

INDIVIDUAL BIOLOGICAL ASSESSMENT REPORT

Site Name/Facility:	San Carlos Creek
Master Program Map No.:	54
Date:	May 15, 2018
Biologist Name/Cell Phone No.:	Jasmine Bakker / 619-708-5990

Instructions: This form must be completed for each storm water facility identified in the Annual Maintenance Needs Assessment report and prior to commencing any maintenance activity on the facility. The Existing Conditions information shall be collected prior to preparation of the Individual Maintenance Plan (IMP) to assist in developing the IMP. The remaining sections shall be completed after the IMP has been prepared. Attach additional sheets as needed.

EXISTING CONDITIONS

The City of San Diego (City) has developed the Master Storm Water System Maintenance Program ([Master Maintenance Program, MMP] City 2011a) to govern channel operation and maintenance activities in an efficient, economic, environmentally, and aesthetically acceptable manner to provide flood control for the protection of life and property.

This document provides a discussion of the biological resources affected by emergency maintenance which occurred within San Carlos Creek (Map 54) from November to December 2014. Due to the emergency nature of the maintenance, a pre-maintenance survey of the area affected by maintenance could not be conducted. As a result, this IBA estimates the vegetation that was affected based on previous survey work conducted for the PEIR in the channel east of Lake Badin Avenue, current air photos and a site visit on May 5, 2015. The IBA is prepared to comply with the MMP's Programmatic Environmental Impact Report ([PEIR] City 2011b). Map numbers correspond to those contained in the MMP.

Project Location and Description

The San Carlos Creek channel is located in the community of San Carlos (Figure 1). It is generally located south of Beaver Lake Drive between Cowles Mountain Boulevard and Boulder Lake Avenue (Figures 2 and 3). The purpose of the maintenance was to alleviate flooding which occurred as a result of vegetation and debris being dislodged from the channel floor and clogging the entrance to the culvert that takes the runoff in the channel beneath Cowles Mountain Boulevard.

The area of the emergency maintenance is characterized by three sections of a concrete-lined storm water channel. The first section, the Beaver Lake section, is 7 feet wide and 950 feet long, and occurs east of Cowles Mountain Boulevard, south of Beaver Lake Drive, north of Lake Cayuga Drive, and west of Lake Badin Avenue. The second section, the Golf Course section, is 1 foot wide by 180 feet long, and occurs west of Cowles Mountain Boulevard

inside the San Carlos Golf Course. The third section, the Lake Badin section, is 8 feet wide and 1,050 feet long, and occurs east of Lake Badin Avenue.

The emergency maintenance was performed in two phases. The first phase was required to remediate flooding caused by a clog in the culvert beneath Cowles Mountain Boulevard. The clog was formed by vegetation within the Beaver Lake section becoming dislodged by a heavy rainfall event, and accumulating at the entrance to the culvert. The second phase was conducted to remove remaining vegetation within the channel further upstream of the Cowles Mountain Boulevard channel to prevent a re-occurrence of a clog.

The first phase occurred within the Beaver Lake and Golf Course sections. The first phase began on November 1, 2014, and was completed on November 8, 2014. An initial emergency response site visit was conducted on November 3, 2014 to review the reach of San Carlos Channel south of Beaver Lake Drive and the channel west of Cowles Mountain Boulevard in Mission Trails Golf Course (Attachment 1). The initial work to clear the culvert was conducted with a Gradall and backhoe from the area above the culvert entrance. In addition, vegetation and sediment were removed for a distance of approximately 180 feet within a concrete channel downstream of the culvert. In order to preclude a similar problem from occurring in the future, vegetation was cut and removed by hand from the sloped sections along the entire length of the Beaver Lake section of the channel. This material was taken to an approved disposal site. Approximately 158 tons of material was removed from the channel.

To further protect against a problem at the Cowles Mountain Boulevard culvert, vegetation and sediment within the channel east of Lake Badin Avenue was removed on December 1, 2014. Removal was performed with hand tools, and less than one truck-full of material was removed and hauled to the Miramar Landfill.

Survey Methods and Date:

Desktop Literature Review

HELIX Environmental Planning, Inc. (HELIX) conducted a review of existing project documentation and permits as part of this IBA. Document review included the MMP; PEIR (City 2011b) and Appendices; and Notification of use of Regional General Permit 63 that was submitted on November 1, 2014 to U.S. Army Corps of Engineers (USACE) and California Regional Water Quality Control Board (RWQCB). The O&M Environmental Evaluation Form completed on November 21, 2014 by the City's maintenance crew for the Lake Badin section removal work was also reviewed and evaluated to determine impacts associated with the emergency maintenance work.

Potential occurrence of special-status species within the project site was determined by a habitat suitability assessment, a review of records from the California Natural Diversity Database (CNDDDB), species occurrence data from the U.S. Fish and Wildlife Service (USFWS) Carlsbad Office's Listing of Multiple Species Database, and the California Native Plant Society (CNPS) rare plant online inventory. A half-mile radius was used to specifically

assess the potential for sensitive species for the San Carlos Creek maintenance area. A CNDDDB search was conducted for the USGS 7.5-minute La Mesa quadrangle, which encompasses the maintenance area.

Biological Survey and Site Assessment

HELIX conducted an initial biological survey of the San Carlos Creek channel during emergency work on November 3, 2014 and an additional biological survey and site assessment on May 5, 2015 following emergency work. Surveys were conducted on foot and achieved 100 percent visual coverage of all three sections of the channel. Vegetation communities were mapped in accordance with the City's Biology Guidelines (City 2012) and following classifications described by Holland (1986). Data collected during surveys included comprehensive species lists, habitat suitability assessments for sensitive species. Vegetation communities were mapped on a 150-scale (1 inch = 150 feet) map with a 2012 aerial photograph base map; mapping of vegetation communities present before maintenance occurred were determined by studying pre-maintenance photographs and maps (Figure 4a). Representative photographs were taken during the survey and are provided in this report. Plants were identified according to The Jepson Manual: Vascular Plants of California (Baldwin *et al.* [2012]).

Biological Resources:

Stream Type: Perennial ☒ Intermittent ☐ Ephemeral ☐

Stream type designations are based on USGS topographical map stream designations and field visit review of the channels. San Carlos Creek is shown on the USGS La Mesa quadrangle map. All three sections are presumed to have perennial sources of water from urban runoff.

Vegetation:

For purposes of this IBA, only vegetation or land covers within the maintenance areas, including associated work areas (i.e., access and loading areas), are described below. A total of 4 vegetation communities or land cover types were identified during the survey to be present prior to maintenance: developed land (concrete channel with or without surface water), disturbed freshwater marsh, non-native vegetation/ornamental, and non-native grassland; Table 1; Figure 4a). The disturbed freshwater marsh was not present during the survey, but was removed during the emergency maintenance performed in November and December 2014. A total of 3 vegetation communities or land cover types remained within the channel segments post-maintenance (Table 1; Figure 4b). See PEIR Appendix D.1 (Biological Resources Report) for general descriptions of vegetation communities/land cover types (City 2011b).

Appendix B

Table 1
PRE- AND POST-MAINTENANCE EXISTING LAND COVERS BY CHANNEL REACH (acres*)

Vegetation Community or Land Cover Type (Holland Code ¹)	City MSCP Habitat Designation/ Tier	Concrete-Lined (pre-maint)/post-maint ²			TOTAL
		Lake Badin	Beaver Lake	Golf Course	
Wetlands					
Freshwater Marsh (52400)	Freshwater Marsh/None	(0.005)/ 0.00	--	(0.004)/ 0.00	(0.009)/ 0.00
Wetland WUS Subtotal		(0.005)/ 0.00	--	(0.004)/ 0.00	(0.009)/ 0.00
Developed - Concrete Channel	Channelized Stream/None	(0.187)/ 0.193	0.107	(0.001)/ 0.005	(0.295)/ 0.305
Non-wetland WUS Subtotal		(0.187)/ 0.193	0.107	(0.001)/ 0.005	(0.295)/ 0.305
Wetland and Non-wetland WUS Total ³		0.193	0.107	0.005	0.305
Uplands					
Non-native grassland (42200)	Common Uplands/Tier IIIb	0.006	0.032	--	0.037
Non-native Vegetation/ Ornamental (11000)	Other Uplands/Tier IV	0.139	0.508	--	0.648
Developed Land (12000) ⁴	Other Uplands/Tier IV	0.456	0.460	0.070	0.986
Uplands Total		0.601	1.000	0.070	1.671
GRAND TOTAL		0.793	1.107	0.075	1.975

*Acreages are rounded to the nearest 0.001 acre; thus, totals reflect rounding

¹ Includes classes added by Oberbauer (2008)

² Pre- and post-maintenance acreages are both listed if different; if there was no change, only one acreage is provided

³ Total reflects WUS and Waters of the State (i.e., WUS acreage is the same as Waters of the State acreage)

⁴ Includes clean concrete and upland vegetation in concrete-lined channel

Freshwater Marsh (0.009 acre pre-maintenance)

A total of 0.009 acre of freshwater marsh was removed during emergency maintenance in November 2014. This wetland community consisted primarily of cattail (*Typha* sp.) and included two small patches (0.005 acre) of freshwater marsh within the Lake Badin section and one 0.004-acre area of freshwater marsh within the Golf Course section of San Carlos Creek.

Non-native grassland (0.037 acre pre- and post-maintenance)

Non-native grassland occurs at the western edge of both the Lake Badin and Beaver Lake sections of San Carlos Creek. This upland community consisted primarily of wild oats (*Avena* spp.), fescue (*Festuca myuros*), and bromes (*Bromus* spp.) and comprised 0.006 acre within the Lake Badin section and 0.032 acre within the Beaver Lake section of San Carlos Creek. No impacts to non-native grassland occurred during emergency maintenance in November 2014.

Non-native Vegetation/Ornamental (0.648 acre pre- and post-maintenance)

This upland community was not impacted during emergency maintenance in November 2014; maintenance resulted in minor trimming/removal of overhanging/broken branches. Hottentot-fig (*Carpobrotus edulis*), fountain grass (*Pennisetum setaceum*), fennel (*Foeniculum vulgare*), and eucalyptus trees (*Eucalyptus* sp.) occur along the top of the channel and occasionally along the banks: 0.139 acre within the Lake Badin section and 0.508 acre within the Beaver Lake section of San Carlos Creek.

Developed Land (1.281 acre pre-maintenance and 1.291 acre post-maintenance)

Developed land includes unvegetated portions of concrete-lined channel (both wetland and upland), landscaping from adjacent properties, and the parking lot adjacent to the Lake Badin maintenance area. The removal of freshwater marsh during emergency maintenance resulted in an increase to developed land. Specifically, 0.005 acre of freshwater marsh within the Lake Badin section pre-maintenance became an additional 0.005 acre of developed concrete channel bottom (non-wetland WUS) post-maintenance and thus increased the total developed land within the Lake Badin section from 0.643 acre (including 0.187 acre of wetland) to 0.648 acre (including 0.193 acre of wetland). Similarly, 0.004 acre of freshwater marsh within the Golf Course section pre-maintenance became an additional 0.004 acre of developed concrete channel bottom (non-wetland WUS) post-maintenance and thus increased the total developed land within the Golf Course section from 0.071 acre (0.001 acre of wetland and 0.070 acre of upland) to 0.075 acre (0.005 acre of wetland and 0.070 acre of upland). No changes to the 0.567 acre developed land (including 0.107 acre of wetland and 1.000 acre of upland) occurred within the Beaver Lake section as a result of maintenance.

Special Status Species:

No federal or state-listed plant or animal species, nor other sensitive species, were detected during the biological survey, nor were any special-status species reported within 0.5 mile of the project work areas.

Wildlife Value:

Freshwater marsh within the maintenance area, and trees within the developed, landscaped yards adjacent to the maintenance area, provide habitat for wildlife, including potential nesting and foraging songbirds and small mammals. A list of the 13 wildlife species detected during the biological survey and site assessment is provided below.

- Anna's Hummingbird (*Calypte anna*)
- American Crow (*Corvus brachyrhynchos*)
- Bewick's Wren (*Thyromanes bewickii*)
- European Starling (*Sturnus vulgaris*)
- Northern Mockingbird (*Mimus polyglottos*)
- Mourning Dove (*Zenaida macroura*)
- Unidentified Warbler
- House Finch (*Haemorhous mexicanus*)
- Mallard (*Anas platyrhynchos*)
- Song Sparrow (*Melospiza melodia*)
- Hooded Oriole (*Icterus cucullatus*)
- Cassin's kingbird (*Tyrannus vociferans*)
- Pacific-slope Flycatcher (*Empidonax difficilis*)

Are there current level of anthropogenic influences on habitat with the project footprint (e.g., homeless encampment, illegal dumping)? Yes ☒ No ☐

If yes, describe the influence:

Landscaping materials from adjacent non-native vegetation/developed land had fallen into the channel or appeared to sometimes be dumped.

Are there any conservation easements which have been previously recorded within the maintenance area? Yes ☐ No ☒

If yes, describe them and their purpose:

Jurisdictional Areas (pre-maintenance):**U.S. Army Corps of Engineers**

Wetland Waters of the U.S. (WUS): 0.009 ac freshwater marsh

Non-wetland WUS: 0.295 ac concrete-lined channel

California Department of Fish and Wildlife/City of San Diego:

Wetlands: 0.009 ac freshwater marsh

Streambed/Unvegetated Waters: 0.295 ac concrete-lined channel

Wetland determinations were completed at a program level and soil pits were not excavated. Determinations were based on species of vegetation present and their wetland affiliations, above-ground hydrology indicators, topography, soil surface substrate, and best professional judgment. Unvegetated reaches of the channel have downstream connectivity to waters of the US and waters of the State (Lake Murray) and therefore qualify as jurisdictional.

<p>Emergency maintenance of the San Carlos Creek channel from November and December 2014 resulted in impacts to 0.009 acre of wetlands and waters under the jurisdiction of USACE, RWQCB, California Department of Fish and Wildlife (CDFW), and City. No impacts the non-wetland WUS/Streambed occurred (unvegetated concrete-lined channel) occurred as a result of emergency maintenance. Note that for the San Carlos Creek, the impacts to jurisdictional wetlands and waters is the same across all agencies.</p>			
<p>Sensitive* Plant Species Observed: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p><u>If yes, what species were observed and where? If yes, complete a California Native Species Field Survey Form and submit it to the California Natural Diversity Database.</u></p>	<p>Sensitive* Animal Species Observed/Detected: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p><u>If yes, what species were observed/detected and where? If yes, complete a California Native Species Field Survey Form and submit it to the California Natural Diversity Database.</u></p>		
<p>Is any portion of the maintenance activity within an MHPA? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p><u>If yes, describe which portions are within an MHPA:</u></p>			
<p>Is there moderate or high potential for listed animal species to occur in or adjacent to the impact area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>Work was conducted outside the avian breeding season. Thus, no impacts occurred from the emergency maintenance.</p> <p><u>If yes, which species (check all that apply) and describe any surveys which should be undertaken to determine whether those species could occur within the maintenance area:</u></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Least Bell's vireo <input type="checkbox"/> Southwestern willow flycatcher <input type="checkbox"/> Arroyo toad <input type="checkbox"/> Coastal California gnatcatcher <input type="checkbox"/> San Diego fairy shrimp </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Riverside fairy shrimp <input type="checkbox"/> California least tern <input type="checkbox"/> Light-footed clapper rail <input type="checkbox"/> Western snowy plover <input type="checkbox"/> Other: Nesting birds and raptors </td> </tr> </table> <p>Attach documentation supporting the determination of the presence or absence of listed animal species with a moderate or high potential to occur (e.g. California Natural Diversity Database records searches).</p> <p>Refer to Figure 5.</p>		<input type="checkbox"/> Least Bell's vireo <input type="checkbox"/> Southwestern willow flycatcher <input type="checkbox"/> Arroyo toad <input type="checkbox"/> Coastal California gnatcatcher <input type="checkbox"/> San Diego fairy shrimp	<input type="checkbox"/> Riverside fairy shrimp <input type="checkbox"/> California least tern <input type="checkbox"/> Light-footed clapper rail <input type="checkbox"/> Western snowy plover <input type="checkbox"/> Other: Nesting birds and raptors
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Is there moderate or high potential for a listed plant species to occur in or adjacent to the impact area? Yes ☐ No ☒

If yes, identify which species may occur and describe any surveys which should be undertaken to determine whether those species could occur within the maintenance area:

Attach documentation supporting the determination of the presence or absence of listed plant species with a moderate or high potential to occur (e.g. California Natural Diversity Database records searches).

Refer to Figure 5.

Could maintenance disrupt the integrity of an important habitat (i.e., disruption of a wildlife corridor and/or an extensive riparian woodland: Yes ☐ No ☒

If yes, discuss which habitat could be impacted and how:

Could work be conducted during the avian breeding season (January 15 – August 31) without the need for pre-construction nesting surveys: Yes ☐ No ☒

Work was conducted outside the avian breeding season. Thus, no impacts occurred from the emergency maintenance.

If yes, provide justification:

Is it anticipated that maintenance activities would generate noise in excess of 60 dB(A) L_{eq} ? Yes ☒ No ☐

Although maintenance equipment likely generated noise levels in excess of 60 dB(A) L_{eq} , noise attenuation was not required because the emergency maintenance occurred outside the breeding season (January 15 – August 31).

If yes, what measures should be taken to avoid adverse impacts on avian bird breeding within or adjacent to the maintenance?

Biological Resource Conditions Relative to Original Survey Conducted for MASTER PROGRAM Final Program EIR (May 2010) (vegetation communities present, including adjacent uplands; general habitat quality/level of disturbance):

The majority of habitat mapping and jurisdictional delineation work for the PEIR was conducted by HELIX in late winter and early spring of 2007 and 2008. The Beaver Lake section of San Carlos Creek (Map 54) had been mapped entirely as developed land and non-native vegetation, and emergency maintenance resulted in removal of sediment and anthropogenic debris and vegetation that had become uprooted during the storm and obstructed the culvert; no intact vegetation communities had been impacted.

Based on comparison of 2006 aerial photographs with 2012 aerial photographs, and the 2015 field survey, two small patches of freshwater marsh (0.005 acre total) had developed in the Lake Badin section in recent years; this is likely also true for the Golf Course section of the San Carlos Creek channel. All freshwater marsh (0.009 acre total) within the San Carlos Creek channel was removed during emergency maintenance in November to December 2014.

Table 2
MAINTENANCE IMPACTS

Total Impacts:	
All Vegetation/Land Cover Impacts:	0.009 acres
Wetland	0.009 acre
Upland	0.000
Jurisdictional Areas:	
Wetland and Non-wetland Waters (USACE WUS, RWQCB, CDFW, and City Wetlands)	0.009 acre

Is there a moderate or high potential for maintenance to impact an MHPA?

Yes ☐ No ☒

If yes, discuss the potential impacts that could occur from the portion within or adjacent to that MHPA:

Is there moderate or high potential for listed animal species to be impacted?

Yes ☐ No ☒

If yes, which species (check all that apply):

MITIGATION

Applicable Maintenance Protocols (list the applicable maintenance protocols based on the biological resources occurring or likely to occur on site --include any special protocols required):

None. Sediment, plant material, and debris were removed from the channel outside the avian breeding seasons. Adjacent resources include non-native vegetation and non-native grassland. No impacts to this adjacent habitat occurred.

Applicable PEIR mitigation measures:

None.

Other mitigation measures:

None. Work was conducted outside the avian breeding season.

Environmental Mitigation Requirements (including wetland enhancement, restoration, creation, and/or purchase of wetland credits in a mitigation bank; off-site upland habitat acquisition/payment into the City's habitat acquisition fund):

Mitigation is required for impacts to wetlands and non-wetland waters associated with the emergency maintenance. City mitigation ratios must be consistent with those identified in the SDP related to the Final PEIR for the MMP. Mitigation for jurisdictional impacts is dependent upon the type of aquatic resources impacted, and on the nature of the channel; jurisdiction and mitigation ratios are different for earthen and concrete channels.

USACE/RWQCB/CDFW Jurisdictional Wetlands:

The USACE does not regulate activities which occur in concrete-lined channels unless the work involves the placement of fill. Per section 404 (f)(1)(b) of the Clean Water Act, the maintenance of serviceable structures is exempt from USACE regulation, and San Carlos Creek qualifies as a serviceable structure. During the emergency, the USACE confirmed that the work was exempt. Maintenance within San Carlos Creek was limited to removal of sediment, plant material, and other debris.

While CDFW requires notification of activities within concrete-lined channels, it typically does not require compensatory mitigation for these activities. CDFW was notified on November 13, 2014.

The RWQCB determines the need for compensatory mitigation on a case-by-case basis. On November 26, 2014, the RWQCB concurred with the USACE's determination that the work was exempt. Mitigation was not required.

City Wetlands:

The City regulates concrete-lined channels and requires compensatory mitigation for wetland impacts pursuant to the mitigation ratios specified in Site Development Permit (SDP) No. 1134892 amended by SDP No. 2034245 for the Master Storm Water System Maintenance Program. The maintenance performed in November and December 2014 will require mitigation to compensate for 0.009 acre of impact to City wetlands composed of freshwater marsh. Concrete-lined channels without accumulated sediment and/or vegetation inside the project areas were not be affected by project activities and no impact to such areas resulted from the project. Wetland mitigation will be provided at a 4:1 ratio for freshwater marsh, consisting of 1:1 restoration and 3:1 enhancement, to comply with Site Development Permit (SDP) No. 1134892 amended by SDP No. 2034245. The total mitigation requirement for City wetland impacts is 0.036 acre.

Mitigation Description/Location:

Mitigation for wetland impacts from maintenance in Map 54 is proposed at the Stadium Wetland Mitigation Site (Atkins 2015) in the San Diego River watershed between I-15 and I-805 south of Qualcomm Stadium. The Stadium Mitigation Site is an advanced-permittee responsible mitigation site with a service area that includes the Pueblo watershed, Peñasquitos watershed, and San Diego River watershed west of El Capitan Reservoir.

ADDITIONAL COMMENTS OR RECOMMENDATIONS
None.

Figures:

Figure 1 – Regional Location Map

Figure 2 – Project Vicinity Map (Aerial Photograph)

Figure 3 – Project Vicinity Map (USGS Topography)

Figure 4a – Pre-maintenance Vegetation

Figure 4b – Post-maintenance Vegetation

Figure 5 – Sensitive Resources (CNDDDB) Map

REFERENCES:

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. *The Jepson Manual: Vascular Plants of California*, second edition. University of California Press, Berkeley.
- City of San Diego (City). 2012. Land Development Code Biology Guidelines (as amended by Resolution No. R-307376). June.
- 2011a. Master Storm Water Maintenance Program. San Diego, California. October.
- 2011b. Final Recirculated Master Storm Water System Maintenance Program PEIR. San Diego, California. October.
2007. California Environmental Quality Act, Significance Determination Thresholds. Development Services Department. January (updated 2011).
1997. City of San Diego Subarea Plan, Multiple Species Conservation Program. March.
- Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program, California Department of Fish & Game.

SITE PHOTOS (post-maintenance)



PHOTO NOTES:
Lake Badin section, looking upstream at inlet,
May 5, 2015.



PHOTO NOTES: Lake Badin section,
looking downstream at outlet, May 5, 2015.



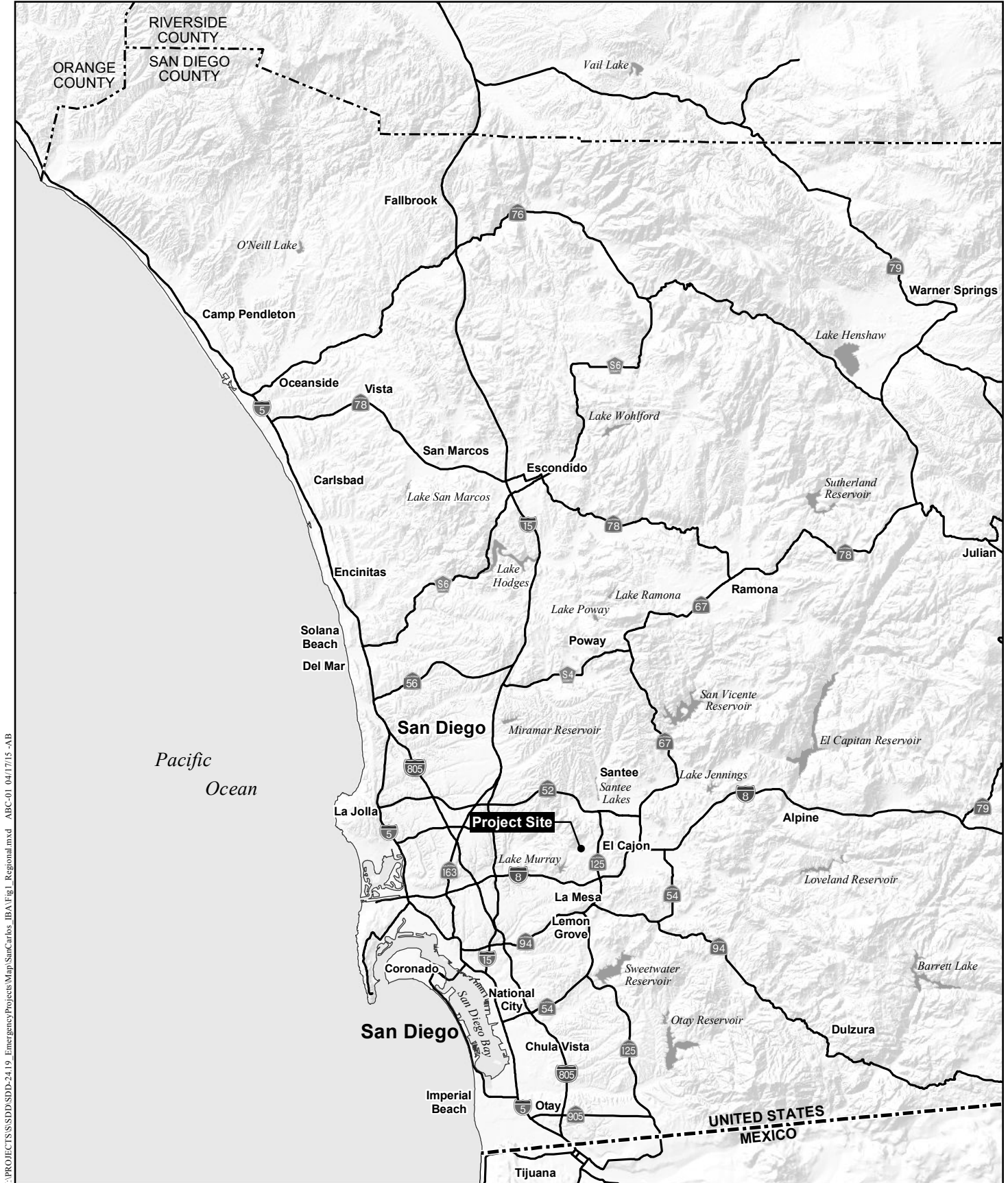
PHOTO NOTES:
Lake Badin section, area of freshwater marsh
removal (downstream patch), May 5, 2015.



PHOTO NOTES:
Lake Badin section, area of freshwater marsh
removal (upstream patch), May 5, 2015.

Appendix B

 A photograph showing a steep, eroded bank of a waterway. The bank is covered in dense green vegetation and tall grasses. A small stream of water flows down the center of the bank.	 A photograph showing a steep, eroded bank of a waterway. The bank is covered in dense green vegetation and tall grasses. A small stream of water flows down the center of the bank. A chain-link fence is visible in the foreground.
<p>PHOTO NOTES: Beaver Lake section, upstream end, May 5, 2015.</p>	<p>PHOTO NOTES: Beaver Lake section, downstream end, May 5, 2015.</p>
 A photograph showing a concrete culvert or outlet pipe. The pipe is surrounded by a concrete wall. The area around the pipe is covered in dense green vegetation and tall grasses. A chain-link fence is visible in the background.	 A photograph showing a wide, shallow waterway. The water is dark and still. The banks are covered in dense green vegetation and tall grasses. A chain-link fence is visible in the background.
<p>PHOTO NOTES: Beaver Lake section, looking downstream at outlet (area of debris removal), May 5, 2015.</p>	<p>PHOTO NOTES: Golf Course section, area of freshwater marsh removal, May 5, 2015.</p>



Regional Location Map

SAN CARLOS CHANNEL

Figure 1

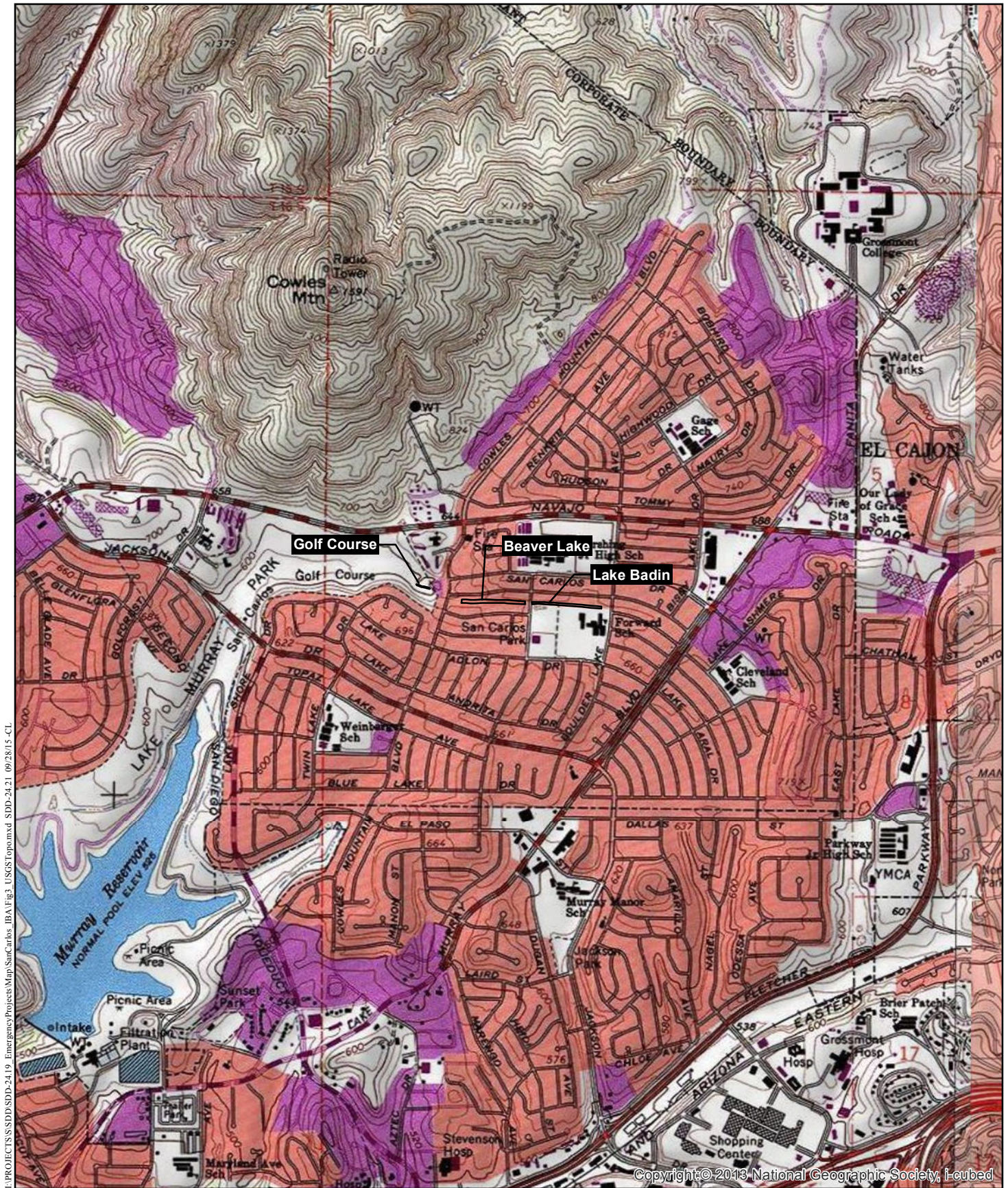


Project Vicinity (Aerial Photograph)

SAN CARLOS CHANNEL

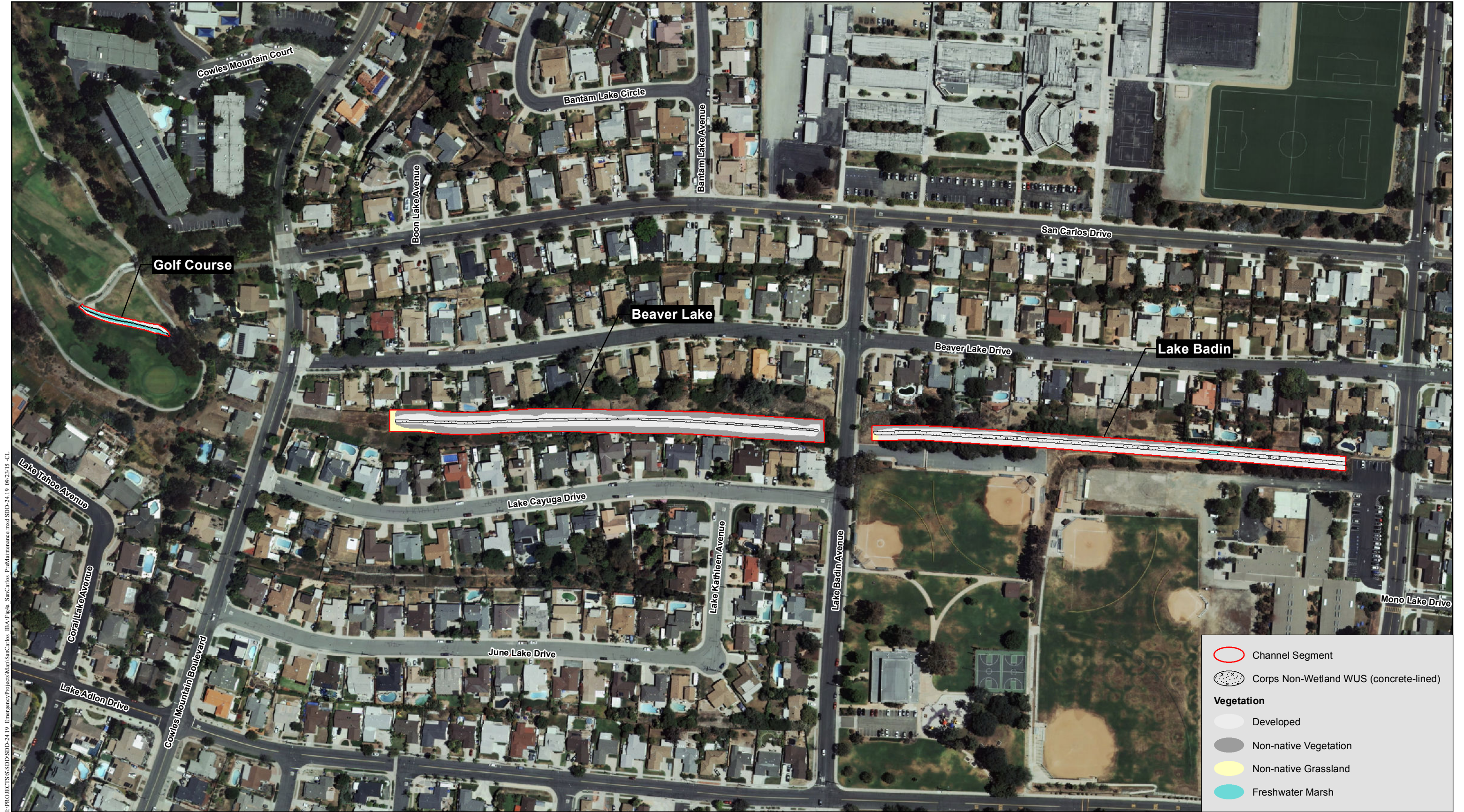
Figure 2

I:\PROJECTS\SDD\SDD-24.19_EmergencyProjects\Map\SanCarlos_IBA\Fig2_AerialPhotograph.mxd SDD-24.21 09/28/15-CL



Project Vicinity (USGS Topography)

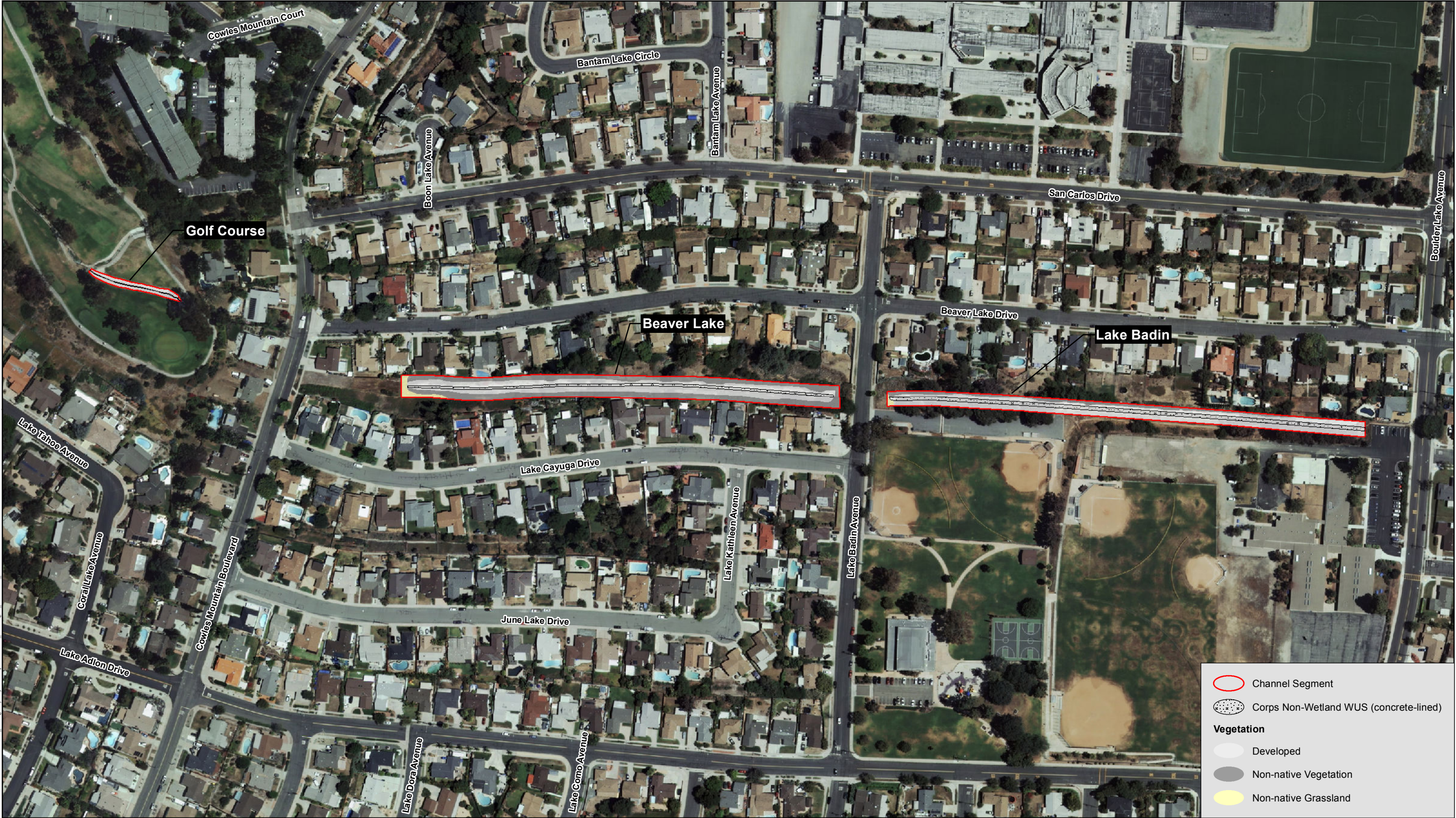
SAN CARLOS CHANNEL



Pre-Maintenance

SAN CARLOS CHANNEL

Figure 4a



Post-Maintenance

SAN CARLOS CHANNEL

Figure 4b

