City of San Diego

Otay 2nd Pipeline Phase 4 (H207169)

Biological Resources Technical Report

March 13, 2026

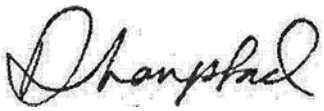
Prepared For:

Nick Dorner, P.E.
Associate: Public Works
Rick Engineering Company
5620 Friars Road
San Diego, CA 92110

Prepared By:

Derek H. Langsford, Principal Scientist
Tierra Data Inc.
10110 W. Lilac Road
Escondido, CA 92026
(760) 749 2247

Principal Investigator



Derek H. Langsford, PhD, CSE

EXECUTIVE SUMMARY

This Biological Resources Technical Report identifies the biological resources, potential impacts, and proposed mitigation for Phase 4 of the replacement of the City of San Diego's (City's) Otay 2nd Pipeline Project (Project). Phase 4 occurs from the terminus of Phase 3 in Sweetwater River Regional Park in the unincorporated area to just south of Telegraph Canyon Road, east of Paseo Ladera, in Chula Vista.

The Otay 2nd Pipeline carries water from the Otay-Barrett-Morena Reservoirs in the Otay-Cottonwood watersheds, and specifically from Lower Otay Reservoir to the City. Having been originally installed in the 1930s, problems such as leakage from multiple repairs and the increasing risk of failure, this pipeline is needing replacement.

The proposed alignment was originally planned to parallel the existing pipeline alignment, but initial vegetation and rare plant mapping resulted in the route being moved to mostly within streets including Bonita Road and Glen Abbey Drive in the unincorporated area and Terra Nova Drive, East H Street, Paseo Del Rey, East J Street, and Paseo Ladera in the City of Chula Vista. While the new proposed alignment substantially reduced impacts, the proposed alignment still passes through lands supporting sensitive habitat within the County of San Diego's and City of Chula Vista's Multiple Species Conservation Program (MSCP) preserve system or Multi-Habitat Planning Area (MHPA). Portions are within the County of San Diego's Pre-Approved Mitigation Area and City of Chula Vista's Central Preserve Management Area.

The proposed Project would impact 16.12 acres in total but only 3.32 acres of sensitive habitat with only 0.62 acres being permanent impacts from creation of road access. Impacts would occur to 0.172 acre of riparian (Wetland Tier) habitats in Sweetwater Regional Park and 3.15 acres of Tier I-IIIB (0.06 acre of Tier I Maritime Succulent Scrub, 2.99 acres of Tier II Coastal Sage Scrub, and 0.10 acre of Tier IIIb Non-Native Grassland) in both the unincorporated area and City of Chula Vista. The 0.172 acre of impact to riparian habitats are also potentially California Department of Fish and Wildlife jurisdictional under Section 1600 of the California Fish and Game Code and City wetlands.

Impacts would also occur to three California Rare Plant Rank (CRPR) 1B.2 species (decumbent goldenbush [*Isocoma menziesii* var. *decumbens*], south coast saltscale [*Atriplex pacifica*], and long spined spineflower [*Chorizanthe polygonoides* var. *longispina*]) and two CRPR 4 species (San Diego sunflower [*Bahiopsis laciniata*] and ashy spike moss [*Selaginella cinerascens*]). Two listed animal species could be affected: the federal- and state-listed as endangered light-footed Ridgway's rail (*Rallus obsoletus levipes*) and the federal-listed threatened coastal California gnatcatcher (CAGN; *Polioptila californica californica*), but both are MSCP-covered species. Other MSCP-covered species that could also be affected by the Project are the detected orange-

throated whiptail (*Aspidoscelis hyperythra*), and potentially present Cooper's hawk (*Accipiter cooperi*) and rufous-crowned sparrow (*Aimophila ruficeps canescens*) which could also be affected by the Project. While no City MSCP Area Specific Management Directives apply to the alignment (City 1997), MSCP Conditions of Coverage would be applied to these species.

All impacted areas outside of the access road in natural areas will be revegetated. Pursuant to the City's Biology Guidelines, riparian impacts of 0.172 acre in Sweetwater Regional Park will be revegetated *in situ* and be mitigated with an additional 0.540 acres of mitigation credits from the City Stadium Wetland Mitigation Bank. Impacts of 3.15 acres to MSCP Tier I through IIIb habitats require 3.16 acres of mitigation and will be mitigated by mitigation credits from the City's Otay Mesa and Sander mitigation banks. Mitigation for Maritime Succulent Scrub will be in-kind. Revegetation of temporary impacts to 2.52 acres of Tier I through IIIb upland habitats and 1.36 acres of Tier IV habitats will result in a total of 3.88 acres of upland revegetation. No additional mitigation is required for impacts to sensitive plants because the off-site mitigation for habitat in City mitigation banks alone will provide habitat for sensitive species. In addition, the temporary impact areas where they were detected will be revegetated and will include the sensitive species in the plant palettes at the locations where the species are found.

Implementation of avoidance and minimization measures in compliance with the City's Land Development Code (2018b) that includes the City's Biology Guidelines, the City's MSCP Subarea Plan (1997) and its Conditions of Coverage and MHPA Land Use Adjacency Guidelines, as well as the City's standard Avian and general Biological Protection Requirements will reduce potential impacts to light-footed Ridgway's rail, CAGN, orange-throated whiptail, Cooper's hawk, and rufous-crowned sparrow to below significance and ensure compliance with the Migratory Bird Treaty Act and California Fish and Game Code. These include restricting clearing of CAGN-occupied habitat in the MHPA during the CAGN breeding season (March 1-August 15) and requiring construction-generated noise levels in the MHPA not exceed 60 decibels equivalent continuous, A-weighted, sound level averaged over an hour ($dB(A)_{leqh}$), to be less than significant.

Applying these measures, significant impacts would be reduced to below a level of significance and the proposed replacement of this portion of the Otay 2nd Pipeline would be accomplished without significant effects on sensitive biological resources.

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List of Acronyms and Abbreviations

ARDR	Aquatic Resources Delineation Report
BCME	Biological Construction Mitigation/Monitoring Exhibit
BMO	Biological Mitigation Ordinance
BMZ	Brush Management Zone
BRCA	Biological Resource Core Area
CAGN	Coastal California Gnatcatcher
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG	California Fish and Game
City	City of San Diego
CNDDB	California Natural Diversity Database
COHA	Cooper's hawk
County	County of San Diego
CRPR	California Rare Plant Rank
CSS	Coastal Sage Scrub
$dB(A)_{leqh}$	decibels, equivalent continuous sound level averaged over an hour
DCCO	double-crested cormorant
DCSS	Diegan Coastal Sage Scrub (aka CSS)
DEV	Developed
DH	Disturbed Habitat
DW	Disturbed Wetland
ED	Environmental Designee
EPP	Essential Public Project
ESA	Endangered Species Act
ESL	Environmentally Sensitive Land
EW	Eucalyptus Woodland
FMZ	Fuel Modification Zone
ft	foot/feet
FWM	Freshwater Marsh
Glen Abbey	Glenn Abbey Memorial Park & Mortuary
GRBH	great blue heron
HLIT	Habitat Loss and Incidental Take
I	Interstate
LCD	Landscape Construction Document
LDC	Land Development Code
LF	linear feet
LFRR	light-footed Ridgeway's rail
LSAA	Lake and Streambed Alteration Agreement

LUAG	Land Use Adjacency Guidelines
MBTA	Migratory Bird Treaty Act
MHPA	Multi-Habitat Planning Area
MSCP	Multiple Species Conservation Program
MSS	Maritime Succulent Scrub
NNG	Non-Native Grassland
NNV	Non-Native Vegetation
OTWH	orange-throated whiptail
PAMA	Pre-Approved Mitigation Area
PMA	Preserve Management Area
Project	Otay 2nd Pipeline Phase 4 Project
-R	Restoration
RCSP	rufous-crowned sparrow
RWQCB	Regional Water Quality Control Board
SAWRF	Southern Arroyo Willow Riparian Forest
SR	State Route
SWS	Southern Willow Scrub
TDI	Tierra Data Inc.
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
YBCH	yellow-breasted chat
YEWA	yellow warbler

1.0 INTRODUCTION

This Biological Resources Technical Report is being provided in support of the California Environmental Quality Act (CEQA) review of the proposed design of the Otay 2nd Pipeline Phase 4 Project (Project) from the terminus of Phase 3 at Sweetwater Road in the unincorporated community of Bonita to the south side of Telegraph Canyon Road in the City of Chula Vista.

The Otay 2nd Pipeline carries water from the Otay-Barrett-Morena Reservoirs in the Otay-Cottonwood watersheds to the City of San Diego (City). The pipeline is one of the City's oldest and most important, treated-water transmission mains. The pipeline was originally installed in the 1930s, and the majority of the pipeline consists of the pipe material which has led to multiple problems including ongoing leakage from multiple repairs as well as an increased risk for pipeline failure; therefore, this pipeline is approaching the end of its lifecycle. Currently, the Otay 2nd Pipeline is the backbone transmission system supplying the Paradise Hills/Paradise Mesa water system as well as providing looped transmission service between the two treatment plant service areas. The replacement of the Otay 2nd Pipeline is driven by the need to replace a critical facility; provide a reliable supply to the Paradise Hills/Paradise Mesa Water System (HGL Zones: 390, 472, 490 & 610); and provide operational flexibility. It is considered an Essential Public Project (EPP) to continue safe and adequate water service to the southern portion of the City.

The report summarizes the biological resources within the new pipeline alignment that is proposed to replace the current pipeline, as well as the associated permanent and temporary construction access routes. The report also addresses potential impacts to those resources and proposes avoidance, minimization, and mitigation measures as required by the City Biology Guidelines (2018b) and the City's Guidelines for Conducting Biological Surveys (2018b), as well as consistency with the Multiple Species Conservation Program (MSCP; 1998).

1.1 Location

The Project is located east of Interstate (I) 805, south of State Route (SR) 54 and mostly north of Telegraph Canyon Road and occurs in both the unincorporated community of Bonita in the County of San Diego (County) and the City of Chula Vista in southern San Diego County (Figure 1). The existing pipeline is within an existing City of San Diego 50-foot (ft) utility easement and on City-owned parcels, but the new pipeline will deviate from the old alignment to minimize impacts to the environment. The project is within the U.S. Geological Survey (USGS) 7.5-minute National City and Imperial Beach quadrangle maps and the Sweetwater and San Diego Bay watersheds. The project is located within the County's and the City of Chula Vista's MSCP Subarea Plan areas.

The Project's northern end is just south of Sweetwater Road and east of the Willow Street Bridge in the County's Sweetwater Regional Park. After crossing the Sweetwater River, the alignment crosses the parking lot between the Kaiser Permanente facility and the gas station at the corner of Willow Street and Bonita Road in the City of Chula Vista before turning west along Bonita Road which is the boundary between the County and City of Chula Vista.

Figure 1. Regional Location.

After 900 ft along Bonita Road, the alignment then turns due south up Glen Abbey Drive until it jogs east onto a trail through areas of native and non-native vegetation between Glenn Abbey Memorial Park & Mortuary (Glen Abbey) and residential development on The Hill Drive.

After approximately 1,400 ft, the alignment jogs west, then east before continuing south, parallel to The Hill Road, then further south over the County/City of Chula Vista boundary heading mostly directly south through a portion of City of Chula Vista MSCP Preserve Management Area (PMA) until it reaches Terra Nova Drive.

At Terra Nova Drive, the alignment begins its in-street portion within the City of Chula Vista, initially heading west then south to East H Street. At East H Street the alignment heads east and then turns south on Paseo Del Rey. Rising up Paseo Del Rey, it turns east on East J Street along the mesa, until it reaches Paseo Ladera. Turning south and then southwest on Paseo Ladera until the alignment turns southeast off Paseo Ladera, through a final portion of PMA before crossing Telegraph Canyon Road to this phase's terminus just south of Telegraph Canyon Road (Figure 2).

1.2 Project Description

The Otay 2nd Pipeline Phase 4 Project proposes to upsize the existing steel pipe with new cement piping beginning east of Willow Street Bridge across the Sweetwater River to south of Telegraph Canyon Road.

The Project proposes the replacement of approximately 16,910 linear feet (LF) (3.20 miles) of existing 36-inch and 40-inch pipe with new 48-inch Cement Mortar Lined and Tape Coated steel pipeline, and Cement Mortar Coated welded steel pipeline (City 2018a). A new 8-inch Polyvinyl Chloride distribution pipe will also be installed to reconnect City water customers from the transmission main to this distribution main. The Project pipeline is currently aligned in the right-of-way, city-owned parcels (Cities of San Diego and Chula Vista), and privately-owned parcels. The recommendation in the Otay 2nd Phase 4 Pipeline Planning Study (City 2018a) was for the Project to realign and construct the proposed new main, parallel with the existing water main to keep the existing pipeline in-service during construction. After completion of the new line, the existing alignment will be abandoned. The Project will also remove and backfill existing structures abandoned by the Bonita Pipeline (City 2018a).

After initial field studies in 2022, City staff determined that impacts to sensitive biological resources could be substantially reduced by placing some of the new pipe in existing roads. As a result, the proposed alignment was redesigned to minimize impacts to sensitive biological resources and now will be 22,050 LF (4.18 miles) and of the same construction type as previously proposed.

A typical cross section for work within undeveloped and open space areas shows a 45-ft limit of work, with a 20-ft graded, unpaved access road with the new 48-inch pipe 5 ft deep within a 16-ft-wide trench. After completion of installation, 25 ft of the 45-ft work width will be restored to habitat matching the habitat adjacent to the alignment (Figure 3).

Temporary impacts will be revegetated per the City Biology Guidelines and Landscape Regulations (City 2018b) and will be described in Landscape Construction Documents (LCDs) per the LDC Landscape Standards and Whitebook and in a Revegetation Plan. The LCDs and Revegetation Plan will cover all temporary impact areas of the project including temporary access route and work areas associated with project implementation and installation, the 120-Day Plant Establishment Period, a 5-year (60-month) monitoring period for the wetland areas and the 25-month Maintenance and Monitoring Period for CSS and upland areas. Erosion control treatments will be installed within temporary disturbance areas in accordance with the City's Biology Guidelines and Landscape Regulations (City 2018b). Revegetation of extant native and restoration of Tier IV habitats will feature native species that are typical of the impact vicinity and will be fenced off with Environmentally Sensitive Area fencing. Erosion control features will include silt fence and straw fiber rolls. Sign-off will only occur once success criteria in the Revegetation/Restoration Plan (TDI 2025b) and LCDs (RE Services 2025) are satisfied. Sensitive Plants adjacent to the access route should be flagged and avoided to the maximum extent practicable. Those that are impacted should be replaced, if feasible, as part of the revegetation of the vegetation communities.

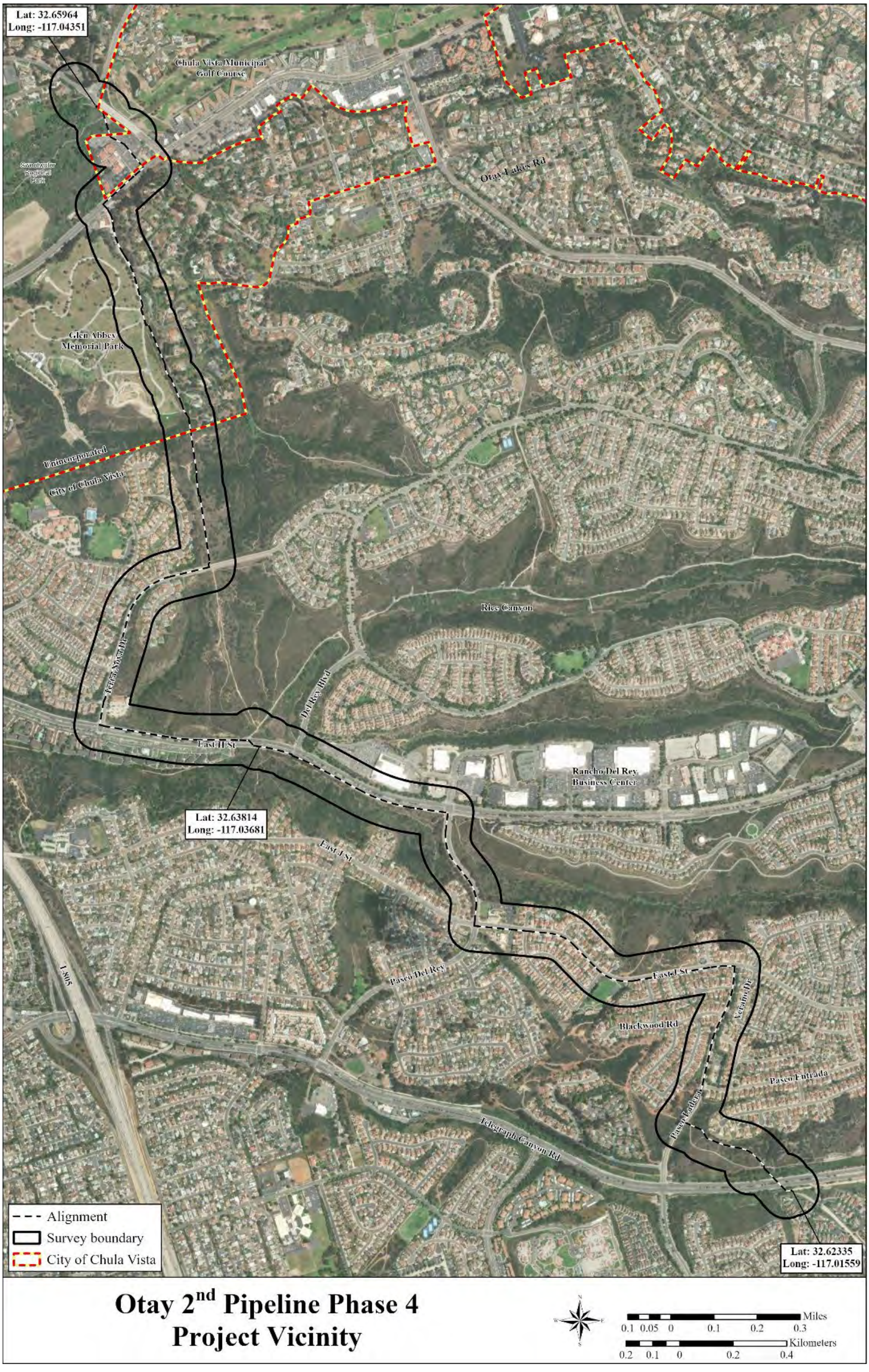

Figure 2. Vicinity Map.

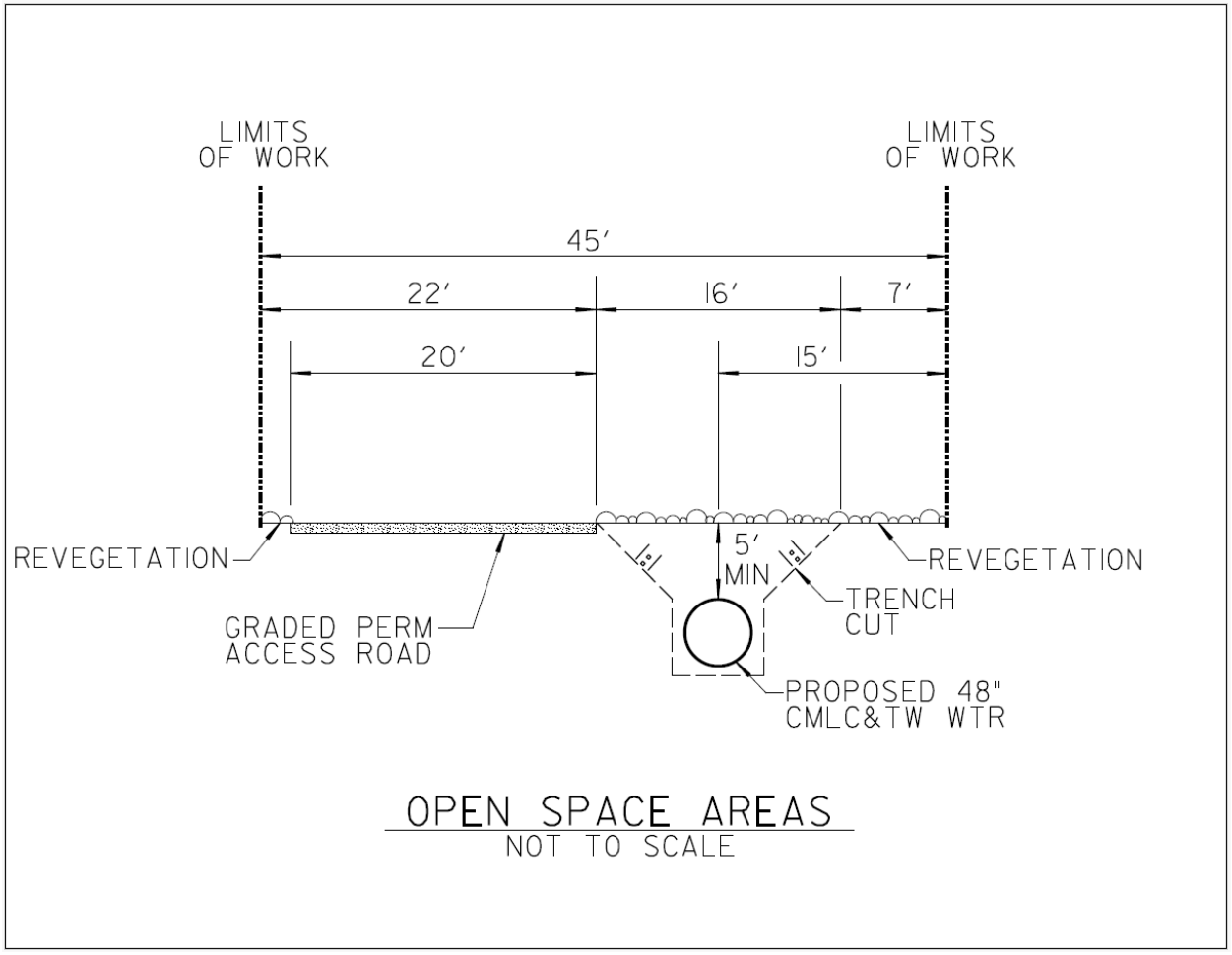

Figure 3. Schematic of Work Width Along Alignment.

Work will require both open-trench and trenchless Underground Directional Drilling techniques under jurisdictional channels, plus construction, maintenance access roads, access points on private property, community coordination, permits, and traffic control design as additional elements. A geotechnical study will be required. Work is not anticipated to be near earthquake faults or rail lines.

2.0 METHODS

Prior to performing the field surveys, a California Natural Diversity Database (CNDDB) search was conducted to identify sensitive plant and wildlife species historically noted in the vicinity of the proposed Project sites (5-mile radius) (California Department of Fish and Wildlife [CDFW] 2022). Site visits and surveys were conducted by Tierra Data Inc. (TDI) staff as identified in Table 1.

Table 1. Field Survey Dates and Personnel

Date	Survey Type	Personnel
2022		
5/26, 6/16	Vegetation Mapping and General Surveys	DL.BV
7/19, 7/21	Rare Plants, Aquatic Resource Delineation	DL, BV, DU
2023		
5/15	Rare Plants	DL, BV
3/28, 4/12, 4/25, 5/5, 5/16, 5/26	Light-footed Ridgway's Rail	BS
8/9	Rare Plants	DL, CL
2024		
2/14, 2/15	Vegetation Mapping and General Survey Update	DU, CL
2025		
6/11, 6/17, 6/25	Vegetation Mapping and General Survey Update, Rare Plants, and Aquatic Resource Delineation Update	DL/DU
Personnel: DL – Derek Langsford, BV = Ben Van Allen, DU = Diego Uribe, BS = Beth Sabiston, CL = Cai Leão		

TDI identified vegetation mapping, general plant and animal inventories, sensitive plant surveys, an aquatic resources delineation of aquatic resources, and surveys for the federal and state endangered light-footed Ridgway's rail (LFRR; *Rallus obsoletus levipes*) be performed.

Initial vegetation mapping and general biological surveys occurred along the alignment plus a 300-ft buffer occurred at an ideal time of year to detect most plants and animals. Focused rare plant surveys occurred at optimal times to see most special status plant species. The aquatic resources delineation was performed well into the summer of 2022, but water was still flowing in the creeks. LFRR surveys adhered to the recommended guidelines provided to the U.S. Fish and Wildlife Service (USFWS) by Clapper Rail Study Team (2009) and incorporating elements of the Standard North American Marsh Bird Monitoring Protocols (Conway 2009). In 2024, after the change in the project alignment, additional mapping occurred to accurately assess potential impacts of the proposed project to sensitive resources along the alignment when in roads. Biologists also checked the previously mapped areas to verify that conditions at those previously mapped areas had not changed. Vegetation community classifications follow Holland (1986), Oberbauer et al. (2008), and City's Biology Guidelines (2018b). Plant names follow Calflora (2025). Surveys in 2025 were

to update prior surveys, perform a third rare plant survey, and to check for any changes to the aquatic resources at Sweetwater Regional Park and Telegraph Canyon.

The Otay 2nd Pipeline Phase 4 Project Aquatic Resources Delineation Report (ARDR; TDI 2025a) describes methods used to estimate the extent of U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), CDFW, and City aquatic resource jurisdiction within the project ARDR Study Area which only includes a 300-ft buffer to the areas of potential wetland impacts.

3.0 RESULTS

3.1 Physical Characteristics

The Project passes across several distinct areas in unincorporated Bonita and City of Chula Vista communities. The Project will cross three valleys with ridges or mesas above, starting in the Sweetwater River Valley in the north and ending in Telegraph Canyon in the south. The Sweetwater River is a major river in San Diego County originating in the Cuyamaca Mountains and draining out toward into San Diego Bay to the west. Telegraph Canyon Creek is a local drainage that originates in the Otay Ranch area to the east and is carried by concretized channels and culverts west of I-805 to San Diego Bay. Rice Canyon and its tributary canyons drain into a culvert that runs along East H street then heads northwest to join the Sweetwater River. The ridges/mesas that are between the canyons rise to approximately 375 ft above mean sea level and are developed mostly with residential uses but most of the canyon slopes and portions of the mesas being undeveloped (refer to Figure 2).

3.2 Soils

The length of this project means it passes through a large number of different soil types though none are particularly rare (U.S. Department of Agriculture 2024; Figure 4). The Project starts in the Sweetwater River Valley with Riverwash and Tujunga Sand. Moving out of the valley bottom, the alignment passes through Terrace Escarpments, and Gaviota fine sandy loam soil in Glen Abbey. Passing through Linne clay loam and emerging on the ridge with Olivenhain cobbly loam on the ridge/mesa. Heading south on Terra Nova Drive, the soils change back to Terrace Escarpments into Rice Canyon (Figure 4).

Rice Canyon has Salinas clay loam along its bottom with Linne Clay loam soils on the slopes. Moving up to East J Street, the alignment alternates between Olivenhain cobbly loam and Linne cobbly loam as it descends down Paseo Ladera, until it hits the bottom of Telegraph Canyon with more Salinas clay loam (Figure 4).

According to the U.S. Department of Agriculture (2024), Olivenhain cobbly loam in depressions and Tujunga sand in drainage ways can be hydric.

3.3 Regional History

Historically, the Sweetwater Valley in Bonita was in agriculture before denser residential development started in the 1960s (Historical Aerials 2024). Meanwhile, the majority of the land in the Chula Vista portion of the alignment was in a natural state until the 1980s when residential and commercial developments extended from the west, north of E Street and Telegraph Canyon Road. By 1990, the commercial development along E Street and residential development south of Otay Lakes Road were under construction and completed by 2000. The current uses include residential development interspersed with open space canyons, commercial development, schools, with the mesa tops generally developed for suburban residential uses, while the canyon areas and riparian habitats left as open space and recreational areas.

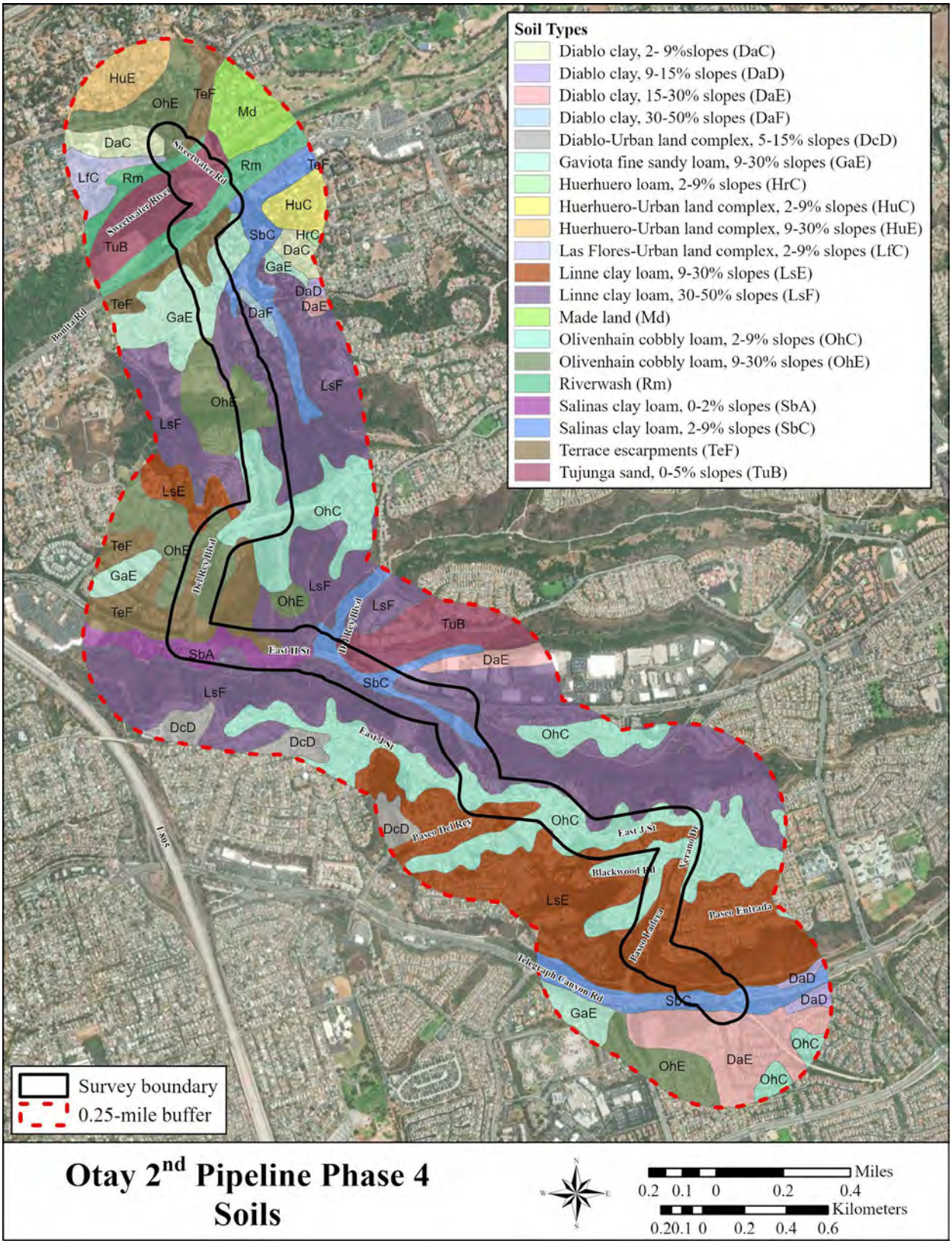

Figure 4. Soils.

3.4 Environmental Setting

The project alignment is in south San Diego County, south of the main metropolitan area of the City of San Diego, and zig-zags from the Sweetwater River Valley in the unincorporated area along and over a ridge/mesa, passing into Chula Vista, to Rice Canyon, then over a second ridge/mesa before heading down into Telegraph Canyon (refer to Figure 2). The river valleys and canyons are mostly undeveloped and protected with various easements and designations within the County and Chula Vista (Historic Aerials 2024; Google Earth 2024).

3.5 Biological Resources

The 2022-2025 biological surveys a mix of open space areas and developed areas supporting sensitive vegetation communities, jurisdictional features, sensitive plants, and sensitive animals that could be affected by the Project.

3.5.1 Vegetation Communities

This Project will be constructed traversing both wetland and upland habitats that include southern riparian scrub, Disturbed Wetland (DW), Diegan Coastal Sage Scrub (CSS), Eucalyptus Woodland (EW), and Non-Native Grassland (NNG). These habitats are considered sensitive by the City, County, and City of Chula Vista and will require mitigation for significant unavoidable impacts. It is likely that mitigation was not applied during the initial installation of the Otay 2nd Pipeline in the 1930s.

Vegetation Communities were mapped using Holland Code Vegetation Communities (Holland 1986; Oberbauer et al. 2008) with mapping units of 0.1 acre or less. Wetland vegetation was mapped to the nearest 0.001 acre. The alignment plus a 300-ft buffer was mapped to allow assessment of direct and indirect impacts. The area under study contains a variety of communities but is mostly dominated by MSCP Tier IV (other uplands) including Developed Land but with Tier II (uncommon uplands), mostly CSS, being the most common native upland habitat present in its archetypal and disturbed form (Figure 5-Figure 13; Table 2). Out of a total of 332.40 acres, only 97.84 acres were sensitive native or naturalized habitats (i.e., Wetlands and MSCP Tiers I through IIIb) (Table 2).

Wetlands include Freshwater Marsh (FWM), Open Water, and DW, as well wetland restoration (DW-R), Southern Willow Scrub (SWS), and Southern Arroyo Willow Riparian Forest (SAWRF) communities.

Tier III (common uplands) habitat is present as Tier IIIb NNG whereas Tier IV (other uplands) are mostly disturbed habitats and include Non-Native Vegetation (NNV) communities containing exotic species (public landscaping along roads, or exotics that have established in native areas). This occurs most notably in wetlands that can support such species as pampas grass (*Cortaderia jubata*), acacia (*Acacia* sp.), and Mexican fan palms (*Washingtonia robusta*). Other Tier IV communities present include EW, Disturbed Habitat (DH), and Developed Land (DEV) in various forms (homes, landscaped backyards, and roads).

Table 2. Holland Vegetation Communities (acres).

Vegetation Community/Habitat in the Study Area (Holland Code)	MSCP Tier	Total Area Mapped
Freshwater Marsh (52400)	Wetland	2.67
Disturbed Wetland (11200)	Wetland	1.82
Disturbed Wetland–Restoration	Wetland	0.56
Southern Arroyo Willow Riparian Forest (61320)	Wetland	6.03
Southern Willow Scrub (63320)	Wetland	0.86
Open Water (64100)	Wetland	0.03
	Subtotal	***11.97***
Maritime Succulent Scrub (32400)	Tier I	0.81
	Subtotal	***0.81***
Diegan Coastal Sage Scrub (32500)	Tier II	83.59
Diegan Coastal Sage Scrub–Restoration (32500)	Tier II	0.87
Diegan Coastal Sage Scrub–Disturbed (32500)	Tier II	0.60
	Subtotal	***85.06***
Non- native grassland (42200)	Tier IIIB	1.76
	Subtotal	***1.76***
Non-Native Vegetation (11000)	Tier IV	16.82
Eucalyptus Woodland (79100)	Tier IV	9.39
Disturbed Habitat (11300)	Tier IV	7.99
Developed (12000)	Tier IV	198.60
	Subtotal	***232.80***
	TOTAL	**332.40**

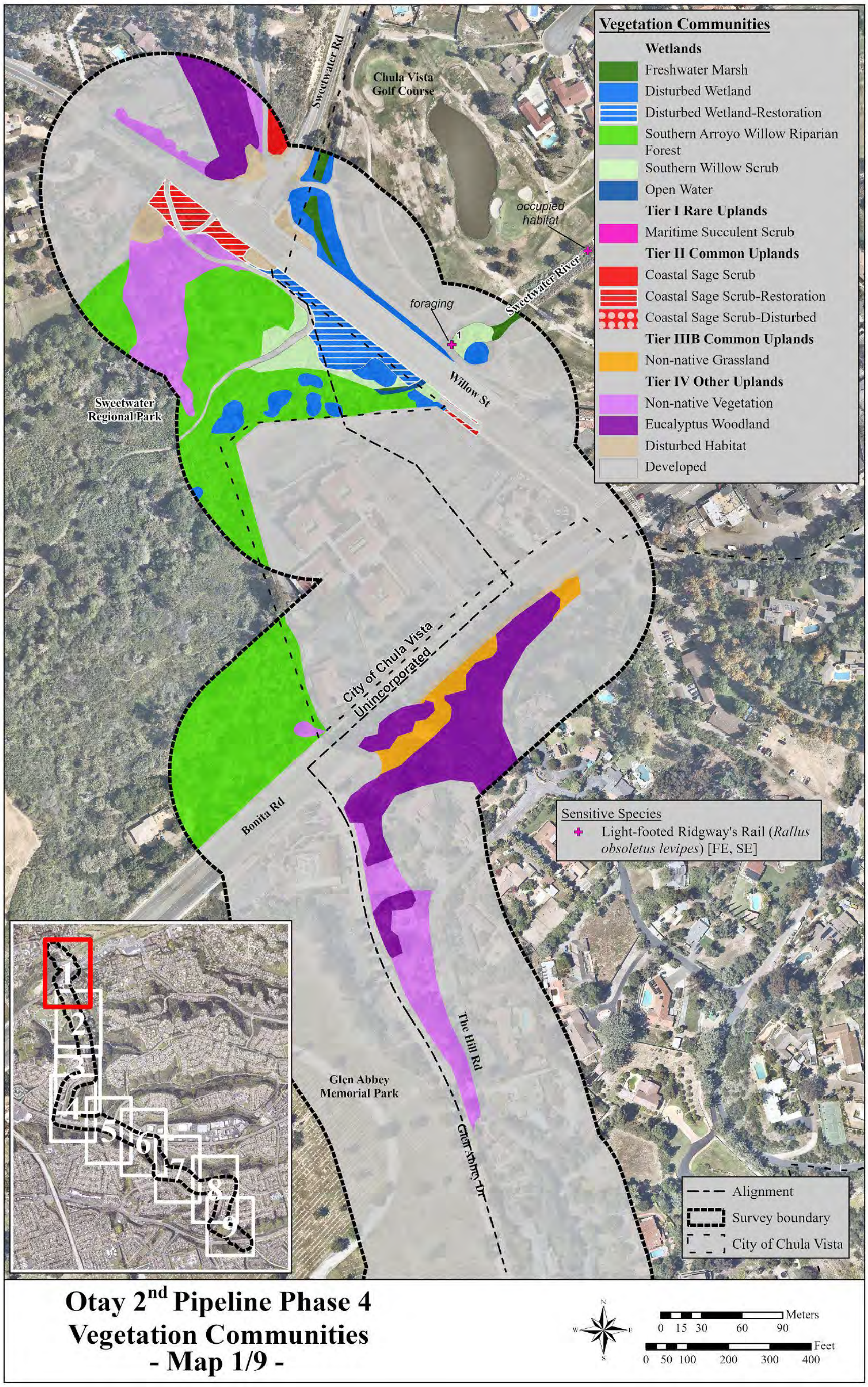

Figure 5. Vegetation Communities and Sensitive Resources – Map 1/9.

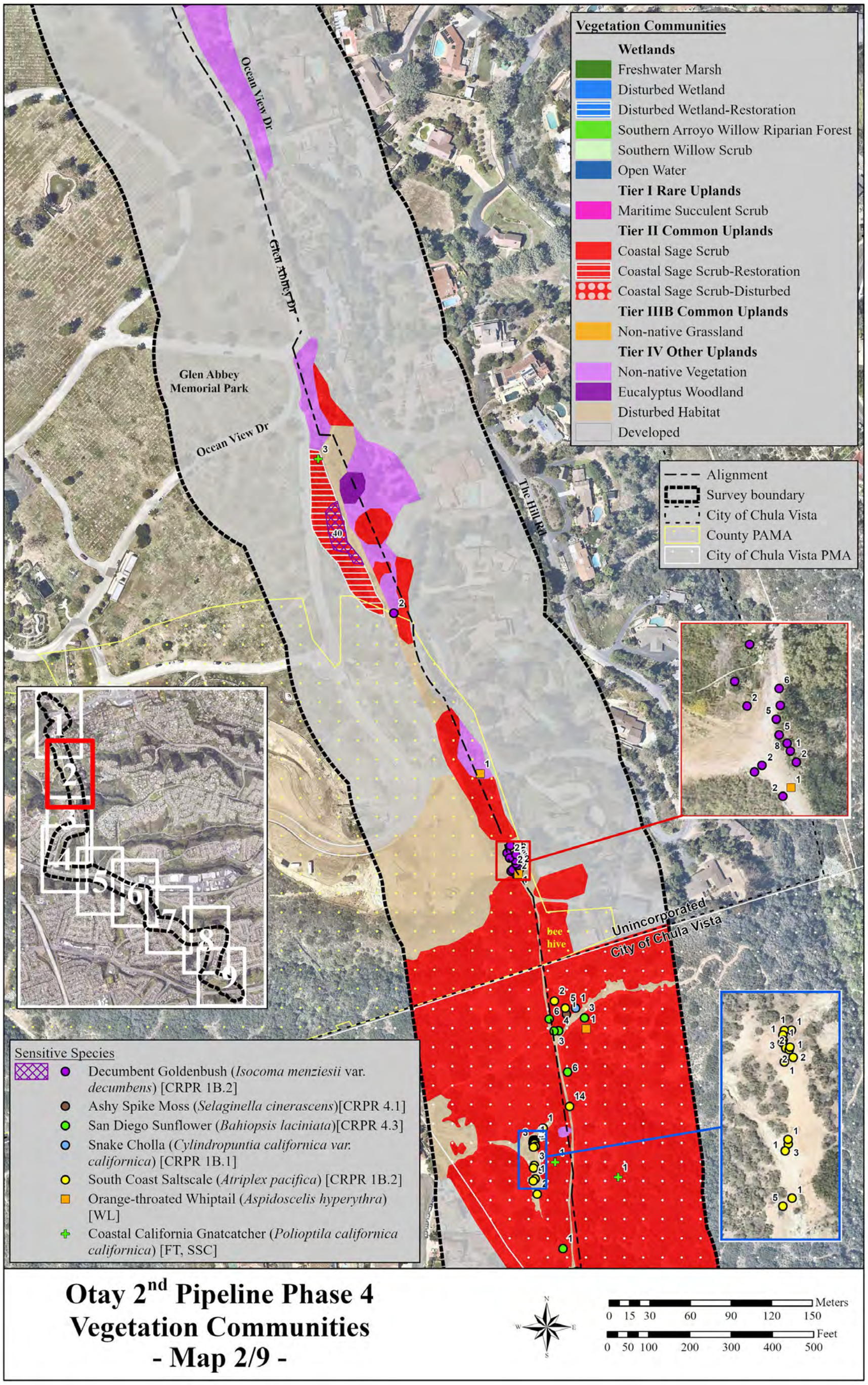

Figure 6. Vegetation Communities and Sensitive Resources – Map 2/9.

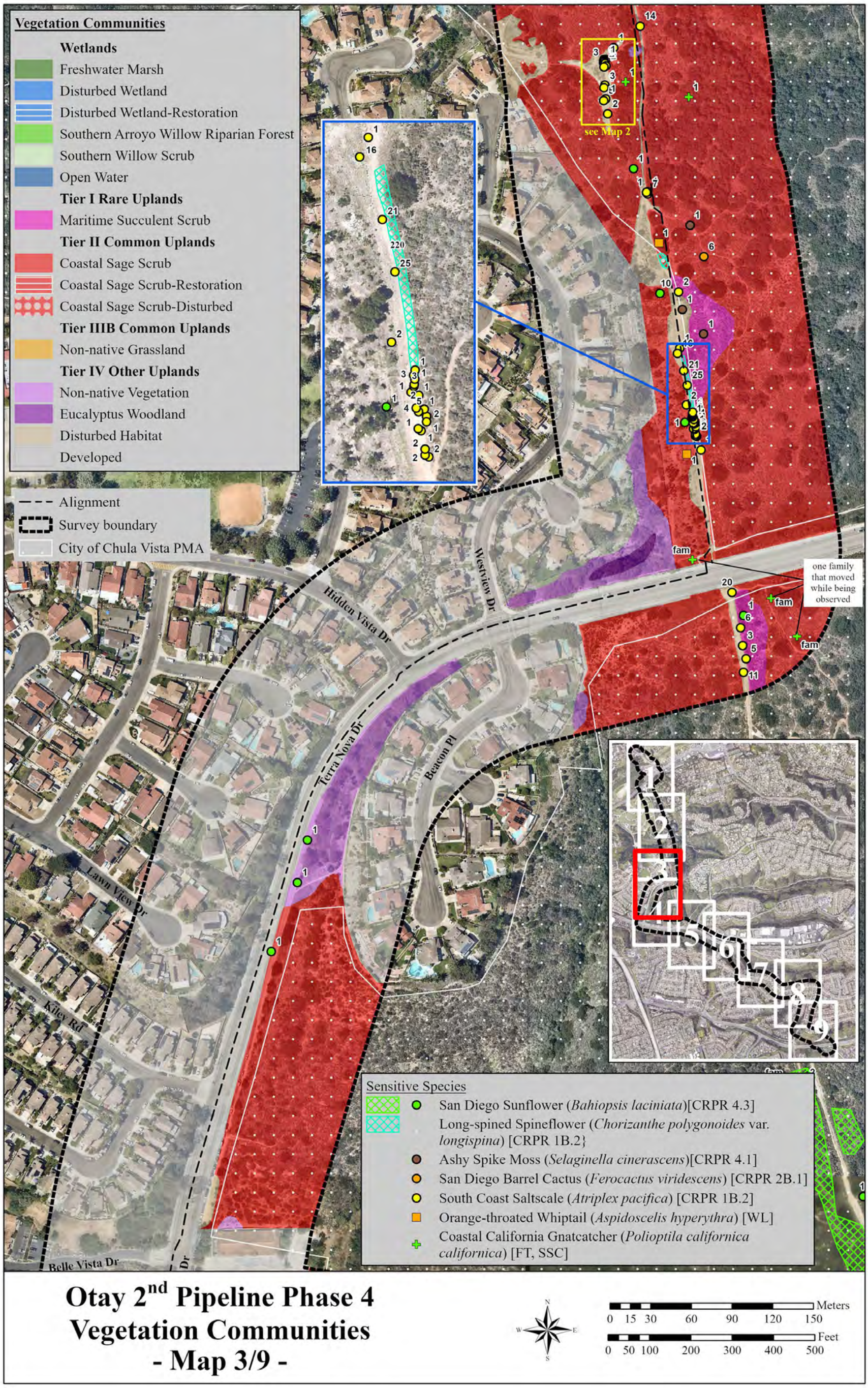

Figure 7. Vegetation Communities and Sensitive Resources – Map 3/9.

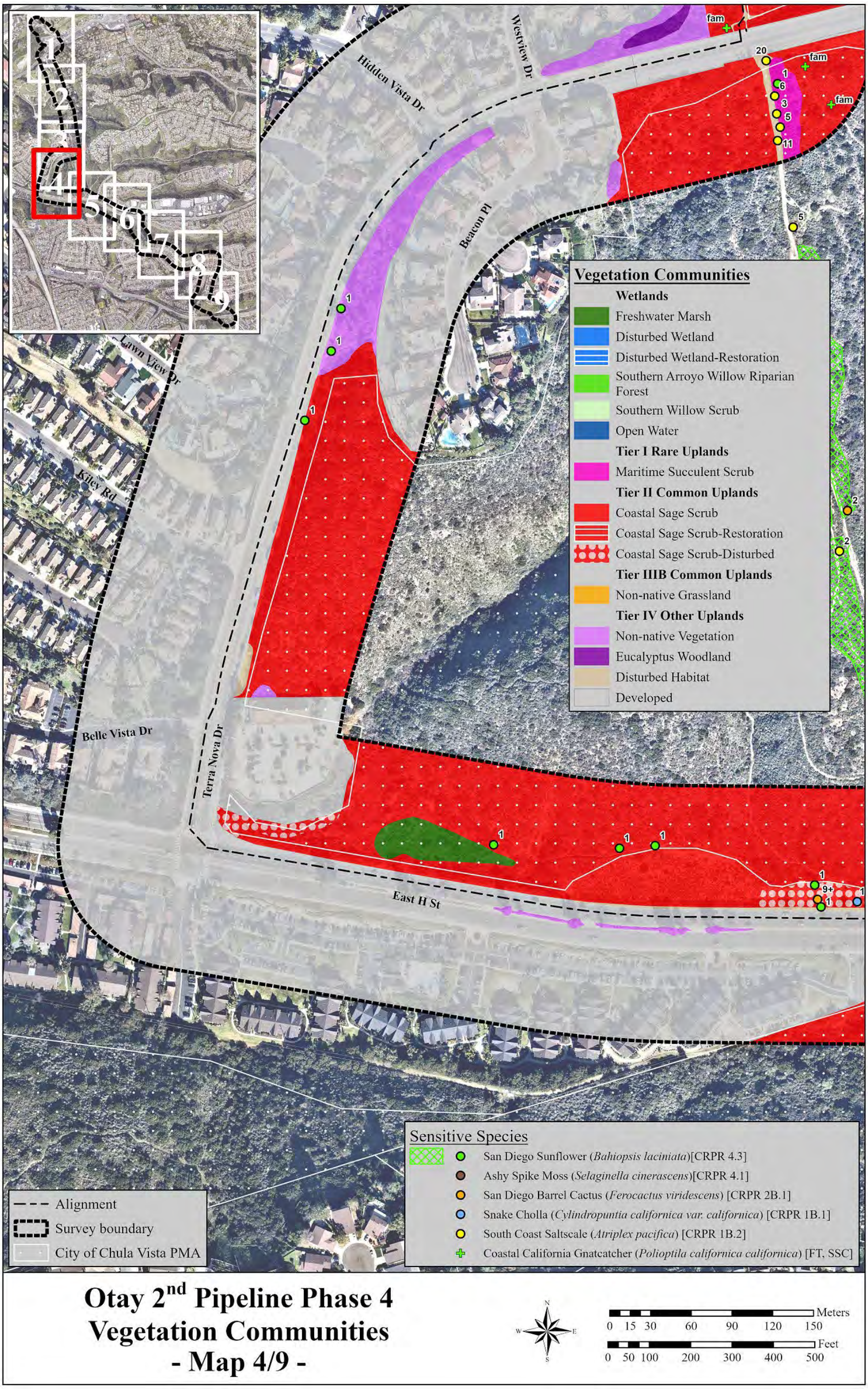

Figure 8. Vegetation Communities and Sensitive Resources – Map 4/9.

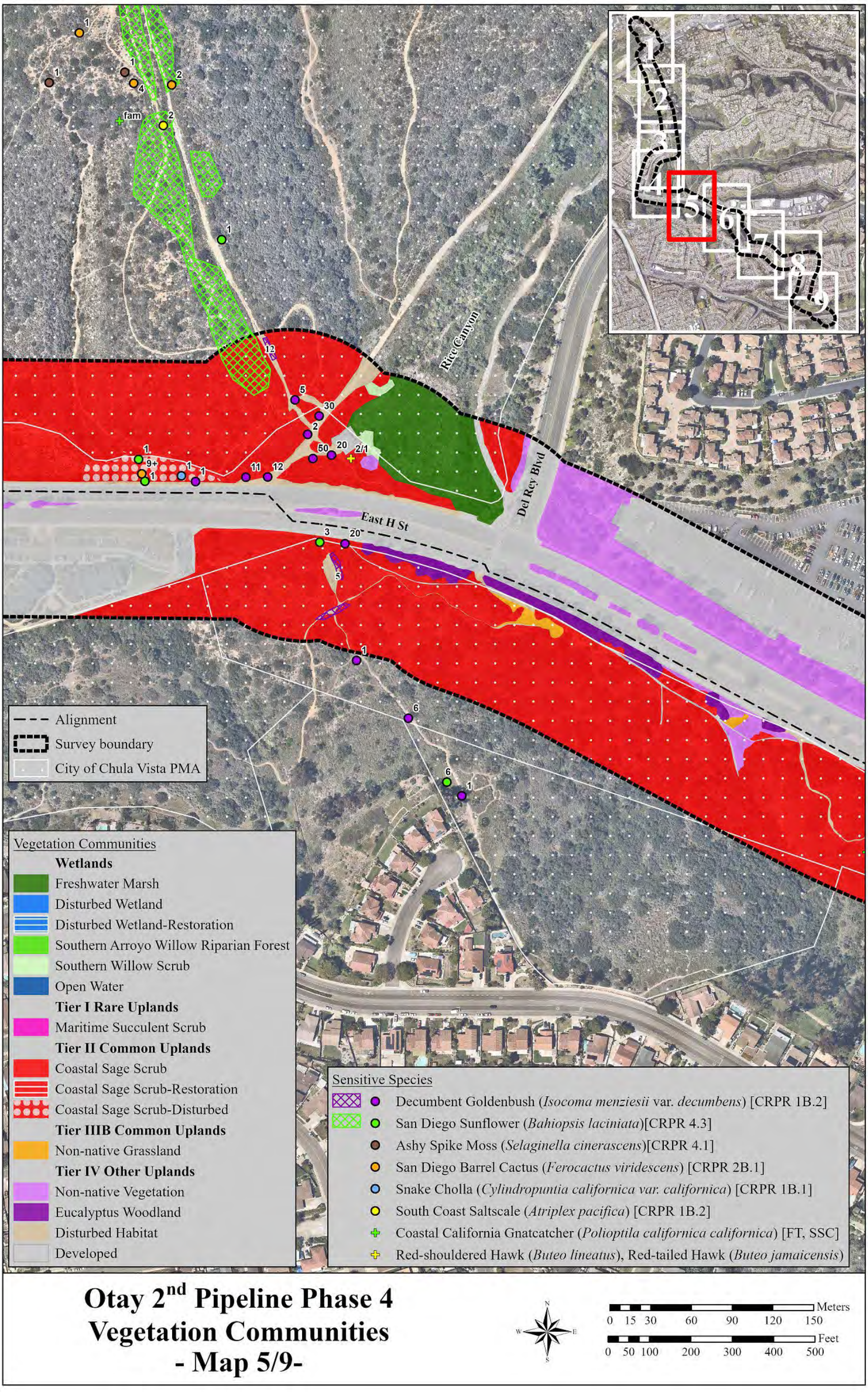

Figure 9. Vegetation Communities and Sensitive Resources – Map 5/9.

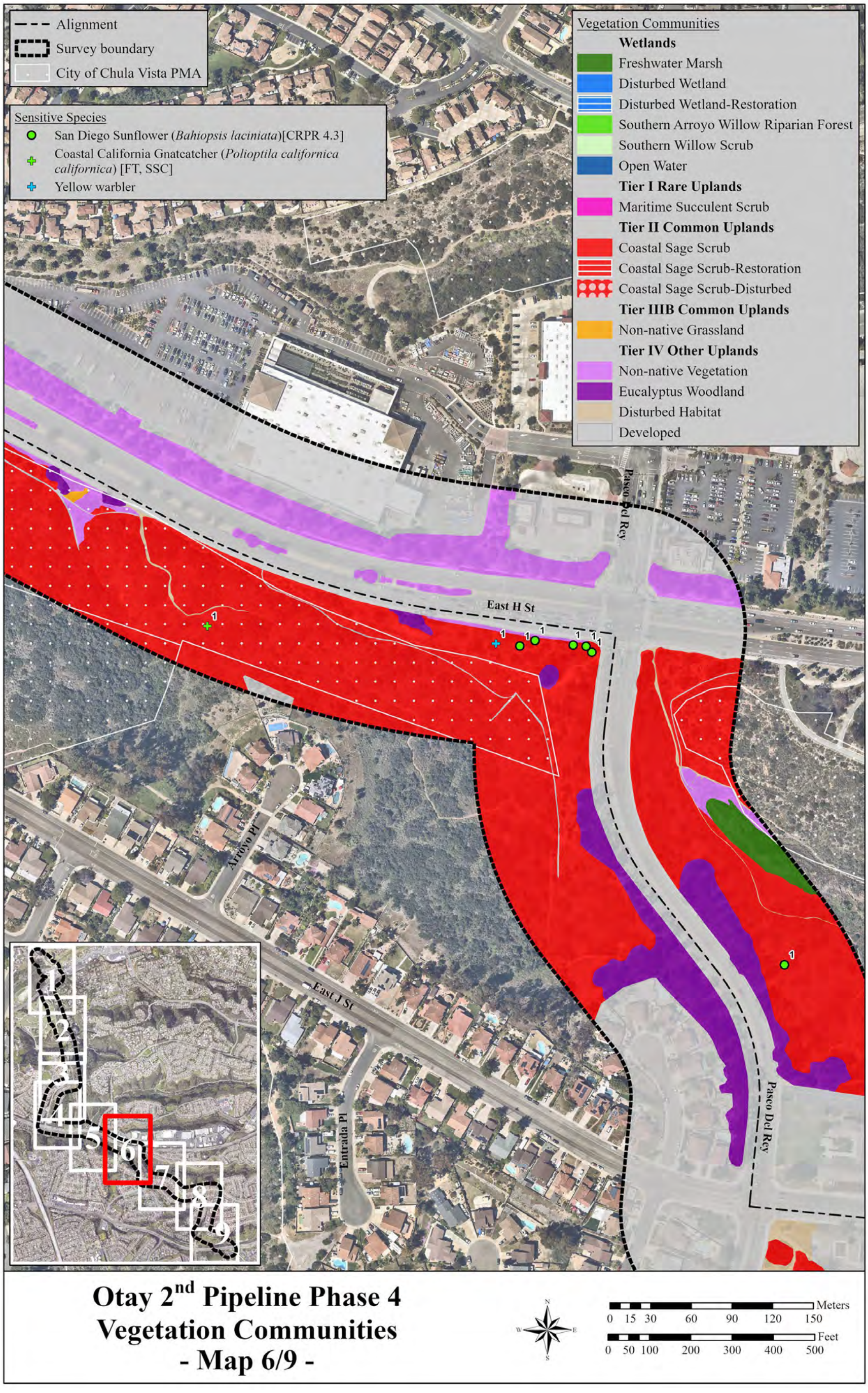

Figure 10. Vegetation Communities and Sensitive Resources – Map 6/9.

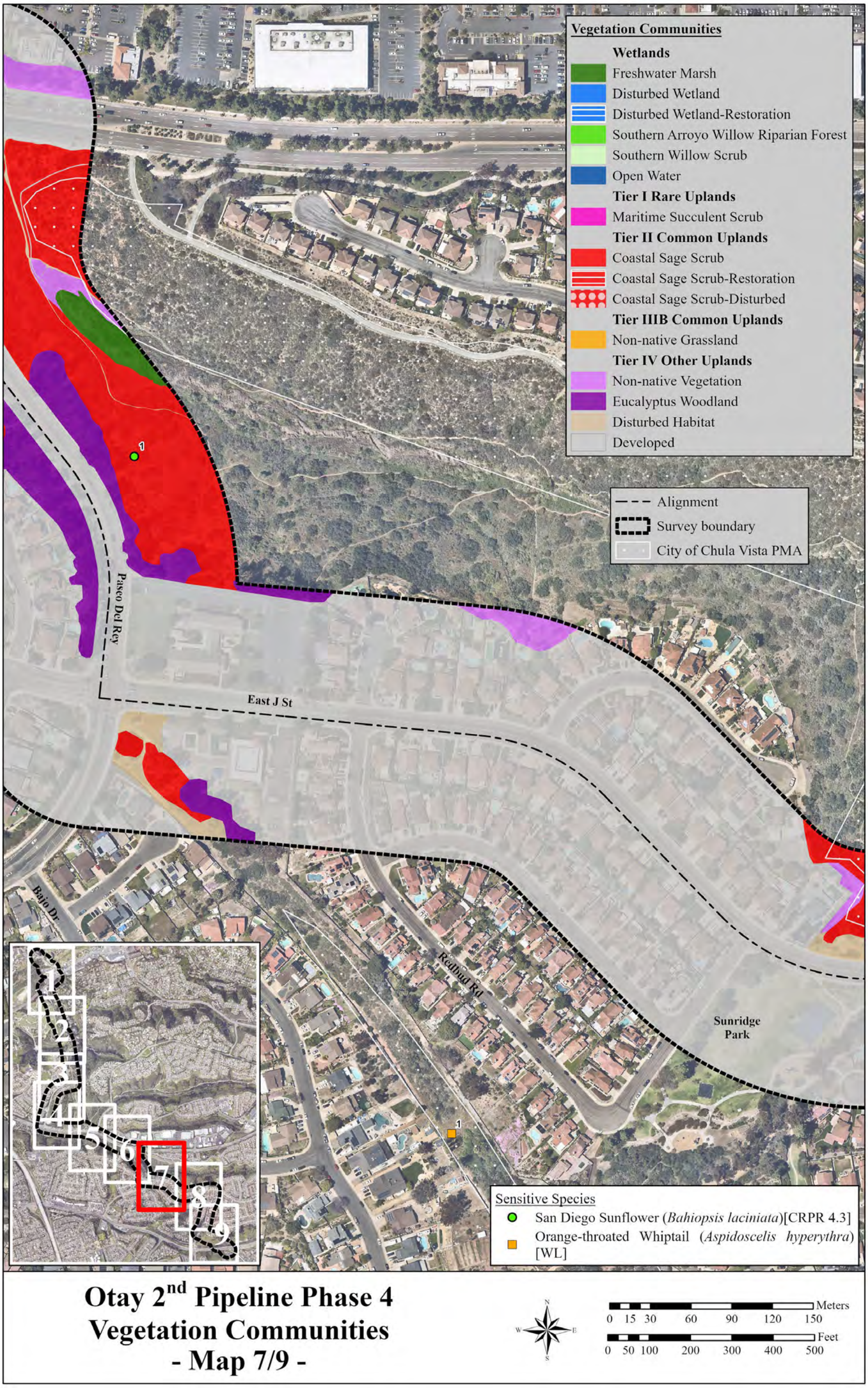

Figure 11. Vegetation Communities and Sensitive Resources – Map 7/9.

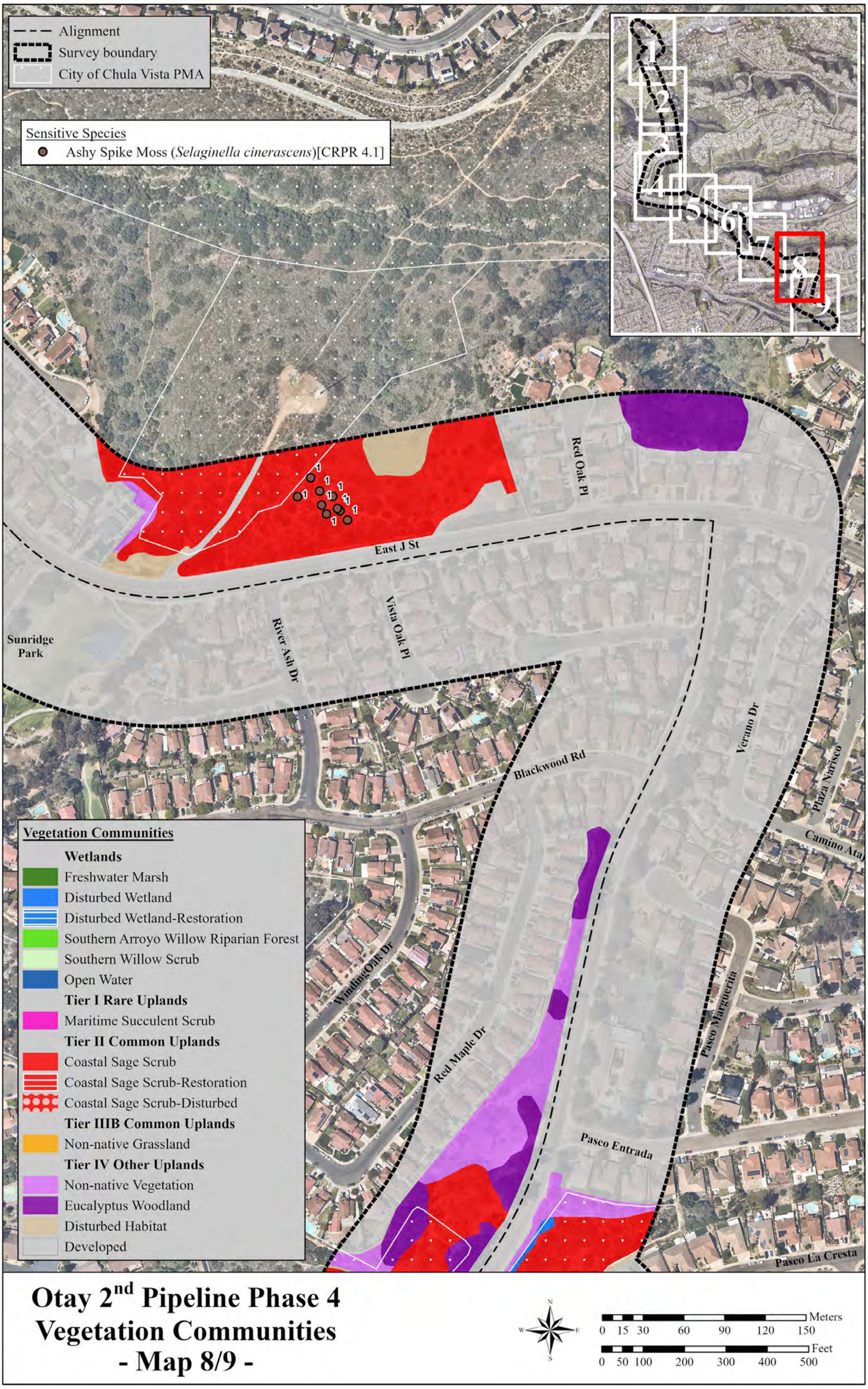

Figure 12. Vegetation Communities and Sensitive Resources – Map 8/9.

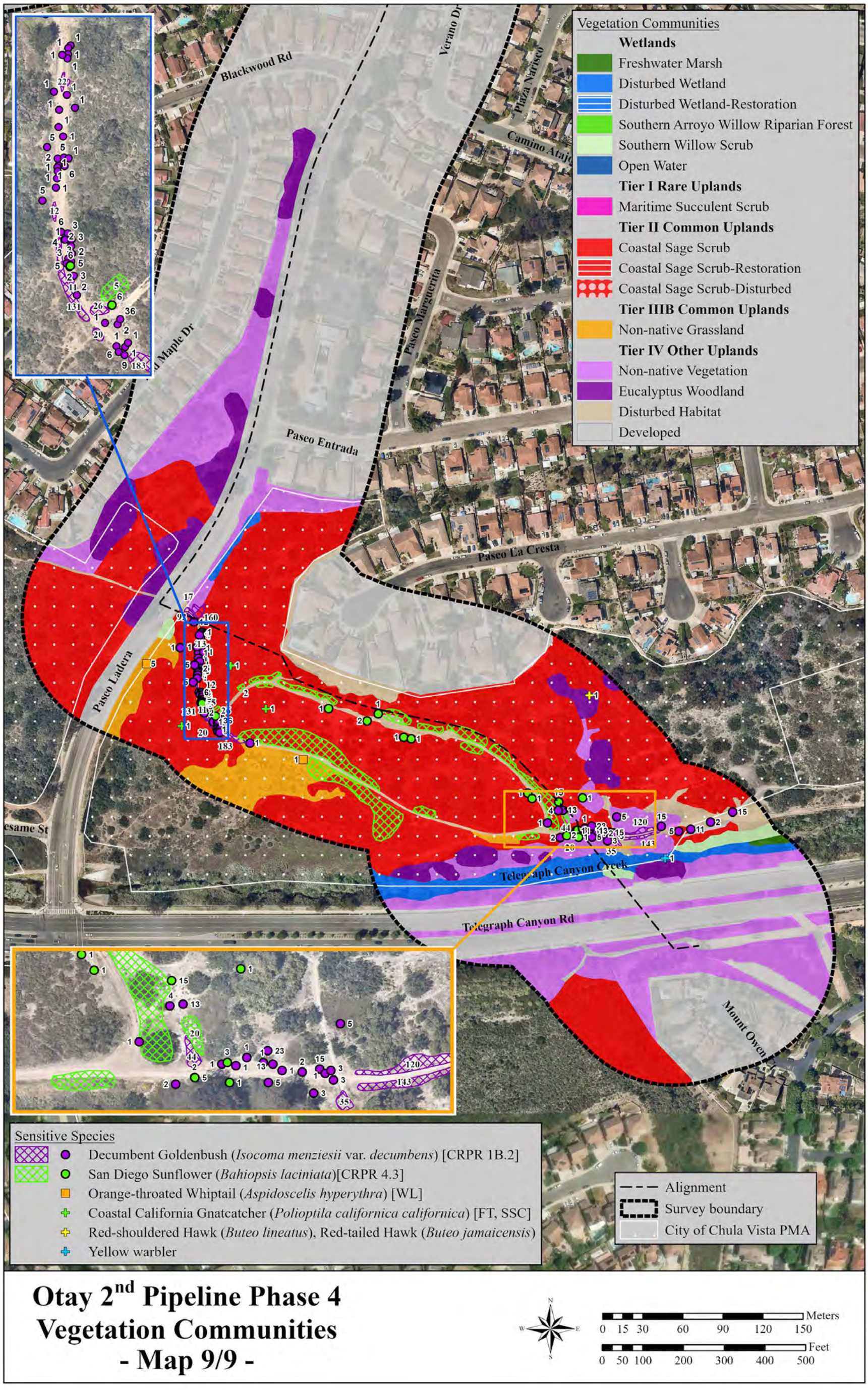

Figure 13. Vegetation Communities and Sensitive Resources – Map 9/9.

3.5.1.1 Wetland Habitats

Freshwater Marsh (52400)

FWM is dominated by perennial, emergent monocots up to 20 ft in height, often forming completely closed canopies. This habitat usually occurs in drainages and ponds lacking significant current but permanently flooded by fresh water. Prolonged saturation permits accumulation of deep, peaty soils.

FWM in the area of study consists mostly of cattails (*Typha* sp.) or California bulrush (*Schoenoplectus californicus*) in the Sweetwater River mostly east of Willow Street Bridge, north of East H Street, in Rice Canyon, and off Paseo Del Rey.

Disturbed Wetland (11200)

DW are areas permanently or periodically inundated by water, which have been significantly modified by human activity or invaded by exotic species. Wetlands containing human-made structures such as riprap, piers, and concrete linings are considered disturbed. DW vegetation is archetypical, dominated by invasives including giant reed (*Arundo donax*), tamarisk (*Tamarix ramosissimus*), Mexican fan palm, pampas grass, and Bermuda grass (*Cynodon dactylon*), interspersed with a few native cattails, willows (*Salix* spp.), and mule fat (*Baccharis salicifolia*).

DW is found in the north of the study area along the Sweetwater River Valley next to Willow Street Bridge which was expanded between August 2017 and August 2019 (Google Earth 2024). Also, exotic species adjacent to wetlands on the east side of the Willow Street Bridge, a ditch on Paseo Ladera, and along Telegraph Canyon Creek. Patches of giant reed within the Sweetwater riparian area are also mapped as DW.

Disturbed Wetland–Restoration (11200)

An area west of Willow Street Bridge in the Sweetwater River corridor was cleared in Spring 2015 then used in 2017 through 2019 as a staging area for the replacement of Willow Street Bridge. Restoration, presumably contributing to the mitigation for impacts from the project, started in 2019 but has struggled to take and remains an open vegetation with scattered struggling mule fat and scattered herbaceous species.

Southern Arroyo Willow Riparian Forest (61320)

SAWRF are winter-deciduous riparian forests consisting of moderately tall broad-leafed trees, typically dominated by arroyo willow (*Salix lasiolepis*); and have closed or nearly closed canopies. The community is dependent on frequently overflowed lands along rivers and streams. Understories usually are shrubby willows, but additional species often include mugwort (*Artemisia douglasiana*), mule fat, chilicothe (*Marah macrocarpa*), western sycamore (*Platanus racemosa*), cottonwood (*Populus fremontii*), black willow (*Salix gooddingii*), sandbar willow (*S. exigua*), and stinging nettle (*Urtica holosericea*).

SAWRF occurs along the Sweetwater River west of Willow Street Bridge in Sweetwater Regional Park and north of Bonita Road. This area consists primarily of arroyo willow, mule fat, and black willows at its thickest the further west you go and has sandbar willow, California mugwort in areas of more frequent inundation of the creek. DW patches of giant reed are present within the SAWRF.

Southern Willow Scrub (63320)

SWS is a dense, broad-leafed, winter-deciduous riparian thickets dominated by several willow species, without emergent trees. Most stands are too dense to allow much understory development. Found on loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. This early seral type requires repeated flooding to prevent succession to a riparian forest.

SWS occurs on both the east and west portions of the Willow Street Bridge and along Telegraph Canyon Creek east of the location where the alignment crossed the creek. The primary species found along the SWS areas in Sweetwater Creek consisted primarily of sandbar willow, mule fat, and California mugwort with additional individuals of arroyo willow and black willows intermixed. Along Telegraph Canyon, the new pipeline will go directly under an arroyo willow that is surrounded by patches of tamarisk and pampas grass. There is a patch of SWS further east along the trail, consisting primarily of sandbar willows and a few arroyo willows growing along the creek behind.

Open Water (64100)

Open Water is where a creek, river, pond or lake has no vegetative cover such that the water surface is open to the sky and visible in aerial imagery. A small section of the Sweetwater River west of Willow Street Bridge is visible and has no overgrowing vegetation.

3.5.1.2 MSCP Tier I (rare uplands)

Maritime Succulent Scrub (32400)

Maritime Succulent Scrub (MSS) is a low (knee to waist high), relatively open (25-75% cover) scrub dominated by drought deciduous, CSS shrubs with a rich admixture of stem and leaf succulents. The proportion of cacti is highest toward the south or in some inland areas. The ground is more or less bare between the shrubs. Growth and flowering are concentrated in the spring.

Found on thin, rocky or sandy soils, often on steep slopes of coastal headlands and bluffs.

MSS species include California sagebrush (*Artemisia californica*), California brittlebush (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), and San Diego sunflower (*Bahiopsis laciniata*) typically with succulents including prickly pear (*Opuntia littoralis*), chaparral pricklypear (*O. oricola*), coastal cholla (*Cylindropuntia prolifera*), golden-spined cereus (*Bergerocactus emoryi*), San Diego barrel cactus (*Ferocactus viridescens*). At the coast, Shaw's agave (*Agave shawii*), cliff spurge (*Euphorbia misera*), and California boxthorn (*Lycium californicum*) are more frequent.

MSS occurs in two patches on the mesa south of Glen Abbey. The northern patch appears to be an area that was disturbed in the 1980s and either was restored with a lot of cacti or recovered with lots of cactus. A second patch of MSS occurs just south of Terra Nova Drive on the east side of the trail and alignment of the existing pipeline appears to have a similar history of disturbance as the other patch. Both patches of MSS are dominated by coastal cholla.

3.5.1.3 MSCP Tier II (Uncommon Uplands)

Coastal Sage Scrub (32500)

CSS is one of the major shrub types occurring in Southern California, occupying xeric sites with shallow soils. Dominated by low, drought deciduous shrub species with relatively shallow root systems and open canopies, CSS communities often contain a substantial herbaceous component. CSS occurs along the coast from Los Angeles to Baja California, Mexico (Holland 1986), where it supports several endangered, threatened, and rare vascular plants, as well as several bird and reptile species that are candidates for federal listing.

CSS is typically dominated by California sagebrush and California buckwheat (*Eriogonum fasciculatum*) together with laurel sumac (*Malosma laurina*), lemonadeberry, white sage (*Salvia apiana*), and black sage (*S. mellifera*) with an herbaceous understory of various native forbs and grasses including some rare.

Found on low moisture-availability sites including steep, xeric slopes or clay-rich soils that are slow to release stored water. Intergrades at higher elevations with several chaparrals.

The areas of CSS vary in size and quality. Patches of CSS occur along the trail alongside Glen Abbey, then in a larger continuous swath from the south of Glen Abbey into the City of Chula Vista all the way to Terra Nova Drive and beyond, connecting to Rice Canyon. The CSS in this area is dominated by lemonadeberry shrubs within a matrix of California sagebrush, buckwheat, white sage, and broom baccharis (*Baccharis sarothroides*).

While CSS is on some of the slopes adjacent to the roads along which the alignment passes, it ultimately passes through CSS when it leaves Paseo Ladera and heads across a slope to Telegraph Canyon. From Paseo Ladera the alignment passes up a lemonadeberry-dominated slope which transitions to a more classic CSS as it reaches the top of the ridge. Heading downwards to Telegraph Canyon creek the slope up to the homes to the north has a mixture of lemonadeberry, California buckwheat, California sagebrush, and San Diego sunflower.

Coastal Sage Scrub – Restoration (32500)

CSS-R are areas where CSS has been or is undergoing restoration but has not attained their fully established status or diversity. CSS-R occurs in areas being restored from the Willow Street Bridge project and apparent restoration by Glen Abbey at the edge of their property by which the alignment passes.

Coastal Sage Scrub – Disturbed (32500)

CSS-D is where CSS had been disturbed by past human activity or thinned because of fuel modification. It can contain typical CSS species but has bare ground between shrubs or weed species. Patches of CSS-D occur on the north side of East H Street, in the west as part of the Fuel Modification Zone (FMZ) for the Kingdom Hall of Jehovah's Witnesses, and further west where a sandstone bluff adjacent to the road is eroding and only a few CSS shrubs are present.

3.5.1.4 MSCP Tier IIIB (Common Uplands)

Non-Native Grassland (42200)

NNG is a dense to sparse cover of annual grasses with flowering culms 0.2-0.5 or more meters high. Often associated with numerous species of showy flowered, native annual forbs ("wildflowers"), especially in years of favorable rainfall. In San Diego County, the presence of wild oat (*Avena barbata*), bromes (*Bromus* sp.), filaree (*Erodium* sp.), and mustard (*Brassica* sp. and *Hirschfeldia* sp.) are common indicators. In some areas, depending on past disturbance and annual rainfall, native and non-native annual forbs may be the dominant species; however, it is presumed that grasses will soon dominate. Germination occurs with the onset of the late fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants die through the summer-fall dry season, persisting as seeds. Remnant native species are variable. This can include grazed and even dry-farmed (i.e., disked) areas where irrigation is not present.

3.5.1.5 MSCP Tier IV (Other Uplands)

Non-Native Vegetation (11000)

NNV is a disturbed land characterized by predominantly non-native species introduced and/or naturalized through human action. These areas are not typically artificially irrigated but receive water from precipitation or runoff. It includes exotic trees such as pampas grass adjacent to drainages, species of ice plant, and exotic trees and shrubs. NNV is found throughout San Diego County especially in highly populated areas, coastal and riparian zones.

NNV includes exotic trees in Sweetwater Regional Park, abandoned landscaping adjacent to Glen Abbey, landscaping along Terra Nova Drive, East H Street, and Paseo Ladera with swaths of pampas grass along the Telegraph Canyon Creek.

Eucalyptus Woodland (79100)

EW habitats range from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus forms a dense stand with a closed canopy. Eucalyptus species produces a large amount of leaf and bark litter, the chemical and physical characteristics of which limit the ability of other species to grow in the understory, decreasing floristic diversity. Overstory composition is typically limited to one species of the genus, or mixed stands composed of several Eucalyptus species; few native overstory species are present within eucalyptus planted areas, except in small, cleared pockets.

EW occurs in most portions of the alignment from the neighborhoods north of the Willow Street Bridge, at the entrance to Glen Abbey, s individual or rows of trees along streets in Chula Vista, to groupings of trees on the slopes above and along Telegraph Canyon Creek.

Disturbed Habitat (11300)

DH is a disturbed land that consists of areas that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association but continues to retain a soil substrate. Typically, vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance or shows signs of past or present animal usage that removes any capability of providing viable natural habitat for uses other than dispersal. Examples of disturbed land include areas that have been graded, repeatedly cleared for fuel management purposes and/or experienced repeated use that prevents natural revegetation (i.e., dirt parking lots, trails that have been present for several decades), recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old homesites (Oberbauer et al. 2008).

DH occurs as unpaved trails at Sweetwater Regional Park, cleared and graded but not landscaped land at Glen Abbey, trails within the Chula Vista PMA, areas that were previously graded along the alignment, and utility access roads off Paseo Ladera along the alignment.

Developed (12000)

DEV are areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. DEV is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that require irrigation. Areas where no natural land is evident due to a large amount of debris or other materials being placed upon it may also be considered DEV (e.g., car recycling plant, quarry).

DEV includes all streets, residential neighborhoods, commercial areas including Glen Abbey, and FMZs.

3.5.2 Plants

A list of plant species detected during general and rare plant surveys of the Project Study Area is presented in Appendix A. This list includes species that are typically found within the CSS of urbanized San Diego. The following sensitive plants were detected in the survey area.

Snake Cholla (*Cylindropuntia californica* var. *californica*)

Federal Status: None
State Status: None
California Rare Plant Rank (CRPR): IB.1
MSCP: Covered, Narrow Endemic, County List A

Snake cholla is a rare cactus subspecies found in CSS and chaparral found mainly in south San Diego County and in Baja California, Mexico. While hundreds of common coastal cholla were

seen only two snake cholla were detected in the Study Area. One in a side trail between Glen Abbey and Terra Nova Drive and one just north of East H Street in CSS-D, east of Del Rey Boulevard.

Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*)

Federal Status: None
State Status: None
CRPR: IB.2
MSCP: Not Covered, County List A

Decumbent goldenbush is a rare CSS and sometimes wetland-riparian perennial subshrub found throughout Sam Diego County and in Baja California, Mexico. In the Study Area it was found in several portions associated with disturbance. In a small canyon next to Glen Abbey through which the alignment and a trail passes, 42 individuals were counted. Further south and still adjacent to Glen Abbey among and around irrigation valves and pipes, 64 individuals were detected. Along East H Street over 150 individuals were found north and south of the street where the existing pipeline and trails passes within East H Street, just east of Del Rey Boulevard. As the new alignment runs southeast off Paseo Ladera, several hundred decumbent goldenbush occur along the utility road going up the slope from Paseo Ladera to where the utility road splits, and several hundred more occur north of Telegraph Canyon Creek along the utility road through which the alignment will pass to cross the creek.

South Coast Saltscale (*Atriplex pacifica*)

Federal Status: None
State Status: None
CRPR: IB.2
MSCP: Not Covered, County List A

South coast saltscale is a rare annual herb found in the southwestern U.S. and northwestern Mexico. It is usually associated with CSS and Alkali Sink communities in coastal regions and playas. In the Study area, it is mostly found along trails through the Chula Vista PMA north (132 individuals) and south of Terra Nova Drive (45 individuals) with one individual detected north of East H Street in CSS-D, east of Del Rey Boulevard.

Long Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*)

Federal Status: None
State Status: None
CRPR: 1B.2
MSCP: Not Covered, County List A

Long spined Spineflower is a rare annual herb found in the western Riverside, Orange and San Diego counties, south into Baja California, Mexico. It is usually associated with CSS and Alkali Sink communities in coastal regions and playas. But in the Study area is found along the trail through the Chula Vista PMA north of Terra Nova Drive.

San Diego Barrel Cactus (*Ferocactus viridescens*)

Federal Status: None
State Status: None
CRPR: 2B.1
MSCP: Covered, County List B

San Diego barrel cactus is a rare species found in a variety of vegetation communities including freshwater wetlands, CSS, chaparral, and grassland, especially in areas that contain vernal pools. It occurs exclusively in San Diego County and in Baja California, Mexico. In the Study Area, San Diego barrel cactus was seen in a couple of locations. A cluster of six were detected in CSS east of the trail between Glen Abbey and Terra Nova Drive and another cluster of nine was detected north of East H Street in CSS-D, east of Del Rey Boulevard.

Ashy Spike Moss (*Selaginella cinerascens*)

Federal Status: None
State Status: None
CRPR: 4.1
MSCP: Not Covered, County Group D

Ashy spike moss occurs throughout southern San Diego County and in Baja California, Mexico. It occurs mainly on dry, clay-heavy soils in CSS and chaparral. In the Study Area it was found in the CSS between Glen Abbey and Terra Nova Drive. It was also detected in the CSS north of East J Street and west of Red Oak Place.

San Diego Sunflower (*Bahiopsis laciniata*)

Federal Status: None
State Status: None
CRPR: 4.3
MSCP: Not Covered, County List D

San Diego sunflower occurs throughout southern San Diego County and in Baja California, Mexico. It occurs in CSS habitat on a variety of soil types and is often a dominant component of the landscape where it occurs. This species is present in many locations where CSS is present in the Study Area but it is most prevalent in the area between Paseo Ladera and Telegraph Canyon Creek.

The following species were not detected despite focused surveys or having a moderate potential to occur:

Otay Tarplant (*Deinandra conjugens*)

Federal Status: Threatened
State Status: Endangered
CRPR: 1B.1
MSCP: Covered, County List A

Otay tarplant occurs within CSS in openings and grasslands within the canyons of southwestern San Diego County west of the Otay and Jamul Mountains, east of I-805, and south of SR 94. Focused surveys for this species at appropriate times of the year over three years (2022, 2023, and 2025) in all potential areas along the alignment (Table 1) did not detect the species, despite presence within the alignment at Telegraph Canyon in 2016, 2017, and 2019 (Calflora 2025). The species was detected at the Otay Ranch Preserve in 2022 and 2023 (San Diego Mitigation and Monitoring Program 2025). The common fascicled tarplant (*Deinandra fasciculata*) was plentiful but not this special status species. With three years of negative surveys when the species was detectable elsewhere for two of them, and data not available for 2025, the species does not seem to occur within the project alignment.

Lewis' Evening-Primrose (*Camissoniopsis lewisii*)

Federal Status: None
State Status: None
CRPR: 3
MSCP: Not Covered, County List C

Lewis’ evening-primrose is an annual herb in the Onagraceae that is native to southern California and Baja California. It occurs in coastal bluff scrub, cismontane woodland, coastal dunes, coastal sage scrub, and in valley and foothill grasslands of the inland mountain ranges, growing at elevations from 0 to 300 meters in sandy or clay soils.

No specimens were detected along the alignment but the species was recently observed in Rice Canyon (Calflora 2025) where the alignment is within roads so there is a moderate chance of the species occurring, and most likely at Telegraph Canyon where some suitable habitat occurs.

Other Sensitive Plant Species with Potential to Occur

Potentially occurring sensitive plant species based on habitat preferences and distribution were identified by using the CNDDB search for the area. Potentially occurring plant species are those (1) that occur outside of, but within the general vicinity of the areas studied, and/or (2) whose habitat preferences are consistent with available habitat within the area studied. A total of 23 sensitive plant taxa were identified as having some potential to occur in the areas studied (Appendix B). Of these, none have a very high, high, or moderate potential to occur. The remainder have a low or very low potential to occur.

The potential for MSCP Narrow Endemic Plant Species to occur within the study area is assessed in Appendix C. One was present (snake cholla) but the ethers have no, a very low, or a low potential to occur.

3.5.3 Animals

A list of animal species detected during surveys of the proposed project sites and access routes is presented in Appendix D. The following sensitive animal species have been detected in the area surveyed.

Orange-Throated Whiptail (*Aspidoscelis hyperythra*)

Federal Status: None
State Status: CDFW Watch List
MSCP: Covered, County Group 2

The orange-throated whiptail (OTWH) is a slender lizard found in open, sandy areas of CSS and chaparral in Southern California and Baja California, Mexico. OTWH is likely found in all areas where CSS occurs but was detected in a CSS patch next to Glen Abbey, between Glen Abbey and Terra Nova Drive, and adjacent to Paseo Ladera.

Light-Footed Ridgway's Rail (*Rallus obsoletus levipes*)

Federal Status: Endangered
State Status: Endangered, Fully Protected
MSCP: Covered, County Group 1

LFRR generally inhabits coastal marshes, lagoons, and some freshwater habitats in Southern California and northern Baja California, Mexico. Focused surveys for LFRR detected LFRR in the FWM east of the Willow Street Bridge along the Sweetwater River and determined that was part of an occupied territory. One, perhaps one of the pair, was seen foraging closer the Willow Street Bridge under a willow. Habitat west of Willow Street Bridge is much less suitable for the LFRR.

Coastal California Gnatcatcher (*Polioptila californica californica*)

Federal Status: Threatened
State Status: Species of Special Concern (SSC)
MSCP: Covered, County Group 1

Coastal California gnatcatchers (CAGN) are generally restricted to CSS and Riversidean Sage Scrub in southern Los Angeles, Orange, western Riverside, and San Diego Counties south into Baja California. Typically found in sage scrub habitats with some California sagebrush and California buckwheat as opposed to high densities of laurel sumac or lemonadeberry.

CAGN was detected in the vicinity of alignment in several locations. A family group was detected in one of the patches adjacent to Glen Abbey, east of the alignment south of the unincorporated/Chula Vista boundary; a CAGN family group was observed moving across Terra Nova Drive adjacent to the alignment; a family group was detected north of the Study Area north of East H Street east of Del Rey Boulevard and one was heard south of East H street east of Paseo Del Rey. Lastly, CAGN was detected in the CSS vegetation east of Paseo Ladera.

Yellow Warbler (*Dendroica petechia brewsteri* [*Setophaga petechia]*)

Federal Status: Bird of Conservation Concern (BCC)
State Status: SSC
MSCP: Not Covered, County Group 2

Yellow warblers (YEWA) are small songbirds with a widespread distribution in the Americas, including breeding distribution in much of California. *D. p. brewsteri* is a recognized subspecies with a more limited distribution. YEWA is a USFWS BCC and CDFW SSC. One was detected south of East H Street near the intersection with Paseo Del Rey in the CSS. Another was detected along Telegraph Canyon Creek.

Red-Shouldered Hawk (*Buteo lineatus*) – Nest

Federal Status: None
State Status: None
MSCP: Not Covered

Red-shouldered hawks are mid-sized buteos found throughout the eastern U.S. and central Mexico, as well as in near-coastal regions of California and Baja California, Mexico. An active, Red-shouldered Hawk nest was detected in a eucalyptus tree less than 400 ft north of Telegraph Canyon Creek. The nests of other native birds that are not federal- or state-listed and not covered by the MSCP, are protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game (CFG) Code, which protects virtually all actively nesting birds.

Monarch Butterly (*Danaus plexippus*)

Federal Status: Proposed Threatened
State Status: SSC
MSCP: Not Covered, County Group 2

Monarch butterflies are known for their large size, orange and black wings, and their long-distance annual migration and reliance on milkweed (*Asclepias* spp.) as its obligate larval host plant. An individual was detected along the DW-R area west of Willow Street Bridge in Sweetwater River.

In 2014, monarchs were petitioned to be listed under the federal Endangered Species Act (ESA). In December 2020, the USFWS found that listing was warranted but precluded. In California, monarchs are not listed under the California Endangered Species Act (CESA). They are included on the CDFW's Terrestrial and Vernal Pool Invertebrates of Conservation Priority and identified as a Species of Greatest Conservation Need in California's State Wildlife Action Plan. No monarch roosting colonies are known within the project alignment or buffer area. The nearest known colony is in Eucalyptus Park, Chula Vista, 2.8 miles to the west (Xerces Society 2025).

Other species with no individual sensitivity but their nesting colonies are considered sensitive by CDFW include the great blue heron (GRBH; *Ardea herodias*) and double-crested cormorant (DCCO; *Nannopterum auritum*) that were detected during surveys.

Great Blue Heron (*Ardea herodias*) Nesting Colony

Federal Status: None
State Status: None
MSCP: Not Covered, County Group 2

The GRBH is the largest heron in North America. It is widespread and often seen standing silently along inland rivers or lakeshores or flying high overhead. It is highly adaptable and thrives around all kinds of waters from subtropical mangrove swamps to desert rivers to the coastline of southern Alaska.

A GRBH was seen near the edge of the open water area west of Willow Street Bridge in Sweetwater River. They typically eat nearly anything within striking distance, including fish, amphibians, reptiles, small mammals, insects, and other birds. They mostly nest in colonies in trees near large bodies of water but can also nest on the ground and in bushes and on structures. No nesting trees were identified near the alignment.

Double-Crested Cormorant (*Nannopterum auritum*) Nesting Colony

Federal Status: None
State Status: None
MSCP: Not Covered, County Group 2

DCCO is the most generally distributed cormorant in North America and is most frequently seen in freshwater. They are large waterbirds with small heads on long, kinked necks. They have thin, strongly hooked bills, roughly the length of the head. Their heavy bodies sit low in the water.

A DCCO was observed flying over the open water area west of Willow Street Bridge along the Sweetwater River. Their diet is almost all fish, with just a few insects, crustaceans, or amphibians. Nesting occurs on the ground, on rocks or reefs with no vegetation, or atop trees, in colonies, often near large bodies of water. No suitable nesting areas were identified near the alignment.

Other Sensitive Animal Species with Potential to Occur

Potentially occurring sensitive animal species based on habitat preferences and distribution were identified by searching using the CNDDB search for the area. Potentially occurring animal species are those (1) that occur outside of, but within the general vicinity of the areas studied, and/or (2) whose habitat preferences are consistent with available habitat within the area studied. A total of 31 sensitive animal species were identified as having some potential to occur in the areas studied (Appendix E). Of these none have a very high potential to occur, one has a high potential to occur, three have a moderate potential to occur, and the remainder have low, very low, or no potential to occur. The four species with a high or moderate potential to occur are described below.

Two Stripe Gartersnake (*Thamnophis hammondii*)

Federal Status: None
State Status: CDFW SSC
MSCP: Not Covered, County Group 1

Two stripe gartersnake is a species of aquatic snake endemic to western North America, ranging from central California to Baja California, Mexico. It is a medium sized snake (18–30 inches) total length with a head barely wider than the neck. Two common color variations occur in the wild, a striped

variant and a checkered variant. It is a highly aquatic species and prefers habitat adjacent to permanent or semi-permanent bodies of water. This species feeds primarily on fish and amphibians.

Historically detected northeast at Sweetwater Reservoir which is 2.5 miles from the Willow Street bridge, it has a moderate potential to occur along the Sweetwater River.

Yellow-Breasted Chat (*Icteria virens*)

Federal Status: BCC
State Status: SSC
MSCP: Not Covered, County Group 1

Larger and bulkier than a warbler, the yellow-breasted chat (YBCH) is a widespread breeder in shrubby habitats across North America. It breeds in areas of dense shrubbery, including abandoned farm fields, clearcuts, powerline corridors, fencerows, forest edges and openings, swamps, and edges of streams and ponds and forage mainly on spiders and insects, including beetles, bugs, ants, bees, mayflies, cicadas, moths, and caterpillars.

eBird (2025) shows detections of the species along the Sweetwater River and major and minor rivers and creeks in San Diego County as well as open space areas. The species has a high potential to occur in or near the project and along the Sweetwater River and potentially along Telegraph Canyon Creek. Because of the abundant presence of potentially suitable vegetation along the alignment for its use, it has a high potential to occur.

Cooper's Hawk (*Accipiter cooperii*)

Federal Status: None
State Status: CDFW Watch List
MSCP: Covered, County Group 1

Cooper's hawk (COHA) is an MSCP-covered, CDFW Watch List raptor that more generally occurs in oak groves, mature riparian woodlands, and eucalyptus stands, or other mature forests. This species has adapted well to urban and suburban areas with trees in recent decades and could only be impacted by disturbance if one nests within 300-ft of work. This species is abundant in well wooded parts of San Diego County, and so could nest in wooded areas along the alignment including Sweetwater Regional Park and eucalyptus trees found near the alignment. The nesting season of COHA is between mid-March and mid-July.

Rufous-Crowned Sparrow *(Aimophila ruficeps*)

Federal Status: None
State Status: CDFW Watch List
MSCP: Covered, County Group 1

Rufous-crowned sparrows (RCSP) are bulky, long-tailed sparrows that are fairly sedentary and do not migrate. They spend much of their time walking, foraging, and running on the ground between shrubs

and grasses. RCSP are found on dry, open hillsides covered with grass, rocks, and scattered shrubs, including coastal sagebrush, open chaparral, scrub oaks, pinyon pine, and other woody plants. They eat mainly insects in spring and summer, and mainly stems, shoots, and seeds in winter.

eBird (2025) shows detections of the species abundantly east of interstate 125 ranging from 3-5 miles from the pipeline alignment to the north of I-8, and in the Otay River Valley but not in the vicinity of the alignment; however, because of the abundant presence of CSS along the alignment it has a moderate potential to occur.

3.5.4 MSCP-Covered Species

MSCP conditions of coverage apply to MSCP-covered species that would be potentially impacted by the Project. These conditions will apply to snake cholla, OTWH, LFRR, and CAGN observed near/over the area of study. Covered species with a moderate or high potential to occur in the project area include the COHA and RCSP.

3.5.5 Wildlife Corridors

Wildlife movement corridors are areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features such as canyon drainages, ridgelines, or areas with vegetative cover provide corridors for wildlife movement. Wildlife movement corridors are important because they provide access to mates and resources, allow the dispersal of individuals away from high population density areas, and facilitate the exchange of genetic material between populations.

The Study Area includes a portion of the Sweetwater River Linkage between Sweetwater Reservoir/San Miguel Mountain/Sweetwater Resource Core Area and the northwestern portion of the Otay Lakes/Otay Mesa/Otay River Valley Core Resource Area in which the Study area mostly lies and includes the City of Chula Vista's canyon complex (City 1998). The Sweetwater River provides cover for movement and resources for resident wildlife, especially west of the Chula Vista Golf Course. Direct connection from the river, across Bonita Road and Glen Abbey, provides movement opportunities for some wildlife to access the Chula Vista canyon complex. Rice Canyon has a constrained connected to the Sweetwater River along the habitats in the canyon in which the I-805 occurs. Connection of Rice Canyon to Telegraph Canyon is meager with direct connection mostly blocked by residential development. The only exception being across East J Street through Sunridge Park to a canyon that connects to Telegraph Canyon. Telegraph Canyon has some value for resident wildlife and provides for local east-west movement but is mostly isolated as the creek is mostly culverted west of the 805 and connections to other portions of the Otay Lakes/Otay Mesa/Otay River Valley Core to the north are limited and minimal to the south.

3.5.6 Jurisdictional Areas

Because of the length of this project and its northwest to southeast direction, it crosses several canyons that drain east to west. Assessment of wetlands mainly occurred where potential jurisdictional waters of the U.S., State, City, and CDFW jurisdictional resources could occur.

Sweetwater River: In the north, the alignment crosses the Sweetwater River which has a narrow low-flow channel with a broad floodplain where the pipeline will cross. The situation at the Willow Street Bridge area was changed somewhat in 2017 through 2019 by the replacement of the Willow Street Bridge, reconfiguration of the channels east of the bridge, and use of the floodplain on either side of the bridge for staging areas and construction.

East of the bridge the main channel was left alone as pre-construction surveys had detected LFRR. The volume of water in the main channel of the Sweetwater River is controlled by release from the Sweetwater Reservoir Dam and so is protected from some of the variation of flows that would occur in a natural watershed. The river leaves the base of the dam but is soon joined by a creek that drains the neighborhoods to the north of the reservoir. The river then passes through the Bonita Golf Course, before becoming more natural with a broad floodplain supporting willow forest and marsh in the portion of Sweetwater Park north of Central Avenue. After passing under Central Avenue and passing through into the Chula Vista Golf Course the willows narrow, and the channel becomes OW with cattail and FWM until reaching Willow Street Bridge.

Just east of Willow Street Bridge, the channel widens and supports some willows and a patch of giant reed before merging with the channelized drainage from the north which starts approximately 1.2 miles to the north then east at the entrance to Rohr Park off Sweetwater Road and follows the road to Willow Street Bridge.

The river then passes under Willow Street Bridge as a much wider approximately 20-ft-wide channel with no vegetation in it or on its banks until it emerges. As soon as it emerges into daylight the river channel narrows to approximately 6 ft wide in mostly native vegetation communities with cattail then willow-dominated woodland within another section of the Sweetwater Regional Park that extends for many miles to the west.

In the vicinity of the alignment a wide trail comes off Sweetwater Road north of Willow Street Bridge and descends down into the river floodplain beside SAWRF then SWS before the trail heads west. The wetland restoration area is to the east and south of the trail along the bridge. A mixture of SAWRF and giant reed patches (DW) occur on both sides of the river channel where the alignment passes before emerging in the parking lot for the commercial buildings at the corner of Willow St and Bonita Road.

The Sweetwater River undergoes periodic flooding during significant storms but while significant rainfall events occurred in 2023 and 2024, prior years were more typical and the evidence of OHWM was close to the low-flow channel.

Rice Canyon: A patch of FWM occurs north of East H Street after the alignment turns east from Terra Nova Drive, then further along East H Street, west of Del Rey Boulevard, the main drainage feature of Rice Canyon approaches from the northeast. A large retention basin north of East H Street captures the flows from Rice Canyon and has an outlet 100-ft north of East H Street which puts water into a pipe that carries water from the Canyon and all inputs along East H Street to the Sweetwater River just south of where Bonita Road passes under the 805.

Further east on East H Street, east of Paseo Del Rey, more FWM is present in the canyon which apparently enters an intake at its west end, 150 ft from Paseo Del Rey that presumably takes it into the pipe that runs down East H. Street.

Telegraph Canyon Creek: The Study Area crosses Telegraph Canyon Creek approximately 1,300 ft east of Paseo Ladera. The creek originated historically (1953) in the area that is currently the intersection of SR 125 and East H. Street (Historic Aerials 2024). Since then, the lands north and south have been developed, and the creek channelized or culverted until it emerges west of the SR 125 S exit ramp for Otay Lakes Road. The creek then heads southwest on the north side of Otay Lakes Road before crossing to the south side at the entrance to Otay Lakes Lodge. Otay Lakes Road becomes Telegraph Canyon Road and the creek crosses back to the north 800 ft east of Paseo Ranchero/Heritage Road. The creek then passes under Paseo Ranchero and continues west until reaching the Study Area.

Telegraph Canyon Creek continues west, passes under Paseo Ladera but 2,350 ft to the west the creek has been channelized until is enters a culvert to go under the I-805 and reemerges to the west of I-805 where is carried by concretized channels and culverts all the way to San Diego Bay.

At the Study Area the channel is uniform 6-ft-wide with mostly pampas grass, tamarisk, Peruvian pepper (*Schinus molle*), and weeds including wild celery (*Apium graveolens*) and bristly ox tongue (*Helminthotheca echioides*). A few willows are scattered along the creek in the Study area and to the east.

U.S. Army Corps of Engineers and Regional Water Quality Control Board

The main Sweetwater River channel is potentially jurisdictional to the USACE and RWQCB varying in width through the Study Area from 5-ft wide to 18-ft wide plus a small strip of FWM west of Willow Street Bridge and SWS and FWM east of the Willow Street Bridge (Figure 14). A 5-ft-wide tributary channel with some FWM in places, coming from the north on the east side of the bridge, is also potentially jurisdictional.

At Telegraph Canyon, only the apparently permanent channel is potentially jurisdictional to the USACE and RWQCB (Figure 15).

No other areas with channels or wetlands were delineated because they were deemed too far away from the impact footprint to be impacted by the project.

California Department of Fish and Wildlife

The main Sweetwater River channel, tributary channel, and its associated wetland and riparian vegetation are potentially jurisdictional to the CDFW varying in width through the Study Area. The CDFW streambeds vary from 5-ft wide to 20-ft wide. There is 0.151 acre of FWM, 0.876 acre of DW, 0.581 acre of DW-R, 0.485 acre of SWS, and 3.043 acres of SAWRF in the ARDR Study Area at the Sweetwater River (Figure 16).

At Telegraph Canyon, the 6-ft permanent channel (0.027 acre) plus the adjacent and overhanging riparian vegetation consisting of 0.048 acre of SWS and 0.221 acre of DW is potentially jurisdictional to the CDFW (Figure 17).

City Wetlands

The City regulates impacts to wetlands when identified as Environmentally Sensitive Lands (ESLs; 2018b). The definition of wetlands ESL is intended to differentiate uplands (terrestrial areas) from wetlands, and furthermore to differentiate naturally occurring wetland areas from those created by human activities.

The City does not consider artificially created wetlands to be City wetlands but does consider naturally occurring wetland vegetation communities dominated by hydrophytic plants as wetlands. In addition, areas lacking naturally occurring wetland vegetation communities are still considered wetlands if hydric soil or wetland hydrology is present and past human activities have occurred to remove the historic vegetation.

The City does not regulate ephemeral/intermittent drainages unless wetland vegetation is present or has been removed by human activity. Areas that contain wetland vegetation, soils, or hydrology created by human activities in historically non-wetland areas do not qualify as wetlands under this definition unless they have been determined to be wetlands under USACE and/or the CDFW criteria.

Per these criteria, the permanently flowing creeks at the sites would be potentially under City jurisdiction, as would the CDFW wetlands supporting native wetland (Figure 16, Figure 17).

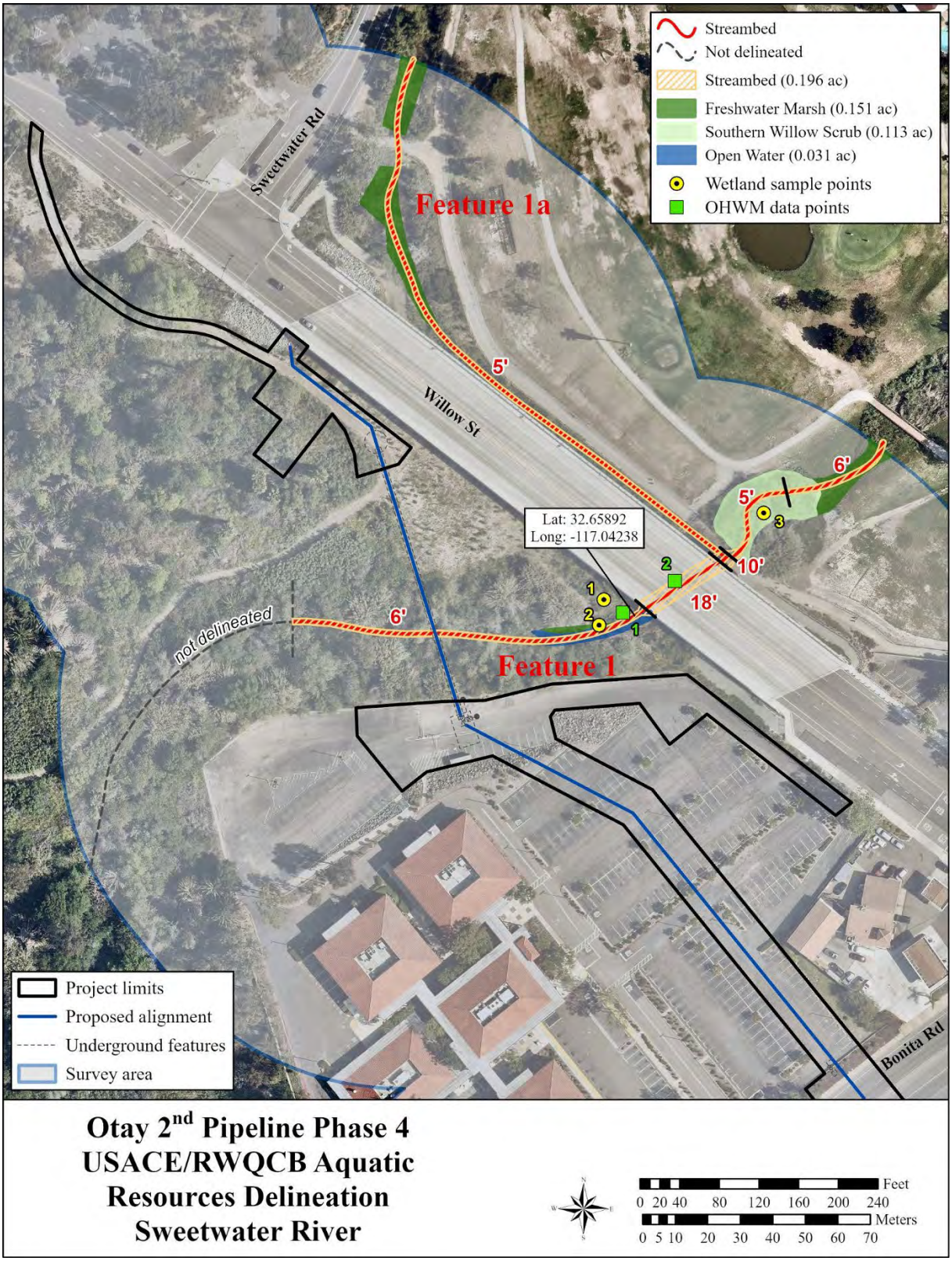

Figure 14. USACE/RWQCB Wetlands at Sweetwater River.

Figure 15. USACE/RWQCB Wetlands at Telegraph Canyon Creek.

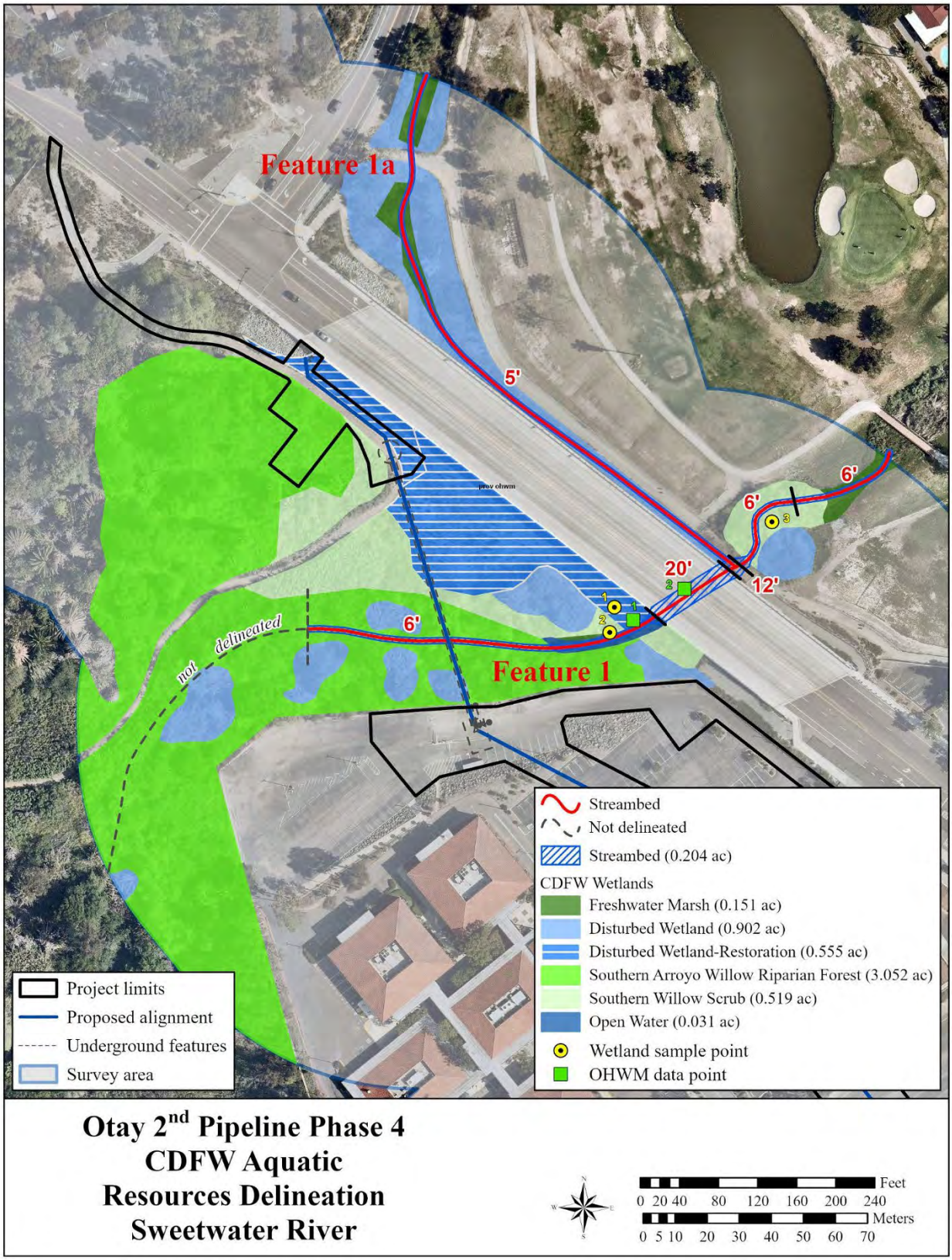

Figure 16. CDFW/City Jurisdiction at Sweetwater River.

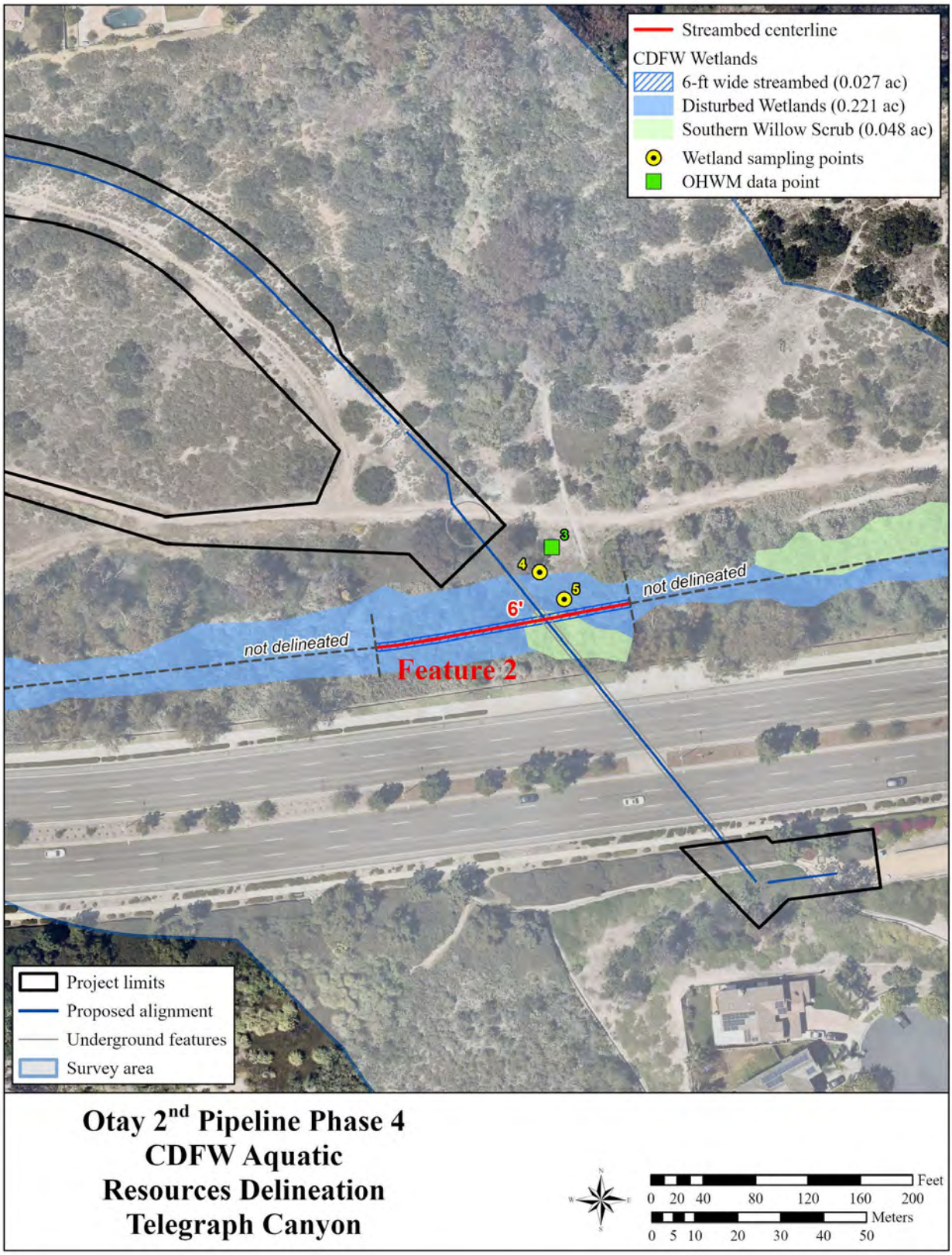

Figure 17. CDFW/City Jurisdiction at Telegraph Canyon Creek.

4.0 REGIONAL AND REGULATORY CONTEXT

This section describes the regulatory requirements for the Project, as well as the Project's regional resource planning status. The Project is subject to CEQA, and applicable state and federal regulations. As it is a City of San Diego project crossing from the unincorporated community of Bonita and the City of Chula Vista, the Project is subject to federal, state, City, and potentially County of San Diego, and City of Chula Vista regulations.

4.1 California Environmental Quality Act

As the City of San Diego is the Project proponent it will act as the Lead Agency for the Project. While the Project is within the County and City of Chula Vista, the City, County and City of Chula Vista have agreed, and the USFWS and CDFW have concurred (pending) that this Project's impacts to biological will be assessed against the City's CEQA thresholds of significance for biological resources (City 2022) and mitigation will follow the City's Biological Guidelines City 2018b).

4.2 Federal and State Regulations

Regulations that might apply to the project site include the federal ESA and CESA, MBTA, CFG Code, federal Clean Water Act, and CEQA. Because no impacts to USACE and RWQCB jurisdictional areas are anticipated, a USACE Clean Water Act Section 404 Permit and a San Diego RWQCB Clean Water Act Section 401 Certification will not be required. Impacts to CDFW jurisdiction are to habitat and not waters of the state, so a CFG Code Section 1602 Lake and Streambed Alteration Agreement (LSAA) may not be required nor will a RWQCB Waste Discharge Requirements Permit under the state's Porter-Cologne Act.

The MBTA prohibits the "take" of any migratory bird, part, nest, or eggs and is implemented using Section 10.12 of the USFWS's MBTA regulations which defines "take" as to: pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities. A "take" does not include habitat destruction or alteration, as long as there is not a direct "take" of birds, active nests, eggs, or parts thereof.

Pursuant to Section 3503, 3503.5, 3505, and 3513 of the CFG Code, it is unlawful to take, possess, or needlessly destroy the active nest or eggs of any bird. The CFG Code defines "take" as to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.

4.3 Local Regulations

4.3.1 MSCP

The MSCP is a comprehensive conservation planning program that covers a 900-square-mile area of southwestern San Diego County and endeavors to address the habitat needs of species. Local jurisdictions and special districts were to implement their portions of the MSCP Plan via subarea plans designed to identify lands they would conserve to provide habitat for federal and state endangered, threatened, or sensitive species (City 1998). The MSCP Plan identified a process for

the local issuance of permits and includes implementation strategies, preserve design, and management guidelines (City 1998).

The northernmost portions of the project area are mostly within the unincorporated area, covered by the County of San Diego regulations and its South County MSCP Subarea Plan (County 1997), although the Willow Street Bridge and the commercial development on the northeast corner of the bridge and Bonita Road are within the City of Chula Vista covered by the City of Chula Vista MSCP Subarea Plan (City 2003) as is the remainder of the alignment south of Glen Abbey. The City holds an easement and owns some parcels along the existing alignment, but new easements will be needed for the locations where the new alignment deviates from the old.

4.4 City of San Diego

4.4.1 MSCP Guidelines

In July 1997, the USFWS, California Department of Fish and Game (CDFW as of January 1, 2013), and City adopted the Implementing Agreement for the MSCP (City 1997). This program allows the incidental take of threatened and endangered species as well as regionally sensitive species that are otherwise adequately conserved. The program designates regional preserves intended to be mostly void of development activities while allowing development of other areas subject to program requirements.

The City's MSCP Subarea Plan was prepared to meet the requirements of the California Natural Communities Conservation Planning Act of 1992 and to be consistent with the ESA and CESA. This Subarea Plan describes how the City's portion of the MSCP Preserve (the Multi-Habitat Planning Area [MHPA]) will be implemented.

4.4.1.1 Multi-Habitat Planning Area Preserve

The MSCP (City 1997) identifies an MHPA that is intended to link all core biological areas into a regional wildlife preserve. While the Project Study Area is outside of City limits, portions occur within County and City of Chula Vista designations that are part of their MSCP Subarea Plan MHPA and support sensitive species (Figure 18).

4.4.1.2 Multi-Habitat Planning Area Adjacency Guidelines

The City's Subarea Plan includes recommendations so that development activities adjacent to or near the MHPA will be subject to special conditions, the Land Use Adjacency Guidelines (LUAG), so that minimal impacts to the Preserve area can be assured. Potential impact issues requiring mitigation include drainage, lighting, noise, barriers, invasive species, and brush management, all of which will be addressed for the County and City of Chula Vista MSCP preserve areas under the impact and mitigation sections below.

4.4.1.3 Specific Management Directives

The City's MSCP Subarea Plan includes specific management directives for various portions of the MHPA throughout the City. They do not apply to this Project.

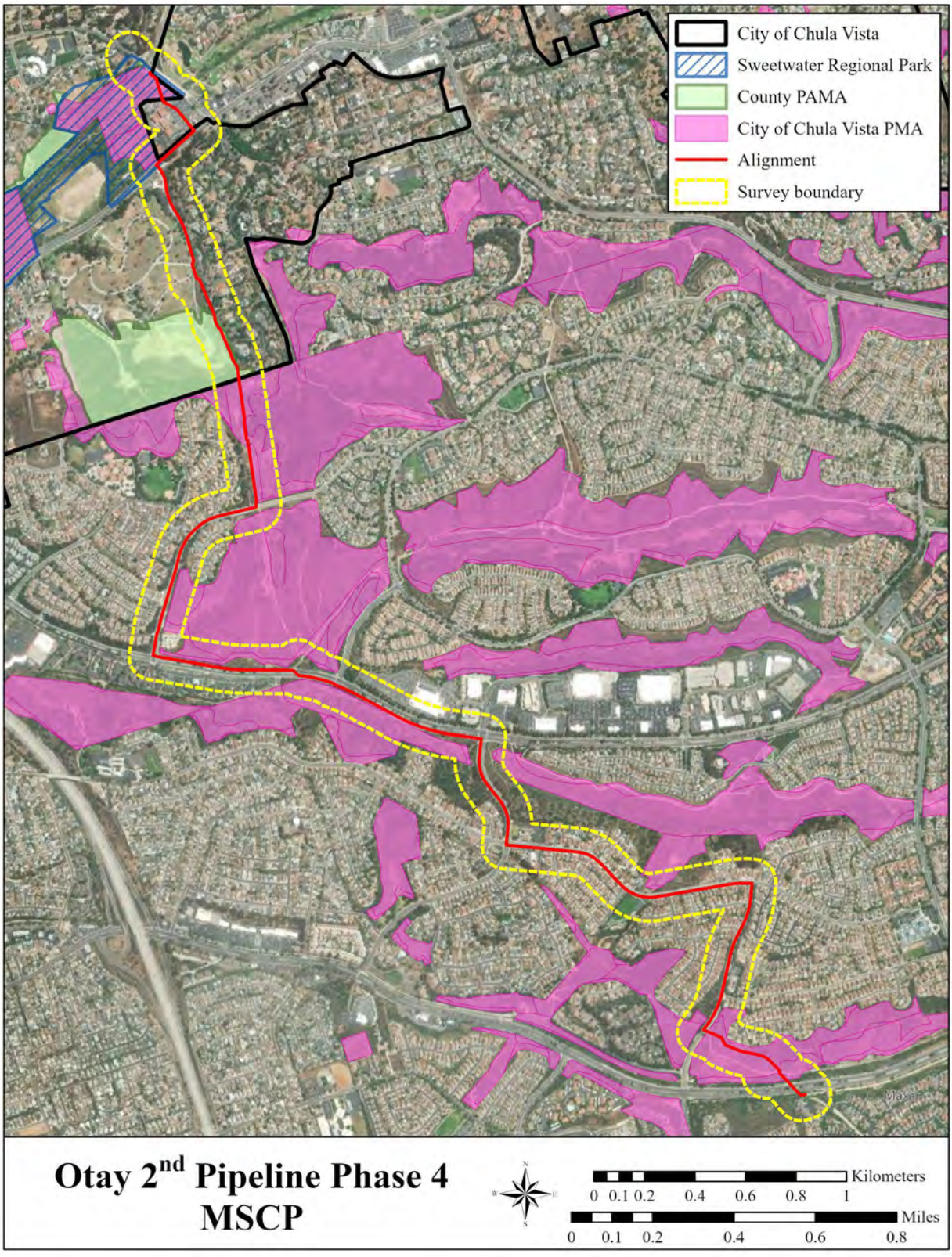

Figure 18. County Pre-Approved Mitigation Area and Chula Vista PMA MSCP Designations along the Alignment.

4.4.1.4 Special Conditions for Covered Species

Special conditions apply to covered species that would be impacted by a project. These conditions apply to species classified as "narrow endemic" and other species specifically called out in the MSCP Plan (City 1998).

4.4.2 City of San Diego Development Regulations

The City regulates development of sensitive biological resources through its Land Development Code (LDC). Mitigation requirements for sensitive resources discussed in this document follow requirements of the City's Biology Guidelines (City 2018b) as outlined in the City's ESLs regulations, which have the purpose to "protect, preserve and, where damaged restore, the ESLs of San Diego and the viability of the species supported by those lands." ESLs are defined to include sensitive biological resources, steep hillsides, coastal beaches, sensitive coastal bluffs, and 100-year floodplains. Areas of the Study Area support sensitive vegetation and species and therefore are ESLs, including City wetlands and the Sweetwater River floodplain.

Impacts to City wetlands and 100-year flood plains require a deviation from the ESL regulations. The project is outside the Coastal Overlay Zone and is an EPP with no feasible alternate route because it is replacing an existing pipeline with the terminus of Phase 3 being just north of the Sweetwater River. Phase 4 must cross the Sweetwater River and Telegraph Canyon Creek along its route to the starting point of Phase 5. The original project design for Phase 4 was rerouted into more streets from its more direct route to avoid impacts to other upland ESL resources including CSS and CAGN as well as rare plants. The pipeline will be routed underneath the main channels of the two creeks using Underground Directional Drilling, but the Sweetwater River floodplain is too wide to drill under and supports riparian vegetation. Implementing the Underground Directional Drilling for the main channel will avoid impacts to USACE/RWQCB wetlands but will impact the CDFW/City riparian resources in the floodplain.

Per §143.0510(d)(1)(A) of the LDC, a deviation is requested because no feasible alternative exists that would avoid the impacts to wetlands as described above, and per §143.0510(d)(1)(B)(ii) the project qualifies as an EPP because it is a linear infrastructure project to replace a failing water pipeline.

4.4.3 Multi-Habitat Planning Area Land Use Adjacency Guidelines

The City's MSCP Subarea Plan includes recommendations so that development activities adjacent or in close proximity to the MHPA will be subject to special conditions so that minimal impacts to the preserve area can be assured.

The County's and City of Chula Vista's MHPA designations (Pre-Approved Mitigation Area [PAMA] and PMA) cover portions of the proposed Project Study Area and so the City is seeking an easement for the new pipeline alignment. Work conducted in the easement will require a Site Development Permit and so the City's MSCP Subarea Plan and the MHPA LUAG will apply to protect resources in the PAMA and PMA and allow the City to use its incidental take permit for unavoidable impacts. Per Section 1.4.3 of the City's MSCP Subarea Plan, drainage (altered

drainage patterns), toxic substances (leaking construction vehicles), lighting (night work lighting), noise (impacting sensitive species within the MHPA), barriers (creating movement barriers for wildlife), invasive species (exotic weed introduction), brush management (not applicable to this project), and grading (errant grading during project implementation) are topics of concern addressed by the City's MHPA LUAG (1997).

These guidelines are addressed below to ensure compliance with the requirements of the MSCP Plan. Implementation of the MHPA LUAGs would be assured through conditions of project approval and included in the Site Development Permit.

Drainage

Guideline:

> *All new and proposed parking lots and developed areas in and adjacent to the preserve must not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials and other elements that might degrade or harm the natural environment or ecosystem processes within the MHPA. This can be accomplished using a variety of methods including natural detention basins, grass swales or mechanical trapping devices. These systems should be maintained approximately once per year, or as often as needed, to ensure proper functioning. Maintenance should include dredging out of sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.*

Compliance:

> Being an underground pipeline project, it will not create parking lots, paved areas, or development. Ground disturbance for the proposed project will be temporary and mostly restored to habitat after construction. Vehicular access will be via existing or utility access roads or trails. Erosion control best management practices will control runoff during project implementation.

Toxic Substances

Guideline:

> *Land uses, such as recreation and agriculture, that use chemicals or generate by- products such as manure, that are potentially toxic or impactive to wildlife, sensitive species, habitat, or water quality need to incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the MHPA. Such measures should include drainage/detention basins, swales, or holding areas with non-invasive grasses or wetland-type native vegetation to filter out the toxic materials. Regular maintenance should be provided. Where applicable, this requirement should be incorporated into leases on publicly owned property as leases come up for renewal.*

Compliance:

The proposed Project will not change the land use and will leave the land in similar condition as before with the exception of an unpaved access road where current access is via a trail or where none is provided. The contractor shall ensure all areas for staging, storage of equipment and materials, trash, equipment maintenance, and other construction related activities are within the limits of work or in designated areas away from the MHPA. During construction, all maintenance of any construction equipment (e.g., refueling, oil changing, hydraulic maintenance) will be conducted within designated best management practice-fortified areas in the grading area or off site in a manner that will not allow the release of toxins, chemicals, petroleum into Open Space or MHPA areas. If fluid leaks occur from equipment, any contaminated soil will be removed and disposed of appropriately. Toxins, chemicals, or petroleum products from construction will not enter the MHPA.

Lighting

Guideline:

Lighting of all developed areas adjacent to the MHPA should be directed away from the MHPA. Where necessary, development should provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the MHPA and sensitive species from night lighting.

Compliance:

The proposed Project does not include any lighting and shall only occur during daylight hours. If night work is required for work along roads, lighting will be directed away from any native habitat such that it will not impact the MHPA. The Project is in compliance with this guideline.

Noise

Guideline:

Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas, recreational areas, and any other use that may introduce noises that could impact or interfere with wildlife utilization of the MHPA. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise reduction measures and be curtailed during the breeding season of sensitive species. Adequate noise reduction measures should also be incorporated for the remainder of the year.

Compliance:

The presence of the federal-listed as threatened CAGN and LFRR or suitable habitat for these species at or near most of the alignment means that noise from project activities within the MHPA may need to be limited between March 1 and August 15 for the CAGN and LFRR if the species are present. The City's Biology Guidelines (2018b) and CEQA thresholds of significance (2022) require that no noise above 60 decibels equivalent continuous, A-weighted sound level averaged over an hour ($dB(A)_{leqh}$) occur within CAGN-occupied habitat within the MHPA

during the gnatcatcher breeding season. The equipment being used produces over 60 $dB(A)_{leqh}$ at source so the work will either require noise baffling to reduce noise levels to below 60 $dB(A)_{leqh}$ during the CAGN breeding season or the work will be precluded from occurring during the CAGN breeding season. Monitoring of LFRR may also be required for work in the Sweetwater River if that works occurs during the LFRR breeding season March 15 to September 15). A Qualified Biologist will be required to monitor project implementation and will ensure this and all MHPA LUAG are followed.

Barriers

Guideline:

New development adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation.

Compliance:

The proposed Project is replacement of a water line and temporary access to work areas along the alignment that is designated as PAMA and PMA. Most impacts will be temporary, but a permanent unpaved access road will be created. No other structures will be created and barriers to protect the open space are not needed as the temporary impacts outside the access road will be restored to pre-construction contours and revegetated after completion. Public access already exists and cannot be prevented in the areas so temporary barriers may be required to prevent damage to the restoration areas. The surrounding areas are mostly suburban, and domestic pets may intrude, and dogs are likely walked along the trails though they are not as frequently used as many trails in suburban San Diego County. The proposed Project will not attract additional users and should not change the current situation.

Invasive Species

Guideline:

No invasive non-native plant species shall be introduced into areas adjacent to the MHPA.

Compliance:

The restoration of temporary impacts from the replacement of the water line will not introduce invasive non-native plants. Plant species within 100 ft of the MHPA shall comply with the Landscape Regulations (LDC142.0400 and per Table 142-04F, Revegetation and Irrigation Requirements). In addition, the project shall keep weeds under control in areas disturbed during implementation to prevent weeds from establishing and seeding.

Brush Management

Guideline:

> *New development located adjacent to and topographically above the MHPA (e.g., along canyon edges) must be set back from slope edges to incorporate Zone 1 brush management areas on the pad and outside of the MHPA. Zone 2 may be located in the MHPA upon granting of an easement to the City (or other acceptable agency) except where narrow wildlife corridors require it to be located outside of the MHPA. Brush Management Zones (BMZs) will not be greater in size than is currently required by the City's regulations. Initial thinning of woody vegetation shall not exceed 50 percent coverage of the existing vegetation prior to implementation of brush management activities. Additional thinning and pruning shall be done consistent with City standards to obtain minimum vertical and horizontal clearances and shall avoid/minimize impacts to covered species to the maximum extent possible. For all new development, regardless of the ownership, brush management in the Zone 2 area will be the responsibility of a homeowners' association or other private party. For existing and approved projects, the BMZs, standards and locations, and clearing techniques will not change from those required under existing regulations.*

Compliance:

> The project is not a structural development and would not create any new BMZs or FMZs. As a result, no additional impacts to the Open Space or MHPA will occur from brush management.

Grading/Land Development

Guideline:

> *Manufactured slopes associated with site development shall be included within the development footprint for projects within or adjacent to the MHPA.*

Compliance:

> The project is not a development, and the impacts are temporary in nature. Graded areas will be recontoured and revegetated back to pre-construction conditions or better.

As demonstrated above, the proposed Project either will be in compliance with each MHPA Adjacency Guideline, or the Guideline does not apply. As a result, indirect impacts to the MHPA are not expected to occur.

4.4.4 Specific Management Directives

The City's MSCP Subarea Plan includes specific management directives for various portions of the MHPA throughout the City. As this Project is not within the City, no City-specific management directives relate to the proposed project but often they are referenced in the Special Conditions of Coverage for overed species, and so will be applied to the covered species along the alignment in the County PAMA and City of Chula Vista PMA.

4.4.5 Special Conditions for Covered Species

Special conditions apply to covered species that would potentially be impacted by a project. These conditions apply to species classified as "narrow endemic" and other species specifically called out in the City's MSCP Subarea Plan (1997). Two narrow endemic species were observed within the Project area: snake cholla and LFRR. Other sensitive species detected which have special conditions for coverage include CAGN, OTWH, and San Diego barrel cactus. Covered species with a moderate or high potential to occur which have special conditions for coverage include COHA, RCSP, Otay tarplant, and variegated dudleya (*Dudleya variegata*) The Special Conditions for Coverage for these species are identified below as is Project compliance with the conditions:

Snake Cholla

Two snake cholla were detected in the Study Area though neither will be directly impacted. One of the snake cholla is along an opening near a side trail east of the main trail just south of the City

Conditions of Coverage:

> *Area specific management directives must include specific measures to protect against detrimental edge effects and management measures to maintain surrounding habitats for pollinators.*

Compliance:

> Two snake cholla were detected in the Study Area though neither will be directly impacted. One of the snake cholla is along an opening near a side trail east of the main trail just south of the City of Chula Vista boundary south of Glen Abbey. The habitat being impacted to the west for the project is CSS and will be restored to CSS with a seed mix of flowering natives. The other snake cholla is on a slope above East H Street and will not be impacted by the project as no restoration is needed along streets.

Otay Tarplant

No Otay tarplant has been detected during three surveys in different years despite CNDDB records along both portions of the alignment that support good to high quality habitat.

Conditions of Coverage:

> *MSCP coverage of this species requires avoidance of populations in the Otay River Valley through sensitive design and development of the active recreations areas as described in the Otay Ranch RMP and GDP. One of the seven major populations occurs within an amendment area (Proctor Valley). At the time permit amendments are proposed, strategies to provide protection for this species within the amendment area must be include (proposed take authorization amendments will be subject to public review through CEQA and NEPA processes and take authorization amendments require approval by CDFG and USFWS). Area specific management directives must include specific measures for monitoring of populations and adaptive management of preserves (taking into consideration the extreme population*

fluctuations from year to year), and specific measures to protect against detrimental edge effects to this species.

Compliance:

Per Section 3.5.2, three focused surveys in 2022, 2023, and 2025 of the areas which could support and have supported Otay tarplant in the past were negative despite the species being seen in other areas (San Diego Mitigation and Monitoring Program 2025). As a result, it is unlikely that this annual plant is still present along the alignment and no further focused surveys are required. Areas extending from Glen Abbey to Terra Nova Drive and the area east of Paseo Ladera, where Otay tarplant were previously detected are not heavily trafficked by the public. Public activity in the area was low and infrequent during the many days of field surveys performed. Surveys for other rare plants in the summer prior to project implementation should detect this species if it reappears. The restoration of disturbed areas along the alignment should reduce edge effects.

Variegated Dudleya

No variegated dudleya has been detected during surveys and CNDDB records show one location in Rice Canyon as the nearest location, but Calfora (2025) show locations have been recorded 40-50 years ago close to the alignment in the north. The species has a moderate potential to occur because of suitable habitat and historic locations.

Conditions of Coverage:

Area specific management directives must include species-specific monitoring and specific measures to protect against detrimental edge effects to this species, including effects caused by recreational activities. Some populations now occur within a major amendment area (Otay Mountain) and at the time permit amendments are proposed, strategies to provide protection for this species within the amendment area must be included. (Proposed take authorization amendments will have public review through CEQA and NEPA processes and require approval by CDFG and USFWS.)

Compliance:

As a perennial herb it should have been detected if present. Surveys should occur in the summer prior to start of work to determine if variegated dudleya is present between Glen Abbey and Terra Nova Drive. Edge effects caused by humans are minimal and the restoration of disturbed areas along the alignment should reduce edge effects.

San Diego Barrel Cactus

The individuals detected within the Study Area, east of the alignment south of Glenn Abbey in the Chula Vista PMA and north of East H Street between the street and the PMA are outside the limits of work and so project impacts on San Diego barrel cactus would be less than significant.

San Diego barrel cactus is an MSCP-covered species; thus, take of the species is allowed for projects that comply with the City's MSCP implementing regulations.

Conditions of Coverage:

Area specific management directives must include measures to protect this species from edge effects, unauthorized collection, and include appropriate fire management/control practices to protect against a too frequent fire cycle.

Compliance:

The Diego barrel cactus will be protected by Environmentally Sensitive Area fencing along the edge of the limits of work. The six cacti south of Glen Abbey will be adequality buffered from the impact area. The single cactus north of East H Street along with a south coast saltscale, San Diego sunflower, and decumbent goldenbushes present in the same area will require special attention when work is passing to ensure no damage occurs.

Cooper's Hawk

Conditions of Coverage:

In the design of future projects within the Metro-Lakeside-Jamul segment, design of preserve areas shall conserve patches of oak woodland and oak riparian forest of adequate size for nesting and foraging habitat. Area Specific Management Directives must include 300-ft impact avoidance areas around the active nests, and minimization of disturbance in oak woodlands and oak riparian forests.

Compliance:

COHA has potential to occur in woodlands along the Sweetwater River, EW adjacent to Glen Abbey Drive, EW west of the alignment north for Terra Nova Drive, and in EW north of Telegraph Canyon Creek. If project work occurs within the bird breeding season (February 1-September 15), a survey for COHA nests will be performed by a Qualified Biologist and if any COHA nests are detected within 300 ft of the proposed Project, the potential for disturbance will be evaluated based on horizontal and vertical distance and screening of the project from the nest. If the Qualified Biologist deems that the distance between project work and the nest is adequate to avoid impacts, work will be allowed to proceed. If the distance is not adequate, then work will be delayed until after fledging. Implementation of COHA conditions of coverage would be assured as a condition of project approval and included in the site development permit.

Coastal California Gnatcatcher

Conditions of Coverage:

Area Specific Management Directives must include measures to reduce edge effects and minimize disturbance during the nesting period, fire protection measures to reduce the potential for habitat degradation due to unplanned fire, and management measures to maintain

or improve habitat quality including vegetation structure. No clearing of occupied habitat within the cities' MHPAs and within the County's Biological Resource Core Areas may occur between March 1 and August 15.

Compliance:

As CAGN were detected in many locations along the Study Area and suitable habitat occurs in many areas adjacent to the alignment within the PAMA and PMA, clearing of habitat will not occur during the CAGN breeding season (March 1-August 15). During the breeding season, noise will be limited in the PAMA and PMA if CSS within 300 ft of the work supports nesting CAGN. After Project completion, temporary impacts outside of the permanent access road will be restored to CSS which will reduce edge effects and mitigation off site will offset the acreage of impacts to CSS in the PAMA and PMA. Implementation of CAGN condition below would be assured as a condition of project approval and included in the Site Development Permit.

The following Specific Protections for the Coastal California Gnatcatcher shall be applied:

Prior to the issuance of the Notice to Proceed, the City Environmental Designee (ED) shall verify that the MHPA boundaries and the following project requirements regarding the coastal California gnatcatcher are shown on the construction plans and/or within the project specifications:

No clearing, grubbing, grading, or other construction activities shall occur between March 1 and August 15, the breeding season of the coastal California gnatcatcher, until the following requirements have been met to the satisfaction of the City ED:

A Qualified Biologist (possessing a valid ESA section 10(a)(1)(a) recovery permit) shall survey those habitat areas within the MHPA that would be subject to construction noise levels exceeding 60 decibels [db(A)] hourly average for the presence of the coastal California gnatcatcher. Surveys for the coastal California gnatcatcher shall be conducted pursuant to the protocol survey guidelines established by the U.S. Fish and Wildlife Service within the breeding season prior to the commencement of any construction. If gnatcatchers are present, then the following conditions must be met:

I Between March 1 and August 15, no clearing, grubbing, or grading of occupied gnatcatcher habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; and

II. Between March 1 and August 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 db(A) hourly average at the edge of occupied gnatcatcher habitat. An analysis showing that noise generated by construction activities would not exceed 60 db(A) hourly average at the edge of occupied habitat must be completed by a qualified acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the

City ED at least two weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; or

III. At least two weeks prior to the commencement of construction activities, under the direction of a qualified acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 db(A) hourly average at the edge of habitat occupied by the coastal California gnatcatcher. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 db(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician or biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (August 16).

* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB (A) hourly average or to the ambient noise level if it already exceeds 60 dB (A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the City Manager, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

B. If CAGN are not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the city manager and applicable resource agencies which demonstrates whether or not mitigation measures such as noise walls are necessary between March 1 and August 15 as follows:

I. If this evidence indicates the potential is high for coastal California gnatcatcher to be present based on historical records or site conditions, then condition A.III shall be adhered to as specified above.

II. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

Light-Footed *Ridgway's Rail*

LFRR were detected east of the Willow Street Bridge, foraging under the group of willows and heard calling from cattail marsh to the east. As habitat west of the bridge is much less suitable and no work will occur east of the bridge impacts to LFRR are not expected to be significant with Environmentally Sensitive Area fencing being paced to prevent workers from going to the east

side of the bridge and prevent rails from entering the work area. Depending on sound levels, noise barriers may be needed.

Conditions of Coverage:

Area specific management directives must include active management of wetlands to ensure a healthy tidal saltmarsh environment, and specific measures to protect against detrimental edge effects to this species.

Compliance

As stated above, barriers will prevent workers going to the east side of the bridge where LFRR were detected and will also prevent LFRR from entering the work area. It should be noted that the LFRR territory identified during surveys was in a narrows strip of cattail along the Sweetwater River channel within the Chula Vista Gold Course

Rufous-Crowned *Sparrow*

Conditions of Coverage:

Area Specific Management Directives must include maintenance of dynamic processes, such as fire, to perpetuate some open phases of coastal sage scrub with herbaceous components.

Compliance

Suitable habitat for RCSP occurs within the Study Area. The Area Specific Management Directives identified for RCSP and CAGN are conflicting in regard to edge effects. The creation of an access road along the alignment will create an edge between the CSS swaths, which will promote usage by RCSP.

Orange-Throated Whiptail

Conditions of Coverage:

Area Specific Management Directives must address edge effects.

Compliance

Several OTWH were seen and suitable habitat for OTWH occurs throughout much of the native vegetation portions of the Study Area. The Area Specific Management Directives for OTWH will be accomplished on site by the required revegetation of CSS, NNV, and DH with CSS after Project installation. This will reduce edge effects while also increasing habitat acreage of CSS and OTWH habitat along the alignment. In addition, the project is mitigation impacts to CSS off site with use of mitigation credits.

Monitoring of Project implementation by a Qualified Biologist will ensure these compliance measures will be applied, and that the Project effects on these covered species will be avoided and minimized. The majority of the Project impacts to habitat are temporary, and no long-term changes to dynamic processes will occur.

4.4.6 Biological Resource Protection During Construction

The proposed project will include the following requirements to ensure compliance with the City's MSCP Subarea Plan and to avoid or minimize impacts to biological resources to the maximum extent feasible. The following requirements shall be included as conditions of project approval in the Site Development Permit and incorporated into the project plans and/or construction documents.

BIOLOGICAL RESOURCE PROTECTION DURING CONSTRUCTION

I. Prior to Construction

A. **Biologist Verification -** The Permittee shall provide a letter to the City's ED stating that a Project Biologist (Qualified Biologist) as defined in the City of San Diego's Biological Guidelines (2018), has been retained to implement the project's biological monitoring program. The letter shall include the names, resumes, and contact information of all persons involved in the biological monitoring of the project.

B. **Pre-Construction Meeting -** The Qualified Biologist shall attend the pre-construction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up mitigation measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.

C. **Biological Documents -** The Qualified Biologist shall submit all required documentation to ED verifying that any special mitigation reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City Biology Guidelines, MSCP, ESL, project permit conditions; CEQA; ESAs; and/or other local, state or federal requirements.

D. **BCME -** The Qualified Biologist shall present a Biological Construction Mitigation/Monitoring Exhibit (BCME) which includes the biological documents in C above. In addition, include: restoration/revegetation plans, plant salvage/relocation requirements (e.g., coastal cactus wren plant salvage, burrowing owl exclusions, etc.), avian or other wildlife surveys/survey schedules (including general avian nesting and USFWS protocol), timing of surveys, wetland buffers, avian construction avoidance areas/noise buffers/ barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City's ED. The BCME shall include a site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule. The BCME shall be approved by the City's ED and referenced in the construction documents.

E. **Avian Protection Requirements -** To avoid any direct impacts to any species identified as a listed, candidate, sensitive, or special status species in the MSCP, removal of habitat

that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted within three calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the pre-construction survey to City ED for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report in conformance with the City's Biology Guidelines and applicable State and Federal Law (i.e. appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's ED and Environmental Biologist shall verify and approve that all measures identified in the report or are in place prior to and/or during construction.

F. **Resource Delineation -** Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora & fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.

G. **Education –** Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas, etc.).

II. During Construction

A. **Monitoring** - All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on "Exhibit A" and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR shall be e-mailed to ED on the

1st day of monitoring, the 1st week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.

B. **Subsequent Resource Identification -** The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna on site (e.g., flag plant specimens for avoidance during access, etc.). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species-specific local, state or federal regulations have been determined and applied by the Qualified Biologist.

III. Post Construction Measures

A. In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City Biology Guidelines, ESL and MSCP, State CEQA, and other applicable local, state and federal law. The Qualified Biologist shall submit a final BCME/report to the satisfaction of the City ED within 30 days of construction completion.

4.4.7 City of San Diego CEQA Thresholds of Significance

In addition to the state CEQA thresholds, the City identifies City-specific CEQA thresholds of significance for impacts to biological resources (City 2022):

(a) Total upland impacts (Tiers I- IIIB) less than 0.1 acre are not considered significant and do not require mitigation. See Section 3 (Cumulative Impacts) relative to native grasslands.

(b) Impacts to NNG totaling less than 1.0 acres which are completely surrounded by existing urban developments are not considered significant and do not require mitigation. Examples may include urban infill lots.

(c) Total wetland impacts less than 0.01 acre are not considered significant and do not require mitigation. THIS DOES NOT APPLY TO VERNAL POOLS or wetlands within the Coastal Zone.

(d) Brush management Zone 2 thinning activities, while having the potential to adversely affect biological resources, are not considered potentially significant inside the MHPA or, to the extent that non-covered species are not impacted, outside the MHPA, because of the implementation of the MSCP. Brush management Zone 2 thinning outside the MHPA which affects non-covered species is potentially significant. Brush management not conducted in accordance with brush management regulations, regardless of where it is located, is also potentially significant. Mitigation is not required for impacts to NNG habitat when impacted for the purpose of wetland or other native habitat creation.

(e) Habitat mitigation is not required for impacts to manufactured slopes or areas that have been planted with native species for the purpose of erosion control. For example, in order to qualify for this exception, substantiation of previous permits and mitigation must be provided.

Noise mitigation, however may be required for significant noise impacts to certain avian species during their breeding season depending upon the location of the slope (such as adjacent to an MHPA) and what birds may be present in the area such as the California gnatcatcher, least Bell's vireo, southern willow flycatcher, least tern, cactus wren, tricolored blackbird, or western snowy plover. If these avian species (except for the California gnatcatcher) are present, then mitigation will be required if construction or operational noise levels would exceed 60 db(A), or the existing ambient noise level if already above 60dB(A) during the breeding season. For California gnatcatcher habitat within the MHPA and occupied, construction or operational noise levels exceeding 60 dB(A) (or exceeding the existing ambient noise level if already above 60 dB(A)) during the breeding season is considered significant. There are no restrictions for the gnatcatcher outside the MHPA anytime of the year. In addition, inside the MHPA, impact avoidance areas are required for COHA, northern harrier, golden eagle, burrowing owl, and southwestern pond turtle. See Biology Guidelines, Section II, A. 2 & 4. and Section 9.12 of the Implementing Agreement.

(f) Removal/control of non-native plants is not considered to constitute a significant habitat impact for which compensatory habitat acquisition, preservation, or creation for the area impacted is required. Mitigation for indirect impacts such as erosion control or off-site infestation by non-native species may be needed.

4.5 County of San Diego

In October 1997, the USFWS, California Department of Fish and Game (CDFW as of January 1, 2013), and the San Diego County Board of Supervisors entered into an Implementing Agreement for the San Diego County MSCP Subarea Plan (County 1997). This program allows the incidental take of threatened and endangered species as well as regionally sensitive species that are otherwise adequately conserved. The program designates regional preserves intended to be mostly void of development activities while allowing development of other areas subject to program requirements.

The County's MSCP Subarea Plan (1997) was prepared to meet the requirements of the California Natural Communities Conservation Planning Act of 1992 and to be consistent with MSCP Plan (City 1998) and the federal ESA and CESA. This Subarea Plan describes how the County's portion of the MSCP Preserve (MHPA) will be implemented. The County's Biological Mitigation Ordinance (BMO), approved at the same time as the MSCP Subarea Plan, identifies how impacts to sensitive biological resources must be avoided, minimized, or mitigated in compliance with the MSCP.

4.5.1 Multi-Habitat Planning Area Preserve

The County MSCP Subara Plan (1997) identifies an MHPA that is intended to link all core biological areas into a regional wildlife preserve. The County MHPA consists of the preserve areas of the hard-lined projects identified in the County MSCP Subarea Plan, the PAMA and preserve lands that have been brought into the County's MSCP via the Major or Minor Amendment process.

4.5.2 Biological Mitigation Ordinance

The BMO is intended to protect the County's biological resources and prevent their degradation and loss by guiding development outside of Biological Resource Core Areas (BRCAs), and by establishing mitigation standards which will be applied to discretionary projects while enabling the County to achieve the conservation goals of their MSCP Subarea Plan.

The BMO provides the criteria for avoiding impacts to BRCAs and to plant and animal populations within those areas, and the mitigation requirements for all projects requiring a discretionary permit. The BMO promotes the preservation of biological resources by directing preservation toward land which can be combined into contiguous areas of habitat or linkages to form a preserve system. It gives greater value to the preservation of large contiguous BRCAs or to habitat linkages when formulating avoidance and mitigation requirements.

The BMO has two parts: how mitigation for impacts is formulated and how impacts to certain species must be mitigated.

The project is within the Metro-Lakeside-Jamul Segment of the County Multiple Species MSCP Subarea Plan area. Take of covered species resulting from the construction and operation of public infrastructure facilities within the Segment of the Subarea Plan, other than preserved areas, is permitted within the MHPA based on the County making the findings for the project.

Sweetwater Regional Park is not identified as a preserved area in the MSCP Subarea Plan. A public facility or public project, determined to be essential by the County, is exempted from the BMO provided findings can be made. As the project is a public project to replace a regionally important water line, it would appear the project would be exempt from the BMO if it complies with the required County findings:

a) The facility, project, or recreational facility is consistent with adopted community or subregional plans, and the MSCP and Subarea Plans;

b) All feasible mitigation measures have been incorporated into the facility, project, or recreational facility, and there are no feasible, less environmentally damaging locations, alignments or non-structural alternatives that would meet project objectives;

c) Where the facility, project or recreational facility encroaches into a wetland or floodplain, mitigation measures have been incorporated into the project that result in a net gain in wetland and/or riparian habitat;

d) Where the facility, project or recreational facility encroaches into steep slopes, native vegetation will be used to revegetate and landscape cut and fill areas;

e) No mature riparian woodland will be destroyed or reduced in size due to otherwise allowed encroachments; and

f) All Critical Populations of Sensitive Plant Species within the County's Subarea (Attachment C of BMO), Rare Narrow Endemic Animal Species within the County's Subarea (Attachment D of BMO), Narrow Endemic Plant Species within the County's Subarea (Attachment E of BMO), and San Diego County Sensitive Plant Species (as defined in the BMO), will be avoided as required and consistent with the Subarea Plan and BMO. Projects must conform to the above findings or be consistent with the BMO.

4.6 City of Chula Vista

4.6.1 MSCP Subarea Plan

The City of Chula Vista prepared a Subarea Plan to guide implementation of the MSCP Plan within its corporate boundaries. The Plan was adopted by the City on May 13, 2003, and an implementing agreement and "take" permit was issued by the USFWS and CDFW on January 13, 2005 (City of Chula Vista 2024).

The Chula Vista MSCP Subarea Plan (2003) identifies a 9,200-acre natural habitat preserve system and provides a regulatory framework for determining impacts and designating mitigation associated with proposed projects through a series of focused planning areas within which some lands will be dedicated for preservation of native habitats within the City's boundaries. The City's preserve is divided into three PMAs areas with the Project occurring within the Central City PMA.

Of the 85 sensitive plant and wildlife species considered to be covered species based on the implementation of individual local subarea plans. Nineteen of these (including the Quino checkerspot butterfly [*Euphydryas editha quino*]) are considered to be adequately conserved by the Chula Vista MSCP Subarea Plan. An additional 36 plant and wildlife species are considered to have potential to occur in Chula Vista and are considered to be adequately conserved in conjunction with the continued implementation of the City of San Diego and County of San Diego subarea plans. The remainder of the species evaluated in the MSCP Plan are not expected to occur within Chula Vista.

There are 19 plants that are identified in the MSCP Plan as narrow endemic species based on their limited distributions in the region. Eight of these are either known to occur within Chula Vista or for there to be suitable habitat for them within Chula Vista.

The MSCP Subarea Plan categorizes areas for land use, including Development Areas and Conservation Areas. If a project proposes more than 5 percent encroachment of a narrow endemic species population within a 100 percent conservation preserve area or 20 percent within a 75 to 100 percent conservation preserve area, a determination of biologically superior preservation must be made by the City and sent to the Wildlife Agencies.

4.6.2 Habitat Loss and Incidental Take Ordinance

Following adoption of the City of Chula Vista MSCP Subarea Plan and issuance of take authorization by the Wildlife Agencies, Chula Vista developed the Habitat Loss and Incidental

Take (HLIT) Ordinance in order to implement the protective measures identified in the City of Chula Vista MSCP Subarea Plan. Prior to project implementation, the Project Applicant will be required to obtain an HLIT Permit pursuant to Section 17.35 of the City's Municipal Code for impacts to sensitive biological resources.

Per Section 5.2.2.1 of the City of Chula Vista MSCP Subarea Plan, "take" of covered species and habitat within development areas of covered projects will not require an HLIT Permit. Covered projects will be developed consistent with requirements of an approved Sectional Planning Area or precise plans, Wildlife Agency agreements, conditions of coverage cited in Section 7.5.6 of this Subarea Plan, and/or the Otay Ranch General Development Plan/Subregional Plan and Resource Management Plan. Development of covered projects within preserve boundaries will be subject only to the narrow endemic species protection provisions of the HLIT, as described in Section 5.2.3 of the City of Chula Vista Subarea Plan and Wetlands protection described in Section 5.2.4 of the Subarea Plan (City of Chula Vista 2003). Covered projects include future and planned development.

In the portion of the Study Area between Glen Abbey and Terra Nova Drive, the southern portion of the area is located within a development area (Terra Nova), and the northern portion is within a designated 100 percent conservation area-habitat preserve (Figure 5). In the portion off Paseo Ladera, north of Telegraph Canyon Road, the land north of Telegraph Canon Creek is 100 percent conservation area. Chula Vista's Subarea Plan identifies that an encroachment of only 5% into narrow endemic species populations is allowed in such areas.

5.0 IMPACTS

5.1 Significance Criteria

CEQA regulations generally define a significant effect on the environment as a substantial or potentially substantial adverse change in the physical environment (CEQA Guidelines §§ 15064 and 15126.2). The City's Significance Determination Thresholds under CEQA (City 2022) provides the following guidance regarding impacts on biological resources. These thresholds assure conformance with CEQA as well as identify federal biological regulation conformance requirements, e.g., wetlands, threatened/endangered species permits, etc. Projects are considered to have a significant impact on the environment if they result in any of the following:

1) A substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in the MSCP or other local or regional plans, policies or regulations, or by the CDFW or USFWS.
2) A substantial adverse impact (>0.10 acre) on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the Biology Guidelines of the Land Development manual or other sensitive natural community identified in local or regional plans, policies or regulations, or by the CDFW or USFWS.
3) A substantial adverse impact (>0.01 acre) on wetlands (including, but not limited to, marsh, vernal pool, riparian, etc.) through direct removal, filling, hydrological interruption, or other means.
4) Substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impedance of the use of native wildlife nursery sites.
5) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state Habitat Conservation Plan, either within the MSCP Plan area or in the surrounding region.
6) Introduction of a land use within an area adjacent to the MHPA that would result in adverse edge effects.
7) Conflict with any local policies or ordinances protecting biological resources.
8) Introduction of invasive species of plants into a natural open space area.

5.2 Direct Impacts

Direct impacts occur when biological resources are altered or destroyed during the course of, or as a result of, project implementation. Examples of such impacts include clearing and grubbing of vegetation, grading, loss of foraging or nesting habitat, and loss of individual species as a result of habitat clearing.

Impacts may be permanent or temporary. Permanent impacts occur when biological resources are removed and replaced with structures or continued activity. Temporary impacts occur when biological resources are impacted, but after project completion are allowed to recover or are actively revegetated to their former condition. It is assumed that impacts from the construction of an unpaved access would be permanent but that trench work along the alignment and impacts from staging, and access would be temporary as the land surface would be returned to its original contours and habitat revegetation would occur where appropriate (Figure 3). Creek crossings would occur via trenchless "core and bore" techniques which will require work areas and excavation either side of the creek areas. While USACE, CDFW, and RWQCB recognize the difference between permanent and temporary impacts to jurisdictional resources, the City treats permanent and temporary impacts to any sensitive resources similarly and require mitigation in addition to revegetation per the City Biology Guidelines (2018b).

Impacts to vegetation communities are identified as temporary and permanent to differentiate what will be revegetated and what will remain permanently impacted. Impacts within the alignment are largely unavoidable because of the need to replace the existing pipeline. The access route to the alignment will be via streets, existing utility roads, and trails. These provide a feasible means of getting needed machinery to the work areas while simultaneously minimizing impacts to adjacent sensitive habitats. It is assumed that a 45-ft width was needed to implement the project as designed.

5.2.1 Vegetation Communities

Vegetation community/cover impacts (permanent and temporary) total 16.12 acres (Table 3) with 0.172 acre of impacts to Wetlands (SAWRF, SWS, and DW-R), 0.06 acre to Tier I (MSS), 2.99 acres to Tier II habitat (CSS and CSS-R), and 0.10 acre to Tier IIIb (NNG). The remaining 12.80 acres of impacts are to Tier IV communities NNV, EW, DH, and DEV). The impacts are identified and summarized in Figure 19 through Figure 27, and in Table 3.

Total permanent impacts from creation of unpaved service roads parallel to the pipeline are 1.21 acres out of the total 16.12 acres, with 0.62 acre being to Tier I through IIIb habitats (versus 0.58 acre of impacts to Tier IV habitats). Temporary impacts of 14.91 acres are mostly to roads (10.85 acres) leaving 4.06 acres to be revegetated. This includes 0.172 acre of Wetlands and 2.52 acres of Tier I through IIIb habitats plus an additional 1.36 acres of Tier IV vegetation communities (NNV, EW, and DH). Revegetation of impacts to Wetlands and Tier I through Tier IIIb habitat still require mitigation.

Impacts to Wetland, and Tier I, Tier II, and Tier IIIb habitats would be significant unless avoided or mitigated in addition to revegetation. Impacts within Sweetwater Regional Park are 0.41 acre where 0.172 acre of impact is to wetlands, and 0.24 acre are to existing roads or trails (Table 4). Approximately 0.65 acre of County PAMA, and 3.03 acres of City of Chula Vista PMA would be impacted (Table 4). Out of a total of 16.12 acres of impacts, only 4.09 acres are to MHPA designated lands, and only 2.77 acres of that impact are to sensitive vegetation communities (Wetlands, and Tiers I through Tier IIIb).

Table 3. Impacts to Holland Vegetation Communities (acres).

MSCP Tier Vegetation Community (Holland Code)	Impact (Acres)[1]		
	Permanent	**Temporary**	**Total**
Wetland Tier			
Southern Arroyo Willow Riparian Forest (61320)	-	0.106	0.106
Southern Willow Scrub (63200)	-	0.021	0.021
Disturbed Wetland - Restoration (11200)	-	0.045	0.045
Wetland Subtotal	***-***	***0.172***	***0.172***
Tier I			
Maritime Succulent Scrub (32400)	0.04	0.02	0.06
Tier I Subtotal	***0.04***	***0.02***	***0.06***
Tier II			
Coastal Sage Scrub (32500)	0.57	2.42	2.99
Coastal Sage Scrub – Disturbed (32500)	-	<0.01	<0.01
Coastal Sage Scrub - Restoration (32500)	-	<0.01	<0.01
Tier II Subtotal	***0.57***	***2.42***	***2.99***
Tier IIIb			
Non-Native Grassland (11000)	0.01	0.09	0.10
Tier IIIb Subtotal	***0.01***	***0.09***	***0.10***
Tier I through IIIb Subtotal	***0.62***	***2.52***	***3.15***
Tier IV			
Non-Native Vegetation (11000)	0.01	0.52	0.53
Eucalyptus Woodland (79100)	-	0.08	0.08
Disturbed Habitat (11300)	0.57	0.77	1.34
Developed (12000)	<0.01	10.85	10.85
Tier IV Subtotal	***0.58***	***12.21***	***12.80***
Total Impacts	**1.21**	**14.91**	**16.12**

[1]Totals may not add due to rounding.

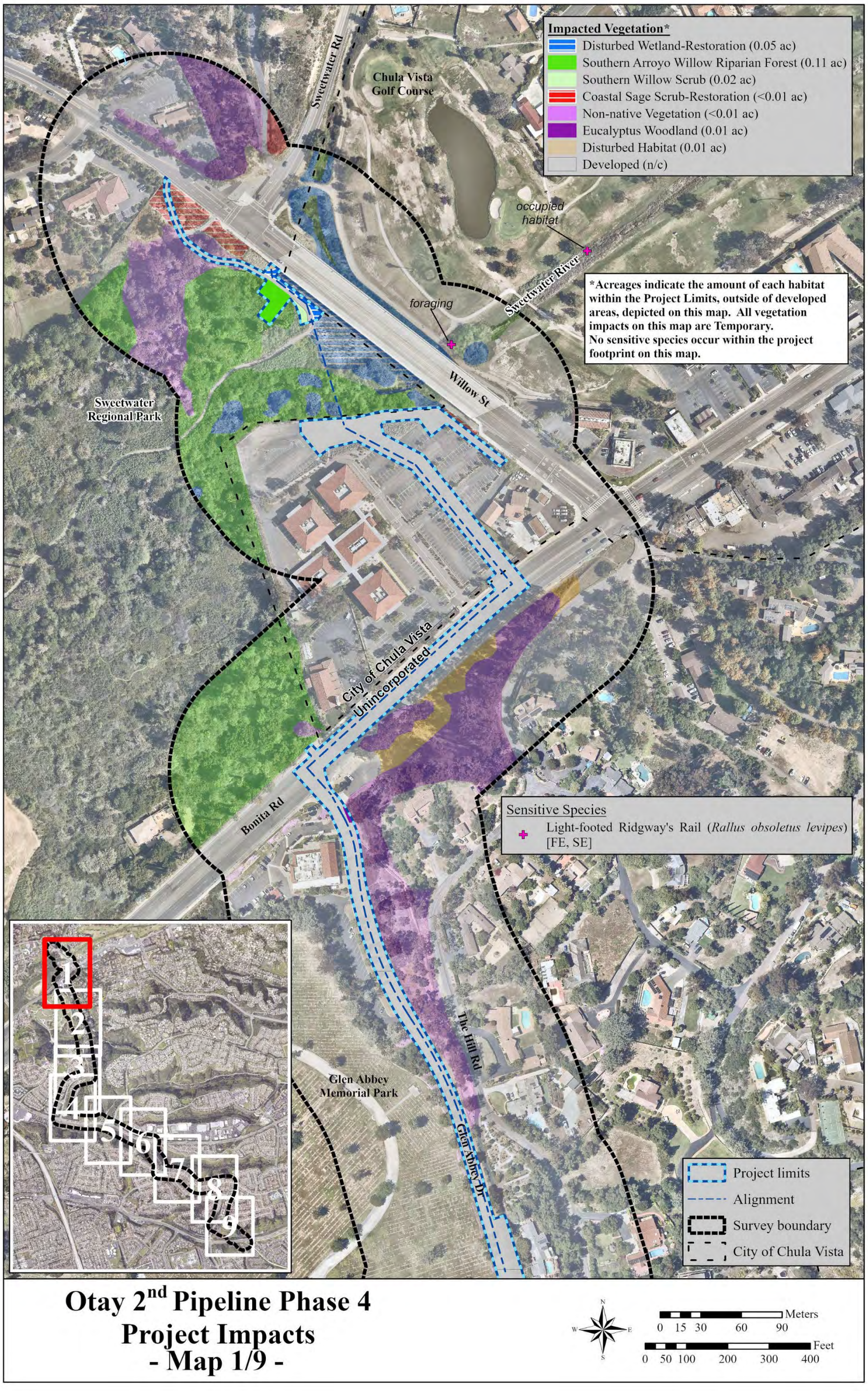

Figure 19. Vegetation & Sensitive Resource Impacts – Map 1/9.

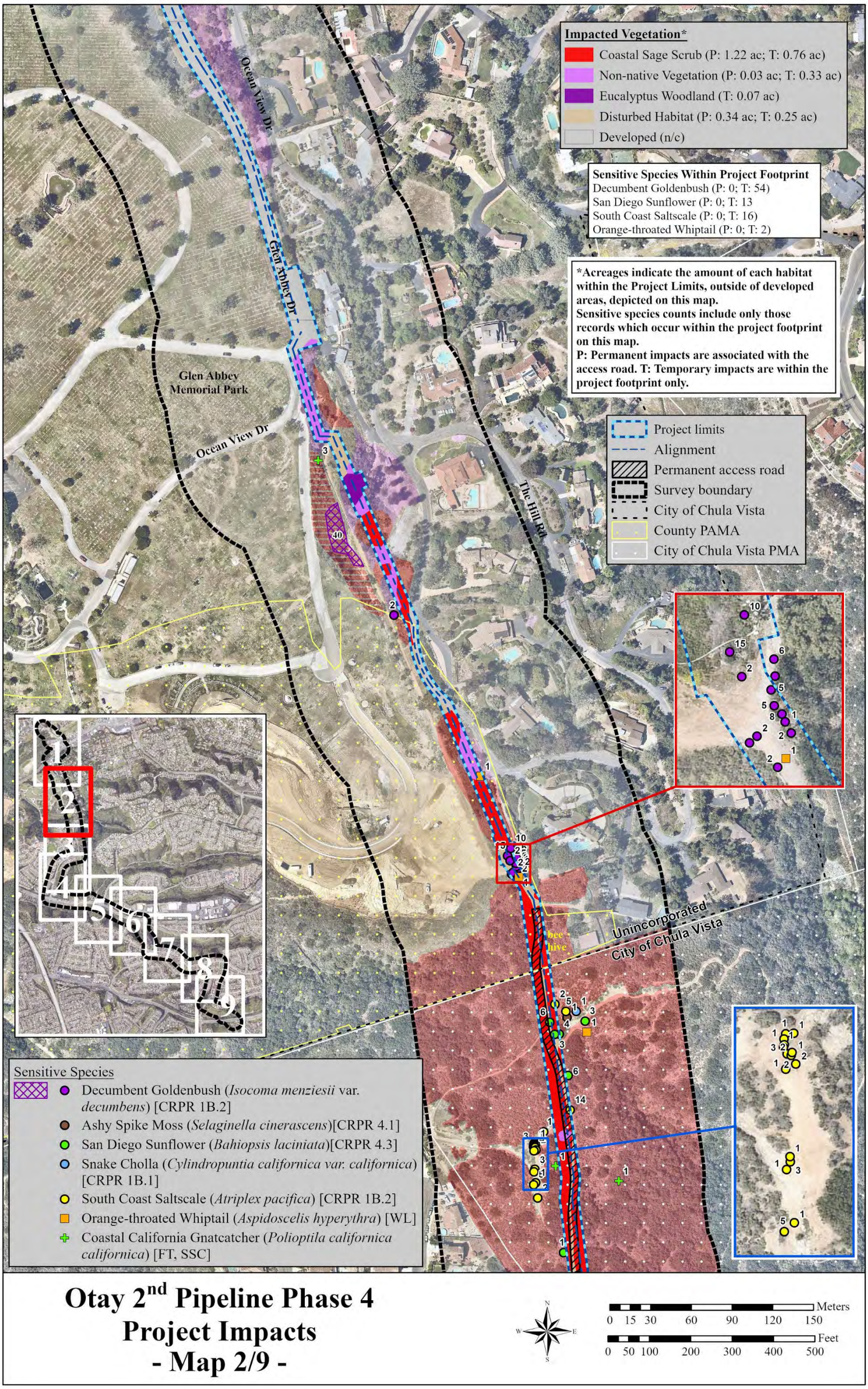

Figure 20. Vegetation & Sensitive Resource Impacts – Map 2/9.

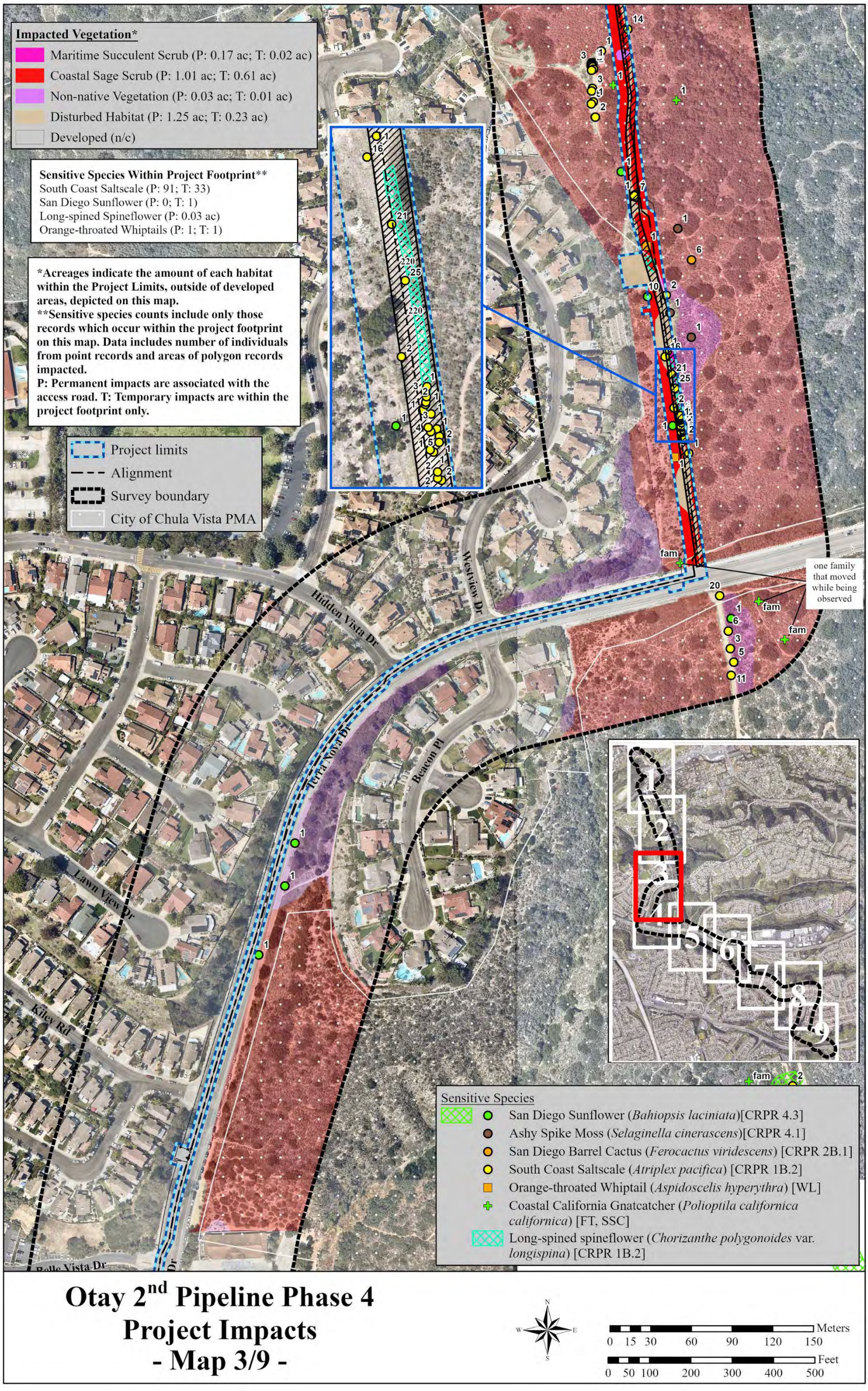

Figure 21. Vegetation & Sensitive Resource Impacts – Map 3/9.

Figure 22. Vegetation & Sensitive Resource Impacts – Map 4/9.

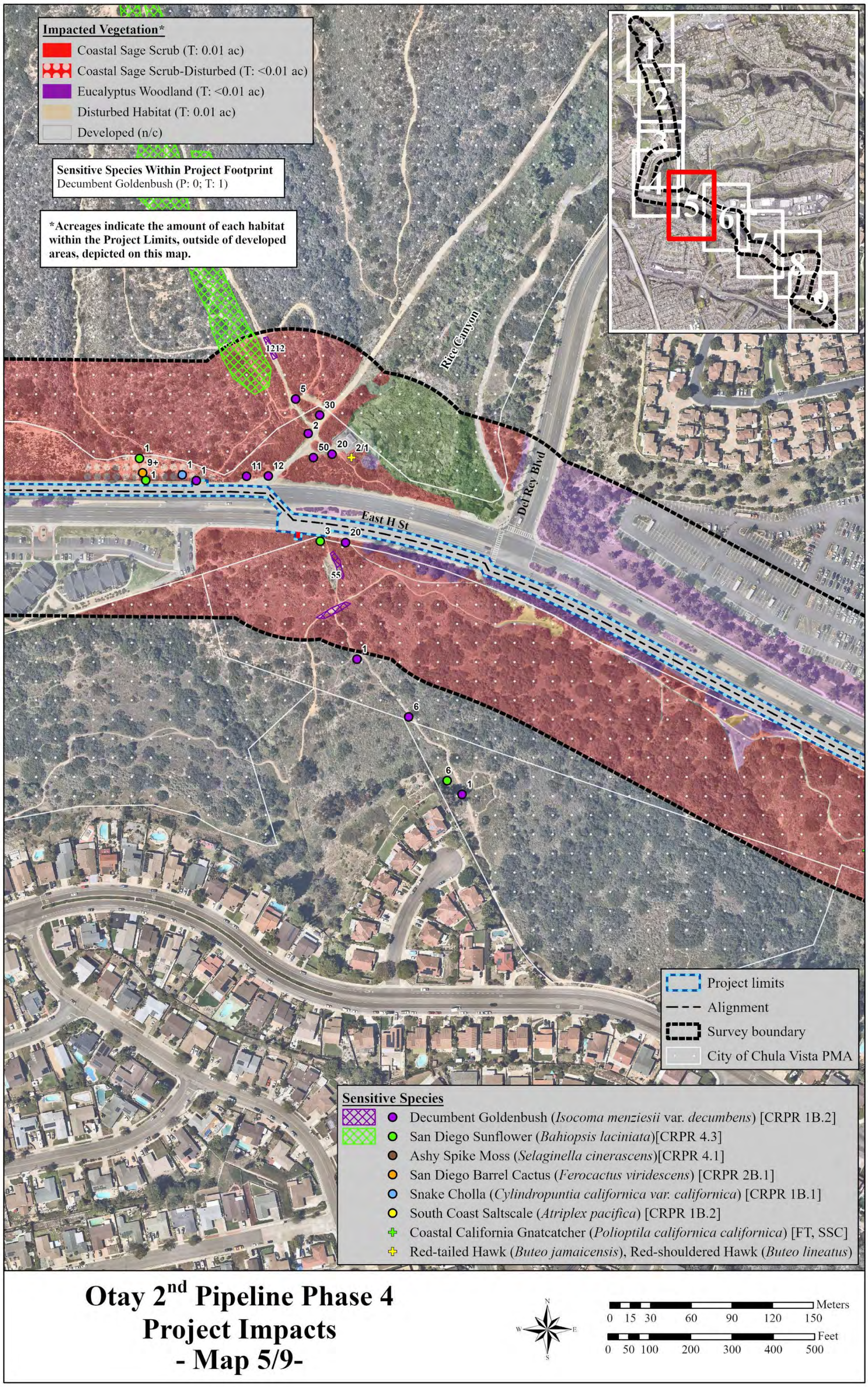

Figure 23. Vegetation & Sensitive Resource Impacts – Map 5/9.

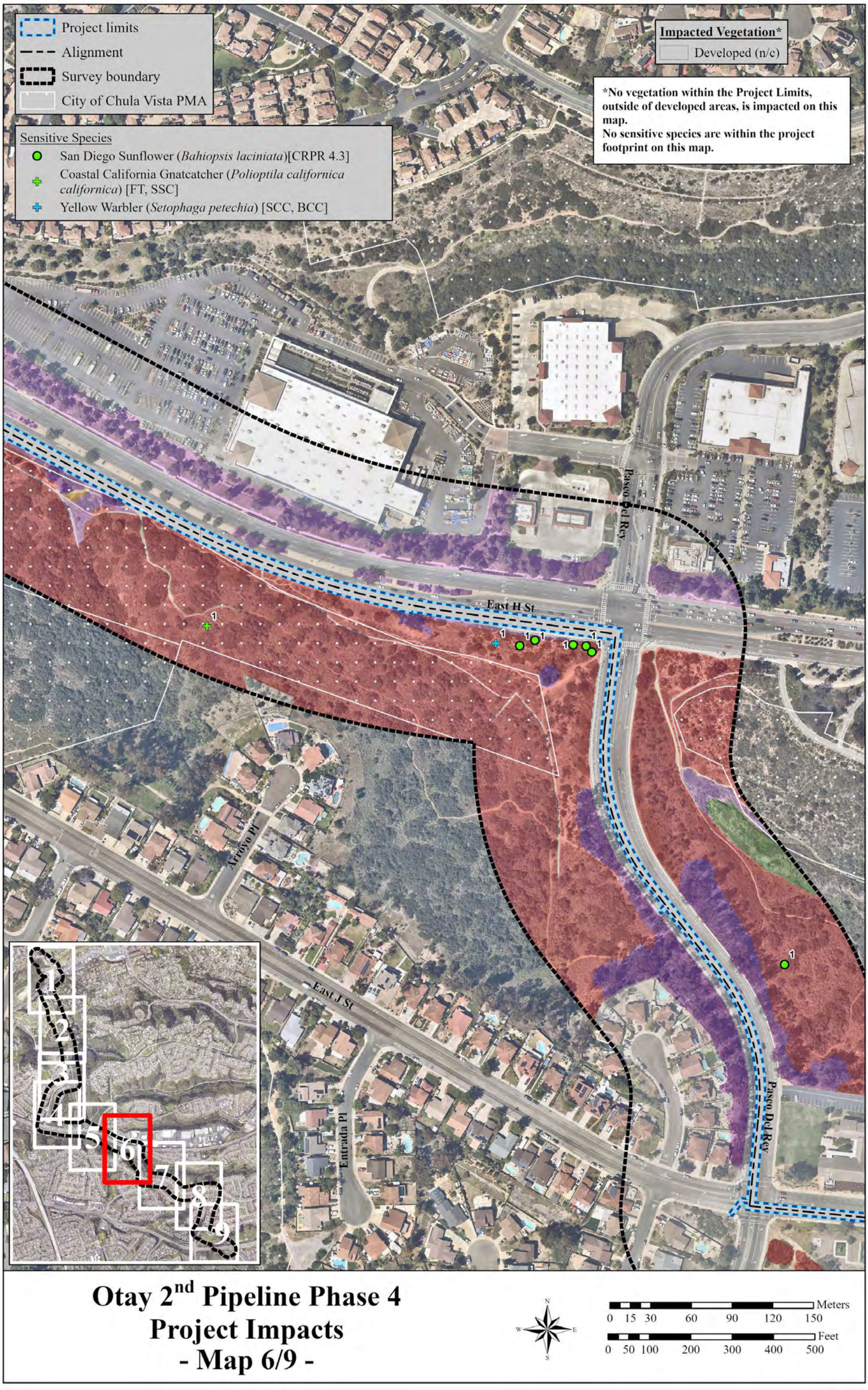

Figure 24. Vegetation & Sensitive Resource Impacts – Map 6/9.

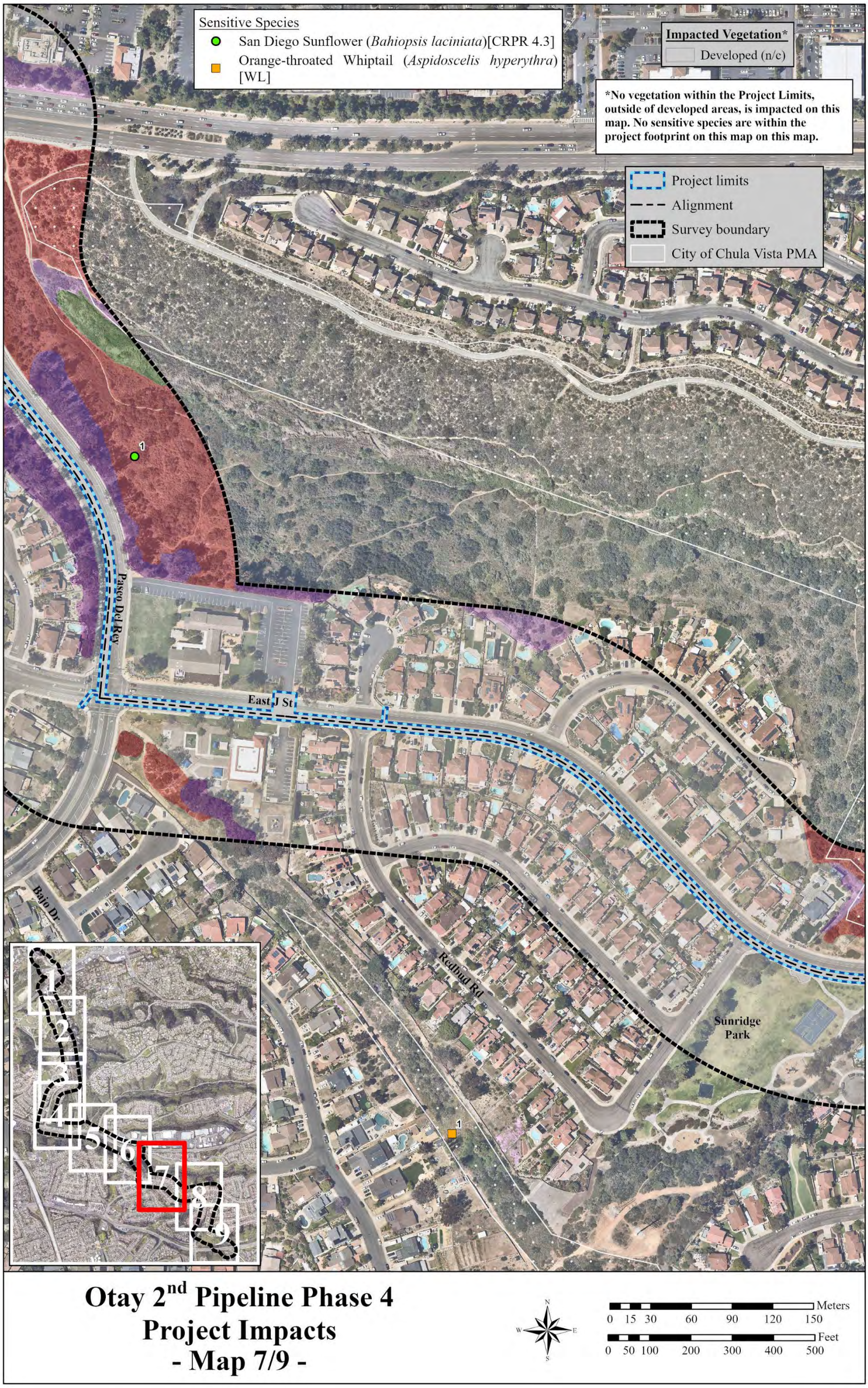

Figure 25. Vegetation & Sensitive Resource Impacts – Map 7/9.

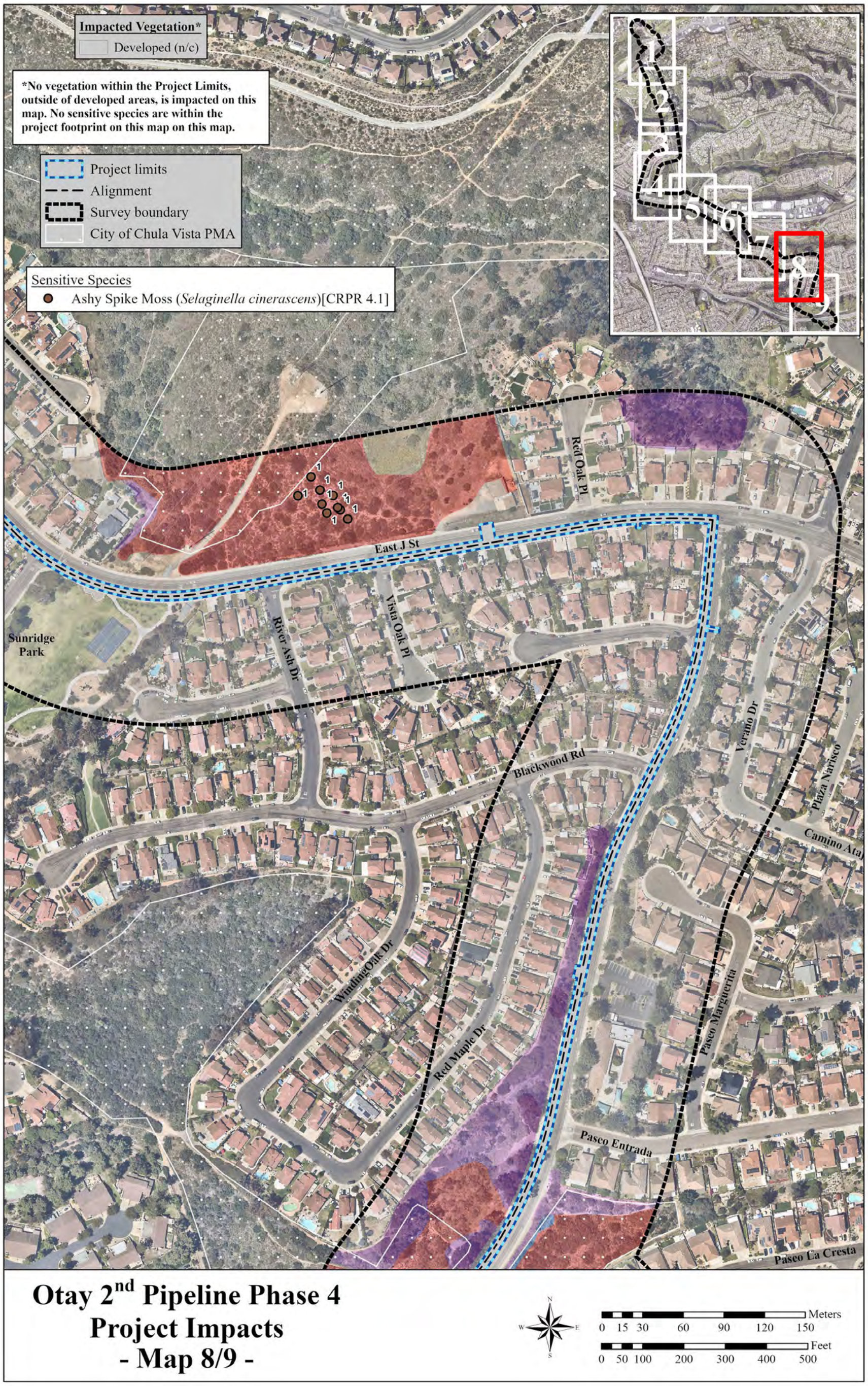

Figure 26. Vegetation & Sensitive Resource Impacts – Map 8/9.

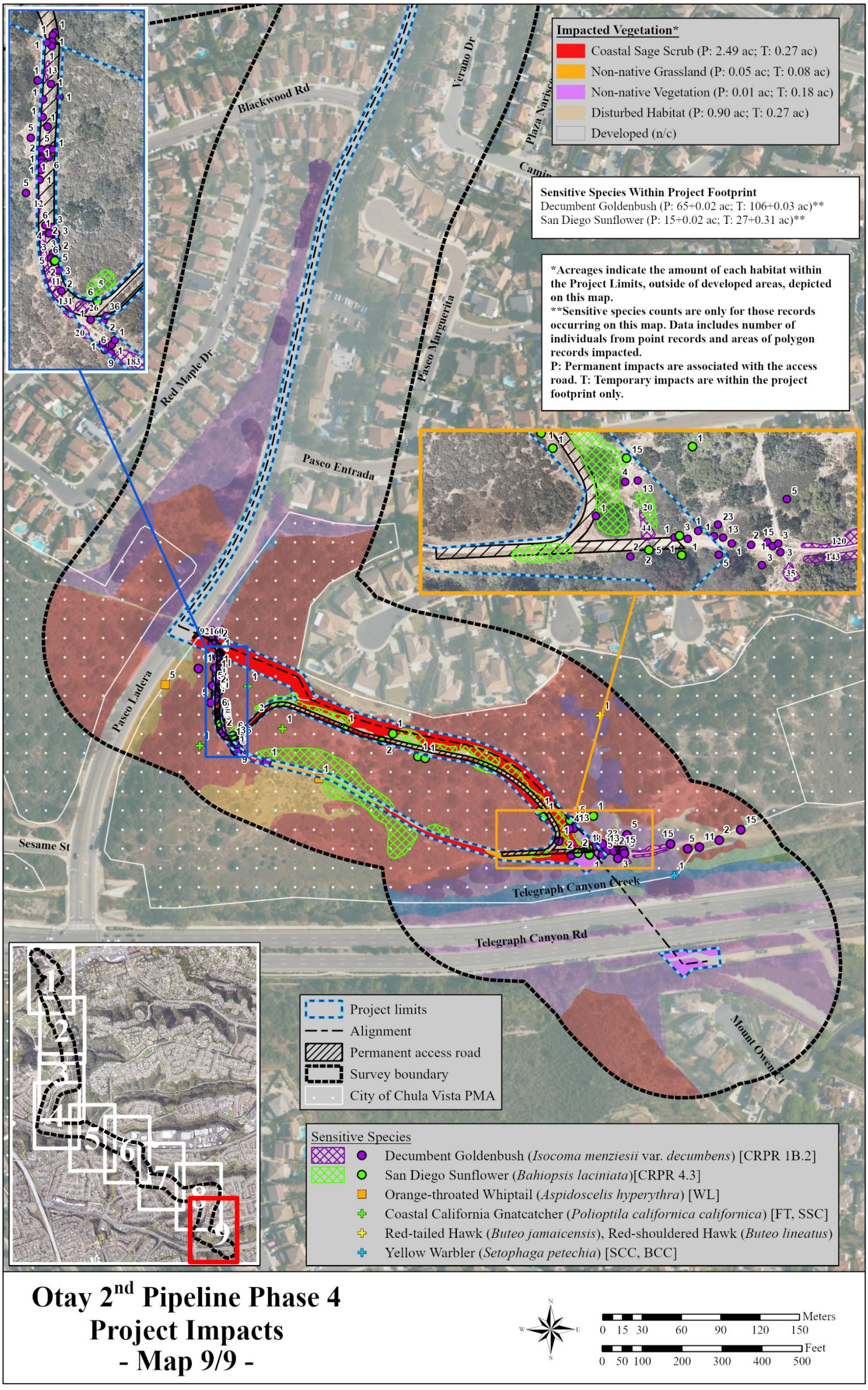

Figure 27. Vegetation & Sensitive Resource Impacts – Map 9/9.

Table 4. Impacts to Vegetation Communities and Mitigation Ratios within and outside of the MHPA (acres).

Vegetation Community MSCP Tier	IMPACTS (Acres)							
	County of San Diego		City of Chula Vista	Total in MHPA	Mitigation Ratio (In/Out of MHPA)	Total Outside MHPA	Mitigation Ratio (In/Out of MHPA)	Combined Total[1]
	Sweetwater Regional Park	PAMA	PMA					
Wetlands								
Southern Arroyo Willow Riparian Forest	0.106	-	-	0.106	3:1[2]	-	3:1[2]	0.106
Southern Willow Scrub	0.021	-	-	0.021	2:1[2]	-	2:1[2]	0.021
Disturbed Wetland - Restoration	0.045	-	-	0.045	2:1[2]	-	2:1[2]	0.045
Tier I								
Maritime Succulent Scrub	-	-	0.01	0.01	2:1 / 3:1	0.06	1:1 / 2:1	0.06
Tier II								
Coastal Sage Scrub	-	0.33	2.16	2.49	1:1 / 2:1	0.50	1:1 / 1.5:1	2.99
Tier IIIb								
Non-Native Grassland	-	-	0.10	0.10	1:1 / 1.5:1	-	0.5:1 / 1:1	0.10
Tier IV								
Non-Native Vegetation	-	0.08	0.11	0.19	-	0.34	-	0.53
Eucalyptus Woodland	-	-	-	-	-	0.08	-	0.08
Disturbed Habitat	0.01	0.15	0.66	0.82	-	0.51	-	1.33
Developed	0.23	0.08	-	0.31	-	10.53	-	10.84
Total[1]	**0.41**	**0.65**	**3.03**	**4.09**	**-**	**12.02**	**-**	**16.12**
Grand Totals[1]	**1.06**		**3.03**	**4.09**	**-**	**12.02**	**-**	**16.12**

[1] Totals may not add due to rounding
[2] Includes no-net loss requirement (creation)

5.2.2 Sensitive Plants

The project will directly impact several sensitive plant species (Table 5). Three CRPR 1B.2 species would be impacted (decumbent goldenbush, south coast saltscale, and long spined spineflower), mostly because these species seem to be associated with past soil disturbance and the Project alignment through undeveloped land follows the existing alignment with adjacent utility access roads and trails where these species were found.

Table 5. Direct Impacts to Sensitive Plants.

Common Name	Scientific name	Status	Detected	Impacts
ashy spikemoss	*Selaginella cinerascens*	CRPR 4.1 County Group D	6 patches	A portion of one patch
decumbent goldenbush	*Isocoma menziesii* var. *decumbens*	CRPR 1B.2 County Group A	527+19 patches	226+12 patches
long spined spineflower	*Chorizanthe polygonoides* var. *longispina*	CRPR 1B.2 County Group A	364	Approximately 364
San Diego barrel cactus	*Ferocactus viridescens*	CRPR 2B.1 County Group B	22	None
San Diego sunflower	*Bahiopsis laciniata*	CRPR 4.3 County Group D	101+19 patches	56 individuals+12 patches
snake cholla	*Cylindropuntia californica var. californica*	CRPR 1B.1 Narrow Endemic County Group A	2	None
south coast saltscale	*Atriplex pacifica*	CRPR 1B.2 County Group A	212	126

Impacts to more than half the CRPR 1B.2 south coast saltscale and all the long spined spineflower locations where it was detected occur because they grow along the trail and utility access along the alignment in the City's parcel or easement for the pipeline from Glen Abbey to Terra Nova Drive and cannot be avoided.

Impacts to CRPR 1B.2 decumbent goldenbush occur around the irrigation valves on the east side of Glen Abbey and along the utility access road near Paseo Ladera and by Telegraph Canyon Creek. Locations adjacent to East H Street are avoided because work is wholly within East H Street.

While these species have high sensitivity, impacts to these species would not be significant because, pursuant to the City's Biology Guidelines Section II.B.(1)(d), such species would be adequately mitigated through habitat based compensatory mitigation and, in addition, are included in the restoration plant palettes for areas where it was found to ensure the species impacts are adequately offset. These impacts would not be significant.

An impact to one location of ashy spike moss (CRPR 4.1) occurs north of Terra Nova Drive. This impact would not be significant as it is offset by off-site habitat mitigation for vegetation communities and other sensitive plant species.

Impacts to more than half the San Diego sunflower (CRPR 4.3) will be reduced to below significance by habitat based compensatory mitigation, and in addition, the species will be included in the habitat restoration plant palettes for CSS in areas it was impacted.

No impacts would occur to snake cholla (CRPR 1B.1), and MSCP narrow endemic species, or San Diego barrel cactus (CRPR 2B.1).

Lewis' evening-primrose (CRPR 3) has a moderate potential to occur at the Telegraph Canyon portion of the project, but impacts, if they occur, will be reduced to below significance by habitat based compensatory mitigation.

With delineation of areas outside the project footprint as Environmentally Sensitive Areas, impacts to sensitive plants adjacent to the work corridor would be avoided.

Narrow Endemics

No other City narrow endemics were detected but an analysis of plants with potential to occur (Appendix C) shows that variegated dudleya and Otay tarplant have a moderate potential to occur in the Study Area based on historic presence and suitable habitat for the species. But three rare plant surveys at times when both species would have been detectable, and in years where they have been detectable elsewhere, indicate they are not present in the project alignment. As a result, impacts to narrow endemic species would not occur.

5.2.3 Sensitive Animals

While several sensitive animals were detected during surveys (LFRR, CAGN, YEWA, and OTWH), direct impacts would only occur to CAGN and OTWH without avoidance measures.

OTWH was observed in several locations along the alignment (east and south of Glen Abbey and east of Paseo Ladera) as they tend to prefer habitat edges, be they natural openings or edges in habitat along utility roads and trails, but they likely occur in all parts of the alignment where CSS is present and would likely be impacted when CSS is cleared.

The federal-listed as threatened CAGN was detected as individuals or family groups by call or sighting in many locations in the Study Area. A family group was seen moving along the trail east of Glen Abbey where the trail dips down and is shielded from Glen Abbey operations and distanced from residential development on The Hill Road. An individual was heard east of the alignment just south of Glen Abbey. A family group was seen flitting within and among tree tobacco (*Nicotiana glauca*) on both sides of Terra Nova Drive adjacent to the utility road. CAGN was heard both north and south of East H Street in Rice Canyon, and CAGN was heard on three separate occasions east of Paseo Ladera identifying the area as a territory.

LFRR was seen and heard east of the Willow Street Bridge whereas the alignment and work areas are over 300 ft to the west on the west side of the bridge where little suitable habitat occurs. So, no direct impacts are expected.

No other federal- or state-listed species would be expected to be impacted based on habitat present (Appendix E). Other sensitive animals identified in Appendix E and evaluated based on habitat requirements and species range to have a high or moderate potential to occur within or proximal to the project impact area include the RCSP and COHA. Both species are MSCP-covered species and would be protected long-term by the MSCP Conditions of Coverage for the two species that would be applied to the project (see Section 4.4.5).

The LFRR, CAGN, and OTWH are also covered species under the MSCP. As a result, compliance with the requirements of the MSCP Conditions of Coverage and MHPA LUAG (1997) and Special Conditions for Covered Species (Section 4.4.5) during construction ensures compliance with the federal ESA and MSCP.

Monarch butterflies may fly through the work area during construction but would not be expected to be impacted and no colonies are known nearby.

Double-crested cormorant may fly over the work area during construction but would not be expected to land on the project or be impacted.

GRBH may occur near the work area during construction but would not be expected to enter active work areas of the project or be impacted.

Two-striped gartersnakes may occur along the alignment adjacent to the Sweetwater River but the project will use Underground Directional Drilling from outside the river corridor to avoid impacts to the Sweetwater River and so impacts to the species and its preferred habitat close to water will be avoided. Impacts to COHA and RCSP will be avoided though the Special Conditions of Coverage for the species. Impact to YEWA and YBCH will be avoided because of the City's Avian Protection Requirement will be applied to prevent loss of nests.

5.2.4 Wildlife Corridors

Temporary impacts would occur to the Sweetwater Regional Park west of Willow Street Bridge, which may affect some wildlife movement, however, the main river channel and its associated habitat will not be impacted. Work will also occur during daytime while most larger animals are either crepuscular (at sunrise or sunset) or active at night. So, this temporary impact is not expected to be significant. The same applies to any movement across Glen Abbey to the Chula Vista's Central City PMA and canyon complex. With the Project being in streets from Terra Nova Drive to Paseo Ladera, no impacts to corridors in this area are expected. At Telegraph Canyon there are only local corridors, and work will not block movement so impacts would not be significant.

5.2.5 Jurisdictional Areas

While the project proposes to go under the Sweetwater River and Telegraph Canyon Creek using Underground Directional Drilling to avoid impacts to channels and adjacent habitat, some impacts still occur at the Sweetwater River to jurisdictional resources because of the extent of riparian habitat in the Sweetwater River floodplain (Table 6 and 7).

Out of 0.460 acre of potential USACE/RWQCB jurisdictional waters in the ARDR Study Area at Sweetwater Regional Park, no impacts will occur because the potential USACE jurisdiction is restricted to the channel up to the OHWM on the bank of the main and tributary channel and FWM and some willows growing along the channels which is far from the Underground Directional Drilling pits to the north and south of the main channel. No impacts would occur to the 0.027 acre of non-vegetated waters of the U.S. at Telegraph Canyon Creek because the Underground Directional Drilling pit was also designed to avoid the channel which is choked with upland exotic species including pampas grass.

Out of 8.207 acres of potential CDFW/City streambed, wetland, and riparian habitat in the ARDR Study Area at Sweetwater Regional Park, impacts would occur to 0.172 acre of potential CDFW/City wetland/riparian jurisdiction resulting from clearing an area to excavate and operate the Underground Directional Drilling to go under the Sweetwater River. No impacts would occur to the 1.097 acres of potential CDFW/City streambed, wetland, and riparian habitat at Telegraph Canyon Creek because the Underground Directional Drilling was designed to avoid all wetland impacts.

Table 6. Project Impacts on Potential Corps and RWQCB Jurisdictional Areas.

Habitat Type	Present in ARDR Study Area (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)*	Total Impact (acres)
Sweetwater River				
Non-vegetated waters of the U.S.	0.196	-	-	None
Vegetated Waters of the U.S.:				
Freshwater Marsh	0.151	-	-	None
Southern Willow Scrub	0.113	-	-	-
Subtotal	**0.460**	**-**	**-**	**None**
Telegraph Canyon Creek				
Non-vegetated waters of the U.S.	0.027	-	-	None
TOTAL	**0.487**	**-**	**-**	**None**

Impacts to 0.172 acre of CDFW/City wetlands is above the 0.01-acre threshold for significance and so would be significant for the City. Impacts to City wetlands will be authorized with approval of the deviation from ESL regulations (See Section 4.4.2) but mitigation is still required.

Table 7. Project Impacts on Potential CDFW and City Jurisdictional Areas.

Habitat Type	Present in ARDR Study Area (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)*	Total Impact (acres)
Sweetwater River				
Streambed	0.204	-	-	None
Riparian:				
Freshwater Marsh	0.151	-	-	None
Southern Arroyo Willow Riparian Forest	6.027	-	0.106	0.106
Southern Willow Scrub	0.519	-	0.021	0.021
Disturbed Wetland	0.902	-	-	None
Disturbed Wetland - Restoration	0.555	-	0.045	0.045
subtotal	**8.207**	**-**	**0.172**	**0.172**
Telegraph Canyon Creek				
Streambed	0.027	-	-	None
Riparian:				
Southern Willow Scrub	0.217	-	-	None
Disturbed Wetland	0.853	-	-	None
subtotal	**1.097**	**-**	**-**	**None**
Total	**9.304**	**-**	**0.172**	**0.172**

5.3 Indirect Impacts

An indirect impact consists of secondary effects of a project (such as noise) that lead to habitat degradation or impacts to sensitive species. The magnitude of an indirect impact may be the same as a direct impact; however, the effect usually takes a longer time to become apparent.

Indirect impacts of the proposed project to sensitive biological resources could occur from modification of current drainage patterns, noise from construction machinery, invasive plant species being allowed to flower and seed in graded/disturbed areas during construction, and errant grading beyond project limits. Compliance with the Conditions of Coverage for the sensitive species detected in the vicinity or with a moderate or high potential to occur (Section 4.4.5) and the MHPA LUAG (Section 4.4.3) require that these indirect impacts to sensitive species be avoided or minimized to not be significant. The City shall apply its standard Biological Protection Measures during construction (Section 4.4.6) which include biological monitoring to ensure compliance with the Conditions of Coverage and MHPA LUAG. As a result, indirect impacts would not occur and would be below a level of significance.

6.0 CUMULATIVE IMPACTS

Although impacts to sensitive biological resources may not be significant when considered independently, when multiple impacts such as from several development projects within an area are combined, they may be cumulatively significant.

The City participates in the MSCP, a regional conservation plan established in 1996 to protect sensitive species and habitats in southwest San Diego County. The City implements the MSCP through its Subarea Plan. The proposed Project site is within the County and City of Chula Vista covered by their respective MSCP Subarea Plans with some impacts occurring inside the County and City of Chula Vista Preserve areas (i.e., the MHPA). The MSCP was designed to address cumulative impacts through minimizing or eliminating impacts to covered species and habitats of regional significance that assures their long-term conservation. The goal of the MSCP is to establish a preserve system in conformance with the California Natural Communities Conservation Planning Act, and federal ESA and CESA.

Preservation of habitat and regulation of impacts combine to meet the biological resource conservation goals of the MSCP, which was intended to mitigate cumulative biological resource impacts. While the Subarea Plans differ in substantial ways, they are all designed to achieve the same goal of resource protection. Therefore, by being consistent with the City MSCP Subarea Plan, the City's MHPA LUAG, and the MSCP Special Condition for Coverage, cumulative impacts to uplands, sensitive plants, and sensitive wildlife would be mitigated for covered species. Implementation of the proposed Project would not contribute to the incremental loss of native habitats occurring within the County or City of Chula Vista.

7.0 MITIGATION

7.1 Mitigation

The following mitigation requirements are designed to be in conformance with City requirements that will also be compatible with County, and City of Chula Vista biological regulations. Conformance with these requirements also achieves project conformance with most state and federal biological regulations. Consultation with CDFW will be required regarding permitting prior to project implementation.

Note that conformance with the City's MHPA LUAG including CAGN noise restrictions (see Section 4.4.3), and the MSCP Special Conditions of Coverage for Species (Section 4.4.5) will also be a condition of project development approval. These requirements must be included in contract specifications and in construction documents.

A Revegetation/Restoration Plan (Tierra Data 2025b), to revegetate temporary impact areas in compliance with City Biology Guidelines (City 2018b), is being submitted as part of this proposed Project's approval. Revegetation and restoration of temporary impacts can only start after construction in each area of temporary impact is complete and contours have been returned to the original state.

Upland and wetland habitat mitigation for permanent and temporary impacts, is also required per City Biology Guidelines (City 2018b), is described below.

7.1.1 Upland Habitat Mitigation

Under the City's Biology Guidelines (2018b), project impacts to Tier I-IIIb upland habitats must be mitigated in accordance with City's Biology Guidelines Table 3, as shown in Table 8. Table 8 also itemizes the impacts anticipated for each habitat type, and the resulting mitigation requirement. Lands designated as Tier IV, such as DEV, DH, and EW, are not considered to have significant habitat value, and impacts would not be significant and would not require mitigation.

Table 8. Mitigation Requirements for Impacts to Sensitive Upland Vegetation Communities.

MSCP Tier	Impacts and Mitigation (Acres)						
	Total Impacts in MHPA	Mitigation Ratio (in MHPA)	Required Mitigation in MHPA	Total Impacts Outside MHPA	Mitigation Ratio (in MHPA)	Required Mitigation in MHPA	Total Mitigation Required
Tier I							
MSS	<0.01	2:1	0.01	0.06	1:1	0.06	0.07
Tier II							
CSS	2.49	1:1	2.49	0.50	1:1	0.50	2.99
Tier III							
NNG[1]	0.10	1:1	0.10	-	0.5:1	-	0.10
Totals[2]	**2.60**	**-**	**2.60**	**0.56**	**-**	**0.56**	**3.16**

[1] NNG impacts will be mitigated either with NNG or up tiered with CSS
[2] Totals may not add up due to rounding

Mitigation is proposed to be provided by credits at City Public Utility Department (PUD) mitigation banks which are within the MHPA. Mitigation of 0.07 acre of MSS shall be mitigated with MSS credits from the City's Otay Mesa Mitigation Bank. Mitigation of 2.99 acres of CSS shall be mitigated with CSS credits at the City's Sander Mitigation Bank. Mitigation of 0.10 acre of NNG will be mitigated with 0.10 acre of NNG or uptiered to 0.10 acre of CSS at the Sander Mitigation Bank.

7.1.2 Wetland Habitat Mitigation

Under the City's Biology Guidelines (2018b), project impacts to City Wetland habitats must be mitigated. Project mitigation would occur at ratios identified in Table 2a of the City's Biological Guidelines (City 2028) as presented in Table 9 below, which also itemizes the impacts anticipated for each wetland habitat type, and the resulting mitigation requirement. Impacts to City wetlands would only occur at Sweetwater Regional Park.

Wetland mitigation of 0.540 acre is needed to fully mitigate impacts (Table 9). The City proposes to mitigate the impacts with credits available from one or more of the City PUD's existing Stadium Wetland Mitigation Bank. Proof of deduction from the bank will be submitted by PUD to the City ED and submitted and approved by CDFW and RWQCB prior to start of Project implementation. Mitigation of 0.318 acre of SAWRF will be satisfied with 0.106 acre of rehabilitation and 0.212 acre of enhancement of Riparian Forest Buffer, mitigation of 0.042 acre of SWS will be satisfied with 0.021 acre of rehabilitation and 0.0.021 acre of enhancement of Riparian Forest Buffer, and mitigation of 0.180 acre of Disturbed Wetland Restoration will be satisfied with 0.045 acre of rehabilitation of Riparian Forest Buffer and 0.135 acre of enhancement of Riparian Scrub Buffer.

Table 9. Project Impacts and Mitigation for CDFW/City-Jurisdictional Wetlands.

Vegetation Communities	Impacts and Mitigation (Acres)		
	Total Impacts in MHPA	Mitigation Ratio* (in or out of MHPA)	Required Mitigation
Wetlands			
Southern Arroyo Willow Riparian Forest	0.106	3:1[1]	0.318
Southern Willow Scrub	0.021	2:1[1]	0.042
Disturbed Wetland Restoration	0.045	4:1[2]	0.180
Total[3]	**0.172**		**0.540**

* Wetland mitigation ratios for EPP are pursuant to table 2a of the Biology Guidelines

[1] Must include a no-net -loss component i.e. creation or restoration

[2] Disturbed Wetland - Restoration is assumed to be mitigation, so impacts require double mitigation from 2:1 to 4:1.

[3] Totals may not add up due to rounding

7.1.3 Sensitive Plant Mitigation

No additional mitigation is required for impacts to sensitive plants because the off-site mitigation for habitat in City mitigation banks will provide habitat for these species. In addition, the temporary impact areas where they were detected will be revegetated and will include the species in the plant palettes at the locations where the species are found.

7.1.4 Sensitive Animal Mitigation

No additional mitigation is required for impacts to sensitive animals as they would be protected by compliance with the requirements of the MSCP Conditions of Coverage and MHPA LUAG (1997) during construction as well as the Avian and Biological Protection Requirements for the project identified in Section 4.4.6.

8.0 CONCLUSION

The proposed Project is located in a linear corridor starting in Sweetwater Regional Park in the unincorporated community of Bonita and ending at Telegraph Canyon Road in the City of Chula Vista. While the project alignment will be routed along mostly streets, impacts to sensitive native habitats and species would and could occur both within and outside of MHPA lands (County PAMA and City of Chula Vista PMA). Impacts would occur to sensitive Wetlands, MSCP Tier I through IIIb habitats, three CRPR 1B.2 plants (decumbent goldenbush, south coast saltscale and long spined spineflower), two CRPR 4 plants (San Diego sunflower and ashy spike moss), could impact the federal- and state-listed as endangered LFRR, federal-listed as threatened CAGN, and the MSCP-covered OTWH, COHA, and RCSP, as well as other nesting birds, including YEWA and YBCH (both SSCs),which are protected by the MBTA and CFG Code. Using Underground Directional Boring techniques to place the pipeline under the Sweetwater River channel and Telegraph Canyon Creek avoids impacts to USACE/RWQCB jurisdictional areas and species such as the two-striped gartersnake (SSC), but impacts occur to CDFW riparian resources/City Wetlands at Sweetwater Regional Park. Consultation with CDFW may be required and a wetland deviation from the City ESL will be required to allow impacts to City wetlands. No impacts are expected to Monarch butterfly colonies, or GRBH and DCCO nesting colonies.

Wetlands impacts in Sweetwater Regional Park to 0.172 acre of riparian habitat will be revegetated *in situ* with appropriate plant palettes and be mitigated with 0.540 acres of credits from a City wetland mitigation bank. The mitigation includes double mitigation (at 4:1) for the impacts to DW-R which is believed to be mitigation for the Willow Street Bridge project. Impacts to 3.15 acres of sensitive upland vegetation communities (2.99 acres of CSS, 0.06 acre of MSS, and 0.10 acre of NNG) would be mitigated by allocation of 3.16 acres of credits at City upland mitigation banks including in-kind mitigation for MSS. Revegetation of all temporary upland impacts on site would occur, including revegetating the 2.52 acres of Tier I-IIIb habitat to MSS and CSS, and revegetating the 1.37 acres of restorable Tier IV habitats (0.52 acre of NNV, 0.08 acre of EW, and 0.77 acre of DH; Table 3) to CSS. A combination of using Environmentally Sensitive Area fencing to protect individuals outside the work area, and using seed and salvaged soil from the locations where the CRPR 1B.2 decumbent goldenbush, south coast saltscale, and long spined spineflower, and the CRPR4.3 San Diego sunflower are found, and applying them at suitable locations (adjacent to the unpaved access road) will reduce impacts to the species to below significance. Impacts to CRPR 4.1 ashy spike moss are not significant and do not require mitigation.

Implementation of avoidance and minimization measures in compliance with the City's LDC Biology Guidelines (2018b), and the City's MSCP Subarea Plan (1997) through application of Special Conditions of Coverage for Species, the MHPA LUAG, as well as the Avian, Specific Protections for the Coastal California Gnatcatcher, and general Biological Resource Protection During Construction requirements, will reduce potential impacts to CAGN, LFRR, OTWH, COHA, and RCSP, and potential impacts to YEWA and YBCH, to below significance. Impacts to LFRR are not expected to be significant with work being on the opposite side of the Willow Street Bridge to their preferred habitat and with use of Environmentally Sensitive Area fencing.

Applying the measures above, the proposed replacement of this portion of the Otay 2nd Pipeline Project would be accomplished without significant impacts to sensitive biological resources.

9.0 QUALIFICATIONS AND CERTIFICATIONS

The following individuals contributed to the fieldwork and/or preparation of this report. See Appendix F for resumes of the prime investigators

Prime Investigator:

Derek Langsford	Ph.D., Ecology, UC Davis/San Diego State University, 1996 B.Sc., (Hons.), Ecological Science, University of Edinburgh, 1985 ESA Certified Senior Ecologist, San Diego County Approved Biologist

Assisted by:

Benjamin Van Allen	Ph.D., Ecology and Evolutionary Biology, Rice University, 2014 M.S., Biology, Virginia Commonwealth University, 2009 B.S., Environmental Science, Otterbein College, 2006 ESA Certified Senior Ecologist
Scott Snover	M.S., Ecology, San Diego State University, 1991 B.S., Biology, Pennsylvania State University, 1985
Beth Sabiston	B.S., Marine and Freshwater Biology, University of New Hampshire, 2009
Diego Uribe	M.S., Biology/Ecology, San Diego State University, 2022 B.A., International Business, San Diego State University, 2009
Cai Leão	M.S., Biology, California State University, San Marcos, 2022 B.S., Ecology and Evolution, University of California, Santa Barbara, 2017

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APPENDICES

APPENDIX A: PLANT SPECIES OBSERVED

Species Name	Common Name	Status	Habitat
*Acacia redolens**	bank catclaw		NNV, DEV
*Acacia cyclops**	Coastal wattle		NNV
Acmispon glaber	Deerweed		CSS
Artemisia californica	California sagebrush		CSS, CSS-R
Artemisia douglasiana	California mugwort		CSS, SAWRF, SWS, FWM
*Arundo donax**	giant reed, arundo		DW, SAWRF
*Asparagus aetheopicus**	African asparagus		DH
Asterella californica	California perianth liverwort		CSS, DW
Astragalus trichopodus	Santa Barbara milkvetch		CSS
Atriplex canescens	fourwing saltbush		CSS
Atriplex pacifica	south coast saltscale	1B.2	DH (in trails/unpaved road)
Baccharis pilularis	coyote brush		CSS, MSS
Baccharis salicifolia	mule fat		FWM, SAWRF, SWS, DW, DW-R
Baccharis sarathroides	broom baccharis		CSS
Bahiopsis lacianata	San Diego County sunflower	4.3	CSS
*Brassica nigra**	black mustard		CSS, DEV, DH
*Carduus pycnocephalus**	Italian thistle		SAWRF, DW
*Carya illinoinensis**	pecan		SAWRF, NNV
*Centauria melitensis**	Maltese star thistle		CSS, DH
Chorizanthe polygonoides var. *longispina*	Long spined spineflower	1B.2	CSS/DH
*Conium maculatum**	poison hemlock		FWM, DW
*Cortaderia selloana**	pampas grass		DH, DW
Cylindropuntia californica var. californica	snake cholla	1B.1 MSCP-covered	CSS-R
Cylindropuntia prolifera	coast cholla		CSS, CSS-R, MSS
Diplacus aurantiacus	orange bush monkeyflower		CSS
Dudleya pulverulenta	chalk dudleya		CSS, CSS-R, DEV
Encelia californica	California brittlebush		CSS
*Erodium cicutarium**	coast heron's bill		CSS
Eriogonum fasciculatum	California buckwheat		CSS, CSS-R
*Eucalyptus cinerea**	argyle apple		DEV, NNV, EW
*Eucalyptus sideroxylon**	red ironbark		DEV, NNV, EW
Euthamia occidentalis	western goldenrod		DW
Ferocactus viridescens	San Diego barrel cactus	2B.1 MSCP-covered	CSS, CSS-R
*Glebionis coronaria**	crown daisy		CSS, DH, DEV

Species Name	Common Name	Status	Habitat
Gutierrezia californica	California matchweed		CSS
Heteromeles arbutifolia	toyon		CSS
Heterotheca grandifolia	telegraphweed		CSS, DH
*Hirschfeldia incana**	shortpod mustard		CSS, DEV, DH
Isocoma menziesii var. *decumbens*	decumbent goldenbush	1B.2	DH
Malacothamnus fasciculatus	chaparral bushmallow		CSS
*Malephora crocea**	coppery mesembryanthemum		DEV
Malosma laurina	laurel sumac		CSS,
*Malva parvifolia**	cheeseweed mallow		DEV, DH
Marah macrocarpa	chilicothe		CSS, DEV, DH
*Nicotiana glauca**	tree tobacco		DEV, DH
*Opuntia fictus-indica**	Indian-fig cactus		CSS
Opuntia littoralis	coast prickly pear		CSS, CSS-R
Opuntia oricola	chaparral pricklypear		CSS, MSS
Opuntia semispinosa	California prickly pear		CSS
*Oxalis pes-caprae**	Bermuda buttercup		DEV
Platanus racemosa	Western sycamore		DEV
Pseudognaphalium sp.	rabbit tobacco		CSS
Rhus integrifolia	lemonadeberry		CSS
Salix exigua var. *hindsiana*	sandbar willow		FWM, SAWRF, SWS, DW
Salix gooddingii	Goodding's black willow		SAWRF, SWS, FWM
Salix lasiolepis	arroyo willow		SWS, SAWRF, FWM, DW
*Salsola tragus**	Russian thistle		DEV, DH
Salvia apiana	white sage		CSS-R
Salvia mellifera	black sage		CSS, CSS-R
Sambucus mexicana	blue elderberry		DW
*Schinus molle**	Peruvian pepper tree		CSS, DW, DEV
*Schinus terebinthifolia**	Brazilian pepper tree		DW, DEV
Selaginella cinerascens	ashy spike moss	4.1	CSS
Simmonodsia chinensis	jojoba		CSS
*Sonchus asper**	spiny sowthistle		CSS
*Sonchus oleraceus**	common sow thistle		CSS, DH, DEV
*Tamarix ramossisima**	saltcedar		DW
Typha spp.	Cattails		FWM, DW
Urtica diocia	stinging nettle		CSS, DH
*Washingtonia robusta**	Mexican fan palm		SAWRF, CSS, DEV
Yucca schidigera	Mojave yucca		CSS, CSS-R

* = non-native

Habitats: CSS = coastal sage scrub, CSS-R = restored coastal sage scrub,, DEV = developed habitat, DH = disturbed habitat DW = disturbed wetland, FWM = freshwater marsh, MSS = maritime succulent scrub, NNV = non=native vegetation SAWRF = southern arroyo willow riparian forest, SWS = southern willow scrub; -R = restoration

APPENDIX B: SPECIAL STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR

Species		Status			Habitat Associations/ Life Form/Blooming Period	Potential to Occur On Site	Observed
Common Name	Scientific Name	Federal	State	CRPR/ MSCP			
San Diego thornmint	*Acanthomintha ilicifolia*	FT	SE	1B.1/ MSCP	Chaparral, coastal sage scrub, Valley and foothill grassland, vernal pools, clays/annual herb/April-June	Low: little appropriate habitat would have been seen if present. No clay in impact areas.	No
San Diego adolphia	*Adolphia californica*	None	None	2B.1	Chaparral, coastal sage scrub, Valley and foothill grassland in western San Diego, clays/shrub/December-April	Low: while found south of Mission Valley and to the north would have been seen if present.	No
Shaw's agave	*Agave shawii*	None	None	2B.1/ MSCP	Maritime succulent scrub, coastal bluff scrub, coastal scrub/perennial leaf succulent/September-May	Very Low: coastal species.	No
San Diego ambrosia	*Ambrosia pumila*	FE	None	1B.1/ MSCP	Chaparral, coastal sage scrub, Valley and foothill grassland, vernal pools, clays/perennial herb/June-September	Very Low: generally found in flatter areas of open grassy valley bottoms. Would have been seen if present.	No
aphanisma	*Aphanisma blitoides*	None	None	1B.2/ MSCP	Coastal bluff scrub, coastal sage scrub, sandy soils/annual herb/April-May	None: high affinity to coastal bluffs	No
south coast saltscale	*Atriplex pacifica*	None	None	1B.2	Coastal bluff scrub, coastal sage scrub, playas/annual herb/March-October	Present: site is within range of species and has some suitable habitat along trails south of Terra Nova drive.	Yes
golden snake cereus	*Bergerocactus emoryi*	None	None	2B.2	Coastal scrub, sandy soils/ perennial stem succulent/May-June	Very low: Most recent detections in Otay and on Point Loma. Would have been detected if present.	No

Species		Status			Habitat Associations/ Life Form/Blooming Period	Potential to Occur On Site	Observed
Common Name	Scientific Name	Federal	State	CRPR/ MSCP			
Orcutt's brodiaea	*Brodiaea orcuttii*	None	None	1B.1/ MSCP	Closed-cone coniferous forest. chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools, mesic and clay soils/ perennial bulbiferous herb/May-July	Low: historically found to the north and east but not south of SR 94 and west of SR 125.	No
Lewis' evening-primrose	*Camissonia lewisii (Camissoniopsis lewisii)*	None	None	3	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal sage scrub, valley and foothill grassland, sandy or clay soils/annual herb/March-June	Moderate: site within range of species and has some suitable habitat. Found recently in Rice Canyon.	No
Southern tarplant	*Centromadia parryi australis*	None	None	1B.1	Marshes and swamps (margins), valley and foothill grassland (vernally mesic), vernal pools/ annual herb/May-November	None: no suitable habitat and site is too far south of known range.	No
Long spined spineflower	*Chorizanthe polygonoides* var. *longispina*	None	None	CRPR 1B.2	CSS and chaparral edges and open areas west of the San Diego deserts and in western Riverside County.	Present: found along trail/access north of Terra Nova Dr, south of Glen Abbey.	Yes
San Diego sand aster	*Corethrogyne (Lessingia) filaginifolia incana*	None	None	1B.1	Coastal bluff scrub, chaparral, coastal scrub/perennial herb/June-September	Low: habitat present and within species' range but would have been detected if present in alignments.	No
Otay Tarplant	*Deinandra conjugens*	FT	SE	1B.1/MSCP NE	Occurs from Sweetwater Reservoir area south to the Mexican border and detected in Chula Vista canyons with historic records along alignment.	Low: 3 surveys in 2022, 2023, and 2025 failed to detect the species in the alignment.	No
Western dichondra	*Dichondra occidentalis*	None	None	4.2	Chaparral, cismontane woodland, coastal sage scrub, Valley and foothill grassland/perennial herb/March-May	Low: has been found generally in south county but no individuals south of SR 94, west of SR 125, or north of 905. Would likely have been detected if present.	No

Species		Status			Habitat Associations/ Life Form/Blooming Period	Potential to Occur On Site	Observed
Common Name	**Scientific Name**	**Federal**	**State**	**CRPR/ MSCP**			
San Diego button celery	*Eryngium aristulatum parishii*	FE	SE	1B.1/ MSCP	Coastal scrub, valley and foothill grassland, vernal pools, mesic soils/ annual / perennial herb/April-June	None: mostly restricted to vernal pools. No suitable habitat present.	No
Coast barrel cactus	*Ferocactus viridescens*	None	None	2B.1/ MSCP	Chaparral, coastal sage scrub, Valley and foothill grassland, vernal pools/shrub/May-June	Present: Found in two locations within Study Area.	Yes
Orcutt's hazardia	*Hazardia orcuttii*	None	ST	1B.1	Chaparral (maritime), coastal scrub, often clay/ perennial evergreen shrub/August-October	None: Coastal species. Site too far inland.	No
Graceful tarplant	*Holocarpha virgata elongata*	None	None	4.2	Coastal sage scrub, cismontane woodland, chaparral, Valley and foothill grassland/annual herb/August-November	Low: within range but mostly found to east and north.	No
decumbent goldenbush	*Isocoma menziesii* var. *decumbens*	None	None	1B.2	Chaparral, coastal scrub, sandy, often in disturbed areas/perennial shrub/April-November	Present: Found in high numbers in three main locations on alignment.	Yes
San Diego marsh-elder	*Iva hayesiana*	None	None	2B.2	Marshes and swamps, playas/perennial herb/April-October	Low: would have been seen if present.	No
Southwestern spiny rush	*Juncus acutus leopoldii*	None	None	4.2	Coastal dunes (mesic), meadows and seeps (alkaline seeps), marshes and swamps (coastal salt)/perennial rhizomatous herb/(March)May-June	Low: would have been seen if present.	No
Robinson pepper grass	*Lepidium virginicum robinsonii*	None	None	4.3	Chaparral, coastal scrub/annual herb/January-July	Low: mostly found to the north and east. No peppergrass seen during surveys.	No
California boxthorn	*Lycium californicum*	None	None	4.2	Coastal bluff scrub, coastal scrub/ perennial shrub/(December) March, June-August	None: More coastal and would have been detected if present.	No

Species		Status			Habitat Associations/ Life Form/Blooming Period	Potential to Occur On Site	Observed
Common Name	Scientific Name	Federal	State	CRPR/ MSCP			
Small flowered microseris	*Microseris douglasii platycarpha*	None	None	4.2	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools, clay soils/annual herb/March-May	Low: little suitable habitat and soils not present.	No
Willowy monardella	*Monardella linoides viminea (Monardella viminea)*	FE	SE	1B.1/ MSCP	Chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland, alluvial ephemeral washes/perennial herb/June-August	Low: found mostly to the north. Riparian areas densely covered and not suitable.	No
California spine flower	*Mucronea californica*	None	None	4.2	Chaparral, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland, sandy soils/annual herb/March-July (August)	Low: only recently known from Point Loma.	No
San Diego goldenstar	*Muilla clevelandii (Bloomeria clevelandii)*	None	None	1B.1/ MSCP	Chaparral, coastal scrub, valley and foothill grassland, vernal pools, clay soils/perennial bulbiferous herb/April-May	Low: typically found in grasslands on clay soils.	No
Little mousetail	*Myosurus minimus apus*	None	None	3.1	Valley and foothill grassland, vernal pools (alkaline)/annual herb/March-June	None: no vernal pools	No
Spreading navarretia	*Navarretia fossalis*	FT	None	1B.1	Chenopod scrub, marshes and swamps (assorted shallow freshwater), playas, vernal pools/annual herb/April-June	None: no vernal pools or other suitable habitat.	No
Prostrate navarretia	*Navarretia prostrata*	None	None	1B.1/ MSCP	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools, mesic soils/annual herb/April-July	None: no vernal pools or other suitable habitat.	No

Species		Status			Habitat Associations/ Life Form/Blooming Period	Potential to Occur On Site	Observed
Common Name	Scientific Name	Federal	State	CRPR/ MSCP			
California adder's tongue fern	*Ophioglossum californicum*	None	None	4.2	Chaparral, valley and foothill grassland, vernal pools (margins), mesic soils/ perennial rhizomatous herb/(December) January-July	Low: Little suitable habitat. No ferns seen. Most recent sighting at Rice Canyon.	No
Snake cholla	*Opuntia parryi serpentine (Cylindropuntia californica var. californica)*	None	None	1B.1/ MSCP	Coastal sage scrub, chaparral, shrub (stem succulent)/April-May	Present: two individuals observed.	Yes
Orcutt grass	*Orcuttia californica*	FE	SE	1B.1/ MSCP	Vernal pools/annual herb/April-August	None: No vernal pools present.	No
Golden-rayed pentachaeta	*Pentachaeta aurea (Pentachaeta aurea ssp. aurea)*	None	None	4.2	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, valley and foothill grassland/annual herb/March-July	Low: fairly wide-ranging species easily overlooked but mostly occur in foothills and mountains to east of alignment.	No
Brand's phacelia	*Phacelia stellaris*	None	None	1B.1	Coastal dunes, coastal sage scrub/annual herb/March-June	None: very coastal distribution in San Diego County.	No
Cooper's rein orchid	*Piperia cooperi*	None	None	4.2	Chaparral, cismontane woodland, valley and foothill grassland/perennial herb/March-June	Low: Not found locally in central San Diego. Closest, most recently found east of San Miguel Mountain.	No
San Diego mesa mint	*Pogogyne abramsii*	FE	SE	1B.1/ MSCP	Vernal pools/annual herb/April-June	None: no vernal pools.	No
Santa Catalina Island currant	*Ribes viburnifolium*	None	None	1B.2	Chaparral, cismontane woodland/ perennial evergreen shrub/February-April	None: Found near coast. Would have been detected.	No
Ashy spike moss	*Selaginella cinerascens*	None	None	4.1	Chaparral, coastal scrub/ perennial rhizomatous herb	Present: in CSS in seal locations.	Yes

Species		Status			Habitat Associations/ Life Form/Blooming Period	Potential to Occur On Site	Observed
Common Name	Scientific Name	Federal	State	CRPR/ MSCP			
Rayless ragwort	*Senecio aphanactis*	None	None	2B.2	Chaparral, cismontane woodland, coastal scrub, sometimes alkaline soils/annual herb/January-April (May)	Low: Ranges from San Diego County to Bay Area but rarely seen locally.	No
San Diego sunflower	*Viguiera laciniata (Bahiopsis laciniata)*	None	None	4.3	Chaparral, coastal scrub/perennial shrub/February-June (August)	Observed along alignment in CSS in north and south of alignment.	Yes

Status:

MSCP = Covered species in the Multiple Species Conservation Plan

Federal:

FE = Federal Endangered
FT = Federal Threatened
FC = Federal Candidate
FSC = Federal Species of Concern

State:

SE = State Endangered
ST = State Threatened
SR = State Rare

California Rare Plant Rank (CRPR):

1A = Plants Presumed Extinct in California
1B = Plants Rare, Threatened or Endangered in California and Elsewhere
2 = Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3 = Plants About Which We Need More Information, A Review List
4 = Plants of Limited Distribution, A Watch List

State Rank and CRPR is followed by threat code (e.g. State Rank S2.2 or CRPR 1B.2):

.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 = Fairly endangered in California (20-80% occurrences threatened)
.3 = Not very endangered in California (<20% of occurrences threatened)

APPENDIX C: POTENTIAL FOR NARROW ENDEMICS TO OCCUR

Potential or Narrow Endemic Plant Species to Occur		
Species	**Status***	**Potential to Occur**
San Diego thornmint (*Acanthomintha ilicifolia*)	FT/SE CRPR 1B.1 MSCP	Low. Grassy openings in chaparral or sage scrub, or near vernal pools, with friable or broken clay soils are the preferred habitat of this annual species. Blooming period is April to June. No exposed clay soils along alignment.
Shaw's agave (*Agave shawii*)	--/-- CRPR 2.1 MSCP	None. This succulent is found in coastal sage scrub and maritime succulent scrub, often on volcanic soils. Blooming period is September to May. Would have been observed if present.
San Diego ambrosia (*Ambrosia pumila*)	FE/-- CRPR 1B.1 MSCP	Low. Creek beds, seasonally dry drainages, and floodplains are preferred habitat but has also been found in DH. Blooming period is June to September. No records of this species in the project vicinity.
Aphanisma (*Aphanisma blitoides*)	--/-- CRPR 1B.2 MSCP	None. Found in sandy, alkaline areas in coastal shrubland and bluffs. Blooming period is April to May. No records of this species in the project vicinity.
Coastal dunes milk vetch (*Astragalus tener* var. *titi*)	FE/SE CRPR 1B.1 CA Endemic MSCP	None. Habitat for this annual is coastal dunes and sandy places along the coast. Blooming period is March to May. No suitable habitat present in Study Area.
Encinitas baccharis (*Baccharis vanessae*)	FT/SE CRPR 1B.1 CA Endemic MSCP	None. Occurs in southern maritime and southern mixed chaparral in northern San Diego County. Species would likely have been observed if present.
Otay tarplant (*Deinandra conjugens*)	FT/SE CRPR List 1B.1 MSCP	Low. Occurs from Sweetwater Reservoir area south to the Mexican border and detected in Chula Vista canyons with historic records along alignment. Blooming period is May/June. 3 surveys in 2022, 2023, and 2025 failed to detect the species in the alignment.
Short-leaved dudleya (*Dudleya blochmaniae* ssp. *brevifolia*)	--/SE CRPR 1B.1 CA Endemic MSCP	Very low. Open areas and sandstone bluffs of chamise chaparral or Torrey pine forest. No suitable habitat present.
Variegated dudleya (*Dudleya variegata*)	--/-- CRPR 1B.2 MSCP	Low. Found in openings in sage scrub and chaparral, isolated rocky substrates in open grasslands, and a proximity to vernal pools and mima mound topography. Blooming period is May to June. Rocky sage scrub with openings exist in Study Area to support species but not seen despite three surveys.
San Diego button celery (*Eryngium aristulatum* ssp. *parishii*)	FE/SE CRPR 1B.1 MSCP	None. Occurs in vernal pools and marshes; no suitable habitat in Study Area.

Potential or Narrow Endemic Plant Species to Occur		
Species	**Status***	**Potential to Occur**
Prostrate navarretia (*Navarretia fossalis*)	FT/-- CRPR 1B.1 MSCP	None. Occurs in vernal pools and marshes; no suitable habitat in Study Area.
Snake cholla (*Opuntia californica* var. *californica*)	--/-- CRPR 1B.1 MSCP	Present. Occurs in chaparral and coastal sage scrub from Point Loma south to Chula Vista and Baja California. two individuals identified in Study Area.
California orcutt grass (*Orcuttia californica*)	FE/SE CRPR 1B.1 MSCP	Low. Occurs in vernal pools and marshes; little suitable habitat in Study Area.
San Diego mesa mint (*Pogogyne abramsii*)	FE/SE CRPR 1B.1 CA Endemic MSCP	None. Occurs in vernal pools and marshes; marsh in Study Area not suitable.
Otay Mesa mint (*Pogogyne nudiuscula*)	FE/SE CRPR 1B.1 MSCP	None. Occurs in vernal pools on Otay Mesa; no suitable habitat on site.

*Refer to Appendix B for a listing and explanation of status and sensitivity codes

APPENDIX D: ANIMAL SPECIES OBSERVED

Species Name	Common Name	Status	Habitat
Invertebrates			
Aeshna multicolor	blue-eyed darner dragonfly		DW-R
Apis sp.	honey bee		many
Argia vivida	vivid dancer damselfly		DW-R
Bombus vosnesenskii	yellow-faced bumblebee		CSS-D
Chlorion aerarium	steel blue cricket hunter wasp		CSS-R
Colias eurytheme	orange sulphur butterfly		CSS
Cycloneda sanguinea	spotless lady beetle		CSS
Danaus plexippus	monarch butterfly	PT	DW-R
Erynnis funeralis	funereal duskywing butterfly		DEV
Hylephila phyleus	fiery skipper		DEV
Linepithema humile	Argentine ant		many
Litaneutria minor	agile ground mantis		CSS
Nymphalis antiopa	mourning cloak butterfly		DEV
Pachydiplax longipennis	blue dasher dragonfly		OW
Pantala flavescens	wandering glider dragonfly		OW/DEV
Paplio cresphontes	giant swallowtail butterfly		DEV
Pieris rapae	cabbage white butterfly		DEV
Schistocerca nitens	gray bird grasshopper		DW-R
Schistocerca shoshone	green bird grasshopper		CSS-R
Rhopalomya audibertiae	white sage gall midge		CSS
Birds			
Anas platyrhynchos	mallard		OW
Aphelocoma californica	California scrub jay		CSS
Ardea herodias	great blue heron		edge of OW
Buteo jamaicensis	red-tailed hawk		EW
Buteo lineatus	red-shouldered hawk		EW
Butorides virescens	green heron		edge of OW
Callipepla californica	California quail		CSS
Calocitta colliei	black-throated magpie jay		DEV
Calypte anna	Anna's hummingbird		CSS
Chamaea fasciata	wrentit		CSS
Colaptes auratus	northern flicker		CSS
Corvus brachyrhyncos	American crow		DEV
Empidonax difficilus	Pacific-slope flycatcher		EW
Geothlypus trichas	common yellowthroat		SWS
Haemorhous mexicanus	house finch		CSS/DEV
Icterus cucullatus	hooded oriole		DEV
Lonchura punctulata	nutmeg mannakin (scaly-breasted munia)		DEV

Species Name	Common Name	Status	Habitat
Melospiza melodia	song sparrow		many
Melozone crissalis	California towhee		CSS
Mimus polyglottos	California mockingbird		CSS
Molothrus ater	brown-headed cowbird		SWS
Petrochelidon pyrrhonata	cliff swallow		DEV/OW
Phalacrocorax auritus	double-crested cormorant	WL	flyover
Pheucticus melanocephalus	black-headed goldfinch		SWS
Picoides nuttalli	Nuttall's woodpecker		EW
Pipilo maculatus	spotted towhee		CSS
Polioptila californica californica	coastal California gnatcatcher	FT, SSC MSCP-Covered	CSS
Psaltriparus minimus	American bushtit		CSS
Quiscalus mexicanus	great-tailed grackle		CSS
Rallus obsoletus levipes	light-footed Ridgway's rail	FE, SE, FP	FWM
Sayornis nigricans	black phoebe		many
Selasphorus sasin	Allen's hummingbird		CSS
Setophaga petechia	yellow warbler	SSC	SWS
Sialia mexicana	western bluebird	MSCP-covered	CSS
Spinus psaltria	lesser goldfinch		CSS
Stelgidopteryx serripennis	northern rough-winged swallow		OW
Thryomanes bewickii	Bewick's wren		CSS
Toxostoma redivivum	California thrasher		CSS
Troglodytes aedon	house wren		CSS
Tyrannus vociferans	Cassin's kingbird		DEV
Vermivora celata	orange-crowned warbler		NNV
Zenaida macroura	mourning dove		DEV
Reptiles			
Aspidoscelis hyperythra	orange-throated whiptail	WL, MSCP-Covered	CSS
Sceloporus occidentalis	western fence lizard		CSS
Uta stansburiana	western side-blotched lizard		CSS
Mammals			
Canis latrans	coyote		CSS
Otospermophilus beecheyi	California ground squirrel		many
Sylvilagus sp.	rabbit		many

Habitats: CSS = coastal sage scrub, CSS-R = restored coastal sage scrub, DEV = developed habitat, DH = disturbed habitat DW = disturbed wetland, EW = eucalyptus woodland FWM = freshwater marsh, MSS = maritime succulent scrub, NNV = non-native vegetation, OW = open water, SAWRF = southern arroyo willow riparian forest, SWS = southern willow scrub; -R = restoration

MSCP-Covered = Covered species in the Multiple Species Conservation Plan

Federal:
FE = Federal Endangered
FT = Federal Threatened
PT = Proposed Threatened

State
SE = State Endangered
SE = State Threatened
FP = Fully Protected

SSC = Species of Special Concern
WL = CDFW Watch List

APPENDIX E: SPECIAL STATUS ANIMAL SPECIES WITH POTENTIAL TO OCCUR

Species		Status			Habitat Associations	Potential to Occur On Site	Observed
Common Name	**Scientific Name**	**Federal**	**State**	**MSCP**			
Invertebrates							
San Diego fairy shrimp	*Branchinecta sandiegoensis*	FE	None	Covered	Found in Vernal pools among Mima mounds in CSS.	None: no vernal pools.	No
Quino checkerspot butterfly	*Euphydryas editha quino*	FE	None		Found on ridges and mesa tops in grasslands or openings in shrublands (e.g., fire breaks, near dirt roads) supporting dot-seed plantain host plant.	None: project outside of known range and USFWS survey area.	No
Monarch Butterfly	*Danaus plexippus*	PT			Breeds in a wide variety of environments, as long as they contain milkweed. Adults feed on other nectar sources and migrate long distances. Overwinter in wooded areas	Present: resident monarchs fly through urban and suburban areas. Nearest known colony site is in Eucalyptus Park, Chula Vista (2.8 miles from Willow St. Bridge).	Yes
Riverside fairy shrimp	*Streptocephalus woottoni*	FE	None	Covered	Found in deeper vernal pools and ponds.	None: No vernal pools or ponds.	No
Reptiles							
Silvery legless lizard	*Anniella pulchra pulchra*	None	SSC		Occurs in areas with loose soil, particularly in sand dunes and or otherwise sandy soil. Generally found in leaf litter, under rocks, logs, or driftwood in oak wood land, chaparral, and desert scrub.	Low: access compacted, non-sandy soil. Work area mostly steep or exotic species.	No
Southwestern pond turtle	*Clemmys marmorata pallida*	None	SSC	Covered	Found largely in permanent water, particularly deep ponds with muddy substrates and abundant logs, rocks, or submerged vegetation for cover. Generally require native upland habitat nearby for overwintering.	None: little open water and only associated with Sweetwater River. No permanent water.	No
Orange-throated whiptail	*Cnemidophorus hyperythrus (Aspidoscelis hyperythra beldingi)*	None	None	Covered	Open coastal sage scrub, chaparral and often in brushy patches on stream terraces and other sandy areas.	Present: likely in CSS along access areas.	Yes

Species		Status			Habitat Associations	Potential to Occur On Site	Observed
Common Name	**Scientific Name**	**Federal**	**State**	**MSCP**			
San Diego banded gecko	*Coleonyx variegatus abbottii*	None	SSC		Found in open scrub habitats and woodlands, often in association with rock outcrops from sea level to 4,000 ft.	None: no rock outcrops present on site.	No
Northern red diamond rattlesnake	*Crotalus ruber ruber*	None	SSC		Occurs in coastal sage scrub and chaparral with abundant rocky outcrops.	Low: no noticeable rock outcrops along the alignment.	No
San Diego horned lizard	*Phrynosoma coronatum blainvillei (Phrynosoma blainvillii)*	None	SSC	Covered	Inhabits open sage scrub where it preys upon carpenter ants.	Low: nearby residential uses reduce native ant populations because of Argentine ants present, some areas of the alignment may be far enough away to support the species.	No
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	None	SSC		Found in coastal sage scrub, chaparral, riparian, grasslands, and agricultural fields. Prefers open habitat with friable or sandy soils, burrowing rodents for food, and enough cover to escape being preyed upon.	Low: Some suitable habitat found on site, but soil not friable.	No
Western spadefoot toad	*Scaphiopus hammondii*	None	SSC		Habitats include coastal sage scrub, chaparral, and grassland. with temporary pools for breeding and friable soils for burrowing.	Low: waters run in creeks and no areas known to pond water occur.	No
Two stripe gartersnake	*Thamnophis hammondii*	None	SSC		Found along permanent creeks and streams but also around vernal pools and along intermittent streams. Rarely found in upland scrub habitats relatively far from permanent water.	Moderate: nearest reported sightings are from Sweetwater reservoir but suitable habitat occurs along the Sweetwater River.	No
South Coast gartersnake	*Thamnophis sirtalis novum*	None	SSC		Found in north County watersheds. Prefers riparian areas with willows and mule fat.	Low: not known from the vicinity.	No

Species		Status			Habitat Associations	Potential to Occur On Site	Observed
Common Name	**Scientific Name**	**Federal**	**State**	**MSCP**			
Birds							
Cooper's hawk	*Accipiter cooperi*	None	None	Covered	Occurs in oak groves, mature riparian woodlands, and eucalyptus stands or other mature forests.	Moderate: trees and woodlands adjacent to alignment could support species.	No
Tricolored blackbird	*Agelaius tricolor*	None	SSC/ Candidate - Endangered	Covered	Freshwater marsh for breeding; grasslands and agriculture for foraging.	None: little to no open water, limited nesting, and no foraging area.	No
Rufous-crowned sparrow	*Aimophila ruficeps canescens*	None	WL	Covered	Coastal sage scrub and chaparral – typically with prominent rock outcrops.	Moderate: sage scrub with edges present, despite absence in the vicinity.	No
Grasshopper sparrow	*Ammodramus savannarum*	None	SSC		Open grasslands of intermediate height and density.	None: no suitable habitat occurs on the sites.	No
Bell's sage sparrow	*Amphispiza belli belli*	BCC	None		Prefers semi-open habitats with evenly spaced shrubs 3-6 ft tall in dry chaparral and coastal sage scrub.	Low: no records of the Sage Sparrow from isolated canyons enclosed within the City of San Diego.	No
Burrowing owl	*Athene cunicularia hypugea*	None	SSC	Covered	Open grasslands, agricultural fields.	Low: no suitable habitat.	No
San Diego cactus wren	*Campylorhynchus brunnicapillus couesi (Campylorhynchus brunneicapillus sandiegensis)*	None	SSC	Covered	Cactus patches in coastal sage scrub/chaparral.	Low: patches of cactus not large enough within the area of study.	No
Northern harrier	*Circus cyaneus hudsonius*	None	SSC	Covered	Marshes, agricultural fields, grasslands.	Low: while a tiny marsh is present no fields and small grasslands in vicinity.	No
Yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FT	SE		Wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes.	Very Low: exceedingly rare bird not seen in suburban areas.	No
Yellow warbler	*Dendroica petechia brewsteri (Setophaga petechia)*	BCC	SSC		Breeding restricted to riparian woodlands.	Present: detected south of East H Street and in Telegraph Canyon.	Yes

Species		Status			Habitat Associations	Potential to Occur On Site	Observed
Common Name	**Scientific Name**	**Federal**	**State**	**MSCP**			
White-tailed kite	*Elanus caeruleus*	NA	FP		Riparian woodlands and oak or sycamore groves adjacent to grassland.	Very low: No suitable combination of habitats present.	No
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE	SE	Covered	Riparian thickets, woodlands and forests.	Low: suitable no habitat present but not known from the area.	No
Horned lark	*Eremophila alpestris actis*	None	None		Grasslands, dunes, and agriculture for foraging and breeding.	None: no suitable habitat present.	No
Prairie falcon	*Falco mexicanus*	BCC	None		Shrubby habitats and grasslands.	Low: little suitable habitat for the species.	No
American peregrine falcon	*Falco peregrinus anatum*	BCC	FP		Open grasslands, agricultural fields especially near water.	Very Low: little suitable habitat present.	No
Yellow-breasted chat	*Icteria virens*	None	SSC		Riparian woodlands, primarily in the coastal lowland but will also use the foothill zone.	High: native riparian woodland present and has been detected.	No
Loggerhead shrike	*Lanius ludovicianus*	BCC	SSC		Grassland, open sage scrub, chaparral, and desert scrub.	Low: suitable habitat is very steep.	No
Coastal California gnatcatcher	*Polioptila californica californica*	FT	None	Covered	Coastal sage scrub, occasional in chaparral.	Present: high quality CSS present.	Yes
Light-footed Ridgway's Rail	*Rallus obsoletus levipes*	FE	SE	Covered	Coastal marshes, lagoons, and some freshwater habitats.	Present: only observed east of Willow Street bridge. Little suitable habitat west of bridge (too dense).	Yes
Bank swallow	*Riparia riparia*	None	ST		Low areas along rivers, streams, ocean coasts, or reservoirs.	None: streams are narrow and have no easily accessible banks suitable for the species.	No
Least Bell's vireo	*Vireo bellii pusillus*	FE	SE	Covered	Riparian scrub and woodlands.	None: little willow-dominated habitat within alignment which is its preference.	No
Mammals							
Pallid bat	*Antrozous pallidus*	None	SSC		Often in mountainous or rocky areas near water. Roosts in caves, mines, bridges, crevices, abandoned buildings, and trees.	Very Low: little roosting or foraging habitat.	No

Species		Status			Habitat Associations	Potential to Occur On Site	Observed
Common Name	Scientific Name	Federal	State	MSCP			
Dulzura California pocket mouse	*Chaetodipus californicus femoralis*	None	SSC		Forages on seeds of forbs, grasses, and shrubs in Coastal sage and arid scrubs with sandy or gravelly soil.	Low: CSS is present but soil not sandy.	No
Northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	None	SSC		Occupies shrublands that vary from sparse desert shrublands to dense coastal scrub. It tends to be more abundant where rocks or shrubs provide cover.	Low: as few rocks are present along alignment.	No
Mexican long-tongued bat	*Choeronycteris mexicana*	None	SSC		Occurs in deciduous, semi-arid scrub and coniferous forests. Roosts in caves or abandoned buildings during the day.	Low: little foraging habitat in area.	No
Greater western mastiff bat	*Eumops perotis californicus*	None	SSC		Chaparral and oak woodland with coast live oaks and in arid, rocky areas. Roosts on or in buildings, trees, tunnels, and crevices in cliffs.	Low: little foraging habitat in area.	No
Mountain lion	*Felis concolor*	NA	NA	Covered	Wide-ranging species lives in mountains and hill country. Sometimes comes down to suburban areas.	Low: area too suburban to allow residence.	No
Western red bat	*Lasiurus blossevillii*	None	SSC		Red bats will most likely be found in the forest roosting under leaves.	Low: no forest habitat. Brazilian peppers are short.	No
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	None	SSC		Found in open Coastal sage scrub and chaparral with associated grassland.	Low: hillsides too steep and little suitable habitat in area.	No
San Diego desert woodrat	*Neotoma lepida intermedia*	None	SSC		Found in open chaparral and coastal sage scrub, often building large, stick nests in rock outcrops or around clumps of cactus or yucca.	Low: no rock outcrops present.	No
Pocketed free-tailed bat	*Nyctinomops femorosaccus*	None	SSC		Mostly occurs in desert; roosts in rock outcrops.	Low: no rock outcrops on sites.	No
Big free-tailed bat	*Nyctinomops macrotis*	None	SSC		Rocky areas; by day, roosts in rocky cliffs, sometimes caves, buildings, or tree holes.	Low: no rock outcrops on sites.	No

Species		Status			Habitat Associations	Potential to Occur On Site	Observed
Common Name	**Scientific Name**	**Federal**	**State**	**MSCP**			
Southern mule deer	*Odocoileus hemionus fuliginatus*	NA	NA	Covered	The mule deer lives throughout the western United States, including the deserts. It may migrate in response to rainfall.	Low: while adaptable moving through suburban areas, no sign was detected and none were seen.	No
Pacific pocket mouse	*Perognathus longimembris pacificus*	FE	SSC		Fine or sandy soils with sparse coastal sage scrub or disturbed grassland within 2.5 miles of Ocean.	Very low: no suitable soil and too far from coast.	No
American badger	*Taxidea taxus*	None	SSC	Covered	Open plains, grasslands, fields, and pastures, occasionally on edges of woods.	Low: Not found in urban or suburban areas, no evidence and no burrows detected.	No

Status:

MSCP = Covered species in the Multiple Species Conservation Plan

Federal:

BCC = Bird of Conservation Concern
FE = Federal Endangered
FT = Federal Threatened
PT = Proposed Threatened

State:

FP = Fully Protected
SE = State Endangered
SSC = Species of Special Concern
ST = State Threatened
WL = Watchlist

APPENDIX F: REPORT AUTHOR AND FIELD RESUMES

DEREK LANGSFORD PHD, CSE

Project Manager

Experience Summary

Over 35 years of experience as an ecologist and over 25 years in government and consulting as a CEQA regulator, project manager, and group manager in San Diego. He has managed projects on behalf of federal, state, county, and municipal governments, water, school, college, and hospital districts, as well as numerous private clients. Participates in all biological aspects of projects including field surveys, habitat evaluations, data analysis, preparation of technical reports, wetland permitting applications and regulatory compliance, and mitigation, monitoring, and management plans. Key aspects of his experience include impact assessment in a wide range of biological resources, both wetland/riparian and upland, and in coastal, inland, and desert environments. He has negotiated project mitigation requirements for impacts to threatened and endangered species with federal and state wildlife agencies in the complex regulatory environment of San Diego County. Management capabilities include client liaison, budgeting, research, fieldwork scheduling and supervision of field biologists, agency liaison, scientific review, and quality control. He is a County of San Diego Approved Biologist and has extensive experience in the San Diego region.

Education

PH.D. IN ECOLOGY
University of California, Davis/SDSU
1996

B.SC. IN ECOLOGICAL SCIENCE
University of Edinburgh, Scotland
1985

Permits, Certifications, Training

- Certified Sr. Ecologist, Ecological Society of America, 2012- Present
- Approved Biological Consultant, County of San Diego, 1999– Present
- Certificate in GIS, Cuyamaca College 2013
- AED/CPR, March 2017
- 38-hr ACOE Wetland Delineation Training Program, Richard Chinn, 2017
- CPESC Review & CESSWI Integrations Course, Michael Harding, 2017

Project Experience

WEST MISSION BAY DRIVE BRIDGE REPLACEMENT
Kleinfelder | San Diego, CA | 2018-Present

Primary Qualified Biologist (PQB) for the replacement of the current 4-lane bridge with two 3-lane bridges with bike lanes and sidewalks across the San Diego River Flood Control Channel. Managed pre-construction surveys in fulfillment of Coastal Development Permit and have overseen monitoring of light-footed Ridgway's rail, marine mammals and sea turtles, airborne noise and hydroacoustic sound during impact pile driving, monitoring of bird nests, weeding, and planting at two mitigation sites (Dog Beach and Pacific Highway). Also perform weekly checks of construction and mitigation sites. Prepare and provide QA/QC for weekly, monthly, and seasonal monitoring reports in satisfaction of project conditions and permits. Work performed for Kleinfelder Construction Services on behalf of the City of San Diego.

BIOLOGICAL SUPPORT FOR THE CITY OF SAN DIEGO ENGINEERING ON-CALL (INCLUDING RENEWAL)
Rick Engineering | San Diego, CA | 2015-Present

Acted as Project Manager, Lead Biologist, and Wetland Delineator. TDI provided biological resource surveys and reporting to Rick Engineering for various City of San DPW Diego projects which required vegetation mapping, rare plant surveys, jurisdictional delineation, biology reports, and Revegetation Plans.

- *Maple Canyon Jurisdictional Determination and Biology Report Addendum 2018-2019*
- *Southcrest Green Infrastructure Improvements 2018-present*
- *Scripps Ranch Storm Drain Replacement Project - 2017-present*
- *Coast Blvd Walkway Improvements Project - 2016-2019*
- *Serra Mesa Storm Drain Replacement & Green Infrastructure Project - 2016-present*
- *Clairemont Mesa Storm Drain Replacement – 2018-present*
- *Sunset Cliffs Natural Park Building Removal – 2016-present*
- *Sunset Cliffs Natural Park Drainage Improvements – 2018-present*

AS-NEEDED BIOLOGICAL CONSULTING SERVICES
City of Vista | Vista, CA | 2013-Present

Acted as project manager, senior biologist, and chief reviewer of reports.

Third-Party Review: Review to ensure compliance of the proposed projects and biological resource reports with the biologically related regulatory requirements of the City, State of California, and the federal government; that the studies followed state and federal, and industry-accepted methodologies; and to verify that all appropriate findings for the resources present on site are made.

- *Emerald Drive - Subdivision*
- *Rancho Lomas Verdes – Major Subdivision*
- *Santa Fe Avenue – Persea multi-family*
- *Sycamore-Watson Condominiums*

Biological Resource Reports: Biological Resource surveys and preparation of reports in satisfaction of regulatory requirements.

- *Vista Grande Subdivision*
- *Monte Mar Center – Shopping Center*
- *Sunroad Plaza – Shopping Center*

BUSINESS PARK DRIVE & POINSETTIA AVENUE PARCEL
Commercial Development Resources | Vista, CA | 2018-2019

Biology Project Manager. Biological survey and wetland delineation to determine edge centerline and bank of drainage feature in conservation area adjacent to site and from which City required setbacks for development. Prepared a Constraints Report of findings.

BIOLOGICAL CONSULTING SERVICES FOR THE VISTA TERRACE MARKETPLACE PROJECT
Black Lion Investment Group | Vista, CA | 2017-2019

Biology Project Manager. Biological Survey, Jurisdiction Delineation (JD), Biology and JD Report for this proposed Sprouts Market in north Vista. Proposed Project needed to culvert section of Buena Vista Creek which required wetland permits. Prepared applications and secured all wetland approvals, identified, and secured mitigation.

KEYSTONE VICTORY PARK PROJECT
Badiee Development | Vista, CA | 2015-2017

Biology Project Manager for biological resource surveys and processing of the project that prosed two concrete-tilt buildings on a 10.4-acre site off Keystone Way in the City of Vista. Performed vegetation mapping, rare plants surveys, census of Nuttall's scrub oak and California adolphia, prepared biology report, and identified mitigation in compliance with CEQA, and MHCP.

PORTSIDE PIER PROJECT
RECON Environmental | San Diego, CA | 2016-2017

Biology Project Manager. Field survey, biology report, and Essential Fish Habitat (EFH) assessment for the demolition of the existing restaurant and construction of the new Portside Pier complex of eateries on the North Embarcadero of San Diego Bay. Issues included effects on marine mammals and seas turtles of pile removal during demolition and driving for construction, effects on EFH, increase in shading of bay water, and bird collisions on glass surfaces. Work performed for RECON under their on-call Environmental contract with Port of San Diego.

SUNSET CLIFFS NATURAL PARK TRAIL IMPROVEMENTS
Estrada Land Planning | Point Loma, CA | 2011-2013

Biology Project Manager. Planned trail system with fencing and overlooks, to protect sensitive habitats, improve drainage and reduce erosion, remove an abandoned ball field and dwellings, and revegetate unauthorized trails, disturbed areas, and demolition areas. Required conformance to the Park's adopted Master Plan and MEIR, and the MSCP. Required updated biological studies and preparation of a biological technical report and revegetation plan. Work performed while at URS for Estrada Land Planning under their on-call Environmental contract with City of San Diego.

BEN G. VAN ALLEN, PHD

Wildlife Biologist

Experience Summary

Over 10 years of experience as an ecologist and over four years in government environmental services and consulting as a project manager and wildlife biologist in San Diego and Central Ohio. He has managed projects in California on behalf of federal clients, water districts, cities, and private clients. Participates in all biological aspects of projects including field surveys, habitat evaluations, data analysis, preparation of technical reports, regulatory compliance, and mitigation, monitoring, and management plans. He has over 20 years of experience in bird identification and has experience assisting in wetland delineations in California, Ohio, and Virginia. Management capabilities include client liaison, budgeting, research, fieldwork scheduling and supervision of field biologists, agency liaison, scientific review, and quality control.

Education

PH.D. IN ECOLOGY & EVOLUTIONARY BIOLOGY
Rice University
2014

M.S. IN BIOLOGY
Virginia Commonwealth University
2009

B.SC. IN ENVIRONMENTAL SCIENCE
Otterbein University
2006

Project Experience

AS-NEEDED BIOLOGICAL CONSULTING SERVICES
Metropolitan Water District of Southern California | Southern California | 2018-Present

Project manager, senior biologist, and chief reviewer of reports.

Biological Resource Reports: Biological Resource survey, activity monitoring, and preparation of reports in satisfaction of regulatory requirements.

- *Santa Anna Upper Feeder Bird Survey and Vegetation Removal 2018 - 2019*
- *Bull Creek Vegetation Maintenance Biomonitoring 2018 - 2019*
- *Diemer Slope Erosion Remediation Biological Resource Survey and Monitoring 2018 - 2019*
- *Rialto Feeder Biological Resource Surveys and Construction Monitoring 2018 – 2019*
- *Rio Honda Middle Feeder Vegetation Removal 2020*

Management: Liaise with MWD, scheduling work, and review reports in satisfaction of regulatory requirements.

- *All of the above projects as well as*
- *Eagle Rock Tree Evaluation 2018-2019*
- *Walnut OCF Station 2019*

WEST MISSION BAY DRIVE BRIDGE REPLACEMENT PROJECT
Kleinfelder Construction Services | San Diego, CA | 2018-Present

Survey Coordinator/Biological Monitor for the replacement of the current 4-lane bridge with two 3-lane bridges with bike lanes and sidewalks across the San Diego River Flood Control Channel. Coordinate monitoring and report preparation to maintain compliance with Coastal Development Permit conditions and have coordinated monitoring of light-footed Ridgway's rail, marine mammals and sea turtles, airborne noise and hydroacoustic sound during impact pile driving, monitoring of bird nests, weeding, and planting at two mitigation sites (Dog Beach and Pacific Highway). Also manage weekly project personnel schedule. Help prepare weekly, monthly, and seasonal monitoring reports in satisfaction of project conditions and permits. Work performed for construction services prime on behalf of the City of San Diego.

ENVIRONMENTAL COMPLIANCE & NATURAL RESOURCES MANAGEMENT SUPPORT FOR CHULA VISTA BAYFRONT DEVELOPMENT
San Diego Unified Port District | San Diego, CA | 2019-Present

Wildlife Biologist. As part of an on-call contract, performing construction and biomonitoring at multiple sites planned for development on the Chula Vista Bayfront on San Diego Bay.

BUSINESS PARK DRIVE & POINSETTIA AVENUE PARCEL
Commercial Development Resources | Vista, CA | 2018-2019

Wildlife Biologist. Biological survey and wetland delineation to determine edge centerline and bank of drainage feature in a conservation area adjacent to site and from which City required setbacks for development. Prepared a Constraints Report of findings.

GREEN OAK RANCH
Green Oak Ranch RV Resort | Vista, CA | 2019-Present

Wildlife Biologist. Biological survey including experience with CAGN and assistance on jurisdictional determination of drainage features. Habitat assessment. Work performed for Green Oak Ranch.

CITY OF SAN DIEGO ENGINEERING ON-CALL (INCLUDING RENEWAL)
Rick Engineering | San Diego, CA | 2018-Present

Wildlife Biologist. TDI provided biological resource surveys and reporting to Rick Engineering for various City of San DPW Diego projects which required vegetation mapping, rare plant surveys, wetland delineation, biology reports, and Revegetation Plans. Acted as Field Biologist and provided Wildlife Surveys and reports as well as assisting with Wetland Delineations.

- *Scripps Ranch Storm Drain Replacement Project - 2018-present*
- *Serra Mesa Storm Drain Replacement & Green Infrastructure Project - 2018-present*
- *Clairemont Mesa Storm Drain Replacement - 2018-2019*
- *Southcrest Green Infrastructure Improvements 2018-2019*
- *Sunset Cliffs Natural Park Drainage Improvements – 2018-2020*
- *Maple Canyon Jurisdictional Determination – 2019 - present*

BIOLOGICAL RESOURCES SERVICES FOR SRF APPLICATION ASSISSTANCE FOR THE VALLEY CENTER MUNICIPAL WATER DISTRICT
Birdseye Planning Group | Valley Center, CA | 2019

Wildlife Biologist. Habitat Assessment and biological resources survey along ten separate Project alignments planned for water line replacement and maintenance in the VCMWD area of northern San Diego County.

POMERADO TERRACE PROPERTY STORM DRAIN OUTFALL CLEARING
Lincoln Military Housing | San Diego, CA | 2019

Biological Monitor and TDI Project Coordinator for the clearing of seven compromised storm drain outfalls along approximately 1,000 feet of Scripps Ranch Row in San Diego, CA. Clearing of outfalls was needed to preventflooding of Scripps Ranch Row. Evaluated outfalls for native and invasive species, rare plants, wetlands, and animalspecies of special concern. Assisted with and managed production of pre-project scoping and post-outfall clearingmonitoring reports. Work performed for prime on behalf of Lincoln Military Housing.

BAYVIEW HILLS STORMWATER EROSION CONTROL PROJECT
Lincoln Military Housing | San Diego, CA | 2019

Wildlife Biologist. Habitat Assessment, biological resources survey and jurisdictional assessment for proposed work to repair a broken stormwater conveyance pipe in San Diego, CA. Site included sensitive sage scrub habitat occupied by federally listed CAGN. Assisted with preparation of a memorandum identifyingsensitive resource issues and potential avoidance measures. Work performed for Lincoln Military Housing.

MURPHY CANYON BRUSH MANAGEMENT IMPLEMENTATION MONITORING
Lincoln Military Housing | San Diego, CA | 2019

Biological Monitor and TDI Project Coordinator for the clearing of brush for fire safety around five canyon- top communities in San Diego, CA. Coordinated team mark-outs of 100-foot buffers around structures to be clearedand marked sensitive environmental resources for avoidance. Coordinated weekly monitoring of progress and monthly reporting across the over five-month project. Work performed for Lincoln Military Housing.

JOSEDIEGO URIBE, MS

Staff Biologist

Experience Summary

Over 10 years of experience as an ecologist and over four years in government environmental services and consulting as a project manager and wildlife biologist in San Diego and Central Ohio. He has managed projects in California on behalf of federal clients, water districts, cities, and private clients. Participates in all biological aspects of projects including field surveys, habitat evaluations, data analysis, preparation of technical reports, regulatory compliance, and mitigation, monitoring, and management plans. He has over 20 years of experience in bird identification and has experience assisting in wetland delineations in California, Ohio, and Virginia. Management capabilities include client liaison, budgeting, research, fieldwork scheduling and supervision of field biologists, agency liaison, scientific review, and quality control.

Education

MS. IN ECOLOGY
San Diego State University
2022

B.A. IN INTERNATIONAL BUSINESS
San Diego State University
2009

Permits, Certifications, Training

- OSHA 30HR Construction Safety Training
- AED/CPR, May 2024
- Roadway Worker Protection (RWP) training -2025
- PADI Open Water Diver and AAUS Research Diver - Present
- Qualified Pesticide Applicator Certificate 2011-2017
- Basic NEPA Workshop, 2013 - 2014
- Advanced CEQA Workshop & Practicum, 2014

Project Experience

Otay 2nd Pipeline Phase 4 Project - Compensatory Mitigation Site | San Diego, CA | Rick Engineering Company / City of San Diego | 2022-2025. Biological consulting services for the 3.2-mile Otay 2nd Pipeline Phase 4 Project that extends from the County of San Diego (County) Unincorporated Community of Bonita at the Willow Street Bridge to Telegraph Canyon Road in the City of Chula Vista. The alignment passes through areas of the County's MSCP Planning Area and City's MSCP Subarea and would require biological monitoring and submittal of a biological technical report to confirm no sensitive resources (sensitive vegetation communities including wetlands and coastal sage scrub) were impacted.

Wetland Mitigation Plan for the La Media Road Improvement Project San Diego, California| Otay Mesa, CA | City of San Diego | 2023-Ongoing. Staff Biologist/Project Management support for the enhancement of vernal pool habitat, implementation of mitigation of a freshwater marsh, emergent wetland, and southern willow scrub habitats and area enhancement for burrowing owl breeding habitat due to impacts caused by the La Media Road Improvement. Assisted with on-site field supervisor activities during maintenance and construction activities as well as assist in schedule coordination and project logistics. Assisted with GIS mapping and GPS tracking of sensitive biological species, monitoring and technical reports.

Vernal Pool Mitigation Plan for the La Media Road Improvement Project San Diego, California| Otay Mesa, CA | City of San Diego | 2023-Ongoing. Field Biologist/Project Management Support for the establishment, re-establishment, and enhancement of vernal pools as mitigation for 0.150 acre of impacts caused by the La Media Road Improvement. Assist with on-site field supervisor activities during maintenance and construction activities as well as assist in schedule coordination and project logistics. Assist with GIS mapping and GPS tracking of sensitive biological species, monitoring and technical reports.

Serra Mesa Storm Drain & Green Infrastructure Project | San Diego, CA | Rick Engineering Company / City of San Diego | 2022-2025. Staff scientist providing biological consulting services to identify, map and monitor the natural and biological resources as well as the potential impacts to them for the proposed replacement of seven storm drain (SD) systems for the Serra Mesa Storm Drain & Green Infrastructure Project (Project) in the Serra Mesa Community of the City of San Diego (City), in support of the CEQA. Assisted in the writeup of ARDR.

2024 MSCP Annual Report | County of San Diego | | 2024-2025. Land Use Environmental Planner II/ Project Manager for the drafting of the 2024 Annual Report. The County of San Diego produces annual reports on the progress of the approved South County Subarea Plan. These include information about impacts, conservation, and land management within the County Subarea. Each year, a public workshop is held to present and summarize the progress of the MSCP for all the participating jurisdictions.

Rincon Reservation BIA Endangered Species Program | Valley Center, CA | Rincon Band of Luiseño Indians | 2022-Ongoing. Biologist involved in the inventory, assessment and mapping and surveying for endangered species and invasive species and working to control invasive species when discovered at the Rincon Reservation Preserve. Species worked with include Arroyo Toad (survey), Argentine Ant (survey and manage) and American Bullfrog (survey and manage).

Lincoln Military Housing Brush Management Implementation 2023/2025 | San Diego, CA | San Diego Family Housing | 2023/2025.

- Village of Serra Mesa Fence Line Brush Maintenance Project (2023/2025)
- Murphy Canyon Brush Management Implementation 2022, 2024
- Bayview Hills Paradise Valley Road Brush Maintenance (2023)

Sweetwater Park Construction Monitoring at the Chula Vista Bayfront | Chula Vista, CA | San Diego Unified Port District | 2023- 2024. Biological monitor /Project Management Support. On-site field monitoring for bird and raptor nest surveys. Biomonitoring and environmental training of sensitive resources during and post construction.

Multiple habitat restoration projects 2023-2024. Assistant Project Management.

- Los Peñasquitos Lagoon Habitat Mitigation | Del Mar, CA | Los Peñasquitos Lagoon Foundation | 2023-2024.
- Deer Canyon Upland Mitigation Site | San Diego, CA | California Department of Transportation
- Deer Canyon East Mitigation Site - Phase II | San Diego, CA | SANDAG & Caltrans
- Anderprises Phase 2 | Otay Mesa, CA | SANDAG & Caltrans | 2023.
- Ecke Vernal Pool Mitigation Site | Carlsbad, CA | SANDAG & Caltrans | 2023.

West Mission Bay Drive Bridge Replacement Project | San Diego, CA | City of San Diego | 2022-2024. Staff scientist assisting PQB in the project involving the replacement of the WMBD bridge with two new bridges with bike lanes and sidewalks across the San Diego River Flood Control Channel. Responsible for biological compliance, biological monitoring of (light-footed Ridgway's rail, marine mammal, Salt Marsh Bird's Beak), vegetation mapping, invasive species removal and reporting for bridge construction and mitigation implementation.