

# Canyon Sewer Cleaning Program and Long Term Sewer Maintenance Program Progress Report



Public Utilities Department

2024 Annual Report  
July 1, 2023 – June 30, 2024

# CANYON SEWER CLEANING PROGRAM AND LONG-TERM SEWER MAINTENANCE PROGRAM PROGRESS REPORT

October 2024

Cover – **Top Left:** Bushtit (*Psaltirparus minimus*) nest in California sagebrush (*Artemisia californica*), **Top Right:** California mantis (*Stagomantis californica*) on goldenbush (*Isocoma menziesii*), **Center:** California bee assassin (*Apiomerus californicus*) on splendid mariposa lily (*Calochortus splendens*), **Bottom Left:** Los Peñasquitos Canyon; **Bottom Right:** Lake Murray Canyon (Chaparral Canyon/MTRP)

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Attachment A	25 Month Revegetation and Restoration Projects Status Table
Attachment B	Mitigation Summary Table

## **ACRONYMS AND ABBREVIATIONS**

BMP	Best Management Practices
CDFW	California Department of Fish and Wildlife
CIP	Capital Improvement Project
DSD	Development Services Department
MEAP	Long Term Maintenance and Emergency Access Plan
MHPA	Multiple Habitat Planning Area
OSCAC	Open Space Canyons Advisory Committee
PEIR	Programmatic Environmental Impact Report
PEP	Plant establishment period
Program	Canyon Sewer Cleaning Program and the Long-term Canyon Sewer Maintenance Program
Public Utilities	City of San Diego Public Utilities Department
ROF	Redirection of Flow
SCR	Substantial Conformance Review
USACE	United States Army Corps of Engineers
WWC	Wastewater Collection Division

## **EXECUTIVE SUMMARY**

In response to an Administrative Order from the U.S. Environmental Protection Agency, in an effort to reduce sewer spills and beach closures, and under the direction of Council Policies 400-13 and 400-14, the City of San Diego's Public Utilities Department (Public Utilities) has adopted the Canyon Sewer Cleaning Program and the Long-Term Canyon Sewer Maintenance Program (Program) to access, clean, and repair miles of sewer infrastructure located in canyons and other environmentally sensitive areas.

A Programmatic Environmental Impact Report (PEIR) was prepared to study the Program and in July 2004 the City of San Diego approved Coastal Development Permit No. 13506 and Site Development Permit No. 13507 for the Program.

The objectives of the Program are:

- To complete the inspection and cleaning of City of San Diego sewer infrastructure located in canyons and other environmentally sensitive areas.
- To identify and implement efficient, effective, and environmentally sensitive means to accomplish the necessary canyon sewer cleaning activities.
- To provide for long-term maintenance of canyon sewer infrastructure, recognizing that availability of access to the infrastructure is essential for an effective long-term program, in accordance with Council Policy 400-13.
- To evaluate and pursue options to redirect sewage flows out of canyons and into street sewer lines or other accessible areas, where feasible and appropriate pursuant to Council Policy 400-14.

This annual report, as required by the site development permit condition 27, provides a Progress Report to the Open Space Canyons Advisory Committee (OSCAC) on the Program for the year from July 1, 2023, through June 30, 2024. This report provides the status of all Program activities within the reporting year, including habitat mitigation, long term access planning and implementation, construction and emergency projects, and 25-month revegetation and restoration projects.

## **REDIRECTION OF FLOW STUDY**

An ROF study evaluates the economic feasibility of removing all or part of the sewer from an environmentally sensitive area or canyon versus providing access to the sewer if it remains in place, per Council Policy 400-14. If the estimated cost of redirection of flow for the subject sewer mains is greater than 35% of the estimated cost of Leave-In-Place, the redirection is determined not economically feasible. Over the last year, the following sewer rehab and/or replacements projects received ROF evaluations:

- La Jolla Improvements 5 – South Torrey Pines Canyon
- Kensington Improvements 2 – Fairmount/Aldine Canyon
- Emerald Hills Improvements 1 – North Market Canyon
- Bay Terraces Improvements 2 – Woodman Canyon
- Midtown Improvements 1 – Reynard Way and Washington Creek Canyons
- Mission Valley West Improvements – Presidio, Hortensia, and Hillcrest (Dove) “A” and “B” Canyons
- Hillcrest Improvements 3 – Highway 163 Corridor Canyon
- Hillcrest Improvements 4 – Pennsylvania Canyon (Highway 163 Corridor) Canyon

Each of these projects were evaluated for redirection and were determined not to be economically feasible except for the Washington Canyon portion of the Midtown Improvements 1 Project and the 10<sup>th</sup> St portion of the Hillcrest Improvements 3 Project.

## **LONG TERM ACCESS PROJECTS**

Long Term Sewer Access Projects provide access paths to sewer infrastructure for ongoing maintenance, inspections, and cleaning. When ROF is found to be infeasible from all or portions of environmentally sensitive areas/canyons, Public Utilities staff develop a Long-Term Maintenance and Emergency Access Plan (MEAP) in accordance with Policy 400-13. Public Utilities staff prepares and submits a Substantial Conformance Review (SCR) package to the Development Services Department (DSD) for a determination whether the proposed mitigation, restoration, and access planning for individual canyon areas or project is in conformance with the PEIR and Program master permits. Project specific design plans are then prepared as necessary to provide specific direction on access improvements and construction that include additional information necessary to obtain regulatory agency permits. Separate permits or clearances are obtained from the regulatory agencies prior to implementation of long-term access projects.

The following canyons are in various stages of long-term access planning, implementation, and monitoring:

- **North, Central, and Southern Tecolote Canyon** – Access crossing improvements are included with the Tecolote Canyon Trunk Sewer Replacement CIP project. The construction Notice to Proceed was issued on October 1, 2024. The construction work is anticipated to start in November 2024.

- **San Clemente Canyon** – Improvements for the eastern portion (between Genesee Ave. and I-805) of the Canyon are still in the planning stage. The eastern portion of the Canyon will be evaluated for the need to improve the existing access path and establish new access, if necessary. The eastern portion will be evaluated once construction for the Pure Water Pipeline is completed along Genesee Ave. It was also determined that no improvements for the western and middle portions of the Canyon are necessary.
- **Bounty and Waring (Navajo) Canyon** – Additional improvements to protect and re-establish two access paths near its most southern entrance (north from Adobe Falls Rd & Del Cerro Blvd) and a northeast segment (west from Bounty St & Spear St) of the canyon have completed its planning stage. A final technical memorandum and cost exhibit for implementation and construction of the project were approved summer 2024. Project implementation (including design) and construction schedule have yet to be determined.
- **Ranch Mission Canyon** – This project is still in the planning stage and will include improvements to the existing access path. Implementation schedule is to be determined.
- **Buchanan/University Heights** – Public Utilities transferred this access project to the Engineering and Capital Projects Department (ECP), and it is included in the University Heights Improv 1 CIP. It currently is in the design/permitting stage.
- **Woodman Canyon** – The planning stage is complete for this project. Improvements will be necessary to fix and protect the path from erosion. Implementation schedule is to be determined.
- **Hopkins Canyon** – The planning stage is complete for this project. Improvements will be necessary to fix and protect the path from erosion. Implementation schedule is to be determined.
- **Sewer Pump Station 77B Force Main Vaults** – This project is still in the design/permitting stage and will include creation of a new access path and formalizing an existing path to two different vaults.

## **MAINTENANCE, MONITORING, AND MAPPING**

Wastewater Collection (WWC) Division staff coordinated closely with Environmental Staff (Environmental Section) in ensuring daily activities were in compliance with the Program's master permit, agency permits, and environmental regulations.

Environmental training is provided to all Public Utilities staff working in canyons/environmentally sensitive areas. Crews are directed to contact staff in the Environmental Section for guidance and support for work that may impact sensitive resources.

The Environmental Section reviews daily fieldwork reports, facilitates quarterly meetings to discuss and review all work in canyons, obtains permits, and provides daily

support to field crews. Work conducted in canyons/environmentally sensitive areas is monitored by the Environmental Compliance & Watershed Protection Section. Bird nesting surveys, vegetation and sensitive species mapping, jurisdictional delineations and other biological surveys are completed by the Environmental Section for daily WWC operation and maintenance of sewer lines in canyons.

Public Utilities regularly assesses its mapping inventory of existing access to sewers in canyons and makes updates as necessary. This inventory provides information on existing access conditions, identifies access needs and areas of concern, and facilitates ongoing maintenance. To date, 174 miles of pedestrian and vehicular paths have been mapped with the GPS data for 137 canyon areas. Vehicle access path data is available on Atlas.

## **CONSTRUCTION, MAINTENANCE AND EMERGENCY PROJECTS**

Below is a list of sewer emergency projects, access path maintenance and repair and pipeline/manhole repair projects that occurred in canyons or environmentally sensitive areas since July of 2023:

### **Emergency Projects**

- Stevenson Canyon Manhole 171 Repair
- Shawn Canyon Manhole 75 Replacement
- Sewer Pump Station 11 Repair (Mission Bay)
- Sewer Pump Station 16 Repair (Mission Bay)



Shawn Canyon Manhole 75 Replacement

**Repair/Maintenance Projects**

- North Market Canyon Access Path Maintenance
- Lexington Canyon Access Path Maintenance
- Peñasquitos Canyon Access Path Repair
- Sewer Pump Station 11 Valve Replacement
- Rancho Mission Canyon Access Path Maintenance
- Rose Canyon Sewer Force Main Air Valve Access Repair
- San Clemente Canyon (Middle) Pipe Repair
- Shawn Canyon Manhole 72 Repair

Public Utilities crews completed access path maintenance in multiple canyon areas to facilitate access for cleaning, inspections, and maintenance. Path maintenance is usually limited to trimming or mowing vegetation that has grown on the pathways. Maintenance on the access path precedes manhole cleaning and maintenance.

Public Utilities staff manages emergency and non-CIP construction projects. Environmental review, monitoring, and reporting are done in adherence with the Program. Biological assessments have been prepared and permits have been obtained as necessary for these emergency and construction projects. Following construction, revegetation and/or restoration has been implemented in accordance with the Program.

**25 MONTH REVEGETATION AND RESTORATION PROJECTS**

Conditions of the Master Site Development Permit require effective erosion control on access paths and restoration of temporarily impacted areas outside of permanent access paths following construction. Each impact area is monitored and maintained for a period of no less than 25 months.

Revegetation sites include all areas required for permanent access to utilities including the access paths, turn-arounds, and work areas around manholes. When new access paths and permanent access areas are created, revegetation is required. The goal of revegetation is successful erosion control. Maintenance and monitoring of revegetation areas may include hydroseeding or hand-seeding, weeding, mulching or installing wood chips on the path, installation of temporary Best Management Practices (BMPs), site monitoring or a combination of the above treatments.

Restoration sites are areas impacted outside of permanent access areas. Restoration areas are typically staging areas, emergency access or work areas, pipeline repair areas, unauthorized impact areas, or areas disturbed as a result of temporary widening of pathways. The goal of habitat restoration is re-establishment of native habitat. Restoration areas shall obtain native plant coverage equal to the native species present in the adjacent area or 30% coverage, whichever is greater. Restoration areas shall support no more than 1% perennial weeds and no more than 10% annual weeds during the 25-month maintenance period. Maintenance and monitoring of restoration areas may include hydroseeding or hand-seeding, installation of container plants, weeding,

and installation of temporary BMPs, temporary irrigation, site monitoring or a combination of the above treatments.

Seed and plant material for revegetation and restoration efforts are typically from locations within 25 miles of the coastline in San Diego County. Maintenance and monitoring of all sites continue for 25 months or until successful erosion control is achieved on the paths and/or restoration goals are met outside of the paths.

During this reporting year, monitoring for one canyon sewer revegetation project was completed. Monitoring for three additional projects is ongoing.

Updates on the status of the revegetation and restoration projects are a regular agenda item at OSCAC's meetings. See *Attachment A* for the June 2024 Revegetation and Restoration Projects Status update table.



Sewer Pump Station 77A Force Main Vault Sewer Spill Restoration  
(Hodges Reservoir Recreation Area)

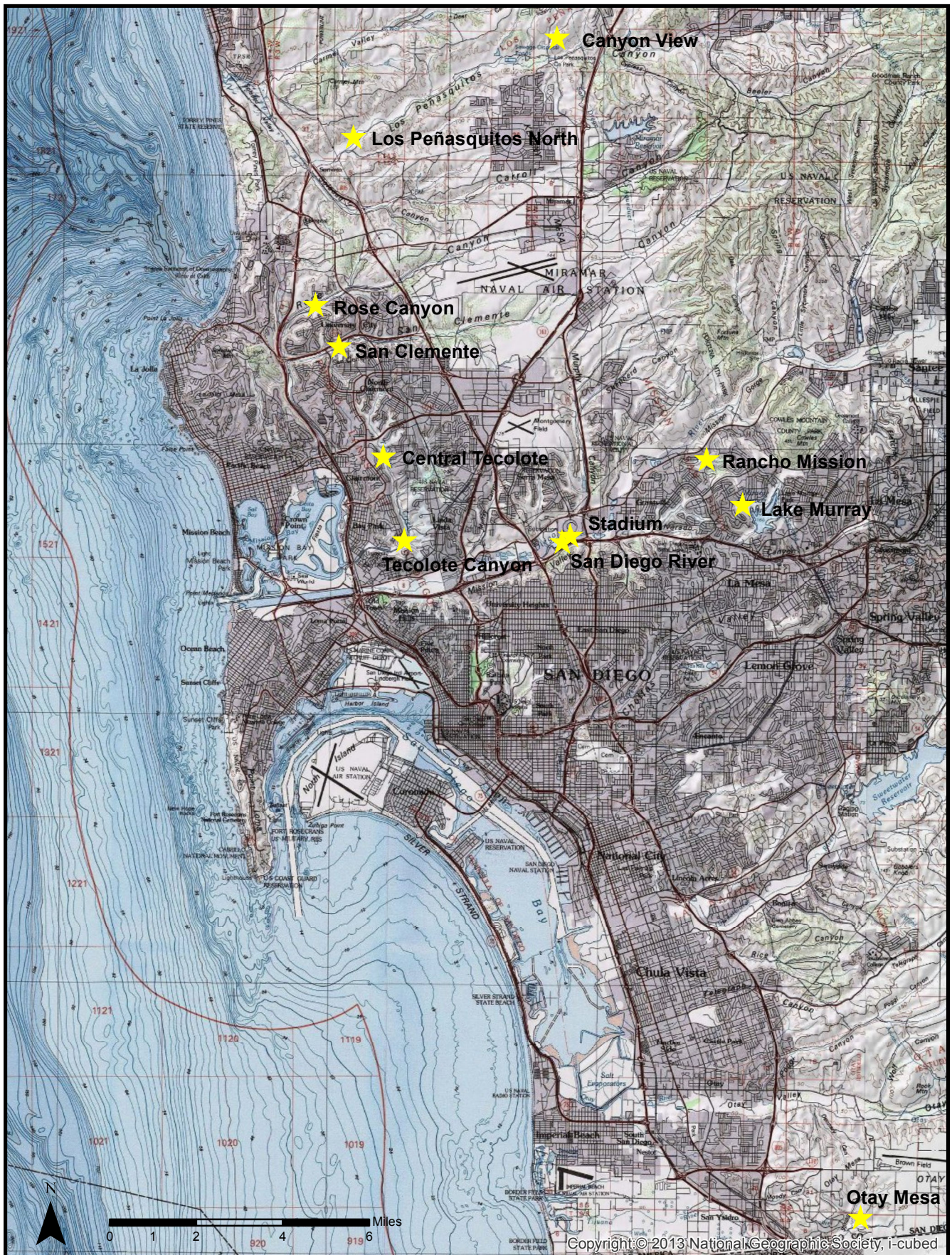
## **MITIGATION PROJECTS**

In accordance with applicable local, state, and federal regulations, restoration, revegetation, or mitigation is required for significant biological impacts resulting from the Program, such as the creation of access paths through environmentally sensitive areas, emergency repairs, and pipeline repair projects. In order to mitigate these impacts, Public Utilities staff has identified and implemented a number of habitat mitigation projects located within various watersheds where past, current, or future impacts have or may occur. These mitigation sites are designed and built to accommodate numerous Public Utilities projects. Allocation of mitigation is completed as each project is planned, permitted and constructed. Post construction adjustments are made to mitigation assignments based on actual project impacts. Project impacts and mitigation assignments are tracked internally within the Canyon Database. A summary of acreages available, acreages assigned, and the balance is included as Attachment B.

The location of these projects is shown in Figure 1. The status of each habitat mitigation project is summarized below.



*Stadium Wetland Mitigation Site (2024)*



## **Canyon View Upland Restoration Mitigation Project**

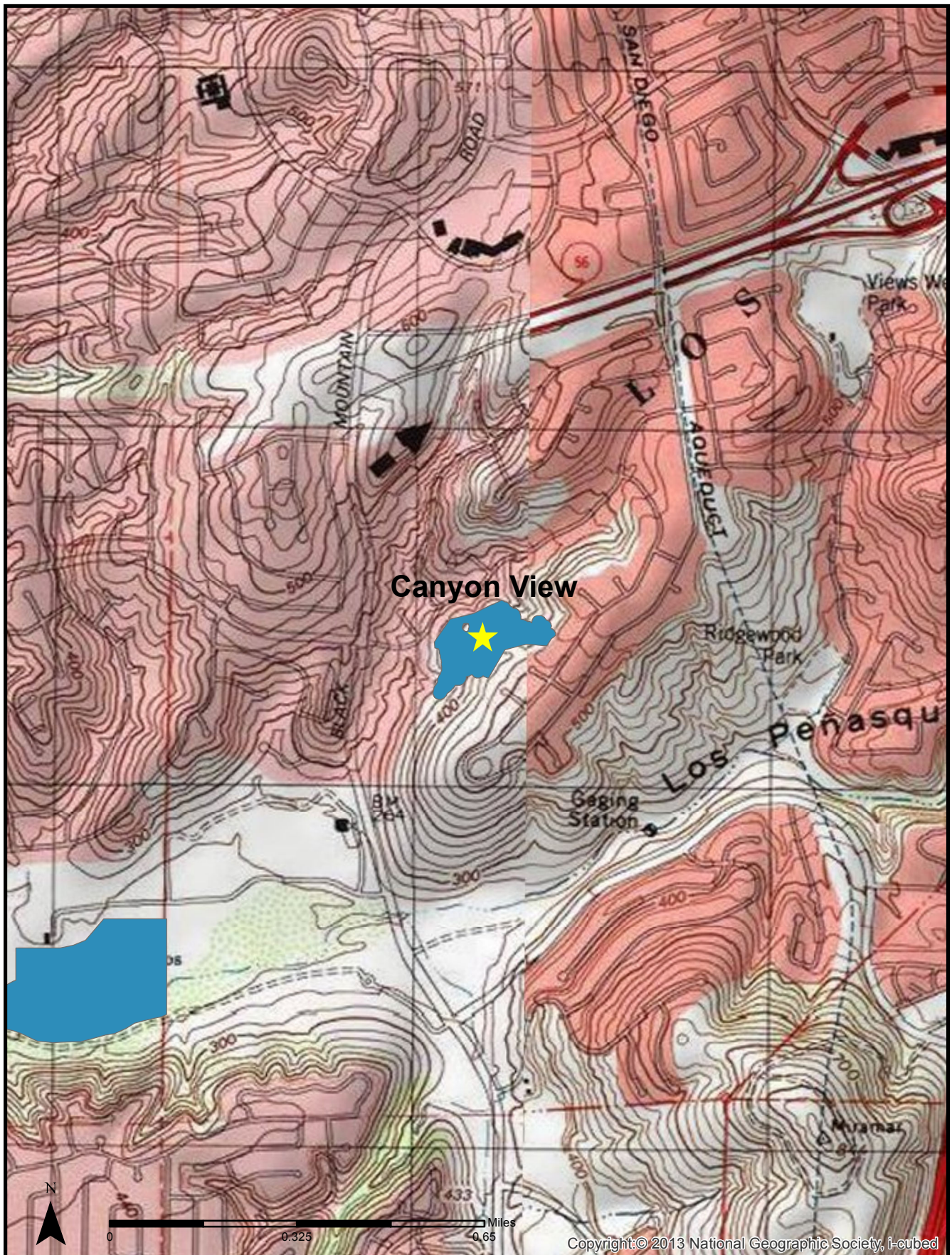
This project is located east of Black Mountain Road and south of Adolphia Street in Los Peñasquitos Canyon (Figure 2). Construction began in September 2011. The project included the restoration of approximately 0.9 acres of native grassland and 6.49 acres of Diegan coastal sage scrub habitat, within Los Peñasquitos Canyon Preserve. Coastal California gnatcatchers (*Polioptila californica californica*) have been observed foraging and feeding fledglings onsite within the native grassland and Diegan coastal sage scrub habitat. This project completed the 5-year maintenance and monitoring period in 2017 and received sign-off in spring of 2018.



*Canyon View: Native grassland and  
coastal sage scrub (2024)*

This site has successfully achieved the goal of restoring low quality non-native uplands into high quality native habitats. The mitigation area continues to sustain mature native habitats in 2023 /2024. The site is dominated by native coastal sage scrub species including California sagebrush (*Artemisia californica*), lemonadeberry (*Rhus integrifolia*), black sage (*Salvia mellifera*), bush sunflower (*Encelia californica*), and native grassland species. Maintenance activities focused on controlling mustard and other non-native species.

<b>Mitigation Credits</b>			
<b>Habitat Type</b>	<b>Acres</b>	<b>Assigned</b>	<b>Balance</b>
<b>Diegan Coastal Sage Scrub (Tier II)</b>	6.49	4.21	2.28
<b>Native Grassland (Tier I)</b>	0.89	0.27	0.62



## Central Tecolote Enhancement Mitigation Project

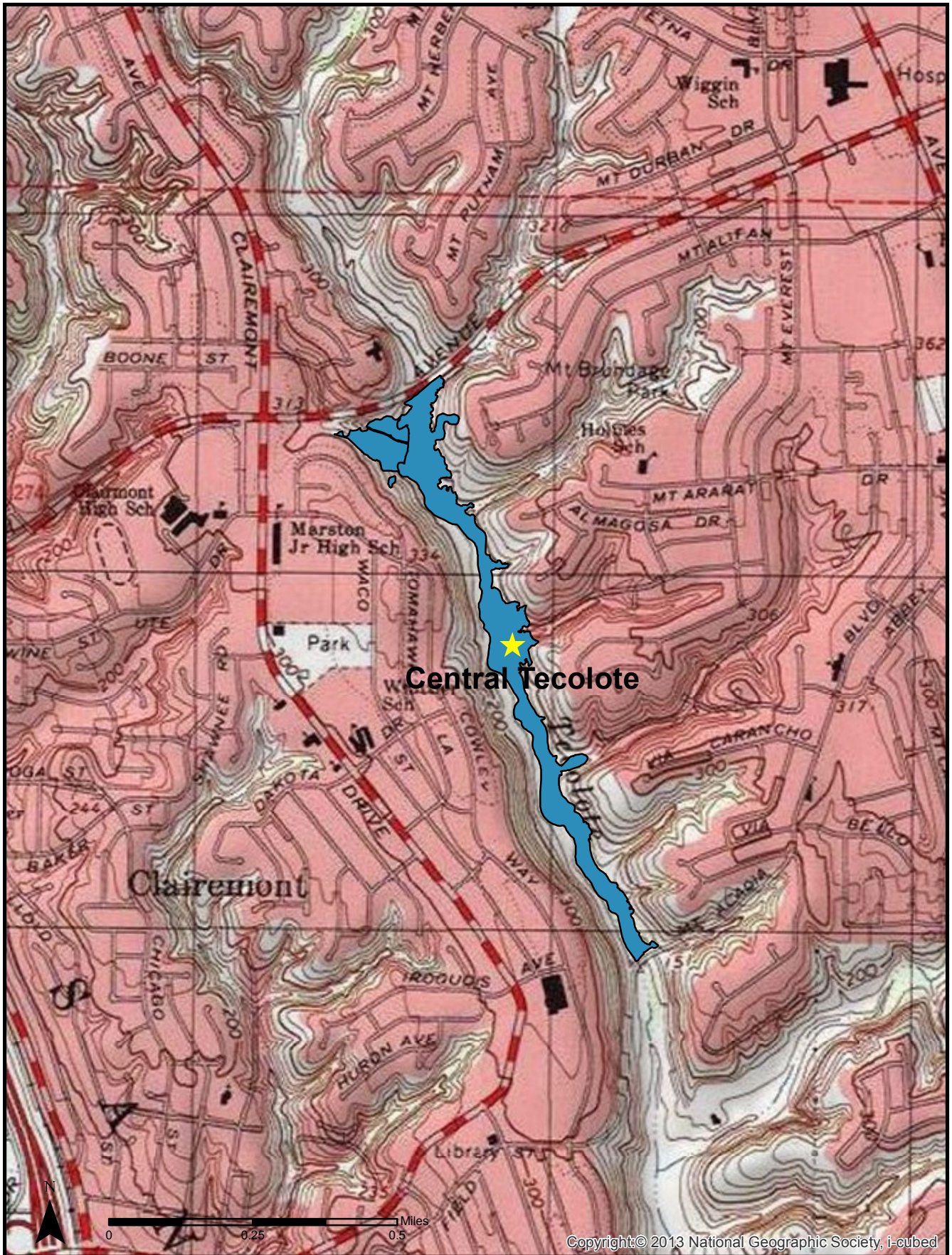
This project is located south of Balboa Avenue and north of Mt. Acadia Boulevard in Tecolote Canyon (Figure 3). The project consists of riparian enhancement and native grassland/coastal sage scrub restoration in the bottom of Tecolote from Balboa Ave. to Mt. Acadia Dr. At the end of the Year 5 Maintenance and Monitoring period vegetation communities had met or exceeded the success criteria milestones, successfully completing the 5-year maintenance and monitoring period and the project received regulatory agency sign-off in June of 2018.



Central Tecolote: coastal sage scrub and coast live oak woodland (2024)

PUD continues to monitor and maintain the site. Maintenance in 2023/2024 included focused control of hollow-stem asphodel (*Asphodelus fistulosus*), which included foliar herbicide application after mechanical methods of control had limited success. Tocalote (*Centaurea melitensis*) and mustards were also removed. The restored habitats onsite continue to develop in all strata, with notable growth resulting from higher-than-average rainfall this season.

Mitigation Credits			
Habitat Type	Acres	Assigned	Balance
Oak Riparian Forest (Enhancement)	7.35	4.72	2.63
Diegan Coastal Sage Scrub (Tier II)	3.06	1.20	1.86
Native Grassland (Tier I)	0.71	0.23	0.49
Coast Live Oak Woodland (Tier I)	0.04	0.04	0
Maritime Succulent Scrub (Tier I)	0.01	0.01	0
Poison Oak Scrub (Tier III)	0.1	0.05	0.05



## Rose Canyon Mitigation Project

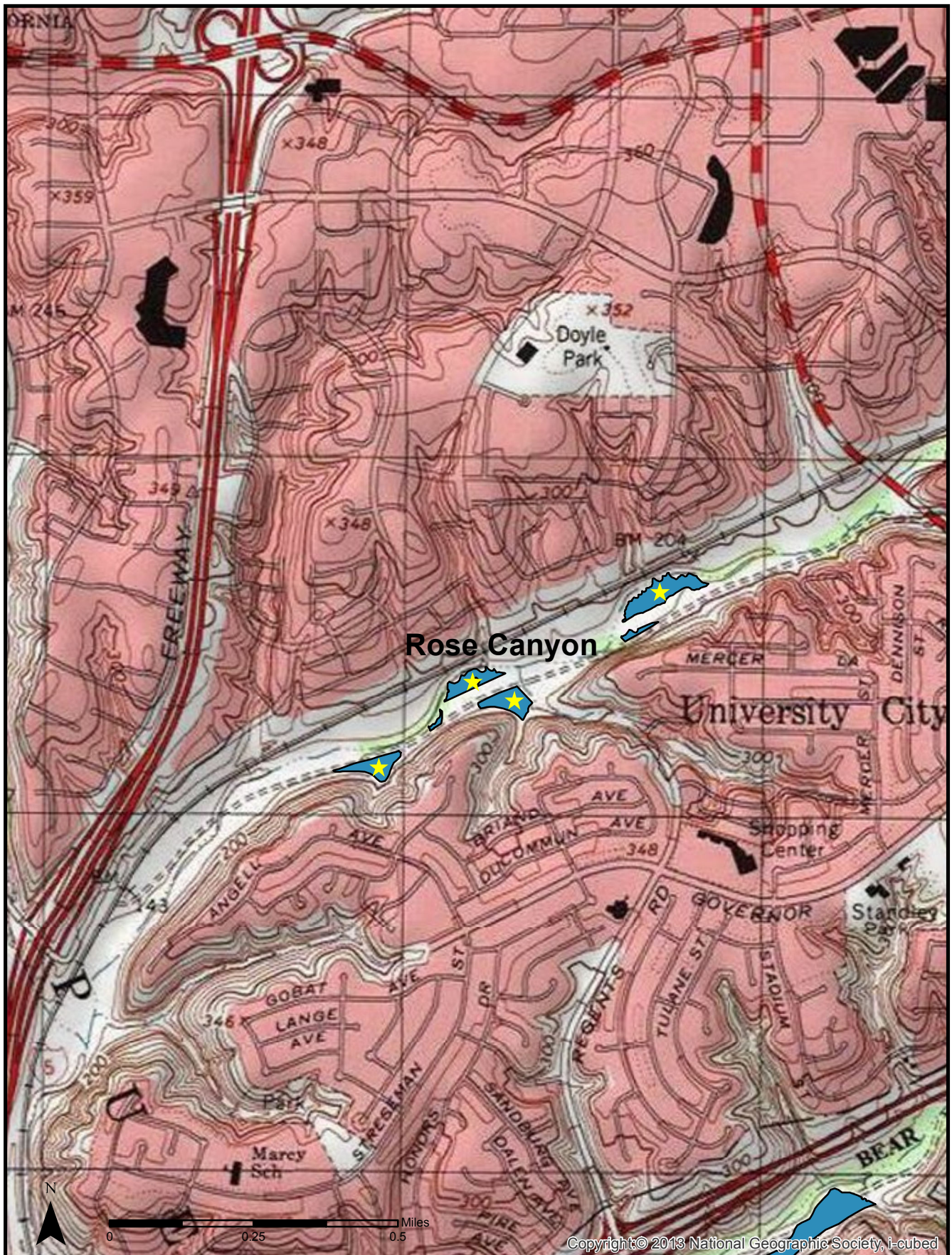
The Rose Canyon Mitigation Project is located in the Rose Canyon Open Space Park, starting 0.5 mile west of Genesee Avenue and continuing another 0.5 mile further west into the park (Figure 4). Approximately 5 acres of oak riparian forest, southern cottonwood-willow riparian forest, and mule fat scrub were created adjacent to Rose Creek with 0.61 acre of riparian enhancement. Approximately 4.75 acres of Diegan coastal sage scrub were restored in the upland areas. Seven years of maintenance was completed in the project area and regulatory sign-off was received in July 2016.



Rose Canyon: Coastal sage scrub and riparian habitat (2024)

As of summer 2024, the site continues to support high cover by native species. The coastal sage scrub is dense with few gaps in the shrub stratum. Coast live oak (*Quercus agrifolia*), willows (*Salix* spp.), and western cottonwood (*Populus fremontii*) are thriving in the riparian areas. Ongoing maintenance activities help to ensure native habitat continues to develop in maturity and spatial coverage. This year maintenance crews focused on control and removal of non-native species such as mustard.

Mitigation Credit Status			
Habitat Type	Acres	Assigned	Balance
Riparian Forest (Creation)	5.05	3.67	1.38
Riparian Forest (Enhancement)	0.61	0.61	0
Diegan Coastal Sage Scrub (Tier II)	4.75	2.49	2.26
Native Grassland (Tier I)	0.28	0.09	0.19



## San Clemente Canyon Mitigation Project

The San Clemente Canyon Mitigation Project is located at two sites within the park, one just east of the Regents East parking area and the other approximately three-fourths of a mile east of the Genesee parking area (Figure 5).

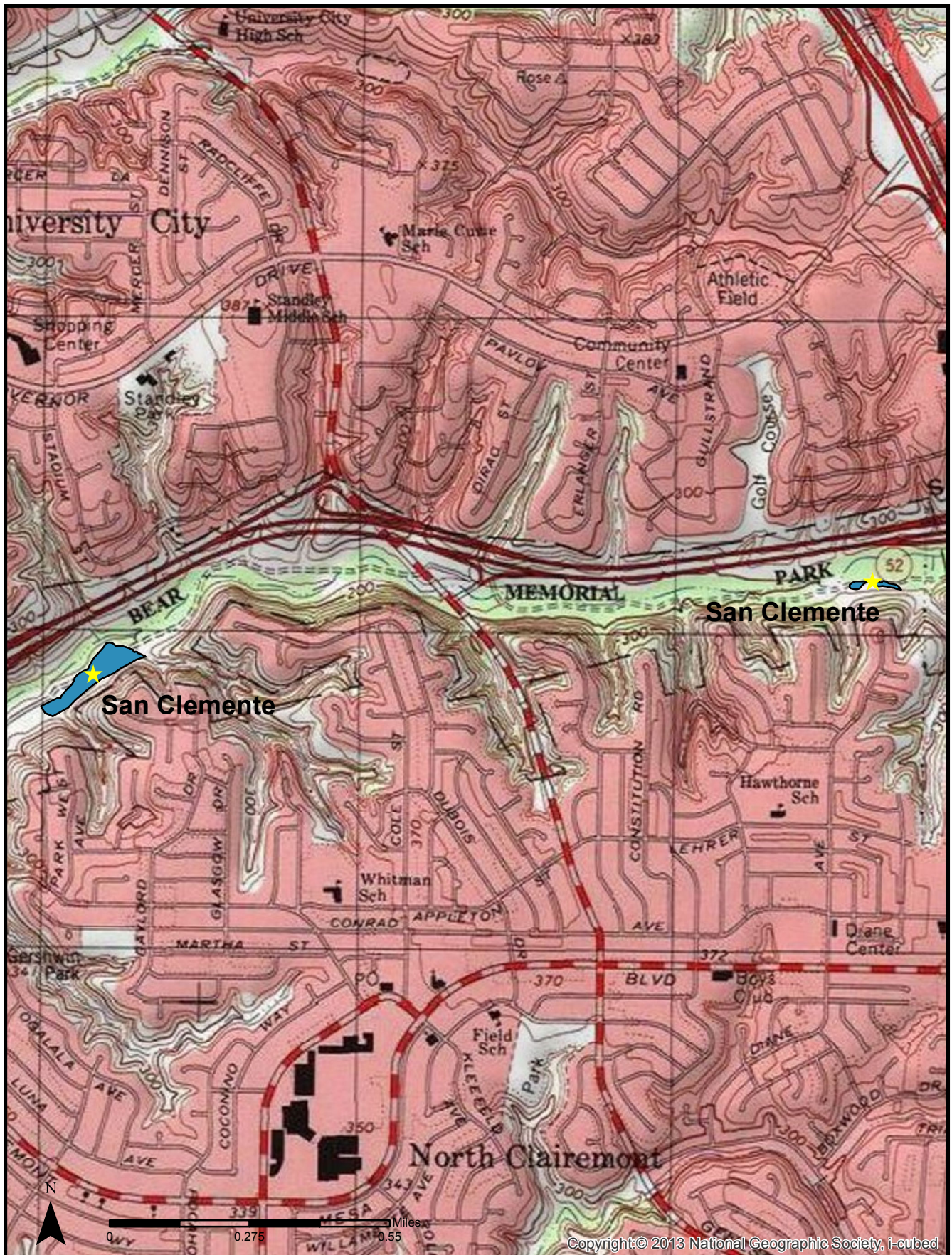
The project included the creation of approximately 2.86 acres of wetland habitat (southern willow riparian forest, streambed, and emergent wetland) and 2.81 acres upland habitat (Diegan coastal sage scrub and oak woodland). Construction was initiated in October 2007 and received regulatory sign-off from the USACE in January 2015.



*San Clemente Canyon: Diegan coastal sage scrub and oak woodland (2024)*

The upland and wetland planting areas for the project continue to demonstrate healthy growth in 2023/2024, with vegetative cover in portions of the wetland habitat exceeding 100 percent cover due to well-developed shrub and tree strata. The wetlands support a willow or oak overstory and an understory of species such as mulefat (*Baccharis salicifolia*) and southwestern spiny rush (*Juncus acutus* subsp. *leopoldii*). In 2023/2024 maintenance crews focused on control and removal of non-native annuals such as mustard and sweet clover. Available mitigation acreage below reflects actual acreage of habitats restored at the end of the 5-year maintenance period and rounded totals of assignments to date.

Mitigation Credit Status			
Habitat Type	Acres	Assigned	Balance
Streambed (Creation)	0.02	0.01	0.01
Emergent Wetland (Creation)	0.20	0.00	0.20
Riparian Forest (Creation)	2.64	2.32	0.32
Diegan Coastal Sage Scrub (Tier II)	2.42	1.57	0.85
Oak Woodland (Tier I)	0.39	0.19	0.20



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## Rancho Mission Canyon Wetland Enhancement Project

The Rancho Mission Canyon Wetland Enhancement Project is located in the City's Rancho Mission Canyon Open Space Park, south of Mission Gorge Road, north of Navajo Road, and on either side of Margerum Way in the Community of Allied Gardens (Figure 6).

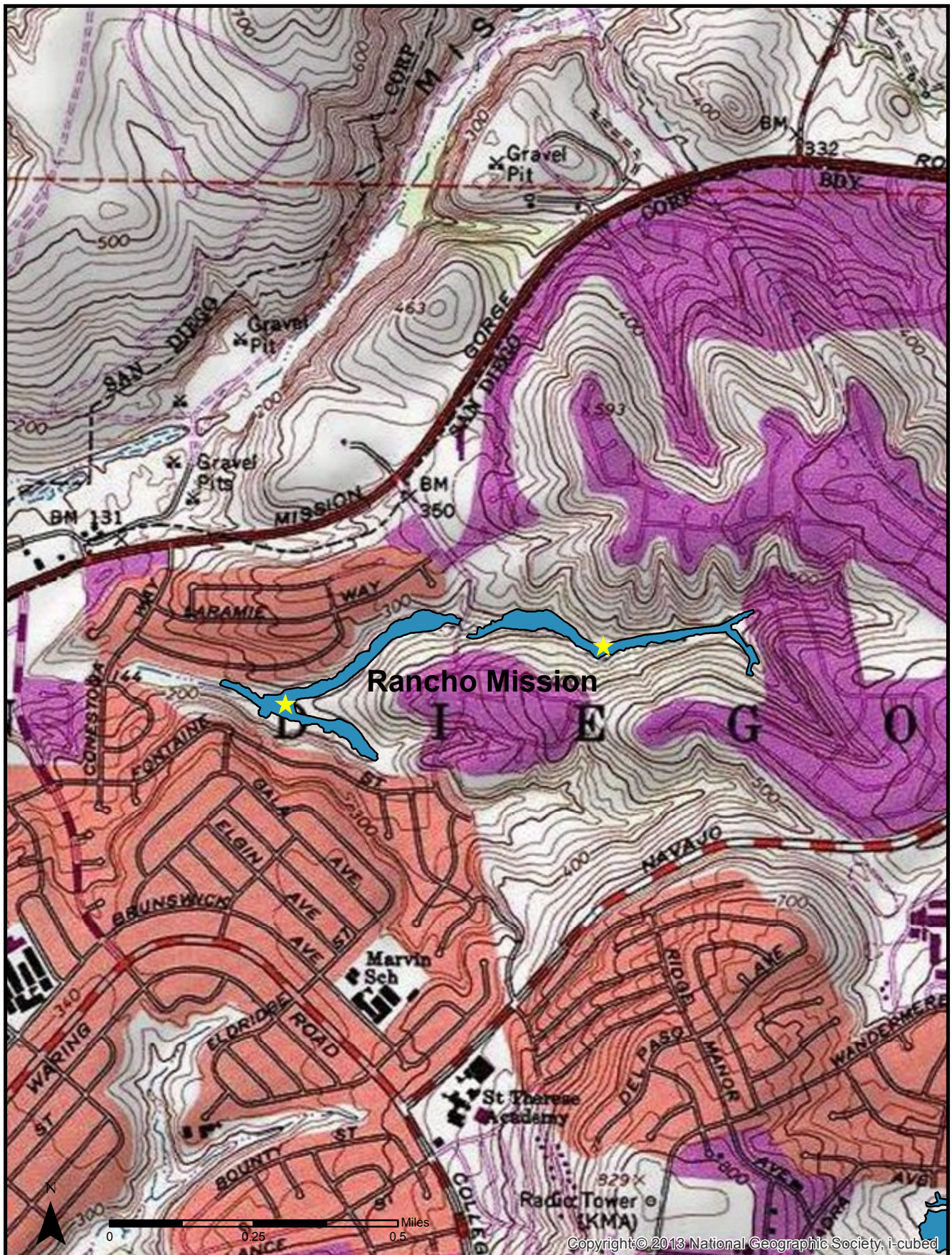


*Rancho Mission Canyon (2023)*

The Rancho Mission Canyon Project includes the enhancement of 7.59 acres of wetlands and restoration of 1.53 acres (75% mitigation credit) of wetland transitional habitats. Non-native vegetation was removed from the canyon, followed by revegetation with native southern willow scrub and wetland transitional species. The total area of habitat enhancement runs the length of the entire canyon bottom and encompasses more than 13.5 acres. The site completed the 5-year long-term maintenance and monitoring period in March 2013 with regulatory sign-off and approval in summer of 2013.

The site continues to support mature, dense thickets of vegetation throughout the riparian corridor. Trees within the site continue to mature with some individuals exceeding 30 feet in height, and the understory is well developed with a diverse variety of herbs and shrubs. Maintenance activities in 2023/2024 included general weeding as well as sweeps for invasive species seedlings to be eradicated. Both Mexican fan palm (*Washingtonia robusta*) and fennel (*Foeniculum vulgare*) individuals were observed within the mitigation site and removed. The site will continue to be monitored to ensure non-native invasive species do not become established in the mitigation areas.

Mitigation Credit Status			
Habitat Type	Acres	Assigned	Balance
Southern Willow Scrub (Enhancement)	8.74	2.26	6.48



## **Tecolote Canyon Mitigation Project**

The Tecolote Canyon Mitigation Project includes two distinct areas; the Balboa site is located south of Balboa Avenue, and the Grove site is located south of the Tecolote Golf Course and north of the University of San Diego (Figure 7).

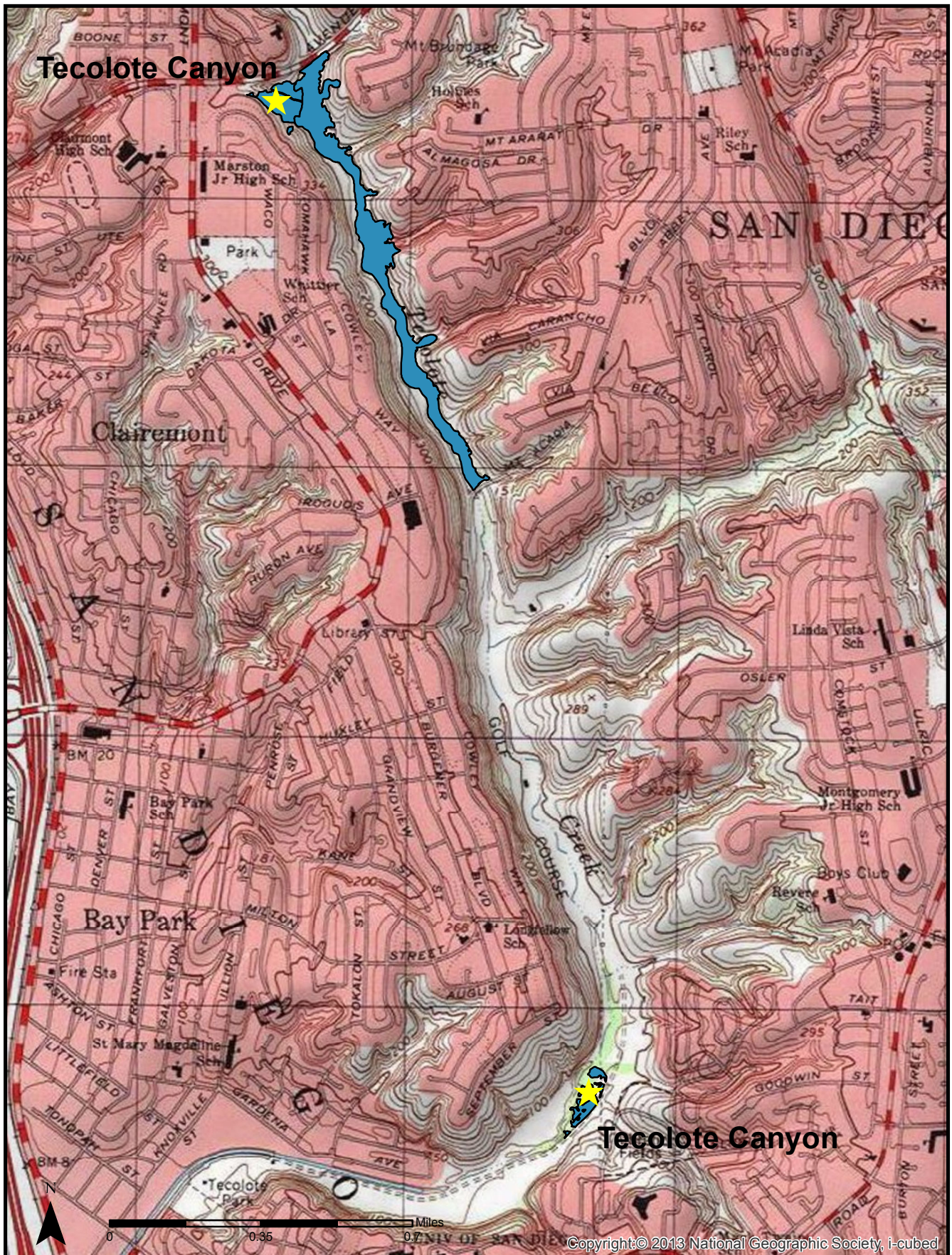
The project includes the creation of 1.61 acres of wetland habitat (southern willow scrub, southern cottonwood willow riparian forest, and oak riparian forest) and restoration of 3.37 acres upland habitat (Diegan coastal sage scrub & native grassland). Construction was initiated in February 2007 and the site met its 5-year maintenance goals and received regulatory sign-off in 2013.



*Tecolote Canyon (2024)*

The mitigation sites continue to support high native cover with minimal gaps between shrubs. Maintenance activities consisted of focused hollow-stem asphodel treatment and general weeding to control non-native plant species. Available mitigation acreage below reflects actual acreage of habitats restored at the end of the 5-year maintenance period and rounded totals of assignments to date.

<b>Mitigation Credit Status</b>			
<b>Habitat Type</b>	<b>Acres</b>	<b>Assigned</b>	<b>Balance</b>
<b>Riparian Forest (Creation)</b>	1.19	1.09	0.10
<b>Southern Willow Scrub (Creation)</b>	0.42	0.41	0.01
<b>Diegan Coastal Sage Scrub (Tier II)</b>	3.30	3.30	0
<b>Native Grassland (Tier I)</b>	0.07	0.06	0.01



## San Diego River Wetland Creation Project

The San Diego River Wetland Creation Project is located on a Public Utilities-owned parcel located immediately adjacent to the San Diego River, north of Camino Del Rio North, west of I-15, and east of Mission Center Parkway in the Mission Valley Community of the City of San Diego (Figure 8).

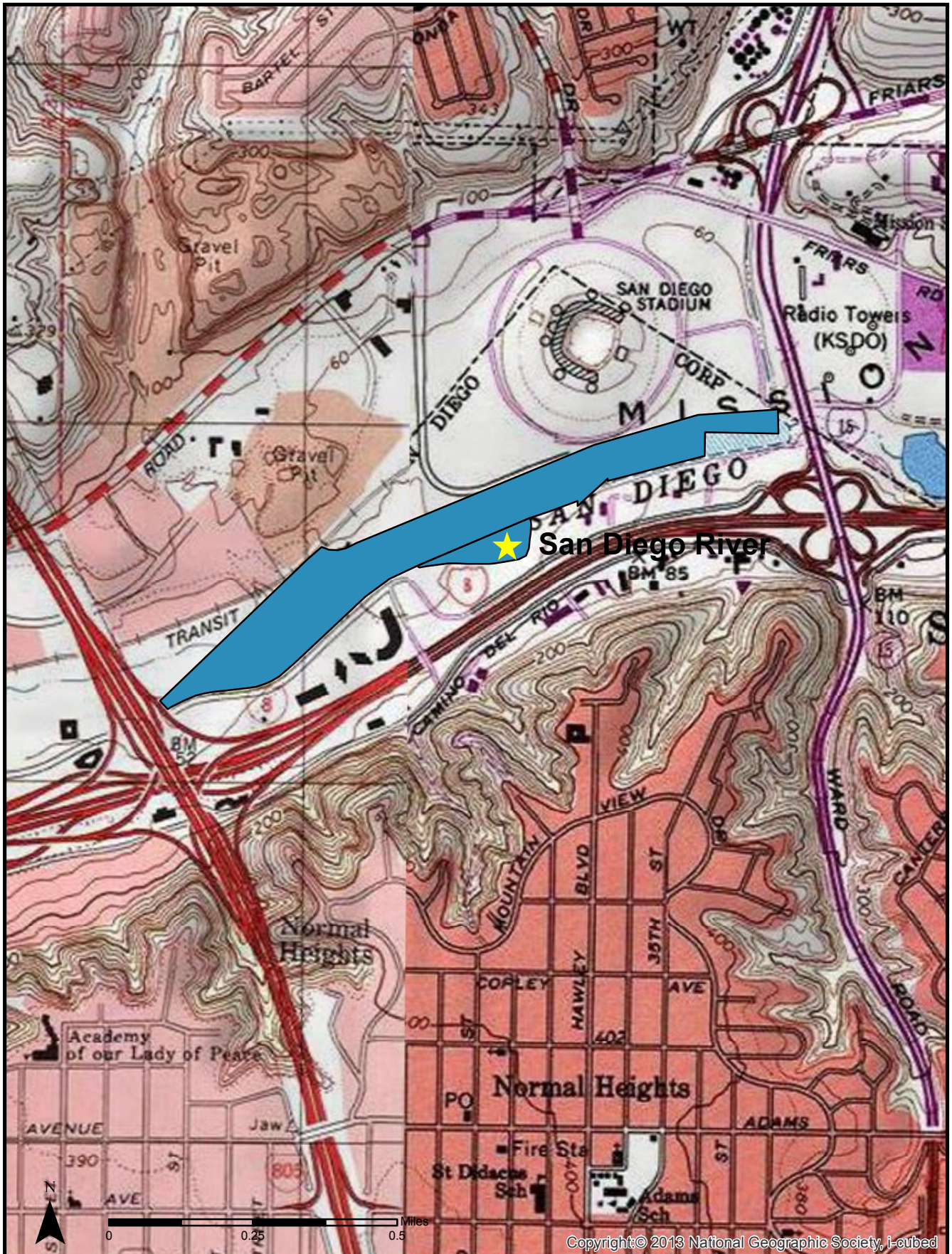


*San Diego River: Riparian Forest and coastal sage scrub (2024)*

The site includes the creation of 3.43 acres of native riparian habitat and 2 acres of Diegan coastal sage scrub habitat. The project site was graded in the fall of 2005 to create a basin along the southern bank of the San Diego River. The long-term maintenance, monitoring, and reporting program started June 14, 2006, and the site successfully completed 5-years of maintenance and monitoring in June of 2011.

In 2023/2024, native vegetation at the site provides near 100 percent cover and maintenance needs were relatively light with efforts focused primarily on mustard control. The site supports a well-developed understory of spiny rush, arrowweed (*Pluchea sericea*), and mulefat with willows and western cottonwood providing canopy cover. As part of long-term management of the site, these areas were treated and will continue to receive maintenance to help ensure non-native species do not become established. Trash from nearby encampments continues to be removed from the site and adjacent areas.

Mitigation Credit Status			
Habitat Type	Acres	Assigned	Balance
Riparian Forest (Creation)	3.43	2.34	1.02



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## Los Peñasquitos North Wetland Creation Project

Los Peñasquitos North Wetland Creation Project is located in the City of San Diego's Los Peñasquitos Canyon Preserve in the community of Peñasquitos, just north of the Los Peñasquitos Creek (Figure 9).

The project includes the creation of 3.8 acres of wetland habitat, including 3.15 acres of southern willow scrub, 0.43 acres of cottonwood/sycamore woodland, and 0.22 acres of freshwater marsh. The site also includes one acre of Diegan coastal sage scrub habitat to serve as a buffer on the north edge of the site. Regulatory sign-off and approval for the project was received in the spring of 2012.



Los Peñasquitos North: Southern willow scrub (2024)

The site continues to support wetland habitat with willows in the tree stratum and a rich array of herbs and small shrubs providing cover in the understory. Vegetation within the wetland habitat is predominately southwestern spiny rush, deer grass (*Muhlenbergia rigens*), and various species of willows and there are halophytic species such as salt grass (*Distichlis spicata*), pickleweed (*Salicornia* sp.), and alkali mallow (*Malvella leprosa*) present as well. Dense coverage by coastal sage scrub continues to provide a high-quality upland buffer upslope of the wetland creation area. Maintenance activities consisted of general weeding with focused monitoring for Mexican fan palm and pampas grass (*Cortaderia* sp.) seedlings. No trash or debris or unauthorized trails were observed onsite.

Mitigation Credit Status			
Habitat Type	Acres	Assigned	Balance
Freshwater Marsh (Creation)	0.22	0.22	0
Riparian Woodland (Creation)	0.43	0.43	0
Southern Willow Scrub (Creation)	3.15	3.04	0.11
Diegan Coastal Sage Scrub (Tier II)	1.03	1.02	<0.01



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## Lake Murray Mitigation Project

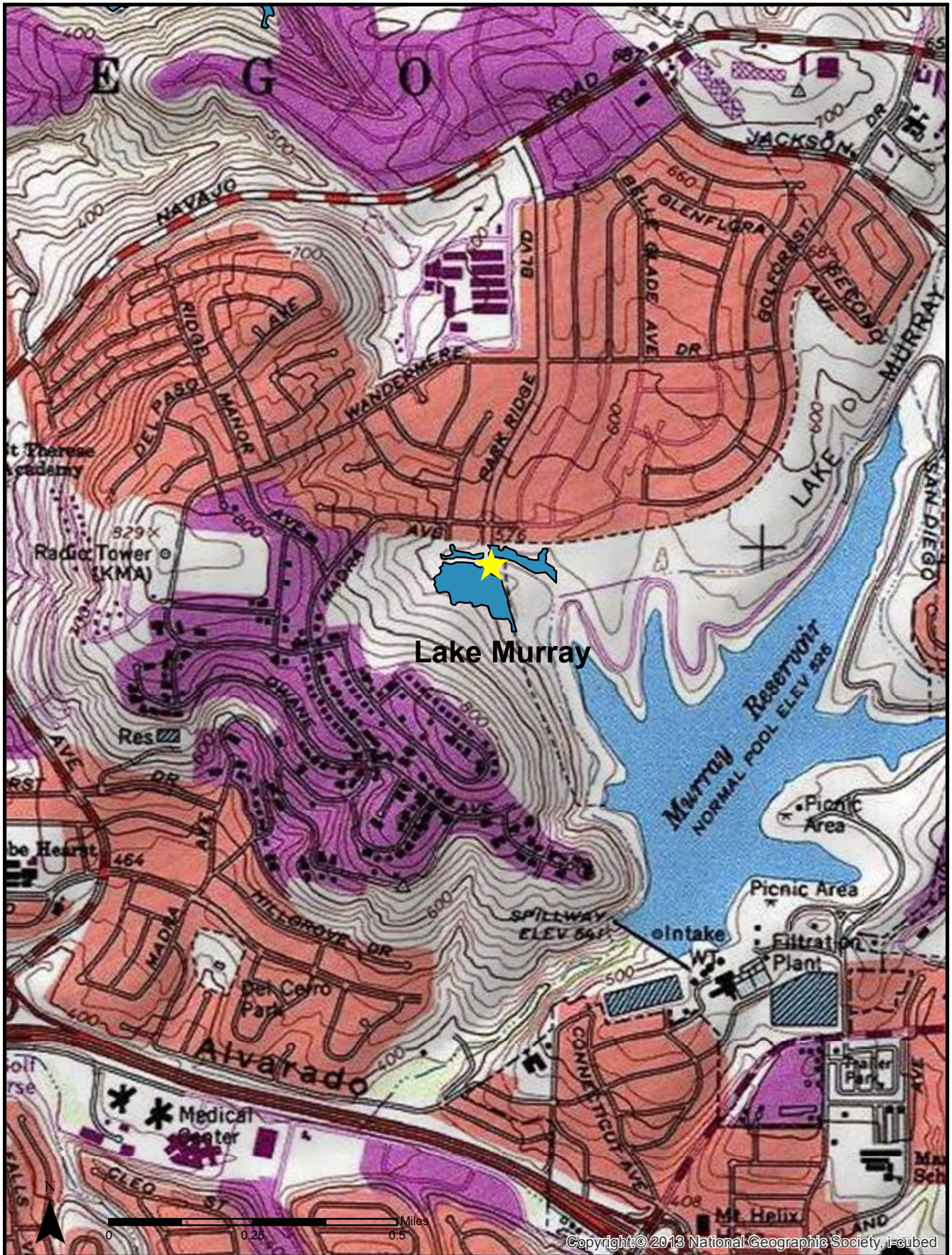
The Lake Murray Mitigation Project is in the City of San Diego's Mission Trails Regional Park. It is located in the area just west of Lake Murray in the Del Cerro neighborhood of the Navajo Community (Figure 10). The mitigation site includes 2.5 acres of wetland enhancement (southern willow scrub habitat) and just over 5.2 acres of upland restoration area (Diegan coastal sage scrub). Official sign-off was received from the regulatory agencies by December 2011.



Lake Murray (2023)

A site visit was conducted to assess the current condition of the mitigation site. Fifth year success criteria required an average combined cover of 90% for the upland restoration and wetland enhancement areas. The wetland enhancement area exceeds 100% native cover throughout the defined enhancement site due to high vegetative cover in multiple strata. The wetland overstory continues to mature, increasing in density and height with species such as western cottonwood (*Populus fremontii*), western sycamore (*Platanus racemosa*), and various types of willows reaching heights of 40 feet or more. The understory is diverse with species such as southwestern spiny rush, evening primrose (*Oenothera elata*), San Diego marsh-elder (*Iva hayesiana*), and broad-leaved cattail (*Typha latifolia*). The upland areas continue to support mature coastal sage scrub habitat, and an area with particularly challenging soil conditions that has previously supported limited growth now contains seedlings from species such as broom baccharis (*Baccharis sarothroides*), black sage (*Salvia mellifera*), tarweed (*Deinandra fasciculata*), and California Sagebrush (*Artemisia californica*). Maintenance efforts continue to focus on bristly ox-tongue (*Helminthotheca echioides*), which is especially abundant at this site, and mustard control along with monitoring for palm seedlings within the wetland area.

Mitigation Credit Status			
Habitat Type	Acres	Assigned	Balance
Southern Willow Scrub (Enhancement)	2.5	1.54	0.87
Diegan Coastal Sage Scrub (Tier II)	5.2	5.2	0



**Figure 10**

**Lake Murray Mitigation Site  
Vicinity Map**

## Otay Mesa Upland Mitigation Bank

The Otay Mesa Mitigation Bank is in the Otay Mesa community of the City of San Diego and occurs within the MHPA. The mitigation site is located on undeveloped land that is surrounded by other City of San Diego Park and Recreation Open Space lands and federal land holdings along the U.S /Mexico border. Five habitat types are found onsite and include maritime succulent scrub, non-native grasslands, ruderal, disturbed habitat, and vernal pool.



Otay Mesa Upland Mitigation: Maritime succulent scrub (2024)

In August 2019, portions of the mitigation area were burned during a wildfire. The fire moved through the area quickly and fire retardant was dropped in some areas. During the 2022/2023 annual monitoring visits, it was documented that the burned areas were recovering well, and the burn scar was barely noticeable in most areas. Some non-native weed species such as red-stem filaree (*Erodium cicutarium*) did return, but those were treated and/or removed during maintenance visits. The fencing installed in 2014 and 2017 was intact and functioning as intended. Non-native species removal and native upland species restoration activities are being implemented in the surrounding areas by the Park and Recreation Open Space Division and a maintenance contractor obtained by PUD.

On-site maritime succulent scrub consists of mature shrubs such as San Diego bur-sage (*Ambrosia chenopodiifolia*), San Diego sunflower (*Bahiopsis laciniata*), jojoba (*Simmondsia chinensis*), lemonadeberry, and California sagebrush surrounded by non-native grassland. Maintenance activities in 2023/2024 consisted of general weeding and control of mustards along with seed collection.

Mitigation Credit Status			
Habitat Type	Acres	Assigned	Balance
Maritime Succulent Scrub (Tier I)	13.24	2.44	10.80



**Figure 11**

Otay Mesa Upland Mitigation Bank  
Vicinity Map

## Stadium Wetland Mitigation Project

The Stadium Wetland Mitigation Project is located within the floodplain of the San Diego River between I-15 and I-805. The site is approximately 57 acres and was dominated by a high number of non-native species, including stands of giant reed (*Arundo donax*). This project restored native habitat via removal of non-native species, installation of native plants, and a 5-year maintenance and monitoring period.



Stadium Mitigation Site (2024)

Work at the Stadium Mitigation site began in August 2016 with the initial cleanup, removal of illegal encampments, and removal of non-native vegetation. Resource agency sign-off was provided by December 2023 and the project was named 2024 Project of the Year by the San Diego/Imperial chapter of the American Public Works Association.

This site provides high quality habitat for a number of regionally sensitive species including least Bell's Vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), southwestern pond turtle (*Actinemys pallida*), yellow-billed cuckoo (*Coccyzus americanus*), and two-striped garter snake (*Thamnophis hammondi*). The restoration area also helps improve water quality and functionality of the San Diego River.

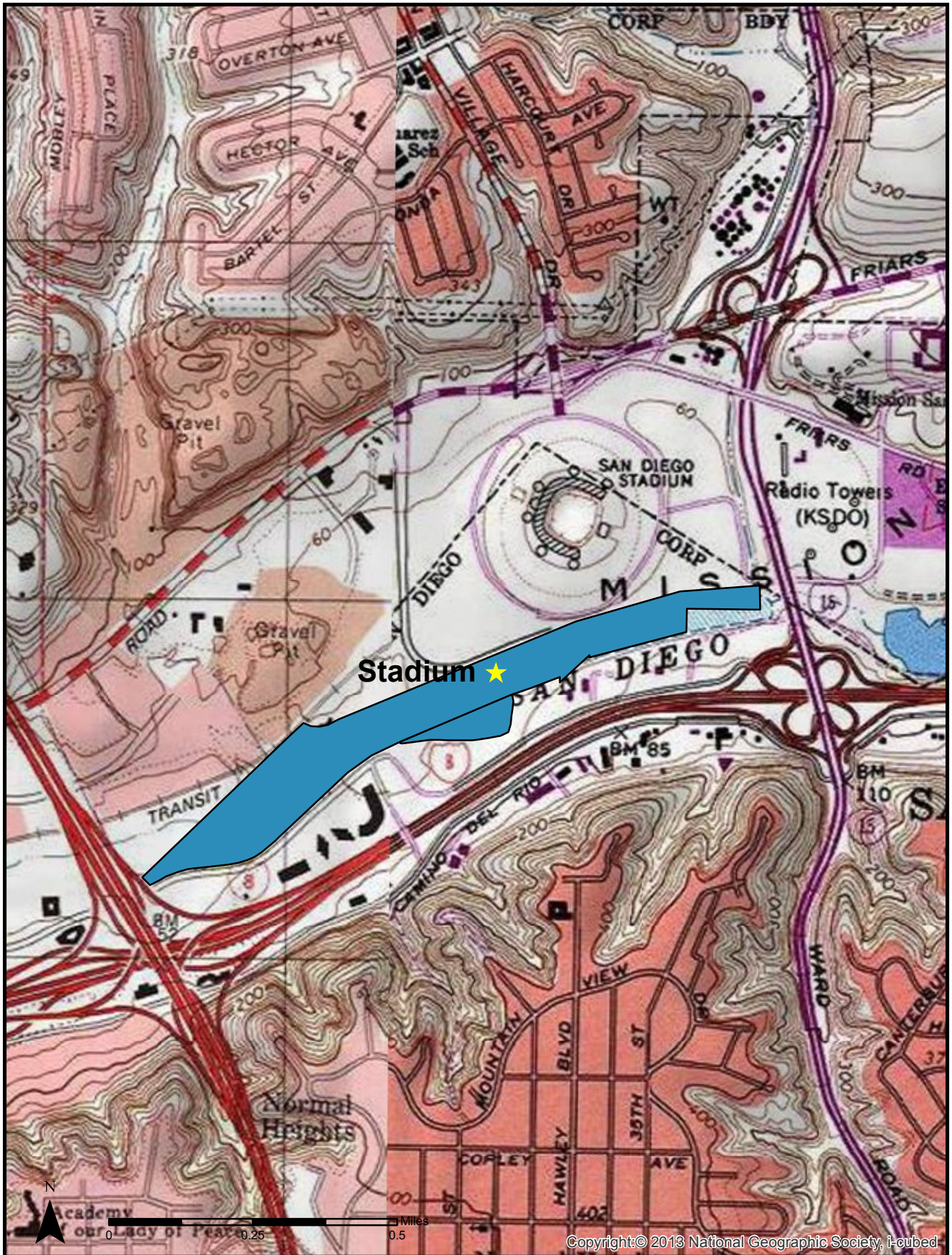
Given the size of the mitigation site and its location within the San Diego River, maintenance efforts targeting non-native species are extensive to maintain adequate control. Maintenance activities in 2023/2024 consisted of targeted non-native species treatment, including cut stump and backpack spray herbicide treatments for invasive species such as bladder flower (*Araujia sericifera*), tree tobacco (*Nicotiana glauca*), castor bean (*Ricinus communis*), Mexican fan palm, pampas grass, and fennel. Trash is also removed from the site during maintenance visits.

Mitigation credits were released from this site in a planned phased approach with credits released as the project met set milestones. With agency sign-off provided in late 2023, 100% of the credits have been released for use.

**CANYON SEWER CLEANING PROGRAM AND LONG-TERM  
SEWER MAINTENANCE PROGRAM PROGRESS REPORT**

October 2024

<b>Mitigation Credit Status</b>				
<b>Jurisdictional Resource</b>	<b>Vegetation Community</b>	<b>Total</b>	<b>Assigned Credits</b>	<b>Total Balance of Credits</b>
ACOE/RWQCB				
Wetland Waters of the U.S.	Coastal and Valley Freshwater Marsh	0.47	0.463	0.007
	Southern Cottonwood – Willow Riparian Forest	22.43	18.582	3.848
	Riparian Scrub	5.71	3.3662	2.3438
	<b>Subtotal</b>	<b>28.61</b>	<b>22.4112</b>	<b>6.1988</b>
Non-wetland Waters of the U.S.	Coastal and Valley Freshwater Marsh	0.03	0	0.03
	Southern Cottonwood – Willow Riparian Forest	9.56	7.707	1.853
	Riparian Scrub	6.81	3.4995	3.3105
	<b>Subtotal</b>	<b>16.37</b>	<b>11.2065</b>	<b>5.1635</b>
Riparian Buffer (Non-jurisdictional)	Southern Cottonwood – Willow Riparian Forest	3.87	1.116	2.754
	Riparian Scrub	4.84	1.787	3.053
	<b>Subtotal</b>	<b>8.71</b>	<b>2.903</b>	<b>5.807</b>
<b>Total</b>		<b>53.69</b>	<b>36.5207</b>	<b>17.1693</b>
CDFW				
Wetlands	Coastal and Valley Freshwater Marsh	0.5	0.463	0.037
	Southern Cottonwood – Willow Riparian Forest	35.86	27.405	8.455
	Riparian Scrub	17.36	8.6527	8.7073
<b>Total</b>		<b>53.72</b>	<b>36.5207</b>	<b>17.1993</b>
City of San Diego				
Wetlands	Coastal and Valley Freshwater Marsh	0.5	0.463	0.037
	Southern Cottonwood – Willow Riparian Forest	35.86	27.405	8.455
	Riparian Scrub	17.36	8.6527	8.7073
	<b>Subtotal</b>	<b>53.72</b>	<b>36.5207</b>	<b>17.1993</b>
Uplands	Diegan Coastal Sage Scrub	0.79	0.0502	0.7398
<b>Total</b>		<b>54.51</b>	<b>36.5709</b>	<b>17.9391</b>



**ATTACHMENT A**  
**25 MONTH REVEGETATION AND RESTORATION PROJECTS STATUS TABLE**



Canyon Restoration/Revegetation Projects (2023-2024)  
June 2024

Active Projects								
Project	Revegetation or Restoration	Size (acre)	Start of 25 Months	Seeding Date	Planting Date	End of 25 Months	PM	Status
Shepherd Canyon Dishwater Pond Water Main Repair	Restoration	0.01	2/21/2023	2/21/2023	2/21/2023	3/21/2025	Frick	25-month maintenance/monitoring in progress
East Shepherd Canyon Water Main Break Emergency Restoration Project	Restoration	0.064	6/2/2022	TBD	6/2/2022	7/31/2024	Tran	25-month maintenance/monitoring complete
2711 Carmel Valley Rd Water Main Break	Restoration	0.02	2/09/2023	2/09/2023	2/08/2023	3/09/2025	Smith	25-month maintenance/monitoring in process
Sewer Pump Station 77A Force Main Vault Spill Emergency and Blow-off Valve Removal	Restoration	0.38	4/10/2024	4/11/2024	4/10/2024	5/10/2026	Smith	25-month maintenance/monitoring in process
I-805 & Governor Drive Emergency Water Main Break	Restoration	0.40	5/31/2024	TBD – fall 2024	5/31/2024	6/30/26	Tran	25-month maintenance/monitoring in process; Seed to be spread in fall of 2024

Completed Projects				
Canyon/Project	Revegetation or Restoration	Project Initiation	Project Completion	PM
PS 64 Channel Clearing Emergency	Restoration	4/17/2020	12/31/2022	Frick
Rose Canyon Emergency Sewer Point Repair	Restoration	1/9/2019	2/9/2022	Frick
Wing St Sewer Main Repair	Revegetation	8/26/2019	9/30/2021	Frick
Del Cerro WMB Emergency	Revegetation	7/9/2019	8/25/2021	Frick
Lake Hodges Vault Repair	Restoration	3/25/2019	4/25/2021	Frick
Central Tecolote Sewer Break Emergency	Restoration	5/19/2016	12/07/2020	Smith
45 <sup>th</sup> and Quince WMB Emergency	Revegetation	10/16/2017	11/16/2019	Frick
55 <sup>th</sup> Street Emergency Sewer Point Repair	Restoration	3/21/2018	4/21/2020	Smith
Elanus Canyon	Revegetation	3/31/2018	04/30/2020	Jenkins
6692 Plaza Ridge Road WMB Emergency	Revegetation	6/13/2018	7/13/2020	Smith
Central Avenue WMB	Revegetation	7/17/2018	9/3/2020	Jenkins
1830 Upas St Sewer Repair	Revegetation	7/19/2018	8/19/2020	Jenkins
Stevenson Canyon Emergency Sewer Pipe Protection	Restoration	10/8/2018	11/8/2020	Frick
Highland Ave/Quince St WMB Emergency	Reveg/Rest	12/20/2018	1/20/2021	Smith/Frick
San Clemente Pipe Patch FSN 13325	Revegetation	3/1/2019	4/1/2021	Frick
Juniper Canyon Manhole 54 Emergency Repair Project	Revegetation	3/13/2019	4/30/2021	Frick
Greenwich Dr Water Main Break Emergency Revegetation	Revegetation	11/27/17	4/6/2020	Frick
Alvarado Canyon LTA	Revegetation	12/17/2018	01/17/2021	Lavan
Balboa & I-15 Canyon Long-Term Access	Restoration	10/19/2018	11/19/2020	Lavan
Rancho Capistrano Bend WMB Emergency	Restoration	06/05/2017	07/05/2019	Frick
Mt Elbrus LTA	Restoration	07/01/2017	08/01/2019	Tran
SR-905 & Picador Blvd WMB Emergency	Revegetation	11/18/2017	12/18/2019	Smith
3555 37 <sup>th</sup> St Water Main Break	Revegetation	12/09/2017	01/09/2020	Smith
South Chocolate (Juniper) Canyon Emergency Sewer Point Repair	Revegetation	03/19/2018	04/19/2020	Smith
Switzer Canyon Berm Replacement	Revegetation	04/22/2016	05/22/2019	Jenkins
San Clemente Emergency Sewer Repair	Revegetation	04/21/2017	6/13/19	Frick
32nd Street LTA	Revegetation	03/08/2017	7/17/19	Tran
Home Ave TS LTA (Ash Canyon)	Revegetation	09/23/2016	7/15/19	Jenkins
PS45 Emergency	Restoration	11/16/2015	5/29/19	Jenkins
Sorrento Valley Water Main Leak Emergency Repair	Restoration	01/31/2017	6/14/19	Jenkins
Point Loma Sludge Pipeline Assessment Friars Road	Revegetation	07/08/2016	5/28/19	Jenkins
Alvarado Ct Sewer Emergency I/II	Restoration	02/27/2016	6/4/2019	Lavan
South Chollas	Restoration	09/01/2015	5/14/2019	Tran
Alta La Jolla Water Break	Restoration	10/11/2016	4/30/19	Frick
Mission Valley Canyon Sewer Repair	Revegetation	10/31/2015	4/17/19	Lavan
Nimitz Blvd and Catalina Blvd WMB Emergency	Revegetation	03/01/2016	April 2018	Smith
4497 Revillo Dr Sewer Repair	Revegetation	7/28/2015	8/28/17	Frick
Mission Gorge Pipe Protection	Restoration	11/1/2013	9/6/2018	Balo
3 Water Transmission Pipeline Condition Assessment	Restoration	11/6/2014	9/6/2018	Adleberg
6610 Potomac St Water Main Break	Revegetation	6/2/2015	9/6/2018	Frick
East Shepherd Water Emergency	Restoration	8/9/2015	9/6/2018	Paver
Emerald Hills Standpipe	Revegetation	8/20/2015	9/6/2018	Paver
Murphy Canyon MH 114	Revegetation	8/27/2015	9/6/2018	Paver
10325 Roselle St Emergency WMB	Revegetation	10/1/2015	9/6/2018	Adleberg
4 <sup>th</sup> and Quince Water Main Break	Revegetation	8/24/2015	9/6/2018	Frick
Sonico Spot Repair	Revegetation	5/15/2015	6/21/2017	Frick
Manzanita Break II	Restoration	2/13/2015	3/13/2017	Paver

West SD River Sewer Abandonment	Restoration	2/27/2015	3/27/2017	Frick
Shepard Canyon Water Emerg (Water)	Restoration	3/6/2015	4/6/2017	Smith
Nobel Drive MH 97	Revegetation	2/27/2015	3/27/2017	Paver
Buchanan Emergency	Reveg/Rest	1/12/2015	2/12/2017	Adleberg
Fairway Spot Repairs –La Jolla	Revegetation	1/1/2015	2/1/2017	Paver
Rose Canyon Emergency Sewer Point Repair	Restoration	1/9/2019	2/9/2022	Frick
Lake Hodges Vault Repair Restoration	Restoration	3/25/2019	4/25/2021	Frick
Del Cerro WMB Emergency	Revegetation	7/9/2019	8/9/2021	Frick
Wing St Sewer Main Repair	Revegetation	8/26/2019	9/26/2021	Frick
El Camino South (Gonzales Canyon)	Revegetation	1/31/2016	2/31/2018	Jenkins
Hopkins Canyon Sewer Pipe Protection Emergency Project	Revegetation	1/14/2020	2/14/2022	Jenkins
Chocolate Canyon Path Repair	Revegetation	10/6/2020	11/6/2022	Jenkins
65 <sup>th</sup> and Herrick WPS Temporary Pump	Revegetation	12/01/2020	01/01/2023	Jenkins

**ATTACHMENT B  
MITIGATION SUMMARY TABLE**

# Mitigation Site Details



Mitigation Site	Mitigation Type	Habitat	USACE	RWQCB	CDFW	City	MHPA	Coastal	Acres	Used	Free	
<b>Penasquitos</b>												
Canyon View (Penasquitos Upland)	Upland Restoration	Coastal Sage Scrub (CSS)	✗	✗	✗	✓	✓	✗	6.4900	4.2103	2.2797	●
		Native Grassland (NG)	✗	✗	✗	✓	✓	✗	0.8900	0.2692	0.6208	●
Central Tecolote Enhancement/Mitigation	Upland Restoration	Coast Live Oak Woodland (CLOW)	✗	✗	✗	✓	✓	✗	0.0400	0.0400	0.0000	●
		Diegan Coastal Sage Scrub (DCSS)	✗	✗	✗	✓	✓	✗	3.0600	1.1970	1.8630	●
		Maritime Succulent Scrub (MSS)	✗	✗	✗	✓	✓	✗	0.0100	0.0100	0.0000	●
		Native Grassland (NG)	✗	✗	✗	✓	✓	✗	0.7100	0.2240	0.4860	●
		Poison Oak Scrub (POS)	✗	✗	✗	✓	✓	✗	0.1000	0.0550	0.0450	●
	Wetland Enhancement	Riparian Forest (RF)	✗	✓	✓	✓	✓	✗	5.8200	1.4114	4.4086	●
		Riparian Forest (RF)	✓	✓	✓	✓	✓	✗	1.5300	1.2152	0.3148	●
El Cuervo Norte	Wetland Creation/Restoration	Riparian Forest (RF)	✓	✓	✓	✓	✓	✗	0.7200	0.7200	0.0000	●
	Wetland Enhancement	Riparian Forest (RF)	✓	✓	✓	✓	✓	✗	0.6800	0.6800	0.0000	●
El Rancho (Penasquitos Enhancement)	Wetland Enhancement	Riparian Forest (RF)	✓	✓	✓	✓	✓	✗	5.5300	5.5300	0.0000	●
Los Penasquitos North	Upland Restoration	Diegan Coastal Sage Scrub (DCSS)	✗	✗	✗	✓	✓	✓	1.0300	1.0250	0.0050	●
	Wetland Creation/Restoration	Freshwater Marsh (FM)	✓	✓	✓	✓	✓	✓	0.2200	0.2200	0.0000	●
		Riparian Woodland (RW)	✓	✓	✓	✓	✓	✓	0.4300	0.4300	0.0000	●
		Southern Willow Scrub (SWS)	✓	✓	✓	✓	✓	✓	3.1500	3.0386	0.1114	●
Penasquitos Eucalyptus Removal	Wetland Creation/Restoration	Riparian Forest (RF)	✓	✓	✓	✓	✓	✗	0.3100	0.3100	0.0000	●
Pueblo South Native Grassland Creation	Upland Restoration	Native Grassland (NG)	✗	✗	✗	✓	✗	✗	2.4600	1.3010	1.1590	●
Rose Canyon Wetland and Upland	Upland Restoration	Coastal Sage Scrub (CSS)	✗	✗	✗	✓	✓	✗	4.7500	2.4880	2.2620	●
		Native Grassland (NG)	✗	✗	✗	✓	✓	✗	0.2800	0.0870	0.1930	●
	Wetland Creation/Restoration	Riparian Forest (RF)	✓	✗	✓	✓	✓	✗	0.6200	0.6200	0.0000	●
		Riparian Forest (RF)	✓	✗	✓	✓	✓	✗	2.4200	2.1316	0.2884	●
		Riparian Forest (RF)	✗	✗	✓	✓	✓	✗	2.0100	0.9256	1.0844	●
	Wetland Enhancement	Riparian Forest (RF)	✗	✗	✓	✓	✓	✗	0.6100	0.6100	0.0000	●

San Clemente Wetland and Upland	Upland Restoration	Coast Live Oak Woodland (CLOW)	✗	✗	✗	✓	✓	✗	0.3900	0.1890	0.2010	●
		Coastal Sage Scrub (CSS)	✗	✗	✗	✓	✓	✗	2.4200	1.5665	0.8535	●
	Wetland Creation/Restoration	Emergent Wetland (EW)	✓	✓	✓	✓	✓	✗	0.2000	0.0020	0.1980	●
		Riparian Forest (RF)	✓	✓	✓	✓	✓	✗	0.8800	0.5590	0.3210	●
		Riparian Forest (RF)	✗	✗	✓	✓	✓	✗	1.7600	1.2280	0.5320	●
		Streambed (STREAMBED)	✓	✓	✓	✓	✓	✗	0.0200	0.0130	0.0070	●
SANDER	Upland Restoration	Chamise Chaparral (CC)	✗	✗	✗	✓	✓	✗	1.3000	1.2497	0.0503	●
		Coastal Sage- Chaparral (CSC)	✗	✗	✗	✓	✓	✗	12.5500	1.8688	10.6812	●
		Diegan Coastal Sage Scrub (DCSS)	✗	✗	✗	✓	✓	✗	0.8800	0.7000	0.1800	●
		Diegan Coastal Sage Scrub (DCSS)	✗	✗	✗	✓	✓	✗	1.2500	1.1200	0.1300	●
		Scrub Oak Chaparral (SOC)	✗	✗	✗	✓	✓	✗	2.6400	1.3010	1.3390	●
	Wetland Enhancement	Herbaceous Wetland (HW)	✓	✓	✓	✓	✓	✗	1.3300	0.0000	1.3300	●
		Non-Vegetated Channel (NVC)	✓	✓	✓	✓	✓	✗	0.4700	0.0000	0.4700	●
		Vernal Pool (VP)	✓	✓	✗	✓	✓	✗	0.2600	0.2600	0.0000	●
	Wetland Reestablishment	Vernal Pool (VP)	✓	✓	✗	✓	✓	✗	0.6000	0.6000	0.0000	●
	Wetland Rehabilitation	Vernal Pool (VP)	✓	✓	✗	✓	✓	✗	0.2900	0.2722	0.0178	●
Soledad Valley	Upland Restoration	Diegan Coastal Sage Scrub (DCSS)	✗	✗	✗	✓	✓	✗	0.2600	0.2600	0.0000	●
	Wetland Creation/Restoration	Alkali Marsh (AM)	✓	✓	✓	✓	✓	✗	0.2000	0.2000	0.0000	●
	Wetland Enhancement	Alkali Marsh (AM)	✓	✓	✓	✓	✓	✗	0.6000	0.6000	0.0000	●
Tecolote - Tree of Heaven removal	Wetland Enhancement	Riparian Forest (RF)	✓	✓	✓	✓	✓	✗	0.2500	0.2500	0.0000	●
Tecolote Canyon Wetland and Upland	Upland Restoration	Coastal Sage Scrub (CSS)	✗	✗	✗	✓	✓	✗	3.3000	3.2998	0.0002	●
		Native Grassland (NG)	✗	✗	✗	✓	✓	✗	0.0700	0.0560	0.0140	●
	Wetland Creation/Restoration	Riparian Forest (RF)	✓	✓	✓	✓	✓	✗	1.1900	1.0900	0.1000	●
		Southern Willow Scrub (SWS)	✓	✓	✓	✓	✓	✗	0.4200	0.4090	0.0110	●
Watson Creek Ranch	Wetland Enhancement	Freshwater Marsh (FM)	✓	✓	✓	✓	✓	✗	0.2800	0.2800	0.0000	●
San Diego												
Camino del Rio North - San Diego River Creation	Wetland Creation/Restoration	Riparian Forest (RF)	✓	✓	✓	✓	✓	✗	3.4300	2.4059	1.0241	●
Lake Murray	Upland Restoration	Diegan Coastal Sage Scrub (DCSS)	✗	✗	✗	✓	✓	✗	5.2000	5.2000	0.0000	●
	Wetland Enhancement	Southern Willow Scrub (SWS)	✓	✓	✓	✓	✓	✗	2.5000	1.6329	0.8671	●
Rancho Mission Enhancement	Wetland Enhancement	Southern Willow Scrub (SWS)	✓	✓	✓	✓	✓	✗	8.7400	2.2582	6.4818	●

Stadium	Upland Restoration	Diegan Coastal Sage Scrub (DCSS)	✖	✖	✖	✔	✔	✖	0.7900	0.0502	0.7398	●
	Wetland Enhancement	Freshwater Marsh (FM)	✔	✔	✔	✔	✔	✖	0.3600	0.0000	0.3600	●
		Freshwater Marsh (FM)	✔	✔	✔	✔	✔	✖	0.0100	0.0000	0.0100	●
		Riparian Forest (RF)	✔	✔	✔	✔	✔	✖	15.3000	0.1100	15.1900	●
		Riparian Forest (RF)	✔	✔	✔	✔	✔	✖	5.5800	3.1300	2.4500	●
		Riparian Forest (RF)	✔	✔	✔	✔	✔	✖	2.3700	0.0600	2.3100	●
		Southern Riparian Scrub (SRS)	✔	✔	✔	✔	✔	✖	2.9700	0.0000	2.9700	●
		Southern Riparian Scrub (SRS)	✔	✔	✔	✔	✔	✖	1.9900	0.2550	1.7350	●
		Southern Riparian Scrub (SRS)	✔	✔	✔	✔	✔	✖	1.1100	0.1850	0.9250	●
		Wetland Reestablishment	Freshwater Marsh (FM)	✔	✔	✔	✔	✔	✖	0.0400	0.0000	0.0400
	Freshwater Marsh (FM)		✔	✔	✔	✔	✔	✖	0.0200	0.0000	0.0200	●
	Riparian Forest (RF)		✔	✔	✔	✔	✔	✖	0.0100	0.0000	0.0100	●
	Riparian Forest (RF)		✔	✔	✔	✔	✔	✖	0.0300	0.0000	0.0300	●
	Southern Riparian Scrub (SRS)		✔	✔	✔	✔	✔	✖	0.8900	0.0072	0.8828	●
	Southern Riparian Scrub (SRS)		✔	✔	✔	✔	✔	✖	0.7800	0.0020	0.7780	●
	Wetland Rehabilitation	Freshwater Marsh (FM)	✔	✔	✔	✔	✔	✖	0.0700	0.0000	0.0700	●
		Riparian Forest (RF)	✔	✔	✔	✔	✔	✖	7.1000	0.7720	6.3280	●
		Riparian Forest (RF)	✔	✔	✔	✔	✔	✖	3.9700	0.0000	3.9700	●
		Riparian Forest (RF)	✔	✔	✔	✔	✔	✖	1.5000	0.0000	1.5000	●
		Southern Riparian Scrub (SRS)	✔	✔	✔	✔	✔	✖	3.7300	0.5080	3.2220	●
		Southern Riparian Scrub (SRS)	✔	✔	✔	✔	✔	✖	4.0400	1.1520	2.8880	●
		Southern Riparian Scrub (SRS)	✔	✔	✔	✔	✔	✖	1.8500	0.0000	1.8500	●
	Tijuana											
Marron Valley Cornerstone Lands Conservation Bank	Upland Bank	Diegan Coastal Sage Scrub (DCSS)	✖	✖	✖	✔	✔	✖	7.5450	6.8030	0.7420	●
Otay Mesa Mitigation Bank	Upland Bank	Maritime Succulent Scrub (MSS)	✖	✖	✖	✔	✔	✖	13.2400	2.4440	10.7960	●