

**SUMMARY REPORT FOR THE  
TELEGRAPH CREEK MARSH AND  
CHULA VISTA WILDLIFE RESERVE  
ENHANCEMENT PROJECT**

**SAN DIEGO BAY, CHULA VISTA, CALIFORNIA**

*Prepared for*

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**INTRODUCTION**

Merkel & Associates, Inc. (M&A) was contracted by the San Diego Unified Port District (Port) to conduct habitat enhancement activities, including debris removal and habitat restoration, at Telegraph Creek Marsh and the Chula Vista Wildlife Reserve in San Diego Bay (Figure 1). This project was funded by a Port Environmental Advisory Committee Grant, as part of the Port's Environmental Stewardship Program.

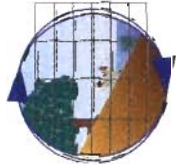
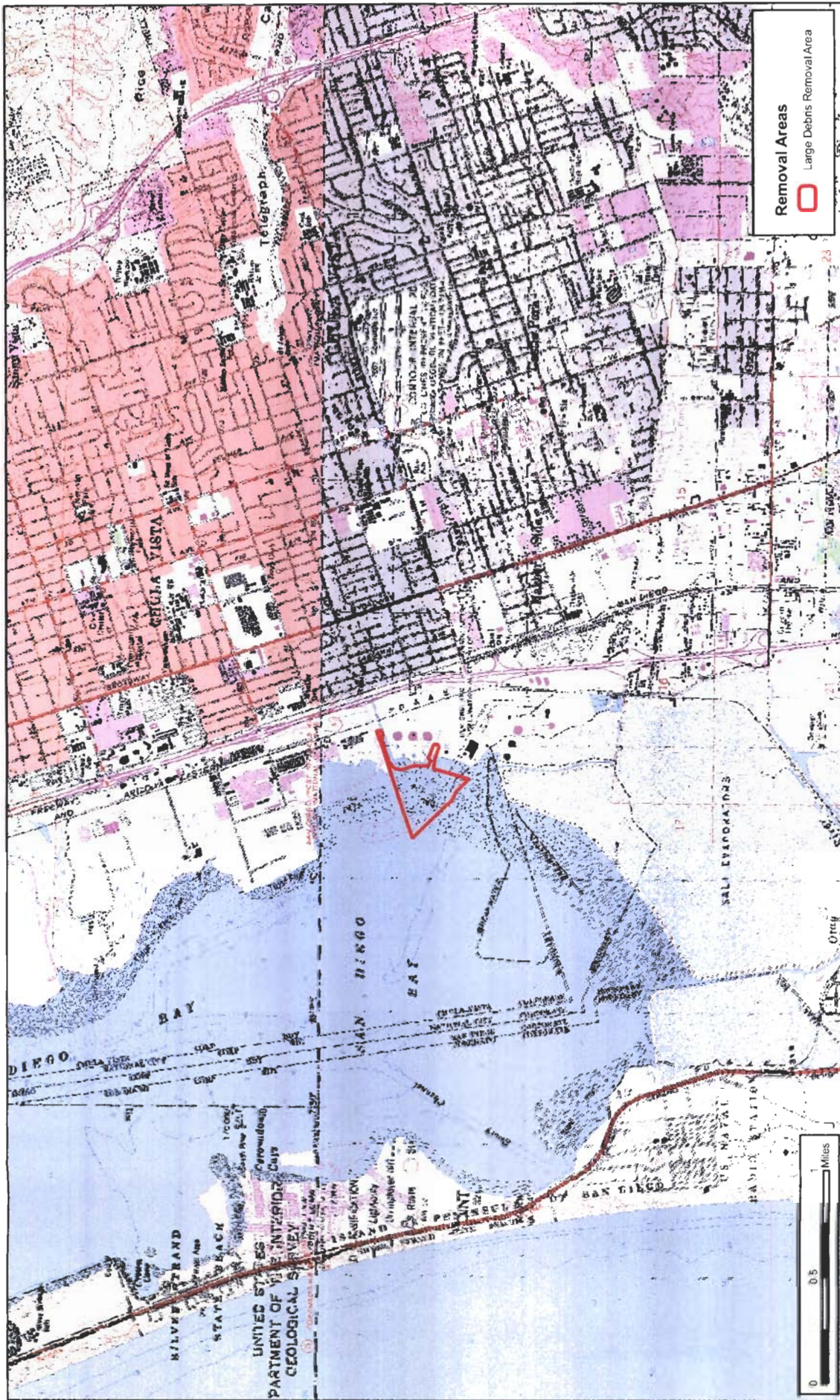
**DEBRIS REMOVAL**

Between January 2 and January 4, 2008, M&A staff removed debris from both Telegraph Creek Marsh and the Chula Vista Wildlife Reserve (Figure 2). The effort focused on items that were beyond the capacity for removal by port volunteers. M&A staff members familiar with sensitive upland and tidal wetland habitats accessed the area by kayaks and a low draft pontoon vessel. During low tide, items were marked, photographed, and rigged for hoisting. Shovels were used to dig out items that were decaying and/or buried. During high tide, debris items were hoisted onto the vessels and then transported to the Chula Vista Marine Park shoreline. Large debris was then dismantled using a steel cut-off saw. Items were loaded into a pick-up truck and properly disposed of at the City of San Diego Miramar Landfill. The type and quantity of debris items removed are listed in Table 1. Images of before and after the debris removal and debris items are shown in Appendix A. M&A staff estimates that 95 percent of the debris items were removed, with the remaining 5 percent of debris items being deeply buried or in advanced stages of decay that prevented complete removal.

**Table 1. Quantity of debris items removed from the Telegraph Creek Marsh and the Chula Vista Wildlife Reserve.**

<b>Debris Item</b>	<b>Quantity</b>
Aluminum Cans	23
Bicycles	2
Blankets	3
Boat Parts	3
Buckets	7
Car Parts	2
Chairs	13
Computers	1
Fence	2
Glass Bottles	18
Household Items	4
Mattresses	2

<b>Debris Item</b>	<b>Quantity</b>
Plastic Bags	21
Plastic Bottles	38
School Desks	1
Shopping Carts	44
Sport Balls	8
Tires	13
Traffic Cones	23
Trash Cans	8
Other unidentifiable items	16
<b>Total items removed</b>	<b>252</b>



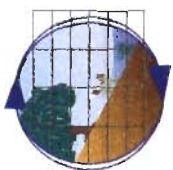
### Project Vicinity Map Telegraph Creek Marsh Enhancement

Figure 1



**Removal Areas**  
Large Debris Removal Area

0 250 500 1,000 Feet



Telegraph Creek Marsh Enhancement

Figure 2

## HABITAT RESTORATION

Merkel & Associates commenced habitat restoration at Telegraph Creek Marsh (Figure 3) on January 7, 2008. Work began with treating (i.e., herbiciding) and removing non-native vegetation from approximately 5.0 acres of salt marsh and disturbed uplands adjacent to Telegraph Creek Marsh. The initial work included treating/removing invasive species such as Lindley's saltbush (*Atriplex lindleyi*), iceplant (*Lampranthus* sp.), Russian thistle (*Salsola tragus*), crystalline iceplant (*Mesembryanthemum crystallinum*), hottentot fig (*Carpobrotus edulis*), ngaio (*Myoporum laetum*), and pampas grass (*Cortaderia selloana*) which were common along the eastern slopes of the marsh. Plants were either manually removed or chemically controlled using herbicide that is safe for wetland conditions. Herbicide applications were directed by a biologist with a Department of Pesticide State Applicators License (QL 33092). All work was conducted in a manner that avoided impacts to native vegetation.

Following weed eradication, M&A Staff and Port volunteers planted the following plant species within the habitat restoration area.

Species	Size	Quantity
California Sagebrush ( <i>Artemisia californica</i> )	4-inch pot	100
	1-gallon	50
Lemonadeberry ( <i>Rhus integrifolia</i> )	1-gallon	30
San Diego Sea-Dahlia ( <i>Coreopsis maritima</i> )	1-gallon	80
San Diego Sunflower ( <i>Viguiera laciniata</i> )	1-gallon	40
Coast Prickly-pear ( <i>Opuntia littoralis</i> )	1-gallon	30
Big Saltbush ( <i>Atriplex lentiformis</i> )	1-gallon	100
California Desert Thorn ( <i>Lycium californicum</i> )	1-gallon	90
California Encelia ( <i>Encelia californica</i> )	1-gallon	40
Bluff Buckwheat ( <i>Eriogonum parvifolium</i> )	1-gallon	25
Cliff Spurge ( <i>Euphorbia misera</i> )	1-gallon	50
Beach-bur ( <i>Ambrosia chamissonis</i> )	1-gallon	30

All plants are being hand-watered on an as-needed basis. Currently, plants are watered every 10-14 days. A majority of the plants are healthy, and only a few have died. We will continue to maintain the areas throughout the summer by hand watering and weeding as needed for establishment. Photographs of this effort are included in Appendix B.



**Removal Areas**  
Invasive Exotics Removal/Native Habitat Restoration

**Figure 3**

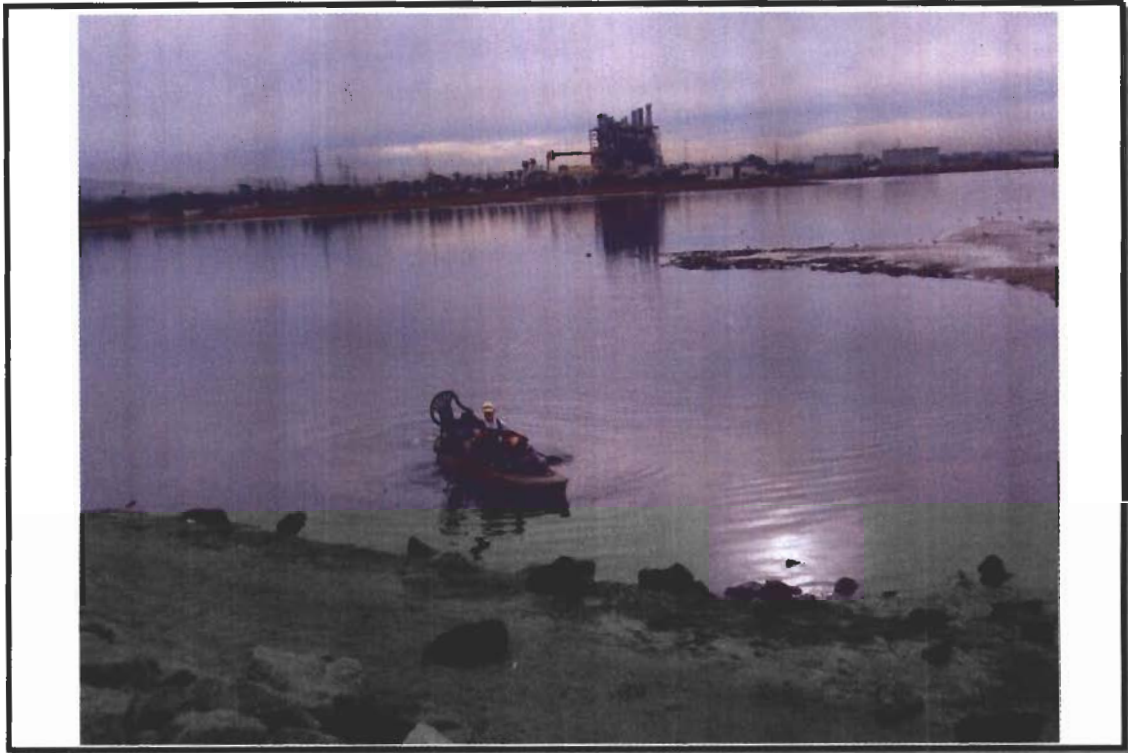
**Telegraph Creek Marsh Enhancement**

## **RECOMMENDATIONS**

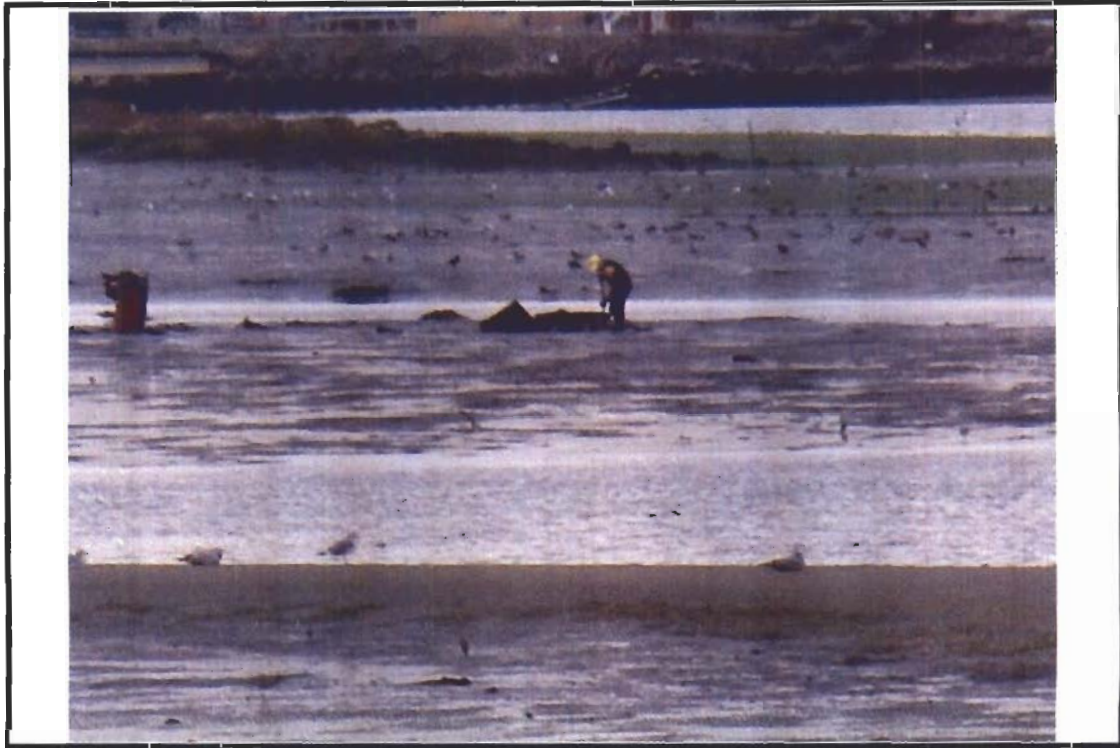
Dumping of debris is an on-going, inevitable problem at the Telegraph Creek Marsh and the Chula Vista Wildlife Reserve. During the removal process, M&A staff members were approached by several members of the local community expressing their appreciation of the clean-up activities funded by the Port. M&A recommends that prevention measures be established to prevent further dumping of debris. One idea is to build a post and rail fence along the boundary. This will deter dumping of items and not obscure the viewing of wildlife at the marsh. In addition, a no dumping law should be enforced and signs should be posted stating "Fines For Dumping" in both English and Spanish language.

It is also recommended that a habitat maintenance and monitoring program be established for at least one year to help ensure the vegetation establishment. Work should include bi-weekly hand watering of plant material through November and then watering every three weeks from December through July. In addition, hand weeding, trash removal, and replacing dead plants, as necessary should be included in the maintenance program.

**APPENDIX A. DEBRIS REMOVAL PHOTOGRAPHS**



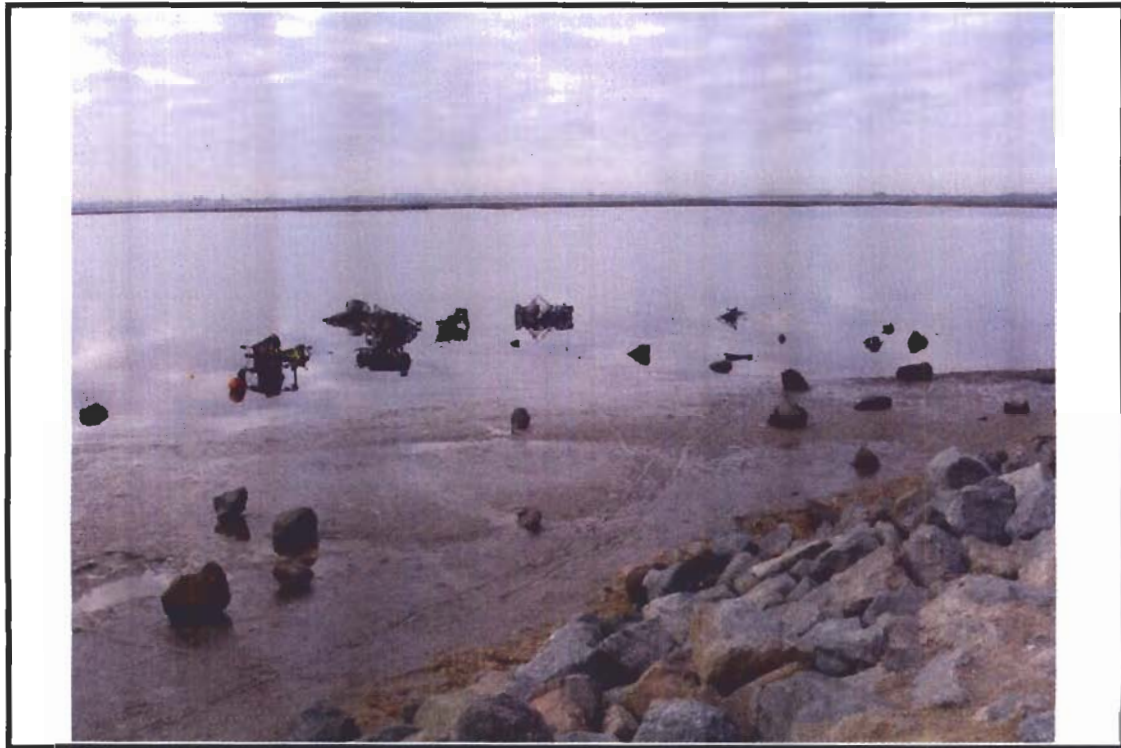
**Photo Point 1.** Removing debris from the marsh at low tide by kayak.



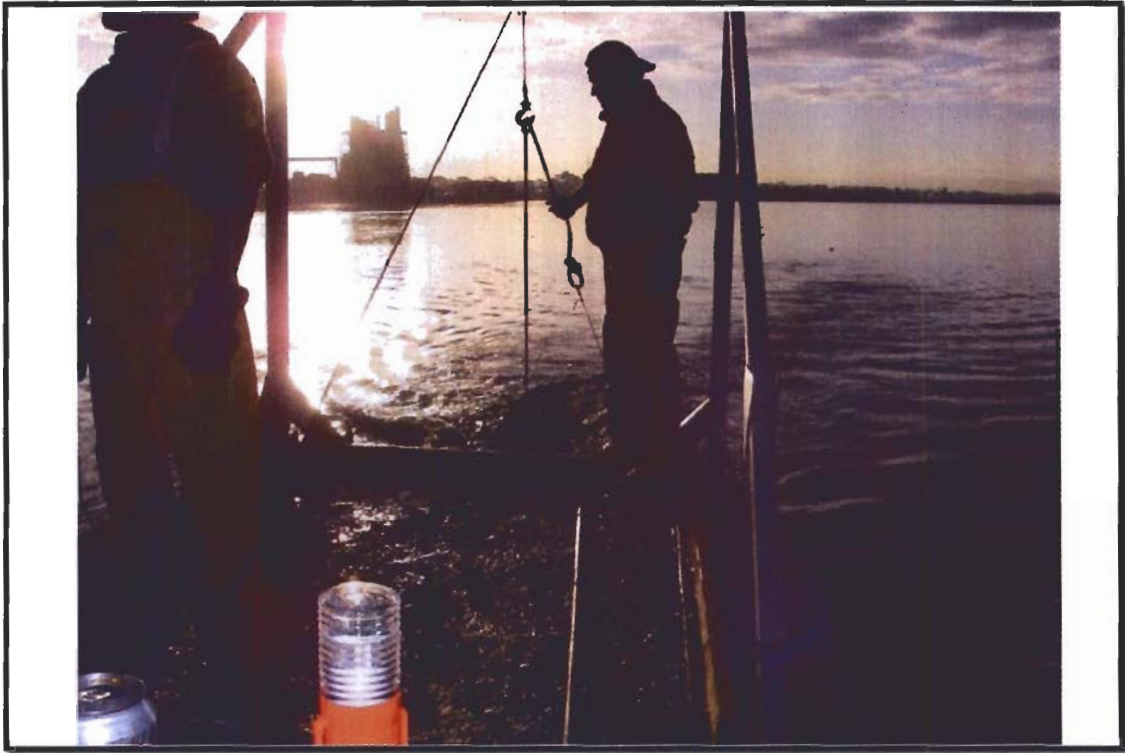
**Photo Point 2.** Digging out debris and attaching floats and lifting tackle for easy removal.



**Photo Point 3.** Debris transported to the shoreline, awaiting disposal.



**Photo Point 4.** Carts transported to the shoreline, awaiting disposal.



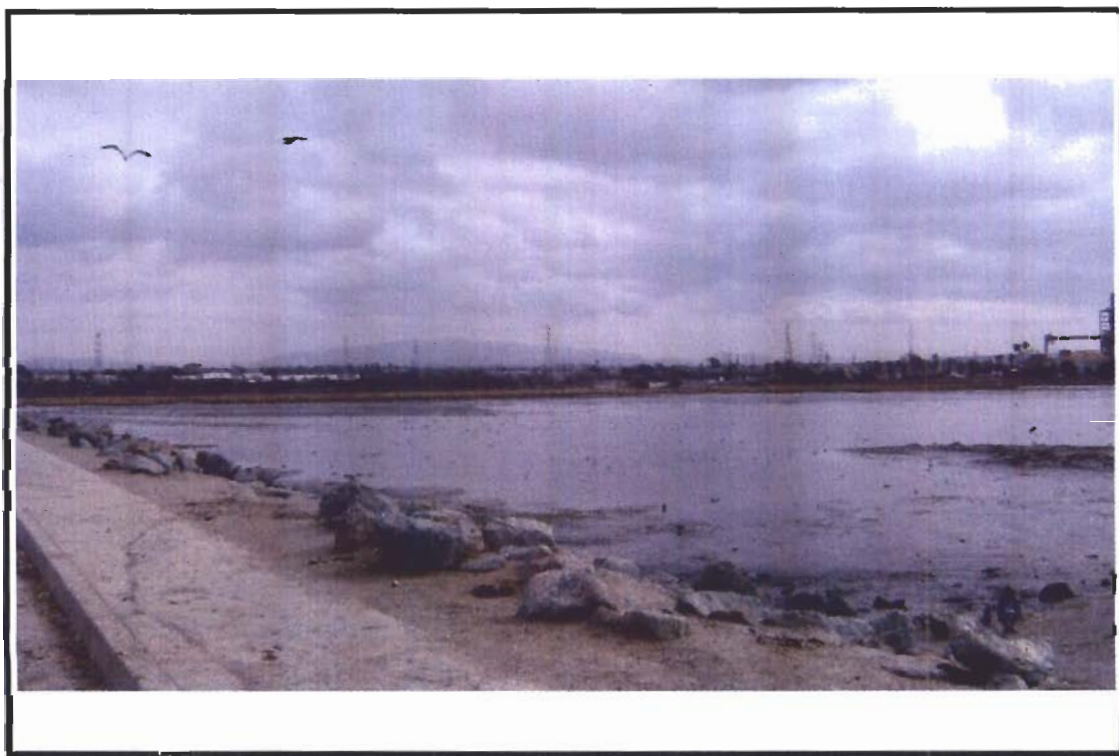
**Photo Point 5.** Winching debris off the tide flats at high tide.



**Photo Point 6.** Pick-up truck loaded with debris to be transported to landfill.



**Photo Point 9.** Before debris removal.



**Photo Point 10.** After debris removal.



**Photo Point 11.** After debris removal.



**Photo Point 12.** After debris removal.



**Photo Point 13.** Shopping cart, trash can, muffler, and other assorted debris items.

**APPENDIX B. HABITAT RESTORATION PHOTOGRAPHS**



Photo Point 1. Merkel & Associates and Port of San Diego staff planting disturbed uplands with native vegetation.



Photo Point 2. Port of San Diego staff planting Bluff Buckwheat (*Eriogonum parvifolium*).



**Photo Point 3.** Port of San Diego staff planting Big saltbush (*Atriplex lentiformis*).



**Photo Point 4.** Merkel & Associates staff hand-watering native plantings.