the fauna composition represents many urban-adapted species.

A total of 84 wildlife species was recorded during the 2019 focused surveys (Appendix 4.3-1).

4.3.1.4 Sensitive Plant Species

Endangered, rare, or threatened plant species, as defined in the California Environmental Quality Act (CEQA) Guidelines Section 15380(b) (14 CCR 15000 et seq.), are referred to as “special-status plant species” in this report and include (1) endangered or threatened plant species recognized in the context of the California Endangered Species Act (CESA) and the federal Endangered Species Act (FESA) (CDFW 2018a), and (2) plant species with a California Rare Plant Rank (CRPR) of 1 through 3 (CNPS 2019). This report also includes CRPR 4 plant species.

Special-status plant surveys were conducted within the project site to determine the presence or absence of plant species that are considered endangered, rare, or threatened under CEQA Guidelines Section 15380 (14 CCR 15000 et seq.). A list of potentially occurring plants was generated as part of the literature review. Each species’ potential to occur on site was evaluated based on the elevation, habitat, and soils present on site; Dudek’s knowledge of biological resources in the area; and the regional distribution of each species. A number of potentially

occurring plant species are conspicuous (e.g., large, woody shrubs) and readily observed if present within an open and largely disturbed site.

Surveys conducted in 2019 recorded three special-status plants—San Diego sagewort (*Artemisia palmeri*; CRPR 4.2), southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2), and San Diego marsh-elder (*Iva hayesiana*; CRPR 2B.2)—within the San Diego River portion of the study area. Only San Diego sagewort is mapped in the project site, where a few individuals occur along the riparian/berm edge. No other special-status plants were observed or have a moderate to high potential to occur within the study area during the surveys. The surveys were conducted on April 12, 2019, and July 29, 2019, which coincides with the bloom periods for the target species; therefore, they would have been detected if they occurred on site.

Special-status plant species known to occur in the surrounding region that are not expected to occur on site are presented in Appendix 4.3-1.

Critical Habitat

There is no critical habitat designated by the U.S. Fish and Wildlife Service (USFWS) mapped for plant species within the project site or off-site areas. However, there is USFWS-designated critical habitat for one species located within 5 miles of the project site: spreading navarretia (*Navarretia fossalis*; federally threatened, CRPR 1B.1) (USFWS 2019).

4.3.1.5 Sensitive Wildlife Species

Endangered, rare, or threatened wildlife species, as defined in CEQA Guidelines Section 15380(b) (14 CCR 15000 et seq.), are referred to as “special-status wildlife species” and, as used in this report, include (1) endangered or threatened wildlife species recognized in the context of CESA and FESA (CDFW 2018b); (2) California Species of Special Concern (SSC) and Watch List (WL) species, as designated by the California Department of Fish and Wildlife (CDFW) (CDFW 2018c); (3) mammals and birds that are fully protected species, as described in the California Fish and Game Code, Sections 4700 and 3511; and (4) Birds of Conservation Concern, as designated by the USFWS (USFWS 2008).

Special-status wildlife species that were observed on site or have a moderate potential to occur are described in this section. Special-status wildlife species that are known to occur in the surrounding region but that were absent or have low potential to occur on site are presented in Appendix 4.3-1. For each species listed, Dudek determined whether the species had the potential to occur on site based on information gathered during the literature review and site visits, including the location of the project site, vegetation communities or land covers present, current site conditions, and past and present land use.

Critical Habitat

There is no USFWS-designated critical habitat for wildlife species mapped within the project site or off-site areas. However, there is USFWS-designated critical habitat for two species located within 5 miles of the project site: San Diego fairy shrimp (*Branchinecta sandiegonensis*; federally endangered (FE)) and least Bell’s vireo (*Vireo bellii pusillus*; FE, state endangered (SE)) (USFWS 2019).

Species Observed or with Potential to Occur On Site

Special-Status Amphibians and Reptiles

There is potential for Southern California legless lizard (*Anniella stebbinsi*; SSC), orange-throated whiptail (*Aspidoscelis hyperythra*; WL), Coronado skink (*Plestiodon skiltonianus interparietalis*; WL), and western spadefoot (*Spea hammondi*; SSC) to occur within the riparian habitat associated with the channel in the southwestern portion of the project site and/or Murphy Canyon Creek. While the southern willow scrub area is approximately 500 feet away from suitable habitat, this area provides moderately suitable habitat for these species. However, these species were not observed during surveys for the project.

Special-Status Birds

Least Bell's vireo was observed in the San Diego River during the 2019 focused surveys. It was also detected in the riparian area that extends south of Fenton Parkway during a site visit on July 2, 2019, and was previously documented near the same location during focused surveys in 2017 for the Stadium Wetland Mitigation project (Dudek 2017). Figures 4.3-1 and 4.3-2 include the 2017 and 2019 observations. Least Bell's vireo was not detected in the southern willow scrub located near the Recycling Buyback Center and given its marginal suitability, this area is not considered suitable habitat for least Bell's vireo. Similarly, no least Bell's vireo were recorded in Murphy Canyon Creek during the 2019 focused surveys and there are no records in the USFWS Critical Habitat and Occurrence Data, the CDFW California Natural Diversity Database, or eBird (USFWS 2019; CDFW 2019; Cornell Lab of Ornithology 2019). Murphy Canyon Creek is a narrow channel between the Stadium parking lot and I-15, with intermittent riparian vegetation. Given the lack of records and the marginal habitat, it is not considered suitable habitat for least Bell's vireo.

Willow flycatcher (*Empidonax traillii*) consists of five subspecies, three of which are native to Southern California. All three are listed as endangered under CESA, but only *E. t. extimus* (FE, SE), more commonly known as the southwestern willow flycatcher, is also federally listed. Only the southwestern willow flycatcher is known to breed and reside in San Diego County. The other two willow flycatcher subspecies, while occasionally observed in San Diego County, are considered migrants. Surveys for southwestern willow flycatcher were negative. There is one record of southwestern willow flycatcher in the San Diego River downstream of El Capitan Reservoir (approximately 20 miles from the project site) from June 22, 2009; one record in Chocolate Canyon just south of El Capitan Reservoir on July 8, 2010; and two pairs nesting at the north end of El Capitan Reservoir in 2001 (USFWS 2019; CDFW 2019). There are no other records of the southwestern willow flycatcher subspecies in the San Diego River (CDFW 2019; USFWS 2019; Cornell Lab of Ornithology 2019). There are willow flycatcher (*E. traillii*) records in eBird (Cornell Lab of Ornithology 2019) in the San Diego River. However, none of the records is during the "non-migrant" period (i.e., about June 15 to July 20); willow flycatchers detected only outside of this period are likely migrants (Sogge et al. 2010). Given the lack of possible breeding individuals (i.e., southwestern willow flycatchers) recorded since 2009 and the lack of any willow flycatchers detected during the 2019 focused protocol surveys, it is unlikely that southwestern willow flycatcher occurs within the study area. However, there is suitable habitat in the San Diego River for this species and thus it has the potential to occur on site in the future.

Cooper's hawk (*Accipiter cooperii*; WL), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; WL), yellow-breasted chat (*Icteria virens*; SSC), and yellow warbler (*Setophaga petechia*; Bird of Conservation Concern, SSC) were detected within the study area (Figures 4.3-1 and 4.3-2).

Surveys for coastal California gnatcatcher (*Poliioptila californica californica*; federally threatened; SSC) were negative. Given the small patch of Baccharis-dominated Diegan coastal sage scrub and the narrow Diegan coastal sage scrub along the berm between the river and the Stadium parking lot, the habitat is considered marginal for coastal California gnatcatcher. This species is not expected to nest on site.

Special-Status Mammals

There is potential for Mexican long-tongued bat (*Choeronycteris mexicana*; SSC) and western red bat (*Lasiurus blossevillii*; SSC) to forage on site and roost in the riparian habitat associated with the channel in the southwestern portion of the project site. Nevertheless, neither bat species was observed on site. In fact, no special-status mammals have been observed on site.

4.3.1.6 Wetlands/Jurisdictional Resources

The project site was surveyed to determine the presence of an ordinary high water mark along two potential drainage channels, Murphy Canyon Creek, and a portion of the San Diego River directly south of the project site (“off-site”) (Table 4.3-2).

Table 4.3-2. Jurisdictional Aquatic Resources within the Project Site and Off-Site Areas

Jurisdictional Aquatic Resource	Project Site (acres)	Off-Site Areas (acres)
ACOE/RWQCB/CDFW Jurisdictional		
Non-wetland waters – ephemeral/riparian area	0.58	–
Non-wetland water – ephemeral	0.74	–
Wetland	0.53	0.01
<i>Subtotal</i>	<i>1.85</i>	<i>0.01</i>
CDFW-only Jurisdictional		
Riparian area	2.58	0.03
Total*	4.43	0.04

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

* Acreages may not sum due to rounding.

There are no National Hydrographic Database blue-line stream channels within the project site, but there is one blue-line stream channel associated with the San Diego River just south of the on-site storm drain outlet channel. This drainage is regulated by the U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and CDFW. It supports hydrophytic vegetation and hydrology, but not hydric soils. Thus, it does not qualify as a wetland, but does support surrounding riparian habitat regulated by CDFW. The wetland determination data forms are included in Appendix 4.3-1. Vegetation present along the drainage was predominantly cottonwood and arroyo willow but included pampas grass among other sparse herbaceous vegetation. The drainage observed on site had a defined bed and bank, evidence of an ordinary high water mark, and a channel bed 12 feet wide and approximately 300 feet long; thus, it was determined to be a jurisdictional water. Flows within this drainage are directed south and connect with the San Diego River just outside the project boundary.

There is another feature located near the Recycling Buyback Center that conveys runoff from the surrounding developments into a defined channel with evidence of an ordinary high water mark, and a channel bed approximately 5 feet wide and 117 feet long. The runoff is then directed into a culvert where it flows beneath the

Stadium parking lot and outlets into the San Diego River. This feature is regulated by ACOE, RWQCB, and CDFW and the surrounding riparian vegetation is regulated by CDFW.

Murphy Canyon Creek is a narrow, incised channel located along the eastern boundary of the site. The channel bottom is approximately 20 feet wide; the upstream portion is concrete-lined and becomes earthen-lined just south of San Diego Mission Road until it terminates in the San Diego River. The channel is a non-wetland waters of the United States and state. The adjacent steep slopes are composed of native and non-native riparian habitat regulated by CDFW only.

A temporary impact is planned in the off-site portion of the San Diego River in southern cottonwood–willow riparian forest, of which a portion is a wetland waters of the United States and along the slope it is a riparian vegetation regulated by CDFW only.

4.3.1.7 Habitat Connectivity and Wildlife Corridors

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as steppingstones for wildlife dispersal. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provide corridors for wildlife travel. Wildlife corridors are important because they provide access to mates, food, and water; allow the dispersal of wildlife from high-density areas; and facilitate the exchange of genetic traits between populations (Beier and Loe 1992). Wildlife corridors are considered sensitive by resource and conservation agencies.

Canyonlands in San Diego are rapidly disappearing and are largely the only habitat corridors that still remain within urbanized areas of San Diego. There are no canyonlands within or adjacent to the project site. The largest open space areas within the vicinity of the project site are the San Diego River, located directly adjacent to the southern boundary of the project site; Murphy Canyon, located 1.2 miles northeast of the project site; Marine Corps Air Station Miramar, located 5.2 miles north of the project site; and Mission Trails Regional Park, located 5.6 miles northeast of the project site.

The project site vicinity includes existing urban development to the west; existing urban development and I-15 to the east; the San Diego River and I-8 to the south; and steep hillsides and residential development to the north. Much of the project site is located within the existing development footprint of the SDCCU Stadium. Due to the nearby urban areas, highways, and existing Stadium, wildlife are not expected to use the project site as a wildlife corridor; however, there may be movement of urban-adapted wildlife species through the existing area when it is not being used by people.

There are three features—Murphy Canyon Creek along the eastern boundary of the project site; the San Diego River, which runs east to west along the southern boundary of the project site; and the storm drain outlet channel in the western portion of the project site—that likely support wildlife movement. The storm drain outlet channel is not considered a linkage within the area as it does not connect two parcels of native habitat, but is instead a small cul-de-sac feature for species that may use the San Diego River. Murphy Canyon Creek, however, does support a linkage function from Murphy Canyon to the San Diego River and would be considered suitable for smaller wildlife species, particularly birds and reptiles, to move in a north–south direction. The San Diego River serves as habitat for both migratory birds and year-round birds, as well as providing foraging habitat and movement for avian and terrestrial species both up and downstream.

4.3.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Endangered Species Act

FESA of 1973 (16 USC 1531 et seq.), as amended, is administered by USFWS, the National Oceanic and Atmospheric Administration, and the National Marine Fisheries Service. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. Under the provisions of Section 9(a)(1)(B) of FESA, it is unlawful to “take” any listed species. “Take” is defined in Section 3(19) of FESA as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans (HCPs) on private property without any other federal agency involvement. Upon development of an HCP, USFWS can issue incidental take permits for listed species.

FESA provides for designation of Critical Habitat, defined in Section 3(5)(A) as specific areas within the geographical range occupied by a species where physical or biological features “essential to the conservation of the species” are found and “which may require special management considerations or protection.” Critical Habitat may also include areas outside the current geographical area occupied by the species that are nonetheless “essential for the conservation of the species.”

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, “take” is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). In December 2017, Department of the Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interprets the MBTA to only prohibit intentional take. Unintentional or accidental take is not prohibited (DOI 2017). Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

Clean Water Act, Section 404

Pursuant to Section 404 of the Clean Water Act, the discharge of dredged and/or fill material into “waters of the United States” is regulated by ACOE. The term “wetlands” (a subset of waters) is defined in 33 CFR 328.3(b) as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” In the absence of wetlands, the limits of ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the “ordinary high water mark,” which is defined in 33 CFR 328.3(e).

Section 320.4(b)(2) of the ACOE General Regulatory Policies (33 CFR 320–330) list criteria for consideration when evaluating wetland functions and values. These include wildlife habitat (spawning, nesting, rearing, and resting), food chain productivity, water quality, groundwater recharge, and areas for the protection from storm and floodwaters.

State

California Endangered Species Act

CESA (California Fish and Game Code, Section 2050 et seq.) prohibits the take of plant and animal species designated by the California Fish and Game Commission as endangered or threatened in the State of California. CESA is regulated by CDFW. Under CESA Section 86, “take” is defined as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA Section 2053 stipulates that state agencies may not approve projects that will “jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy.”

CESA Sections 2080 through 2085 address the taking of threatened, endangered, or candidate species by stating:

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 determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act (Fish and Game Code, Sections 1900–1913), or the California Desert Native Plants Act (Food and Agricultural Code, Section 80001).

California Fish and Game Code, Sections 3503, 3511, and 4700

According to Sections 3511 and 4700 of the California Fish and Game Code, which regulate birds and mammals, respectively, a fully protected species may not be taken or possessed without a permit from the Fish and Game Commission, and “incidental take of these species is not authorized.

According to Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. Finally, Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

For the purposes of these state regulations, CDFW currently defines an active nest as one that is under construction or in use, and includes existing nests that are being modified. For example, if a hawk is adding to or maintaining an existing stick nest in a transmission tower, then it would be considered to be active and would be covered under these California Fish and Game Code sections.

California Fish and Game Code, Section 1602

Pursuant to Section 1602 of the California Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. A

Streambed Alteration Agreement is required for impacts to jurisdictional wetlands in accordance with Section 1602 of the California Fish and Game Code.

Porter–Cologne Water Quality Control Act

The intent of the Porter–Cologne Water Quality Control Act (Porter–Cologne Act) is to protect water quality and the beneficial uses of water, and it applies to both surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the RWQCBs develop basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under the Porter–Cologne Act include isolated waters that are no longer regulated by ACOE. Developments with impacts to jurisdictional waters must demonstrate compliance with the goals of the Porter–Cologne Act by developing stormwater pollution prevention plans, standard urban stormwater mitigation plans, and other measures to obtain a Clean Water Act Section 401 certification.

Natural Community Conservation Plan

Section 2835 of the California Fish and Game Code allows CDFW to authorize incidental take in a natural community conservation plan (NCCP). Take may be authorized for identified species whose conservation and management is provided for in the NCCP, whether or not the species is listed as threatened or endangered under FESA or CESA, provided that the NCCP complies with the conditions established in Section 2081 of the California Fish and Game Code. The NCCP provides the framework for the San Diego Multiple Species Conservation Program (MSCP) Plans.

Regional

Multiple Species Conservation Program

The MSCP is a comprehensive, regional long-term habitat conservation program designed to provide the local regulatory agency—in this case, the City of San Diego—with the ability to authorize take of certain “covered” species pursuant to CESA and FESA. The MSCP addresses habitat and species conservation within approximately 900 square miles in the southwestern portion of San Diego County (County of San Diego 1998), including areas within the City of San Diego. It serves as an approved HCP under Section 10 of FESA and as an approved NCCP pursuant to the state Natural Communities Conservation Planning Act (County of San Diego 1998).

The MSCP establishes a preserve system designed to conserve large blocks of interconnected habitat having high biological value, which are delineated as the Multi-Habitat Planning Area (MHPA). The City MHPA is an area within which a “hard line” preserve will be established in cooperation with the wildlife agencies, property owners, developers, and environmental groups. The MHPA identifies biological core resource areas and corridors targeted for conservation, in which only limited development may occur (City of San Diego 1997).

The MSCP identifies 85 plants and animals to be “covered” under the plan (“Covered Species”). Many of these Covered Species are subject to one or more protective designations under state and/or federal law and some are endemic to San Diego. The MSCP seeks to provide adequate habitat in the preserve to maintain ecosystem functions and persistence of extant populations of the 85 Covered Species, while also allowing participating landowners take of Covered Species on lands located outside of the preserve. The purpose of the MSCP is to address species conservation on a regional level and thereby avoid project-by-project biological mitigation, which tends to fragment habitat.

Within the City, the MSCP is implemented through the *City of San Diego MSCP Subarea Plan* (Subarea Plan) (City of San Diego 1997), as described below. The project site is located within the City's MSCP Subarea Plan area.

SDSU was not involved with the preparation of the MSCP in the mid-1990s. SDSU is not signatory to the San Diego MSCP and is therefore not a "permittee" under this HCP. SDSU also would not benefit from the take coverage provided by the Implementing Agreement. Because SDSU is not a permittee of this HCP and because SDSU does not need to obtain any entitlements that would constitute a discretionary action by the City, adherence to the restrictions typically placed on land within the MHPA as per the City's Biological Resource Guidelines does not apply to SDSU or SDSU-owned land. SDSU also is not subject to the City's land use policies.

Local

City of San Diego Multiple Species Conservation Program Subarea Plan

The City Subarea Plan (1997) encompasses 206,124 acres within the MSCP Subarea Plan area. The site is located within the Urban area of the Subarea Plan. Urban habitat areas within the MHPA include existing designated open space such as Mission Bay, Tecolote Canyon, Marian Bear Memorial Park, Rose Canyon, San Diego River, the southern slopes along Mission Valley, Carroll and Rattlesnake Canyons, Florida Canyon, Chollas Creek, and a variety of smaller canyon systems. The eastern area of the Subarea Plan includes East Elliott and Mission Trails Regional Park.

The MSCP Subarea Plan is characterized by urban land uses, with approximately three-quarters of the Subarea Plan area either built out or retained as open space/park system. The City MHPA is an area within which a hard line preserve will be developed by the City in cooperation with the wildlife agencies, property owners, developers, and environmental groups. The MHPA identifies biological core resource areas and corridors targeted for conservation, in which only limited development may occur (City of San Diego 1997). The MHPA is considered an urban preserve that is constrained by existing or approved development, and is composed of habitat linkages connecting several large core areas of habitat (City of San Diego 1997, Figure 1-3, Multi-Habitat Planning Area, and Figure 1-4, Core Areas and Habitat Linkages). The criteria used to define core and linkage areas involves maintaining ecosystem function and processes, including large animal movement. Each core area is connected to other core areas or to habitat areas outside of the MSCP either through common boundaries or through linkages. Core areas have multiple connections to help ensure that the balance in the ecosystem will be maintained (City of San Diego 1997). Critical habitat linkages between core areas are conserved in a functional manner with a minimum of 75% of the habitat within identified linkages conserved (City of San Diego 1997).

As discussed previously, SDSU was not involved with the preparation of the Subarea Plan and is therefore not a permittee under this HCP. Because SDSU is not a permittee of this HCP and because SDSU does not need to obtain any entitlements that would constitute a discretionary action by the City, the restrictions typically placed on land within the MHPA per the City's Biological Resource Guidelines do not apply to SDSU or SDSU-owned land. SDSU also is not subject to the City's land use policies.

City of San Diego Biology Guidelines

The City's Development Services Department developed the Biology Guidelines presented in the Land Development Manual "to aid in the implementation and interpretation of the Environmentally Sensitive Lands Regulations (ESL), San Diego Land Development Code (LDC), Chapter 14, Division 1, Section 143.0101 et seq, and the Open Space Residential (OR-1-2) Zone, Chapter 13, Division 2, Section 131.0201 et seq." (City of San

Diego 2012). The guidelines also provide standards for the determination of impact and mitigation under CEQA. The State of California, as the lead agency, is not subject to the City's guidelines; however, this section includes the same level of detail and analysis that is expected for a report that is within the City's jurisdiction.

4.3.3 Significance Criteria

The significance criteria used to evaluate the project impacts to biological resources are based on Appendix G of the CEQA Guidelines. According to Appendix G, a significant impact related to biological resources would occur if the project would:

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.
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.
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.
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.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
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.
7. Result in a cumulative impact to biological resources.

4.3.4 Impacts Analysis

Would the project 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?

Direct Impacts

Least Bell's Vireo

Least Bell's vireo is a federally and state-listed endangered species. Least Bell's vireo was recorded in the southern cottonwood-willow riparian forest habitat in the southwestern portion of the project site during a site visit on July 2, 2019, and in the San Diego River during the focused 2019 surveys. Least Bell's vireo was also observed during focused surveys in 2017 (Dudek 2017), which includes an observation within the project site (Figure 4.3-4, Impacts to Biological Resources – Project Site, and Figure 4.3-5, Impacts to Biological Resources – Fenton Parkway Extension).

The project would result in permanent impacts (0.35 acres) and temporary impacts (0.15 acres) to southern cottonwood-willow riparian forest associated with the storm-drain-fed intermittent channel, which has potential to support the special-status least Bell's vireo. By impacting a portion of the potential southern cottonwood-willow riparian

forest that is adjacent to the trolley tracks as part of the River Park and Shared Parks and Open Space design or the Fenton Parkway roadway extension, the proposed project would adversely affect suitable habitat for this species. Given the presence of least Bell's vireo on site, this impact is considered **potentially significant** absent mitigation (**Impact BIO-1**). Impacts to a federally and state-listed species requires take authorization from USFWS and CDFW.

The small patch of southern willow scrub on site (0.08 acres) is isolated and surrounded by development and human activity; therefore, it is not considered suitable for least Bell's vireo. Similarly, no least Bell's vireo were recorded in Murphy Canyon Creek during the 2019 focused surveys and there are no USFWS, CNDDDB, or eBird records (USFWS 2019; CDFW 2019; Cornell Lab of Ornithology 2019). Murphy Canyon Creek is a narrow channel between the Stadium parking lot and I-15, with intermittent riparian vegetation. Given the lack of records and the marginal habitat, it is not considered suitable habitat for least Bell's vireo. Further, no impacts to the southern willow scrub or Murphy Canyon Creek would occur.

Willow Flycatcher, Including Southwestern Willow Flycatcher

Willow flycatcher (*E. traillii*) consists of five subspecies, three of which—*E. t. brewsteri*, *E. t. adastus*, and *E. t. extimus*—are native to Southern California. All three are listed as endangered under CESA, but only *E. t. extimus*, more commonly known as the southwestern willow flycatcher, is also federally listed. In addition, only the southwestern willow flycatcher is known to breed and reside in San Diego County. The other two willow flycatcher subspecies, while occasionally observed in San Diego County, are considered migrants.

Southwestern willow flycatcher was not observed during focused protocol surveys in 2019. Surveys conducted in the San Diego River as part of the Stadium Wetland Mitigation project in 2017 were also negative for all willow flycatcher subspecies (Dudek 2017). There is one record of southwestern willow flycatcher in the San Diego River downstream of El Capitan Reservoir (approximately 20 miles from the project site) from June 22, 2009; one record in Chocolate Canyon just south of El Capitan Reservoir on July 8, 2010; and two pairs nesting at the north end of El Capitan Reservoir in 2001 (USFWS 2019; CDFW 2019). There are no other records of the southwestern willow flycatcher in the San Diego River (CDFW 2019; USFWS 2019; Cornell Lab of Ornithology 2019; Unitt 2004). There are willow flycatcher (*E. traillii*) records in eBird (Cornell Lab of Ornithology 2019) in the San Diego River. However, none of the records is during the “non-migrant” period (i.e., about June 15 to July 20); willow flycatchers detected only outside of this period are likely migrants (Sogge et al. 2010). Given the lack of possible breeding individuals (i.e., southwestern willow flycatchers) recorded since 2009 and the lack of any willow flycatchers detected during the 2019 focused protocol surveys, it is unlikely that southwestern willow flycatcher occurs within the study area. However, there is suitable habitat in the San Diego River for this species and thus it has the potential to occur on site in the future.

The impacts associated with project implementation would result in permanent impacts (0.35 acres) and temporary impacts (0.15 acres) to southern cottonwood–willow riparian forest associated with the storm-drain-fed intermittent channel, which has potential to support this species. If southwestern willow flycatcher were to occur on site in the future, impacts to individuals of the species and/or occupied habitat would be considered **potentially significant** absent mitigation (**Impact BIO-2**).

Coastal California Gnatcatcher

Coastal California gnatcatcher is a federally listed threatened species and a CDFW SSC. Focused surveys were conducted in 2019 to determine presence or absence within the Baccharis-dominated Diegan coastal sage scrub and/or Diegan coastal sage scrub on site. No coastal California gnatcatcher were observed.

The impacts associated with project implementation would result in permanent impacts (0.05 acres) and temporary impacts (0.21 acres) to Baccharis-dominated Diegan coastal sage scrub and Diegan coastal sage scrub. No coastal California gnatcatcher were detected during focused surveys to date; the habitat is marginal and patchy, and not expected to support this species. Therefore, **no direct impacts** to this species would occur.

Other Special-Status Birds

Other special-status birds were detected within the study area during the focused riparian bird surveys, including Cooper’s hawk, Southern California rufous-crowned sparrow, yellow-breasted chat, and yellow warbler.

While most of these birds have been observed in the San Diego River portion of the study area, the project would result in permanent impacts (0.35 acres) and temporary impacts (0.15 acres) to southern cottonwood–willow riparian forest associated with the storm-drain-fed intermittent channel, which has potential to support these special-status species. Impacts to this habitat would be considered **potentially significant** absent mitigation (**Impact BIO-3**). No impacts to the southern willow scrub or Murphy Canyon Creek would occur.

Special-Status Amphibians and Reptiles

The Southern California legless lizard, orange-throated whiptail, Coronado skink, and western spadefoot have moderate potential to occur in the riparian vegetation in the southwestern portion of the site and/or Murphy Canyon Creek, as well as the small area of southern willow scrub near the Recycling Buyback Center. These species are not federally or state listed as threatened or endangered, but are CDFW SSC. The species were not observed during Dudek’s survey of the project site.

The impacts associated with the proposed project would result in permanent impacts (0.35 acres) and temporary impacts (0.15 acres) to southern willow scrub and southern cottonwood–willow riparian forest and the associated storm-drain-fed intermittent channel, which has potential to support these special-status reptile and amphibian species. Impacts to this potentially occupied habitat would be considered **potentially significant** absent mitigation (**Impact BIO-4**). No impacts to the southern willow scrub habitat or Murphy Canyon Creek would occur.

Special-Status Mammals

The Mexican long-tongued bat and western red bat have potential to forage over the project site. These species are not federally or state listed as threatened or endangered, but are CDFW SSC. While minor impacts to potentially suitable foraging habitat would be associated with the proposed project, impacts to foraging habitat would not have a substantially adverse effect on these species and would be considered **less than significant**. The riparian trees provide suitable roosting habitat for some bat species, including Mexican long-tongued bat and western red bat. Maternity roosts are protected under the California Fish and Game Code and can be considered a nursery site. Impacts to maternity roosts would be considered **potentially significant** absent mitigation (**Impact BIO-5**). No impacts to the southern willow scrub habitat or Murphy Canyon Creek would occur.

Birds Protected Under the Migratory Bird Treaty Act and Fish and Game Code

The MBTA prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, “take” is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). In December 2017, Department of the Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interprets the MBTA to only prohibit intentional take. Unintentional or accidental take is not prohibited (DOI 2017). Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds,

requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

Construction activities are anticipated to occur during the bird nesting season (typically February 1 through September 15) in order to achieve the schedule required by San Diego Municipal Code (SDMC) Section 22.0908(i), which provides that “River Park improvements shall be made at no cost to the City General Fund and completed not later than seven years from the date of execution of the sales agreement,” and Section 22.0908(j), which provides that the “construction of the Joint Use Stadium shall be completed not later than seven years from the date of execution of the sales agreement.” The proposed project is anticipated to begin construction in February 2020 and would be phased over approximately 17 years through buildout. There are numerous birds that could nest within or adjacent to the project site. Therefore, impacts to migratory birds or destruction of active migratory bird nests and/or eggs would be considered a **potentially significant** impact because they are protected under the MBTA and California Fish and Game Code (**Impact BIO-6**).

Special-Status Plants

Three special-status plants were observed within the study area: San Diego sagewort, southwestern spiny rush, and San Diego marsh-elder. Southwestern spiny rush and San Diego marsh-elder are located outside of the proposed impact area; therefore, no direct impacts to these species would occur. One San Diego sagewort is mapped within the developed footprint. Impacts to one San Diego sagewort would be **less than significant** because it is a fairly common plant with a low sensitivity status (CRPR 4).

Indirect Impacts

Short-Term Indirect Impacts to Special-Status Plants

Project construction could cause short-term or temporary indirect impacts to San Diego marsh-elder, which occurs adjacent to the site. Such impacts include those related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). Short-term indirect impacts associated with project implementation that could affect the special-status plants if they occur adjacent to the project site are described in detail in the following paragraphs.

Generation of Fugitive Dust. Excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration, transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and diseases.

Changes in Hydrology. Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the limits of grading. Hydrologic alterations include changes in flow rates and patterns in drainages and dewatering, which may affect adjacent and downstream (off-site) aquatic, wetland, and riparian vegetation communities. Water-quality impacts include chemical-compound pollution (fuel, oil, lubricants, paints, release agents, and other construction materials), erosion, and excessive sedimentation. Direct impacts, as described previously, can also remove native vegetation and increase runoff from roads and other paved surfaces, resulting in increased erosion and transport of surface matter into adjacent vegetation communities. Altered erosion, increased surface flows, and underground seepage can allow for the establishment of non-native plants. Changed hydrologic conditions can also alter seed bank characteristics and modify habitat for ground-dwelling fauna that

may disperse seed. Because San Diego marsh-elder occurs within riparian areas, this species can be affected by changes in hydrology, such as those described above.

Chemical Pollutants. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect special-status plants. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants, such as San Diego marsh-elder.

Short-term indirect impacts to special-status plants associated with project implementation would be **potentially significant** absent mitigation (**Impact BIO-7**).

Long-Term Indirect Impacts to Special-Status Plants

Long-term (operation-related) or permanent indirect impacts could result from the proximity of the proposed development to San Diego marsh-elder located adjacent to the project site after construction. Permanent indirect impacts associated with project implementation that could affect special-status plants include habitat fragmentation, chemical pollutants, altered hydrology, non-native invasive plant species, increased human activity, and alteration of the natural fire regime. Each of these potential indirect impacts is discussed in the following paragraphs.

Chemical Pollutants. The effects of chemical pollutants on San Diego marsh-elder are described above. During landscaping activities, herbicides may be used to prevent certain types of vegetation from reoccurring around structures. However, weed control treatments shall include only legally permitted chemical, manual, and mechanical methods. Additionally, the herbicides used during landscaping activities will be contained within the project impact footprint.

Altered Hydrology. Water would be used for landscaping purposes that could alter the on-site hydrologic regime. Further, as explained above, topographic alterations may result in changes in flow rates and patterns in drainages and dewatering, which may affect adjacent and downstream (off-site) aquatic, wetland, and riparian vegetation communities. These hydrologic alterations may affect San Diego marsh-elder, particularly since they occur in riparian areas. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants (*Linepithema humile*), which can compete with native ant species that could be seed dispersers or plant pollinators.

However, the proposed River Park and Shared Parks and Open Space along the border with the San Diego River and Murphy Canyon Creek will provide a natural buffer between the development and river/creek. The San Diego River serves as a natural outlet for stormwater runoff from the project site. Accordingly, the proposed project's grading plan and storm drain system would collect and retain runoff and direct drainage to retention basins in compliance with Municipal Separate Storm Sewer System (MS4) requirements. This will improve the current runoff conditions, which convey surface runoff from the Stadium parking lot into the outfall structures without basins to filter sediment and pollutants. Long-term indirect impacts to the San Diego River associated with altered hydrology are expected to improve as a result of the proposed project. Accordingly, the water, and associated runoff, used during landscaping activities will be retained and treated within the project site, and long-term indirect impacts to San Diego marsh-elder associated with altered hydrology are not expected.

Non-Native, Invasive Plant Species. Invasive plant species that thrive in edge habitats are well documented in Southern California and throughout the United States. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including, but not limited to, exotic plant competition for light, water, and nutrients and the formation of thatches that block sunlight from reaching smaller native plants.

The project site already contains invasive species (e.g., pampas grass). Exotic plant species may establish adjacent to the project site, and alter habitats and displace native species over time, leading to extirpation of native plant species and unique vegetation communities. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for plants within vegetation communities and special-status plant populations.

Increased Human Activity. Increased human activity could result in the potential for trampling of vegetation outside of the impact footprint, as well as soil compaction, and could affect the viability of plant communities. Trampling can alter the ecosystem, creating gaps in vegetation and allowing exotic, non-native plant species to become established, leading to soil erosion. Trampling may also affect the rate of rainfall interception and evapotranspiration, soil moisture, water penetration pathways, surface flows, and erosion.

An increased human population increases the risk for damage to vegetation communities, special-status plants, and wildlife corridors.

Alteration of the Natural Fire Regime. The proposed project could potentially increase the risk of fire in the adjacent habitat, including, but not limited to, fire associated with potential barbecues in the River Park and Shared Parks and Open Space and the introduction of new construction.

Long-term indirect impacts to San Diego marsh-elder associated with project implementation are considered **potentially significant** absent mitigation (**Impact BIO-8**).

Short-Term Indirect Impacts to Special-Status Wildlife Species

Short-term, construction-related, or temporary indirect impacts to special-status wildlife species that were observed or have moderate potential to occur (see Appendix 4.3-1) would primarily result from construction activities associated with project implementation. Potential temporary indirect impacts could occur as a result of generation of fugitive dust, noise, lighting, chemical pollutants, increased human activity, and non-native animal species.

Generation of Fugitive Dust. Dust and applications for fugitive dust control can impact vegetation surrounding the limits of grading, resulting in changes in the community structure and function. These changes could result in impacts to suitable habitat for special-status wildlife species.

Noise. Construction-related noise from equipment used during construction. Noise impacts can have a variety of indirect impacts on wildlife species, including increased stress, weakened immune systems, altered foraging behavior, displacement due to startle, degraded communication with conspecifics (e.g., masking), damaged hearing from extremely loud noises, and increased vulnerability to predators (Lovich and Ennen 2011; Brattstrom and Bondello 1983, cited in Lovich and Ennen 2011). The existing measured noise levels within the San Diego River south of the project, and near the riparian vegetation adjacent to Fenton Parkway ranged from 59 to 64 A-weighted decibels (dBA) equivalent noise level (L_{eq}). (Appendix 4.12-1). These levels are generally higher than the 60 dBA L_{eq} threshold typically used for analyzing impacts to special-status species, like least Bell's vireo. During construction, the noise levels at a distance of 475 feet from the riparian area in the southwest corner (near noise monitoring location ST7) is 71 dBA L_{eq} . Noise levels at a distance of 200 feet from the San Diego River south of the project (near noise monitoring locations ST6, STR1, and STR2) is approximately 79 dBA L_{eq} (Appendix 4.12-1).

Lighting. Nighttime lighting will occur during portions of the construction phasing. The nighttime construction will be associated with utility improvements located in existing disturbed and developed areas associated with the

construction of the new Stadium located approximately 2,000 feet from the San Diego River and light would be shielded away from the river; therefore, lighting is not expected to be an impact to adjacent native habitat.

Chemical Pollutants. Accidental spills of hazardous chemicals could contaminate nearby surface waters and groundwater and indirectly impact wildlife species through poisoning or altering suitable habitat.

Increased Human Activity. Construction activities adjacent to the San Diego River and Murphy Canyon Creek can deter wildlife from using already constrained habitat areas near the project site.

Non-Native Animal Species. Trash from construction-related activities could attract invasive predators (e.g., ravens [*Corvus corvax*], coyotes [*Canis latrans*], rats [*Rattus* spp.], Virginia opossums [*Didelphis virginiana*], raccoons [*Procyon lotor*], American crows [*Corvus brachyrhynchos*], and gulls [*Larus* spp.]) that could impact the wildlife species in the project site or surrounding areas.

Short-term indirect impacts to special-status wildlife species associated with project implementation would be considered **potentially significant** absent mitigation (**Impact BIO-9**).

Long-Term Indirect Impacts to Special-Status Wildlife Species

Potential long-term or permanent indirect impacts associated with project implementation to special-status wildlife species that have moderate potential to occur (see Appendix 4.3-1) include non-native, invasive plant and animal species; noise; lighting; increased human activity; alteration of the natural fire regime; and altered hydrology.

Non-Native, Invasive Plant and Animal Species. Invasive plant species that thrive in edge habitats are well-documented in Southern California and throughout the United States. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including, but not limited to, the fact that exotic plants compete for light, water, and nutrients, and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and subsequently suitable habitat for special-status wildlife species. In addition, trash can attract invasive predators, such as ravens and coyotes, that could impact the wildlife species on the project site. Least Bell's vireo, which have been documented in the San Diego River, are susceptible to nest parasitism from brown-headed cowbirds (*Molothrus ater*).

Noise. Operation-related noise can have the same type of impacts to wildlife described above under the short-term indirect impacts. As described above, the existing measured noise levels within the San Diego River south of the project and near the riparian vegetation adjacent to Fenton Parkway ranged from 59 to 64 dBA L_{eq} . (Appendix 4.12-1). These levels are higher than the 60 dBA L_{eq} threshold typically used for analyzing impacts to special-status species, like least Bell's vireo. The predicted operational noise levels range from 60 to 65 dBA L_{eq} within the San Diego River south of the project and near the riparian vegetation adjacent to Fenton Parkway (Appendix 4.12-1). These noise changes (up to 1 dBA L_{eq}) are not enough to result in long-term impacts to special-status species.

Lighting. Lighting would be installed around the exterior of the new Stadium. The design goal is to limit light spill illumination to surrounding areas to 0.5 foot-candles, approximately 200 feet from the Stadium's perimeter. In addition, all lighting sources would be directed downwards or otherwise shielded so as to keep light and glare confined within the project boundary. This will help minimize light intrusion into sensitive habitat areas occupied by least Bell's vireo as well as southwestern willow flycatcher, should this species pass through the project site in the future.

Outside lighting would be installed around the commercial and residential buildings, parking areas, and interior roads; however, these structures would be located away from the San Diego River and Murphy Canyon Creek.

Within the River Park and Shared Parks and Open Space, several lighted sports fields and courts are proposed. These sports fields include soccer and baseball fields, as well as basketball and tennis courts. These fields and courts would be set back a minimum of 100 feet from the San Diego River. With lighting design and shielding devices internal to the luminaire, there should be no light spillage into the River Corridor Area, and lighting should be directed away from sensitive areas to ensure consistency with the MSCP's Land Use Adjacency Guidelines. For security purposes, trails within the River Park and Shared Parks and Open Space would have nighttime lighting. Similar to the sports fields, lighting would be shielded, with directional LEDs so there would be very little light spill. The trail closest to the river is generally 100 feet from the river and at the closest point is approximately 86 feet from the river. The installation of the River Park and Shared Parks and Open Space will provide a natural buffer between the Stadium, commercial and residential buildings, and the San Diego River and Murphy Canyon Creek. Lighting will be directed away from the San Diego River and Murphy Canyon Creek.

Increased Human Activity. The proposed project includes the replacement of the SDCCU Stadium and additional development of a campus village and research park with office, retail, parks/recreation, hospitality, and residential uses. A River Park and Shared Parks and Open Space is planned along the southern project border with the San Diego River. While the current use is an existing Stadium that receives regular use by people, the proposed project would result in an increased population within the Mission Valley Community Plan area of approximately 8,510 residents and approximately 8,000 permanent employees (Appendix 4.13-1). Increased human activity could result in the potential for trampling of vegetation and soil compaction outside of the impact footprint, and could affect the viability and function of suitable habitat for wildlife species. An increased human population increases the risk for damage to suitable habitat for wildlife species. In addition, increased human activity can deter wildlife from using habitat areas near the proposed project footprint, particularly if people go into the San Diego River or Murphy Canyon Creek.

Alteration of the Natural Fire Regime. The proposed project would potentially increase the risk of fire in the adjacent habitat, including, but not limited to, fire associated with human error. However, the current Stadium allows tailgate barbeques that could result in accidental fires in adjacent habitat. The River Park and Shared Parks and Open Space would not allow open fires or barbeques, thus reducing the potential for fires in adjacent habitat areas.

Altered Hydrology. Water would be used for landscaping purposes that may alter the on-site hydrologic regime. Further, as explained above, topographic alterations may result in changes in flow rates and patterns in drainages and dewatering, which may affect adjacent and downstream (off-site) aquatic, wetland, and riparian vegetation communities. These hydrologic alterations may affect special-status wildlife species. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants, which can compete with native ant species that could be seed dispersers or plant pollinators. Changes in plant composition could affect the native vegetation communities and wildlife habitat.

However, the proposed River Park and Shared Parks and Open Space along the border with the San Diego River and Murphy Canyon Creek will provide a natural buffer between the development and river/creek. The San Diego River serves as a natural outlet for stormwater runoff from the project site. Accordingly, the proposed project's grading plan and storm drain system would collect and retain runoff and direct drainage to retention basins in compliance with MS4 requirements. This will improve the current runoff conditions, which convey surface runoff from the Stadium parking lot into the outfall structures without basins to filter sediment and pollutants. Long-term indirect impacts associated with altered hydrology are expected to improve as a result of the proposed project.

Accordingly, the water, and associated runoff, used during landscaping activities will be contained within the project impact footprint, and long-term indirect impacts associated with altered hydrology are not expected.

Long-term indirect impacts to special-status wildlife species associated with project implementation would be considered **potentially significant** absent mitigation (**Impact BIO-10**).

Would the project 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?

Direct Impacts

Sensitive Natural Communities

As described in Section 4.3.1, the project site was surveyed for vegetation communities. The results of the surveys are provided in Table 4.3-1. A total of five native vegetation communities were mapped on the project site, including Baccharis-dominated Diegan coastal sage scrub, Diegan coastal sage scrub, southern willow scrub, southern cottonwood-willow riparian forest, and southern riparian forest; and four non-native vegetation communities or land cover types—urban/developed, disturbed habitat and ornamental plantings, disturbed wetland, and unvegetated channel. Anticipated temporary and permanent impacts to these communities/land covers are shown in Tables 4.3-3 and 4.3-4 and shown on Figure 4.3-4, Figure 4.3-5, and Figure 4.3-6, Impacts to Biological Resources – Off-Site Sewer and Storm Drain Connections.

Table 4.3-3. Temporary On-Site and Off-Site Impacts to Vegetation Communities/Land Cover Types

Habitat Types/Vegetation Communities	Existing On-Site Acres	On-Site Impacts (acres)	Off-Site Impacts (acres)	Total Impacts (acres)
<i>Native Vegetation Communities</i>				
Baccharis-dominated Diegan coastal sage scrub	0.97	0.06	—	0.06
Diegan coastal sage scrub (restored)	0.12	0.11	0.04	0.15
Southern willow scrub	0.08	—	—	—
Southern cottonwood-willow riparian forest	2.59	0.11	0.04	0.15
Southern riparian forest	0.10			
<i>Subtotal</i>	3.87	0.28	0.08	0.36
<i>Non-Native Vegetation Community/Land Cover Types</i>				
Disturbed habitat	0.85	0.10	—	0.10
Disturbed wetland	0.89			
Urban/developed	165.77	0.51	—	0.51
Non-vegetated channel or floodway	0.75	—	—	—
<i>Subtotal</i>	168.26	0.61	—	0.61
Total*	172.13	0.89	0.08	0.97

Note:

* May not total due to rounding.

**Table 4.3-4. Permanent On-Site and Off-Site Impacts to Vegetation Communities/
Land Cover Types**

Habitat Types/Vegetation Communities	Existing On-Site Acres	On-Site Impacts (acres)	Off-Site Impacts (acres)	Total Impacts (acres)
Native Vegetation Communities				
Baccharis-dominated Diegan coastal sage scrub	0.97	0.04	—	0.03
Diegan coastal sage scrub (restored)	0.12	0.01	—	0.01
Southern willow scrub	0.08	—	—	—
Southern cottonwood–willow riparian forest	2.59	0.35	—	0.35
Southern riparian forest	0.10			
<i>Subtotal</i>	3.87	0.40	0	0.40
Non-Native Vegetation Community/Land Cover Types				
Disturbed habitat	0.85	0.04	0.84	0.88
Disturbed wetland	0.89			
Urban/developed	165.77	163.76	2.67	166.43
Non-vegetated channel or floodway	0.75	—	—	—
<i>Subtotal</i>	168.26	163.80	3.51	167.31
Total*	172.13	164.20	3.51	167.71

Note:

* May not total due to rounding.

Temporary impacts to 0.06 acres of Baccharis-dominated Diegan coastal sage scrub, 0.15 acres of restored Diegan coastal sage scrub, 0.10 acres of disturbed habitat, and 0.51 acres of urban/developed land would occur. Temporary impacts to Baccharis-dominated Diegan coastal sage scrub and restored Diegan coastal sage scrub would be considered **potentially significant** absent mitigation (**Impact BIO-11**).

Southern cottonwood–willow riparian forest is regulated as riparian habitat by the California Fish and Game Code Section 1600. There are also temporary impacts associated with sewer improvements in the San Diego River (Figure 4.3-6), which would result in temporary impacts to 0.15 acres of southern cottonwood–willow riparian forest. Temporary impacts to these sensitive natural communities would be considered **potentially significant** absent mitigation (**Impact BIO-11**).

Project implementation would result in permanent impacts to Baccharis-dominated Diegan coastal sage scrub (0.04 acres), 0.01 acres of restored Diegan coastal sage scrub, 0.88 acres of disturbed habitat, and 166.43 acres of urban/developed land. Permanent impacts to Baccharis-dominated Diegan coastal sage scrub and restored Diegan coastal sage scrub would be considered **potentially significant** absent mitigation (**Impact BIO-12**). Project implementation would also permanently impact 0.35 acres of southern cottonwood–willow riparian forest. Permanent impacts to this sensitive natural community would be considered **potentially significant** absent mitigation (**Impact BIO-12**).

Jurisdictional Waters

Impacts to jurisdictional features are summarized in Tables 4.3-5 and 4.3-6. Temporary impacts total approximately 0.15 acres, which includes impacts to 0.01 acres of wetlands. Temporary impacts to jurisdictional features would

be considered **potentially significant** absent mitigation (**Impact BIO-13**). Permanent impacts total approximately 0.07 acres to non-wetlands waters/CDFW riparian area and 0.28 acres of CDFW riparian area. Permanent impacts to jurisdictional features would be considered **potentially significant** absent mitigation (**Impact BIO-14**).

Table 4.3-5. Temporary On-Site and Off-Site Impacts to Jurisdictional Aquatic Resources

Habitat Types/Vegetation Communities	Existing Project Site (acres)	On-Site Impacts (acres)	Off-Site Impacts (acres)	Total Impacts (acres)
<i>ACOE/RWQCB/CDFW Jurisdictional</i>				
Non-wetland waters – ephemeral/riparian area	0.12	0.03	–	0.03
Non-wetland water – ephemeral	0.15	–	–	–
Wetland	0.53	–	0.01	0.01
<i>Subtotal</i>	0.80	0.03	0.01	0.04
<i>CDFW-Only Jurisdictional</i>				
Riparian area	1.20	0.08	0.03	0.11
Total*	1.99	0.11	0.04	0.15

Note:

* May not total due to rounding.

Table 4.3-6. Permanent Impacts to Jurisdictional Aquatic Resources

Jurisdictional Aquatic Resource	Existing Project Site (acres)	Permanent On-Site Impacts (acres)
<i>ACOE/RWQCB/CDFW Jurisdictional</i>		
Non-wetland waters – ephemeral/riparian area	0.12	0.07
Non-wetland water – ephemeral	0.15	–
Wetland	0.53	–
<i>Subtotal</i>	0.78	0.07
<i>CDFW-Only Jurisdictional</i>		
Riparian area	1.20	0.28
Total*	1.99	0.35

Note:

* May not total due to rounding.

The above impacts to jurisdictional resources would occur as a result of implementation of wet utilities located or proposed for location along the southern edge of the project site and the extension of Fenton Parkway onto the project site. An alternative roadway extension design, the feasibility of which has yet to be determined, which would entail construction of a majority of the road bed on a cantilevered structure, is in preparation. This alternative design would impact similar jurisdictional resources; however, these permanent and temporary impacts would be smaller in quantity due to the use of pier structures or other minimally impactful structural components.

Indirect Impacts

Sensitive Natural Communities (Short-Term and Long-Term)

The project could have short-term and long-term indirect impacts on sensitive natural communities. These would be the same as those described for special-status plants. Such impacts would be considered **potentially significant** absent mitigation (**Impacts BIO-7 and BIO-8**).

Jurisdictional Waters (Short-Term)

Potential short-term or temporary indirect impacts to jurisdictional waters and wetlands adjacent to or downstream from the project site would primarily result from construction activities, and would include impacts related to or resulting from changes in hydrology resulting from construction, including sedimentation and erosion, and the introduction of chemical pollutants (including herbicides). Potential short-term indirect impacts associated with project implementation that could affect jurisdictional waters and wetlands of the San Diego River and/or Murphy Canyon Creek that occur adjacent to or downstream from the project site are described in detail in the following paragraphs.

Changes in Hydrology. Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the construction area directly toward the San Diego River.

Chemical Pollutants. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect jurisdictional waters. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants.

Short-term indirect impacts to jurisdictional waters associated with project implementation would be considered **potentially significant** absent mitigation (**Impact BIO-15**).

Jurisdictional Waters (Long-Term)

Long-term (operation-related) or permanent indirect impacts could result from the proximity of the proposed project to jurisdictional waters and wetlands of the San Diego River and/or Murphy Canyon Creek after construction, including impacts related to operation and maintenance. Operation and maintenance activities will occur within the project site. Permanent indirect impacts associated with project implementation that could affect jurisdictional waters and wetlands include habitat fragmentation, introduction of chemical pollutants, altered hydrology, non-native invasive plant and animal species, increased human activity, and alteration of the natural fire regime. Each of these potential indirect impacts is discussed in the following paragraphs.

Chemical Pollutants. The effects of chemical pollutants on jurisdictional waters and wetlands are described above.

Altered Hydrology. Water used for landscaping purposes may alter the on-site hydrologic regime. These hydrologic alterations may affect jurisdictional waters and wetlands. However, the water, and associated runoff, used during landscaping activities will be contained within the project impact footprint. The proposed River Park and Shared Parks and Open Space along the border with the San Diego River and Murphy Canyon Creek will provide a natural buffer between the development and river/creek. The San Diego River serves as a natural outlet for stormwater runoff from the project site. Accordingly, the proposed project's grading plan and storm drain system would collect and retain runoff and direct drainage to retention basins in compliance with MS4 requirements. This will improve the current runoff conditions, which convey surface runoff from the Stadium parking lot into the outfall structures

without basins to filter sediment and pollutants. Long-term indirect impacts associated with altered hydrology are expected to improve as a result of the proposed project.

Non-Native, Invasive Plant and Animal Species. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for plants within jurisdictional waters and wetlands.

Increased Human Activity. An increased human population increases the risk for damage to jurisdictional waters and wetlands.

Long-term indirect impacts to jurisdictional waters associated with project implementation would be considered **potentially significant** absent mitigation (**Impact BIO-16**).

Would the project 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?

The project would have no permanent impacts on federally protected wetlands; however, the project would result in temporary impacts to 0.01 acres of wetland waters of the United States (see Table 4.3-5). These impacts are associated with improvements to the sewer connection on the northern side of the San Diego River. Short-term temporary impacts to federally protected wetlands would be considered **potentially significant** absent mitigation (**see Impact BIO-13**).

The project also would have temporary impacts to 0.15 acres of CDFW riparian area and permanent impacts to approximately 0.35 acres of CDFW riparian area. These impacts would be considered **potentially significant** absent mitigation (**see Impacts BIO-13 and BIO-14**).

Short-term and long-term indirect impacts to state and federal wetlands would be considered **potentially significant** absent mitigation (**see Impacts BIO-15 and BIO-16**).

Would the project 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?

Direct Impacts

The project site is approximately 96% developed with the existing SDCCU Stadium, parking lot, and roads. Wildlife may use the small riparian area in the southwest corner for local movement between urban areas and the San Diego River, as well as Murphy Canyon Creek. More urban-adapted wildlife species may use the entire site to move through, particularly when the Stadium is not in use. However, none of the project site is considered a wildlife corridor. Therefore, the proposed project would not have a substantially adverse effect on wildlife movement and impacts would **not be considered significant**.

Special-Status Bat Roosts

The impacts to the riparian forest could impact roosting bats (including maternity roosts). While specific surveys for bats were not conducted and bats were not observed during various biological resource surveys conducted on or adjacent to the project site, the riparian trees provide suitable roosting habitat for some bats species, including Mexican long-tongued bat and western red bat. Maternity roosts are protected under the California Fish and Game

Code and can be considered a nursery site. Impacts to maternity roosts would be considered **potentially significant** absent mitigation (**Impact BIO-5**).

Migratory Birds

The San Diego River floodplain includes riparian vegetation that provides habitat for a variety of resident and migratory birds. Murphy Canyon Creek is a narrower channel, but provides foraging and nesting habitat for birds. The proposed project includes buildings ranging from 3 to 24 stories in height. While most buildings would be less than eight stories, or approximately 90 feet, the height of as many as five buildings within the proposed project would be permitted up to approximately 230 feet.

The proposed project would entail construction of multiple buildings, including several buildings taller than the existing Stadium. New buildings, and in particular reflective windows on these buildings, present a potential collision impact for birds flying through the area. The factors involved in potentially fatal bird strikes with buildings include migrant birds striking a lighted building at night at the elevation at which they are migrating; daytime migrant birds striking windows of a tall structure, most likely due to the reflection of the sky or nearby vegetation in the windows; and migrant or resident birds striking windows at lower elevations that reflect the surrounding vegetation, which they interpret to be vegetation in front of them. Birds migrating over terrestrial locations appear to migrate at higher altitudes, but do not frequently exceed 1,500 feet (Cooper and Ritchie 1995).

Daytime collisions or strikes occur at both tall buildings and low structures, including residential homes. The daytime strikes at tall buildings can occur from daytime migrating birds or local resident birds striking reflective glass because birds cannot interpret that the images observed in glass are reflections; therefore, they fly into windows that they think are trees or sky.

Collisions with lower-height buildings or homes appear to be associated with birds using feeders, or resident and migrant birds colliding with windows that reflect the surrounding landscape (Klem 1990). These collisions are most common at ground level and at heights above 10 feet (Klem 1989). Reflection of vegetation within windows provides a cue to birds that they can pass through the area. Gelb and Delacretaz (2009) stated that many of the collisions they detected occurred toward the lower parts of buildings where large glass exteriors reflected outdoor vegetation. This study indicates that this optical illusion is highly likely to have caused many of the subject bird strikes. The primary condition of concern with daytime collisions is caused by landscaping or other bird attractants that are located 30 feet or more from reflective glass surfaces (Klem et al. 2004). As the distance of the vegetation or other bird attractant exceeds 30 feet from the windows, birds are able to attain enough speed in flight to result in a fatal strike if they hit the window (Klem 1990). Bird strikes to windows on buildings increase with increasing amounts of vegetation and glass, especially reflective glass opposite the vegetation (Gelb and Delacretaz 2006; Klem et al. 2009; Borden et al. 2010). Gelb and Delacretaz (2009) felt that many of the collisions they detected occurred where transparent windows revealed interior vegetation. Where reflective glass faces forested patches, there is a significant increase in bird strikes that can lead to several hundred collisions per year even for buildings that are not within an especially well-documented migration corridor (O'Connell 2001). Such bird strikes include migrant birds as well as resident bird species, and occur during both daytime and nighttime periods.

Bird strikes associated with the construction of multiple new buildings, including several buildings that are taller than the existing Stadium, would be considered **potentially significant** absent mitigation (**Impact BIO-17**).

Indirect Impacts

Short-Term

The project site itself is not considered important for wildlife movement; however, the San Diego River just south of the project site is an important habitat area for wildlife, particularly birds. Murphy Canyon Creek provides additional habitat for wildlife, particularly birds, traveling to and from the river, especially because of the level of urban development and the opportunities for north-south movement across the San Diego River. Short-term indirect impacts to the San Diego River and Murphy Canyon Creek could result from increased human activity, lighting, and noise.

Increased Human Activity. Project construction would take place during the daytime and possibly at night. Daytime construction activities would not affect wildlife species such as mammals that are most active in the evenings and at nighttime; however, these could be affected if nighttime construction occurs near natural habitat areas. Wildlife species such as birds, rabbits, and lizards are active in the daytime. The nighttime construction would likely be limited to utility improvements. Because the project site is developed and is therefore subject to varying amounts of human activity, wildlife is expected to continue to use the adjacent habitat. Additionally, the construction activities will not occur within the San Diego River (with the exception of small temporary work around existing outfall structures).

Lighting. Nighttime lighting will occur during portions of the construction phasing. The nighttime construction will be associated with utility improvements located in existing disturbed and developed areas; therefore, lighting is not expected to be an impact to adjacent native habitat.

Noise. Construction-related noise could occur from equipment used during vegetation clearing. Noise impacts can have a variety of indirect impacts on wildlife species, including increased stress, weakened immune systems, altered foraging behavior, displacement due to startle, degraded communication with conspecifics (e.g., masking), damaged hearing from extremely loud noises, and increased vulnerability to predators (Lovich and Ennen 2011; Brattstrom and Bondello 1983, as cited in Lovich and Ennen 2011). The existing measured noise levels within the San Diego River south of the project site and near the riparian vegetation adjacent to Fenton Parkway ranged from 59 to 64 dBA L_{eq} . (Appendix 4.12-1). These levels are higher than the 60 dBA L_{eq} threshold typically used for analyzing impacts to special-status species, like least Bell's vireo. During construction, the noise levels at a distance of 475 feet from the riparian area in the southwest corner (near noise monitoring location ST7) is 71 dBA L_{eq} . Noise levels at a distance of 200 feet from the San Diego River south of the project site (near noise monitoring locations ST6, STR1, and STR2) is approximately 79 dBA L_{eq} (Appendix 4.12-1).

Short-term indirect impacts to wildlife movement would be considered **potentially significant** absent mitigation (**Impact BIO-18**).

Long-Term

Long-term indirect impacts include noise, lighting, and increased human activity.

Noise. At any one location, the hourly average sound level associated with recreational noise is difficult to predict due to many variables, including the type of recreational activity, the number of participants and spectators, the location of people, and the amount and level of conversation and cheering. To determine the approximate noise levels that would be generated at ballfields and other recreational activities, and to predict potential noise impacts, noise measurements were conducted by Dudek staff at several existing recreational parks, including

Stagecoach Park in Carlsbad, Cardiff Sports Park in Encinitas, and Vista National Little League in Vista. The proposed project may have similar ballfields as these facilities within the River Park and Shared Parks and Open Space areas. The results of these measurements indicate that ballfield activities (including use of a public address system) generate a 1-hour average noise level of approximately 55–65 dBA at a distance of 50 feet from the stands and/or spectator areas.

Similarly, the River Park and Shared Parks and Open Space would generate a 1-hour average noise level of approximately 55–65 dBA at a distance of 50 feet from the stands and/or spectator areas. The River Park and Shared Parks and Open Space would have the potential to exceed the daytime 1-hour 60 dBA L_{eq} limit if the loudest noise sources are placed within approximately 100 feet of sensitive habitat. However, the proposed ballfields would be located at least 100 feet from the park and would serve to reduce noise spillover.

Regarding electronic amplification, such systems may be used in conjunction with active sport activities such as softball, soccer, and other court sports. Public events may also occur that required amplified noise. Activities that would include amplified noise or other temporary noise-generating equipment would be required to obtain an event permit from the City of City of San Diego. If a permit is not obtained, Section 59.5.0502(b)(2) of the SDMC prohibits any park or recreation center user from operating a radio, television, stereo or any similar electronic or mechanical device capable of producing or emitting sound at a volume where the sound is audible at a distance greater than 50 feet from the point of emission. Activities that require permitted amplified noise would be limited to normal park operation hours. Additionally, amplified noise would not be a continuous source of noise. Activities would occur on various dates and times, and at varied locations. Permitted uses would still be subject to hourly exterior noise level limits. University Police and the City of San Diego Police Department enforce the nuisance noise ordinance of the SDMC. Therefore, nuisance noise and permitted amplified noise from events at the River Park and Shared Parks and Open Space would result in a **less-than-significant** impact.

Scheduled maintenance by maintenance crews would occur at the site. Maintenance activities would include the use of gasoline-powered mowers, trimmers, blowers, and edgers, resulting in intermittent short-term temporary noise increases. Maintenance activities are permitted uses and would be subject to the 1-hour L_{eq} noise limits of 60 dBA (or ambient noise levels if higher than 60 dBA). Additionally, maintenance equipment would not be operating at any one location for more than a few minutes, and all equipment would not be operating simultaneously. Due to the limited amount of time equipment would be operating in one location, operation of landscape equipment would generally not exceed the hourly noise level limit at a particular receptor. Therefore, landscape maintenance would result in a **less-than-significant** impact.

Lighting. Lighting would be installed around the exterior of the new Stadium. The design goal is to limit light spill illumination to surrounding areas to 0.5 foot-candles, approximately 200 feet from the Stadium's perimeter. In addition, all lighting sources would be directed downward or otherwise shielded so as to keep light and glare confined within the project boundary.

Outside lighting would be installed around the commercial and residential buildings, parking areas, and interior roads; however, these structures would be located away from the San Diego River and Murphy Canyon Creek.

Within the River Park and Shared Parks and Open Space, several lighted sports fields and courts are proposed. These sports fields include soccer and baseball fields, as well as basketball and tennis courts. These fields and courts would be set back a minimum of 100 feet from the San Diego River. With lighting design and shielding devices internal to the luminaire, there should be no light spillage into the River Corridor Area, and lighting should be directed away from sensitive areas to ensure compliance with the MSCP's Land Use Adjacency Guidelines and

to be in accordance with the Land Development Code, Section 142.0740 (Outdoor Lighting Regulations). For security purposes, trails within the River Park and Shared Parks and Open Space would have nighttime lighting. Similar to the sports fields, lighting would be shielded, with directional LEDs so there would be very little light spill. The trail closest to the river is generally 100 feet from the river and at the closest point is approximately 86 feet from the river. The installation of the River Park and Shared Parks and Open Space will provide a natural buffer between the Stadium, commercial and residential buildings, and the San Diego River and Murphy Canyon Creek. Lighting will be directed away from the San Diego River and Murphy Canyon Creek.

Increased Human Activity. As described above, the project site is an existing developed area, but the proposed project would result in an increased population over time. Increased human activity could result in increased noise, potentially affecting the San Diego River and Murphy Canyon Creek and wildlife species that use these areas. An increased human population increases the risk for damage to suitable habitat for wildlife species. In addition, increased human activity can deter wildlife from using habitat areas near the proposed project footprint. The River Park and Shared Parks and Open Space would provide a natural buffer along the San Diego River and Murphy Canyon Creek.

Long-term indirect impacts to wildlife movement would be considered **potentially significant** absent mitigation (**Impact BIO-19**).

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The lead agency, the California State University, which is the State of California acting in its higher education capacity, is a state agency; therefore, it is not subject to the policies and ordinances set forth by local agencies such as the City or County of San Diego, which might maintain a local tree preservation policy or ordinance. Therefore, **no impact** would occur.

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Direct Impacts

The proposed project would not result in direct impacts to the MHPA, which covers the San Diego River. The project would impact least Bell's vireo and may potentially impact southwestern willow flycatcher should this species use habitat in the San Diego River corridor in the future; both of these are covered species in the City's MSCP Subarea Plan. Because SDSU would fully mitigate for impacts to both of these covered species by creating additional habitat, the proposed project would not have the effect of eliminating key habitat areas for these covered species; therefore, the project would not hinder the City's ability to reach their goals and objectives for conservation of these covered species. Additionally, SDSU is not a signatory to the San Diego MSCP and thus is not a permittee under this HCP. As such, SDSU is not subject to the MSCP and need not comply with its provisions. Because SDSU is not subject to the policies and ordinances set forth by the MSCP, **no impact** to the City of San Diego or other local agencies' abilities to implement the MSCP would occur.

Indirect Impacts

Land Use Considerations

SDSU reviewed Chapter 1.4, Land Use Considerations, 1.4.2, General Planning and Design Guidelines, of the City of San Diego's MSCP Subarea Plan (City of San Diego 1997) to determine whether construction of the proposed project adjacent to an area designated as MHPA, which is intended to support an element of the eventual MSCP preserve, would affect the City's ability to comply with the provisions of their Subarea Plan. This guideline outlines the City's policies related to lighting, barriers, chemical pollutants, and mining or extraction; the proposed project's potential impacts relating to these areas are outlined below. No direct impacts to the MHPA would occur.

Lighting. No lighting is proposed along the MHPA boundaries (i.e., San Diego River and Murphy Canyon Creek). Lighting would be installed around the exterior of the Stadium. The design goal is to limit light spill illumination to surrounding areas to 0.5 foot-candles, approximately 200 feet from the Stadium's perimeter. In addition, all lighting sources would be directed downward or otherwise shielded so as to keep light and glare confined within the project boundary. Further, outside lighting would be installed around the commercial and residential buildings, parking areas, and interior roads; however, these structures would be located away from the San Diego River and Murphy Canyon Creek. The installation of the River Park and Shared Parks and Open Space will provide a natural buffer between the Stadium, commercial and residential buildings, and the San Diego River and Murphy Canyon Creek. The sports fields would be lighted when in use; however, lighting would be directed away from the San Diego River. Lighting required along the trails in the River Park and Shared Parks and Open Space would be shielded from the river and Murphy Canyon Creek. With the exception of the closest trail point at 86 feet away, lighting in the River Park and Shared Parks and Open Space would be a minimum of 100 feet from the San Diego River and MHPA, and would be directed downward and/or shielded.

Barriers. Visual barriers are proposed between the River Park and Shared Parks and Open Space and the San Diego River and Murphy Canyon Creek. For example, signs and landscaping would be installed to deter people from entering these areas. In addition, there are existing berms on the southern and western edge of the project site, which would be maintained and would further discourage intrusion into the San Diego River and Murphy Canyon Creek. Lastly, Murphy Canyon Road would be extended north along Murphy Canyon Creek from the southeast corner of the project site, where Rancho Mission Road currently enters the project site, to the northwest portion of site before turning west and would serve as a barrier to people crossing into Murphy Canyon Creek. Therefore, the proposed project would avoid conflicts with the Subarea Plan's lighting and barriers adjacency guidelines.

Chemical Pollutants. SDSU would store and use all hazardous materials, chemicals, and substances (i.e., janitorial supplies) consistent with their use and storage recommendations; all such materials and substances would be stored within the building or appropriate enclosures consistent with Occupational Safety and Health Administration and SDSU Environmental Health and Safety protocols. No storage of these chemicals and substances would occur within the MHPA; therefore, the proposed project would not be inconsistent with the Subarea Plan's guidelines regarding hazardous substance storage in sensitive habitat areas.

Mining or Extraction. The proposed project would not involve any type of mining or extraction activity, so no inconsistency with the Subarea Plan's mining and extraction policies would occur. While occurring outside of the MHPA, the installation of the River Park and Shared Parks and Open Space would provide a natural buffer between the development and the river/creek. The San Diego River serves as a natural outlet for stormwater runoff from the project site. The proposed project's grading plan and storm drain system would collect and retain runoff and direct drainage to retention basins in compliance with MS4 requirements. This would improve the current runoff

conditions, which convey surface runoff from the Stadium parking lot into the outfall structures without basins to filter sediment and pollutants. Long-term indirect impacts associated with altered hydrology are expected to improve as a result of the proposed project.

Land Use Adjacency Guidelines

SDSU also reviewed Section 1.4.3, Land Use Adjacency Guidelines, of Chapter 1.4, Land Use Considerations of the City's Subarea Plan. Similar to the guidelines above, Section 1.4.3 outlines the City's policies related to eight land development considerations: drainage, toxics, lighting, noise, barriers, invasive species, brush management, and grading/land development. Although SDSU is not subject to these guidelines, an analysis of consistency with each provision is provided to ensure that the proposed project does not hinder the City's ability to meet the requirements of its Subarea Plan.

Drainage. The proposed project's drainage system would improve compared to existing conditions. The San Diego River serves as a natural outlet for stormwater runoff from the project site. The proposed project's grading plan and storm drain system would collect and retain runoff and direct drainage to retention basins in compliance with MS4 requirements. Therefore, the proposed project would not be inconsistent with the City's drainage guidelines in Section 1.4.3 of the Subarea Plan.

Toxics. Any on-site landscaped areas would be treated with standard fertilizers as per SDSU's typical landscaping protocols and schedules. Any runoff from these areas would be directed to the on-site drainage/filtration system, which would treat all runoff before it is directed to the existing storm drain system. Therefore, the proposed project would not be inconsistent with the City's provision for use/filtration of landscape fertilizers and chemicals.

Lighting. As indicated above, lighting will be installed around the perimeter of the Stadium, commercial and residential buildings, and interior roads and in the sports fields. The exterior Stadium lighting will illuminate up to 200 feet from the Stadium's perimeter. The San Diego River and Murphy Canyon Creek are located approximately 1,500 feet and 2,000 feet, respectively, from the new Stadium location, which is farther from the river compared to the existing Stadium. The sports fields would be lighted when in use; however, lighting would be directed away from the San Diego River. Lighting required along the trails in the River Park and Shared Parks and Open Space would be shielded from the river and Murphy Canyon Creek. With the exception of the closest trail point, at 86 feet away, lighting in the River Park and Shared Parks and Open Space would be a minimum of 100 feet from the San Diego River and MHPA, and would be directed downward and/or shielded. These avoidance and minimization measures would serve to reduce potential impacts to least Bell's vireo and southwestern willow flycatcher (should this species use habitat in the San Diego River corridor in the future), both of which are covered species under the MSCP Subarea Plan.

Noise. The City requires that uses adjacent to the MHPA be designed to minimize noise impacts. The MHPA is located in the San Diego River, south of the project site. The Stadium and commercial and residential buildings are located farther north from the San Diego River. The River Park and Shared Parks and Open Space is proposed along the border of the San Diego River to provide a buffer between the Stadium, commercial and residential areas, and the river. Recreational sports fields are located a minimum of 100 feet from the MHPA in order to minimize indirect impacts such as noise. Further, during construction, pre-construction surveys (see Section 4.3.6, Mitigation Measures), would be conducted to determine the presence of sensitive wildlife. Construction would follow the guidelines outlined in these mitigation measures to minimize impacts to sensitive wildlife that may be in the riparian areas to a level below significance.

Barriers. The proposed construction site would be fenced to prevent wildlife intrusion into work areas and to prevent human intrusion into adjacent areas. Visual barriers are proposed between the River Park and Shared Parks and Open Space and the San Diego River and Murphy Canyon Creek. For example, signs and landscaping would be installed to deter people from entering these areas. In addition, existing berms on the southern and western edge of the project site would be maintained and would further discourage intrusion into the San Diego River and Murphy Canyon Creek. Lastly, Murphy Canyon Road would be extended north along Murphy Canyon Creek from the southeast corner of the project site, where Rancho Mission Road currently enters the project site, to the northwest portion of site before turning west, serving as a barrier to people crossing into Murphy Canyon Creek.

Invasive Species. The proposed project would result in a passive, naturally landscaped area within the River Park and Shared Parks and Open Space to serve as a buffer to the river. All landscaping would consist of native plant species where possible and would not include any plants included on the most recent version of the California Invasive Plant Council California Invasive Plant Inventory for the project region. Therefore, the proposed project would be consistent with the Subarea Plan's objectives for invasive species avoidance.

Brush Management. The River Park and Shared Parks and Open Space would be provided as a buffer between the developed areas and the MHPA and would be maintained. No specific brush management is required since the project site is located on existing urban/developed areas. Therefore, the proposed project would be consistent with this provision of the City's Subarea Plan.

Grading/Land Development. All grading and land development work that is necessary for the proposed project would be contained within the project impact footprint as described above in the impact evaluation for biological resources. Therefore, the proposed project would be consistent with this provision of the City's Subarea Plan.

Because SDSU is not subject to the policies and ordinances set forth by the MSCP, and the proposed project demonstrates consistency with the Land Use Considerations and Land Use Adjacency Guidelines, **no impact** to the City of San Diego or other local agencies' abilities to implement the MSCP would occur.

Would the project result in a cumulative impact to biological resources?

Sensitive Wildlife and Plant Resources

Cumulative projects associated with the development of the "Purple Line" by Metropolitan Transit System and any planned improvements to California Department of Transportation (Caltrans) owned/operated transportation infrastructure such as I-8, I-15, etc. may result in direct and indirect impacts to sensitive wildlife and plant resources and their habitats in and around Mission Valley. However, any impacts from these projects would need to be fully mitigated to avoid cumulative impacts. Any impacts to sensitive wildlife and plant resources and their habitat would be regulated by USFWS and/or CDFW, which require full mitigation to offset such impacts. Any impacts to these resources as a result of San Diego County Water Authority projects would be offset by the regional conservation planning framework outlined in their NCCP/HCP (adopted in 2011). All of the Water Authority's capital improvement projects and operations and maintenance activities must be consistent with their NCCP/HCP which, like the San Diego MSCP, provides a coordinated approach to avoiding and mitigating for impacts to sensitive plant and wildlife species and their habitats.

With the exception of projects proposed by state agencies such as Caltrans, special districts, or other regional agencies such as the San Diego County Water Authority or Metropolitan Transit System, all remaining cumulatively considerable projects listed in Table 3-1, Cumulative Projects, are reviewed and approved by the City of San Diego.

During the City's entitlement review process, all projects are designed to be consistent with the City's regional HCP, which ensures that cumulative impacts to plant, wildlife, and habitat resources, including listed species such as least Bell's vireo and southwestern willow flycatcher, as a result of development are minimized. As outlined above, approximately 20 years ago, the San Diego MSCP was established as a regional HCP to help facilitate planned regional development while at the same time establishing a regional preserve system for the long-term benefit of the region's diverse plant and wildlife resources. In 1998, the City of San Diego adopted their MSCP Subarea Plan, which covers the Mission Valley Community Plan Area, including the Stadium site. The City's Subarea Plan implements the regional MSCP and through the City's development review process, all projects, including all of those listed in Table 3-1, must be consistent with and contribute to the establishment of this regional preserve system. The City enforces development siting restrictions, limits direct impacts to designated preserve areas, ensures compliance with adjacency and buffering techniques to reduce indirect impacts, and provides for the long-term management of the established preserves. Because all projects must comply with the City's MSCP Subarea Plan, cumulative impacts to biological resources from other projects listed in Table 3-1 have been avoided.

As stated above, the proposed project is located in the San Diego MSCP and within the City's Subarea Plan Area. Although SDSU is a state agency and is not subject to the provisions of the MSCP or City's Subarea Plan, direct avoidance of potential sensitive habitat resources as well as avoidance and minimization measures and project design features that would reduce the potential for indirect impacts are consistent with the MSCP and the City's Subarea Plan. Due to this consistency with these regional planning tools, the project would not result in cumulative impacts to plant and wildlife resources.

Sensitive Wetland and Riparian Resources

As described previously under "Jurisdictional Waters," the proposed project would impact jurisdictional wetlands and waters of the United States, and therefore would be required to comply with wetlands mitigation requirements pursuant to Sections 401 and 404 of the federal Clean Water Act and Section 1600 of the California Fish and Game Code. These regulations are all designed to ensure the "no net loss" of wetlands and riparian resources. As outlined in **mitigation measure (MM) BIO-13**, these impacts would be mitigated at a ratio of approximately 1:1 for creation and 2:1 for revegetation and enhancement, and would result in no net loss of habitat. Similarly, cumulative projects such as those listed in Table 3-1 may impact wetlands and waters of the United States in and around the Mission Valley area and within the greater San Diego River watershed. That said, all of these resources are protected under Sections 401 and 404 of the federal Clean Water Act and Section 1600 of the California Fish and Game Code. Any project or agency that must impact these resources would need to fully mitigate for impacts to these resources at similar ratios as the proposed project. Accordingly, there would be no net loss of wetland resources from cumulatively considerable projects, and such cumulative impacts would be less than significant.

In summary, the proposed project is primarily an infill project with very limited impacts to sensitive wildlife and plant resources and their habitat as well as wetland and riparian resources. All of the project's impacts would be fully mitigated pursuant to state and federal wetland regulations and would be consistent with the mitigation and avoidance and minimization measures specified in the City's Subarea Plan. When combined with existing and probable future projects within the cumulative study area, the proposed project **would not contribute to cumulatively considerable impacts** to sensitive biological resources.

4.3.5 Summary of Impacts Prior to Mitigation

- Impact BIO-1** The project would have a substantial adverse effect on least Bell's vireo.
- Impact BIO-2** The project would have a substantial adverse effect on southwestern willow flycatcher.
- Impact BIO-3** The project would have a substantial adverse effect on other special-status birds.
- Impact BIO-4** The project would have a substantial adverse effect on special-status amphibians and reptiles.
- Impact BIO-5** The project would result in significant impacts to maternity bat roosts from the removal of suitable riparian trees on site.
- Impact BIO-6** The project would have a substantial adverse effect on migratory birds.
- Impact BIO-7** The project would result in significant short-term indirect impacts to special-status plants and sensitive natural communities.
- Impact BIO-8** The project would result in significant long-term indirect impacts to special-status plants and sensitive natural communities.
- Impact BIO-9** The project would result in significant short-term indirect impacts to special-status wildlife species.
- Impact BIO-10** The project would result in significant long-term indirect impacts to special-status wildlife species.
- Impact BIO-11** The project would result in temporary direct impacts to southern cottonwood–willow riparian forest, Baccharis-dominated Diegan coastal sage scrub, and restored Diegan coastal sage scrub.
- Impact BIO-12** The project would result in permanent direct impacts to sensitive vegetation communities and land covers.
- Impact BIO-13** The project would result in temporary direct impacts to federally and state-regulated wetlands/riparian areas.
- Impact BIO-14** The project would result in permanent direct impacts to federally and state-regulated wetlands/riparian areas and non-wetland waters.
- Impact BIO-15** The project would result in significant short-term indirect impacts to federally and state-regulated wetlands/riparian areas and non-wetland waters.
- Impact BIO-16** The project would result in significant long-term indirect impacts to federally and state-regulated wetlands/riparian areas and non-wetland waters.
- Impact BIO-17** The project would result in significant impacts to migratory birds from bird strikes with the proposed buildings on site.
- Impact BIO-18** The project would result in short-term indirect impacts to native habitat that supports wildlife movement, including the San Diego River and Murphy Canyon Creek.

Impact BIO-19 The project would result in long-term indirect impacts to native habitat that supports wildlife movement, including the San Diego River and Murphy Canyon Creek.

4.3.6 Mitigation Measures

The following mitigation measures would reduce the potential for direct and indirect impacts on special-status plant and wildlife species, sensitive natural communities, jurisdictional waters, and wildlife corridors by ensuring that special-status resources would be avoided to the extent possible and compensatory mitigation provided to address unavoidable significant impacts.

MM-BIO-1 TAKE AUTHORIZATION. Based on observations of least Bell's vireo (*Vireo bellii pusillus*), riparian habitat on site is considered occupied. Southwestern willow flycatcher (*Empidonax traillii extimus*) is not currently occupying the proposed impact areas; however, there is suitable habitat within the San Diego River. Habitat impacts will be mitigated at a 3:1 mitigation ratio (see **MM-BIO-2**) or as determined through the consultation process. Take authorization may be obtained through the federal Section 7 Consultation or Section 10 and state 2080.1 incidental take permit requirements. California State University/San Diego State University or its designee shall comply with any and all conditions, including pre-construction surveys, that the U.S. Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW) may require for take of these species pursuant to the federal Endangered Species Act and/or California Endangered Species Act. If required as a permit condition, pre-construction surveys will be conducted in accordance with USFWS protocols unless the USFWS authorizes a deviation from those protocols.

MM-BIO-2 HABITAT MITIGATION: Temporary and permanent impacts to southern willow scrub and southern cottonwood–willow riparian forest will be mitigated at a 3:1 mitigation ratio, as determined during the permitting process (see **MM-BIO-13**). Additionally, temporary and permanent impacts to Baccharis-dominated Diegan coastal sage scrub and restored Diegan coastal sage scrub shall be mitigated at a minimum of 1.5:1 mitigation ratio. Conservation of habitat shall be by on-site preservation, off-site creation and/or enhancement, and/or by purchase of appropriate credits at an approved mitigation bank in San Diego County. If required, any invasive removal shall be completed using hand equipment and removal will be completed outside of the nesting bird season. If invasive removal cannot be completed outside of the nesting bird season, pre-work surveys shall be conducted per the nesting bird survey noted in **MM-BIO-3**.

The mitigation habitat shall include appropriate habitat for special-status amphibians, reptiles, mammals, and birds with potential to occur on site.

MM-BIO-3 NESTING BIRD SURVEY: Construction activity that occurs during the breeding season (typically February 1 through September 15) shall require a one-time biological survey for nesting bird species to be conducted within the proposed impact area and a 500-foot buffer within 72 hours prior to construction. This survey is necessary to assure avoidance of impacts to nesting raptors (e.g., Cooper's hawk [*Accipiter cooperii*] and red-tailed hawk [*Buteo jamaicensis*]) and/or birds protected by the federal Migratory Bird Treaty Act and California Fish and Game Code, Sections 3503 and 3513. If any active nests are detected, the area shall be flagged and mapped on the construction plans. If occupied nests are found, then limits of construction (e.g., 250 to 500 feet) to avoid occupied nests shall be established by the project biologist in the field with flagging,

fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. The project biologist shall serve as a construction monitor during those periods when construction activities occur near active nest areas to avoid inadvertent impacts to these nests. The project biologist may adjust the 250-foot or 500-foot setback at his or her discretion depending on the species and the location of the nest (e.g., if the nest is well protected in an area buffered by dense vegetation). Once the nest is no longer occupied for the season, construction may proceed in the setback areas.

If construction activities, particularly clearing/grubbing, grading, and other intensive activities, stop for more than 3 days, an additional nesting bird survey shall be conducted within the proposed impact area and a 500-foot buffer.

MM-BIO-4 **TEMPORARY INSTALLATION OF FENCING:** To prevent inadvertent disturbance to areas outside the limits of grading for each phase, the contractor shall install temporary fencing along the limits of grading.

MM-BIO-5 **CONSTRUCTION MONITORING AND REPORTING:** To prevent inadvertent disturbance to areas outside the limits of grading for each phase, all grading of native habitat shall be monitored by a biologist. The biological monitor shall be contracted to perform biological monitoring during all clearing and grubbing activities.

The project biologist also shall perform the following duties:

- a. Attend the pre-construction meeting with the contractor and other key construction personnel prior to clearing and grubbing to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds).
- b. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas and of minimizing harm to or harassment of wildlife prior to clearing and grubbing.
- c. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing and grubbing.
- d. Supervise and monitor vegetation clearing and grubbing weekly to ensure against direct and indirect impacts to biological resources that are intended to be protected and preserved and to document that protective fencing is intact.
- e. Flush special-status species (i.e., avian or other mobile species) from occupied habitat areas immediately prior to brush-clearing activities.
- f. Periodically monitor the construction site to verify that the project is implementing the following stormwater pollution prevention plan best management practices: dust control, silt fencing, removal of construction debris and a clean work area, covered trash receptacles that are animal-proof and weather-proof, prohibition of pets on the construction site, and a speed limit of 15 miles per hour during the daylight and 10 miles per hour during hours of darkness.
- g. Periodically monitor the construction site after grading is completed and during the construction phase to see that artificial security light fixtures are directed away from open space and are shielded, and to document that no unauthorized impacts have occurred.

- h. Keep monitoring notes for the duration of the proposed project for submittal in a final report to substantiate the biological supervision of the vegetation clearing and grading activities and the protection of the biological resources.
- i. Prepare a monitoring report after the construction activities are completed, which describes the biological monitoring activities, including a monitoring log; photos of the site before, during, and after the grading and clearing activities; and a list of special-status species observed.

MM-BIO-6 **AIR QUALITY STANDARDS:** The following guidelines shall be adhered to:

- 1. No person shall engage in construction or demolition activity subject to this rule in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period.
- 2. Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall:
 - a. Be minimized by the use of any of the following or equally effective track-out/carry-out and erosion control measures that apply to the project or operation: track-out grates or gravel beds at each egress point, wheel-washing at each egress during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and for outbound transport trucks: using secured tarps or cargo covering, watering, or treating of transported material; and
 - b. Be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations. If a street sweeper is used to remove any track-out/carry-out, only coarse particulate matter (PM₁₀)-efficient street sweepers certified to meet the most current South Coast Air Quality Management District Rule 1186 requirements shall be used. The use of blowers for removal of track-out/carry-out is prohibited under any circumstances.

MM-BIO-7 **SIGNAGE AND BARRIERS:** To prevent long-term inadvertent disturbance to sensitive vegetation and species adjacent to the project site, signage and visual barriers shall be installed along the River Park and Shared Parks and Open Space interface with the San Diego River and Murphy Canyon Creek. The signage shall state that these areas are native habitat areas, and no trespassing is allowed. Barriers shall be installed where appropriate to deter access into the river and creek.

MM-BIO-8 **INVASIVE SPECIES PROHIBITION:** The final landscape plans shall be reviewed by the project biologist to confirm they comply with the following: (1) no invasive plant species as included on the most recent version of the California Invasive Plant Council California Invasive Plant Inventory for the project region shall be included and (2) the plant palette shall be composed of species that do not require high irrigation rates. The project biologist shall periodically check landscape products for compliance with this requirement.

MM-BIO-9 **NOISE:** Pre-construction surveys shall be conducted for any work between February 1 and September 15. Prior to start of construction activities, a qualified biologist shall conduct a pre-construction survey for the least Bell's vireo (*Vireo bellii pusillus*) and, if needed, southwestern willow flycatcher (*Empidonax traillii extimus*) to document presence/absence and the extent of occupied habitat. The pre-construction survey area for these species shall encompass all suitable habitats within the impact area, as well as suitable habitat within a 300-foot buffer of the construction activities. If active nests for any of these species are detected, on-site noise reduction

techniques shall be implemented to ensure that construction noise levels do not exceed 60 A-weighted decibels (dBA) hourly equivalent noise level (or the existing ambient noise level if already above 60 dBA during the breeding season) at the nest location.

MM-BIO-10 **INDIRECT EDGE EFFECTS:** The proposed project shall be designed so that any sports or recreational fields and courts shall be set back a minimum of 100 feet from the floodway of the San Diego River to reduce noise and lighting impacts.

MM-BIO-11 **LIGHTING PLAN:** Lighting shall be designed to minimize light pollution within native habitat areas, while enhancing safety, security, and functionality. All artificial outdoor light fixtures shall be installed so they are directed away from the San Diego River and Murphy Canyon Creek. The lighting in the River Park and Shared Parks and Open Space shall be designed so there is no light spillage into the River Corridor Area. Lighting should be directed away from sensitive areas to ensure compliance with the Multiple Species Conservation Program's Land Use Adjacency Guidelines and to be in accordance with the Land Development Code Section 142.0740 (Outdoor Lighting Regulations). Light fixtures shall be installed in conformance with the County Light Pollution Code, the Building Code, the Electrical Code, and any other related state and federal regulations such as California Title 24.

MM-BIO-12 **RESTORE TEMPORARY IMPACTS:** Temporary impacts to Diegan coastal sage scrub and southern cottonwood–willow riparian forest (federally and state-regulated wetlands) shall be restored to their original condition. California State University/San Diego State University or its designee shall prepare a conceptual restoration plan outlining the restoration of these communities and implement the restoration plan, including monitoring and maintenance for a period of at least 3 years to ensure 80% coverage.

MM-BIO-13 **WETLAND MITIGATION/FEDERAL AND STATE AGENCY PERMITS.** The overall ratio of wetland/riparian habitat mitigation shall be 3:1. Impacts shall be mitigated at a 1:1 impact-to-creation ratio by either the creation, or purchase of credits for the creation, of jurisdictional habitat of similar functions and values. An additional 2:1 enhancement-to-impact ratio shall be required to meet the overall 3:1 impact-to-mitigation ratio for impacts to wetlands/riparian habitat. Impacts to unvegetated and ephemeral stream channels shall occur at a 1:1 or 2:1 mitigation ratio, with a 1:1 impact-to-creation ratio. Additional mitigation for unvegetated channels will occur through preservation. Mitigation may occur as on-site creation, off-site enhancement and restoration (e.g., at the San Diego State University-owned Adobe Falls property), and/or purchase of credits at an approved mitigation bank.

If mitigation is proposed outside of an approved mitigation bank, a conceptual wetlands mitigation and monitoring plan shall be prepared and implemented. The conceptual wetlands mitigation and monitoring plan shall, at a minimum, prescribe site preparation, planting, irrigation, and a 5-year maintenance and monitoring program with qualitative and quantitative evaluation of the revegetation effort and specific criteria to determine successful revegetation.

Prior to impacts occurring to U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) jurisdictional aquatic resources, California State University/San Diego State University or its designee shall obtain the

following permits: ACOE 404 permit, RWQCB 401 Water Quality Certification, and CDFW 1600 Streambed Alteration Agreement.

MM-BIO-14 BAT SURVEYS AND ROOST AVOIDANCE OR EXCLUSION. Prior to construction activities, a bat biologist shall survey the existing buildings to confirm they contain no active maternity roosts. If a maternity roost is present, the following measures shall be implemented to reduce the potential impact to special-status bat species to a less-than-significant level:

- 1. Maternity Roosting Season Avoidance.** All proposed project-related activities, including bat roost exclusion, shall occur outside the general bat maternity roosting season of March through August. Roost exclusion must only occur during the time when bats are most active (early spring or fall) to increase the potential to exclude all bats from trees and/or buildings and minimize the potential for a significant impact to occur by avoiding the maternity roosting season.
- 2. Replacement Roost Installation.** One month prior to the exclusion of bats from the buildings, the consultant will procure and install two bat boxes from a reputable vendor, such as Bat Conservation and Management, to allow bats sufficient time to acclimate to a new potential roost location. The bat boxes shall be installed within close proximity to the trees and/or buildings and in an area that is within close proximity to suitable foraging habitat. Additionally, the bat boxes will be oriented to the south or southwest, and the area chosen for the bat boxes must receive sufficient sunlight (at least 6 hours) to allow the bat boxes to reach an optimum internal temperature (approximately 90 °F) to mimic the existing bat roost. The bat boxes will be suitable to house crevice-roosting bat species, and large enough to contain a minimum of 50 bats (e.g., Four Chamber Premium Bat House or Bat Bunker Plus). The bat boxes shall be installed on the side of the adjacent structure that will be preserved by the proposed project, or installed on a 20-foot-tall steel pole.
- 3. Roost Exclusion.** Approximately 1 month after bat boxes have been installed, exclusion of the existing roost within the trees and/or buildings will occur. The primary exit points for roosting bats will be identified, and all secondary ingress/egress locations on the trees and/or buildings will be covered with a tarp or wood planks to prevent bats from leaving from other locations. The primary exit point will remain uncovered to allow exclusion devices to be installed. Exclusion devices will consist of a screen (poly netting, window screen, or fiberglass screening) with mesh 1/6 of an inch or smaller, installed at the top and sealed along the sides of the window frame, covering the entire window and passing 2 feet below the bottom of the window. The exclusion devices will be installed at night to increase the potential that bats have already left the roost and are less likely to return. Exclusion devices will be left in place for a 1-week period to ensure that any remaining bats in the buildings are excluded. A passive acoustic monitoring detector will also be deployed during the exclusion period in order to verify excluded species and monitor if bat activity has decreased during the exclusion period. Periodic monitoring during the exclusion period should also be conducted to observe if any bats are still emerging from the trees and/or buildings, and an active monitoring survey conducted on the final night of exclusion to ensure that no bats are emerging from the trees and/or buildings and determine that exclusion has been successful. Any continued presence of roosting bats will require an adjustment to the exclusion devices and schedule.

MM-BIO-15 GLARE REDUCTION. Measures proposed to reduce the impact of bird strikes to windows at the proposed project’s buildings include the following methods:

1. Create visual markers on the building glass surfaces. These markers function to indicate to birds that the surface is solid, thus preventing strikes to the object (City of Toronto 2007; Ocampo-Peñuela et al. 2016). Application to the lower portion of the buildings are most important and should match the average height of the surrounding landscaping or vegetation. These visual markers may include but are not limited to (City of Toronto 2007):
 - a) Patterned, fritted glass
 - b) Film that illustrates products or provides advertising
 - c) Patterns provided by decals
 - d) Fenestration patterns that are provided structurally or by application of decals or etching of the glass
 - e) Decorative grilles or louvers
 - f) Artwork
2. Avoid use of reflective glass or application of reflective coatings on any window surface.

CEQA requires that the effect of implementation of mitigation measures be evaluated and disclosed in the CEQA document. Implementation of **MM-BIO-2**, Habitat Mitigation, consists of creation of new riparian habitat at a 1:1 ratio and enhancement of wetland habitat at a 2:2 ratio, as well as mitigation for impacts to Baccharis-dominated Diegan coastal sage scrub and Diegan coastal sage scrub at a 1.5:1 ratio. SDSU is currently evaluating wetland creation opportunities on site, at the SDSU-owned Adobe Falls parcel approximately 3 miles east of the proposed project site, within Murphy Canyon Creek or through purchase of credits at the San Luis Rey Mitigation Bank. Enhancement opportunities are being considered at these locations as well. Should wetland creation or enhancement occur in these on-site or nearby drainages, potential impacts that are similar to the impacts of the proposed project would occur. These impacts may entail recontouring of the site to facilitate appropriate drainage, vegetation removal, and installation of stabilization structures to ensure long-term stability of the stream system. Implementation of mitigation measures including nesting bird surveys, such as described in **MM-BIO-3**; installation of construction fencing to avoid inadvertent activity in adjacent areas, such as described in **MM-BIO-4**; and avoidance of work during the bird breeding season would all serve to reduce potential impacts of mitigation measure implementation.

4.3.7 Level of Significance After Mitigation

Implementation of the above mitigation measures would reduce potential impacts to biological resources to **less-than-significant** levels.

Impacts BIO-1 and BIO-2: Least Bell’s Vireo and Southwestern Willow Flycatcher

The direct impacts to suitable habitat for least Bell’s vireo and southwestern willow flycatcher would be reduced to **less than significant** through implementation of **MM-BIO-1**, which requires habitat mitigation and take authorization from USFWS and/or CDFW, and **MM-BIO-2**, which requires habitat mitigation at a 3:1 mitigation ratio.

Impact BIO-3: Other Special-Status Birds

The direct impacts to suitable habitat for Cooper's hawk, Southern California rufous-crowned sparrow, yellow-breasted chat, and yellow warbler will be reduced to **less than significant** through implementation of **MM-BIO-2**, which requires habitat mitigation at a 3:1 mitigation ratio for impacts to southern cottonwood–willow riparian forest and 1.5:1 mitigation ratio for impacts to Baccharis-dominated Diegan coastal sage scrub and restored Diegan coastal sage scrub.

Impact BIO-4: Special-Status Amphibians and Reptiles

The direct impacts to suitable habitat for southern California legless lizard, orange-throated whiptail, Coronado skink, and western spadefoot would be reduced to **less than significant** through implementation of **MM-BIO-2**, which requires habitat mitigation at a 3:1 mitigation ratio for impacts to southern cottonwood–willow riparian forest and 1.5:1 mitigation ratio for impacts to Baccharis-dominated Diegan coastal sage scrub and restored Diegan coastal sage scrub.

Impact BIO-5: Bat Roosts

Potentially significant impacts to maternity bat roosts, if present, could occur from the removal of suitable riparian trees on site. These impacts will be reduced to **less than significant** through implementation of **MM-BIO-14**, which requires bat surveys, maternity roost season avoidance, installation of replacement roost(s), and roost exclusion to ensure that there are no direct impacts to a maternity roost.

Impact BIO-6: Migratory Birds

The significant direct impacts to nesting birds protected under the MBTA would be reduced to **less than significant** through implementation of **MM-BIO-3**, which requires nesting bird surveys when construction activities occur during the bird nesting season and avoidance buffers if active nests are found.

Impact BIO-7: Plants and Sensitive Natural Communities – Short-Term Indirect Impacts

The potentially significant short-term indirect impacts to special-status plants and sensitive natural communities would be reduced to **less than significant** through implementation of **MM-BIO-4**, **MM-BIO-5**, and **MM-BIO-6**, which require temporary installation of construction fencing to delineate the limits of grading, biological monitoring, a monitoring report, and implementation of air quality standards.

Impact BIO-8: Plants and Sensitive Natural Communities – Long-Term Indirect Impacts

The potentially significant long-term indirect impacts to special-status plants and sensitive natural communities would be reduced to **less than significant** through implementation of **MM-BIO-7**, which requires signage/barriers between the River Park and Shared Parks and Open Space and San Diego River/Murphy Canyon Creek interface, and **MM-BIO-8**, which imposes restrictions on landscape planting adjacent to the MHPA.

Impact BIO-9: Wildlife – Short-Term Indirect Impacts

The potentially significant short-term indirect impacts to special-status wildlife species would be reduced to **less than significant** through implementation of **MM-BIO-4** and **MM-BIO-5**, which require temporary installation of construction fencing to delineate the limits of grading biological monitoring and a monitoring report, and **MM-BIO-**

9, which requires noise monitoring for least Bell's vireo, southwestern willow flycatcher, and/or coastal California gnatcatcher if present within 300 feet of the impact areas.

Impact BIO-10: Wildlife – Long-Term Indirect Impacts

The potentially significant long-term indirect impacts to special-status wildlife species will be reduced to **less than significant** through implementation of **MM-BIO-7**, **MM-BIO-8**, **MM-BIO-10**, and **MM-BIO-11**, which require signage/barriers between the River Park and Shared Parks and Open Space and San Diego River/Murphy Canyon Creek interface, restrictions on landscape planting, compliance with buffer setbacks, and a lighting plan.

Impact BIO-11: Sensitive Natural Communities – Temporary Direct Impacts

The proposed project's temporary direct impacts to southern cottonwood-willow riparian forest, Baccharis-dominated Diegan coastal sage scrub, and restored Diegan coastal sage scrub will be reduced to **less than significant** through implementation of **MM-BIO-12**, which requires restoration of these impacts to pre-project conditions.

Impact BIO-12: Sensitive Natural Communities – Permanent Direct Impacts

Permanent direct impacts to sensitive vegetation communities and land covers will be reduced to **less than significant** through implementation of **MM-BIO-2**, which requires habitat mitigation.

Impact BIO-13: Jurisdictional Waters – Temporary Direct Impacts

The proposed temporary impacts to federally and state-regulated wetlands/riparian areas will be reduced to **less than significant** through implementation of **MM-BIO-12**, which requires restoration of these impacts to pre-project conditions, and **MM-BIO-13**, which requires state and federal permits.

Impact BIO-14: Jurisdictional Waters – Permanent Direct Impacts

Permanent direct impacts to federally and state-regulated wetlands/riparian areas and non-wetland waters will be reduced to **less than significant** through implementation of **MM-BIO-2**, which requires habitat mitigation, and **MM-BIO-13**, which requires state and federal permits.

Impact BIO-15: Jurisdictional Waters – Short-Term Indirect Impacts

The potentially significant short-term indirect impacts to jurisdictional waters will be reduced to **less than significant** through implementation of **MM-BIO-4**, **MM-BIO-5**, and **MM-BIO-6**, which require temporary installation of construction fencing to delineate the limits of grading, biological monitoring, a monitoring report, and implementation of air quality standards.

Impact BIO-16: Jurisdictional Waters – Long-Term Indirect Impacts

The potentially significant long-term indirect impacts to sensitive vegetation communities will be reduced to **less than significant** through implementation of **MM-BIO-7**, which requires signage/barriers between the River Park and Shared Parks and Open Space and San Diego River/Murphy Canyon Creek interface, and **MM-BIO-8**, which imposes restrictions on landscape planting adjacent to the MHPA.

Impact BIO-17: Migratory Birds

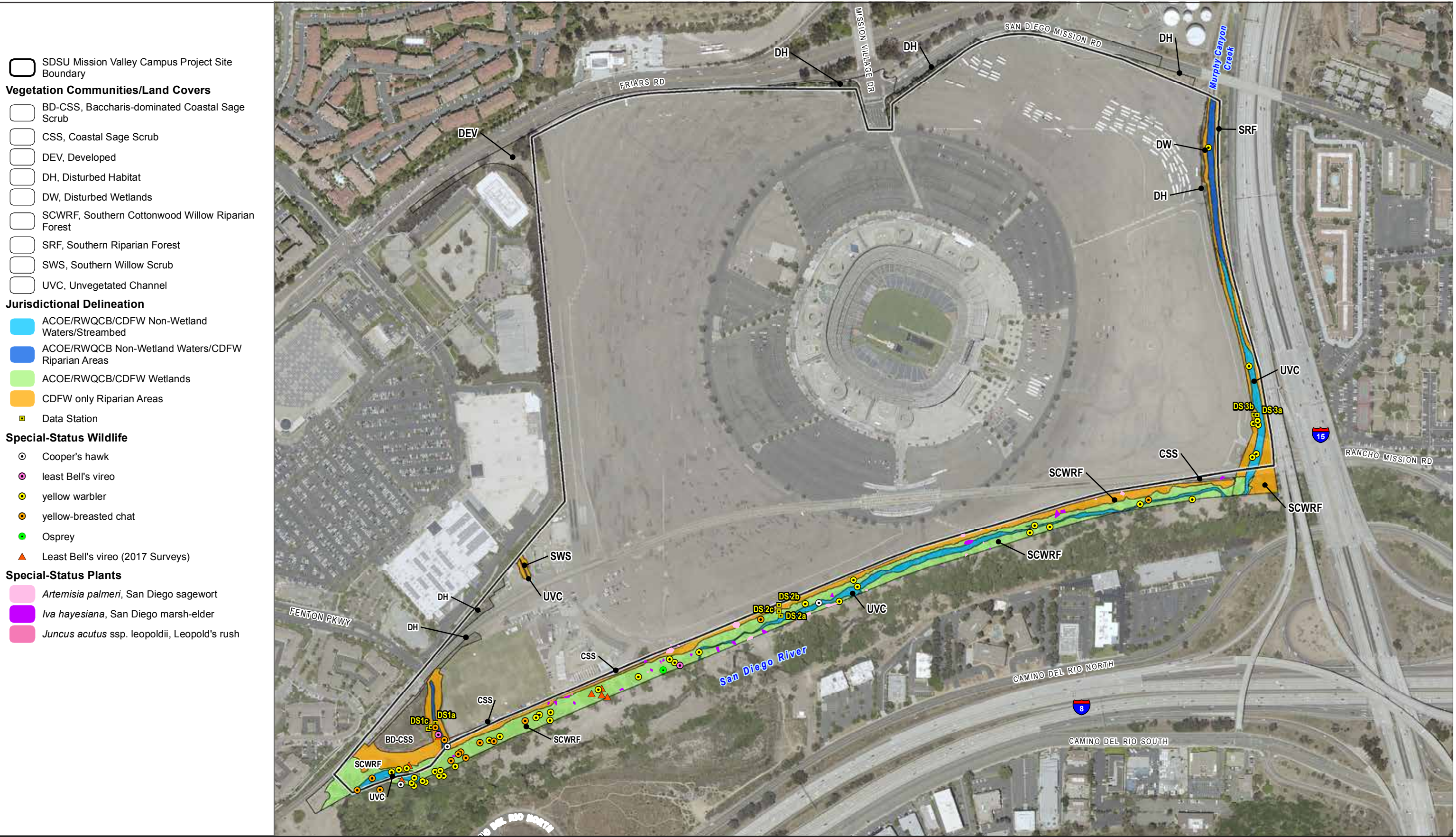
There are potentially significant impacts from bird strikes with the proposed buildings on site. These impacts will be reduced to **less than significant** through implementation of **MM-BIO-15**, which requires non-reflective coating on all windows as well as other methods to reduce bird strikes.

Impact BIO-18: Wildlife Movement – Short-Term Indirect Impacts

The potentially significant short-term indirect impacts to the native habitat which supports wildlife movement, including the San Diego River and Murphy Canyon Creek, will be reduced to **less than significant** through implementation of **MM-BIO-4** and **MM-BIO-5**, which require temporary installation of construction fencing to delineate the limits of grading biological monitoring and a monitoring report.

Impact BIO-19: Wildlife Movement – Long-Term Indirect Impacts

The potentially significant long-term indirect impacts to the native habitat which supports wildlife movement including the San Diego River and Murphy Canyon Creek, will be reduced to **less than significant** through implementation of **MM-BIO-7**, **MM-BIO-8**, **MM-BIO-10**, and **MM-BIO-11**, which require signage/barriers between the River Park and Shared Parks and Open Space and San Diego River/Murphy Canyon Creek interface, restrictions on landscape planting, compliance with buffer setbacks, and a lighting plan.



SDSU Mission Valley Campus Project Site Boundary

Vegetation Communities/Land Covers

- BD-CSS, Baccharis-dominated Coastal Sage Scrub
- CSS, Coastal Sage Scrub
- DEV, Developed
- DH, Disturbed Habitat
- DW, Disturbed Wetlands
- SCWRF, Southern Cottonwood Willow Riparian Forest
- SRF, Southern Riparian Forest
- SWS, Southern Willow Scrub
- UVC, Unvegetated Channel

Jurisdictional Delineation

- ACOE/RWQCB/CDFW Non-Wetland Waters/Streambed
- ACOE/RWQCB Non-Wetland Waters/CDFW Riparian Areas
- ACOE/RWQCB/CDFW Wetlands
- CDFW only Riparian Areas
- Data Station

Special-Status Wildlife

- Cooper's hawk
- least Bell's vireo
- yellow warbler
- yellow-breasted chat
- Osprey
- Least Bell's vireo (2017 Surveys)

Special-Status Plants

- Artemisia palmeri*, San Diego sagewort
- Iva hayesiana*, San Diego marsh-elder
- Juncus acutus* ssp. *leopoldii*, Leopold's rush

SOURCE: AERIAL SANGIS 2017

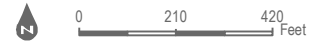
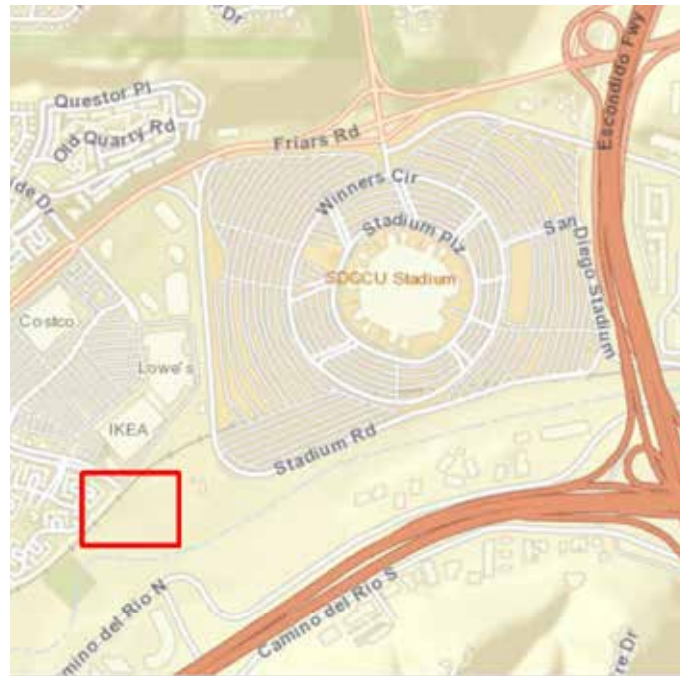


Figure 4.3-1
Biological Resources - Project Site

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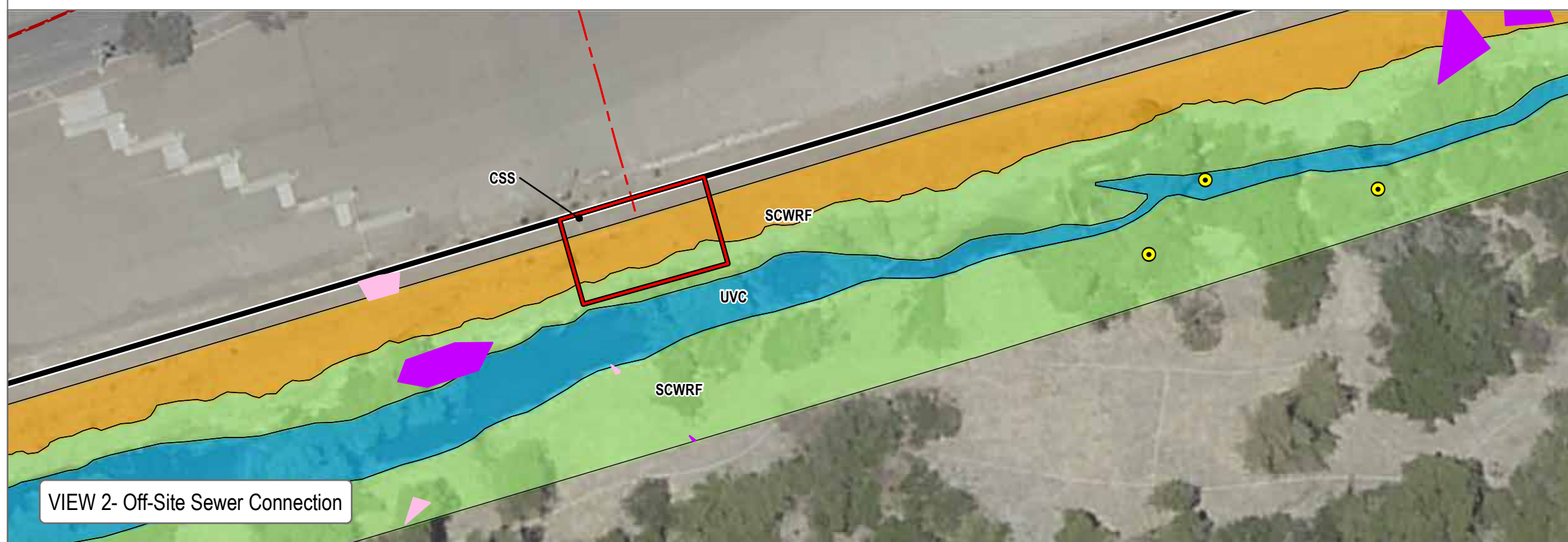
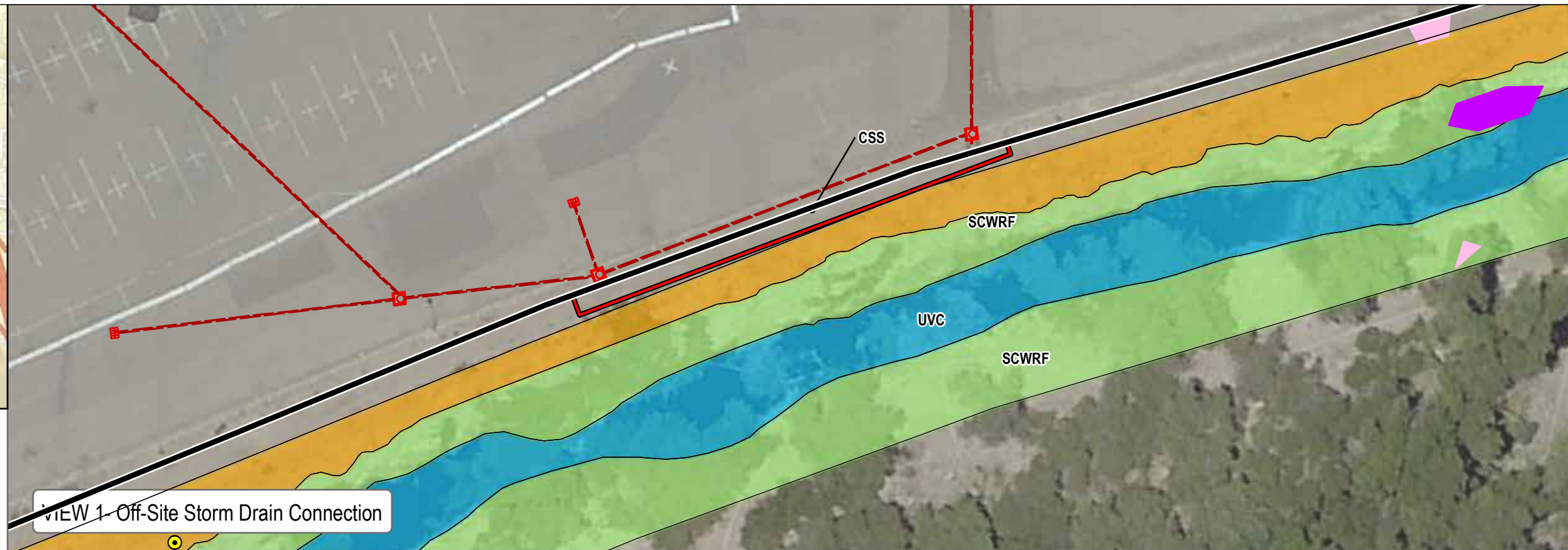
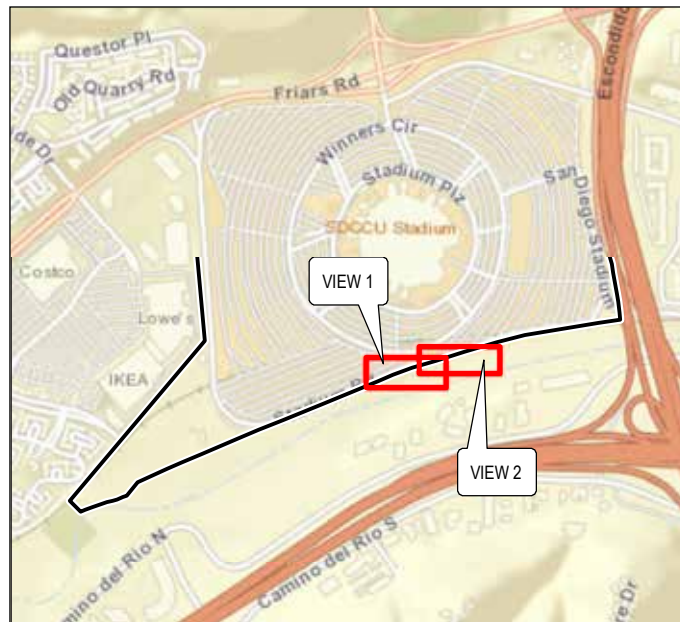


- SDSU Mission Valley Campus Project Site Boundary
- Vegetation Communities/Land Covers**
- BD-CSS, Baccharis-dominated Coastal Sage Scrub
- CSS, Coastal Sage Scrub
- DEV, Developed
- DH, Disturbed Habitat
- SCWRF, Southern Cottonwood Willow Riparian Forest
- Jurisdiction Delineation**
- ACOE/RWQCB Non-Wetland Waters/CDFW Riparian Areas
- ACOE/RWQCB/CDFW Wetlands
- CDFW only Riparian
- Data Station
- Special-Status Wildlife**
- Cooper's hawk
- least Bell's vireo
- yellow warbler
- yellow-breasted chat
- Least Bell's vireo (2017 Surveys)
- Special-Status Plants**
- Iva hayesiana*, San Diego marsh-elder

SOURCE: AERIAL SANGIS 2017



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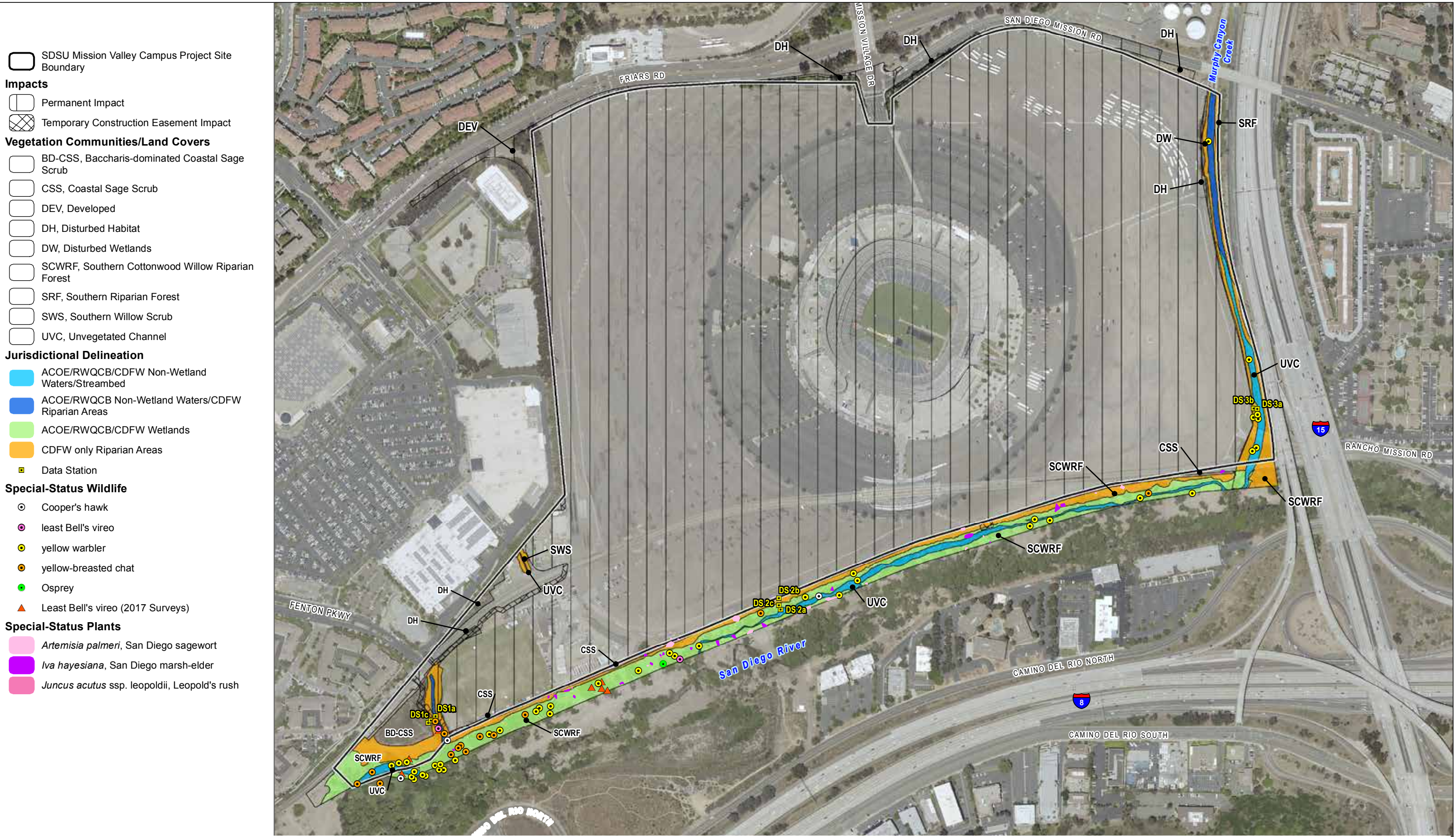


- SDSU Mission Valley Campus Project Site Boundary
- Vegetation Communities/Land Covers**
- CSS, Coastal Sage Scrub
- DEV, Developed
- SCWRF, Southern Cottonwood Willow Riparian Forest
- UVC, Unvegetated Channel
- Temporary Construction Easement Area
- Jurisdiction Delineation**
- ACOE/RWQCB/CDFW Non-Wetland Waters/Streambed
- ACOE/RWQCB/CDFW Wetlands
- CDFW only Riparian
- Special-Status Wildlife**
- yellow warbler
- Special-Status Plants**
- Artemisia palmeri*, San Diego sagewort
- Iva hayesiana*, San Diego marsh-elder

SOURCE: AERIAL SANGIS 2017



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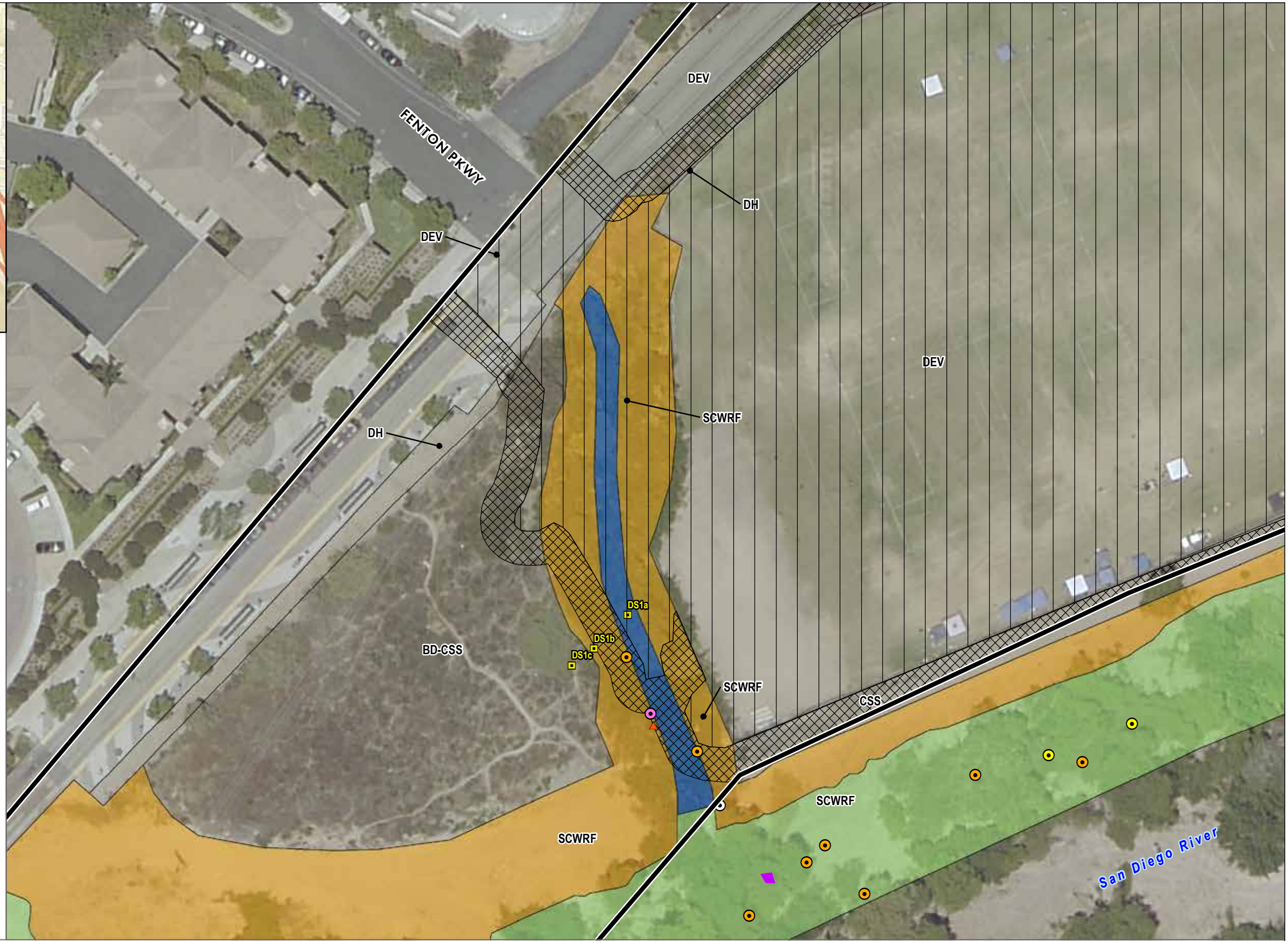
- SDSU Mission Valley Campus Project Site Boundary
- Impacts**
- Permanent Impact
- Temporary Construction Easement Impact
- Vegetation Communities/Land Covers**
- BD-CSS, Baccharis-dominated Coastal Sage Scrub
- CSS, Coastal Sage Scrub
- DEV, Developed
- DH, Disturbed Habitat
- DW, Disturbed Wetlands
- SCWRF, Southern Cottonwood Willow Riparian Forest
- SRF, Southern Riparian Forest
- SWS, Southern Willow Scrub
- UVC, Unvegetated Channel
- Jurisdictional Delineation**
- ACOE/RWQCB/CDFW Non-Wetland Waters/Streambed
- ACOE/RWQCB Non-Wetland Waters/CDFW Riparian Areas
- ACOE/RWQCB/CDFW Wetlands
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- Cooper's hawk
- least Bell's vireo
- yellow warbler
- yellow-breasted chat
- Osprey
- Least Bell's vireo (2017 Surveys)
- Special-Status Plants**
- Artemisia palmeri*, San Diego sagewort
- Iva hayesiana*, San Diego marsh-elder
- Juncus acutus* ssp. *leopoldii*, Leopold's rush

SOURCE: AERIAL SANGIS 2017



Figure 4.3-4
Impacts to Biological Resources - Project Site

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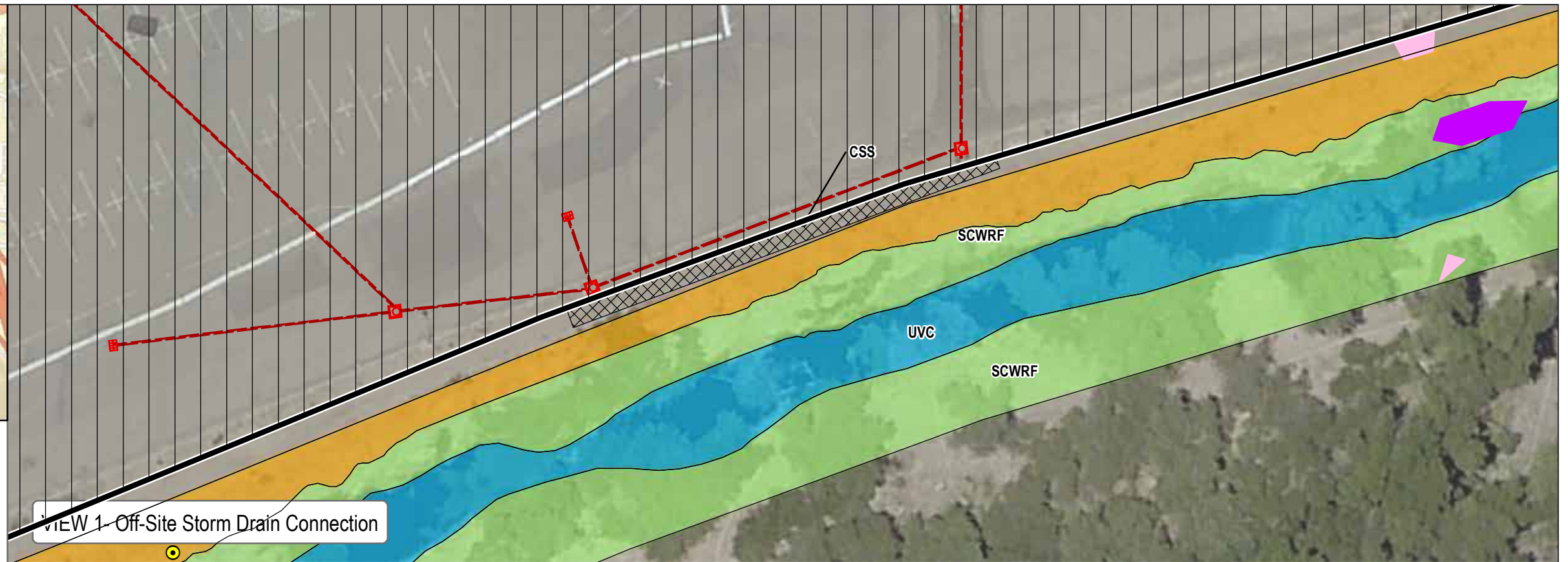
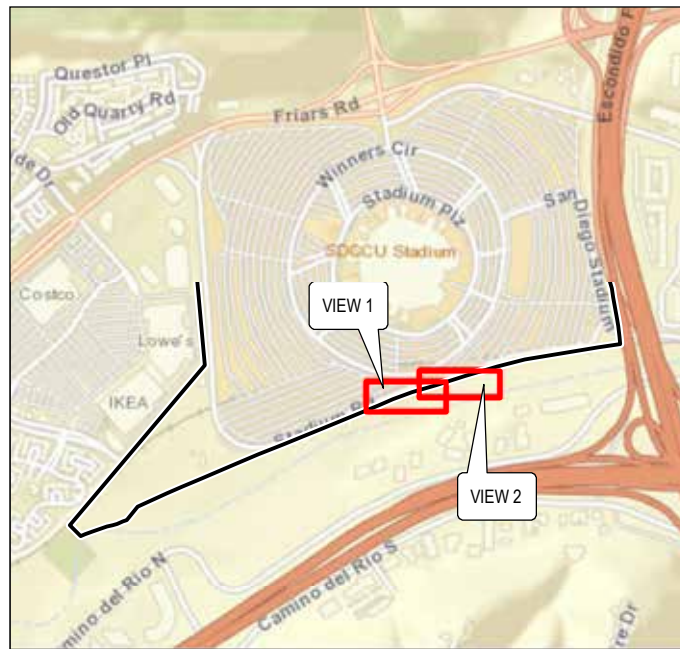


SOURCE: AERIAL SANGIS 2017

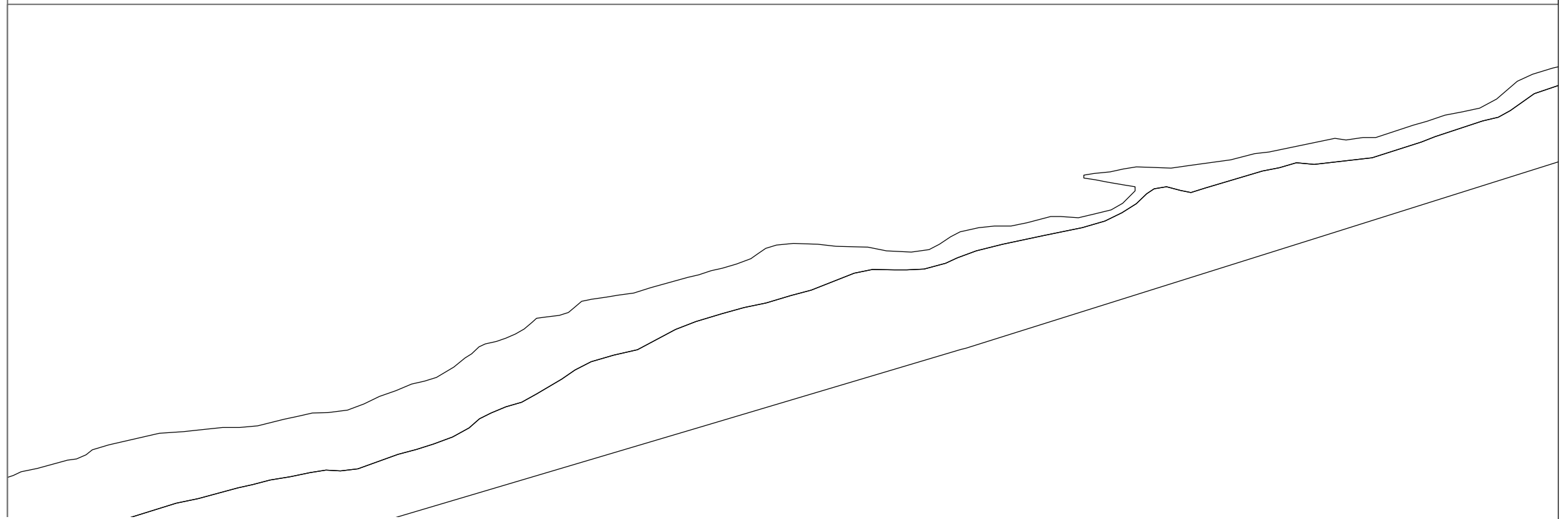


Figure 4.3-5
Impacts to Biological Resources - Fenton Parkway Extension

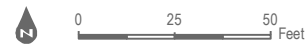
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- SDSU Mission Valley Campus Project Site Boundary
- Vegetation Communities/Land Covers**
- CSS, Coastal Sage Scrub
- DEV, Developed
- SCWRF, Southern Cottonwood Willow Riparian Forest
- UVC, Unvegetated Channel
- Impacts**
- Permanent Impact
- Temporary Construction Easement Impact
- Jurisdiction Delineation**
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- ACOE/RWQCB/CDFW Wetlands
- CDFW only Riparian
- Special-Status Wildlife**
- yellow warbler
- Special-Status Plants**
- Artemisia palmeri*, San Diego sagewort
- Iva hayesiana*, San Diego marsh-elder



SOURCE: AERIAL SANGIS 2017



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