NORTH COUNTY HABITAT BANK

HABITAT MANAGEMENT PLAN

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Prepared for:

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North County Habitat Bank
Habitat Management Plan

TABLE OF CONTENTS

TABLE OF CONTENTS (cont.)

LIST OF FIGURES

LIST OF TABLES

1.0 INTRODUCTION

This Habitat Management Plan (HMP) has been prepared for the proposed North County Habitat Bank (NCHB) in accordance with the Implementing Agreement for the NCHB. The HMP is intended to provide the framework for long-term management of the bank property consistent with the goals of the bank as approved by the U.S. Army Corps of Engineers (Corps), U.S. Fish and Wildlife Service (Service), and California Department of Fish and Game (CDFG).

The NCHB Area consists of an approximately 18.73-acre site, and is located in the City of Carlsbad in northwestern San Diego County, California south of Palomar Airport Road and Hidden Valley Road (Figures 1 and 2). Commercial development occurs to the west, Palomar Airport Road forms the northern boundary, and undeveloped/open space occurs to the southwest, south, and immediately east. Encinas Creek bisects the property, with the southeastern corner of the site sloping up from the creek.

The NCHB is located within the City of Carlsbad's Habitat Management Plan (Carlsbad HMP; 1999), which addresses potential impacts to native species and habitats (and some non-native habitats) while at the same time providing mitigation options that satisfy the federal and state Endangered Species Acts (ESAs). The primary objective of the Carlsbad HMP is to allow development while identifying and maintaining an open space area system that allows for the sustained existence of animals and plants at both the local and regional levels. The Carlsbad HMP preserve is a network of large habitat blocks with interconnecting linkages. In the context of the Carlsbad HMP, the NCHB project site is located within Local Facility Management Zone (LFMZ) 5. Existing hardline conservation areas occur immediately south of the site. This HMP is intended to meet management objectives of the Carlsbad HMP.

The open space designation is intended to provide permanent protection for sensitive biological resources. The proposed open space area will be compatible with open space in adjacent areas, thereby providing a substantial contribution to subregional and regional open space systems outlined in the Multiple Habitat Conservation Program (MHCP) Subregional Plan (San Diego Association of Governments 2003) as well as the Carlsbad HMP (1999).

All open space areas (i.e., approximately 15.7 acres) will be conveyed to the City of Carlsbad and managed by a Habitat Manager approved by the City, Corps, CDFG, and Service. In this way, all lands within the boundaries of the project that have been designated for preservation by the MHCP Subregional Plan, the City's HMP, and the project's subdivision map will be open space area.

2.0 PURPOSE

The purpose of this HMP is to maximize and maintain the wildlife habitat qualities of the preserved open space areas within the NCHB, and to meet Conditions of the NCHB Implementation Agreement. The HMP provides a framework for the management of the open space area and identifies parties responsible for carrying out its required tasks. The Habitat Manager is identified as the person/entity responsible for overseeing all aspects of the management program (as defined below in Section 6.0, Administrative Structure). The Habitat Manager is in turn responsible to the City, which has final authority over the open space area.

3.0 PROJECT DESCRIPTION

3.1 PROJECT LOCATION

The NCHB is located in the City of Carlsbad, in northwestern San Diego County, California and is situated southeast of the intersection of Palomar Airport Road and El Camino Real. The NCHB is located within the Carlsbad HMP.

3.2 PROJECT SUMMARY

The proposed project is the creation and maintenance of an upland and wetland mitigation bank to be used in providing more viable long-term conservation of mitigation lands for small restoration efforts. Creation and enhancement of wetland habitats, as well as preservation of wetland and upland habitats are included in the bank. The HMP will either address only the 18.7 acres within the NCHB boundaries, or may also include the approximately 20-acre Costco open space parcel to the west. The final area will be determined prior to the signing of the Implementation Agreement for the bank.

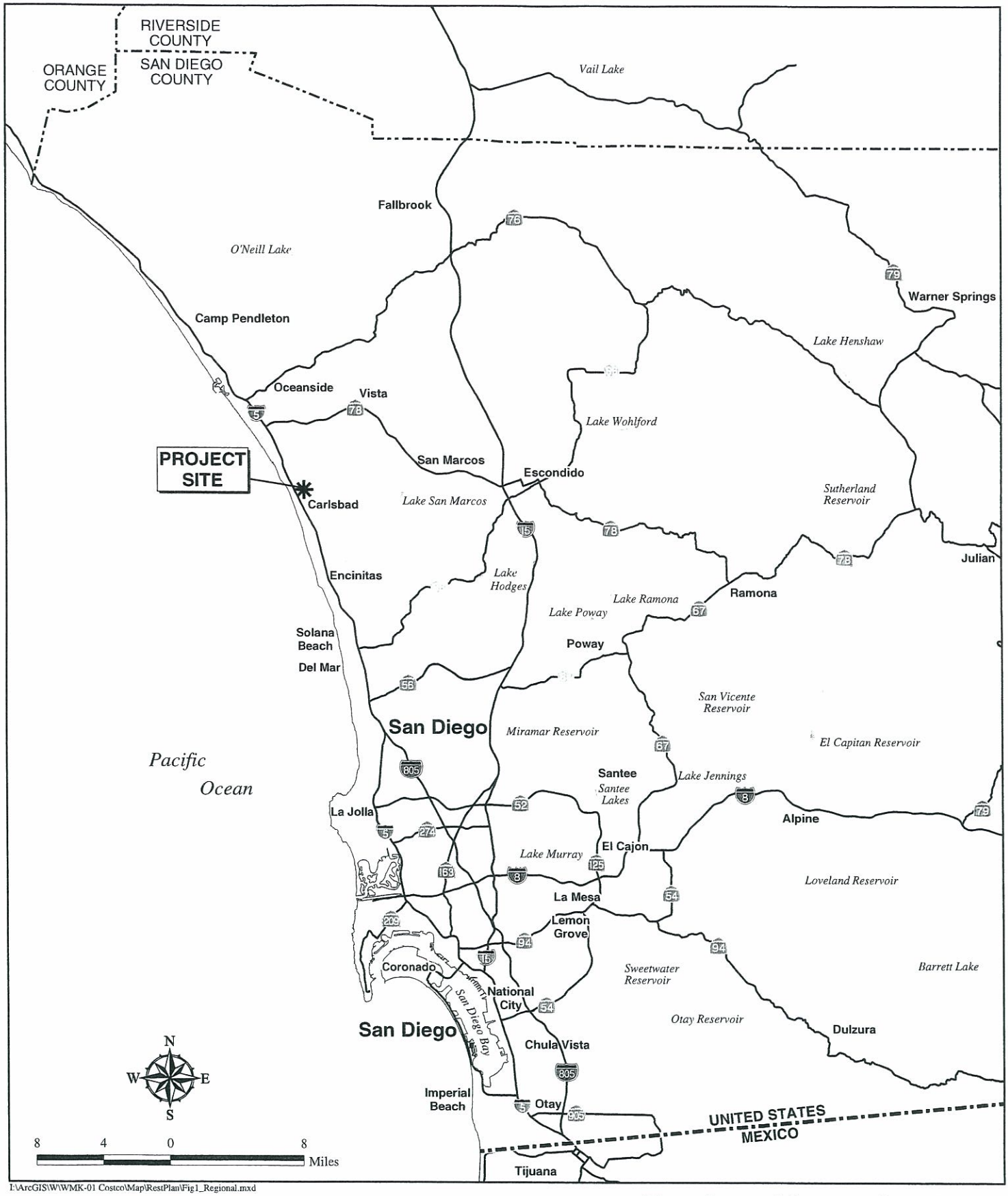
4.0 BIOLOGICAL SURVEY METHODS

A formal wetland delineation and vegetation mapping of the site was conducted by HELIX Environmental Planning, Inc (HELIX). The fieldwork was conducted by W. Larry Sward and Keli Balo of HELIX on December 8, 2003. The entire site was traversed on foot. Vegetation was mapped on an aerial photograph at 1"=150' scale. Delineations were conducted in areas suspected to be under jurisdiction of the ACOE pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344) and habitats under the jurisdiction of the California Department of Fish and Game (CDFG; Section 1600).

Prior to beginning HELIX's portion of the fieldwork, aerial photographs (1"=150' scale), and the Soil Survey of the San Diego Area (Bowman 1973) were reviewed to determine the location of potential jurisdictional areas on site.

All areas with depressions or drainage channels were evaluated for the presence of jurisdictional areas. Each area was inspected according to ACOE wetland delineation guidelines. The ACOE wetland boundaries were determined using three criteria (vegetation, hydrology, and soils) established for wetland delineations as described within the Wetlands Delineation Manual (Environmental Laboratory 1987). Other references used included Clarification and Interpretation of the 1987 Manual (Williams 1992) and Questions and Answers on the 1987 Manual (Studt 1991). The CDFG jurisdictional boundaries were determined based on the presence of either riparian vegetation or stream hydrology. Riparian habitat is not defined in Title 14 but refers to vegetation and habitat associated with a stream, where this habitat may extend beyond the banks of a stream.

Suspected jurisdictional areas were traversed within or along the drainage, and the width of the ordinary high water mark (OHWM) and/or wetland and riparian habitat was measured periodically. Suspected jurisdictional areas which, after closer inspection were found to be non-jurisdictional, were also noted.



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Regional Location Map

NORTH COUNTY HABITAT BANK

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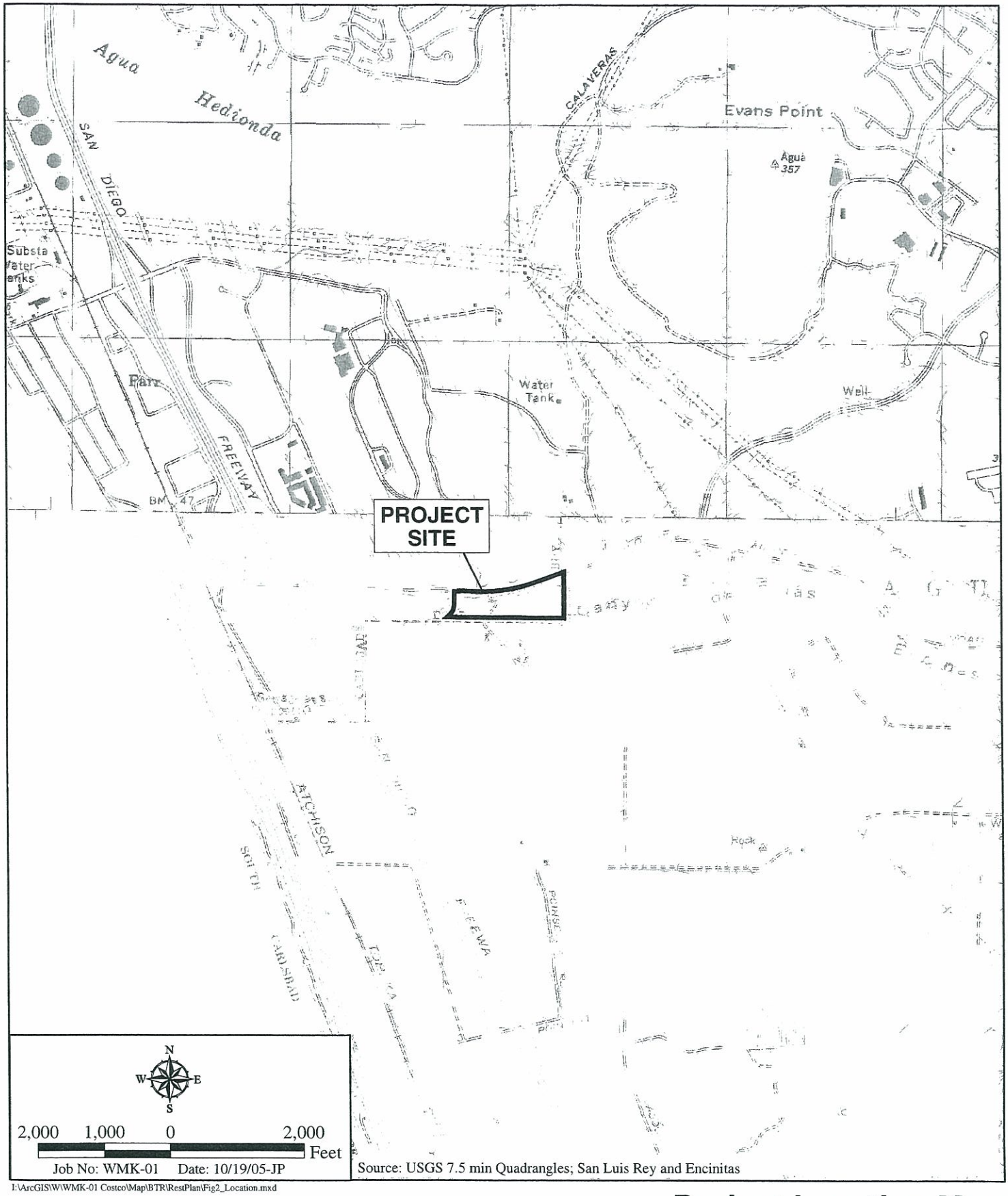
Figure 1



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Project Location Map

NORTH COUNTY HABITAT BANK

HELIX

Figure 2

Dominant and non-dominant vegetation elements were noted in accordance with the delineation manual guidelines. Plants were identified according to Hickman, ed. (1993), although because of the timing of the surveys, some of the vegetation present was dormant or senescent. Indicator status was assigned to each dominant species using the USFWS Branch of Habitat Assessment's National List of Plant Species that Occur in Wetlands (1996). Wetland hydrology was evaluated by the presence of surface water, general drainage patterns, watermarks, drift lines, debris, and sediment deposits. Wetland soils were noted by low chromas (Kollmorgen 1994).

Focused wildlife surveys for the site have not been conducted; however, the least Bell's vireo (*Vireo bellii pusillus*) was observed at the eastern end of the property in 2000 (B. Jones pers. obs.).

Nomenclature for this report follows Hickman, ed. (1993) and Beauchamp (1986) for plants; Holland (1986) for vegetation communities; Emmel and Emmel (1973) for butterflies; Collins (1997) for reptiles and amphibians; the American Ornithologists' Union (1998) for birds; and Jones et al. (1997) for mammals. Sensitive animal and plant status is taken from CDFG (2000a) and CDFG (2000b), respectively. Sensitive animals and plants are those formally recognized as such at local (City of Carlsbad), federal (USFWS), or state (CDFG) levels.

5.0 RESOURCE DESCRIPTION

The site supports five native and one non-native vegetation communities or habitats: riparian forest, mule fat scrub, freshwater marsh, Diegan coastal sage scrub, coastal sage scrub/ chaparral, non-native grassland, and disturbed habitat. Only those habitats within the proposed Bank are included in Table 1. Figure 3 includes areas with existing sewer and road easements, as well as a 1.55-acre conservation easement proposed for inclusion in the Bank.

Table 1
EXISTING VEGETATION COMMUNITIES

VEGETATION COMMUNITY	Acres*
Riparian forest	6.57
Mule fat scrub	0.21
Freshwater marsh	†
Diegan coastal sage scrub	1.01
Coastal sage scrub/chaparral	1.38
Non-native grassland	0.45
Disturbed habitat	6.07
TOTAL	15.69

*Areas are given in approximate acreage.
†Occurs within the 18.7-acre property boundary but outside of the Bank.

5.1 VEGETATION COMMUNITIES

The following communities occur on the project site.

5.1.1 Riparian Forest

Riparian forest consists of dense, broad-leaved, winter-deciduous stands of trees dominated by mature willows (*Salix* sp.). On site, the dominant species are black willow (*Salix gooddingii*) and arroyo willow (*Salix lasiolepis*), with an understory of mule fat (*Baccharis salicifolia*). Herbaceous components of riparian forest on site include western ragweed (*Ambrosia psilostachya*), California blackberry (*Rubus ursinus*), and yerba mansa (*Anemopsis californica*).

5.1.2 Mule Fat Scrub

Mule fat scrub is a riparian shrub community dominated by mule fat. The understory includes western ragweed and ox-tongue (*Picris echioides*).

5.1.3 Freshwater Marsh

Freshwater marsh is dominated by perennial, emergent monocots that can reach a height ranging from 12 to 15 feet. Cattail (*Typha latifolia*) is the dominant plant species in this habitat type. These areas are permanently flooded by freshwater yet lack a significant current (Holland 1986).

5.1.4 Diegan Coastal Sage Scrub

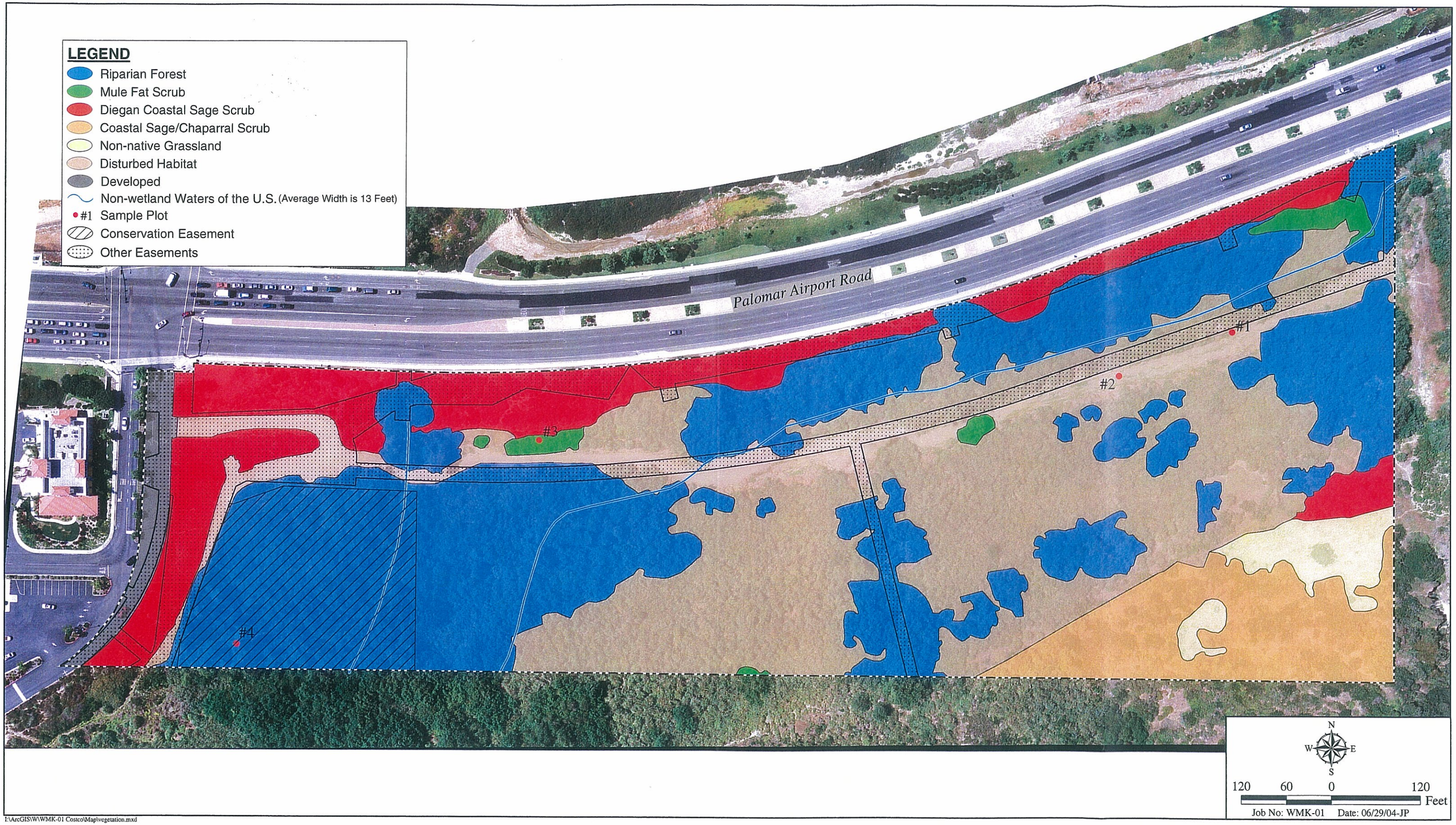
Diegan coastal sage scrub is a sensitive vegetation community and a southern California subset of coastal sage scrub. Coastal sage scrub is one of the major shrub communities that occur in California. The Diegan coastal sage scrub on the site includes California sagebrush (*Artemisia californica*), laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*), California buckwheat (*Eriogonum fasciculatum*), and California encelia (*Encelia californica*). Diegan coastal sage scrub is considered a sensitive resource by several resource agencies, including the City (1999), CDFG (Holland 1986), and USFWS because it supports many sensitive plants and animals and because it is declining due to development and other factors.

5.1.5 Coastal Sage Scrub/Chaparral

Coastal sage scrub/chaparral is a habitat type where two habitats, Diegan coastal sage scrub and chamise or southern mixed chaparral co-dominate. Chaparral is composed of broad- and thick-leaved shrubs that grow to about six to ten feet tall and form dense and often nearly impenetrable stands. Coastal sage scrub/chaparral has these components, but is much more open with integrations of Diegan coastal sage scrub. Plant components of coastal sage scrub/chaparral include chamise (*Adenostoma fasciculata*), lemonadeberry, mission manzanita (*Xylococcus bicolor*), scrub oak (*Quercus* sp.), California sagebrush, and flat-top buckwheat (*Eriogonum sasciculatum*).

5.1.6 Non-native Grassland

Non-native grassland consists mostly of annual rather than perennial grasses that are characteristically associated with flowering forbs. The dominant species in non-native grasslands are mediterranean, introduced species.



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Existing Vegetation and Easements

NORTH COUNTY HABITAT BANK

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Figure 3

5.1.7 Disturbed Habitat

Disturbed habitats are lacking in vegetation or dominated by weedy species, primarily pampas grass. Disturbed areas occur as a result of past agriculture or development.

5.2 WETLANDS AND WATERS OF THE U.S.

Three wetland/riparian vegetation communities occur on site: riparian forest, freshwater marsh-disturbed, and mule fat scrub (Figure 3; Table 2). A total of 0.05 acre of ACOE jurisdictional non-wetland Waters of the U.S., and 6.83 acre of CDFG jurisdictional areas occur on site (Figure 3).

Table 2
JURISDICTIONAL AREAS

HABITAT	JURISDICTIONAL AREAS	
	ACOE	CDFG
Riparian forest	--	6.57
Mule fat scrub	--	0.21
Waters of the U.S./Streambed	0.05	0.05
TOTAL	0.05	6.83

Description of Sample Points

Sample Point 1. This sample point was taken in the eastern portion of the property in freshwater marsh habitat. Hydrological criteria were met by indicators of current inundation. Wetland vegetation was present, with cattail being the dominant plant species. This point was in a wetland.

Sample Point 2. This sample point was taken in the eastern portion of the property just west of sample point 1 in an area mapped as disturbed habitat. There were no primary or secondary wetland hydrology indicators. Wetland vegetation was not met, as pampas grass was the dominant species. Hydrological criteria were not met as there were no saturated soils in the upper 14 inches. Soils exhibited upland characteristics (i.e., 10.5 YR 3/2) with no mottling. This point was not in a wetland.

Sample Point 3. This sample point was taken in the western portion of the property in an area mapped as mule fat scrub. Hydrological criteria were not met, and no wetland vegetation was present. Soils were 10 YR 5/4. This point was not in a wetland.

Sample Point 4. This sample point was taken in the southwestern portion of the property in an area mapped as riparian forest. Hydrological criteria were not met.

5.3 SENSITIVE PLANT SPECIES

There are no known occurrences of sensitive plant species from the site. If present, sensitive plant species would almost certainly occur in the sage scrub, sage scrub/chaparral, and grassland habitats.

These areas are not proposed to be enhanced. Rare plant surveys would be conducted once the Bank is formally established.

5.4 SENSITIVE ANIMAL SPECIES

As noted above, the least Bell's vireo is known to have occupied the site fairly recently. Several other riparian-dependant species including yellow-breasted chat (*Icteria virens*), and yellow warbler (*Dendroica petechia*), have a high probability of occurring on site. The site may also be used by several raptor species including Cooper's hawk (*Accipiter cooperii*). A number of upland-dependant species may occupy the Diegan coastal sage scrub, sage scrub/chaparral, and grassland habitats. Focused surveys for the coastal California gnatcatcher (*Polioptila californica californica*) will be conducted during the fall of 2005.

6.0 ADMINISTRATIVE STRUCTURE

6.1 ADMINISTRATION

Westmark Development is the Project Sponsor. The Project Sponsor shall hire an individual or organization acceptable to the agencies and City to serve as Habitat Manager. If the entity hired is an organization, the person(s) actively managing the open space must satisfy the criteria for a Habitat Manager (as described below), and a Project Manager must be designated.

The City shall designate one of its staff members as the HMP Administrator. The Habitat Manager (or Project Manager, if applicable) shall report directly to the HMP Administrator on all issues, concerns, and questions, unless otherwise directed in writing by the HMP Administrator.

The following organizations and individuals will be involved in the fulfillment of the Bressi Ranch HMP:

- Through the Planning Division, the City has the ultimate responsibility for the HMP. The City may transfer responsibility to a different department, if deemed necessary.

- The Habitat Manager will be responsible for the implementation of the HMP and will carry out the HMP's requirements and objectives. The Habitat Manager has not been selected at this time. If the City determines that the Habitat Manager is not meeting management objectives, the City may elect to serve as the Habitat Manager or it may transfer this responsibility to another entity acceptable to the City.

- The project applicant will be 100 percent responsible for funding the HMP (refer to Section 8.0, Funding Mechanism).

- The Habitat Manager will work in conjunction with the Fire Marshal on issues such as controlled burns, brush management and emergency vehicle access.

- The Project Sponsor shall be responsible for the restoration of wetland habitats. Upon final sign off of the restoration effort by the resource agencies, the Habitat Manager shall assume responsibility for the management of these lands.

6.2 QUALIFICATIONS FOR THE HABITAT MANAGER

The City and Project Sponsor shall jointly approve the selection of a Habitat Manager. The qualifications of the Habitat Manager must meet the following criteria:

- Possession of a B.S. or B.A. degree in wildlife management, natural resources, ecology, zoology, botany, biology, or similar degree.
- A minimum of two years experience in field biology in southern California (preferably San Diego County).
- Demonstrated experience in similar projects, or in projects requiring similar skills.
- Experience in working with community groups.

7.0 RESPONSIBILITY

7.1 LAND CONVEYANCE

The Project Sponsor will grant title to the Habitat Management Entity responsible for long-term management. The conservation easement shall provide for full implementation of this HMP. The City may transfer the easement to an entity selected by the City upon approval from the Corps, Service and CDFG.

7.2 MANAGEMENT

The Project Sponsor shall complete the following project requirements under the direction of the City and/or the Habitat Manager, depending on the timing of individual events:

- Implement the wetland restoration plans consistent with the Implementation Agreement for the NCHB.
- Maintain and monitor all restored habitat for a period of five years, to the satisfaction of the City and other applicable resource agencies, or until the habitat has met 5-year success criteria.
- Contract with a Habitat Manager approved by the City.
- Supply the Habitat Manager with copies of all reports prepared for the project area, as appropriate (i.e., reports containing data regarding sensitive resource locations).
- Perform all open space conveyances (as noted above) at the designated times.

The Habitat Manager's primary responsibility will be to maintain the integrity of all open space areas and restored habitats. In order to fulfill that responsibility, the Habitat Manager shall:

- Be an advocate of the open space area and its protection.
- Be familiar with this HMP, its appendices, and supporting documentation.
- Be responsible for all points noted in this HMP as being within his/her responsibility or judgment, as discussed in applicable sections of this document.
- Maintain all documents transferred by the project applicant (as previously noted) and be knowledgeable about the resources addressed in these reports.
- Educate the surrounding community about the presence and need for the open space and be responsive to any community concerns or problems regarding the open space.
- Document all field visits, and notify the HMP Administrator in a timely manner of all concerns, problems and suggested solutions.
- Coordinate with the HMP Habitat Managers of adjacent properties on management practices and tasks related to preservation and maintenance of the subregional open space system. Specifically, this will include activities such as the removal of exotic and pest species, and ensuring compatibility with the overall open space management plan of the Carlsbad HMP.

8.0 FUNDING MECHANISM

The Project Sponsor shall be responsible for funding the implementation of this HMP. The funding requirement for the implementation of the HMP shall be based on the Property Analysis Record (PAR) prepared by the Habitat Manager. The Project Sponsor shall be fully responsible for funding all of the habitat restoration and enhancement activities (including the five-year monitoring and maintenance efforts). Accordingly, habitat restoration/enhancement costs are not included in the yearly HMP budget.

Generation of the itemized budget will be prepared in order to incorporate both current and potential future funding needs. This should include a contingency fund specifically designed to account for unforeseen expenditures.

9.0 LONG-TERM MANAGEMENT SPECIFICATIONS

The open space area is intended to serve as a habitat preserve and as such is not compatible with many activities. Activities that will be specifically prohibited include:

- Unseasonal watering, use of herbicides (except to remove non-native species as necessary), pesticides, biocides, fertilizers, or other agricultural chemicals;
- Weed abatement activities for fuel management;
- Incompatible fire protection activities;

- Use of off-road vehicles and use of any other motorized vehicles except in the execution of management duties;
- Grazing or other agricultural activity of any kind;
- Recreational activities including, but not limited to, horseback riding, biking, hunting or fishing, except as may be specifically permitted under existing easements;
- Commercial or industrial uses;
- Construction, reconstruction or placement of any building or other improvement, billboard, or sign;
- Depositing or accumulation of soil, trash, ashes, refuse, waste, bio-solids or any other material;
- Planting, introduction or dispersal of non-native or exotic plant or animal species;
- Filling, dumping, excavating, draining, dredging, mining, drilling, removing or exploring for or extraction of minerals, loam, gravel, soil, rock, sand or other material on or below the surface of the open space;
- Altering the general topography of the open space, including but not limited to building of roads and flood control work;
- Removing, destroying, or cutting of trees, shrubs or other vegetation, except as required by federal, state or local law or by governmental order for (1) fire breaks, (2) maintenance of existing foot trails or roads, (3) prevention or treatment of disease, or (4) required mitigation programs;
- Manipulating, impounding or altering any natural watercourse, body of water or water circulation on the open space, and activities or uses detrimental to water quality, including but not limited to degradation or pollution of any surface or sub-surface waters.

Exceptions to this prohibition include selective hand-clearing of vegetation to the extent required by written order of the fire authorities for the express purpose of reducing an identified fire hazard, uses and activities expressly permitted pursuant to this HMP (refer to Section 1.0), and any related mitigation plans. Table 3 summarizes long-term management tasks.

Table 3
LONG-TERM MANAGEMENT TASKS

TASK	TIMING OF IMPLEMENTATION*
Baseline Inventory	Spring 2006
Track Changes	Monthly/Updates every 5 years
Site Monitoring	Monthly
Covered Species Monitoring	Every 3 years starting in 2008
Exotic Weed Control	At least twice annually
Initiation of long-term management plan	Fall 2008
Annual Reports	November-annually
Public Awareness	At least twice annually
Trash Removal	As needed

*Initial work will be conducted by the project sponsor until the Habitat Manager assumes management responsibility.

9.1 HABITAT MONITORING

Maintaining the health and diversity of the habitat contained within the open space is the basis for successful management of the preserved open space area. To facilitate the Habitat Manager in prioritizing management tasks and to provide information to the general public, City of Carlsbad, researchers, etc., regarding the overall state of the open space area, the Habitat Manager will verify the open space habitat types and conditions on an annual basis.

9.1.1 Baseline Inventory

The quantity and quality of the habitat types present within the open space area will be documented during the first year of active management. This information will be used as a baseline, or starting point, to measure changes in habitat resulting from both natural and man-made causes as well as to evaluate the success of the management effort in following years. The Habitat Manager will also use baseline maps in discussions with individuals or agency personnel involved in open space management.

Methods

A vegetation map showing current conditions will be produced for the project area (in digital format). Based on this mapping a table listing the total acreage of all existing habitat types will be produced. A one-day field inspection will be used to list all observed species within each identified habitat type. In addition, a complete list of all species observed (either directly or indirectly by sign [e.g., scat, tracks, etc.]) during the field inspection shall also be produced. The locations of any sensitive plant or animal species will be noted on the vegetation map.

Schedule

The baseline inventory will be conducted once, during the first year of active management.

9.1.2 Tracking Changes

Habitat types shift and change over time due to natural processes (e.g., fire, flood, succession). In addition, the open space area within the site boundaries is also susceptible to indirect impacts from adjacent development, particularly along the urban/wildlife margins. Any changes within the open space area may affect the values and functions provided by the existing habitat; therefore, changes in habitat are important to monitor over time. Information obtained from regularly tracking changes in the habitat within the open space area will assist the Habitat Manager in determining and prioritizing future management tasks.

Methods

The open space area will be visually inspected for changes during regular maintenance (i.e., monthly monitoring, annual weed control) and surveying activities (i.e., triennial plant and animal surveys). If substantial changes are noted, the area will be monitored, and remedial measures including additional weeding and seeding will be implemented as noted below until the site stabilizes.

If weed cover exceeds existing weed cover by 15 percent as noted in Section 11.3.1 below, additional weed control efforts and/or habitat enhancement through use of seed augmentation or cuttings shall

be conducted using funds from the contingency fund. It is anticipated that use of a native seed mix and/or cuttings shall be adequate for restoration of disturbed habitat areas. The seed/cutting mix shall be determined by the Habitat Manager based on slope, aspect, and existing native plant species occurring in habitat immediately adjacent to the restoration area. Seed and cuttings used shall be collected from on site sources to insure genetic integrity of the habitat. Seed shall be planted in the late fall (November-December) to take advantage of winter rains. Cuttings would be planting in the spring. Supplemental irrigation should not be used. If the Habitat Manager determines that container stock would be appropriate for certain species, seed for these species shall be collected from on site.

Schedule

The baseline vegetation and sensitive species maps will be updated every five years, with the updated maps to be submitted to the Corps, Service, CDFG, and City.

9.1.3 Site Monitoring

Monitoring of the open space is needed to insure that access is being controlled, weeds are not becoming a significant issue, and the general condition of the open space is being maintained.

Methods

The open space area will be monitored by inspecting the development/open space boundary for unauthorized access points, illegal dumping and other unauthorized activities. Inspection shall occur by walking the open space area.

If weed cover exceeds 15 percent of existing weed cover as noted in Section 11.3.1 below, additional weed control efforts and/or habitat enhancement through use of seed augmentation shall be conducted using funds from the contingency fund.

Schedule

Monitoring shall occur at least every month.

9.2 COVERED SPECIES MONITORING

No sensitive species are currently known from the site, although least Bell's vireos have been observed previously on the site. Monitoring for sensitive bird species will be conducted to determine future use of the site. Adaptive management measures may be required to intervene when either natural or man-made disturbances or effects appear to be negatively influencing a sensitive species.

9.2.1 Methods

It is the responsibility of the Habitat Manager to evaluate the status of the sensitive species on site and to institute protective measures if any individual species becomes threatened. Monitoring of sensitive species populations will vary based on the target species, but will include the use of specific non-protocol survey methodologies. Sensitive plant species shall be monitored by conducting one walkover of the entire site during the spring months, every three years. Sensitive bird species will be monitored during spring months by conducting three walkovers of the entire site every three years. Herptofauna will be observed opportunistically during the sensitive plant and bird surveys.

The Habitat Manager will monitor all of the vegetation communities and sensitive species that have been previously observed on site (Section 5.0, above). Other sensitive species have the potential to occur on site and, if found, should be included in the program of regular monitoring.

9.2.2 Schedule

Sensitive species populations should be assessed once every three years. Surveys for the sensitive species will be conducted at the appropriate time of year for each species.

9.3 CONTROL OF EXOTIC SPECIES

The introduction of exotic plant and animal species through urban edge effects can result in degradation of both native habitats and associated wildlife. The Habitat Manager will implement the following measures to control the introduction of exotic plants and animals in the open space area.

9.3.1 Exotic Plant Control

The control of exotic plant species will include coordination with the habitat managers in adjacent open space areas to increase the efficiency of program implementation (as described above in Section 7.2, Management). A list of exotic pest plant species of local concern is provided below in Table 4 and in Table 12 of the Carlsbad HMP.

Table 4
EXOTIC PEST PLANT SPECIES

SCIENTIFIC NAME	COMMON NAME	HABITAT MOST AFFECTED
Arundo donax	giant reed	Riparian
Brassica nigra	black mustard	Coastal sage
Carpobrotus sp.*	ice plant/sea fig	All
Centaurea sp.*	star thistle	Coastal sage
Cortaderia sp.*	pampas grass	Riparian
Cynara cardunculus	artichoke thistle	All
Eichornia crassipe	water hyacinth	Riparian
Foeniculum vulgare	fennel	All
Hydrilla verticillata	hydrilla	Riparian
Lolium perenne	Italian ryegrass	Riparian
Nicotiana glauca	tree tobacco	All
Pennisetum spp.*	fountain grass	Coastal sage
Phoenix sp.*	date palm	Riparian
Rincinus communis	castor bean	Riparian
Delaireia odorata	cape ivy	Riparian
Schinus terebinthifolius	Brazilian pepper tree	All
Spartium junceum	Spanish broom	All
Tamarix sp.*	salt cedar	Riparian

*All species of this genus should be treated as a pest species.

Methods

Control of exotic plant species will include the three principal steps outlined below:

1) Removal of Existing Exotic Plants – Methods for removing the exotic plant species identified by the Habitat Manager are described above (Section 10.5, Weed Removal). The Habitat Manager is responsible for weed removal.

2) Removal of Introduced Exotic Plants – The Habitat Manager will be responsible for removing populations of all specified species, with the exception of star thistle and black mustard (Table 3), from the open space area as soon as feasible after their discovery. Star thistle and black mustard will be targeted annually as part of the ongoing weed control, however up to 15 percent total cover above what occurs today shall be allowed for these species. If cover exceeds 15 percent of current levels, contingency funds may be used to increase weed control measures.

Schedule

Removal of exotic plant species will be a focus of the Habitat Manager's duties during the spring and early summer months when most weed species are growing. To this end, weeding should be scheduled between March and June and on an as-needed basis for the remainder of the year. The Habitat Manager will modify this schedule to accommodate annual fluctuations in weed growth. A minimum of two weed removal days shall be conducted annually.

9.3.2 Domestic Pets

The Habitat Manager will implement the following steps in an ongoing manner to control the effects of domestic pets on wildlife within the open space area:

- The Habitat Manager will promote education of the local residents regarding the impacts of uncontrolled pets on wildlife, through measures such as signs.

- The Habitat Manager will report persistent and chronic problems related to uncontrolled pets in the open space area to the County Animal Control Officer.

9.4 FIRE MANAGEMENT

Fire is an important element in the ecology of southern California and also presents a potential hazard to buildings located adjacent to open habitat areas. Accordingly, fire management activities within the open space area will not be conducted. The removal of the pampas grass from the site will reduce fire potential for the area.

The preferred method of habitat restoration in burned areas is natural recovery. The Habitat Manager may decide revegetation is necessary if the burned area fails to recover or is taken over by invasive weed species. The Habitat Manager may also install slope stabilization structures (e.g., fiber rolls, hay bales or water bars) if erosion poses problems after a burn.

9.5 ANNUAL REPORT

Methods/Schedule

A letter report summarizing the status of the open space area, the results of the annual surveys, and all major actions taken since the last assessment will be provided to the City each year. This letter report will include information on the overall health of the various habitats present within the open space area, any changes to the health or distribution of sensitive plant and animal species observed (provided on a map), any observed changes resulting from natural or man-made causes, any management issues/tasks addressed during the last year, and tasks identified for the next year. This report will also compare the most recent data with that collected in previous years. If any habitat type or sensitive species is declining the report will outline a plan for their recovery. The annual report should also include the most up-to-date vegetation and sensitive species maps. These digital format maps will be updated per surveys conducted by the Habitat Manager.

9.6 PUBLIC AWARENESS

It is important that the community accept the open space area as a valuable amenity and important resource. To that end, steps will be taken to encourage participation by local residents and members of the community in the stewardship of the open space area. It is also a goal of this plan that members of the community take pride in the maintenance and protection of the open space area. The community can help police the open space area and assist the Habitat Manager, who cannot be present 24 hours a day, in preventing vandalism and unauthorized activities from occurring.

9.6.1 Methods

The following measures will be taken to maximize public awareness and acceptance of the open space:

- The Habitat Manager will attend meetings of the local community to inform them of the status of the habitat management program and to enlist their cooperation and support.

- Interpretive signs will be installed at strategic locations to help educate users of the open space about the ecology of the area, purpose of the open space area, common and/or sensitive species present, and need for preservation of the area. Other important information will be included, such as timing of herbicide treatments, rattlesnake warnings, what to do in the case of an emergency, and a number to call with any suspected violations of open space rules.

- The Habitat Manager will provide bulletins of important activities or events that occur in the open space area to local newspapers and local organizations.

9.6.2 Schedule

The Habitat Manager will attend meetings with the local community at least once per year.

9.7 ADDITIONAL MANAGEMENT CONCERNS

9.7.1 Trash Removal

The Habitat Manager will be responsible for general removal of trash from the open space area as often as necessary.

9.7.2 Squatting

Illegal squatting is often a problem within open space areas in the City. The Habitat Manager will regularly survey the site for encampments and report them to the City Police Department.

9.7.3 Poaching/Collecting

Removal of any plants, animals, rocks, minerals, or other natural resources will be prohibited within the open space area. The Habitat Manager will post signs (at least two) advising visitors of this policy and warning them of the potential legal consequences. Anyone found removing natural resources will be informed, in a non-confrontational manner, that these activities are illegal. The Habitat Manager should maintain a log of all incidences of collecting within the open space area. Should a situation turn confrontational or if requests to discontinue illegal activities are ignored the Habitat Manager shall report the offender(s) to the City Police Department, Service and CDFG.

The Habitat Manager may, at his/her discretion, allow seed collection and plant cuttings to be used as part of revegetation efforts within the open space area. Any such activities will take place under the direct supervision of the Habitat Manager. The amount of collected plant materials will be limited to provide only what is absolutely necessary to ensure successful revegetation.

9.7.4 Fencing

Fencing shall be limited to the maintenance of the existing gate that precludes access along the existing water district right-of-way.

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