

INDIVIDUAL BIOLOGICAL ASSESSMENT REPORT

Site Name/Facility: Alvarado Channel Sections 01 and 02, and 06 and 07 of 07

MSWSMP Map No.: 59, 60, 63, and 64

Date: 4 October 2010

Biologist Name/Cell

Phone No.: W. Larry Sward/619.992.4170

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 preparing 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

Survey Methods and Date:

Visually inspected entire facility by walking along the western three-quarters of the southern side of channel and the eastern one-quarter of the northern side of the channel. Vegetation was mapped with the aid of a recent aerial photograph and dominant species were noted. The potential for sensitive species was assessed. Dates of surveys: 11 and 26 July, and 21 September 2010

Biological Resources: **Stream Type:** Perennial Intermittent Ephemeral

The easternmost 1,200 linear foot section of these maps of the Alvarado Channel (Map 64) appears to be part earthen and part concrete lined channel. Most of the bottom and northern side (the northern side becomes an eastern side at the western end of Map 64, where 180 linear feet of channel wraps to the north) of the channel appears to be concrete lined. The extension of the channel north from this point (Map 63) appears to be unlined, although small sections of the channel sides have been grouted or are lined with riprap. The southern side of the channel for Map 64 appears to be unlined. Most of this Maps 58 and 60 are concrete lined. Water flow to these sections from a box culvert outlet at the eastern end of Map 60. The western 750 feet appears to be an earthen channel, although riprap is visible in places. The center of the earthen channel section is open water and consists of 0.21 acre. The southern bank in this western segment is disturbed wetland and the northern bank is disturbed habitat strewn with debris from the past removal of a thicket of giant reed (*Arundo donax*).

Wetland vegetation within these 4 sections of the Alvarado Channel total approximately 2.77 acres and consists of 1.08 acres of freshwater marsh (FWM), 0.32 acre of southern willow scrub (SWS; including disturbed), 0.05 acre of southern riparian woodland (RW), 0.58 acre of disturbed riparian forest (dRF), and 0.72 acre of disturbed wetland (DW). Cattail (*Typha* sp.) is the dominant plant species within the FWM. The SWS and RW are dominated by willows (*Salix* spp). SWS is relatively young habitat and does not have clearly defined shrub and tree layers, which differentiates it from riparian woodlands and forests that do have defined strata. The DW is comprised mostly of giant reed (*Arundo donax*), and in lesser amounts white sweetclover (*Melilotus albus*), bristly ox-tongue (*Picris echioides*) and cocklebur (*Xanthium strumarium*). Non-wetland waters of the U.S. (WUS) total of 0.70 acre, with 0.13 acre of natural-bottomed channel, and 0.57 acres of the concrete lined channel.

Nearby upland and non-wetland portions of the study area consist of 0.02 acre of Diegan coastal sage scrub (including disturbed; CSS) 0.17 acre disturbed habitat (DH), 2.02 acres of previously developed areas, 0.04 acre of eucalyptus woodland and 0.28 acre non-native vegetation. The DH is dominated by upland weed species. The developed areas consist of maintained landscaping and paved surfaces.

Approximately 5 individuals of San Diego marsh elder (*Iva hayesiana*) were observed along the upper bank of

Map 63. This species is a California Native Plant Society List 2.2 species (i.e., Rare, threatened, or endangered in California, but more common elsewhere; and fairly endangered in California).

The sections of Alvarado Creek covered by Map 63 supports dRF. It is not considered potential least Bell's vireo (*Vireo pusillus belli*) because of the small patches of suitable vireo habitat within this mapping unit.

The CSS south of the channel on Map 64 may support coastal California gnatcatcher (*Polioptila californica californica*), although the study area barely encroaches on its potential habitat. The remaining areas of habitat within the study area were not observed to have, or have the potential for sensitive plant and animal species. The facility has limited potential to function as a regional wildlife corridor due to its isolation from urbanization. As a source of water and habitat heterogeneity, it does enhance local wildlife values. An updated vegetation map is provided as an attachment to this form.

Maps 59, 60, and 63 have very limited wildlife value due to the nearly entire interface with developed lands. Map 64 may have a greater interface with local wildlife due to the undeveloped land that exists along its southern edge.

Jurisdictional Areas:

U.S. Army Corps of Engineers

Wetland Waters of the U.S. (WUS): 0.05 acre of RW, 0.58 acre of dRF, 0.32 acre of SWS, 0.02 acre of MFS, 1.08 acres of FWM, 0.72 acre of DW, and 0.14 acre of DH.

Non-wetland WUS: 1.68 acres comprised of 0.37 acre of undeveloped streambed, 1.17 acres of concrete streambed, and 0.14 acre of DH.

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

Wetlands: 0.05 acre of RW, 0.58 acre of dRF, 0.32 acre of SWS, 0.02 acre of MFS, 1.08 acres of FWM, and 0.72 acre of DW.

Streambed/Unvegetated Waters: 0.04 acre.

Sensitive Plant Species Observed:

Yes No

If yes, what species were observed and where?

Approximately 5 individuals of San Diego marsh elder (*Iva hayesiana*) were observed along the upper bank of Map 63.

Sensitive Animal Species Observed/Detected:

Yes No

If yes, what species were observed/detected and where?

Is there moderate or high potential for listed animal species to occur in or adjacent to the impact area?

Yes No

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

- | | |
|--|--|
| <input type="checkbox"/> Least Bell's vireo | <input type="checkbox"/> Riverside fairy shrimp |
| <input type="checkbox"/> Southwester willow flycatcher | <input type="checkbox"/> California least tern |
| <input type="checkbox"/> Arroyo toad | <input type="checkbox"/> Light-footed clapper rail |
| <input checked="" type="checkbox"/> Coastal California gnatcatcher | <input type="checkbox"/> Western snowy plover |
| <input type="checkbox"/> San Diego fairy shrimp | <input type="checkbox"/> Other: _____ |

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

Pre-construction nesting surveys are necessary to ensure no impacts to avian species occur pursuant to the Migratory Bird Treaty Act. If no nesting birds are present, construction may occur in the breeding season.

If yes, provide justification:

Is it anticipated that maintenance activities would generate noise in excess of 60 dB(A) L_{eq} :

Yes No

Biological Resource Conditions Relative to Original Survey Conducted for MSWSMP Final Program EIR (May 2010) (vegetation communities present, including adjacent uplands; general habitat quality/level of disturbance): The biological resources associated with this storm water facility are essentially the same as recorded in the original surveys conducted for the Program EIR.

The biological resources associated with these sections of the Alvarado Channel are very similar to what was recorded in the original surveys conducted for the Program EIR. At that time, this facility was characterized as a combination of FWM, SWS, DW, and streambed over concrete lined and unlined channel. Urban development and small amounts of NNG were mapped adjacent to the channel. The channel empties into the southern riparian forest of the San Diego River.

MAINTENANCE IMPACTS

Maintenance Methodology (based on IMP)

1. Install temporary dam upstream of maintenance area; 2. Temporarily route surface water around maintenance area using 2, 6-inch portable pumps and a pipeline located on the bank of the facility; 3. Build temporary access ramps at the 3 locations using imported fill materials; 4. Dozer pushes the accumulated materials to a location near the temporary access ramp; 5. Loader enters drain facility from temporary access ramp. 6. Loader scoops accumulated material from central site and loads into dump truck. 7. Loaded dump truck leaves drain facility and transports material to an approved offsite disposal location; and 8. Remove temporary access ramp after channel maintenance.

Vegetation Impacts:

Wetland
1.77 acres comprised of 0.05 acre of RW, 0.15 acre of dRF, 0.24 acre of SWS, , 0.96 acre of FWM, and 0.37 acre of DW.

Upland
0.10 acre of DH

Jurisdictional Impacts:

U.S. Army Corps of Engineers
Wetland Waters of the U.S. (WUS): 1.77 acres comprised of 0.05 acre of RW, 0.15 acre of RF, 0.24 acre of SWS, 0.96 acre of FWM, and 0.37 acre of DW.
Non-wetland WUS: 0.92 acre comprised of 0.82 acre of streambed and 0.10 acre of DH.

California Department of Fish and Game/City of San Diego:
Wetlands: 1.77 acres comprised of 0.96 acre of FWM, 0.37 acre of DW, 0.24 acre of SWS, 0.15 acre of RF, and 0.05 acre of RW.
Streambed/Unvegetated Waters: 0.01 acre.

Is there moderate or high potential for listed animal species to be impacted? Yes No

- If yes, which species (check all that apply):
- | | |
|--|--|
| <input type="checkbox"/> Least Bell's vireo | <input type="checkbox"/> Riverside fairy shrimp |
| <input type="checkbox"/> Southwester willow flycatcher | <input type="checkbox"/> California least tern |
| <input type="checkbox"/> Arroyo toad | <input type="checkbox"/> Light-footed clapper rail |
| <input checked="" type="checkbox"/> Coastal California gnatcatcher | <input type="checkbox"/> Western snowy plover |
| <input type="checkbox"/> San Diego fairy shrimp | <input type="checkbox"/> Other: _____ |

MITIGATION
<p><u>Applicable Maintenance Biological Protocols (list the applicable maintenance protocols based on the biological resources occurring or likely to occur on site --include any special protocols required):</u></p> <p>BIO-27: Restrict vehicles to approved access ramp(s) as shown on the maintenance plan. BIO-28: The size and number of equipment used for maintenance shall be selected to minimize disturbance associated with maintenance. BIO-29: Flag all sensitive biological resource areas in the field prior to commencing maintenance activities where necessary. A qualified biologist shall be present to monitor the work to ensure impacts to the resource are avoided. BIO-30: Avoid introduction of seed from invasive species in erosion control measures (e.g., fiber mulch, rice straw, etc.) Bio-31: As necessary, conduct preconstruction surveys to determine the presence of any sensitive animal species and implement appropriate protection measures (e.g., fencing, flagging, noise barriers, and signage) during maintenance. The biological monitor shall be present throughout the first full day of maintenance and shall visit the site weekly through the duration of the maintenance activities to confirm that measures required to protect sensitive resources continue to be effective.</p>
<p><u>Applicable PEIR mitigation measures:</u></p> <p>The following mitigation measures must be carried out by the City as part of the proposed maintenance: MM 4.3.5 (requires compensation for FWM, SWS, SRW, and DW), MM4 3.8 (requires City approval of monitoring biologist), MM 4 3.14 (requires a pre-maintenance meeting with contractor and biologist), MM 4 3.15 and 18 (requires a pre-maintenance surveys for sensitive birds), MM 4.3.20 (requires removal of invasive plants prior to beginning maintenance), and MM 4.3.32 (requires avoidance of nesting birds not covered by MSCP).</p>
<p><u>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):</u></p> <p><u>Corps Jurisdictional Areas:</u></p> <p>Loss of WUS will be mitigated as follows: The mitigation ratio for RF and RW will be 3:1, SWS will be 2:1, and FWM, DW and non-wetland WUS will be 1:1. Applying these ratios, would result in restoration or creation of 0.15 acre of RW, 0.45acre of RF, 0.48 acre of SWS, 0.96 acre of FWM, 0.37 acre of DW, and 0.93 acre of non-wetland WUS. Creation will comprise an area equivalent to what was impacted. For those habitats that will be mitigated at greater than 1:1, any mitigation obligation above 1:1 will consist of restoration (weed or trash removal) of extant wetland habitat.</p> <p><u>CDFG Jurisdictional Areas:</u></p> <p>This IBA is 1 of 3 initial submissions under the City's Storm Water Management Program. Thus there is little precedence for what is necessary or appropriate mitigation for impacts to wetland vegetation in an unnatural landscape position (i.e., on sediment accumulated within a concrete lined drainage structure). For these reasons, the mitigation for these impacts will be determined in consultation with CDFG.</p> <p><u>City Wetlands:</u></p> <p>Pursuant to the thresholds in the City's Environmentally Sensitive Lands Ordinance, impacts of 0.01 acre and greater requires mitigation. Using the ratio of 3:1 for southern riparian forest woodland, 2:1 for SWS, and 1:1 for FWM and DW defined in the Master PEIR, the maintenance would require enhancement, restoration or creation of 0.15 acre of RW, 0.45 acre of RF, 0.48 acre of SWS, 0.96 acre of FWM, and 0.37 acre of DW. However, for the 2 reasons stated for the mitigation requirements for CDFG, mitigation for these impacts will be determined in consultation with the City.</p>
<p><u>Mitigation Description/Location:</u></p> <p>To be determined. If mitigation is deemed necessary and appropriate, the FWM, SWS, SRW, and DW impacts associated with this maintenance activity will be located within the San Diego River watershed.</p>
ADDITIONAL COMMENTS OR RECOMMENDATIONS
None

SITE PHOTOS Map 59_Alvarado Channel,Section 1of 7 _ July 26, 2010



PHOTO NOTES:
Unlined channel with streambed (open water), disturbed wetland, and disturbed habitat present on channel banks. Looking west from half way between west end of Map 59 and Mission Gorge Road.



PHOTO NOTES:
Concrete lined channel with freshwater marsh, southern willow scrub, and disturbed wetland. Looking west from Mission Gorge Road.

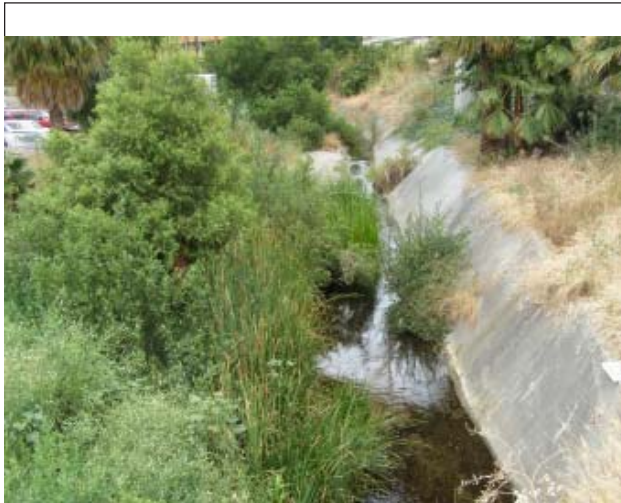


PHOTO NOTES:
Concrete lined channel with southern willow scrub, disturbed wetland, and non-wetland Waters of the U.S. Looking east from Mission Gorge Road.



PHOTO NOTES:
Concrete lined channel with disturbed wetland, and non-wetland Waters of the U.S. Looking west from under MTDB Trolley Tracks.

SITE PHOTOS Map 60_Alvarado Channel, Section 2 of 7_July 26, 2010



PHOTO NOTES:
Concrete lined channel with freshwater marsh. Looking west along south side from eastern end of Map. This channel begins at west end of box culverts.

PHOTO NOTES:

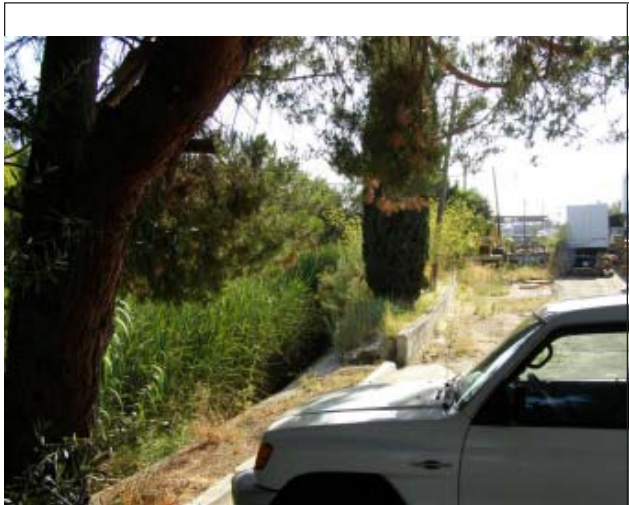


PHOTO NOTES:
Concrete lined channel with freshwater marsh. Looking west along north side from 375 feet west of eastern end of Map.

PHOTO NOTES:

SITE PHOTOS Map 63_Alvarado Channel, Section 6 of 7 _September 21, 2010



PHOTO NOTES:

Unlined channel with mule fat scrub and disturbed Diegan coastal sage scrub along upper channel bank, disturbed southern riparian forest in central part of channel. Looking south, along eastern side of channel, from SDSU parking lot near northern end of Map 63 study area.



PHOTO NOTES:

Foreground with freshwater marsh is part of Map 64. The disturbed southern riparian forest in the background is the south end of Map 63. The channel is either unlined, or rip rap lined and buried sediment. Looking north from parking lot adjacent to west end of Map 64.

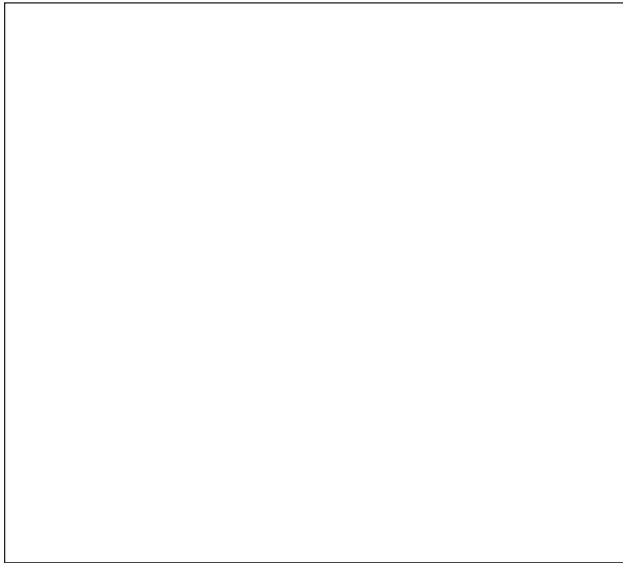
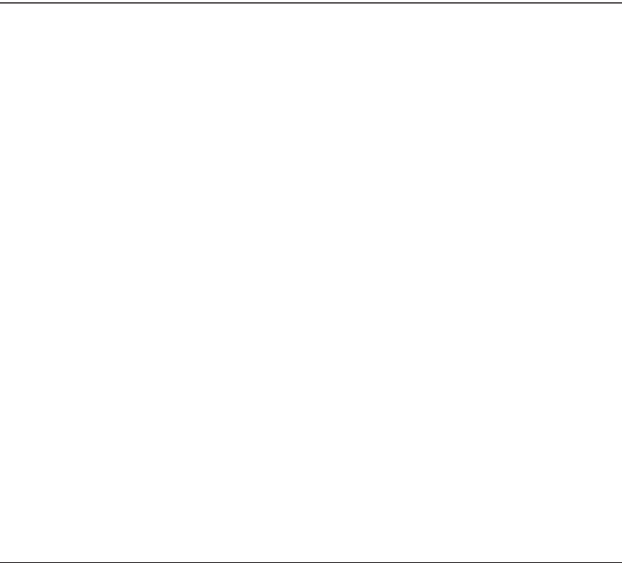


PHOTO NOTES:

PHOTO NOTES:



SITE PHOTOS Map 64_Alvardo Channel, Section 7 of 7_July 11, 2010



PHOTO NOTES:

Concrete lined access ramp to Map 64. Located at western end of Map 64. Looking west, from adjacent parking lot.

PHOTO NOTES:

Channel is concrete lined on the bottom and along north side. South side appears to be unlined or rip rap lined and buried in sediment. Freshwater marsh and non-wetland Waters of the U.S. are present in channel bottom. Disturbed wetland present along southern edge of channel. Looking east along north side of channel near west end of Map 64.



PHOTO NOTES:

Channel is concrete lined on the bottom and along north side. South side appears to be unlined or rip rap lined and buried in sediment. Freshwater marsh and non-wetland Waters of the U.S. are present in channel bottom. Disturbed wetland present along southern edge of channel. Looking west from near west end of Map 64.

PHOTO NOTES:

Channel is concrete lined on the bottom and along north side. South side appears to be unlined or rip rap lined and buried in sediment. Freshwater marsh, southern willow scrub, and non-wetland Waters of the U.S. are present in channel bottom. Looking west along north side of channel from east end of Map 64 study area.