

APPENDIX Q
MHPA Boundary Line
Adjustment Equivalency Analysis

June 2nd, 2017

Ms. Kristy Forburger
City of San Diego
Planning Department/Multiple Species Conservation Program (MSCP)

Dear Ms. Forburger:

Subject: SANDER East Site Multi-Habitat Planning Area Boundary Line Adjustment
Equivalency Analysis

The Public Utilities Departments is requesting a Multi-Habitat Planning Area Boundary Line Adjustment to include a portion of a parcel referred to as the SANDER East parcel, APN 35603113. Attached you will find the MHPA BLA equivalency analysis memo dated June 2, 2017.

If you have any questions or need additional information, please contact me at (858) 614-5789.

Sincerely, _____



Summer Adleberg
Project Officer

Attachments – Equivalency Analysis

cc: Keli Balo, Public Utilities Department

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June 2, 2017

SDD-32.04

Ms. Summer Adleberg
City of San Diego
Public Utilities Department
9192 Topaz Way, MS 901A
San Diego, CA 92123

Subject: MHPA Boundary Line Adjustment Review for the Pure Water San Diego Program
Sander East Site

Dear Ms. Adleberg:

This letter has been prepared to support the proposed Multi-Habitat Planning Area (MHPA) boundary line adjustment for the Sander East site of the City of San Diego (City) Public Utilities Department's Pure Water San Diego Program (Pure Water Program) North City Pure Water Project.

PROJECT LOCATION AND SETTING

The Sander East site encompasses an approximately 30-acre area located in the community of Kearny Mesa, south of State Route 52 (SR 52), and north of Mercury Street (Figure 1). The site is located in unsectioned land within Townships 15 South, Range 3 West on the San Bernardino Base and Meridian U.S. Geological Survey 7.5-minute La Jolla quadrangle map (Figure 2). Elevations in the Sander East site range from approximately 362 feet (ft) above mean sea level (amsl) to approximately 412 ft amsl. Soil types mapped within this study area include Redding cobbly loam (9 to 30 percent slopes) and Redding gravelly loam (2 to 9 percent slopes).

The Sander East site occurs within the City's Multiple Species Conservation Program (MSCP) Subarea Plan (City 1997); however, it is not located within the MHPA. The southeastern portion of the Sander East site is designated as Hardline Preserve for the Draft City of San Diego Vernal Pool Habitat Conservation Program (Vernal Pool HCP; City 2016).

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PROJECT DESCRIPTION

The Pure Water Program is the City Public Utilities Department's proposed program to provide a safe, secure, and sustainable local drinking water supply for San Diego. Advanced water purification technology will be used to produce potable water from recycled water. The Pure Water Program consists of the design and construction of new advanced water treatment facilities, wastewater treatment facilities, pump stations, transmission lines, and pipelines. The North City Project is the first phase of the Pure Water Program, which proposes to expand the existing North City Water Reclamation Plant (NCWRP) and build a new advanced water treatment facility, referred to as the North City Pure Water Facility (NCPWF), adjacent to the NCWRP. The NCPWF project would include construction of a new full-scale advanced water purification facility, pipelines, electrical transmission lines, and support facilities such as pump stations.

Construction of the NCPWF would result in unavoidable impacts to vernal pool resources and upland habitats. Permanent impacts to vernal pools and upland habitats within the NCPWF site would be mitigated through restoration, enhancement, and preservation of vernal pools and associated upland watershed habitat at the Sander East site. The mitigation approach involves re-establishment of vernal pools within degraded areas of the Sander East site, as well as rehabilitation and enhancement of existing, low-functioning vernal pools. Portions of the site have been degraded due to disturbances associated with Miramar Landfill operations, as well as vehicular activity, illegal dumping, human visitation, and non-native plant invasion. Restoration of disturbed areas within the Sander East vernal pool complex, including vernal pools and associated mima mounds, and degraded upland habitats is proposed. The restored habitat would consist of a mosaic of chaparral, coastal scrub, and wildflower habitat, typical of vernal pool complexes in the region.

An MHPA boundary line adjustment is proposed to ensure that all mitigation occurs within the City's MHPA. Vernal pools and associated micro-watersheds within the Sander East site are proposed to be preserved and incorporated into the City's MHPA. Upon successful completion of the proposed mitigation program, the habitat within the MHPA would be managed in accordance to MHPA requirements.

EXISTING BIOLOGICAL CONDITIONS

HELIX Environmental Planning, Inc. (HELIX) and Rocks Biological Consulting, Inc. (Rocks) completed a general biological survey, fairy shrimp surveys, and rare plant surveys for the Sander East site, as described in the Existing Conditions Letter Report for the Pure Water San Diego Program North City Water Purification Project (Existing Conditions Report; HELIX 2016a). The general biological survey consisted of mapping vegetation communities, conducting habitat assessments for sensitive species, documenting the locations of sensitive plant and animal species observed, evaluating potentially jurisdictional habitats/drainages, as well as mapping potential ponding basins. A baseline assessment of the functions and services of the vernal pool systems within the Sander East site was conducted by Dudek in April 2017. The vegetation community mapping was adjusted slightly by Dudek in 2017 to reflect current conditions. Wet

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and dry season fairy shrimp surveys were conducted by HELIX and Rocks (as a subconsultant to HELIX) in 2016 (Rocks 2016 and HELIX 2016b, respectively), and the surveys were conducted in accordance with the U.S. Fish and Wildlife Service (USFWS) protocol (USFWS 2015) to determine the presence/absence of San Diego fairy shrimp (*Branchinecta sandiegonensis*) and Riverside fairy shrimp (*Streptocephalus woottoni*). In addition, soil from the basins that contained dry season fairy shrimp cysts were sent to the University of Kansas for hatching to determine if the presence of the non-listed versatile fairy shrimp (*Branchinecta lindahli*) or the listed San Diego fairy shrimp (University of Kansas 2017).

Vegetation Communities

A total of 12 vegetation communities/land use areas occur on the Sander East site (Table 1; Figure 3): vernal pool, disturbed wetland, scrub oak chaparral, coastal sage-chaparral transition, Diegan coastal sage scrub (including disturbed), Diegan coastal sage scrub: baccharis-dominated, chamise chaparral, eucalyptus woodland, disturbed habitat, non-native vegetation, maintained engineered landfill surface, and developed. These communities are discussed in detail below.

VEGETATION COMMUNITY/LAND USE AREA¹	TIER	AREA
Wetlands		
Vernal pool (44000)	Wetland	0.55
Disturbed wetland (11200)	Wetland	1.79
Wetlands Subtotal		2.34
Uplands		
Scrub oak chaparral (37900)	I	2.54
Coastal sage-chaparral transition (37G00)	II	12.94
Diegan coastal sage scrub (including disturbed) (32500)	II	0.82
Diegan coastal sage scrub: baccharis-dominated (32530)	II	1.25
Chamise chaparral (37200)	IIIA	1.30
Eucalyptus woodland (79100)	IV	0.31
Disturbed habitat (11300)	IV	0.22
Non-native vegetation (11000)	IV	0.08
Maintained engineered landfill surface (12000)	N/A	8.03
Developed (12000)	N/A	0.01
Uplands Subtotal		27.50
TOTAL		29.84

¹Vegetation community codes are from Oberbauer (2008)

Vernal Pool

Vernal pools are a highly specialized plant habitat that supports a unique flora. Vernal pools are associated with two important physical conditions: a subsurface hardpan or claypan that inhibits the downward percolation of water and a topography characterized by a series of low hummocks

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called mimas mounds and low depressions (the vernal pools), which prevent above ground water runoff. As the result of these two physical conditions, water collects in these depressions during the rainy season. As the rainy season ends and the dry season begins, the water that has collected in these vernal pools is gradually evaporated. As water evaporates from these pools, a gradient of low soil water availability to high soil water availability is created from the periphery of the pool margins to the center of the pool. The chemical composition of the remaining pool water becomes more concentrated as the pool water is evaporated, creating a gradient of low ion concentration at the pool periphery to high ion concentration at the pool center. A temporal succession of plant species will occur at the receding pool margins, depending upon the physical and chemical microenvironmental characteristics of the pool. Vernal pool indicator species observed within these pools include hyssop loosestrife (*Lythrum hyssopifolia*), long leaf plantain (*Plantago elongata*), San Diego mesa mint (*Pogogyne abramsii*), and woolly marbles (*Psilocarphus brevissimus*). Thirty-seven vernal pools were documented within the Sander East site, totaling 0.55 acre.

Disturbed Wetland

Disturbed wetlands are dominated by exotic wetland species that invade areas that have been previously disturbed or undergone periodic disturbances. These non-natives become established more readily following natural or human-induced habitat disturbance than the native wetland flora. The disturbed wetland on the Sander East site makes up approximately 1.79 acres in association with an unnamed drainage that crosses through the site, and the community is dominated by pampas grass (*Cortaderia* spp.), tamarisk (*Tamarix* spp.), eucalyptus (*Eucalyptus* sp.), date palm (*Phoenix* spp.), Washington fan palm (*Washingtonia robusta*), and Bermuda grass (*Cynodon dactylon*).

Scrub Oak Chaparral

Scrub oak chaparral is a dense, evergreen chaparral up to 20 feet tall, dominated by scrub oak (*Quercus dumosa*) with considerable mountain mahogany (*Cercocarpus betuloides*). Scrub oak chaparral occurs in somewhat more mesic areas than many other chaparrals, such as north facing slopes, and recovers more rapidly from fires than other chaparrals due to resprouting capabilities of scrub oak (Holland 1986). Approximately 2.54 acres of scrub oak chaparral occur within the Sander East site.

Coastal Sage-Chaparral Transition

Coastal sage-chaparral scrub transition is a mixture of sclerophyllous chaparral shrubs and drought-deciduous sage scrub species regarded as an ecotone (transition) between two vegetation communities. This singular community contains floristic elements of both communities including California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum* ssp. *fasciculatum*), laurel sumac (*Malosma laurina*), chamise (*Adenostoma fasciculatum*), inland scrub oak (*Quercus berberidifolia*), and ceanothus (*Ceanothus* spp.). This community varies in species composition but always contains coastal sage and chaparral species. Approximately 12.94 acres of coastal sage-chaparral scrub occur within the Sander East site.

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Diegan Coastal Sage Scrub

Diegan coastal sage scrub is the wide-spread coastal sage scrub in coastal southern California. This vegetation community occupies xeric sites characterized by shallow soils. The Diegan coastal sage scrub on site is dominated by California sagebrush, California buckwheat, laurel sumac, lemonadeberry (*Rhus integrifolia*), and black and white sage (*Salvia mellifera* and *S. apiana*). Approximately 0.82 acre of primarily disturbed Diegan coastal sage scrub occurs within the Sander East site.

Diegan Coastal Sage Scrub: baccharis-dominated

Diegan coastal sage scrub: baccharis-dominated is similar to Diegan coastal sage scrub but dominated by *Baccharis* species. It is typically found on disturbed sites or those with nutrient-poor soils. This habitat is often found within other forms of Diegan Coastal Sage Scrub and on upper terraces of river valleys. Dominant species include broom baccharis (*Baccharis sarothroides*) and/or coyote brush (*Baccharis pilularis*), and may also include California sagebrush, California buckwheat, sawtooth goldenbush (*Hazardia squarrosa*), Menzies' goldenbush (*Isocoma menziesii*), and black sage in lesser amounts. Approximately 1.25 acres of Diegan coastal sage scrub: baccharis-dominated habitat occur within the Sander East site.

Chamise Chaparral

Chamise chaparral is the most widely distributed chaparral shrub and is dominated by the species chamise. This vegetation community is found from Baja to northern California in pure or mixed stands. Chamise chaparral's ubiquitous distribution may be the result of chamise being the only chaparral species that regenerates from fire from both an underground root crown and the production of seeds (Rundel 1986). It often dominates at low elevations and on xeric south facing slopes with 60 to 90 percent canopy cover. Mission manzanita (*Xylococcus bicolor*) and black sage are minor plant species associated within this vegetation community. Approximately 1.30 acres of chamise chaparral occur within the Sander East site.

Eucalyptus Woodland

Eucalyptus woodland is dominated by eucalyptus, an introduced species that has often been planted purposely for wind blocking, ornamental, and hardwood production purposes. Most groves are monotypic with the most common species being either the blue gum (*Eucalyptus gunnii*) or red gum (*E. camaldulensis* ssp. *obtusa*). The understory within well-established groves is usually very sparse due to the closed canopy and allelopathic nature of the abundant leaf and bark litter. If sufficient moisture is available, this species becomes naturalized and is able to reproduce and expand its range. Approximately 0.31 acre of eucalyptus woodland occurs within the Sander East site.

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Disturbed Habitat

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat. Approximately 0.22 acre of disturbed habitat occur within the Sander East site, which primarily includes the landfill access easement that traverses the western portion of the Sander East site. A partially paved roadway varying in width from 10 to 18 feet traverses the western portion of the Sander East site and provides access to the adjacent landfill.

Non-native Vegetation

Non-native vegetation is a category describing stands of naturalized trees and shrubs (e.g., acacia [*Acacia* sp.], peppertree [*Schinus* sp.]), many of which are also used in landscaping. Approximately 0.08 acre of non-native vegetation occurs within the Sander East site.

Maintained Engineered Landfill Surface

Maintained engineered landfill surface includes land that is considered developed due to active maintenance associated with landfill operations. These areas have been physically altered by landfill activities and typically does not support native vegetation. Approximately 8.03 acres of maintained engineered landfill surface occurs within the northern portion of the Sander East site.

Developed

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained. Approximately 0.01 acre of developed land occurs within the Sander East site and consists of a stabilized crossing of the unnamed drainage.

Sensitive Biological Resources

Sensitive Vegetation Communities

Sensitive vegetation communities that occur within the Sander East site include Diegan coastal sage scrub, Diegan coastal sage scrub: baccharis-dominated, chamise chaparral, and scrub oak chaparral.

Sensitive Plants

One federally and state listed as endangered plant species, San Diego mesa mint, was observed within the Sander East site. Six other special-status plant species were observed: Orcutt's brodiaea (*Brodiaea orcuttii*), long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), San Diego barrel cactus (*Ferocactus viridescens*), Nuttall's scrub oak (*Quercus*

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dumosa), ashy spike-moss (*Selaginella cinerascens*), and San Diego County viguiera (*Viguiera laciniata*) (Figure 4).

San Diego mesa mint (*Pogogyne abramsii*)

Listing: FE/SE; CNPS Rank 1B.1

Distribution: Western San Diego County; Baja California, Mexico

Habitat: This small annual is restricted to vernal pools in grasslands, chamise chaparral, and coastal sage scrub on mesas.

Status on site: A total of 12 individuals were documented by Dudek in 2017 in a single vernal pool in the central portion of the site.

Orcutt's brodiaea (*Brodiaea orcuttii*)

Listing: --/--; CNPS Rank 1B.1; City MSCP Covered

Distribution: Riverside and San Bernardino counties south to Baja California, Mexico

Habitat: Vernal moist grasslands, mima mound topography, and vernal pool periphery are preferred habitat. Occasionally will grow on streamside embankments in clay soils.

Status on site: A total of 130 individuals were estimated within the site.

Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)

Listing: --/--; CNPS Rank 1B.2

Distribution: Western Riverside, San Diego, and Santa Barbara counties; Baja California, Mexico

Habitat: This small annual is typically found on clay lenses largely devoid of shrubs and can be occasionally seen on vernal pool peripheries.

Status on site: A minimum of 15,992 individuals were estimated within the site.

San Diego barrel cactus (*Ferocactus viridescens*)

Listing: --/--; CNPS Rank 2.1; City MCSP Covered

Distribution: San Diego County; Baja California, Mexico

Habitat: Optimal habitat for this cactus appears to be Diegan coastal sage scrub hillsides, often at the crest of slopes and growing among cobbles. Occasionally found on vernal pool periphery and mima mound topography in Otay Mesa.

Status on site: One individual was documented in the western portion of the site.

Nuttall's scrub oak (*Quercus dumosa*)

Listing: --/--; CNPS Rank 1B.1

Distribution: San Diego, Orange, and Santa Barbara counties; Baja California, Mexico

Habitat: Chaparral with a relatively open canopy cover is the preferred habitat in flat terrain (also found in coastal scrub). On north-facing slopes, may grow in dense monotypic stands. Occurs on sandy or clay loam soils.

Status on site: A total of 432 individuals were estimated within the site.

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Ashy spike-moss (*Selaginella cinerascens*)

Listing: --/--; CNPS Rank 4.1

Distribution: Orange and San Diego counties; northwestern Baja California, Mexico

Habitat: Flat mesas in coastal sage scrub and chaparral. A good indicator of site degradation, as it rarely inhabits disturbed soils.

Status on site: A total of 2,921 individuals were estimated within the site.

San Diego County viguiera (*Viguiera laciniata*)

Listing: --/--; CNPS Rank 4.2

Distribution: San Diego and Orange County; Baja California, Mexico

Habitat: Diegan coastal sage scrub. Generally, shrub cover is more open than at mesic, coastal locales supporting sage scrub. Occurs on a variety of soil types.

Status on site: One individual was documented within the western portion of the site.

No other sensitive plant species, including City narrow endemic species, were observed during the biological surveys that took place between October 2015 and April 2017.

Sensitive Animals

Sensitive animal species are considered those listed as federal/state endangered or threatened, proposed for listing, fully protected by California Department of Fish and Wildlife (CDFW), MSCP covered species, or California species of special concern. Two sensitive animal species were observed or detected during the biological surveys: San Diego fairy shrimp and western spadefoot toad (Figure 4).

San Diego fairy shrimp (*Branchinecta sandiegonensis*)

Status: FE/--

Distribution: San Diego County and extreme northern Baja California, Mexico.

Habitat(s): Seasonally astatic pools which occur in tectonic swales or earth slump basins and other areas of shallow, standing water often in patches of grassland and agriculture interspersed in coastal sage scrub and chaparral.

Status on site: San Diego fairy shrimp were observed within two vernal pools on the site during the wet season surveys during the 2015-2016 wet season. San Diego fairy shrimp were documented in three additional vernal pools as part of the dry season hatching work that was completed in 2017.

Western spadefoot (*Spea hammondi*)

Status: --/SSC

Distribution: Throughout the Central Valley and San Francisco Bay area south along the coast to northwestern Baja California

Habitat: Occurs in open coastal sage scrub, chaparral, and grassland, along sandy or gravelly washes, floodplains, alluvial fans, or playas; requires temporary pools for breeding and friable soils for burrowing; generally excluded from areas with bullfrogs (*Rana catesbiana*) or crayfish (*Procambarus* sp.).

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Status on site: One individual was observed on the eastern portion of the site in 2016. In addition, Dudek observed tadpoles and juveniles in 2017 in the eastern portion of the site.

Jurisdictional Wetlands

Vernal pools with indicator species are considered City jurisdictional aquatic resources in accordance with the City's Biology Guidelines (City 2012). The on-site vernal pools are considered jurisdictional wetlands by the U.S. Army Corps of Engineers (USACE) under the federal Clean Water Act based on the observation of ponding for greater than 14 days (wetland hydrology), ponding for a minimum length duration during the growing season (hydric soils), and the presence of vernal pool indicator species. The on-site drainage channel, which crosses the Sander East site approximately 100 feet to the north of the vernal pool complex, may provide connectivity of surface flows to an USACE-jurisdictional waterbody. The Regional Water Quality Control Board (RWQCB) may assert jurisdiction over the vernal pools as wetland waters of the State under the Porter Cologne Act. Based on these considerations, the vernal pools are considered jurisdictional in the context of City, USACE, and RWQCB guidelines. A formal jurisdictional delineation has not been conducted and would be needed to assess whether the on-site drainage would be under the jurisdiction of USACE, RWQCB, and/or CDFW.

BOUNDARY LINE ADJUSTMENT

The Project would include an MHPA boundary line adjustment to add areas of existing native wetland and upland habitats as well as proposed vernal pool restoration, enhancement, and preservation areas currently outside the MHPA (Figure 5). Adjustments to the MHPA boundary may be made without amending the City's MSCP Subarea Plan in cases where the new MHPA boundary preserves an area of equivalent or greater biological value. The proposed boundary line adjustment would result in the addition of approximately 21.61 acres of upland and wetland habitat and the sensitive species supported therein into the MHPA (Table 3).

Table 3			
PROPOSED ADDITIONS TO THE MHPA (acres)			
HABITAT	TIER	TOTAL SITE ACREAGE	PROPOSED MHPA ADDITION
Wetlands			
Vernal pool	Wetland	0.55	0.55
Disturbed wetland	Wetland	1.79	1.79
Wetland Subtotal		2.34	2.34

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Table 3 (cont.) PROPOSED ADDITIONS TO THE MHPA (acres)			
HABITAT	TIER	TOTAL SITE ACREAGE	PROPOSED MHPA ADDITION
Sensitive Uplands			
Scrub oak chaparral	I	2.54	2.54
Coastal sage-chaparral transition	II	12.94	12.94
Diegan coastal sage scrub (including disturbed)	II	0.82	0.82
Diegan coastal sage scrub: baccharis-dominated	II	1.25	1.25
Chamise chaparral	IIIA	1.30	1.30
<i>Sensitive Upland Subtotal</i>		18.86	18.86
Non-sensitive Uplands			
Eucalyptus woodland	IV	0.31	0.28
Disturbed habitat	IV	0.22	0.05
Non-native vegetation	--	0.08	0.08
Maintained engineered landfill surface	--	8.03	--
Developed	--	0.01	--
<i>Non-sensitive Upland Subtotal</i>		8.64	0.41
TOTAL		29.84	21.61

In order for a boundary line adjustment to be approved, six findings must be made in accordance with Section 5.4.2 of the Regional MSCP Plan (dated August 1998). These six findings are discussed below.

1. *Effects on significantly and sufficiently conserved habitats (i.e., the exchange maintains or improves the conservation, configuration, or status of significantly and sufficiently conserved habitats, as defined in Section 4.2.4 of the Regional MSCP Plan).*

The proposed boundary line adjustment would result in the addition of 21.61 acres to the MHPA. The maintained engineered landfill surface areas within the northern portion of the site, as well as the disturbed/developed habitat associated with the access easement for the landfill, would be excluded. The addition of the proposed area would result in an overall net gain in functional wetland and upland habitats to be conserved and managed as part of the MHPA, including a number of sensitive vegetation communities.

2. *Effects on covered species (i.e., the exchange maintains or increases the conservation of covered species).*

The habitat proposed for addition to the MHPA supports six sensitive plant species (Orcutt's brodiaea, long-spined spineflower, San Diego barrel cactus, San Diego mesa mint, Nuttall's scrub oak, ashy spike-moss, and San Diego County viguiera) and two sensitive animal species (San Diego fairy shrimp and western spadefoot toad). Inclusion of this habitat in the

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MHPA would increase the conservation of covered species (Orcutt's brodiaea, San Diego barrel cactus, San Diego mesa mint, and San Diego fairy shrimp).

3. *Effects on habitat linkages and function of preserve areas (i.e., the exchange maintains or improves any habitat linkages or wildlife corridors).*

The proposed boundary adjustment would add wetland and upland habitat to the MHPA, including vernal pools, a drainage channel supporting disturbed wetland, and sensitive upland habitats including coastal sage-chaparral transition, Diegan coastal sage scrub, Diegan coastal sage scrub: baccharis-dominated, chamise chaparral, and scrub oak chaparral. The proposed boundary line adjustment would improve habitat linkages because the Sander East site would provide stopover habitat for avian species and would preserve an unnamed drainage that provides local movement for wildlife species.

4. *Effects on preserve configuration and management (i.e., the exchange results in similar or improved management efficiency and/or protection of biological resources).*

The proposed MHPA boundary adjustment will improve the protection of biological resources. Specifically, all 37 vernal pools, including those that support listed species (San Diego fairy shrimp and San Diego mesa mint), along with a number of other sensitive species, would be included in the MHPA. Active restoration and management work that would be completed during a five-year maintenance and monitoring period, including the control of non-native vegetation in and around the existing and restored vernal pools, protection of the area from future disturbance with exclusionary fencing, and reducing unauthorized access through the restoration of a dirt road and trails that bisect the vernal pool complex. Long-term and adaptive management will be necessary to manage the site in perpetuity and to protect the viability of the vernal pool complex, but the boundary adjustment is not expected to affect the management efficiency or configuration of the MHPA. The boundary adjustment will add 21.61 acres of high-quality restored lands, and preserve management will not begin until the site achieves its success criteria and the mitigation is accepted by the regulatory agencies. Upon successful completion of the proposed mitigation activities, the habitat would be managed in accordance with MHPA requirements and in accordance with the City's Vernal Pool HCP.

5. *Effects on ecotones or other conditions affecting species diversity (i.e., the exchange maintains topographic and structural diversity and habitat interfaces of the preserve).*

The areas proposed for addition to the MHPA currently consist of wetland and upland habitat supporting a variety of sensitive plant and animal species. The proposed boundary line adjustment would maintain topographic and structural diversity by including the existing habitats into the MHPA. Habitat interfaces would also be maintained through the addition of these lands into the MHPA, including the habitat restoration areas that are proposed. Species diversity is also expected to increase as a result of the vernal pool mitigation that is proposed for the site.

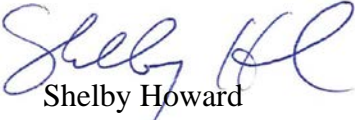
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6. *Effects on species of concern not on the covered species list (i.e., the exchange does not significantly increase the likelihood that an uncovered species will meet the criteria for listing under either the federal or state Environmental Species Acts).*

The proposed boundary adjustment would protect the habitats that support sensitive species on the site, including those that are not on the covered species list. Furthermore, the proposed mitigation would improve the quality of the habitat on site and would take measures to reduce future human intrusion through exclusionary fencing and restoration of trails to native habitat. As a result, the boundary line adjustment would not significantly increase the likelihood that an uncovered species would meet the criteria for listing under the federal or state Endangered Species Acts.

Please call either of us if you have any questions or require further information regarding this review.

Sincerely,


Shelby Howard
Principal Biologist


Vanessa Toscano
Project Manager

Enclosures:

- Figure 1 Regional Location
- Figure 2 Project Vicinity (USGS Topography)
- Figure 3 Vegetation
- Figure 4 Special Status Species
- Figure 5 Proposed MHPA

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REFERENCES

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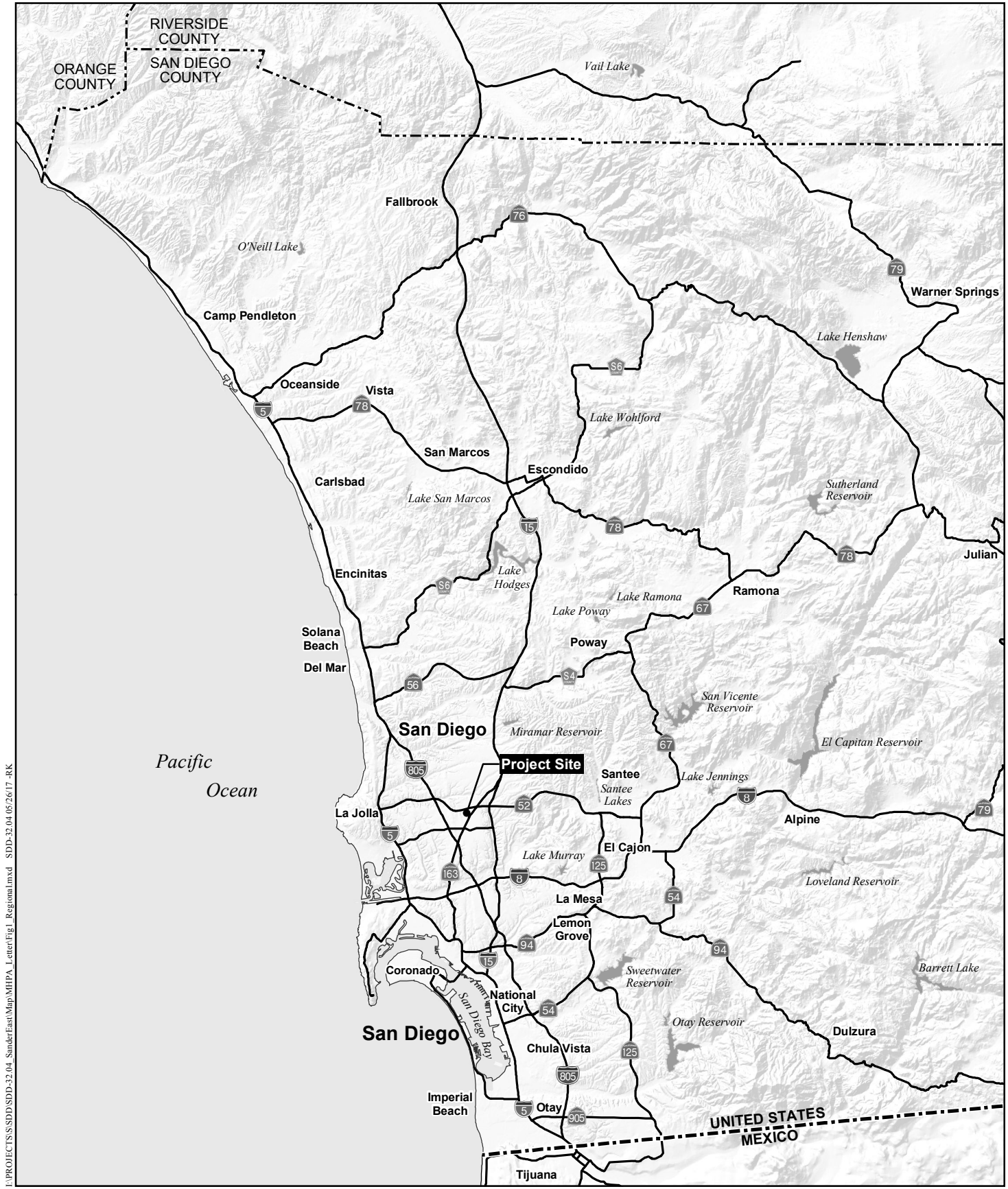
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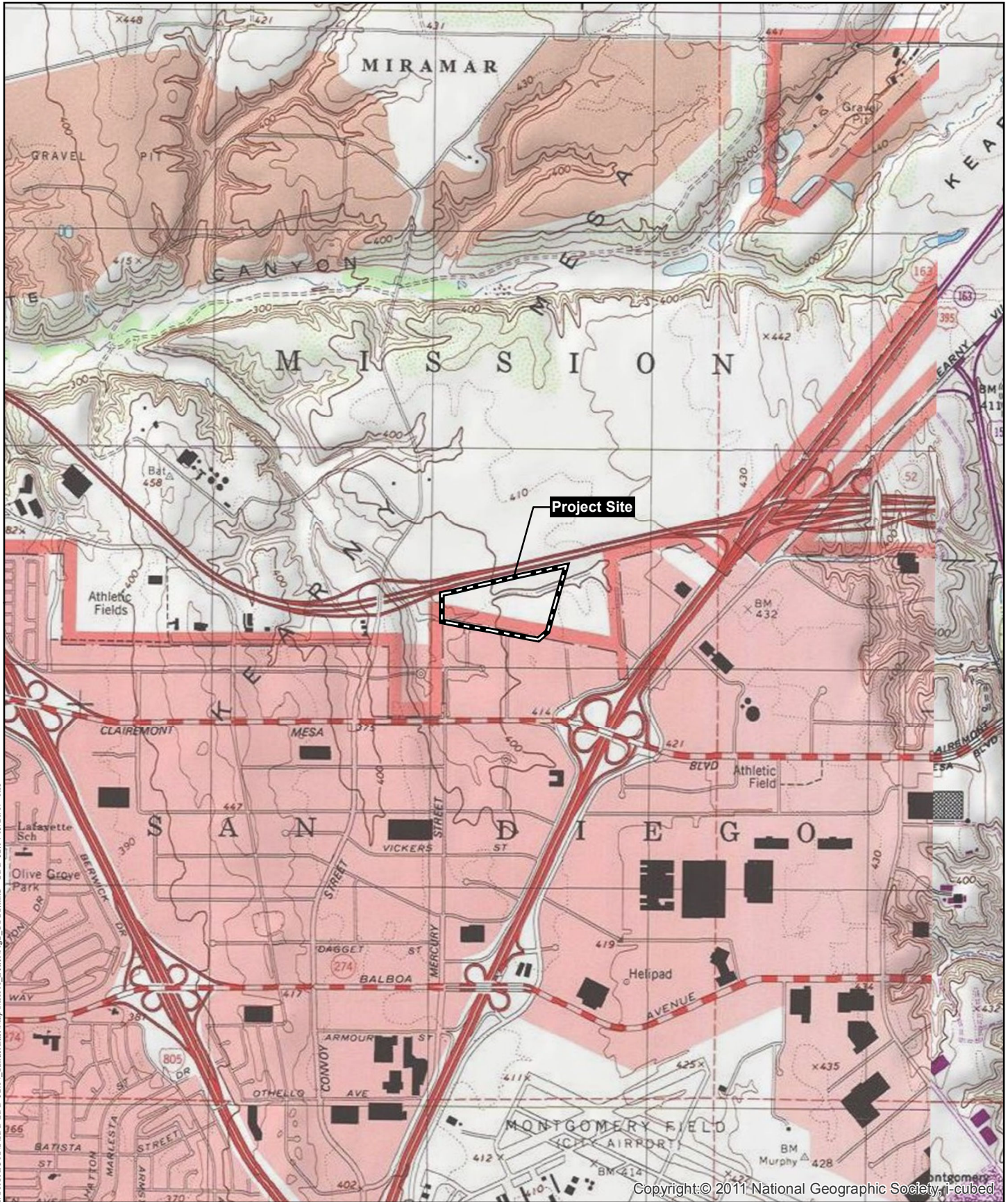
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Regional Location

SANDER EAST - MHPA BOUNDARY LINE ADJUSTMENT



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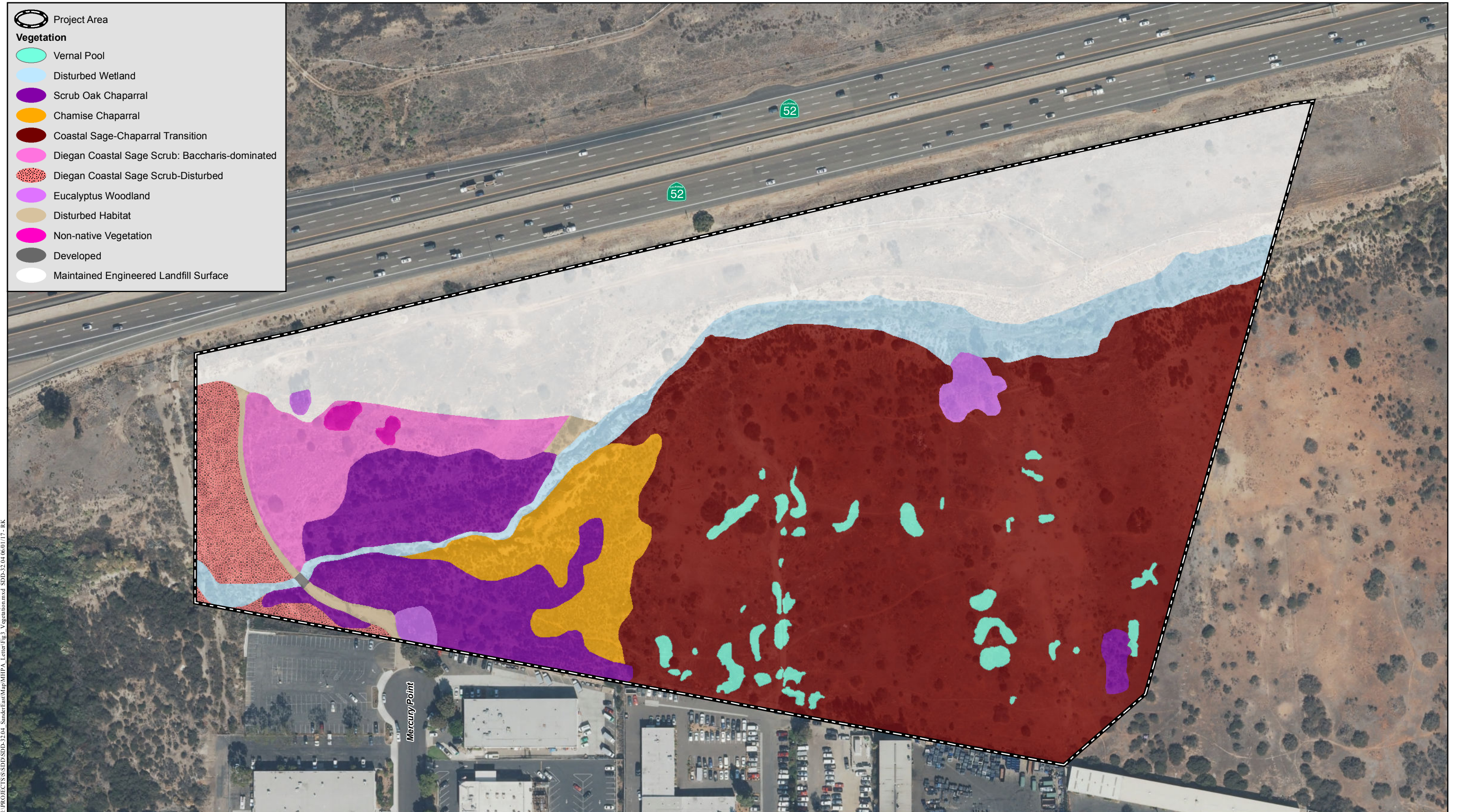
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Project Vicinity (USGS Topography)

SANDER EAST - MHPA BOUNDARY LINE ADJUSTMENT



Figure 2



Vegetation

SANDER EAST - MHPA BOUNDARY LINE ADJUSTMENT

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Project Area

Rare Plant Survey Results

- Orcutt's Brodiaea (*Brodiaea orcuttii*)-CRPR 1B.1
- Long-spined Spineflower (*Chorizanthe polygonoides*var.*longispina*)-CRPR 1B.2
- San Diego Barrel Cactus (*Ferocactus viridescens*)-CRPR 2B.1
- Nuttall's Scrub Oak (*Quercus dumosa*)-CRPR 1B.1
- Ashy Spike-moss (*Selaginella cinerascens*)-CRPR 4.1
- San Diego County Bahiopsis (*Bahiopsis laciniata*)-CRPR 4.2
- San Diego Mesa Mint (*Pogogyne abramsii*)

Rare Plant Survey Results

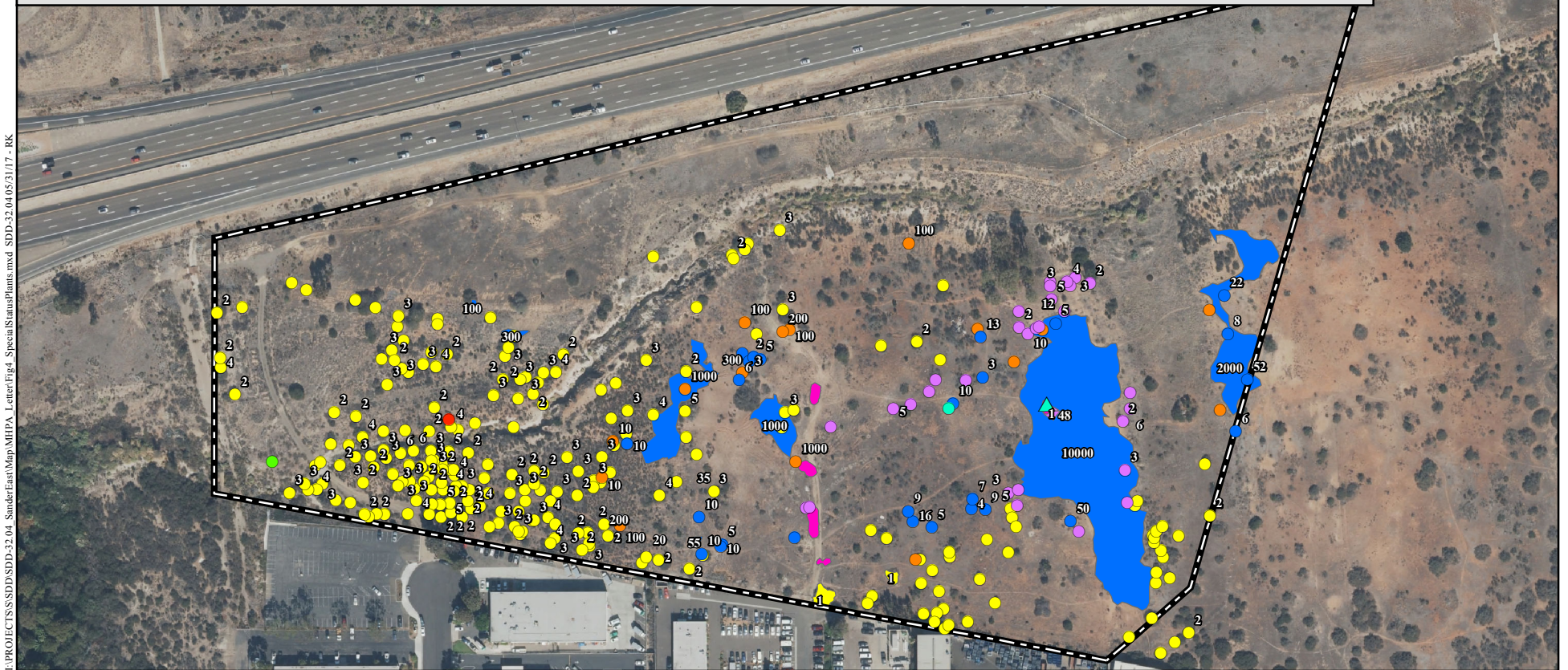
- Orcutt's Brodiaea (*Brodiaea orcuttii*)-CRPR 1B.1
- Long-spined Spineflower (*Chorizanthe polygonoides*var.*longispina*)-CRPR 1B.2
- Nuttall's Scrub Oak (*Quercus dumosa*)-CRPR 1B.1

Special Status Animal Survey Results

- ▲ Western Spadefoot Toad (*Spea hammondi*) - CDFW Species of Special Concern

Vernal Pool Fairy Shrimp Results

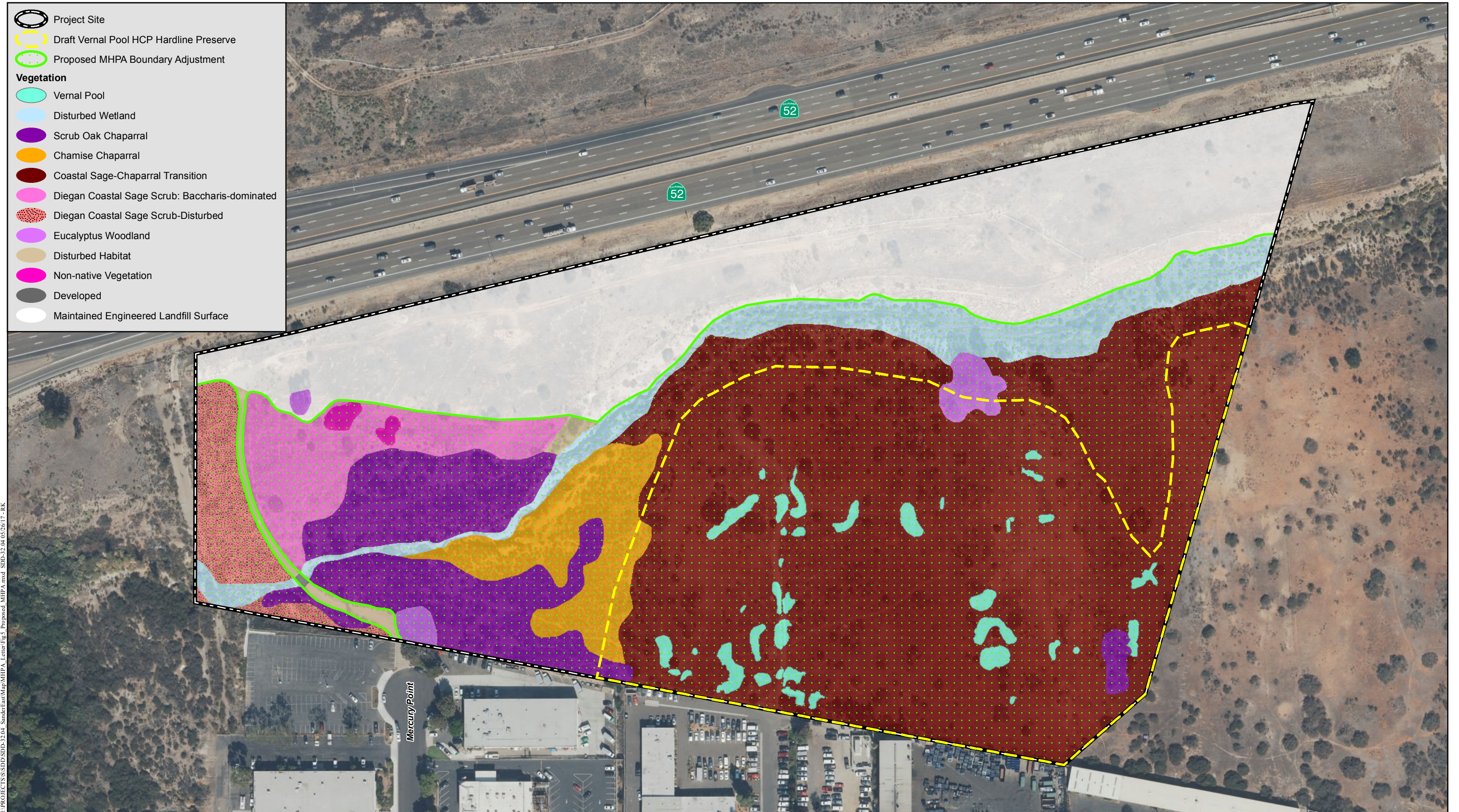
- San Diego Fairy Shrimp (*Branchinecta sandiegonensis*) - Federally Endangered



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Special Status Species

SANDER EAST - MHPA BOUNDARY LINE ADJUSTMENT



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Proposed MHPA Areas

SANDER EAST - MHPA BOUNDARY LINE ADJUSTMENT