

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400



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ADOPTED COMMISSION FINDINGS AND CONDITIONS
COASTAL DEVELOPMENT PERMIT

Application No: 6-04-88

Applicants: Southern California Edison and
San Dieguito River Valley Joint Powers Authority

Description: Application from Southern California Edison and San Dieguito River Park Joint Powers Authority for implementation of the San Dieguito Wetland Restoration Plan and construction of a portion of the Coast to Crest Trail. The overall project includes creation/substantial restoration of about 150 acres of tidal wetland and about 15 acres of additional wetland habitat, initial inlet dredging and periodic dredging to permanently maintain an open inlet, construction of three berms, including permanent access roads, adjacent to the San Dieguito River to confine existing flows and maintain sediment transport to the ocean, bank protection for portions of the berms and river channel, culverts in the berms to help balance water levels and a weir to eliminate any backwater effect on the upstream river channel, creation of four new nesting sites and rehabilitation of an existing site for the California Least Tern and Western Snowy Plover, creation of treatment ponds to filter freshwater runoff and reduce freshwater flows into the restored tidal wetlands, construction of a public access trail, including interpretive signage, trailhead parking and viewpoints, and improvements to beach access, upland and beach disposal of excavated materials, and maintenance and monitoring programs. Completion of the design phase for the major restoration components fulfills Section 2.1 of Condition A of CDP #6-81-330 for the operation of the San Onofre Nuclear Power Plant Units 2 and 3. When implemented, SCE's components of the project will provide 115 net acres of wetland habitat mitigation credit plus a 35-acre enhancement credit for inlet maintenance.

Site: Western end of San Dieguito River Valley from El Camino Real to Pacific Ocean, with a portion of the trail from east of San Andres Drive to Jimmy Durante Boulevard, Del Mar and San Diego, San Diego County

STAFF NOTES:

This report has been compiled by Commission staff to reflect the Commission's action on October 12, 2005. The revisions made by staff in the addendum to the staff report dated October 7, 2005, have been incorporated as well as the minor changes made by staff and adopted by the Commission at the hearing. At the hearing, the staff revised its recommendation and the Commission accepted a 1 to 1 mitigation ratio for the permanent impacts associated with the treatment pond berms (compared to 2 to 1). The size of the coastal technical panel was revised to five (instead of 7) members plus the Executive Director, to be selected from a pool of 10 experts (instead of 15). The panel members will be selected by the Executive Director in consultations with the listed parties (instead of by the listed parties) and the Surfrider Foundation was added to the list of parties. The coastal panel will convene once following the initial beach survey and at least twice per year thereafter, and as necessary following shoreline changes that exceed the identified triggers (instead of only following surveys that indicate the identified triggers have been met).

Due to the minor nature of the changes made to the staff recommendation at the hearing, it is not necessary for the Commission to adopt revised findings.

Executive Summary

Purpose of Project

The proposed San Dieguito Wetlands Restoration Project has been designed by Southern California Edison (SCE) to comply with Coastal Commission permit conditions regarding the San Onofre Nuclear Generating Station (SONGS) located in northern San Diego County. The Coastal Commission, through a long series of permit and amendment actions, required SCE to implement an extensive package of measures to mitigate marine resource impacts caused by the operation of SONGS Units 2 and 3. Findings A and B provide a detailed history and background. The SONGS permit conditions require SCE to restore or create 150 acres of wetlands to compensate for reduction of marine fish standing stocks caused by the cooling system for SONGS Units 2 and 3. The conditions authorize up to 35 acres of credit for maintaining tidal flow in perpetuity. The coastal permit conditions established specific parameters for wetland site selection and performance measures that must be met to ensure that the restored wetland is successful and provides real compensation for impacts caused by the SONGS operation.

The Commission's permit conditions gave Southern California Edison some options regarding site selection and the major responsibility to design a wetland restoration project that would meet the performance standards. The Commission also established an independent scientific monitoring structure so that SCE would not be actually monitoring the effectiveness of its mitigation project.

SCE teamed up with the San Dieguito River Valley Joint Powers Authority (JPA) to prepare a comprehensive restoration, access, recreation, and interpretive plan for the San Dieguito River Valley. This permit application is a joint submittal by SCE and the JPA and includes all the

components that SCE must carry out to meet its mitigation requirements and trail and access improvements and water quality improvements that the JPA will implement.

Major Project Components

The key elements of the project are:

- Initial and long-term periodic excavation of the tidal inlet to maintain marine water exchange between the ocean and the restored wetlands in perpetuity (35 acres credit);
- Excavation and grading to create a total of 115 acres of wetland habitat, including subtidal, intertidal, transitional, and seasonal salt marsh habitats east and west of I-5;
- Construction of three berms adjacent to the San Dieguito River to confine existing flood flows and maintain the transport of river sediment to the ocean;
- Bank protection on the south side of the river upstream of Jimmy Durante Bridge and on the southern slope of portions of the river berm located east of I-5 and north of the river;
- Culverts may be used through the two main river berms to help balance water levels in the tidal lagoons and river channel during flood flows;
- A weir along the eastern edge of a river berm to eliminate any backwater effect on the upstream river channel;
- A pedestrian trail along the south side of the inlet channel or alternative accessway that would provide access around the mouth of the lagoon during tidal exchange;
- Creation of four nesting sites and rehabilitation of an existing nesting site to provide habitat for the California Least Tern and Western Snowy Plover;
- Freshwater runoff treatment ponds; and
- Public access trails to be managed by the JPA.

Chapter 3 of the Coastal Act is the Standard of Review for the Permit

The San Dieguito Wetlands Restoration Project has been carefully designed and reviewed by a large number of technical specialist, scientists, federal, state, and local agencies and the public through extensive workshops and the EIR/EIS process. The standard of review for the San Dieguito Restoration Project coastal permit is Chapter 3 of the Coastal Act. In addition, the components of the project that SCE will carry out to fulfill a portion of its mitigation responsibilities for impacts caused by SONGS must be in compliance with the Coastal Commission permit conditions requiring the SONGS mitigation program.

The San Dieguito Restoration Project involves extensive construction and manipulation of the existing San Dieguito Wetland System, resulting in impacts to existing wetland resources. The project has been carefully designed to reduce impacts to the maximum extent feasible and the proposed permit conditions require additional mitigation for unavoidable impacts to wetlands

and other habitats. As conditioned, the project is consistent with Chapter 3 of the Coastal Act and is in compliance with Condition A Subsection 2 (CDP 6-81-330-A). The major issues raised by this project are summarized below and relate to wetland impacts and shoreline processes and sand transplant.

Wetland Restoration

Habitat Conversion to Increase Ecological Value

The central feature of the San Dieguito Wetland Restoration Project is habitat conversion within the historical wetland footprint from less valuable vegetation types to more valuable tidal saltmarsh or open water. The vast majority of the acreage (c. 150 ac) that will be converted to tidal habitats is currently upland (c. 128 ac) that supports weedy, generally non-native (ruderal) vegetation. There are also about 19 acres of seasonal saltmarsh that are periodically flooded or saturated by rainfall and runoff that will be converted to tidal marsh and about 3 acres of tidal marsh that will be disrupted during construction and then converted back to tidal marsh. After restoration to tidal saltmarsh, these habitats will be subject to tidal action throughout the year, which will enable saltmarsh plants to be healthier with higher productivity, will support a greater variety of invertebrate prey, and will be utilized by a greater diversity and abundance of vertebrates. These goals will be accomplished by maintaining an open inlet to the sea and by substantially increasing the area that is subject to regular tidal inundation by appropriate grading.

There will be both temporary and permanent impacts to existing wetland vegetation incidental to the physical alterations necessary for a successful restoration. These impacts fall into six categories: (1) conversion of existing wetland types to new, higher functioning wetland types; (2) fill of existing wetland for the construction of protective berms; (3) fill of existing wetland for construction of interpretive trails; (4) fill of existing wetland for the construction of Least Tern Nesting sites; (5) fill of existing wetland for construction of water treatment structures; and (6) conversion of freshwater and seasonal saltmarsh to freshwater marsh within treatment ponds. Overall, the San Dieguito Wetland Restoration Project will result in the creation or substantial restoration of 150 acres of tidal saltmarsh at a cost of 6.06 acres of permanent fill of existing wetlands (2.03 tidal and 4.03 non-tidal wetlands), which will generally be mitigated by additional wetland creation at a 4:1 ratio.

Berms

Grading to lower land surface elevations will, of course, impact the currently existing wetland vegetation. However, since the tidal saltmarsh will be of much greater ecological value than the existing habitats, the temporary loss associated with grading and conversion to tidal influence, is considered to be self-mitigating (i.e., a mitigation ratio of 1:1). The alterations to surface elevations and tidal flow that are necessary in order to restore tidal saltmarsh also have the potential to alter the hydrology and sediment transport of the San Dieguito River. Were a substantial portion of the riverine bedload to be diverted into the restored tidal wetlands, there could be an increase in scour within the river channel and a decrease in sediment delivery to the beach at the inlet.

In order to accomplish the restoration goals without having a negative effect on sediment transport and beach processes, it is necessary to construct earthen berms parallel to the river

channel to maintain existing flow characteristics. Portions of the berms will result in permanent fill of existing wetland. These impacts will be mitigated at a 4:1 ratio.

Trails Through the Wetlands

The provision of educational and recreational opportunities by the construction of a peripheral trail system is an important part of the overall restoration effort. These trails will also result in small areas of permanent wetland fill that will be mitigated at a 4:1 ratio. Portions of the trail will be constructed on existing access roads containing scattered depressions that periodically are colonized by wetland plants. Although currently subject to disturbance by allowable maintenance activities, impacts to those areas will nonetheless be mitigated at a ratio of 1:1.

Least Tern Nesting Sites

Another aspect of the restoration also will have impacts to the existing wetlands. As part of the biological restoration, upland habitat suitable for nesting by least terns, a federally and state-listed endangered species, is being constructed. These nesting areas were recommended by the U.S. Fish and Wildlife Service and are being constructed to fulfill mitigation requirements of the 22nd District Agricultural Association under a previous Coastal Development Permit. Based on advice from the Attorney General, the conditions of that permit do not require mitigation for the amount wetland fill associated with the tern islands (2.89 ac).

Freshwater Runoff Treatment Ponds

Currently, an area of seasonal freshwater marsh and non-tidal saltmarsh east of I-5 receives substantial nuisance flow of polluted freshwater that originates from adjacent commercial and residential development. As part of the wetland restoration, this polluted water will be diverted into constructed treatment ponds that will be created and defined by a series of berms that will result in some permanent fill of existing seasonal wetlands (0.51 ac).

Wetland Mitigation Ratios

Conversion of one type of wetland to another will be mitigated at 1:1, wetland conversion that will be periodically disturbed by maintenance activities will be mitigated at 1.5:1, some permanent fill for treatment pond berms will be mitigated at 1:1, and permanent fill of wetlands will be mitigated at 4:1. The smaller mitigation ratios for treatment pond conversion is justified by a unique set of circumstances: the treatment ponds are an integral part of the overall restoration, providing a beneficial solution to an existing problem (and not required mitigation for development), and the existing seasonal wetlands will be converted to habitat of equal or better quality.

[Note: there are 3.88 ac of conversion and 0.51 ac of fill (permanent impacts) associated with construction of the treatment ponds.]

Shoreline Processes and Sand Supply to the Beach

Maintaining the Wetlands Connection to the Ocean

The proposed project has been designed to minimize alteration of sediment supplies from the San Dieguito River to the coast as well as to the littoral sand supply. The restored river and lagoon system has been modeled carefully. Channel hydrodynamics and roughness characteristics have been modified and remodeled through an iterative process to reach a project design that will maintain existing sediment transport characteristics. No changes to the existing volume of river-borne sediments are expected from the proposed project. This has been examined and confirmed by an independent panel of experts, including Dr. Peter Goodwin and Dr. A. J. Mehta and by the Commission's coastal engineer.

The proposed project will actively manage the San Dieguito Lagoon with a goal of keeping the inlet open continuously to tidal influence. Under natural conditions the inlet closes periodically and a wide sand spit builds across the lagoon. During times of high river flow, the river will breach the sand spit, carrying seaward the sand in the spit along with any sand that had been deposited in the active river channel. Once mobilized by the river flow, this sand can be carried offshore to an ebb tidal bar or to offshore sand bars, or carried onshore to the adjacent beaches. The proposed project will continue the sediment supply of the existing river system by placing onto the adjacent beaches all excess beach quality sand that is excavated during the construction phase of the project. In addition, the project will excavate the inlet area regularly to maintain tidal exchange, and all excavated beach quality sand will be placed on adjacent beaches throughout the life of the proposed project. The proposed project will not alter high river flows and these events will also carry sediments from the river channel to the coast, in the manner that occurs at present.

Sediment Management

The sediment management aspects of the proposed project (lagoon excavation and regular inlet excavation) will insure that there will be no change in the volume of beach quality sand that reaches the coast; the only change will be in the timing of the delivery. The initial project construction, as conditioned, will augment the existing supply of sediment to the coast and the maintenance dredging, as conditioned, will re-supply the adjacent beaches approximately every 8 months, as described in the Inlet Management Plan. The inlet maintenance will take approximately 14 to 17 days for each maintenance cycle, using a track-mounted backhoe excavator, scrapers, front-end loaders and dump trucks to excavate the inlet sands and transport them to adjacent beach areas. Inlet maintenance has been undertaken on two separate occasions by the City of Del Mar and the proposed project maintenance would use similar equipment and undertake similar activities.

Due to concerns that the on-going maintenance may interfere with recreational beach use, the proposed project has been conditioned that no work may occur on the sandy beach during the summer months and any equipment that is used on the beach during authorized maintenance periods must be removed from the beach at the end of each workday. In addition, the Commission's coastal engineer has reviewed the sediment management components of the

proposed project and has found that the proposed project, as conditioned, will not adversely alter local sediment supply or the availability of beach quality sand from current conditions.

The proposed project will establish a low-flow channel at the mouth of the San Dieguito Lagoon. Under most flow conditions, people should be able to walk or wade across the channel, but there will no longer be the continuous dry sand/lateral beach access that is available when the lagoon mouth is closed by the sand spit. Alternative inland access is provided as part of the proposed project to mitigate for the changes to the existing lateral beach access.

High Flow Conditions in the San Dieguito River

The high-flow conditions of the San Dieguito River will not be changed by the proposed project. The high-flow and flood events bring sand to the coast and also contribute to erosion of the beaches adjacent to the lagoon mouth. The high flow events will continue to present an erosion risk, with or without the proposed project. Detailed modeling and analysis of inlet dynamics and coastal processes has shown that the proposed project should not alter or exacerbate the on-going erosive events. This analysis has been reviewed by Drs. Peter Goodwin, A.J. Mehta and Paul Komar who found the modeling to be generally correct in describing the inlet dynamics, but not for precise predictions. The proposed project should not add to or increase the erosion conditions that currently exist on the beaches adjacent to the inlet. This conclusion is supported by modeling, analysis and best professional judgment. In addition, it is supported by the Commission's coastal engineer's review of the large body of research relating to the San Dieguito area that has been undertaken throughout the years.

Shoreline Monitoring Requirements

As an added safe-guard and as is typical for a project of this magnitude, the proposed project has been conditioned to have extensive shoreline monitoring so that unanticipated changes to the adjacent beaches can be identified and examined. In addition, if conditions outside the historic range of beach variability are observed, an independent Coastal Processes Technical Panel will be convened quickly to study the beach conditions in detail, determine causes for the identified changes and to recommend measures to reverse any adverse beach trends, along with additional studies or revision to the triggers used to convene the panel.

The concern about possible modifications to local erosion characteristics had been raised in a lawsuit challenging the project EIR/EIS brought by the Sandy Lane Homeowners Association. The EIR/EIS was found by an appellate court to be valid. These homeowners live in a community that was developed in the 1950s on the sand spit that is south of the current location for the San Dieguito Lagoon inlet. The oceanfront homes were built with some awareness that the area could be at risk from erosion since there were small seawalls as part of the original development. Over the years, the oceanfront property owners have addressed the on-going erosion concern by installing riprap revetments seaward of the original shore protection. The property owners have also established a Save The Beach organization and obtained the expertise of a coastal process specialist, Dr. Gregory Stone, from Louisiana State University to examine the project's coastal and hydrodynamic studies and modeling. Save The Beach has recommended that (1) there be a tide gauge installed in the channel between Camino Del Mar and the Railroad bridge, with regular collection and reporting of recorded data; (2) a total of 8 locations along the

shoreline be monitored with wading depth surveys; and (3) that the triggers for convening the Coastal Process Technical Panel be based upon the short-term, summer survey record developed by Save The Beach. The tide gauge has been added into the lagoon monitoring effort. Staff has considered the other requests by Save The Beach, but believes that the proposed monitoring plan, with 7 monitoring locations, will provide a better range of useful information than the plan proposed by Save The Beach. In addition, staff could find no basis for the triggers proposed by Save The Beach and recommends the triggers that were developed in concert with the City of Del Mar.

In summary, the proposed project has been designed to maintain existing sediment supplies to the coast. The volume of beach quality sediment that is exchanged between the littoral area and the lagoon will be maintained. However, the timing of these exchanges will be somewhat modified from what occurs at present. Finally, while there should be no change in the erosion characteristics of the adjacent beaches, Special Condition #25 requires that an extensive monitoring program be established to investigate shoreline conditions, report any abnormal changes and convene an expert panel to respond promptly and pro-actively to these changes. As proposed and conditioned, the San Dieguito Wetland Restoration Project consistent with those Coastal Act policies related to shoreline sand supply.

I. STAFF RECOMMENDATION

The staff recommends the Commission adopt the following resolution:

MOTION: *I move that the Commission approve Coastal Development Permit No. 6-04-88 pursuant to the staff recommendation.*

STAFF RECOMMENDATION OF APPROVAL:

Staff recommends a YES vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION TO APPROVE THE PERMIT:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

See attached page. (Appendix A)

III. SPECIAL CONDITIONS

The permit is subject to the following conditions:

1. Final Wetland Restoration Plan. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit for review and written approval of the Executive Director a revised *San Dieguito Wetlands Restoration Project Final Restoration Plan* (FRP). The changes included in revised strike-out/underline version of the FRP (Appendix B), dated July 2005 and received September 6, 2005 (including text and exhibit changes), and the changes and additions shown in Appendix C, "San Dieguito Wetlands Restoration Project Final Restoration Plan Changes and Additions," shall be fully incorporated into the revised FRP.

The revised FRP shall clearly identify the size and location of all areas of impact to existing wetland and coastal sage scrub habitat and the size and location of all proposed mitigation areas. In computing the mitigation required for project impacts, the following ratios shall apply to both the FRP and the "as built" restoration project:

- a. Temporary impacts on modules W1, W2a, W2b, W3, W4, W5, W16, W17, W45, and Trail shall be mitigated at a ratio of 1 to 1.
- b. Temporary impacts from construction of Ponds 1 and 2 on module TP41 shall be mitigated at a ratio of 1.5 to 1 and temporary impacts from construction of Ponds 3 and 4 on module TP41 shall be mitigated at a ratio of 1 to 1.
- c. Permanent impacts on modules B7, B8, DS32, and Road shall be mitigated at a ratio of 4 to 1.
- d. Permanent impacts on module TP41 for the construction of treatment pond berms shall be mitigated at a ratio of 1 to 1.
- e. Permanent impacts on the Trail module that are not in the existing roadbed shall be mitigated at a ratio of 4 to 1, and permanent impacts that are in the existing roadbed shall be mitigated at a ratio of 1 to 1.

Revisions to the creation and impact acreages shown in the FRP shall be based on the *Wetland Delineation for the Proposed San Dieguito River Park Coast to Crest Trail, San Diego, California* prepared by Tierra Environmental Services, Inc. and revised July 14, 2005, the *CCC Wetland Study in the Villages Mitigation Bank* prepared by WRA Environmental Consultants dated August 30, 2005, the letter dated September 6, 2005 from Project Design Consultants, and the mitigation ratios specified above. Any revisions or updates to these documents that the applicants may provide shall include the basis for such changes, and shall be submitted to the Executive Director for review and approval. If the revised FRP identifies greater impacts than

are identified in the July 2005 FRP (received September 6, 2005), then the applicants shall increase the mitigation area in accordance with the above ratios.

Prior to the commencement of construction and again at the completion of construction, the applicants shall submit to the Executive Director finalized plans and digital files (e.g., ArcView, ArcMap and Autocad) of project components (i.e., aerial maps, topographical maps, restoration modules, existing wetland areas, river berms, nesting sites, disposal sites, staging areas, access and haul roads, trails and associated components, and treatment ponds) that will allow for independent assessment of the accuracy of the "as built" plans to determine compliance with the requirements of CDP #6-81-330-A. The applicants shall document the physical and biological "as built" condition, including measurements of actual impacts to wetland habitat, within 30 days of completion of each construction area.

The applicants shall take maximum care to ensure that the project is built as described in the revised and approved FRP. However, if the "as built" plan for any construction area shows any greater impacts than are identified in the revised approved FRP, then within 90 days the applicants shall submit a plan for supplemental mitigation to the Executive Director for review and written approval. If the "as built" plans demonstrate that there are less actual impacts, then the applicants may request a permit amendment to reduce the mitigation acreage requirements.

The applicants shall undertake development in accordance with the approved Final Restoration Plan. Any proposed changes to the approved Plan shall be reported to the Executive Director. No changes to the approved Plan shall occur without a Coastal Commission-approved amendment to this coastal development permit pursuant to the Commission's regulations unless the Executive Director determines that the changes are minor and within the scope of the Commission's permit approval and no amendment is required. The applicants shall be required to provide additional appropriate mitigation, as determined by the Commission, if actual impacts to wetland habitat exceed those identified in the approved Plan.

2. Amendment to the SONGS Permit (CDP #6-81-330-A4). PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall obtain a Coastal Commission-approved amendment to Standard 1.3h of Condition A of the SONGS permit to allow minimal loss of existing wetlands authorized in this Permit.

3. Final Grading, Drainage and Erosion and Sediment Control Plans. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and written approval, final grading, drainage, erosion and sediment control plans for the San Dieguito Wetlands Restoration Project that have been approved by the City of Del Mar and the City of San Diego. Said plans shall be in substantial conformance with the two sets of plans submitted June 20, 2005, (City of Del Mar Sheets 1-25, dated 6/17/05, and City of San Diego Sheets 1-60, dated 5/26/05) and shall include the following:

- a. Final grading plan for Disposal Site DS32, public access trail, storm drain improvements and utility maintenance road, shown on City of San Diego Sheet 33269-17-D, approved by the City of San Diego Engineering Department. The revised final grading plan shall avoid, to the extent possible, impacts from placement

of dredge spoils on DS32 to the existing wetlands delineated in the *CCC Wetland Study in the Villages Mitigation Bank by WRA Environmental Consultants* dated 8/30/05. In the event restoration of the entire W16 to tidal marsh is not part of the final grading plans or is determined not to be implemented by SCE as part of the overall restoration project, a permit amendment is required to revise DS32 to avoid or reduce disposal of dredge spoils on the wetlands identified above and include appropriate mitigation.

- b. The revised final grading plan shall include structural BMPs on the two storm drain outlets to be constructed to move stormwater past the DS32 site, using Continuous Deflector Separation and sized to adequately capture pollutants conveyed from Via de la Valle prior to discharging into the proposed wetlands. Storm drain improvements adjacent to Via de la Valle and on DS32 shall be designed to provide a water source to the lower elevations of the fill slope, if possible. Riprap at the proposed discharge points shall be minimized and specifically described on the final grading plans.
- c. Sand excavated from restoration module W1 shall be placed on tern nesting sites NS11, NS12, NS13, NS14 and NS15 first. Channel sand may be used to construct the nesting sites only in the event sand from W1 is not sufficient in quantity or not suitable as determined by the project engineer in consultation with the USFWS. The applicant shall notify the Executive Director of this determination in writing prior to such use.
- d. Trail alignment and treatment ponds (TP41) shall be graded in accordance with the public access trail and treatment pond plans approved pursuant to Special Conditions #6 and #7.
- e. Reference to maintenance roads on City of San Diego Sheets 12-16, and 28-30, 39 as private shall be deleted.

The applicants shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Coastal Commission-approved amendment to this coastal development permit pursuant to the Commission's regulations unless the Executive Director determines that the changes are minor and within the scope of the Commission's permit approval and no amendment is required.

4. Berm and Slope Protection. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and written approval, final plans for berm and slope protection for the San Dieguito Wetlands Restoration Project that have been approved by the City of Del Mar and the City of San Diego. Said plans shall be in substantial conformance with the two sets of plans submitted June 20, 2005, (City of Del Mar Sheets 33-35, dated 6/17/05, and City of San Diego Sheets 67-72, dated 5/26/05) and shall include the following:

- a. Detailed plans shall address the transitional area between the adjacent slopes and proposed berm protection and the revetment on the south side of the river east of

Jimmy Durante Boulevard. The rock shall be placed to minimize erosion and disruption of the adjacent slopes.

- b. The proposed topsoil cover to the rock slope protection shall be installed immediately following completion of construction and continually maintained to mitigate the visual impact of the rock slope protection to public use areas.

The applicants shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Coastal Commission-approved amendment to this coastal development permit pursuant to the Commission's regulations unless the Executive Director determines that the changes are minor and within the scope of the Commission's permit approval and no amendment is required.

5. Landscape Plans/Planting Program. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and written approval, final planting plans for the San Dieguito Wetlands Restoration Project that have been approved by the City of Del Mar and City of San Diego. Said plans shall be in substantial conformance with the planting program identified in Section 4.3 of the FRP, the submittal *San Dieguito Lagoon Wetland Restoration Project Specifications for Wetland Mitigation and Restoration* prepared by Wetland Research Associates, Inc. and dated October 15, 2003 and Addendums (Memoranda) to this submittal dated October 15, 2004, and the two sets of plans submitted June 20, 2005, (City of Del Mar Sheets 27-30; and 40, dated 6/17/05, and City of San Diego Sheets 62-65, and 82-89 dated 5/26/05) and shall incorporate the following:

- a. The propagules (seeds or rhizomes or cuttings) for the containers and seed mixes shall be collected from coastal populations between the Palos Verde peninsula and the Mexican border. Seed mixes shall be certified as being "weed free" to insure the plants are appropriate and there are no unintended genetic consequences.
- b. The plant palette on the final plans shall include only native species. Native plants shall be established as soon as possible in order to reduce colonization by invasive species.
- c. Plant materials that may be impacted by the restoration and construction activities shall be salvaged and used in the restoration to the extent practicable.
- d. Revegetation of the freshwater treatment ponds shall occur within 90 days of completion of grading and infrastructure improvements. Planting shall be done in accordance with the mitigation program approved pursuant to Special Condition #8.
- e. Weed and invasive control in TP41 shall be implemented in accordance with the document titled *M41 Parcel - Treatment Marsh Descriptions* submitted 2/11/04; however, the final plans shall indicate invasive plant materials from the treatment ponds shall be removed annually.
- f. The slope (approximately 5.16 acres) of the W45 module, to be constructed to provide non-tidal wetlands to offset temporary and permanent impacts associated

with restoration activities, shall be covered with wetland topsoil and planted with pickleweed (*Salicornia virginica*). The remaining area of W45 (approximately 3.49 acres) shall be graded to elevations between 5 to 6 ft., NGVD, covered with wetland topsoil and planted with pickleweed or other appropriate seasonal saltmarsh species.

- g. Provisions for planting characteristic middle and upper salt marsh species other than *Salicornia virginica*, such as *Jaumea carnosa*, *Batis maritima*, *Distichlis spicata*, *Frankenia salina*, *Monanthochloa littoralis*, and *Salicornia subterminalis*.

The applicants shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Coastal Commission-approved amendment to this coastal development permit pursuant to the Commission's regulations unless the Executive Director determines that the changes are minor and within the scope of the Commission's permit approval and no amendment is required.

6. Final Coast to Crest Trail Plans. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF THE TRAILS AND WITHIN 18 MONTHS OF COMMISSION ACTION ON THE PERMIT, the applicants shall submit final plans for construction of the coastal segment of the Coast to Crest Trail commencing at Jimmy Durante Blvd. and ending at the proposed weir or inland extent of the restoration work. Said plans shall be in substantial conformance with the trail alignment shown in the *Wetland Delineation for the Proposed San Dieguito River Park Coast to Crest Trail San Diego, California* prepared by Tierra Environmental Services, Inc. and revised July 14, 2005, and City of Del Mar Sheets 36-46 dated 6/17/05 and City of San Diego Sheets 73-89 dated 5/26/05, and shall include the following revisions. Upon written approval by the Executive Director of trail plans for segments 1 through 8, the JPA may commence construction of segments 1 through 3 in accordance with the approved plans and written authorization by the Executive Director.

- a. The trail segment including the boardwalk (Segment 1a-1b) shall be designated pedestrian only.
- b. The trail segment extending from the boardwalk to the east side of I-5 under the underpass (Segments 2, 3, 4a-4c) shall be designated for pedestrian and bicycle use only.
- c. In Segment 5, a turn-around for equestrian users shall be located at the western terminus of the east-west portion of the trail and shall be designed to avoid impacts to wetland habitat from such equestrian use. Signs prohibiting equestrian users from proceeding south of the turnaround shall be placed at the turnaround. At such time as a feasible trail connection to the beach is identified, the applicants may request an amendment to this coastal development permit to review the potential for equestrian use on any trail segment west of the turnaround point on Segment 5, excluding the boardwalk.
- d. A note indicating the following: The boardwalk (Segment 1b) is an interim use in the approved alignment within non-vegetated wetlands in the South Overflow Lot until

- such time as the South Overflow Lot is restored to functional wetland habitat. The location of the boardwalk shall be addressed in the coastal development permit for the wetland restoration of the South Overflow Lot and the boardwalk may be relocated at that time.
- e. Construction of the trail improvements and signage installation shall avoid or minimize impacts to existing salt marsh, freshwater and brackish marsh and coastal sage scrub to the maximum extent possible.
 - f. The plans shall indicate disturbance to all existing wetlands for construction of the approved trail as delineated in the *Wetland Delineation for the Proposed San Dieguito River Park Coast to Crest Trail, San Diego, California*, revised July 14, 2005 and the *CCC Wetland Study in the Villages Mitigation Bank* prepared by WRA Environmental Consultants dated August 30, 2005. Disturbance to no more than approximately 0.748 acres of existing delineated wetlands shall be permitted for construction of the trail as shown on Exhibit 13 (Tierra matrix).
 - g. The plans shall indicate disturbance to all existing coastal sage scrub for construction of the approved trail as delineated in *Wetland Delineation for the Proposed San Dieguito River Park Coast-to-Crest Trail, San Diego, California*, revised July 14, 2005, as referenced and discussed in a letter report dated September 26, 2005 from Mr. Nordby to Ms. J. Loeffler.
 - h. Mitigation for trail construction impacts to seasonal salt marsh, freshwater and brackish marsh and coastal sage scrub shall be provided in accordance with Special Condition #8.
 - i. Trail surfacing plans shall include use of pervious surfacing materials as described in Section 4.6 of the approved Final Restoration Plan. Trail surfacing shall use only compacted decomposed granite or alternative pervious materials (see below), except for the open bottom concrete culverts for Sections 4a and 4c, the concrete in Section 1a and in Section 4b under I-5, and the concrete portion of trail adjacent to Treatment Pond 1 in Trail Section 6. Pervious material alternatives to decomposed granite that provide equivalent water quality protection are encouraged, subject to approval of the Executive Director. The trails shall include covered trash containers to minimize the impacts of littering.
 - j. Maintenance and operation of the trails shall be the responsibility of the JPA in accordance with the Park Facility Management Plan described in Section 4.6.2.4 of the approved Final Restoration Plan. SCE shall be responsible for funding trail maintenance and operation tasks. The trail maintenance plan shall include the requirement to perform regular trail maintenance, including manure and trash removal from and around the trail. The maintenance program shall include a monitoring component that will determine when and how often trail cleanup should occur to ensure that the trash containers do not overflow and that neither trash nor manure migrates from the trail into the wetlands. Under no circumstances shall trail

maintenance occur less than once every two weeks. All efforts should be made for at least weekly trail maintenance.

- k. Evidence of an approved Caltrans encroachment permit for construction of the trail and drainage crossings under I-5.
- l. Evidence of an approved agreement or easement with SBC for use of the utility maintenance road for a public access trail.

The applicants shall undertake development in accordance with the approved final trail plans. Any proposed changes to the approved final trail plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Coastal Commission-approved amendment to this coastal development permit pursuant to the Commission's regulations unless the Executive Director determines that the changes are minor and within the scope of the Commission's permit approval and no amendment is required.

7. Freshwater Runoff Treatment Ponds. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF THE FRESHWATER RUNOFF TREATMENT PONDS AND WITHIN 12 MONTHS OF THE COMMISSION'S APPROVAL OF THE FRP, the applicants shall submit final plans for the treatment ponds shown in TP41 to intercept and treat nuisance flows of polluted freshwater that originate in upstream areas of commercial and residential development and that currently flow untreated into the existing wetlands. Said plans shall be in substantial conformance with the document titled *M41 Parcel – Treatment Marsh Descriptions* submitted 2/11/04 and shall incorporate the following:

- a. Construction of the treatment ponds shall minimize impacts to existing seasonal salt marsh, freshwater and brackish marsh to the maximum extent possible while still allowing the treatment ponds to adequately function and reduce discharge of freshwater to the wetland restoration area.
- b. Identification of all impacts from construction of the approved treatment ponds to existing wetlands as delineated in the *Wetland Delineation for the Proposed San Dieguito River Park Coast to Crest Trail, San Diego, California* prepared by Tierra Environmental Services, Inc. and revised July 14, 2005. Disturbance to no more than approximately 4.4 acres of existing delineated wetlands shall be permitted for construction of the treatment ponds and pond berms as shown on Exhibit 13, Tierra Matrix.
- c. Mitigation for impacts to seasonal salt marsh, freshwater and brackish marsh shall be provided in accordance with Special Condition #8.
- d. Grading, erosion control and planting of the treatment ponds as restored freshwater marsh shall be done in accordance with plans submitted pursuant to Special Condition #5 and #8 and shall be the responsibility of the JPA.
- e. Maintenance and monitoring of the treatment ponds shall be completed in accordance with the maintenance/monitoring plans approved pursuant to Special Condition #10.

The applicants shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Coastal Commission-approved amendment to this coastal development permit pursuant to the Commission's regulations unless the Executive Director determines that the changes are minor and within the scope of the Commission's permit approval and no amendment is required.

8. Trail/Treatment Pond Wetland Mitigation Program. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF SEGMENTS 4 THROUGH 8 OF THE TRAIL AND THE TREATMENT PONDS AND WITHIN 18 MONTHS OF COMMISSION ACTION ON THE PERMIT, the applicants shall submit for review and written approval of the Executive Director, a final wetland mitigation program for all wetland impacts associated with construction of the coastal segment of the Coast to Crest Trail and the freshwater runoff treatment ponds (TP41). The program shall be developed in consultation with the California Department of Fish & Game and U.S. Fish & Wildlife Service and at a minimum shall include:

- a. A detailed site plan of the wetland impact area that substantially conforms with the *Wetland Delineation for the Proposed San Dieguito River Park, Coast to Crest Trail, San Diego, California* prepared by Tierra Environmental Services, Inc. and revised July 14, 2005 and the *CCC Wetland Study in the Villages Mitigation Bank* prepared by WRA Environmental Consultants dated August 30, 2005. The final plan must delineate all impact areas (e.g., on a map that shows elevations, surrounding landforms, etc.), the types of impact (both permanent and temporary), and the exact acreage of each impact so identified.
- b. A detailed site plan of the coastal sage scrub impact area that substantially conforms to *Wetland Delineation for the Proposed San Dieguito River Park Coast-to-Crest Trail, San Diego, California* and revised July 14, 2005, as referenced and discussed in a letter report dated September 26, 2005 from Mr. Nordby to Ms. J. Loeffler. The final plan must delineate all impact areas (e.g., on a map that shows elevations, surrounding landforms, etc.), the types of impact (both permanent and temporary), and the exact acreage of each impact so identified.
- c. Provision for mitigating the impacts identified in (a) above through creation of a minimum 2.32 acres of salt marsh and 5.07 acres of freshwater marsh, or as the final acreage may be refined during Executive Director approval of the final plans, at the following ratios:
 - (1) Permanent impacts to tidal and seasonal salt marsh and freshwater/brackish marsh from construction of the drainage crossings, and trail construction in wetlands not within an existing roadbed shall be mitigated in-kind at a 4 to 1 ratio.
 - (2) Permanent impacts for trail construction to seasonal salt marsh and disturbed freshwater/brackish marsh within an existing roadbed shall be mitigated in-kind at a 1 to 1 ratio.

- (3) Temporary impacts (not including construction of berms) to seasonal salt marsh and freshwater and brackish marsh for construction of freshwater Ponds 1 and 2 in TP41 shall be mitigated in-kind at a 1.5 to 1 ratio. Mitigation may include freshwater marsh and salt marsh creation on-site or offsite, if necessary.
 - (4) Temporary impacts for construction of freshwater Ponds 3 and 4 in TP41 to disturbed freshwater/brackish marsh shall be mitigated in-kind at a 1 to 1 ratio, including freshwater marsh created in Ponds 3 and 4.
 - (5) Permanent impacts to seasonal salt marsh and freshwater and brackish marsh for construction of the treatment pond berms shall be mitigated in-kind at a 1 to 1 ratio. Mitigation may include seasonal salt marsh creation on the treatment pond berms.
 - (6) Mitigation for permanent impacts shall involve upland suitable for conversion to wetlands unless otherwise specified. Mitigation for temporary wetland impacts may involve substantial restoration of existing disturbed wetlands.
- d. Provision for mitigating the impacts identified in (b) above through the proposed creation of about 56 acres of coastal sage scrub.
- e. Identification of locations for the required mitigation for impacts from the trail and treatment ponds at one or more of the following mitigation sites:
- (1) Freshwater Treatment Ponds (TP41 on-site);
 - (2) Salt marsh mitigation site located east of and adjacent to I-5 and north of the river (on-site);
 - (3) Former Boudreau property (off-site) located west of El Camino Real and south of the river.
 - (4) Coastal sage scrub mitigation sites at the four disposal sites, DS33, DS34, DS35, and DS36.
- f. A mitigation program that shall include the following:
- (1) A description of the proposed restoration site.
 - (2) A description of the proposed restoration, including, as appropriate, topography, hydrology, vegetation types, sensitive species, and wildlife usage.
 - (3) A description of planned site preparation and invasive plant removal.
 - (4) A restoration plan including the planting palette (seed mix and container plants), planting design, source of plant material, plant installation, erosion control, irrigation, and remediation.

- (5) A plan for documenting and reporting the physical and biological "as built" condition within 30 days of the restoration work, demonstrating the wetland mitigation sites have been established in accordance with the approved design and construction methods.
 - (6) A plan for interim monitoring and maintenance including a schedule, interim performance standards, a description of field activities, the monitoring period, and provision for submission of annual reports of the monitoring results to the Executive Director for the duration of the required monitoring period beginning the first year after submission of the "as-built" report.
 - (7) Final success criteria for each habitat type, including species diversity, total ground cover of vegetation, vegetative cover of dominant species and definition of dominants, hydrology, and, where appropriate, presence and abundance of sensitive species and wildlife usage.
 - (8) The final design and construction methods that will be used to ensure the mitigation site(s) achieve the defined goals, objectives, and performance standards.
 - (9) The method by which "success" will be judged, including type of comparison, identification and description of any reference sites that will be used, test of similarity; the field sampling design to be employed, specification of the maximum allowable difference between the restoration value and the reference value for each success criterion, a statistical power analysis to determine the necessary replication for the sampling design, and, a statement that final monitoring for success will occur after at least 3 years with no remediation or maintenance activities other than weeding.
 - (10) Provision for submission of a final monitoring report to the Executive Director at the end of the final performance monitoring period, prepared by a qualified restoration ecologist. The report shall evaluate whether the restoration site conforms to the goals, objectives, and performance standards set forth in the approved final restoration program, and must address all the monitoring data collected over the monitoring period.
 - (11) Provision for possible further action. If the final report indicates that the restoration project has been unsuccessful, in part, or in whole, based on the approved performance standards, the JPA shall submit within 90 days a revised or supplemental restoration program to compensate for those portions of the original program which did not meet the approved performance standards. The revised restoration program, if necessary, shall be processed as an amendment to the coastal development permit.
- g. Submittal of a deed restriction(s), in a form and content acceptable to the Executive Director, that the owner of the identified mitigation site(s) shall record against the mitigation sites, free of all prior liens and encumbrances, except for tax liens, and

binding on the applicants' successors in interest and any subsequent purchasers of any portion of the real property. The applicants shall make any modifications to the proposed deed restriction(s) the Executive Director determines are necessary to comply with this Permit. Evidence that the deed restriction has been recorded shall be provided to the Executive Director within 30 days of final approval by the Executive Director. The deed restriction shall establish the authorized use of the mitigation area to be habitat restoration, habitat maintenance, open space, and habitat protection over the portion of the property comprising the mitigation area. The restriction shall:

- (1) Permit the applicants and their agents to enter the property when necessary to create and maintain habitat, re-vegetate portions of the area, and fence the newly created/re-vegetated area in order to protect such habitats.
- (2) Restrict all development, vegetation clearance, fuel modification and grading within the approved mitigation sites, with the exception of TP41 Ponds 1 and 2 where maintenance is permitted in accordance with Special Condition # 10.
- (3) Permit the Coastal Commission staff to enter and inspect for purposes of determining compliance with Coastal Development Permit No. 6-04-88.

The deed restriction shall be recorded free of prior liens and encumbrances which the Executive Director determines may affect the interest being conveyed and shall run with the land in favor of the People of the State of California, binding all successors and assigns.

- h. Implementation of the approved mitigation program and recordation of the deed restrictions shall occur prior to or concurrent with construction of segments #4 through 8 of the trail.

The applicants shall undertake the required mitigation in accordance with the approved mitigation program. Any proposed changes to the approved mitigation program shall be reported to the Executive Director. No changes to the approved mitigation program shall occur without a Coastal Commission-approved amendment to this coastal development permit pursuant to the Commission's regulations unless the Executive Director determines that the changes are minor and within the scope of the Commission's permit approval and no amendment is required.

9. Independent Wetland Performance Monitoring Program. This special condition is a reiteration of the provisions of the SONGS permit requiring construction phase monitoring and post-restoration performance monitoring independent of SCE and is included here as a requirement of this Permit as well.

In accordance with the provisions of the SONGS permit (CDP 6-81-330-A), monitoring, management (including maintenance), and remediation shall be conducted over the full operating life of SONGS Units 2 and 3, as defined in Section 3 of Condition A therein. Pursuant to Condition D of the SONGS permit, an independent monitoring program carried out under the direction of the Executive Director and funded by SCE shall be conducted to measure the success of the wetland in achieving restoration goals specified in the Final Restoration Plan and

performance standards specified in the SONGS permit. SCE shall be fully responsible for any failure to meet the goals and performance standards during the full operating life of SONGS Units 2 and 3. In accordance with provisions of the SONGS permit, upon the Executive Director's determination that the goals or standards are not achieved, the Executive Director shall prescribe remedial measures, after consultation with SCE, which shall be immediately implemented by SCE with Commission staff direction.

The independent wetland post-restoration monitoring shall be implemented in accordance with the monitoring plan prepared by Commission staff and contract scientists in consultation with SCE and appropriate wildlife agencies, and approved by the Executive Director. (See Section IV-D for discussion of independent monitoring plan. The Monitoring Plan is incorporated herein as Appendix D.

Independent monitoring shall be performed under the direction of the Executive Director during and immediately after each stage of construction of the wetland restoration project to ensure that the restoration work is conducted according to the approved plans. Such construction phase monitoring shall be performed in accordance with the biannual work program to be approved by the Commission pursuant to Condition D of the SONGS permit, and shall be coordinated with SCE. This independent construction phase monitoring is separate from the applicants' responsibilities to ensure that the restoration project is constructed according to approved plans (Special Condition #1), to conduct beach sand monitoring (Special Condition #25), or to fulfill monitoring requirements imposed by other permitting agencies, such as, but not limited to, biological and water quality monitoring.

10. Maintenance and Management. Maintenance and management of the restoration project components, excluding the five Least Tern Nesting sites, shall be the responsibility of SCE for a period of time equivalent to the full operating life of SONGS Units 2 and 3, as defined in Section 3 of Condition A of CDP #6-81-330-A, after which time SCE shall transfer maintenance and management responsibilities to the JPA in accordance with the terms of the 1991 Memorandum of Agreement between SCE and JPA as amended August 1, 2005, except for maintenance of the beach access, which shall remain SCE's responsibility. SCE may contract with JPA or another third party (e.g., San Diego County Parks and Recreation Department) to perform SCE's maintenance and management responsibilities prior to transfer to the JPA. Maintenance and management shall be performed as follows:

- a. Both wetland and upland areas of the restoration shall be maintained to control invasive plants and to assure that native plants become established.
- b. Inlet maintenance shall be performed in accordance with and as determined through the document titled *Restored San Dieguito Lagoon Inlet Channel Initial and Periodic Dredging*, dated December 10, 2004, and in accordance with Special Condition #23.
- c. River berms and slope protective works shall be inspected annually between August and November and after major storm events (greater than the 10 year flood with flows overtopping Lake Hodges Dam). After magnitude 5.5 or greater seismic events originating within a 20-mile radius of the project site, inspections shall be made by a hydrologist, restoration specialist and geotechnical engineer, and the results of their

determination of any adverse effect shall be provided in writing to the Executive Director. If after inspection, it is apparent repair or maintenance is necessary, the applicants shall contact the Commission office to determine whether permits are necessary.

- d. The weir located between the Villages Parcel (DS32) and the Horse Park property shall be inspected annually between August and November and after major storm events (greater than the 10 year flood with flows overtopping Lake Hodges Dam) to identify any structural damage. If after inspection, it is apparent repair or maintenance is necessary, the applicants should contact the Commission office to determine whether permits are necessary. Sediment and debris shall be removed from the weir and culverts located in the river berms annually between August and November and after major storm events (greater than the 10 year flood with flows overtopping Lake Hodges Dam). Biofouling organisms (e.g., mussels) shall be removed from the weirs and culverts as needed.
- e. Active Freshwater runoff treatment ponds 1 and 2 (Northside) shall be maintained by the JPA for water quality treatment purposes by removing vegetation and accumulated sediment no more frequently than annually, but at a minimum of once every three years. Invasive plant material shall be removed annually. No plant material other than invasive species may be removed from the outside or tops of any banks around the ponds. No tree species may be removed unless they are non-native species. Material shall only be removed by hand or by a backhoe that will reach from the trail surface through the vegetation openings left along the trail edge.
- f. Passive Freshwater runoff treatment ponds 3 and 4 (Southside) shall be monitored and inspected annually to identify the sustainability and viability of all planted native species. Corrective action shall be conducted within 3 months of this inspection period. Corrective action includes the infill planting of approved species and removal of all non-native or invasive species.
- g. The maintenance of the Freshwater runoff treatment ponds and achievement of success criteria shall be substantially consistent with the document titled *M41 Parcel – Treatment Marsh Descriptions* submitted 2/11/04 and as revised in accordance with Special Conditions #5 and #8.
- h. Public access and education components of the restoration project, except for the improved beach access, shall be maintained and managed in accordance with Section 4.6.2.4 Public Access and Park Facility Management Plan in the FRP.
- i. The existing beach access trail south of the inlet shall be maintained by SCE in its current condition, at a minimum. The access ramp north of the inlet shall be maintained to provide ADA accessible public access from Camino del Mar to the beach at all times.

11. Permanent Maintenance Road. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and written approval, revised plans for the permanent maintenance road extending from Racetrack

View Drive east toward I-5 shown on City of San Diego Sheets 7, 15 and 16 dated 5/26/05. The plans shall be in substantial conformance with the revised alignment shown on the plan dated 6/30/05 utilizing the existing road extending from Racetrack View Drive to the western property line of APN 300-490-17 in the Del Mar Estates subdivision. The revised plans shall incorporate the following:

- a. Year round public pedestrian use of the proposed maintenance road extending from Racetrack View Drive to the existing cul-de-sac as shown on the 6/30/05 plan. (Exhibit 16) A gate shall be installed at the DFG property boundary and access restricted north of the gate to authorized personnel only. The existing City of San Diego easement from the road to the cul-de-sac shall be open year around to public pedestrian use, except during rainy periods. Equestrian use and dog access shall be prohibited at all times.
- b. A mitigation plan in substantial conformance with the mitigation plan dated July 26, 2005 and prepared by Project Design Consultants for impacts to 500 sq. ft. of existing coastal sage scrub habitat that is part of mitigation required pursuant to CDP # 6-02-153 (Caltrans).
- c. Evidence that an amendment to the Caltrans permit No. 6-02-153 has been approved by the Commission and that the revised mitigation has been implemented in accordance with the approved plan.

The applicants shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Coastal Commission-approved amendment to this coastal development permit pursuant to the Commission's regulations unless the Executive Director determines that the changes are minor and within the scope of the Commission's permit approval and no amendment is required.

12. Beach Access Trail Plans. PRIOR TO THE COMMENCEMENT OF INLET DREDGING, the applicants shall submit to the Executive Director for review and written approval, final public access trail plans, approved by the City of Del Mar, for the beach access trails that include the following:

- a. Improvements to the existing path from Camino Del Mar to the beach south of the river mouth for pedestrian access as required within the EIR/EIS for the project, including materials, guardrails and any grading necessary for said improvements. Installation of a stairway from the existing trail to the beach may be permitted subject to approval by the City of Del Mar and the Executive Director.
- b. Plans for an accessible path and/or ramp from Camino Del Mar (north of bridge) to the beach north of the river mouth to provide continual coastal access that is otherwise interrupted by the mouth opening. The foundation of the access ramp at beach level shall be located as far landward as possible and shall be designed to not require protection from storm waves at any time.

- c. The relocated storm drain inlet, if necessary, shall be designed so the discharge point and any required riprap are located inland of the toe of the existing slope.
- d. Signage to be located on the beach and on the street, north and south of the inlet, to direct the public to the alternative access opportunities.
- e. The plans shall indicate installation of the public access paths addressed in (a) and (b) above shall occur prior to or concurrent with the initial inlet dredging for the FRP, in order to provide alternative public access to either side of the river mouth.
- f. Maintenance of the beach access trails shall be the responsibility of SCE.

The applicants shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Coastal Commission-approved amendment to this coastal development permit pursuant to the Commission's regulations unless the Executive Director determines that the changes are minor and within the scope of the Commission's permit approval and no amendment is required.

13. Water and Sediment Quality. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the applicants shall submit to the Executive Director for review (1) any modifications to the August 2, 2004 Storm Water Pollution Prevention Plan (SWPPP) and (2) a copy of the comprehensive water quality monitoring plan required by the San Diego Regional Water Quality Control Board (SDRWQCB) in the Waste Discharge Requirements for this project (Order No. R9-2005-0213). Copies of the monthly water quality monitoring reports, required by Order No. R9-2005-0213 during dredging operations, shall be submitted to the Executive Director at the same time that they are submitted to the SDRWQCB.

14. Other Permits. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the applicants shall provide to the Executive Director copies of all required state or federal discretionary permits for the development authorized by CDP #6-04-88 including, but not necessarily limited to, the Army Corps of Engineers Permits and Regional Water Quality Control Board approval, except that removal of trees and/or shrubs in upland areas where grading will occur for the project as described in the revised Final Restoration Plan approved pursuant to Special Condition #1 may occur at any time after the CDP issued, if such vegetation removal is in compliance with the provisions of Special Condition #19. Before commencing any removal of trees and/or shrubs, the applicants must submit for the review and approval of the Executive Director a plan identifying the areas where the activity will occur and methods that will be used. Any mitigation measures or other changes to the project required through said permits shall be reported to the Executive Director. Such changes shall not be incorporated into the project until the applicants obtain an amendment to this permit, unless the Executive Director determines that no amendment is legally required. In addition, the applicants shall demonstrate to the satisfaction of the Executive Director that the City of San Diego, the City of Del Mar and all resource agencies have approved the grading plans for that portion of the project located within their respective jurisdictions and for any associated infrastructure and improvements, including (but not limited to) the existing sewer force main crossing the San Dieguito River from the 22nd District Agricultural Association (22nd DAA).

15. Least Tern Nesting Sites. Construction of the four new Least Tern nesting sites shown in the Final Restoration Plan as NS11, NS12, NS13 and NS14 shall not commence until an amendment to the 22nd District Agricultural Association's CDP No. 6-84-525 requiring the 22nd DAA's maintenance and monitoring of these least tern nesting sites has been approved by the Coastal Commission, the 22nd DAA has accepted the terms of said amendment, and the amendment has been issued.

PRIOR TO THE COMMENCEMENT OF REHABILITATING the existing Least Tern nesting site shown in the Final Restoration Plan as NS15, the applicants shall provide evidence of the California Department of Fish and Game's commitment to maintain and monitor the refurbished site in perpetuity.

16. Access to California Department of Fish and Game San Dieguito Lagoon Ecological Reserve. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the applicants shall obtain access authorization or a temporary construction easement from the California Department of Fish and Game to perform work within the San Dieguito Lagoon Ecological Reserve. The applicants shall coordinate all work within the Reserve with the Ecological Reserve Manager.

17. Property Use Agreements and Easements. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT the applicants shall submit to the Executive Director, for review and written acceptance, copies of the signed and approved three-way agreement between JPA, SCE and 22nd District Agricultural Association dated September 21, 2005. The Grant of Easement for the San Dieguito River Mouth, Public Trail (referred to in the three-way agreement as the Restoration Easement) shall be submitted in a form and content acceptable to the Executive Director and suitable for recordation, within twelve months of permit issuance and prior to commencement of the inlet dredging or trail construction. The Grant of Easement for the Least Tern Nesting Habitat Sites (referred to in the three-way agreement as the Habitat Easement) shall be submitted in a form and content acceptable to the Executive Director and suitable for recordation, within twelve months of permit issuance and prior to commencement of construction of the least tern islands. Evidence of recordation of the approved documents shall be submitted within 30 days of Executive Director approval of the documents for recording.

The three property use agreements (1) Memorandum of Agreement between the San Dieguito River Valley Regional Open Space Park Joint Powers Authority and the Southern California Edison Company, dated August 14, 1991, and First Amendment to Memorandum of Agreement between the San Dieguito River Valley Regional Open Space Park Joint Powers Authority and Southern California Edison, dated August 1, 2005; (2) November 16, 1998 Memorandum of Agreement between City of San Diego, Southern California Edison Company, and San Dieguito Regional River Valley Open Space Park Joint Powers Authority; and (3) Agreement between the 22nd District Agricultural Association, Southern California Edison Company, and San Dieguito River Park Joint Powers Authority, dated September 21, 2005 and all grants of easement executed in compliance with those agreements are incorporated into this CDP by reference. Change in use, boundaries or zoning of any properties within the restoration project requiring revision of these agreements and/or easements will require an amendment to the CDP.

18. Contractor's Acknowledgement. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the applicants shall submit a signed statement from the project contractor

indicating that the contractor has received a copy of the coastal development permit and special conditions and is aware of all permit conditions.

19. Timing of Construction/Seasonal and Habitat Restrictions. PRIOR TO COMMENCEMENT OF CONSTRUCTION AND WITHIN 12 MONTHS OF COMMISSION ACTION ON THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and written approval, a final construction plan and schedule, which shall be incorporated into construction bid documents. The project must comply with the following restrictions, which shall be specified in the schedule:

- a. Construction activities shall not occur in areas where breeding is occurring by raptors, migratory birds and threatened and endangered bird species. This restriction can be met by either avoiding known breeding periods, or by conducting pre-construction surveys to demonstrate that breeding is not occurring. Threatened or endangered species include: Belding's Savannah Sparrow, Western Snowy Plover, California Least Tern, Least Bell's Vireo, and Light Footed Clapper Rail. The months and areas of restriction shall be in substantial conformance with the two sets of plans submitted June 20, 2005 (City of Del Mar Sheets 26-27, dated 6/17/05, and City of San Diego Sheets 61-62, dated 5/26/05).
- b. Regardless of season, construction shall not occur in designated areas of restriction within minimum distances of occupied nests of bird species specified in (a) above. The minimum distance for Belding's Savannah Sparrow and Least Bell's Vireo is 150 feet, the minimum distance for migratory birds is 200 feet, and the minimum distance for raptors is 500 feet. Further, the U.S. Fish and Wildlife Service shall be consulted for advice on geographic restrictions of construction if nests of Snowy Plovers, California Least Terns, Least Bell's Vireo or Light Footed Clapper Rails are encountered in the project area. This guidance shall be followed regardless of whether the nests are encountered in or out of the seasonal restrictions specified in (a) above.
- c. Construction shall, if possible, avoid areas containing threatened and endangered or otherwise rare plant species including but not limited to the Southern tarplant, Red sand verbena, Coulter's goldfields, Del Mar Mesa sand aster, Lewis's evening primrose, and Woolly seablite. Construction fencing shall be placed outside of and around these restricted areas and signs indicating sensitivity shall be placed every 100' along the perimeter of the restricted areas. If avoidance is not possible, whole plants and seeds of sensitive species shall be salvaged and transplanted to areas specified in the plans submitted June 20, 2005 (City of Del Mar Sheets 26-27, dated 6/17/05 and City of San Diego Sheets 61-63, dated 5/26/05).
- d. Prior to disposing materials on beach areas during February through August, the applicants shall consult with the California Department of Fish and Game for the expected spawning and hatching periods of the California grunion, and shall provide monitors on the beach during the time of the predicted run. If no grunion are observed, disposal activities can take place until the next predicted run. If grunion are observed, there can be no activities until the next predicted run, at which time the monitoring shall be repeated.

- e. No construction work may occur on sandy beach during the summer months (Memorial Day weekend to Labor Day) of any year. During approved construction periods, any equipment used on the beach shall be removed from the beach at the end of each work day.

20. Staging Areas/Access Corridors. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and written approval, detailed plans incorporated into the construction bid documents for the location of access corridors to the construction sites and staging areas. Use of sandy beach and public parking areas, including on-street parking for the interim storage of materials and equipment shall not be permitted except as provided in Special Condition #22. Access corridors and staging areas shall be located in a manner that has the least impact on public access via the maintenance of existing public parking areas and traffic flow on coastal access routes (Camino Del Mar, Via de la Valle, Jimmy Durante Blvd. and El Camino Real). If more than one staging site is utilized, the plans shall indicate which sites are connected with which portions of the overall development, and each individual site shall be removed and/or restored immediately following completion of its portion of the overall development.

21. Construction Materials. Disturbance to sand and intertidal areas shall be minimized. Beach sand excavated shall be re-deposited on the beach. Local sand, cobbles or shoreline rocks shall not be used for backfill or construction material. The applicants shall remove from the beach and inlet area any and all debris that result from the construction period.

22. North Beach Staging Plan and Beach Access During Construction. PRIOR TO USE OF THE NORTH BEACH STAGING AREA OR COMMENCEMENT OF BEACH RESTORATION ACTIVITIES, the applicants shall provide the Executive Director and the City of Del Mar with detailed plans for the staging of equipment on the North Beach area. This will include the specific months of the year the North Beach area will be used as well as a detailed outline of the proposed staging boundary. No staging or equipment storage shall occur on North Beach from June 1 to September 30, without prior approval from the City of Del Mar. The staging plans shall include necessary measures, including barricades and security, to ensure public safety during and after construction hours. Staging areas shall also avoid impacts to any existing wetlands. The project contractor shall bear the responsibility for maintaining the security of the worksite at all times during the construction phase. The contractor shall provide details for safety measures during sand placement on the beach, including lifeguard access, pedestrian traffic, vehicular turn-around locations, flagging requirements, and hours of operation subject to review and approval by the Planning, Public Works, Engineering, and Community Services Departments of the City of Del Mar. Pedestrian and lifeguard beach access shall be maintained during construction as required by the Community Services Department of the City of Del Mar.

23. Inlet Dredging Plan. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and written approval, a dredging construction phase impact and mitigation plan, that has been approved by the City of Del Mar. The plans shall include construction schedules, number and type of truck/equipment traffic, type of dredge to be used, and material storage and haul route information. The plan shall specify the anticipated timeframe for the inlet opening and frequency for maintenance openings, and shall include the following specifications for inlet location:

- a. The initial inlet dredging shall be as shown on the approved drawings and the inlet channel shall be located a minimum distance of 50 feet from the riprap revetment to the south of the channel. At the time the inlet is dredged for the initial opening, any beach depressions from the pre-existing inlet channel shall be filled to a level approximating the adjacent undisturbed beach levels.
- b. In the event the inlet is closed at the time of any subsequent maintenance activities, re-opening shall occur such that the south edge of the inlet channel is located a minimum of 40 feet from the rip-rap and the first priority for dredged sand shall be to restore usable beach area.
- c. In the event the inlet is open at the time of any subsequent maintenance activities, dredging may occur in the inlet as it then exists and any widening shall occur on the channel side closest to mid-point of the lagoon entrance (between the bluffs to the north and the revetment to the south).

The applicants shall undertake inlet dredging in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Coastal Commission-approved amendment to this coastal development permit pursuant to the Commission's regulations unless the Executive Director determines that the changes are minor and within the scope of the Commission's permit approval and no amendment is required.

24. Beach Nourishment/Dredge Disposal Plans. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and written approval, beach nourishment/dredge disposal plans to insure that only beach quality material shall be used for beach nourishment. During the initial inlet dredging, all beach quality sand dredged from west of Jimmy Durante Bridge shall be placed on the beach, except as noted below for potential use on the least tern nesting sites. In all subsequent inlet maintenance dredging, all beach quality sand shall be placed directly on the beach adjacent to the location of the San Dieguito River inlet. The final beach nourishment/dredge disposal plans shall include the following:

- a. Dredge Plan: The applicants shall provide information for each dredging episode that shall include:
 - (1) Map of all dredging areas and sample locations;
 - (2) All testing results;
 - (3) A proposed placement plan;
 - (4) Estimate of the volume of beach quality material to be dredged;
 - (5) Estimate of the volume of unacceptable beach material to be dredged and plans for disposal; and
 - (6) Schedule for dredging, placement and disposal if needed.

- b. Test Samples: Prior to the initial restoration project, the applicants shall take and test a minimum of ten samples from the channel excavation sites. All samples shall be taken to a depth equal to or in excess of the design excavation depth.
- c. Silt and Clay Limitations: The applicants shall insure that sand comprises at least 90% of the nourishment material and that the nourishment material contains less than 5% clay and less than 10% silt and clay combined, with sand, silt and clay defined by the Unified Soil Classification.
- d. Removal of Large Debris: Prior to placement on the beach, the applicants shall sift all sand excavated from the lagoon area east of the NCTD Railroad Bridge to insure that it is free of stones, organics debris, or lumps exceeding 1 inch in greatest dimension. The applicants shall be responsible for disposal of all unacceptable material in compliance with all applicable federal, state and local laws.
- e. Sand Transport: To the maximum extent feasible, all sand shall be transported via pump or conveyor to minimize the potential impacts of heavy construction traffic on the surrounding community and infrastructure.
- f. Odor from Dredged Sand: If there are public complaints about the odor of the beach quality sand, sand placement on the beach shall stop and the remaining excavated or dredged sand shall be stored near the dredge site until the odor subsides.
- g. Appearance: To the maximum extent feasible dredged sand shall match the color of existing beach sand to avoid public concerns about the safety or cleanliness of the sand placed on the beach.
- h. Tern Islands: If it is determined by the project engineer in consultation with the USFWS that the volume of "airfield" (W1) sand is inadequate for least tern nesting site construction, the applicants may use sand dredged from the area west of Jimmy Durante Bridge to construct the least tern nesting sites and shall notify the Executive Director, in writing, of such determination prior to use of such sand.

The applicants shall undertake beach nourishment and dredge disposal in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Coastal Commission-approved amendment to this coastal development permit pursuant to the Commission's regulations unless the Executive Director determines that the changes are minor and within the scope of the Commission's permit approval and no amendment is required.

25. Beach Monitoring. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and written approval, a beach monitoring program that will consist of beach profiles and inlet channel cross-sections, data analysis and reporting. The beach monitoring program shall be designed to guide and direct placement of dredged beach quality sand and to identify unanticipated changes to the shoreline condition. The monitoring program shall outline the procedure for the necessary surveys, report preparation and submittal, and the skills and qualifications for all personnel. The monitoring program shall record detailed project information regarding the initial placement of sand and

subsequent maintenance projects, including, but not limited to, the dates of placement, quantity of sand, locations from which sand was dredged, method of transportation and placement, locations of sand placement, weather conditions, river conditions, and any formal complaints regarding the sand placement activities. The monitoring program shall also establish an independent Coastal Processes Technical Panel that would be able to assist in a rapid response to unforeseeable adverse beach changes. The beach monitoring program shall include the following:

- a. **Beach Surveys:** Beach surveys shall be performed at 4 historic profile locations, DM-0590, DM-0580, DM-SD0595 and SD-0600 (called SIO1, SIO2, SIO5, and SIO6 by the City of Del Mar in its permit) and at 3 new profile locations approximately 500 feet, 1,000 feet, and 1,500 feet south of DM-0590 (SIO1). Profiles shall be referenced to the City of Del Mar's Shoreline Protection Area Line (SPA Line) or, for sites that do not have an SPA reference line, to a fixed and identified feature. The profile locations 500 feet and 1,000 south of DM-0590 (SIO1) are in the approximate locations of the profiles identified by Dr. Stone as being RE-13 and RE-18, respectively. Profile locations may be adjusted slightly to establish required profiles in locations for which historic survey information is available. Full profile beach surveys shall be performed in the spring and fall for the 4 historic profile locations (DM-0590, DM-0580, SD-0595, and SD0600) and the survey location approximately 1,000 feet south of DM-0590. The full profile surveys shall be referenced to the SPA Line (or equivalent) and shall survey to the depth of closure ("depth of closure" is the depth beyond which there are no changes in bottom profile due to seasonal variation in wave conditions). Wading depth surveys shall be performed quarterly (every three months) for all profiles, shall be referenced to the SPA Line (or equivalent) and shall survey to at least -6' NGVD. Wading depth profiles shall also be performed before and after artificial inlet maintenance and following large storms or floods. Information from full profile surveys can substitute for wading depth surveys where available; wading depth surveys shall not be a substitute for required full profile surveys. Surveys shall be conducted by a licensed engineer or surveyor, using the methods from the SANDAG Regional Beach Monitoring Program (SANDAG 2003) or from Elwany et al. (Elwany 2003) or other professional accepted methods. To the extent practicable, these survey requirements shall be met by using available local, regional, state or federal survey efforts, and shall be supplemented as needed by project specific surveys to provide for the required information.
- b. **Analyses:** Beach survey data shall be analyzed to provide information on beach width for each profile line (from the SPA line or other fixed reference seaward to 0' NGVD), beach sand volume for each profile line (cubic yards per foot, from the SPA line or other fixed reference seaward to 0' NGVD or to closure), and beach slope (from the SPA line or other fixed reference seaward to 0' NGVD or to closure) for the surveyed area following each survey. In addition to quantitative information, the analysis shall provide: 1) time series plots of beach width and beach sand volume at each profile location; 2) time series plot of overall sand volume; and 3) time series plots of differences between beach width and sand volume between DM-0580 (SIO2)

and all other surveyed profile sites and between DM-0590 (SIO1) and SD-0595 (SIO5).

The analysis shall be used to determine the fate and transport of any sand placed on the beach for nourishment or as a result of inlet dredging, and shall make recommendations for placement locations for beach compatible sand that will be excavated by upcoming dredging episodes. In addition, the analysis shall determine whether observed beach parameters (beach width, beach sand volume, beach profile) are within values measured during the historical monitoring period from January 1978 to the date at which inlet maintenance begins. Specifically, the analyses will determine whether:

- (1) The beach width at DM-0590 (SIO1) is at or less than 32.4 feet (the lowest historically observed minimum)
 - (2) The beach width at DM-0590 (SIO1) is at or less than 90 feet and there is more than an 180-foot difference in beach widths measured at DM-0590 and DM-0580 (SIO1 and SIO2); or
 - (3) The beach width at SD-0595 (SIO5) is at or less than 74 feet (the lowest historically observed minimum).
- c. Reporting: The Beach Monitoring Program shall provide for prompt reporting of survey data, within 2 weeks following any survey with exceptions noted below, through print and electronic outlets. At a minimum, survey data and analysis shall be provided to the Executive Director, members of the Technical Panel, the City of Del Mar, State Lands Commission and US Army Corps of Engineers, and made available to the public at Del Mar City Hall and Del Mar Library and through the internet. The annual report and/or any report for surveys taken prior to a dredge cycle shall be submitted within 30 days of the survey and shall discuss and provide information on (1) surveyed beach conditions and beach changes, (2) placement of any material removed from the inlet (e.g. volume and placement location), (3) information on other nourishment efforts that might influence the survey results, (4) fate and transport of all placed material; (5) results of descriptive statistics and analyses performed on the data, as detailed in Analyses, above; (6) channel conditions and channel changes as recorded by the channel transects; and (7) recommendations for placement of dredge material for the following dredge cycle(s). Every survey report shall include a determination of whether survey results indicate that beach parameter measurements are outside of values recorded during historical surveys pre-dating permanent inlet maintenance (width, volume or profile) identified in (b) above. The first annual report (to be submitted within one year after issuance of the permit) shall include a thorough analysis of all available historic shoreline information (surveys and aerial photographs), as well as the data and analysis from the first year of monitoring. If surveys or analyses indicate that changes to the beach area differ from the pre-project conditions, the applicant shall notify the Executive Director and the CPT Panel in a timely manner and not wait for the following annual report.

- d. CPT (Coastal Processes Technical) Panel: The Beach Monitoring Program shall establish the process for creation of a CPT Panel that shall be kept up to date on all beach survey results and that shall be available throughout the life of the project, to provide technical review and expert opinion on any beach conditions that are determined by the Executive Director to be abnormal. At a minimum, the Executive Director shall convene the CPT Panel within 2 weeks of any survey report that finds that any of the following triggers have been met:
- (1) The beach width at DM-0590 (SIO1) is at or less than 32.4 feet (the lowest historically observed minimum) for six months or three consecutive surveys (whichever is the shorter amount of time); or
 - (2) The beach width at DM-0590 (SIO1) is at or less than 90 feet and there is more than an 180-foot difference in beach widths measured at DM-0590 and DM-0580 (SIO1 and SIO2) for two consecutive surveys (180 feet is the maximum historically observed difference); or
 - (3) The beach width at SD-0595 (SIO5) is at or less than 74 feet (the lowest historically observed minimum) for six months or three consecutive surveys (whichever is the shorter amount of time).

The CPT Panel shall be composed of coastal professionals who are familiar with local coastal conditions and have expertise in the areas of coastal engineering, oceanography, coastal geology, littoral sediment transport, lagoon and inlet hydrodynamics, or other applicable areas. Within six months of issuance of the permit, the applicants shall provide the Executive Director with a list of 10 experts to be considered for service on the CPT Panel. All recommended panelists must have documented expertise in the required knowledge areas, through educational achievements, academic degrees, or published peer-reviewed papers. In addition, panelists shall be independent of both the applicants and Save The Beach and shall not have received any funding from either group, within the past two years, for any work relating to San Dieguito Lagoon or Del Mar Beach. When experts retire from the panel, the applicants shall immediately provide the remaining panel with a list of 4 potential new panelists (with documented expertise), and the remaining panel members shall determine who will best complement the existing panel expertise. The shoreline monitors shall provide input to the panel and attend the panel meetings but shall not be panel members. The applicants shall be responsible for all panel expenses, including the panelists' travel, per diem and salaries, salaries for support staff to record meetings and prepare reports, and costs for meeting space, conference calls or other communication requirements.

The Executive Director, or designee, shall be the permanent chair of the panel and shall serve as a panel member; a minimum of five additional experts shall serve on the Panel. The Executive Director shall select panel members from the list of experts after consultation with the City of Del Mar, the City of Solana Beach, the SANDAG Shoreline Preservation Committee, Executive Director of State Lands Commission,

Executive Director of California Department of Parks and Recreation, the Del Mar Sandy Lane HOA, and the Surfrider Foundation.

The panel will be given full access to all project design materials, historic shoreline information, monitoring reports and other relevant information. The panel shall meet once following the first beach survey and a minimum of twice per year thereafter, and additionally as necessary following shoreline changes that exceed triggers in Condition 25b. Within 3 months of being convened as a result of shoreline changes, the CPT Panel shall provide to the Executive Director a written report that outlines the reason or reasons for the panel being convened; likely range of causes; measures, if any, that should be taken to correct the immediate shoreline erosion problem, such as beach or dune nourishment, sand by-passing, etc.; recommendation for additional monitoring or studies needed to determine the success of the interim corrective actions; recommendations for modified "triggers" to better respond to identified shoreline changes; and, recommendations for follow-up panel meetings. SCE shall be responsible for taking all necessary steps and for obtaining all necessary authorizations to implement the recommendations of the CPT Panel.

- e. Reduction in Monitoring: The beach sand monitoring and placement of dredge material on the beach shall continue for the life of the project. If, after 15 years of monitoring, there is no evidence of any adverse project impacts on the beach, the applicants may request a permit amendment to reduce the monitoring to occur only pre- and post-excavation for inlet openings, to provide only wading depth profiles adjacent to the inlet, to reduce reporting to an annual letter report or electronic notice, and to dismiss the CPT Panel.

26. Waiver of Liability. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit a signed document which shall indemnify and hold harmless the California Coastal Commission, its officers, agents and employees against any and all claims, demands, damages, costs, expenses of liability arising out of the acquisition, design, construction, operation, maintenance, existence, or failure of the permitted project.

27. Villages Mitigation Bank. The wetland restoration as proposed on module W16 is approved in this Permit. However, the proposal to operate W16 as the Villages Wetlands Mitigation Bank, as more fully described in the *Villages Wetlands Mitigation Bank, Bank Enabling Instrument* prepared by SCE (January 2005), is not approved as part of this CDP application, nor is any mitigation credit that may accrue as a result of restoration of W16 approved at this time. To the extent that the Commission approves a final grading plan (pursuant to Special Condition #3) that includes excess acreage of restored wetlands on module W16 that is not required to comply with CDP No. 6-81-330-A, such excess acreage may be available in the future to satisfy some other wetland mitigation requirement if the use of module W16 as mitigation is authorized pursuant to a future coastal development permit. If module W16 is not fully restored concurrent with the disposal of excavated materials from the restoration project onto Disposal Site 32, an amendment to this CDP is required to revise the restoration plan to avoid or reduce disposal on existing wetlands in DS32.

IV. FINDINGS AND DECLARATIONS

A. BACKGROUND COMMISSION ACTIONS RELATING TO THE SONGS

A.1. THE SONGS PROJECT

The San Onofre Nuclear Generating Station (SONGS) is located in north San Diego County. SONGS Unit 1, which generated up to 436 megawatts of electric power, began operation in 1968 and stopped operating in the early 1990s. Construction of SONGS Units 2 and 3 began in 1974 and was completed in 1981. Operation of Units 2 and 3 began in 1983 and 1984, respectively. Each unit generates up to 1,100 MW of electric power, and draws in seawater at a rate of 830,000 gallons per minute from an intake pipe 18 feet in diameter, originating 3,400 feet offshore. The plant draws in about 872 billion gallons of seawater per year, resulting in both direct losses of adult fish due to entrapment and indirect stock reductions caused by the intake and killing of larvae. Annual entrapment losses were estimated to be about 52 metric tons. Indirect losses of adults due to the intake and killing of larvae reduce standing fish stocks in the Southern California Bight by about 2,290 metric tons.

The discharge pipe for Unit 2 terminates 8,500 feet offshore, while the discharge pipe for Unit 3 terminates 6,150 feet offshore. The last 2,500 feet of the discharge pipes for Units 2 and 3 each consist of a multiport diffuser that rapidly mixes the cooling water with the surrounding water. To cool the discharge water, the diffusers draw in ambient seawater at a rate about ten times the discharge flow and mix it with the discharge water. The surrounding water is swept up along with sediments and organisms and transported offshore at various distances, depending on the prevailing currents.

A.2. PERMIT HISTORY

a. The Original SONGS Permit

In 1973, the California Coastal Zone Conservation Commission (CCZCC, now the California Coastal Commission) denied a permit for the construction of SONGS Units 2 and 3. In 1974, the Commission approved Permit No. 183-73 for the construction of the SONGS Units 2 and 3 with conditions that:

- (1) established a three-member independent Marine Review Committee (MRC) comprised of members appointed by the Commission, the applicants, and an environmental coalition that had opposed the project, to carry out a comprehensive field study to predict and measure the impacts of the SONGS on the marine environment; and
- (2) authorized the Commission to require the applicants to make future changes in the SONGS cooling system to address adverse impacts to the marine environment identified by the MRC.

In 1979, based on recommendations from the MRC, the Commission recognized that compensatory mitigation measures could be appropriate in addition to, or in-lieu of, changes to the SONGS cooling system.

In 1989 the MRC submitted its final report and recommendations, which documented significant impacts to fish populations in the Southern California Bight, and to the San Onofre kelp bed community. The MRC's Final Report also included recommendations for mitigating adverse impacts to the marine environment caused by the SONGS.

The 1974 permit is still in full force and effect, and its conditions gave the Commission the authority to further condition the coastal development permit to require the existing comprehensive mitigation package based on the findings and recommendations of the MRC.

b. The Commission's Adopted 1991 Conditions Requiring Mitigation

In July 1991, based on the results of the impact studies and recommendations of the MRC, the Commission concluded that a compensatory mitigation program was the most cost-effective means of dealing with the impacts of SONGS Units 2 and 3 and therefore further conditioned the SONGS permit to require (1) creation or restoration of southern California wetlands, (2) installation of fish barrier devices at the power plant, and (3) construction of a kelp reef. The 1991 conditions also require SCE to provide the funds necessary for Commission staff technical oversight and independent monitoring of the mitigation projects to be carried out by appropriate and independent scientific and technical personnel and consultants under the direction of the Commission's Executive Director. The Commission found that this oversight and monitoring condition addresses the uncertainties associated with the use of compensatory mitigation by providing both information on the success of mitigation resources and a mechanism for "adaptive management" of the created resource.

The Commission found the mitigation, monitoring and remediation program to be a minimum package and directed staff to consider the need for additional mitigation by means of a fish hatchery program. In March 1993, the Commission added a requirement for the applicants to partially fund construction of an experimental white seabass fish hatchery program. Due to its experimental nature, the Commission did not assign mitigation credit for the hatchery.

c. Permit Condition Implementation

From 1992 to 1995 Commission staff worked with SCE to implement the mitigation conditions. In 1992, at SCE's request and after an extensive selection process established by the 1991 permit conditions, the Commission approved the San Dieguito Lagoon as the site for 150 acres of wetland restoration.

Planning continued through the next several years, but by 1994 implementation of the wetland and artificial reef conditions had stalled due to conflicts over permit condition interpretation. Ultimately, the Commission approved a permit amendment in April 1997 that (1) reaffirmed the approval of San Dieguito Lagoon as the wetland restoration site, (2) allowed partial credit (35 acres) for enhancing existing tidal wetlands by permanent inlet maintenance at San Dieguito Lagoon, (3) revised the artificial kelp reef condition to require a mitigation reef of sufficient size to sustain 150 acres of medium to high density kelp bed community, and (4) added a requirement for payment of \$3.6 million to the State's Ocean Resource Enhancement and Hatchery Program to fund a mariculture/marine fish hatchery to provide compensation for resources not replaced by the artificial mitigation reef.

A.3. CONDITION A: WETLAND MITIGATION

The overall goal of the wetland mitigation program is to compensate for the Bight-wide losses of marine fish standing stocks that occur as a result of the operation of SONGS Units 2 and 3. Coastal Act Section 30230 states "[m]arine resources shall be maintained, enhanced, and where feasible, restored." The non-recirculating water system for cooling SONGS Units 2 and 3 causes substantial losses of marine fish for the duration of its operation. Construction of Units 2 and 3 was found to be consistent with the Coastal Act only if these significant adverse impacts to fish would be fully mitigated. Condition A of CDP 6-81-330-A sets forth a process for restoring or creating 150 acres of wetlands in order to mitigate this impact. Condition A contains requirements regarding site selection, mitigation plan development, plan implementation, and project monitoring, management and remediation. This comprehensive process was required to ensure the wetland mitigation project would compensate for the fish losses for the duration of the operating life of SONGS.

The Commission selected the option of coastal wetland mitigation for several reasons. Coastal wetlands provide valuable habitat for fish, including some of the species affected by SONGS and other economically important species, such as California halibut. In addition, coastal wetland mitigation provides numerous other estuarine, marine and coastal resource benefits. Finally, coastal wetlands currently comprise a rare habitat type. Less than 25 percent of the original coastal wetland area remains in Southern California, and much of the remaining wetlands are degraded.

a. Requirements of Condition A

Condition A of the SONGS permit (Exhibit 1) requires SCE to create or substantially restore a minimum of 150 acres of wetlands to mitigate for the reduction in the standing stocks of nearshore fishes caused by the operation of SONGS Units 2 and 3. In April 1997, the Commission revised Condition A to allow up to 35 acres of enhancement credit for permanent, continuous tidal maintenance. The condition sets forth the requirements for site selection and planning, and specifies the minimum standards and objectives that must be met by the restoration plan. (See Section IV-E for findings on compliance with the requirements of Condition A.)

In addition, Condition A lays out the framework for monitoring, management and remediation of the restored wetland over the full operating life of SONGS Units 2 and 3, and Condition D specifies the administrative structure for carrying out this independent monitoring program under the direction of the Commission's Executive Director. Most importantly, Condition A specifies the physical and biological performance standards that must be met as measured relative to reference sites of relatively undisturbed, natural tidal wetlands within the Southern California Bight. (See Section IV-D for details on the monitoring requirements.)

b. Actions Pertaining to Compliance with Condition A

On June 11, 1992, following an evaluation of eight sites, the Commission approved SCE's selected restoration site, the San Dieguito River Valley. On April 9, 1997, the Commission reaffirmed its prior determination that San Dieguito River Valley is the restoration site that meets the minimum standards and best meets the objectives set forth in Condition A. The Commission further found that an additional site could be proposed if achieving all 150 acres of restoration at

San Dieguito River Valley became infeasible due to hydrology or other engineering concerns. At the same time, the Commission approved an enhancement credit, which allows SCE to satisfy up to 35 of the 150 required acres by permanently maintaining the tidal inlet at San Dieguito Lagoon. The 35 acres of enhancement credit is based upon the determination that 126 acres of existing wetlands at San Dieguito Lagoon will be enhanced by 28% if the tidal flows are continuously maintained.

On November 4, 1997, the Commission approved SCE's preliminary wetland restoration plan, as revised on November 3, 1997, for the San Dieguito Lagoon. The Commission found that the preliminary plan provides 150 acres of wetland restoration credit and authorized SCE to move the proposed project to the next steps: the CEQA/NEPA process, the development of the Final Plan, and the permitting process. The Commission conditioned its approval of the preliminary plan, finding (1) that if the Final Plan involves any destruction of existing wetland habitat, the Final Plan shall include a request to amend the SONGS permit Condition A to allow the minimum amount of destruction of existing wetlands that is necessary for the restoration project, and (2) that all wetland acreage destroyed by the implementation of the restoration project shall be mitigated on a 4 to 1 ratio. In approving the preliminary plan, the Commission acknowledged and accepted that a small amount of existing wetland would be lost in implementing the overall wetland restoration project at San Dieguito. The Commission will consider an amendment to the SONGS permit in a separate action (see staff report on CDP #6-81-330-A4, dated September 29, 2005).

The CEQA/NEPA environmental review incorporated SCE's wetland mitigation requirements into the overall San Dieguito River Valley Regional Open Space Park project. The lead agencies for the CEQA/NEPA review were the San Dieguito River Valley Regional Open Space Park Joint Powers Authority (JPA) and the U.S. Fish and Wildlife Service (USFWS). Following the review period on the January 2000 Draft EIR/EIS, the Final EIR/EIS was released in September 2000. On September 15, 2000, the JPA certified the EIR after public hearing. The EIR/EIS designated the Mixed Habitat plan as the environmentally preferred alternative.

Lawsuits challenging the adequacy of the Final EIR/EIS were filed by the Del Mar Sandy Lane Association and Citizens United to Save the Beach. On July 27, 2001, the San Diego Superior Court ruled that the EIR/EIS did not comply with CEQA and remanded the EIR/EIS back to the JPA for revisions. However, on August 4, 2003, the California Court of Appeals overturned the Superior Court's ruling and upheld the adequacy of the EIR/EIS.

Following the conclusion of the litigation, the USFWS issued its final Record of Decision on the Final EIR/EIS on November 28, 2003.

B. SAN DIEGUITO WETLAND RESTORATION PROJECT DESCRIPTION

B.1. PROJECT LOCATION

The San Dieguito Wetland Restoration encompasses approximately 440 acres at the western end of the San Dieguito River Valley and generally includes the public lands located between El Camino Real on the east, the Pacific Ocean on the west, Via de la Valle on the north, and the northern edge of the Carmel Valley planning area on the south. The project site, which is situated

entirely within the coastal zone, is located within incorporated boundaries of the Cities of Del Mar and San Diego in San Diego County, California. (Exhibits 2, Regional Location Map, and 3, Project Vicinity Map)

B.2. PROJECT BACKGROUND

The San Dieguito Lagoon was once the largest of the six San Diego coastal lagoons. Restoration of the San Dieguito coastal wetlands has been a stated goal of the Cities of Del Mar and San Diego, local citizens, and the organizers of the San Dieguito River Park JPA for over two decades. In the late 1970s, the City of Del Mar and the State Coastal Conservancy prepared a plan for revitalizing and managing what remained of the lagoon and surrounding areas west of Interstate 5 (I-5) near the mouth of the river, and in 1979 the City of Del Mar adopted the San Dieguito Lagoon Resource Enhancement Program as part of its General Plan. In 1983, using a grant from the Coastal Conservancy, a new tidal basin was dredged on 70 acres of land acquired by the California Department of Fish and Game as an Ecological Reserve and located in the southern corner of the historic wetlands just west of I-5. The river mouth was also opened, thus restoring tidal influence, at least temporarily, to the entire coastal wetland.

Since this initial restoration effort, the restoration goal was expanded to address both the west and east sides of I-5, with the goal of restoring what remains of the historically significant San Dieguito Lagoon system. In the early 1990s, efforts began to direct coastal wetland mitigation proposals to San Dieguito. One possible mitigation project was identified when in 1991 the Coastal Commission adopted new conditions for the SONGS Units 2 and 3 requiring Southern California Edison (SCE) to create or substantially restore 150 acres of coastal wetlands. After identifying eight wetlands in Southern California that could be evaluated for suitability, in June 1992 the Commission approved San Dieguito as the mitigation site.

The proposed wetland restoration project is a joint application between Southern California Edison (SCE) and the San Dieguito River Valley Regional Open Space Park Joint Powers Authority, also known as the San Dieguito River Park JPA. The JPA is the agency responsible for creating a natural open space park in the San Dieguito River Valley, which will one day extend from the ocean at Del Mar to Volcan Mountain, just north of Julian.

The major components of the proposed project include restoration of the San Dieguito Lagoon, which will be implemented by SCE in fulfillment of its Condition A requirements of CDP No. 6-81-330-A, and construction of the Coastal Segment of the Coast to Crest Trail and freshwater runoff treatment ponds, which will be implemented by the JPA. In addition, SCE proposes to include creation of new nesting sites for the endangered California Least Tern to fulfill a requirement of the 22nd District Agricultural Association (DAA) under its previously granted Coastal Development Permit No. 6-84-525. A detailed project description is found in Chapters 4 and 5 of the revised strike-out/underline version of the Final Restoration Plan (FRP) dated July 2005 and received September 6, 2005, incorporated herein as Appendix B. (The FRP can be found through a link on the Commission's website; see Appendix B.) A description of existing conditions also is found in the FRP. Upon approval of the CDP, the FRP as revised in accordance with Special Condition #1 will be re-published.

The major components are described in the following sections and shown on Exhibit 4 (FRP Figure 4.1a) and Exhibit 5 (FRP Figure 4.1b).

B.3. RESTORATION PROJECT LAND OWNERSHIP

The San Dieguito Wetlands Restoration Project is located within the Cities of San Diego and Del Mar and is being accomplished through a number of agreements and easements between the applicants, SCE and JPA, both cities and the 22nd DAA, another owner of property within the restoration site. Appropriate permits also will be obtained from Caltrans, North County Transit District, California Department of Fish and Game and State Lands Commission for use of their property for the project. (Permits also will be obtained from other agencies retaining regulatory jurisdiction over the project.) Except for parcels owned by SCE, all property within the restoration project is in public ownership. Title to those parcels currently owned by SCE will be transferred to JPA, whose mission is to maintain the project area to preclude any uses not consistent with the conservation of the wetland. Areas owned by the Cities of Del Mar and San Diego are zoned "open space reserves, preserves." In addition to the various land agreements, open space deed restrictions or parkland designations have been placed on the upland disposal sites.

Three agreements and related easements are most relevant to ensuring that the restoration site is used in accordance with the approved Final Restoration Plan and remains in open space, and are thus incorporated into this CDP:

- (1) JPA and SCE, dated 8/14/91 (amended 8/1/05), to transfer title to "Horseworld" property to JPA, grant restoration rights on Horseworld and old airfield properties to SCE, and establish endowment fund for management and maintenance;
- (2) JPA, SCE and City of San Diego, dated 11/16/98, to transfer title to "Villages" property to JPA, grant conservation easement and restoration rights and allow disposal of excavated soil on upland areas, agree not to sell, lease or encumber property, and agree to manage property to preclude any uses inconsistent with the restoration; and
- (3) JPA, SCE and 22nd DAA, dated September 21, 2005, to construct least tern nesting sites and grant easement to 22nd DAA for monitoring and maintenance and grant restoration easement to SCE/JPA, including access to the river mouth property.

Because these agreements and easements are incorporated as part of this CDP, the Commission finds that any future in use, boundaries, or zoning of any properties in the restoration area subject to these agreements requires an amendment, as specified in Special Condition #17.

B.4. SCE RESTORATION COMPONENTS

The primary goal of the proposed Final Restoration Plan (FRP) is to restore a significant portion of the San Dieguito Lagoon site west and east of Interstate 5 (I-5) to tidal wetlands consisting of subtidal, intertidal mudflat, coastal salt marsh, and seasonal wetland habitats created through excavation and grading of existing high elevation areas. The portion of the project being implemented by SCE also includes non-tidal wetlands, berms, and nesting sites. On both sides of I-5, additional areas of transitional wetland habitat will be created to offset unavoidable impacts

on existing wetlands incurred in the course of the restoration. Creation or substantial restoration of at least 115 acres of wetland habitat, along with a 35 acre enhancement credit for maintaining an open inlet, will meet SCE's mitigation requirements for 150 acres of wetland habitat under CDP 6-81-330-A.

Excavation will result in about 2,083,500 cubic yards of excavated soils. Of the total volume of excavated soil, about 114,500 cubic yards will be used for features within the project, including 91,000 cubic yards for berm construction and 23,500 cubic yards for creating the bases of the nesting sites for the California Least Tern and Western Snowy Plover. (Exhibit 6, FRP Figure 4.2) Project construction may occur in dry or wet soil conditions. Either condition will involve constructing water level controls to keep water out so that excavation could take place with backhoes and other land-based equipment. Wet condition construction will entail actively flooding areas so that material could be removed using hydraulic dredging equipment.

Approximately 107 acres of upland will be used for disposal of soil excavated to create tidal wetlands. The upland disposal sites will be converted to upland habitat. Excavated soil suitable for beach disposal will be placed on the local beaches.

The elements of the restoration plan that SCE is responsible for implementing are described below.

a. Creation of Wetland Habitat

The restoration project will result in the creation or substantial restoration of coastal wetland habitat that includes subtidal, intertidal mudflats, coastal salt marsh (low, mid, and high), transitional wetland, and seasonal salt marsh habitats through the excavation of ten modules—W1, W2a, W2b, W3, W4, W5, W10, W16, W17 and W45 as illustrated in Exhibit 5, FRP Figure 4.1b. In addition to excavation at the river mouth and in the inlet channel (W17), there are five major areas of excavation proposed on the west side of I-5. A tidal basin will be created on the old airfield property (W1), San Diego's old sewage treatment ponds will be converted to coastal salt marsh and transitional wetlands (W2a and W2b), and the area immediately west of the San Diego property will be restored to coastal salt marsh (W3). On the east side of I-5, coastal salt marsh will be created north and south of the river (W4, W5, W10, and W16). Seasonal salt marsh will be created on W45 to offset the impacts of the overall restoration project on existing wetlands. The table below summarizes the gross wetland habitat created on these modules.

Table 1. Summary of Gross Wetland Habitat Created by Module

Habitats	WETLAND HABITAT AREA (ACRES)									
	W1	W2A	W2B	W3	W4	W5	W10	W16	W45	TOTAL
Subtidal	31.08				0.95					32.03
Frequently Flooded Mudflats	5.50				6.00					11.50
Frequently Exposed Mudflats	1.23				6.30			5.90		13.43
Low Marsh	2.92	0.18		0.10	10.53	3.82		3.60		21.15
Mid Marsh	3.13	5.50		3.08	25.60	1.06		4.83		43.20

Table 1 continued.	WETLAND HABITAT AREA (ACRES)										
	Habitats	W1	W2A	W2B	W3	W4	W5	W10	W16	W45	TOTAL
High Marsh	0.54	1.40	7.50	2.34	2.60	0.45	7.10	6.30			28.23
Seasonal Salt Marsh										8.65	8.65
Transitional Wetlands	0.33		0.06	0.03	0.24	0.16		0.14			0.96
TOTALS	44.73	7.08	7.56	5.55	52.22	5.49	7.10	20.77	8.65		159.15

Source: from Table 4.1, Final Restoration Plan

In creating the wetland habitat described for the modules above, some existing wetland habitats will be converted to a different type of habitat. These conversions are considered self-mitigating at a 1 to 1 ratio. In addition, some wetland habitat will be impacted permanently, from the construction of river berms, a permanent maintenance road, and a small amount of fill on disposal site 32. These losses must be mitigated at a ratio of 4 to 1 and are illustrated in the table below. (Additional impacts and mitigation result from the construction of the trails and freshwater runoff treatment ponds. These are discussed in section B.5 below.) All project impacts are discussed in the findings in Section C, Conformity with Chapter 3 of the Coastal Act.

Table 2. Summary of Impacts and Required Mitigation, SCE Restoration Components¹

Habitats	A	B	C	D	
	Temporary Impacts	Mitigation Ratio 1:1	Permanent Impacts	Mitigation Ratio 4:1	Total (B+D)
Subtidal	0.33	0.33			0.33
Low Marsh			0.02	0.08	0.08
Mid Marsh	2.13	2.13	0.10	0.40	2.53
High Marsh	0.86	0.86	0.14	0.56	1.42
Seasonal Salt Marsh	14.00	14.00	1.86	7.44	21.44
Estuarine Flats non-tidal	0.21	0.21			0.21
Estuarine Flats inter-tidal			0.01	0.04	0.04
Freshwater/Brackish Water Marsh	0.44	0.44	0.02	0.08	0.52
Riparian Southern Willow	0.01	0.01			0.01
TOTALS	17.98	17.98	2.15	8.60	26.58

Source: from Table 4.1, Final Restoration Plan

The total amount of the impacts from wetland habitat creation/substantial restoration in the modules shown in Table 2 above is deducted from the gross acres created shown in Table 1. Thus, 159.15 acres created less 26.58 acres impacted equals a net creation/substantial restoration of 132.57 acres.

SCE had proposed to excavate and convert to tidal salt marsh the entire W16 module as part of the construction, but to operate it as the Villages Mitigation Bank. Thus, the intention had been

¹ SCE proposes to create least tern nesting sites for the 22nd District Agricultural Association to fulfill its obligations under CDP #6-84-525. The nesting sites are not required in fulfillment of SCE's SONGS permit requirements. Creation of NS11 and NS12 will result in additional permanent wetland impacts. However, these impacts are not proposed to be mitigated as discussed in subsection IV-B.4.f below.

to deduct the acreage restored on W16 (20.77 acres) from the net acreage created (132.57 acres). However, this leaves only 111.8 acres credit towards the SONGS mitigation requirement. Because of this shortfall, SCE now proposes that 3.20 acres of the restored W16 module be counted toward its requirements, thus bringing the total net creation/substantial restoration to 115 acres.

The entire restoration proposed for W16 is part of the overall San Dieguito wetland restoration project, and therefore is approved in this permit. However, approval of the proposed mitigation bank, the draft Bank Enabling Instrument (January 2005), and any mitigation credit that may accrue as a result of the restoration of W16 is not granted at this time. Except for the 3.20 acres required to comply with CDP No. 6-81-330-A, restoration of W16 currently constitutes excess acreage of restored wetlands, and thus may be available in the future to satisfy some other wetland mitigation requirement. (See Section IV-C.10 for additional discussion.) However, if after the wetland restoration is constructed there is any shortfall in the actual wetland habitat acreage as determined by the "as built" plans, such shortfall will be deducted from the excess acreage on W16, thus reducing the amount of acreage potentially available for a mitigation bank.

b. Excavation of Tidal Inlet

To provide the hydraulic regime necessary to support the created and restored wetland habitat, initial and long-term periodic excavation will be done at the river mouth and within the inlet channel to provide ocean water exchange. The initial excavation of the tidal inlet channel, if needed at the time of project implementation, will create a 900 foot channel between the ocean and North County Transit District (NCTD) railroad bridge. Periodic excavation will be done to keep the channel at the appropriate depth. Dredged sand materials will be deposited on the beach north and south of the inlet (DS40). If needed, SCE proposes the use of dredged materials from east of Jimmy Durante Boulevard to create the least tern nesting sites.

c. Construction of Berms

Three river berms (B7, B8, and B9) will be constructed along the river channel. The primary intent of the berms will be to maintain existing water velocities and existing rate of channel scour from El Camino Real to the Pacific Ocean, maintain sediment transport during storm events, and maintain existing patterns of stormwater flooding. The three berms will be constructed with a landscaped trapezoidal cross-section. The base widths will vary depending on ground elevation of either side of the berms. The top of the berms will be approximately 20 feet wide, and will be revegetated with native species except in the maintenance paths.

- Berm B7 will be located west of I-5 and south of the San Dieguito River, and will be approximately 1,825 feet long, with a footprint of approximately 4.2 acres. Elevation will vary from +16.5 feet, NGVD to +17.5 feet, NGVD. Culverts will be placed through this berm and berm B8 to help balance water levels in the tidal lagoons and river channel during flood events.
- Berm B8 will be located east of I-5 on the north side of the San Dieguito River, and will be approximately 4,250 feet long, with a footprint of approximately 10 acres. Elevation will vary from +18.5 feet, NGVD to +19.8 feet NGVD. A weir is proposed

to be incorporated into the eastern end to eliminate any backwater effect of the berm on the upstream river channel during flood events.

- Berm B9 will be located east of I-5 and south of the San Dieguito River. The western portion will be 875 feet long and the eastern portion will be approximately 625 feet long, with a combined footprint of approximately 1.8 acres. Elevation will be +19.0 feet, NGVD.

As stated above, there will be some wetland habitat loss from the construction of the river berms. The permanent impacts from B7 and B8, included with the impacts shown in Table 2 above, total 1.01 acres and will be mitigated at a ratio of 4 to 1. Section IV-C.3 discusses the necessity of the river berms for the restoration project.

d. Slope Protection and Erosion Control

Slope protections will be required for several elements, including the berm slopes, a section of the San Dieguito River bank, the slopes formed to create nesting sites, and the slopes created to dispose of dredge material in upland areas.

Stone revetments will be used in three areas: (1) the portion of the southern San Dieguito River bank that is located approximately 600 feet east of the Jimmy Durante Bridge to protect the slope from changes in river scour associated with creation of the tidal basin (W1), (2) on the northern river bank approximately 1,800 feet upstream of I-5 to protect the river berm (B8) at the concave bend from increased river scour, and (3) also on the northern river bank another 1,500 feet upstream to protect the easterly edge of the berm (B8). Section IV-C.3 discusses the need for these protections.

The remaining portion of the earthen berm along the northern side of the channel upstream of I-5 incorporates a geogrid-reinforced erosion-resistant fill to minimize flood-induced streambank scour. Stockpiled topsoil will be used to cover the berm, nesting site and disposal site slopes, which will be planted with native species effective in slope stabilization and erosion control.

e. Beach Access Improvement

Beach access will be improved on both sides of the river at Camino del Mar. An existing pedestrian pathway atop rip-rap along the south side of the river at the inlet will be improved and a wood stairway may be added subject to the approval of the City of Del Mar to provide access to the beach area on the south side of the river, which will have a permanently maintained open inlet. Alternative access from the beach to Camino del Mar may be provided at 29th Street subject to the City of Del Mar coastal development permit. On the north side of the river, the existing pathway to the beach will be improved to provide an ADA-accessible ramp. The two improved pathways will provide access to and from both sides of the river to Camino Del Mar, where beach goers could then use the existing pathway on the Camino Del Mar Bridge to cross the river.

f. Creation of Nesting Habitat

The restoration project includes the construction of four new Least Tern nesting sites and rehabilitation of an existing site. Provision of these nesting sites is not a mitigation requirement under SCE's CDP #6-81-330-A.

The four new nesting sites (NS11, NS12, NS13, and NS14) are the responsibility of the 22nd District Agricultural Association (DAA) under its Coastal Development Permit No. 6-84-525. Following the Commission's approval of the San Dieguito Lagoon as the restoration site for SCE's required mitigation, Commission staff requested that nesting sites be accommodated in the wetland restoration plan. SCE will construct the nesting sites and DAA will be responsible for maintaining and monitoring the sites in accordance with the Commission's approval of an amendment to DAA's CDP 6-84-525. Approval of the DAA's amendment request is expected concurrent with approval of the wetland restoration project.

The four new sites will provide 11.3 acres of flat nesting area for the California least tern, western snowy plover, and other shorebirds. The nesting sites will be somewhat higher than the surrounding wetlands in order to protect the sites from tidal inundation. The base of the nesting sites will be constructed using soil excavated from other restored areas, topped with two feet of coarse sand and shell fragments. The target height of the nesting plateau is approximately +10 feet, NGVD. Two of the four sites, NS11 and NS12, will result in impacts to approximately 2.89 acres of existing wetland habitat. No mitigation is proposed for the nesting site impacts because the least tern nesting sites were authorized and required by the Commission in its actions on an earlier permit granted to the 22nd District Agricultural Association, CDP No. 6-84-525, with the understanding that they might be located in degraded wetlands. The Commission authorized construction of the nest sites without separate mitigation for the wetland fill. In accordance with advice from the Attorney General's Office, the Commission may not at this time require additional mitigation for the activity that was already authorized and required in the approved CDP 6-84-525. (Also see CDP amendment No. 6-84-525-A1.)

The existing nesting site (NS15) is located west of I-5 near the DFG tidal basin. Rehabilitation of this site will include removal of weeds, re-grading, and adding new sand and shell fragments. The nesting plateau for NS15 will be 1 acre, with a target height of +15 feet, NGVD. Maintenance and monitoring of NS15 will be the responsibility of DFG.

g. Construction/Permanent Access Routes

In addition to the staging areas within the footprint of the restoration project, construction staging areas will be required outside the work zone to accommodate the staging of construction equipment and supplies. These outside staging areas will be located adjacent to the footprint of the restoration project. As shown on Exhibit 7 (FRP Figure 4.13) four primary staging areas are proposed, three on the west side of I-5 and one on the east.

Construction equipment will use existing paved and dirt roads within the site and travel will be within the footprint of the proposed construction sites, whenever feasible. However, several temporary construction access roads will be constructed in order to provide access to proposed excavation sites, as well as to accommodate the hauling of excavated materials to the disposal sites. The main access points to the site for large construction equipment will be off of San

Dieguito Drive, San Andres (from Via de la Valle), Camino del Mar and off of El Camino Real. If necessary, access to the site via the Grand Avenue Bridge (off of San Dieguito Drive) will be available but will not be used as primary access for construction vehicles. Construction access roads will be up to 30 feet wide and the roads will be compacted and surfaced with gravel.

All roads will be designed to avoid impacts to nesting areas and sensitive wetland vegetation, wherever possible. At the completion of the project, access routes will be uncompacted and replanted with appropriate vegetation as mitigation for impacts caused within the access routes during construction. Maintenance access also will be maintained along the tops of the proposed berms. On the south side of the river, a permanent maintenance road will be designed off of Racetrack View Drive to allow vehicular access to NS15, located west of I-5. As specified in Special Condition #11, mitigation for impacts to a Caltrans mitigation site (pursuant to CDP #6-02-153) from this permanent maintenance road are required.

h. Disposal Sites

The excavated soil not used for river berm and nesting site base construction will be placed on five upland disposal sites (DS32, DS33, DS34, DS35, and DS36) and the beach disposal site (DS40) shown on Exhibit 5, FRP Figure 4.1b. The upland disposal sites have been designed to mimic the underlying natural landform and use contour grading techniques to the maximum extent practicable. The fill slopes have been designed with contour grading to integrate with the surrounding natural slopes.

One site, DS32, contains existing wetlands. Since the time of the original delineation in 1997, it became clear that some wetlands existing today were not included in the earlier delineation and thus were subject to reexamination. As a result, approximately 1.05 acres of existing wetlands were identified in several areas in the vicinity of DS32. This permanent loss must be mitigated at a ratio of 4 to 1; thus, fill on DS32 resulting from the overall restoration project will require the creation or substantial restoration of 4.2 acres of wetland. As discussed above, this mitigation acreage will be created on the W16 module.

B.5. JPA PUBLIC ACCESS/EDUCATION COMPONENTS

The proposed public access facilities, which are the responsibility of the JPA, include trails as a means of eliminating uncontrolled access and of enhancing public appreciation of the restoration effort, staging areas, viewpoints, a future nature/interpretive center, and a series of treatment ponds to treat freshwater runoff from the surrounding community. The proposed trail will provide controlled access from Jimmy Durante Boulevard to the western edge of the Horsepark facilities east of I-5, a distance of approximately 2 miles. The proposed trail and future nature center also will provide opportunities for nature study and education about wetland values. In addition, the JPA portion of the overall restoration project includes a series of freshwater runoff treatment ponds to filter pollutants from the urban watershed and to reduce the flow of freshwater into the newly restored tidal salt marsh system. Although these are beneficial uses, there will be some impacts to existing wetland habitat as illustrated below and more fully discussed in Sections IV-C.6 and IV-C.8.

Table 3. Summary of Impacts and Mitigation, JPA Trail and Treatment Ponds

	Acres Impacted	Total Required Mitigation
Trail Permanent	0.491	1.655
Trail Temporary	0.197	0.197
Trail Permanent (Segment 7)*	0.060	0.240
SUBTOTAL TRAIL	0.748	2.092
Treatment Ponds 1 & 2 Permanent	0.019	0.019
Treatment Ponds 1 & 2 Temporary	1.806	2.710
Treatment Ponds 3 & 4 Permanent	0.497	0.497
Treatment Ponds 3 & 4 Temporary	2.073	2.073
SUBTOTAL TREATMENT PONDS	4.395	5.299
TOTAL	5.143	7.391

Source: Tierra Environmental Consultants. Wetland Delineation Report for the San Dieguito River Park Coast to Crest Trail, July 14, 2005

* From WRA Environmental Consultants. CCC Wetland Study in the Villages Mitigation Bank, August 30, 2005, and Project Design Consultants Exhibit A Village Mitigation Bank Wetland Impacts, August 30, 2005.

a. Coast to Crest Trail

The Coastal to Crest Trail is a multiple use, non-motorized trail system for hikers, bicyclists, and equestrians. This regional trail is anticipated to ultimately extend for 55 miles from the beach at Del Mar to Volcan Mountain, north of Julian. Some twenty miles of the trail already exist or are under construction, and the JPA operates and maintains the trail system with its ranger staff and a volunteer maintenance and construction crew and volunteer patrol.

The restoration plan contains that portion of the Coast to Crest trail that goes from Jimmy Durante Boulevard to the Horsepark (Exhibit 8, FRP Figure 4.17). (An additional segment from Horsepark to El Camino Real will be the subject of a subsequent permit action.)

- Segment 1a brings the pedestrian down from Jimmy Durante Boulevard to the beginning of the trail (Segment 1b).
- Segment 1b is a 12" high, 6' wide boardwalk for pedestrian use only. This segment begins at Jimmy Durante Boulevard via Segment 1a and skirts the northern edge of a conservation easement along the southern edge of the Fairgrounds south overflow parking lot.
- Segment 2 is the beginning of a pedestrians-bicycles only section of the trail that continues along the southern edge of the Fairgrounds east overflow parking lot. Bicyclists can enter or exit the trail via the south overflow lot from Jimmy Durante Blvd.
- Segment 3 continues the pedestrian-bicycle trail along the southern edge of the Surf & Turf Golf Driving Range. A 6-foot-high net fence will be located north of the trail

outside the floodway to protect trail users from golf balls. The net will be removed during Fairground operations that use the Surf & Turf lot for parking.

- Segment 4 crosses under the I-5 freeway bridge and across two drainage channels. The 12-foot-wide undercrossing (Segment 4b) will be constructed of concrete within the northernmost bay of the I-5 bridge. The drainage channel crossings (Segments 4a and 4c) will be constructed as open bottom concrete culverts.
- Segment 5 parallels I-5 utilizing an existing utility maintenance road.
- Segment 6 continues on the maintenance road south of and adjacent to the shopping center. There is substantial urban run-off in this location. A series of freshwater treatment ponds are proposed (see Section 5.c, below). The trail would be built to allow water to flow between treatment ponds underneath the trail.
- Segment 7 uses the right of way of the existing San Andres Road and existing sidewalk in addition to new trail construction east of the right-of-way.
- Segment 8 will be located along the top of the proposed 4 to 1 slope that will separate the fill area from the restored wetland (W4 and W16). Viewing platforms will be located midway at an appropriate location adjacent to the trail and at the end of this segment.

b. Interpretive Signage Program

The JPA will achieve its educational objectives through use of interpretive panels along the trails, within TP 41, through detailed displays at the future Nature Center, viewing platforms at the boardwalk and Grand Avenue Bridge and docent-led hikes.

c. Freshwater Runoff Treatment Ponds

Freshwater runoff treatment ponds are proposed on a 4.6-acre area along Trail Segment 6 (Module TP41) to treat runoff from a 313-acre watershed in the residential community north of Via de la Valle before it enters the restored wetlands and lagoon. (Exhibit 8, FRP Figure 4.17; Exhibit 9, FRP Figure 4.19; Exhibit 10, Tierra Figure 6; and Exhibit 11, FRP Figure 4.20) The series of ponds will allow high flows to be returned directly to the existing drainage course by flowing over a weir in the first basin. The low flows, which are the most polluted, would pass consecutively through the other three basins in series before returning to the natural drainage course. In addition to the connected ponds, this project component would include: (1) removal of invasive species, (2) creation of a berm for the trail and side slopes for ponds, (3) installation of water quality control devices (e.g., trash rack, sediment trap, oil wastewater separator), (4) installation of weirs, culverts and other piping necessary to make the ponds work from a hydrological perspective, (5) installation of a hard surface trail on the berms, (6) installation of interpretive signage, and (7) replanting of area with wetland and riparian species. The JPA will maintain the ponds on a three-year cycle.

d. Staging/Parking Areas

Additional trail elements include a primary staging area, which will be unpaved, at the site of the future nature center where 60 spaces for cars and small trucks and 15 pull-through spaces are planned. These improvements are part of the current Final Restoration Plan and CDP application. The nature center itself will be reviewed in a separate CDP application. A second permanent staging area would be an unpaved 20-car parking area east of Jimmy Durante Blvd. in a location to be determined on 22nd DAA property as part of a separate CDP. The third unpaved parking area is planned along the west side of El Camino Real to provide staging for the future Mesa Loop Trail. The Mesa Loop Trail and parking area for it will be part of a separate CDP.

The JPA also proposes as part of this CDP a small approximately 5-car parking area at the foot of the Grand Avenue Bridge just north of San Dieguito Drive. SCE will remove a portion of the bridge with the remaining portion suitable for a viewing area. The JPA will maintain interpretive panels to provide visual access into the restored wetland.

B.6. PROJECT MANAGEMENT, MAINTENANCE AND MONITORING PROGRAMS

Management, maintenance and monitoring for the San Dieguito wetland restoration project will be undertaken for each component by various responsible parties.

a. Inlet and Created Wetlands

The wetland restoration is designed to be a self-sustaining tidal system, dependent upon a continuously open inlet. SCE is responsible for implementing a long term monitoring program for the inlet that includes water level measurements, inlet and channel topographic surveys, and water quality measurements. The inlet monitoring program identifies standards for determining when maintenance dredging will be performed. Initial maintenance of the restoration areas will assure that native plants become established and invasive plants are controlled in both the wetland areas and upland areas.

SCE also is responsible for maintaining the structural integrity of slope protections and river berms. Inspections will occur on a periodic basis and after major storm events to identify potential areas of erosion and loss of armor stone. Weirs and culverts will be inspected for structural damage on a periodic basis and following major storm events. Sediment and debris, along with biofouling organisms (e.g., mussels), will be removed from the weir and culverts to maintain functional performance.

SCE is responsible for maintaining the improved beach access and for monitoring beach sand levels. SCE may also be required under a permit from the Regional Water Quality Control Board to implement water quality monitoring during dredging activities to determine if those activities are causing excessive turbidity. The Regional Board will also require water quality monitoring if there is dredged sediment return water from the placement of dredged material on land.

In accordance with the 1991 agreement between SCE and JPA, as amended in July 2005, SCE has established an endowment fund for the JPA to permit the JPA to take over maintenance responsibilities for the entire restoration project.

b. Public Access and Education

The JPA will be responsible for managing and maintaining all of the public access and education components of the project, except for the improved beach access, which will remain as an SCE responsibility. These include the Coast to Crest trail and interpretive overlook at the Grand Avenue Bridge, as well as the future Nature Center and Mesa Loop Trail. In addition, the JPA will be responsible for maintaining the freshwater treatment ponds, including periodic dredging.

c. Nesting Sites

Maintenance and monitoring of the four new nesting sites (NS11, NS12, NS13, and NS14) are the responsibility of the DAA, to be implemented under a separate permit (see Amendment to CDP No. 6-84-525). Maintenance and monitoring for the existing nesting site (NS15) will be the responsibility of the DFG.

d. Wetland Performance Monitoring

The SONGS permit Condition A requires that monitoring of the wetland restoration be done to measure compliance with the physical and biological performance standards specified in the SONGS permit. The SONGS permit Condition D establishes that this monitoring is to be independent and carried out under the direction of the Executive Director of the Commission. The Commission's staff and contract scientists have developed a Monitoring Plan that includes the methods to be used to determine whether the various performance standards have been met (Appendix D). (Also see Section IV-D below.) The monitoring activities required by the Monitoring Plan will be performed by contract scientists under the direction of the Executive Director in accordance with the biannual work programs approved by the Commission and funded by SCE as required in the SONGS permit.

C. CONFORMITY WITH CHAPTER 3 OF THE COASTAL ACT

C.1. CHAPTER 3 POLICIES

The following policies of Chapter 3 of the Coastal Act are applicable to the proposed wetland restoration plan and state:

Section 30230.

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231.

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30233.

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(7) Restoration purposes.

(8) Nature study, aquaculture, or similar resource dependent activities.

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

For the purposes of this section, "commercial fishing facilities in Bodega Bay" means that not less than 80 percent of all boating facilities proposed to be developed or improved, where such improvement would create additional berths in Bodega Bay, shall be designed and used for commercial fishing activities.

(d) Erosion control and flood control facilities constructed on water courses can impede the movement of sediment and nutrients which would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for such purposes are the method of placement, time of year of placement, and sensitivity of the placement area.

Section 30235.

Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply.

Section 30236.

Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.

Section 30240.

- (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
- (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Section 30253, in part:

New development shall:

- (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

Section 30210.

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30211.

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212.5.

Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

Section 30213.

Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred...

Section 30214.

(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:

- (1) Topographic and geologic site characteristics.
- (2) The capacity of the site to sustain use and at what level of intensity.

(3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.

(4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.

(b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article X of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the public under Section 4 of Article X of the California Constitution.

(c) In carrying out the public access policies of this article, the commission and any other responsible public agency shall consider and encourage the utilization of innovative access management techniques, including, but not limited to, agreements with private organizations which would minimize management costs and encourage the use of volunteer programs.

Section 30223.

Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

C.2 WETLAND RESTORATION / EXISTING CONDITIONS

The San Dieguito Wetland Restoration Project Final Restoration Plan (FRP) revised July 2005 (and received September 6, 2005) is proposed by Southern California Edison (SCE) to comply with Condition A of CDP No. 6-81-330-A (SONGS Units 2 & 3) as mitigation for the impacts of operating Units 2 and 3 of the San Onofre Nuclear Generating Station (SONGS). Complete findings for the purpose of Condition A are described in the findings for permit No. 6-81-330-A (formerly 183-73) and incorporated herein by reference. Section IV-E of this report addresses how the proposed FRP meets the requirements of the previous Commission action on CDP No. 6-81-330-A for SONGS Units 2 and 3. The consistency of the proposed mitigation program with Chapter 3 of the Coastal Act will be addressed in following findings.

The San Dieguito lagoon and associated tidal wetlands probably encompassed around 1,000 acres in the mid-1800s. By the end of the 19th century the wetlands and lagoon were already suffering from human disturbance. Over the next 40 years, hundreds of acres of wetland were lost to fill and development, the lagoon mouth was constrained by roads and railroad, and freshwater inflow was altered by Lake Hodges dam. The net effect of these alterations was to reduce or remove tidal inundation to much of the remaining historical wetland and to reduce the tidal prism and freshwater storm flow to the point that, since about 1940, the inlet mouth has remained closed much of the time unless artificially breached. Portions of the historical wetland that remain in open space are currently weedy upland; other parts are comprised of salt marsh vegetation that is maintained by seasonal influxes of freshwater. Some areas are still periodically inundated with saltwater when the inlet mouth is open.

The extent of the various habitat types, including wetlands, was estimated through the analysis of aerial photographs coupled with field observations and sampling and was presented in the 1993 report by MEC Analytical Systems entitled *San Dieguito Lagoon Restoration Project Biological Baseline Study March 1992-May 1993*. This was updated in 1997 by M. Josselyn in *Summary of Existing Biological Resources in San Dieguito Lagoon*. The Commission's staff ecologist determined that these reports provided an adequate basis for restoration planning. The EIR/EIS team conducted independent field investigation, literature review, and review of more recent (1997-1999) aerial photography to confirm or correct the previous habitat maps. In addition, in the period after the preliminary restoration plan was prepared, the applicants' biologists, Commission contract scientists, and staff of the Army Corps of Engineers identified potential areas of permanent project impacts to wetlands. The Commission's staff ecologist determined that these areas were delineated according to the wetland definitions contained in the Coastal Act and the Commission's Regulations and that the areas of impact were accurately estimated.

As a result of the reduced area of wetland habitat and the frequent episodes of poor water quality associated with inlet closures, San Dieguito is missing many species found in other salt marshes in the region. Although most of the physical constraints to the San Dieguito wetlands are for practical purposes permanent, the wetland restoration project is designed to improve significantly the functioning of the existing wetland areas and to convert some upland to wetland by maintaining an open inlet to the sea and substantially increasing the area that is subject to regular tidal inundation by appropriate grading. Grading to alter land surface elevations will, of course, impact the currently existing wetland vegetation.

The alterations to surface elevations and tidal flow that are necessary in order to restore tidal salt marsh also have the potential to alter the hydrology and sediment transport of the San Dieguito River. Were a substantial portion of the riverine bedload to be diverted into the restored tidal wetlands, there could be an increase in scour within the river channel and a decrease in sediment delivery to the beach at the inlet. In order to accomplish the restoration goals without having a negative effect on sediment transport and beach processes, it is necessary to construct berms parallel to the river channel to maintain existing flow characteristics. Portions of the berms will result in fill of existing wetlands.

Three other aspects of the restoration project also will have impacts to the existing wetlands. As part of the biological restoration, upland habitat suitable for nesting by least terns, a federally and state-listed endangered species, is being constructed. Construction of these nesting islands will

entail some wetland fill. Currently, the seasonal salt marsh east of Interstate Highway 5 receives substantial nuisance flow of polluted freshwater that originates from adjacent commercial and residential development. This freshwater inflow is now part of the "new normal" environmental circumstances. In order to improve water quality within the restored salt marsh, this nuisance flow will be diverted into constructed treatment ponds that will be created and defined by a series of berms that will result in fill of existing seasonal wetland. Finally, the provision of educational and recreational opportunities by the construction of a peripheral trail system is an important part of the overall restoration effort to manage and control access. These trails will also have some negative impacts to existing wetland.

The central feature of this restoration project is habitat conversion within the historical wetland footprint from less valuable vegetation types to more valuable tidal salt marsh vegetation types or open water. The vast majority of wetland habitat created (c. 128 ac.) will be converted to tidal habitats from upland that supports weedy, generally non-native (ruderal) vegetation. Ruderal habitats perform some ecosystem services such as providing foraging opportunities for some species of raptors, but, in general, they are of low ecological value. However, there are also about 19 acres of seasonal salt marsh within the project area that will be converted to tidal marsh and about 3 acres of tidal and subtidal habitat that will be temporarily disrupted from construction before being converted back to tidal marsh.

Seasonal marsh habitats are non-tidal habitats that are periodically flooded or saturated by rainfall and runoff. These habitats often occur in shallow basins where drainage is poor and soils are saline because they were once part of the tidal system. Although very dry during most of the year, seasonal marsh may provide valuable ecological benefits during the rainy season. They provide a source of standing fresh water, support pickleweed and other high marsh plant species, and are utilized by some of the same wildlife that is found in tidal systems, including Belding's savannah sparrow. After restoration to tidal salt marsh, these habitats will be wetted throughout the year, which will enable salt marsh plants to be healthier with higher productivity, will support a greater variety of invertebrate prey, and will be utilized by a greater diversity and abundance of vertebrates.

Since the tidal salt marsh will be of much greater ecological value than the existing seasonal salt marsh, the temporary loss of habitat associated with grading and conversion to tidal influence, is considered to be self-mitigating and no additional wetland creation/restoration is necessary to mitigate this conversion. Therefore, seasonal salt marsh will be converted to tidal salt marsh at a 1 to 1 ratio. The excavation is a necessary part of the physical changes required to increase tidal influence and the new habitats will be of greater overall value than the existing habitat. These impacts are also considered self-mitigating and impacted tidal habitat will be converted at a 1 to 1 ratio.

The project EIR/EIS examined five alternative configurations for the restoration of San Dieguito Lagoon. These alternatives were designated: Mixed Habitat Alternative, Maximum Intertidal Alternative, Hybrid Plan Alternative, Maximum Tidal Basin Alternative, and Reduced Berm Alternative. The lead agencies determined, with input from the public and other interested parties including Commission staff, that the Mixed Habitat Alternative was the preferred alternative. The Mixed Habitat Alternative is similar to the design proposed in the SCE Preliminary

Restoration Plan that was previously reviewed and accepted by the Coastal Commission in November 1997.

At that time, the Commission found the Preliminary Plan provides 150 acres of wetland restoration credit to meet the requirements of Condition A, which specifies credit of 35 acres allowed for permanent inlet maintenance and 115 acres for creation and/or substantial restoration. The Commission conditionally approved the Preliminary Plan and authorized the applicants to immediately move the proposed project to the next steps. A condition of approval states:

The Preliminary Plan shall be revised and further developed through the CEQA/NEPA process and result in a Final Plan. If the Final Plan involves any destruction of existing wetland habitat, the Final Plan shall include a permit amendment request to revise the permit condition to allow the minimum amount of destruction of existing wetlands that is necessary for the restoration project described in the Final Plan. All wetland acreage destroyed by the implementation of the restoration project shall be mitigated on a 4 to 1 ratio.

At the time of the November 1997 approval of the Preliminary Plan, the Commission recognized in order to construct the mitigation wetlands there would be some impacts to existing wetlands. These impacts occur either through existing wetlands being converted from one type to another, or from existing wetlands being eliminated by fill to create berms and least tern nesting islands. In addition, since that time, the project has been revised to include the Coastal Segment of the Coast to Crest Trail and freshwater runoff treatment ponds, which also result in impacts to existing wetlands. The impacts from the project to wetland habitat are shown on Exhibit 12, Wetland Impact Map (PDC), which includes a summary table of both impacts and creation/substantial restoration by project module. Pursuant to Section 30233 such impacts are allowed for restoration if there is no less environmentally damaging alternative and all adverse environmental effects are minimized and fully mitigated. Section 30236 also calls for the best mitigation measures feasible. The following findings analyze each project component for its consistency with the above-referenced Sections of Chapter 3 and support approval of the project, as conditioned, to meet the requirements of the Coastal Act.

C.3 RIVER CHANNELIZATION/FLOOD CONTROL

The primary function of the wetland restoration project is the improvement of fish and wildlife habitat; therefore the proposed use is consistent with Section 30236. However, it should be recognized that this small restoration site is a complex system. In addition to the primary objective of improvement of fish and wildlife habitat, the project must be implemented in a manner that satisfies several critical constraints. These constraints include that the potential flooding risk to existing infrastructure and property should not be worse than the "no action" alternative. Second, the potential risk of scour in the inlet channel inducing bridge failure or failure of berms should also be equivalent or less than the "no-action" alternative, and third, the transport of sand through the project area to the beaches should not be disrupted. These constraints must be satisfied for liability reasons as well as the applicants' desire to be a "good neighbor." Satisfying these three constraints result in engineered features that would not be present if the sole objective was habitat restoration. However, the philosophy of the applicants

and agency reviews has been to minimize these engineered artificial interventions and to create a restoration that is sustainable with the minimum maintenance to the extent feasible.

There are three constructed river berms incorporated into the project design that were common to all of the restoration alternatives except the "no action" alternative in the EIR/EIS. The importance of incorporating the berms in the overall project design for any significant restoration of the San Dieguito Lagoon is described in several places in the Draft EIR/EIS. A response to comments regarding the need for the berms and the environmental effects of eliminating the berms was included in the Final EIR/EIS, which states on pg. 6 Response to Comments:

"As described in the draft, berms are needed to maintain existing flood flows and sediment transport when considering the additional off-channel excavations proposed to create, restore, or enhance tidal wetland habitat in these off-channel areas. Without the berms, the proposed project, again due to the proposed dredging and associated increase in tidal prism, will result in lower velocity floodwaters passing through the system, which would tend to drop out sediment within the upper reaches of the proposed wetland restoration project.

The San Dieguito River is a coastal river that supplies littoral sediments to the beach. These sediments are the source of beach sand that provides both a recreational resource and an effective means for shore protection to beachfront properties. Under the present plan for all but the No Action alternative, off-channel tidal basins for lagoon restoration would be created and, at the same time, berms would be incorporated to maintain the effective flow rate of the river channel and bypass these tidal basins. This design would maintain the sand flow through the river reach to avoid potential scour impacts by the project, both riverine and coastal. By implementing the project but eliminating the berms, the hydraulic conveyance of the river system would be decreased, thus reducing sand flow through the system and ultimately to the beach, impacting both the coastal sand supply and increasing river scour within the downstream reaches of the project. Without the berms, river sand would be trapped in the proposed tidal basins, resulting in degradation of the restored wetland areas and a deficit sand supply to downstream areas and the beach...."

A description of how the project would function without the berms is also provided. The potential adverse effects without the berms include disruption of sand flow in the river channel, reduction of sand supply to the beach, scour impacts along the downstream river channel, reduced stability of bridges and river banks and requirements for tidal maintenance dredging and beach sand replenishment. Thus, the potential adverse effects of a project without the berms outweigh the 1.01 acres of permanent impact to tidal and seasonal salt marsh and freshwater and brackish marsh required to construct the berms. The berms are considered a necessary component of the restoration plan and therefore, a permitted use in wetlands. However, Section 30233 requires that unavoidable and permissible impacts to wetlands must be minimized to the maximum extent possible.

The proposed berms are designed to a height of 3 feet above the projected height of a 100-year flood. This additional freeboard is to prevent overtopping in flood events up to the design event (the 100-year flood). Due to the configuration of the tidal basins, computer simulations showed that there could be 2-3 feet difference in water surface elevation between the river and tidal basins at the most upstream point of the berms. Floodwater overtopping the berms with this

elevation difference would be sufficient to scour the berms, washing large quantities of sediment into the tidal basin. This erosion can be prevented by armoring the crest and inside of the berms with concrete or riprap, or by raising the crest elevation of the berm. This latter alternative was considered preferable since the more natural finish to the berm will allow some vegetation cover and habitat value. In addition, because the berms will not be overtopped, this design ensures that virtually all the flow and sediment transported is directed down the channel. This will result in a slightly steeper water surface gradient in the river channel compared with the existing condition and (as demonstrated by the sediment modeling) will result in a slight increase in the sediment delivery (or sediment being transported through the inlet channel). Thus the function of the berm is related to maintaining or increasing the sediment transport through the restoration area, ensuring that the scour of the inlet channel will not be increased as a result of the restoration activities

Despite the fact that the berms are designed to prevent overtopping by a 100-year flood, they are not flood control structures, since they do not prevent tidal and flood flows from entering the restoration areas. They do, however, prevent river flows from entering the restoration areas during floods where strong overbank flows could carry sediment of a geomorphically significant size (i.e., sediment that would reduce the bedload and influence scour characteristics in the river channel). In a major flood, the water surface elevation in the tidal basin will increase at a rate that is close to the rate of rise in the river channel. Therefore there will be only a small water surface slope and the transport of sediment into the tidal wetland under flood flows will be insignificant and similar to the no-action condition. A further ameliorating influence is the formation of scour holes in the general vicinity of the entrances of the tidal basin. This increase in depth will tend to reduce the cross-flow of sediment into the tidal basins (Chang 1998).

An added consequence of designing berms that will not be overtopped by floods of 100-year magnitude is that there will be a transient difference in water surface elevation during a flood event between the river and restoration sides of the berm as the restoration area fills. During large flood events, this water surface difference could create currents of sufficient velocity to move bed load sediments (coarser sediments that will influence scour) into the restoration areas. To address this problem, culverts have been designed to lead to more rapid filling and emptying of the restoration basins and reducing water surface differences that induce these sediment-moving flows. An alternative to a design with high berms and culverts would be one where the berms could be set lower with no culverts. The risk would be that overtopping of the lower berms would lead to erosion and the need for more extensive rock armoring.

Thus, the potential negative impacts of filling 1.01 acres of seasonal, tidal, and freshwater wetlands is balanced against the possibility that: (1) designs of berms with lesser height could erode and require maintenance to both the berms and the restored habitats; and (2) that overtopping could divert sediments through the breaches and reduce the amount of sediment transported to the beach. The risks of flooding and scour are very real and the final alignment represents significant peer-reviewed modeling and the best professional judgment of the design engineers. It represents the 100-year flood as the design event, the standard design used by Federal Agencies such as FEMA. Floods greater than this are expected to cause extensive damage and even at lesser flood events the Jimmy Durante Bridge and other bridges could be jeopardized even with the 'no-action' alternative. The objective of the current design is to ensure

conditions and risks will be no more severe than the existing condition, not to provide structural integrity and zero flooding at events up to the 100-year flood. This design is defensible and conservative (ensuring more sediment is delivered to the inlet channel from the restoration area).

To minimize heavily engineered features and create a sustainable system that requires the minimum maintenance within the constraints of the heavily disturbed and hydrologically altered setting, a detailed modeling study was conducted to assess the required extent of channel protection (Chang, 1998; 2004). This study showed three areas were at potential risk of major damage to regions of the river channel that will be subject to erosion during major flood events with or without the proposed restoration project. Although the project has been designed so that the rate of channel scour is less than or equal to the existing condition, three areas require channel protection from stone revetments, which will be about 3.5 feet thick and will consist of "1/4 ton" quarry rock with dimensions averaging 2'x1'x1'. These are:

- (a) *Stone revetment number 1:* The local area at river bend (the confluence of the San Dieguito River and tidal basin on the west side of I-5). This area is a major constriction to flow and is known to be the location of a major scour hole. This revetment will be approximately 53 feet wide and extend along 600 feet of shoreline with an area of about 0.7 acres.
- (b) *Stone revetment number 2:* *Outside bank of the river bend east of I-5.* Monitoring during the past few years has indicated a slight trend for the river to be moving toward the north-east tidal basin. The siting of the berm along this bank will create a scour hole on the outside of the bend. If the river continues to migrate in this direction it will erode the newly constructed berm over time. More importantly, the restored inter-tidal habitat could be jeopardized if the river migrates in this direction. This revetment will be approximately 79 feet wide and extend along 1,200 feet of shoreline or an area of about 2.2 acres.
- (c) *Stone revetment number 3.* Approximately 1,500 feet upstream of stone revetment number 2. This revetment provides scour protection to the most upstream river bend which initiates channel meandering downstream of the El Camino Real bridge. A weir will extend along 285 feet of this revetment and will cover about 0.4 ac. The remainder of the revetment will be about 130 feet wide and extend along 415 feet of shoreline, covering about 1.2 ac.

The stone revetments at the river bends east of the I-5 freeway are necessary to address bank erosion that has been revealed in continued monitoring. Based on the modeling study, the extensive channel protection was minimized by a range of design modifications such as setting back the berm on the west side of I-5 away from the river channel.

To ameliorate the visual impacts of the river berms, the berm slopes and tops (except where there are trails or maintenance roads) will receive a minimum of 2 feet of topsoil and will be re-vegetated.

The applicants are proposing to mitigate the allowable impacts to wetlands associated with construction of the berms at a 4 to 1 ratio at W45. W45 will be constructed to provide non-tidal wetlands to offset additional temporary and permanent impacts associated with restoration

activities. It will be excavated to form a shallow bowl with a footprint of approximately 8.65 acres. The slope of W45 will be 5.16 acres in area and range in elevation from 7.5 to 6 feet, NGVD. The slope will be covered with wetland topsoil and will be planted with pickleweed (*Salicornia virginica*). Based on observations of nearby reference sites, it is expected that the wetter central area of about 3.49 acres will be naturally colonized by alkali weed (*Cressa truxilensis*). To ensure that the entire 8.65 acre W45 site will in fact function to mitigate the impacts to wetland habitat from construction of the berms, Special Condition #5 requires the 3.49 acre area to be graded to an elevation between 5 to 6 ft., NGVD, covered with wetland topsoil and planted with pickleweed or other appropriate seasonal saltmarsh species.

The berms and slope protections are necessary for the success of the restoration project and have been minimized to the maximum extent feasible. Impacts to the wetlands are proposed to be mitigated at a 4 to 1 ratio and the berms will be re-vegetated to minimize visual impacts and reduce erosion, as required in Special Condition #4. Thus, the Commission finds that as designed and conditioned, the berms and slope protections are consistent with Sections 30233 and 30236.

C.4 INLET DREDGING

The inlet at San Dieguito Lagoon is subject to intermittent, gradual closure on an annual basis due to accumulation of sand in the inlet channel, which gradually progresses to the inner lagoon. Certain kinds of rare storm conditions can move sand into the inlet very quickly, and some larger storm water flows in the San Dieguito River can clear out the lagoon opening. When the inlet is open, water quality in the lagoon is good and the lagoon supports many species of estuarine plants, invertebrates, fish and birds. Closure of the inlet for extended periods can result in significant deterioration of water quality, fish kills, and degradation of existing tidal wetland vegetation. Therefore if the San Dieguito tidal inlet can be maintained open on a permanent and continuous basis, the degradation of water quality, fish habitat, and wetland vegetation can be avoided by increased tidal flushing, and marine resources will be enhanced consistent with Section 30230.

One of the performance standards contained in the SONGS permit (Condition A, section 3.4.a(3)) requires that the tidal prism of the restored wetland be maintained, and that tidal flushing not be interrupted. Restoration of the lagoon will increase the tidal prism and self-scouring capabilities of the inlet, somewhat reducing the closure frequency. However, periodic dredging/excavation will still be needed to maintain an open inlet despite the increased tidal prism.

The Final Restoration Plan for San Dieguito also includes a program of permanent maintenance of the tidal inlet to ensure the continuous tidal flow necessary to achieve substantial restoration of existing non-tidal wetlands and to create new tidal wetlands at San Dieguito.² The maintenance plan is designed to maintain a channel configuration (-2.0 feet, NGVD to -4.0 feet,

² Coastal Environments. 2004. Restored San Dieguito Lagoon Inlet Channel Initial and Periodic Dredging. Technical Report submitted to Southern California Edison, Rosemead, CA 91770, on December 10, 2004. CE Reference No. 04-19.

NGVD) that will result in minimum maintenance cost, minimal disturbance to the lagoon itself, and minimal impact to the uses of the lagoon and beach.

SCE will conduct a long term monitoring program for the inlet channel to ensure a healthy tidal system. This program will involve taking water level measurements, conducting inlet and channel topographic surveys, and measuring water quality, in order to determine when and where dredging is needed to keep the inlet open. The monitoring program identifies the conditions that will trigger the need for maintenance dredging, and the areas to be dredged will be determined by comparing the topographical survey data to the design configuration. Inlet excavation is prohibited from occurring closer than 40 feet from the existing Sandy Lane riprap in order to avoid disturbance.

SCE will perform regular maintenance dredging utilizing conventional construction equipment approximately once every 8 months. The timing and extent of the dredging is based on an analysis of the expected volume of tidally-induced influx of sand into the inlet channel³, and is the minimum estimated maintenance required to maintain an open inlet that will permit tidal flushing of the restoration. Occasional unscheduled excavation may also be required due to sudden closure events.

Special Condition #23 requires the applicants to submit a dredging construction phase impact and mitigation plan, which includes limitations on the location of the inlet channel and specifies that the first priority for dredged sand is to restore usable beach area. Thus, both the initial and maintenance inlet dredging will be conducted consistent with Section 30233(b).

C.5. BEACH DYNAMICS/SAND SUPPLY

The proposed activity will dredge sediment from the San Dieguito lagoon area, and will have the potential to alter littoral sediment transport, alter local erosion patterns and contribute to local flooding.

By separate action, the City of Del Mar has reviewed the lagoon restoration and inlet maintenance program and has found that the proposed project, as conditioned by the City, will be consistent with all relevant City of Del Mar policies and procedures.

a. Regional Sediment Sources and Transport

San Dieguito Lagoon and the Solana Beach/Del Mar coast are in the southern portion of the Oceanside Littoral Cell. This cell extends approximately 54 miles, from Dana Point at the north end to Point La Jolla at the south end. Net littoral transport is from north to south, with average longshore transport rates estimated to be approximately 350,000 cy/yr at the southern end of the cell (Patsch, 2004). Major sediment sources for the Oceanside Littoral Cell include fluvial systems, inland gullies and cliff erosion. Rivers are estimated now to provide approximately

³ Jenkins, S.A., and J. Wasyl. 1998. Analysis of coastal processes effects due to the San Dieguito Lagoon Restoration Project. Report submitted to Southern California Edison, Rosemead, CA 91770, on January 23, 1998. 300 pp, 9 Appendices.

132,000 cubic yards per year, gullies to provide approximately 287,000 cubic yards per year and cliff erosion to provide approximately 55,000 cubic yards per year. (DBAW and SCC, 2002, page 8-43).

The San Dieguito River is one of the largest rivers in San Diego County, with a drainage area of 345.5 square miles (CCSTWS, 1991, page 6-5). Two water storage dams, Lake Hodges (completed in 1919) and the Sutherland Reservoir (completed in 1954) now control 89% of the flow through this watershed and block up to 79% of the sediment that historically was discharged by the river (DBAW and SCC, 2002). Current estimates are that the San Dieguito River supplies up to 12,500 or 13,000 cubic yards of sand and gravel per year (Brownlie Taylor 1981; DBAW and SCC, 2002; and Simons/Li, 1985) to the Oceanside Littoral Cell.

b. Inlet and Beach Dynamics

The basic premise of a coastal sediment budget is that beach width is related to the volume of sediment reaching the coast. Beach width is an important factor in beach recreation, beach access and the storm protective function of a beach. A decrease in sediment supply from San Dieguito River would be expected to contribute to a narrowing of the beaches that rely on this sediment source, such as the beaches in Solana Beach and Del Mar. And, as stated in Section 30253, new development shall:

- (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

As a result of this concern for sediment supply, an initial requirement of the restoration design was to avoid altering the volume of sediment that the San Dieguito River brings to the coast. This element of the restoration project is discussed in more detail in Section IV-C.3, River Channelization.

The tidal characteristics of the San Dieguito Lagoon have been altered by upstream development, the installation of two large dams and various constrictions such as I-5, access roads, and the railroad. The combination of these features has reduced the tidal prism of the lagoon. At present, ocean waves and currents will carry sand into the lagoon mouth, developing a sand spit that will close off the lagoon-ocean connection. The lagoon will often remain closed for extended periods of time and open only when river flooding is sufficient to scour the inlet. Once open, the lagoon may remain open for a few days, a few months or even a few years, depending upon river and coastal conditions.

The flood conditions that open the lagoon mouth are normally high flow events that can scour a deep river channel and add to the scour and erosion of the adjacent beaches. These river floods add new sediments to the littoral supply as well as returning littoral sediments trapped in the lagoon. The deep flood channel normally fills quickly with sediment to become a low-flow channel. If the low-flow channel stays open, it will have flow velocities of approximately 1 meter per second (Elwany, et al. 2003) and beach walkers will be able to wade across this easily. An ebb tidal bar approximately 200 feet to 300 feet wide will develop several hundred feet offshore of the river mouth, serving as a by-pass bar for transport of longshore sediment.

Lagoon conditions during high flood events are quite different from the conditions that occur during low-flow events. The low flow conditions do little to alter the shoreline other than the interruption of potential longshore access and the development of the ebb tidal delta. During high-flow events, the river will scour out inland sand deposits and carry these to the coast, resulting in the fluvial sediment contribution to the sediment budget. High flow events will scour the inlet channel or breach the sand spit if the flows occur when the inlet is closed. These high flow events are influenced by the upstream flows and river conditions, and not by the existence of a low-flow channel at the inlet. During times of high wave energy, the river impacts can combine with wave impacts, resulting in higher amounts of beach erosion near the lagoon than in areas more distant from the lagoon mouth. These erosive beach events have been observed to occur with the high flow events. The main factors contributing to these erosive events are river flows and ocean conditions. The proposed restoration program that will establish a low-flow channel will not alter or augment the beach erosion conditions resulting from these large river flood events.

As stated, when there is a large flood event, this event alters the shoreline. Likewise nourishment events and regional changes in sediment supply also alter the shoreline. The proposed inlet maintenance project will modify the beach conditions immediately seaward of the lagoon. At present, there are times when the inlet is closed and there is continuous beach spanning the inlet area. [Consensus conclusions concerning the historic record of inlet closures, as reported in the Commission's 16 February 1996 staff report on SCE's calculation of credit for San Dieguito Lagoon inlet maintenance (S. Hansch, CCC to F. Melone, SCE), are that the inlet was closed 25% of the time in the 1980's and 37% of the time in the 1990s (Jenkins and Elwany, 2001)]. With the proposed project, there will be a shallow inlet cutting across the beach that will interrupt lateral access along the dry beach. During most times of year, flows will be less than 1 meter per second and the shallow channel will be easy to wade, just as has occurred for those times that the inlet has been open in the past. Also, an inland access route will be improved as part of this project. This inland access route will provide an alternative north/south route for people who do not want to wade, or for times when the river flow is too fast or deep to allow safe wading access. These changes to the beach immediately seaward of the river mouth will be a direct consequence of the proposed project.

c. General Beach Characteristics Near San Dieguito Lagoon

Much of the coast in the immediate vicinity of San Dieguito Lagoon is sandy beach shoreline. North of the mouth of San Dieguito Lagoon is a sandy beach area, locally referred to as North Beach and/or Dog Beach. Further to the north, the shoreline trends slightly westward, the beach becomes narrower and is backed by high, wave-cut and eroding bluffs.

The shoreline at the lagoon mouth has been characterized as a pocket beach, bounded on the north by cliffs and the south by a riprap training wall (Sterrett and Flick, 1994). The width of this beach varies greatly, depending upon wave conditions and outflow from the San Dieguito River during high-flow conditions.

The shoreline immediately south of the lagoon mouth is a sand beach backed by a sand and cobble spit. Historically the San Dieguito River mouth migrated through about a 1-mile wide coastal segment and the sand and cobble spit is a remnant of this migration. (Sterrett and Flick,

1994) Upstream controls on flow and bank locations have restricted the presently active portion of the river/lagoon mouth to the northern portion of its historic range. There is a moderately wide beach that is used for recreation and beach access and that provides some level of backshore protection. However, the spit is susceptible to seasonal erosion and has experienced localized wave overwashing and flooding during storm events.

Homes have been built on much of the barrier spit. The backshore is fixed by a combination of vertical concrete walls, timber walls and riprap revetment, installed to provide some level of protection to the more landward development. Most of the armoring is now in the form of vertical sheetpile seawalls, which over the past fifteen years have replaced nearly all the older concrete and riprap revetments. An exception to this is the area just south of the lagoon, where the older concrete and riprap walls remain. The history of this full section of shoreline armoring has not been researched, but much of it likely follows the trend of the armoring adjacent of the inlet. The shoreline armoring immediately south of the inlet was built in the early 1950s, concurrent with the construction of the homes (Rick, 1999). The original shoreline structures were 10" thick concrete seawalls founded approximately 6 feet below ground (Rick, 1999). Riprap revetments were constructed immediately seaward of these walls in 1980, in response to erosion from storms earlier that year and they were repaired once, in response to damage from the 1982/83 El Niño storms. Thus, the backshore south of the inlet has been fixed for many years, first by vertical concrete walls and later by more seaward revetments, and later still, except for immediately south of the lagoon (Sandy Land subdivision), by sheetpile walls. However, even with these walls and revetments, the beachfront development south of San Dieguito Lagoon has been at some risk from storms since it was built.

d. Beach Changes – Seasonal and Long-Term

The beaches throughout San Diego County have been monitored for many years by the US Army Corps of Engineers, Scripps Institution of Oceanography, the San Diego Association of Governments, the City of Del Mar and various private contractors. These surveys, in combination, can provide a long record of historic shoreline change. Unfortunately, each surveyor has tended to follow different naming conventions and to use different datum and different onshore/offshore termination points for profiles in the same or similar locations. To minimize the confusion that arises from the various names, the rest of this discussion will use the US Army Corps of Engineers names. As such, DM-580 is the southern-most profile in the vicinity of the San Dieguito Lagoon, located at 25th Street in Del Mar, approximately 2,000 feet south of the river inlet. DM-590 is immediately south of the river inlet, SD-0595 is immediately north of the river inlet and SD-0600 is approximately 2,000 feet north of the river inlet, along the Solana Beach shoreline (Exhibit 18).

As a part of the Monitoring Report identified in Special Condition #25, the applicants are required to review all the different profiles and survey information. In the analysis of this historic information, the applicants will need to sort through the differences in coordinate systems, datum and profile naming systems to provide one coordinated history of shoreline change for the beaches to the north and south of the San Dieguito Lagoon. Also, the profiles along the Del Mar shoreline will use the City's SPA (Shoreline Protection Area) line for reporting and referencing all historic and surveyed beach widths. Del Mar beaches generally demonstrate the seasonal profiles that are typical of many California beaches—a wide dry beach in the summer and a

narrower dry beach in the winter months. The Environmental Impact Report for the Del Mar Beach and Riverfront Protective Device (PRC Engineering, 1984) found that the northern beach areas (north of 27th Street) and the southern beach areas (Seagrove Park, south of 17th Street) typically had dry beaches (measured from the backshore to Mean Higher High Water) that were 35 to 55 feet wide in winter and 100 to 200 feet wide in the summer⁴. The middle section of beach (27th Street to 17th Street) typically would be about 90 feet wide in the winter and also between 100 and 200 feet wide in summer. The study also found that, "beach widths during low beach profiles are significantly narrower and in places are as narrow as 15 feet during the highest observed tides." (PRC Engineering, page 10) Key points from this study are that the beach north of 27th Street was markedly different from the beach slightly to the south; the beach adjacent to San Dieguito Lagoon had tended for many years to be narrower than the beach further to the south; and that the beaches tend to have large seasonal changes in width.

All of the beaches in the Oceanside Littoral Cell have experienced some level of human alteration—through construction of jetties for inlet stabilization, construction of shoreline armoring, harbor dredging, sand by-passing or beach nourishment. Del Mar beaches have been altered by the regional alterations in sediment supply (upstream dams, Oceanside Harbor, etc.) and by more localized shoreline armoring and some beach nourishment. Recent beach nourishment efforts include the nearshore placement of 170,000 cubic yards of sand that was dredged from the North Island in San Diego Bay as part of the US Navy Homeporting Project, onshore placement of 183,000 cubic yards of sand as part of the 2001 Regional Beach Sand Project, and onshore placement of sand removed from the San Dieguito inlet.

As part of the SANDAG Regional Beach Monitoring Program (Coastal Frontiers, 2005) beach widths were compiled, with beach width measured from the Mean Sea Level beach landward to an identifiable backshore feature. The survey site (DM-590) to the south of the lagoon mouth has shown dramatic seasonal changes, with the spring profile ranging from 18 feet to 141 feet (from 1996 to 2004) and the fall profile has ranged from 84 feet to 267 feet (from 1984 – 2004). The survey site (DM-580) at 25th Street, about 2,000 feet to the south of the lagoon mouth has shown spring profiles ranging from 111 feet to 236 feet (from 1996 to 2004) and the fall profile has ranged from 143 feet to 241 feet (from 1984 – 2004).

Elwany, Flick and Hamilton (Elwany et al. 2003) examined beach changes in the vicinity of San Dieguito Lagoon, using beach profile data for the 23-year period from 1978 to 2000, with an interruption in data from 1984 through 1991. This study effort concluded that the seasonal beach variability at the Del Mar is large compared with other local beaches. It also concluded that the beach south of the San Dieguito lagoon inlet has historically been eroded by flood events from the San Dieguito River, with these impacts far more apparent at the survey site immediately south of the inlet than at the survey site approximately 2,000 feet further to the south. The study also examined the effects of artificial openings of the lagoon mouth and concluded that the effects on the beach are small and not statistically significant.

⁴ Coastal engineers and scientists consider the complete beach to be the zone from the dry shore through the nearshore, to a depth of at least – 30 feet, mean lower low water. Thorough surveys of beach conditions cover this full zone. However, dry beach width is often used to provide an indication of the beach conditions for purposes of access and recreation and as a surrogate for overall beach quality.

The final set of data for the beaches adjacent to San Dieguito Lagoon come from Dr. Gregory Stone, an expert from Louisiana State University who has been hired by Save The Beach to examine shoreline change adjacent to the San Dieguito Lagoon. Part of his work included the acquisition of 10 different wading depth surveys along portions of the San Dieguito beach area, taken at various times from December 2000 through December 2004. These surveys add to the existing historic of beach change in the area and provide information that is in general agreement with other survey reports. The only formal report on beach conditions submitted by Dr. Stone to the Commission is from February 18, 2001, which provides his analysis from beach profiles that were taken December 19, 2000 and again in January 16, 2001, a one month time difference⁵. In addition to the 2001 report, Dr. Stone has provided computer files that contain survey information from the winter 2000/2001 through the winter 2004⁶.

Dr. Stone's beach surveys show that the beach immediately south of the inlet has a width that ranges from 57.5 feet (in March 2003) to 190 feet (in November 2002), where beach width was measured from 0' Mean Sea Level to the back shore. The Mean Sea Level to back shore distance is the same beach width measure that was used by Coastal Frontiers in the Regional Beach Monitoring Program and these beach widths are within the ranges reported earlier. Generally, the Stone surveys show that the beach near the inlet is narrower than the beach further to the south; however only 4 of the profiles extended far enough away from the inlet to show this geographic trend in beach width. Based on rough examination of the profile data, the pivot point for a wider beach seems to be about 700 feet south of the inlet (at about 29th Street). This observation has not been developed from any mathematical tests, but does agree with the 1984 EIR finding that 27th Street was a dividing point for beach conditions, with the beach north of this point exhibiting a narrower winter profile than the beaches south of 27th Street. It also suggests that the surveys at 25th Street can be considered an area of beach that is outside the historic influence of changes resulting from high-flows at the San Dieguito River.

One of the reasons the beaches adjacent to the lagoon have been studied by so many researchers is that there are differences in opinion about the impacts to the down coast beaches from maintaining the inlet open for longer time periods than it would open through natural breaching. Also, the possibility that the inlet opening project could have an adverse impact on local beaches is one that is of serious concern to the Commission. Efforts have been made to correlate conditions of the beaches adjacent to the inlet with whether or not the inlet is open. When the inlet is open, it will trap small volumes of longshore sediment that will be carried into the lagoon through tidal action. In studying the lagoon, Dr. Stone (Stone 2001, page 45) concludes that, "All indications are that these downdrift beaches will undergo accelerated erosion directly attributable to the impedance of longshore transport from north to south." (Stone 2001, page 25) Dr. Stone's concerns were two-fold—that the lagoon system may not establish an ebb tide delta which is one of the main mechanisms for longshore transport of sediment across the inlet; and that large volumes of littoral sediment will be trapped in the lagoon and that the deficit of littoral sediment

⁵ In June 2004, Dr. Stone and Dr. FitzGerald provided *Analysis of Sand Resources in the Vicinity of the San Dieguito River, Del Mar, California*; this report provided information and recommendations for material within the lagoon, and did not address changes to the beach area.

⁶ On September 6, 2005, staff received "Beach and Nearshore Profile Monitoring at Del Mar Beach: Mouth of the San Dieguito River, Del Mar, California" prepared by Gregory W. Stone, Duncan Fitzgerald and Xiongping Zhang (October 27, 2004) which includes the profile information and some general discussion about observed beach changes.

will contribute to beach erosion. As noted by Jenkins and Elwany (Jenkins and Elwany, 2001) an ebb tide delta does regularly develop offshore of San Dieguito Lagoon when the inlet is open. They have provided photographs and survey information that show the presence of an ebb tide delta and this issue seems to have been resolved by the provision of additional information to the concerned parties.

The proposed restoration effort will increase the tidal prism of San Dieguito Lagoon, but this increase will not be large enough to maintain an open tidal inlet. The restoration program must dredge the inlet and the channels on a regular basis to maintain the tidal exchange. Section 30233(b) of the Coastal Act states in part: "Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems." The excavation from the restoration effort and from the maintenance effort must be considered for beneficial reuse for beach nourishment. As identified in Restored San Dieguito Lagoon Inlet Channel Initial and Periodic Dredging (Coastal Environments 2004), following the main restoration effort, the maintenance plan calls for the removal of 4,000 cubic yards of sand from the inlet and west of the Highway 101 Bridge and 12,000 cubic yards of sand from the channel west of the railroad bridge. This sand removal will occur every 8 months. The maintenance plan also required the removal of approximately 4,000 cubic yards of sand from the channel east of the railroad bridge every 2 years. Occasional unscheduled dredging may be needed to address sudden closure events (Coastal Environments 2004). The maintenance activities are provided as part of the project and Special Condition #24 insures that all dredged beach quality sand will be placed on an adjacent beach.

Dr. Stone concludes his study of San Dieguito Lagoon with recommendations that a detailed monthly monitoring program be developed to further study the San Dieguito Beach area, since, "there is simply too much at stake in terms of maintaining seawall protection and the structural integrity of expensive property along Sandy Lane, the site where erosion will likely accelerate, to rely on approximate predictions... This is not meant as a criticism of modeling *per se*, but a realistic statement of what is at stake... A detailed sand management plan should be developed and implemented that caters to the maintenance of the downcoast beach after each successive dredging. A threshold beach volume level could be calculated and if reached a remedial dredge and fill plan should be implemented immediately to protect downdrift property." (Stone, 2001, page 46)

Dr. Stone's discussion suggests that if the inlet were to alter local sediment sand supply, the only area of concern for erosion would be to the south of the inlet. A detailed study of directional sediment transport (Coastal Environments, 1998) has found that individual sand particles can move up and down coast, and offshore many times and that longshore transport is in both directions. At Agua Hedionda Lagoon, approximately 12.5 miles north of San Dieguito Lagoon found that 80% of the sediment traveling past the entrance to the lagoon was being transported from north to south, and 20% of the sediment was being transported from south to north. The Carlsbad Submarine Canyon is slightly south of Agua Hedionda Lagoon; the canyon "alters the local wave regime and decreases the northward longshore transport at Carlsbad compared with Oceanside." (Coastal Environments, 1998; Vol. II, iii) And, while the variation in sediment transport direction at San Dieguito would not be exactly the same as at Agua Hedionda - the shoreline orientation at San Dieguito Lagoon is slightly more north-south and transport is not

altered by proximity to a submarine canyon and the shoreline has a slightly different exposure to waves, nevertheless the study for Agua Hedionda does indicate that the San Dieguito coastal area may also experience significant northerly transport of sediment throughout the year. Also, the San Dieguito River supplies beach quality material to adjacent beaches north and south of the lagoon mouth. Special Condition #25 requires beach monitoring prior to every dredging and disposal event and that results of the monitoring be used to place the beach quality sand where it is most needed.

The historic beach profiles show that the beaches in the vicinity of San Dieguito Lagoon have exhibited significant seasonal and interannual changes. While the beach profiles have noted beach widths greater than zero when "beach width" is defined as the distance from mean sea level to the back beach, there are often cases when there is no dry beach during high or extreme high tide conditions. Dr. Stone's suggestion that the beach fronting Sandy Lane be provided with some threshold volume of sand is recommending a condition that has not been observed historically. Over the time that the revetment has been in place immediately south of the inlet, waves have been observed to break on the revetment and there has been no dry beach fronting the revetment. Furthermore, there is no evidence that indicates the proposed inlet management project will alter the up or down coast shoreline beyond what has been occurring naturally.

The Commission recognizes however, that there can be impacts or changes to the shoreline that are not anticipated. As part of any project of this scale, the Commission routinely requires some monitoring in case unanticipated effects arise. Since sediment transport at this beach is both north to south and south to north, the monitoring should responsibly address the beaches both north and south of the lagoon. Special Condition #25 outlines the elements of the monitoring program and includes both north and south profile locations and control sites. The monitoring will use sites immediately adjacent to the inlet (DM-0590 and SD-0595) as indicators of change to the adjacent beaches as well as sites that are far enough from the inlet that they should not be influenced by the inlet (DM-0580 and SD-0600). These more distant monitoring locations have been selected to provide an indicator of regional shoreline changes that have occurred beyond the influence of the inlet. In addition to these four historic profile locations, the condition requires the monitoring program to include three new profile locations approximately 500 feet, 1,000 feet and 1,500 feet south of DM-0590 (the survey point immediately south of the inlet). These new survey locations should correspond to the extent possible to locations where historic survey information is available as provided by Dr. Stone for the period between 2000 and 2004. The profile locations approximately 500 feet and 1,000 south of DM-0590 (SIO1) are in the approximate location of the profile identified by Dr. Stone as being RE-13 and RE-18, respectively.

The seasonal full depth profiles will provide information on the littoral processes adjacent to the inlet—shifts in onshore to offshore sediment transport or large scale modifications to the littoral area. They will continue upon the existing historic record for surveys at the four historic locations. The new full profile survey has been added to give a better understanding of the possible changes noted above and to enable the researcher to estimate changes of overall sediment volume within the area downcoast of the inlet. The more frequent wading depth profiles at seven locations will be used to track short-term beach changes, indicate where inlet dredge material should be placed, and provide early warnings of changes in the shoreline

dynamics of the area. Save The Beach has requested that there be 4 new profile locations included in the beach section between DM-0590 and DM-0580 that would be measured only with wading depth profiles. The monitoring program outlined herein and provided in Special Condition #25 will provide shoreline change information of a scope and detail that will serve the project purposes and, if necessary, the needs of the CPT Panel. The addition of one more wading depth profile will not add appreciably to the project information and the replacement of monitoring as specified in Special Condition #25 with 8 wading depth profiles will limit the monitoring information's utility to the CPT Panel should it ever be convened as a result of shoreline changes that exceed the "triggers" specified in Special Condition #25.

Special Condition #25 identifies three separate "triggers" that would lead to rapid study of the situation at the San Dieguito Lagoon area. The first two triggers are the observation of a persistently narrow beach at either of the profile locations (DM-0590 and SD-0595) adjacent to the inlet. These triggers are the occurrence of an extremely narrow beach for either 6 months or three consecutive surveys (whichever is the shorter amount of time) at either beach adjacent to the inlet. These beach conditions would be of concern since a narrow beach can be a normal seasonal occurrence, but persistence of a narrow beach for many months has not happened and would be a trend that differs from past conditions. The final "trigger" for concern would be if the beach widths adjacent to the inlet were unusually narrower than the beach areas further from the inlet. As noted earlier, the beach immediately adjacent to the inlet has routinely been narrower than the beach area further from the inlet. However, the historic surveys have shown that there are some limits to the differences between these beach sections. The surveys indicate that there has never been more than a 180-foot difference in beach width between DM-0580 and DM-0590, and if the beach width difference should exceed this limit for two consecutive surveys or 6 months, there would be cause for concern. The "triggers" would cause the applicants to implement a contingency plan to investigate the problem and consider augmenting the beach area with additional sand. While the Commission finds no reason to suspect that the proposed project would result directly in adverse impacts to the adjacent beaches, the monitoring triggers have been designed to provide an early alert to potential beach problems. Within two weeks of any trigger being met, the Executive Director would convene a panel of coastal experts (Coastal Processes Technical Panel, CPT Panel) to examine the monitoring information, all historic data, inlet conditions, and any other relevant information that can be readily obtained. To facilitate the prompt examination of the problem, Special Condition #25 outlines the formation of this panel, the required range of expertise and requires that the applicants insure prompt involvement by the required CPT Panel members through retainers, on-going contracts, or other agreements. In addition, the condition acknowledges that the Executive Director has the discretion to convene the panel at any time should the surveys or analysis indicate changes to the beach area that are abnormal, regardless of whether the identified "triggers" have been met.

The CPT Panel will be given full access to all project design materials, historic shoreline information, monitoring reports and other relevant information, and will meet once following the first beach survey and thereafter a minimum of twice per year, and additionally as necessary following shoreline changes that exceed the identified triggers. Remote conferencing may be used at the discretion of the Executive Director. Within 3 months of convening as a result of shoreline changes that exceed the identified triggers, the expert CPT Panel should provide to the Executive Director a written report that outlines the reason or reasons for the CPT Panel being

convened; likely range of causes; measures, if any, that should be taken to correct the immediate shoreline erosion problem, such as beach or dune nourishment, sand by-passing, etc.; recommendations for additional monitoring or studies needed to determine the success of the interim corrective actions; recommendations for modified "triggers" to better respond to identified shoreline changes; and, recommendations for follow-up CPT Panel meetings. The applicants shall be responsible for taking all necessary steps and obtaining all necessary authorizations to implement the recommendations of the CPT Panel.

The CPT Panel shall be composed of coastal professionals who are familiar with local coastal conditions and have expertise in the areas of coastal engineering, oceanography, coastal geology, littoral sediment transport, lagoon and inlet hydrodynamics, or other applicable areas. Within one month of issuance of the permit, the applicants shall provide the Executive Director with a list of 10 experts to be considered for service on the CPT Panel. To assure independent, unbiased analysis of the survey information and beach conditions, panelists shall be independent of both the applicants and Save The Beach and shall not have received any funding from either group, within the past two years, for any work relating to San Dieguito Lagoon or Del Mar Beach. All recommended panelists must have documented expertise in the required knowledge areas, through educational achievements, academic degrees, or published peer-reviewed papers. When experts retire from the panel, the applicants shall immediately provide the remaining panel with a list of 4 potential new panelists (with documented expertise), and the remaining panel members shall determine who will best complement the existing panel expertise. The shoreline monitors shall provide input to the panel and attend the panel meetings but shall not be panel members. The applicants shall be responsible for all panel expenses, including the panelists' travel, per diem and salaries, salaries for support staff to record meetings and prepare reports, and costs for meeting space, conference calls or other communication requirements.

The Executive Director, or designee, shall be the permanent chair of the panel and shall serve as a panel member; a minimum of five additional experts shall serve on the Panel. After consultations with the City of Del Mar, the City of Solana Beach, the SANDAG Shoreline Preservation Committee, Executive Director of State Lands Commission, Executive Director of California Department of Parks and Recreation, the Del Mar Sandy Lane HOA, and the Surfrider Foundation, the Executive Director will select the panel members from the list of experts.

As noted earlier, the City of Del Mar has also reviewed this proposed project and has approved the project, with conditions. The City has required conditions for sampling, testing and placement of dredge material and for shoreline monitoring that are in agreement with Special Conditions #24 and #25. However, the Contingency Condition required by the City of Del Mar differs from Special Condition #25 in that the City's condition requires, "If expert review of statistical analysis and other quantitative data show that the restoration project has caused a loss of Del Mar beach sand beyond historical values, SCE will take all necessary steps and obtain all necessary authorizations to replenish the sand lost from the beach area or close the lagoon inlet channel if it is determined by the City and California Coastal Commission that sand loss is a direct result of the project and that beach sand loss cannot be mitigated by sand replenishment."

Special Condition #25 uses the same triggers as the City of Del Mar, but provides more detail into the development the expert panel, the interim steps that could be taken for beach restoration, the range of more longer-term options that could be taken and provides for Commission review

and approval of any change to the restoration program. The two conditions, while not identical, do both provide for the protection of the beach area and provide a mechanism to reexamine the restoration project if significant beach changes are observed. The further detail provided in Special Condition #25 will give a stronger guarantee that all coastal resources are considered during the examination of unexpected adverse beach impacts, just as all coastal resources are being carefully considered in the initial restoration program.

It is very unlikely that shoreline erosion will be identified, or that, if identified, the erosion cannot be corrected by active beach nourishment or other management options. However, in the very unlikely event that the only option for protection of the public recreational beach amenities is to cease the inlet management effort, the applicants will be required to reopen this permit and develop a new alternative that will fully mitigate for the habitat losses resulting from construction and operation of the San Onofre Nuclear Generating Station.

Downcoast property owners and Save The Beach have repeatedly voiced concern regarding the potential impacts of the proposed restoration project and continued maintenance dredging that is expected to open the lagoon mouth with a considerably larger cross-section than exists at present (Stone, 2001). Save The Beach has recommended that a total of 8 locations along the shoreline be monitored with wading depth surveys; and that the triggers for convening the Coastal Process Technical Panel be based upon the short-term, summer survey record developed by Save The Beach. These recommendations have been given consideration; however, the proposed monitoring plan, with 7 monitoring locations, will provide a better range of useful information than the plan proposed by Save The Beach. In addition, there was no basis for the triggers proposed by Save The Beach while the triggers that were developed in concert with the City of Del Mar are based on historic records and shoreline observations. Save The Beach has also requested that another tide gauge, in addition to those located on the railroad bridge and Grand Ave. bridge and other locations east and west of the freeway, be added in the area between Highway 101 and the railroad. These tide gauges provide information related to water height, dissolved oxygen, salinity and water temperature and installation of an additional tide gauge will occur as part of the independent monitoring effort at the Highway 101 bridge in response to this request.

The overall project has been designed to maintain the pre-project fluvial supply of sediment to the littoral cell. The proposed restoration project will not increase or change any long-term or regional erosion trends; neither will the restoration project alter future beach losses that are expected to occur with a rise in sea level. However, the adjacent property owners are concerned about potential localized impacts to sediment deposition and erosion patterns. As noted previously, the area downcoast of the lagoon has been subject to erosion and flooding for decades; in the 1950s, the original development included vertical concrete seawalls as a protective feature. Ever since the development south of the lagoon mouth was constructed, it has experienced flooding from both storm waves and high-flow events on the San Dieguito River. As noted above, the proposed project will not modify or augment the flow characteristics of a large flood event and there will be no change in the flooding characteristics to which these downcoast properties will be exposed. Therefore, the Commission finds that the proposed project is consistent with Section 30253 of the Coastal Act.

Finally, as noted above, there is little reason to expect that the establishment and maintenance of a low flow channel will alter any beach areas except for the beach immediately fronting the lagoon. However, to insure that the proposed restoration effort does not contribute to adjacent erosion, Special Conditions #24 and #25 require that all dredged or excavated material that is suitable for beach use shall be placed on the beach; that SCE undertake a beach monitoring program of the beaches up and downcoast of the lagoon mouth and that the results of this monitoring shall be used to identify appropriate placement sites for all excavated or dredged beach quality material. As described in the project description and as conditioned, the Commission finds that the proposed lagoon restoration and inlet management project is consistent with Sections 30233(b) and 30235 of the Coastal Act.

C.6. WATER QUALITY

The proposed project will improve water quality and coastal resources by maintaining an open inlet to the lagoon, increasing tidal circulations, restoring wetland functions and increasing wetland area. In addition, sandy sediments dredged near the lagoon inlet will be used for beach restoration adjacent to the inlet and fine-grained sediments and soils from within the project footprint will be used to construct berms necessary to the restoration project. Surplus fine-grained material will be placed at designated upland disposal sites. Since the project will result in a healthy wetland with good tidal exchange, the biggest threat to water quality is likely to occur during the construction phase.

The applicants have submitted a Stormwater Pollution Prevention Plan which includes adequate Best Management Practices (BMP) to minimize impacts of construction on coastal resources. In addition, Special Condition #6 includes requirements to reduce the water quality impacts of public access through the restored wetlands with conditions on trail construction and maintenance. Special Condition #7 addresses the requirements for a structural BMP (freshwater runoff treatment ponds) that is being created to minimize the impacts of a 313 acre residential/commercial watershed and Special Condition #8 addresses the mitigation requirements for those treatment ponds. Special Condition #13 requires that the applicants provide a copy of a comprehensive water quality monitoring plan required by the San Diego Regional Water Quality Control Board (SDRWQCB), copies of water quality monitoring reports and any changes to the August 2, 2004 SWPPP to the Executive Director.

a. Dredging Impacts

Dredging of the inlet channel will likely have short-term impacts on water quality such as increased turbidity and possibly release of sediment-associated pollutants. Best Management Practices (e.g., silt curtains, slowing work during peak currents if turbidity exceeds standards) will be used to minimize these impacts. A comprehensive water quality monitoring program for impacts associated with the dredging is required by the SDRWQCB and will be used to assess the effectiveness of the BMPs and to make adjustments to the dredging operations as needed to protect water quality. Sediment sampling to date has not revealed significant sources of contamination in the inlet sediments. Additional samples will be taken during the dredging operations to confirm that the sediments can be used for beach nourishment without threatening water quality.

b. Construction Impacts

The Stormwater Pollution Prevention Plan (SWPPP) for the project is required by the State Water Resource Control Board's General Permit for Discharges of Storm Water Associated with Construction Activity (Order 99-08-DWQ) and requires a wide array of source control and treatment control BMPs for use during project construction. The current version of the SWPPP, dated August 2, 2004, adequately addresses site-specific construction impacts of the project as currently described. Site-specific conditions of this project include a construction staging area on the beach, dredging and berm construction in a small coastal estuary, and dewatering runoff from upland placement of clean dredged material.

c. Trail Surfacing and Maintenance

Special Condition #6 requires that surfacing material for the Coast to Crest Trail use pervious surfacing materials as described in Section 4.6 of the Final Restoration Plan. The pervious materials will allow for infiltration of rain, minimizing the runoff of soil, manure or other pollutants to the wetlands. Special Condition #6 requires that trail surfacing material be either decomposed granite or alternative pervious materials (approved by the Executive Director) that provide equivalent water quality protection. The exceptions are for few areas of the trail where a solid surface is required for safety reasons. The trails are required to include covered trash containers to minimize the impacts of littering and to avoid the development of polluted runoff by rainwater entering the containers.

Special Condition #6 requires that maintenance of the trails be the responsibility of the JPA in accordance with the Park Facility Management Plan described in Section 4.6.2.4 of the approved Final Restoration Plan. The trail maintenance plan will include the requirement to perform regular trail maintenance, including manure and trash removal from and around the trail. The maintenance program will also include a monitoring component that will determine when and how often trail cleanup should occur to ensure that the trash containers do not overflow and that neither trash nor manure migrates from the trail into the wetlands, with the condition that under no circumstances shall trail maintenance occur less than once every two weeks.

d. Urban Runoff and Stormwater Discharges

Although this restoration project will significantly improve the water quality of the wetland habitat, the wetland will still be subjected to impacts from stormwater and various nonpoint source pollutants. The JPA will construct and maintain freshwater runoff treatment ponds with a trash rack, sediment trap and oil/water separator that will serve to reduce the impacts of a 313 acre urban watershed (see below). While this structural treatment BMP will reduce the impacts of one subwatershed, many others will continue to discharge to the San Dieguito River and Lagoon. After the project is completed, there will be at least 6 other discharges into the restoration area from stormdrains exceeding 4 feet in diameter. The San Diego Regional Water Quality Control Board's permit for this project (Waste Discharge Requirements, Order No. R9-2005-0213) indicates that there are currently no significant structural BMPs on the tributaries to this wetland.

While the applicants are not responsible for the quality of water flowing into the San Dieguito River and Lagoon from outside the project boundaries, they will be constructing structural BMPs

on two 48-inch stormdrain outlets that will be constructed to move stormwater past the DS32 dredged material disposal site (Special Condition #3). The structures will use a technology known as Continuous Deflector Separation (CDS) and be sized to adequately capture pollutants, conveyed from Via de la Valle, prior to discharging into the proposed wetlands. These structural BMPs will be placed within the City of San Diego storm drain easement and will be maintained by the City of San Diego.

e. Freshwater Runoff Treatment Ponds

The San Dieguito River Park Joint Powers Authority (JPA) is proposing to construct a complex of freshwater runoff treatment ponds associated with construction of the Coast to Crest public access trail. The ponds are located southwest of the southern terminus of San Andres Drive and shown as TP41 on Exhibit 5 (FRP Figure 4.1b). Currently, wastewater from surface runoff is discharged via a storm drain to the area of the proposed treatment ponds resulting in areas of disturbed freshwater marsh, disturbed brackish marsh, and disturbed remnant salt marsh. The treatment ponds would capture this runoff and filter it through a system of created wetlands planted with native wetland plant species.

The report prepared by Tierra Environmental Services titled *Wetland Delineation for the Proposed San Dieguito River Park Coast to Crest Trail, San Diego, California* revised July 14, 2005 describes the primary objective of the treatment ponds to be filtration of sediment, nutrients, heavy metals, oily substances, and invasive plant species collected from the watershed during low hydrologic flows. The secondary objective is to reduce the flow of freshwater into the tidal salt marsh system.

The treatment ponds are designed to handle the typical small storm, which is defined as a 1-hour duration storm event; thus, it is not the intent of the treatment ponds to handle all storm events. Instead they are designed to handle all non-storm or low-flow urban runoff as well as typical small annual storm events. All other storm events would flow over the spillway and riprap armored slope (or through a weir and discharge culvert) into an open channel leading towards the San Dieguito Lagoon and River. Even with the ponds only able to handle a small one-year flood event, 100% of the non-storm flows and most of the smaller storm events will still flow through the treatment ponds.

The above-cited report by Tierra Environmental Services describes the function of the treatment ponds, consisting of four basins (ponds) (Exhibit 10, Figure 6 from Tierra report), as follows, beginning with basin 1 at the storm drain discharge and proceeding counter-clockwise.

"1. The first basin, located at the storm drain discharge, is the smallest. It has an entry elevation of 10.0' MSL and an exit elevation of 9.5' MSL. The intended function of this basin is to capture propagules of invasive plant species, heavy metals, and sediments as they enter the system. The basin inlet will also contain a trash rack, designed to prevent larger pieces of trash from entering the system. This basin will be dredged approximately every three years to remove the invasive species as they grow and remove the minimal sediment transported through the watershed. The trash rack will be looked at semi-annually to make sure that it has been cleared of build up. [Note: Special Condition #10 requires that vegetation and accumulated sediment in Ponds 1 and 2 be removed no more frequently

than annually but at a minimum of once every three years, and that invasive plant material be removed annually.]

The system floodwater bypass is located adjacent to this basin and will flow over the trail to the east as well as through a weir structure and culvert system. It is armored (with concrete side-slopes, concrete spillway, the concrete trail surface and rip-rap rock) to maintain its form during more intensive storm events. Bypassed flows will feed into the larger marsh of the San Dieguito River.

2. The lower hydrologic flows will continue through the system entering the second basin directly to the west at 9.0' MSL. To promote positive flow through the system, the base contour is set at the exit elevation of 8.5 MSL. The design is sinuous to maximize bio-filtration during base flow and becomes gradually more direct from entry culvert to exit culvert as flows increase.

This basin will remove primarily oils and nutrient loads but will also function as a back up for finer sediments and invasive species. This basin will be dredged over a two-year period, with dredging the east and west portions of the basin in alternate years. The dredging will be conducted in conjunction with the first basin to ensure that only one of these areas is dredged per year. The design also supports habitat refuge during moderate flows by creating small islands.

3. The third basin directly to the south of the second receives flows at an elevation of 8.3 MSL. It has an exit culvert elevation of 8.0 MSL. The design and intent of this basin is to provide for the natural use of these excess waters, prior to them reaching the high salt marsh lagoons of the restoration project. This urban water, regardless of the water quality at the discharge point, will have a negative affect on the salt marsh proposed next to the site. The area will likely convert to a brackish marsh if too much urban runoff accumulates in the newly dredged marsh. The quantity of water reaching the marsh will be diminished by the temporary holding of the water in these ponds. A certain volume will be taken up by the proposed riparian trees and freshwater marsh species. Some of the ponded water will be lost through evaporation and transpiration. Furthermore, since the bottom of the pond is not sealed, a certain amount of water will percolate. With the lower treatment ponds in place, the volume of fresh water eventually released into the tidal wetlands would be reduced by approximately one-half what it would have been if the lower treatment ponds were not constructed. Thus if the lower ponds are eliminated, then more fresh water will be introduced into the salt water marsh. For this reason, the ponds as proposed are considered the optimal size, with the smallest wetland impact that meets the project's objectives.

This pond is not proposed to be maintained and cleared of vegetation, since the greater the biomass the greater the rate of evapotranspiration. Another function of the pond will be the last line of defense in a containment scheme. If a major pollutant enters the pond system, it will be somewhat treated and contained within the four basins, with a delay of pollutants reaching the enhanced and constructed salt marsh wetlands to the south. Once the pollutants reach the open lagoon, the spread of the pollutants will be much greater and potentially more damaging to the marsh than it would be to the wetland ponds.

4. The fourth basin will have an entry elevation of 7.8 MSL and an exit elevation of 7.5 MSL. This basin functions in the same manner as the third basin. This final basin in the system will empty via a pipe to the salt marsh created by SCE [with a discharge] elevation of 4.5 MSL. This basin will not require maintenance nor will vegetation removal be required.”

As stated, the site of the proposed treatment pond system currently collects runoff through an existing storm drain at San Andres Drive from the 313 acre watershed upland of the discharge point. The influx of runoff in this area has created an artificial situation where water impounded by an existing gravel road has created an area of mixed fresh, brackish and salt marsh habitats. During especially wet years, such as the 2004-2005 rainy season, storm water overtops the gravel road and sheet flows into disturbed areas to the south. The areas to the north of the existing road (Ponds 1 and 2) and south of the road (Ponds 3 and 4) have been delineated as wetlands based on the State definition of the presence of any one of three wetland parameters including hydrophytic vegetation, wetland hydrology and wetland soils. (Exhibit 11, FRP Figure 4.20)

Due to the impacts to existing wetlands associated with the proposed treatment ponds, the treatment system must be analyzed for its consistency with Section 30233 of the Coastal Act. Although not part of the restoration required by the Commission to be implemented by Southern California Edison as mitigation for SONGS, the treatment ponds have been developed by the JPA in connection with the public access trail system as part of the wetland restoration effort encompassed by this coastal development permit. The Commission finds the treatment ponds are a beneficial component of the restoration plan by preventing discharge of harmful pollutants and reducing freshwater flows into the restored tidal salt marsh system. Therefore, the ponds serve a restoration purpose, which is a permitted use in wetlands pursuant to Section 30233. In addition, in connection with the public access trail, the JPA has proposed an interpretive program as part of the treatment ponds and trail system to offer the public an ecological and educational opportunity similar to the nature study function which is also a permitted use in wetlands.

However, Section 30233 allows filling and dredging of wetlands for restoration only when there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects. In response to this provision of the Act, the JPA provided the following analysis of alternatives that would reduce direct impacts to existing wetland areas:

“An alternative analysis considered whether the freshwater runoff treatment ponds could be designed on a smaller scale, by removing the lower treatment ponds (south of the trail), in order to reduce wetland impacts, while still meeting the project objectives. The total capacity of the ponds was determined by looking at annual flood events and the size of the watershed. Again, the ponds were not designed as flood retention ponds, but were sized to handle the expected urban run-off associated with non-storm events as well as the “first flush” associated with rains that come after longer periods of no rain. Everything else goes over the spillway and/or culverts. The primary function of the upper two ponds (which require regular maintenance) is to serve as a cleansing basin, to remove heavy metals, sediment, some chemical pollutants and invasive species. The lower ponds would require no maintenance, and would therefore perform fully as natural wetlands.

The advantages associated with eliminating the lower ponds would be:

- 1) Lower costs to the JPA in terms of grading, revegetation and monitoring
- 2) Less impacts to current wetland designated areas including some functioning wetlands and other disturbed or upland ruderal areas

The disadvantages associated with eliminating the lower ponds would be:

- 1) Larger amounts of water would be discharged into the San Diego River and newly created salt water marsh habitats
- 2) Sediment disturbed in the upper ponds resulting from semi-annual maintenance may find its way into the lagoon and river (though the net sediment load would be less than if no ponds at all were provided)
- 3) There would be no last containment pond associated with an urban spill
- 4) The total capacity of the pond system would be less
- 5) The removal of invasives and conversion of ruderal/upland areas to wetland habitats would not occur
- 6) The trail system would no longer pass through a restored riparian freshwater wetland, which was going to be part of the interpretive program
- 7) The educational aspects of treatment wetlands would be reduced."

Thus, the Commission finds the advantages of the complete treatment pond system (TP41), as proposed by the JPA and described in the following findings, outweigh the impacts to the existing significantly degraded wetlands within the project site. Ponds 1 and 2 will be created north of the existing gravel road, which will be elevated to create a berm and the public access trail through the treatment pond system. The loss of habitat value within the existing degraded marsh area located north of the road will be adequately mitigated by the habitat created within Ponds 1 and 2, the additional habitat created within the proposed salt marsh wetland mitigation area east of I-5, and the habitat benefits associated with the treatment ponds are additionally offset by the benefits associated with the treatment pond function which is to avoid discharge of pollutants, freshwater and invasive species toward the restored tidal salt marsh created through the FRP. The habitat to be planted in Ponds 3 and 4 to be located south of the trail/berm, over-time, will exceed the habitat value of the existing degraded wetlands located south of the existing gravel road.

An analysis of the wetland impacts associated with construction of Ponds 1 and 2, Ponds 3 and 4 and the berms necessary to complete the treatment pond system is provided in the Tierra Environmental Services report and illustrated in Table 4 below. (Also see Exhibit 13, Tierra matrix.) The Commission finds the impacts for construction of the berms to be a permanent impact to wetlands; however, the loss of habitat for construction of the treatment ponds would be considered temporary because the area will be replanted with wetland vegetation to function as wetland habitat. Because Ponds 1 and 2 will be subject to periodic maintenance dredging, the

replacement value for the wetlands created in those ponds is not as high as the wetlands to be created in Ponds 3 and 4. In addition, portions of the treatment pond berms will be planted with seasonal salt marsh vegetation that can thrive at higher elevations. This salt marsh can be given credit toward mitigation for the displaced wetlands associated with construction of the berms.

The Commission typically requires a mitigation ratio of 4 to 1 to address permanent impacts to wetlands, which takes into account both the temporal loss of habitat and the uncertainties of restoration success. In this particular case, the Commission has taken into consideration a variety of factors, which results in a lesser mitigation ratio being justified for the impacts to the existing wetlands that will result from installation of the treatment ponds. These factors include the quality of the existing wetland, the purpose for the impact and the quality/value of the wetlands to be replaced through the project.

Special Condition #7 requires final plans for the treatment pond system in substantial conformance with that presented in the Tierra Environmental Services report, which will assure impacts to existing wetlands are maintained at the minimum necessary to construct the ponds. Special Condition #8 details the mitigation required for the impacts associated with the different components of the treatment pond system.

Table 4. Summary of Impacts and Mitigation, JPA Treatment Ponds

Habitats	Acres Impacted	Mitigation Ratio	Total Required Mitigation
Treatment Ponds 1 & 2 Permanent:			
Disturbed Freshwater/Brackish (pond berms)	0.019	1:1	0.019
Treatment Ponds 1 & 2 Temporary:			
Seasonal Salt Marsh (Pond 2)	1.071	1.5:1	1.607
Disturbed Freshwater/Brackish (Pond 1)	0.178	1.5:1	0.267
Disturbed Freshwater/Brackish (Pond 2)	0.557	1.5:1	0.836
Treatment Ponds 3 & 4 Permanent:			
Seasonal Salt Marsh not in roadbed (pond berms)	0.107	1:1	0.107
Disturbed FW/Brackish not in roadbed (pond berms)	0.390	1:1	0.390
Treatment Ponds 3 & 4 Temporary:			
Seasonal Salt Marsh	0.024	1:1	0.024
Disturbed Freshwater/Brackish	2.049	1:1	2.049
TOTAL TREATMENT PONDS	4.395		5.299

Source: Tierra Environmental Consultants. Wetland Delineation Report for the San Dieguito River Park Coast to Crest Trail, July 14, 2005

Temporary impacts to seasonal salt marsh (0.024 ac.) and disturbed freshwater and brackish marsh (2.049 ac.) for construction of Ponds 3 and 4 can be mitigated by 1 to 1 replacement in-kind of wetland habitat within the pond footprints. Due to the fact that the created wetlands within Ponds 1 and 2 will be periodically disrupted by maintenance dredging but will provide habitat value outside the dredging period, the Commission finds a mitigation ratio of 1.5 to 1 is

required for the temporary impacts to existing seasonal salt marsh (1.071 ac.) and disturbed freshwater and brackish marsh (0.735 ac.) within the footprints of Ponds 1 and 2.

The design of the treatment pond system has included the alignment of the existing gravel road as the basis for the berm separating Ponds 1 and 2 and Ponds 3 and 4. The berm would also support the public access trail through this segment of the proposed wetland restoration plan. The Commission recognizes the area of delineated wetlands within the existing roadbed currently do not function as wetlands or have any existing wetland value. Therefore, mitigation for impacts to wetlands within the existing roadbed can be accepted at a lesser mitigation ratio than that typically required for impacts to good quality wetland.

However, when existing wetlands are being displaced by construction of the berms for the treatment ponds and/or the public access trail, such an impact is considered a permanent impact to wetlands. Berms for the treatment ponds (Ponds 1-4) will impact 0.107 ac. of seasonal salt marsh and 0.409 ac. of freshwater and brackish marsh. The Commission finds this permanent impact can be mitigated at a 1 to 1 ratio taking into consideration the berm impacts are necessary for a beneficial use and the quality of the habitat to be disturbed is outweighed by that value of the treatment ponds to the overall restoration effort.

The mitigation ratios required in Special Condition #8 result in a total mitigation requirement of 5.299 acres, which exceeds the mitigation proposed by the JPA for impacts associated with the treatment ponds (see Exhibit 13, Tierra matrix). The JPA has proposed only a 1.5 to 1 mitigation ratio for permanent impacts to disturbed freshwater marsh associated with the berms necessary for the treatment ponds, and only a 1 to 1 mitigation ratio for the temporary impacts associated with Pond 2.

Mitigation proposed by the JPA includes 3.968 acres of mitigation accomplished at the treatment ponds by converting disturbed wetlands into managed wetlands (1.095 acres of seasonal saltmarsh and 2.873 acres of freshwater and brackish marsh). In addition, the JPA has indicated 0.847 ac. of mitigation can be provided at the proposed mitigation site adjacent to the east of I-5. The former Boudreau property located on the south side of the San Dieguito River, west of El Camino Real and southeast of and adjacent to the project boundary has been identified as another mitigation site that can provide at least 1.718 ac. of wetland mitigation area.

As stated above, the created wetland habitat within Ponds 1 and 2 will be periodically disrupted by maintenance dredging and, thus, will not have the same value as wetlands established in Ponds 3 and 4 that will be able to function as viable wetland habitat without disruption. Therefore, the mitigation ratio for impacts within Ponds 1 and 2 (1.5 to 1) must be higher than the ratio for impacts from construction of Ponds 3 and 4 (1 to 1) to offset the temporal loss of habitat value from future periodic maintenance dredging. In addition, the permanent removal of wetlands for construction of the berms necessary to create the ponds requires mitigation beyond restoration of existing degraded wetlands and must be offset by at least a 1:1 mitigation ratio for the berm impacts. This mitigation ratio is less than typically required by the Commission and takes into consideration, in this particular case, the increased value of the treatment ponds when compared to the marginal value of the wetlands impacted. The Commission recognizes the JPA has proposed seasonal salt marsh on a portion of the berms, which can be used to meet some but not all of the mitigation requirement.

Special Condition #8 outlines a complete mitigation and monitoring program that will be acceptable for the treatment ponds to offset the impacts to existing degraded wetlands necessary for treatment pond construction. The proposed planting of the ponds is mitigation and subject to the same requirements as the mitigation for impacts associated with construction of the public access system addressed in Section IV-C.8, Public Access. The mitigation program must meet the required mitigation ratios and create habitat in-kind to that being impacted. The program shall include preparation/restoration plans, planting palette, success criteria, monitoring, and maintenance requirements. In addition, a deed restriction is required to be recorded against the treatment ponds to establish the authorized use rights of access for maintenance purposes. As conditioned, the approved freshwater treatment ponds will meet the requirements of Sections 30233 of the Coastal Act. In addition, the Commission finds that only as conditioned can the proposed San Dieguito Wetlands Restoration Project protect water quality and marine resources pursuant to Sections 30230 and 30231 of the Coastal Act.

C.7. ENVIRONMENTALLY SENSITIVE HABITAT AREAS

Section 30240 of the Coastal Act requires that environmentally sensitive habitat areas (ESHA) be protected against significant disruption of habitat values. In addition, development in areas adjacent to ESHA and parks and recreation areas must be designed to prevent impacts that would significantly degrade those areas. All such development must be compatible with the continuance of those habitat and recreation areas. As stated previously, the proposed San Dieguito Wetland Restoration Plan is being proposed to restore 150 acres of tidal wetland habitat in this river valley where the quality of the resource and habitat value has become degraded over time due to the influences of development and unnatural processes. The proposed project and associated monitoring program will assure restoration of these resources consistent with Section 30240 of the Coastal Act.

a. Planting Program

The proposed Planting Program is divided into two components. The first component includes those habitat types that will be vegetated and monitored by the CCC to ensure compliance with Condition A of the SONGS permit. These habitat types are low marsh, middle marsh, and high marsh up to 4.5 feet NGVD. The SONGS permit requires that the FRP provide a Planting Program for the mitigation portion of the SDL Restoration Project (Condition A, Section 2.1, d.2. Planting Program) that contains information pertaining to the *removal of exotic species, sources of plants and or seeds (local, if possible), protection of existing salt marsh plants, methods for preserving top soil and augmenting soils with nitrogen and other necessary soil amendments before planting, timing of planting, plans for irrigation until established, and location of planting and elevations on the topographic drawings*. The second component of the Planting Program concerns planting at elevations above 4.5 feet as required in the EIR/EIS for the re-vegetation of seasonal marsh habitat, erosion control and disposal site stabilization. An overview of both components of the Planting Program is provided in the FRP. More detail on the specifics requested under Condition A of the SONGS permit (FRP Section 4.3.5 Additional Issues to be Considered in Final Engineering Phase) is provided in the submittal, *San Dieguito Lagoon Wetland Restoration Project Specifications for Wetland Mitigation and Restoration*, October 15, 2003, and Addendums (Memoranda) to this submittal dated October 15, 2004, and in the final grading plans.

The overview of the Planting Program provided in the FRP, including methods that will be used to establish selected plant communities/species, is given in Section 4.3.4 Habitats Considered for Planting. The Planting Program will provide a supplement to the natural recruitment of marsh vegetation that is expected to occur following grading and the introduction of tidal action to restored habitat. Specific objectives for the Planting Program stated in the FRP include: (1) encouragement of plant cover to meet the permit conditions, (2) introduction of species that have limited seed dispersal (e.g., cordgrass, *Spartina foliosa*), (3) encouragement of native plant establishment to compete against invasive species, (4) promotion of the use of salvaged plant materials that may be impacted by the restoration and/or construction activities, and (5) meeting additional sensitive plant establishment requirements as contained in the EIR/EIS.

The Planting Program for vegetated habitat below 4.5 feet NGVD calls for the planting of native cordgrass, *Spartina foliosa*, in the low marsh habitat (located in modules W4, W5, and, if restored in W16). Cordgrass is the principal vegetation of low marsh habitat, but will require planting because it has a low natural recruitment rate. A small colony of this species was planted in the mid-1980s in the DFG parcel in San Dieguito Lagoon. Once established, cordgrass can spread through vegetative growth. For planting, it is anticipated that some sprigs (rhizome segments and above ground shoots) may be taken from existing colonies in the DFG parcel and transplanted to the newly constructed areas. However, because of the large number of plants that will be required (approximately 14,000) a nursery will probably need to be contracted to collect seeds or plants to produce the required quantity of plants and this may require a multi-year effort. Cordgrass may also be collected from another local wetland in the region such as Batiquitos Lagoon. Appropriate collection permits will be obtained from the Department of Fish and Game prior to collection. Alternative collection sites will be identified if required.

No planting is anticipated for the middle marsh habitat. Pickleweed, *Salicornia virginica*, will be the primary species to colonize this area and natural recruitment via seed is expected to be sufficient. However, the FRP states that if the performance criteria given in the SONGS permit are not being met within two years after construction is completed planting will be undertaken using nursery grown stock.

The high marsh experiences less frequent tidal inundation than the middle marsh and natural colonization by native species occurs more slowly. Therefore, some planting will take place in this habitat using plant material salvaged from seasonal salt marsh impacted during construction. Pickleweed is the primary candidate for salvage and transplantation to high marsh habitat. Pickleweed salvaged during construction will be stockpiled, cut into fragments a few inches in length, distributed over the target high marsh habitat by hand and rototilled or disked into the soil. Areas of planting will be irrigated weekly until the first significant rainfall.

The second component of the Planting Program concerns elevations above 4.5 feet NGVD that consist of transitional wetland habitat, seasonal salt marsh habitat, and upland areas on berm slopes, nesting site slopes, and disposal sites (Sections 4.2.10 Erosion Control, 4.3.3 Habitats Considered for Planting). The FRP states that re-vegetation of transitional habitat will depend on natural recruitment and seeding. Re-vegetation of seasonal marsh will depend on natural recruitment supplemented with transplantation of pickleweed fragments salvaged from seasonal marsh impacted during construction. The FRP states that on those berm slopes that will not be

structurally reinforced, the soil slopes will be planted with native species effective in slope stabilization and erosion control.

The re-vegetation effort for upland sites will consist primarily of the application of native plant hydroseed mixes. The hydroseed slurry will include soil binding tackifier and site-specific plant mixes. The seed mix contains herbaceous and shrub species that will grow to varying heights and is compatible with native vegetation on adjacent lands. Appropriate amendments will be added as required to ameliorate unfavorable soil conditions. On slopes greater than 3:1, hydroseeding will be supplemented by planting one-gallon specimens. Table 2.3.1.8 of the EIR/EIS provides plant palette species composition lists and specifications for the one-gallon specimens. In order to establish suitable soils for native vegetation the project will place topsoil that was salvaged from the site in the upland areas that will be re-vegetated. This topsoil will likely contain a large number of weed seed and methods are proposed in the FRP to help reduce the initial establishment of weeds in these upland areas.

The FRP and the EIR/EIS discuss potential construction-related impacts to non-listed sensitive plant species. These impacts will be avoided to the maximum extent possible. Information on the protection of existing salt marsh plants during construction activities is provided in the FRP (Section 4.3.3), which includes the use of fencing and signage to protect existing vegetation. Special Condition #19 incorporates the seasonal and habitat-related restrictions on timing and method of construction proposed as part of the FRP and incorporated into plans approved by the City of Del Mar and the City of San Diego. The proposed restrictions are designed to avoid the breeding seasons of sensitive species and establish minimum distances for construction buffers in designated areas regardless of season. Special Conditions #5 and #8 specify the requirements of the planting program. As so conditioned, the project is in conformance with Section 30240 of the Coastal Act.

The FRP identifies potential impacts to coastal sage scrub related to the construction of the trail system. Although somewhat degraded, this coastal sage scrub is important upland habitat adjacent to tidal salt marsh and is considered an Environmentally Sensitive Habitat Area because of its important ecosystem functions. However, the trail system and interpretive component are necessary parts of the restoration project and will provide a nature study use that is dependent upon these resources. Special Condition #6 requires that installation of all trail improvements and signage avoid or minimize impacts to existing Environmentally Sensitive Habitat Area to the maximum extent possible consistent with Section 30240 of the Coastal Act and that all unavoidable impact be appropriately mitigated. The trail alignment impacts 0.86 acre of coastal sage scrub that will be mitigated by the creation of about 56 acres of coastal sage scrub on disposal sites DS33-36. As conditioned, the project is in conformance with Section 30240 of the Coastal Act.

C.8. PUBLIC ACCESS

As proposed, the FRP contains Section 4.6 Public Access Facilities that incorporates the San Dieguito River Park Joint Powers Authority's (JPA) proposals for access to and interpretation of the coastal resources that can be viewed in this area. These include the Coast to Crest Trail as well as the future nature center and several other potential trail segments that are not part of the subject FRP. In addition to these improvements, the project includes maintaining in its current

condition the existing path located between the downcoast beach areas and the bridge at Camino del Mar to address the potential impact to access across the inlet due to an open, management inlet, and may include improvements to this path if approved by the City of Del Mar. In addition, the project includes construction of an ADA accessible access ramp from Camino del Mar to the beach on the north side of the inlet channel.

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The public access and recreation policies of Chapter 3 of the Coastal Act protect the public's right of access to the shoreline and acknowledge public access should be implemented in ways that protect public rights, rights of private property owners, and natural resource areas from over use. The Coastal Act protects and encourages lower cost visitor and recreational facilities such as the public access trail and interpretive program proposed as part of the San Dieguito Wetland Restoration Plan. In addition, the Act prioritizes reservation of upland areas necessary to support coastal recreational uses.

As a result of implementation of the FRP and the JPA's future plans, public access throughout the river valley will be maximized consistent with the need to protect existing public access opportunities, provide new opportunities where they do not currently exist and to protect sensitive coastal resources.

a. Wetland Impacts from Coast to Crest Trail

The JPA is proposing to construct a multiple-use trail system extending from near the mouth of the San Dieguito River in the City of Del Mar eastward, eventually connecting to the Laguna Mountains. The first phase of this "Coast to Crest Trail" will extend from the Del Mar Fairgrounds (22nd Agricultural District property) eastward to just west of El Camino Real Road (Exhibit 14, Tierra Figure 2). For a portion of this segment, extending from Jimmy Durante Boulevard in the City of Del Mar to San Andres Drive in the City of San Diego, the trail follows historic wetlands associated with the San Dieguito River and San Dieguito Lagoon. The trail segment begins at a dirt parking lot adjacent to Jimmy Durante Boulevard used by the 22nd Agricultural District, parallels the San Dieguito River up to the I-5 bridge, crosses under the I-5 bridge and proceeds north and then east to San Andres Drive and then east to approximately 0.5 mile west of El Camino Real.

The JPA had a study prepared by Tierra Environmental Services and titled *Wetland Delineation for the Proposed San Dieguito River Park Coast to Crest Trail, San Diego California* (Revised July 14, 2005) to delineate any wetland habitat in the proposed trail alignment that is subject to the jurisdiction of the California Department of Fish and Game pursuant to Section 1600 of the

Fish and Game Code and the Coastal Commission pursuant to the California Coastal Act. The study identifies the impacts to the State jurisdictional wetlands associated with construction of the Coast to Crest Trail and the companion treatment ponds. The wetland delineation performed in this study also provides a discussion of wetlands habitat on-site and the determination of potential impacts associated with the proposed project. The Commission staff ecologist has concurred with the wetland delineation prepared by Tierra Environmental Services (Revised July 14, 2005) and upon which the following impact analysis is based.

The FRP indicates the Final Environmental Impact Report (FEIR) for the project concluded that inclusion of the trail system is a necessary mitigation measure for the project. The FEIR determined that any adverse impacts from construction of the new trails would be insignificant and greatly outweighed by the overall benefits of eliminating the existing uncontrolled access and by the institution of trail monitoring and policing, litter control, etc. that are part of the proposed project. The trails will also benefit the project by enhancing public appreciation of the restoration effort by providing opportunities for nature study and education about wetland values.

Pursuant to Section 30233 of the Coastal Act, the Commission must find the proposed trail improvements to be a permitted use in wetlands. As indicated above, the trail system and interpretive component are necessary parts of the restoration project and will provide a nature study function. Thus, the Commission finds the impacts to existing wetlands associated with construction of the public access trail system in connection with the proposed FRP are a permitted use within wetlands. However, for any uses allowed within existing wetlands, the Commission must find the impacts to be the least environmentally damaging feasible alternative and that such impacts are unavoidable. In this particular case, the proposed trail alignment has been located in areas where it will not impact any areas containing high quality wetland vegetation. As described in the following, the wetland resources that would be impacted by implementation of the trail are all marginal in terms of function and value and are seasonal salt marsh or disturbed freshwater or brackish marsh which are not subject to tidal influence.

The wetland study prepared for the trail indicates the functional salt marsh habitat in the project area is confined to a narrow band immediately adjacent to the San Dieguito River. Historic filling for agriculture and access east of I-5 has resulted in remnant salt marsh that persists largely on rainfall and artificial sources of water such as the storm drain at San Andres Drive.

The salt marsh and waters of the U.S. associated with the eastern drainage channel adjacent to I-5 would be considered low to moderate in terms of ecological value. The small area of salt marsh growing within the riprap would have few, if any natural functions of wetlands. The small area growing on the earthen bank consists of a narrow band of salt marsh habitat, isolated from similar habitat except where the drainage channel joins the main channel of the San Dieguito River.

Historic photographs suggest that the site now occupied by the utility service gravel road and proposed for the JPA trail was once wetland (County of San Diego, 1928). As it currently exists, the gravel road does not function as a wetland, except within some small depressions that impound water during very wet periods and where hydrophytic vegetation has been observed.

Starting with segment 1 as described in the FRP, segment 1a leading from Jimmy Durante Blvd. to the boardwalk, would be six feet wide and for pedestrian use only. Segment 1b is approximately 1,460 feet long and is comprised of a six foot wide, twelve inch high boardwalk for pedestrian use only. This segment will be located immediately adjacent to approx. 1.51 ac. of existing salt marsh/salt panne that has been restored on the southern portion of the south overflow lot that is subject to a conservation easement required by the ACOE. The entire south overflow lot is delineated as unvegetated wetlands and is currently authorized for use by the 22nd Agricultural District for parking during the fair and race season. The wetlands here are considered "atypical" because the vegetation is periodically removed and is currently of marginal habitat value due to the periodic disturbance from parking and access; however, the area is fully capable of being restored to viable functioning salt marsh.

Due to the design of the boardwalk, which will be elevated above ground level, and the location of the trail on an existing berm, the Commission concurs with the applicants' determination that there will be no impacts to existing wetlands within this trail segment. Installation of the boardwalk may actually reduce disruption of the soil surface when compared to the existing condition and allow recruitment of wetland vegetation under the boardwalk and along its sides. However, due to the possibility that the south overflow lot may be restored to functional salt marsh habitat in the future, Special Condition #6d acknowledges the boardwalk to be a temporary interim use that may be relocated in the future in association with any future wetland restoration of the south overflow lot.

Segment 2 is 1,400 feet long and the beginning of the 12 foot-wide multi-use section of the trail. Bicyclists heading west on the trail would be directed at this point to the bike lanes on Jimmy Durante Blvd. The trail will be located on an existing berm and not within existing delineated wetlands. There will be a public viewing platform at the termination of the boardwalk and commencement of the multi-use trail.

Segment 3 would be 840 feet long and located along the southern boundary of the Surf and Turf Golf Driving Range. A 6 foot high net fence will be located north of the trail to protect trail users from flying golf balls. No impacts to vegetated wetland are associated with this portion of the trail.

Segment 4 of the proposed trail includes the undercrossing along the northern abutment of the I-5 freeway/San Dieguito River bridge. Currently, pedestrians are not able to easily pass under the bridge due to the presence of two drainage channels located on both sides of the freeway. These trapezoidal channels, constructed as part of the freeway, serve an approximate 100 acre drainage basin as well as provide an outlet for I-5 runoff. While both channels are dirt bottom, the west channel is riprap lined at the San Dieguito River. Since the undercrossing is within Caltrans right-of-way, an encroachment permit is required from Caltrans to construct the trail. Special Condition #6j requires approval of the encroachment permit, prior to commencement of construction of the trail.

The proposed width of this segment of the trail is an 8 foot wide trail surface with 2 foot wide shoulders on each side. This width would provide a Class I Bike Path and is proposed for pedestrian and bicycle use in this location. Under the freeway, the entire trail would be constructed of concrete and would be cut into the existing freeway embankment. A retaining

wall is proposed along the north side of the trail and a fence would be located on the south side of the trail above the existing rock embankment and the river (Exhibit 15, FRP Figure 4.18). Existing riprap would be removed or relocated but no new riprap is proposed.

The applicants have prepared an alternatives analysis for the drainage crossings that analyzed three drainage crossing types including the concrete box culvert, concrete arch culvert and prefabricated bridge. The box culvert and the arch culvert would both have 20 ft. spans and the difference would be the arch culvert has an open, earthen bottom. Two small areas of salt marsh vegetation occur on both sides of the eastern channel and would be impacted by either culvert design. The salt marsh grows among the riprap on the west side of the channel and on the earthen bank on the east side.

The bridge alternative would be constructed at the top of the channel banks and have a span of approximately 50 feet. The pile supported foundation would have less impacts to the salt marsh than either culvert design; however, the difference in impacts is less than 100 sq. ft. The wetland delineation and study indicates 142 sq. ft. of high salt marsh and 207 sq. ft. of low salt marsh would be permanently impacted by construction of the open bottom concrete arch culvert drainage crossings, which are slightly less wetland impacts than the concrete box design. All three alternatives would be within the 100 year floodplain, thus, the trail would be potentially subject to flooding during high storm events.

Although neither design has been shown to have adverse hydrological effects on the river, the Commission finds the concrete arch culverts to be preferable to a bridge for the following reasons. The bridge would represent a more substantial cost and be a more permanent structure within the floodplain where structures should be ephemeral and capable of withstanding periodic flooding without the need for flood protection. Although wetland impacts are less for the bridge, the impacts for the culvert are not significantly greater and the habitat value of the wetlands being affected is not high in any event. The culvert design is more easily removed in the future should conditions underneath the freeway change or should the freeway be modified from its current configuration.

The applicants have proposed mitigation for the impacts associated with construction of the open bottom concrete arch culvert to low and high salt marsh located within the eastern drainage channel. Mitigation would be at a 4 to 1 ratio and located within the mitigation site just east of the area of impact. The proposed mitigation area is located adjacent to the proposed trail alignment parallel to and east of I-5. The mitigation site currently supports predominantly weedy upland species. Although historic photographs indicate that this was once wetland, the area was filled for agriculture and does not currently exhibit the characteristics of a wetland. Therefore, the Commission finds the impacts to wetlands for this segment of the trail to be the minimum necessary for the least environmentally damaging feasible alternative and that adequate mitigation is provided consistent with Section 30233 of the Act.

Segment 5 is approximately 2,000 feet long and utilizes an existing maintenance road that parallels I-5 to the east. The maintenance road is used by SBC to maintain fiber optic cables that parallel I-5. The JPA is currently seeking an easement from SBC to construct and use the trail in this location. Special Condition #6k requires evidence of the easement prior to commencement of construction of the trail.

The JPA has proposed this segment to be the western extent of the equestrian use of the trail, until such time as the trail is extended westward to the beach. Signs would indicate that equestrians must turn-around and return instead of crossing under the freeway. Special Condition #6c requires that adequate area be delineated within the proposed trail to allow for horses to turnaround without impacting salt marsh vegetation located on either side of the trail. The trail is eight feet wide with two foot shoulders on each side at this location. In addition, the turnaround point must be a sufficient distance from the sensitive resources of the restored wetlands. Therefore, the Commission approves the turnaround area at the western terminus of the east-west portion of the trail, so the north-south segment adjacent to the proposed salt marsh mitigation site is not utilized by horses at this time. This location for the turning point will also avoid, to the extent possible, potential conflicts between equestrian, pedestrian and bicycle users in this constrained area.

The intent of this condition is to minimize the impacts of trail use, especially near tidal marsh, mudflats, and open water habitats. The section of trail paralleling I-5 is very close to restored habitats and the San Dieguito River. Equestrian use has the potential to have greater impacts to sensitive resources than pedestrian or bicycle use. Equestrian use is more erosive and creates greater compaction and equestrian trails will probably require greater maintenance than trails used only by pedestrians and cyclists, both for repair and for removal of manure. In addition, the turn-around area is a natural area for trail conflicts and requires more space. By locating the turn-around as recommended, disturbance near habitat areas will be minimized.

Segment 6 is approximately 1,100 feet long and continues on the maintenance road south of the existing shopping center that is located at the southwest quadrant of Via de la Valle and San Andres Drive. Due to the amount of urban runoff in this location, the JPA is proposing a series of freshwater treatment ponds to treat and clean the urban run-off before the water reaches the restored wetlands. The public access trail would be elevated on a berm above the ponds to allow the water to flow between the ponds and underneath the trail via pipes.

An analysis of the nature of the wetland vegetation and the impacts associated with construction of the trail from I-5 through the treatment pond system is provided in the Tierra Environmental Services report. Table 5 below summarizes the proposed impacts to seasonal salt marsh and disturbed freshwater and brackish marsh associated with construction of the trail extending from I-5 through the treatment ponds to the future nature center site. (Also see Exhibit 13, Tierra matrix.) The treatment ponds and associated impacts are discussed in greater detail in the Water Quality section of this report (IV-C.6).

Table 5. Summary of Impacts and Mitigation, JPA Trail

Habitats	Acres Impacted	Mitigation Ratio	Total Required Mitigation
Trail Permanent:			
Low Marsh	0.002	4:1	0.008
High Marsh	0.006	4:1	0.024
Seasonal Salt Marsh (not Roadbed)	0.020	4:1	0.080
Seasonal Salt Marsh (Roadbed)	0.051	1:1	0.051

Table 5 continued.			
Habitats	Acres Impacted	Mitigation Ratio	Total Required Mitigation
Disturbed Freshwater/Brackish (not Roadbed)	0.360	4:1	1.440
Disturbed Freshwater/Brackish (Roadbed)	0.052	1:1	0.052
Seasonal Salt Marsh (Trail segment 7)*	0.060	4:1	0.240
Trail Temporary:			
Seasonal Salt Marsh	0.183	1:1	0.183
Disturbed Freshwater/Brackish	0.014	1:1	0.014
TOTAL TRAIL	0.748		2.092

Source: Tierra Environmental Consultants. Wetland Delineation Report for the San Dieguito River Park Coast to Crest Trail, July 14, 2005

* From WRA Environmental Consultants. CCC Wetland Study in the Villages Mitigation Bank, August 30, 2005, and Project Design Consultants Exhibit A Village Mitigation Bank Wetland Impacts, August 30, 2005.

In analyzing the impacts to existing wetlands from construction of the public access trail, the JPA has included the distinction of whether or not the wetlands are within the existing roadbed. This distinction relates to the quality of existing wetland being impacted and the mitigation ratio that is necessary to offset the proposed impact. The study indicates this portion of the proposed trail is currently covered with several feet of compacted gravel. The roadway is elevated above the level of the surrounding areas for much of its length and does not support hydrophytic vegetation. Some depressions in the road impound water during very wet periods, which have facilitated the establishment of hydrophytic vegetation; thus, these areas are considered State jurisdictional wetlands. However, this wetland vegetation may be damaged by vehicles using the road, or by placement/movement of the gravel to fill depressions in the road during routine road maintenance. The impacts to wetland vegetation from creation of the trail are the same as what could occur from ongoing routine use and maintenance of the existing road.

Accordingly, the Commission recognizes the functional value of these wetlands is marginal, and the potential for restoration of these areas to viable salt marsh habitat does not exist due to the need for the existing maintenance road. Due to the quality of the wetlands being impacted for the trail in these segments, the JPA is proposing a 1 to 1 mitigation ratio for 0.103 ac. of permanent impacts for the trail to seasonal salt marsh and disturbed freshwater/brackish marsh within the existing roadbed. The Commission concurs with the proposed mitigation.

Construction of the trail will result in temporary impacts to 0.183 ac. of seasonal salt marsh and 0.014 ac. of disturbed freshwater/brackish marsh. Temporary impacts are defined as areas that would be impacted during construction but subsequently restored. Thus, there is no permanent dredge or fill of these wetlands. The JPA proposes to mitigate temporary impacts at a 1 to 1 ratio.

Permanent impacts are defined as conversion of existing wetland habitat to trail. Permanent impacts to 0.02 ac. of seasonal salt marsh and 0.008 ac. of tidal salt marsh not located within the roadbed would be mitigated at a 4 to 1 ratio. The JPA proposes to mitigate permanent impacts to 0.36 ac. of disturbed freshwater/brackish marsh for construction of the trail that is not located in the roadbed at a 2 to 1 ratio. The Commission finds no basis to require a lesser mitigation ratio for permanent impacts to the freshwater marsh located outside the existing roadbed; thus Special

Condition #8 requires a 4 to 1 mitigation ratio for these impacts. As conditioned, the required mitigation will adequately offset the actual and temporal loss of viable existing habitat area.

Segment 7 is 653 feet long and would extend north from the treatment ponds and parallel the east side of San Andres Drive. Permanent impact to 0.06 ac. of seasonal salt marsh is unavoidable to construct the trail between the existing street and the adjacent disturbed habitat/open space area. Immediately adjacent to the east of this trail alignment is the location of the proposed Villages Mitigation Bank (VMB) on W16 which, if implemented as proposed, would convert the existing seasonal salt marsh and upland areas to tidal salt marsh. The entire W16 is not needed to fulfill SCE's mitigation requirement but the wetland restoration of this area has been designed to be compatible with the proposed restoration effort (FRP). The JPA is proposing to mitigate the permanent wetland impact in this segment at a 4 to 1 ratio, which is acceptable to the Commission.

Segment 8 is 2,829 feet long and would be located on the disposal site (DS32) for dredge spoils from the wetland restoration effort. The trail would be located at the top of the fill slope at an elevation of 100 ft. or more above the restored wetlands. Special Condition #3a requires the grading plan to be revised to avoid impacts to the extent possible to existing wetlands delineated in the *CCC Wetland Study in the Villages Mitigation Bank* prepared by WRA Environmental Consultants and dated August 30, 2005 for the disposal site. Complete avoidance of wetlands in this area is not possible if W16 is to be restored to tidal salt marsh as proposed in the FRP. The Commission finds the benefits of full tidal restoration in this area outweigh the impacts to the existing seasonal and transitional wetlands and the impacts are for an allowable use, i.e., wetland restoration.

On the western portion of Segment 8, the trail will pass on the slope to the south of the site of the future nature center and the interim Wetland Learning Center that functions out of a converted and enlarged strawberry stand on the south side of Via de la Valle. Drainage improvements extending from Via de la Valle toward the restored wetlands will also be part of the approved grading for the disposal site. Viewing platforms would be located midway across the slope and at the eastern end of the trail segment.

In the event restoration of the *entire* W16 to tidal marsh is not part of the final grading plans (the majority of W16 is not required to fulfill the SONGS mitigation requirement), Special Condition #3a indicates a permit amendment is required to revised the grading plan to avoid or reduce disposal of dredge spoils on the delineated wetlands in this area because the deposition of fill on DS32 would be reduced by about one-third without the excavated materials from the full restoration of W16.

As conditioned, the Commission is requiring final plans for the Coast to Crest Trail in the proposed alignment which has been developed to avoid impacts to existing wetlands to the maximum extent possible, while still allowing for construction of accessible trail improvements north of the river that will be most beneficial and conducive to public use. Special Condition #8 requires a final wetland mitigation program that identifies the specific mitigation ratios required based on the nature of impact and the quality of wetlands to be impacted. The approved mitigation program will include locations proposed by the JPA. Mitigation will be provided both

on-site adjacent to the east of I-5, and off-site at the former Boudreau property located west of El Camino Real and south of the river, which was recently acquired by the JPA.

Special Condition #8 outlines a complete mitigation and monitoring program that will be acceptable for the proposed mitigation sites including mitigation ratios, type of habitat to be created, site preparation/restoration plans, planting palette, success criteria, monitoring, and maintenance requirements. In addition, a deed restriction is required to be recorded against each approved mitigation site to establish the authorized use of the mitigation area and acknowledge rights of access for maintenance purposes. Permitted uses are limited to habitat restoration, habitat maintenance, open space and habitat protection. As conditioned, the approved trail plan will meet the requirements of the public access and recreation policies as well as Sections 30233 and 30240 of the Coastal Act.

b. Alternative Trail Access

One important purpose of the JPA Coast to Crest Trail is to formalize the areas within the wetland restoration site where public access and recreational use is permitted and encouraged. The areas where the Coast to Crest Trail is proposed are currently, with the exception of under I-5, available for use by the public on an informal basis. However, due to the trail improvements, signage, viewing platforms and overlooks, implementation of the project will significantly improve the opportunities for public access and recreation north of the river from those that exist today. Barriers and signage will also protect against uncontrolled pedestrian, bicycle or equestrian use in the sensitive restored wetland areas.

Implementation of the project will also have an effect on some of the existing informal trails currently used by the public in the area located south of the river and west of I-5. In this area, the primary existing access point is located at the Grand Ave. Bridge crossing. Currently, there is sufficient area for parking north of San Dieguito Drive at Grand Avenue and access to existing informal trails which extend across the bridge and to the north and east is not prohibited. Further to the east, there is an existing City of San Diego easement that extends north from Racetrack View Drive, then turns east to the western property limits of the existing residential subdivision. Again, public pedestrian trail access is currently permitted in this location.

The trail access at the Grand Avenue Bridge will be modified as a result of the wetland restoration project. The northern half of the existing Grand Avenue Bridge will be removed and the southern half will be developed into a public viewing platform allowing visual access to the restored wetlands, e.g., birdwatching. Approximately twelve existing piles in the channel will be removed at the mudline and the channel excavated to connect to the proposed wetland tidal basin W1 located to the east.

The existing City of San Diego easement off of San Dieguito Drive is proposed as a permanent maintenance road that is 10 feet wide with 6 inch gravel surfacing. (Exhibit 16, PDC Permanent Maintenance Road Access) From the existing road, a gated entrance would allow access to the proposed maintenance road that would extend north to the least tern nesting site located on property owned by the Department of Fish and Game (NS15). As proposed, the extension of the road would have limited access that would be controlled by gates accessible only to authorized

personnel. A second gate would be constructed as the road crosses through a Caltrans mitigation site into DFG property.

The restoration site on Caltrans property was required as mitigation for impacts associated with an auxiliary lane on I-5 (CDP # 6-02-153). Caltrans commenced implementation of the mitigation plan in January 2005 by planting the required coastal sage scrub habitat. The proposed road would cross a 50 foot area with a 10 foot wide road, thus, 500 sq. ft. of the mitigation site would be affected. The applicants have inventoried the number and type of plants which would be affected and has found the plants affected are limited to 21 container stock and 42 plants established from seed. The applicants have indicated the plants could be easily transplanted to other areas adjacent to the required mitigation site without a significant impact on the quality and viability of the restoration area.

The modification to the mitigation plan would require an amendment to CDP #6-02-153 which will be processed concurrently by Caltrans. The transplanted restoration area will be subject to the same monitoring requirements as the original site and because the mitigation plan was recently implemented, there will not be a significant temporal loss in habitat value associated with the transplantation. Special Condition #11 requires the Caltrans amendment be processed and the revised mitigation implemented within 90 days of Commission action on the subject coastal development permit to maximize the potential success of the transplantation effort and minimize impacts to established habitat area.

The JPA park plan proposes three permanent trail staging areas and a small parking area for wetland viewing at the Grand Avenue Bridge. The primary staging area, which will be unpaved, will be located at the site of the proposed future nature center where 60 spaces will be available for cars and smaller trucks and 15 pull-through spaces will be available for equestrian rigs, recreational vehicles, and buses. The primary staging area will be constructed with the Coast to Crest Trail and will serve trail users as well as visitors to the existing temporary Wetland Learning Center located at the old strawberry stand on the future nature center site.

The second permanent staging area would be an unpaved 20-car parking area for park visitors east of Jimmy Durante Blvd. in a location to be approved by the 22nd DAA as part of a separate CDP. The third permanent staging area would be an unpaved 25-car parking area for park visitors off El Camino Real to access the Mesa Loop Trail, both of which would be part of a separate CDP.

In addition, approximately five cars could be accommodated off San Dieguito Drive at the foot of the Grand Avenue Bridge where the viewing area and interpretive panels are proposed. With the alternate public trail access and support facilities proposed on both sides of the river, the Commission finds the proposed project will not interfere with existing public rights of access to the shoreline consistent with Section 30210. Special Condition #11 requires the portion of the maintenance road that is currently open to public use to remain open on a year-around basis to maximize public use and enjoyment of the restored wetlands in the river valley consistent with Section 30210 and 30213 of the Act. Equestrian and dog access shall be prohibited year around to protect the adjacent sensitive habitat areas. The road may be closed during rainy periods to avoid erosion of the trail and potential sedimentation in the restored wetlands.

The proposed public access program includes an interpretive signage program that helps establish the trail system as an important component with a nature study function as permitted use in wetlands pursuant to Section 30233. The educational objectives of the interpretive program will identify the various naturally occurring and restored areas and explain the relationship between the habitat areas and the species that utilize it, as well as to the hydrology and geology of the river valley. Another important goal is to convey to park users that protection and preservation of existing wetlands is preferred to restoration because successful restoration is difficult to achieve at any cost. Special Condition #6 requires that installation of all trail improvements and signage avoid or minimize impacts to existing wetland habitat areas to the maximum extent possible consistent with Section 30240 of the Coastal Act.

The proposed trail system is also consistent with Section 30233 of the Act. As explained above, the proposed public trail will result in some impacts to wetlands. The route has been designed to minimize these impacts and the conditions require full mitigation through creation/restoration of additional wetlands.

Under Section 30233(a)(8), fill of wetlands is permitted for "nature study, aquaculture, or similar resource dependent activities." The new trail will allow nature study because it will enable students, birders, and other members of the public to walk adjacent to the restored wetlands for fairly close-up observation of birds and wetland habitats. As explained above, interpretive signage along the trail will describe the habitat and species that use it. In addition, as discussed above, Section 20233(a)(9) allows wetland fill for "restoration purposes." The public trail is an important part of the San Dieguito wetland restoration project because it will prevent unregulated public access throughout the entire restoration area, and will confine public access to a trail located on the perimeter of the restored wetlands. This will ensure that wetland vegetation is not trampled and will limit human interference with birds and other wildlife nesting, feeding or using the restored wetlands. Accordingly, the public trail is consistent with Section 30233.

c. Beach Access Improvements

The propose project description indicates that beach access will be improved on both sides of the San Dieguito River inlet to allow continuous public access from north to south. At the time of submittal of the permit application, it was contemplated that significant improvements would be made to the existing trail on the south side of the river. Currently there is a dirt path that extends west from Camino del Mar to a point where the rip-rap bank has been modified to allow the public to access the south side of the river and beach area located to the west. The path is currently fairly level and unobstructed and has been developed through years of informal public use. At times, when the inlet is open, the river channel is immediately adjacent to the rock-lined channel in this location and access to the beach is not possible.

Improvements to access on the south side of the river have been considered including possible construction of a wooden stairway across the riprap to facilitate access to beach level. However, given the fact that there are currently times when there is not adequate dry land that would accommodate a foundation for such a stairway, it appears the existing informal public access is the most viable option for assuring public access is maintained to the degree possible in this location.

The final Mitigation Monitoring Program for the final EIR for the project indicates a significant impact of the project is that crossing the river on foot would become relatively more difficult most of the time and prevented at some periods, particularly during high tides. As such, the program includes the following as a mitigation measure:

“As a condition of the CDP and prior to approval of discretionary permits from the City of Del Mar, SCE shall prepare, to the satisfaction of the City of Del Mar, a design for a pedestrian access way along the south side of the inlet channel that would accommodate access to Camino del Mar. SCE shall agree to fund and construct said pathway prior to opening the inlet channel. If based on additional design work, the City determines that the pathway is in fact technically infeasible, an alternative access way to Camino del Mar shall be considered.”

The City of Del Mar is considering allowing an alternative to the existing access on the south side of the river, in its approval of the CDP for the portion of the project within its jurisdiction. As an alternative to improvements to the existing informal path, the City would require improvements at the 29th Street beach access to provide continual access to Camino del Mar. This alternative access would also be ADA accessible, which could not be accommodated within the constraints and location of the existing pathway, and would be available when access at the river inlet is not available due to the tides.

The Commission finds this option consistent with the public access and recreational policies of the Coastal Act provided the existing access on the south side of the river also remains as an alternative for those members of the public who want to use it. There is an obvious amount of public usage and care taken to assure the beach is accessible at this location, even though access currently is not available at high tide when the river mouth is open. The Commission finds this existing condition will not be adversely affected by implementation of the proposed restoration project with a managed, open inlet: In fact, given the requirements for the maintenance dredging to create a channel at least 40 feet from the rip rap revetment on the southern bank of the river, it is likely the accessibility of the beach from the existing trail will be improved with a managed inlet.

North of the river, the public is able to access the beach from Camino Del Mar via a number of informal pathways that have been beaten down the slope from the road to the beach. The applicants are proposing to formalize this access route through construction of an ADA accessible ramp leading from the street to beach level. The design of the ramp is constrained by grade limitations and the elevation of the street in relation to the beach. The design of the ramp is being developed with the City of Del Mar. Special Condition #12 establishes specific criteria for the ramp to be incorporated into the final design subject to approval by the City and prior to commencement of construction. The trail must be installed prior to or concurrent with the initial inlet dredging for the restoration project. Maintenance of the existing path on the south side of the river in its current condition and the new access ramp on the north is the responsibility of SCE to offset the effects on a managed inlet on lateral public access.

To avoid any potential adverse effects on public access and recreation in the North Beach area, the condition requires the foundation to be located as far landward as possible and designed to not require shoreline protection. If the existing storm drain must be relocated north of the ramp,

it should be designed to avoid discharge and rip rap seaward of the toe of the existing slope. Signage will be required to direct the public to Camino del Mar to provide continual lateral access opportunities when the inlet is open.

In addition, Special Condition #20 requires the construction plans to identify access corridors and staging areas proposed to implement the project. To avoid adverse effects on public access to the coast, use of sandy beach and public parking areas is prohibited for interim storage of equipment and materials. North Beach is proposed as a staging area; however, the City of Del Mar has prohibited use of this beach for staging during the summer months. Special Condition #22 addresses use of North Beach for staging to minimize adverse impacts to public access and recreation to the extent possible. As conditioned, the proposed access program can be found consistent with the public access and recreation policies of the Coastal Act.

C.9 LEAST TERN NESTING SITES

The San Dieguito Wetland Restoration Plan was designed to include nesting habitat for the endangered California Least Tern to accommodate permit conditions previously required of the 22nd District Agricultural District (DAA) in CDP 6-84-525 (see Staff Report on CDP amendment #6-84-525-A1, dated September 29, 2005). Special Condition #15 requires approval of the DAA's amendment and acceptance of the terms of the amendment, which include responsibility for maintaining and monitoring the nesting sites. There are four new nesting sites proposed in the Final Restoration Plan, NS11, NS12, NS13, and NS14. A fifth nesting site, NS15, currently exists on DFG property and will be refurbished. Maintenance and monitoring of NS15 will be the responsibility of DFG. Special Condition #16 requires SCE to coordinate work on NS15 with the DFG's Ecological Reserve Manager.

While acknowledging the need for this particular endangered species' habitat, construction of two of the four new nesting sites (NS11 and NS12) will result in a permanent impact to 2.89 acres of existing high marsh and seasonal marsh wetlands. Coastal Act Section 30233(a) prohibits dredge and fill of wetlands unless the project is limited to one of the eight allowable uses, has no feasible less environmentally damaging alternative, and is adequately mitigated.

The nesting sites are a segment of the much larger restoration project and are thus an allowable use. Further, the applicants, Commission staff, and state and federal resource agencies have reviewed many possible alternative locations and have determined that the proposed sites carry the least amount of adverse impact and greatest potential for success as any reviewed in the past or as part of the overall restoration project. Thus, the first two tests of Section 30233(a) are met. However, no mitigation for the impacts from NS11 and NS12 is proposed because the original DAA permit and accompanying Memorandum of Agreement (1984) between the DAA and DFG necessarily contemplated loss of wetlands to create the requisite least tern nesting sites and did not require mitigation for wetland impacts from creation of the sites, although it was likely known that some fill of wetlands would be required. Since the Commission previously authorized and required the creation of least tern nesting habitat in 1984, the Attorney General's Office has advised that additional mitigation measures cannot now be imposed.

The DAA proposes to dedicate a conservation easement over a vacant, 8-acre site within the lagoon, shown on the Mixed Habitat plan in the EIR/EIS as module W6b (Exhibit 4, FRP Figure

4.1a), which will be available for future wetland restoration purposes. The DAA proposes this land dedication to mitigate both for provision of less nesting area than originally required and the temporal loss of suitable nesting habitat in the lagoon since 1984.

Findings for the proposed least tern nesting sites are discussed in detail in the staff report and recommendation for CDP Amendment 6-84-525-A1, dated September 29, 2005.

C.10. VILLAGES MITIGATION BANK AND DISPOSAL SITE 32

SCE proposes that a portion of the wetlands restoration area (Module W16) that is not needed to meet SCE's 150-acre wetland mitigation requirement under Condition A of the SONGS permit be reserved and operated as a wetlands mitigation bank, to be known as Villages Mitigation Bank (VMB). The VMB is proposed to be used for off-site compensatory mitigation for impacts to waters of the United States or the State of California, wetlands, federal or State listed threatened or endangered species, or critical habitats as may be authorized under applicable laws.

Module W16 is located on a portion of the former Villages property south of Via De La Valle, east of I-5, and north of the San Dieguito River. As part of the San Dieguito wetlands restoration project, tidal marsh habitat will be created and restored on W16 that will be contiguous with restored tidal marsh habitat in module W4, just south of W16. The inclusion of W16 in the restoration project will result in a larger network of restored wetland habitat, which will increase the tidal prism of the project and improve the project's ability to maintain an open inlet without interruption.

The W16 site primarily consists of disturbed, ruderal habitat that was historically used for agriculture. However, some existing seasonal salt marsh and fresh and brackish water marsh will be converted to tidal wetlands. In addition, Disposal Site 32 is the site proposed for excavated materials from W16 (about one-third of the proposed fill for DS32 will come from the restoration of the entire W16 module) and contains a small amount of seasonal wetland that will be permanently impacted.

Since the restoration of module W16 requires similar disturbance to existing seasonal marsh and provides qualitatively similar benefits associated with restoration to tidal action as does the rest of the restoration areas, the Commission finds that such restoration is an allowable use under Section 30233, regardless of whether the acreage represented by W16 is needed to comply with the mitigation requirements of CDP 6-81-330-A, provided the loss is mitigated by creation or substantial restoration of wetlands at a ratio of 4 to 1.

The wetlands in the vicinity of DS32 were originally delineated in 1997 and, on the basis of that delineation, it was anticipated that implementation of the restoration plan would result in the permanent loss of a small, but unspecified, area of existing wetlands. Since that time, it became clear that some wetland areas that exist today were not included in the earlier delineation. Those areas were subject to reexamination by WRA Environmental Consultants and as a result a larger area of existing wetlands was identified in several areas in the vicinity of DS32. The impacts to wetlands were estimated on September 6, 2005 to be about 1.05 acres. This permanent loss must be mitigated at a 4 to 1 ratio; thus, this allowable wetland fill would require the creation or substantial restoration of 4.2 acres of wetland as mitigation for the permanent loss of approximately 1.05 acres of existing seasonal wetland on DS32.

According to the Commission staff ecologist, the recent delineation completed by WRA Environmental Consultants appears to be appropriately based on the wetlands definition in the Coastal Act and the Commission's regulations and the methods applied were the standard methods recommended by the Army Corps of Engineers.

As discussed above (Section B.4), SCE had originally proposed that the entire W16 be operated as a mitigation bank, but, due to the mitigation requirements for the impacts to DS32, approximately 3.20 acres of restored wetland habitat on W16 must be counted toward SCE's SONGS mitigation requirement. If after the wetland restoration is constructed there is any shortfall in the actual wetland habitat acreage as determined by the "as built" plans, such shortfall will be deducted from the excess acreage on W16, thus reducing the amount of acreage potentially available for a mitigation bank.

The Commission acknowledges that restoration of W16 may provide wetland creation beyond that required to comply with Condition A of CDP 6-81-330-A and that it could be used as a mitigation option on other, future projects requiring mitigation in the coastal zone in which impacts to wetland habitat are the same as the habitat established at the VMB. Such authorization would be through a separate coastal development permit and the Commission would determine the function and value of the habitat established in the bank as potential mitigation at the time such coastal development permit allowing the impact to be mitigated is approved. However, the VMB is not approved at this time as it is still undergoing review by state and federal resource agencies, nor is any mitigation credit that may ultimately accrue to such a bank as a result of the restoration of W16 approved as part of this CDP (Special Condition #27).

The proposed design and footprint of DS32 is based on the restoration of the entire W16 module. As noted above, only a small portion of W16 will be required to fulfill SCE's mitigation requirements. Creation of the remaining wetland acreage in W16 is contingent on an outside funding source, either through the proposed VMB or a grant from an appropriate entity. Thus, there is a small possibility that funding would not be available, in which case the majority of W16 would not be restored and the excavated materials proposed for DS32 would be reduced by nearly one-third. If such a reduction were to occur, then DS32 could likely be re-designed to reduce, if not eliminate, impacts to existing wetlands. Special Conditions #3 and #27 address this potentiality by requiring an amendment to the CDP to revise the restoration plan to avoid or reduce disposal on existing wetlands in DS32 in the event module W16 is not fully restored.

D. INDEPENDENT WETLAND PERFORMANCE MONITORING PROGRAM

D.1. MONITORING PLAN

The SONGS permit (CDP # 6-31-330-A) provides for the monitoring, management and remediation of the wetland mitigation project. Specifically, Condition A (Wetland Mitigation) requires that monitoring of the wetland restoration independent of SCE be done over the full operating life⁷ of SONGS Units 2 & 3 to measure compliance of the mitigation project with the

⁷ The "full operating life" of SONGS units 2 and 3 is defined in Section 3 of the CDP for SONGS and "includes past and future years of operation of SONGS units 2 and 3 including the decommissioning period to the extent there are continuing discharges. The number of past operating years at the time the wetland is ultimately constructed, shall be

performance standards specified in the SONGS permit. In accordance with Condition D, which establishes the administrative structure and funding for independent monitoring and technical oversight of SCE's mitigation projects, contract scientists retained by the Executive Director developed a Monitoring Plan to guide the monitoring work and will oversee the monitoring studies outlined in the Plan. Special Condition #9 memorializes these SONGS requirements in this CDP.

The Monitoring Plan was developed by Commission contract scientists in consultation with the members of the Scientific Advisory Panel convened by the Executive Director to provide guidance to the Commission on the design, implementation and monitoring of the SONGS mitigation projects. The contract scientists also consulted with SCE and state and federal resource agencies. A draft Monitoring Plan was circulated for additional review in May 2005. The Monitoring Plan as revised September 2005 is incorporated into this Permit as Appendix D (and can be downloaded from the Commission's website, see Appendix D).

The Commission finds that the Monitoring Plan closely adheres to the monitoring requirements of the SONGS permit. The performance standards that will be used to measure the success of the wetland restoration project fall into two categories. The first category includes long-term physical standards relating to topography (erosion, sedimentation), water quality (e.g., oxygen concentration), tidal prism, and habitat areas. The second category includes biological performance standards relating to biological communities (e.g., fish, invertebrates, and birds), marsh vegetation, *Spartina* canopy architecture, reproductive success of marsh plants, food chain support functions, and exotic species. The Monitoring Plan includes a description of each performance standard and the methods that will be used to determine whether the various performance standards have been met. The successful achievement of the performance standards will in some cases be measured relative to three reference wetlands, which are specified in the permit to be relatively undisturbed, natural tidal wetlands within the Southern Bight. In accordance with the SONGS permit the Executive Director selected Tijuana River Estuary, Mugu Lagoon, and Carpinteria Salt Marsh as the reference wetlands.

Management issues relevant to the SONGS wetland mitigation requirement are also discussed in the Monitoring Plan. These issues include inlet maintenance, excessive changes in topography, and exotic species. Although Commission staff and contract scientists are not responsible for managing the wetland restoration, their monitoring will measure several parameters that can be used in adaptive management to ensure the success of the restoration project.

SCE has a plan for managing the inlet in perpetuity to ensure uninterrupted tidal flushing of the restored wetland⁸. This plan provides conditions that would indicate the need for additional maintenance dredging at the inlet. Commission contract scientists will measure water elevation, salinity, and dissolved oxygen concentration during water quality monitoring in the wetland.

added to the number of future operating years and decommissioning period, to determine the length of the monitoring, management and remediation requirement."

⁸ Coastal Environments. 2004. Restored San Dieguito Lagoon Inlet Channel Initial and Periodic Dredging. Prepared for Southern California Edison, Rosemead, California 91770, 10 December 2004, CE-Reference No. 04-19.

These variables change dramatically with a reduction in tidal flushing and provide a useful trigger for inlet maintenance. Topographic degradation of the wetland and berms is likely to occur over time as a result of sedimentation and scour. If aerial photographs or topographic surveys taken as part of post-restoration monitoring indicate that major topographic degradation has occurred, then the appropriate corrective action (e.g., dredging) will be taken to reconfigure the wetland to its "as designed" condition. Exotic species may invade restored habitats. If invasive exotic species are found in the restored wetland during post-restoration monitoring, and these species could adversely affect the success of the restoration, experts working in this field will be consulted and a program to control the spread of these species will be developed.

D.2. WETLAND RESTORATION MONITORING

As part of the Commission's technical oversight, monitoring and management responsibilities under Condition D, the contract scientists conducted pre-restoration monitoring in San Dieguito Lagoon and in other southern California wetlands, including those that will be used as reference sites in post-restoration monitoring. Pre-restoration monitoring data were needed to develop the sampling designs for post-restoration monitoring that are included in the Monitoring Plan. The goal of pre-restoration monitoring was to develop sampling designs that will minimize adverse impacts to wetland resources while effectively determining whether the various performance standards have been met.

Pre-restoration data were needed to develop effective and cost effective strategies for the sampling of wetland fish, invertebrates, birds, and plants. Data were acquired on the temporal and spatial scales over which densities and numbers of wetland species vary to determine the appropriate number and spacing of samples for use in post-restoration monitoring. These data will facilitate the design of a cost-effective sampling program because they provide much needed information on optimal sample sizes, sampling frequency and sampling locations. In addition, the pre-restoration monitoring data will be needed to assess construction-related impacts and changes in the existing wetland following construction. The results of the pre-restoration monitoring studies are provided as Appendices to the Monitoring Plan.

The independent wetland performance monitoring will be implemented by Commission contract scientists in accordance with the Monitoring Plan, which contains the goals and physical and biological standards for the restoration and the monitoring methodology, including standards of comparison with wetland reference sites selected by the Executive Director, and in accordance with the biannual work programs to be approved by the Commission and funded by SCE pursuant to Condition D of the SONGS permit.

In addition to wetland performance monitoring, Condition A of the SONGS permit requires independent construction phase monitoring to ensure that the restoration work is conducted according to approved plans. Commission contract scientists will perform construction phase monitoring during and immediately after each stage of construction. This independent construction phase monitoring is separate from SCE's responsibilities to ensure that the restoration project is constructed according to approved plans; however, independent construction monitoring will be coordinated with SCE to avoid or minimize duplication. The construction phase monitoring tasks to be carried out under the Commission's independent

monitoring function will be described fully in the biannual work program for 2006-2007 expected to be before the Commission in November 2005.

E. COMPLIANCE WITH CONDITIONS OF SONGS CDP 6-81-330-A

The standard of review for permitting the San Dieguito Wetlands Restoration Project is conformity with the policies of Chapter 3 of the Coastal Act. However, the majority of the restoration project also is proposed and designed to comply with the SONGS permit (CDP # 6-81-330-A) Condition A, which requires that the wetland mitigation meet minimum standards and objectives, and that the Final Restoration Plan contain certain elements and substantially conform to the Preliminary Plan approved by the Commission.

On November 5, 1997, the Commission approved SCE's preliminary wetland restoration plan, as revised November 3, 1997, for the San Dieguito Wetland Restoration Project. The Commission found that the Preliminary Plan provided 150 acres of wetland restoration credit as required by Condition A and complied with all but one of the minimum standards and objectives, subject to the additional refinements expected during the environmental review process.

The one standard not met, Standard 1.3.h, requires that the restoration project "not result in loss of existing wetlands." In approving the Preliminary plan, the Commission acknowledged and accepted that a very small amount of existing wetland would probably need to be destroyed to implement a sound wetland restoration project at San Dieguito. The Commission further found that, if needed, it would consider an amendment to this provision of the SONGS permit in the context of the Final Restoration Plan and the provision of a 4 to 1 mitigation ratio for the wetland acres to be eliminated. The Final Restoration Plan (FRP) includes a small amount of loss of existing wetland, which is discussed below under Minimum Standard h. The Commission will consider an amendment to the SONGS permit in a separate action (see staff report on CDP #6-81-330-A4, dated September 29, 2005). The FRP now proposes treatment of freshwater runoff (Section C.6) in which some impacts are proposed to be mitigated at ratios of less than 4 to 1. The Commission has taken into consideration the quality of the existing wetland, the purpose for the impact and the quality/value of the wetlands to be replaced through the project and has thus found the impacts from the treatment ponds to mitigated appropriately.

In evaluating the restoration plan against the minimum standards and objectives and the required elements for the FRP, the Commission finds that the Final Restoration Plan for the San Dieguito Wetland Restoration Project as revised July 2005 (and received September 6, 2005) substantially conforms to the preliminary restoration plan submitted to the Commission on November 3, 1997 and approved November 5, 1997. The FRP meets the minimum standards (as modified by CDP 6-81-330-A4) and objectives and includes the required elements, as specified in the SONGS permit, as summarized below.

E.1. MINIMUM STANDARDS

The required minimum standards and the basis for the finding of conformity of the FRP and accompanying Coastal Permit Application documents with the preliminary restoration plan is summarized below.

a. *Location within Southern California Bight.*

The project consists of restoration of coastal wetland habitat within the Southern California Bight.

b. *Potential for restoration as tidal wetland, with extensive intertidal and subtidal areas.*

The restoration project will be created through the excavation, grading, and planting of an area that historically consisted of large areas of tidal wetland habitat that were transformed to upland habitat through anthropogenic (e.g., filling) and natural processes (e.g., sedimentation). The site currently receives tidal exchange when the tidal inlet is open to the ocean; therefore, the project will provide great potential for tidal wetland restoration with extensive intertidal and subtidal habitat areas as well as seasonal salt marsh, transitional wetland, nesting habitats, and reseeded coastal sage scrub/reseeded grasslands habitats.

c. *Creates or substantially restores a minimum of 150 acres (60 hectares) of wetlands, excluding buffer zone and upland transition area. If the full 150 acre restoration project is carried out at San Dieguito River Valley or if, pursuant to condition A.1.1, an additional site to complete the mitigation requirement is approved by the Commission, up to 35 acres of enhancement credit will be given for permanent, continuous tidal maintenance. The enhancement credit allows the applicant to satisfy up to 35 of the 150 required acres by permanently maintaining the tidal inlet. The 35 acres of enhancement credit is based upon the determination that 126 acres of existing wetlands at San Dieguito Lagoon will be enhanced by 28% if the tidal flows are continuously maintained. However, if the final restoration plan provides for enhancement of less than 126 acres through tidal maintenance, the exact amount of enhancement credit shall be equal to 28% of the total number of tidal wetland acres that are enhanced by tidal maintenance.*

The SCE restoration components proposed to fulfill the SONGS mitigation requirements will involve the creation or substantial restoration of a total of 141.58 acres of wetland habitat on modules W1, W2a, W2b, W3, W4, W5, W10, a small portion of W16 (i.e., 3.2 acres credited to SONGS mitigation requirements from the total acreage on W16), and W45 (Exhibit 17, FRP Tables 5.1, 5.2, and 5.3, as revised September 2005). These areas will consist of subtidal, frequently flooded mudflat, frequently exposed mudflat, low, mid and high coastal salt marsh, and seasonal salt marsh habitats, as well as transitional wetlands. In addition, the restoration project includes maintaining the tidal inlet open to uninterrupted tidal exchange in perpetuity. Construction of the SCE components of the restoration project will result in a need to compensate for the conversion of 17.98 acres from one type of wetland to another (temporary impacts, considered self-mitigating at a one to one ratio) and a permanent loss of 2.15 acres (exclusive of permanent impacts from construction of the least tern nesting sites⁹) that must be

⁹ Two of the four least tern nesting sites included in the FRP to accommodate the permit obligations of the 22nd District Agricultural Association (CDP 6-84-525) will result in a 2.98-acre impact to existing wetlands. No mitigation is proposed for these impacts because the least tern nesting sites were authorized and required by the Commission in its actions on the earlier 22nd DAA permit with the understanding that the nesting sites might be located in degraded wetlands. The Commission authorized construction of the nesting sites without separate mitigation for the wetland fill.

mitigated at a four to one ratio (for a total mitigation of 8.6 acres). The *net* creation or substantial restoration of SCE components therefore totals 115 acres (141.58 gross habitat created – 17.98 temporary impacts – 8.6 mitigation of permanent impacts). The Commission previously determined that the enhancement of existing tidal wetland habitat through maintaining the inlet in an open configuration represents a 35 acre credit toward the required wetland creation or substantial restoration. Therefore, the SCE components of the restoration project will provide a net total of 150 acres of mitigation credit for creation or substantial restoration of tidal wetlands and significant enhancement of existing tidal wetlands by permanent inlet maintenance (115 +35); thus, the SCE restoration components comply with Minimum Standard 1.c.

- d. *Provides a buffer zone of a size adequate to ensure protection of wetland values, and not less than at least 100 feet wide, as measured from the upland edge of the transition area.*

The restoration provides a buffer zone that is at least 100 feet wide as measured from the upland edge of the transition area. However, the Coast to Crest Trail is located within the minimum one hundred foot buffer in some locations. The trail is considered a resource-dependent use, and thus can be allowed within wetland buffers and environmentally sensitive habitat areas.

- e. *Any existing site contamination problems would be controlled or remediated and would not hinder restoration.*

Soil and water quality testing conducted as part of the environmental review process indicated that the project site did not contain any significant levels of contamination.

- f. *Site preservation is guaranteed in perpetuity (through appropriate public agency or nonprofit ownership, or other means approved by the Executive Director), to protect against future degradation or incompatible land use.*

Custody of all land within the SCE project boundaries is currently possessed by the JPA for preservation as River Park, in perpetuity, by SCE and by the City of San Diego. Agreements between SCE and the JPA and City govern use of the land as "open space reserves, preserves." SCE has agreed to transfer title of its owned lands to the JPA upon completion of its SONGS CDP obligations. An endowment provided to the JPA from SCE exists to guarantee open inlet maintenance in perpetuity and other management and maintenance responsibilities. (See Special Condition #17)

- g. *Feasible methods are available to protect the long-term wetland values on the site, in perpetuity.*

The FRP states in Section 4.8 that once SCE has met its obligations, SCE will transfer responsibility to the JPA for maintaining the inlet channel. Per an agreement between SCE and the JPA, SCE has established a \$500,000 endowment fund for the JPA to permit the JPA to maintain the inlet channel in perpetuity and perform other management and maintenance responsibilities for the restored wetlands. A long term monitoring and maintenance program for

the inlet channel will ensure uninterrupted tidal exchange. The berms will be inspected annually before the rainy season and following major storm events to identify areas of erosion and/or loss of armor stone and maintenance conducted as needed. These berms are designed to withstand a 100-year flood and will protect most wetland areas. Damage to vegetation in modules W5 and W10 may occur during major storms, but is expected to be self-repairing. Weirs and culverts will also be inspected annually before the rainy season and following major storm events and repaired, if necessary. The FRP states that SCE will maintain responsibility for repairing damage related to flooding.

h. Does not result in loss of existing wetlands.

The restoration project will result in the loss of existing wetland (as discussed above in paragraph c). Special Condition #2 requires SCE to obtain a Coastal Commission-approved amendment to this standard. A separate permit application has been filed to modify this minimum standard (CDP 6-81-330-A4) to allow the loss of existing wetland necessary for the implementation of the FRP.

Impacts to existing wetland habitat that is converted to the same or different wetland habitat during construction are considered self-mitigating and will be mitigated at a one to one ratio. Permanent impacts resulting from the construction of SCE components to existing wetland habitat that is converted to non-wetland habitat will be mitigated at a four to one ratio. (Permanent impacts resulting from the JPA components (trail and treatment ponds) will be mitigated as discussed above in Section C.6 Water Quality and Section C.8 Public Access. As noted above in paragraph c, impacts from the construction of least tern nesting sites are not required to be mitigated. These components are not part of SCE's requirements under CDP 6-81-330-A.).

Permanent impacts to existing wetland were avoided where possible and minimized where necessary. The SCE components will result in permanent impacts from the construction of river berms B7 and B8, the disposal of excavated materials on DS32, and the construction of a permanent maintenance road extending from Racetrack View Drive east of I-5. These impacts have been discussed above in the findings under Chapter 3 of the Coastal Act and found to be necessary for the restoration project and therefore unavoidable, and mitigated appropriately.

Similarly, permanent impacts from the treatment ponds and trails have been discussed above in the findings under Chapter 3 of the Coastal Act and found to be necessary for the restoration project and therefore unavoidable, and mitigated appropriately. Finally, permanent impacts from the nesting sites are not required to be mitigated, as discussed above and in CDP amendment 6-84-525-A1.

i. Does not result in impact on endangered species.

The environmental review that was conducted for the restoration project concluded that the project will not result in significant, long-term, adverse impacts on endangered species. Biological observers will monitor construction activities to minimize the risk of short-term constructed-related impacts to endangered species. If potential impacts are identified then the biological observers will redirect construction activities to locations away from the endangered

species or their habitat. The project will result in significant long-term beneficial impacts on endangered species such that endangered species are expected to use some of the created and substantially restored habitat. For example, the Belding Savannah Sparrow is expected to utilize the high coastal salt marsh habitat for nesting and the California Least Tern is expected to use the subtidal and intertidal areas for foraging. The potential exists that as a result of wetland restoration at this site, endangered species habitat and populations will be greatly enhanced.

E.2. OBJECTIVES

The required objectives and the basis for the finding of conformity of the FRP and accompanying Coastal Permit Application documents with the preliminary restoration plan is summarized below.

- a. *Provides maximum overall ecosystem benefits (e.g., maximum upland buffer, enhancement of downstream fish values, provides regionally scarce habitat, potential for local ecosystem diversity).*

The USFWS, NMFS, CDFG, CCC, JPA, and SCE conducted an evaluation of five restoration alternatives during the environmental review process and determined that the Mixed Habitat Alternative (presented in modified form as the Final Restoration Plan) provides the maximum overall ecosystem benefits. The restoration project achieves the optimum balance of upland buffer, transition areas, fish habitat, and regionally scarce habitat with the least amount of impact to existing habitat and infrastructure. Maintenance of a tidal inlet and creation of subtidal and intertidal areas will provide habitat for fish, benthos, and aquatic vegetation. The creation of a relatively large amount of coastal salt marsh will provide aggregate increases in regionally scarce habitat and enhance habitat for some endangered or sensitive species. Maintaining adequate buffer zones and limiting future land uses through implementation of the San Dieguito River Park Plan will provide sufficient upland buffers to support wetland habitat functions in perpetuity. Creation of nesting areas will also provide habitat for endangered species.

- b. *Provides substantial fish habitat compatible with other wetland values at the site.*

A relatively large portion of the restoration project will consist of subtidal habitat west of Interstate 5 that will provide substantial fish habitat. The subtidal habitat will transition to intertidal, transitional wetlands, and seasonal salt marsh habitats so that the fish community that eventually develops within the subtidal portion of the restored wetlands is compatible with other wetland values at the site. Recent studies within Southern California have shown the importance of intertidal habitat (i.e., marshes, tidal creeks, and shallow mudflats) in providing vital habitat and production sites for estuarine fish; therefore, the intertidal areas will provide additional fish habitat.

- c. *Provides a buffer zone of an average of at least 300 feet wide, and not less than 100 feet wide, as measured from the upland edge of the transition area.*

The restoration provides for an average buffer zone of 300 ft. (FRP Section 4.2.12, Figure 4.14), which is at least 100 feet wide as measured from the upland edge of the transition area. However, the Coast to Crest Trail is located within the minimum one hundred foot buffer in some

locations. The trail is considered a resource-dependent use, and thus can be allowed within wetland buffers and environmentally sensitive habitat areas.

d. Provides maximum upland transition areas (in addition to buffer zones).

SCE components of the restoration provides for 0.82 acres of wetland to upland transition habitat. Where possible, seasonal wetland habitat is also preserved and in some cases, created, within the transitional areas. These areas will provide refugial habitat for species during high tides and storm events and are important for many sensitive plant and animal species. Much of the undeveloped land that surrounds the restoration project will be owned and managed by the JPA for the purposes of natural habitat restoration. Disposal areas on the perimeter of the project will be restored to coastal sage/natural grassland habitat as well. As a result, the project will provide substantial upland transitional areas.

e. Restoration involves minimum adverse impacts on existing functioning wetlands and other sensitive habitats.

The potential adverse impacts to functioning wetlands and other sensitive habitats associated with construction of the restoration project were identified as part of the environmental review process. Mitigation measures were developed to minimize the effects of any potentially significant construction-related impacts. Mitigation measures include implementation of Best Management Practices, restrictions on type of construction equipment, limitations on timing of construction operations, implementation of traffic control measures, and restoration of any impacted habitat. In addition, biological, cultural, and paleontological monitoring will be conducted during construction to minimize impacts to these resources, as required by the City of San Diego in the San Dieguito River Valley Restoration and Coast to Crest Trail Site Development/Coastal Development Permit/PTS 55370.

Any long-term impacts to existing wetland habitat that is converted to the same or different wetland habitat during construction will be mitigated at a one to one ratio. Any long-term impacts to existing wetland habitat within SCE's restoration project components that is converted to non-wetland habitat will be mitigated at a four to one ratio. The restoration seeks to avoid grading within existing wetland areas to minimize impacts to existing wetlands and other sensitive habitats. Therefore, grading within existing wetlands is proposed only at locations that require slope stabilization, inlet maintenance, habitat restoration (wetlands and nesting sites), berm construction, and disposal of excavated soil (beach).

f. Site selection and restoration plan reflect a consideration of site specific and regional wetland restoration goals.

The restoration plan was developed in full consideration of the site-specific goals established by the Commission, resource agencies, and public working group as well as the regional wetlands restoration goals identified by local biologists, university faculty, and resource agencies.

- g. *Restoration design is that most likely to produce and support wetland-dependent resources.*

The restoration project was designed to provide a diverse mixture of wetland habitats including subtidal, mudflat, coastal salt marsh, transitional wetlands, seasonal salt marsh, and nesting areas, instead of focusing primarily on one or two habitat types. The diverse habitat mix was selected to produce and support a wide variety of wetland-dependent resources such as aquatic vegetation, fish, benthos, coastal salt marsh vegetation, and birds.

- h. *Provides rare or endangered species habitat.*

The restoration project is designed to provide habitat for numerous rare and endangered species including the California Least Tern, Western Snowy Plover, Light-footed Clapper Rail, Belding's Savannah Sparrow, California Brown Pelican, Coastal California Gnatcatcher, least Bell's Vireo, and Pacific Little Pocket Mouse. In addition, the restoration project is included in the JPA Park Master Plan that will include habitat creation and management elements to support some of the life requirements of the species listed above as well as additional species.

- i. *Provides for restoration of reproductively isolated populations of native California species.*

A number of sensitive plant species are found within the San Dieguito Lagoon including the Del Mar Mesa Sand Aster, San Diego Marsh Elder, Southwestern spiny rush, and Coulter's goldfields. The restoration plans include provision for the protection and creation of habitat that will benefit these species.

- j. *Results in an increase in the aggregate acreage of wetland in the Southern California Bight.*

Since the restoration project is located within the Southern California Bight and the project consists of the restoration of coastal wetland habitat, project implementation will result in an increase in the aggregate acreage of wetland in the Southern California Bight.

- k. *Requires minimum maintenance.*

Section 4.8 of the FRP details management and maintenance requirements. Once completed and the vegetation is established, the restoration project will require minimal maintenance to improve the functional performance of the restored ecosystem. The inlet will be maintained in an open condition in perpetuity through implementation of a tidal inlet maintenance program utilizing conventional construction equipment approximately one to two times per year. The berms will confine the river flows, thereby reducing flood damage (i.e., erosion and sedimentation) to the restored wetlands. The berms will be inspected annually before the rainy season and following major storm events to identify areas of erosion and/or loss of armor stone and maintenance conducted as needed. Weirs and culverts will also be inspected annually before the rainy season and following major storm events. Any damage will be repaired and sediment and debris and any biofouling organisms (e.g., mussels) removed. Periodic removal of exotic species will be required for the restored vegetated wetland and upland areas, including upland disposal sites.

- l. Restoration project can be accomplished in a timely fashion.*

With completion of the environmental review, construction of the restoration project can proceed after final permitting and engineering design (i.e., final design). Construction will take approximately three years. Although there have been delays due to legal and administrative issues, there are no structural issues (e.g. site contamination, insufficient area) that preclude restoration being concluded in a timely manner.

- m. Site is in proximity to SONGS.*

The restoration project is located in the City of Del Mar, California, which is located approximately 35 miles south of SONGS. SONGS and the restoration project are both located in San Diego County.

E.3. REQUIRED ELEMENTS

The required elements and the basis for the finding of conformity of the FRP and accompanying Coastal Permit Application documents with the preliminary restoration plan is summarized below.

The FRP shall include:

- a. Detailed review of existing physical, biological, and hydrological conditions; ownership, land use and regulation.*

This review is provided in Section 2 of the FRP. Subsections that address this condition include those on land use (2.1), property ownership (2.2), regulation (2.3), physical attributes (2.4), biological attributes (2.5), lagoon hydrology and hydraulics (2.6), coastal processes (2.7), and water quality (2.8).

- b. Evaluation of site-specific and regional restoration goals and compatibility with the goal of mitigating for SONGS impact to fish.*

Thirty-one site specific goals are provided in the FRP (Section 5.2). These goals incorporate the standards and objectives specified in Condition A of the SONGS permit and also include wetlands restoration goals developed by the Public Working Group.

A list of regional goals identified by local biologists, resource agency staff, and university researchers in the regional coastal wetlands restoration needs assessment is also provided in the FRP. An evaluation of how each of the site-specific and regional goals is met by the restoration project is provided in the FRP. These goals are compatible with the original, main goal of mitigating for the impacts of SONGS to fish.

- c. Identification of site opportunities and constraints.*

Site opportunities are identified in the FRP (Section 3). These include 1) background information on inlet characteristics that will facilitate the maintenance of the inlet in an open configuration, 2) water quality that is sufficient to support marine resources when the inlet is open to tidal flushing, 3) biology of the existing wetland, including a source of seed and habitat for wetland

dependent animals, and 4) engineering elements related to construction and disposal sites that will minimize environmental impacts.

Site constraints are also provided in the FRP (Section 3). These include issues related to 1) flooding (e.g., scour and sedimentation), 2) water quality related to lagoon closure, 3) biology, including impacts to existing wetlands within the footprint of the restoration project, and 4) engineering elements, including the disposal of dredged material unsuitable for beach replenishment. Detailed mitigation measures for addressing the potential constraints to the restoration project are provided in the FEIR/EIS and included in the FRP.

d. Schematic restoration design, including:

d.1 Proposed cut and fill, water control structures, control measures for storm water, buffers and transition areas, management and maintenance requirements.

Proposed cut and fill, water control structures, control measures for storm water, buffers and transition areas are indicated on the final grading plans submitted with the CDP application and in the Storm Water Pollution Prevention Plan (August 2, 2004). An annual inspection will be done of berms, weir, and culverts before the rainy season, and following major storm events, and repairs and other maintenance done if needed (Section 4.8, FRP).

d.2. Planting Program, including removal of exotic species, sources of plants and or seeds (local, if possible), protection of existing salt marsh plants, methods for preserving top soil and augmenting soils with nitrogen and other necessary soil amendments before planting, timing of planting, plans for irrigation until established, and location of planting and elevations on the topographic drawings.

An outline of the methods that would be used to establish selected plant communities/species is provided in the FRP (Section 4.3.4). Details of the planting program are provided in the submittal, "San Dieguito Lagoon Wetland Restoration Project. Project Specifications for Wetland Mitigation and Restoration" October 15, 2003. This submittal includes specifications for the salvaging of topsoil and existing marsh plants, controlling weed seeds in upper topsoil, augmentation of marsh soils with amendments (e.g., clay) before planting, irrigation, and timing of planting. Topographic drawings showing the location and elevation of planting are provided with this submittal and with the final grading plans.

Information on the protection of existing salt marsh plants are provided in the FRP (Section 4.3.3), which includes the use of fencing and signage to protect existing vegetation. As a condition of the San Dieguito River Valley Restoration and Coast to Crest Trail Site Development/Coastal Development Permit/PTS 55370 issued by the City of San Diego, a project biologist will monitor initial grading and construction activities to ensure that construction activities do not encroach into biologically sensitive areas beyond the limits of disturbance shown on the approved final grading plans.

d.3. Proposed habitat types (including approximate size and location).

Proposed habitat types and approximate size and location are provided in Section 4 of the FRP. Acreage estimates of net wetland habitat creation are provided in Exhibit 17 (FRP Tables 5.1-

5.3, as revised September 2005). The plan view of the restoration project in the FRP (Exhibit 4, FRP Figure 4.1a) provides an overview of proposed habitat types.

d.4. Assessment of significant impacts of design (especially on existing habitat values) and net habitat benefits.

The potential impacts associated with project implementation were assessed by the USFWS and JPA during the environmental review process. The results are presented in Table 4.7 of the FRP. This table was taken from the FEIR/FEIS document (JPA, USFWS, 2000). Mitigation measures that were developed for unavoidable, adverse significant impacts are presented in Table 4.7 for each potentially significant impact.

d.5. Location, alignment and specifications for public access facilities, if feasible.

Public access facilities are summarized in Section 4.6 of the FRP. The proposed Coast to Crest Trail plan is presented in Figure 4.17 of the FRP. Section 4.6 also includes the design and location of facilities, such as staging areas, viewpoints, and a future nature/interpretive center. Schematic drawings of the location and alignment of the Coast to Crest trail are provided with the grading plans submitted to the Commission with the CDP application.

d.6. Evaluation of steps for implementation, e.g., permits and approvals, development agreements, acquisition of property rights.

The necessary permits, agreements, and approvals that are required are provided in Section 4.7 of the FRP. A preliminary schedule for project implementation is presented in Figure 4.21.

d.7. Cost estimates.

Cost estimates are provided in Section 5.14 of the FRP.

d.8. Topographic drawings for final restoration plan at 1" = 100 foot scale, one foot contour interval.

SCE has provided topographic drawings for the restoration as part of the CDP application with greater resolution at 1"=40, one foot contour interval.

d.9. Drawings shall be directly translatable into final working drawings.

Final grading plans submitted to the CCC with the CDP application (and to be revised consistent with Special Condition #3) represent construction (working) drawings.

F. LOCAL COASTAL PLANNING

Section 30604(a) also requires that a coastal development permit, shall be issued only if the Commission finds that the permitted development will not prejudice the ability of the local government to prepare a Local Coastal Program (LCP) in conformity with the provisions of Chapter 3 of the Coastal Act. In this case, with the attached special conditions, such a finding can be made.

The San Dieguito Wetland Restoration Project includes components within four types of coastal permit jurisdictions. From west to east, these include Coastal Commission original jurisdiction within the public trust areas at the inlet and to the east, City of Del Mar jurisdiction for areas west of Jimmy Durante Boulevard's north-south orientation, City of San Diego jurisdiction for those areas within the Torrey Pines Community Plan, and the Commission's deferred certification area east of I-5 (Subarea II of the North City Future Urbanizing Area [NCFUA]). The cities of Del Mar and San Diego have already issued coastal development permits for the project components within their respective jurisdictions, and neither local permit was appealed to the Commission.

This subject permit covers the Commission's original and deferred certification jurisdictions, which include the vast majority of project components. In both cases, the Chapter 3 policies of the Coastal Act are the legal standard of review, with the certified LCP of Del Mar used only for guidance in the areas west of Jimmy Durante Boulevard. There is no certified LCP for the area east of I-5, although the Commission certified portions of a Framework Plan for the NCFUA in 1993. Those project components east of I-5 are all identified as open space in the Framework Plan, and the proposed restoration plan is consistent with that designation. The preceding findings have demonstrated that the proposal, as conditioned, is consistent with all applicable Chapter 3 policies of the Coastal Act. Therefore, the Commission finds that the proposed project, as conditioned, will not prejudice the City of San Diego from developing a certifiable LCP for the NCFUA area.

G. CONSISTENCY WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096 of the Commission's Code of Regulations requires Commission approval of Coastal Development Permits to be supported by a finding showing the permit, as conditioned, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The proposed project has been conditioned in order to be found consistent with the Chapter 3 policies of the Coastal Act. Mitigation measures, including conditions addressing maintenance and monitoring of the various project components, creation of new wetlands as mitigation for wetland fill, dedication of easements over different areas of the project, construction BMPs and timing constraints, and many more conditions will minimize all adverse environmental impacts. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the proposed project amendment is the least environmentally damaging feasible alternative and can be found consistent with the requirements of the Coastal Act to conform to CEQA.

EXHIBITS

ADOPTED FINDINGS AND CONDITIONS CDP APPLICATION NO. 6-04-88

Item Number:	WED-8.f
Staff Report:	September 29, 2005
Hearing Date:	October 12, 2005
Commission Action:	Approved, 10-0

EXHIBITS

CDP Application No. 6-04-88

Southern California Edison and San Dieguito River Valley Joint Powers Authority

1. SONGS Condition A (CDP #6-81-330)
2. Regional Location Map (EIR/EIS)
3. Project vicinity map
4. Plan map, Figure 4.1a (FRP)
5. Restoration component map, Figure 4.1b (FRP)
6. Grading plan, Figure 4.2 (FRP)
7. Construction access and maintenance roads, Figure 4.13 (FRP)
8. Public trail plan, Figure 4.17 (FRP)
9. Treatment Ponds engineering plan, Figure 4.19 (FRP)
10. Treatment Ponds, Figure 6 (Tierra)
11. Treatment Ponds vegetation, Figure 4.20 (FRP)
12. Wetland impact map (PDC)
13. Matrix of impacts from trails and treatment ponds, (Tierra)
14. Trail alignment, project location map, Figure 2 (Tierra)
15. Trail profile for I-5 undercrossing, Figure 4.18 (FRP)
16. Permanent maintenance road access (PDC)
17. SCE components Tables 5.1-5.3, as revised 9/05 (FRP)
18. Beach Profile Locations, Figure 6.6 (Coastal Environments)

III. SPECIAL CONDITIONS

NOTE: The following italicized text represents language from the 1991 permit conditions. The non-italicized text is the language added or revised by the 1997 amendment.

The Commission approved the amendment of permit 6-81-330 with Conditions A, C, and D of permit 6-81-330 amended as set forth below.¹ Condition A describes the requirements for a wetland mitigation project that compensates for past, present and future fish impacts from the SONGS Units 2 and 3. Condition C describes requirements for artificial reefs and funding for a mariculture/fish hatchery program necessary to mitigate/compensate for adverse impacts to the San Onofre Kelp bed community caused by the discharge of water used to cool SONGS Units 2 and 3. Condition D describes an administrative structure necessary to ensure independent monitoring and scientific oversight of the required mitigation projects. (Appendix C provides mark-up versions of the permittee's proposed condition amendments.)

A. CONDITION A: WETLAND MITIGATION

NOTE: The following italicized text is the original version of the Commission's 1991 permit Condition A. The non-italicized text is the language added or revised by the 1997 amendment. In its April 9, 1997, action, the Commission revised Condition A to: (a) reaffirm the Commission's 1992 selection of San Dieguito River Valley as the site for wetland restoration; (b) grant up to 35 acres of enhancement credit for inlet maintenance if wetland restoration is done at San Dieguito; and, (c) add an optional trust fund to satisfy the permittee's responsibilities (Condition A.4.).

1.0 SITE SELECTION AND PRELIMINARY PLAN

In consultation with Commission staff, the permittee shall select a wetland restoration site and develop a preliminary plan in accordance with the following process and terms.

Within 9 months of the effective date of this permit, the permittee shall submit the proposed site to the Commission for its review and approval or disapproval.² Within 6 months of the Commission's approval of this permit amendment and no later than October 9, 1997, the permittee shall submit the preliminary restoration plan to the Commission for its review and approval or disapproval.

¹ No amendments to Special Conditions B, E, and F were requested by the permittee, so these conditions apply as originally stated. Appendix B includes the original text for Special Conditions A through F.

² San Dieguito River Valley.

EXHIBIT NO.	1
APPLICATION NO.	
	6-04-88
	1 of 9

1.1 Site Selection

The location of the wetland restoration project shall be within the Southern California Bight. The permittee shall evaluate and select from sites including, but not limited to, the following eight sites: Tijuana Estuary in San Diego County, San Dieguito River Valley in San Diego County, Huntington Beach Wetland in Orange County, Anaheim Bay in Orange County, Santa Ana River in Orange County, Los Cerritos Wetland in Los Angeles County, Ballona Wetland in Los Angeles County, and Ormond Beach in Ventura County. Other sites proposed by the permittee may be added to this list with the Executive Director's approval.

The basis for the selection shall be an evaluation of the sites against the minimum standards and objectives set forth in subsections 1.3 and 1.4 below. The permittee shall take into account and give serious consideration to the advice and recommendations of an Interagency Wetland Advisory Panel, established and convened by the Executive Director. The permittee shall select the site that meets the minimum standards and best meets the objectives.

On June 11, 1992, the Commission approved the permittee's selected restoration site, the San Dieguito River Valley. On April 9, 1997, the Commission reaffirmed its prior determination that San Dieguito River Valley is the restoration site that meets the minimum standards and best meets the objectives of this Condition A. The permittee can propose an additional site for restoration prior to October 9, 1997, only if achieving all 150 acres of restoration at San Dieguito River Valley becomes infeasible due to hydrology or other engineering concerns. In that event, the additional substantial restoration or creation needed to meet the 150 acre requirement can be completed at another site subject to Commission approval in accordance with the site selection and planning processes set forth in this condition.

1.2 Preliminary Restoration Plan

In consultation with Commission staff, the permittee shall develop a preliminary wetland restoration plan for the wetland site identified through the site selection process. The preliminary wetland restoration plan shall meet the minimum standards and incorporate as many as possible of the objectives in subsections 1.3 and 1.4, respectively.

The preliminary wetland restoration plan shall include the following elements:

- a. Review of existing physical, biological, and hydrological conditions; ownership, land use and regulation.*
- b. Site-specific and regional restoration goals and compatibility with the goal of mitigating for SONGS impact to fish.*

- c. *Identification of site opportunities and constraints.*
- d. *Conceptual restoration design, including:*
 - 1. *Proposed grading and excavation; water control structures; planting; integration of public access, if feasible; buffers and transition areas; management and maintenance requirements.*
 - 2. *Proposed habitat types (including approximate size and location).*
 - 3. *Preliminary assessment of significant impacts of design (especially on existing habitat values) and net habitat benefits.*
 - 4. *Evaluation of steps for implementation e.g. permits and approvals, development agreements, acquisition of property interests.*
 - 5. *A graphic depiction of proposed plan.*

1.3 Minimum Standards

The wetland restoration project site and preliminary plan must meet the following minimum standards:

- a. *Location within Southern California Bight.*
- b. *Potential for restoration as tidal wetland, with extensive intertidal and subtidal areas.*
- c. *Creates or substantially restores a minimum of 150 acres (60 hectares) of wetlands, excluding buffer zone and upland transition area. If the full 150 acre restoration project is carried out at San Dieguito River Valley or if, pursuant to condition A.1.1., an additional site to complete the mitigation requirement is approved by the Commission, up to 35 acres of enhancement credit will be given for permanent, continuous tidal maintenance. The enhancement credit allows the permittee to satisfy up to 35 of the 150 required acres by permanently maintaining the tidal inlet. The 35 acres of enhancement credit is based upon the determination that 126 acres of existing wetlands at San Dieguito Lagoon will be enhanced by 28% if the tidal flows are continuously maintained. However, if the final restoration plan provides for enhancement of less than 126 acres through tidal maintenance, the exact amount of enhancement credit shall be equal to 28% of the total number of tidal wetland acres that are enhanced by tidal maintenance.*
- d. *Provides a buffer zone of a size adequate to ensure protection of wetland values, and not less than at least 100 feet wide, as measured from the upland edge of the transition area.*
- e. *Any existing site contamination problems would be controlled or remediated and would not hinder restoration.*

- f. *Site preservation is guaranteed in perpetuity (through appropriate public agency or nonprofit ownership, or other means approved by the Executive Director), to protect against future degradation or incompatible land use.*
- g. *Feasible methods are available to protect the long-term wetland values on the site, in perpetuity.*
- h. *Does not result in loss of existing wetlands.*
- i. *Does not result in impact on endangered species.*

1.4 Objectives

The following objectives represent the factors that will contribute to the overall value of the wetland. The selected site shall be that with the best potential to achieve these objectives. These objectives shall also guide preparation of the restoration plan.

- a. *Provides maximum overall ecosystem benefits e.g. maximum upland buffer, enhancement of downstream fish values, provides regionally scarce habitat, potential for local ecosystem diversity.*
- b. *Provides substantial fish habitat compatible with other wetland values at the site.*
- c. *Provides a buffer zone of an average of at least 300 feet wide, and not less than 100 feet wide, as measured from the upland edge of the transition area.*
- d. *Provides maximum upland transition areas (in addition to buffer zones);*
- e. *Restoration involves minimum adverse impacts on existing functioning wetlands and other sensitive habitats.*
- f. *Site selection and restoration plan reflect a consideration of site specific and regional wetland restoration goals.*
- g. *Restoration design is that most likely to produce and support wetland-dependent resources.*
- h. *Provides rare or endangered species habitat.*
- i. *Provides for restoration of reproductively isolated populations of native California species.*
- j. *Results in an increase in the aggregate acreage of wetland in the Southern California Bight.*
- k. *Requires minimum maintenance.*
- l. *Restoration project can be accomplished in a timely fashion.*

m. Site is in proximity to SONGS.

1.6 Restrictions

(a) The permittee may propose a wetland restoration project larger than the minimum necessary size specified in subsection 1.3(c) above, if biologically appropriate for the site, but the additional acreage must (1) be clearly identified, and (2) must not be the portion of the project best satisfying the standards and objectives listed above.

(b) If the permittee jointly enters into a restoration project with another party: (1) the permittee's portion of the project must be clearly specified, (2) any other party involved cannot gain mitigation credit for the permittee's portion of the project, and (3) the permittee may not receive mitigation credit for the other party's portion of the project.

(c) The permittee may propose to divide the mitigation requirement between a maximum of two wetland restoration sites, unless there is a compelling argument, approved by the Executive Director, that the standards and objectives of subsections 1.3 and 1.4 will be better met at more than two sites.

2.0 FINAL PLAN AND PLAN IMPLEMENTATION

2.1 Final Restoration Plan

Within 12 months following the Commission's approval of a site selection and preliminary restoration plan, the permittee shall submit a final restoration plan along with CEQA documentation generated in connection with local or other state agency approvals, to the Executive Director of the Coastal Commission for review and approval. The final restoration plan shall substantially conform to the approved preliminary restoration plan as originally submitted or as amended by the Commission pursuant to a request by the permittee. The final restoration plan shall include, but not be limited to the following elements:

- a. Detailed review of existing physical, biological, and hydrological conditions; ownership, land use and regulation.
- b. Evaluation of site-specific and regional restoration goals and compatibility with the goal of mitigating for SONGS impacts to fish.
- c. Identification of site opportunities and constraints.
- d. Schematic restoration design, including:
 1. Proposed cut and fill, water control structures, control measures for stormwater, buffers and transition areas, management and maintenance requirements.

2. *Planting Program, including removal of exotic species, sources of plants and or seeds (local, if possible), protection of existing salt marsh plants, methods for preserving top soil and augmenting soils with nitrogen and other necessary soil amendments before planting, timing of planting, plans for irrigation until established, and location of planting and elevations on the topographic drawings.*
3. *Proposed habitat types (including approximate size and location).*
4. *Assessment of significant impacts of design (especially on existing habitat values) and net habitat benefits.*
5. *Location, alignment and specifications for public access facilities, if feasible.*
6. *Evaluation of steps for implementation e.g. permits and approvals, development agreements, acquisition of property rights.*
7. *Cost estimates.*
8. *Topographic drawings for final restoration plan at 1" = 100 foot scale, one foot contour interval.*
9. *Drawings shall be directly translatable into final working drawings.*

2.2 Wetland Construction Phase

Within 6 months of approval of the final restoration plan, subject to the permittee's obtaining the necessary permits, the permittee shall commence the construction phase of the wetland restoration project. The permittee shall be responsible for ensuring that construction is carried out in accordance with the specifications and within the timeframes specified in the approved final restoration plan and shall be responsible for any remedial work or other intervention necessary to comply with final plan requirements.

2.3 Timeframe for Resubmittal of Project Elements

If the Commission does not approve any element of the project (i.e. site selection, restoration plan), the Commission will specify the time limits for compliance relative to selection of another site or revisions to the restoration plan.

3.0 WETLAND MONITORING, MANAGEMENT AND REMEDIATION

Monitoring, management (including maintenance), and remediation shall be conducted over the "full operating life" of SONGS Units 2 and 3. "Full operating life" as defined in this permit includes past and future years of operation of SONGS units 2 and 3 including the decommissioning period to the extent there are continuing discharges. The number of past operating years at the time the wetland is ultimately constructed, shall be added to the

number of future operating years and decommission period, to determine the length of the monitoring, management and remediation requirement.

The following section describes the basic tasks required for monitoring, management and remediation. Condition II-D specifies the administrative structure for carrying out these tasks, including the roles of the permittee and Commission staff.

3.1 Monitoring and Management Plan

A monitoring and management plan will be developed in consultation with the permittee and appropriate wildlife agencies, concurrently with the preparation of the restoration plan, to provide an overall framework to guide the monitoring work. It will include an overall description of the studies to be conducted over the course of the monitoring program and a description of management tasks that are anticipated, such as trash removal. Details of the monitoring studies and management tasks will be set forth in a work program (see Section II-D).

3.2 Pre-restoration site monitoring

Pre-restoration site monitoring shall be conducted to collect baseline data on the wetland attributes to be monitored. This information will be incorporated into and may result in modification to the overall monitoring plan.

3.3 Construction Monitoring

Monitoring shall be conducted during and immediately after each stage of construction of the wetland restoration project to ensure that the work is conducted according to plans.

3.4 Post-Restoration Monitoring and Remediation

Upon completion of construction of the wetland, monitoring shall be conducted to measure the success of the wetland in achieving stated restoration goals (as specified in restoration plan) and in achieving performance standards, specified below. The permittee shall be fully responsible for any failure to meet these goals and standards during the full operational years of SONGS Units 2 and 3. Upon determining that the goals or standards are not achieved, the Executive Director shall prescribe remedial measures, after consultation with the permittee, which shall be immediately implemented by the permittee with Commission staff direction. If the permittee does not agree that remediation is necessary, the matter may be set for hearing and disposition by the Commission.

Successful achievement of the performance standards shall (in some cases) be measured relative to approximately four reference sites, which shall be relatively undisturbed, natural

tidal wetlands within the Southern California Bight. The Executive Director shall select the reference sites. The standard of comparison i.e. the measure of similarity to be used (e.g., within the range, or within the 95% confidence interval) shall be specified in the work program.

In measuring the performance of the wetland project, the following physical and biological performance standards will be utilized:

- a. *Long-term Physical Standards. The following long-term standards shall be maintained over the full operative life of SONGS Units 2 and 3.*
 - 1) *Topography. The wetland shall not undergo major topographic degradation (such as excessive erosion or sedimentation).*
 - 2) *Water Quality. Water quality variables [to be specified] shall be similar to reference wetlands.*
 - 3) *Tidal prism. The designed tidal prism shall be maintained, and tidal flushing shall not be interrupted. If the full 150 acre restoration project is carried out at San Dieguito River Valley or if, pursuant to condition A.1.1., an additional site to complete the mitigation requirement is approved by the Commission, up to 35 acres of enhancement credit will be given for permanent continuous tidal maintenance. The enhancement credit allows the permittee to satisfy up to 35 of the 150 required acres by permanently maintaining the tidal inlet. The 35 acres of enhancement credit is based upon the determination that 126 acres of existing wetlands at San Dieguito Lagoon will be enhanced by 28% if the tidal flows are continuously maintained. However, if the final restoration plan provides for enhancement of less than 126 acres through tidal maintenance, the exact amount of enhancement credit shall be equal to 28% of the total number of tidal wetland acres that are enhanced by tidal maintenance.*
 - 4) *Habitat Areas. The area of different habitats shall not vary by more than 10% from the areas indicated in the final restoration plan.*
- b. *Biological Performance Standards. The following biological performance standards shall be used to determine whether the restoration project is successful. Table 1, below, indicates suggested sampling locations for each of the following biological attributes; actual locations will be specified in the work program.*
 - 1) *Biological Communities. Within 4 years of construction, the total densities and number of species of fish, macroinvertebrates and birds (see table 1) shall be similar to the densities and number of species in similar habitats in the reference wetlands.*
 - 2) *Vegetation. The proportion of total vegetation cover and open space in the marsh shall be similar to those proportions found in the reference sites. The*

percent cover of algae shall be similar to the percent cover found in the reference sites.

- 3) *Spartina* Canopy Architecture. The restored wetland shall have a canopy architecture that is similar in distribution to the reference sites, with an equivalent proportion of stems over 3 feet tall.
- 4) Reproductive Success. Certain plant species, as specified by in the work program, shall have demonstrated reproduction (i.e. seed set) at least once in three years.
- 5) Food Chain Support. The food chain support provided to birds shall be similar to that provided by the reference sites, as determined by feeding activity of the birds.
- 6) Exotics. The important functions of the wetland shall not be impaired by exotic species.

Table 1: Suggested sampling locations.

	Salt Marsh			Open Water		Mudflat	Tidal Creeks
	<i>Spartina</i>	<i>Salicornia</i>	Upper	Lagoon	Eelgrass		
1) Density/spp:							
<i>Fish</i>				X	X	X	X
<i>Macroinverts</i>				X	X	X	X
<i>Birds</i>	X	X	X	X		X	X
2) % Cover							
<i>Vegetation</i>	X	X	X		X		
<i>algae</i>	X	X				X	
3) <i>Spar. arch.</i>	X						
4) <i>Repro. suc.</i>	X	X	X				
5) <i>Bird feeding</i>				X		X	X
6) <i>Exotics</i>	X	X	X	X	X	X	X

4.0 FUNDING OPTION FOR WETLAND RESTORATION

As part of the total funding option package provided in revised Condition D, the permittee has the option of satisfying the requirements of Sections 1, 2, and the remediation portion of Section 3 of Condition A by paying the amounts specified for wetland restoration in accordance with the provisions set forth in Sections 4.0 through 4.3 of Condition D.

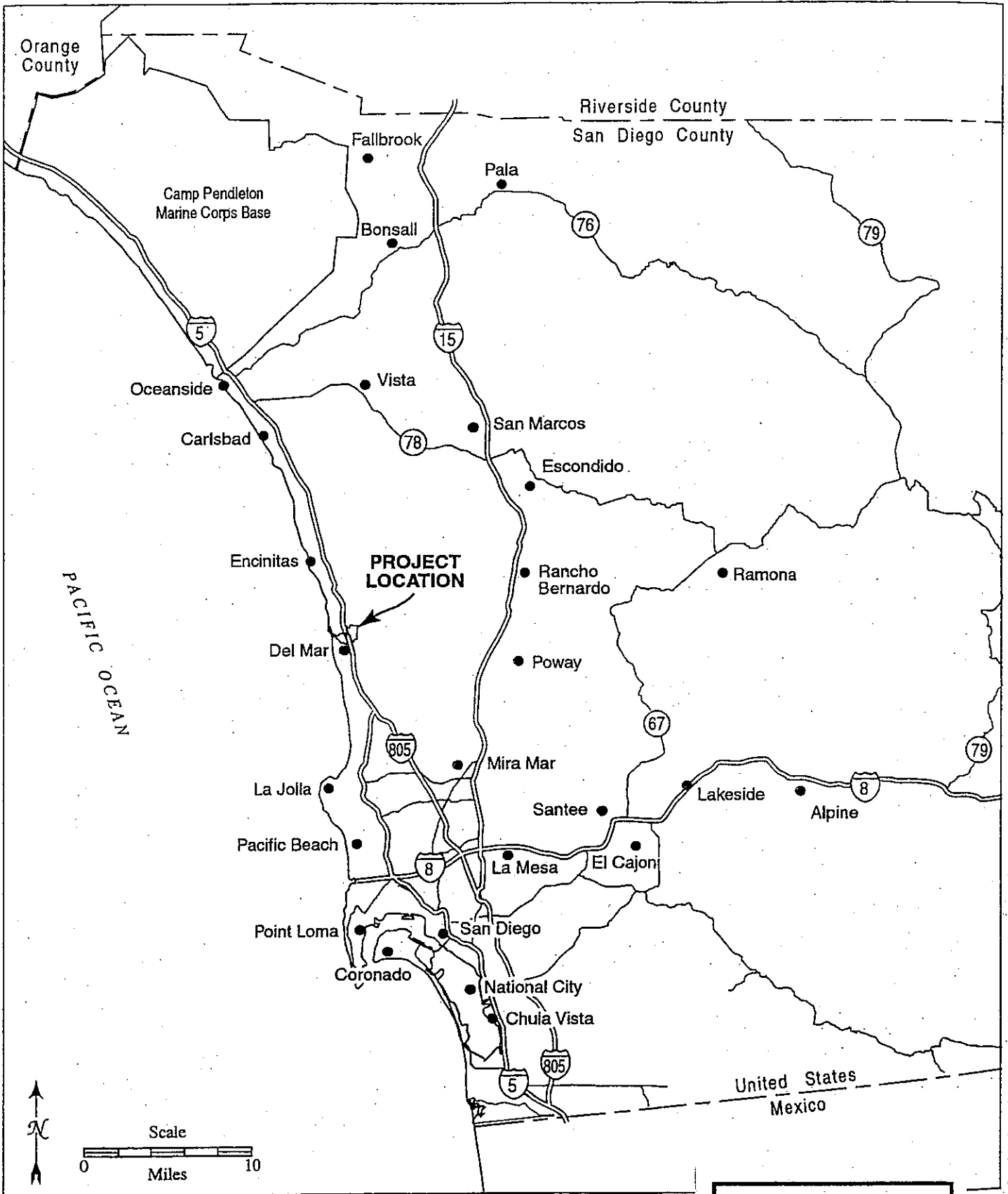


Figure 1-1. Regional Location Map

EXHIBIT NO. 2
APPLICATION NO.
6-04-88

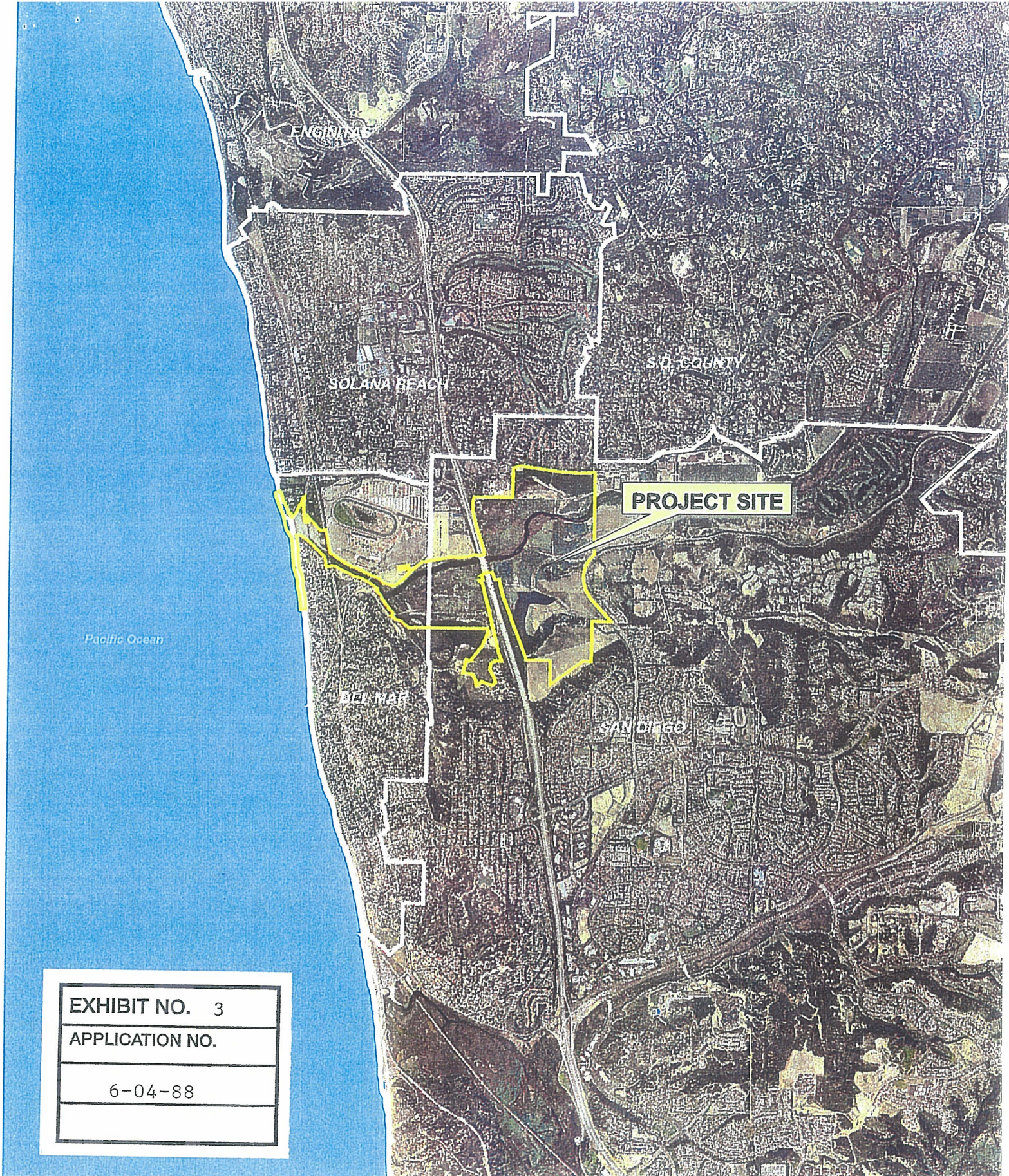
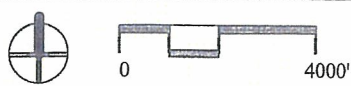


EXHIBIT NO. 3
APPLICATION NO.
6-04-88

Project Vicinity Map

Figure 1

GIS exhibits may be composed from various sources with different levels of accuracy.
 For details on accuracy of this exhibit please refer to Meta Data provided.
 File Name:n:\APP-sd\lagoon_figures.apr
 Date: 6/9/04
 Aerial flown March 2003



PROJECT DESIGN CONSULTANTS
 Planning Environmental Engineering Survey/GPS
 701 B Street, Suite 800, San Diego, CA 92101
 619-235-6471 FAX 619-234-0349

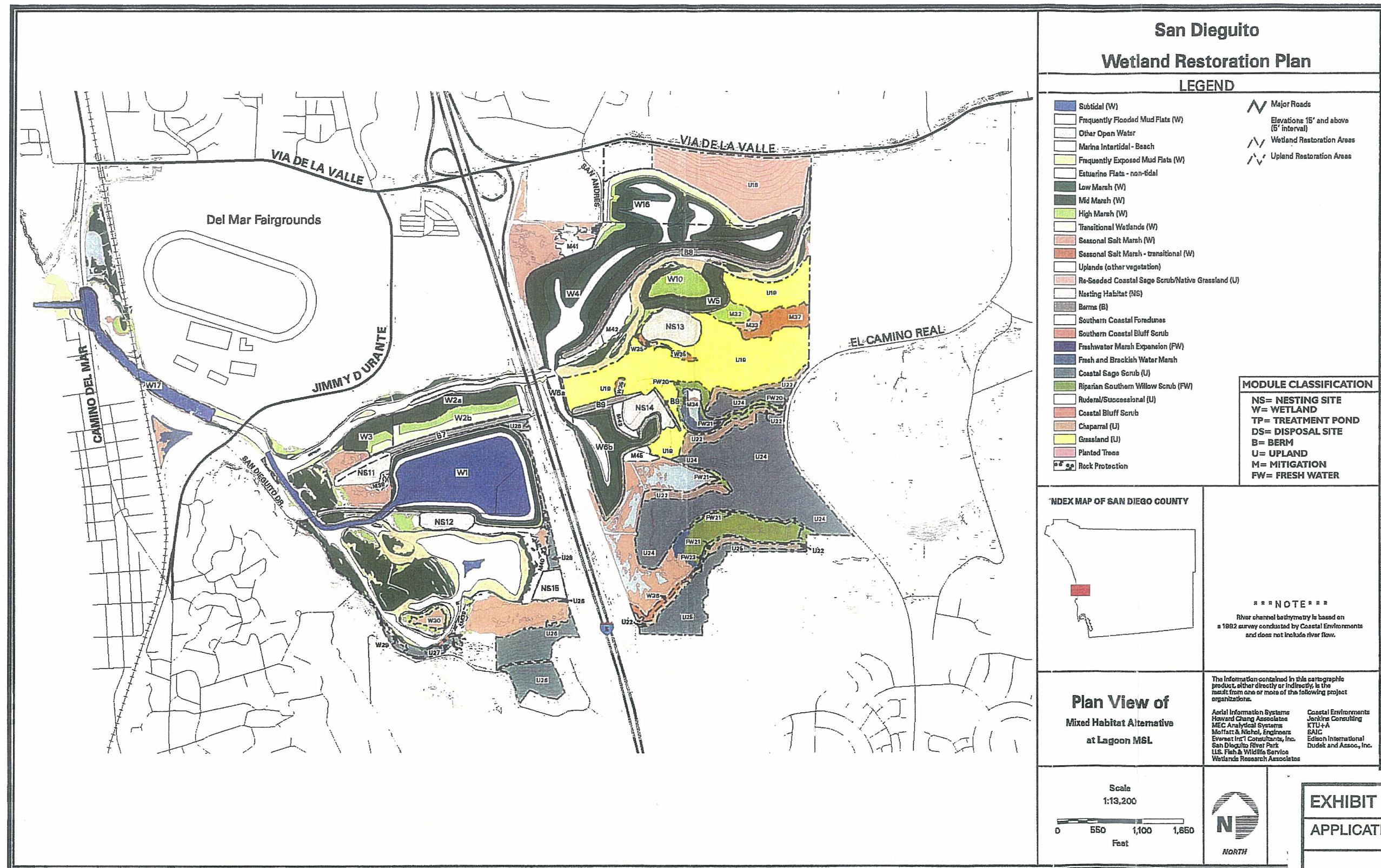


Figure 4.1a. San Dieguito Wetlands Restoration Project

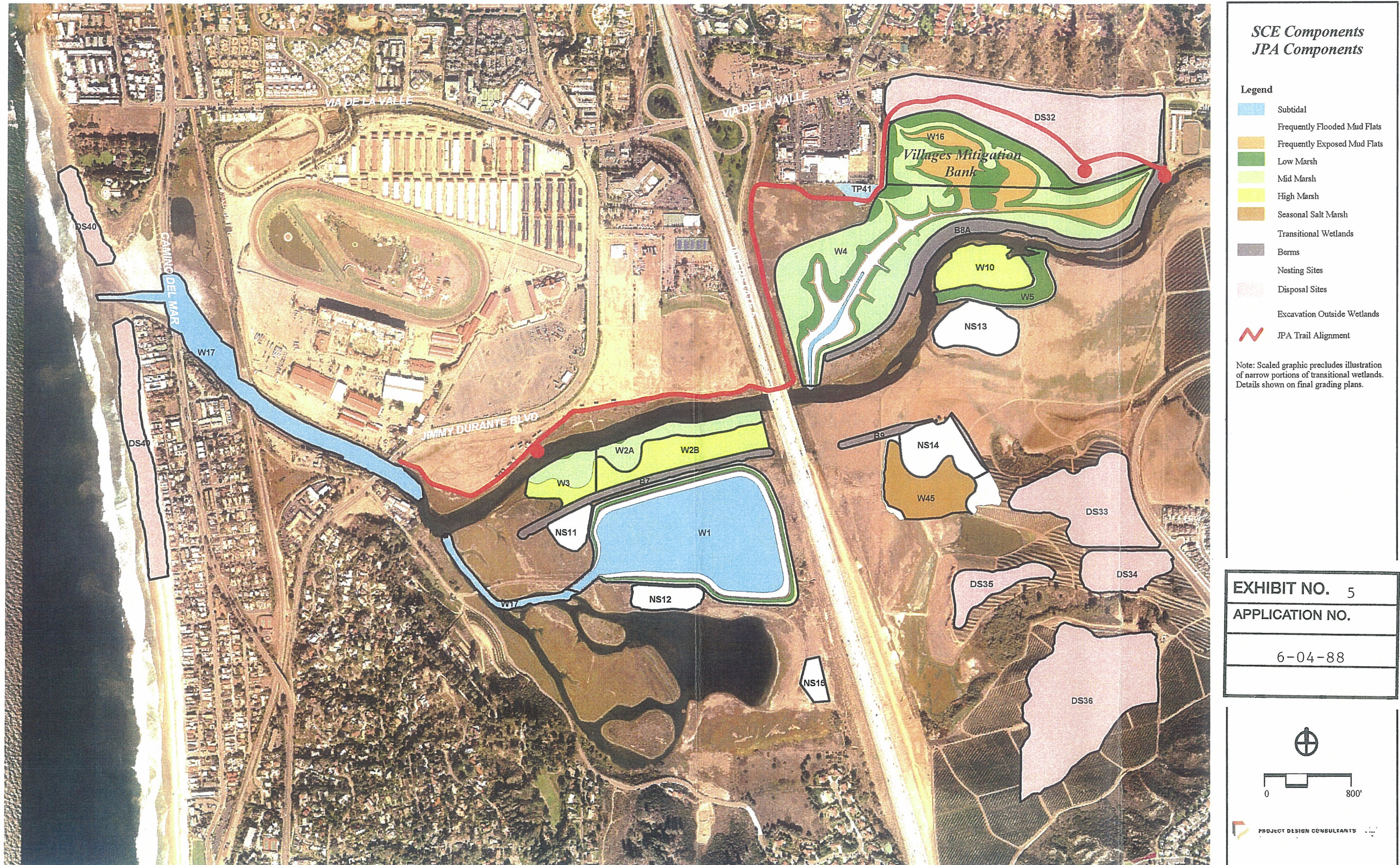


Figure 4.1b. San Dieguito Wetlands Restoration Project-SCE Components and JPA Components



Figure 4.2. San Dieguito Wetlands Restoration Project - Grading Plan

EXHIBIT NO. 6
APPLICATION NO.
6-04-88

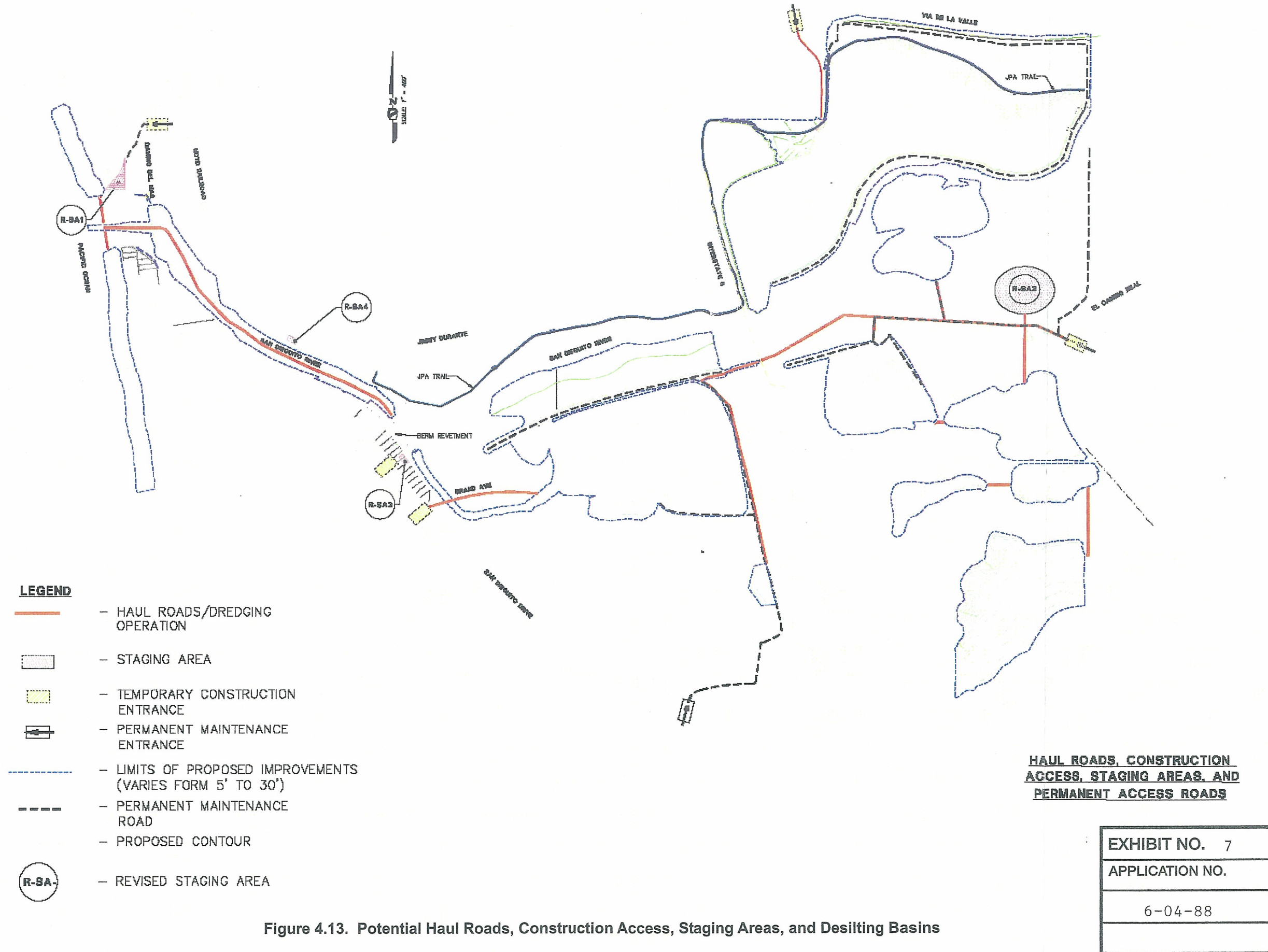


Figure 4.13. Potential Haul Roads, Construction Access, Staging Areas, and Desilting Basins



EXHIBIT NO. 8
APPLICATION NO.
6-04-88

San Dieguito River Park Coast to Crest Trail

Figure 4.17. Coast to Crest Trail Plan

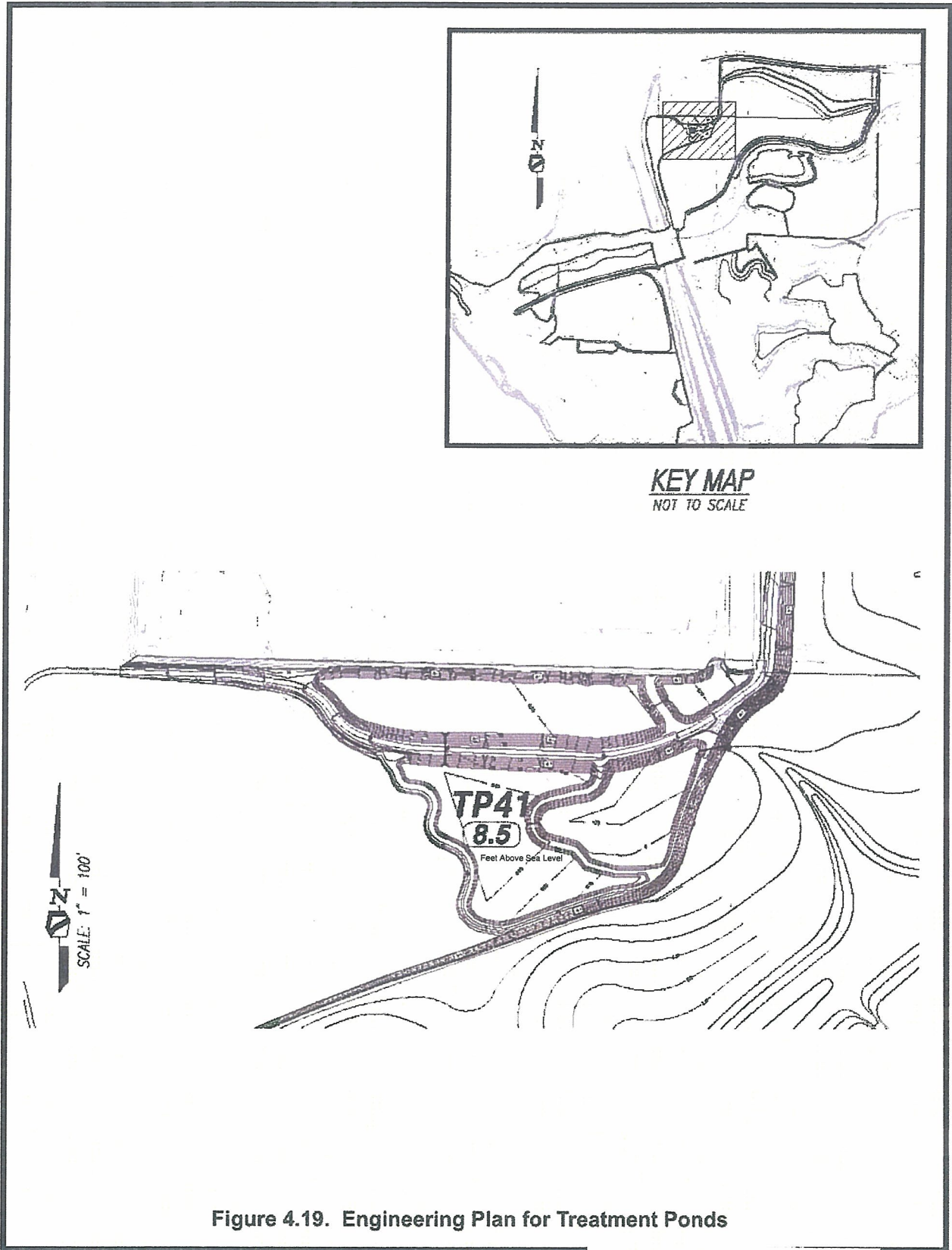


Figure 4.19. Engineering Plan for Treatment Ponds

EXHIBIT NO. 9
APPLICATION NO.
6-04-88



- Legend**
- Contours
 - Basin Base Contour
 - Decomposed Granite Path
 - Concrete
 - Riprap
 - Saltwater Habitats**
 - High Salt Marsh- 0.19 Acres

- Freshwater Habitats**
- Elevations Relative to Basin Base Contour*
- Freshwater Marsh- (0-2 feet) 2.62 Acres
 - Willow Scrub- (2-5 feet) 2.27 Acres
 - Upland Habitat- (5+ feet) 0.26 Acres

San Dieguito Lagoon Wetland Restoration

Figure 6: Wetland Treatment Ponds



Scale: 1 inch equals 40 feet when printed at 22"x34"



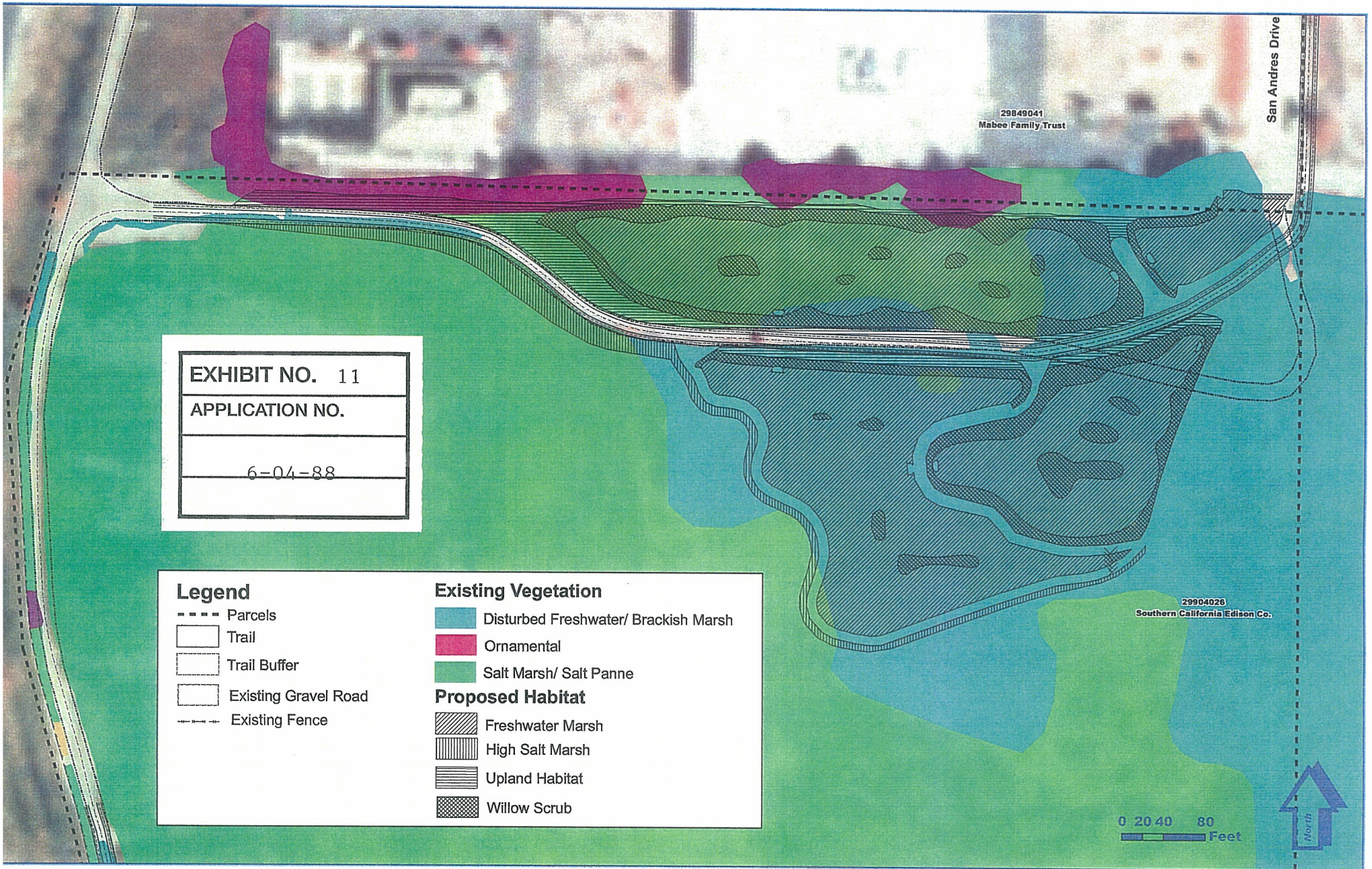
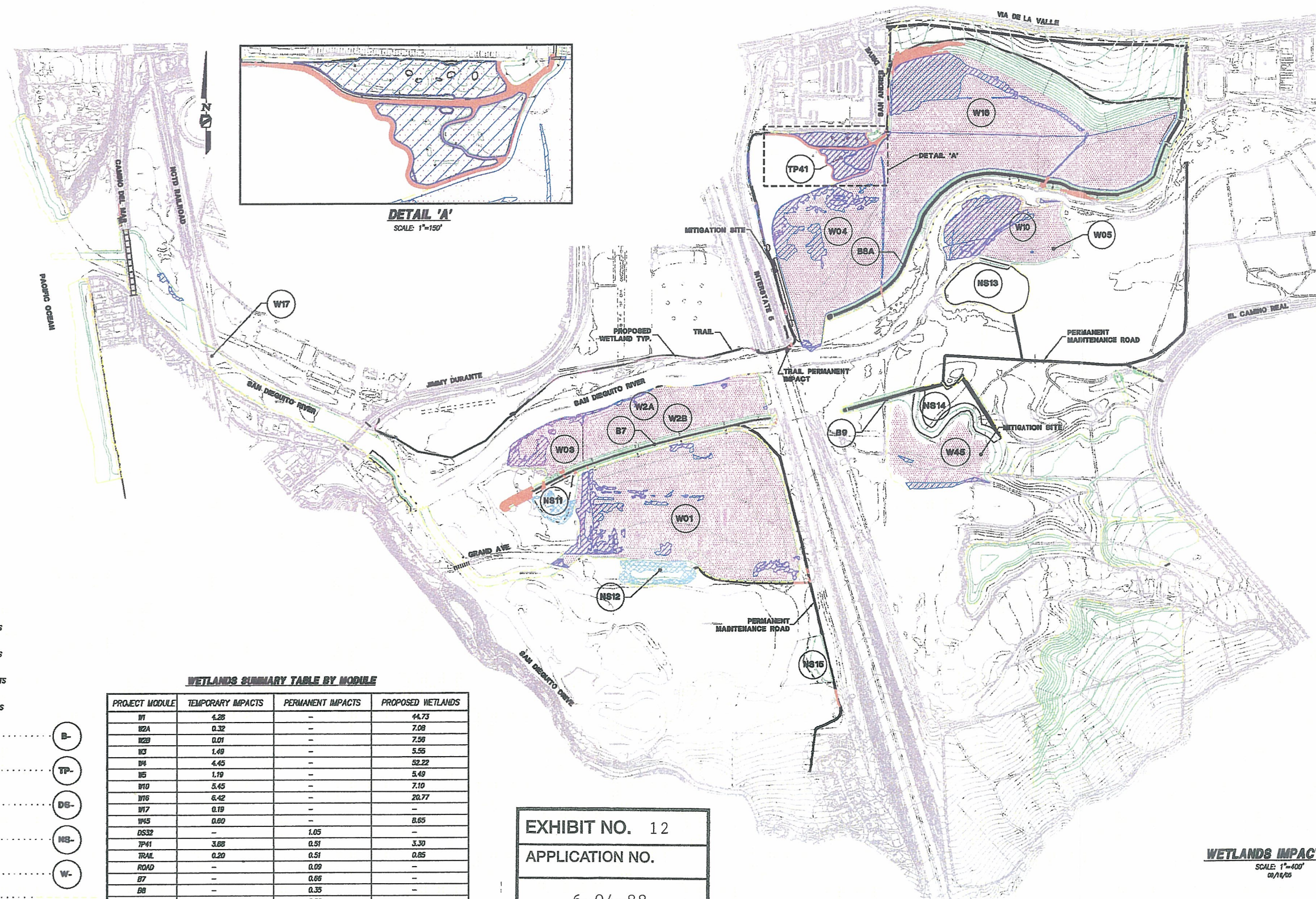


Figure 4.20. Stormwater Treatment Pond Vegetation



LEGEND

- PERMANENT IMPACTS
- TEMPORARY IMPACTS
- NESTING SITE IMPACTS
- PROPOSED WETLANDS

- BERM (B)
- TREATMENT POND (TP)
- DISPOSAL SITE (DS)
- NESTING SITE (NS)
- WETLAND (W)
- LIMITS OF GRADING (dashed line)
- PROPOSED CONTOUR (dotted line)
- PERMANENT MAINTENANCE ROAD (solid line)

WETLANDS SUMMARY TABLE BY MODULE

PROJECT MODULE	TEMPORARY IMPACTS	PERMANENT IMPACTS	PROPOSED WETLANDS
W1	4.28	-	44.73
W2A	0.32	-	7.08
W2B	0.01	-	7.58
W3	1.49	-	5.55
W4	4.45	-	52.22
W5	1.19	-	5.49
W10	5.45	-	7.10
W16	6.42	-	20.77
W17	0.19	-	-
W15	0.60	-	8.65
DS32	-	1.05	-
TP41	3.88	0.51	3.30
TRAIL	0.20	0.51	0.85
ROAD	-	0.09	-
B7	-	0.66	-
B8	-	0.35	-
NS11	-	0.86	-
NS12	-	2.03	-
NS15	-	-	-

EXHIBIT NO. 12
 APPLICATION NO.
 6-04-88

WETLANDS IMPACT MAP
 SCALE: 1"=400'
 03/14/85

PROJECT DESIGN CONSULTANTS
 Planning • Environmental • Engineering • Surveying
 701 B Street, Suite 100, San Diego, CA 92101
 619-235-6471 FAX 619-234-0349

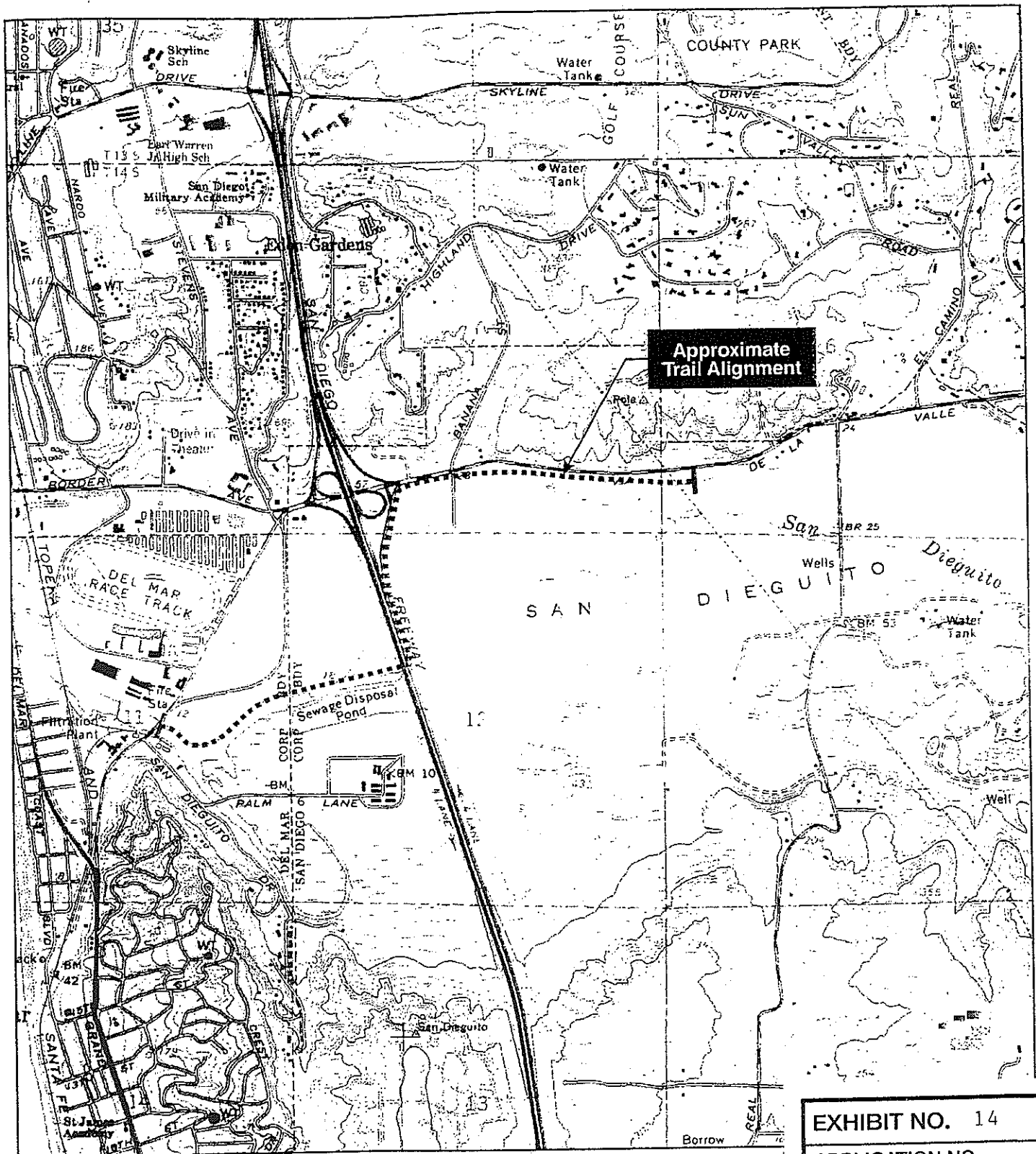
**SAN DIEGUITO WETLAND RESTORATION PROJECT
PROPOSED MITIGATION FOR TRAIL AND WETLAND TREATMENT PONDS**

PROPOSED MITIGATION FOR TRAIL AND TRAIL BERMS	Acres Impacted	Mitigation Ratio		Mitigation Acreage Required	
		Proposed	CCC	Proposed	CCC
Permanent					
Low Marsh	0.002	4 to 1	4 to 1	0.008	0.008
High Marsh	0.006	4 to 1	4 to 1	0.024	0.024
Seasonal Salt Marsh (Not Roadbed)	0.020	4 to 1	4 to 1	0.080	0.080
Seasonal Salt Marsh (Roadbed)	0.051	1 to 1	1 to 1	0.051	0.051
Disturbed FW/Brackish (Not Roadbed)	0.360	2 to 1	4 to 1	0.720	1.440
Disturbed FW/Brackish (Roadbed)	0.052	1 to 1	1 to 1	0.052	0.052
Seasonal Salt Marsh (Trail Segment 7)*	0.060	4 to 1	4 to 1	0.240	0.240
Temporary					
Seasonal Salt Marsh	0.183	1 to 1	1 to 1	0.183	0.183
Disturbed Freshwater/Brackish	0.014	1 to 1	1 to 1	0.014	0.014
SUBTOTAL	0.748			1.372	2.092
PROPOSED MITIGATION FOR TREATMENT PONDS AND POND BERMS					
Ponds 1 & 2					
Permanent					
Disturbed Freshwater/Brackish (Pond Berms)	0.019	1.5 to 1	1 to 1	0.029	0.019
Temporary					
Seasonal Salt Marsh (Pond 2)	1.071	1 to 1	1.5 to 1	1.071	1.607
Disturbed Freshwater/Brackish (Pond 1)	0.178	1.5 to 1	1.5 to 1	0.267	0.267
Disturbed Freshwater/Brackish (Pond 2)	0.557	1 to 1	1.5 to 1	0.557	0.836
Ponds 3 & 4					
Permanent					
Seasonal salt Marsh not in roadbed (Pond Berms)	0.107	1.5 to 1	1 to 1	0.161	0.107
Disturbed FW/Brackish not in roadbed (Pond Berms)	0.390	1.5 to 1	1 to 1	0.585	0.390
Temporary					
Seasonal Salt Marsh	0.024	1 to 1	1 to 1	0.024	0.024
Disturbed Freshwater/Brackish	2.049	1 to 1	1 to 1	2.049	2.049
SUBTOTAL	4.395			4.742	5.299
TOTAL	5.143			6.114	7.391

Source: Tierra Environmental Services, Wetland Delineation Report for the San Dieguito River Park Coast to Crest Trail, July 14, 2005

* WRA Environmental Consultants. CCC Wetland Study in the Villages Mitigation Bank, August 30, 2005,
and Project Design Consultants Exhibit A Village Mitigation Bank Wetland Impacts, August 30, 2005

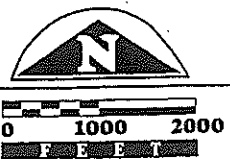
EXHIBIT 13
CDP No. 6-04-88
REVISED 10/12/05

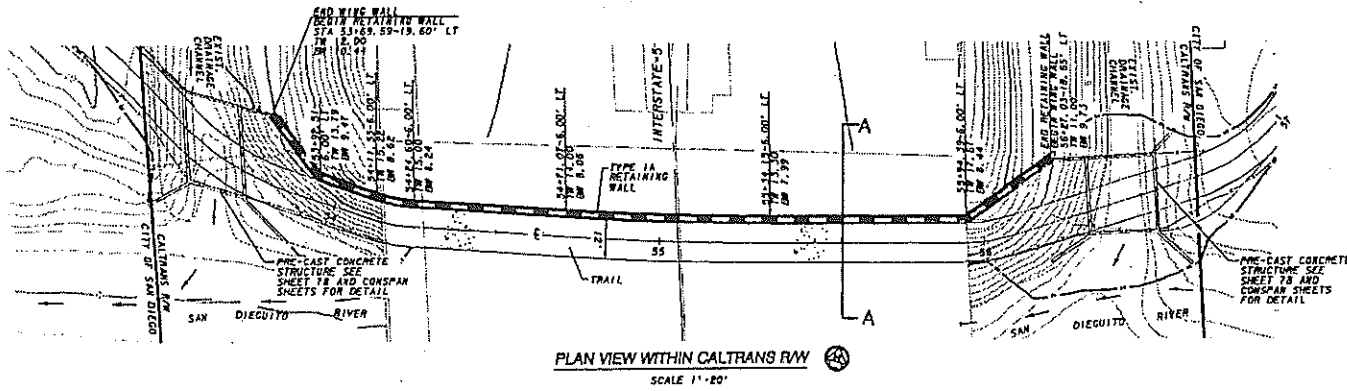


SOURCE: USGS 7.5' Quad Map - Del Mar, CA

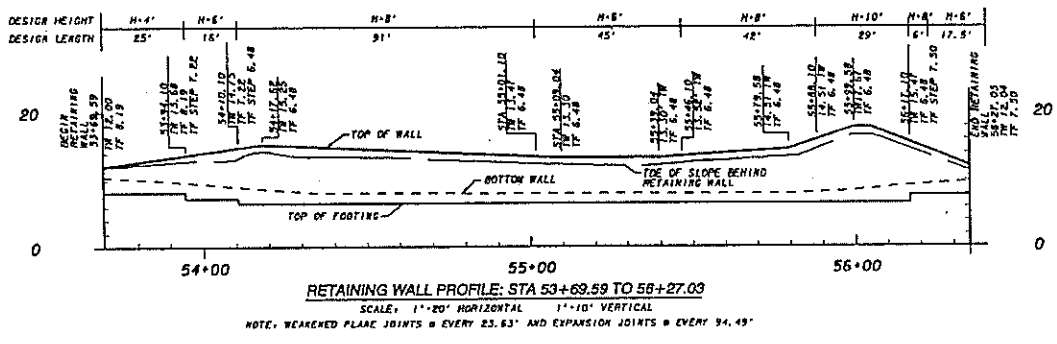
Figure 2
Project Location Map

EXHIBIT NO. 14
APPLICATION NO.
6-04-88





- CONSTRUCTION NOTES**
- 1 RETAINING WALL TYPE 1A (CALTRANS STD. DWG. NO. 83-33)
 - 2 8" GRAVEL BACKFILL AND DRAINAGE PER CALTRANS STD. DWG. NO. 80-313-11
 - 3 EXIST. RIPRAP TO BE RELOCATED OR REMOVED
 - 4 EXIST. RIPRAP TO REMAIN IN PLACE
 - 5 EXIST. RIPRAP TO BE REMOVED AND REPLACED WITH CUDAWORKHRT
 - 6 CLASS 2 BASE 16"
 - 7 CONCRETE 14"
 - 8 CABLE RAILINGS TO BE INSTALLED ON TOP OF THE RETAINING WALL PER CALTRANS STD. DWG. NO. 817-47. STA 12-26.00 TO 12-41.00 TO HAVE ONLY 2 RAILS OF CALVARIFE CABLE.



- NOTE: ALL ONSITE, PRIVATE IMPROVEMENTS WITHIN CALTRANS RIGHT-OF-WAY AS SHOWN ON THIS DRAWING ARE FOR INFORMATION ONLY. THE CITY ENGINEER'S APPROVAL OF THIS DRAWING, IN NO WAY CONSTITUTES AN APPROVAL OF SAID PRIVATE IMPROVEMENTS. A SEPARATE PERMIT FOR SUCH IMPROVEMENTS MAY BE REQUIRED.
- NOTE: ALL WORK WITHIN THE CALTRANS RIGHT-OF-WAY SHALL CONFORM TO STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION 1999 STANDARD PLANS AND SPECIFICATIONS AND THE ERRATA NO. 83-1. SEE CALTRANS ENCROACHMENT PERMIT NO. 050113 FOR PRIVATE IMPROVEMENT WITHIN CALTRANS RIGHT-OF-WAY.
- NOTE: ALL WORK WITHIN THE CALTRANS RIGHT-OF-WAY IS TO BE DONE 8:30 A.M. TO 5:00 P.M., MONDAY THROUGH FRIDAY, AND AS DIRECTED BY THE STATE INSPECTOR.
- NOTE: SEE RETNA WALL DECORATIVE PLANS FOR DECORATIVE CONCRETE TREATMENT OF RETAINING WALL UNDERNEATH INTERSTATE 5 BRIDGE.

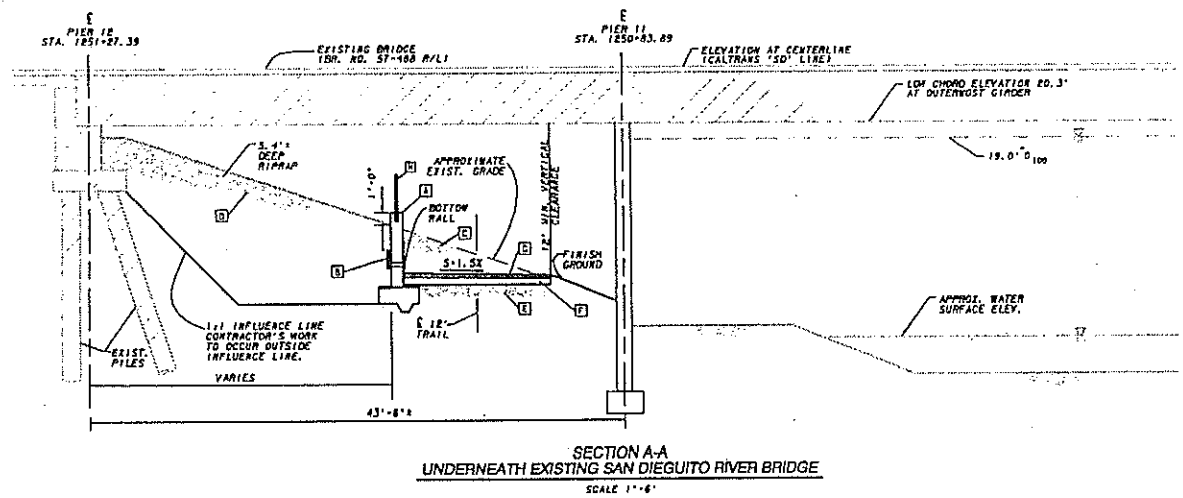


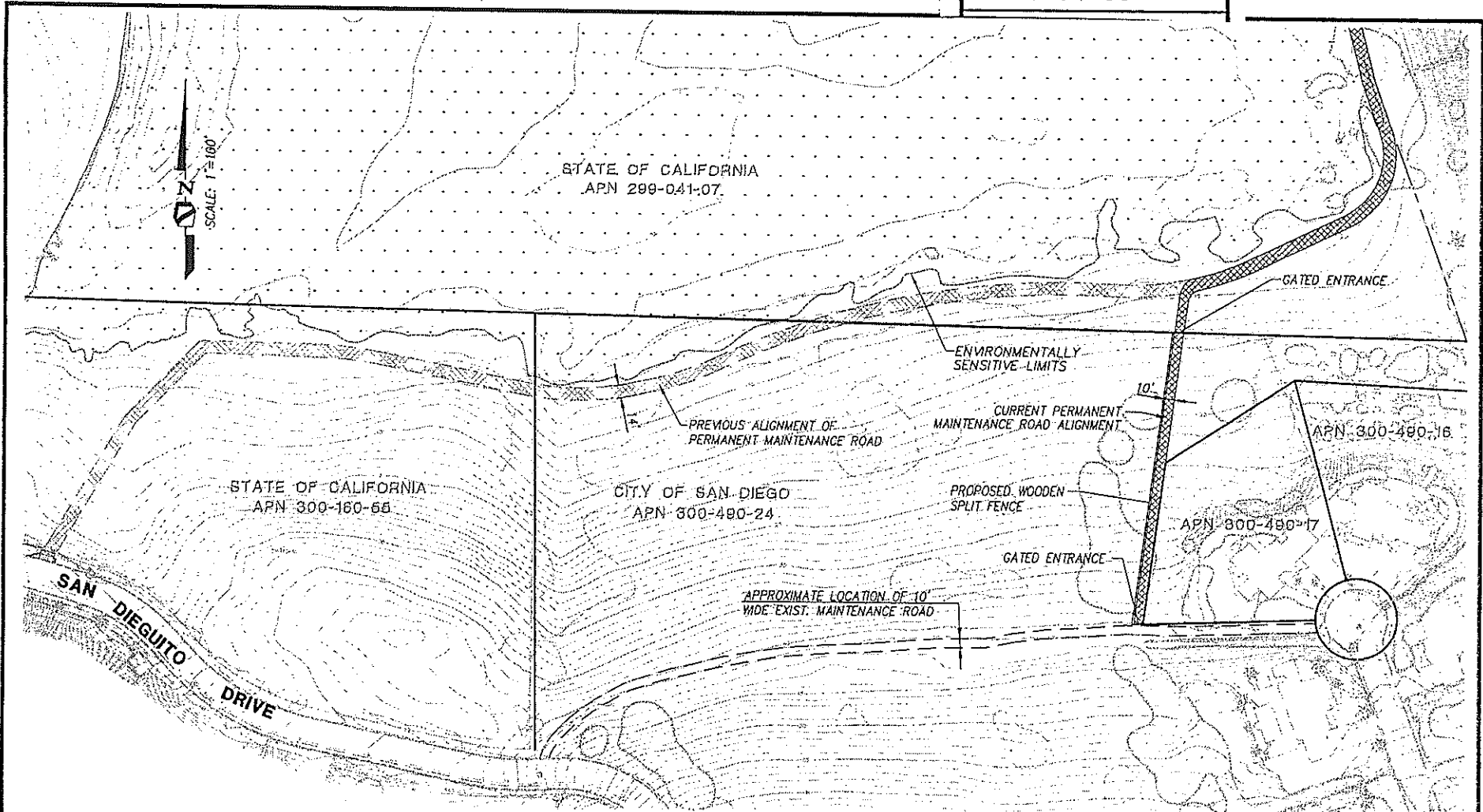
EXHIBIT NO. 15
APPLICATION NO.
6-04-88

Figure 4.18. San Dieguito River Bridge North Abutment Profile: 8-foot path with 2-foot Striped Shoulders

EXHIBIT NO. 16

APPLICATION NO.

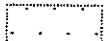
6-04-88



LEGEND:



6" GRAVEL MULCH



ENVIRONMENTALLY SENSITIVE AREA

RECEIVED

JUL 1 2005

PERMANENT MAINTENANCE ROAD ACCESS

06/30/05



PROJECT DESIGN CONSULTANTS

Planning | Landscape Architecture | Environmental | Engineering | Survey

701 B Street, Suite 400
San Diego, CA 92101
619.236.4411 Tel
619.234.0342 Fax

Table 5.1 Summary of Wetland Habitat Creation by Module – SCE Project Components to Fulfill SONGS Permit Requirements

<i>Habitats</i>	WETLAND HABITAT AREA (ACRES)									<i>Total</i>
	<i>Module No.</i>									
	W1	W2A	W2B	W3	W4	W5	W10	W16	W45	
Subtidal	31.08	-	-	-	0.95	-	-	-	-	32.03
Frequently Flooded Mudflats	5.50	-	-	-	6.00	-	-	-	-	11.50
Frequently Exposed Mudflats	1.23	-	-	-	6.30	-	-	3.20	-	10.73
Low Marsh	2.92	0.18	-	0.10	10.53	3.82	-	-	-	17.55
Mid Marsh	3.13	5.50	-	3.08	25.60	1.06	-	-	-	38.37
High Marsh	0.54	1.40	7.50	2.34	2.60	0.45	7.10	-	-	21.93
Seasonal Salt Marsh	-	-	-	-	-	-	-	-	8.65	8.65
Freshwater Marsh (nontidal)	-	-	-	-	-	-	-	-	-	0.00
Transitional Wetlands	0.33	0.00	0.06	0.03	0.24	0.16	-	-	-	0.82
Totals	44.73	7.08	7.56	5.55	52.22	5.49	7.10	3.20	8.65	141.58

EXHIBIT NO. 17
APPLICATION NO.
6-04-88
1 of 3

Table 5.2 Summary of Wetland Habitat Impacted by Module – SCE Project Components to Fulfill SONGS Permit Requirements (Based on CCC Wetland Delineation)

Habitats	WETLAND HABITAT AREA (ACRES)																	Total	
	Module No.																		
	Temporary Impacts									Permanent Impacts									
	W1	W2A	W2B	W3	W4	W5	W10	W16 ⁵	W17	W45	B7	B8	DS32 ⁴	NS11 ²	NS12 ²	NS15	ROAD ³		
Subtidal				0.02	0.04	0.08	0.17			0.02	0.00				0.01				0.34
Frequently Flooded Mudflats																			0.00
Frequently Exposed Mudflats																			0.00
Low Marsh												0.02							0.02
Mid Marsh		0.25		0.14	0.03	0.16	1.55					0.10			0.17				2.40
High Marsh	0.07	0.04		0.29	0.06	0.28	0.12					0.14			1.72				2.72
Seasonal Salt Marsh	4.13	0.03	0.01	1.04	3.86	0.56	3.60		0.19	0.58	0.66	0.06	1.05	0.86			0.09		16.72
Estuarine Flats Non Tidal	0.08				0.02	0.10	0.01								0.13				0.34
Estuarine Flats Inter Tidal												0.01							0.01
Fresh and Brackish Water					0.44							0.02							0.46
Freshwater Marsh (nontidal)																			0.00
Riparian Southern Willow						0.01											0.002		0.01
Unadjusted Impact Totals	4.28	0.32	0.01	1.49	4.45	1.19	5.45	0.00	0.19	0.60	0.66	0.35	1.05	0.86	2.03	0.00	0.09		23.02
Adjusted Impact Totals^{1,2,3,4}	4.28	0.32	0.01	1.49	4.45	1.19	5.45	0.00	0.19	0.60	2.64	1.40	4.20	0.00	0.00	0.00	0.36		26.58
Habitat Created	44.73	7.08	7.56	5.55	52.22	5.49	7.10	3.20	0.00	8.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	141.58
Net Habitat Impacted/Created	40.45	6.76	7.55	4.06	47.77	4.30	1.65	3.20	-0.19	8.05	-2.64	-1.40	-4.20	0.00	0.00	0.00	-0.36		115.00

¹ 4:1 requirement for permanent impacts to B7, B8, NS15, DS32 and Road.

² Mitigation is not required for NS11 and NS12.

³ Impacts from permanent maintenance road. Unadjusted impact totals have been rounded to the nearest hundredth based on the raw acreage numbers which are calculated to the thousandth.

⁴ This impact may be less if W16 is not restored or DS32 is reconfigured. Compensation for impacts from DS32 would be at a ratio of 4:1 and would utilize wetland acreage over and above the 115 acres required to satisfy the SONGS permit and/or from the Villages Mitigation Bank (W16).

⁵ The amount of "Habitat Created" shown is the amount to fulfill the SONGS mitigation requirement, not the total amount of habitat created on W16.

*Temporary impact subtotals: Unadjusted=17.98, Adjusted=17.98

*Permanent impact subtotals: Unadjusted=5.04, Adjusted=8.6

Table 5.3 Summary of Net Wetland Habitat Creation - SCE Project Components to Fulfill SONGS Permit Requirements

Habitats	Restored Area (acres) A	Area Required to Compensate for Permanent Impacts (acres) ^{1,2} B	Area Required to Compensate for Temporary Impacts (acres) ² C	Net Wetland Habitat Creation (acres) A-(B+C)
Tidal Wetland (below +4.5 feet, NGVD)				
Subtidal	32.03	0.00	0.33	31.70
Frequently Flooded Mudflats	11.50	0.00	0.00	11.50
Frequently Exposed Mudflats	10.73	0.00	0.00	10.73
Low Coastal Salt Marsh	17.55	0.08	0.000	17.47
Mid Coastal Salt Marsh	38.37	0.40	2.13	35.84
High Coastal Salt Marsh	21.93	0.56	0.86	20.51
Estuarine Flats Inter Tidal	0.00	0.04	0.00	-0.04
Fresh and Brackish Marsh	0.00	0.08	0.44	-0.52
Riparian Southern Willow	0.00	0.01	0.01	-0.02
Total Tidal Wetland	132.11	1.17	3.77	127.17
Nontidal Wetland (above +4.5 feet, NGVD)				
Seasonal Salt	8.65	7.43	14.00	-12.78
Transitional Wetlands	0.82	0.00	0.00	0.82
Estuarine Flats Non Tidal	0.00	0.00	0.21	-0.21
Freshwater Marsh	0.00	0.00	0.00	0.00
Total Nontidal Wetland	9.47	7.43	14.21	-12.17
Total Wetland	141.58	8.60	17.98	115.00

¹ 4:1 requirement for permanent impacts to B7, B8, NS15, DS32 and Road.

² No mitigation is proposed or required for nesting site impacts.

EXHIBIT NO. 17
APPLICATION NO.
6-04-88
3 of 3

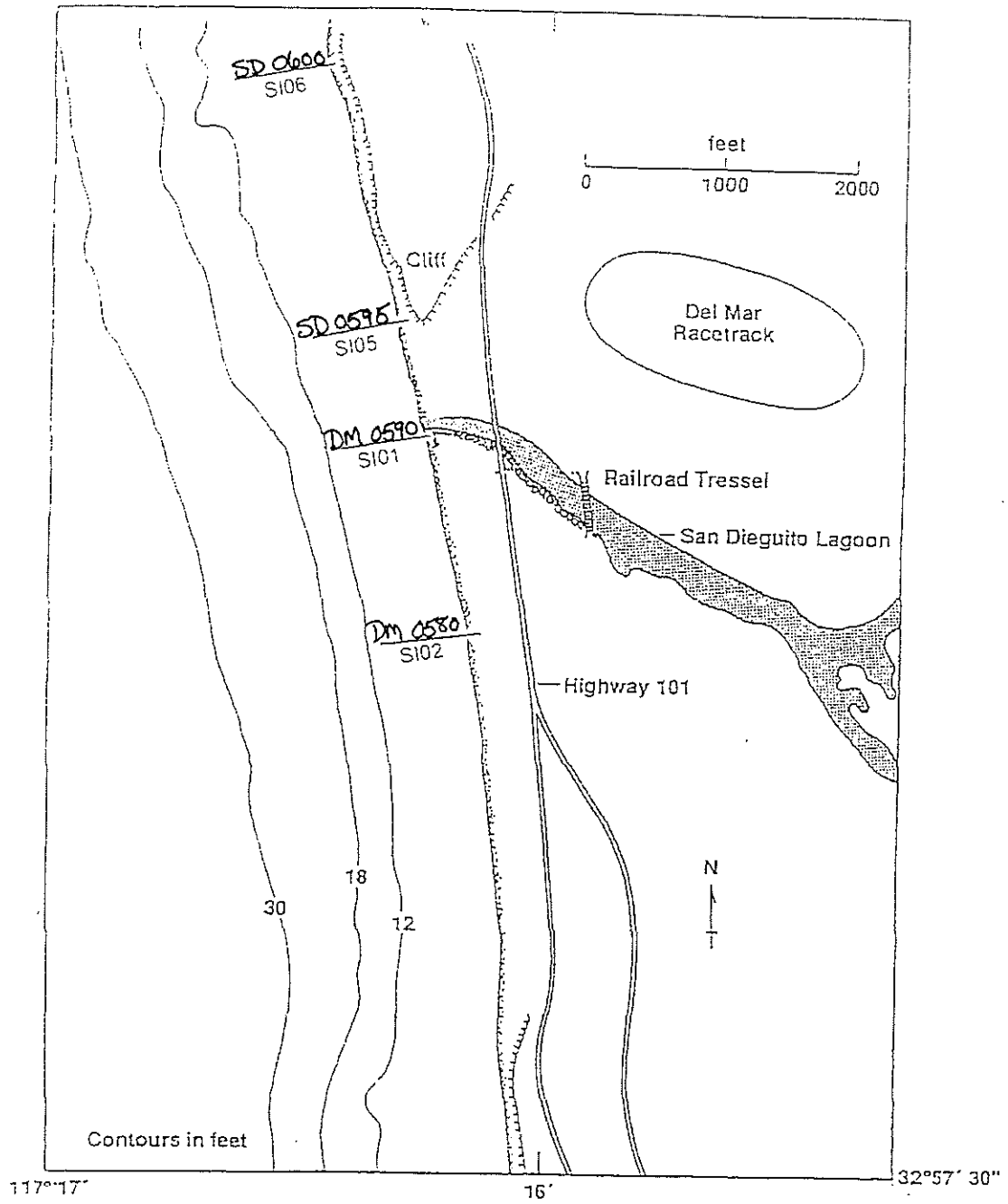


Figure 6-6. Map showing locations of beach profile ranges historically surveyed since 1978.

EXHIBIT NO. 18
APPLICATION NO.
6-04-88
BEACH PROFILE LOCATIONS