HELIX Environmental Planning

Cottonwood Sand Mine Project

Biological Resources Technical Report

May 2025 | 02975.00002.002

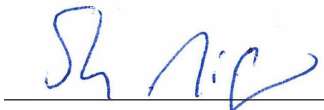
PDS2018-MUP-18-023
PDS2018-RP-18-001
PDS2018-ER-18-19-007

Prepared for:

County of San Diego
Planning & Development Services
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Prepared for:

New West Investment Group, Inc.
565 N. Magnolia Avenue
El Cajon, CA 92020



Stacy Nigro
County Approved Biologist

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

This page intentionally left blank

TABLE OF CONTENTS

Section **Page**

TABLE OF CONTENTS (cont.)

Section **Page**

TABLE OF CONTENTS (cont.)

LIST OF APPENDICES

TABLE OF CONTENTS (cont.)

LIST OF FIGURES

TABLE OF CONTENTS (cont.)

LIST OF TABLES

This page intentionally left blank

ACRONYMS AND ABBREVIATIONS

AMSL	above mean sea level
BCC	Bird of Conservation Concern
BGEPA	Bald and Golden Eagle Protection Act
BMO	Biological Mitigation Ordinance
BOS	Biological Open Space
BRCA	Biological Resource Core Area
Cal-IPC	California Invasive Plant Council
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG Code	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	County of San Diego
CRPR	California Rare Plant Rank
CWA	Clean Water Act
CY	cubic yards
dBA	A-weighted decibels
FESA	Federal Endangered Species Act
ft	feet
GPS	Global Positioning System
HCP	Habitat Conservation Plan
HELIX	HELIX Environmental Planning, Inc.
LBVI	least Bell's vireo
MBTA	Migratory Bird Treaty Act
MSCP	Multiple Species Conservation Program
MUP	Major Use Permit
NCCP	Natural Communities Conservation Planning
NPPA	Native Plant Protection Act
NRCS	Natural Resource Conservation Service

ACRONYMS AND ABBREVIATIONS (cont.)

PAMA	Pre-Approved Mitigation Area
PDS	Planning and Development Services
project	Cottonwood Sand Mine Project
project proponent	New West Investment Group, Inc.
RPO	Resource Protection Ordinance
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SDNWR	San Diego National Wildlife Refuge
SWRCB	State Water Resources Control Board
SR	State Route
SSC	Species of Special Concern
SWFL	southwestern willow flycatcher
SWPPP	Storm Water Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WDR	Waste Discharge Requirement
WL	Watch List

SUMMARY

At the request of New West Investment Group, Inc. (project proponent), HELIX Environmental Planning, Inc. (HELIX) completed this biological resource technical report for the proposed Cottonwood Sand Mine Project (project), which is located in the unincorporated community of Rancho San Diego in eastern San Diego County, California. The project proposes the conversion of the existing Cottonwood Golf Club to a sand mining operation that would be conducted in three phases over a 10-year period. Following completion of sand extraction activities, the site would be reclaimed through the removal of all artificial structures, grading to achieve final landforms, incorporation of accumulated wash fines/imported and salvaged topsoil (as applicable), widening of the Sweetwater River floodplain, and restoration and revegetation of native habitats.

The purpose of this report is to document the existing biological conditions within the project site and provide an analysis of potential impacts to sensitive biological resources with respect to local, state, and federal policy. This report provides the biological resources technical documentation necessary for review under the California Environmental Quality Act by the County of San Diego (County) Planning & Development Services (PDS).

HELIX biologists conducted general biological surveys, jurisdictional delineations, rare plant surveys, southwestern pond turtle (*Actinemys pallida*) surveys, acoustical bat surveys, wildlife camera trapping surveys, and protocol-level surveys for arroyo toad (*Anaxyrus californicus*), coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), and southwestern willow flycatcher (*Empidonax traillii extimus*) during the period of August 2018 to July 2022.

The approximately 280-acre project site supports 15 vegetation communities/habitat types: disturbed wetland, freshwater marsh, southern cottonwood-willow riparian forest (including disturbed), southern willow scrub (including disturbed), tamarisk scrub, arundo-dominated riparian, non-native grassland, open water, Diegan coastal sage scrub (including disturbed), artificial pond, eucalyptus woodland, non-native woodland, non-native vegetation, disturbed habitat, and developed lands.

Four special-status plant species were observed within the project site: San Diego sagewort (*Artemisia palmeri*), San Diego County viguiera (*Bahiopsis laciniata*), Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*), and southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*). Additionally, U.S. Fish and Wildlife Service (USFWS) critical habitat for the federally endangered San Diego ambrosia (*Ambrosia pumila*) is present in the southwestern portion of the site.

Twenty-three special-status animal species have been observed or detected on or directly adjacent to the project site during biological surveys conducted for the project: monarch butterfly (*Danaus plexippus*), Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), Cooper's hawk (*Accipiter cooperii*), great blue heron (*Ardea herodias*), oak titmouse (*Baeolophus inornatus*), red-shouldered hawk (*Buteo lineatus*), green heron (*Butorides virescens*), turkey vulture (*Cathartes aura*), white-tailed kite (*Elanus leucurus*), peregrine falcon (*Falco peregrinus*), yellow-breasted chat (*Icteria virens*), coastal California gnatcatcher (*Polioptila californica californica*), vermilion flycatcher (*Pyrocephalus rubinus*), yellow warbler (*Setophaga petechia*), western bluebird (*Sialia mexicana*), Lawrence's goldfinch (*Spinus lawrencei*), barn owl (*Tyto alba*), least Bell's vireo (*Vireo bellii pusillus*), small-footed myotis (*Myotis ciliolabrum*), Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillii*), and Yuma myotis (*Myotis*

yumanensis). Additionally, USFWS critical habitat for the coastal California gnatcatcher and least Bell's vireo occurs in the southwestern portion of the site, and critical habitat for the southwestern willow flycatcher is located immediately west of the site.

The project site supports wetland and non-wetland waters of the U.S. subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the federal Clean Water Act (CWA); wetland and non-wetland waters of the State subject to the regulatory jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA; riparian-vegetated and unvegetated streambed subject to the regulatory jurisdiction of the California Department of Fish and Wildlife (CDFW) pursuant to Section 1600 et seq. of California Fish and Game Code; and wetlands subject to the regulatory jurisdiction of the County pursuant to the Resource Protection Ordinance (RPO). However, the proposed project is exempt from RPO requirements based on its consistency with the measures specified in Section 86.605(d) of the RPO that will also be included as conditions of the project's Major Use Permit (MUP).

The project site occurs within the boundaries of the adopted South County Multiple Species Conservation Program (MSCP) Subarea Plan, within both the South County Segment and Metro-Lakeside-Jamul Segment. Within the MSCP, portions of the site along the south and southeastern boundaries occur within areas identified as Pre-Approved Mitigation Area (PAMA), and Minor Amendment lands occur in the southwestern portion of the site along the Sweetwater River.

Potential significant impacts were identified relative to special-status species, sensitive natural communities and riparian habitat, and local policies/ordinances. Following County Guidelines, a total of 211.94 acres of the 276.63-acre project site, which are primarily comprised of disturbed habitat and developed lands associated with the existing golf course development, would be considered impacted. An additional 4.80 acres of off-site impacts associated with improvements to Willow Glen Drive would also occur as part of the project. Impact neutral lands comprise approximately 21.69 acres on-site.

The project would result in impacts to a total of 2.34 acres of riparian habitat or other sensitive natural communities consisting of 0.55 acre of disturbed wetland, 0.44 acre of southern cottonwood-willow riparian forest (including disturbed), 0.13 acre of disturbed southern willow scrub, 0.01 acre of tamarisk scrub, 0.01 acre of arundo-dominated riparian, and 1.2 acres of Diegan coastal sage scrub. Impacts to these habitats would require mitigation. Reclamation of the project site following the completion of mining activities would result in a biologically superior condition, closer resembling pre-disturbance conditions, compared to the current baseline. As part of the reclamation, the Sweetwater River floodplain would be substantially widened and planted with riparian habitat along the floodplain bottom and coastal sage scrub along the channel slopes. Existing riparian habitat at the southwestern portion of the site would be rehabilitated through the removal of exotic and invasive species, and the planting of riparian habitat. Approximately ~~150.7~~149.0 acres of the site (5~~3.8~~4.5 percent) would be placed into Biological Open Space (BOS), which would protect these resources in perpetuity. Mitigation measures are proposed to mitigate potentially significant impacts to special-status species, sensitive vegetation communities/habitats, and compliance with local policies/ordinances. Implementation of these mitigation measures would mitigate potential impacts to below a level of significance.

1.0 INTRODUCTION

1.1 PURPOSE OF REPORT

At the request of New West Investment Group, Inc. (project proponent), HELIX Environmental Planning, Inc. (HELIX) completed this biological resource technical report for the proposed Cottonwood Sand Mine Project (project). The purpose of this report is to document the existing biological conditions within the project site; identify those resources that are sensitive, including sensitive species with the potential to occur; provide an analysis of potential impacts to sensitive biological resources with respect to local, state, and federal policy; and propose mitigation to offset potential significant impacts of the project on sensitive biological resources. This report provides the biological resources technical documentation necessary for review under the California Environmental Quality Act (CEQA) by the County of San Diego (County) Planning and Development Services (PDS).

1.2 PROJECT LOCATION AND DESCRIPTION

1.2.1 Project Location

The approximately 280-acre project site (site) is located in the unincorporated community of Rancho San Diego in eastern San Diego County, California (Figure 1, *Regional Location*). It is depicted within unsectioned lands of Township 16 South, Ranges 1 West and 1 East of the Jamul Mountains and El Cajon, California U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps (Figure 2, *USGS Topography*). The site lies north of State Route (SR) 94 and east of SR 54 within the Cottonwood Golf Club. More specifically, the site occurs southeast of Willow Glen Drive, north of Jamul Drive, east of Jamacha Road, and west of Hillsdale Road at 3121 Willow Glen Drive, El Cajon, California (Figure 3, *Aerial Vicinity*). Steele Canyon Road bisects the project site from north to south, near the center of the site. The project site occurs within the following 24 Assessor's Parcel Numbers: 506-021-19-00, 506-020-52, 518-012-13, 518-012-14, 518-030-05 through 518-030-08, 518-030-10, 518-030-12, 518-030-13, 518-030-15, 518-030-21, 518-030-22-00, 519-010-15, 519-010-17, 519-010-20, 519-010-21, 519-010-33, 519-010-34, 519-010-37, 519-011-03, 506-021-31, and 506-021-30.

The site is located on unincorporated lands within the South County and Metro-Lakeside-Jamul segments of the County's Multiple Species Conservation Program (MSCP) Subarea Plan (Figure 4, *MSCP Designations*). Within the MSCP, portions of the site along the south and southeastern boundaries occur within areas identified as Pre-Approved Mitigation Area (PAMA), and Minor Amendment lands occur in the southwestern portion of the site along the Sweetwater River (Figure 4).

1.2.2 Project Description

The project site is currently occupied by the Cottonwood Golf Club, which consists of two 18-hole golf courses, one east of Steele Canyon Road and the other located to the west. Currently, only the eastern course is operational; operation of the western course was suspended in 2017. The project proposes to convert the two golf courses into a sand mining operation that would be conducted in three phases over 10 years, with a final fourth phase for cleanup, equipment removal, and final reclamation (Figure 5, *Site Plan and Mine Phasing*). The project's mining operations would extract, process, and transport sand using conventional earth-moving and processing equipment. Approximately 4.3 million cubic yards

(CY; 6.40 million tons) of material are proposed to be extracted, with approximately 3.8 million CY (5.7 million tons) of sand and gravel for market use, with a 10 percent waste factor from the total amount extracted that includes wash fines and materials undesirable for processing (approximately 427,000 CY). These materials would be retained on-site and utilized for backfilling. In addition, approximately 2.5 million CY would be imported to the site to meet the backfill requirements. The imported material would consist of inert debris only. Inert debris would consist of excavated soil material from development projects, clean demolition materials, and possibly concrete, asphalt, and rock. The project would be conditioned to only accept materials suitable for the end use of the site.

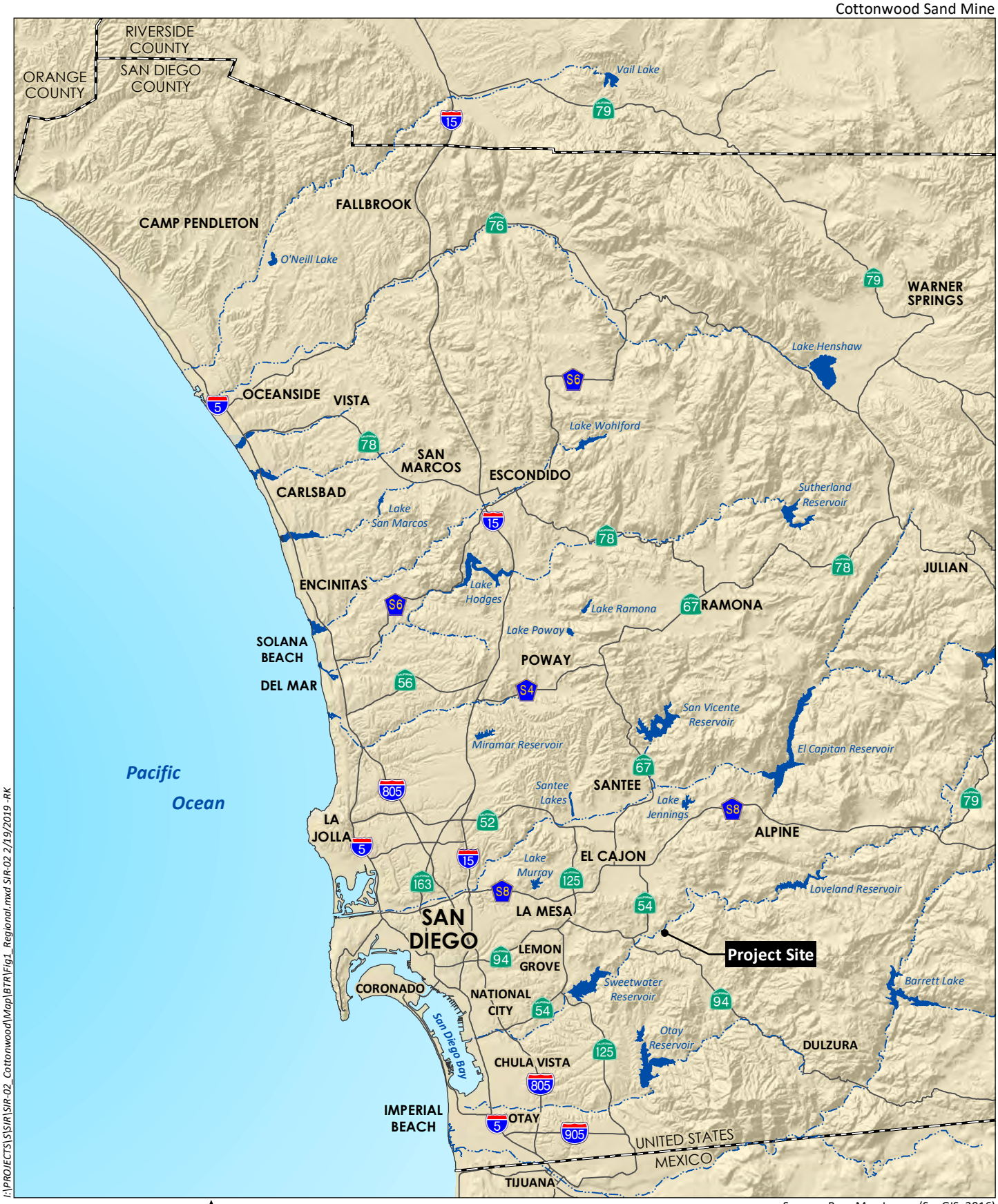
Extraction operations would be limited to a maximum production of 380,000 CY (570,000 tons) of construction grade aggregate (sand) per calendar year. Material extracted and processed at the site would be suitable for construction uses and would be available to customers in San Diego County. Approximately 214 acres of the approximately 250-acre Major Use Permit (MUP) boundary are proposed for extractive use under a phased extraction program (Table 1, *Proposed Mining and Reclamation Phasing*). Surface areas not disturbed by mining would either be left in their current condition or be subject to enhancement through removal of invasive species. The existing Sweetwater River channel and the majority of native habitat that currently exists on the site would be retained.

Table 1
PROPOSED MINING AND RECLAMATION PHASING*

Mining Phase	Area of Disturbance (acres)	Mining Duration (Years)	Mining Initiation Date (est.)	Mining Completion Date (Est.)	Reclamation Completion Date (est.)
1	78.98	3	2025~~3~~	2028~~6~~	2030~~29~~
2	48.18	3	2028~~6~~	2031~~29~~	2033~~1~~
3	78.57	4	2031~~29~~	2035~~3~~	2037~~6~~
4	8.65	<1	2035~~23~~	2035~~3~~	2037~~6~~
TOTAL	214.4	10	-	-	-

**Please note this table has been updated to match DEIR Table 1-2; however, the estimated initiation and completion dates will change due to the extended environmental schedule.*

The project would be mined in three incremental, and partially overlapping phases, with three to four sub-phases in each major phase. Reclamation would begin after the first sub-phase of mining is complete, and would be conducted on a continuous basis following the completion of each mining sub-phase. Pre-mining activities proposed prior to the initiation of Phase 1 include the restriping of Willow Glen Drive from Steele Canyon Road to the northeastern property boundary to provide Class II buffered bike lanes on both sides of the roadway, improvements to the access point from Willow Glen Drive to the Phase 1 excavation area, and installation of screening landscaping and a pedestrian pathway. To facilitate the deceleration of right-turning vehicles into the project ingress driveway, a dedicated right-turn lane would be constructed, which would serve as the primary access for mining operations, material sales, employees, and vendors. Additionally, a pedestrian pathway would be provided along the northern project frontage/Willow Glen Drive east of Steele Canyon Road to provide pedestrian access within the project vicinity where there are no existing sidewalks. Phase 1 would begin with the placement of the processing plant and the conveyor line from the plant to the western portion of the property, where excavation would begin. Processing facilities would be located near the center of the project area, adjacent to Willow Glen Drive and west of the existing golf course parking lot. The plant site would consist of the aggregate processing and washing facilities, three settling ponds, a loadout



I:\PROJECTS\SIS\SIR\SIR-02_Cottonwood\Map\BTR\Fig1_Regional.mxd SIR-02 2/19/2019 -RK

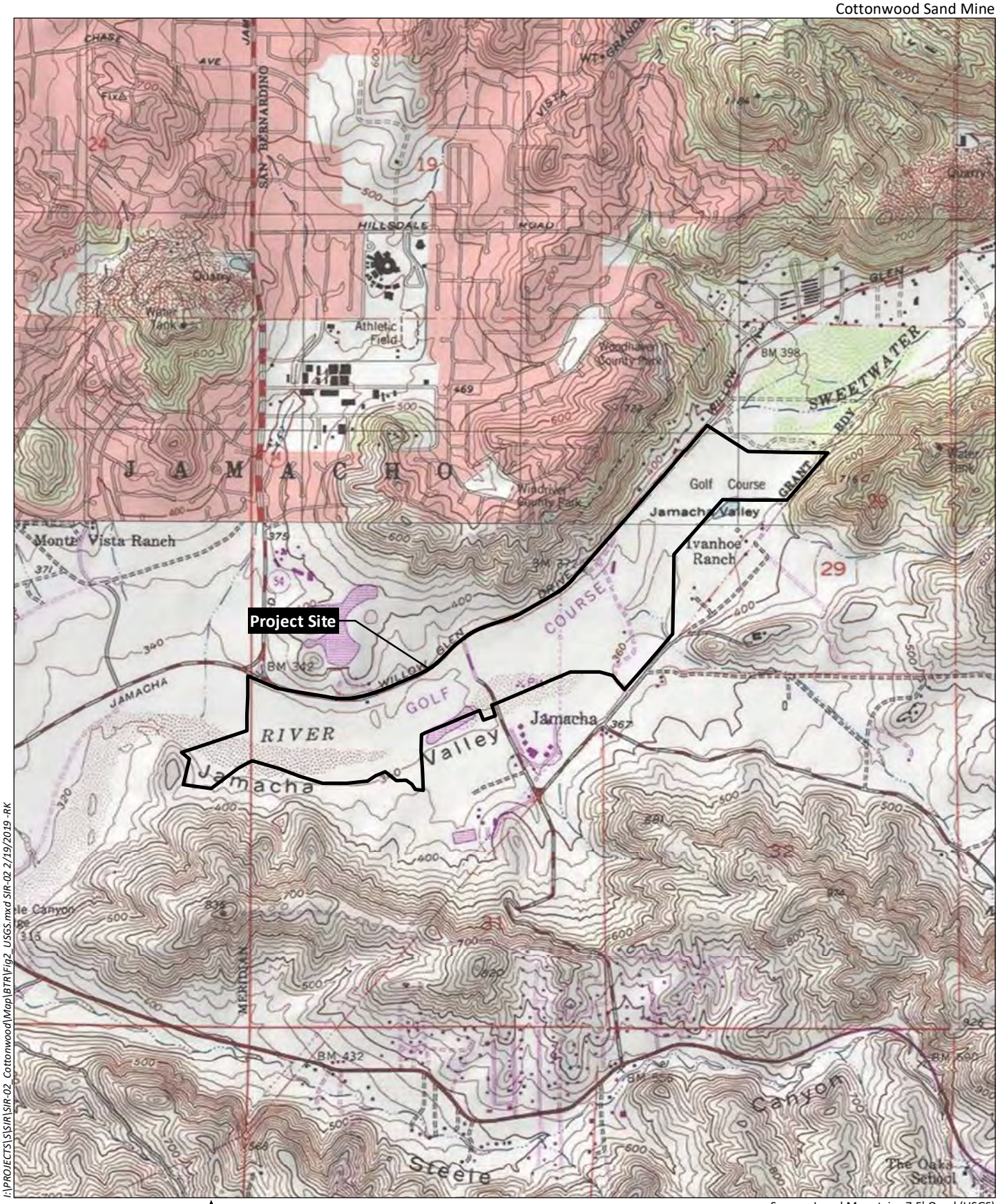
0 8 Miles

Source: Base Map Layers (SanGIS, 2016)

HELIX Environmental Planning

Regional Location

Figure 1



I:\PROJECTS\S\SIR\SIR-02_Cottonwood\Map\BTR\Fig2_USGS.mxd SIR-02 2/19/2019 -RK

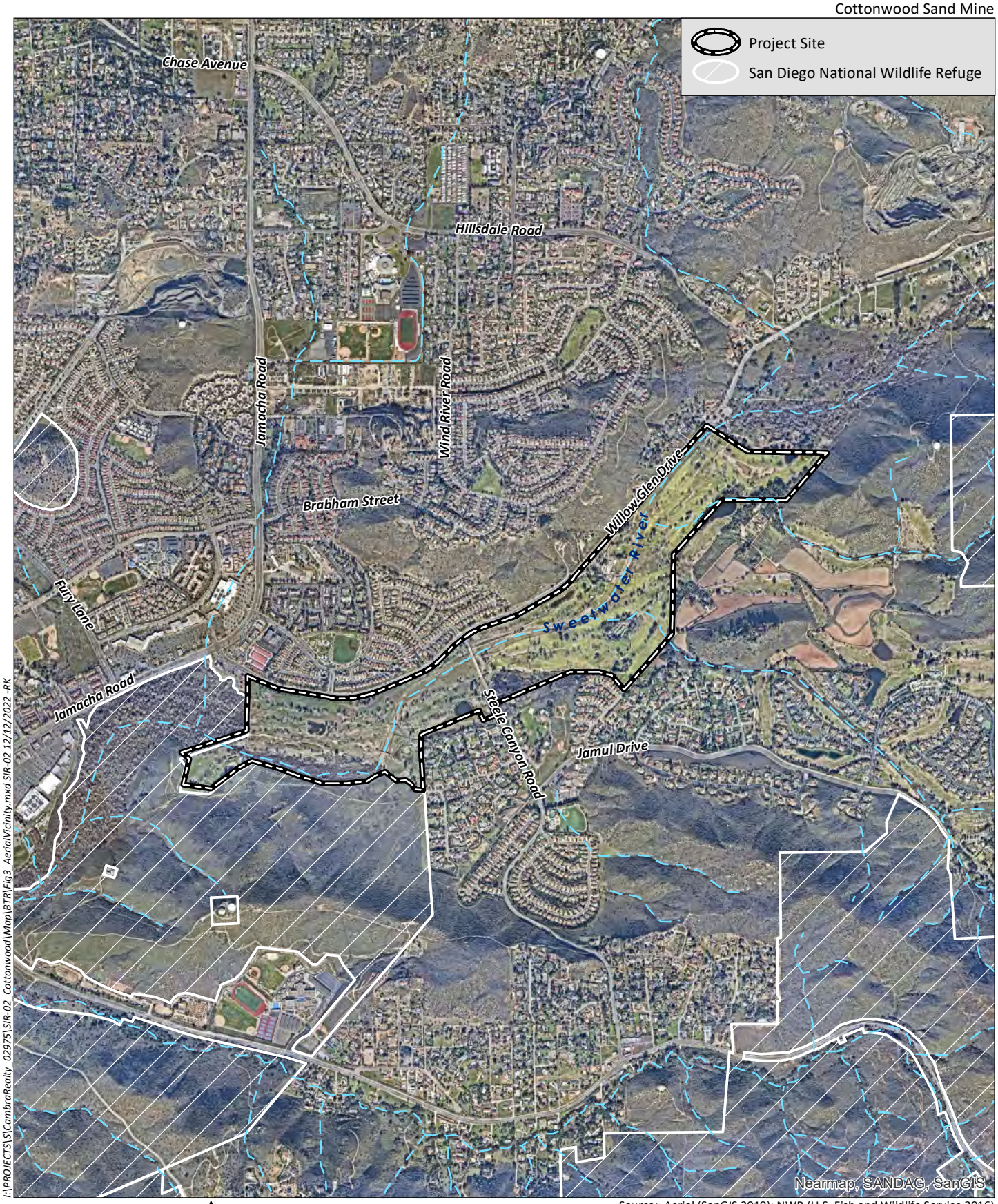
0 2,000 Feet

Source: Jamul Mountains 7.5' Quad (USGS)

HELIX Environmental Planning

USGS Topography

Figure 2

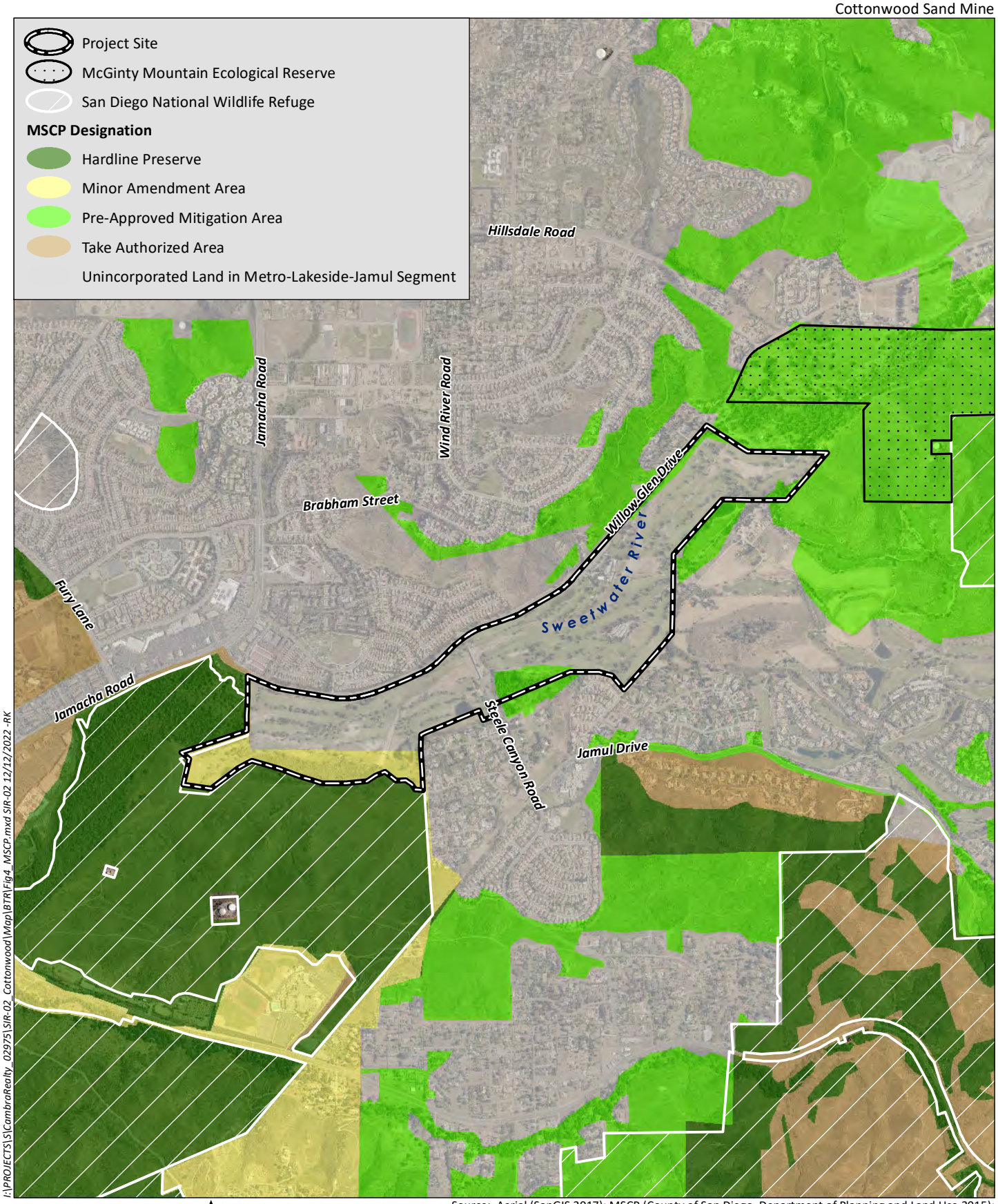


Source: Aerial (SanGIS 2019); NWR (U.S. Fish and Wildlife Service 2016)

HELIX Environmental Planning

Aerial Vicinity

Figure 3



I:\PROJECTS\S\CambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig4_MSCP.mxd SIR-02 12/12/2022 -RK

Source: Aerial (SanGIS 2017); MSCP (County of San Diego, Department of Planning and Land Use 2015); NWR (U.S. Fish and Wildlife Service 2016); Ecological Reserves (CDFW 2013)

HELIX Environmental Planning

MSCP Designations

Figure 4

Project Site
Major Use Permit Boundary
Subphase 1
Subphase 2
Subphase 3
Phase 4/Processing Plant
Easements and Rights-of-way
San Diego Gas & Electric Towers

Jamacha Way
Private Road
Seca Street
Sonett Street
Wind River Road
Brabham Street
Hilton Head Road
Via Hacienda
Jamacha Road
Via Rancho San Diego
Willow Glen Drive
Sweetwater River
Processing Plant
Bridge
Right-of-way
SDG&E
Easement
Access Road
Proposed Permanent
Site Access Point
Heatherwood Drive
Steele Canyon Road
Par Four Drive
Ivanhoe Ranch Road
Cottonwood Springs Lane
Wentworth Drive
Jamul Drive
Greystone Drive

3a
3b
3c
3d
2a
2b
2c
1a
1a-1
1b
1c

Nearmap, SANDAG, SanGIS

0 700 Feet

N

Source: Aerial (SanGIS 2019)

L:\PROJECTS\SCambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig5_Phasing.mxd SJR-02 12/12/2022 -RK

HELIX
Environmental Planning

Site Plan and Mine Phasing

Figure 5

area, and support structures and buildings (e.g., scale, kiosk, and office trailer). A portable conveyor line would be installed to minimize the use of on-site roads to transport excavated materials from the excavation area to the processing plant.

Mining operations would commence in the western portion of the site as part of Phase 1 and proceed east as subsequent phases are initiated: Phase 1 would be located within the area currently occupied by the closed Lakes Course west of Steele Canyon Road; Phase 2 would be located in the center of the site, east of Steele Canyon Road, on the currently operating Ivanhoe Course; Phase 3 would be located east of Phase 2. Existing vegetation and infrastructure within the golf courses would be incrementally removed as mining operations proceed, with approximately 20 to 30 acres subject to mining at any one time. Each phase would include three to four sub-phases that are less than 30 acres each and would begin reclamation as soon as possible following the completion of extraction activities. Excavation in each sub-phase would be completed before moving the conveyor and excavation equipment to the next sub-phase and reclamation would begin in the completed sub-phase. Upon approval of the project, the Ivanhoe Course would be closed. The existing golf clubhouse would be demolished near the end of Phase 2 mining. As each phase of mining is completed, final contours would be established via grading and backfilling, all final clean-up would be conducted and equipment removed, and the mined area would be reclaimed and revegetated. Following the completion of Phase 3 mining, the processing plant would be removed as part of a final Phase 4 consisting of final clean-up and equipment removal from the project site.

Prior to initiating work in a sub-phase, existing vegetation will be cleared and topsoil will be salvaged. The existing banks of the low-flow Sweetwater River channel will remain undisturbed up to a minimum height of 3.5 feet to accommodate existing transfer flow rates. To maintain living soil microorganisms, topsoil will be stored on-site in windrows not more than three feet tall, in an area cleared of existing vegetation. The maximum excavation depth is proposed to be 40 feet below the existing land surface, with the average depth of excavation outside the main Sweetwater River channel expected to be approximately 20 feet below the existing land surface. Excavation would not occur within the bottom of the existing low-flow river channel in order to retain existing hydrologic characteristics. Up to three temporary channel crossings would be utilized to transport heavy equipment across the low-flow river channel during mining operations. Channel crossings would only be used when there is no water flow in the channel. An operating procedure would be established to maintain communication with the Sweetwater Authority prior to, and during, water transfers to ensure channel crossings during water flows are avoided. As soon as excavation within a sub-phase is completed, the conveyor and excavation equipment would be moved to the next sub-phase, and reclamation of the completed sub-phase would begin.

The project proposes to restripe Willow Glen Drive between Steele Canyon Road and the project ingress driveway to provide Class II buffered bike lanes on both sides of the roadway per the County Roadway Standards and the General Plan Mobility Element roadway classification. To facilitate the deceleration of right-turning vehicles into the project ingress driveway, a dedicated right-turn lane would also be constructed, which would serve as the primary access for mining operations, material sales, employees, and vendors. A new egress point would be established in the approximate center of the existing parking lot. The project also proposes to construct a two-way left-turn lane between the ingress and egress driveways, which would serve as a refuge lane for trucks to complete their outbound maneuver. A pedestrian pathway would be provided along the northern project frontage/Willow Glen Drive east of Steele Canyon Road to provide pedestrian access within the project vicinity where there are no existing

sidewalks. In addition, a new access point to the property from Willow Glen Drive west of Steele Canyon Road (Phase 1 area) would be necessary as the clearance height of the bridge that crosses the Sweetwater River on Steele Canyon Road would not allow most large trucks used by service vendors to pass beneath the bridge. Additional access points are proposed to be constructed at the intersection of Willow Glen Drive and Muirfield Drive. The new driveway would be restricted to servicing the mining operations.

The site would be progressively reclaimed following the completion of extraction activities within each subphase area in accordance with the mining and reclamation plan (EnviroMINE 2021a), as depicted on Figure 6, *Extraction and Reclamation Phasing*. Reclamation would include (1) removal of all artificial structures (with the exception of permanent erosion control features); (2) grading and backfilling to achieve final landforms; (3) incorporation of accumulated wash fines and salvaged topsoil (as applicable); and (4) revegetation and monitoring. Final grading would begin after mining and backfilling have been completed within a given area, and as extractive operations proceed east. Reclamation would be an ongoing process that commences where mining operations have ceased within a given sub-phase area and continues until all mining-related disturbance is reclaimed. Compensatory mitigation for impacts to riparian habitat, other sensitive vegetation communities, and jurisdictional waters and wetlands will occur prior to or concurrent with the initiation of ground-disturbing activities for Phase 1 (Table 2, *Compensatory Mitigation and Reclamation Revegetation Phasing*). Preservation of existing native riparian habitat and riparian habitat rehabilitation will occur prior to or concurrent with the initiation of ground-disturbing activities for Phase 1A. Initiation of wetland waters re-establishment would occur prior to or during the fall of the year in which project reclamation is completed, and revegetation is initiated for Phase 1B.

Table 2
COMPENSATORY MITIGATION AND RECLAMATION REVEGETATION PHASING (acre[s])[1]

Habitat	Phase 1		Phase 2		Phase 3		Phase 4		Total	
	M^2	R^2	M^2	R^2	M^2	R^2	M^2	R^2	M^2	R^2
Conceptual Reclamation Revegetation										
Native Habitat Revegetation										
Riparian Forest	0	7.41	0	3.63	0	3.05	0	0	0	14.09
Riparian Scrub	0	28.68	0	28.11	0	28.05	0	0	0	84.84
Streambed (Emergent Wetland)	0	4.02	0	3.55	0	2.37	0	0	0	9.94
Coastal Sage Scrub	0	2.94	0	3.27	0	5.71	0	0	0	11.92
Subtotal	*0*	*43.05*	*0*	*38.56*	*0*	*39.18*	*0*	*0*	*0*	*120.79*
Other Reclamation										
Erosion Control Mix	0	39.68	0	12.30	0	36.73	0	9.19	0	97.90
Revegetation Total	***0***	***82.73***	***0***	***50.86***	***0***	***75.91***	***0***	***9.19***	***0***	***218.69***
Conceptual Compensatory Mitigation										
Wetland Waters Re-Establishment										
Riparian Forest	1.30	0	0	0	0	0	0	0	1.30	0
Rehabilitation										
Riparian Scrub	7.36	0	0	0	0	0	0	0	7.36	0
Preservation										
Open Water	1.68	0	0	0	0	0	0	0	1.68	0
Freshwater Marsh	0.22	0	0	0	0	0	0	0	0.22	0

Habitat	Phase 1		Phase 2		Phase 3		Phase 4		Total	
	M[2]	R[2]	M[2]	R[2]	M[2]	R[2]	M[2]	R[2]	M[2]	R[2]
Southern Cottonwood-Willow Riparian Forest	11.70	0	0	0	0	0	0	0	11.70	0
Southern Willow Scrub	0.25	0	0	0	0	0	0	0	0.25	0
Coastal Sage Scrub	0.55	0	0	0	0	0	0	0	0.55	0
Non-native grassland	0.15	0	0	0	0	0	0	0	0.15	0
Mitigation Total	**23.21**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15.53**	**0**
TOTAL	**23.21**	**82.73**	**0**	**50.68**	**0**	**75.91**	**0**	**9.19**	**23.21**	**218.69**

[1] Areas are presented in acre(s) rounded to the nearest 0.01.

[2] M = Compensatory Mitigation; R = Reclamation Native Habitat Revegetation

Post-reclamation, the final landform of the overall mining area is proposed to be a relatively flat plain that gently slopes downward from east to west, with an expanded floodplain bisecting the length of the site. The expanded floodplain is expected to range in width from approximately 400 to 700 feet~~average approximately 450 to 720 feet in width~~ and would be slightly higher in elevation than the existing low-flow river channel~~lower in elevation than the existing ground level across the site~~. The existing low-flow river channel shall be retained in place with banks up to a minimum height of 3.5 feet to accommodate annual water transfers from Loveland Reservoir to Sweetwater Reservoir that are controlled by the Sweetwater Authority. The low-flow river channel banks would slope down to the expanded floodplain, which will be at a similar elevation to the existing low-flow river channel or slightly higher. In some areas, benches may be constructed ~~at the edges of the floodplain~~on the face of the channel banks to accommodate varying vegetation types and/or multi-use trails. Slopes bordering the expanded floodplain would slope up to the plain surface at a 3:1 ratio or shallower, with an elevation difference of up to 25 feet between the top of slope and bottom of the low-flow river channel~~expanded floodplain~~. Reclaimed areas would be restored to an end-use of ~~native vegetation within a widened floodplain~~open space, ~~recreational~~ multi-use trails, and land suitable for uses allowed by the ~~Open Space~~General Plan land use designation and existing zoning classifications. Maintenance and monitoring of the restored and revegetated native habitat areas would continue until final performance standards are met in all revegetation areas. Following revegetation completion, nearly 54~~5~~ percent of the project site (~~150.7~~149.0 acres) ~~will~~ would be preserved in a biological open space (BOS) easement, which ~~will~~ would protect these lands in perpetuity and ~~will~~ would restrict future uses to protect their biological value.

1.3 METHODS

1.3.1 Literature Review

Prior to conducting biological field surveys, HELIX conducted a search of sensitive species and habitats databases for information regarding sensitive species known to occur within one mile of the project site, including the U.S. Fish and Wildlife Service (USFWS) species records (USFWS 2022), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; CDFW 2022a), SanBIOS (County 2022), and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2022). Recent aerial imagery, topographic maps, soils maps (Natural Resource Conservation Service [NRCS] 2022 and Bowman 1973), and other maps of the project site and vicinity were acquired and reviewed to obtain updated information on the natural environmental setting.

1.3.2 General Biological Surveys

A general biological survey of the project site, including a 100-foot buffer area, was conducted according to County Requirements (2010a) by HELIX on August 13 and November 7, 2018; September 28 and 29, and October 6, 2020; and May 10 and 19, 2022 (Table 3, *Biological Surveys*). Vegetation was mapped on a 1" = 150' scale aerial of the site. The site was surveyed on foot and with the aid of binoculars. Plant and animal species observed or otherwise detected were recorded in field notebooks. Animal identifications were made in the field by direct, visual observation or indirectly by detection of calls, burrows, tracks, or scat. Plant identifications were made in the field or in the lab through comparison with voucher specimens or photographs. The locations of special-status plant and animal species incidentally observed or otherwise detected were mapped. The project site was examined for evidence of potential jurisdictional waters and wetlands.

In addition to the general biological surveys, HELIX conducted a jurisdictional delineation, rare plant surveys, southwestern pond turtle (*Actinemys pallida*) surveys, acoustical bat surveys, wildlife camera trapping surveys, and protocol-level surveys for arroyo toad (*Anaxyrus californicus*), coastal California gnatcatcher (*Polioptila californica californica*; CAGN), least Bell's vireo (*Vireo bellii pusillus*; LBVI), and southwestern willow flycatcher (*Empidonax traillii extimus*; SWFL). Table 3 provides a summary of biological surveys conducted to date for the project.

Table 3
BIOLOGICAL SURVEYS

Survey Type	Date	Survey Number	Personnel[1]	Weather Conditions
Year 2018				
General Biological Survey, Vegetation Mapping, and Habitat Assessment	August 13	--	Erica Harris Samantha Edgley	--
	November 7	--	Erica Harris	--
Jurisdictional Delineation	September 18	--	Larry Sward Erica Harris	--
	October 5	--	Larry Sward Erica Harris	--
Year 2019				
Rare Plant Survey	April 17	Spring	Angelia Bottani Dane van Tamelen	--
	June 19	Summer	Angelia Bottani Dane van Tamelen	--
Arroyo Toad Survey	April 15	1 Daytime	Benjamin Rosenbaum Erica Harris	71°F, wind 0-2 mph, 15% clouds 73°F, wind 2-4 mph, 5% clouds
		Nighttime		60°F, wind 1-3 mph, 60% clouds 62°F, wind 0-1 mph, 90% clouds
	April 24	2 Daytime	Benjamin Rosenbaum Dane van Tamelen	74°F, wind 2-5 mph, 0% clouds 79°F, wind 2-5 mph, 0% clouds
		Nighttime		67°F, wind 2-5 mph, 0% clouds 67°F, wind 2-5 mph, 0% clouds

Survey Type	Date	Survey Number	Personnel[1]	Weather Conditions
Arroyo Toad Survey	May 1	3 Daytime	Benjamin Rosenbaum Dane van Tamelen	66°F, wind 1-3 mph, 5% clouds 72°F, wind 1-3 mph, 5% clouds
		Nighttime		60°F, wind 1-3 mph, 80% clouds 59°F, wind 2-5 mph, 80% clouds
	May 23	4 Daytime	Benjamin Rosenbaum Samantha Edgley	62°F, wind 2-5 mph, 80% clouds 65°F, wind 2-5 mph, 100% clouds
		Nighttime		60°F, wind 2-5 mph, 0% clouds 57°F, wind 2-5 mph, 0% clouds
	June 13	5 Daytime	Benjamin Rosenbaum Angelia Bottiani[2]	78°F, wind 2-5 mph, 0% clouds 87°F, wind 2-5 mph, 0% clouds
		Nighttime	Benjamin Rosenbaum Angelia Bottiani[2]	62°F, wind 0-2 mph, 0% clouds 59°F, wind 0-1 mph, 0% clouds
	June 25	6 Daytime	Benjamin Rosenbaum Angelia Bottiani[2]	69°F, wind 2-5 mph, 80% clouds 71°F, wind 1-3 mph, 40% clouds
		Nighttime		66°F, wind 0-1 mph, 90% clouds 64°F, wind 0-1 mph, 90% clouds
Least Bell's Vireo Survey	April 16	1	Dane van Tamelen	58°F, wind 1-4 mph, 100% clouds 61°F, wind 3-7 mph, 100% clouds
	April 30	2	Dane van Tamelen	57°F, wind 0-2 mph, 100% clouds 60°F, wind 0-3 mph, 90% clouds
	May 15	3	Erica Harris	62°F, wind 0-1 mph, 100% clouds 72°F, wind 0-2 mph, 80% clouds
	May 30	4	Erica Harris	61°F, wind 0-1 mph, 100% clouds 72°F, wind 0-2 mph, 0% clouds
	June 11	5	Erica Harris	61°F, wind 0-1 mph, 0% clouds 82°F, wind 0-3 mph, 0% clouds
	June 21	6	Erica Harris	62°F, wind 0-1 mph, 100% clouds 71°F, wind 1-3 mph, 100% clouds
	July 1	7	Erica Harris	58°F, wind 0-1 mph, 0% clouds 78°F, wind 1-3 mph, 0% clouds
	July 15	8	Stacy Nigro	59°F, wind 0-1 mph, 0% clouds 86°F, wind 0-1 mph, 0% clouds
Southwestern Willow Flycatcher Survey	May 30	1	Erica Harris[3]	61°F, wind 0-1 mph, 100% clouds 72°F, wind 0-2 mph, 0% clouds
	June 11	2	Erica Harris[3]	61°F, wind 0-1 mph, 0% clouds 82°F, wind 0-3 mph, 0% clouds
	June 21	3	Erica Harris[3]	62°F, wind 0-1 mph, 100% clouds 71°F, wind 1-3 mph, 100% clouds
	July 1	4	Erica Harris[3]	58°F, wind 0-1 mph, 0% clouds 78°F, wind 1-3 mph, 0% clouds
	July 15	5	Erica Harris[3]	59°F, wind 0-1 mph, 0% clouds 86°F, wind 0-1 mph, 0% clouds
Year 2020				
General Biological Survey	September 2	--	Amy Mattson Alexander Walsh	--
	September 29	--	Amy Mattson Alexander Walsh	--

Survey Type	Date	Survey Number	Personnel[1]	Weather Conditions
	October 6	--	Alexander Walsh Ronald Rizzo	--
Year 2022				
General Biological Survey, Vegetation Mapping, and Habitat Assessment	May 10	--	Erica Harris	--
	May 19	--	Erica Harris Alexander Walsh	--
Rare Plant Survey	May 20	Spring	Ryan Fitch Shawn Carroll	--
	July 11	Summer	Ryan Fitch Jonathan Mercado	--
Arroyo Toad Habitat Assessment	May 9	Spring	Benjamin Rosenbaum	64°F, wind 2-3 mph, 20% clouds 66°F, wind 2-3 mph, 10% clouds
		Summer	Ronald Rizzo[2]	59°F, wind 0-1 mph, 0% clouds 55°F, wind 0-1 mph, 0% clouds
Southwestern Pond Turtle Visual Survey	May 17	Spring	Benjamin Rosenbaum Laura Moreton	70°F, wind 0-1 mph, 0% clouds 79°F, wind 2-3 mph, 0% clouds
	June	Summer	Benjamin Rosenbaum Alexander Walsh	70°F, wind 1-3 mph, 0% clouds 80°F, wind 2-3 mph, 0% clouds
Coastal California Gnatcatcher Survey	June 23	1	Erica Harris[3] Kristina Beck	66°F, wind 0-1 mph, 50% clouds 75°F, wind 1-3 mph, 85% clouds
	June 30	2	Erica Harris[3] Alexander Walsh	65°F, wind 0-1 mph, 100% clouds 71°F, wind 2-5 mph, 0% clouds
	July 7	3	Erica Harris[3] Alexander Walsh	64°F, wind 0-1 mph, 100% clouds 68°F, wind 2-6 mph, 0% clouds
Southwestern Willow Flycatcher Survey	May 26	1	Erica Harris[3] Mandy Mathews	58°F, wind 0-1 mph, 100% clouds 71°F, wind 1-3 mph, 0% clouds
	June 6	2	Erica Harris[3] Stacy Nigro	62°F, wind 0-1 mph, 100% clouds 74°F, wind 1-3 mph, 0% clouds
	June 16	3	Erica Harris[3] Kristina Beck	61°F, wind 0-1 mph, 0% clouds 71°F, wind 2-4 mph, 0% clouds
	July 5	4	Erica Harris[3]	64°F, wind 0-2 mph, 85% clouds 76°F, wind 0-1 mph, 10% clouds
	July 13	5	Erica Harris[3] Laura Moreton	64°F, wind 0-2 mph, 100% clouds 70°F, wind 1-4 mph, 0% clouds
Bat Survey	May 17 - 31	Acoustic Deployment #1	Laura Moreton Benjamin Rosenbaum	--
	July 14 - 28	Acoustic Deployment #2	Erica Harris	--
	July 26	Evening Emergence	Shawn Carroll Alexander Walsh	75°F, wind 3-8 mph, 10% clouds 68°F, wind 2-5 mph, 0% clouds

Survey Type	Date	Survey Number	Personnel[1]	Weather Conditions
Wildlife Camera Trapping Survey	May 19 - June 6,	Camera Deployment #1	Erica Harris	--
	June 6 - June 30	Camera Deployment #2	Erica Harris	--
	June 30 - July 13	Camera Deployment #3	Erica Harris	--
	July 13 - July 28	Camera Deployment #4	Erica Harris	--

1 All HELIX biologists.
2 Conducted nighttime survey only.
3 USFWS Permit TE-778195-14.

1.3.3 Focused Species Surveys

Rare Plant Surveys

HELIX biologists conducted rare plant surveys on the project site on April 17 and June 20, 2019, and May 20 and July 11, 2022 (Table 3). Rare plant surveys included focused surveys for San Diego ambrosia (*Ambrosia pumila*). USFWS-designated habitat for the federally listed endangered San Diego ambrosia occurs in the southwestern portion of the project site (Figure 7, *USFWS Critical Habitat*). A nearby population of San Diego ambrosia is located south of the southwestern portion of the project site within the San Diego National Wildlife Refuge (SDNWR). This population was field verified for detectability during the surveys. Special-status plant species include species that are: listed as threatened or endangered by the USFWS or the CDFW; those with a California Rare Plant Rank (CRPR) 1 through 4 designated by the CNPS; those that are on the County's Sensitive Plant List (County 2010a); and those covered by the County's MSCP Subarea Plan (County 1997). The surveys were conducted on foot and included 100 percent visual coverage of the project site. Special-status plant species encountered were mapped using a hand-held Global Positioning System (GPS) unit and/or on an aerial photograph. Special-status plant species were also searched for opportunistically during other surveys. The rare plant survey report is included as Appendix A, *Rare Plant Survey Report*.

Arroyo Toad

Focused surveys for arroyo toad were conducted within the project site in 2019. The survey consisted of six survey visits spaced at least seven days apart, conducted between April 15 and June 25, 2019 (Table 3), in accordance with *Survey Protocol for Arroyo Toad* (USFWS 1999). At least one survey was conducted during the months of April, May, and June. The surveys included both a daytime and nighttime component, conducted within the same 24-hour period. Daytime surveys were conducted during the daylight hours prior to sunset, and nighttime surveys began one hour after sunset. The surveys were timed to take place outside of the near- and full-moon phases. The primary objective of daytime surveys was to detect and document the presence of any arroyo toads in the immature life

stage (egg strings, larvae, metamorphic individuals, or toadlets). Nighttime surveys were conducted to detect any breeding adults.

The survey area covered all areas of potential habitat within the project site. Potential habitat for the species within the site generally consists of habitat located along, or directly adjacent to, the Sweetwater River. The survey was conducted by walking slowly along the stream margin and adjacent riparian habitat while visually searching for the species at all life stages (egg strings, larvae, metamorphic individuals, or toadlets) and stopping to listen for calling toads. All arroyo toad locations, along with other special-status species locations encountered during the survey, were mapped on an aerial photograph. The arroyo toad survey report is included as Appendix B, *Arroyo Toad Survey Report*.

An updated habitat assessment for arroyo toad was conducted on May 9, 2022. The habitat assessment consisted of a single daytime and a nighttime site visit to assess and document changes in biological resources from the 2019 focused surveys and evaluate the suitability of potential habitat to support arroyo toad.

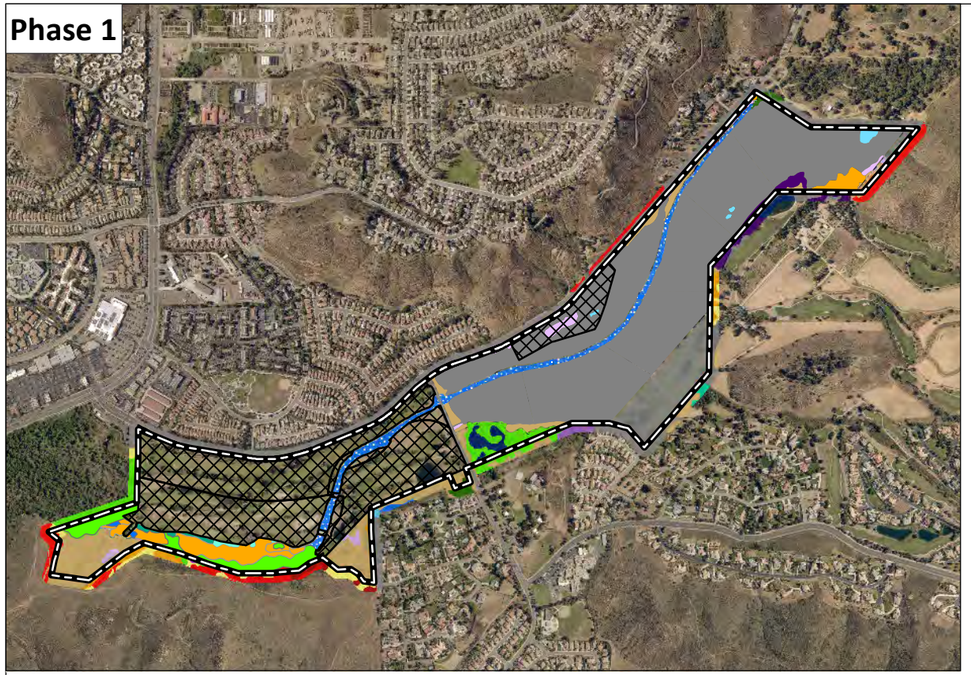
Southwestern Pond Turtle

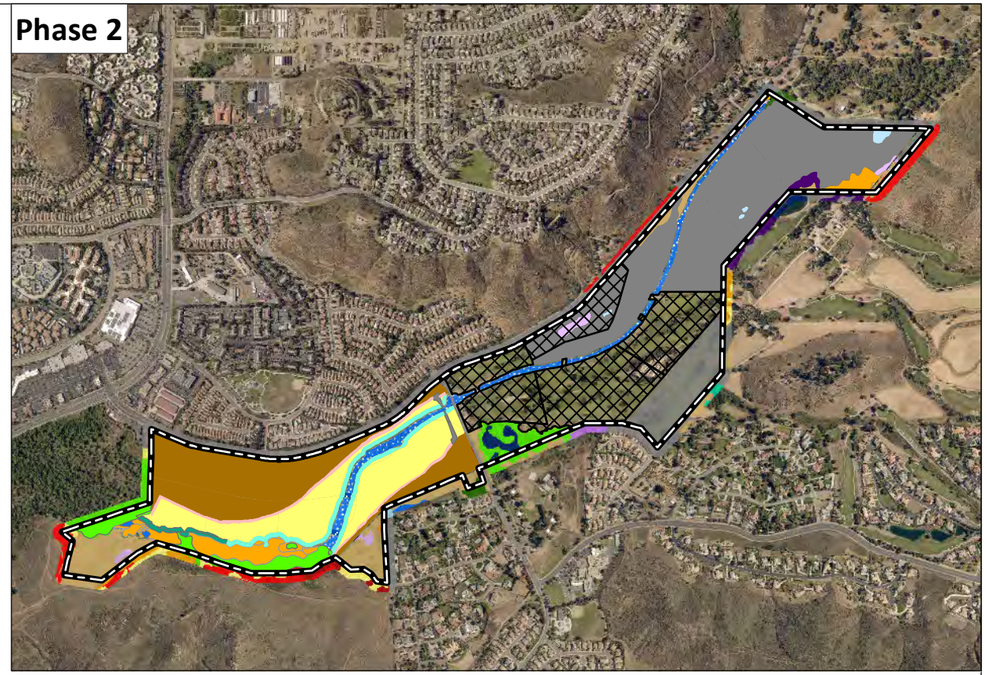
Visual surveys for southwestern pond turtle were conducted within the project site in 2022. The survey consisted of two site visits performed during the species' active period, May to July (Table 3). The surveys were conducted using a modified protocol that generally followed those detailed in *USGS Western Pond Turtle Visual Survey Protocol for the Southcoast Ecoregion* (USGS 2006). The USGS protocol includes procedures for dip netting and seining for turtles within pools, which was not completed, as no turtles were handled as part of the project surveys. No trapping of pond turtles or other reptiles/amphibians occurred as part of the surveys. The pond turtle survey area consisted of all potential aquatic habitat occurring within the project site, including several artificial ponds that were constructed as part of the golf course development, though not all of these ponds were inundated during the surveys. A total of six ponded areas were surveyed, including two artificial ponds within the closed golf course area west of Steele Canyon Road, three artificial ponds within the active golf course area east of Steele Canyon Road, and a ponded area east of Steele Canyon Road along the project's southern boundary that represents a lower lying area that was excavated in the 1960s during construction of the golf course (Figure 8, *Biological Survey Stations*).

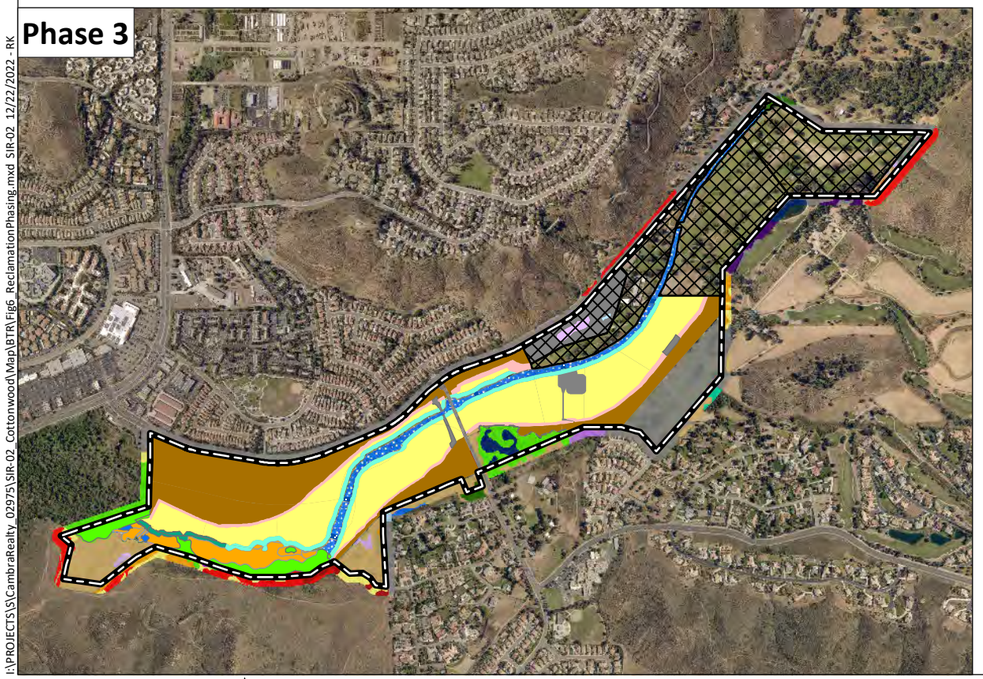
The ponds were surveyed by conducting visual scans and passively monitoring the open bank along the pond edges for basking turtles with the aid of binoculars. Biologists were positioned at vantage points at separate locations along the shoreline to ensure complete visual coverage (typically one biologist at opposite ends of the pond). The banks of the ponds were surveyed by slowly walking the edges where accessible. If a splash was heard by the biologist or made from an unknown source, the biologist would remain still and attempt to determine the source of the splash. The survey included a search for potential submerged refugia locations. All species observed during the surveys were recorded.

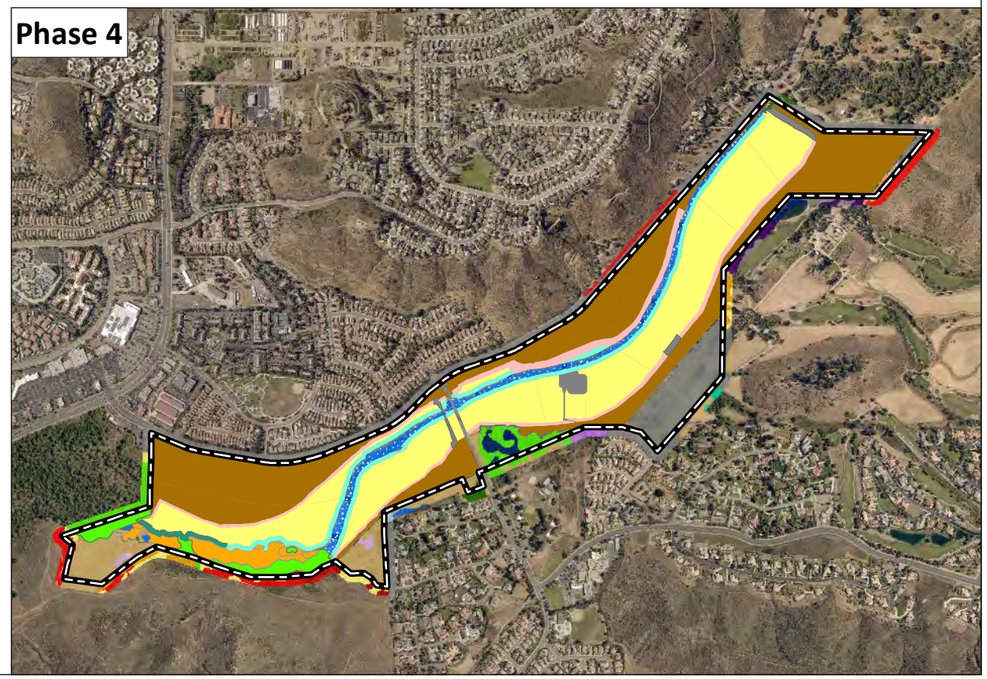
Least Bell's Vireo

Focused surveys for least Bell's vireo were conducted within the project site in 2019. The survey consisted of eight survey visits spaced at least 10 days apart, conducted between April 16 and July 15, 2019 (Table 3), in accordance with *Least Bell's Vireo Survey Guidelines* (USFWS 2001). The survey area consisted of potential least Bell's vireo riparian habitat (i.e., southern cottonwood-willow riparian forest,









Project Site
Disturbance Area

Conceptual Reclamation Revegetation

Streambed
Riparian Scrub
Riparian Forest
Coastal Sage Scrub
Additional Reclaimed Areas

Conceptual Compensatory Mitigation

Wetland Waters Re-establishment
Riparian Forest
Riparian Rehabilitation
Riparian Scrub

Vegetation

Freshwater Marsh (52400)
Coast Live Oak Woodland (71160)
Southern Cottonwood-willow
Riparian Forest (61330)
Southern Cottonwood-willow
Riparian Forest - Disturbed (61330)
Southern Willow Scrub - Disturbed (63320)
Disturbed Wetland (11200)
Diegan Coastal Sage Scrub (32500)
Diegan Coastal Sage Scrub - Disturbed (32500)
Eucalyptus Woodland (79100)
Open Water (64140)
Artificial Pond (64140)
Non-native Woodland (79000)
Non-native Riparian
Arundo-dominated Riparian (65100)
Non-native Grassland (42200)
Non-native Vegetation (11000)
Tamarisk Scrub (63810)
Disturbed Habitat (11300)
Developed (12000)

0 1,700 Feet

N

Source: Aerial (SanGIS, 2017)

I:\PROJECTS\S\CambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig6_ReclamationPhasing.mxd SIR-02 12/22/2022 - RK

HELIX Environmental Planning

Extraction and Reclamation Phasing

Figure 6

Cottonwood Sand Mine

Project Site

Critical Habitat

- Coastal California gnatcatcher
- Least Bell's vireo
- San Diego ambrosia
- Southwestern willow flycatcher

Sweetwater River

I:\PROJECTS\S\CambriaRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig7_CriticalHabitat.mxd SIR-02 12/12/2022 -RK

0 1,000 Feet

Source: Aerial (SanGIS 2019)

HELIX Environmental Planning

USFWS Critical Habitat

Figure 7

Cottonwood Sand Mine

Project Site
Acoustic Bat Monitor Location
Pond Turtle Survey Location
Wildlife Camera Station

Jamacha Way
Targa Pl
Sonett St
Porterfield Pl
Seca St
Greenwick Rd
Mirage Ct
Aspen Ln
Greencrest Dr
Greencrest Ct
Via Antigua
Monte View Ct
Merlyn Pl
Wind River Rd
Via Hacienda
Brabham St
Woodpine Dr
Woodrum Pl
Sea Pines Rd
Congressional Dr
Via Rancho San Diego
Hilton Head Pl
Sawgrass St
Augusto Ct
Hilton Service
Jamacha Rd
Rancho Saint James Dr
Hilton Head Rd
Emerald Point Ct
Willow Glen Dr
Heatherwood Dr
Steele Canyon Rd
Par Four Dr
Ivanhoe Ranch Rd
Cottonwood Springs Ln
Indian Mills Ln
Jamul Dr
Greystone Dr
Ashley Park Dr
Wentworth Way
Wentworth Dr
Stanfield Dr

Pond 6
Camera 1B
Camera 1C
Pond 5a
Pond 5b
Camera 1A
AnaBat 3
Camera 1D
Pond 1
Camera 2A
Camera 2D
Camera 2B
Pond 2
Camera 2C
AnaBat 2
Pond 3
Pond 4
Camera 3B
AnaBat 1
Camera 3A
Camera 3D
Camera 3C

0 700 Feet

Source: Aerial (NearMap, 2019)

I:\PROJECTS\S\CambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig8_BioSurveyLocs.mxd 02975-2-2 8/26/2022 - RK

HELIX Environmental Planning

Biological Survey Stations

Figure 8

southern willow scrub, and tamarisk scrub) present within the project site. The survey was conducted by walking along the edges of, as well as within, potential least Bell's vireo habitat while listening for least Bell's vireo vocalizations and while viewing birds with the aid of binoculars. All least Bell's vireo locations, along with other special status riparian bird species locations (and those of the brown-headed cowbird [*Molothrus ater*]; a nest parasite), were mapped on an aerial photograph. The least Bell's vireo survey report is included as Appendix C, *Least Bell's Vireo Survey Report*.

Southwestern Willow Flycatcher

Focused surveys for southwestern willow flycatcher were conducted within the project site in 2019 and 2022. The survey consisted of five survey visits spaced at least five days apart, conducted between May 30 and July 15, 2019, and between May 26 and July 13, 2022 (Table 3), in accordance with USFWS-approved survey protocol (Sogge et al. 2010). The survey area consisted of potential southwestern willow flycatcher riparian habitat (i.e., southern cottonwood-willow riparian forest, southern willow scrub, and tamarisk scrub) present within the project site. The survey was conducted by walking along the edges of, as well as within, potential southwestern willow flycatcher habitat while listening for flycatcher vocalizations and viewing birds with the aid of binoculars. Recorded SWFL vocalizations were played every 20 to 30 meters followed by a one-minute silent period to listen for a response. All flycatcher locations, along with other special status riparian bird species locations, were mapped on an aerial photograph. The southwestern willow flycatcher survey reports are included as Appendix D, *Southwestern Willow Flycatcher Survey Report*.

Coastal California Gnatcatcher

Focused surveys for coastal California gnatcatcher were conducted within the project site in 2022. The survey consisted of three survey visits spaced at least seven days apart, conducted between June 23 and July 7, 2022 (Table 3), in accordance with the *Coastal California Gnatcatcher Presence/Absence Survey Protocol* (USFWS 1997). The survey area consisted of all potential gnatcatcher habitat occurring on site (i.e., Diegan coastal sage scrub, including disturbed). The surveys were conducted by walking through the vegetation or on adjacent paths, and viewing birds with the aid of binoculars, where necessary. If the coastal California gnatcatcher was not detected passively, a digital coastal California gnatcatcher call prompt was briefly played. Coastal California gnatcatcher locations were mapped on an aerial photograph. The coastal California gnatcatcher survey report is included as Appendix E, *Coastal California Gnatcatcher Survey Report.*

Bat Surveys

Bat surveys were conducted within the project site in 2022 and consisted of acoustic monitoring surveys and a nighttime emergence survey. A habitat assessment was conducted during the first survey visit to evaluate and identify potential roosting and/or foraging habitat for bats present within the project site (e.g., abandoned buildings, water bodies, rock outcrops, etc.). The results of the habitat assessment informed the locations for the acoustic monitoring and emergence survey efforts.

Acoustic monitoring surveys were conducted over two separate two-week deployment periods between May 17 and July 14, 2022 (Table 3). AnaBat Express detectors were deployed at three locations throughout the project site that were selected based on proximity to water (Figure 8). Location 1 (AnaBat 1) was located within the closed golf course west Steele Canyon Road, south of an artificial

pond and north of riparian habitat along the Sweetwater River. Location 2 (AnaBat 2) was located within the closed golf course west of Steele Canyon Road to the north of an artificial pond. Location 3 (AnaBat 3) was located within the active golf course east of Steele Canyon Road adjacent to two artificial ponds. The AnaBat locations were recorded in the field using a hand-held GPS unit. The detector at Location 2 (i.e., AnaBat 2) was stolen during the second deployment period in July; as such, those recordings were not able to be retrieved, and those results are not available. Analook software was used to process the AnaBat Express recordings and aid in species identification. All bat calls were analyzed and compared with recordings from a library of voucher calls of species with the potential to occur in the project site (Corbin and Livengood 2018; Tremor et al. 2017).

A nighttime emergence survey was conducted by HELIX biologists on July 26, 2022 (Table 3). The survey was conducted along Steele Canyon Road, where the bridge spans the Sweetwater River in the central portion of the project site. Adjacent riparian habitat and open water provide suitable roosting and foraging habitat for bat species with the potential to occur within the project site. The emergence survey occurred between one hour before local sunset and one hour after sunset. Surveyors stopped at two stationary point locations: one at the northern end and one at the southern end of Steele Canyon Road. An Echo Meter Touch 2 Pro detector was used to record individuals and provide an initial identification of detected bat species. Following the emergence survey, the recordings were post-processed and analyzed through Sonobat software (version 4.5.5; Szewczak and Szewczak 2019). Calls were then manually reviewed and verified with standard call characteristics, as well as recordings from a library of voucher calls of species with the potential to occur within the project site (Szewczak and Szewczak 2019, Szewczak 2018).

The bat survey report is included as Appendix F, *Bat Survey Report*.

Wildlife Camera Trapping Surveys

Motion-activated cameras were deployed within the project site in 2022 to document wildlife presence, use, and movement throughout the project site. Three Brown Spec Ops Extreme cameras were deployed throughout the project site between May 19 and July 28, 2022 (Figure 8). The cameras were installed in areas where signs of wildlife use and movement (i.e., tracks and scat) were observed; potential food, shelter, and aquatic resources were present (such as existing native riparian habitat areas and artificial ponds); and at potential ingress/egress areas. A total of four deployments were conducted, with each deployment period spanning between two to three weeks (Table 3). The cameras were repositioned during each deployment period to capture wildlife use and movement through the project site (Figure 8). The camera locations were recorded in the field using a hand-held GPS unit. A camera at the southwestern portion of the project site (i.e., Camera 3a) was stolen during the first deployment period and a second camera in the eastern portion of the site (i.e., Camera 1c) malfunctioned during the third deployment period; as such, data was not able to be retrieved from those cameras and survey results during those deployment periods are not available. Following the surveys, all images were downloaded and analyzed for the presence of wildlife species. All images with a positive detection were reviewed, and species recorded were identified to the closest taxonomic group possible.

1.3.4 Jurisdictional Delineation

HELIX conducted a field-based jurisdictional delineation on September 18 and October 5, 2018 (Table 3). Prior to conducting fieldwork, aerial photographs (1" = 150' scale), topographic maps (1"=150' scale), and National Wetland Inventory maps were reviewed to assist in determining the presence or absence of potential jurisdictional areas within the project site. Historical aerial photos were also used to gain an understanding of the lateral extent of the Sweetwater River and associated wetland vegetation. The purpose of the delineation was to identify and map water and wetland resources potentially subject to U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA; 33 USC 1344), Regional Water Quality Control Board (RWQCB) jurisdiction pursuant to Section 401 of the CWA and State Porter-Cologne Water Quality Control Act, and streambed and riparian habitat potentially subject to CDFW jurisdiction pursuant to Sections 1600 et seq. of the California Fish and Game Code (CFG Code). The delineation was also conducted to determine the presence or absence of County Resource Protection Ordinance (RPO) wetlands. Areas generally characterized by depressions, drainage features, and riparian and wetland vegetation were evaluated.

Waters of the U.S.

Potential USACE-jurisdictional waters of the U.S. were determined using three criteria (vegetation, hydrology, and soils) established for wetland delineations as described within Wetlands Delineation Manual (Environmental Laboratory 1987) and Arid West Regional Supplement (USACE 2008). Plants were identified according to Jepson eFlora (2018). Wetland affiliations of plant species follow the National Wetland Plant List (Lichvar et al. 2016). Soils information was taken from the U. S. Department of the NRCS Web Soil Survey (2022). Areas were determined to be potential non-wetland waters of the U.S. if there was evidence of regular surface flow (e.g., bed and bank) but vegetation and/or soil criteria were not met.

Fifteen sampling points were studied, and soil pits were excavated at each of these points. Sampling points were located within representative uplands and wetlands. Standard USACE wetland delineation data forms were completed for each sampling point in the field and Ordinary High Water Mark Datasheets were completed at five locations. The datasheets are included in Appendix G, *Jurisdictional Delineation Datasheets*. Photographs taken of the sampling points and project site are included in Appendix H, *Representative Site Photographs*.

Waters of the State

Potential RWQCB-jurisdictional waters of the State were delineated in the same manner as potential waters of the U.S. All potential waters of the U.S. were also considered waters of the State subject to RWQCB jurisdiction pursuant to CWA Section 401. Where aquatic resources were determined to not be waters of the U.S. due to geographic isolation, they were included as waters of the State subject to RWQCB jurisdiction pursuant to the Porter-Cologne Act.

California Department of Fish and Wildlife Jurisdictional Areas

Potential CDFW-jurisdictional streambed and riparian habitat were determined based on the presence of riparian vegetation or regular surface flow within a measurable bed and bank. Streambeds within CDFW jurisdiction were delineated based on the definition of streambed as "a body of water that flows

at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that support riparian vegetation" (Title 14, Section 1.72). Potential CDFW-jurisdictional unvegetated streambed encompasses the top-of-bank to top-of-bank width for the features within the project site. Riparian habitat is not defined in Title 14, but the section refers to vegetation and habitat associated with a stream. The CDFW jurisdictional habitat includes all riparian shrub or tree canopy that may extend beyond the banks of a stream.

County Resource Protection Ordinance Wetlands

County Resource Protection Ordinance (RPO) wetlands were mapped pursuant to the County's definition (County 2011), which defines RPO wetlands as lands having one or more of the following attributes:

- At least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places);
- The substratum is predominantly undrained, hydric soil; or
- An ephemeral or perennial stream is present, whose substratum is predominately non-soil, and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

According to the RPO, the following are not considered RPO wetlands:

- Lands that have attribute(s) specified above, solely due to man-made structures (e.g., culverts, ditches, road crossings, or agricultural ponds), provided that the Director of PDS determines that they:
    - Have negligible biological function or value as wetlands;
    - Are small and geographically isolated from other wetland systems;
    - Are not vernal pools; and
    - Do not have substantial or locally important populations of wetland dependent sensitive species.
- Lands that have been degraded by past legal land disturbance activities to the point that they meet the following criteria as determined by the Director of PDS:
    - Have negligible biological function or value as wetlands even if restored to the extent feasible; and
    - Do not have substantial or locally important populations of wetland dependent sensitive species.

1.3.5 Survey Limitations

Noted animal species were identified by direct observation, vocalizations, or the observance of scat, tracks, or other signs. However, the lists of species identified are not necessarily comprehensive accounts of all species that utilize the site, as species that are nocturnal, secretive, or seasonally restricted may not have been observed. Those species that are of special status and have the potential to occur on-site, however, are addressed in this report.

1.3.6 Nomenclature

Nomenclature used in this report generally comes from Holland (1986) and Oberbauer (2008) for vegetation; Jepson eFlora (2022) and Calflora (2022) for plants; Pelham (2022) and Davenport (2018) for butterflies; Society for the Study of Amphibians and Reptiles (2022) for reptiles and amphibians; American Ornithological Society (2022) for birds; and Bradley et al. (2014) and Tremor et al. (2017) for mammals. Plant species status is from the CNPS Rare Plant Inventory (CNPS 2022), CDFW (2022b), and County (2010b). Animal species status is from the CDFW (2022c) and County (2010b).

1.4 ENVIRONMENTAL SETTING

1.4.1 Regional Context

The project site is generally located within the southern valley humid temperate ecoregion of southeast San Diego County. It occurs within the boundaries of the Rancho San Diego Specific Plan area of the Valle de Oro Community Plan area. Generalized climate in the region is regarded as dry, sub-humid mesothermal, with warm dry summers and cold moist winters. Mean annual precipitation is between 14 and 18 inches, and the mean annual temperature is between 60- and 62-degrees Fahrenheit. The frost-free season is 260 to 300 days.

Important biological resources in the region generally include core blocks of coastal sage scrub and chaparral, open space conserved within the ~~San Diego National Wildlife Refuge (~~SDNWR~~)~~ and Otay Valley Regional Park, and perennial waters and riparian habitat associated with the Sweetwater River and Otay River corridors and the Sweetwater and Otay Reservoirs. The site is located within the Sweetwater River Valley and in the floodplain of the Sweetwater River, which flows in a northeast-to-southwest direction through the central portion of the site. The region hosts core populations of special status sensitive plants, including Dean's milk-vetch (*Astragalus deanei*), Orcutt's brodiaea (*Brodiaea orcuttii*), and felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*), in addition to important habitat for several special-status animals, including least Bell's vireo and coastal California gnatcatcher, among others. As shown on Figure 7, USFWS-designated critical habitat for three species occurs within the extreme southwestern portion of the project site: coastal California gnatcatcher (2.66 acres), least Bell's vireo (10.42 acres), and San Diego ambrosia (15.66 acres). Additionally, critical habitat for southwestern willow flycatcher occurs off-site, just west of the project boundary, along a downstream segment of the Sweetwater River within the SDNWR. The portion of least Bell's vireo critical habitat mapped within the site is primarily located within areas that have been converted to golf course, though a small portion of riparian habitat along the Sweetwater River is present. Mapped critical habitat for coastal California gnatcatcher within the site is associated with the edge of the Sweetwater River riparian canopy, though critical habitat for this species also occurs directly off-site in areas vegetated

with coastal sage scrub. Designated critical habitat for San Diego ambrosia within the project site is located along the Sweetwater River, though some of these areas consist of golf course.

The project site occurs within both the northeastern portion of the South County Segment and the southwestern portion of the Metro-Lakeside-Jamul Segment of the adopted County MSCP Subarea Plan. The majority of the site is mapped as developed on Attachment J (Habitat Evaluation Map) of the Biological Mitigation Ordinance (BMO [County 2010c]), though small portions along the site's southern boundary are also mapped as low, moderate, high, and very high habitat value. The MSCP Hardline is mapped off-site to the west and south of the project along the Sweetwater River, and within the SDNWR (Figure 4). Lands designated as PAMA, totaling 16.40 acres within the project site, occur along the northeastern, southeastern, and southern project boundaries (Figure 4). A narrow strip of PAMA averaging approximately 100 feet wide (4.96 acres) occurs at the northeastern boundary just south of Willow Glen Drive and generally follows the upstream portion of the Sweetwater River. A small portion of PAMA (3.20 acres), connected to a larger block of off-site habitat that continues further east and southeast of the site, is found at the extreme southeastern portion of the project. The largest patch of PAMA (8.24 acres) occurs directly east of Steele Canyon Road, along the site's southern border, in an area that was excavated during the 1960s. This area was located at the edge of the historic Sweetwater River floodplain and was excavated to a depth that created conditions suitable to support ponded areas. Lastly, approximately 37.79 acres of the site at the southwestern boundary represent a Minor Amendment Area. This includes riparian habitat at the downstream portion of the Sweetwater River, and lands developed as part of the golf course.

1.4.2 General Land Uses

Prior to the 1940s, the site was used for commercial ranching and agriculture, most of which had ended by the 1950s. A 1953 aerial photograph of the site indicates that the floodplain of the Sweetwater River was primarily undeveloped, with the presence of a small, wooden house/structure adjacent to Willow Glen Drive west of Steele Canyon Road. In the 1950s, a small portion of the site was mined for construction aggregates on the south side of the Sweetwater River, west of Steele Canyon Road. Since the 1960s, the project site has operated as a public golf course. Construction of the golf course initially began in 1962 and was completed in 1964. The golf course confined the Sweetwater River to a narrower channel and replaced native riparian vegetation with turf grass. Intermittent mining activities within the site continued through the 1970s, allowing for the creation of water hazards and expanded fairways associated with golf course construction and improvements. The site currently operates as a public golf course, though golf play and irrigation of landscaped turf in the western portion of the site was discontinued in 2017.

Land uses in the surrounding area include residential and rural residential development to the north and south, extractive operations to the east, and an adjacent golf course to the southeast. Open space is present in the hills south, east, and west of the site. The SDNWR abuts the western project boundary along the Sweetwater River.

1.4.3 Disturbance

The project site has been subjected to past human disturbances and habitat modification associated with the development of the golf course and intermittent mining. The site currently operates as a public golf course, though golf play and irrigation of landscaped turf in the western portion of the site was

discontinued in 2017. Mining activities within the site began in the early 1950s south of the Sweetwater River and continued through the 1970s as the golf course expanded.

Vegetation within the project site reflects the site's disturbed and developed nature. The portion west of Steele Canyon Road, which consists of the closed golf course, is characterized by ruderal vegetation, artificial ponds, disturbed habitat, and a mixture of native and non-native planted trees. The eastern portion of the site, which represents the active golf course, is characterized by landscaped turf grass, artificial ponds, native and non-native planted trees, cart paths, parking lots, a clubhouse, and other maintenance facilities. Vegetation within the project site and the Sweetwater River channel has been heavily modified as part of golf course development and is currently dominated by Bermuda grass (*Cynodon dactylon*) or bare ground. Vegetation along most of the channel is irrigated and regularly mowed as part of golf course maintenance activities, excluding the southwestern patch of riparian habitat. A small section, approximately 2,360 feet in length (0.45 mile) and 130 to 250 feet in width, of riparian vegetation is located along the southwestern project boundary. This section is dominated by willows (*Salix* ssp.) intermixed with non-natives such as giant reed (*Arundo donax*) and tamarisk (*Tamarix* sp.).

The Sweetwater River and associated floodplain have been severely modified as a result of previous golf course development. The river has been channelized through the site and its width has been constricted to allow for the development of golf course fairways. Additionally, the hydrological regime of the Sweetwater River has been heavily altered from the creation of several artificial impoundments upstream and downstream of the project site, such as the Loveland Reservoir and Sweetwater Reservoir, which are subject to water transfers and controlled releases by the Sweetwater Authority.

1.4.4 Topography and Soils

Elevations on-site generally decrease from east to west across the site, with the lowest elevations (approximately 320 feet (ft) above mean sea level [AMSL]) occurring along the southwestern boundary, and the highest elevations (approximately 380 ft AMSL) along the northeastern boundary. The Sweetwater River runs through the length of the site, entering at the northeastern project boundary and continuing in a mostly east-west direction to the southwestern boundary, where it exits the site and continues southwest towards Sweetwater Reservoir. The Sweetwater River extends from its headwaters in the Cuyamaca Mountains (east of the site) to the Pacific Ocean, approximately 15 miles downstream of the site.

Six soil series, which comprise nine soil types, have been mapped on-site (NRCS 2022; Figure 9, *Soils*), with the majority classified as sandy loams. Soil types covering the most area include Riverwash and those in the Tujunga series. Tujunga sand soils occur on floodplains and are comprised of alluvium derived from granite. Riverwash soils are found within drainageways and are composed of sandy, gravelly, or cobbly alluvium derived from mixed sources. Less common soil types in the project site are Visalia sandy loam (0 to 2 percent slopes and 2 to 5 percent slopes) and Vista coarse sandy loam (15 to 30 percent slopes). Additionally, very small areas of the site contain Cieneba coarse sandy loam (5 to 15 percent slopes, eroded), Cieneba very rocky coarse sandy loam (30 to 75 percent slopes), Vista coarse sandy loam (9 to 15 percent slope), and Visalia sandy loam (9 to 15 percent slopes).

1.4.5 Vegetation Communities/Land Use Types

Fifteen vegetation communities/land use types occur on the project site (Table 4, *Existing Vegetation Communities/Land Use Types*; Figure 10, *Vegetation and Sensitive Resources*). The numeric codes in parentheses following each community/land use type name are from the Holland classification system (Holland 1986) as added to by Oberbauer (2008) and as presented in the County's Biology Guidelines (County 2010b). The communities are presented in Table 4 in order by MSCP Tier and described in further detail below.

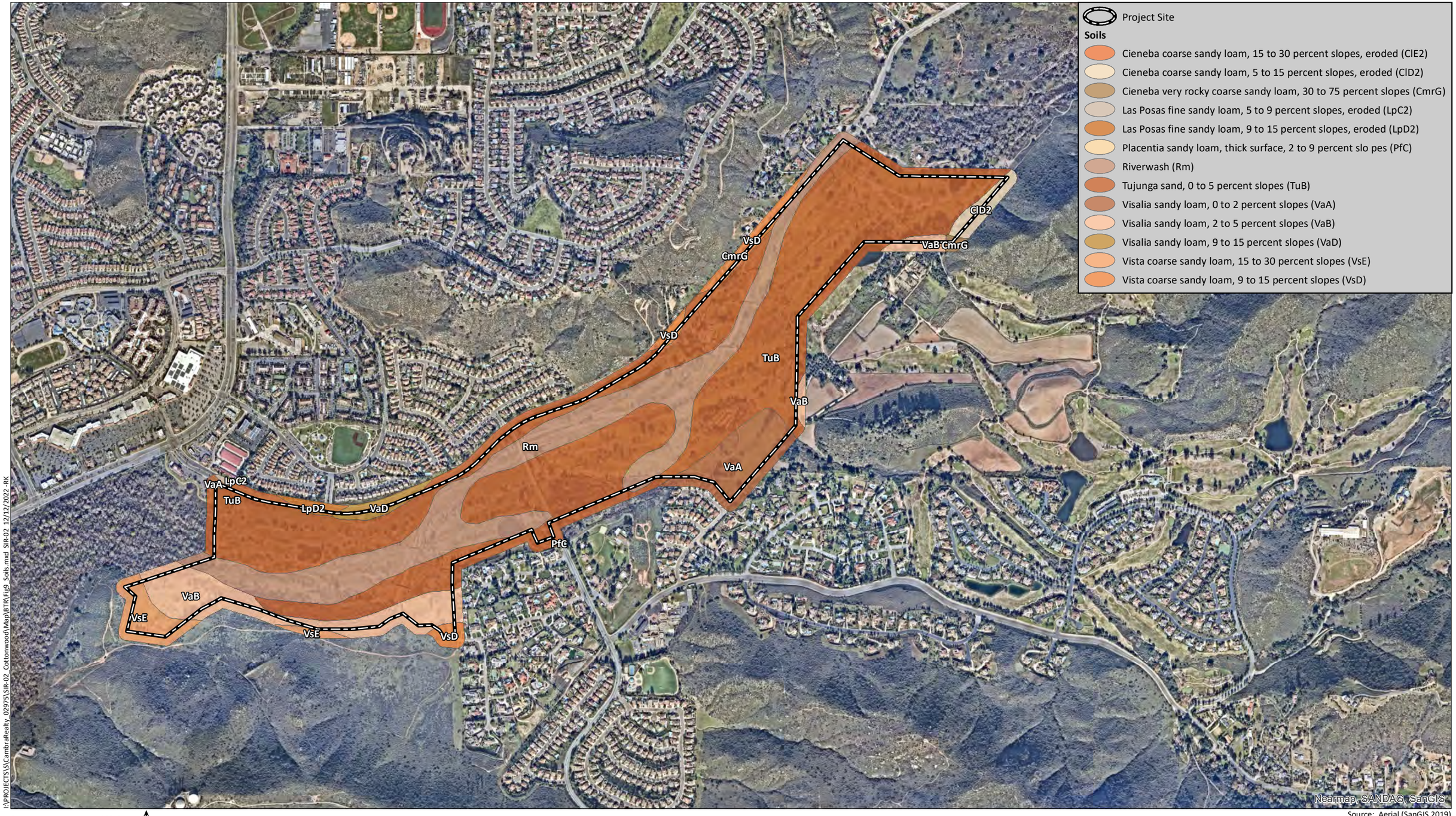
Table 4
EXISTING VEGETATION COMMUNITIES/LAND USE TYPES

Vegetation Community[1]	Acres[2]		
	Within MUP	Outside MUP	Total
Tier I[3]			
Disturbed Wetland (11200)	10.25	0	10.25
Freshwater Marsh (52400)	0.22	0	0.22
Southern Cottonwood-willow Riparian Forest (61330)	9.43	2.42	11.85
Southern Cottonwood-willow Riparian Forest - disturbed (61330)	0.87	0.15	1.02
Southern Willow Scrub - disturbed (63320)	4.82	0	4.82
Tamarisk Scrub (63810)	1.20	0.03	1.23
Open Water (64140)[4]	1.68	0	1.68
Arundo-dominated Riparian (65100)	0.48	0.08	0.56
Tier II			
Diegan Coastal Sage Scrub (32500)	0.8	0.5	1.3
Diegan Coastal Sage Scrub – disturbed (32500)	0.5	<0.1	0.5
Tier IIIB			
Non-native Grassland (42200)	0	0.2	0.2
Tier IV			
Non-native Woodland (79000)	1.5	0.2	1.7
Eucalyptus Woodland (79100)	2.1	0.5	2.6
Non-native Vegetation (11000)	6.6	0.9	7.5
Disturbed Habitat (11300)	79.0	12.3	93.1
N/A			
Artificial Pond (64140)[4]	3.0	0	3.0
Developed Land (12000)	122.0	14.9	136.9
TOTAL	**244.45**	**32.18**	**276.63**

1 Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2008).
2 Upland habitats are rounded to the nearest 0.1 acre, while wetland habitats are rounded to the nearest 0.01; thus, total reflects rounding.
3 County Subarea Habitats and Tiers within the MSCP.
4 The numerical Holland/Oberbauer code refers to Fresh Water which describes year-round bodies of fresh water in the form of lakes, streams, ponds, or rivers and is the most appropriate vegetation community that represents these areas.

Disturbed Wetland

Disturbed wetland is dominated by exotic wetland species that invade areas that have been previously disturbed or undergone periodic disturbances. These non-natives become established more readily



0 1,000 Feet

Source: Aerial (SanGIS 2019)

HELIX Environmental Planning

Soils

Figure 9

Project Site

Major Use Permit Boundary

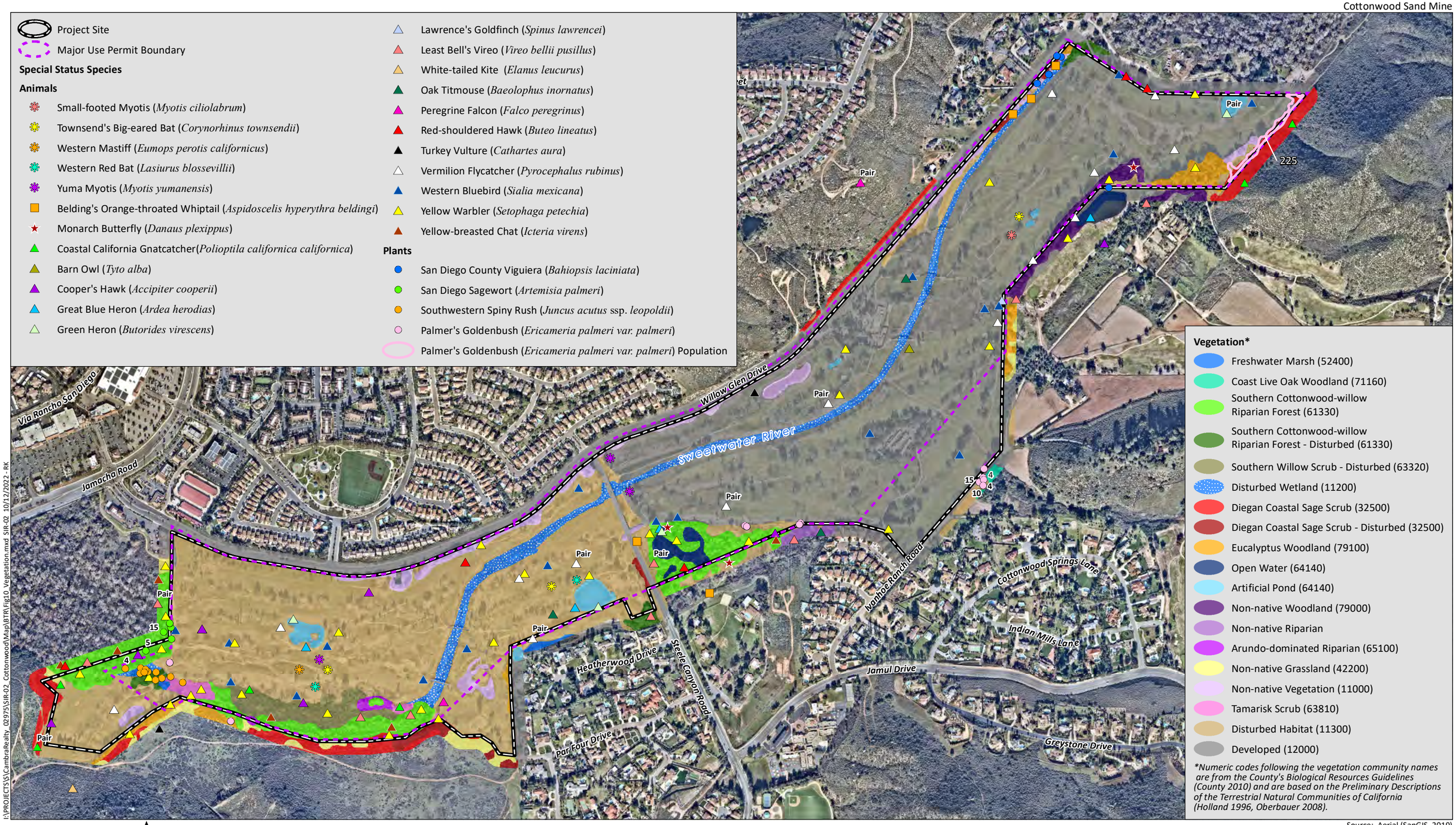
Special Status Species

Animals

- Small-footed Myotis (*Myotis ciliolabrum*)
- Townsend's Big-eared Bat (*Corynorhinus townsendii*)
- Western Mastiff (*Eumops perotis californicus*)
- Western Red Bat (*Lasiurus blossevillii*)
- Yuma Myotis (*Myotis yumanensis*)
- Belding's Orange-throated Whiptail (*Aspidoscelis hyperythra beldingi*)
- Monarch Butterfly (*Danaus plexippus*)
- Coastal California Gnatcatcher(*Polioptila californica californica*)
- Barn Owl (*Tyto alba*)
- Cooper's Hawk (*Accipiter cooperii*)
- Great Blue Heron (*Ardea herodias*)
- Green Heron (*Butorides virescens*)
- Lawrence's Goldfinch (*Spinus lawrencei*)
- Least Bell's Vireo (*Vireo bellii pusillus*)
- White-tailed Kite (*Elanus leucurus*)
- Oak Titmouse (*Baeolophus inornatus*)
- Peregrine Falcon (*Falco peregrinus*)
- Red-shouldered Hawk (*Buteo lineatus*)
- Turkey Vulture (*Cathartes aura*)
- Vermilion Flycatcher (*Pyrocephalus rubinus*)
- Western Bluebird (*Sialia mexicana*)
- Yellow Warbler (*Setophaga petechia*)
- Yellow-breasted Chat (*Icteria virens*)

Plants

- San Diego County Viguiera (*Bahiopsis laciniata*)
- San Diego Sagewort (*Artemisia palmeri*)
- Southwestern Spiny Rush (*Juncus acutus* ssp. *leopoldii*)
- Palmer's Goldenbush (*Ericameria palmeri var. palmeri*)
- Palmer's Goldenbush (*Ericameria palmeri var. palmeri*) Population



Vegetation*

- Freshwater Marsh (52400)
- Coast Live Oak Woodland (71160)
- Southern Cottonwood-willow Riparian Forest (61330)
- Southern Cottonwood-willow Riparian Forest - Disturbed (61330)
- Southern Willow Scrub - Disturbed (63320)
- Disturbed Wetland (11200)
- Diegan Coastal Sage Scrub (32500)
- Diegan Coastal Sage Scrub - Disturbed (32500)
- Eucalyptus Woodland (79100)
- Open Water (64140)
- Artificial Pond (64140)
- Non-native Woodland (79000)
- Non-native Riparian
- Arundo-dominated Riparian (65100)
- Non-native Grassland (42200)
- Non-native Vegetation (11000)
- Tamarisk Scrub (63810)
- Disturbed Habitat (11300)
- Developed (12000)

**Numeric codes following the vegetation community names are from the County's Biological Resources Guidelines (County 2010) and are based on the Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1996, Oberbauer 2008).*

I:\PROJECTS\S\CambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig10_Vegetation.mxd SIR-02_10/12/2022 - RK

0 700 Feet

Source: Aerial (SanGIS, 2019)

HELIX Environmental Planning

Vegetation and Sensitive Resources

Figure 10

following natural or human-induced habitat disturbance than the native wetland flora. Characteristic species of disturbed wetlands include giant reed, tamarisk, cocklebur (*Xanthium strumarium*), umbrella sedge (*Cyperus involucratus*), and wild celery (*Apium graveolens*).

Disturbed wetland on-site is located along the Sweetwater River and is dominated by Bermuda grass or bare ground. The river channel has been altered from current and past disturbances associated with previous mining activities and golf course development, including ongoing maintenance and operations. It has been planted with turf grass and is regularly mowed as part of golf course maintenance activities. Approximately 10.25 acres of disturbed wetland are mapped within the project site.

Freshwater Marsh

Freshwater marsh is dominated by perennial, emergent monocots, 5 to 13 feet tall, forming incomplete to completely closed canopies. This vegetation type occurs along the coast and in coastal valleys near river mouths and around the margins of lakes and springs, freshwater or brackish marshes. These areas are semi- or permanently flooded yet lack a significant current (Holland 1986). Dominant species include cattails (*Typha* sp.) and bulrushes (*Schoenoplectus* sp.), along with umbrella sedges (*Cyperus* sp.), rushes (*Juncus* sp.), and spike-sedge (*Eleocharis* sp.).

Freshwater marsh within the project site is dominated by cattails and California bulrush (*Schoenoplectus californicus*). A small patch occurs in the southwestern portion of the site at the downstream end of the Sweetwater River, just east (upstream) of a bridge crossing. Freshwater marsh also occurs in the south-central portion of the site, just east of Steele Canyon Road, in an area that was previously disturbed by mining and golf course development activities. A total of 0.22 acre of freshwater marsh occurs on-site.

Southern Cottonwood-Willow Riparian Forest (including disturbed)

Southern cottonwood-willow riparian forest consists of tall, open, broad-leaved, winter deciduous riparian species and is dominated by cottonwood species (e.g., *Populus* spp.), with willow species (Salix spp.) composing the main understory. This vegetation community is dense, structurally diverse, and similar to southern arroyo willow riparian forest, although it contains a greater number of cottonwoods and western sycamores (*Platanus racemosa*). Disturbed southern cottonwood-willow riparian forest contains a higher percentage of exotic species such as tamarisk, shamel ash (*Fraxinus uhdei*), eucalyptus (*Eucalyptus* spp.), peppertree (*Schinus* spp.), and Mexican fan palm (*Washingtonia robusta*).

Typical species occurring within southern cottonwood willow riparian forest on-site include western cottonwood (*Populus fremontii*), western sycamore (*Platanus racemose*), arroyo willow (*Salix lasiolepis*), and black willow (*Salix gooddingii*). Non-native species within disturbed portions of southern cottonwood-willow riparian forest include eucalyptus, tamarisk, and Mexican fan palm. Approximately 12.87 acres of southern cottonwood-willow riparian forest, which includes 1.02 acres disturbed, occur at the northeastern and southwestern portions of the project site along the Sweetwater River, and east of Steele Canyon Road along the site's southern boundary in an area previously disturbed by mining activities.

Southern Willow Scrub (disturbed)

Southern willow scrub consists of dense, broad-leaved, winter-deciduous stands of trees dominated by shrubby willows in association with mule fat (*Baccharis salicifolia*), and with scattered emergent cottonwood and western sycamores. This vegetation community occurs on loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest (Holland 1986). In the absence of periodic flooding, this early seral type would be succeeded by southern cottonwood or western sycamore riparian forest. Disturbed southern willow scrub contains a higher percentage of exotics and non-native species.

This habitat occurs along the downstream portion of the Sweetwater River in the southwestern portion of the site. Dominant species include arroyo willow, black willow, and sandbar willow (*Salix exigua*). Disturbed southern willow scrub includes the same species along with intermixed giant reed and tamarisk trees. A total of 4.82 acres of disturbed southern willow scrub occurs on-site.

Tamarisk Scrub

Tamarisk scrub typically comprises shrubs and/or small trees of exotic tamarisk species but may also contain willows, salt bushes (*Atriplex* spp.), and salt grass (*Distichlis spicata*). This habitat occurs along intermittent streams in areas where high evaporation rates increase the salinity level of the soil. Tamarisk is a phreatophyte, a plant that can obtain water from an underground water table. Because of its deep root system and high transpiration rates, tamarisk can substantially lower the water table to below the root zone of native species, thereby competitively excluding them. As a prolific seeder, it may rapidly displace native species within a stream channel.

Tamarisk scrub on-site is dominated by tamarisk with occasional cattails and willows. It is found along the downstream portion of the Sweetwater River in the southwestern portion of the site. A total of 1.23 acres of tamarisk scrub is mapped on-site.

Open Water

Open water consists of year-round bodies of fresh water in the form of lakes, streams, ponds, or rivers. It also includes portions of water bodies that are usually covered by water and less than 10 percent vegetative cover. Open water on-site is located east of Steele Canyon Road along the project's southern boundary in an area that was previously disturbed by mining activities. The area was excavated during sand extraction creating lower-lying areas that intersect the water table. These open water features are surrounded by native riparian habitat. A total of 1.68 acres of open water/freshwater pond occurs on-site.

Arundo-dominated Riparian

Arundo-dominated riparian consists of densely vegetated riparian thickets dominated almost exclusively by giant reed. It occurs along disturbed water courses. On-site, this habitat occurs as a near monoculture of giant reed within a portion of the Sweetwater River, an associated tributary off Ivanhoe Ranch Road, and at the fringe of a constructed pond west of Steele Canyon Road. A total of 0.56 acre of arundo-dominated riparian is mapped on-site.

Diegan Coastal Sage Scrub (including Disturbed)

Coastal sage scrub is one of the two major shrub types that occur in southern California, occupying xeric sites characterized by shallow soils (the other is chaparral). Diegan coastal sage scrub may be dominated by a variety of species, depending on soil type, slope, and aspect. Typical species found within Diegan coastal sage scrub include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasiculatum*), laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*), white sage (*Salvia apiana*), and black sage (*Salvia mellifera*). Disturbed Diegan coastal sage scrub contains many of the same shrub species as undisturbed Diegan coastal sage scrub but is sparser and has a higher proportion of non-native, annual species.

Small patches of this habitat occur at the southeastern and southwestern project boundaries. These patches are connected to larger swaths of coastal sage scrub that occur off-site within preserved lands and open space. Dominant species include California sage brush, California buckwheat, Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*), and broom baccharis (*Baccharis sarothroides*). Disturbed coastal sage scrub on-site occurs as narrow bands of habitat south of Willow Glen Drive at the northeastern boundary, and west of Steele Canyon Road along the southern boundary. These areas consist of scattered shrubs of California sagebrush and California buckwheat growing among planted non-native trees and woody debris deposited on the slopes. A total of 1.8 acres of Diegan coastal sage scrub, including 0.5 acre disturbed, is mapped within the site.

Non-Native Grassland

Non-native grassland is a mixture of annual grasses and broad-leaved, herbaceous species. Annual species comprise from 50 percent to more than 90 percent of the vegetative cover, and most annuals are non-native species. Non-native grasses typically comprise at least 30 percent of the vegetative cover, although this percentage can be much higher in some years and lower in others, depending on land use and climatic conditions. Usually, the grasses are less than three feet in height and form a continuous or open cover. Emergent shrubs and trees may be present but do not comprise more than 15 percent of the total cover (County 2010a). Most of the non-native grasses originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California.

A small patch of non-native grassland totaling 0.2 acre, occurs in the southwestern portion of the project site. Dominant species include ripgut grass (*Bromus diandrus*), short-pod mustard (*Hirschfeldia incana*), and Bermuda grass.

Non-Native Woodland

Non-native woodland is dominated by exotic trees, often intentionally planted. These areas are not artificially irrigated or maintained. A single stand of non-native woodland is found in the southeastern portion of the site. Dominant species include eucalyptus, tamarisk, and Peruvian pepper tree (*Schinus molle*) with an understory comprised of scattered California sagebrush and California buckwheat shrubs, and annual non-native grasses (*Bromus* spp.). Approximately 1.7 acres of non-native woodland occur in the project site.

Eucalyptus Woodland

Eucalyptus woodland is dominated by eucalyptus (*Eucalyptus* spp.), an introduced genus that produces a large amount of leaf and bark litter. The chemical and physical characteristics of this litter, combined with the shading effects of the trees, limit the ability of other species to grow in the understory, thereby decreasing floristic diversity. If sufficient moisture is available, eucalyptus becomes naturalized and can reproduce and expand its cover.

Scattered stands of eucalyptus woodland occur throughout the project site, mostly at the northeastern, southeastern, and southern boundaries. Scattered eucalyptus trees also occur throughout the golf course amongst the trees lining the fairways. A total of 2.6 acres of eucalyptus woodland are mapped in the project site.

Non-Native Vegetation

Non-native vegetation is a category describing stands of naturalized trees and shrubs (e.g., acacia [*Acacia* spp.], peppertree [*Schinus* spp.), many of which are also used in landscaping. On-site, this habitat consists of Peruvian pepper trees and oleander (*Nerium oleander*) lining Willow Glen Drive along the site's northern boundary and tamarisk and other non-natives that have emerged within drained artificial ponds totaling approximately 7.5 acres.

Disturbed Habitat

Disturbed habitat includes areas where there is evidence of soil surface disturbance and compaction resulting from previous legal human activities. Vegetation, if present, has a predominance of non-native and/or weedy species that are indicators of such surface disturbance (County 2010a). Vegetation on disturbed land (if present) will have a high predominance of non-native and/or weedy species that are indicators of surface disturbance and soil compaction, such as Russian thistle (*Salsola tragus*), telegraph weed (*Heterotheca grandiflora*), horehound (*Marrubium vulgare*), and sow-thistle (*Sonchus oleraceus*). Although annual, non-native grasses may be present on disturbed land, they do not dominate the vegetative cover.

Disturbed habitat on-site predominantly occurs west of Steele Canyon Road within the closed portion of the golf course. This area is no longer being irrigated or manicured, though it is subject to periodic mowing. Disturbed habitat consists of dirt roads and non-native, weedy vegetation such as Bermuda grass, shortpod mustard, Russian thistle, filaree (*Erodium* spp.), and scattered non-native grasses (*Bromus* spp.). Additionally, native and non-native planted trees, including cottonwoods, eucalyptus, shamel ash, and northern catalpa (*Catalpa speciosa*) are present along the borders of the previous fairways. A total of 91.3 acres of disturbed habitat occurs on-site.

Artificial Pond

Artificial ponds on-site consist of open water habitat excavated in uplands. A total of six constructed ponds totaling 3.0 acres are present on-site, which serve as water hazards and aesthetic features for the golf course. Four ponds are present in the eastern portion of the site, and two occur west of Steele Canyon. The water level in these constructed ponds is maintained artificially by pumping groundwater into them.

Developed Land

Developed land includes areas that have been constructed upon or otherwise covered with a permanent, unnatural surface and may include, for example, structures, pavement, irrigated landscaping, or hardscape to the extent that no natural land is evident. These areas no longer support native or naturalized vegetation (County 2010a).

Developed land within the project site consists of the active portion of Cottonwood Golf Club, east of Steele Canyon Road. These areas include a clubhouse, parking lot, maintenance facilities and other buildings, golf cart paths, and other areas of hardscape or maintained landscaping that includes irrigated turf grass and planted native and non-native trees. Approximately 136.9 acres of developed land are mapped within the project site.

1.4.6 Flora

A total of 190 plant species were identified within the project site, of which 80 (42 percent) are native species and 110 (58 percent) are non-native species (Appendix I, *Plant Species Observed*).

1.4.7 Fauna

A total of 129 animal species were observed or otherwise detected on the project site during the biological surveys, including 14 invertebrate, one fish, four amphibian, six reptile, 85 bird, and 19 mammal species (Appendix J, *Animal Species Observed or Detected*).

1.4.8 Sensitive Vegetation Communities

Sensitive vegetation communities/habitat types are defined as land that supports unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants as defined by Section 15380 of the State CEQA Guidelines. Table 5 of the County guidelines (County 2010a, 2010b) provides a list of habitat mitigation ratios for each vegetation community type.

Sensitive vegetation communities/habitat types mapped on the project site include disturbed wetland, freshwater marsh, southern cottonwood-willow riparian forest (including disturbed), disturbed southern willow scrub, tamarisk scrub, open water, arundo-dominated riparian, Diegan coastal sage scrub (including disturbed), and non-native grassland. Impacts to sensitive habitats require mitigation.

Non-native woodland, eucalyptus woodland, non-native vegetation, disturbed habitat, artificial pond, and developed lands do not meet the definition of sensitive habitat under CEQA. Impacts to these vegetation communities do not require mitigation.

1.4.9 Special-Status Plant Species

Special-status plant species have been afforded special status and/or recognition by the USFWS, CDFW, and/or the County and may also be included in the CNPS Inventory of Rare and Endangered Plants. Their status is often based on one or more of three distributional attributes: geographic range, habitat specificity, and/or population size. A species that exhibits a small or restricted geographic range (such as

those endemic to the region) is geographically rare. A species may be abundant but occur only in very specific habitats. Lastly, a species may be widespread but exist naturally in small populations.

Special-Status Plant Species Observed

No federally or state listed plant species were observed within the project site. While USFWS designated critical habitat for the federally endangered San Diego ambrosia is present in the southwestern portion of the site, no individuals were observed within the project site during the 2019 and 2022 rare plant surveys. A nearby reference population of San Diego ambrosia that occurs within the SDNWR was field verified for detectability during the rare plant surveys. The species was observed both in vegetative and flowering states within the SDNWR during the surveys. As such, the species would likely have been visible during the survey if present within the project site.

Four species with other special status designations were observed, as listed below and shown on Figure 10.

San Diego Sagewort (*Artemisia palmeri*)
Status: --/--; CRPR 4.2; County List D
Distribution: Coastal regions of Orange and San Diego Counties at elevations below 1,970 feet.
Habitat(s): Moist drainages and stream courses on sandy and mesic soils.
Presence on Site: Seven individuals were observed at the western project boundary at the edge of southern riparian forest habitat along the Sweetwater River.

San Diego County Viguiera (*Bahiopsis laciniata*)
Status: --/--; CRPR 4.3, County List D
Distribution: Coastal portions of southern California from Ventura County south to San Diego County and into western Riverside County at elevations below 2,500 feet.
Habitat(s): Grows on a variety of soil types within coastal sage scrub and chaparral.
Presence on Site: Three individuals were observed at the northeastern portion of the project site within disturbed coastal sage scrub and non-native vegetation. Another three individuals were observed just outside of the project site at the northeastern boundary along Willow Glen Drive and at the southeastern boundary along a dirt road.

Palmer ’s Goldenbush (*Ericameria palmeri* var. *palmeri*)
Status: --/--; CRPR 1B.1; County List B; MSCP Covered and Narrow Endemic
Distribution: Coastal San Diego County and Baja California, Mexico at elevations below 1,970 feet.
Habitat(s): Mesic areas within chaparral and coastal sage scrub communities.
Presence on Site: This species was observed along the southeastern project boundary, within the south-central portion of the site east of Steele Canyon Road, and in the southwestern portion of the project site. Approximately 225 individuals were mapped within Diegan coastal sage scrub habitat in the southeastern portion of the site. Another 11 individuals were mapped within the project site along the southern project boundary at the edge of a patch of giant reed where Mexican Canyon Creek enters the project site, within disturbed habitat just north of the patch of riparian habitat east of Steele Canyon Creek, and in the southwestern portion of the site within disturbed habitat just north of the Sweetwater River.

Southwestern Spiny Rush (*Juncus acutus* ssp. *leopoldii*)
Status: --/--; CRPR 4.2; County List D
Distribution: Coastal regions of southern California at elevations below 1,000 feet. San Luis Obispo County south to San Diego County, and further east into Riverside and Imperial Counties.
Habitat(s): Moist saline environments such as alkaline seeps and meadows, and coastal salt marshes and swamps.
Presence on Site: Seventeen individuals were observed at the southwestern portion of the project site in wetland habitat at the downstream portion of the Sweetwater River.

Special-Status Plant Species with Potential to Occur

Special-status plant species that were not observed but may have potential to occur on-site are listed in Appendix K, *Special-Status Plant Species Observed or with Potential to Occur*. In total, three special-status plant species were determined to have a high potential to occur on-site: singlewhorl burrobrush (*Ambrosia monogyra*), San Diego ambrosia ~~(*Ambrosia pumila*)~~, and Robinson's pepper grass (*Lepidium virginicum* var. *robinsonii*). No additional species have a high potential to occur, primarily due to the lack of suitable conditions, habitat conversion and disturbances from previous golf course uses, ongoing maintenance activities, and prevalence of non-native vegetation.

1.4.10 Special-Status Animal Species

Special-status animal species include those that have been afforded special status and/or recognition by the USFWS, CDFW, and/or the County. In general, the principal reason an individual taxon (species or subspecies) is given such recognition is the documented or perceived decline or limitations of its population size or geographical extent and/or distribution, resulting in most cases from habitat loss.

Special-Status Animal Species Observed or Otherwise Detected

Twenty-three special-status animal species, two of which are federally and/or state listed species, have been observed or detected on or directly adjacent to the project site, or observed flying over the project site, during biological surveys conducted for the project. Each species is listed below in alphabetical order by common name, described, and shown on Figure 10.

Barn Owl (*Tyto alba*)
Status: --/--; County Group 2
Distribution: Common, yearlong resident of California.
Habitat(s): Open habitats such as grassland, chaparral, riparian, and wetlands avoiding dense forests and open desert habitats. Also found in urban and suburban areas. Nest in sheltered areas of cliffs or man-made structures, on ledges, in crevices, culverts, nest boxes, and in cavities in trees. Roosts in dense vegetation, cliffs, and buildings and other man-made structures.
Presence on Site: A single individual was observed foraging in the eastern portion of the site during an evening toad survey.

Belding's Orange-throated Whiptail (*Aspidoscelis hyperythra beldingi*)
Status: --/WL; MSCP Covered; County Group 2
Distribution: Southern Orange County and southern San Bernardino County, south through Baja California below 3,500 feet.

Habitat(s): Coastal sage scrub, chaparral, edges of riparian woodlands, and washes. Also found in weedy, disturbed areas adjacent to these habitats. Important habitat requirements include open, sunny areas, shaded areas, and abundant insect prey base, particularly termites (*Reticulitermes* sp.).
Presence on Site: At least three individuals were observed in the northeastern portion of the site between Willow Glen Drive and the Sweetwater River, and at least two individuals were observed adjacent to the patch of riparian habitat east of Steele Canyon Road.

Coastal California Gnatcatcher (*Polioptila californica californica*)
Status: FT/SSC; MSCP Covered, County Group 1
Distribution: Year-round resident of California occurring from Ventura County south to San Diego County, and east within the western portions of San Bernardino and Riverside Counties.
Habitat(s): Coastal sage scrub, coastal bluff scrub, and coastal sage-chaparral scrub
Presence on Site: A female gnatcatcher was observed foraging with and feeding one fledgling within coastal sage scrub at the project's southwestern boundary on June 11, 2019. Additional observations of the species in 2019 include a single juvenile calling within the patch of riparian habitat along the Sweetwater River in the southwestern portion of the site on July 1, 2019, and another female/juvenile type foraging in the same general area on July 17, 2019. In 2022, two single males were detected off-site southeast of the southeastern project boundary, and one adult male was observed off-site southwest of the southwestern project boundary foraging with and feeding a single juvenile. Though the species was observed within the project site, suitable habitat present is limited to small patches of coastal sage scrub in the extreme southwestern and southeastern portions of the site that connect to larger blocks of coastal sage scrub that continue off-site. The species may utilize these areas for foraging opportunities but would most likely breed off-site in more extensive, higher quality habitat.

Cooper's Hawk (*Accipiter cooperii*)
Status: --/WL; MSCP Covered; County Group 1
Distribution: In California, the species breeds from Siskiyou County south to San Diego County and east towards Owens Valley at elevations below 9,000 feet.
Habitat(s): Oak groves, mature riparian woodlands, and eucalyptus stands or other mature forests. Increasingly found in suburban and urban areas. Nests within dense woodlands and forests and isolated trees in open areas.
Presence on Site: A single individual was documented within five different locations within the eastern and western portions of the site. Observations included individuals flying over the site and individuals perched in trees within the closed and developed golf courses and riparian habitat along the Sweetwater River.

Great Blue Heron (*Ardea herodias*)
Status: --/--; County Group 2
Distribution: Year-round resident of California occurring throughout most of the State.
Habitat(s): Found in a wide variety of habitats foraging in various wetland habitats, water bodies, and occasionally uplands. Nests as single pairs and in small colonies with nests located on the ground, in trees and bushes, and on artificial structures that are usually adjacent to water and secluded from human disturbance.
Presence on Site: Individuals observed foraging in four separate locations within the project site. A pair was observed in the southeastern portion of the site at an artificial pond, one individual was detected within the patch of riparian habitat just east of Steele Canyon Road, and two other individuals were detected at the edge of artificial ponds west of Steele Canyon Road.

Green Heron (*Butorides virescens*)
Status: --/--; County Group 2
Distribution: In California, the species is a year-round resident found generally west of the Sierra Nevada and within the southern deserts.
Habitat(s): Found in a wide variety of wetland habitats such as swamps, marshes, riparian habitat along creeks and streams, lake edges, and man-made ditches, canals, and ponds preferring thick vegetation and avoiding open areas.
Presence on Site: Detected in four separate locations within the project site. A pair was observed at an artificial pond at the eastern boundary, an individual was observed perched within riparian habitat just east of Steele Canyon Road, and two other individuals were detected at the edge of an artificial pond west of Steele Canyon Road.

Lawrence's Goldfinch (*Spinus lawrencei*)
Status: BCC/--
Distribution: Resident of California breeding from Tehama, Shasta, and Trinity Counties to the foothills surrounding Central Valley, south through the southern Coast Range to Santa Barbara County continuing into San Diego County and east to the western edge of the southern Mojave and Colorado Deserts.
Habitat(s): Inhabits arid and open woodlands adjacent to scrub or chaparral habitats, grasslands or meadows, and water resources such as a stream, pond, or lake from sea level up to 10,000 feet.
Presence on Site: A small flock, consisting of approximately eight birds, was observed foraging within the eastern portion of the project along the southern boundary. The species is highly nomadic, flocking to areas where food sources are abundant, and most likely utilizes the site for foraging opportunities.

Least Bell's Vireo (*Vireo bellii pusillus*)
Status: FE/SE; MSCP Covered and NE; County Group 1
Distribution: In California, breeds along the coast and western edge of the Mojave Desert from Santa Barbara County south to San Diego County, and east to Inyo, San Bernardino, and Riverside Counties.
Habitat(s): Breeding habitat consists of early to mid-successional riparian habitat, often where flowing water is present, but also found in dry watercourses within the desert. A structurally diverse canopy and dense shrub cover is required for nesting and foraging. The species can be tolerant of the presence of non-native species such as tamarisk.
Presence on Site: A total of two vireo pairs, and six additional male vireos were detected during the 2019 protocol surveys. One LBVI pair and three male vireos were detected within the project site. The LBVI pair was observed foraging with and feeding three fledglings on May 30, 2019, in the patch of riparian habitat directly east of Steele Canyon Road. Additionally, one LBVI pair and three male vireos were detected outside of the project site. The pair was observed to the west within the SDNWR, two of the males were detected within the Steele Canyon Golf Course, and one male was observed to the west within the SDNWR. Critical habitat for the species occurs both on-site and off-site along the Sweetwater River. Vireos were heard singing at many of these same locations during the 2022 biological surveys.

Monarch Butterfly (*Danaus plexippus*)
Status: FC/--; County Group 2
Distribution: Winter roost sites extend along the coast from northern Mendocino south to Baja California, Mexico.
Habitat(s): Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Larval host plants consist of milkweeds (*Asclepias* sp.).

Presence on Site: A single individual was observed flying within non-native woodland in the southeastern portion of the project site in August 2018. An additional individual was observed just outside of the project boundary, south of the patch of riparian habitat east of Steele Canyon Road, in July 2019.

Oak Titmouse (*Baeolophus inornatus*)
Status: BCC/--
Distribution: Year-round resident found from southern Oregon south through California to northwestern Baja California, Mexico.
Habitat(s): Prefers dry oak and oak-pine woodlands but may use scrub oaks and other scrub habitat near woodlands. Also found in juniper woodlands and open pine forests.
Presence on Site: Individuals were detected foraging within trees at two separate locations east and west of Steele Canyon Road.

Peregrine Falcon (*Falco peregrinus*)
Status: BCC/FP; MSCP Covered and NE, County Group 1
Distribution: In California, the species is a very uncommon breeding resident and migrant throughout the State.
Habitat(s): Inhabits a large variety of open habitats, including marshes, grasslands, coastlines, and woodlands but is generally absent from desert areas. Typically nest on cliff faces in remote rugged sites where adequate food is available nearby, but the species can also be found in urbanized areas nesting on man-made structures.
Presence on Site: A pair was observed flying overhead on May 5, 2019. The pair flew north and perched on a transmission tower located on the hillside north of the project site. An individual was later observed perched on a tree in the western portion of the site before flying further west and off-site. The pair is presumed to have been foraging individuals moving through the area. No suitable nesting habitat for the species is present within or immediately adjacent to the project site, and no nesting individuals were observed during project surveys.

Red-shouldered Hawk (*Buteo lineatus*)
Status: --/--; County Group 1
Distribution: In California, occurs throughout the State in areas west of Sierra Nevada.
Habitat(s): Mature oak and riparian woodlands, eucalyptus groves, and suburban areas near forested areas. Nests in trees, both native and non-native, often located near a water source.
Presence on Site: Multiple individuals observed at four locations across the project site. Observations included single individuals and at least one pair perched in trees or flying overhead within both the eastern and western portions of the site.

Small-footed Myotis (*Myotis ciliolabrum*)
Status: --/--; County Group 2
Distribution: Found throughout California occurring in desert, chaparral, riparian areas, and forests.
Habitat(s): Presence of riparian areas and waters appears to be important in distribution. Strongly associated with chaparral and montane habitats in San Diego County. Roosts solitarily or in small numbers in rocky crevices, caves, mines, snags, buildings, and bridges.
Presence on Site: Detected by AnaBat detectors within the eastern portion of the project site. The species likely utilizes the site for foraging and has potential to roost within trees and buildings present within the project site.

Townsend's Big-eared Bat (*Corynorhinus townsendii pallescens*)
Status: --/SSC; County Group 2
Distribution: In San Diego County, presumed absent from coastal areas being found more commonly in historic mining districts and boulder-strewn regions (i.e., Escondido, Lakeside, Dulzura, Jacumba, etc.).
Habitat(s): Found in a variety of habitats, including desert scrubs as well as pine and pinyon-juniper forests with presence of caves or cave-like structures (such as buildings).
Presence on Site: This species was detected by AnaBat detectors within the eastern and western portions of the project site. The species likely utilizes the site for foraging opportunities but is unlikely to roost within the project site as preferred roosting sites are not present. Although buildings within the project site could provide potential roosting habitat, this species is highly susceptible to disturbance and will abandon its roost if disturbed.

Turkey Vulture (*Cathartes aura*)
Status: --/--; County Group 1
Distribution: Observed throughout San Diego County with the exception of extreme coastal San Diego where development is heaviest.
Habitat(s): Foraging habitat includes most open habitats with breeding occurring in crevices among boulders. Roosts communally preferring stands of large trees or hilly areas, usually away from human disturbance.
Presence on Site: Single individual observed soaring high overhead in the eastern and southwestern portions of the site. No potentially suitable breeding habitat is present on-site.

Vermilion Flycatcher (*Pyrocephalus rubinus*)
Status: --/ SSC; County Group 1
Distribution: Scarce breeding records occur in southern California with a few individuals wintering regularly along the California coast from Ventura County south to San Diego County.
Habitat(s): Arid scrub, farmlands, parks, golf courses, desert, savanna, cultivated lands, and riparian woodland, usually near water. Wintering individuals can be found in open and semi-open areas with hedges, scattered trees and bushes, and often near water.
Presence on Site: Multiple individuals and pairs were observed within and throughout the project site during project surveys. At least two breeding pairs were confirmed to occupy the site during 2019 and a pair was observed with an active nest in 2022. Observations included adult males and females, immature males and females, and numerous fledglings.

Western Bluebird (*Sialia mexicana*)
Status: --/--; MSCP Covered; County Group 2
Distribution: Common year-round resident throughout California but absent from the higher mountains and eastern deserts.
Habitat(s): Breeds in open woodlands, riparian habitats, grasslands, and farmlands. Nests and roosts in cavities of trees and snags, often in holes previously created by woodpeckers, and nest boxes. Winters in a wider variety of habitats.
Presence on Site: Multiple individuals were detected in thirteen different locations throughout the project site within riparian habitat and the developed golf course. Observations included single individuals and small flocks of up to five individuals perched on trees, flying over the site, or foraging within the project site. Suitable breeding habitat is present on-site.

Western Mastiff Bat (*Eumops perotis*)
Status: --/SSC; County Group 2
Distribution: In California, the species occurs from Monterey County to San Diego County from the coast eastward to the Colorado Desert.
Habitat(s): Found in open, semi-arid to arid habitats, including coastal and desert scrub, grasslands, woodlands, and palm oases. Prefers to roost in high situations above the ground on vertical cliffs, rock quarries, outcrops of fractured boulders, and occasionally tall buildings.
Presence on Site: Detected within the western portion of the project site by AnaBat detectors. The species likely utilizes the site for foraging opportunities but is unlikely to roost within the project site as preferred roosting sites are not present.

Western Red Bat (*Lasiurus blossevillii*)
Status: --/SSC; County Group 2
Distribution: In California, the species is locally common occurring from Shasta County south to San Diego County and west of the Sierra Nevada/Cascade Range and deserts.
Habitat(s): Mainly occurs in riparian woodlands populated by willows, cottonwoods, sycamores, and oak trees but can be found in non-native vegetation such as tamarisk, eucalyptus, and orchards. Primarily roosts in trees preferring heavily shaded areas which are open underneath.
Presence on Site: Detected by AnaBat detectors within the western portion of the project site. This tree roosting species has the potential to roost within riparian habitat and planted trees within the project site. The species would also be expected to utilize the site for foraging opportunities.

White-tailed Kite (*Elanus leucurus*)
Status: --/ FP; County Group 1
Distribution: In California, year-long resident of coasts and valleys west of the Sierra Nevada foothills and southeast deserts, though the species has been documented breeding in arid regions east of the Sierra Nevada and within Imperial County.
Habitat(s): Inhabits low elevation grasslands, wetlands, oak woodlands, and open woodlands, and is associated with agricultural areas. Breeds in riparian areas adjacent to open spaces.
Presence on Site: A single individual was observed on numerous occasions during the 2022 biological surveys foraging off-site within the SDNWR.

Yellow-breasted Chat (*Icteria virens*)
Status: --/SSC; County Group 1
Distribution: In California, occurs as a migrant and summer resident breeding from the coastal regions in northern California, east of the Cascades, and throughout the central and southern portions of the State.
Habitat(s): Breeds in early successional riparian habitats with well-developed shrub layer and an open canopy nesting on the borders of streams, creeks, rivers, and marshes.
Presence on Site: Two individuals were heard singing in the southwestern portion of the site within the patch of riparian habitat along the Sweetwater River. Additional individuals were detected further west of the site within the SDNWR.

Yellow Warbler (*Setophaga petechia*)
Status: BCC/SSC; County Group 2
Distribution: Common to locally abundant species breeding throughout California at elevations below 8,500 feet, excluding most of the Mojave Desert, and all of the Colorado Desert.

Habitat(s): Breeds in riparian areas dominated by willows and cottonwoods, near rivers, streams, lakes, and wet meadows. Also breeds in montane shrub and conifer forests at higher elevation areas.
Presence on Site: Multiple individuals were observed throughout the project site. Observations included individuals perched in trees and along fences in the northeastern portion of the site, as well as foraging in these areas. Additional individuals were detected further west of the site within the SDNWR.

Yuma Myotis (*Myotis yumanensis*)
Status: --/--; County Group 2
Distribution: Widespread in California but uncommon in the Mojave and Colorado Deserts, except in the mountain ranges bordering the Colorado River Valley.
Habitat(s): Found in a variety of habitats, including juniper and riparian woodlands, riparian forests, and desert regions where bodies of water (i.e., rivers, streams, ponds, lakes, etc.) are present. Closely associated with water, which it uses for foraging and sources of drinking water. Roosts in caves, attics, buildings, mines, underneath bridges, and other similar structures.
Presence on Site: Detected by AnaBat detectors and during the nighttime emergence survey within the eastern and western portions of the project site. The species likely utilizes the site for foraging and has the potential to roost within trees and buildings present within the project site. Bridges suitable for roosting were not observed on site.

Special-Status Animal Species with Potential to Occur

Special-status animal species present on-site or with potential to occur on-site are included in Appendix L, *Special-Status Animal Species Observed or with Potential to Occur*. The species are grouped into invertebrates and vertebrates (fish, amphibians, reptiles, birds, and mammals) and alphabetized by scientific name. Eight additional special-status animal species that were not observed on the project site were determined to have a high potential to occur: western spadefoot (*Spea hammondii*), two-striped garter snake (*Thamnophis hammondii*), sharp-shinned hawk (*Accipiter striatus*), Canada goose (*Branta canadensis*), California horned lark (*Eremophila alpestris actia*), merlin (*Falco columbarius*), loggerhead shrike (*Lanius ludovicianus*), and Mexican long-tongued bat (*Choeronycteris mexicana*). These species are further discussed in Appendix L. Refer to Appendix M for an explanation of status codes.

Focused surveys for San Diego fairy shrimp (*Branchinecta sandiegonensis*), Quino checkerspot butterfly (*Euphydryas editha quino*), and Stephens' kangaroo rat (*Dipodomys stephensi*) were not conducted, as the site either lacks habitat suitable for the species or is located outside of the species known range as detailed in Appendix L and summarized below.

San Diego fairy shrimp are generally restricted to vernal pools and other ephemeral basins. No vernal pools or other suitable habitat for fairy shrimp is present on-site; therefore, the site lacks suitable habitat for the species, and focused surveys are not required.

Quino checkerspot butterfly inhabits open-canopied habitats such as sage scrub, open chaparral, grassland, and open oak and juniper woodland communities. The project site consists of a developed golf course lacking suitable habitat for the species, and focused surveys are not required. Construction of the golf course resulted in the conversion of previous habitat, which primarily consisted of wetland- and riparian-associated habitat along the Sweetwater River, to non-native vegetation and developed areas associated with the current commercial uses of the site. Ongoing golf course maintenance and operation since the 1960s has resulted in further degradation and disturbance to the site, creating

unsuitable conditions for quino checkerspot butterfly occupation. Furthermore, host plants associated with the species were not found to occur within the project site, and potential nectaring resources are limited as a result of ongoing golf course operation and maintenance activities.

Stephens' kangaroo rat inhabits native to open grasslands and sparse coastal sage scrub (less than 30 percent cover) on relatively flat or gently sloping ground. The species occurs in southwestern San Bernardino, western Riverside, and northwestern San Diego Counties. In San Diego County, the species is found north of the City of Escondido within the Marine Corps Base Camp Pendleton, Fallbrook, and Lake Henshaw (USFWS 1997). The project site is located in the southern portion of the County outside of the species' known range; therefore, focused surveys are not required.

Raptor Foraging

Several species of raptors were observed within and adjacent to the project site during biological surveys. On most occasions, raptors were observed flying and soaring over the project site or perching on trees in stands of riparian habitat or planted trees lining the golf course fairways. On a few encounters, raptors were observed carrying prey items (such as small mammals or a snake) or actively foraging within the project site or adjacent areas, including within the SDNWR. Raptors observed during biological surveys include barn owl, Cooper's hawk, turkey vulture, red-shouldered hawk, peregrine falcon, white-tailed kite, American kestrel (*Falco sparverius*), and red-tailed hawk (*Buteo jamaicensis*).

The County (2010b) defines raptor foraging habitat as, "Land that is a minimum of five acres (not limited to project boundaries) of fallow or open areas with any evidence of foraging potential (i.e., burrows, raptor nests, etc.)." Based on this definition, disturbed habitat within the western portion of the site associated with the closed golf course and fairway greens in the eastern portion of the site associated with the active golf course could be considered raptor foraging habitat since they occupy greater than five acres and support burrows of common small mammals, namely Botta's pocket gopher (*Thomomys bottae*) and California ground squirrel (*Otospermophilus beecheyi*). Several of the species observed within the project are known to be tolerant to urbanization and other disturbances, including Cooper's hawk, red-shouldered hawk, and red-tailed hawk, and are likely to utilize the site for foraging opportunities. Additional foraging opportunities for raptors occur within the surrounding local area and region, including high quality and prime foraging habitat off-site within the SDNWR to the south and west, and McGinty Mountain Ecological Reserve to the east.

1.4.11 Jurisdictional Waters and Wetlands

Potential waters of the U.S., waters of the State, CDFW jurisdictional habitat, and County RPO wetlands are present on-site and are further discussed below. Wetland habitat on-site is primarily associated with the Sweetwater River, which enters the site at the northeastern boundary, flows west, and exits the site at the southwestern boundary. The majority of habitat along the river has been heavily modified by the development of the golf course and is dominated by Bermuda grass that is subjected to ongoing disturbances associated with maintenance activities (i.e., mowing). A stand of riparian habitat is present at the downstream portion of the river within the southwestern portion of the site.

Three ephemeral drainages, two of which are tributary to the Sweetwater River, are also present within the project site. All three drainages enter the site at separate locations along the project's southern boundary. The easternmost unnamed drainage enters the site from the south and terminates within a

lower lying area that was excavated in the 1960s during the construction of the golf course. This drainage course does not have downstream connectivity to the Sweetwater River or any other waterways. A second drainage, Mexican Canyon Creek, enters the site from Ivanhoe Ranch Road, just east of Steele Canyon Road. The drainage flows north, eventually converging with the Sweetwater River. Development of the golf course and ongoing maintenance activities have severely altered this drainage, which lacks a defined bed and bank. Vegetation along the drainage consists of Bermuda grass, which serves as turf grass along the golf course's fairways. The westernmost unnamed drainage flows west from Steele Canyon Road, south of the project boundary. The off-site reach of this drainage enters a small detention basin located within a residential property at the terminus of Heatherwood Drive. A spillway is located at the western portion of the basin at the point where the narrow drainage feature enters the project site. The on-site reach of this drainage flows west for approximately 400 feet and then converges with the Sweetwater River.

1.4.11.1 Waters of the U.S.

Potential waters of the U.S. in the project site include wetland waters of the U.S. and non-wetland waters of the U.S. within the Sweetwater River and unnamed tributaries (Table 5, *Waters of the U.S.*; Figure 11, *Waters of the U.S.*). A total of 24.37 acres of potential waters of the U.S. occur on-site, comprised of 23.82 acres of wetlands and 0.55 acre of non-wetland waters. These waters of the U.S. would also be subject to RWQCB jurisdiction pursuant to CWA Section 401.

Table 5
WATERS OF THE U.S.

Waters of the U.S.	Acreage[1]
Wetland Waters	
Disturbed Wetland	9.98
Freshwater Marsh	0.19
Open Water	1.67
Riparian Forest (including disturbed)	6.54
Southern Willow Scrub (including disturbed)	4.34
Tamarisk Scrub	1.10
Subtotal	***23.82***
Non-wetland Waters	
Streambed	0.55
Subtotal	***0.55***
TOTAL	**24.37**

[1] Acres rounded to the nearest hundredth. Total reflects rounding.

1.4.11.2 California Department of Fish and Wildlife Jurisdiction

Potential CDFW jurisdictional areas within the project site consist of arundo-dominated riparian, disturbed wetland, freshwater marsh, open water, southern cottonwood-willow riparian forest (including disturbed), southern willow scrub (including disturbed), tamarisk scrub, and streambed (Table 6, *California Department of Fish and Wildlife Jurisdiction*; Figure 12, *CDFW Jurisdictional Areas*). The potential CDFW jurisdiction totals 50.33 acres on-site.

Table 6
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE JURISDICTION

Habitat Type	Acreage[1]
Riparian-Vegetated Streambed	
Arundo-dominated Riparian	0.56
Disturbed Wetland	10.26
Freshwater Marsh	0.22
Open Water	1.67
Riparian Forest (including disturbed)	12.87
Southern Willow Scrub (included disturbed)	4.82
Tamarisk Scrub	0.94
Subtotal	***31.35***
Non-vegetated Streambed	
Streambed	18.98
Subtotal	***18.98***
TOTAL	**50.33**

[1] Acres rounded to the nearest hundredth.

1.4.11.3 County Resource Protection Ordinance Wetlands

Areas meeting the criteria to be considered County RPO wetlands (County 2011) in the project site include arundo-dominated riparian, disturbed wetland, freshwater marsh, open water, southern cottonwood-willow riparian forest (including disturbed), southern willow scrub (including disturbed), and tamarisk scrub (Table 7, *County Resource Protection Ordinance Wetlands*; Figure 13, *County RPO Wetlands*). County RPO wetlands total 31.35 acres on-site.

Table 7
COUNTY RESOURCE PROTECTION ORDINANCE WETLANDS

Habitat Type	Acreage[1]
Arundo-dominated Riparian	0.56
Disturbed Wetland	10.26
Freshwater Marsh	0.22
Open Water	1.68
Riparian Forest (including disturbed)	12.87
Southern Willow Scrub (including disturbed)	4.82
Tamarisk Scrub	0.94
TOTAL	**31.35**

[1] Acres rounded to the nearest hundredth.

1.4.12 Habitat Connectivity and Wildlife Corridors

Wildlife corridors connect otherwise isolated pieces of habitat and allow the movement or dispersal of plants and animals. Local wildlife corridors allow access to resources such as food, water, and shelter within the framework of their daily routine. Regional corridors provide these functions over a larger scale and link two or more large habitat areas, allowing the dispersal of organisms and the consequent mixing of genes between populations. A corridor is a specific route that is used for the movement and

- Project Site
- Sample Point

Non-jurisdictional Features

- Artificial Pond

Non-wetland Waters of the U.S.

- Streambed

Wetland Waters of the U.S.

- Disturbed Wetland
- Freshwater Marsh
- Open Water
- Southern Cottonwood-willow Riparian Forest
- Southern Cottonwood-willow Riparian Forest - Disturbed
- Southern Willow Scrub - Disturbed
- Tamarisk Scrub

Jamacha Way
Seca Street
Sonett Street
Wind River Road
Brabham Street
Hilton Head Road
Via Rancho San Diego
Jamacha Road
Willow Glen Drive
Sweetwater River
Kenton Canyon Creek
Heatherwood Drive
Steele Canyon Road
Par Four Drive
Ivanhoe Ranch Road
Cottonwood Springs Lane
Indian Mills Lane
Jamul Drive
Greystone Drive

SP1
SP2
SP3
SP4
SP5
SP6
SP7
SP8
SP9
SP10
SP11
SP12
SP13
SP14
SP15

Nearmap, SANDAG, SanGIS

Source: Aerial (SanGIS, 2019)

0 700 Feet

N

I:\PROJECTS\SCambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig11_USACE.mxd SIR-02 10/12/2022 RK

HELIX Environmental Planning

Waters of the U.S.

Figure 11

Project Site

Sample Point

Non-jurisdictional Features

Artificial Pond

CDFW Jurisdictional Areas

Arundo-dominated Riparian

Disturbed Wetland

Freshwater Marsh

Open Water

Southern Cottonwood-willow Riparian Forest

Southern Cottonwood-willow Riparian Forest - Disturbed

Southern Willow Scrub - Disturbed

Streambed

Tamarisk Scrub

Jamacha Way

Seca Street

Sonett Street

Wind River Road

Brabham Street

Hilton Head Road

Via Rancho San Diego

Jamacha Road

Willow Glen Drive

Heatherwood Drive

Par Four Drive

Steele Canyon Road

Ivanhoe Ranch Road

Cottonwood Springs Lane

Indian Mills Lane

Jamul Drive

Greystone Drive

Sweetwater River

Lexicon Canyon Creek

SP1

SP2

SP3

SP4

SP5

SP6

SP7

SP8

SP9

SP10

SP11

SP12

SP13

SP14

SP15

Nearmap, SANDAG, SanGIS

0 700 Feet

N

Source: Aerial (SanGIS, 2019)

I:\PROJECTS\S\CambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig12_CDFW.mxd SIR-02 10/12/2022 -RK

HELIX Environmental Planning

CDFW Jurisdictional Areas

Figure 12

Cottonwood Sand Mine

- Project Site
- Sample Point

Non-jurisdictional Features

- Artificial Pond

County RPO Wetlands

- Arundo-dominated Riparian
- Disturbed Wetland
- Freshwater Marsh
- Open Water
- Southern Cottonwood-willow Riparian Forest
- Southern Cottonwood-willow Riparian Forest - Disturbed
- Southern Willow Scrub - Disturbed
- Tamarisk Scrub

Jamacha Way
Seca Street
Sonett Street
Wind River Road
Brabham Street
Hilton Head Road
Via Rancho San Diego
Jamacha Road
Willow Glen Drive
Sweetwater River
Mexico Canyon Creek
Heatherwood Drive
Steele Canyon Road
Par Four Drive
Wardbce Ranch Road
Cottonwood Springs Lane
Indian Mills Lane
Jamul Drive
Greystone Drive

SP1
SP2
SP3
SP4
SP5
SP6
SP7
SP8
SP9
SP10
SP11
SP12
SP13
SP14
SP15

Nearmap, SANDAG, SanGIS

0 700 Feet

N

Source: Aerial (SanGIS, 2019)

I:\PROJECTS\S\CambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig13_RPO.mxd SJR-02 10/12/2022 -RK

HELIX Environmental Planning

County RPO Wetlands

Figure 13

migration of species and may be different from a linkage in that it represents a smaller or narrower avenue for movement. A linkage is an area of land that supports or contributes to the long-term movement of animals and genetic exchange by providing live-in habitat that connects to other habitat areas. Many linkages occur as stepping stone linkages that are made up of a fragmented archipelago arrangement of habitat over a linear distance.

With respect to wildlife movement in the region, conservation targets generally include conserving core blocks of coastal sage scrub and chaparral habitat, as well as maintaining linkages between critical biological resource areas. The project site is shown as a habitat linkage between the McGinty Mountain/ Sycuan Peak-Dehesa Biological Resource Core Area (BRCA) to the east and Sweetwater Reservoir/San Miguel Mountain BRCA to the west, which overlap the extreme southwestern and southeastern portions of the site, respectively (Figure 14, *Conceptual Wildlife Corridors and Linkages*). These BRCAs are generally associated with the SDNWR to the west, southwest, and southeast of the site, along with open space areas east and southeast, located within the McGinty Mountain Ecological Reserve and McGinty Mountain Preserve. The Sweetwater River and Sweetwater Reservoir are expected to be key components to the movement of wildlife in the region, namely birds and mammals. These resources support permanent water sources and provide cover for a wide range of species known to the region. Large mammals, such as southern mule deer (*Odocoileus hemionus fuliginata*) and coyote (*Canis latrans*), would be expected to travel to and from the Sweetwater River/Sweetwater Reservoir and expansive habitat blocks associated with the SDNWR. Large mammals would also be expected to travel along the Sweetwater River valley and riparian corridor. Birds would be expected to move unobstructed between key habitat blocks of coastal sage scrub and riparian habitat, which provide important breeding, foraging, and dispersal functions. Key blocks of coastal sage scrub where gnatcatchers are known to occur include the SDNWR, with additional habitat extending further northeast within Crestridge and Harbison Canyon, and southeast into Proctor Valley and areas surrounding Jamul Mountain. Expected wildlife movement trends in the local and regional area are conceptually depicted on Figure 14, with the most significant features being undeveloped land associated with the Sweetwater River, Sweetwater Reservoir, SDNWR, San Miguel Mountain, and McGinty Mountain.

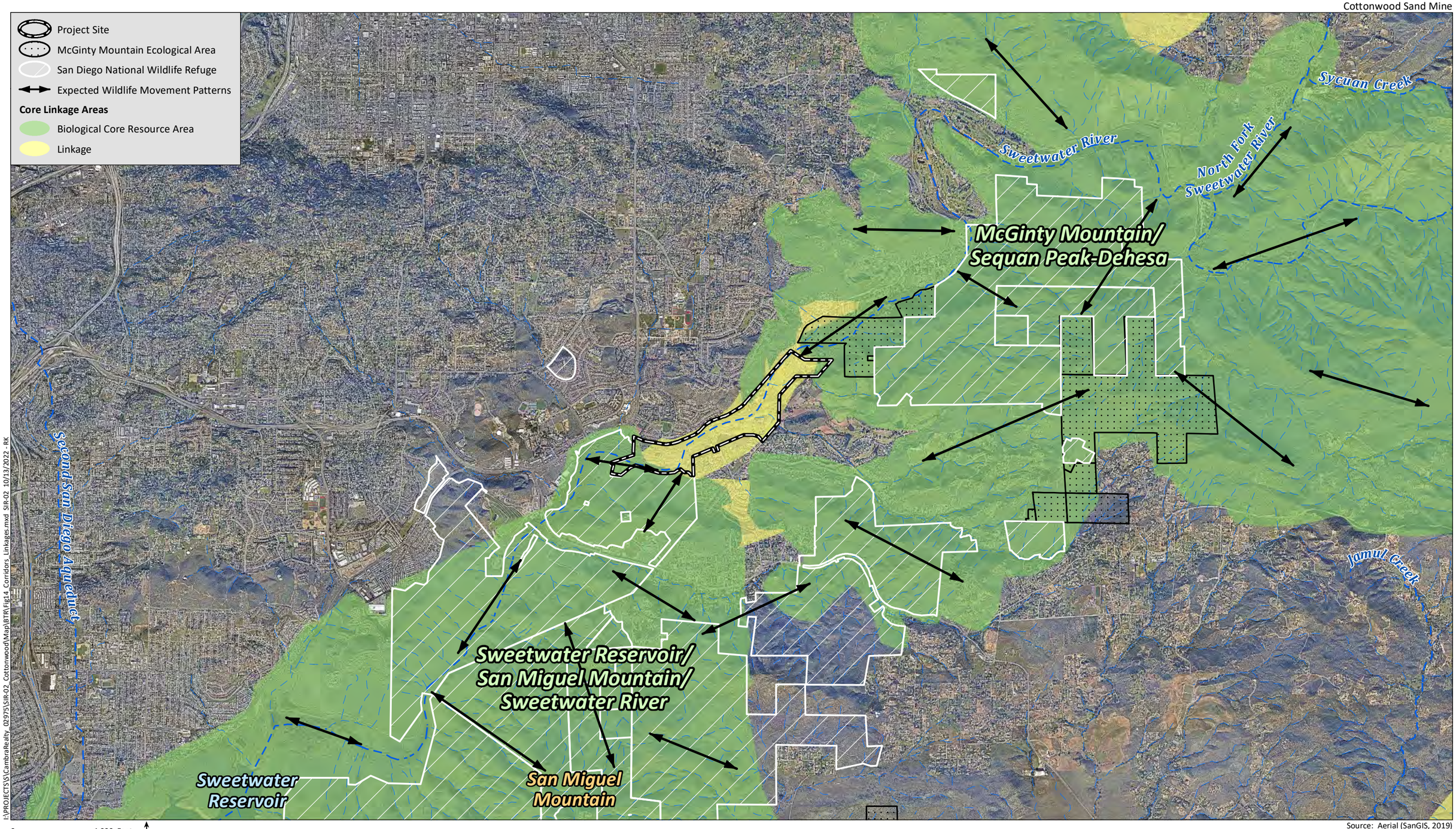
The PAMA in the region is based on the core and linkage concept of landscape-level conservation. The configuration of preserve lands includes large, contiguous areas of habitat supporting important species populations or habitat areas and important functional linkages and movement corridors between them. The project site is mostly developed or disturbed, with only three small portions of the site at the northeastern, southeastern, and southern boundaries containing lands identified as PAMA under the County's MSCP Subarea Plan (Figure 4). The northeastern lands mapped as PAMA represent a narrow patch of habitat south of Willow Glen Drive and north of the Sweetwater River. Vegetation in this area is comprised of small patches of disturbed wetland, southern willow scrub, disturbed southern cottonwood-willow riparian forest, disturbed Diegan coastal sage scrub, eucalyptus woodland, non-native vegetation, and disturbed habitat. The southeastern section of PAMA is contiguous with other off-site lands mapped as PAMA. These lands represent undeveloped habitat and open space areas associated with the McGinty Mountain Ecological Reserve and SDNWR. The southern section of PAMA within the project site represents an isolated patch of riparian habitat that is surrounded on all sides by development and provides no direct connectivity to other open space areas.

The site is shown as a habitat linkage in the South County MSCP, contains lands mapped as PAMA, is located along the Sweetwater River, and is adjacent to preserved and open space areas. The site is a developed golf course that is predominately characterized by open, exposed areas that lack suitable

cover and resources typically associated with wildlife movement areas. Scattered patches of mature riparian forest, eucalyptus woodland, and non-native woodland habitats more conducive to wildlife use and movement occur along the southern project boundary. The Sweetwater River runs through the site, and although riparian habitat occurs upstream and downstream of the site, most of the on-site reach of the river is characterized by bare ground or open areas vegetated with low-growing plant species, primarily Bermuda grass, as part of the golf course development. The downstream section of the Sweetwater River, approximately 0.5 mile of the 1.9 miles of the Sweetwater River that runs through site, contains riparian habitat, which maintains connectivity to off-site habitat within the SDNWR. Large portions of the project boundary are fenced along the northern, eastern, and southern boundaries, which can potentially constrain or impede wildlife access into the site, though several gaps in the fencing were observed. Residential development is present to the north and south of the site, and Steele Canyon Golf Club occurs to the southeast. The site is also subject to regular human activity and other disturbances associated with golf course operations (such as irrigation, mowing, night lighting [e.g., safety lighting within the clubhouse, maintenance building areas, and parking lots], and noise) and unauthorized recreational uses that could potentially discourage larger animals from utilizing the site.

Three motion-activated cameras were deployed within the project site for a 10-week period between May and July 2022 (Figure 8) to document wildlife use and movement within and throughout the site. Species captured by the cameras include great basin fence lizard (*Sceloporus occidentalis longipes*), San Diego gopher snake (*Pituophis catenifer annectens*), black phoebe (*Sayornis nigricans*), Cassin's kingbird (*Tyrannus vociferans*), European starling (*Sturnus vulgaris*), great blue heron, great-tailed grackle (*Quiscalus mexicanus*), greater roadrunner (*Geococcyx californianus*), house finch (*Haemorhous mexicanus*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), red-shouldered hawk, Say's phoebe (*Sayornis saya*), western bluebird, bobcat (*Canis latrans*), California ground squirrel, coyote, desert cottontail (*Sylvilagus audubonii*), long-tailed weasel (*Mustela frenata*), raccoon (*Procyon lotor*), and Virginia opossum (*Didelphis virginiana*). Many of the bird, reptile, and small mammal species detected within the project site are commonly observed in urbanized, residential, and disturbed settings associated with human presence. Medium-sized mammal species such as coyote and bobcat were also detected, though larger species, such as mule deer and mountain lion, were not detected. Coyotes were detected at all camera stations during both daytime and nighttime hours. In addition, coyotes were observed in groups of two and three in the eastern and western portions of the project site during daytime hours on several occasions during the 2022 biological surveys. Bobcat was detected a total of three times (June 25, June 28, and July 14, 2022) at two camera stations located in the extreme southeastern (Camera 1b) and southwestern (Camera 3d) portions of the project site. All detections were of a single individual. These areas are located towards the outskirts of the project site and have direct connectivity to undeveloped upland habitats located south of the site. The lack of other bobcat detections in more interior areas of the project site indicate that the species likely doesn't regularly utilize the site as a main movement corridor between upstream and downstream reaches of the Sweetwater River. Despite multiple field surveys conducted between 2018 to 2022, and a 10-week wildlife camera deployment period, mule deer has not been observed within the project site (including tracks, scat, or other sign). As such, the species likely doesn't regularly visit or utilize the project site for foraging or movement activities.

In addition to wildlife, off-leash dogs, horses, bikers, hikers, off-road vehicles, and other recreational users were observed within both the eastern and western portions of the project site during daytime and nighttime hours. The eastern portion of the project site still serves as an active golf course with light to moderate human activity during daylight hours, including early morning. Unauthorized pedestrian



I:\PROJECTS\S\CambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig14_Corridors_Linkages.mxd SIR-02 10/13/2022 - RK

0 4,000 Feet

N

Source: Aerial (SanGIS, 2019)

HELIX Environmental Planning

Conceptual Wildlife Corridors and Linkages

Figure 14

access and recreational activity in the eastern portion of the project site was detected along Steele Canyon Road and in an adjacent patch of riparian habitat at the southern project boundary. Observations included mountain bikers, cyclists, hikers, off-leash dogs, and unhoused people moving through the area during daytime and nighttime hours. A culvert running beneath Steele Canyon Road occurs in the area and unhoused individuals have been observed utilizing the area for shelter during biological surveys. Unauthorized pedestrian access and recreational activity in the western portion of the project site were detected at all camera stations and observed on numerous occasions during biological surveys conducted between 2018 and 2022. Observations included off-leash dogs, hikers and joggers, fishermen, cyclists, equestrian riders, all-terrain vehicle activity, and unhoused individuals during daytime and nighttime hours. Human encampments were observed within riparian habitat in the southwestern portion of the project site and unhoused individuals were observed moving through the area on multiple locations. In addition, a small patch of riparian habitat downstream of a pedestrian bridge crossing at the extreme southwestern portion of the site was observed to have been recently burned during the 2022 biological surveys. These observations indicate that though the western golf course has been closed since 2017, human presence and activity still occur regularly within the area.

Birds, butterflies, and bats are expected to move freely through the site. Species documented within the project site and the surrounding area likely utilize the site for foraging, dispersal, and breeding activities. Coastal California gnatcatcher likely forages and disperses through the project site based on observations made during the 2019 and 2022 biological surveys during which the species, including adults and juveniles, was observed foraging within and adjacent to the project site. Least Bell's vireo likely forages, disperses through, and breeds within the project site based on observations made during the 2019 and 2022 biological surveys, which included the positive identification of a breeding pair with fledglings in the eastern portion of the project site. Amphibians, reptiles, and small- to medium-sized mammals are expected to regularly move through the project site and utilize the site for foraging, dispersal, and breeding activities where suitable habitat/conditions are present, especially in the southwestern portion of the project site where greater connectivity to the SDNWR is present. Movement of these species through the local area is likely constrained by streets and surrounding development where present, but the site does provide potential live-in habitat with access to water resources. The only large mammal species expected to regularly move those the project site is coyote, based on sign and direct observations made during the 2022 biological surveys. Though bobcat was observed at the outer edges of the project site during the 2022 biological surveys, the species is not expected to use the site, in its current condition, as a main corridor, linkage, or specific travel route to and from important resources based on results of the camera trapping and biological surveys, current site uses, disturbances, and lack of sufficient vegetative cover. Other large mammal species, such as mule deer and mountain lion, are not expected to regularly use the site as a main movement corridor or linkage based on results of the camera trapping and biological surveys, current site uses, disturbances, surrounding development, and lack of sufficient vegetative cover to conceal individual movements. Larger blocks of open space areas associated with the SDNWR occur further south between Steele Canyon Golf Club and Jamul that provide better access to resources and connectivity between preserved lands, open spaces areas, and pockets of undeveloped lands located east and west of the site (Figure 14).

1.5 APPLICABLE REGULATIONS

Biological resources in the project site are subject to regulatory review by federal, state, and local agencies. Under CEQA, impacts associated with a proposed project or program are assessed with regard to significance criteria determined by the CEQA Lead Agency (in this case, the County) pursuant to CEQA Guidelines. Biological resources-related laws and regulations that apply include federal Endangered Species Act (FESA), Migratory Bird Treaty Act (MBTA), CWA, CEQA, California Endangered Species Act (CESA), CFG Code, Porter-Cologne Water Quality Control Act, and County regulations.

With respect to the proposed project, the USFWS will be responsible for reviewing issues related to migratory birds pursuant to the MBTA and project consistency with the adopted South County MSCP Subarea Plan. The USACE will be responsible for reviewing issues related to waters of the U.S. The RWQCB will be responsible for reviewing issues related to waters of the State pursuant to the CWA and Porter-Cologne Water Quality Control Act. The CDFW will be responsible for reviewing issues related to riparian habitat and streambeds pursuant to the CFG Code, nesting birds and raptors pursuant to the CFG Code, and project consistency with the adopted South County MSCP Subarea Plan.

The County is the lead agency for the CEQA environmental review process in accordance with state law and local ordinances. During CEQA review, the County will be responsible for reviewing project issues per the Guidelines for Determining Significance for Biological Resources (County 2010b) and the County RPO. The County is also responsible for reviewing the project with respect to consistency with the County BMO and adopted South County MSCP Subarea Plan.

1.5.1 Federal Government

Federal Endangered Species Act

Administered by the USFWS, the FESA provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a "take" under the FESA. Section 9(a) of the FESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

The USFWS designates critical habitat for endangered and threatened species. Critical habitat is a term defined and used in the FESA and refers to specific geographic areas that contain features considered necessary for endangered or threatened species to recover. Critical habitat designations can include areas that are not currently occupied by the species, as the ultimate goal is to restore healthy populations of listed species within their native habitats so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat pursuant to the FESA, all federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of the critical habitat. Only activities that involve a federal permit, license, or funding require consultation with the USFWS.

Sections 7 and 10(a) of the FESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions

may adversely affect listed species. In this case, take can be authorized via a letter of biological opinion issued by the USFWS for non-marine related listed species issues. A Section 7 consultation (formal or informal) is required when there is a nexus between endangered species' use of a site and there is an associated federal action for a proposed impact (e.g., the USACE would initiate a Section 7 consultation with the USFWS for impacts proposed to USACE jurisdictional areas that may also affect listed species or their critical habitat). Section 10(a) allows the issuance of permits for incidental take of endangered or threatened species with the preparation of a Habitat Conservation Plan (HCP) when there is no federal nexus. The term "incidental" applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity. An HCP demonstrating how the taking would be minimized and how steps taken would ensure the species' survival must be submitted for issuance of Section 10(a) permits. The MSCP is a regional HCP that was developed pursuant to Section 10(a) of the ESA.

Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected under the federal MBTA, as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is used to place restrictions on the disturbance of active bird nests during the nesting season (generally February 1 to August 31). In addition, the USFWS commonly places restrictions on the disturbances allowed near active raptor nests.

Clean Water Act and Rivers and Harbors Act

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the Clean Water Act (CWA). The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. Permitting for projects filling waters of the U.S. (including wetlands) is overseen by the USACE under Section 404 of the CWA. Projects could be permitted on an individual basis or be covered under one of several approved Nationwide Permits.

1.5.2 State of California

California Environmental Quality Act

Primary environmental legislation in California is found in CEQA and its implementing guidelines (State CEQA Guidelines), which require that projects with potential adverse effects (or impacts) on the environment undergo environmental review. Adverse environmental impacts are typically mitigated as a result of the environmental review process in accordance with existing laws and regulations.

California Endangered Species Act

The CESA established that it is state policy to conserve, protect, restore, and enhance state endangered species and their habitats. Under state law, plant and animal species may be formally designated rare, threatened, or endangered by official listing by the California Fish and Game Commission. The CESA authorizes that private entities may "take" plant or wildlife species listed as endangered or threatened under the FESA and CESA, pursuant to a federal Incidental Take Permit if the CDFW certifies that the incidental take is consistent with CESA (CFG Code Section 2080.1[a]). For state-only listed species,

Section 2081 of CFG Code authorizes the CDFW to issue an Incidental Take Permit for state listed threatened and endangered species if specific criteria are met. The MSCP is a regional Natural Communities Conservation Plan that was granted take coverage under Section 2081 of the CESA.

California Native Plant Protection Act

Sections 1900–1913 of the CFG Code (Native Plant Protection Act; NPPA) direct the CDFW to carry out the state legislature's intent to "…preserve, protect, and enhance endangered or rare native plants of this state." The NPPA gives the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and protect endangered and rare plants from take.

California Fish and Game Code

The CFG Code provides specific protection and listing for several types of biological resources. Section 1600 of the CFG Code requires a Streambed Alteration Agreement (SAA) for any activity that would alter the flow, change, or use any material from the bed, channel, or bank of any perennial, intermittent, or ephemeral river, stream, and/or lake. Typical activities that require an SAA include excavation or fill placed within a channel, vegetation clearing, structures for diversion of water, installation of culverts and bridge supports, cofferdams for construction dewatering, and bank reinforcement. Notification is required prior to any such activities.

Pursuant to CFG Code 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. Raptors and owls and their active nests are protected by CFG Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA. These regulations could require that construction activities (particularly vegetation removal or construction near nests) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds will not be disturbed, subject to approval by CDFW and/or USFWS.

Section 401 Water Quality Certification / Porter-Cologne Water Quality Control Act

The RWQCB, through the State Water Resources Control Board (SWRCB), asserts regulatory jurisdiction over activities affecting wetland and non-wetland waters of the State pursuant to Section 401 of the CWA and the State Porter-Cologne Water Quality Control Act. Potential RWQCB jurisdiction (i.e., waters of the State) need to be delineated on the project site and typically extend to the top of bank for streams and to the outer edge of wetlands, pursuant to the SWRCB's wetland definition that was adopted on April 2, 2019 (SWRCB 2019) and implemented as of May 28, 2020.

Whenever a project requires a federal CWA Section 404 permit or a Rivers and Harbors Act Section 10 permit, it must first obtain a CWA Section 401 Water Quality Certification. The RWQCB administers the 401 Certification program. Federal CWA Section 401 requires that every applicant for a Section 404 permit must request a Water Quality Certification that the proposed activity will not violate state and federal water quality standards.

The SWRCB and RWQCB regulate the discharge of waste into waters of the State via the 1969 Porter-Cologne Water Quality Control Act (Porter-Cologne) as described in the California Water Code. The California Water Code is the State's version of the federal CWA. Waste, according to the California Water Code, includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

State waters that are not federal waters may be regulated under Porter-Cologne. A Report of Waste Discharge must be filed with the RWQCB for projects that result in the discharge of waste into waters of the State. The RWQCB will issue Waste Discharge Requirements (WDRs) or a waiver. The WDRs are the Porter-Cologne version of a CWA Section 401 Water Quality Certification.

Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning (NCCP) program is a cooperative effort to protect habitats and species. It began under the state's NCCP Act of 1991, legislation broader in its orientation and objectives than the CESA or FESA. These laws are designed to identify and protect individual species that have already declined significantly in number. The NCCP Act of 1991 and the associated Southern California Coastal Sage Scrub NCCP Process Guidelines (1993), Southern California Coastal Sage Scrub NCCP Conservation Guidelines (1993), and NCCP General Process Guidelines (1998) have been superseded by the NCCP Act of 2003.

The primary objective of the NCCP program is to conserve natural communities at the ecosystem level while accommodating compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

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

1.5.3 County of San Diego

The County regulates natural resources (among other resources) via the MSCP, BMO, and RPO, as discussed below.

Multiple Species Conservation Program

The California NCCP Act of 1991 (Section 2835) allows the CDFW to authorize take of species covered by plans in agreement with NCCP guidelines. A Natural Communities Conservation Program initiated by the

State of California focuses on conserving coastal sage scrub, and in concert with the USFWS and the federal ESA, is intended to avoid the need for future federal and state listing of coastal sage scrub-dependent species.

The San Diego MSCP Plan for the southwestern portion of San Diego County was approved in August 1998 and covers 85 species (County 1998). The City of San Diego, portions of the unincorporated County, and 10 additional city jurisdictions make up the San Diego MSCP Plan area. It is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species by identifying key areas for preservation as open space in order to link core biological areas into a regional wildlife preserve.

County MSCP Subarea Plan

The County MSCP Subarea Plan (County 1997) implements the MSCP within the unincorporated areas under County jurisdiction. It was adopted by the Board of Supervisors in March 1998. The County Subarea Plan is divided into three Segments: Lake Hodges, Metropolitan-Lakeside-Jamul, and South County. The Plan addresses areas authorized for take and planned for conservation, including portions of the South County Segment that are conserved subject to agreements with the Wildlife Agencies. Take of covered species and their habitat is authorized for projects that satisfy the requirements of the County's BMO.

The project site is located within both the South County Segment and the Metro-Lakeside-Jamul Segment of the County MSCP Subarea Plan (Figure 4). A total of approximately 38 acres of the site lies within the South County Segment and is classified by the MSCP as Minor Amendment Area. Per the MSCP, Minor Amendment Areas “contain habitat that could be partially or completely eliminated (with appropriate mitigation) without significantly affecting the overall goals of the County’s MSCP Subarea Plan.” Minor Amendment Areas must meet the criteria and achieve the goals of linkages and corridors described in the County MSCP Subarea Plan and provide mitigation consistent with the BMO. Impacts to Minor Amendment Areas require concurrence from the USFWS Field Office Supervisor and CDFW NCCP Program Manager. The remainder of the site lies within the Metro-Lakeside-Jamul Segment and is classified as Unincorporated Land, except for 16.4 acres that are classified as PAMA. The portion classified as PAMA lies east of Steele Canyon Road. Limited portions of the site are shown as Very High or High on the County’s Habitat Evaluation Map from the BMO.

Biological Mitigation Ordinance

The BMO is the ordinance by which the County implements the County MSCP Subarea Plan at the project level within the unincorporated area to attain the goals set forth in the County MSCP Subarea Plan. The BMO contains design criteria and mitigation standards that, when applied to projects requiring discretionary permits, protect habitats and species and ensure that a project does not preclude the viability of the MSCP Preserve System. In this way, the BMO promotes the preservation of lands that contribute to contiguous habitat core areas or linkages.

Pursuant to Section 86.503(a)(9) of the BMO, the proposed project would be exempt from the BMO requirements provided that the following measures are required as conditions of the project’s Major Use Permit:

a. The facility or project is consistent with the County General Plan, the MSCP Plan, and the Subarea Plan as approved by the Board of Supervisors;

b. All feasible mitigation measures have been incorporated that meet the standards for mitigation required by CEQA and the State Surface Mining and Reclamation Act of 1975;

c. Any wetland buffer area shall be restored to protect the environmental values of adjacent wetlands;

d. In a floodplain, reclamation shall result in a net gain in functional wetlands and riparian habitat in or adjacent to the area of extraction;

e. Native vegetation shall be used on steep slope lands to revegetate and landscape cut areas and fill areas in order to substantially restore the original habitat value, and slopes shall be graded to produce contours and soils, which reflect a landform that is consistent with the approved Reclamation Plan;

f. Mature riparian woodland may not be destroyed or reduced in size due to sand, gravel, and mineral extraction; and

g. All Critical Populations of Sensitive Plant Species Within the MSCP Subarea, (Attachment C of Document No. 0769999 on file with the Clerk of the Board); Rare, Narrow Endemic Animal Species Within the MSCP Subarea, (Attachment D of Document No. 0769999 on file with the Clerk of the Board); Narrow Endemic Plant Species Within the MSCP subarea, (Attachment E of Document No. 0769999 on file with the Clerk of the Board); and San Diego County Sensitive Plant Species, as defined herein will be avoided as required by, and consistent with, the terms of the Subarea Plan.

Resource Protection Ordinance

The County regulates natural resources (among other resources) as sensitive biological resources via the RPO (County 2011), the regulations of which cover wetlands, wetland buffers, sensitive plant and animal species, sensitive vegetation communities/habitat types, and habitats containing sensitive animals or plants. Wetland habitats are defined per the RPO as described in Section 1.3.4, above. Sensitive habitat lands are identified by the RPO as lands that "support unique vegetation communities, or habitats of rare or endangered species or sub-species of animals or plants as defined by Section 15380 of the CEQA Guidelines." It is the intent of the RPO to increase the preservation and protection of the County's unique topography, natural beauty, biological diversity, and natural and cultural resources.

Pursuant to Section 86.605(d) of the RPO, the proposed project would be exempt from RPO requirements provided that the following measures are required as conditions of the project's Major Use Permit:

a. Any wetland buffer area shall be restored to protect the environmental values of adjacent wetlands;

b. In a floodplain, any net gain in functional wetlands and riparian habitat shall occur in or adjacent to the area of extraction;

c. Native vegetation shall be used on steep slopes lands to revegetate and landscape cut and fill areas in order to restore substantially original habitat value, and slopes shall be graded to produce contours and soils that reflect natural landform consistent with the surrounding area; and

d. Mature riparian woodland[1] may not be destroyed or reduced in size due to sand, gravel, or mineral extraction.

2.0 PROJECT EFFECTS

Direct impacts are immediate impacts resulting from permanent habitat removal, including impacts from grading, grubbing, clearing, and fuel modification. Direct impacts were quantified by overlaying the limits of project-related impacts on the biological resources map of the site. Indirect impacts are actions that are not direct removal of habitat but affect the surrounding biological resources either as a secondary effect of the direct impacts (e.g., construction noise, runoff, nighttime lighting, fugitive dust, etc.), or as the cause of degradation of a biological resource over time (e.g., edge effects and adjacency issues). Cumulative impacts are those caused by numerous projects in the region and their additive effect of multiple direct and indirect impacts to biological resources over time. It should be noted that impacts would occur over time in accordance with project phasing, rather than occurring all at once. Indirect impacts would also occur over the life of the proposed project until the site is fully reclaimed, which is expected to be completed within 12 years following the commencement of mining activities.

Following County Guidelines, a total of 211.94 acres of the approximately 276.6-acre project site would be considered impacted as part of sand mining activities and reclamation (Figure 15, *Vegetation and Sensitive Resources/Impacts*). An additional 4.80 acres of off-site impacts would occur as part of the proposed road improvements along Willow Glen Drive. Areas that would not be disturbed as part of the proposed project but are not preserved within BOS were mapped as impact neutral (21.69 acres); these areas primarily consist of land previously disturbed by golf course development. Impact neutral areas include lands located within the MUP boundary that would not be disturbed by the proposed mining project and left in their current condition and lands located within the project site but outside of the MUP boundary. The project has been designed to avoid direct impacts to sensitive habitat, riparian areas, and jurisdictional resources to the greatest extent practicable. Mining activities would take place outside of riparian and sensitive habitat, though small portions would be impacted as part of the proposed reclamation activities, which involves the removal of golf course structures and facilities, filling and grading of man-made ponds, expansion of the Sweetwater River floodplain, and creation of slopes and final landforms.

Of the 211.94 acres of on-site impacts, approximately 11.92 acres would be revegetated with coastal sage scrub, and 110.17 acres would be revegetated or restored with wetland- and riparian-associated habitat as part of the project's proposed reclamation and compensatory mitigation. The majority of which, 118.93 acres, would be placed into a BOS easement. Revegetation is proposed to ensure that areas disturbed as part of mining activities are reclaimed (i.e., adequately revegetated and stabilized) in accordance with the Surface Mining and Reclamation Act and County requirements, and that existing wetland buffer areas are appropriately restored pursuant to the County RPO (County 2011). A portion of

[1] Mature riparian woodland is defined in the RPO as "a grouping of sycamores, cottonwoods, willows, and/or oak trees having substantial biological value, where at least ten of the trees have a diameter of six inches or greater."

- Project Site
- Major Use Permit Boundary
- Phase 1
- Phase 2
- Phase 3
- Phase 4/Proccessing Plant
- Impact Area
- Impact Neutral Area
- Roadway Improvement Impacts
- Trail Impacts
- Conceptual Multi-Use Trails (Post-Reclamation)
- Proposed Pathway

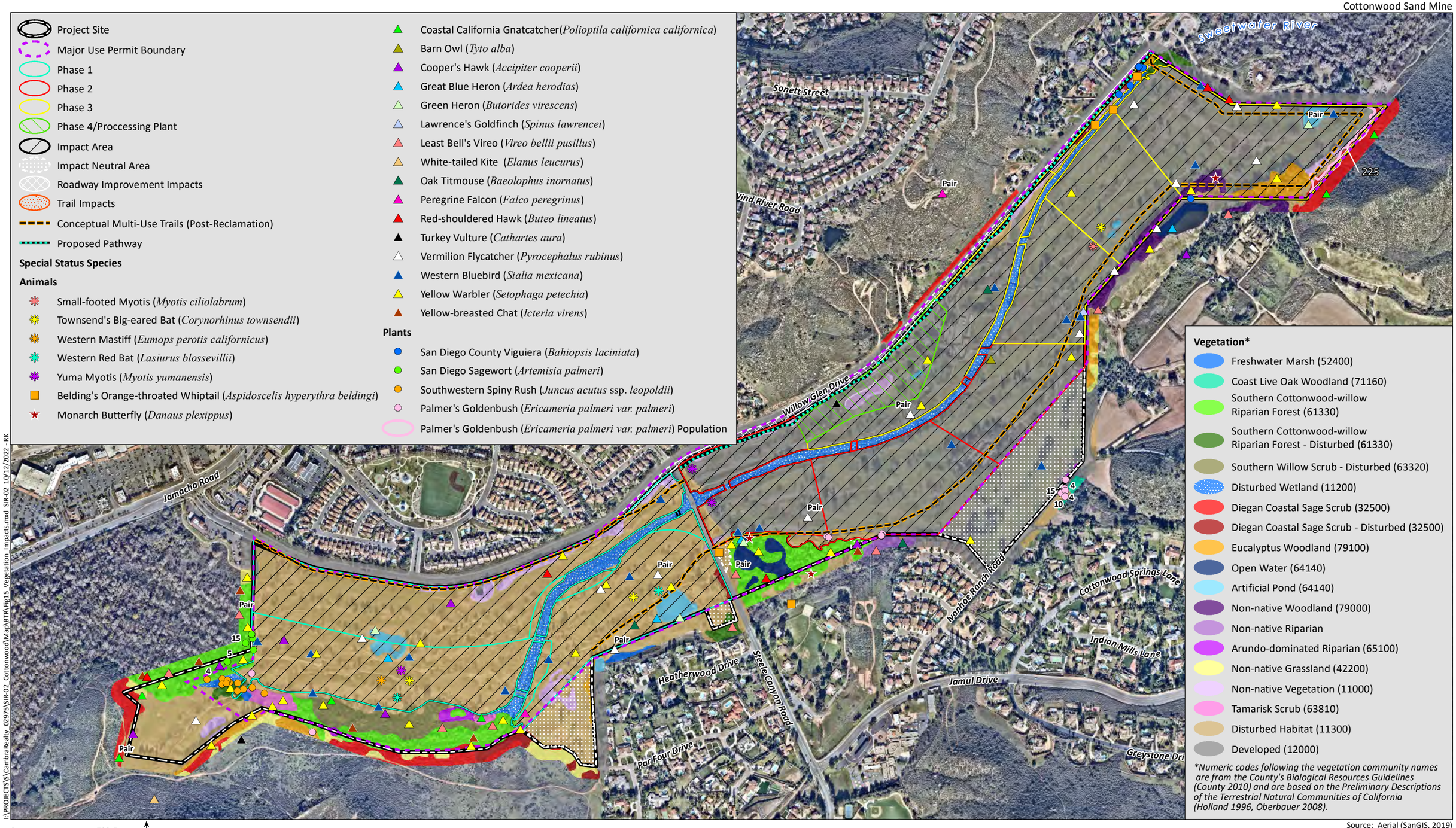
Special Status Species

Animals

- Small-footed Myotis (*Myotis ciliolabrum*)
- Townsend's Big-eared Bat (*Corynorhinus townsendii*)
- Western Mastiff (*Eumops perotis californicus*)
- Western Red Bat (*Lasiurus blossevillii*)
- Yuma Myotis (*Myotis yumanensis*)
- Belding's Orange-throated Whiptail (*Aspidoscelis hyperythra beldingi*)
- Monarch Butterfly (*Danaus plexippus*)
- Coastal California Gnatcatcher(*Polioptila californica californica*)
- Barn Owl (*Tyto alba*)
- Cooper's Hawk (*Accipiter cooperii*)
- Great Blue Heron (*Ardea herodias*)
- Green Heron (*Butorides virescens*)
- Lawrence's Goldfinch (*Spinus lawrencei*)
- Least Bell's Vireo (*Vireo bellii pusillus*)
- White-tailed Kite (*Elanus leucurus*)
- Oak Titmouse (*Baeolophus inornatus*)
- Peregrine Falcon (*Falco peregrinus*)
- Red-shouldered Hawk (*Buteo lineatus*)
- Turkey Vulture (*Cathartes aura*)
- Vermilion Flycatcher (*Pyrocephalus rubinus*)
- Western Bluebird (*Sialia mexicana*)
- Yellow Warbler (*Setophaga petechia*)
- Yellow-breasted Chat (*Icteria virens*)

Plants

- San Diego County Viguiera (*Bahiopsis laciniata*)
- San Diego Sagewort (*Artemisia palmeri*)
- Southwestern Spiny Rush (*Juncus acutus* ssp. *leopoldii*)
- Palmer's Goldenbush (*Ericameria palmeri var. palmeri*)
- Palmer's Goldenbush (*Ericameria palmeri var. palmeri*) Population



Vegetation*

- Freshwater Marsh (52400)
- Coast Live Oak Woodland (71160)
- Southern Cottonwood-willow Riparian Forest (61330)
- Southern Cottonwood-willow Riparian Forest - Disturbed (61330)
- Southern Willow Scrub - Disturbed (63320)
- Disturbed Wetland (11200)
- Diegan Coastal Sage Scrub (32500)
- Diegan Coastal Sage Scrub - Disturbed (32500)
- Eucalyptus Woodland (79100)
- Open Water (64140)
- Artificial Pond (64140)
- Non-native Woodland (79000)
- Non-native Riparian
- Arundo-dominated Riparian (65100)
- Non-native Grassland (42200)
- Non-native Vegetation (11000)
- Tamarisk Scrub (63810)
- Disturbed Habitat (11300)
- Developed (12000)

**Numeric codes following the vegetation community names are from the County's Biological Resources Guidelines (County 2010) and are based on the Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1996, Oberbauer 2008).*

0 700 Feet

Source: Aerial (SanGIS, 2019)

I:\PROJECTS\S\CambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig15_Vegetation_Impacts.mxd SIR-02 10/12/2022 RK

HELIX Environmental Planning

Vegetation and Sensitive Resources/Impacts

Figure 15

the reclaimed site will also provide compensatory mitigation for impacts to wetland habitat and water resources under the regulatory jurisdiction of the USACE, RWQCB, and CDFW. Compensatory mitigation will also include the on-site rehabilitation and preservation of existing riparian habitat. The project's *Conceptual Revegetation Plan*, which details the on-site revegetation of native wetland/riparian habitat, native upland habitat, and stabilized non-sensitive uplands, is provided as Appendix N. The project's *Conceptual Wetland Mitigation Plan*, which details the on-site re-establishment of jurisdictional waters and the rehabilitation of existing riparian habitat, is provided as Appendix O.

A total of ~~150.7~~149.0 acres within the project site would be placed in open space, which includes 118.93 acres of the impact area that would be reclaimed and revegetated with coastal sage scrub and wetland/riparian habitat (Figure 16, *Proposed Biological Open Space*). The BOS would include the preservation of 0.55 acre of existing coastal sage scrub, 0.15 acre of existing non-native grassland, and 13.85 acres of existing wetland and riparian habitat. The proposed project would further rehabilitate an additional 7.36 acres of disturbed wetlands through the removal of exotic and invasive species and planting of riparian habitat within the BOS. Lastly, the BOS will contain approximately ~~1.75 acres of grouted riprap that will be installed along portions of the graded slopes and downstream of Steele Canyon Road and~~ 8.15 acres of retained habitat in the southwestern portion of the site comprised of 0.02 acre of eucalyptus woodland, 0.46 acre of non-native vegetation, and 7.67 acres of disturbed habitat (abandoned golf course). A small portion of the area to be revegetated following extraction activities, approximately 3.16 acres, occurs within an existing San Diego Gas & Electric easement, which will remain over the project site following reclamation. As such, this area will not be placed within the BOS. These revegetation, restoration, and rehabilitation actions are fundamental components of the project's proposal to improve habitat quality and function for wildlife movement through the site. Hiking trails are proposed to be established around the perimeter of the BOS following site reclamation; no hiking trails are proposed within the mitigation area or expanded Sweetwater River floodplain. The BOS will be managed in accordance with a County-approved Resource Management Plan (RMP). The project's *Conceptual Resource Management Plan* is provided as Appendix P.

2.1 SPECIAL-STATUS SPECIES

2.1.1 Special-Status Plant Species

The project would result in impacts to four special-status plant species: Palmer's goldenbush, San Diego sagewort, southwestern spiny rush, and San Diego County viguiera. In addition to the special-status plant species documented on-site, three special-status plant species were determined to have a high potential to occur: singlewhorl burrobrush, San Diego ambrosia, and Robinson's pepper grass (Appendix K).

Palmer's Goldenbush

Palmer's goldenbush is a CRPR 1B.1 species, County List B, MSCP covered, and MSCP narrow endemic species. This species was observed within the southeastern, south-central, and southwestern portions of the project site. As a CRPR 1B.1 species, Palmer's goldenbush has been assigned to a watch list for plants reported rare throughout their range with the majority of them endemic to California, as noted by the CNPS. County List B species are identified as rare in California but more common elsewhere. As an MSCP narrow endemic species, Palmer's goldenbush has been identified as having a limited range, with all or

nearly all the historic and/or current populations occurring within the County. Approximately 234 individuals would be impacted by the proposed project.

Robinson's Pepper Grass

Robinson's pepper grass is a CRPR 4.3 and County List A species. As CRPR 4 species, southwestern spiny rush has been assigned to a watch list for plants of reported limited distribution and moderate degree and immediacy of threat by the CNPS. County List A species are identified as rare in California but more common elsewhere. The species was not detected within the project site during the 2019 and 2022 rare plant surveys, but the project would result in impacts to 1.2 acres of Diegan coastal sage scrub with the potential to support the species.

San Diego County Viguiera

San Diego viguiera is a CRPR 4.3 and County List D species. County List D species are those with limited distribution and are uncommon, but not presently rare or endangered. Five San Diego County viguiera shrubs would be impacted by the proposed project along the site's northeastern boundary, including three shrubs located within the project site and two shrubs located outside of the project site within the road widening impact area. The impacted individuals are not part of a population at the periphery of the species' range, located in an area where the taxon is especially uncommon, or occurring on unusual substrates. Additionally, there are numerous documented occurrences of this species throughout the surrounding area indicating that the project site does not represent a geographically significant population.

San Diego Sagewort

San Diego sagewort is a CRPR 4.2 and County List D species. Two San Diego sagewort individuals observed at the western project boundary at the edge of southern riparian forest habitat would be impacted by the proposed project. The impacted individuals are not part of a population at the periphery of the species' range, located in an area where the taxon is especially uncommon, or occurring on unusual substrates. Additionally, there are numerous documented occurrences of this species throughout the surrounding area indicating that the project site does not represent a geographically significant population.

San Diego Ambrosia

San Diego ambrosia is a federally listed endangered, CRPR 1B.1, County List A, and MSCP covered and narrow endemic species. Although San Diego ambrosia was not detected within the project site during rare plant surveys conducted in 2019 and 2022, approximately 15.66 acres of USFWS-designated critical habitat for the species occurs within the southwestern portion of the site (Figure 7). On-site areas mapped as critical habitat for the species are comprised of disturbed and developed areas associated with the golf course and riparian habitat associated with the Sweetwater River. The project would result in impacts to 0.77 acre of San Diego ambrosia critical habitat consisting of 0.002 acre of freshwater marsh, 0.26 acre of southern cottonwood-willow riparian forest, 0.01 acre of tamarisk scrub, 0.46 acre of disturbed habitat, and 0.04 acre of developed lands associated with golf course development.

- Project Site
- Proposed Pathway
- Conceptual Multi-Use Trails (Post-Reclamation)
- Open Space Conceptual Signage Location
- Existing Fencing
- Proposed Fencing
- Easements and Rights-of-way
- Limited Building Zone Easement
- Biological Open Space
- Non-Biological Open Space
- Additional Reclaimed Areas*
- Retained in Existing Condition

**Additional reclaimed areas are composed of graded upland pads located outside of the expanded Sweetwater River floodplain that will be seeded with an erosion control seed mix.*

Jamacha Way
Sweetwater River
Sonett St
Aspen Ln
Wind River Rd
Sea Pines Rd
Via Rancho San Diego
Bridge Right-of-way
SDG&E Towers
Ivanhoe Ranch Rd
Augusta Ct
Jamacha Rd
Hilton Head Rd
Access Road
Willow Glen Dr
SDG&E Easement
Cottonwood Springs Ln
Ashley Park Dr
Steele Canyon Rd
Indian Mills Ln
Wentworth Way
Heatherwood Dr
Jamul Dr
Par Four Dr
Greystone Dr

0 700 Feet

N

Source: Aerial (SanGIS, 2019)

I:\PROJECTS\S\CambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig16_OpenSpace.mxd SIR-02 5/2/2025 - RK

HELIX Environmental Planning

Proposed Biological Open Space

Figure 16

Singlewhorl burrobrush

Singlewhorl burrobrush is a CRPR 2B.2 species. Singlewhorl burrobrush was not detected within the project site during rare plant surveys conducted in 2019 and 2022, but the project would result in impacts to 1.14 acres of wetland habitat and 1.2 acres of Diegan coastal sage scrub with the potential to support the species.

Southwestern Spiny Rush

Southwestern spiny rush is a CRPR 4.2 species and County List D species. Three individuals occurring within the southwestern portion of the project along the Sweetwater River would be impacted by the removal of an existing bridge crossing. The impacted individuals are not part of a population at the periphery of the species' range, located in an area where the taxon is especially uncommon, or occurring on unusual substrates. Additionally, there are numerous documented occurrences of this species throughout the surrounding area indicating that the project site does not represent a geographically significant population.

2.1.2 Special-Status Animal Species

The project would result in impacts to suitable breeding or foraging habitat for 23 special-status animal species observed or detected on or adjacent to the site, including coastal California gnatcatcher, least Bell's vireo, Cooper's hawk, oak titmouse, red-shouldered hawk, turkey vulture, peregrine falcon, white-tailed kite, yellow-breasted chat, vermilion flycatcher, Lawrence's goldfinch, monarch butterfly, Belding's orange-throated whiptail, great blue heron, green heron, yellow warbler, western bluebird, barn owl, small-footed myotis, Townsend's big-eared bat, western mastiff bat, western red bat, and Yuma myotis. In addition to the special-status animal species detected on-site, eight additional species were determined to have high potential to occur: western spadefoot, two-striped garter snake, sharp-shinned hawk, Canada goose, California horned lark, merlin, loggerhead shrike, and Mexican long-tongued bat. The project would result in impacts to suitable breeding or foraging habitat with the potential to support these species.

Federally and State Listed Species

Coastal California Gnatcatcher

Coastal California gnatcatcher is a federally listed threatened, CDFW Species of Special Concern, County Group 1, and MSCP covered species. The species was incidentally detected within the southwestern portion of the site during project surveys (Figure 9). A female gnatcatcher was observed foraging with and feeding one fledgling in coastal sage scrub at the project's southwestern boundary on June 11, 2019. Additional observations of the species in 2019 include a single juvenile calling within the riparian habitat along the Sweetwater River in the southwestern portion of the site on July 1, 2019, and another female/juvenile type foraging in the same general area on July 17, 2019. In 2022, two single males were detected off-site southeast of the southeastern portion of the site, and one adult male was observed foraging with and feeding a single juvenile off-site southwest of the southwestern portion of the site.

A narrow strip of USFWS-designated critical habitat, totaling 2.7 acres, for the coastal California gnatcatcher is mapped in the southwestern portion of the project site (Figure 7). Critical habitat within

the project site is mostly composed of riparian forest along the Sweetwater River that provides foraging opportunities for the species, but gnatcatchers would not be expected to utilize this habitat for breeding purposes. A small portion of critical habitat for the species would be impacted by the proposed project, consisting of 0.002 acre of tamarisk scrub and 0.08 acre of disturbed habitat associated with the golf course development.

The project would impact 1.2 acres of Diegan coastal sage scrub, including habitat south of Willow Glen Drive, west of Steele Canyon Road, and at the southeastern project boundary. Habitat along Willow Glen Drive and Steele Canyon Road consists of narrow strips of coastal sage scrub comprised of scattered shrubs, and intermixed with non-native trees. Gnatcatchers were not observed within either area during biological surveys; the species would not be anticipated to occupy these areas for breeding purposes based on the small, narrow patch of habitat present in each area. The species may utilize the isolated strip of disturbed coastal sage scrub for foraging opportunities but would most likely breed off-site in more extensive, higher quality habitat. Diegan coastal sage scrub habitat at the southeastern project boundary is connected to a larger block of coastal sage scrub that continues off-site. The species was not detected within the project site in this area but was detected approximately 80 to 100 feet off-site. Additionally, noise related to mining and reclamation activities adjacent to active nests could result in adverse indirect impacts to nesting gnatcatchers.

Following reclamation, the project would provide additional habitat for the species through the revegetation of 11.9 acres of Diegan coastal sage scrub along the cut slopes constructed at the margins of the expanded Sweetwater River floodplain. The expanded Sweetwater River floodplain and associated riparian corridor would also provide additional foraging and dispersal habitat for gnatcatchers.

Least Bell's Vireo

Least Bell's vireo is a federally and state listed endangered, County Group 1, and MSCP covered and narrow endemic species. The species was observed within on-site riparian habitat, as well as within off-site areas along the project's southern and western boundaries (Figure 10). A pair located in the patch of riparian habitat east of Steele Canyon Road was observed feeding three fledglings in 2019, confirming at least one breeding pair within the project area.

Approximately 10.42 acres of critical habitat for the least Bell's vireo occur in the southwestern portion of the project site (Figure 7). Most of this habitat occurs within the footprint of the closed golf course, with small inclusions of undeveloped areas consisting of riparian forest habitat associated with the Sweetwater River. The project would result in impacts to 1.22 acres of least Bell's vireo critical habitat consisting of 0.23 acre of southern cottonwood-willow riparian forest, 0.002 acre of freshwater marsh, 0.81 acre of disturbed habitat, and 0.18 acre of developed land associated with golf course development.

The project would impact 0.44 acre of southern cottonwood-willow riparian forest, 0.13 acre of disturbed southern willow scrub, and 0.01 tamarisk scrub at the periphery of existing habitat located along the Sweetwater River. Least Bell's vireo was detected adjacent to these areas. Additionally, noise related to mining and reclamation activities adjacent to active nests could result in adverse indirect impacts to nesting vireos.

Following reclamation, the project would provide additional, higher quality habitat for the species through the revegetation of approximately 110.17 acres of wetland/riparian habitat within the expanded Sweetwater River floodplain.

Federal and State Sensitive and/or County Group 1 Animals

Cooper's Hawk

Cooper's hawk, a CDFW Watch List, County Group 1, and MSCP covered species, was observed within the eastern and western portions of the project site. The project would impact 0.44 acre of southern riparian forest, 0.13 acre of southern willow scrub, 0.01 acre of tamarisk scrub, 2.1 acres of eucalyptus woodland, and 1.7 acres of non-native woodland, as well as remove planted trees along the golf course fairways, which provide potential nesting and foraging habitat for this species. However, suitable nesting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for nesting and foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable nesting and foraging habitat for the species. Temporal loss of potential nesting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive nesting and foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity. Removal of vegetation during the breeding season could result in direct impacts to the species, and noise related to mining and reclamation activities adjacent to active nests could result in adverse indirect impacts.

Following reclamation, the project would provide additional, higher quality habitat for the species through the revegetation and restoration of the expanded Sweetwater River floodplain.

Lawrence's Goldfinch

Lawrence's goldfinch, a USFWS Bird of Conservation Concern, was detected foraging within the eastern portion of the project site. The species is known to be highly nomadic throughout the County flocking to areas where food resources are temporarily abundant (SDNHM 2004). The proposed project would impact potential breeding and foraging habitat for the species. However, suitable nesting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for nesting and foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable nesting and foraging habitat for the species. Temporal loss of potential nesting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive nesting and foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity. Removal of vegetation during the breeding season could result in direct impacts to the species.

Following reclamation, the project would provide additional, higher quality habitat for the species through the revegetation and restoration of the expanded Sweetwater River floodplain.

Loggerhead Shrike

Loggerhead shrike is a USFWS Bird of Conservation Concern, CDFW Species of Special Concern, and County Group 1 species. This species was not observed within the project site but was determined to have a high potential to occur based on the presence of suitable habitat and documented occurrences within adjacent habitat west of the site. The proposed project would result in impacts to potential breeding and foraging habitat for the species. However, suitable nesting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for nesting and foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable nesting and foraging habitat for the species. Temporal loss of potential nesting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive nesting and foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity. Removal of vegetation during the breeding season could result in direct impacts to the species.

Following reclamation, the project would provide additional, higher quality habitat for the species through the revegetation and restoration of the expanded Sweetwater River floodplain.

Oak Titmouse

Oak titmouse, a USFWS Bird of Conservation Concern, was observed foraging within the western portion of the site. The species is not anticipated to breed on-site as it inhabits oak woodlands, which are absent from the site. Potential foraging habitat for this species occurs on-site and would be impacted by the proposed project. However, suitable foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable foraging habitat for the species. Temporal loss of potential foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity.

Following reclamation, the project would provide additional, higher quality habitat for the species through the revegetation and restoration of the expanded Sweetwater River floodplain.

Peregrine Falcon

Peregrine falcon is a USFWS Bird of Conservation Concern, CDFW Fully Protected species, County Group 1, and MSCP covered and narrow endemic species. A pair was observed soaring over the site and

temporarily perched on a tree in the western portion of the site. Suitable breeding habitat for the species is absent from the site; therefore, no suitable breeding habitat or breeding individuals would be impacted by the project.

Potential foraging habitat for this species occurs on-site and would be impacted by the project; however, suitable foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for foraging opportunities. Additionally, large areas of foraging habitat for the species are present within preserved habitat in the local area, including the SDNWR, and existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable foraging habitat for the species. Temporal loss of potential foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity.

Following reclamation, the project would provide additional, higher quality habitat for the species through the revegetation and restoration of the expanded Sweetwater River floodplain.

Red-Shouldered Hawk

Red-shouldered hawk, a County Group 1 species, was observed within riparian areas and flying overhead during project surveys. Suitable woodland nesting habitat occurs on-site for this species, although it was not observed nesting on-site. The project would impact 0.44 acre of southern riparian forest, 0.13 acre of southern willow scrub, 0.01 acre of tamarisk scrub, 2.1 acres of eucalyptus woodland, and 1.7 acres of non-native woodland, as well as removing mature planted trees along the golf course fairways, which provide potential nesting and foraging habitats for this species. However, suitable nesting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for nesting and foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable nesting and foraging habitat for the species. Temporal loss of potential nesting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive nesting and foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity. Removal of vegetation during the breeding season could result in direct impacts to the species, and noise related to mining and reclamation activities adjacent to active nests could result in adverse indirect impacts.

Following reclamation, the project would provide additional, higher quality habitat for the species through the revegetation and restoration of the expanded Sweetwater River floodplain.

Sharp-shinned Hawk

Sharp-shinned hawk, a CDFW Watch List and County Group 1 species, was not observed within the project site but was determined to have a high potential to occur based on the presence of suitable

overwintering and foraging habitat and documented occurrences within project vicinity. This species is an uncommon winter visitor in San Diego but breeds in the northern and central portions of California. As such, the project would not impact suitable breeding habitat or breeding individuals.

The project would result in impacts to potential overwintering and foraging habitat for the species; however, suitable wintering and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for use. Additionally, large areas of foraging habitat for the species are present within preserved habitat in the local area, including the SDNWR, and existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable habitat for the species. Temporal loss of potential wintering and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity.

Following reclamation, the project would provide additional, higher quality habitat for the species through the revegetation and restoration of the expanded Sweetwater River floodplain.

Turkey Vulture

Turkey vulture, a County Group 1 species, was observed soaring over the southwestern portion of the site. No potentially suitable breeding habitat is present on-site, and no suitable breeding habitat or breeding individuals would be impacted by the project.

Potential foraging habitat for this species occurs on-site and would be impacted by the project; however, suitable foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for foraging opportunities. Additionally, large areas of foraging habitat for the species are present within preserved habitat in the local area, including the SDNWR, and existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable foraging habitat for the species. Temporal loss of potential foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species.

Two-striped Garter Snake

Two-striped garter snake, a CDFW Species of Special Concern and County Group 1 species, was not observed within the project site but was determined to have a high potential to occur based on the presence of potentially suitable aquatic and riparian habitat and reported occurrences within the surrounding area. The proposed project would result in impacts to 0.55 acre of disturbed wetland, 0.44 acre of southern cottonwood-willow riparian forest, 0.13 acre of southern willow scrub, 0.01 acre of tamarisk scrub, and 2.7 acres of constructed ponds with the potential to support the species. However, suitable habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for use. Additionally, existing

stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable habitat for the species. Temporal loss of potential habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity.

Following reclamation, the project would provide additional, higher quality habitat for the species through revegetation and restoration of the expanded Sweetwater River floodplain.

Vermilion Flycatcher

Vermilion flycatcher, a CDFW Species of Special Concern and County Group 1 species, was detected on numerous occasions in the eastern and western portions of the site; at least two breeding pairs were confirmed to occupy the site in 2019, and a pair was observed with an active nest in 2022. Vermilion flycatchers are rare and scattered within San Diego, preferring open habitats associated with surface water (Unitt 2004). In coastal San Diego, they are more commonly found in developed areas such as ranches, baseballs fields, golf courses, and cemeteries that contain open fields with wooded areas, often in association with a watercourse such as the San Luis Rey, Tijuana, or Sweetwater rivers. The proposed project would impact breeding and foraging habitat for the species. However, suitable nesting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for nesting and foraging opportunities. Though the post-reclamation condition of the project site would result in a substantial increase in native upland and riparian habitats and preserved BOS, these areas may be less suitable for vermilion flycatcher than the existing active and inactive golf course areas that are generally open with scattered mature trees. However, suitable habitat for the species is also present south of the site at the Steele Canyon Golf Club where the species was detected in 2000 (Unitt 2004). Removal of vegetation during the breeding season could result in direct impacts to the species.

White-tailed Kite

White-tailed kite, a CDFW Fully Protected and County Group 1 species, was not observed within the project site but was observed off-site foraging within the SDNWR. The proposed project would impact approximately 0.58 acre of suitable riparian breeding/foraging habitat for the species. However, suitable nesting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for nesting and foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable nesting and foraging habitat for the species. Temporal loss of potential nesting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive nesting and foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity. Removal of vegetation during the breeding season could result in direct impacts to the species, and noise related to mining and reclamation activities adjacent to active nests could result in adverse indirect impacts.

Following reclamation, the project would provide additional, higher quality habitat for the species through the revegetation and restoration of the expanded Sweetwater River floodplain.

Yellow-breasted Chat

Yellow-breasted chat, a CDFW Species of Special Concern and County Group 1 species, was detected within riparian habitat in the southwestern portion of the site along the Sweetwater River. The proposed project would impact approximately 0.58 acre of suitable riparian breeding/foraging habitat for the species. However, suitable nesting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for nesting and foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable nesting and foraging habitat for the species. Temporal loss of potential nesting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive nesting and foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity. Removal of vegetation during the breeding season could result in direct impacts to the species.

Following reclamation, the project would provide additional, higher quality habitat for the species through revegetation and restoration of the expanded Sweetwater River floodplain.

County Group 2 Animals

Barn Owl

Barn owl, a County Group 2 species, was observed in the northeastern portion of the site. The proposed project would impact the potential breeding and foraging habitat for this species. However, suitable nesting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for nesting and foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable nesting and foraging habitat for the species. Temporal loss of potential nesting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive habitat for barn owl is preserved within open space areas in the region, including the SDNWR. Removal of vegetation during the breeding season could result in direct impacts to the species.

Following reclamation, the project would provide additional, higher quality habitat for the species through the revegetation and restoration of the expanded Sweetwater River floodplain.

Belding's Orange-throated Whiptail

Belding's orange-throated whiptail, a CDFW Watch List, County Group 2, and MSCP covered species, was observed in the eastern and northeastern portions of the site and the project would impact 1.2 acres of suitable Diegan coastal sage scrub habitat for the species. However, suitable habitat would remain on-

site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for use. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable habitat for the species. Temporal loss of potential habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity.

Following reclamation, the project would provide additional, higher quality habitat for the species through the creation of graded slopes planted with coastal sage scrub along the cut slopes constructed at the margins of the expanded Sweetwater River floodplain.

California Horned Lark

California horned lark, a CDFW Watch List and County Group 2 species, was not observed within the project site but was determined to have a high potential to occur based on the presence of potentially suitable habitat and reported occurrences within the project vicinity. The project would result in impacts to suitable breeding and foraging habitat for the species. However, suitable habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for nesting and foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable nesting and foraging habitat for the species. Temporal loss of potential nesting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive nesting and foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity. Removal of vegetation during the breeding season could result in direct impacts to the species.

Canada Goose

Canada Goose, a County Group 2 species, was not observed within the project site but was determined to have a high potential to occur based on the presence of suitable overwintering habitat and documented occurrences within the project vicinity. The species overwinters in southern California with local breeding records a result of introductions and translocations (Unitt 2004). The project would result in impacts to potential wintering and foraging habitat for the species. However, suitable habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for use. Temporal loss of potential nesting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, suitable habitat for the species is also present within the surrounding area, including at other golf courses (e.g., Steele Canyon Golf Club) and local reservoirs (e.g., Sweetwater Reservoir).

Great Blue Heron

Great blue heron is a County Group 2 species that was observed foraging within artificial ponds and riparian areas within the project site. The project would impact 2.7 acres of artificial ponds, which are used as foraging habitat for this species, and 0.58 acre of potential riparian breeding habitat for the species. However, suitable nesting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for nesting and foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable nesting and foraging habitat for the species. Temporal loss of potential nesting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive nesting and foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity. Removal of vegetation during the breeding season could result in direct impacts to the species.

Following reclamation, the project would provide additional, higher quality habitat for the species through the revegetation of the expanded Sweetwater River floodplain.

Green Heron

Green heron, a County Group 2 species, was observed utilizing artificial ponds and riparian areas within the project site. The project would impact 2.7 acres of artificial ponds, which are used as foraging habitat for this species, and 0.58 acre of potential riparian breeding habitat for the species. However, suitable nesting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for nesting and foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable nesting and foraging habitat for the species. Temporal loss of potential nesting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive nesting and foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity. Removal of vegetation during the breeding season could result in direct impacts to the species.

Following reclamation, the project would provide additional, higher quality habitat for the species through the revegetation of the expanded Sweetwater River floodplain.

Merlin

Merlin, a CDFW Watch List and County Group 2 species, was not observed within the project site but was determined to have a high potential to occur based on the presence of suitable overwintering and foraging habitat and documented occurrences within project vicinity. This species is an uncommon winter visitor in southern California occurring within San Diego from October to March (Unitt 2004); it does not breed in the San Diego region. As such, the project would not result in impacts to suitable breeding habitat or breeding individuals.

The project would result in impacts to potential overwintering and foraging habitat for the species; however, suitable wintering and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for use. Additionally, large areas of foraging habitat for the species are present within preserved habitat in the local area, including the SDNWR, and existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable habitat for the species. Temporal loss of potential wintering and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species.

Following reclamation, the project would provide additional, higher quality habitat for the species through revegetation and restoration of the expanded Sweetwater River floodplain.

Mexican Long-tongued Bat

Mexican long-tongued bat, a CDFW Species of Special Concern and County Group 2 species, was not observed within the project site but was determined to have a high potential to occur based on documented occurrences within project vicinity. In coastal San Diego County, this species is associated with urban areas and has been found within the nearby communities of Mt. Helix and El Cajon. The species forages on night blooming flowers of agaves (Agavaceae) and cacti (Cactaceae). Suitable nectaring resources may occur within adjacent residential areas and buildings within the project site could potentially provide suitable roosting habitat; though, this species was not documented within the project site during the 2022 bat surveys. As such, the project would result in impacts to potential foraging and roosting habitat for the species. The surrounding residential neighborhoods will continue to provide roosting and foraging habitat for the species.

Monarch Butterfly

Monarch butterfly is a County Group 2 species that was observed flying within non-native woodland in the southeastern portion of the site that would be impacted by the proposed project. This species is expected to migrate through the region but is considered unlikely to roost on the site due to its location away from the coast. Thus, while the species may fly through the site and use nectar resources, the site does not provide larval habitat or overwintering roosts. The project would impact 4.38 acres of potential habitat for this species comprised of 1.7 acres of non-native woodland, 2.1 acres of eucalyptus woodland, and 0.58 acre of riparian habitat. However, suitable habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for nectaring opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable habitat for the species. Temporal loss of potential habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity.

Following reclamation, the project would contribute additional nectaring habitat for the species through revegetation and restoration of the expanded Sweetwater River floodplain.

Small-footed Myotis

Small-footed myotis, a County Group 2 species, was detected within the eastern portion of the project site. The species likely utilizes the site for foraging and has the potential to roost within trees and buildings present within the project site. As such, the project would result in impacts to potential foraging and roosting habitat for the species. However, suitable roosting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for roosting and foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable roosting and foraging habitat for the species. Temporal loss of potential roosting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive roosting and foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity.

Following reclamation, the project would provide additional, higher quality habitat for the species through revegetation and restoration of the expanded Sweetwater River floodplain.

Townsend's Big-eared Bat

Townsend's big-eared bat, a CDFW Species of Special Concern and County Group 2 species, was detected within the eastern and western portions of the project site. The species likely utilizes the site for foraging opportunities but is unlikely to roost within the project site as preferred roosting sites are not present. Although buildings within the project site could provide potential roosting habitat, this species is highly susceptible to disturbance and will abandon its roost if disturbed. The project would result in impacts to potential foraging habitat for the species. However, suitable foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable foraging habitat for the species. Temporal loss of potential foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity.

Following reclamation, the project would provide additional, higher quality habitat for the species through revegetation and restoration of the expanded Sweetwater River floodplain.

Western Bluebird

Western bluebird, a County Group 2 and MSCP covered species, was observed in multiple locations throughout the project site. The proposed project would result in impacts to suitable breeding and

foraging habitat. However, suitable nesting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for nesting and foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable nesting and foraging habitat for the species. Furthermore, extensive nesting and foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity, as well as urban areas with mature trees and wide lawns in the region, such as the Singing Hills Golf Resort to the northeast and the Steele Canyon Golf Club to the south. Temporal loss of potential nesting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Removal of vegetation during the breeding season could result in direct impacts to the species.

Following reclamation, the project would provide additional, higher quality habitat for the species through revegetation and restoration of the expanded Sweetwater River floodplain.

Western Mastiff Bat

Western mastiff bat, a CDFW Species of Special Concern and County Group 2 species, was detected within the western portion of the project site. The species likely utilizes the site for foraging opportunities but is unlikely to roost within the project site as preferred roosting sites are not present. As such, the project would result in impacts to potential foraging habitat for the species. However, suitable foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable foraging habitat for the species. Temporal loss of potential foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity.

Following reclamation, the project would provide additional, higher quality habitat for the species through revegetation and restoration of the expanded Sweetwater River floodplain.

Western Red Bat

Western red bat, a CDFW Species of Special Concern and County Group 2 species, was detected within the western portion of the project site. This tree roosting species has the potential to roost within riparian habitat and planted trees within the project site. The species would also be expected to utilize the site for foraging opportunities. As such, the project would result in impacts to potential foraging and roosting habitat for the species. However, suitable roosting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for roosting and foraging opportunities. Additionally,

existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable roosting and foraging habitat for the species. Temporal loss of potential roosting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive roosting and foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity.

Following reclamation, the project would provide additional, higher quality habitat for the species through revegetation and restoration of the expanded Sweetwater River floodplain.

Western Spadefoot

Western spadefoot, a CDFW Species of Special Concern and County Group 2 species, was not observed within the project site but was determined to have a high potential to occur based on the presence of potentially suitable aquatic and riparian habitat and reported occurrences within the surrounding area. The proposed project would result in impacts to 0.55 acre of disturbed wetland, 0.58 acre of potential wetland/riparian habitat, and 2.7 acres of constructed ponds with the potential to support the species. However, suitable habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for use. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable habitat for the species. Temporal loss of potential habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity.

Following reclamation, the project would provide additional, higher quality habitat for the species through revegetation and restoration of the expanded Sweetwater River floodplain.

Yellow Warbler

Yellow warbler is a USFWS Bird of Conservation Concern, CDFW Species of Special Concern, and County Group 2 species. The species was detected on several occasions through the project site. The proposed project would impact 0.58 acre of riparian habitat with the potential to support breeding and foraging individuals. However, suitable nesting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for nesting and foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable nesting and foraging habitat for the species. Temporal loss of potential nesting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive nesting and foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity. Removal of vegetation during the breeding season could result in direct impacts to the species.

Following reclamation, the project would provide additional, higher quality habitat for the species through the revegetation of the expanded Sweetwater River floodplain.

Yuma Myotis

Yuma myotis, a County Group 2 species, was detected within the western and eastern portions of the project site. The species likely utilizes the site for foraging and has the potential to roost within trees and buildings present within the project site. As such, the project would result in impacts to potential roosting and foraging habitat for the species. However, suitable roosting and foraging habitat would remain on-site during mining and reclamation activities as mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for roosting and foraging opportunities. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable roosting and foraging habitat for the species. Temporal loss of potential roosting and foraging habitat during mining and reclamation activities would not affect the local long-term survival of this species. Furthermore, extensive roosting and foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity.

Following reclamation, the project would provide additional, higher quality habitat for the species through revegetation and restoration of the expanded Sweetwater River floodplain.

2.2 RIPARIAN HABITAT AND SENSITIVE NATURAL COMMUNITIES

The majority of project impacts would be restricted to disturbed habitat and developed land currently occupied by the Cottonwood Golf Club. The project would result in impacts to a total of 2.34 acres of riparian habitat or other sensitive natural communities (Table 8, *Project Impacts to Vegetation Communities/Habitat Types*; Figure 15), including 0.55 acre of disturbed wetland, 0.44 acre of southern cottonwood-willow riparian forest (including disturbed), 0.13 acre of southern willow scrub, 0.01 acre of tamarisk scrub, 0.01 acre of arundo-dominated riparian, and 1.2 acres of Diegan coastal sage scrub (including disturbed). Impacts to these habitats would require mitigation. Table 8 provides a summary of project impacts, both on- and off-site, to vegetation communities/habitat types, including sensitive habitat.

In addition to project impacts, and as discussed in Section 2.0, a total of 21.69 acres of impact neutral areas are identified on the project site, primarily occurring within portions of the site previously disturbed by golf course development. These impact neutral areas include lands located within the MUP boundary that would not be disturbed by the proposed mining and reclamation activities and, therefore, left in their current condition, and lands located outside of the MUP boundary.

Table 8
PROJECT IMPACTS TO VEGETATION COMMUNITIES/HABITAT TYPES[1]

Vegetation Community[2]	Impact Neutral Areas (Acres)[1]	Project Impacts (Acres)[1]					Road Improvement Impacts (Acres)[1]			Total Impacts (Acres)[1]		
		Phase 1	Phase 2	Phase 3	Phase 4	Total	On-Site	Off-Site	Total	On-Site	Off-Site	Total
Sensitive Vegetation Communities												
Tier I[3]												
Disturbed Wetland (11200)	0	0.16	0.26	0.13	0	0.55	0	0	0	0.55	0	0.55
Freshwater Marsh (52400)	0	0	0	0	0	0	0	0	0	0	0	0
Southern Cottonwood-willow Riparian Forest – including disturbed (61330)	0.30	0.27	0.12	0.05	0	0.44	0	0	0	0.44	0	0.44
Southern Willow Scrub – including disturbed (63320)	0	0.13	0	0	0	0.13	0	0	0	0.13	0	0.13
Tamarisk Scrub (63810)	0.02	0.01	0	0	0	0.01	0	0	0	0.01	0	0.01
Open Water (64140)	0	0	0	0	0	0	0	0	0	0	0	0
Arundo-dominated Riparian (65100)	0.07	0.01	0	0	0	0.01	0	0	0	0.01	0	0.01
Tier II												
Diegan Coastal Sage Scrub – including disturbed (32500)	0.1	0.2	0	0.9	0	1.1	0	0.1	0.1	1.1	0.1	1.2
Tier IIIB												
Non-native Grassland (42200)	<0.1	0	0	0	0	0	0	0	0	0	0	0
Subtotal Sensitive Communities	*0.49*	*0.78*	*0.38*	*1.08*	*0*	*2.24*	0	*0.1*	*0.1*	*2.24*	*0.10*	*2.34*
Non-Sensitive Vegetation Communities												
Tier IV												
Non-native Woodland (79000)	0	0	0	1.7	0	1.7	0	0	0	1.7	0	1.7
Eucalyptus Woodland (79100)	0.4	<0.1	0	2.1	0	2.1	0	<0.1	<0.1	2.1	<0.1	2.1
Non-native Vegetation (11000)	0.4	3.2	0.6	1.5	1.2	6.5	<0.1	2.0	2.0	6.5	2.0	8.5
Disturbed Habitat (11300)	5.6	71.8	1.8	2.4	0	76.0	<0.1	0.1	0.1	76.0	0.1	76.1

Vegetation Community[2]	Impact Neutral Areas (Acres)[1]	Project Impacts (Acres)[1]					Road Improvement Impacts (Acres)[1]			Total Impacts (Acres)[1]		
		Phase 1	Phase 2	Phase 3	Phase 4	Total	On-Site	Off-Site	Total	On-Site	Off-Site	Total
N/A												
Artificial Pond (64100)	0	2.2	0	0.4	0.1	2.7	0	0	0	2.7	0	2.7
Developed Land (12000)	14.8	0.5	47.3	64.8	7.9	120.5	0.2	2.6	2.8	120.7	2.6	123.3
Subtotal Non-Sensitive Communities	*21.2*	*77.7*	*49.7*	*72.9*	*9.2*	*209.5*	*0.2*	*4.8*	*4.9*	*209.7*	*4.7*	*214.4*
TOTAL	**21.69**	**78.48**	**50.08**	**73.98**	**9.20**	**211.74**	**0.2**	**4.8**	**5.0**	**211.94**	**4.8**	**216.74**

[1] Upland habitats are rounded to the nearest 0.1 acre, while wetland habitats are rounded to the nearest 0.01; thus, total reflects rounding.

[2] Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2008).

[3] County Subarea Habitats and Tiers within the MSCP.

2.3 JURISDICTIONAL WETLANDS AND WATERWAYS

Unavoidable impacts would occur to jurisdictional waters and wetlands as part of proposed project activities, including the expansion of the Sweetwater River floodplain. Impacts to jurisdictional waters and wetlands would occur through mining and reclamation activities. However, mining would not result in direct impacts to the existing ~~Sweetwater River~~ low-flow Sweetwater River channel as the channel would be maintained with banks up to 3.5 feet in height in order to retain existing hydrologic characteristics and maintain water transfers operated by the Sweetwater Authority. Up to three temporary river crossings would be utilized to transport heavy equipment across the low-flow river channel during mining operations. Channel crossings would only be used when there is no water flow in the channel. An operating procedure would be established to maintain communication with the Sweetwater Authority prior to, and during, water transfers to ensure channel crossings during water flows are avoided. Permanent project impacts to jurisdictional wetlands and waters would include the construction of three permanent grouted rip-rap drop structures within the expanded Sweetwater River floodplain. Two drop structures would be located along the constructed upland slopes bordering the expanded floodplain: one at the eastern of the site where the Sweetwater River enters the property along the eastern, western-facing slope; and one east of Steele Canyon Road along the southern, north-facing slope where Mexican Canyon Creek flows into the Sweetwater River. These drop structures would protect the slopes against upstream head cutting. A third structure would be located perpendicular to the Sweetwater River on the west side of the Steele Canyon Road bridge and would prevent head cutting of the channel during infrequent, high flow events.

Following mining activities, the project site would be progressively reclaimed through the backfilling of extraction pits, removal of all artificial structures, and grading of final landforms, which would include an expanded Sweetwater River floodplain and bordering upland slopes. The expanded floodplain would subsequently be planted with native riparian vegetation along the channel bottom, and coastal sage scrub on the cut slopes constructed at the margins of the expanded floodplain. The low-flow river channel would be seeded with a low growing emergent wetland seed mix. However, the Sweetwater River is subjected to periodic heavy flows as a result of natural storm events and water releases and transfers between Loveland Reservoir and Sweetwater Reservoir. As such, vegetation along the Sweetwater River is anticipated to be dynamic and transition between sections of unvegetated streambed and vegetated streambed. The expanded floodplain and associated restored and revegetated areas would support jurisdictional waters and wetlands.

The project would impact 0.60 acre of wetland and 0.36 acre of non-wetland waters of the U.S. (Figure 17, *Waters of the U.S./Impacts*), 1.14 acres of riparian habitat and 17.06 acres of streambed habitat under CDFW jurisdiction (Figure 18, *CDFW Jurisdictional Areas/Impacts*), and 1.14 acres of County RPO wetland (Figure 19, *County RPO Wetlands/Impacts*). The proposed project, however, is exempt from RPO requirements, as discussed in Section 1.5.3. Impacts to jurisdictional waters and wetlands would require compensatory mitigation through a combination of on- or off-site creation, restoration, enhancement, preservation, and/or purchase of credits at an approved wetland mitigation bank.

Table 9, *Impacts to Jurisdictional Wetlands and Waterways,* provides a summary of project impacts to jurisdictional wetlands and waterways.

Cottonwood Sand Mine

- Project Site
- Impact Area
- Impact Neutral Area
- Roadway Improvement Impacts
- Sample Point

Non-jurisdictional Features

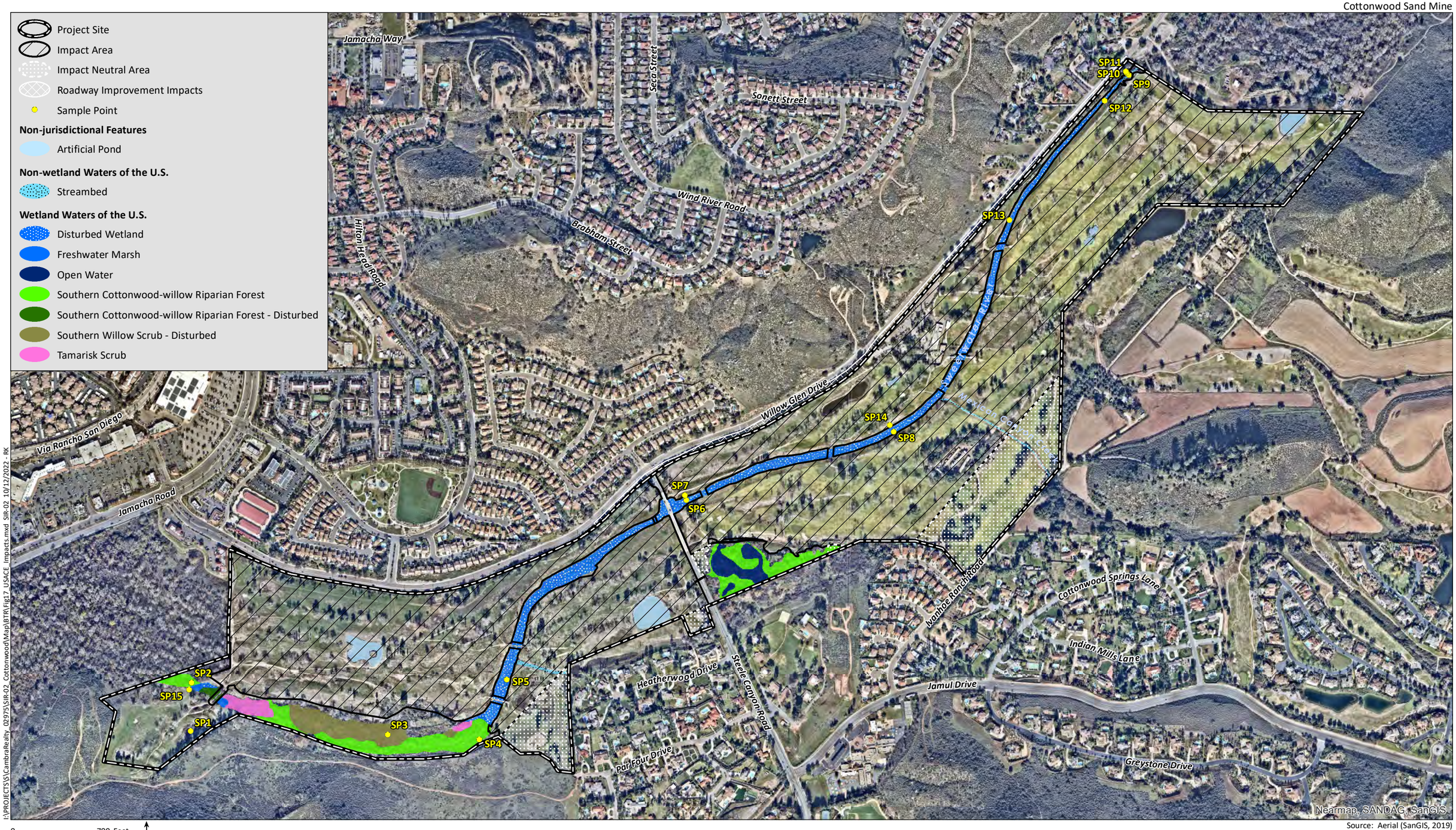
- Artificial Pond

Non-wetland Waters of the U.S.

- Streambed

Wetland Waters of the U.S.

- Disturbed Wetland
- Freshwater Marsh
- Open Water
- Southern Cottonwood-willow Riparian Forest
- Southern Cottonwood-willow Riparian Forest - Disturbed
- Southern Willow Scrub - Disturbed
- Tamarisk Scrub



I:\PROJECTS\S\CambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig17_USACE_Impacts.mxd SIR-02 10/12/2022 - RK

0 700 Feet

Source: Aerial (SanGIS, 2019)

HELIX Environmental Planning

Waters of the U.S./Impacts

Figure 17

Cottonwood Sand Mine

- Project Site
- Impact Area
- Impact Neutral Area
- Roadway Improvement Impacts
- Sample Point

Non-jurisdictional Features

- Artificial Pond

CDFW Jurisdictional Areas

- Arundo-dominated Riparian
- Disturbed Wetland
- Freshwater Marsh
- Open Water
- Southern Cottonwood-willow Riparian Forest
- Southern Cottonwood-willow Riparian Forest - Disturbed
- Southern Willow Scrub - Disturbed
- Streambed
- Tamarisk Scrub

Jamacha Way
Seca Street
Sonett Street
Wind River Road
Brabham Street
Hilton Head Road
Willow Glen Drive
Via Rancho San Diego
Jamacha Road
Heatherwood Drive
Par Four Drive
Steele Canyon Road
Ivanhoe Ranch Road
Cottonwood Springs Lane
Indian Mills Lane
Jamul Drive
Greystone Drive

SP1
SP2
SP3
SP4
SP5
SP6
SP7
SP8
SP9
SP10
SP11
SP12
SP13
SP14
SP15

Nearmap, SANDAG, SanGIS

0 700 Feet

N

Source: Aerial (SanGIS, 2019)

I:\PROJECTS\S\CambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig18_CDFW_Impacts.mxd SIR-02 10/12/2022 - RK

HELIX Environmental Planning

CDFW Jurisdictional Areas/Impacts

Figure 18

Cottonwood Sand Mine

- Project Site
- Impact Area
- Impact Neutral Area
- Roadway Improvement Impacts
- Sample Point

Non-jurisdictional Features

- Artificial Pond

County RPO Wetlands

- Arundo-dominated Riparian
- Disturbed Wetland
- Freshwater Marsh
- Open Water
- Southern Cottonwood-willow Riparian Forest
- Southern Cottonwood-willow Riparian Forest - Disturbed
- Southern Willow Scrub - Disturbed
- Tamarisk Scrub

Calle Albara
Jamacha Way
Seca Street
Sonett Street
Wind River Road
Brabham Street
Hilton Head Road
Via Rancho San Diego
Jamacha Road
Willow Glen Drive
Sweetwater River
Maxwell Creek
Heatherwood Drive
Steele Canyon Road
Par Four Drive
Wardbce Ranch Road
Cottonwood Springs Lane
Indian Mills Lane
Jamul Drive
Greystone Drive

SP1
SP2
SP3
SP4
SP5
SP6
SP7
SP8
SP9
SP10
SP11
SP12
SP13
SP14
SP15

Nearmap, SANDAG, SanGIS

0 700 Feet

N

Source: Aerial (SanGIS, 2019)

I:\PROJECTS\S\CambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig19_RPO_Impacts.mxd SIR-02 10/12/2022 - RK

HELIX Environmental Planning

County RPO Wetlands/Impacts

Figure 19

Table 9
IMPACTS TO JURISDICTIONAL WETLANDS AND WATERWAYS (acre[s])[1]

Habitat	Waters of U.S.	CDFW	County RPO
Wetland Waters/Riparian			
Disturbed Wetland	0.51	0.56	0.56
Freshwater Mash	<0.01	<0.01	<0.01
Southern Cottonwood-Willow Riparian Forest (including disturbed)	0.09	0.44	0.44
Southern Willow Scrub (disturbed)	0	0.13	0.13
Arundo-Dominated Riparian	0	0.01	0.01
Subtotal	*0.60*	*1.14*	*1.14*
Non-wetland Waters			
Streambed	0.36	17.06	0
TOTAL	**0.96**	**18.20**	**1.14**

[1] Areas are presented in acre(s) rounded to the nearest 0.01.

2.4 WILDLIFE MOVEMENT AND NURSERY SITES

The project site is shown in the MSCP as a linkage between two larger BRCAs within the local area (Figure 14). Though its current function is likely constrained by the site's historic and ongoing human-related disturbances associated with the golf course development, ongoing maintenance, and operations, local wildlife still utilizes the site for foraging and dispersal activities. Birds and small- to medium-sized mammals, particularly those adapted to urbanized areas (i.e., coyote), were detected within the site during the project's biological surveys and wildlife camera trapping survey. Larger mammal species, such as mule deer and mountain lion, were not detected and are not expected to regularly use the site as a main movement corridor or linkage based on results of the camera trapping survey and numerous biological surveys, current site uses, disturbances, surrounding development, and lack of sufficient vegetative cover to conceal individual movements.

Mining within the project site has the potential to temporarily disrupt local wildlife use and movement within and through the site. These impacts would not occur throughout the entire project site simultaneously as the mining and subsequent reclamation and revegetation activities would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for wildlife use. As shown in Figure 6, mining activities during Phase 1 would occur west of Steele Canyon Road, with the processing plant just south of Willow Glen Drive representing the active disturbance area east of Steele Canyon Road. During Phase 1, the vast majority of the existing habitat east of Steele Canyon Road would remain unobstructed to wildlife. As mining progresses east to Phase 2, the Phase 1 area west of Steele Canyon Road will have been reclaimed and restoration/revegetation activities along the expanded Sweetwater River floodplain will be in the five-year restoration and revegetation period and unobstructed to wildlife. In addition, the progressive mining and reclamation activities, portions of the project site with the highest biological value (i.e., existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River) would be avoided by project activities and remain available to wildlife use. Further, as shown in Figure 5, each phase would be further broken down into smaller subphases. The phased nature of mining activities and avoidance of higher quality habitat areas would reduce potential temporary adverse effects that mining operations would have on local wildlife.

As part of the project's reclamation process, the Sweetwater River floodplain, which has been narrowed and constrained by the development of the golf course, would be expanded throughout the entire length of the project site (approximately 10,040 linear feet). The channel and associated flood-prone area, currently measuring between 35 and 120 feet wide, would be substantially expanded to between ~~450~~ 400 feet and ~~720~~ 700 feet wide. This additional width would be more consistent with both historical conditions on the site and current conditions downstream of the site. The expanded floodplain would be revegetated with riparian habitat resulting in a post-project condition that would restore wildlife linkage and corridor functions and is biologically superior to the existing condition. The established widened riparian corridor would re-establish connectivity between upstream and downstream riparian areas by providing increased vegetative cover. Improved connectivity would improve wildlife access to higher quality resources and promote and facilitate wildlife use and movement in the local area and the surrounding region that is currently constrained by the existing golf course development. The project would ultimately contribute approximately 149.0 ~~150.7~~ acres of preserved, rehabilitated, restored, and revegetated habitat to the linkage, which will be placed within a BOS easement.

2.5 INDIRECT IMPACTS

Potential significant indirect impacts may occur as a result of project implementation, as described further below.

2.5.1 Noise

Construction-related noise from sources related to clearing, grubbing, grading, and extraction and processing activities would temporarily impact wildlife. Construction of the processing plant, aggregate extraction, and processing operations would require the daily use of heavy equipment that would elevate existing noise levels on-site. Breeding birds and mammals may temporarily or permanently leave their territories to avoid disturbances from human activities, which could lead to reduced reproductive success and increased mortality. Potential short-term noise impacts could result from the proposed mining and reclamation of the site. Impacts would occur incrementally, meaning that not all areas will be impacted at once, as mining activities would begin within Phase 1 and generally progress eastward following completion of earlier phasing. For example, as activities occur within Subphase 1A, habitat within Phase 1B (and later phases) would not be impacted. Noise effects would be considered potentially significant if noise levels generated during construction and/or extraction operations exceed a level of 60 A-weighted decibels (dBA) hourly average (L_{EQ}) or ambient (whichever is greater) adjacent to sensitive nesting bird species such as California gnatcatcher, least Bell's vireo, and raptors.

2.5.2 Lighting

Night lighting that extends from a developed area onto adjacent wildlife habitat can discourage the use of the habitat by nocturnal wildlife, and can also provide nocturnal predators with an unnatural advantage over their prey, resulting in a potentially significant impact. However, the project is required to direct all necessary lighting in a downward direction with appropriate shield and illumination technology to prevent adverse spillover of light. The only proposed night lighting would be installed around the processing plant for security purposes. Sand excavation and processing would only occur between 7:00 a.m. and 5:00 p.m. Therefore, no lighting associated with night work would occur.

2.5.3 Fugitive Dust

Fugitive dust produced by construction and extraction operations has the potential to disperse onto preserved vegetation, which may reduce the overall vigor of individual plants by reducing their photosynthetic capabilities and increasing their susceptibility to pests or diseases. This in turn could affect animals dependent on these plants. Fugitive dust also may make plants unsuitable as habitat for insects and birds. Breeding birds and mammals may temporarily or permanently leave their territories to avoid construction and/or extraction operations, which could lead to reduced reproductive success and increased mortality. The project would implement a Fugitive Dust Control Plan during mining and reclamation activities that would include fugitive dust control measures to minimize dust emissions and meet applicable dust control requirements. Dust control measures would include the watering of active construction and extraction areas, unpaved surfaces, and stockpiles to minimize dust generation; and watering of all exposed soil a minimum of twice per day. Additionally, outgoing loaded trucks would be surface watered for dust suppression purposes and would either be covered or two feet of freeboard would be maintained.

2.5.4 Human Activity

Increases in human activity in the area could result in the degradation of open space habitat and associated indirect impacts on sensitive species through the creation of unauthorized trails and removal of vegetation. The eastern portion of the project site currently operates as an active golf course, which is subject to light to moderate human activity related to golf play and maintenance activities. Though the western portion of the project site has been closed to golf play since 2017, the area is still periodically mowed and subject to unauthorized recreational uses (e.g., off-leash dogs, hikers and joggers, fishing, etc.), as well as the presence of unhoused people, resulting in disturbances from light to moderate human activity in this area. Additionally, aggregate extraction activities have occurred periodically within the site since the 1950s.

Following approval of the MUP, golf play within the project site would cease. Public access during mining and reclamation activities would be controlled by fencing on the perimeter of the property and gates on the access roads within the project boundaries. In addition, appropriate signage would be posted around the perimeter of the excavation area and project boundary at 150-foot intervals. Most of the site is already surrounded by fencing, which would be replaced/repaired where missing or damaged. The gates would be locked during non-operating hours. Following mining activities, the site would be reclaimed, restored and revegetated habitat would be preserved within BOS, and a multi-use trail system would be constructed. Fencing and signage would be installed at the edge of BOS and along on-site trails to prevent unauthorized access to sensitive habitat areas (Figure 16). The proposed trails would only be available for day use and are anticipated to be used primarily by residents of the immediate area. As the site is already subjected to human uses, the proposed project would not represent a substantial increase in human activity and would provide protections for sensitive habitat areas that are not currently in place.

2.5.5 Domestic Predators

The site is adjacent to existing residential development and is already subject to some level of disturbance and predation by domestic animals from adjacent lands. Domestic predators (e.g., dogs and cats) have the potential to harm native wildlife species. For example, free-roaming cats are known to

injure and/or kill native wildlife, and are of particular threat to small animals, including lizards, birds, and small rodents, while off-leash dogs can be a nuisance to wildlife, resulting in changes in wildlife behavior such as alteration in patterns of habitat utilization, or damage to burrows of ground-dwelling animals. Implementation of the proposed project would not result in increased potential for encounters between cats and native wildlife as no residential development is proposed as part of the project. Hiking trails, however, are proposed to be constructed areas along the perimeter of the BOS, which would likely increase the presence of domestic dogs within the project site. Effects of off-leash dogs on wildlife would be minimized through the installation of appropriate fencing and signage along the trail system and requiring dogs to be on leash. Trails that occur adjacent to or cross the BOS would be fenced on either side[2], which would further discourage off-leash dogs from leaving the trail. Trails would not be lit and are considered unlikely to be used by people walking dogs during the night, thus minimizing encounters with nocturnal wildlife.

2.5.6 Exotic Plant Species

Non-native plants could colonize areas disturbed by construction and extraction and could potentially spread into adjacent native habitats. Many non-native plants are highly invasive and can displace native vegetation (reducing native species diversity), potentially increase flammability and fire frequency, change ground and surface water levels, and potentially adversely affect native wildlife dependent on native plant species. However, the site is already heavily infested by non-native vegetation. The project would include weed control during both project operation and the reclamation process as described in the Reclamation Plan (EnviroMINE 2021a), with a focus on highly invasive species. The occurrence of weeds on-site would be monitored by quarterly visual inspection during mine operations and removal would be initiated if the inspection reveals that weeds have become, or are becoming, established. The project includes restoration and rehabilitation of existing riparian habitat within the southwestern portion of the site, revegetation of the expanded Sweetwater River floodplain, and constructed cut slopes at the margins of the expanded floodplain with native riparian and upland habitats. Further, graded pad areas located outside of the expanded floodplain would be revegetated with native or non-invasive plant species that would also minimize the chance for colonization and spread of invasive species into the open space. Successful completion of site reclamation and native restoration and revegetation areas would require achieving success criteria that include the amount of non-native cover on-site.

3.0 SPECIAL-STATUS SPECIES

3.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

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 USFWS or CDFW (County 2010b)?

Any of the following conditions would be considered significant if:

[2] Fencing would consist of 3-strand smooth wire or similar fencing that allows for wildlife passage.

A. The project would impact one or more individuals of a species listed as federally or state endangered or threatened.

B. The project would impact an on-site population of a County List A or B plant species, or a County Group 1 animal species, or a species listed as a state Species of Special Concern.

C. The project would impact the local long-term survival of a County List C or D plant species or a County Group 2 animal species.

D. The project may impact arroyo toad aestivation, foraging, or breeding habitat.

E. The project would impact golden eagle (*Aquila chrysaetos*) habitat.

F. The project would result in a loss of functional foraging habitat for raptors.

G. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species.

H. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term.

I. The project would impact occupied burrowing owl (*Athene cunicularia*) habitat.

J. The project would impact occupied San Diego cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) habitat, or formerly occupied San Diego cactus wren habitat that has been burned by wildfire.

K. The project would impact occupied Hermes copper butterfly (*Lycaena hermes*) habitat.

L. The project would impact the nesting success of the following sensitive bird species through grading, clearing, fire fuel modification, and/or other noise-generating activities such as construction:

- San Diego cactus wren (February 15 to August 15)
- Coastal California gnatcatcher (February 15 to August 31)
- Least Bell's vireo (March 15 to September 15)
- Southwestern willow flycatcher (May 1 to September 1)
- Tree-nesting raptors (January 15 to July 15)
- Ground-nesting raptors (February 1 to July 15)
- Golden eagle (January 1 to July 31)
- Light-footed Ridgway's rail (*Rallus longirostris levipes*) (February 15 to September 30)

3.2 ANALYSIS OF PROJECT EFFECTS

3.2.1 Significant Impacts

The proposed project would result in significant impacts under the **above guidelines 3.1.A, 3.1.B, 3.1C, 3.1.G, 3.1.H, and 3.1.L** for the following reasons:

A. The project would impact one or more individuals of a species listed as federally or state endangered or threatened.

The project would result in potentially significant impacts to the federally listed threatened coastal California gnatcatcher and federally and state listed endangered least Bell's vireo, further discussed below. In addition, USFWS-designated critical habitat for the coastal California gnatcatcher, least Bell's vireo, and federally listed endangered San Diego ambrosia is present in the southwestern portion of the site (Figure 7), and critical habitat for the federally and state listed endangered southwestern willow flycatcher occurs off-site west of the project site within the SDNWR. The project would not impact southwestern willow flycatcher critical habitat occurring off-site within the SDNWR, but would result in minor impacts to San Diego ambrosia, coastal California gnatcatcher, and least Bell's vireo critical habitat areas that occur on-site as discussed below.

Coastal California Gnatcatcher

Coastal California gnatcatcher is a federally listed threatened, CDFW Species of Special Concern, County Group 1, and MSCP covered species. A small portion of USFWS-designated critical habitat for the species would be impacted by the proposed project consisting of 0.002 acre of tamarisk scrub and 0.08 acre of disturbed habitat associated with the golf course development. These impacts would be less than significant since the area does not support suitable coastal sage scrub habitat required by the species.

The coastal California gnatcatcher was incidentally detected within the southwestern portion of the site during project surveys (Figure 10). In 2019, observations included an adult female foraging with and feeding a juvenile gnatcatcher within coastal sage scrub at the project's southwestern boundary, and female/juvenile types foraging within riparian habitat along the Sweetwater River in the southwestern portion of the site. In 2022, two single males were detected off-site southeast of the southeastern portion of the site, and one adult male was observed foraging with and feeding a single juvenile off-site southwest of the southwestern portion of the site.

The project would impact 1.2 acres of Diegan coastal sage scrub, including habitat south of Willow Glen Drive, west of Steele Canyon Road, and at the southeastern project boundary (Figure 15). Habitat along Willow Glen Drive and Steele Canyon Road consists of narrow strips of coastal sage scrub comprised of scattered shrubs and intermixed with non-native trees. Gnatcatchers were not observed within either area during biological surveys; the species would not be anticipated to occupy these areas for breeding purposes based on the small, narrow patch of habitat present in each area. Diegan coastal sage scrub habitat at the southeastern project boundary is connected to a larger block of coastal sage scrub that continues off-site. The species was not detected within the project site in this area but was detected approximately 80 to 100 feet off-site.

Impacts to nesting gnatcatchers and occupied habitat would be significant. Potentially significant impacts to coastal California gnatcatcher habitat would be reduced to a less than significant level through the implementation of mitigation measure **BIO-1**.

Additionally, potentially significant indirect noise impacts could occur if mining and reclamation activities took place within 500 feet of suitable gnatcatcher habitat during the gnatcatcher breeding season (March 1 to August 15). Potentially significant indirect noise impacts to nesting gnatcatchers would be reduced to a less than significant level through the implementation of mitigation measures **BIO-2 and BIO-5**.

Least Bell's Vireo

Least Bell's vireo is a federally and state listed endangered, County Group 1, MSCP covered and narrow endemic species. The project would result in impacts to 1.22 acres of least Bell's vireo critical habitat consisting of 0.23 acre of southern cottonwood-willow riparian forest, 0.002 acre of freshwater marsh, 0.81 acre of disturbed habitat, and 0.18 acre of developed land associated with golf course development. Impacts to disturbed habitat and developed land would be less than significant since these areas do not contain suitable riparian habitat required by the species. Impacts to southern cottonwood-willow riparian forest and freshwater marsh would be significant but would be reduced to a less than significant level through the implementation of mitigation measure **BIO-3**. The least Bell's vireo was detected in several areas within riparian habitat located both on- and off-site, and at least one confirmed breeding pair was observed on-site just east of Steele Canyon Road (Figure 10). The project would impact approximately 0.44 acre of southern cottonwood-willow riparian forest (including disturbed), 0.13 acre of disturbed southern willow scrub, and 0.01 tamarisk scrub at the periphery existing habitat located along the Sweetwater River, including areas where vireos have been detected. Direct impacts to occupied vireo habitat would be potentially significant but would be reduced to a less than significant level through the implementation of mitigation measure **BIO-3**.

Additionally, if mining and reclamation activities took place within 500 feet of suitable vireo habitat during the vireo breeding season (March 15 to September 15), indirect impacts related to noise to nesting vireos would be potentially significant. Potentially significant indirect noise impacts to nesting vireos would be reduced to a less than significant level through the implementation of mitigation measures **BIO-4** and **BIO-5**.

Non-Significant Impacts under County Guideline 3.1.A

The project would not result in significant impacts to San Diego ambrosia or southwestern willow flycatcher, as further discussed below.

San Diego Ambrosia

San Diego ambrosia is a federally listed endangered, CRPR 1B.1, and County List A, and MSCP covered and narrow endemic species. The species has been documented within off-site areas south of the project site within the SDNWR but was not detected on site during the 2019 and 2022 rare plant surveys. USFWS-designated critical habitat for the species occurs in the southwestern portion of the project site (Figure 7). The project would result in impacts to 0.77 acre of San Diego ambrosia critical habitat consisting of 0.002 acre of freshwater marsh, 0.26 acre of southern cottonwood-willow riparian forest, 0.01 acre of tamarisk scrub, 0.46 acre of disturbed habitat, and 0.04 acre of developed lands

associated with golf course development. These impacts would be less than significant since the species was not found to occur within the project site; therefore, no direct impacts to San Diego ambrosia would occur.

Southwestern Willow Flycatcher

Southwestern willow flycatcher is a federally and state listed endangered, County Group 1, and MSCP covered and narrow endemic species. USFWS-designated critical habitat for the southwestern willow flycatcher occurs west of the project site within the SDNWR (Figure 7), and potentially suitable riparian habitat for the species is found on-site east of Steele Canyon Road, and at the downstream portion of the Sweetwater River in the southwestern portion of the site (Figure 10). However, the species was not detected within or adjacent to the project site during protocol surveys conducted in 2019 and 2022, and there are no reported occurrences of the species within the project vicinity. The last recorded breeding occurrence of the species within the general vicinity is located approximately three miles southwest of the site along the Sweetwater River within the SDNWR. A single pair attempted to nest in this area in 1998 and 1999, though all nest attempts were unsuccessful. Migrants were recorded in the vicinity between 2000 and 2002, but no recent occurrences of the species have been reported. The project would impact approximately 0.44 acre of southern cottonwood-willow riparian forest (including disturbed), 0.13 acre of disturbed southern willow scrub, and 0.01 of tamarisk scrub at the periphery existing habitat located along the Sweetwater River. The species is not expected to occupy the site given the negative survey results and lack of recent observations of the species in the area. As such, impacts to 0.58 acre of potential habitat for southwestern willow flycatcher would be less than significant.

B. The project would impact an on-site population of a County List A or B plant species, or a County Group 1 animal species, or a species listed as a state Species of Special Concern.[3]

County List A or B Plant Species

Palmer's Goldenbush

Palmer's goldenbush is a CRPR 1B.1 species, County List B, MSCP covered, and MSCP covered and narrow endemic species. A total of 236 individuals were observed within the southeastern, south-central, and southwestern portions of the project site. Approximately 234 individuals would be impacted by the proposed project. The two individuals that would be avoided by the proposed project are located outside of the MUP boundary within an area that would not be impacted by mining or reclamation activities east of Steele Canyon Road and north of Ivanhoe Ranch Road. As a County List B plant species, species-based mitigation at a minimum 1:1 mitigation ratio is required pursuant to County Requirements (2010a). Significant impacts to Palmer's goldenbush would be reduced to a less than significant level through the implementation of mitigation measure **BIO-6**.

[3] Per County Guidelines (2010b), impacts to County List A or B plant species, a County Group 1 animal species, or a state SSC species are significant except in cases where impacts would occur to less than 5 percent of the individual plants or of the sensitive animal species' habitat on a project site and the project would not result in a substantial adverse effect on the local long-term survival of that plant or animal taxon.

County Group 1 Animal Species/CDFW Species of Special Concern

Project impacts to the following County Group 1 animal species and/or CDFW Species of Special Concern are potentially significant: coastal California gnatcatcher, least Bell's vireo, Cooper's hawk, Lawrence's goldfinch, oak titmouse, peregrine falcon, red-shouldered hawk, Townsend's big-eared bat, turkey vulture, vermilion flycatcher, white-tailed kite, yellow-breasted chat, yellow warbler, western mastiff, and western red bat. Additionally, the project would result in impacts to suitable habitat with the potential to support the following County Group 1 animal species and/or state Species of Special Concern that were determined to have high potential to occur within the project site: loggerhead shrike, Mexican long-tongued bat, sharp-shinned hawk, two-striped garter snake, and western spadefoot. The project would also result in potentially significant impacts to the following USFWS Birds of Conservation Concern: Lawrence's goldfinch and oak titmouse. Coastal California gnatcatcher and least Bell's vireo are discussed above in Section 3.2.1.A, while the remaining species are discussed below.

Cooper's Hawk

Cooper's hawk, a CDFW Watch List, County Group 1, and MSCP covered species, was observed within the eastern and western portions of the site. The project would impact 0.44 acre of southern riparian forest, 0.13 acre of southern willow scrub, 0.01 acre of tamarisk scrub, 2.1 acres of eucalyptus woodland, and 1.7 acres of non-native woodland, as well as remove trees along the golf course fairways, which provide potential nesting and foraging habitat for this species. If project implementation were to result in direct impacts to nesting Cooper's hawk and/or indirect noise impacts to Cooper's hawks nesting within 300 feet of active construction, mining, or reclamation areas, such impacts would be potentially significant. Significant impacts to nesting Cooper's hawk would be reduced to a less than significant level through the implementation of mitigation measures **BIO-5** and **BIO-7**. Impacts to 4.38 acres of potential nesting and foraging habitat would be significant but would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8** and **BIO-9,** which require reclamation and revegetation of the site following the completion of mining activities and habitat-based mitigation.

Lawrence's Goldfinch

Lawrence's goldfinch, a USFWS Bird of Conservation Concern, was detected foraging within the eastern portion of the project site. The proposed project would impact potential breeding and foraging habitat for this species. Direct impacts to nesting individuals would be reduced to a less than significant level through the implementation of mitigation measure **BIO-7**. Though the project would not adversely impact the local long-term survival of the species, loss of potential nesting and foraging habitat during mining and reclamation activities would be a potentially significant impact. However, with the implementation of mitigation measures **BIO-8** and **BIO-9**, which involve the reclamation of the site following mining activities through the revegetation of upland and wetland/riparian habitat within the expanded Sweetwater River floodplain, impacts to this species are considered less than significant.

Loggerhead Shrike

Loggerhead shrike is a USFWS Bird of Conservation Concern, CDFW Species of Special Concern, and County Group 1 species. This species was not observed within the project site but was determined to have a high potential to occur based on the presence of suitable habitat and documented occurrences within adjacent habitat west of the site. If project implementation were to result in direct impacts to

nesting loggerhead shrikes, such impacts would be potentially significant. Potentially significant impacts to nesting loggerhead shrike would be reduced to a less than significant level through the implementation of mitigation measure **BIO-7**. Impacts to potential foraging and breeding habitat would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8**, **BIO-9**, and **BIO-10**, which involves reclamation of the site following mining activities through the revegetation of upland and wetland/riparian habitat within the expanded Sweetwater River floodplain and habitat-based mitigation.

Oak Titmouse

Oak titmouse, a USFWS Bird of Conservation Concern, was observed foraging within the western portion of the site. The proposed project would impact potential breeding and foraging habitat for this species. Direct impacts to nesting individuals would be reduced to a less than significant level through the implementation of mitigation measure **BIO-7**. Though the project would not adversely impact the local long-term survival of the species, loss of potential nesting and foraging habitat during mining and reclamation activities would be a potentially significant impact. However, with the implementation of mitigation measures **BIO-8** and **BIO-9**, which involve the reclamation of the site following mining activities through the revegetation of upland and wetland/riparian habitat within the expanded Sweetwater River floodplain, impacts to this species are considered less than significant.

Peregrine Falcon

Peregrine falcon is a USFWS Bird of Conservation Concern, CDFW Fully Protected species, County Group 1, and MSCP covered and narrow endemic species. A pair was observed soaring over the site and temporarily perched on a tree in the western portion of the site. Suitable breeding habitat for the species is absent from the site; therefore, no suitable breeding habitat or breeding individuals would be impacted by the project. The project would result in impacts to potential foraging habitat, which are considered potentially significant but would be reduced to a less than significant level through the implementation of mitigation measure **BIO-8**, which involves reclamation of the site following mining activities through the revegetation of upland and wetland/riparian habitat within the expanded Sweetwater River floodplain.

Red-Shouldered Hawk

Red-shouldered hawk, a County Group 1 species, was observed within riparian areas and flying overhead during project surveys. Suitable woodland nesting habitat occurs on-site for this species, although it was not observed nesting on-site. The project would impact approximately 0.44 acre of southern riparian forest, 0.13 acre of southern willow scrub, 0.01 acre of tamarisk scrub, 2.1 acres of eucalyptus woodland, and 1.7 acres of non-native woodland, as well as remove trees along the golf course fairways, which provide potential nesting and foraging habitat for this species. If project implementation were to result in direct impacts to nesting red-shouldered hawk and/or indirect impacts to red-shouldered hawk nesting within 300 feet of active construction, mining, or reclamation areas, such impacts would be potentially significant. Significant impacts to nesting red-shouldered hawk would be reduced to a less than significant level through the implementation of mitigation measures **BIO-5** and **BIO-7**. Impacts to 4.38 acres of potential nesting and foraging habitat would be significant but would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8** and **BIO-9,** which require reclamation and revegetation of the site following the completion of mining activities and habitat-based mitigation.

Sharp-shinned Hawk

Sharp-shinned hawk, a CDFW Watch List and County Group 1 species, was not observed within the project site but was determined to have a high potential to occur based on the presence of suitable overwintering and foraging habitat and documented occurrences within the project vicinity. This species is an uncommon winter visitor in San Diego but breeds in the northern and central portions of California. As such, suitable breeding habitat for the species is absent from the site; therefore, no suitable breeding habitat or breeding individuals would be impacted by the project. The project would result in impacts to potential overwintering and foraging habitat for the species, which are considered potentially significant but would be reduced to a less than significant level through the implementation of mitigation measure **BIO-8**, which involves reclamation of the site following mining activities through the revegetation of upland and wetland/riparian habitat within the expanded Sweetwater River floodplain.

Turkey Vulture

Turkey vulture is a County Group 1 species that has been observed soaring over the southwestern portion of the project site. No potentially suitable breeding habitat is present on-site or would be impacted by the project. Therefore, no suitable breeding habitat or breeding individuals would be impacted by the project. The project would result in impacts to potential foraging habitat that are considered potentially significant but would be mitigated in accordance with mitigation measure **BIO-8**, which involves reclamation of the site following mining activities through the revegetation of upland and wetland/riparian habitat within the expanded Sweetwater River floodplain.

Vermilion Flycatcher

Vermilion flycatcher is a CDFW Species of Special Concern and County Group 1 species that was detected on numerous occasions in the eastern and western portions of the site and least two breeding pairs were confirmed to occupy the site in 2019, and at least one pair was observed with an active nest in 2022. The proposed project would impact suitable breeding and foraging habitat for the species. If project implementation were to result in direct impacts to nesting vermilion flycatcher, such impacts would be potentially significant. Significant impacts to nesting vermillion flycatcher would be reduced to a less than significant level through the implementation of mitigation measure **BIO-7**. Potentially significant impacts to suitable nesting and foraging habitat for vermillion flycatcher would be reduced to a less than significant level through the implementation of mitigation measure **BIO-8**, which requires reclamation and revegetation of the site following completion of mining activities. Though the post-reclamation condition of the project site would result in a substantial increase in native upland and riparian habitats and preserved BOS, these areas may be less desirable to vermilion flycatcher. However, suitable habitat for the species is also present south of the site at the Steele Canyon Golf Club where the species was detected in 2000 (Unitt 2004).

White-tailed Kite

White-tailed kite, a CDFW Fully Protected and County Group 1 species, was not observed within the project site but was observed flying overhead just south of the project site within the SDNWR and was determined to have a high potential to occur based on the presence of suitable riparian habitat. The proposed project would impact approximately 0.58 acre of suitable riparian breeding/foraging habitat for the species. If project implementation were to result in direct impacts to nesting white-tailed kite and/or indirect impacts to individuals nesting within 300 feet of active construction, mining, or

reclamation areas, such impacts would be potentially significant. Significant impacts to nesting white-tailed kite would be reduced to a less than significant level through the implementation of mitigation measures **BIO-5** and **BIO-7**. Impacts to potential nesting and foraging habitat are considered potentially significant but would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8** and **BIO-9,** which require reclamation and revegetation of the site following completion of mining activities and habitat-based mitigation.

Yellow-breasted Chat

Yellow-breasted chat, a CDFW Species of Special Concern and County Group 1 species, was detected within riparian habitat in the southwestern portion of the site along the Sweetwater River. The project would impact approximately 0.58 acre of riparian habitat with the potential to support breeding and foraging individuals. Significant impacts to nesting individuals would be reduced to a less than significant level through the implementation of mitigation measure **BIO-7**. Impacts to potential nesting habitat are considered potentially significant but would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8** and **BIO-9,** which require reclamation and revegetation of the site following completion of mining activities and habitat-based mitigation.

Yellow Warbler

Yellow warbler is a USFWS Bird of Conservation Concern, CDFW Species of Special Concern, and County Group 2 species. The species was detected on several occasions throughout the project site. The project would impact approximately 0.58 acre of riparian habitat with the potential to support breeding and foraging individuals. Significant impacts to nesting individuals would be reduced to a less than significant level through the implementation of mitigation measure **BIO-7**. Impacts to potential nesting habitat are considered potentially significant but would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8** and **BIO-9,** which require reclamation and revegetation of the site following completion of mining activities and habitat-based mitigation.

Two-striped Garter Snake

Two-striped garter snake, a CDFW Species of Special Concern and County Group 1 species, was not observed within the project site but was determined to have a high potential to occur based on the presence of potentially suitable aquatic and riparian habitat and reported occurrences within the surrounding area. The proposed project would result in impacts to 0.55 acre of disturbed wetland, 0.44 acre of southern cottonwood-willow riparian forest, 0.13 acre of southern willow scrub, 0.01 acre of tamarisk scrub, and 2.7 acres of constructed ponds with the potential to support the species. Potentially significant impacts to suitable habitat for two-striped garter snake would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8** and **BIO-9,** which require reclamation and revegetation of the site following the completion of mining activities and habitat-based mitigation. Mining and grading activities within the project could potentially result in direct impacts to two-striped garter snake if found to occur within the project site. Such impacts would be considered significant and would be reduced to a less than significant level through the implementation of mitigation measure **BIO-11**.

Western Spadefoot

Western spadefoot, a CDFW Species of Special Concern and County Group 2 species, was not observed within the project site but was determined to have a high potential to occur based on the presence of potentially suitable aquatic and riparian habitat and reported occurrences within the surrounding area. The proposed project would result in impacts to 0.55 acre of disturbed wetland, 0.58 acre of potential wetland/riparian habitat, and 2.7 acres of constructed ponds with the potential to support the species. Potentially significant impacts to suitable habitat for western spadefoot would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8** and **BIO-9,** which require reclamation and revegetation of the site following completion of mining activities and habitat-based mitigation. Mining and grading activities within the project could potentially result in direct impacts to western spadefoot if found to occur within the project site. Such impacts would be considered significant and would be reduced to a less than significant level through the implementation of mitigation measures **BIO-11** and **BIO-12**.

Mexican Long-tongued Bat

Mexican long-tongued bat, a CDFW Species of Special Concern and County Group 2 species, was not detected within the project site but was determined to have a high potential to occur based on documented occurrences within the project vicinity. This species is typically associated with urban areas within coastal southern California and buildings within the project could potentially provide suitable roosting habitat. This species forages on night blooming flowers of agaves (Agavaceae) and cacti (Cactaceae). Potentially significant impacts to bat foraging habitat would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8**, **BIO-9**, and **BIO-10**, which require reclamation and revegetation of the site following the completion of mining activities and habitat-based mitigation. Impacts to roosting bats would be considered significant and would be reduced to a less than significant level through the implementation of mitigation measure **BIO-13**.

Townsend's Big-eared Bat

Townsend's big-eared bat, a CDFW Species of Special Concern and County Group 2 species, was detected within the project site. The species likely utilizes the site for foraging opportunities but is unlikely to roost within the project site as preferred roosting sites are not present. Although buildings within the project site could provide potential roosting habitat, this species is highly susceptible to disturbance and will abandon its roost if disturbed. Impacts to potentially suitable foraging habitat would be less than significant as extensive foraging habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity. As such, the project would not adversely affect the long-term survival of the species within the local area. Regardless, impacts to bat foraging habitat would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8**, **BIO-9**, and **BIO-10**, which require reclamation and revegetation of the site following the completion of mining activities and habitat-based mitigation.

Western Mastiff Bat

Western mastiff bat, a CDFW Species of Special Concern and County Group 2 species, was detected within the western portion of the project site. The species likely utilizes the site for foraging opportunities but is unlikely to roost within the project site, as preferred roosting sites are not present. Impacts to potentially suitable foraging habitat would be less than significant as extensive foraging

habitat for the species is already preserved throughout the region within the SDNWR and other open space areas located in the project vicinity. As such, the project would not adversely affect the long-term survival of the species within the local or area. Regardless, impacts to bat foraging habitat would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8**, **BIO-9**, and **BIO-10**, which require reclamation and revegetation of the site following the completion of mining activities and habitat-based mitigation.

Western Red Bat

Western red bat, a CDFW Species of Special Concern and County Group 2 species, was detected within the western portion of the project site. This tree roosting species has the potential to roost within riparian habitat and planted trees within the project site. The species would also be expected to utilize the site for foraging opportunities. As such, the project would result in impacts to potential foraging and roosting habitat for the species. Potentially significant impacts to bat foraging habitat would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8**, **BIO-9**, and **BIO-10**, which require reclamation and revegetation of the site following the completion of mining activities and habitat-based mitigation. Impacts to roosting bats would be considered significant and would be reduced to a less than significant level through the implementation of mitigation measure **BIO-13**.

Non-Significant Impacts under County Guideline 3.1.2.B

The project would not result in significant impacts to San Diego ambrosia or Robinson's pepper grass. San Diego ambrosia is discussed above in Section 3.2.1.A, while the remaining species are discussed below.

Robinson's Pepper Grass

Robinson's pepper grass is a CRPR 4.3 and County List A species. The species was not detected within the project site during the 2019 and 2022 rare plant surveys, but the project would result in impacts to 1.2 acres of Diegan coastal sage scrub with the potential to support the species. However, these impacts would be less than significant as the species was not found to occur within the project site and the small amount of potential habitat that would be impacted would not support a significant population of the species.

C. The project would impact the local long-term survival of a County List C or D plant species or a County Group 2 animal species.

County List C or D Plant Species

Three County List D plant species would be impacted by the project: San Diego County viguiera, San Diego sagewort, and southwestern spiny rush, as discussed further below. No other County List C or D plant species would be impacted by the project.

San Diego County Viguiera

San Diego County viguiera is a County List D plant and has a CRPR of 4.3. The project would impact the five individuals of San Diego County viguiera observed within the project site along the project's

northeastern boundary. One individual located along the project's southeastern boundary would be avoided by the proposed project. Though the project would not adversely impact the local long-term survival of the species, direct impacts to San Diego County viguiera individuals are considered potentially significant but would be reduced to a less than significant level through the implementation of mitigation measure **BIO-10**, which requires habitat-based mitigation.

San Diego Sagewort

San Diego sagewort is a CRPR 4.2 and County List D species. Two San Diego sagewort individuals observed at the western project boundary at the edge of southern riparian forest habitat would be impacted by the proposed project. Five individuals located along the project's western boundary where it abuts the SDNWR would be avoided by the proposed project and would be preserved within the project's BOS. Though the project would not adversely impact the local long-term survival of the species, direct impacts to San Diego sagewort individuals are considered potentially significant but would be reduced to a less than significant level through the implementation of mitigation measure **BIO-9**, which requires habitat-based mitigation.

Southwestern Spiny Rush

Southwestern spiny rush is a CRPR 4.2 species and County List D species. Three individuals occurring within the southwestern portion of the project along the Sweetwater River would be impacted by the removal of the existing bridge crossing. Fourteen individuals located along the Sweetwater River in the western portion of the project site would be avoided by the proposed project and would be preserved within the project's BOS. Though the project would not adversely impact the local long-term survival of the species, direct impacts to southwestern spiny rush individuals are considered potentially significant but would be reduced to a less than significant level through the implementation of mitigation measure **BIO-10**, which requires habitat-based mitigation.

County Group 2 Animal Species

Project impacts to the following County Group 2 animal species are potentially significant, although the project would not impact the local long-term survival of any of these species: barn owl, Belding's orange-throated whiptail, great blue heron, green heron, monarch butterfly, western bluebird, yellow warbler, small-footed myotis, and Yuma myotis. Additionally, the project would result in impacts to suitable habitat with the potential to support the following County Group 2 animal species that were determined to have high potential to occur within the project site: California horned lark, Canada goose, merlin, Mexican long-tongued bat, and western spadefoot. These species are further discussed below, except for Mexican long-tongued bat, western spadefoot, and yellow warbler, which are discussed above within Section 3.2.1.B.

Barn Owl

Barn owl, a County Group 2 species, was observed in the northeastern portion of the site. The proposed project would impact potential breeding and foraging habitat for this species. Direct impacts to nesting individuals would be reduced to a less than significant level through the implementation of mitigation measure **BIO-7**. Though the project would not adversely impact the local long-term survival of the species, loss of potential nesting and foraging habitat during mining and reclamation activities would be a potentially significant impact. However, with the implementation of mitigation measures **BIO-8 and**

BIO-9, which involve the reclamation of the site following mining activities through the revegetation of upland and wetland/riparian habitat within the expanded Sweetwater River floodplain, impacts to this species are considered less than significant.

California Horned Lark

California horned lark, a CDFW Watch List and County Group 2 species, was not observed within the project site but was determined to have a high potential to occur based on the presence of potentially suitable habitat and reported occurrences within the project vicinity. The project would result in impacts to potential foraging and breeding habitat for the species. Direct impacts to nesting individuals would be reduced to a less than significant level through the implementation of mitigation measure **BIO-7**. Though the project would not adversely impact the local long-term survival of the species, loss of potential nesting and foraging habitat during mining and reclamation activities would be a potentially significant impact. However, with the implementation of mitigation measure **BIO-8**, which involves reclamation of the site following mining activities through the revegetation of upland and wetland/riparian habitat within the expanded Sweetwater River floodplain, impacts to this species are considered less than significant.

Canada Goose

Canada goose, a County Group 2 species, was not observed within the project site but was determined to have a high potential to occur based on the presence of suitable overwintering habitat and documented occurrences within the project vicinity. This species is an uncommon winter visitor in San Diego, but previous breeding records occur within the county. The proposed project would result in impacts to suitable wintering and foraging habitat for the species, and potential breeding habitat. Direct impacts to nesting individuals would be reduced to a less than significant level through the implementation of mitigation measure **BIO-7**. Though the project would not adversely impact the local long-term survival of the species, loss of potential nesting and foraging habitat during mining and reclamation activities would be a potentially significant impact. However, with implementation of mitigation measure **BIO-8**, which involves reclamation and revegetation of the site following mining activities, impacts to this species are considered less than significant.

Green Heron and Great Blue Heron

Green heron and great blue heron are County Group 2 species that have the potential to forage within riparian areas and man-made ponds present within the project site. The site is not expected to support a rookery site or significant population of these two heron species based on the low numbers observed. The project would impact 2.7 acres of artificial ponds and 0.58 acre of wetland/riparian habitat that provide suitable breeding and foraging habitat for these species. Direct impacts to nesting individuals would be reduced to a less than significant level through the implementation of mitigation measure **BIO-7**. Though the project would not adversely impact the local long-term survival of the species, loss of potential nesting and foraging habitat during mining and reclamation activities would be a potentially significant impact. However, with the implementation of mitigation measures **BIO-8** and **BIO-9**, which involve the reclamation and revegetation of the site following mining activities and habitat-based mitigation, impacts to this species are considered less than significant.

Merlin

Merlin, a CDFW Watch List and County Group 2 species, was not observed within the project site but was determined to have a high potential to occur based on the presence of suitable overwintering and foraging habitat and documented occurrences within the project vicinity. This species is an uncommon winter visitor in southern California occurring within San Diego from October to March (Unitt 2004). As such, the project would not result in impacts to suitable breeding habitat or breeding individuals. The project would result in impacts to potential overwintering and foraging habitat for the species. Though the project would not adversely impact the local long-term survival of the species, loss of potential overwintering and foraging habitat during mining and reclamation activities would be a potentially significant impact. However, with the implementation of mitigation measure **BIO-8**, which involves the reclamation and revegetation of the site following mining activities, impacts to this species are considered less than significant.

Western Bluebird

Western bluebird, a County Group 2 and MSCP covered species, was observed in multiple locations throughout the project site. The project would impact the golf course where this species is known to forage and would remove trees suitable for nesting. Direct impacts to nesting individuals would be reduced to a less than significant level through the implementation of mitigation measure **BIO-7**. Though the project would not adversely impact the local long-term survival of the species, loss of potential nesting and foraging habitat during mining and reclamation activities would be a potentially significant impact. However, with the implementation of mitigation measure **BIO-8**, which involves reclamation of the site following mining activities through the revegetation of upland and wetland/riparian habitat within the expanded Sweetwater River floodplain, impacts to this species are considered less than significant.

Monarch Butterfly

Monarch butterfly is a County Group 2 species. A single monarch butterfly was observed flying through the project site. This species is expected to migrate through the region but is not expected to roost on the site due to its inland location. Though the project would not adversely impact the local long-term survival of the species, loss of potential habitat during mining and reclamation activities would be a potentially significant impact. However, with implementation of mitigation measure **BIO-8**, which involves reclamation and revegetation of the site following mining activities, impacts to this species are considered less than significant.

Belding's Orange-throated Whiptail

Belding's orange-throated whiptail, a CDFW Watch List, County Group 2, and MSCP covered species, was observed in the eastern and northeastern portions of the site in areas that would be impacted by the proposed project (Figure 15). The Project would impact 1.2 acres of suitable Diegan coastal sage scrub habitat for the species. Though the project would not adversely impact the local long-term survival of the species, loss of potential habitat during mining and reclamation activities would be a potentially significant impact. However, with the implementation of mitigation measures **BIO-8** and **BIO-10**, which require reclamation and revegetation of the site following the completion of mining activities and habitat-based mitigation, impacts to this species are considered less than significant.

Small-footed Myotis

Small-footed myotis, a County Group 2 species, was detected within the eastern portion of the project site. The species likely utilizes the site for foraging and has the potential to roost within trees and buildings present within the project site. As such, the project would result in impacts to potential foraging and roosting habitat for the species. Potentially significant impacts to bat foraging habitat would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8**, **BIO-9**, and **BIO-10**, which require reclamation and revegetation of the site following the completion of mining activities and habitat-based mitigation. Impacts to roosting bats would be considered significant and would be reduced to a less than significant level through the implementation of mitigation measure **BIO-13**.

Yuma Myotis

Yuma myotis, a Group 2 species, was detected within the western and eastern portions of the project site. The species likely utilizes the site for foraging and has the potential to roost within trees and buildings present within the project site. As such, the project would result in impacts to potential roosting and habitat for the species. Potentially significant impacts to bat foraging habitat would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8**, **BIO-9**, and **BIO-10**, which require reclamation and revegetation of the site following the completion of mining activities and habitat-based mitigation. Impacts to roosting bats would be considered significant and would be reduced to a less than significant level through the implementation of mitigation measure **BIO-13**.

Non-Significant Impacts under County Guideline 3.1.2.C

The project would not result in significant impacts to singlewhorl burrobrush.

Singlewhorl burrobrush

Singlewhorl burrobrush is a CRPR 2B.2 species. Singlewhorl burrobrush was not detected within the project site during rare plant surveys conducted in 2019 and 2022, but the project would result in impacts to 1.14 acres of wetland habitat and 1.2 acres of Diegan coastal sage scrub with the potential to support the species. However, these impacts would be less than significant as the species was not found to occur within the project site and the small amount of potential habitat that would be impacted would not support a significant population of the species.

G. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species.

The extreme southwestern and eastern portions of the site are located within the designated Sweetwater Reservoir/San Miguel Mountain/Sweetwater River and McGinty Mountain/Sycuan Peak-Dehesa BRCAs, respectively (County 1997). However, these areas primarily consist of disturbed and developed areas associated with the golf course and are highly degraded and fragmented from adjacent natural areas by the golf course development. The site is identified as a linkage between these core areas in the MSCP (County 1997), and small portions of the site are identified as PAMA (16.4 acres). The

project site mainly consists of an existing golf course, which lacks adequate vegetative cover preferred by many species for use of an area as a corridor. The on-site reach of the river is narrow and mostly devoid of native riparian habitat (except in the southwest where it connects directly to off-site conserved lands), and the site is fenced in many locations, with both historic and ongoing human-related disturbances spanning several decades. Though its current function is likely constrained by the site's historic and ongoing human-related disturbances associated with the golf course development, ongoing maintenance, and operations, local wildlife still utilizes the site for foraging and dispersal activities, and the location of the site along the Sweetwater River and between two MSCP core areas gives it high restoration potential that could significantly increase the function and viability of the linkage.

Extraction and reclamation activities would temporarily impact lands mapped as BRCA and PAMA and the low-functioning linkage; however, mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for wildlife use. Additionally, existing stands of native riparian habitat east of Steele Canyon Road and in the southwestern portion of the site along the Sweetwater River would be avoided by project activities and preserved within the project's BOS providing suitable nesting and foraging habitat for wildlife species. As such, temporal impacts to these areas during mining and reclamation activities would be less than significant as any wildlife temporarily displaced by activities would be anticipated to reoccupy the area once the activities had concluded and impacts.

The project would result in direct impacts to lands mapped as BRCA and PAMA, and would impact sensitive habitats found to support, or with the potential to support, special-status wildlife species. Direct impacts to lands mapped as BRCA and PAMA would be reduced to a less than significant level through the implementation of mitigation measures **BIO-8** through **BIO-10**, which involve the reclamation of the site following mining activities through the revegetation of upland and wetland/riparian habitat within the expanded Sweetwater River floodplain and habitat-based mitigation. As part of the reclamation process, the project would ultimately contribute approximately 149.0~~150.7~~ acres of preserved, rehabilitated, revegetated, and restored habitat to the linkage through placement of these areas within a BOS easement (Figure 16) in accordance with mitigation measure **BIO-14**. This BOS includes lands mapped as BRCA and PAMA and would restore and improve the connection of the linkage through the establishment of a widened riparian corridor along the Sweetwater River. The restored linkage would connect the project site to off-site areas within the SDNWR providing important foraging, dispersal, breeding, and migratory habitat for several special-status animals, including the coastal California gnatcatcher and least Bell's vireo. As such, the project would result in a biological superior condition compared to its current uses and functions and would have a less than significant impact on the viability of a core wildlife area. Furthermore, the BOS will be managed in accordance with a County-approved RMP, pursuant to mitigation measure **BIO-15**, to ensure the preservation of native habitats and long-term management of the preserve.

H. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term.

Potentially significant indirect impacts to sensitive species resulting from lighting, fugitive dust, human access/activity, domestic animals, and exotic species would be avoided through the following project design features and mitigation measures (1) all project-related lighting would be required to adhere to

Division 9 of the San Diego County Light Pollution Code, with lighting within the proposed project footprint adjacent to undeveloped habitat (including reclaimed areas) of the lowest illumination allowed for human safety, and selectively placed, shielded, and directed away from these areas; (2) the project would implement a Fugitive Dust Plan during mining and reclamation activities that would include fugitive dust control measures to minimize dust emissions and meet applicable dust control requirements; (3) permanent fencing would be installed around open space, and signs precluding access except on established hiking trails would be posted (pursuant to mitigation measure **BIO-14**); (4) off-leash pets would not be allowed on trails or public areas and signs would be posted along trails notifying pet owners of this regulation; (5) weed control measures would be implemented during mining and reclamation activities in accordance with Reclamation Plan, with the occurrence of weeds on-site monitored by quarterly visual inspection during mine operations and removal initiated if the inspection reveals that weeds have become, or are becoming, established; (6) only non-invasive plant species would be included in the landscape plan for the site (species not listed on the California Invasive Plant Inventory prepared by the California Invasive Plant Council [Cal-IPC; 2020]).

Mining and reclamation operations would predominately occur within areas already disturbed by golf course development and extraction activities would be limited to approximately 20 to 30 acres at any one time. As such, the total area of disturbance at any one time would be limited to portions of the site actively being mined or reclaimed, and potential indirect impacts to existing open space, other natural areas, and special-status species would be localized in these areas. Following the completion of extraction activities, the project site would be reclaimed in accordance with mitigation measure **BIO-8**. The post-reclamation condition of the project site proposes a widened river floodplain revegetated with native wetland/riparian and coastal sage scrub habitat. The level pads adjacent to Willow Glen Drive would be hydroseeded with an erosion control mix to aid in soil stabilization and erosion control. Preserved and restored native habitat would be placed within BOS, pursuant to mitigation measure **BIO-14**, and would be contiguous with off-site habitat to the east and west, including the SDNWR. Furthermore, the BOS would be managed in accordance with a County-approved RMP, pursuant to mitigation measure **BIO-15**, to ensure the preservation of native habitats and long-term management of the preserve. Therefore, impacts to open space areas and sensitive species resulting from indirect impacts from human access, domestic animals, exotic species, or lighting would be less than significant with the incorporation of design features and mitigation measures. Potential indirect impacts from construction noise are discussed under Guideline 3.1.L.

L. The project could impact nesting success of coastal California gnatcatcher, least Bell's vireo, and tree-nesting raptors through grading, clearing, fire fuel modification, and/or other noise generating activities such as construction.

Project construction could impact the nesting success of coastal California gnatcatcher, least Bell's vireo, and tree-nesting raptors, all of which have the potential to nest on and/or within 500 feet of impact areas. Removal of vegetation during the breeding season could result in significant impacts to nesting individuals. Noise from such sources as clearing, grading, and mining and reclamation activities could result in a potential significant indirect impact to wildlife. Noise-related impacts would be considered significant if sensitive species (such as coastal California gnatcatcher, least Bell's vireo, and raptors) were displaced from their nests and failed to breed. If coastal California gnatcatcher, least Bell's vireo, or tree-nesting raptors are nesting within 500 feet of the impact area, effects resulting from construction noise would be potentially significant. These impacts would be reduced to a less than significant level through the implementation of mitigation measures **BIO-1** through **BIO-5**, and **BIO-7**.

3.2.2 No Impact or Less than Significant Impacts

The project would not result in significant impacts under **Guidelines 3.1.D, 3.1.E, 3.1.F, 3.1.I, 3.1.J., and 3.1.K** for the following reasons:

D. The project may impact arroyo toad aestivation, foraging, or breeding habitat.

The project site contains potentially suitable breeding, aestivation, and foraging habitat for arroyo toad; however, no arroyo toads were detected within or adjacent to the project site during protocol level surveys in 2019. The Sweetwater River is within the historical range of the species, but the river and associated floodplain within the region have been heavily modified by development, including the Singing Hills Golf Resort and rural residences upstream of the site. Furthermore, the hydrological regime of the river has been substantially altered by the creation of artificial impoundments, including the Loveland Reservoir upstream and the Sweetwater Reservoir downstream of the site. The Sweetwater dam was constructed in 1888 and the Loveland dam was built in 1945, both of which are operated by the Sweetwater Authority and control releases of water to downstream areas.

Potentially suitable habitat within the project site has been heavily degraded by the development of the golf course and previous mining activities. These disturbances have resulted in the removal and conversion of riparian habitat to turf grass throughout most of the site, along with the realignment and constriction of the river channel. Therefore, potentially suitable habitat for arroyo toad is now restricted to a single stand of riparian habitat in the southwestern portion of the site, and although this area has been subjected to past disturbances, it connects to more extensive, higher quality habitat off-site within the SDNWR. The species is not expected to occupy the project site as toads have not been detected south of Sloan Canyon Road, located over five miles upstream of the site, since 1997 (USFWS 2014; USGS 2005a), and focused arroyo toad surveys conducted within the SDNWR, which occurs east and immediately west of site, were negative (Martin 2005). Furthermore, focused arroyo toad surveys were conducted within the project site by the USGS in 2003, during which no arroyo toads were observed (USGS 2005b). Although it is possible that toads may repopulate the reach of the Sweetwater River south of Sloan Canyon Road in the future, it is currently unlikely that a self-sustaining population of arroyo toads persists in the local area.

The project site does not contain habitat critical to the survival of this species and the reach of river within the project site is currently considered unoccupied by this species given the lack of observations in the area for several years, including during the 2019 protocol surveys; therefore, no direct impacts to arroyo toad would occur. Impacts to potentially suitable arroyo habitat would be less than significant since the species was not found to occur within the project site.

E. The project would not impact golden eagle habitat.

The project site does not contain suitable nesting habitat for golden eagle and the site is not within any known golden eagle territory. The site does not contain adequate eagle foraging habitat as it consists of a developed and abandoned golf course, which has historically been subjected to human visitation and disturbances. Golden eagles are less tolerant of development and areas associated with high amounts of human visitation and are known to avoid these areas. Golden eagles are occasional visitors to the SDNWR; however, no known active nest sites occur within 4,000 feet of the project site. The closest golden eagle nest is the San Miguel Mountain pair, which nests over eight miles southeast of the site. A

prime foraging area for this pair is the area around Sweetwater Reservoir, west of the project. The project would not impact golden eagle habitat or a known golden eagle territory, and the site does not contain suitable foraging habitat for the species based on current and past commercial uses. Therefore, impacts to golden eagle habitat would be less than significant.

F. The project would not result in a loss of functional foraging habitat for raptors.

The project site consists of an active and abandoned golf course, which has been historically subjected to frequent human visitation and ongoing disturbances related to golf course operations, such as regular mowing, irrigation, and pest management. In its current state, the project site provides relatively low- to moderate-quality foraging opportunities for common raptors that are resident and migratory to the region. Although the project site provides some function and value for raptor foraging, it has been a golf course for decades and has likely not functioned as a local or regional foraging resource of importance for raptors considering that species observed within the project site are known to be tolerant to urbanization and other disturbances. Other more expansive areas occur in the local area and region that provide foraging habitat, such as the SDNWR to the south and west, and McGinty Mountain Ecological Reserve to the east. Although the project would result in the temporary loss of potential foraging habitat within subphases that are being actively mined, potential foraging opportunities for raptors would remain available in portions of the site outside of the active subphase. Since mining and reclamation activities would occur incrementally in 20- to 30-acre subphases, the majority of the site would remain either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for foraging throughout the mining period. As such, the temporal loss of potential raptor foraging habitat during mining and reclamation activities would not affect the local long-term survival of raptors within the local area and impacts would be less than significant.

I. The project would not impact occupied burrowing owl habitat.

The project site consists of a developed and an abandoned golf course, which have historically been subjected to ongoing disturbances, such as mowing and human visitation. The project site is also characterized by highly sandy and friable soils, which are not suitable for burrowing owls. As such, the site does not support suitable burrowing owl habitat and no burrowing owl or burrowing owl sign was detected within the site during biological surveys. Therefore, the project would have a less than significant impact on burrowing owl.

J. The project would not impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.

The project site does not contain suitable habitat (i.e., cacti thickets) for the coastal cactus wren. Therefore, the project would have a less than significant impact on cactus wren.

K. The project would not impact occupied Hermes copper butterfly habitat.

The project site does not support Hermes copper butterfly habitat. The species' host plant, spiny redberry (*Rhamnus crocea*), was not observed within the project site and Hermes copper is not likely to occur. Therefore, the project would have a less than significant impact on Hermes copper.

3.3 CUMULATIVE IMPACT ANALYSIS

The area of consideration for cumulative impacts on biological resources was based on an approximate five-mile radius from the project site. This study area includes surrounding PAMA connections to the project site, as well as Preserve areas (i.e., SDNWR, Sweetwater Reservoir, Ranch Jamul Ecological Reserve, McGinty Mountain Preserve), and foothills and canyons abutting the Sweetwater River. The cumulative study area was chosen because it includes areas with similar biological resources as the project site, as well as capturing the local watershed for the site. The area of consideration includes lands within a reasonable distance from the project site that may have a biologically based connection to the site in terms of habitat connectivity and development in the region.

A total of 15 projects (including the proposed project) were reviewed for this cumulative analysis (Table 10, *Cumulative Impacts on Biological Resources*; Figure 20, *Cumulative Impacts*). Of these 15 cumulative projects, nine would result in significant or potentially significant cumulative impacts to sensitive biological resources. The remaining six projects either would not result in impacts to sensitive biological resources or information on impacts is not available. The project has the potential to contribute to the cumulative impact on coastal California gnatcatcher and least Bell's vireo as discussed below.

The cumulative projects with available data would impact 118.78 acres of coastal sage scrub habitat, including impacts from the proposed project. The loss of coastal sage scrub habitat would represent a potential cumulative impact on the coastal California gnatcatcher. This impact would be potentially significant. The proposed project would result in impacts to 1.2 acres of coastal sage scrub, no portions of which were determined to support coastal California gnatcatcher, which is considered less than cumulatively considerable. Projects are required to implement avoidance measures so that direct, inadvertent take of gnatcatcher individuals is prevented. In addition, projects are required to compensate impacts on coastal sage scrub at a minimum 1:1 ratio, which ensures that the loss of occupied and suitable habitat for the gnatcatcher is fully compensated. The proposed project would implement the required gnatcatcher avoidance measures and compensate for the loss of coastal sage scrub habitat at a 1.5:1 ratio through on-site preservation of existing and revegetated coastal sage scrub habitat within a BOS easement. The post-reclamation condition of the site would result in a biologically superior condition following site reclamation compared to its current condition as developed golf course. The Sweetwater River floodplain would be substantially widened and revegetated with native riparian habitat along the channel's bottom and with coastal sage scrub along the constructed channel slopes. These areas would be placed within a BOS easement and would be contiguous with existing native habitat located east and west of the site, including preserved areas within the SDNWR. With the implementation of these measures and project design features, the proposed project would have a less than significant contribution to the potentially significant cumulative impact on coastal sage scrub habitat or coastal California gnatcatcher.

The cumulative projects would impact 4.36 acres of riparian/wetland habitat, which is the preferred habitat of the least Bell's vireo. The cumulative loss of riparian/wetland habitat would represent a significant cumulative impact on least Bell's vireo. The proposed project would result in impacts to 1.14 acres of riparian/wetland habitat, a portion of which was determined to support least Bell's vireo. As with the coastal California gnatcatcher, projects are required to implement avoidance measures so that direct, inadvertent take of vireo is prevented. In addition, projects are required to compensate impacts on riparian/wetland habitat at a minimum 1:1 ratio, which ensures that the loss of occupied and suitable

habitat for vireo is fully compensated. The proposed project would implement required vireo avoidance measures and compensate the loss of riparian/wetland habitat at a minimum 1:1 ratio through the on-site preservation, rehabilitation, restoration, and revegetation of riparian habitat along the expanded Sweetwater River floodplain. The post-reclamation condition of the site would result in a biologically superior condition following site reclamation compared to its current condition as developed golf course. The Sweetwater River floodplain would be substantially widened and revegetated with native riparian habitat along the channel's bottom and with coastal sage scrub along the constructed channel slopes. These areas would be placed within a BOS easement and would be contiguous with existing riparian habitat located east and west of the site, including preserved areas within the SDNWR. With the implementation of these measures and project design features, the proposed project would have a less than significant contribution to the potentially significant cumulative impact on wetland/riparian habitat or least Bell's vireo.

As the proposed project would ultimately be in conformance with the South County MSCP Subarea Plan and any other projects proposed in the vicinity would also have to follow the South County MSCP Subarea Plan, cumulative impacts would be considered fully mitigated.

Table 10
CUMULATIVE IMPACTS ON BIOLOGICAL RESOURCES

Project Number[2]	Project Name[1]	Resource			
		Riparian/ Wetland		CSS[2,3]	
		Impacts (I)	Mitigation (M)	I	M
PDS2004-TM-5289; PDS2004-ER-03-19-04; PDS2004-3100-5289	Jamul Highlands Subdivision	3.04	--	0.31	--
PDS2002-TPM 20628; PDS2002-3200-20628	Yacoo Minor Subdivision	0	0	1.44	1.56
PDS2004-TPM-20868; PDS2004-ER-91-19-038A; PDS2004-3200-20868	Steinbarth Minor Subdivision	0	0	0.86	0.86
PDS2002-TPM 20594; PDS2002-3200-20594	Pioneer Minor Subdivision	--	0.44	0.03	0.03
PDS2005-MUP-05-010; PDS2005-3300-05-010	St. Gregory of Nyssa Greek Orthodox Church	--	--	--	--
PDS2005-TM 5460; PDS2005-TM-5460TE; PDS2005-ER-3910-05-19-023; PDS2005-3100-5460	Simpson Farms Major Subdivision	0.14	0.42	95.0	95.0
DS2018-TM-5629; PDS2018-GPA-18-005; PDS2018-REZ-18-004; PDS2018-STP-18-016	Ivanhoe Ranch	--	--	--	--
N/A	Cuyamaca College Master Plan Revisions	--	--	--	--

Project Number[2]	Project Name[1]	Resource			
		Riparian/ Wetland		CSS[2,3]	
		Impacts (I)	Mitigation (M)	I	M
PDS2014-GPA-14-003; PDS2014-REZ-14-003; PDS2014-TM-5588; PDS2014-STP-14-015	Sweetwater Place	0	0	0.64	0.68
PDS2015-MUP-15-006; PDS 2015-ER-15-19-002	College Preparatory Middle School	0	0	0	0
PDS2016-GPA-16-005; PDS2016-REZ-16-003; PDS2016-ER-16-19-001 PDS2016-MUP-16-003	Skyline Retirement Center	0	0	4.4	--
PDS2018-TPM-21262; PDS-2018-MUP-18-008	Jamul Commercial	--	--	--	--
PDS2015-ER-89-19-015I; PDS2015-REZ-15-008; PDS2015-TM-5608; PDS2015-SPA-15-002; PDS2015-STP-15-016; PDS2015-MUP-89-015W4; PDS2015-GPA-15-006	Sweetwater Vistas	0.04	0.04	14.9	22.4
PDS2018-SPA-18-002; PDS2018-GPA-18-004; PDS2018-REZ-18-002; PDS2018-STP-18-013; MUP-70-299W1M32; PDS2018-ER-18-19-003; PDS2018-TM-5627	Aventine at Sweetwater Springs	0	0	0	0
	Subtotal	***3.22***	***0.9***	***117.58***	***120.53***
PDS2018-MUP-18-023 PDS2018-RP-18-001 PDS2018-ER-18-19-007	Cottonwood Sand Mine (proposed project)	1.14	3.42	1.2	1.8
	TOTAL	**4.36**	**4.32**	**118.78**	**122.33**

[1] ER = Environmental Review; GPA = General Plan Amendment; MUP = Major Use Permit; REZ = Rezone; RP = Reclamation Plan; SPA = Specific Plan Amendment; STP = Site Plan: TM = Tentative Map; TPM = Tentative Parcel Map; N/A / -- = Information Not Available or Not Applicable.

[2] CSS=coastal sage scrub

[3] This column combines all sage scrub habitat variants and ecotones (e.g., coastal sage-chaparral scrub, flat-topped buckwheat scrub, coyote brush scrub, etc.)

3.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Direct impacts to coastal California gnatcatcher and least Bell's vireo breeding and foraging habitat and nesting individuals would be mitigated through the implementation of the following measures **BIO-1** through **BIO-4**:

BIO-1 Mitigation for impacts to 1.2 acres of potential foraging habitat for coastal California gnatcatcher, comprised solely of Diegan coastal sage scrub, shall occur at a 1.5:1 ratio for a total mitigation requirement of 1.8 acres. Mitigation shall occur through the on-site preservation of

0.6 acre of Diegan coastal sage scrub and on-site revegetation of 11.3 acres of Diegan coastal sage scrub for a total of 11.9 acres of Diegan coastal sage scrub to be preserved within the biological open space easement.

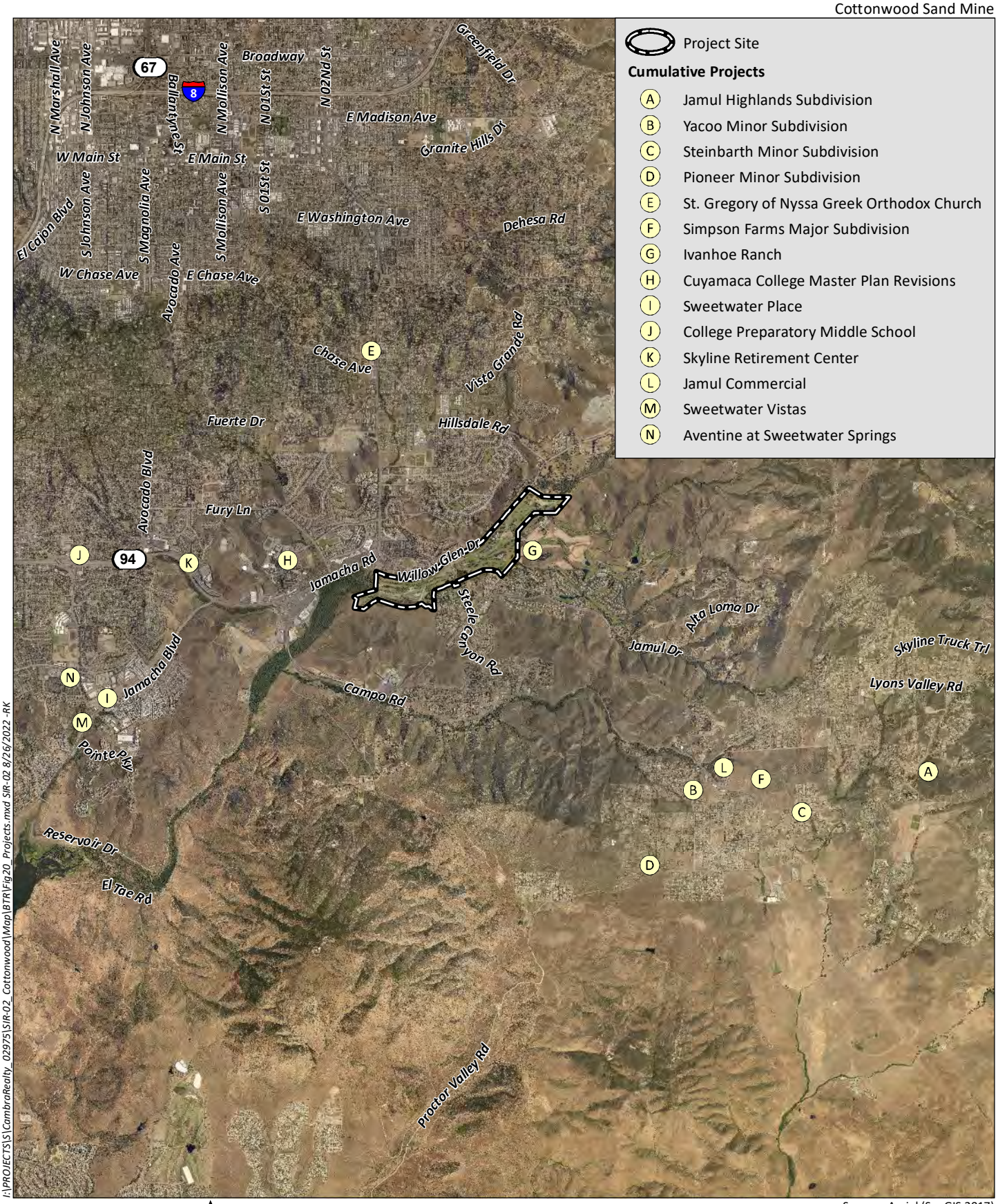
BIO-2 ~~Grading or clearing of vegetation within 500 feet of occupied Diegan coastal sage scrub during the breeding season of the coastal California gnatcatcher (March 1 to August 15) shall be avoided to the extent feasible.~~ If clearing or grading ~~would~~ occurs within 500 feet of suitable coastal California gnatcatcher habitat during the gnatcatcher breeding season (March 1 through August 15) ~~for the gnatcatcher~~, a qualified biologist shall conduct a pre-construction survey no more than three days (72 hours) prior to commencement of activities to determine whether gnatcatchers occur within 500 feet of the proposed impact area(s). If there are no gnatcatchers nesting (includes nest building or other breeding/nesting behavior) within that area, grading and clearing shall be allowed to proceed. If any gnatcatchers are observed nesting or displaying breeding/nesting behavior during the pre-construction survey or additional surveys within the area, construction shall be postponed within 500 feet of any location at which gnatcatchers have been observed until a qualified biologist has determined that all nesting (or breeding/nesting behavior) has ceased or until after August 15.

BIO-3 Mitigation for impacts to 0.58 acre of potential nesting and foraging habitat for least Bell's vireo (southern cottonwood-willow riparian forest, disturbed southern willow scrub, and tamarisk scrub) shall occur at a minimum 3:1 ratio with at least 1:1 creation (establishment/re-establishment) for a total mitigation requirement of 1.74 acres. Mitigation shall occur through on-site preservation of 13.85~~6~~ acres of wetland and riparian habitat, on-site rehabilitation of 7.36 acres of riparian habitat, and on-site re-establishment and revegetation of 107.63~~2~~ acres of riparian habitat for a total of 128.84 acres of wetland riparian habitat to be preserved within the biological open space easement.

BIO-4 ~~Grading or clearing of riparian habitat during the breeding season of the least Bell's vireo (March 15 through September 15) shall be avoided to the extent feasible.~~ If clearing or grubbing ~~must~~ occurs within 500 feet of suitable least Bell's vireo habitat during the ~~least Bell's~~ vireo breeding season (March 15 through September 15), a qualified biologist shall conduct a pre-construction survey no more than three days (72 hours) prior to commencement of activities to determine whether vireos occur within 500 feet of proposed impact area(s). Impacts to occupied habitat shall be avoided. If there are no vireos nesting (includes nest building or other breeding/nesting behavior) within that area, grading and clearing shall be allowed to proceed. If any vireos are observed nesting or displaying breeding/nesting behavior during the pre-construction survey or additional surveys within that area, construction shall be postponed within 500 feet of any location at which vireos have been observed until a qualified biologist has determined that all nesting (or breeding/nesting behavior) has ceased or until after September 15.

Indirect impacts to nesting gnatcatchers, vireo, and raptors would be mitigated through the implementation of the following measure **BIO-5**:

BIO-5 If operation of construction or excavation equipment is initiated within 500 feet of suitable habitat during the breeding seasons for the coastal California gnatcatcher (March 1 to August 15), nesting raptors (January 15 to July 15), or least Bell's vireo (March 15 to September 15), pre-construction survey(s) shall be conducted by a qualified biologist to determine whether



I:\PROJECTS\S\CambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig20_Projects.mxd SIR-02 8/26/2022 -RK

0 6,000 Feet

Source: Aerial (SanGIS 2017)

HELIX Environmental Planning

Cumulative Impacts

Figure 20

these species occur within the areas potentially impacted by noise, with the final survey occurring within three days (72 hours) of the proposed start of construction, mining, or reclamation activities. If it is determined at the completion of pre-construction survey(s) that active nests belonging to these sensitive species are absent from the potential impact area, activities shall be allowed to proceed. If pre-construction surveys determine the presence of active nests belonging to these sensitive species, then activities shall: (1) be postponed until a qualified biologist determines the nest(s) is no longer active or until after the respective breeding season; or (2) not occur until a temporary noise barrier or berm is constructed at the edge of the impact footprint and/or around the piece of equipment to ensure that noise levels are reduced to below 60 dBA or ambient, whichever is greater. The type(s) and location(s) of noise barrier(s) shall be provided to the County and Wildlife Agencies along with the associated noise measurements demonstrating compliance with required noise level reductions. Decibel output would be confirmed by a County-approved noise specialist and intermittent monitoring by a qualified biologist to ensure that noise levels remain below 60 dBA at occupied areas.

Direct impacts to Palmer's goldenbush would be mitigated through the implementation of the following measure **BIO-6**:

BIO-6 Impacts to 234 individuals of Palmer's goldenbush shall be mitigated at a 1:1 ratio. Mitigation shall occur through planting and/or seeding of the species within on-site native revegetation areas in accordance with a revegetation plan to be approved by the County and Wildlife Agencies (USWFS and CDFW).

Potential impacts to nesting birds, including but not limited to barn owl, California horned lark, Canada goose, coastal California gnatcatcher, Cooper's hawk, great blue heron, green heron, Lawrence's goldfinch, least Bell's vireo, loggerhead shrike, oak titmouse, red-shouldered hawk, vermilion flycatcher, western bluebird, white-tailed kite, yellow-breasted chat, and yellow warbler would be mitigated through the implementation of the following measure **BIO-7**:

BIO-7 ~~Grubbing or clearing of vegetation during the general avian breeding season (February 15 through August 31) or raptor breeding season (January 15 through July 15) shall be avoided to the extent feasible.~~ If grubbing, clearing, or grading ~~would~~ occurs during the general avian breeding season (February 15 through August 31) within 300 feet of general nesting bird habitat or during the raptor breeding season (January 15 through July 15) within 500 feet of nesting raptor habitat, a qualified biologist shall conduct a pre-construction survey no more than three days (72 hours) prior to the commencement of activities to determine if active bird nests are present in the affected areas. If there are no nesting birds (includes nest building or other breeding/nesting behavior) within this area, clearing, grubbing, and grading shall be allowed to proceed. Furthermore, if construction activities are to resume in an area where they have not occurred for a period of seven or more days during the breeding season, an updated survey for avian nesting will be conducted. If active nests or nesting birds are observed within the area, the biologist shall flag the active nests and construction activities shall avoid active nests until a qualified biologist has determined that nesting behavior has ceased, nests have failed, or young have fledged.

Potential impacts to suitable breeding, wintering, and foraging habitat for special-status species, including but not limited to Belding's orange-throated whiptail, barn owl, California horned lark, Canada

goose, Cooper's hawk, great blue heron, green heron, Lawrence's goldfinch, loggerhead shrike, Mexican long-tongued bat, merlin, monarch butterfly, peregrine falcon, oak titmouse, red-shouldered hawk, sharp-shinned hawk, small-footed myotis, Townsend's big-eared bat, turkey vulture, vermilion flycatcher, two-striped garter snake, western bluebird, western mastiff bat, western red bat, western spadefoot, white-tailed kite, yellow-breasted chat, yellow warbler, and Yuma myotis would be mitigated through the implementation of the following measures **BIO-8**, **BIO-9**, and **BIO-10**:

BIO-8 Upon completion of all extraction activities, reclamation and final grading to establish the final landform shall occur in accordance with the approved Reclamation Plan. Revegetation with native species will occur within the expanded Sweetwater River floodplain and constructed bordering slopes according to a revegetation plan to be approved by the County and Wildlife Agencies (USWFS and CDFW).

BIO-9 Mitigation for impacts to 0.44 acre of southern cottonwood-willow riparian forest, 0.13 acre of disturbed southern willow scrub, 0.01 acre of tamarisk scrub, 0.01 acre of arundo-dominated riparian, and 0.55 acre of disturbed wetland shall occur at a 3:1 ratio with at least 1:1 creation (establishment/re-establishment) for a total mitigation requirement of 3.42 acres. Mitigation shall occur through on-site preservation of 13.85~~6~~ acres of wetland and riparian habitat, on-site rehabilitation of 7.36 acres of riparian habitat, and on-site re-establishment and revegetation of 107.63~~2~~ acres of riparian habitat for a total of 128.84 acres of wetland riparian habitat to be preserved within the biological open space easement.

BIO-10 Mitigation for 1.2 acres of impacts to Diegan coastal sage scrub shall occur at a 1.5:1 ratio with 1.8 acres of Tier II or Tier I habitat in the South County MSCP area within a biological resource core area. Mitigation shall occur through on-site preservation of 0.6 acre of Diegan coastal sage scrub and on-site revegetation of 11.3 acres of Diegan coastal sage scrub for a total of 11.9 acres of Tier II Diegan coastal sage scrub to be preserved within the biological open space easement.

Direct impacts to special status reptile and amphibian species not covered under the County's MSCP (including two-striped garter snake and western spadefoot), if found to occur within the proposed impact area(s), would be mitigated through the implementation of the following measure **BIO-11**:

BIO-11 Prior to any vegetation removal, grading, and/or other ground disturbing activities, a qualified biologist familiar with special status reptile and amphibian species behavior and life history shall conduct a pre-construction survey no more than two weeks prior to commencement of activities to determine whether reptile and amphibian species designated as sensitive by CDFW, but not covered under the County's MSCP, occur within proposed impact area(s). If special status reptile or amphibian species are detected during the pre-construction survey, consultation with CDFW shall be initiated to prepare species-specific protocols for proper handling and relocation procedures.

Direct impacts to western spadefoot, if found to occur within the proposed impact area(s), would be mitigated through the implementation of the following measure:

BIO-12 If western spadefoot toads, tadpoles, or egg masses are identified within the proposed impact area(s), the following measures shall be implemented: (1) A suitable relocation site(s) outside the proposed impact area(s) shall be identified by a qualified biologist. The relocation site(s)

shall be located a minimum of 50 feet outside of the proposed impact area(s), or 100 feet if available, and shall be approved by CDFW; (2) All western spadefoot adults, tadpoles, and egg masses encountered in the proposed impact area(s) shall be collected and released in the identified relocation site(s); (3) The relocation site(s) shall be monitored annually for five years during and immediately following peak breeding season (late winter to March), such that surveys can be conducted for adults as well as for egg masses and tadpoles. The results of annual monitoring shall be provided to CDFW in an annual report.

Impacts to bat species with potential to roost within the project site, including Mexican long-tongued bat, western red bat, small-footed myotis, and Yuma myotis would be mitigated through the implementation of the following measure **BIO-13**:

BIO-13 Prior to the removal of mature trees or existing buildings/structures with the potential to support roosting bats, a qualified biologist shall conduct an initial pre-construction survey no more than 30 days and no less than two weeks prior to the commencement of tree removal or demolition activities to determine if roosting bats are present in the proposed impact area(s). A letter report summarizing the survey methods and results of the survey, including negative findings, shall be submitted to the County and CDFW for review at least two weeks prior to the commencement of Project activities. If bats are detected within the proposed impact area(s) during the initial pre-construction survey, the letter report will identify measures to be implemented to avoid and minimize potential direct and indirect impacts to roosting bats, including those identified in this measure. A final pre-construction survey shall be conducted no more than three days (72 hours) prior to tree removal or demolition activities within the proposed impact area(s). If bats are not detected during the final pre-construction survey or determined to be absent from the proposed impact area(s), construction activities shall be allowed to proceed, and no additional measures would be necessary. If bats are detected during the final pre-construction survey, the following avoidance measures shall be implemented, depending on the time of year, including additional measures identified in the letter report. If an active maternity roost is detected during the bat maternity season (April 15 through August 15), the biologist shall flag the active roost site and construction activities shall avoid the roost site until after the maternity season (August 16), or until the qualified biologist has determined young are self-sufficiently volant (able to fly). If bats are detected and determined to be roosting within the proposed impact area(s) outside of the bat maternity season (August 16 through April 14), the biologist shall flag the active roost site and construction activities shall avoid roost sites until bats are no longer determined to be roosting as determined by the qualified bat biologist. Exclusion of roost sites, where feasible, outside of the bat maternity season may be conducted with approval of the County and CDFW. Methods of roost exclusion shall be determined in consultation with the County and CDFW.

Impacts to County List D plant species San Diego County viguiera, San Diego sagewort, and southwestern spiny rush would be mitigated through the implementation of habitat-based mitigation as detailed in measures **BIO-9** and **BIO-10**.

Impacts to sensitive habitats located in lands designated as BRCA and PAMA would be mitigated through the implementation of measures **BIO-8** through **BIO-10**, and the following measures **BIO-14** and **BIO-15**:

BIO-14 The applicant shall dedicate 149.0~~150.7~~ acres of biological open space to be managed by a long-term manager approved by the County in accordance with a Resource Management Plan. The biological open space easement shall include native habitat revegetation areas located within the expanded Sweetwater River floodplain and bordering constructed slopes. Permanent open space fencing and signage shall be installed around the perimeter of the biological open space as detailed in the final Resource Management Plan.

BIO-15 The project requires preparation of a Resource Management Plan (RMP) for on-site biological open space to be approved by the County and Wildlife Agencies (USFWS and CDFW). The RMP would provide direction for the permanent preservation and management of the on-site biological open space in accordance with County regulations.

3.5 CONCLUSION

Project implementation could result in potentially significant impacts to federally and state listed animal species, state Species of Special Concern animals, County List B and D plant species, County Group 1 and 2 animal species, and raptors with the potential to nest and/or forage over the site and immediate vicinity. Potential significant impacts could result from direct disturbance, loss of habitat, and noise. Implementation of mitigation measures **BIO-1** through **BIO-15** would reduce impacts to less than significant.

4.0 RIPARIAN HABITAT AND SENSITIVE NATURAL COMMUNITIES

4.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the USFWS or CDFW (County 2010b)?

Any of the following conditions would be considered significant if:

A. Project-related grading, clearing, construction, or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in Table 5 in the County Guidelines for Determining Significance [County 2010b], excluding those without a mitigation ratio) on or off the Project site.

B. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by the USACE, CDFW, and County: vegetation removal; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; road crossing construction; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity, and abundance.

C. The project would draw down the groundwater table to the detriment of groundwater--dependent habitat, typically a drop of three feet or more from historical low groundwater levels.

D. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term.

E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.

4.2 ANALYSIS OF PROJECT EFFECTS

4.2.1 Significant Impacts

The proposed project would result in significant impacts under above guidelines 4.1.A, 4.1.B, and 4.1.D, for the following reasons:

A. Project-related grading, clearing, construction, or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in Table 5 in the County Guidelines for Determining Significance [County 2010b], excluding those without a mitigation ratio) on or off the Project site.

Implementation of the proposed project would result in direct impacts to approximately 2.34 acres of sensitive vegetation communities made up of: 0.55 acre of disturbed wetland (Tier I), 0.44 acre of southern cottonwood-willow riparian forest (Tier I), 0.13 acre of disturbed southern willow scrub (Tier I), 0.01 acre of tamarisk scrub (Tier I), 0.01 acre of arundo-dominated riparian (Tier I), and 1.2 acres of Diegan coastal sage scrub (Tier II) (Table 8). Impacts to sensitive natural communities would be considered potentially significant. These impacts would be reduced to a less than significant level through the implementation of mitigation measures **BIO-9** and **BIO-10**, which require compensatory mitigation in accordance with mitigation ratios detailed in the County MSCP Subarea Plan.

Indirect impacts to adjacent sensitive vegetation communities could occur through inadvertent intrusion into these adjacent areas by construction vehicles, equipment, and personnel. Implementation of mitigation measures **BIO-16** and **BIO-17** would ensure that inadvertent impacts to sensitive habitats located immediately adjacent to the work areas are avoided.

B. The following would occur to or within jurisdictional wetlands and/or riparian habitats as defined by the USACE, CDFW, and County: vegetation removal; grading; diversion of water flow; placement of fill; placement of structures; road crossing construction; placement of culverts; disturbance of the substratum; and activities that may cause an adverse change in native species composition, diversity, and abundance.

The project would result in impacts to jurisdictional wetlands and riparian habitats as defined by the USACE, CDFW, and/or County. Impacts to jurisdictional waters and wetlands include 0.60 acre of wetland and 0.36 acre of non-wetland waters of the U.S. (Figure 17; Table 9) and 18.20 acres of CDFW jurisdictional areas (including 0.44 acre of southern cottonwood-willow riparian forest, 0.002 acre of

freshwater marsh, 0.13 acre of southern willow scrub, 0.56 acre of disturbed wetland, 0.01 acre of arundo-dominated riparian, and 17.06 acres of streambed) (Figure 18). These impacts would be considered potentially significant. These impacts would be reduced to a less than significant level through the implementation of mitigation measures **BIO-18** through **BIO-20**, which require the project to obtain wetland permits through the appropriate wetland permitting agencies and prepare a wetland mitigation plan to offset project impacts to wetland habitat and water resources to wetland habitat and jurisdictional waters.

The proposed project would also impact 1.14 acres of County RPO wetland (Table 9; Figure 19); however, the project is exempt from RPO requirements pursuant to Section 86.605(d) of the RPO, as discussed in Section 1.5.3, above.

Mining and reclamation activities would involve ground disturbance, movement of earth material, and use of heavy equipment that have potential to impact on-site and off-site jurisdictional wetlands and riparian habitats through alteration of the Sweetwater River floodplain and associated drainage patterns. These impacts were determined to be less than significant as detailed in the project's Drainage Study (Chang Consultants 2022), which completed hydraulic models and compared existing and post-project conditions to evaluate the effects of the proposed mining and reclamation activities on flood conveyance through the project site, the findings of which are summarized below.

Though the project would impact the jurisdictional wetlands and riparian habitat during mining and reclamation, the bottom of the current ~~Sweetwater River~~ low-flow Sweetwater River channel would not be altered. Extraction activities would be set back at least five feet from the outer edge of each side of the existing low-flow Sweetwater River channel. Mining activities proposed during the rainy season (November through March) would be located away from the river channel to the extent feasible. The existing 3.5-foot-high channel banks would remain in place and continue to accommodate water transfers along its current path during the various mining phases. The maximum 358 cfs transfer flow rate along with concurrent historic levels of precipitation will be accommodated by the project within this existing channel. This will prevent capture of the water transfer in the extraction areas and preserve the Sweetwater Authority's ability to transfer water from Loveland Reservoir to Sweetwater Reservoir. The post-reclamation condition of the site also would retain the low-flow river channel in its current alignment, but with an expanded floodplain that would be slighter higher in elevation than the low-flow river channel. In terms of larger flow events, hydrologic modeling indicates that large flood events such as 100-year floods would extend outside the channel across the floodplain in the post-reclamation condition, similar to the existing current condition. As such, the proposed project would have a less than significant impact on flow rates within the Sweetwater River channel.

Extraction pits that are temporarily created during excavation activities would be progressively backfilled. The final landform within the project site post-reclamation would be a relatively flat plain that gently slopes downward from east to west, with an expanded floodplain bisecting the length of the site. The expanded floodplain is expected to range in width from approximately 400 to 700 feet~~average approximately 450 to 720 feet in width~~ and would be slightly higher in elevation than the existing low-flow river channel. Slopes bordering the expanded floodplain would slope up to the plain surface at a 3:1 ratio or shallower, with an elevation difference of up to 25 feet between the top of slope and bottom of the expanded floodplain. The expanded floodplain would improve the site's ability to accommodate both natural flows and high flows during storm events and would dissipate water energy during large storm events. As such, the proposed project would not result in increased velocities and

peak flow rates exiting the project site and would not cause downstream flooding. Furthermore, restored and revegetated wetland and riparian habitat would reduce the velocity of water flow, and the expanded floodplain would allow peak flows to extend outward from the existing low-flow river channel during overtopping events increasing the carrying capacity and minimizing long-term erosion and sedimentation from the site. In addition, by retaining the existing low-flow river channel within the site, there would be no changes to the location or geometry or the main channel. Further, the primarily non-vegetated low-flow river channel adjacent to the current and previous golf course areas transitions to a natural channel stretching from the west end of the project site to approximately 2,300 linear feet upstream in the project site. This on-site reach of river is within a densely vegetated riparian corridor that merges with the wider riparian corridor immediately off-site within the SDNWR. Thus, topography within the SDNWR downstream of the project site is not anticipated to be altered as no changes to the low-flow river channel are proposed and the post-reclamation condition would connect to existing riparian habitat in SDNWR that is wider than existing and proposed habitat on the project site. Therefore, the project would have a less than significant impact on downstream waters and habitats, including those within the SDNWR.

The project's Drainage Study determined that the 100-year flow of the on-site reach of the Sweetwater River would be the same under existing and post-reclamation conditions. Therefore, the proposed project would not create adverse flooding impacts within the Sweetwater River or off-site areas. Additionally, the 100-year flow velocities within the project site would generally be low and are considered non-erosive. Velocities over six feet per second (fps) are typically considered erosive. The proposed velocities within the site at the completion of mining are less than six fps, except adjacent to the existing Steele Canyon Road crossing of the channel. However, grouted rip-rap will be installed in this location to prevent erosion associated with upstream headcutting on site. Grouted rip-rap will also be installed at the northeast end of the project site along the upstream bank of the mining area to prevent upstream headcutting and creation of knickpoints off site northeast of the project. The rip-rap will act as a grade control structure that prevents vertical erosion along the upstream channel, including along the McGinty Mountain Ecological Reserve and upstream private road crossings. Hydraulic modeling was conducted that included the rip-rap grade control structures and determined that the rip-rap would withstand the 100-year flow velocities. Further, to help ensure that the rip-rap is functioning as designed in preventing the formation of headcuts and knickpoints, the mining operator will perform routine inspections during ongoing mining and provide additional erosion protection measures and maintenance, as needed, and as documented in the SWPPP. Therefore, the project would have a less than significant impact on the on-site and off-site 100-year floodplain.

Backfill operations, including those where groundwater is present, will be conducted in a manner so as to reduce the possibility of void space in the lower layers that could settle over time and result in depressions on the floodplain. Approximately 2.5 million cubic yards of material would be imported to the site to meet backfill requirements. This material would consist of excavated soil material from development projects, clean demolition materials, and possibly concrete, asphalt, and rock. The project would be conditioned to only accept materials suitable for the end use of the site. To reduce the possibility of void space, excavated pits would be limited to five acres in size and backfilled with wash fines, overburden, and imported materials prior to expanding the pit size. Mined-out pit areas would be backfilled to an elevation above groundwater level as the mining phases advance. In areas where excavation extends below the water table, an excavator would be utilized for pit excavation; dewatering would not be required. Backfilling activities will comply with the California Department of Natural Resources Recycling and Recovery regulations as well as State Water Resources Control Board Waste

Discharge Regulations. If necessary, geotechnical oversight of backfilling operations would occur and could include compaction testing during grading, or other means to verify the adequacy of backfilling materials and methods.

Potential direct and indirect impacts to on-site and off-site jurisdictional wetlands and riparian habitat resulting from erosion, sedimentation, and project run-off would be less than significant through compliance with current federal, State, and local regulations as detailed in the project's Stormwater Quality Management Plan, Groundwater Investigation Report (Geo-Logic Associates 2021), Sediment Load Analysis (Geo-Logic Associates 2022a), and Water Quality Evaluation Report (Geo-Logic Associates 2022b).

The project would prepare and submit Storm Water Pollution Prevention Plan (SWPPP) prior to the commencement of construction activities. Best Management Practices to control runoff and prevent erosion and the discharge of sediment to surface waters would be implemented during all project phases. Erosion control measures may include, but are not limited to, monitoring soil movement, arresting gullies or rills using straw mulch and hay bales, and installing silt fencing, compacting soils with equipment, and re-grading, as necessary. During mining activities, silt fencing would be installed five feet from the outer edge of each side of the existing low-flow Sweetwater River channel, and other areas as needed. Temporary de-siltation basins would be established within the project site to capture runoff from existing culverts within Willow Glen Drive and to prevent sediment from leaving the site while allowing water to pass through to existing drainage features. Runoff would be directed from the disturbed mining and reclamation areas towards these basins, as necessary, to allow for de-siltation and infiltration. The project would not result in a substantial increase in impervious surfaces. Stormwater runoff from the new impervious surfaces on Willow Glen Drive would be directed along the southerly curb of Willow Glen Drive and conveyed into tree wells just south of the roadway, thus limiting potential for erosion and siltation.

Based on the results of the studies discussed above, indirect impacts to critical habitat up or downstream of the project resulting from potential changes in hydrology would be less than significant.

Indirect impacts to adjacent jurisdiction waters and wetlands could occur through inadvertent intrusion into these adjacent areas by construction vehicles, equipment, and personnel. Implementation of mitigation measures **BIO-16** and **BIO-17** would ensure that inadvertent impacts to jurisdictional waters and wetlands located immediately adjacent to the work areas are avoided.

D. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term.

Potentially significant indirect impacts to sensitive species resulting from lighting, fugitive dust, human access/activity, domestic animals, and exotic species would be avoided through the following project design features and mitigation measures (1) all project-related lighting would be required to adhere to Division 9 of the San Diego County Light Pollution Code, and lighting within the proposed project footprint adjacent to undeveloped habitat (including reclaimed areas) would be of the lowest illumination allowed for human safety, and would be selectively placed, shielded, and directed away from these areas(3) permanent fencing would be installed around open space, and signs precluding access except on established hiking trails would be posted (**BIO-14**); (4) off-leash pets would not be

allowed on trails or public areas and signs would be posted along trails notifying pet owners of this regulation; (6) only non-invasive plant species would be included in the landscape plan for the site (species not listed on the California Invasive Plant Inventory prepared by the Cal-IPC (2020). Therefore, impacts to sensitive species resulting from indirect impacts from human access, domestic animals, exotic species, or lighting would be less than significant with the incorporation of design features and mitigation measures. Potential indirect impacts from construction noise are discussed under Guideline 3.1.L.

As addressed under County Guideline 3.1.H, mining operations would predominately occur within areas already disturbed by development and extraction activities and would be limited to approximately 20 to 30 acres at any one time. As such, the total area of disturbance at any one time would be limited to portions of the site actively being mined or reclaimed, and potential indirect impacts to existing open space, other natural areas, and special-status species would be localized these areas. Following completion of extraction activities, the project site would be reclaimed in accordance with mitigation measure **BIO-8**. The post-reclamation condition of the project site proposes a widened river floodplain revegetated with native wetland/riparian and coastal sage scrub habitat. The level pads adjacent to Willow Glen Drive would be hydroseeded with an erosion control mix to aid in soil stabilization and erosion control. Preserved and restored native habitat would be placed within open space, pursuant to mitigation measure **BIO-14**, and would be contiguous with off-site habitat to the east and west, including the SDNWR. Furthermore, the BOS would be managed in accordance with a County-approved RMP, pursuant to mitigation measure **BIO-15**, to ensure preservation of native habitats and long-term management of the preserve. Therefore, impacts to open space areas and sensitive habitats resulting from indirect impacts from human access, domestic animals, exotic species, or lighting would be less than significant with the incorporation of design features and mitigation measures.

4.2.2 No Impact or Less than Significant Impacts

The project would not result in significant impacts under the guidelines 4.1.C and 4.1.E for the following reasons:

C. The project would not draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of three feet or more from historical low groundwater levels.

Eight groundwater wells currently occur on the project site and are used to provide irrigation water for the existing golf course uses and to fill the man-made ponds. The existing groundwater use by the Cottonwood Golf Club is conservatively estimated to be 803.6 acre-feet per year (EnviroMINE 2021b). The existing wells would be used to provide water for mining operations, but consumption would be substantially reduced. The project's water usage is estimated at 139.9 acre-feet annually at the maximum annual production rate of 570,000 tons of construction aggregate, which is a reduction of approximately 663.7 acre-feet per year relative to current golf course consumption (Geo-Logic Associates 2021). Water would be required for the washing operation (90 percent of which would be continuously used and recycled), dust suppression, irrigation of landscaping near the site entrance, and supplemental water for revegetation activities. Water demand estimates for the project considered irrigation usage and evaporation rates associated with the extraction pits and revegetation of the reclaimed areas. The 139.9-acre feet per year estimated for the project's total water consumption represents an 82 percent decrease in the annual groundwater consumption during mining operations than the entire golf club operation (or 65 percent reduction compared to groundwater use for a single

course). Therefore, the project impacts related to groundwater drawdown during mining operations would be less than significant. Ultimately, wells not proposed for use by the Sweetwater Authority for groundwater monitoring and/or by the property owner after mining and reclamation are completed will be properly abandoned in accordance with County requirements and standards. It is assumed that six of the wells will be abandoned and two will be left in place.

The post-reclamation condition of the project would include backfilling of excavation areas, widening of the Sweetwater River floodplain, and restoring and revegetating the channel with wetland/riparian vegetation. The groundwater study prepared for the project calculated the post-reclamation groundwater use associated with these areas, which took into account loss due to evapotranspiration, at 337-acre feet per year, which is a reduction of approximately 467 acre-feet per year relative to golf course consumption in the baseline condition with both courses in operation (Geo-Logic Associates 2021). Assuming previously recorded groundwater use with both courses in operation is cut in half to account for closure of the western Lakes Course (i.e., approximately 402 acre-feet per year), this would still represent an annual reduction of approximately 65 acre-feet from current conditions with operation of the eastern Ivanhoe Course. This represents a 16 percent decrease in the annual groundwater consumption in the post-reclamation condition compared to existing consumption related to the current golf club operation (Ivanhoe Course only) and a 58 percent decrease in the annual groundwater consumption with both golf courses operating as permitted and historically used. Therefore, site reclamation and the proposed native habitat restoration and revegetation would have a less than significant effect on groundwater.

The approximate groundwater elevation is 310 feet AMSL at the western end of the site and 354 feet AMSL at the eastern end of the site, between 10 and 20 feet below the existing ground surface. The groundwater study prepared for the project determined that project pumping would not lower the water table three feet below the historical low groundwater level (HLGL) as established from available water level data (Geo-Logic Associates 2021). Therefore, the project would not exceed the County's three-foot drawdown threshold below HLGL for groundwater-dependent habitat and potential impacts would be less than significant.

E. The project includes wetland buffers adequate to protect the functions and values of existing wetlands.

The proposed project is exempt from the County's BMO (County 2010c) and RPO (County 2012) requirements pursuant to Section 86.503(a)(9) of the BMO and Section 86.605(d) of the RPO. Therefore, no wetland buffer is required during the extraction process and impacts to wetland buffers would be less than significant. A material part of these exemptions requires reclamation of the site following extraction to restore wetland buffers to protect environmental values of adjacent wetlands, which are addressed below in Section 7.0.

4.3 CUMULATIVE IMPACT ANALYSIS

As the project would be in conformance with County guidelines and mitigation ratios, the proposed project's contribution to cumulative impacts to sensitive vegetation communities is not considerable and would be less than significant.

The project would contribute to the cumulative impact on wetland and riparian habitats and other sensitive natural communities (coastal sage scrub). The proposed project's impacts to wetland/riparian habitat and sensitive upland communities, while significant at the project level, are not considered cumulatively significant as the project would provide mitigation for these impacts in accordance with County and regulatory agency guidelines. The County-approved mitigation ratios are standardized and not dependent upon the quality of habitat. Rather, the mitigation ratios recognize the regional importance of the habitat, the overall rarity of the habitat, and the number and variety of species it supports. Mitigation for habitat loss is required to compensate for direct impacts as well as cumulative loss of habitat. Impacts to wetland/riparian habitat and sensitive upland communities would be fully mitigated at County-approved ratios through; thus, providing long-term conservation value. As the project would be in conformance with County guidelines and mitigation ratios, the proposed project's contribution to cumulative impacts to sensitive vegetation communities is not considerable and would be less than significant.

4.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Mitigation for impacts to riparian habitats and sensitive natural communities is proposed to occur on site, however, the locations of proposed compensatory mitigation depicted herein may change during final negotiation with the County, wetland permitting agencies (USACE, RWQCB, and CDFW), and Wildlife Agencies (CDFW and USFWS). Riparian habitat mitigation will be subject to approval of a wetland restoration plan by the County and wetland permitting agencies. On-site habitat preservation exceeds the required mitigation ratios for the project's impacts to uplands, though graded slopes at the border of the widened Sweetwater River floodplain will also be planted with Diegan coastal sage scrub species and placed within BOS, further offsetting project impacts to sensitive upland habitats. Figure 21, *Post-Project Linkage and Preserve Configuration*, depicts areas of conceptual preservation, rehabilitation, restoration, and revegetation locations (to be finalized during preparation of a wetland mitigation plan and revegetation plan).

Impacts to riparian habitats and sensitive natural communities would be mitigated through the implementation of measures **BIO-9** and **BIO-10**, and the following measures **BIO-16** and **BIO-17**:

BIO-16 To help ensure errant impacts to sensitive vegetation communities outside of the impact footprint are avoided during construction, temporary environmental fencing (including silt fencing where determined necessary by the Stormwater Pollution Prevention Plan [SWPPP]), would be installed at the edges of the impact limits prior to initiation of grading. All construction staging shall occur within the approved limits of construction.

BIO-17 A qualified biologist shall monitor the installation of environmental fencing wherever it would abut sensitive vegetation communities, jurisdictional waters or wetlands, or open space. Prior to the installation of temporary fencing, the placement design should carefully consider the potential impacts to wildlife movement patterns between the upstream and downstream riparian habitats adjacent to the Project site. The biologist also would conduct a pre-construction environmental training session for construction personnel prior to all phases of construction to inform them of the sensitive biological resources on-site and avoidance measures to remain in compliance with project approvals. The biologist shall monitor initial vegetation clearing, grubbing, and grading activities to ensure that activities occur within the approved limits of work and avoid impacts to nesting birds. The biologist shall periodically

monitor the limits of construction and mining operations to ensure that mining and avoidance areas are delineated with temporary fencing and that fencing remains intact.

Impacts to jurisdictional wetlands and/or riparian habitats as defined by the USACE, CDFW, and County would be mitigated through the implementation of the following measures **BIO-16** and **BIO-17**, and measures **BIO-18** through **BIO-20**:

BIO-18 Impacts to 0.60 acre of U.S. Army Corps of Engineers (USACE) wetland waters of the U.S. shall be mitigated a minimum 3:1 ratio and 0.36 acre of USACE non-wetland waters of the U.S. shall be mitigated at a minimum 1:1 ratio through one or a combination of the following: on- and/or off-site establishment, re-establishment, rehabilitation, and/or enhancement of 2.16 acres waters of the U.S.; and/or off-site purchase of waters of the U.S. credits at an approved mitigation bank, or other location deemed acceptable by the USACE. Any mitigation completed through purchase of mitigation credits shall be provided prior to the issuance of a grading permit, and prior to use of the premises in reliance of this permit. Any applicant-initiated mitigation must be implemented prior to or concurrent with impacts to waters of the U.S. Impacts to waters of the U.S. would require issuance of a Section 404 CWA permit from the USACE prior to impacts.

BIO-19 Impacts to 1.14 acres of California Department of Fish and Wildlife (CDFW) jurisdictional riparian habitat (0.44 acre of southern cottonwood-willow riparian forest, 0.13 acre of southern willow scrub, 0.002 acre of freshwater marsh, 0.01 acre of arundo-dominated riparian, and 0.56 acre of disturbed wetland) shall be mitigated at a 3:1 ratio, totaling 3.42 acres of riparian habitat mitigation. Impacts to 17.06 acres of CDFW streambed shall be mitigated at a minimum 1:1 ratio through one or a combination of the following: on- and/or off-site establishment, re-establishment, rehabilitation, and/or enhancement of 17.06 acres of riparian and/or stream habitat; and/or off-site purchase of riparian and/or stream credits at an approved mitigation bank, or other location deemed acceptable by the CDFW. Combined mitigation for CDFW riparian habitat and streambed totals 20.48 acres. Any mitigation completed through purchase of mitigation credits shall be provided prior to issuance of a grading permit, and prior to use of the premises in reliance of this permit. Any applicant-initiated mitigation must be implemented prior to or concurrent with impacts to CDFW habitat. Impacts to CDFW jurisdictional habitat would require issuance of a CFG Code Section 1602 Streambed Authorization Agreement from the CDFW prior to impacts.

BIO-20 The project requires preparation of a wetland mitigation plan for impacts to wetland habitat and jurisdictional waters to be approved by the County (wetland impacts only) and U.S. Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and Regional Water Quality Control Board (RWQCB) (impacts to waters of the U.S. and State, and CDFW riparian habitat and streambed), as applicable. Approval of the plan and/or acceptance of mitigation bank credits by the USACE, CDFW, and RWQCB shall be a condition of the associated wetland permits for the project.

4.5 CONCLUSION

The project would result in significant impacts to sensitive natural communities and riparian habitat; however, a combination of avoidance through project design, proposed open space, and mitigation measures to fully compensate the loss of habitat would reduce impacts to below a level of significance.

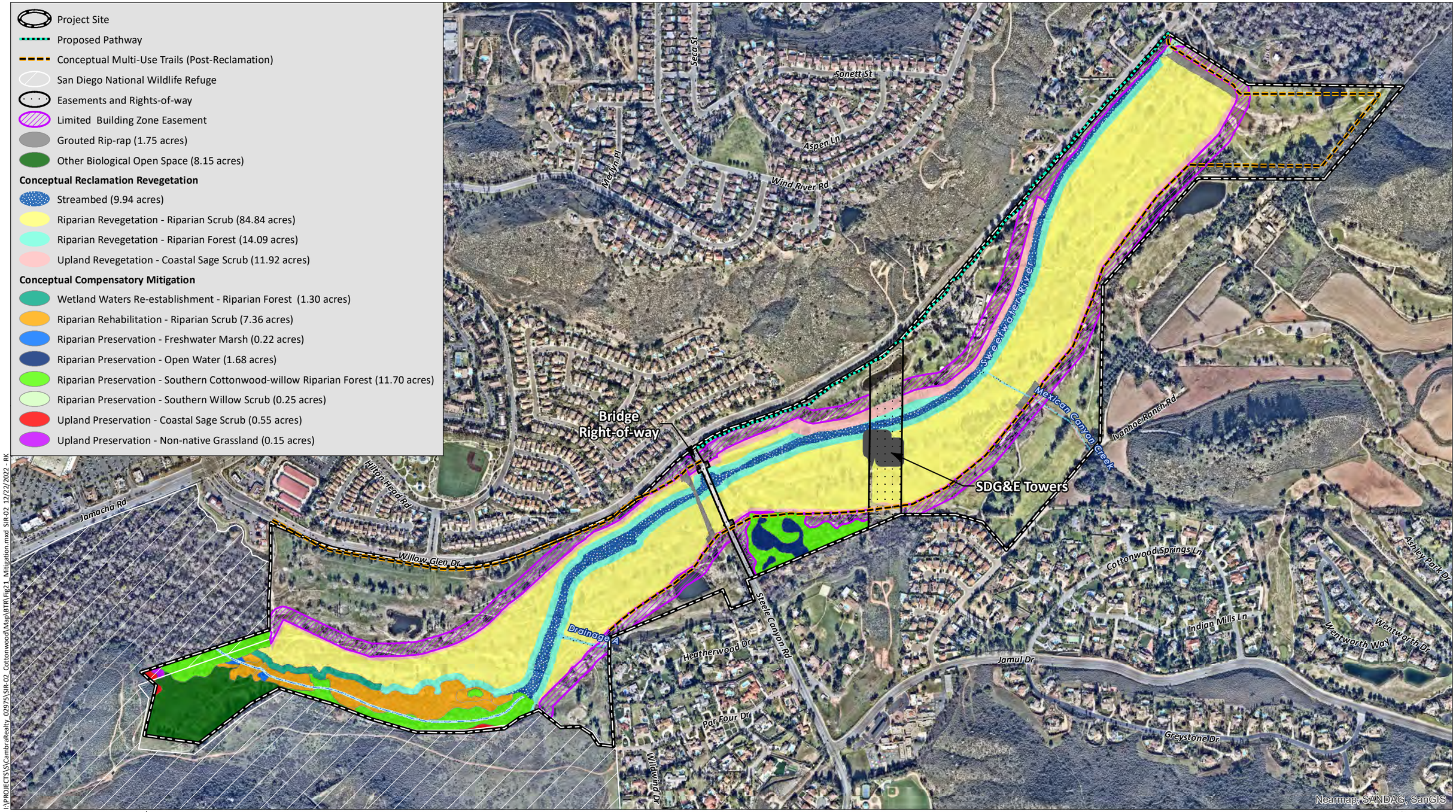
- Project Site
- Proposed Pathway
- Conceptual Multi-Use Trails (Post-Reclamation)
- San Diego National Wildlife Refuge
- Easements and Rights-of-way
- Limited Building Zone Easement
- Grouted Rip-rap (1.75 acres)
- Other Biological Open Space (8.15 acres)

Conceptual Reclamation Revegetation

- Streambed (9.94 acres)
- Riparian Revegetation - Riparian Scrub (84.84 acres)
- Riparian Revegetation - Riparian Forest (14.09 acres)
- Upland Revegetation - Coastal Sage Scrub (11.92 acres)

Conceptual Compensatory Mitigation

- Wetland Waters Re-establishment - Riparian Forest (1.30 acres)
- Riparian Rehabilitation - Riparian Scrub (7.36 acres)
- Riparian Preservation - Freshwater Marsh (0.22 acres)
- Riparian Preservation - Open Water (1.68 acres)
- Riparian Preservation - Southern Cottonwood-willow Riparian Forest (11.70 acres)
- Riparian Preservation - Southern Willow Scrub (0.25 acres)
- Upland Preservation - Coastal Sage Scrub (0.55 acres)
- Upland Preservation - Non-native Grassland (0.15 acres)



0 700 Feet

Source: Aerial (SanGIS, 2017)

HELIX Environmental Planning

Conceptual Reclamation Revegetation and Compensatory Mitigation Areas

Figure 21

Mitigation is proposed at ratios consistent with those required by the County, Wildlife Agencies, and Resource Agencies. With the implementation of measures **BIO-9**, **BIO-10**, and **BIO-16** through **BIO-18**, impacts to sensitive natural communities, including riparian habitat, would be reduced to less than significant.

5.0 JURISDICTIONAL WETLANDS AND WATERWAYS

5.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (County 2010b)?

The following condition would be considered significant if:

A. The project would impact federally protected wetlands as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means.

5.2 ANALYSIS OF PROJECT EFFECTS

5.2.1 Significant Impacts

As previously stated in Section 4.2.1, implementation of the proposed project would result in impacts to 0.60 acre of wetland waters of the U.S. and 0.36 acre of non-wetland waters of the U.S. (Table 6; Figure 15). Impacts to wetland and non-wetland waters of the U.S. would be considered potentially significant.

5.3 CUMULATIVE IMPACT ANALYSIS

The proposed project's impacts to 0.96 acre of USACE jurisdictional areas, comprised of 0.60 acre of wetland waters of the U.S. and 0.36 acre of non-wetland waters, while significant at the project level would be fully mitigated through one or a combination of the following: on- and/or off-site establishment, re-establishment, rehabilitation, enhancement and/or preservation; and/or off-site purchase of mitigation credits at an approved mitigation bank, or other location deemed acceptable by the County, Wildlife Agencies, and Regulatory Agencies. Mitigation would conform to the USACE's no net loss policy, which would also be a requirement of other projects with potential for impacts to jurisdictional wetlands; thus, no cumulatively significant impact would occur.

5.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Impacts to USACE wetland and non-wetland waters would be mitigated through the implementation of measures **BIO-16** through **BIO-18**, and **BIO-20**, above.

5.5 CONCLUSION

Implementation of the proposed project would result in significant impacts to USACE wetland and non-wetland waters of the U.S. The project would also result in significant impacts to RWQCB wetland and non-wetland waters of the State and CDFW-jurisdictional riparian habitat and streambed. Mitigation measures **BIO-16** through **BIO-18**, and **BIO-20** would reduce potential impacts to a less than significant level; however, final mitigation measures will be determined in consultation with the USACE, RWQCB, and CDFW.

Impacts to jurisdictional areas would require permitting through the appropriate regulatory agencies, as discussed below. Securing necessary wetland permits prior to issuance of a grading permit would be required. Anticipated wetland permits include a CWA Section 404 permit from the USACE, CWA Section 401 Water Quality Certification or State Porter-Cologne Water Quality Control Act Waste Discharge requirements from the RWQCB, and CFG Code Section 1602 Streambed Alteration Agreement from CDFW. Final mitigation requirements would be determined through consultation with the USACE, RWQCB, and CDFW, and would reduce impacts to less than significant.

6.0 WILDLIFE MOVEMENT AND NURSERY SITES

6.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

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 (County 2010b)?

Any of the following conditions would be considered significant if:

A. The project would impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.

B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.

C. The project would create artificial wildlife corridors that do not follow natural movement patterns.

D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.

E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path.

F. The project does not maintain adequate visual continuity (i.e., long lines-of-sight) within wildlife corridors or linkage.

6.2 ANALYSIS OF PROJECT EFFECTS

6.2.1 No Impact or Less than Significant Impacts

The project would not result in significant impacts under the above guidelines for the following reasons:

A. The project would not impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.

Proposed mining activities would primarily occur within disturbed and developed portions of the site already disturbed by golf course development and operations. In addition, mining and reclamation activities would occur incrementally in 20- to 30-acre subphases leaving other, previously disturbed portions of the site, either inactive or in the five-year restoration and revegetation monitoring period, and accessible for wildlife use. Wildlife foraging habitat, breeding habitat, and water sources necessary for reproduction on-site generally consists of existing riparian habitat and open water resources located along the project's southern boundary just east of Steele Canyon Road, and the riparian habitat located in the southwestern portion of the site along the downstream reach of the Sweetwater River. These areas would be avoided by mining activities and would be further preserved within the project's BOS. A such, they would remain available to wildlife during mining and reclamation activities and following project completion. The patch of riparian habitat located east of Steele Canyon Road is geographically isolated from other habitat areas, being bounded to the south of residential development, west by roadway, and north and east by the current golf course development. Mining and reclamation activities during Phase 1 would avoid this area, leaving it accessible to the north and east by wildlife. Mining and reclamation activities during Phase 2 would occur immediately north of this area, temporarily constraining, and possibly impeding, access to this area by land roaming species. However, the area would remain available to other species, including the federally listed LBVI, which was observed in this area during the 2019 and 2022 biological surveys. As such, potential impacts would be less than significant as they would be temporary in nature and habitat would still remain available for use by numerous species. Mining and reclamation activities during Phase 3 and Phase 4 would occur further east and north of this area. Following reclamation of Phase 2, wildlife access to the area would be improved to the north and west by widening of the Sweetwater River floodplain and planting of native riparian and upland vegetation. The downstream reach of the Sweetwater River is contiguous with off-site habitats and preserved lands associated with the SDNWR, and the extreme southwestern portion of the project site abutting the SDNWR would be avoided and preserved within the project's BOS. Wildlife would be able to move freely in and out of the project site in these areas. Therefore, the project would not impede wildlife access to foraging and breeding habitat within these areas. Further, although it provides little vegetative cover across most of the site, the Sweetwater River channel would remain unobstructed throughout the mining period and could be used (most likely at night) by urban-adapted animals, such as coyotes, traveling east-west across the site through the adjacent mining phase. While wildlife access to different portions of the site would be temporarily constrained during each individual subphase, overall access to areas providing suitable foraging and breeding habitat would not be significantly or permanently constrained. Impacts would be less than significant.

In addition, following reclamation, the project would provide additional, higher quality foraging and breeding habitat for wildlife through widening of the Sweetwater River floodplain, which would be revegetated with native riparian and upland habitats and placed within the project's BOS.

B. The project would not substantially interfere with connectivity between blocks of habitat and would not potentially block or substantially interfere with a local or regional wildlife corridor or linkage.

The project would not substantially interfere with the already constrained linkage between the McGinty Mountain/Sycuan Peak-Dehesa BRCA to the east and the Sweetwater Reservoir/San Miguel Mountain BRCA to the west. The proposed project is located within a developed golf course that has been maintained and operated since the 1960s. Though the golf play within the Lakes Course in the western portion of the site was discontinued in 2017, the area is still regularly mowed and utilized recreationally by the public as evidenced through observations made during the biological surveys. The project site is predominately characterized by disturbed and developed areas and contains limited vegetative cover to conceal land-traveling wildlife species that would likely move east to west through the project site. The most common medium-sized mammal species captured by motion-activated cameras deployed was coyote, which is well adapted to urbanized areas. Other medium-sized species detected, such as bobcat, were captured on only a few occasions and were located at the outer edges of the project site where the southern boundary abuts undeveloped areas and preserved habitat associated with the SDNWR. Mining and reclamation activities would largely avoid these areas and occur within disturbed and developed areas associated with golf course development. Furthermore, mining would occur incrementally in 20- to 30-acre subphases leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for wildlife use (Figure 5). As part of reclamation, the project would preserve, rehabilitate, restore, and revegetate native habitat along the expanded Sweetwater River floodplain. The post-reclamation condition of the project site would restore and substantially improve functional connectivity of the site and the identified linkage to BRCAs and preserved lands east, west, and south of the site as shown in Figure 22, *Post-Project Linkage and Preserve Configuration*. The project would conform to the goals and requirements of the County Subarea MSCP and BMO, including effects on habitat linkages and wildlife corridors. Impacts would be less than significant.

C. The project would not create artificial wildlife corridors that do not follow natural movement patterns.

The project does not create artificial corridors. Wildlife movement functions would continue and be substantially improved on the site under post-project conditions. Adequate upland scrub and riparian habitat associated with favorable topography and cover for target wildlife would be preserved, rehabilitated, and restored as part of the site's reclamation following sand extraction operations. The Sweetwater River floodplain would be widened and planted with native riparian vegetation along the channel bottom and coastal sage scrub along the bordering slopes (Figure 21). The site is already situated along the path of a constrained linkage and the project would not introduce significant barriers further separating or fragmenting key habitat stands as discussed above. Alternatively, the project would restore and improve functional connectivity of the linkage by re-establishing a riparian corridor connecting existing habitat east and west of the site, including to areas preserved within the SDNWR. Proposed mining activities would occur within disturbed and developed portions of the site already disturbed by golf course development and operations. The project would preserve adequate space and resources to conserve existing movement patterns and would result in a beneficial effect on species as a result of the site's proposed reclamation. No artificial corridors would be created, and no significant impacts would occur.

Cottonwood Sand Mine

Project Site
Easements and Rights-of-way
Biological Open Space*
San Diego National Wildlife Refuge
McGinty Mountain Ecological Area

MSCP Designations
Hardline Preserve
Minor Amendment Area
Pre-Approved Mitigation Area
Take Authorized Area
Unincorporated Land in Metro-Lakeside-Jamul Segment

** Recreational trails to be constructed within open space*

Sweetwater River

0 2,000 Feet

Source: Aerial (SanGIS, 2017)

I:\PROJECTS\S\CambraRealty_02975\SIR-02_Cottonwood\Map\BTR\Fig22_Post-Project_Linkage.mxd SIR-02 3/10/2025 - RK

HELIX Environmental Planning

Post-Project Linkage and Preserve Configuration

Figure 22

D. The project would not increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.

The project occurs along the path of a constrained linkage that is already subjected to noise and nighttime lighting impacts associated with operation of the Cottonwood Golf Club. The reach of river traversing the site currently has low function as a wildlife corridor as it is narrow, lacks suitable vegetative cover to conceal and facilitate wildlife movement, and is situated within the center of developed golf course operations.

Construction-related noise generated from mining and reclamation activities could temporarily impact wildlife. Mining operations and reclamation activities would require the daily use of heavy equipment that would elevate existing noise levels on-site. Wildlife may be temporarily displaced from or avoid the project site during construction activities but would be expected to return to the area was activities have ceased. The proposed mining and reclamation would occur in 20- to 30-acre subphases across the site, rather than the entire project footprint impacted concurrently. This would allow for wildlife, particularly avian species, to continue to use or occupy portions of the site outside of active work areas. Larger wildlife species, such as mule deer or mountain lion, would already be discouraged from utilizing the site based on results of biological surveys and wildlife camera surveys, current golf course activity and lack of vegetative cover along the Sweetwater River. Reclamation activities would begin immediately following mining activities and will generally proceed eastwards with project phasing. Reclamation activities would first occur adjacent to existing riparian habitat along the Sweetwater River channel in the western portion of the site, followed by the southwestern portion of the site adjacent to the SDNWR. As mining activities progress eastward and reclamation is completed, active revegetation areas would provide a buffer between later extraction areas and BRCAs west of the site reducing potential project-related disturbances to these areas. Therefore, potential noise related impacts to wildlife corridors or linkages during mining operations and reclamation activities would be less than significant.

The final post-reclamation condition of the site would include a widened and re-established riparian corridor along the Sweetwater River through the center of the site. Noise levels post-reclamation are anticipated to be similar to baseline conditions, which range between 52.4 to 77.2 dBA across the project site (HELIX 2021). Therefore, post-reclamation impacts to wildlife corridors or linkages resulting from noise would be less than significant.

Nighttime lighting is not anticipated to adversely impact the linkage or on-site movement corridors. All project-related lighting would be required to adhere to Division 9 of the San Diego County Light Pollution Code. Project lighting adjacent to undeveloped habitat (including reclaimed areas) would be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from such habitat. Sand excavation and processing would only occur between 7:00 a.m. and 5:00 p.m. and would not require the use of artificial night lighting. The only proposed night lighting would be installed around the processing plant for security purposes. Therefore, potential impacts resulting from lighting to wildlife corridors or linkages would be less than significant.

E. The project maintains an adequate width for an existing wildlife corridor or linkage and would not further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, or placement of barriers in the movement path.

The project would not further constrain existing wildlife corridors or linkages in the local area. As discussed above, the project site occurs along the path of a mapped east-west linkage that is already constrained and fragmented as a result of previous golf course development. The proposed project would predominately result in impacts to disturbed and developed areas associated with the golf course development; only 2.34 acres (1.1 percent) of the 211.94 acres of the on-site impacts would occur to native or sensitive habitats at the periphery of those habitats (Figure 15). These impacts would occur in 20- to 30-acre subphases during mining and reclamation activities across the site rather than the entire project footprint impacted concurrently. Portions of the project site located outside of active work areas would still be available for wildlife access and use, particularly areas of higher biological value with direct connectivity to off-site preserved areas associated within the SDNWR to the west and south of the site. As such, potential impacts would be temporary in nature and reduced to areas of active mining and reclamation grading.

The project would not include the construction or placement of barriers in any wildlife movement paths. Currently, Steele Canyon Road crosses the site north to south bisecting the entirety of the east-west linkage; therefore, species that are currently accessing the project site and crossing below the road will continue to be able to do so following project implementation. No additional road crossings are proposed as part of the project.

The project would not narrow the existing wildlife linkage width. As stated above, the proposed post-reclamation condition of the site would consist of an expanded Sweetwater River floodplain that would be restored and revegetated with wetland/riparian habitat. Graded slopes would be created on either side of the channel and planted with coastal sage scrub. This would increase the width of the existing linkage and restore available vegetative cover that would encourage and adequately conceal wildlife movement within the area. The preserved, rehabilitated, restored, and revegetated riparian habitat along the Sweetwater River would be conserved within a BOS easement that directly abuts existing riparian habitat to the west located within the SDNWR. The BOS would follow the path of the river across the entire site, extending approximately 10,040 feet from end to end, with widths varying between ~~450~~ 400 feet and ~~720~~ 700 feet wide and an overall average width of approximately 600 feet. The project does not propose any additional development following reclamation of the site, though select areas outside of the BOS would be available for land uses allowed by the existing land use designation and zoning classifications (if approved through a subsequent review process). The project would restore and greatly improve habitat connectivity and suitability for wildlife through the implementation of the proposed design features and site reclamation and revegetation as described above. Therefore, temporary impacts to the mapped wildlife linkage would be less than significant.

F. The project maintains adequate visual continuity (i.e., long lines-of-sight) within wildlife corridors and linkage.

The project would not impair visual continuity within corridors or linkages within the local area. The site is a developed golf course that lacks sufficient vegetative cover to conceal and encourage wildlife movement through the linkage. The proposed project would predominately result in impacts to

disturbed and developed areas associated with the golf course development. These impacts would occur in 20- to 30-acre subphases across the site, rather than the entire project footprint impacted concurrently, during mining and reclamation activities leaving other portions of the site either undisturbed or in the five-year restoration and revegetation monitoring period and accessible for foraging. Reclamation of the site would include widening of the Sweetwater River floodplain and planting the area with native wetland/riparian habitat. Reclamation activities would first occur adjacent to existing riparian habitat along the Sweetwater River channel in the western portion of the site, and adjacent to off-site preserved areas located within the SDNWR. As mining activities progress eastward and reclamation is completed, active revegetation areas would provide a buffer between later extraction areas and existing riparian habitat off-site improving visual continuity within the linkage.

The project would also preserve and rehabilitate existing riparian habitat thereby preserving stepping-stone/archipelago habitat for avian species moving through the area. Although 0.58 acre of riparian habitat would be impacted as part of project implementation, these impacts are on the outer edges of existing habitat and would not adversely affect visual continuity within the wildlife linkage. As part of the proposed reclamation, the project would increase topographic complexity of the site by establishing a widened Sweetwater River floodplain with bordering constructed slopes and elevated graded pads to the north and south. This would create topographic features more favorable to wildlife species movement along the linkage path and would separate the restored riparian corridor from graded pads located outside of the BOS, and roadways and residential development located north and south of the site. The project would also increase vegetative cover within the widened riparian corridor providing adequate coverage for wildlife species that would utilize the linkage. As such, the project would not impair, but would ultimately improve, visual continuity within corridors or linkages in the local area and impacts would be less than significant.

6.3 CUMULATIVE IMPACT ANALYSIS

The cumulative projects are located in existing urbanized areas of El Cajon, Rancho San Diego, and Jamul within the unincorporated County, or on the fringes of urbanization. A cumulative impact on wildlife movement has already occurred in the local area where commercial and residential development and major roadways (such as SR 94, SR 54, and Steele Canyon Road) have constrained available areas for wildlife movement. Primary wildlife use areas in the local area are located in the McGinty Mountain/Sycuan Peak-Dehesa and Sweetwater Reservoir/San Miguel Mountain BRCAs, generally associated with the SDNWR, Sweetwater River and Sweetwater Mountain Ecological Reserve, McGinty Mountain Ecological Reserve, and McGinty Mountain Preserve. These resources provide wildlife movement areas for a wide range of species known to the region. As described above, the current function of the project site as a linkage/corridor for wildlife movement is considered low based on previous golf course development, ongoing disturbances related to golf course maintenance and operations, and lack of sufficient habitat cover to conceal wildlife movement through the site. As such, the project is not expected to substantially interfere with the movement of wildlife species or impede the use of nursery sites. The project would comply with the requirements of the BMO and MSCP, including preserve design criteria related to corridors and linkages. In addition, the project would improve habitat quality and connectivity compared to the site's current state as a golf course. The project's proposed reclamation would preserve, rehabilitate, and restore native riparian and upland habitats along the Sweetwater River. This would result in a widened riparian corridor that re-establishes functional connectivity to BRCAs located east and west of the site, including the SDNWR. The

contribution of the project to the cumulative impact on wildlife movement would not be considerable and would be less than significant.

6.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Potential project impacts to wildlife movement and linkages would be less than significant. No additional mitigation measures are required.

6.5 CONCLUSION

With the project's proposed open space, incorporation of design features, and implementation of the measures listed above, impacts to wildlife movement, corridors and linkages, and nursery sites would be less than significant and no additional mitigation measures are required.

7.0 LOCAL POLICIES, ORDINANCES, AND ADOPTED PLANS

7.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Would the project conflict with the provisions of an adopted HCP, NCCP plan, or other approved local, regional or state HCP (County 2010b)?

Any of the following conditions would be considered significant if:

A. For lands outside of the MSCP, the project would impact Diegan coastal sage scrub vegetation in excess of the County's five percent habitat loss threshold, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.

B. The project would preclude or prevent the preparation of the subregional NCCP. For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.

C. The project will impact any amount of wetlands or sensitive habitat lands as outlined in the RPO.

D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the NCCP Guidelines.

E. The project does not conform to goals and requirements outlined in any applicable HCP, RMP, Special Area Management Plan, Watershed Plan, or similar regional planning effort.

F. For lands within the MSCP, the project would not minimize impacts to a BRCA, as defined in the BMO (County 2010c).

G. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.

H. The project does not maintain existing movement corridors and/or habitat linkages, as defined by the BMO.

I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.

J. The project would reduce the likelihood of survival and recovery of listed species in the wild.

K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (MBTA).

L. The project would result in the take of eagles, eagle eggs, or any part of an eagle (Bald and Golden Eagle Protection Act; BGEPA).

7.2 ANALYSIS OF PROJECT EFFECTS

7.2.1 Significant Impacts

The project would result in significant impacts under above guideline 7.1.I, 7.1.J, and 7.1.K for the following reasons:

I. The project would impact MSCP narrow endemic species but would not impact core populations of narrow endemics.

Three MSCP narrow endemic species were observed within the project site: Palmer's goldenbush, peregrine falcon, and least Bell's vireo. Palmer's goldenbush was observed within the southeastern, south-central, and southwestern portions of the project site. However, the project site does not contain a core population of Palmer's goldenbush, the species was observed along the perimeter of the project site, the species was observed within habitat immediately adjacent to the project site, and protected populations occur in the local area at McGinty Mountain Ecological Reserve and San Diego National Wildlife Refuge. As such, the project site does not contain an isolated or significant population of the species, and project implementation would not result in significant impacts to a core population of Palmer's goldenbush. As discussed in Section 3.2.1.B, the project's direct impacts to 234 individuals of Palmer's goldenbush would be considered potentially significant but would be reduced to a less than significant level through the implementation of mitigation measure **BIO-6**.

The project site lacks suitable breeding habitat for peregrine falcon but does contain suitable foraging habitat for this species. The project site does not contain a core population of peregrine falcon as the site lacks suitable breeding habitat and observations are limited to foraging individuals. Therefore, no impact would occur to a core population of peregrine falcon. Impacts would occur to suitable foraging habitat for this species, which are considered potentially significant. Incorporation of mitigation measure **BIO-8** would reduce this impact to less than significant.

Least Bell's vireo was detected within the riparian habitat both on-site and immediately adjacent to the project site within the SDNWR. However, the project site does not contain a core vireo population as the project site contains limited suitable habitat for the species, which would be avoided by the proposed project. Multiple vireos were detected within off-site habitat, including the SDNWR located immediately west of the site, indicating that the site does not contain an isolated or significant population of the

species. Therefore, the project would not result significant impacts to a core population of least Bell's vireo. The project would impact approximately 0.58 acre of riparian habitat, which includes 0.28 acre mapped as least Bell's vireo critical habitat, with potential to support least Bell's vireo. Direct impacts to occupied vireo habitat would be potentially significant but would be reduced to a less than significant level through the implementation of mitigation measure **BIO-3**.

For the reasons outlined above, the project would result in impacts to MSCP narrow endemic species. However, with the incorporation of mitigation, these impacts would be considered less than significant.

Non-Significant Impacts under County Guideline 7.2.1.I

One MSCP narrow endemic species has high potential to occur, San Diego ambrosia. USFWS critical habitat for San Diego ambrosia occurs within the southwestern portion of the site, though the species was not detected within the project site during rare plant surveys in 2019 and 2022. The project would result in minor impacts, 0.77 acre, to USFWS critical habitat for the species but would not result in direct impacts to individuals or core populations. Therefore, the project would not result in a significant impact to San Diego ambrosia.

J. The project would reduce the likelihood of survival and recovery of listed species in the wild.

Two listed species were detected within the project site: coastal California gnatcatcher and least Bell's vireo. The project would impact 1.2 acres of disturbed Diegan coastal sage scrub habitat that provides potential foraging habitat for the coastal California gnatcatcher and 0.58 acre of riparian with potential to support least Bell's vireo. Impacts to suitable gnatcatcher and vireo foraging and breeding habitat would not adversely affect the recovery of either species in the wild as these impacts are minimal and larger blocks of the habitat for the species would be avoided by project activities and preserved within the project's BOS. Furthermore, following reclamation the project would result in a substantial net gain in suitable gnatcatcher and vireo foraging and breeding habitat within the expanded Sweetwater River floodplain contributing to the species' recovery. However, removal of vegetation during the breeding season for gnatcatcher (March 1 to August 15) or vireo (March 15 to September 15) could result in significant impacts to nesting gnatcatcher and vireo. Additionally, if mining and reclamation activities took place within 500 feet of suitable gnatcatcher or vireo habitat during the gnatcatcher or vireo breeding season, indirect impacts related to noise to nesting gnatcatchers and vireos would be potentially significant. Impacts to these species have been mitigated through the incorporation of mitigation measures **BIO-1** through **BIO-5**. Therefore, impacts are considered less than significant with mitigation.

K. The project could result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (MBTA).

Implementation of the project could potentially result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs protected under the MBTA. Project construction and operations could directly impact individuals or cause breeding birds to temporarily or permanently leave their territories, which could lead to reduced reproductive success and increased mortality. These impacts would be significant; however, mitigation measure **BIO-7** would reduce impacts to less than significant.

7.2.2 No Impact or Less than Significant Impacts

The project would not result in significant impacts under above guidelines 7.1.A, 7.1.B, 7.1.C, 7.1.D, 7.1.E, 7.1.F, 7.1.G, 7.1.H, and 7.1.L for the following reasons:

A. The project would not impact Diegan coastal sage scrub vegetation outside of the MSCP in excess of the County's five percent habitat loss threshold, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.

Project impacts to Diegan coastal sage scrub are all located within the adopted South County MSCP Subarea Plan. No significant impact would occur.

B. The project would not preclude or prevent the preparation of the subregional NCCP. For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.

The project is located within the boundaries of the South County MSCP Subarea Plan, which has already been prepared and adopted. No impact would occur.

C. The project would impact wetlands and sensitive habitat lands outlined in the RPO.

The project would directly impact a total of 2.34 acres of riparian habitat or other sensitive natural communities, including those that qualify as County RPO wetlands. However, the proposed project is exempt from this guideline pursuant to Section 86.605(d) of the RPO. The project would be required to include the mitigation measures listed in Section 1.5.3 as conditions of the project's Major Use Permit. The proposed project would comply with these measures as follows:

a. Wetland buffer areas surrounding the Sweetwater River, currently consisting of golf course fairways and greens, would be restored as part of the site's reclamation. The Sweetwater River floodplain would be widened and planted with native riparian habitat and the slopes constructed at the margins of the expanded floodplain will be planted with coastal sage scrub thereby restoring and improving wetland buffer areas.

b. The site is located within the Sweetwater River floodplain. Reclamation of the site following mining activities would substantially widen the existing Sweetwater River floodplain and revegetate the area with native riparian habitat, resulting in a substantial net gain in functional wetland and riparian habitat.

c. Native vegetation (i.e., coastal sage scrub) shall be used on sloped lands to revegetate and landscape cut and fill areas in order to substantially restore the original habitat value, and slopes shall be graded to produce contours and soils which reflect a natural landform which is consistent with the surrounding area; and

d. The site contains southern riparian forest meeting the definition of mature riparian woodland. The proposed project would result in impacts to approximately 0.44 acre of southern cottonwood-willow riparian forest located in the southwestern portion of the site. Impacts to riparian forest would be limited to the perimeter of existing habitat and would not occur as part of extraction activities. Impacts would occur during site reclamation as part of creation of the

widened Sweetwater River floodplain. These impacts are required to maintain proper drainage of the expanded floodplain area and prevent ponding and erosion where it meets existing riparian habitat within the SDNWR. The impacted area would be restored with native riparian habitat following project activities as part of site reclamation and project's proposed compensatory mitigation. Furthermore, the post-reclamation condition of the project would result in a substantial increase in riparian habitat through widening and revegetation of the Sweetwater River floodplain. The restored and revegetated riparian habitat, and existing stands of riparian habitat would be preserved within a BOS easement following reclamation of the site. As such, the proposed project would not destroy or reduce the size of mature riparian woodland habitat.

The project would conform with conditions (a) through (d) of Section 86.605(d) of the RPO; thus, the project is exempt from the RPO and no significant impact would occur.

D. The project would mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the NCCP Guidelines.

The project would impact 1.2 acres of Diegan coastal sage scrub. The project is located within the adopted South County MSCP Subarea Plan and the loss would be mitigated in accordance with the South County MSCP Subarea Plan and BMO. Therefore, impacts would be less than significant.

E. The project conforms to goals and requirements outlined in any applicable HCP, RMP, Special Area Management Plan, Watershed Plan, or similar regional planning effort.

The project occurs within the boundaries of the adopted South County MSCP. The project would impact a total of 9.8 acres of the 16.4 acres of on-site lands designated as PAMA under the County's Subarea MSCP (County 1997), comprising 60 percent of PAMA mapped within the project site. However, most proposed project impacts within PAMA would be in lands that are in existing disturbed and developed land use categories, which together make up 8.8 acres of impact to on-site PAMA (90 percent of on-site PAMA impacts). Project impacts to sensitive vegetation communities in PAMA total 1.0 acre, representing only 10 percent of on-site PAMA impacts. As shown in Table 11, *PAMA Impacts Summary*, only 13.5 percent of the sensitive vegetation communities within PAMA would be impacted, compared to 97.8 percent of the non-sensitive vegetation communities within PAMA.

Table 11
PAMA IMPACTS SUMMARY

Category of Impacts	Acreage		Percent Impacted[3]
	Existing PAMA On-Site	Proposed Impacts in PAMA On-Site	
Sensitive Vegetation Community[1]	7.4	1.0	13.5
Non-sensitive Vegetation Community/Land Use Type[2]	9.0	8.8	97.8
TOTAL	**16.4**	**9.8**	**59.8**

[1] Disturbed wetland, freshwater marsh, open water, southern cottonwood-willow riparian forest (including disturbed), disturbed, southern willow scrub, and Diegan coastal sage scrub (including disturbed).
[2] Eucalyptus woodland, non-native woodland, non-native vegetation, disturbed habitat, and developed land.
[3] Percent impacted represents impacts relative to the impact category, not total impacts.

Additionally, a total of 7.5 acres of the 37.79 acres of the Minor Amendment Area would be impacted, comprised primarily of disturbed habitat (6.6 acres), non-native vegetation (0.3 acre), and developed lands (less than 0.1 acre) associated with inactive portions of the golf course. A small portion of these impacts also include southern cottonwood-willow riparian forest (0.27 acre), disturbed southern willow scrub (0.13 acre), freshwater marsh (0.002 acre), tamarisk scrub (0.01 acre), arundo-dominated riparian (0.01 acre), and disturbed wetland habitat (0.2 acre). The impacted areas would be restored and revegetated with native riparian habitat following project activities as part of site reclamation and the project's proposed compensatory mitigation. Post-reclamation, the Minor Amendment Area would either be left in place in impact neutral areas (4.9 acres) or would be conserved within open space (32.9 acres, including the 6.5 acres of impacted habitat) and restored and revegetated as part of the project's proposed compensatory mitigation and site reclamation.

The project minimizes impacts to sensitive habitat, PAMA, and Minor Amendment Area to the greatest extent practicable. Impacts to PAMA and the Minor Amendment Area would largely encompass disturbed habitat and developed lands associated with the golf course development. The project would preserve existing native habitat within open space and would further restore these areas through removal of exotic, invasive species. As required by the MSCP, development within the Minor Amendment Area would require approval from the USFWS, CDFW, and County. The project would conform to goals and requirements outlined in the County MSCP Subarea Plan; therefore, no significant impact would occur in regard to regional planning efforts.

F. For lands within the MSCP, the project would minimize impacts to BRCA, as defined in the BMO.

The project minimizes impacts to BRCA in accordance with the MSCP and BMO. Impacts would be less than significant.

G. The project would not preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.

The project is located within the adopted MSCP and connectivity is evaluated according to the MSCP and BMO. Impacts would be less than significant.

H. The project maintains existing movement corridors and/or habitat linkages, as defined by the BMO.

The project site is located within an identified habitat linkage in the South County MSCP. As part of the reclamation process, the proposed project would substantially improve the condition of the existing linkage through widening of the Sweetwater River floodplain and planting of riparian habitat. A riparian corridor would be re-established throughout the site, which would encourage and facilitate wildlife movement within the region. Therefore, the project would ultimately conserve and enhance the functions and values of the habitat linkage in accordance with the MSCP and BMO. Impacts would be less than significant.

L. The project would not result in the take of eagles, eagle eggs, or any part of an eagle (BGEPA).

The project site does not contain eagle foraging habitat or nesting habitat and it is not within any known golden eagle territory. The surrounding habitat fragmentation and the distance from known eagle territories would indicate that the site does not have high value for golden eagle. The surrounding area

is primarily urbanized and new nesting in the vicinity is unlikely. Therefore, no impacts would occur to golden eagle or its habitat.

7.3 CUMULATIVE IMPACT ANALYSIS

The project would comply with the requirements of the MBTA, BGEPA, RPO, BMO, and MSCP. All currently proposed and future projects within the cumulative study area also would be required to comply with these regulations thus no significant cumulative impacts would occur.

7.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Impacts to MSCP narrow endemic species (Palmer's goldenbush, peregrine falcon, and least Bell's vireo) would be reduced to a less than significant impact through the implementation of measures **BIO-3**, **BIO-6,** and **BIO-8**. Impacts to federally listed species (coastal California gnatcatcher and least Bell's vireo) would be reduced to a less than significant impact through the implementation of measures **BIO-1** through **BIO-5**. Impacts to nesting birds protected under the MBTA would be reduced to a less than significant level through the implementation of measure **BIO-7**.

7.5 CONCLUSION

Implementation of the project would result in potentially significant impacts to MSCP narrow endemic species, federally listed species, and breeding migratory birds. Implementation of mitigation measures **BIO-1** through **BIO-8** would reduce these impacts to below a level of significance.

8.0 SUMMARY OF PROJECT IMPACTS AND MITIGATION

The proposed project has the potential to cause significant impacts to special-status animal species, sensitive natural communities, jurisdictional wetlands, and/or riparian habitats as defined by the USACE, CDFW, and County. In each case, however, the identified significant impact can be mitigated to a less than significant level. Table 12, *Summary of Vegetation communities Impacts and Mitigation*, provides a summary of project impacts and mitigation pertaining to sensitive natural communities. Table 13, *Summary of Biological Resources Mitigation Measures*, provides a summary of the proposed mitigation measures.

Table 12
SUMMARY OF VEGETATION COMMUNITIES IMPACTS AND MITIGATION (acre[s])[1]

Vegetation Community/Habitat[2]	Total Existing	Total Impacts[3]	Mitigation			Preserved in Excess of Required Mitigation
			Ratio[4]	Required	Preserved On-Site[5]	
Tier I						
Streambed (Emergent Wetland) (52440)	0	0	3:1	0	9.58	9.58
Disturbed Wetland (11200)	10.25	0.55		1.65[6]	0	0
Freshwater Marsh (52400)	0.22	0		0	0.22	0.22
Southern Cottonwood-willow Riparian Forest - including disturbed (61330)	12.87	0.44		1.32[6]	26.48[6]	23.45[7~~8~~]
Southern Willow Scrub – including disturbed (63320)	4.82	0.13		0.39	90.88	90.49
Tamarisk Scrub (63810)	1.23	0.01		0.03	0	0
Open Water (64140)	1.68	0		0	1.68	1.68
Arundo-dominated Riparian (65100)	0.56	0.01		0.03[6]	0	0
Subtotal	***31.63***	***1.14***	**--**	***3.42***	***128.84***	***125.42***
Tier II						
Diegan Coastal Sage Scrub – including disturbed (32500)	1.8	1.2	1.5:1	1.8	11.85	10.05
Subtotal	***1.8***	***1.2***	**--**	***1.8***	***11.85***	***10.05***
Tier IIIB						
Non-native Grassland (42200)	0.2	0	0.5:1	0	0.15	0.15
Subtotal	***0.2***	***0***	**--**	***0***	***0.15***	***0.15***
Tier IV						
Non-native Woodland (79000)	1.7	1.7	N/A	0	0	0
Eucalyptus Woodland (79100)	2.6	2.1		0	0.02	0.02
Non-native Vegetation (11000)	7.5	8.5		0	0.46	0.46
Disturbed Habitat (11300)	91.3	76.1		0	7.67	7.67
Subtotal	***103.1***	***88.4***	**--**	***0***	***8.15***	***8.15***

Vegetation Community/Habitat[2]	Total Existing	Total Impacts[3]	Mitigation			Preserved in Excess of Required Mitigation
			Ratio[4]	Required	Preserved On-Site[5]	
N/A						
Artificial Pond (64140)	3.0	2.7	N/A	0	0	0
Developed Land (12000)	136.9	123.3		0	~~1.75~~[7]0	~~1.75~~[7]0
Subtotal	***139.9***	***126.0***	**--**	***0***	***~~1.75~~0***	***~~1.75~~0***
TOTAL	**276.63**	**216.74**	**--**	**5.22**	**~~150.74~~148.99**	**~~145.52~~143.77**

[1] Area presented in acre(s) rounded to the nearest hundredth for wetlands and the nearest tenth for uplands. Totals reflect rounding.

[2] Vegetation categories and numerical codes are from Oberbauer (2008)

[3] Includes both on- and off-site impacts.

[4] Proposed mitigation ratios are consistent with those contained in the South County MSCP Subarea Area (County 1997) and Biological Mitigation Ordinance (County 2010c) and assume that impacts and mitigation shall occur within Biological Resource Core Areas.

[5] In Biological Open Space.

[6] Mitigation location for impacts to wetland habitats to be determined through consultation with USACE, RWQCB, CDFW, and the County.

~~[7] Consists of grouted rip-rap.~~

[8]7 Includes 1.65 acres of mitigation for impacts to 0.55 acre of disturbed wetland, 0.03 acre of mitigation for 0.1 acre of tamarisk scrub, and 0.03 acre of mitigation for impacts to 0.01 acre of arundo-dominated riparian.

Table 13
SUMMARY OF BIOLOGICAL RESOURCES MITIGATION MEASURES

	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number
BIO-1	Mitigation for impacts to 1.2 acres of potential foraging habitat for coastal California gnatcatcher, comprised solely of Diegan coastal sage scrub, shall occur at a 1.5:1 ratio for a total mitigation requirement of 1.8 acres. Mitigation shall occur through on-site preservation of 0.6 acre of Diegan coastal sage scrub and on-site revegetation of 11.3 acres of Diegan coastal sage scrub for a total of 11.9 acres of Diegan coastal sage scrub to be preserved within the biological open space easement.	Less than significant	3.1 A 3.1 B 7.1 J
BIO-2	~~Grading or clearing of vegetation within 500 feet of occupied Diegan coastal sage scrub during the breeding season of the coastal California gnatcatcher (March 1 to August 15) shall be avoided to the extent feasible.~~ If clearing or grading ~~would~~ occurs within 500 feet of suitable coastal California gnatcatcher habitat during the gnatcatcher breeding season (March 1 through August 15) ~~for the gnatcatcher~~, a qualified biologist shall conduct a pre-construction survey no more than three days (72 hours) prior to commencement of activities to determine whether gnatcatchers occur within 500 feet of the proposed impact area(s). If there are no gnatcatchers nesting (includes nest building or other breeding/nesting behavior) within that area, grading and clearing shall be allowed to proceed. If any gnatcatchers are observed nesting or displaying breeding/nesting behavior during the pre-construction survey or additional surveys within the area, construction shall be postponed within 500 feet of any location at which gnatcatchers have been observed until a qualified biologist has determined that all nesting (or breeding/nesting behavior) has ceased or until after August 15.	Less than significant	3.1 A 3.1 B 3.1 L 7.1 J 7.1 K
BIO-3	Mitigation for impacts to 0.58 acre of potential nesting and foraging habitat for least Bell's vireo (southern cottonwood-willow riparian forest, disturbed southern willow scrub, and tamarisk scrub) shall occur at a minimum 3:1 ratio with at least 1:1 creation (establishment/re-establishment) for a total mitigation requirement of 1.74 acres. Mitigation shall occur through on-site preservation of 13.85~~6~~ acres of wetland and riparian habitat, on-site rehabilitation of 7.36 acres of riparian habitat, and on-site re-establishment and revegetation of 107.63~~2~~ acres of riparian habitat for a total of 128.84 acres of wetland riparian habitat to be preserved within the biological open space easement.	Less than significant	3.1 A 3.1 B 7.1 I 7.1 J

	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number
BIO-4	~~Grading or clearing of riparian habitat during the breeding season of the least Bell's vireo (March 15 through September 15) shall be avoided to the extent feasible.~~ If clearing or grubbing ~~must~~ occurs within 500 feet of suitable least Bell's vireo habitat during the ~~least Bell's~~ vireo breeding season (March 15 through September 15), a qualified biologist shall conduct a pre-construction survey no more than three days (72 hours) prior to commencement of activities to determine whether vireos occur within 500 feet of proposed impact area(s). Impacts to occupied habitat shall be avoided. If there are no vireos nesting (includes nest building or other breeding/nesting behavior) within that area, grading and clearing shall be allowed to proceed. If any vireos are observed nesting or displaying breeding/nesting behavior during the pre-construction survey or additional surveys within that area, construction shall be postponed within 500 feet of any location at which vireos have been observed until a qualified biologist has determined that all nesting (or breeding/nesting behavior) has ceased or until after September 15.	Less than significant	3.1 A 3.1 B 3.1 L 7.1 I 7.1 J 7.1 K
BIO-5	If operation of construction or excavation equipment is initiated within 500 feet of suitable habitat during the breeding seasons for the coastal California gnatcatcher (March 1 to August 15), nesting raptors (January 15 to July 15), or least Bell's vireo (March 15 to September 15), pre-construction survey(s) shall be conducted by a qualified biologist to determine whether these species occur within the areas potentially impacted by noise, with the final survey occurring within three days (72 hours) of the proposed start of construction, mining, or reclamation activities. If it is determined at the completion of pre-construction survey(s) that active nests belonging to these sensitive species are absent from the potential impact area, activities shall be allowed to proceed. If pre-construction surveys determine the presence of active nests belonging to these sensitive species, then activities shall: (1) be postponed until a qualified biologist determines the nest(s) is no longer active or until after the respective breeding season; or (2) not occur until a temporary noise barrier or berm is constructed at the edge of the impact footprint and/or around the piece of equipment to ensure that noise levels are reduced to below 60 dBA or ambient, whichever is greater. The type(s) and location(s) of noise barrier(s) shall be provided to the County and Wildlife Agencies along with the associated noise measurements demonstrating compliance with required noise level reductions. Decibel output would be confirmed by a County-approved noise specialist and intermittent monitoring by a qualified biologist to ensure that noise levels remain below 60 dBA at occupied areas.	Less than significant	3.1 A 3.1 B 3.1 H 3.1 L 4.1 D 7.1 I 7.1 J 7.1 K

	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number
BIO-6	Impacts to 234 individuals of Palmer's goldenbush shall be mitigated at a 1:1 ratio. Mitigation shall occur through planting and/or seeding of the species within on-site native revegetation areas in accordance with a revegetation plan to be approved by the County and Wildlife Agencies (USWFS and CDFW).	Less than significant	3.1B 7.1 I
BIO-7	~~Grubbing or clearing of vegetation during the general avian breeding season (February 15 through August 31) or raptor breeding season (January 15 through July 15) shall be avoided to the extent feasible.~~ If grubbing, clearing, or grading would occur during the general avian breeding season (February 15 through August 31) within 300 feet of general nesting bird habitat or during the raptor breeding season (January 15 through July 15) within 500 feet of nesting raptor habitat, a qualified biologist shall conduct a pre-construction survey no more than three days (72 hours) prior to the commencement of activities to determine if active bird nests are present in the affected areas. If there are no nesting birds (includes nest building or other breeding/nesting behavior) within this area, clearing, grubbing, and grading shall be allowed to proceed. Furthermore, if construction activities are to resume in an area where they have not occurred for a period of seven or more days during the breeding season, an updated survey for avian nesting will be conducted. If active nests or nesting birds are observed within the area, the biologist shall flag the active nests and construction activities shall avoid active nests until a qualified biologist has determined that nesting behavior has ceased, nests have failed, or young have fledged.	Less than significant	3.1 A 3.1 B 3.1 C 3.1 L 4.1 D 7.1 I 7.1 J 7.1 K
BIO-8	Upon completion of all extraction activities, reclamation, and final grading to establish the final landform shall occur in accordance with the approved Reclamation Plan. Revegetation with native species will occur within the expanded Sweetwater River floodplain and constructed bordering slopes according to a revegetation plan to be approved by the County and Wildlife Agencies (USWFS and CDFW).	Less than significant	3.1 A 3.1 B 3.1 C 3.1 G 3.1 H 4.1 A 4.1 D 7.1 I 7.1 J
BIO-9	Mitigation for impacts to 0.44 acre of southern cottonwood-willow riparian forest, 0.13 acre of disturbed southern willow scrub, 0.01 acre of tamarisk scrub, 0.01 acre of arundo-dominated riparian, and 0.55 acre of disturbed wetland shall occur at a 3:1 ratio with at least 1:1 creation (establishment/re-establishment) for a total mitigation requirement of 3.42 acres. Mitigation shall occur through on-site preservation of 13.85~~6~~ acres of wetland and riparian habitat, on-site rehabilitation of 7.36 acres of riparian habitat, and on-site re-establishment and revegetation of 107.63~~2~~ acres of riparian habitat for a total of 128.84 acres of wetland riparian habitat to be preserved within the biological open space easement.	Less than significant	3.1 A 3.1 B 3.1 C 3.1 G 4.1 A

	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number
BIO-10	Mitigation for 1.2 acres of impacts to Diegan coastal sage scrub shall occur at a 1.5:1 ratio with 1.8 acres of Tier II or Tier I habitat in the South County MSCP area within a biological resource core area. Mitigation shall occur through on-site preservation of 0.6 acre of Diegan coastal sage scrub and on-site revegetation of 11.3 acres of Diegan coastal sage scrub for a total of 11.9 acres of Tier II Diegan coastal sage scrub to be preserved within the biological open space easement.	Less than significant	3.1 A 3.1 B 3.1 C 3.1 G 4.1 A 7.1 D
BIO-11	Prior to any vegetation removal, grading, and/or other ground disturbing activities, a qualified biologist familiar with special status reptile and amphibian species behavior and life history shall conduct a pre-construction survey no more than two weeks prior to commencement of activities to determine whether reptile and amphibian species designated as sensitive by CDFW, but not covered under the County's MSCP, occur within proposed impact area(s). If special status reptile or amphibian species are detected during the pre-construction survey, consultation with CDFW shall be initiated to prepare species-specific protocols for proper handling and relocation procedures.	Less than significant	3.1 B
BIO-12	If western spadefoot toads, tadpoles, or egg masses are identified within the proposed impact area(s), the following measures shall be implemented: (1) A suitable relocation site(s) outside the proposed impact area(s) shall be identified by a qualified biologist. The relocation site(s) shall be located a minimum of 50 feet outside of the proposed impact area(s), or 100 feet if available, and shall be approved by CDFW; (2) All western spadefoot adults, tadpoles, and egg masses encountered in the proposed impact area(s) shall be collected and released in the identified relocation site(s); (3) The relocation site(s) shall be monitored annually for five years during and immediately following peak breeding season (late winter to March), such that surveys can be conducted for adults as well as for egg masses and tadpoles. The results of annual monitoring shall be provided to CDFW in an annual report.	Less than significant	3.1 B

	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number
BIO-13	Prior to the removal of mature trees or existing buildings/structures with the potential to support roosting bats, a qualified biologist shall conduct an initial pre-construction survey no more than 30 days and no less than two weeks prior to the commencement of tree removal or demolition activities to determine if roosting bats are present in the proposed impact area(s. A letter report summarizing the survey methods and results of the survey, including negative findings, shall be submitted to the County and CDFW for review at least two weeks prior to the commencement of Project activities. If bats are detected within the proposed impact area(s) during the initial pre-construction survey, the letter report will identify measures to be implemented to avoid and minimize potential direct and indirect impacts to roosting bats, including those identified in this measure. A final pre-construction survey shall be conducted no more than three days (72 hours) prior to tree removal or demolition activities within the proposed impact area(s). If bats are not detected during the final pre-construction survey or determined to be absent from the proposed impact area(s), construction activities shall be allowed to proceed, and no additional measures would be necessary. If bats are detected during the final pre-construction survey, the following avoidance measures shall be implemented, depending on the time of year, including additional measures identified in the letter report. If an active maternity roost is detected during the bat maternity season (April 15 through August 15), the biologist shall flag the active roost site and construction activities shall avoid the roost site until after the maternity season (August 16), or until the qualified biologist has determined young are self-sufficiently volant (able to fly). If bats are detected and determined to be roosting within the proposed impact area(s) outside of the bat maternity season (August 16 through April 14), the biologist shall flag the active roost site and construction activities shall avoid roost sites until bats are no longer determined to be roosting as determined by the qualified bat biologist. Exclusion of roost sites, where feasible, outside of the bat maternity season may be conducted with approval of the County and CDFW. Methods of roost exclusion shall be determined in consultation with the County and CDFW.	Less than significant	3.1 B 3.1 C
BIO-14	The applicant shall dedicate 149.0~~150.7~~ acres of biological open space to be managed by a long-term manager approved by the County in accordance with a Resource Management Plan. The biological open space easement shall include native habitat revegetation areas located within the expanded Sweetwater River floodplain and bordering constructed slopes. Permanent open space fencing and signage shall be installed around the perimeter of the biological open space as detailed in the final Resource Management Plan.	Less than significant	3.1 A 3.1 B 3.1 C 3.1 G 3.1 H 4.1 A 4.1 D

	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number
BIO-15	The project requires preparation of a Resource Management Plan (RMP) for on-site biological open space to be approved by the County and Wildlife Agencies (USFWS and CDFW). The RMP would provide direction for the permanent preservation and management of the on-site biological open space in accordance with County regulations.	Less than significant	3.1 A 3.1 B 3.1 C 3.1 G 3.1 H 3.1 I 4.1 A 4.1 D 7.1 I
BIO-16	To help ensure errant impacts to sensitive vegetation communities outside of the impact footprint are avoided during construction, temporary environmental fencing (including silt fencing where determined necessary by the Stormwater Pollution Prevention Plan [SWPPP]), would be installed at the edges of the impact limits prior to initiation of grading. All construction staging shall occur within the approved limits of construction.	Less than significant	4.1.A 4.1 B 5.1 A
BIO-17	A qualified biologist shall monitor the installation of environmental fencing wherever it would abut sensitive vegetation communities, jurisdictional waters or wetlands, or open space. Prior to the installation of temporary fencing, the placement design should carefully consider the potential impacts to wildlife movement patterns between the upstream and downstream riparian habitats adjacent to the Project site. The biologist also would conduct a pre-construction environmental training session for construction personnel prior to all phases of construction to inform them of the sensitive biological resources on-site and avoidance measures to remain in compliance with project approvals. The biologist shall monitor initial vegetation clearing, grubbing, and grading activities to ensure that activities occur within the approved limits of work and avoid impacts to nesting birds. The biologist shall periodically monitor the limits of construction and mining operations to ensure that mining and avoidance areas are delineated with temporary fencing and that fencing remains intact.	Less than significant	4.1 A 4.1 B 5.1 A

	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number
BIO-18	Impacts to 0.60 acre of U.S. Army Corps of Engineers (USACE) wetland waters of the U.S. shall be mitigated a minimum 3:1 ratio and 0.36 acre of USACE non-wetland waters of the U.S. shall be mitigated at a minimum 1:1 ratio through one or a combination of the following: on- and/or off-site establishment, re-establishment, rehabilitation, and/or enhancement of 2.16 acres waters of the U.S.; and/or off-site purchase of waters of the U.S. credits at an approved mitigation bank, or other location deemed acceptable by the USACE. Any mitigation completed through purchase of mitigation credits shall be provided prior to issuance of a grading permit, and prior to use of the premises in reliance of this permit. Any applicant-initiated mitigation must be implemented prior to or concurrent with impacts to waters of the U.S. Impacts to waters of the U.S. would require issuance of a Section 404 CWA permit from the USACE prior to impacts.	Less than significant	4.1 B 5.1 A
BIO-19	Impacts to 1.14 acres of California Department of Fish and Wildlife (CDFW) jurisdictional riparian habitat (0.44 acre of southern cottonwood-willow riparian forest, 0.13 acre of southern willow scrub, 0.002 acre of freshwater marsh, 0.01 acre of arundo-dominated riparian, and 0.56 acre of disturbed wetland) shall be mitigated at a 3:1 ratio, totaling 3.42 acres of riparian habitat mitigation. Impacts to 17.06 acres of CDFW streambed shall be mitigated at a minimum 1:1 ratio through one or a combination of the following: on- and/or off-site establishment, re-establishment, rehabilitation, and/or enhancement of 17.06 acres of riparian and/or stream habitat; and/or off-site purchase of riparian and/or stream credits at an approved mitigation bank, or other location deemed acceptable by the CDFW. Combined mitigation for CDFW riparian habitat and streambed totals 20.48 acres. Any mitigation completed through purchase of mitigation credits shall be provided prior to the issuance of a grading permit, and prior to use of the premises in reliance of this permit. Any applicant-initiated mitigation must be implemented prior to or concurrent with impacts to CDFW habitat. Impacts to CDFW jurisdictional habitat would require issuance of a CFG Code Section 1602 Streambed Authorization Agreement from the CDFW prior to impacts.	Less than significant	4.1 A 4.1 B 5.1 A
BIO-20	The project requires preparation of a wetland mitigation plan for impacts to wetland habitat and jurisdictional waters to be approved by the County (wetland impacts only) and U.S. Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and Regional Water Quality Control Board (RWQCB) (impacts to waters of the U.S. and State, and CDFW riparian habitat and streambed), as applicable. Approval of the plan and/or acceptance of mitigation bank credits by the USACE, CDFW, and RWQCB shall be a condition of the associated wetland permits for the project.	Less than significant	4.1 A 4.1 B 5.1 A

9.0 LIST OF PREPARERS AND PERSONS/ORGANIZATIONS CONTACTED

The following individuals contributed to the fieldwork and/or preparation of this report.

Samantha Edgley	B.S., Environmental Biology with an emphasis in Ecosystem Ecology and Management, California State Polytechnic University, Pomona, 2012
Sean Bohac	Graduate Certificate, GIS Certificate Program, Mesa College, San Diego, California, 2003 B.S., Biology, The Evergreen State College, Olympia, Washington, 1998
Angelia Bottiani	B.S., Biology, emphasis on Ecology and Biodiversity, Humboldt State University, 2015
Erica Harris‡	B.S., Biology, Emphasis in Zoology, San Diego State University, 2009
Rebecca Kress	B.A., Geography, State University of New York, Geneseo, 1999
Beth Martinez*	M.S., Environmental Studies, California State University Fullerton, 2002 B.A., Philosophy, University of California Irvine, 1992
Stacy Nigro*†	B.S., Forest Resources and Conservation (emphasis in Wildlife Ecology, minor in Botany), University of Florida, 1994
Benjamin Rosenbaum*	B.S., Biology, emphasis in Ecology, San Diego State University, 2009
W. Larry Sward†	M.S., Biology, with an emphasis in Botany, San Diego State University, 1979 B.S., Biology, with an emphasis in Ecology, San Diego State University, 1975
Dane van Tamelen	B.A., Environmental Studies, University of California, Santa Cruz, 2015

‡ Primary report author
* Contributing author
† County-approved Biological Consultant

10.0 REFERENCES

American Ornithological Society (AOS). 2022. AOU Checklist of North and Middle American Birds (online checklist). Retrieved from: http://checklist.aou.org/taxa/.

Bowman, R. 1973. Soil Survey of the San Diego Area. USDA in cooperation with the USDI, C Agricultural Experiment Station, Bureau of Indian Affairs, Department of the Navy, and the U.S. Marine Corps.

Bradley, R.D., Ammerman, L.K., Baker, R.J., Bradley, L.C., Cook, J.A., Dowler, R.D. Jones, C., Schmidly, D.J, Stangi, F.B., Van De Bussche, R.A., Wursig, B. (2014). Revised checklist of North American mammals north of Mexico. Museum of Texas Tech University Occasional Papers. 327:1-27.

California Department of Fish and Wildlife (CDFW). 2022a. California Natural Diversity Database (CNDDB). RareFind Database Program, Version 5.

2022b.California Natural Diversity Database (CNDDB). Special Vascular Plants, Bryophytes, and Lichens List. October. Retrieved from: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline.

2022c. California Natural Diversity Database (CNDDB). Special Animal List. October. Retrieved from: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline.

Calflora. 2022. Retrieved from: http://www.calflora.org/.

California Invasive Plant Council. 2022. California Invasive Plant Inventory. Retrieved from: http://www.cal-ipc.org/ip/inventory/index.php.

California Native Plant Society (CNPS). 2022. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). Rare Plant Program. California Native Plant Society, Sacramento, CA. Retrieved from: http://www.rareplants.cnps.org/.

Chang Consultants. 2022. CEQA-level Drainage Study for the Cottonwood Sand Mining Project. October 4.

Corbin, C. and K. Livengood. 2018. Title: Scientific Bat Acoustics Course Workshop Materials and Voucher Calls. September 30 to October 4.

County of San Diego (County). 2022. SanBIOS Database. Land Use and Environment Group. Available at: http://www.sangis.org/.

2011. San Diego County Code Title 8 Zoning and Land Use Regulations, Division 6. Miscellaneous Land Use Regulations. Chapter 6. Resource Protection Ordinance. October 14.

2010a. Report Format and Content Requirements, Biological Resources. Fourth Revision, September 15.

County of San Diego (cont.)

2010b. Guidelines for Determining Significance and Report Format and Content Requirements, Biological Resources. Fourth Revision, September 15. Retrieved from: https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/Biological_Report_Format.pdf.

2010c. Biological Mitigation Ordinance [for the South County MSCP Subarea Plan]. Ordinance No. 8845, 9246, 9632, 10039. April 2.

1998. Final Multiple Species Conservation Program, MSCP Plan. August.

1997. Multiple Species Conservation Program, County of San Diego Subarea Plan. October 22.

Davenport, Ken. 2018. Lepidoptera of North America 15. Butterflies of southern California in 2018: updating Emmel and Emmel's 1973 Butterflies of southern California. Colorado State University. Department of Bioagricultural Sciences and Pest Management; C.P. Gillette Museum of Arthropod Diversity. April 20. Retrieved from: https://mountainscholar.org/handle/10217/187314.

Dunk, J.R. 1995. White-tailed Kite (*Elanus leucurus*), version 2.0. In The Birds of North America (A. F. Poole and F. B. Gill, Editors). Cornell Lab of Ornithology. Ithaca, New York. Available at: https://doi.org/10.2173/bna.178.

EnviroMINE, Inc. 2021a. Reclamation Plan for the Cottonwood Sand Mining Project (PDS2018-MUP-003, PDS2018-RP-18-001, PDS2018-ER-18-19-007), Jamacha, Ca. October.

2021b. Draft Groundwater Use Analysis, Cottonwood Sand Mine. April 26.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi. 100 pp. with Appendices.

Geo-Logic Associates. 2022a. Sediment Load Analysis. November.

2022b. Water Quality Evaluation Report. November.

2022c. Streamflow Infiltration to Groundwater, Proposed Cottonwood Sand Mine. Technical Memorandum. October 7. 2021. Groundwater Investigation Report, Cottonwood Sand Mine, Jamacha, California. November.

2021. Groundwater Investigation Report, Cottonwood Sand Mine, Jamacha, California. November.

HELIX Environmental Planning, Inc. 2021. Cottonwood Sand Mine Project Acoustical Site Assessment Report.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, The Resources Agency, 156 pp.

Jepson Flora Project (eds.) 2022. *Jepson eFlora*. Retrieved from: http://ucjeps.berkeley.edu/eflora/.

Kollmorgen Instruments Corporation (Kollmorgen). 1994. Munsell Soil Color Charts, Revised edition. Baltimore, MD.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1–17. Published 28 April. Retrieved from: https://www.fws.gov/wetlands/documents/National-Wetland-Plant-List-2016-Wetland-Ratings.pdf.

Martin, John. 2005. Arroyo Toad (*Bufo californicus*) Surveys on San Diego National Wildlife Refuge Report. August 1.

Natural Resource Conservation Service (NRCS). 2022. Hydric Soils of the U.S. Retrieved from: http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/.

Oberbauer, T., M. Kelly, and J. Buegge. 2008. Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California," R. F. Holland, Ph.D., October 1986. March. Revised from 1996 and 2005. July.

Pelham, Jonathon P. 2022. A Catalogue of Butterflies of the United States and Canada. University of Florida. Florida Museum of Natural History, McGuire Center for Lepidoptera and Biodiversity; University of Washington. Burke Museum of Natural History and Culture. Revised June 3. Retrieved from: https://www.butterfliesofamerica.com/US-Can-Cat.htm.

Szewczak, J. 2018. Echolocation Call Characteristics of California Bats. Humboldt State University Bat Lab. Arcata, CA..

Szewczak, J and N. Szewczak. 2019. Sonobat ver. 4.5.5: Arcata, California. Accessed July 2022.

Small, A. 1994. California Birds: Their Status and Distribution. Ibis Publishing Company. Vista, California.

Society for the Study of Amphibians and Reptiles (SSAR). 2022. North American Standard English and Scientific Names Database. Retrieved from: https://ssarherps.org/cndb/.

Sogge, M.K., Ahlers, Darrell, and S.J. Sferra. 2010. A natural history summary and survey protocol for the southwestern willow flycatcher. U.S. Geological Survey Techniques and Methods 2A-10.

State Water Resources Control Board. 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Adopted April 2. Retrieved from: https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/procedures_conformed.pdf.

Unitt, P. 2004. San Diego County Bird Atlas. San Diego Natural History Museum. California.

U.S. Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). Eds. J.S. Wakely, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Fish and Wildlife Service (USFWS). 2022. Occurrence Information for Multiple Species within Jurisdiction of the Carlsbad Fish and Wildlife Office (CFWO). Retrieved from: http://www.fws.gov/carlsbad/gis/cfwogis.html.

2014. Arroyo Toad (*Anaxyrus californicus*) Species Report. U.S. Fish and Wildlife Service Ventura Fish and Wildlife Office, Ventura, California. March 24. Retrieved from: https://www.fws.gov/ventura/docs/species/at/Arroyo%20Toad%20Final%20Species%20Report.pdf.

2001. Least Bell's Vireo Survey Guidelines. January 19. Retrieved from: https://www.fws.gov/pacific/ecoservices/endangered/recovery/documents/LBVireo.2001.protocol.pdf.

1999. Survey Protocol for the Arroyo Toad. May 19. Retrieved from: https://www.fws.gov/pacific/ecoservices/endangered/recovery/documents/AroyoToad.1999.protocol.pdf.

1997. Draft Recovery Plan for the Stephens' Kangaroo Rat. April. Retrieved from: https://ecos.fws.gov/docs/recovery_plan/970623.pdf.

U.S. Geological Survey (USGS). 2006. Draft USGS Western Pond Turtle (*Emys marmorata*) Visual Survey Protocol for the Southcoast Ecoregion. U. S. Geological Survey protocol. San Diego, CA. 56 pp. Available at: https://sdmmp.com/upload/SDMMP_Repository/0/4fnpv18xm0sqtw29j7d3rz56bkychg.pdf.

2005a. Baseline Surveys for the Arroyo Toad (*Bufo californicus*) in the Sweetwater River Channel, San Diego County, San Diego. Draft Final Report. October 5. Retrieved from: https://sdmmp.com/upload/SDMMP_Repository/0/ng809h3vjcfzwbrxsdm51qyk72t4p.pdf.

2005b. Distribution and Status of Arroyo Toad (*Bufo californicus*) and Western Pond Turtle (*Emys marmorata*) in the San Diego MSCP and Surrounding Areas. Final Report. U.S. Geological Survey Western Ecological Research Center. October 5. Retrieved from: https://www.sandiegocounty.gov/content/dam/sdc/pds/mscp/docs/Toad_Turtle_Distribution_and_Status.pdf.

2003. Arroyo Toad and Western Pond Turtle in the San Diego Multiple Species Conservation Area, 2002. Interim Report. U.S. Geological Survey Western Ecological Research Center. Retrieved from: https://sdmmpcom/upload/SDMMP_Repository/0/8j40y6xnm2z5twdr3pgfkcbh97qs1v.pdf.