MINUTE ITEM
This Calendar Item No. C37 was approved as Minute Item No. 37 by the California State Lands Commission by a vote of 3 to 0 at its 12-3-99 meeting.

CALENDAR ITEM
C37

A 78
S 39

PRC 8132.9

12/03/99
W 25579
J. Smith

GENERAL LEASE - PUBLIC AGENCY USE

LESSEE:
California Department of Parks and Recreation
8885 Rio San Diego Drive, Suite 270
San Diego, California 92108

AREA, LAND TYPE, AND LOCATION:
Sovereign lands in the Tijuana Estuary, Imperial Beach, San Diego County.

AUTHORIZED USE:
Management of sovereign lands within Border Field State Park as a complement to the Tijuana River National Estuarine Research Reserve (TRNERR).

LEASE TERM:
47 years, beginning December 1, 1999.

CONSIDERATION:
The public use and benefit; with the State reserving the right at any time to set a monetary rent if the Commission finds such action to be in the State's best interest.

OTHER PERTINENT INFORMATION:

1. Applicant owns the uplands adjoining the lease premises.

2. The Commission has leased the majority of its sovereign interests in the Tijuana Estuary north of Border Field State Park to the United State Fish and Wildlife Service (USFWS) to be managed as part of the TRNERR (Lease No. PRC 5938). Applicant is the owner of state lands within Border Field State Park. The Applicant is working with the USFWS and the California Coastal Conservancy in a cooperative effort to preserve and restore those environmentally sensitive wetland areas within the state park. One such effort is the Model Marsh/Fenton Quarry Enhancement Project. This project is the second phase of a multi-phase marsh

restoration effort known as the Tijuana Estuary Tidal Restoration Program. Any future restoration projects to be undertaken within the proposed lease area will require compliance with the CEQA and the California Coastal Act.

The first component of this project entails the excavation and construction of a 20-acre intertidal wetland located in the southwest corner of the Tijuana Estuary. Sediment excavated during construction will be trucked to and stored at a temporary stockpile located immediately adjacent to the Fenton Quarry, which is located east of the Estuary at the mouth of Goat Canyon. The sediment will be used in the restoration and reclamation of the quarry.

Staff is recommending that the Commission authorize a lease to the Applicant for all those sovereign interests within the Tijuana Estuary located within Border Field State Park, to be managed as part of the TRNERR, including the Model Marsh/Fenton Quarry Enhancement Project. Staff is proposing that the term of the lease be 47 years to coincide with the term of Lease No. PRC 5938.

3. Management Lease

Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (Title 14, California Code of Regulations, section 15061), the staff has determined that this activity is exempt from the requirements of the CEQA as a categorically exempt project. The project is exempt under Class 7, Actions by Regulatory Agencies for Protection of Natural Resources; Title 2, California Code of Regulations, section 2905(f)(1).

Authority: Public Resources Code section 21084 and Title 14, California Code of Regulations, section 15300 and Title 2, California Code of Regulations, section 2905.

Model Marsh/Fenton Quarry Enhancement Project

A Mitigated Negative Declaration was prepared and adopted for this project by the California Coastal Conservancy. The California State Lands Commission's staff has reviewed such document. A Mitigation Monitoring Program was adopted by the California Coastal Conservancy.

4. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code sections 6370, et seq. Based upon the staff's consultation with the persons nominating such lands and through the CEQA review process, it is the staff's opinion that the project, as proposed, is consistent with its use classification.

APPROVALS OBTAINED:

U.S. Fish and Wildlife Service; California Coastal Commission; and California Coastal Conservancy.

EXHIBITS:

A. Location and Site Map
B. Notice of Determination
C. Lead Agency Approval
D. Mitigation Monitoring and Reporting Program

PERMIT STREAMLINING ACT DEADLINE:

March 15, 2000

RECOMMENDED ACTION:

IT IS RECOMMENDED THAT THE COMMISSION:

CEQA FINDING:

MANAGEMENT LEASE

FIND THAT THE ACTIVITY IS EXEMPT FROM THE REQUIREMENTS OF THE CEQA PURSUANT TO TITLE 14, CALIFORNIA CODE OF REGULATIONS, SECTION 15061 AS A CATEGORICALLY EXEMPT PROJECT, CLASS 7, ACTIONS BY REGULATORY AGENCIES FOR PROTECTION OF NATURAL RESOURCES; TITLE 2, CALIFORNIA CODE OF REGULATIONS, SECTION 2905(f)(1).

MODEL MARSH/FENTON QUARRY ENHANCEMENT PROJECT

FIND THAT A MITIGATED NEGATIVE DECLARATION AND A MITIGATION MONITORING PROGRAM WERE PREPARED AND ADOPTED FOR THE MODEL MARSH/FENTON QUARRY ENHANCEMENT PROJECT BY THE CALIFORNIA COASTAL CONSERVANCY AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.

ADOPT THE MITIGATION MONITORING PROGRAM AS CONTAINED IN EXHIBIT D, ATTACHED HERETO.

SIGNIFICANT LANDS INVENTORY FINDING:

FIND THAT THIS ACTIVITY IS CONSISTENT WITH THE USE CLASSIFICATION DESIGNATED BY THE COMMISSION FOR THE LAND PURSUANT TO PUBLIC RESOURCES CODE SECTIONS 6370, ET SEQ.

AUTHORIZATION:

AUTHORIZE ISSUANCE TO THE CALIFORNIA DEPARTMENT OF PARKS AND RECREATION OF A GENERAL LEASE - PUBLIC AGENCY USE, BEGINNING DECEMBER 1, 1999, FOR A TERM OF 47 YEARS, FOR MANAGEMENT OF SOVEREIGN LANDS WITHIN BORDER FIELD STATE PARK AS A COMPLEMENT TO THE TIJUANA RIVER NATIONAL ESTUARINE RESEARCH RESERVE (TRNERR) AND AUTHORIZE THE MODEL MARSH/FENTON QUARRY ENHANCEMENT PROJECT; ON THE LAND SHOWN ON EXHIBIT A ATTACHED AND BY THIS REFERENCE MADE A PART HEREOF; CONSIDERATION BEING THE PUBLIC USE AND BENEFIT, WITH THE STATE RESERVING THE RIGHT AT ANY TIME TO SET A MONETARY RENT IF THE COMMISSION FINDS SUCH ACTION TO BE IN THE STATE'S BEST INTEREST.

NO SCALE

SITE MAP

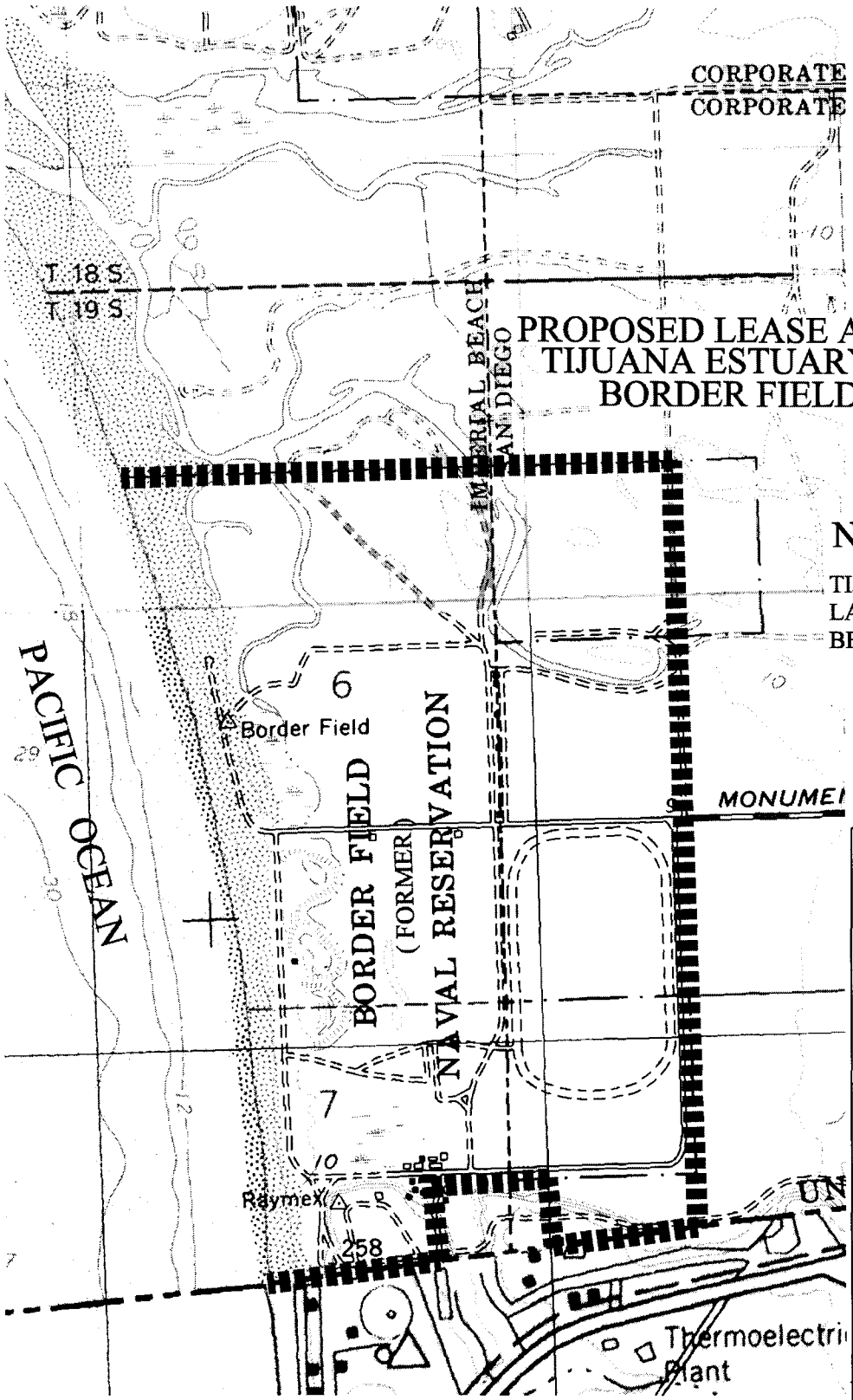
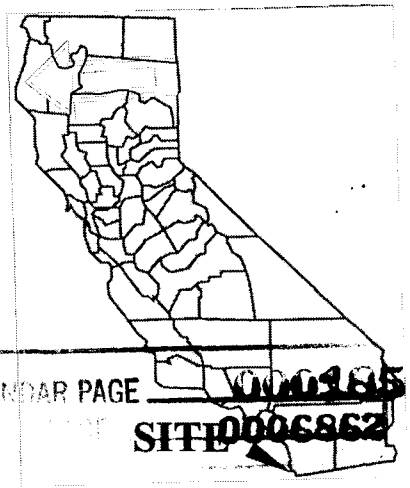


Exhibit A

W25579
Tijuana Estuary
SAN DIEGO CO.



CALENDAR PAGE
SITE

This Exhibit is solely for purposes of generally defining the lease premises, and is not intended to be, nor shall it be construed as, a waiver of limitation of any state interest in the subject or any other property.

EXHIBIT B

NOTICE OF DETERMINATION

To: X Office of Planning & Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

___ County Clerk
County of _____

From: State Coastal Conservancy
1330 Broadway, 11th Floor
Oakland, CA 94612-2530
(510) 286-1015

SUBJECT:
Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

Tijuana Estuary Tidal Restoration Program - Model Marsh/Fenton Quarry Project
Project Title

98091110 CA State Coastal Conservancy - Jim King (510) 286-4167
State Clearinghouse Number (If submitted to Clearinghouse) | **Lead Agency or Responsible Agency Contact Person** | **Area Code/Telephone**

Tijuana River Nat'l Estuarine Research Reserve, San Diego County
Project Location (include county):

Project Description: Excavation and restoration of 20-acre intertidal salt marsh and transport, stockpiling and use of excavated soil for restortion of upland former quarry site.

This is to advise that the [X] Lead Agency [] Responsible Agency has approved the above-described project
on August 6, 1999 and has made the following determinations regarding the above-described project:

1. The project [] will [X] will not have a significant effect on the environment.
2. [] An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   [X] A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [X] were [] were not made a condition of the approval of the project.
4. A mitigation monitoring or reporting program [X] was [] was not adopted pursuant to California Public Resources Code Section 21081.6.
5. A State of Overriding Considerations [] was [X] was not adopted for this project.
6. Findings [X] were [] were not made pursuant to the provisions of CEQA.

This is to certify that the [] final EIR [X] EIR Negative Declaration with comments and responses and record of project approval is available from the State Coastal Conservancy, 1330 Broadway, 11th Floor, Oakland, California 94612-2530.

Jim King — Project Analyst — August 6, 1999
Signature — Title — Date

Jim King
Name

Date received for filing at OPR: _____

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STATE CLEARINGHOUSE

CALENDAR PAGE 000186
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COASTAL CONSERVANCY

Staff Recommendation
August 6, 1999

TIJUANA ESTUARY

MODEL MARSH/FENTON QUARRY ENHANCEMENT PROJECT

File No. 98-053
Project Manager: Jim King

STAFF RECOMMENDATION: Staff recommends that the State Coastal Conservancy adopt the following Resolution pursuant to Sections 31251-31270 *et seq.* of the Public Resources Code:

> "The State Coastal Conservancy hereby approves the Model Marsh/Fenton Quarry Enhancement Project as described in the Final EIR/EIS approved by the Conservancy on October 30, 1992; in the supplemental Negative Declaration approved by the Conservancy on December 8, 1998; and in the supplemental Negative Declaration for the Model Marsh/Fenton Quarry Enhancement Project attached as Exhibit C to the accompanying staff recommendation; approves the supplemental Negative Declaration for the Model Marsh/Fenton Quarry Enhancement Project; and adopts the mitigation monitoring program attached as Exhibit D to the accompanying staff recommendation."

Staff further recommends that the Conservancy adopt the following findings:

> "Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:
>
> 1. The proposed Model Marsh/Fenton Quarry Enhancement Project is consistent with the Model Project phase of the Tijuana Estuary Tidal Restoration Program, and its Final Environmental Impact Report and Environmental Impact Statement (Final EIR/EIS), documents reviewed, approved and certified by the Conservancy on October 30, 1992;
> 2. The proposed Model Marsh/Fenton Quarry Enhancement Project is consistent with the Model Marsh Nega-

tive Declaration that the Conservancy reviewed, approved and certified on December 8, 1998;

3. The Conservancy has reviewed the proposed Negative Declaration for the Model Marsh/Fenton Quarry Enhancement Project, attached to the accompanying staff recommendation as Exhibit C, and finds that the project avoids, reduces or mitigates the possible significant environmental effects and that there is no substantial evidence that the project will have a significant effect on the environment as defined in 14 California Code of Regulations Section 15382;

4. The proposed project is consistent with the purposes and criteria set forth in Chapter 6 of the Public Resources Code (Sections 31251-31270) regarding the enhancement of coastal resources;

5. The proposed project is consistent with the Conservancy role and responsibilities detailed in the Tijuana River National Estuarine Research Reserve Management Plan adopted by the Conservancy in October 1985;

6. The proposed project is consistent with the Conservancy's Interim Project Selection Criteria and Guidelines as adopted by the Conservancy on May 27, 1999;

7. The Southwest Wetlands Interpretive Association is a private nonprofit organization as defined by Section 501(c)(3) of the Internal Revenue Code and has among its principal charitable purposes the preservation of land for scientific, educational and ecological purposes;

8. There is no evidence before the Conservancy that the Model Marsh/Fenton Quarry Enhancement Project located in San Diego County will have a potentially adverse effect, either individually or cumulatively, on wildlife resources as defined under California Fish and Game Code Section 711.2; and

9. The Conservancy has on the basis of substantial evidence rebutted the presumption of adverse effect contained in California Code of Regulations 753.5(d) regarding potential for adverse effect on wildlife resources as defined under California Fish and Game Code Section 711.2."

MITIGATION, MONITORING AND REPORTING PROGRAM FOR THE TIJUANA ESTUARY MODEL MARSH/FENTON QUARRY ENHANCEMENT PROJECT

1.0 Introduction

The Tijuana Estuary Model Marsh/Fenton Quarry Enhancement Project is a habitat restoration project composed of two components. The first component, the Model Marsh, entails the excavation and construction of a 20-acre intertidal wetland located in the southwest corner of San Diego County in the Tijuana River National Estuarine Research Reserve (TRNERR; Figure 1). The sediment excavated during construction of this marsh will be trucked approximately 1 mile east to a temporary stockpile location (Figure 1). The second part of the project, the Fenton Quarry, entails restoration of an abandoned sand and gravel quarry with the sediment excavated from the Model Marsh. The sediment stored in the temporary stockpile, located immediately adjacent to the quarry, will be moved to the quarry, the site will be contoured, and then will be planted with native plant species. Construction of the Model Marsh is scheduled to begin October 1, 1999. Construction of the Quarry is anticipated to begin approximately March 2000.

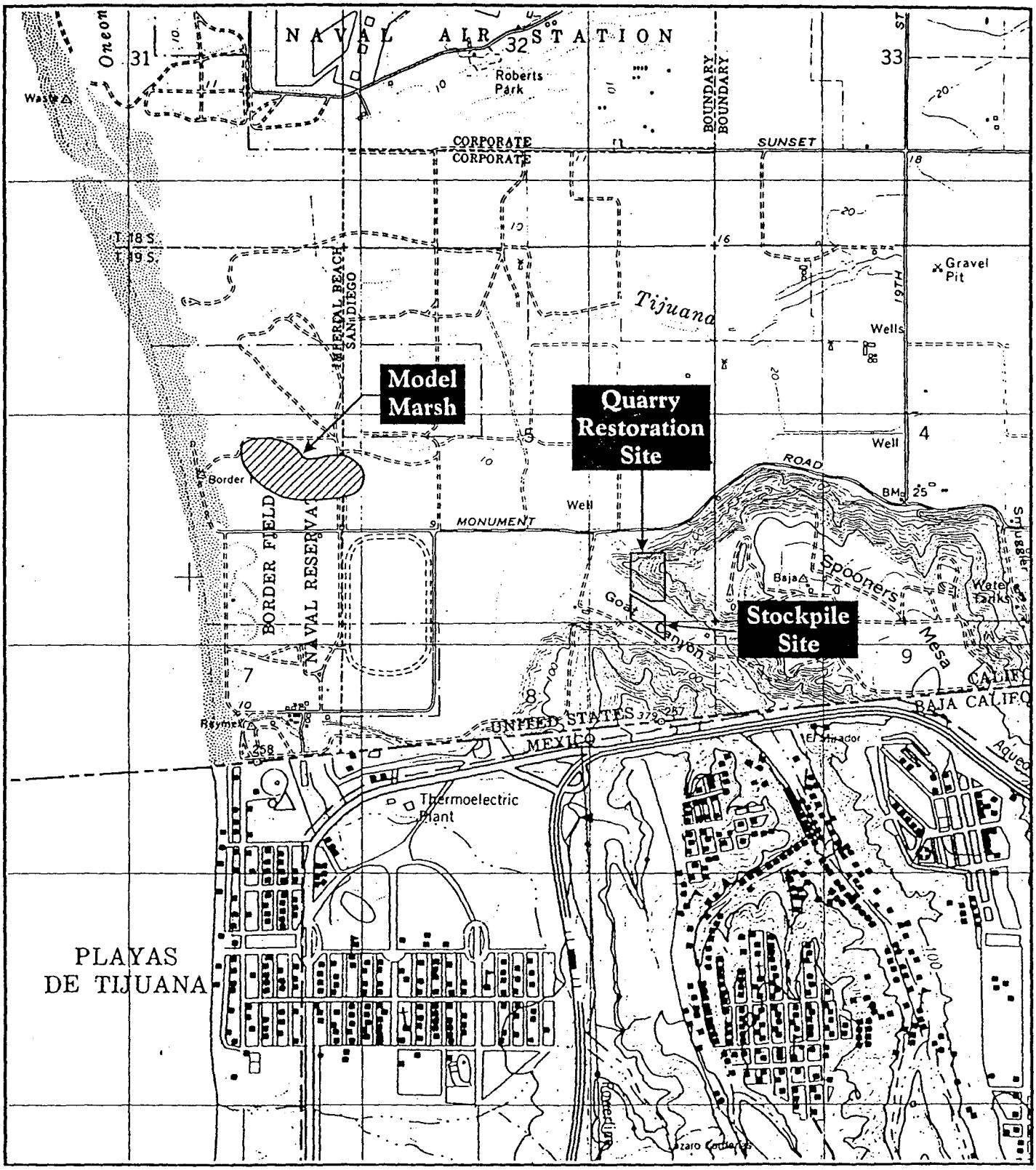
An EIR/EIS was produced in 1992 that included the Model Marsh as part of a larger restoration effort at the TRNERR. A Mitigated Negative Declaration was adopted in 1998 to address deviations in the Model Marsh project design relative to the EIR/EIS. A Mitigated Negative Declaration that included restoration of the quarry was adopted August 6, 1999. The EIR/EIS and 1998 Mitigated Negative Declaration identified ocean disposal for sediments excavated from the Model Marsh. However, physical tests revealed that the sediments did not meet the U.S. Army Corps of Engineers criteria for beach disposal. Therefore, an alternative disposal site was needed. The quarry site was identified as the disposal site in the August 6, 1999 Mitigated Negative Declaration.

A number of mitigation measures have been presented in the above documents to reduce potential project impacts to a level below significant. This Mitigation, Monitoring and Reporting Program (MMRP) is presented to provide assurance that these mitigation measures are properly undertaken and successful in reducing potential project impacts. The MMRP includes conditions for pre-construction, construction and post-construction monitoring for both parts of the project, as presented below.

2.0 Model Marsh

2.1 Air Quality

An active dust control program will be implemented by the Contractor and overseen by the Construction Manager during all phases of excavation, hauling and stockpile construction. All



SOURCE: USGS 7.5' Quad Map (Imperial Beach)

Figure 1
Project Location Map

0 1000 2000
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accessible paved and unpaved roads will be watered with a water truck on a frequent basis (e.g., several times daily) to limit dust emissions. The surface of the soil stockpile will also be watered from a pressurized hose or water truck to prevent dust emissions due to wind erosion and truck traffic. The Construction Manager shall determine if watering of haul truck contents is necessary during the short haul from the Model Marsh to the stockpile site. It such watering is required, it will be applied using a pressurized hose immediately after loading.

2.2 · Biological Resources

No construction activities will occur during the breeding season of sensitive bird species, including the California least tern (*Sterna antillarum browni*), Belding's Savannah sparrow (*Passerculus sandwichensis beldingi*), light-footed clapper rail (*Rallus longirostris levipes*) and western snowy plover (*Charadrius alexandrinus nivosus*) whose combined breeding seasons extend roughly from February 15 through September 15. All planting will be done between October 1 and April 30 to take advantage of the winter rainy season, as required by the CDFG in Streambed Alteration Agreement 5-519-98. Preconstruction surveys will be conducted prior to initiating construction, as described below.

2.2.1 Pre-Construction Monitoring. Prior to excavation of the Model Marsh and construction of the stockpile, pre-construction surveys will be conducted to ensure that there are no nesting birds within the project footprint and to determine the location of any sensitive species in the project vicinity. Excavation of the Model Marsh will not proceed until a qualified wildlife biologist has determined that the nesting season for Belding's Savannah sparrow in the project vicinity has ended.

Upon completion of the pre-construction survey, the area proposed for the stockpile will be cleared of all vegetation to discourage nesting by species such as northern harrier (*Circus cyaneus*). Locations of sensitive species, including coastal California gnatcatcher (*Pilioptila californica californica*) and yellow-breasted chat (*Icteria virens*), will be noted for construction of noise abatement berms (see Construction Monitoring).

2.2.2 Construction Monitoring. A Construction Manager will be on-site during all phases of marsh excavation and stockpile construction. The Construction Manager will possess at a minimum a Bachelor's degree in biology and will have demonstrated at least 5 years experience in restoration of southern California native habitats. The Construction Manager will be responsible for ensuring that there are no direct impacts to species or habitats beyond that included in the project specifications and plans. In addition, the Construction Manager will oversee installation of earthen noise abatement berms to reduce noise impacts at selected nest sites and oversee noise monitoring at sensitive receptor sites.

Earthen berms will be constructed adjacent to sensitive nesting bird species to reduce noise from construction of the stockpile. It is anticipated, based on 1999 survey data, that one pair of nesting gnatcatcher and one pair of nesting yellow-breasted chat will occur within 300 ft of the soil stockpile requiring installation of earthen berms. These berms will be constructed to the specifications of the

resource agencies (the U.S. Fish and Wildlife Service {USFWS} and the California Department of Fish and Game {CDFG}) as a condition of their approval of the project.

In addition, daily noise monitoring will be conducted by a trained acoustician at or adjacent to the nest sites to determine the impacts of noise on the nesting birds. Each noise monitoring period should last at least one hour and should take place during normal construction operating hours. Readings during quiet times (e.g. lunch break) should be avoided.

Noise from construction activities shall not exceed an hourly average noise level (of 60 dBA L_{eq}) at the edge of the gnatcatcher/chat habitat. Should the hourly noise level exceed 60 dBA L_{eq}, use of the equipment that exceed this limit will be stopped and the City of San Diego USFWS and CDFG notified. Confounding noise events not related to the project construction activities should be factored out of the data. These events include, but are not limited to, helicopter overflights and nearby Border Patrol activities. The duration, time, and description of each event shall be recorded by the person conducting the monitoring. Each daily noise monitoring period shall be described and summarized in a weekly submitted report to be sent to the City and appropriate resource agencies.

The conditions of the noise monitoring plan presented above shall be made part of the construction plans and contract(s) for both the Model Marsh and the Quarry Enhancement components of the project. The contractor shall be responsible for meeting the established noise levels and will take the appropriate actions to reduce noise to acceptable levels should violations of the noise threshold criteria occur.

2.2.3 Post-Construction Monitoring. A multi-year monitoring program will be implemented to determine if revegetation of the Model Marsh is functioning as expected. Monitoring will be conducted for a period of five years or until success criteria have been achieved, whichever occurs first. The overall success of the restoration will be evaluated by comparing the final year of monitoring data with the target values. Monitoring will be conducted over a 3-5 year period to identify trends and progress toward the goal of a self-sustaining, functioning habitat. Monitoring will also assess whether any adjustments to the original plan are needed. An annual report will be submitted to the appropriate agencies each monitoring year that will cover project monitoring as outlined below.

Three types of monitoring will be undertaken for post-construction phase monitoring of the revegetation site. These include Implementation Monitoring, Qualitative Monitoring, and Quantitative Monitoring.

Implementation Monitoring. To ensure that the revegetation plan is followed, all implementation activities will be monitored by the Construction Manager. The Construction Manager will be on-site for all phases of project implementation including grading and planting. Notations will be made to the project planting plan of the initial efforts including dates and quantities of plants, and problem areas if any. These will serve as the "as-built" plans for the project.

Qualitative Monitoring. Qualitative monitoring will be conducted by the Project Monitor. This individual or individuals will have a minimum of a Bachelor's degree in biology, botany or related science and will demonstrate at least 5 years experience in monitoring of native habitat restoration projects in southern California. Qualitative data will include overall survival, evidence of water stress, insect infestation, development of erosion problems and health and vigor of planted areas by species. Permanent photographic stations will be established and used to document qualitative changes over time. These will be used with quantitative data to describe the attainment of success criteria.

Quantitative Monitoring. Quantitative monitoring will also be conducted by the Project Monitor. Quantitative monitoring will measure the development of the restoration site and document that the success criteria defined by performance standards (presented below) have been achieved. The revegetated area will be monitored for a 3-5 year period, depending on the development of the site. If success criteria are met by year 3, monitoring will be terminated.

Quantitative data include analysis of survivorship and growth, including canopy development, understory development, and height and per cent cover of shrub species, and estimated cover of planted areas. Vegetation growth and establishment should be quantitatively assessed through the use of line intercept transects. Four transects per acre will be analyzed. In each transect, per cent canopy cover are determined for each species intercepted by the sampling line. Data are recorded on standard field data forms and, along with notes of observations, kept on file by the California State Coastal Conservancy or their agent for documentation purposes.

Both qualitative and quantitative monitoring will be conducted quarterly for years 1 and 2, and semi-annually for years 3-5 (if needed). Qualitative monitoring surveys will concentrate on survival, natural recruitment, potential problems and recommend remedial actions, where necessary. Remedial actions may include re-planting areas lost to disease, natural causes or other causes such that this loss will jeopardize attainment of the criteria for success.

Annual reports will be produced at the end of each monitoring year. These reports will be submitted to the California State Coastal Conservancy, The California Coastal Commission, the California Department of Parks and Recreation, the California Department of Fish and Game, the U.S. Fish and Wildlife Service, and the City for their review and evaluation. Each annual report will address the criteria for success and measures needed to meet those criteria.

Criteria for Success. In order to determine if the goals of the revegetation program have been achieved, certain success criteria must be met. The Model Marsh project is somewhat unique in that it incorporates a research component conducted by scientists at the Pacific Estuarine Research Laboratory (PERL) at San Diego State University. As such, much of the Model Marsh area will be planted as experiments that will be analyzed by PERL. Such experiments cannot be held to typical success criteria but, nonetheless, will contribute to establishment of habitat and long-term functioning of the site. Therefore, the success criteria to be met by the Owner focuses on the establishment and survival of the 0.55 acre of high marsh that will be salvaged and transplanted. Quantitative measures of the high marsh transplantations will include assessment of percentage

survival of plantings and percent of coverage. Each monitoring report will evaluate if these criteria have been met and prescribe corrective measures if they have not. The primary success criterion is survival. Criteria include 80% for year 1 and 100% survival thereafter. In addition, the CDFG Streambed Alteration Agreement (#5-519-98) conditions require that the site attain75% cover after year 3 and 90% cover after year 5. If the survival and cover requirements have not been met, the Project Owner is responsible for replacement planting to achieve these requirements. Replacement plants will be monitored with the same survival and growth requirements for 5 years after planting.

The results of experiments conducted by PERL will be presented annually to the Coastal Conservancy and will be made available upon request to the California Department of Parks and Recreation, California Department of Fish and Game, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers and other appropriate agencies.

In addition to the replanted upper marsh, low marsh habitat will also be established at the Model Marsh in experimental plots. Pacific cordgrass (*Spartina foliosa*) plants will be collected as "plugs" from donor sites and transplanted to the low marsh areas of the Model Marsh. Each salvaged cordgrass plug will be planted on either 2 m or 4 m centers, requiring the collection and transplantation of 4,000 cordgrass plugs. Cordgrass will be planted in areas with and without soil amendment in order to assess the performance of the soil amendment. Post-construction monitoring will be conducted by the Construction Manager and by researchers from PERL to quantify growth and density of cordgrass with and without soil amendment.

The lowest parts of the Model Marsh, in terms of elevation, will not be planted but will be intentionally left bare to function as mudflats. The functioning of these created mudflats as foraging habitat for shorebirds will be assessed by researchers at PERL with reports provided upon request.

2.2.4 Project Maintenance

Irrigation. A temporary supplemental irrigation system has been designed to provide water for the transplanted glasswort plants. The irrigation system will be monitored by the Construction Manager and reported to the Contractor. The Contractor will maintain the irrigation system for the 120-day plant establishment period. Thereafter, irrigation maintenance will be the responsibility of the Project Owner until which time the plants are considered self-sustaining by the Construction Manager.

Weed Control. Invasive weed species will be monitored by the Construction Manager and reported to the Contractor. The Contractor will remove all weed species from the upland perimeter of the Model Marsh during the plant establishment period. Thereafter, weed control will be the responsibility of the Owner. No weeds are anticipated at the mid and low marsh elevations due to daily inundation by seawater.

Pest Control. Insect and other pest infestations will be monitored by the Construction Manager and reported to the Contractor. During the plant establishment period, the Contractor will remove severely diseased plants and replace them to prevent the spread of disease. Pesticides and herbicides are strictly prohibited on the Model Marsh site.

Debris Removal. The Contractor will remove and dispose off-site all organic and non-organic debris that may occur within the work site. Removal of trash and litter will continue on a regular basis during the plant establishment period.

Erosion Control. Throughout the project installation and plant establishment periods, the Construction Manager will monitor for erosion within revegetation areas. Because the project seeks to create functional salt marsh and mudflat habitat, the formation of side channels and gullies will be carefully monitored. The Construction Manager will prescribe erosion control procedures after evaluation of potential and existing erosion problems on a case-by-case basis. Erosion control will emphasize prevention. If needed, however, repair will include redirection or dissipation of the water source and recontouring of soil. In some cases, straw mulching (with weed-free straw) or jute mats may be required to stabilize the soil.

Replanting Any plants not achieving the success criteria (80% minimum survival) during the plant establishment period must be removed and replaced by the Contractor. Plants shall be replaced in kind, as specified in the plant palettes, or with appropriate replacement species which have shown success in that specific area, as determined and directed by the Construction Manager. The Contractor must arrange for replacement planting stock in advance to ensure that replacement of dead plants (exceeding 80%)is not delayed during the plant establishment period. Local stock may be propagated from cuttings taken from salvaged stock or by subcontracting to certified nurseries.

2.2.5 Notification of Completion. Once the Project Monitor determines that the success criteria have been met, a report summarizing the revegetation project will be prepared and submitted to the California State Coastal Conservancy, the California Coastal Commission, the California Department of Parks and Recreation, the California Department of Fish and Game, the U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers. Upon acceptance of the revegetation site by the agencies, long-term management will become the responsibility of the property owner, the California Department of Parks and Recreation.

2.3 Cultural Resources

A qualified Project Archaeologist will be retained to monitor initial grading of the Model Marsh site. The Project Archaeologist will have a minimum of 5 years experience and will be certified by the Society of Professional Archaeologists (SOPA). If significant archaeological evidence is observed, the Project Archaeologist will immediately notify the appropriate resource agencies and a data recovery program will be implemented, if necessary.

3.0 Quarry Enhancement Project

3.1 Air Quality

An active dust control program will be implemented by the Contractor and overseen by the Construction Manager during all phases of excavation of the stockpile and quarry restoration. All accessible unpaved roads will be watered with a water truck on a frequent basis (e.g., several times daily) to limit dust emissions. The surface of the soil stockpile will also be watered from a pressurized hose or water truck to prevent dust emissions due to wind erosion and truck traffic.

3.2 Biological Resources

3.2.1 Pre-Construction Monitoring. Prior to the restoration of the quarry, pre-construction surveys will be conducted to ensure that there are no nesting birds with the project footprint and to determine the location of any sensitive species in the project vicinity. Locations of sensitive species, including coastal California gnatcatcher (*Pilioptila californica californica*) and yellow-breasted chat (*Icteria virens*), will be noted for construction of noise abatement berms (see Construction Monitoring).

3.2 .2 Construction Monitoring. A Construction Manager will be on-site during all phases of quarry restoration. The Construction Manager will possess at a minimum a Bachelor's degree in biology and will have demonstrated at least 5 years experience in restoration of southern California native habitats. The Construction Manager will be responsible for ensuring that there are no direct impacts to species or habitats beyond that included in the project specifications and plans. In addition, the Construction Manager will oversee maintenance of earthen noise abatement berms to reduce noise impacts at selected nest sites and oversee noise monitoring at sensitive receptor sites.

As part of the Model Marsh component of the project, earthen berms will be constructed adjacent to sensitive nesting bird species to reduce noise from construction. These berms will be retained during the Quarry enhancement portion of the project. It is anticipated, based on 1999 survey data, that one pair of nesting gnatcatcher and one pair of nesting yellow-breasted chat will occur within 300 ft of the soil stockpile requiring installation of earthen berms. These berms will be constructed and maintained to the specifications of the resource agencies (the U.S. Fish and Wildlife Service {USFWS} and the California Department of Fish and Game {CDFG}) as a condition of their approval of the project.

In addition, daily noise monitoring will be conducted by a trained acoustician at or adjacent to the nest sites to determine the impacts of noise on the nesting birds. Each noise monitoring period should last at least one hour and should take place during normal construction operating hours. Readings during quiet times (e.g. lunch break) should be avoided.

Noise from construction activities shall not exceed an hourly average noise level (to be determined by the resource agencies) at the edge of the gnatcatcher/chat habitat. Should the hourly noise level

exceed 60 dBA L_{eq}, use of the equipment that exceed this limit will be stopped and the City of San Diego USFWS and CDFG notified. Confounding noise events not related to the project construction activities should be factored out of the data. These events include, but are not limited to, helicopter overflights and nearby Border Patrol activities. The duration, time, and description of each event shall be recorded by the person conducting the monitoring. Each daily noise monitoring period shall be described and summarized in a weekly submitted report to be sent to the City and appropriate resource agencies.

The conditions of the noise monitoring plan presented above shall be made part of the construction plans and contract(s) for both the Model Marsh and the Quarry Enhancement components of the project. The contractor shall be responsible for meeting the established noise levels and will take the appropriate actions to reduce noise to acceptable levels should violations of the noise threshold criteria occur.

3.2.3 Post-Construction Monitoring. The emphasis of post-construction monitoring will be the success of the proposed revegetation program for the quarry. Currently, it is estimated that approximately 4.25 acres of the restored quarry site will be available for establishment of maritime succulent scrub habitat. Final plans and specifications are being prepared but are not available at this time. These will be provided to the City of San Diego upon completion. Pending complete plans and specifications, this MMRP expands upon the mitigation included in the Biological Resources Report for the Model Marsh Soil Stockpile and Quarry Restoration Project, City of San Diego, California and the Draft Mitigated Negative Declaration for the Model Marsh Soil Stockpile and Quarry Restoration Project.

Grading and Drainage Plan. A ninety percent complete grading and drainage plan has been completed for the project and submitted to the City of San Diego in the Coastal Development Permit. The plan specifies placement of soils excavated for construction of the Model Marsh in the quarry, all structural requirements, such as geotextile reinforcement, and drainage plans. A "cap" of native soils approximately 1-2 feet in depth will be placed over the imported fill to stabilize the fill and provide a soil substrate conducive to establishment of the desired plant species. This native soil currently supports many of the target species included in the revegetation plan.

Brush and Propagule Salvage. All existing coastal sage scrub habitat that currently exists within the Quarry will be brushed and stored separately within the stockpile are for re-introduction at the revegetation site. An exception will be the nearly vertical faces of the lower quarry which are inaccessible. This material will be spread on the surface of the restored quarry in selected locations to facilitate establishment of desired species from seed and or re-sprouting root balls.

Weed Eradication. Control of weeds is an important element of the revegetation plan. The "capping" of imported soil with native material from the quarry should help to minimize weed recruitment. Hand weeding of the 4.25 acre site is proposed during project maintenance, presented in later sections.

Planting Specifications. A preliminary list of proposed plant species to be used in the revegetation program is presented below. This list may be subject to change pending availability of certain species. All plants will be planted as seed. Initial application will be made using a hydro-seed technique. Should portions of the site require supplemental seeding, subsequent seeding will be applied either by hand or in a hydro-seed matrix.

Species	Lbs/Acre
Artemisia californica	7
Simmondsia chinensis	4
Eriogonum fasciculatum	7
Lotus scoparius	5
Baccharis sarathroides	4
Isocoma menziesii	3
Cardiomena ramosissimum	2
Astragalus trichopodus	2
Hemizonia fasciculata	2
Cressa truxillensi	1
Gnaphalium californicum	1
Bergerocactus emoryi	cuttings

Seed Sources and Procurement. All seeds will be collected form the Tijuana River Valley depending on availability. Initial surveys indicate a lack of *Euphorbia misera* in the valley. Depending on the final restoration plans, inclusion of this and other species to enhance the species diversity of the existing maritime succulent scrub, seed collection may be required at Point Loma or some other regional seed source. Collection from outside the Tijuana River Valley will require approval from the resource agencies. In addition, planting of cactus species typically associated with this habitat, such as *Bergerocactus emoryi*, is feasible given the presence of suitable donor sites within the project area.

Irrigation. Irrigation is not currently available to this site nor is supplemental irrigation recommended for the establishment of self-sufficient maritime succulent scrub habitat. The intent is to apply seeds in a hydro-seed matrix and rely on winter rains for germination and establishment. All seeding will be conducted between December and March to take advantage of the rainy season. It is anticipated

that a dry winter season will result in partial or complete failure of the seed crop. This worst case scenario has been designed into the plans which allow for one complete re-seeding effort as well as follow up, site- and species-specific seed application.

Project Maintenance. The site will be maintained for a period of five years to ensure that the maritime succulent scrub habitat develops as planned. Maintenance will focus on establishment of target species and removal of weeds.

Site Protection. Following restoration and revegetation, the site will be fenced at all access points to protect the revegetation site from damage. In addition, signs will be erected at key Border Patrol lookouts to inform Border Patrol agents that the area is off limits.

Weed Control. Weedy species will be removed by hand from the site to allow establishment and growth of the target species. Monthly weeding has been budgeted for the first year, declining to semi-monthly in years 2-5 as the target species canopy develops. Should the target canopy development occur by year 3, weeding will be discontinued, pending agency approval. If the canopy development goal has not been met by year 3, weeding will continue into years 4 and 5. The U.S. Fish and Wildlife Service and California Department of Fish and Game have determined that the site shall not support more than 5-10% weeds at any given time during the 5 year monitoring program.

Erosion Control. Erosion both onto the revegetated site and into adjacent areas from the site will be controlled through the use of silt fencing. Silt fencing will be retained until the target species have been established and the ground surface is sufficiently vegetated to prevent erosion. Erosion control and repair of the silt fence will be a regular part of the long-term maintenance program. In the event of significant erosion, i.e. development of large gullies or rills, remediation measures will be implemented. Such measures will include, but not be limited to, re-direction of the water source, energy dissipation through use of staked hay bales or similar device, and recontouring and replanting, if needed.

Replacement Seeding. The maintenance contractor will be responsible for re-seeding all or a portion of the site at least one time, as previously stated. Replacement seeds must be collected from the same source and applied either by hand or by hydro-seed. Replacement seeding will occur between December and March to take advantage of the winter rainy season.

Irrigation Maintenance. No supplemental irrigation is proposed for this project. Therefore, irrigation maintenance will not be required.

3.2.5 Project Monitoring. A 5-year monitoring program will be implemented to determine if the revegetation site is functioning as expected. The overall success of the mitigation program will be evaluated by comparing the final year of monitoring data with the target values. Monitoring will be conducted to identify trends and progress toward the goal of a self-sustaining, functioning habitat. Monitoring will also assess whether any adjustments to the original plan are needed. An

annual report will be submitted to the appropriate agencies each monitoring year that will cover project monitoring as outlined below.

Three types of monitoring will be undertaken for post-construction phase monitoring of the revegetation site. These include Implementation Monitoring, Qualitative Monitoring, and Quantitative Monitoring.

Implementation Monitoring. To ensure that the revegetation plan is followed, all implementation activities will be monitored by the Construction Manager. The Construction Manager will be on-site for all phases of project implementation including grading and planting. Records will be kept of the initial efforts including dates and quantities of hydro-seed applied, problem areas if any, and weed control measures. These will serve as the "as-built" plans for the project.

Qualitative Monitoring. Qualitative monitoring will conducted by the Project Monitor. This individual or individuals will have a minimum of a Bachelor's degree in biology, botany or related science and will demonstrate at least 5 years experience in monitoring of native habitat restoration projects in southern California. Qualitative data will include overall survival, evidence of water stress, insect infestation, development of erosion problems and health and vigor of seeded areas by species. Permanent photographic stations will be established and used to document qualitative changes over time. These will be used with quantitative data to describe the attainment of success criteria.

Quantitative Monitoring. Quantitative monitoring will also be conducted by the Project Monitor. Quantitative monitoring will measure the development of the restoration site and document that the success criteria defined by performance standards (presented below) have been achieved. Quantitative data include analysis of survivorship and growth, including canopy development, understory development, and height and per cent cover of shrub species, and estimated cover of seeded areas. Germination and survival of seeded species will be assessed using 1-m square quadrats along belt transects. Vegetation growth and establishment should be quantitatively assessed through the use of belt transects. Four belt transects per acre are recommended. In each transect, height and canopy cover are determined for each species rooted in the transect. These data are recorded on standard field data forms and, along with notes of observations, kept on file by the California State Coastal Conservancy or their agent for documentation purposes. Cover and density of maturing shrub species shall be compared to a nearby reference site.

It is recommended that qualitative monitoring be conducted monthly for the first three months after planting, and that both qualitative and quantitative monitoring be conducted quarterly for the remainder of year 1 and all of year 2, and semi-annually for years 3-5. The monthly qualitative monitoring surveys conducted during the first three months will concentrate on seed germination, survival, potential problems and recommend remedial actions, where necessary. Remedial actions may include re-seeding areas lost to disease, natural causes or other causes such that this loss will jeopardize attainment of the criteria for success.

The quarterly and semi-annual monitoring surveys should collect both qualitative and quantitative data. Qualitative information will be similar to that collected during the first three months including identification of potential problems and remedial alternatives. Quantitative data will be collected as described above.

Annual reports will be produced at the end of each monitoring year. These reports will be submitted to the California State Coastal Conservancy, the California Department of Parks and Recreation, the California Department of Fish and Game, the U.S. Fish and Wildlife Service, and the City for their review and evaluation. Each annual report will address the criteria for success and measures needed to meet those criteria.

3.2.6 Criteria for Success. In order to determine if the goals of the revegetation program have been achieved, certain success criteria must be met. Quantitative measures of these criteria typically include percentage survival of plantings and percent of coverage. Each monitoring report will evaluate if these criteria have been met and prescribe corrective measures if they have not. The primary success criteria are survival and cover. Success criteria, as recommended by the U.S. Fish and Wildlife Service and the California Department of Fish and Game, are presented by monitoring year below:

First Year Performance Standards. It is difficult to characterize survival of seeded areas during the first months following application. An overall criteria of 50% germination and survival of the hydro-seed mix is recommended for year 1. Should the hydro-seed fail to achieve 50% germination and survival in year 1, additional seeding may be required.

Second Year Performance Standards. 35% of the site should be covered with a minimum of 15% shrub cover and 20% herbaceous cover of the species listed in Table 1.

Third Year Performance Standards. By the end of Year 3, 50% of the site should be covered with a minimum of 20% shrub cover and 30% herbaceous cover of the species listed in Table 1. If these goals are not met, the Project Monitor will determine if re-seeding is necessary for those portions of the site that do not meet the success criteria.

Fourth Year Performance Standards. In year 4, 65% of the site should be covered with a minimum of 25% shrub cover and 40% herbaceous cover of the species listed in Table 1.

Fifth Year Performance Standards. By the end of Year 5, 85% of the 4.27 acre site shall be covered with a minimum 30% shrub cover and 50% herbaceous cover of 10 of the 13 plant species specified in Table 1 or alternate coastal sage scrub species approved by resource agencies. The site shall have less than 5-10% weeds at any time during the 5 year monitoring effort.

3.2.7 Notification of Completion. Once the Project monitor determines that the success criteria have been met, a report summarizing the revegetation project will be prepared and submitted to the California State Coastal Conservancy, the California Department of Parks and Recreation, the

California Department of Fish and Game, the U.S. Fish and Wildlife Service, and the City of San Diego. Upon acceptance of the revegetation site by the agencies, long-term management will become the responsibility of the property owner, the International Boundary and Water Commission.

3.3 Cultural Resources

An archaeological site denoted CA-SDI-8602 has been identified within the vicinity of the stockpile and quarry. This site will be flagged by the Project Archaeologist prior to beginning work in the area and the site will be avoided. The Project Archaeologist will have a minimum of 5 years' experience and shall be certified by the Society of Professional Archaeologists (SOPA).

3.4 Recreation

A Memorandum of Understanding (MOU) was adopted by the Tijuana River Valley Esquestrian Association (TRVEA), the Tijuana River National Estuarine Research Reserve, and the Southwest Wetlands Interpretive Association regarding maintaining equestrian access to the beach during construction of the project. This MOU establishes two alternate routes for maintaining safe equestrian access while construction is in progress and establishes the intent of all parties to work together to ensure that while the enhancement project is constructed, equestrian access to the beach is maintained without interruption. The Construction Manager will continuously monitor the effectiveness of the measures undertaken and recommend actions to assure that access is maintained.