CONCLUSIONS

SAN DIEGUITO WETLAND RESTORATION PROJECT FINAL ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL IMPACT STATEMENT

PROJECT:

The San Dieguito Wetland Restoration Project involves the development, design, and ultimate implementation of a comprehensive coastal restoration plan for the western end of the San Dieguito River Valley, San Diego County, California. The project includes restoration of tidal wetlands, creation of nesting areas for threatened and endangered birds, re-establishment of historic uplands, enhancement and expansion of freshwater and seasonal coastal wetland areas, and a public access and interpretation component. Essential to the project is the restoration of the lagoon's tidal functions, to be accomplished by maintaining the inlet channel in an open configuration in perpetuity. In accordance with the adopted San Dieguito River Park Concept Plan, a Park Master Plan for the project area has also been prepared to address the various elements of the project.

BACKGROUND:

The Draft EIR/EIS for the San Dieguito Wetland Restoration project was distributed for public review in January 2000. Numerous agencies, organizations, and individuals provided substantive and constructive comments. The responses to these comments are provided in the final section of this volume of the Final EIR/EIS. As a result of the comments received, revisions have been made to the previously distributed document. These revisions were necessary to clarify the discussions already provided in the draft. No new significant impacts were identified. The bulk of the revisions, which have been underlined to assist the reader, can be found in Chapter 2 and sections 4.2, 4.4, 4.8, and 4.10. Additional minor revisions, also underlined, were made throughout the text to address specific public comments.

As a result of input from the City of Del Mar, one mitigation measure presented in section 4.1 regarding the provision of access from the beach to Camino Del Mar has been reevaluated. It appears that through coordination with the City of Del Mar, the provision of a pedestrian pathway along the south side of the inlet channel is technically feasible. SCE has agreed to design and construct this pathway, in accordance with the City of Del Mar's development and engineering standards. Construction of this pathway would mitigate impacts related to access across the beach. Please refer to Volume II, section 4.1.1.2 of Final EIR/EIS for a complete discussion of this issue.

SUMMARY OF ALTERNATIVES:

Five restoration alternatives and the No Action alternative were analyzed in this document. Restoration alternatives include Maximum Tidal Basin, Mixed Habitat, Hybrid, Maximum Intertidal, and Reduced Berm. All but the Reduced Berm and No Action alternatives have the same restoration footprint. The reason for this relates to the purpose and need for the project, which is to restore the habitats that historically occurred within this coastal area, taking into consideration the constraints now imposed by existing adjacent land uses. The footprint of the majority of the alternatives represents the maximum area available within the river valley that can feasibly be restored (taking into consideration existing land use, ownership, and physical constraints).

Provided in Table 1 is a comparison of the overall tidal prism, total material to be excavated, and depth of the inlet sill for each alternative. The habitat types and acreages to be created by each alternative are presented in Table 2, and the net acres of habitat created by restoration alternative are presented in Figure 1.

Table 1. Comparison of Alternatives

	Maximum Tidal Basin	Hybrid	Mixed Habitat	Maximum Intertidal	Reduced Berm
Diurnal Tidal Prism (cubic feet)*	43,623,580*	43,032,840	42,841,530	38,896,643	30,420,830
Volume of Excavated Material** (cubic yards)	2,352,950**	2,070,750	1,990,250	1,758,650	776,750
Inlet Sill Depth (feet NGVD)	-1.97	-1.33	-1.60	-0.89	-0.46

*The diurnal tidal prism under existing conditions is 20,650,080 cubic feet.

**Volumes are based on a ½-foot over dredge allowance, consistent with levels achieved for the Batiquitos Lagoon Enhancement Project. Sand to be excavated from the inlet and river channel is not included in these figures.

Elements common to all of the alternatives except the No Action alternative include implementation of a public access and interpretation component, maintenance of the inlet channel, provision of five nesting sites in proximity to proposed tidal wetlands, upland and freshwater marsh restoration, and the need for disposal sites to accommodate the excavated material to be generated as a result of project implementation.

Table 2. Habitat Types and Acreages per Alternative

Habitat Type	Existing Conditions	Maximum Tidal Basin	Hybrid	Mixed Habitat	Maximum Intertidal	Reduced Berm
Subtidal	8.42 acres	83.58 acres	49.61 acres	37.1 acres	24.86 acres	13.54 acres
Frequently Flooded Mudflats	0	20.22 acres	23.6 acres	25.33 acres	27.61 acres	15.32 acres
Frequently Exposed Mudflats	0.68 acre	2.77 acres	5.79 acres	4.08 acres	7.0 acres	8.62 acres
Estuarine Flats Nontidal	5.16 acres	3.32 acres	3.32 acres	3.32 acres	3.32 acres	0
Low Marsh	0.01 acre	15.14 acres	29.11 acres	34.81 acres	34.81 acres	22.87 acres
Mid Marsh	0.77 acre	24.71 acres	31.39 acres	44.16 acres	38.88 acres	20.51 acres
High Marsh	2.67 acre	18.41 acres	23.31 acres	20.08 acres	27.19 acres	21.68 acres
Transitional Wetlands	0	15.38 acres	17.38 acres	14.67 acres	19.76 acres	2.51 acres
Seasonal Salt Marsh	20.72 acres	3.34 acres	3.34 acres	3.34 acres	3.34 acres	3.34 acres
Seasonal Salt Marsh Transitional	0	7.66 acres	7.66 acres	7.66 acres	7.66 acres	7.66 acres
Uplands	17.1 acres	5.24 acres	5.31 acres	5.24 acres	5.39 acres	2.69 acres
Nesting Area	0	21.29 acres	21.29 acres	21.29 acres	21.29 acres	21.29 acres
Re-seeded Coastal Sage Scrub/Native Grassland	0	27.32 acres	27.32 acres	27.32 acres	27.32 acres	27.32 acres
Freshwater Marsh	1.14 acres	0.92 acre	0.92 acre	0.92 acre	0.92 acre	0.92 acre
Coastal Sage Scrub	1.13 acres	84.1 acres	84.1 acres	84.1 acres	84.1 acres	84.1 acres
Riparian Southern Willow Scrub	0.6 acre	7.08 acres	7.08 acres	7.08 acres	7.08 acres	7.08 acres
Ruderal Successional	254.8 acres	10.47 acres	10.47 acres	10.47 acres	10.47 acres	0
Chaparral	0	12.73 acres	12.73 acres	12.73 acres	12.73 acres	12.73 acres

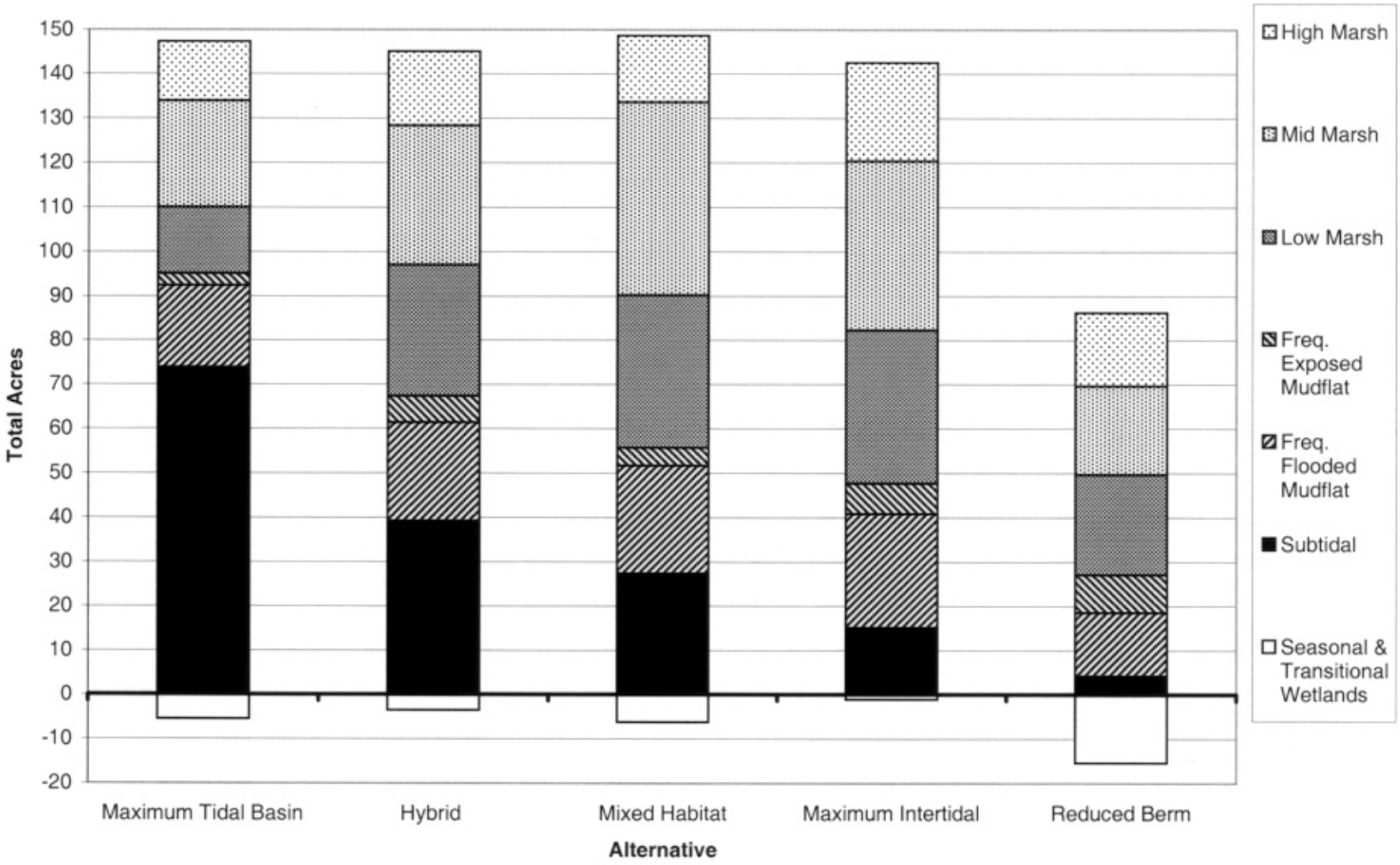

Figure 1. Net Acres of Tidal Habitats Created By Restoration Alternatives

The EIR/EIS examined an array of options for disposing of the soil (cut) to be generated by the excavation of new tidal wetlands. A portion of the soil to be generated would be used to construct the berms (125,600 cubic yards) and the bases of three of the nest sites (71,200 cubic yards), accommodating approximately 196,800 cubic yards of material for all of the action alternatives except the Reduced Berm Alternative. Under the Reduced Berm Alternative, the berms (73,200 cubic yards) and bases of the nest sites would require 144,400 cubic yards of material. Sand generated from the project (up to about 84,400 cubic yards) would be used first to cap the nest sites, with the remaining sand to be used for beach nourishment. The construction of the berms and nest sites would only accommodate a fraction of the material to be generated; therefore, the EIR/EIS also evaluated the environmental impacts associated with disposing of this excess material on a variety of disposal sites in the immediate vicinity of the restoration project, including five upland sites and three sites located within the floodplain. One of the sites located within the floodplain (DS44) would involve overexcavation of the airfield property to remove beach quality sand that is present at subsurface depths and replace it with less suitable material removed from other portions of the site. No one disposal site can accommodate all of the material generated by the project; therefore, it will be necessary to distribute the material over several of the sites evaluated in the document. Further, there is more than adequate capacity among the sites to accommodate the project-generated material; therefore, project implementation does not require the use of all of the sites that were considered. The maximum capacity of each of the potential disposal sites is provided in Table 3.

Table 3. Maximum Capacity of Potential Disposal Sites

Disposal Site Number	Disposal Site Name	Area (acres)	Maximum Capacity (cubic yards)*
DS32	Via de la Valle	32.5	917,600
DS33	El Camino Real N	13.7	89,000
DS34	El Camino Real SE	11.0	172,000
DS35	El Camino Real SW	3.8	55,400
DS36	Ranches	42.5	749,800
DS37	Fairgrounds Paved Parking Lot	22.0	62,900
DS38	Surf & Turf	28.0	289,600
DS44	Airfield (overexcavation site)	45.0	1,683,000
*As stated above, 196,800 cubic yards of the material to be generated would be used to construct berms and the bases of nest sites for all but the Reduced Berm Alternative. Under the Reduced Berm Alternative, 144,400 cubic yards would be used for berms and nest sites.			

CONCLUSIONS:

Lead Agencies' Preferred Alternative for Wetland Restoration

The U.S. Fish and Wildlife Service, as the Federal lead agency for the San Dieguito Wetland Restoration Project EIR/EIS, identifies the Mixed Habitat Alternative as the Preferred Alternative, pursuant to the National Environmental Policy Act. The San Dieguito River Park Joint Powers Authority (JPA), as lead agency for the project in accordance with the California Environmental Quality Act, will select a preferred alternative in association with the certification

of the Final EIR/EIS. JPA staff recommends to the JPA Board that the Mixed Habitat Alternative is the most appropriate restoration alternative for the western river valley.

The identification of the Mixed Habitat Alternative as the preferred restoration alternative follows consideration of public and agency comments on the full array of alternatives described in the Draft EIR/EIS, consultation with professional biologists of the National Marine Fisheries Service (NMFS), California Department of Fish and Game (CDFG), and the California Coastal Commission (CCC), and consideration of the goals and objectives established by the Working Group, as well as the goals and objectives set forth in the San Dieguito River Park Concept Plan.

The process of selecting a preferred alternative also involved a screening level evaluation of numerically based criteria and the projected ability of the alternatives to fulfill program objectives, particularly as related to biological benefits. For this evaluation only the "action" alternatives were considered since the Final EIR/EIS concludes that the No Action Alternative would not fulfill the project objectives.

Each project alternative was first evaluated based on a matrix format, which focused on criteria that could be defined using a numeric value or metric (Table 4). Specifically, each biological criterion in the table is based on a project-associated value such as the number of acres of a particular type of wetland habitat that would benefit, by its creation, a type or group of species. This type of habitat metric represents an indirect measure of projected benefits to the species in question, and assumes successful habitat creation and maintenance will occur. As an example, the optimum habitat for fish-eating birds, including the least tern, would be represented by the alternative that would create the greatest number of subtidal acres, in this case the Maximum Tidal Basin Alternative. Under this ranking approach the Maximum Tidal Basin Alternative would receive the highest value, a "1" as shown on the table, with the other alternatives ranked as a decimal percentage of this maximum acreage. Similar logic was applied for habitat creation that would benefit shorebirds (including western snowy plover) and Belding's savannah sparrow, although in these instances the Maximum Intertidal Alternative would create the highest number of beneficial acres. Another type of indirect criterion is tidal flushing, using tidal prism values as the surrogate measure, based on the assumption that greater flushing will produce better circulation and health of the restored wetland. Finally, based on the generally greater difficulty in creating successful high marsh habitat, as compared to mid- or low-marsh habitat, the combined number of acres for these latter categories was used as an indicator of the maximum chance of successful marsh restoration, in this case represented by the Mixed Habitat Alternative.

For non-biological criteria, two metrics are listed in the table: lowest excavation volume as an indirect measure of the fewest short-term impacts (e.g., to air quality and traffic, as detailed in Chapter 4 of the EIR/EIS) due to initial construction, and "trafficability" as a surrogate for public safety during crossings of the inlet region by pedestrians.

Based on the matrix subtotals and totals (Table 4), initial screening of the results indicates that the Reduced Berm and Maximum Tidal Basin alternatives have consistently lower values than the other action alternatives and, consequently, were eliminated from further consideration as the preferred alternative. No further use of Table 4 information was included in the final agency

selection of a preferred alternative. As a second level evaluation, the Mixed Habitat and Hybrid alternatives were identified as preferable to the Maximum Intertidal Alternative since they both incorporate at least one tidal basin, along with intertidal components. The basins, by definition, would provide important, intermediate-sized areas of subtidal/open water habitat for use by fishes and fish foraging birds, a feature deemed desirable by the agencies. Thus, the amount and types of habitat for these alternatives represent an important compromise for project design.

Table 4. Scaled Comparison or Criteria that Differentiate Among Alternatives.
Best = 1, followed by decimal percentage of progressively worse alternatives as estimated based on criterion metric. (Actual metric values are listed below the percentages)

Biological Criteria	Maximum Intertidal Alternative	Maximum Tidal Basin Alternative	Mixed Habitat Alternative	Hybrid Alternative	Reduced Berm Alternative
Maximum Flushing of Created/ Restored Wetland Habitat: Best = maximum tidal prism (root mean squared current)	.61 (0.92 ft/sec)	1 1.5 ft/sec)	.91 (1.37 ft/sec)	.83 (1.25 ft/sec)	.76 (1.14 ft/sec)
Maximum Chance of Successful Marsh Restoration: Best = most low plus mid marsh acres	.93 (72.68 acres)	.50 (38.84 acres)	1 (77.96 acres)	.78 (61.02 acres)	.55 (42.58 acres)
Maximum Shorebird Habitat (incl. Snowy Plover) Created: Best = most marsh + mudflat + nontidal wetland acres	1 (127.73 acres)	.54 (69.11 acres)	.91 (115.61 acres)	.81 (103.73 acres)	.52 (66. acres)
Maximum Fish, Least Tern, and Other Fish-Eating Bird Habitat Created: Best = most subtidal acres	.20 (15.12 acres)	1 (73.84 acres)	.37 (27.36 acres)	.53 (39.21 acres)	.06 (4.19 acres)
Maximum Belding's Habitat Created: Best = most high and mid marsh acres	1 (60.27 acres)	.62 (37.32 acres)	.97 (58.44 acres)	.80 (48.04 acres)	.61 (36.60 acres)
SUBTOTAL FOR BIOLOGICAL CRITERIA	**3.74**	**3.66**	**4.16**	**3.75**	**2.50**

Table 4. Continued.

Non-Biological Criteria	Maximum Intertidal Alternative	Maximum Tidal Basin Alternative	Mixed Habitat Alternative	Hybrid Alternative	Reduced Berm Alternative
Minimizes Construction-Related (Short-term) Impacts (e.g., to AQ and traffic): Best = lowest excavation volume, including overdredge (1/x)	.44 (1,758,650 cubic yards)	.33 (2,352,950 cubic yards)	.39 (1,990,250 cubic yards)	.38 (2,070,750 cubic yards)	1 (776,750 cubic yards)
Minimizes Public Safety Concerns: Best = lowest increase in % time that inlet is non-trafficable (1-x)	.79 (21.4%)	.64 (36.2%)	.68 (32.4%)	.72 (28.5%)	1 (11.6%)
SUBTOTAL FOR NON-BIOLOGICAL CRITERIA	**1.23**	**0.97**	**1.07**	**1.10**	**2**
TOTAL COMBINED CRITERIA	**4.97**	**4.63**	**5.23**	**4.85**	**4.50**

Many other biological and non-biological criteria were considered, particularly as related to the goals and objectives developed by the Working Group. All of the restoration alternatives meet many of the Working Group goals and objectives; therefore it was not possible to distinguish among the alternatives with respect to those issues. For example, all of the alternatives would meet the following Working Group criteria:

- Improve, preserve, and create a variety of habitats to increase and maintain wildlife and ensure protection of endangered species;

- Ensure adequate tidal and fluvial flushing and circulation with an optimal tidal regime to support a diversity of biological resources while maintaining the appearance of a natural wetland ecosystem; and

- Project should not contribute to the net loss of beach and sand north or south of the river mouth.

With respect to the Working Group objective of "providing regionally scarce habitats including habitats for rare or endangered species," the alternatives were evaluated to determine which would maximize habitat for threatened and endangered species. In this case, the Mixed Habitat Alternative ranked slightly higher, followed by the Maximum Intertidal Alternative. The Maximum Tidal Basin and Hybrid alternatives ranked a close third and fourth, while the Reduced Berm Alternative was considered the least effective in achieving this objective. In evaluating the objective of "optimizing subtidal and intertidal areas," the Mixed Habitat Alternative is slightly better, followed by Maximum Tidal Basin, Hybrid, Maximum Intertidal, and Reduced Berm. All of the restoration alternatives would comply equally with the goals and objectives outlined in the San Dieguito River Park Concept Plan.

Having considered all of the information described above, as well as input from biologists representing NMFS, CDFG, and CCC, the Mixed Habitat Alternative has been identified by the U.S. Fish and Wildlife Service and the JPA staff as the most appropriate restoration alternative for the San Dieguito Lagoon. The Mixed Habitat Alternative best optimizes a balancing of biological benefits with improved tidal flow. That is, increased seawater volume circulated nearer the lagoon mouth improves the self-maintaining nature of the mouth and will develop very high aquatic habitat values. Three of the alternatives considered have these qualities: Maximum Tidal Basin, Hybrid, and Mixed Habitat. Farther from the mouth of the lagoon and east of the I-5 freeway, the hydraulic and biological benefits of seawater volume are less. Alternatives that have this larger volume but lower biological value water area east of I-5 include the Maximum Tidal Basin, Hybrid, and Maximum Intertidal alternatives. The Mixed Habitat Alternative has the highest likelihood of biological success and broadest spectrum of fish and wildlife benefits, for the least amount of dredging.

Full completion of all the nesting areas, including surfacing with clean sand, is an important part of the preferred alternative. The sites as designed constitute an optimal array (size and location) for providing essential habitat for Federally listed threatened and endangered birds.

Preferred Disposal Site Options

Disposal sites that are located outside of sensitive habitat areas and do not raise the elevation of the existing floodplain are preferred locations for disposal of excess cut material generated by the project. The upland sites DS32 through DS36, with a combined capacity of 1,983,800 cubic yards, would accommodate the excess material for all alternatives except the Maximum Tidal Basin Alternative. If the Maximum Tidal Basin Alternative were ultimately approved, DS-44 would also have to be included as a disposal site in order to accommodate all of the excess material generated by the restoration.

Disposal sites DS37 and DS38, located west of I-5, are both within the floodplain and jurisdictional wetlands have been identified on DS38. The Final EIR/EIS identifies significant, unmitigated impacts associated with the use of these two disposal site options. As a result, these sites are not among the preferred sites. Although located within the floodplain, use of DS44 would not raise the elevation of the floodplain and would not result in any unmitigated environmental effects.

Summary of the Project's Significant, Unmitigated Impacts

The following environmental impacts have been identified as significant and unmitigable:

- Loss of Agriculturally Important Lands
- Landform Alteration Resulting from Disposal of Excavated Material On-site
- Visual Impacts Related to the Contrast in Appearance of the Nesting Site with the Surrounding Area
- Loss of Wetlands, Should DS38 be Approved as a Disposal Site
- Conflicts with Trail Users if the Tram is Permitted to Operate on the Coast to Crest Trail

Mitigation, Monitoring and Reporting Program

Other impacts, as described in Volume II, were identified as potentially significant, but mitigable to below a level of significance through the implementation of specific mitigation measures. To ensure that these measures are strictly enforced, a Mitigation, Monitoring and Reporting Program (MMRP) has been prepared for consideration and adoption by the San Dieguito River Park Joint Powers Authority in accordance with the California Environmental Quality Act. The JPA will coordinate with the California Coastal Commission (CCC) to avoid any inconsistencies between the requirements of the MMRP and the maintenance and monitoring program to be developed by the CCC for SCE's required Coastal Development Permit.