

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



Public Utilities Dept.

**2022 Annual Report
July 1, 2021 – June 30, 2022**

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

October 2022

*Cover – Top Left: South Juniper Canyon, Top Right: East Tecolote Canyon, Center: Western Diamondback Rattlesnake,
Bottom Left: Baja Canyon; Bottom Right: Tecolote Canyon Pipe Repair*

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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, 2021 through June 30, 2022. 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

A 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:

- Highway 163 Corridor
- Adams Improvements 1
- Golden Hill Improvements – South Juniper
- Golden Hill Improvements - Huckleberry
- Ridgeview Webster Improvements 1

Each of these projects were evaluated for redirection and all except for Ridgeview Webster Improvements 1 were determined to not be economically feasible.

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) packages 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:

- **East Tecolote Phase II** – Phase II will include additional stream crossing improvements. Design, permitting, and implementation timeline is to be determined.
- **Norfolk Canyon Access Improvements**– Public Utilities has transferred this access project to the Engineering and Capital Projects Department (ECP) and it will be included in the Kensington Improv 1 Capital Improvements Project (CIP). This project is currently in the 30% design phase. Implementation is anticipated Fall 2025.
- **North, Central, and Southern Tecolote Canyon** – Access crossing improvements are included with the Tecolote Canyon Trunk Sewer Replacement CIP project.

The CIP project is in the permitting stage and anticipates receiving the final permit by Spring 2023. The project implementation start date is estimated Fall 2023.

- **San Clemente Canyon** – Recently (September 2022) improvement were made in the western portion of the canyon (west of Regent’s Road) to re-establish access to the sewer manholes so City crews can clean the sewer line in this area. The middle (between Regents Road and Genesee Ave) and the eastern (between Genesee Ave and 1-805) are in the planning stage. This area will be evaluated for the need to improve the existing access path and establish new access if necessary. Implementation schedule will be determined for the middle and eastern portions of the canyon.
- **Bounty and Waring – Navajo** – The project to construct the improvements to the existing access path at manhole 10 were completed in the fall of 2021. Additional improvements to protect the access path near the southern entrance of the canyon are in the planning stage.
- **Ranch Mission Canyon** – This project is in planning stage and will include improvements to the existing access path. Implementation schedule is to be determined.
- **Buchanan/University Heights** – Public Utilities has transferred this access project to the Engineering and Capital Projects Department (ECP) and it will be included in the University Heights Improv 1 CIP.
- **Woodman Canyon** – This project is in planning stage and will include improvements to the existing access path. Implementation schedule is to be determined.
- **Hopkins Canyon** - This project is in planning stage and will include improvements to the existing access path. Implementation schedule is to be determined.

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 field work reports, facilitates monthly 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 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 2021:

Emergency Projects

- Switzer Canyon Emergency Sewer Pipe Protection (near MH 106)
- Sewer Pump Station 13 Force Main No. 1 Emergency

Other Construction/Maintenance

Projects

- East Switzer Canyon Access Path Maintenance
- East Tecolote Canyon Sewer Main Offset Joint Repair
- South Tecolote / Manning Canyon Road Repair
- Alvarado Canyon Access Path Repair
- Gonzales Canyon Trail Repair



*Switzer Canyon Emergency Pipe Repair,
April 27, 2022*

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 continues 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 5 canyon sewer revegetation projects were completed. Monitoring for five additional projects is ongoing. Monitoring for one new revegetation sites was initiated in FY-22.

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 2022 Revegetation and Restoration Projects Status update table.



Rose Canyon Sewer Point Repair Restoration Project (completed)

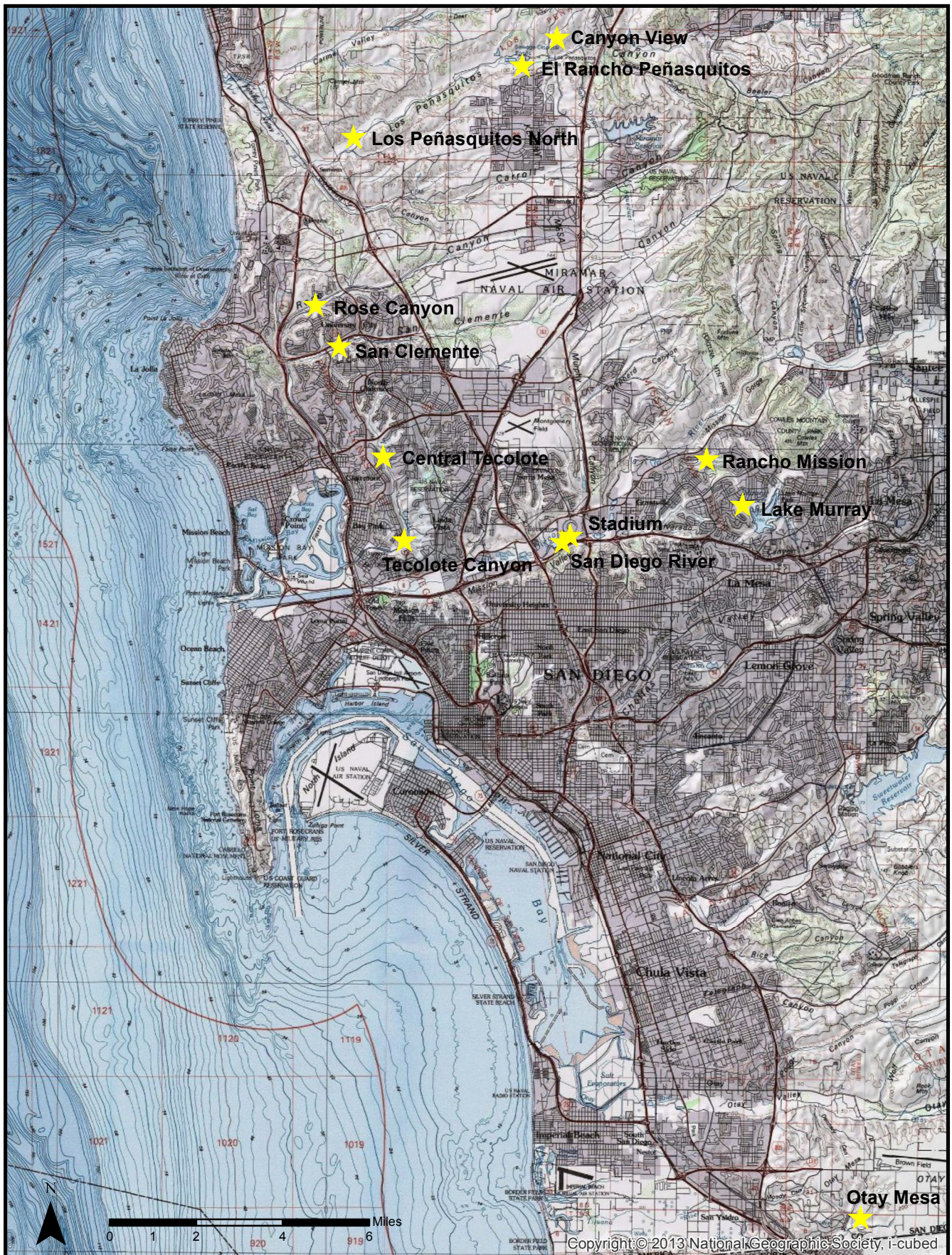
MITIGATION PROJECTS

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.



Rancho Mission Canyon, 2022



Canyon View Upland Restoration Mitigation Project

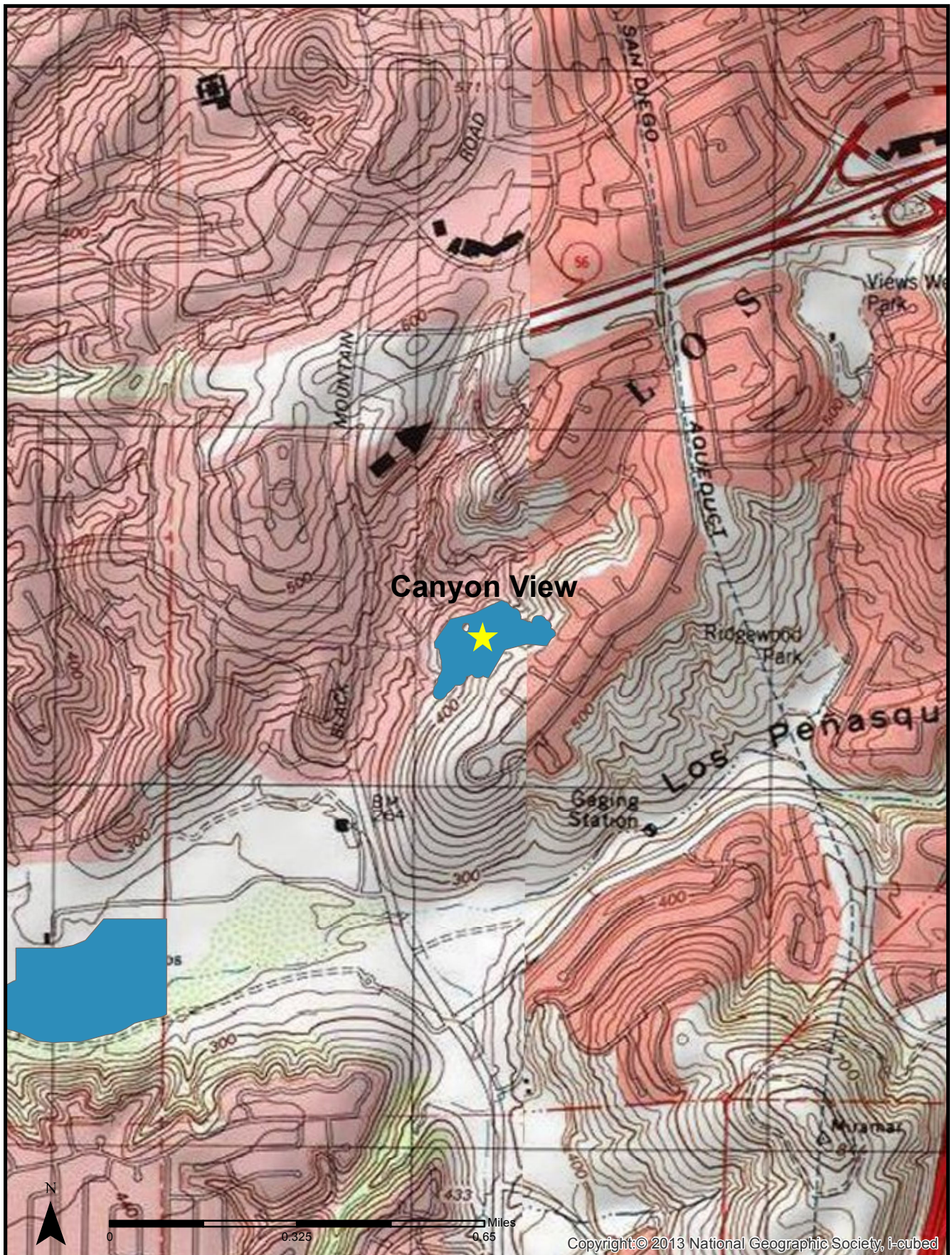
This project is located east of Black Mountain Road and south of Adolphia Street in Los Peñasquitos Canyon (Figure 2). Construction began in September 2011. The project included the restoration of approximately 0.9 acres of native grassland and 6.49 acres of Diegan coastal sage scrub habitat, within 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.



Canyon View: Native grassland, 2021

This site has successfully achieved the goal of restoring low quality non-native uplands into high quality native habitats. This project completed the 5-year maintenance and monitoring period in 2017 and received sign-off in spring of 2018. The mitigation area continues to sustain mature native habitats in 2021 and 2022. The site is dominated by native coastal sage scrub species including California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), bush sunflower (*Encelia californica*), and native grassland species.

Mitigation Credits			
Habitat Type	Acres	Assigned	Balance
Diegan Coastal Sage Scrub (Tier II)	6.49	2.24	4.25
Native Grassland (Tier I)	0.89	0.09	0.80



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 all regulatory agency sign-offs in June of 2018.

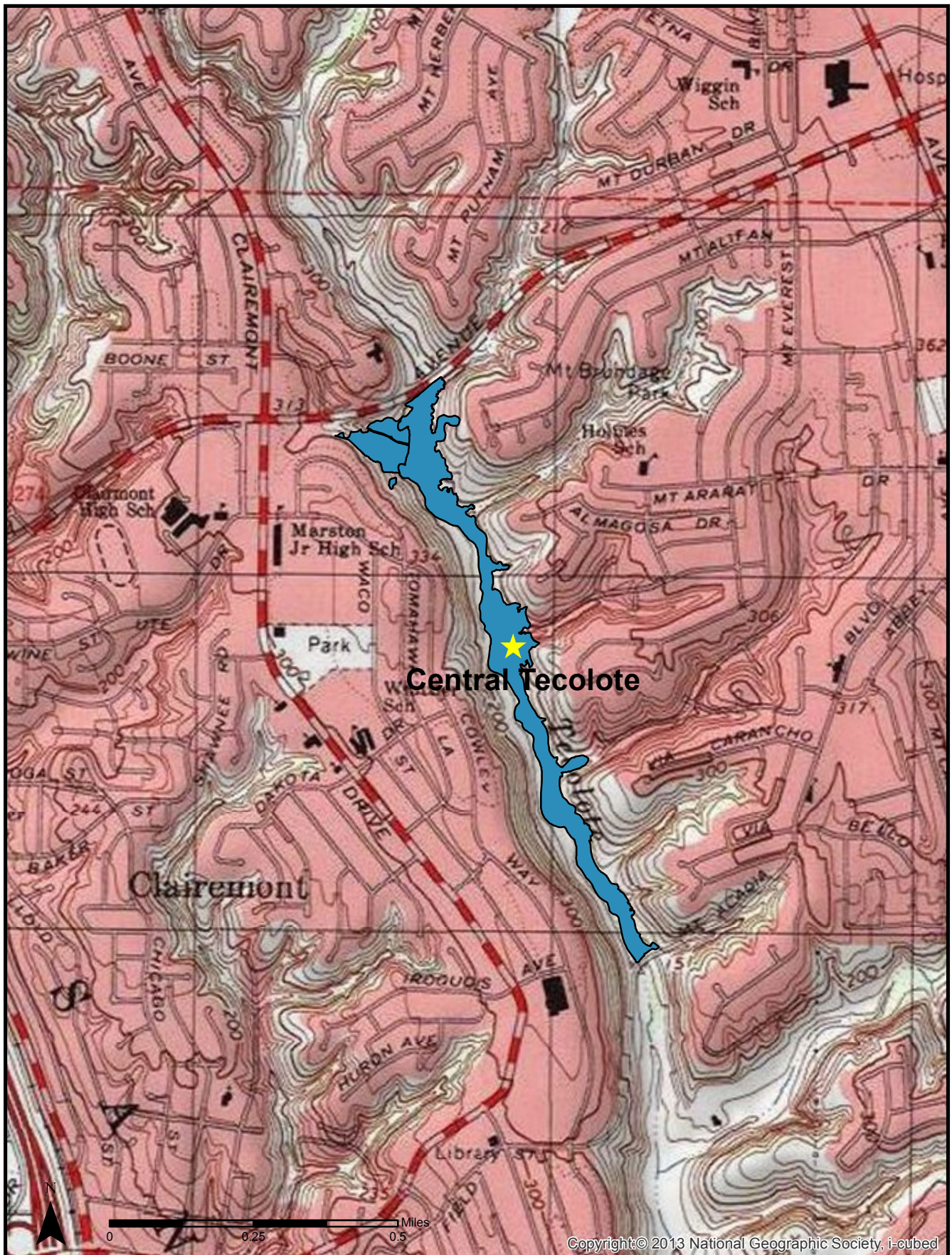


Central Tecolote, 2022

PUD continues to monitor and maintain the site. Maintenance in 2021/2022 included the removal of target invasive species including black mustard (*Brassica nigra*), sweetclover (*Melilotus* sp.), prickly lettuce (*Lactuca serriola*), and tocalote (*Centaurea melitensis*). The restored habitats onsite continue to mature with willows exceeding 20 feet in height and sage scrub established to full shrub stature. The oak margins are lined with Mexican elderberry (*Sambucus mexicana*), and poison oak (*Toxicodendron diversilobum*) has formed dense thickets in the oak tree understory.

The updated Mitigation Credit table below reflects the habitats restored at the time of agency sign off.

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	0.83	2.23
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, 2021

As of summer 2022, native vegetative cover at the site is very high, with upland habitats exceeding 95 percent cover with a high diversity of species that includes California sagebrush, lemonadeberry (*Rhus integrifolia*), broom baccharis (*Baccharis sarothroides*), coyote bush (*Baccharis pilularis*), and San Diego goldenbush (*Isocoma menziesii*). The wetland creation habitat exceeds 100 percent cover in some sections of the project area with a good vertical richness of both trees and shrubs. Many cottonwood (*Populus fremontii*) and willow (*Salix* spp.) saplings were observed on the site. The native grassland habitat continues to do well, with increased coverage of purple needlegrass and (*Stipa pulchra*), and beardless wild rye (*Elymus triticoides*). The site will continue to receive maintenance to help ensure native habitat continues to increase in maturity and spatial coverage. This year maintenance crews focused on control and removal of non-native species such as mustard and sweet clover.

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	2.48	2.27
Native Grassland (Tier I)	0.28	0.09	0.19

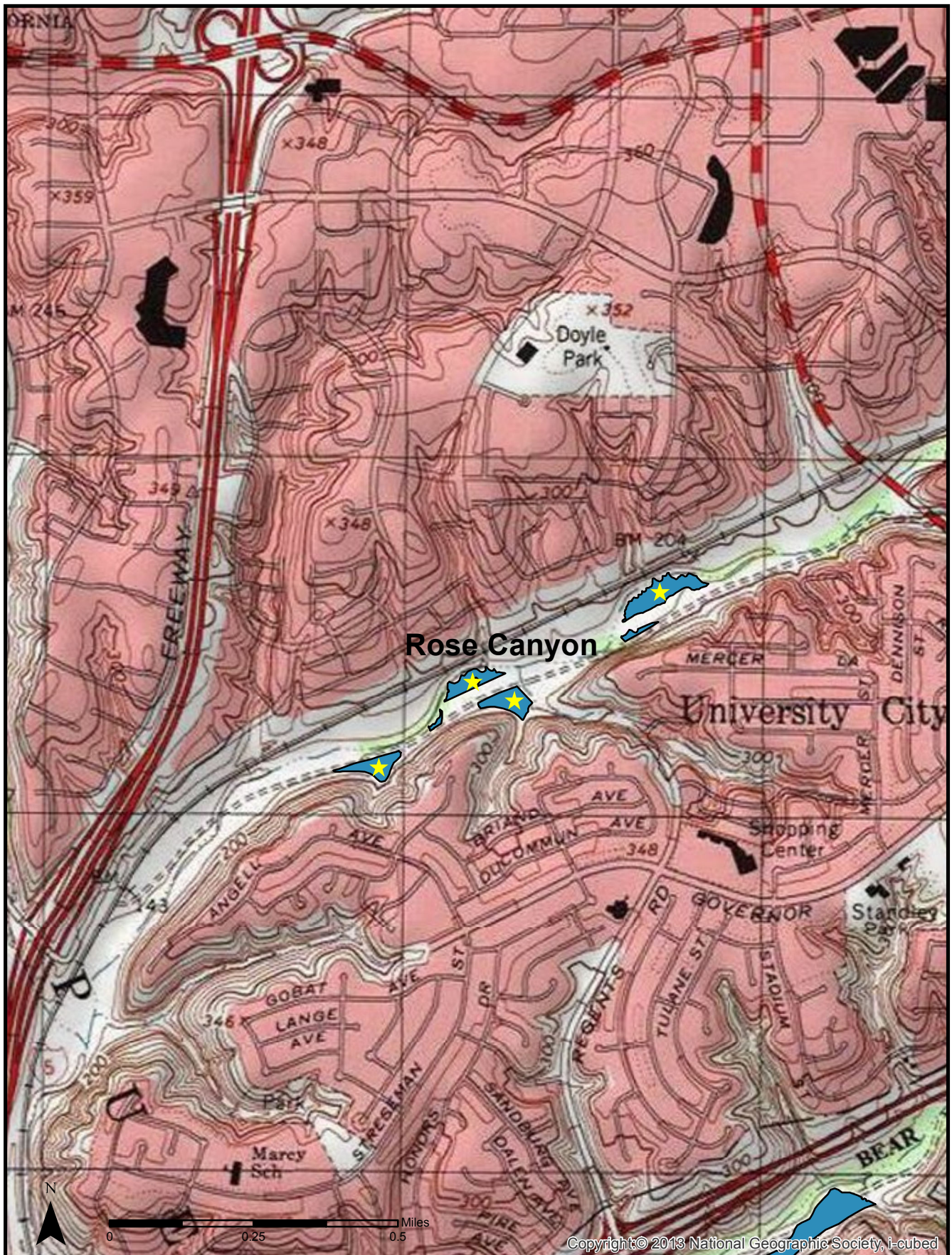


Figure 4
Rose Canyon Mitigation Site
Vicinity Map

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).

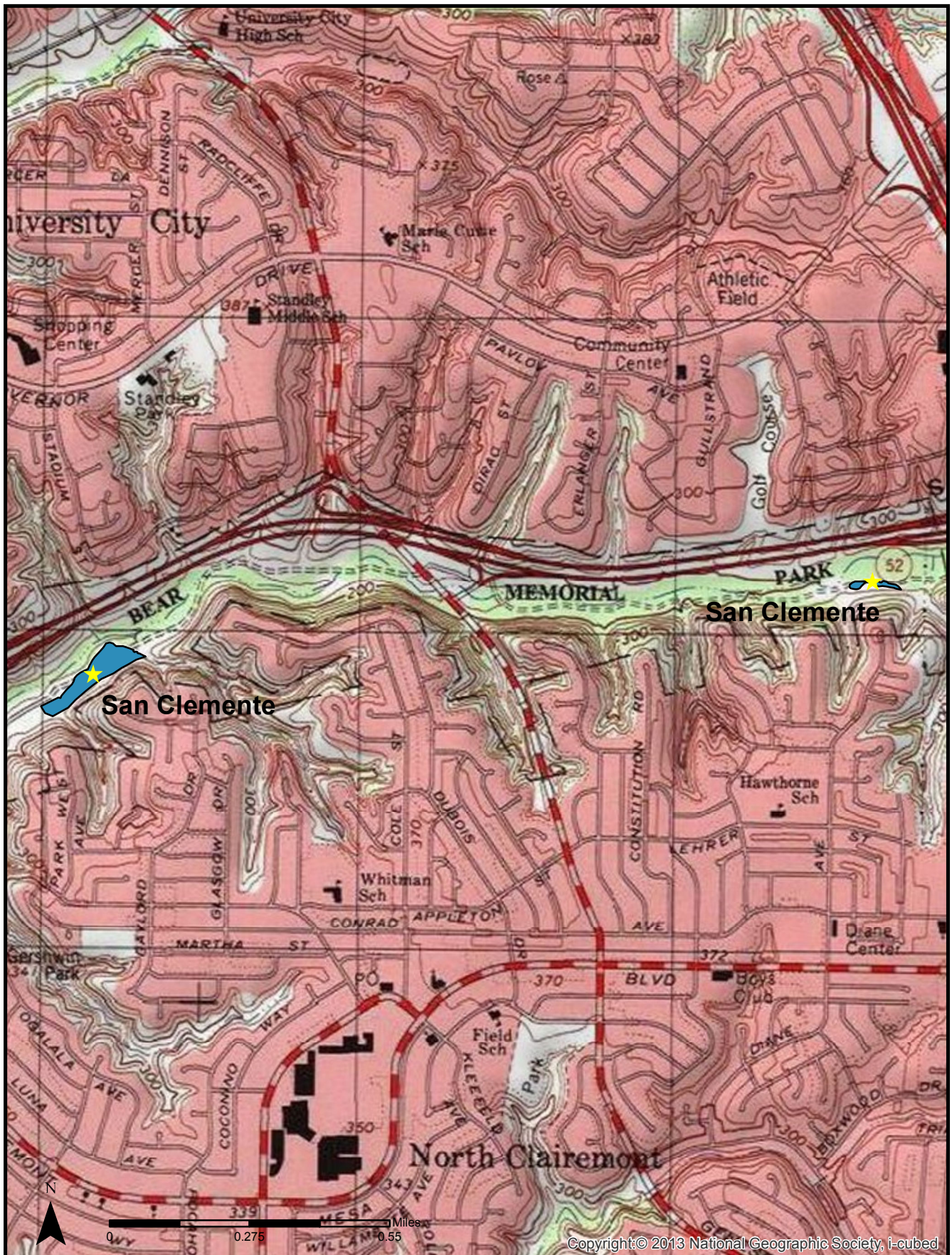
The project included the creation of approximately 2.86 acres of wetland habitat (southern willow riparian forest, streambed, and emergent wetland) and 2.81 acres upland habitat (Diegan coastal sage scrub and oak woodland).



San Clemente Canyon: Diegan coastal sage scrub with oak woodland, 2021

Construction was initiated in October 2007 and received regulatory sign-off from the USACE in January 2015. The upland and wetland planting areas for the project continue to show steady establishment of target species in 2021/2022, with vegetative cover in portions of the wetland habitat over 100 percent cover. The wetlands support a willow or oak overstory and a well-developed understory including species such as mulefat (*Baccharis salicifolia*) and spiny rush (*Juncus acutus*). The site will continue to receive maintenance help ensure native habitat continues to increase in maturity and spatial coverage. In 2020/21 maintenance crews focused on control and removal of non-native annuals such as black 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	1.79	0.85
Diegan Coastal Sage Scrub (Tier II)	2.42	1.57	0.85
Oak Woodland (Tier I)	0.39	0.19	0.20



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).

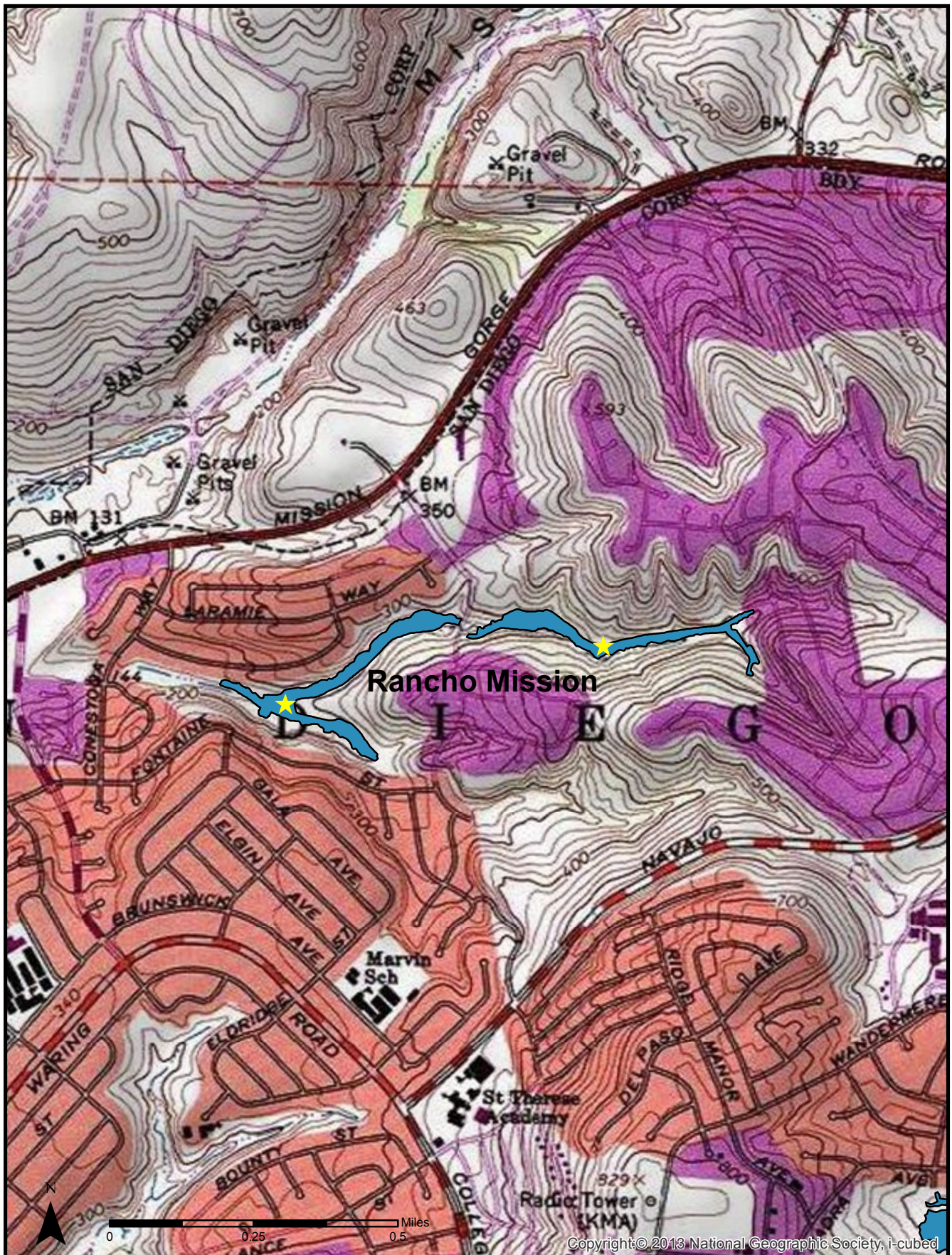


Rancho Mission Canyon, 2022

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 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 target native cover of 100%, exceeding the Year 5 goal of 90%. The site is continuing to mature with dense thickets of vegetation found 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. During 2021 assessment some non-native species were observed in the upland areas adjacent to the mitigation area including: Mexican fan palm (*Washingtonia robusta*), tree tobacco (*Nicotiana glauca*) and black mustard which were subsequently treated and removed during maintenance visits. The site will continue to be monitored to ensure non-natives 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).

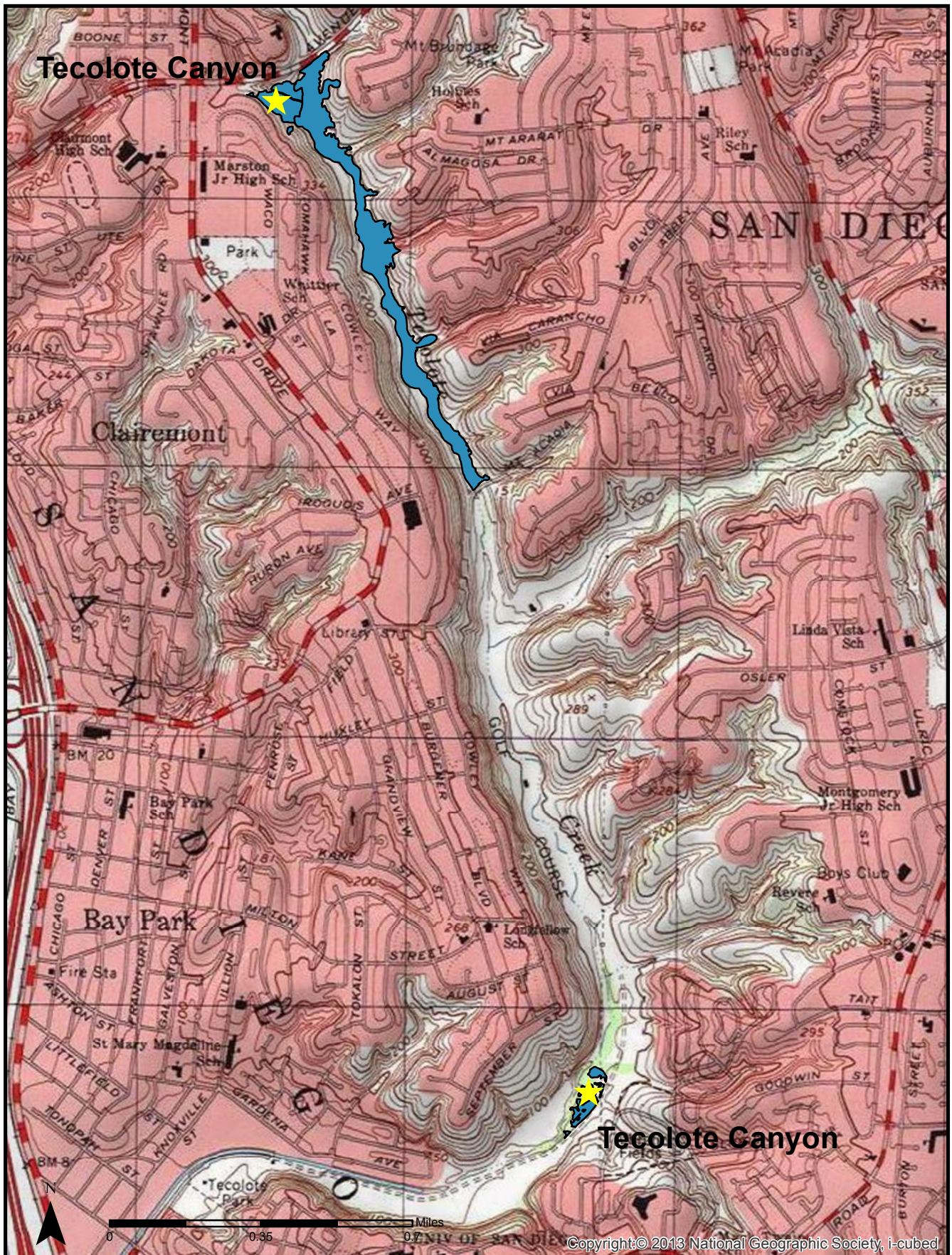
The project includes the creation of 1.61 acres of wetland habitat (southern willow scrub, southern cottonwood willow riparian forest, and oak riparian forest) and restoration of 3.37 acres upland habitat (Diegan coastal sage scrub & native grassland). Construction was initiated in February 2007 and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



Tecolote Canyon: Balboa site, 2022

A qualitative review of the site in the spring of 2022 estimated vegetative cover to be over 90 percent in the Diegan coastal sage scrub habitats, and 80 percent in the riparian areas. 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
Riparian Forest (Creation)	1.19	1.09	0.10
Southern Willow Scrub (Creation)	0.42	0.41	0.01
Diegan Coastal Sage Scrub (Tier II)	3.30	3.30	0
Native Grassland (Tier I)	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).

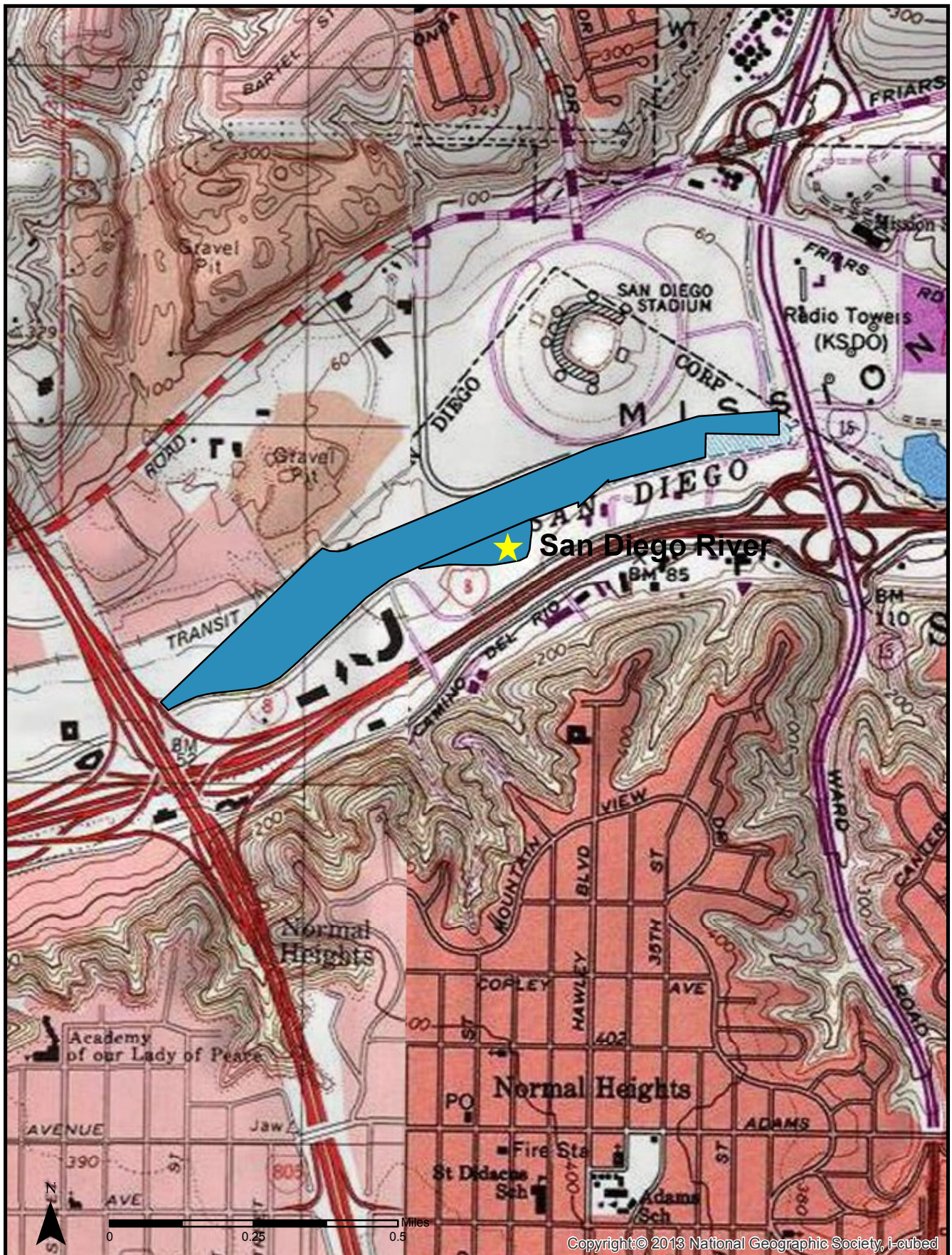


San Diego River: Riparian forest and coastal sage scrub, 2021

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 2021/2022, native vegetation at the site continues to mature with trees reaching heights of 25-30 feet, and total vegetative cover at approximately 95 percent. The site supports a well-developed understory of spiny rush, arrowweed (*Pluchea sericea*), and mulefat. Non-native annuals including Spanish false fleabane (*Pulicaria paludosa*), and mustard were observed sporadically throughout the site, primarily along the edges and trails. 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 illegal 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



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: Freshwater marsh and riparian woodland, 2021

The site was assessed in spring of 2022 and remained in good condition. The site continues to mature with vegetative cover approaching 95% and willows occasionally reaching heights of 25 to 35 feet. No trash or debris or unauthorized trails were observed onsite. Vegetation within the wetland habitat is predominately spiny rush, deer grass (*Muhlenbergia rigens*), and various species of willows. Invasive species, including black mustard and rabbit's foot grass (*Polypogon monospermiensis*) were observed occasionally and maintenance crews cut and treated small numbers of pampas grass (*Cortaderia selloana*) that were observed within the mitigation area.

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	3.00	0.15
Diegan Coastal Sage Scrub (Tier II)	1.03	1.02	<0.01



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Lake Murray Mitigation Project

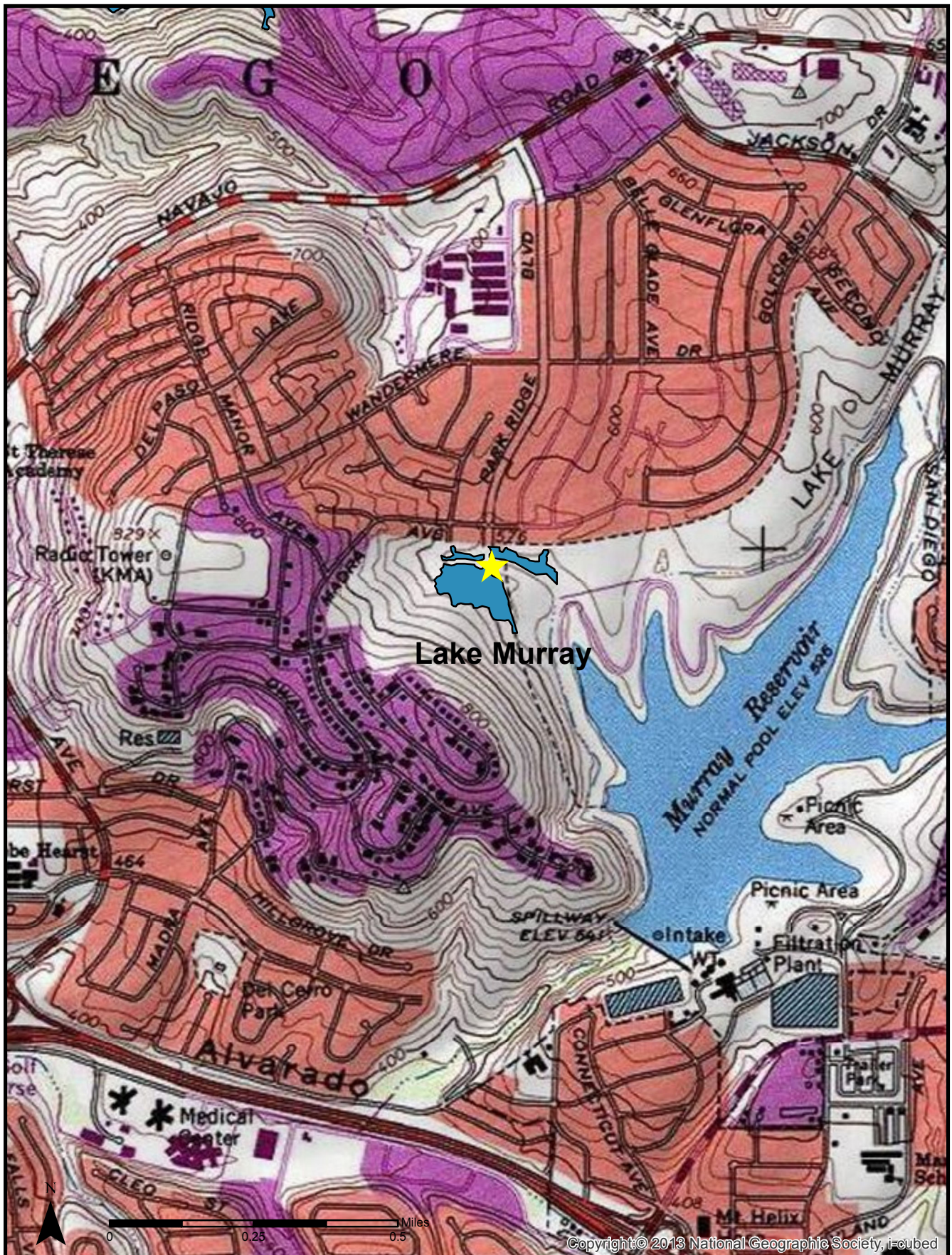
The Lake Murray Mitigation Project is in the City of San Diego's Mission Trails Regional Park. It is located in the area just west of Lake Murray in the Del Cerro neighborhood of the Navajo Community (Figure 10). The mitigation site includes 2.5 acres of wetland enhancement (southern willow scrub habitat)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



Lake Murray: cactus cuttings installed, 2022

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 all of the defined enhancement site. The wetland overstory continues to mature, increasing in density and height with species such as Fremont 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 spiny rush, spike sedge (*Carex nardina*), evening primrose (*Oenothera elata*), San Diego marsh elder (*Iva hayesiana*), and broad-leaved cattail (*Typha latifolia*). The upland areas, while not as successful as the riparian areas, are continuing to fill in with native coastal sage scrub species including California sagebrush, lemonadeberry, flattop buckwheat (*Erigeron fasciculatus*), laurel sumac (*Malosoma laurina*), and black sage (*Salvia mellifera*). As part of the annual maintenance effort this year, non-native species including black mustard and bristly ox tongue (*Helminthotheca echioides*) were removed from the upland habitat areas.

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	5.05	0.15



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El Rancho Peñasquitos Wetland Enhancement Project

The mitigation site is located along Los Peñasquitos Canyon approximately 0.5 mile west of Black Mountain Road in the vicinity of the historically designated Johnson Taylor Adobe of Rancho de los Peñasquitos (City of San Diego HRB Site #75). The site is within the MHPA on County and City of San Diego Open Space Land.



El Rancho Peñasquitos, 2021

The El Rancho Project included enhancement of 5.53 acres of southern cottonwood willow riparian forest, by eradicating targeted non-native species. Project efforts began March 26, 2006 and regulatory sign-off was received in early 2010. This project treated 6,720 non-native plants, targeted species included Canary Island date palm (*Phoenix canariensis*), Mexican fan palm (*Washingtonia robusta*), Eucalyptus, Peruvian pepper tree (*Schinus terebinthifolius*), Brazilian pepper tree (*Schinus terebinthifolia*), and edible fig (*Ficus carica*).

The El Rancho Peñasquitos Wetland Enhancement Project continues to meet the success criteria outlined in the Mitigation Plan. Many of the larger treated plants have begun to deteriorate and decompose, allowing for the establishment of native species in their direct vicinity. Park and Recreation has taken over long-term management of the site and manages the land consistent with the Multiple Species Conservation Plan which includes targeting the treatment or removal of invasive exotics as part of routine park management. As of 2021, all credits have been assigned for El Rancho Peñasquitos. In 2021 as well, the City completed their final requirement with long-term maintenance for this mitigation site and management of the site is back with the property owner which is the County of San Diego.

Mitigation Credit Status			
Habitat Type	Acres	Assigned	Balance
Riparian Forest (Enhancement)	5.53	5.53	0

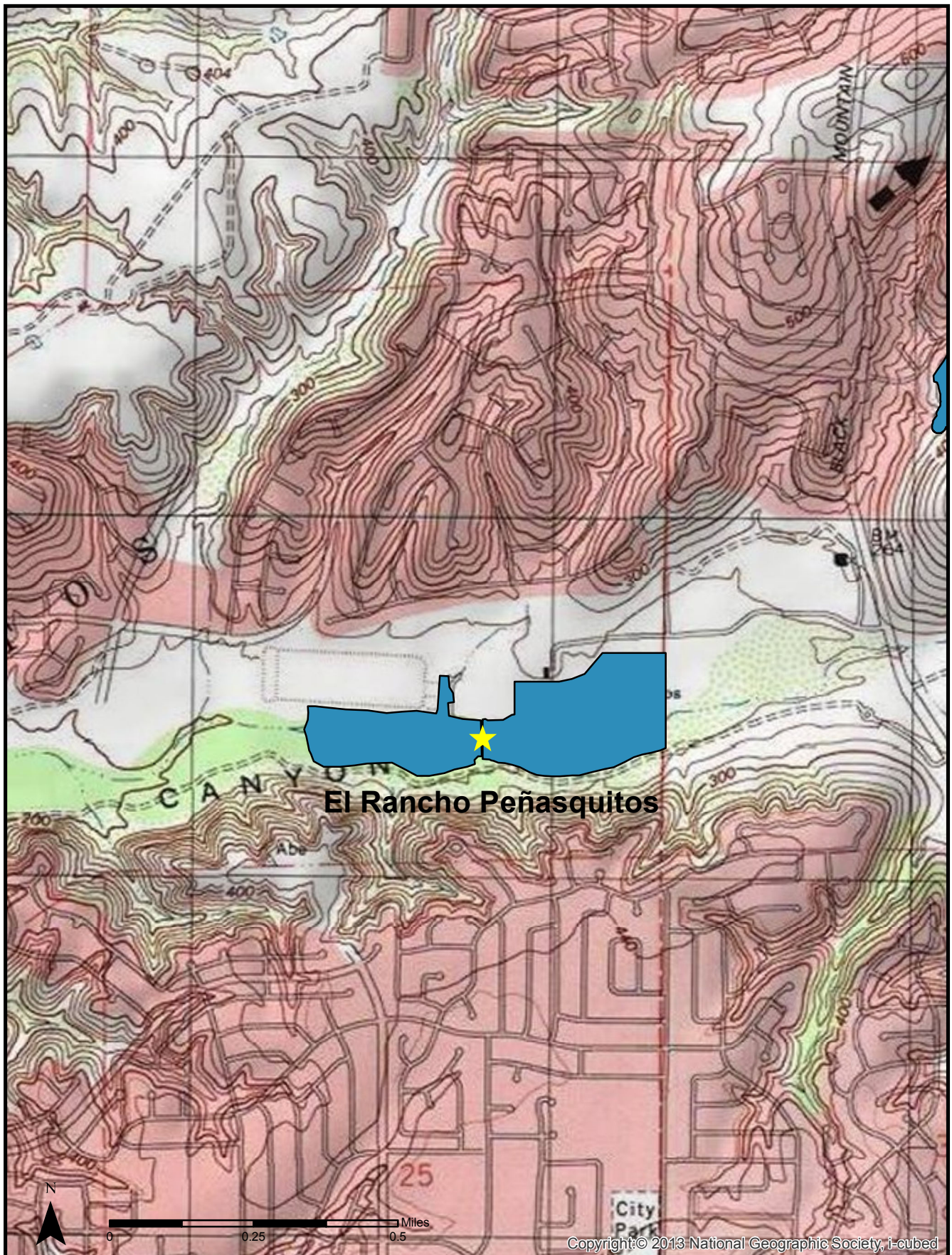


Figure 11

**El Rancho Peñasquitos 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 and vernal pools, February 2022

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 2021/2022 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.

Sensitive plant species present onsite include San Diego button-celery (*Eryngium aristulatum* var. *parishii*), spreading navarretia (*Navaretia fossalis*), variegated dudleya (*Dudleya variegata*), snake cholla (*Opuntia parryi serpentina*), San Diego barrel cactus (*Ferocactus viridescens*), San Diego bur-sage (*Ambrosia chenopodiifolia*), south coast saltbush (*Atriplex pacifica*), and San Diego County viguiera (*Viguiera laciniata*). Notable bird species observed in 2021/2022 within the site include California gnatcatcher and western burrowing owl (*Athene cunicularia*). Notable animal species observed in and around the vernal pools include San Diego fairy shrimp (*Branchinecta sandiegonensis*), western spadefoot toad (*Spea hammondi*), and southern pacific rattlesnake (*Crotalus oreganus helleri*).

Mitigation Credit Status			
Habitat Type	Acres	Assigned	Balance
Maritime Succulent Scrub (Tier I)	13.24	2.58	10.66



Figure 12

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. This project is restoring native habitat in the area by removal of non-native species, installation of native plants, and a 5-year maintenance and monitoring period.



Stadium Mitigation Site: Riparian scrub and forest, June 2022

Work at the Stadium Mitigation site began in August 2016 with the initial cleanup, removal of illegal encampments, and removal of non-native vegetation. Recent work onsite included non-native removal, irrigation removal, and trash removal. The project is now in year five of the maintenance and monitoring period with vegetation communities continuing to diversify, mature, and increase in density.

This site provides high quality habitat for a number of regionally sensitive species including least Bell's Vireo, southwestern willow flycatcher (*Empidonax traillii extimus*), western pond turtle (*Actinemys marmorata*), 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.

Mitigation credits are released from this site in a planned phased approach with credits released as the project meets set milestones. Currently 85% of the credits have been released for use and 100% will be released after sign off for end of 5 year monitoring and maintenance with the agencies is scheduled for release in early 2023.

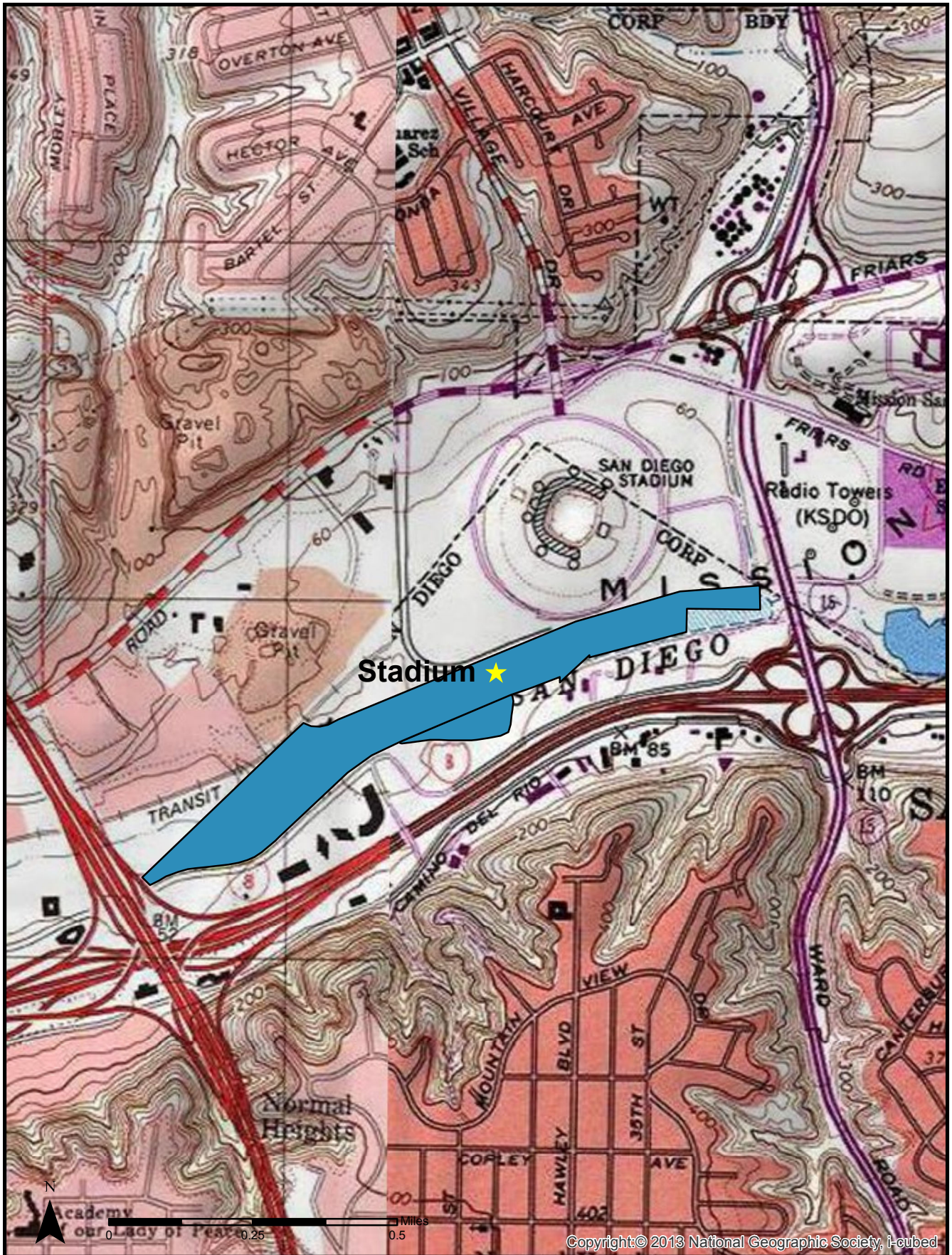
Mitigation Credit Status						
Jurisdictional Resource	Vegetation Community	Total	85% Credit Release	Assigned Credits	Balance of 85% Credit Release	Total Balance of Credits
ACOE/RWQCB						
Wetland Waters of the U.S.	Coastal and Valley Freshwater Marsh	0.492	0.4182	0.003	0.4152	0.489
	Southern Cottonwood – Willow Riparian Forest	19.752	16.7892	3.952	12.8372	15.8
	Riparian Scrub	6.38	5.423	0.929	4.494	5.451
	Subtotal	26.624	22.6304	4.884	17.7464	21.74

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

October 2022

Non-wetland Waters of the U.S.*	Southern Cottonwood – Willow Riparian Forest	13.998	11.8983	4.415	7.4833	9.583
	Riparian Scrub	7.915	6.72775	2.6735	4.05425	5.2415
	Subtotal	21.913	18.62605	7.0885	11.53755	14.8245
Riparian Buffer (Non-jurisdictional)	Southern Cottonwood – Willow Riparian Forest	2.57	2.1845	1.116	1.0685	1.454
	Riparian Scrub	2.976	2.5296	1.747	0.7826	1.229
	Subtotal	5.546	4.7141	2.863	1.8511	2.683
Total		54.083	45.97055	14.8355	31.13505	39.2475
CDFW						
Wetlands	Coastal and Valley Freshwater Marsh	0.492	0.4182	0.003	0.4152	0.489
	Southern Cottonwood – Willow Riparian Forest	36.32	30.872	9.483	21.389	26.837
	Riparian Scrub	17.271	14.68035	5.3495	9.33085	11.9215
Total		54.083	45.97055	14.8355	31.13505	39.2475
City of San Diego						
Wetlands	Coastal and Valley Freshwater Marsh	0.492	0.4182	0.003	0.4152	0.489
	Southern Cottonwood – Willow Riparian Forest	36.32	30.872	9.483	21.389	26.837
	Riparian Scrub	17.271	14.68035	5.3495	9.33085	11.9215
	Subtotal	54.083	45.97055	14.8355	31.13505	39.2475
Uplands	Diegan Coastal Sage Scrub	0.77	0.6545	0	0.6545	0.77
Total		54.853	46.62505	14.8355	31.78955	40.0175

*These areas were classified as non-wetland waters of the U.S. based on the updated jurisdictional delineation but may develop into wetland waters of the U.S. as the Project establishes and reaches equilibrium and hydric soils and hydrophytic vegetation have time to develop.



ATTACHMENT A
25 MONTH REVEGETATION AND RESTORATION PROJECTS STATUS TABLE



Canyon Restoration/Revegetation Projects (2016–2022)
June 2022

Active Projects								
Project	Revegetation or Restoration	Size (acre)	Start of 25 Months	Seeding Date	Planting Date	End of 25 Months	PM	Status
El Camino South (Gonzales Canyon)	Revegetation	<0.01	1/31/2016	N/A	N/A	2/31/2018	Jenkins	Additional erosion issues being addressed by the water crews
Rose Canyon Emergency Sewer Point Repair	Restoration	0.11	1/9/2019	1/17/2018	1/9/2019	2/9/2022	Frick	NOC completed
Lake Hodges Vault Repair Restoration	Restoration	0.113	3/25/2019	2/17/2019	3/25/2019	4/25/2021	Frick	NOC completed
Del Cerro WMB Emergency	Revegetation	<0.01	7/9/2019	7/9/2019	N/A	8/9/2021	Frick	NOC completed
Wing St Sewer Main Repair	Revegetation	<0.01	8/26/2019	8/26/2019	N/A	9/26/2021	Frick	NOC completed
Hopkins Canyon Sewer Pipe Protection Emergency Project	Revegetation	<0.01	1/14/2020	1/14/2020	N/A	2/14/2022	Jenkins	25-month monitoring in progress
Chocolate Canyon Path Repair	Revegetation	<0.01	10/6/2020	N/A	N/A	11/6/2022	Jenkins	25-month monitoring in progress
65 th and Herrick WPS Temporary Pump	Revegetation	0.02	12/01/2020	N/A	N/A	01/01/2023	Jenkins	25-month monitoring in progress
Shepard Canyon Dishwater Pond Water Main Repair	Restoration	0.01	N/A	N/A	N/A	N/A	Frick	Pending installation of container plants
PS 64 Channel Clearing Emergency	Restoration	<0.01	4/17/2020	N/A	4/17/2020	12/31/22	Frick	25-month maintenance extended until end of calendar year to account for lapse in contracted maintenance
East Shepard Canyon Water Main Break Emergency Restoration Project	Restoration	0.064	6/2/2022	TBD	6/2/2022	7/31/2024	Tran	

**ATTACHMENT B
MITIGATION SUMMARY TABLE**

Mitigation Site Details



Mitigation Site	Mitigation Type	Habitat	USACE	RWQCB	CDFW	City	MHPA	Coastal	Acres	Used	Free	
Penasquitos												
Canyon View (Penasquitos Upland)	Upland Restoration	Coastal Sage Scrub (CSS)	✗	✗	✗	✓	✓	✗	6.4900	2.2423	4.2477	●
		Native Grassland (NG)	✗	✗	✗	✓	✓	✗	0.8900	0.0930	0.7970	●
Central Tecolote Enhancement/Mitigation	Upland Restoration	Coast Live Oak Woodland (CLOW)	✗	✗	✗	✓	✓	✗	0.0400	0.0400	0.0000	●
		Diegan Coastal Sage Scrub (DCSS)	✗	✗	✗	✓	✓	✗	3.0600	0.8370	2.2230	●
		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	2.9980	0.1520	●
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	2.4780	2.2720	●
		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	2.1290	0.2910	●
		Riparian Forest (RF)	✗	✗	✓	✓	✓	✗	2.0100	0.9256	1.0844	●
	Wetland Enhancement	Riparian Forest (RF)	✗	✗	✓	✓	✓	✗	0.6100	0.6100	0.0000	●