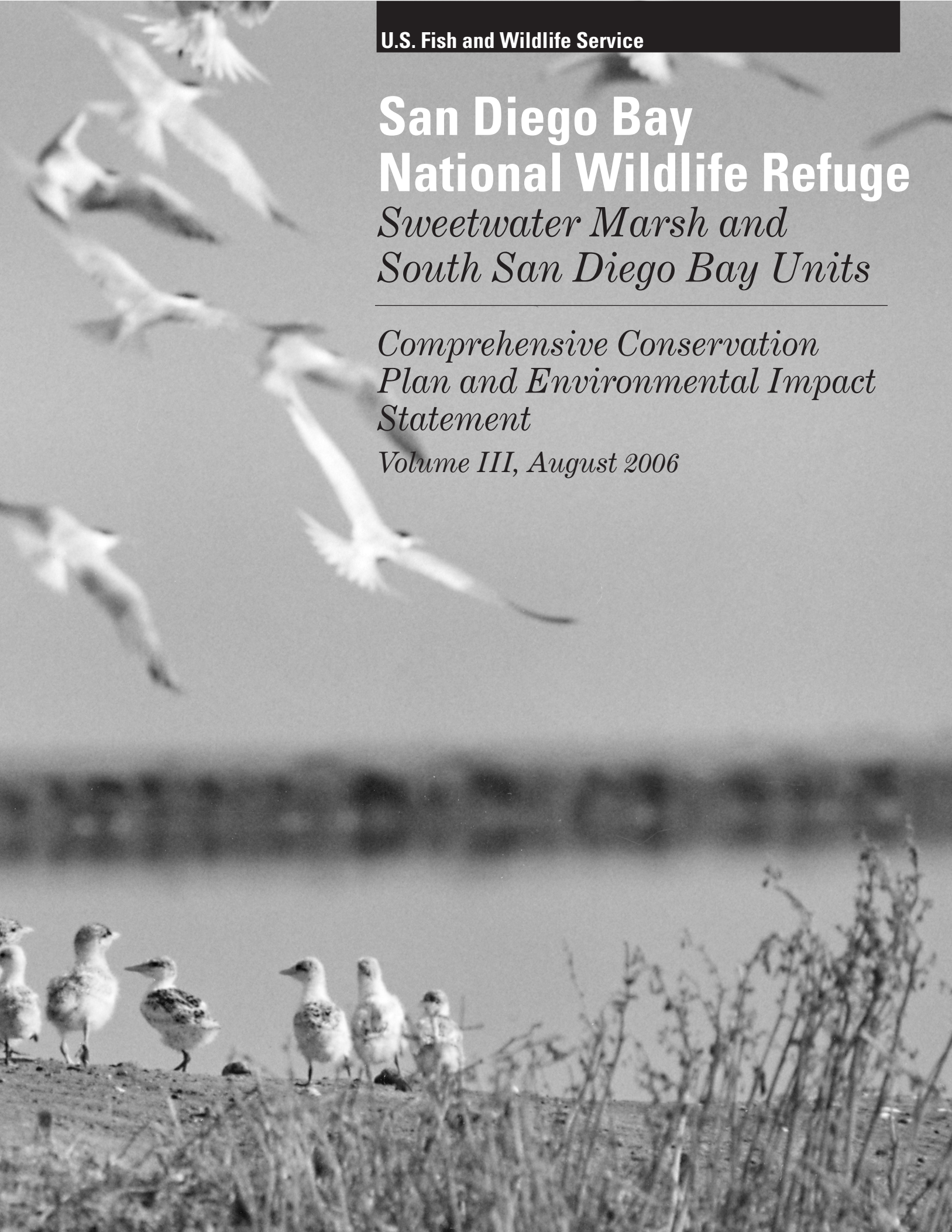
U.S. Fish and Wildlife Service

San Diego Bay National Wildlife Refuge

Sweetwater Marsh and South San Diego Bay Units

Comprehensive Conservation Plan and Environmental Impact Statement

Volume III, August 2006



Comprehensive Conservation Plans provide long-term guidance for management decisions and set forth goals, objectives, and strategies needed to accomplish refuge purposes and identify the Service's best estimate of future needs. These plans detail program planning levels that are sometimes substantially above current budget allocations and, as such, are primarily for Service strategic planning and program prioritization purposes. The plans do not constitute a commitment for staffing increases, operational and maintenance increases, or funding for future land acquisition.

U.S. Fish & Wildlife Service

San Diego Bay National Wildlife Refuge

Sweetwater Marsh and South San Diego Bay Units

Final Comprehensive Conservation Plan and Environmental Impact Statement

Volume III – August 2006

Appendix P: Responses to Comments

Appendix P: Responses to Comments

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

September 14, 2005

Victoria Touchstone, Refuge Planner
U.S. Fish and Wildlife Service
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Road
Carlsbad, California 92011

Subject: Draft Environmental Impact Statement (DEIS) for the San Diego Bay National Wildlife Refuge Comprehensive Conservation Plan, San Diego County, California (CEQ #20050299)

Dear Ms. Touchstone:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508) and Section 309 of the Clean Air Act.

1.1 The DEIS evaluates three management alternatives for the Sweetwater March Unit of the refuge. Alternative C (Implement Habitat Enhancement and Restoration and Improve Existing Public Uses) is the preferred alternative. The DEIS also evaluates four alternatives for the South San Diego Bay Unit. Alternative D (Expand Habitat Management, Enhance Nesting Opportunities, Maximize Habitat Restoration, and Provide Additional Public Use Opportunities) is the preferred alternative. EPA has no objections to the preferred alternatives and supports their habitat enhancement and restoration goals. Accordingly, we have rated the DEIS as Lack of Objections (LO) (see the enclosed "Summary of EPA Rating Definitions").

We appreciate the opportunity to review this DEIS. When the Final EIS is released for public review, please send one copy to the address above (mail code: CED-2). If you have any questions, please contact me or David P. Schmidt, the lead reviewer for this project. David can be reached at 415-972-3792 or schmidt.davidp@epa.gov.

Sincerely,

Nova Blazej, Acting Manager
Environmental Review Office
Communities and Ecosystems Division

Enclosure:
Summary of EPA Rating Definitions

Printed on Recycled Paper

1.1 Comment Noted.

SUMMARY OF EPA RATING DEFINITIONS [1]

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACTS OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impact that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

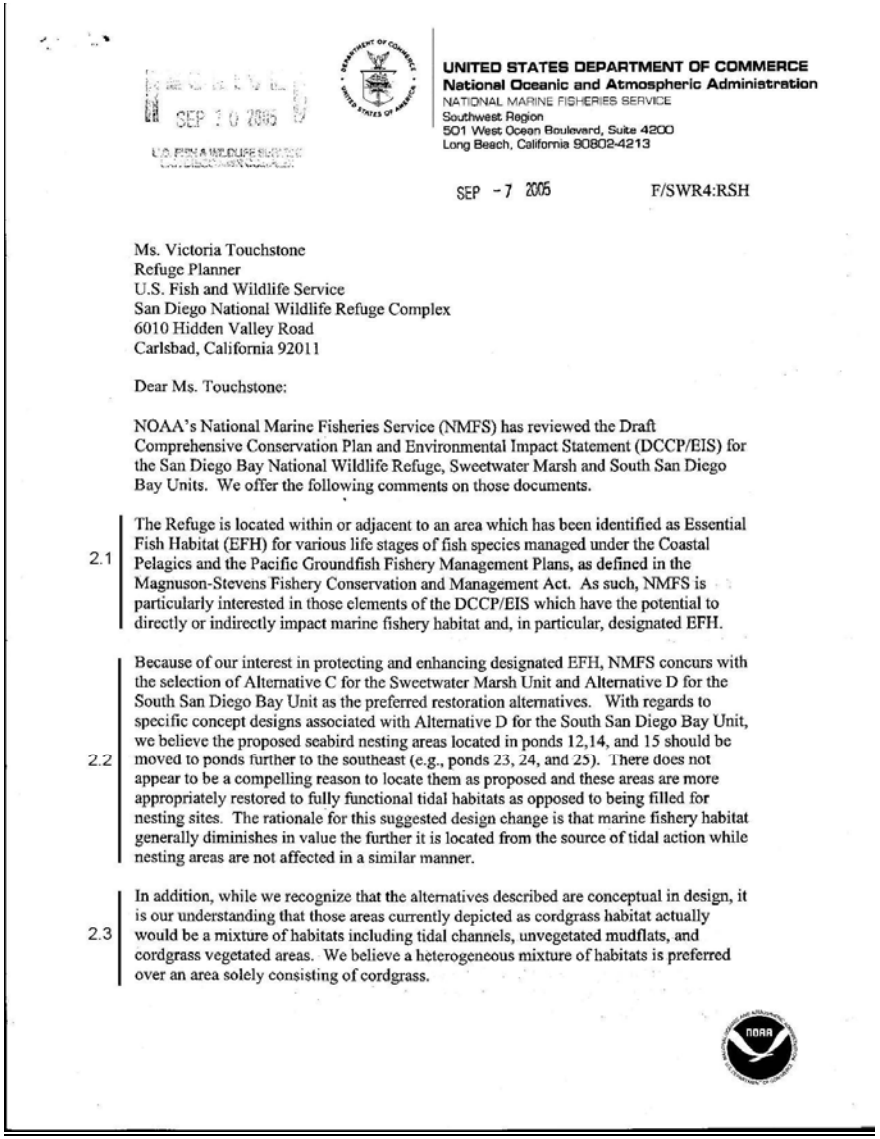
"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

[1] From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.



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U.S. FISH & WILDLIFE SERVICE

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

SEP -7 2005 F/SWR4:RSH

Ms. Victoria Touchstone
Refuge Planner
U.S. Fish and Wildlife Service
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Road
Carlsbad, California 92011

Dear Ms. Touchstone:

NOAA's National Marine Fisheries Service (NMFS) has reviewed the Draft Comprehensive Conservation Plan and Environmental Impact Statement (DCCP/EIS) for the San Diego Bay National Wildlife Refuge, Sweetwater Marsh and South San Diego Bay Units. We offer the following comments on those documents.

2.1 The Refuge is located within or adjacent to an area which has been identified as Essential Fish Habitat (EFH) for various life stages of fish species managed under the Coastal Pelagics and the Pacific Groundfish Fishery Management Plans, as defined in the Magnuson-Stevens Fishery Conservation and Management Act. As such, NMFS is particularly interested in those elements of the DCCP/EIS which have the potential to directly or indirectly impact marine fishery habitat and, in particular, designated EFH.

2.2 Because of our interest in protecting and enhancing designated EFH, NMFS concurs with the selection of Alternative C for the Sweetwater Marsh Unit and Alternative D for the South San Diego Bay Unit as the preferred restoration alternatives. With regards to specific concept designs associated with Alternative D for the South San Diego Bay Unit, we believe the proposed seabird nesting areas located in ponds 12,14, and 15 should be moved to ponds further to the southeast (e.g., ponds 23, 24, and 25). There does not appear to be a compelling reason to locate them as proposed and these areas are more appropriately restored to fully functional tidal habitats as opposed to being filled for nesting sites. The rationale for this suggested design change is that marine fishery habitat generally diminishes in value the further it is located from the source of tidal action while nesting areas are not affected in a similar manner.

2.3 In addition, while we recognize that the alternatives described are conceptual in design, it is our understanding that those areas currently depicted as cordgrass habitat actually would be a mixture of habitats including tidal channels, unvegetated mudflats, and cordgrass vegetated areas. We believe a heterogeneous mixture of habitats is preferred over an area solely consisting of cordgrass.

2.1 The need to consult with NOAA's National Marine Fisheries Service under the Magnuson-Stevens Fishery Conservation and Management Act during the preparation of final engineering/ restoration plans for the restoration of the salt ponds has been added to Section 1.4 of the Final CCP/EIS and a discussion of Essential Fish Habitat has been added to Section 3.4.5.3.

2.2 The specific locations, configurations, and sizes of the seabird nesting enhancements to be implemented under the preferred alternative would be determined during subsequent detailed engineering and restoration planning. The location of these enhancements would be selected based on an evaluation of the optimal habitat value for both fish and the affected bird species. This evaluation will consider input provided by Refuge biologists, other programs in the USFWS including Migratory Birds and Ecological Services, NOAA's National Marine Fisheries Service, California Department of Fish and Game, and the public.

2.3 As described in Response 2.2, specifics regarding the design of the areas to be restored under the preferred alternative would be determined during subsequent detailed restoration planning. At this time, restoration is intended to include a mix of habitat types, including tidal channels, unvegetated mudflats, cordgrass and pickleweed-dominated salt marsh, and new seabird nesting areas. Because one of the objectives of the restoration proposal is to restore habitat essential to the conservation and recovery of the light-footed clapper rails in San Diego Bay, greater emphasis may be placed on restoring cordgrass-dominated salt marsh habitat in some portions of the South San Diego Bay Unit.

We appreciate the opportunity to review the DCCP/EIS look forward in assisting the U.S. Fish and Wildlife Service as this project moves forward from a planning to an implementation phase. Should you have any questions regarding our comments, please contact Bob Hoffman at 562-980-4043 or via email at Bob.Hoffman@noaa.gov.

Sincerely,

Valerie L. Chambers
Assistant Regional Administrator
for Habitat Conservation

cc: CDFG – San Diego (Marilyn Fluharty)
USFWS – Carlsbad (Carolyn Lieberman)

DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

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U.S. FISH & WILDLIFE SERVICE

IN REPLY REFER TO:
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Ser N45JNW.tc/0313
September 19, 2005

Ms. Victoria Touchstone
U.S. Fish and Wildlife Service
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Road
Carlsbad, CA 92011

Dear Ms. Touchstone:

The Navy has reviewed the Draft Comprehensive Conservation Plan (CCP) and Environmental Impact Statement (EIS) for San Diego Bay National Wildlife Refuge (Refuge), Sweetwater Marsh and South Sand Diego Bay Units dated July 2005 and our comments attached [Enclosure (1)].

3.1 Of primary concern are any impacts the CCP would have on military land and training in and around San Diego Bay. In order to support our military mission, the Navy needs to ensure access to its land and established training areas. Of utmost concern are the restrictions imposed by resource management activities in the in-water components of the South San Diego Bay Unit, specifically those areas adjacent to and north of Emory Cove.

3.2 In addition, all land and water owned by the Navy at Naval Radio Receiving Facility, Naval Base Coronado should be removed from the CCP. The Navy had requested the removal of its lands from consideration in all Refuge planning and management documents [enclosure (2)].

3.3 We also request that your document address how your proposed management actions on Refuge land impact natural resources on Navy lands, especially endangered species, as our management strategies are developed to support the Navy's mission.

3.4 As stated in previous comments [Enclosure (3)], the Navy is concerned with any action that would reduce or modify the amount of habitat available for the federally endangered California least tern (*Sterna antillarum browni)* and the federally threatened western snowy plover (*Charadrius alexandrinus nivosus*) in the Sweetwater Marsh Unit of the San Diego National Wildlife Refuge Complex.

3.5 Finally, although we applaud the proposal to improve existing habitat quality of seabirds, including the California least tern and western snowy plover, we are concerned that increased use of the site might effect these listed species. Of particular concern are the management recommendations for the gulled-billed tern (*Sterna nilotica*) and the effects this species will have on the tern and plover populations on Navy land. The gull-billed tern is a known predator to our populations and its increased presence has dramatically impacted the reproductive success of terns and plovers on Naval Amphibious Base Coronado, Naval Base Coronado.

3.1 A discussion of surrounding military lands and known training operations occurring in the vicinity of the Refuge has been added to the Final CCP/EIS as Section 3.6.1.5. The CCP proposes no resource management activities for the in-water areas of the Refuge located adjacent to and north of Emory Cove that could adversely affect authorized Naval training activities. This conclusion has been added to Section 4.7.1 of the Final CCP/EIS.

3.2 With the exception of the northwest corner of Pond 11, no management recommendations are included within the CCP that would affect the Naval Radio Receiving Facility, Naval Base Coronado (NRRF). In addition, the CCP does not address, nor does it include any management recommendations relevant to the Stewardship Project. The need for coordination with the Navy prior to making any changes to Pond 11 has been added to Section 1.4 (Required Permits and Approvals) and Section 2.3.2.3 of the Final CCP/EIS. Various figures have also been revised to depict Navy ownership in Pond 11 and indicate the need to coordinate with the Navy during step-down planning for Pond 11.

3.3 The potential effects of the proposed management actions for the San Diego Bay NWR on the endangered species supported on Navy lands are addressed in Section 4.7 of the Final CCP/EIS.

3.4 We do not agree that restoration of a portion of the D Street Fill to tidally influenced habitat would reduce the productivity of the D Street Fill for least terns or western snowy plovers. This conclusion is based on current and historic nesting activity on the D Street Fill and the proposed management actions that would be implemented under the preferred alternative. Nesting observations at the D Street Fill from 1998 to present indicate that California least terns and western snowy plovers are not nesting within the area proposed for tidal restoration. The majority of nesting occurs at the western end of the D Street Fill, although some nesting also occurs along the northeastern portion of the Fill (refer to Figure 3-13 in the Final CCP/EIS).

This preference for the western portion of the site may relate to substrate conditions, proximity to human and mammalian activity, effects of night lighting from adjacent development, and/or distance to appropriate foraging areas.

Under Alternative C, approximately 33 acres of the D Street Fill would be preserved and enhanced to support tern and plover nesting and 13 acres at the south eastern end would be restored to intertidal habitat. As stated in the draft CCP/EIS, based on past and current nesting activity at the D Street Fill, this proposal is not expected to have any significant adverse effects on terns or plovers; rather it is intended to improve nesting success for both species. This is supported by the plan objective for least terns and snowy plovers (Objective 2.1) that is included in Section 2.2.5.2 of the Final CCP/EIS. This objective envisions increased productivity for both species. Strategies proposed to achieve this objective include enhancing the existing nesting substrate where necessary, providing additional fencing, removing shrubs and other vegetation as appropriate, and improving access to adjacent foraging areas. Further, an increase in intertidal areas around this nesting site would provide additional proximal foraging habitat for both species.

3.5 The management actions included under Alternative D for the South San Diego Bay Unit are intended to conserve and where feasible improve the ecological conditions for a wide variety of species, allowing for the dynamics of the ecosystem to be maintained in a natural and environmentally healthy state. Expanding the nesting habitat within the salt works is directed primarily at improving conditions for nesting least terns and snowy plovers, although all of the ground nesting birds supported within this area would derive benefits from this action. Currently, least terns and snowy plovers nest on marginal habitat near the salt plant rather than on the larger more remote levees. We believe this is due in large part to competition with other ground nesting birds for nesting space. By expanding the area available for nesting, we believe crowding would

Thank you for the opportunity to comment on the development of your CCP and EIS. To ensure that military land or training are not impacted by proposed management we would suggest meeting to discuss the specifics in the CCP in order to ensure that our military mission in San Diego Bay is not impacted. To arrange a meeting, to address questions regarding the above or to acquire further information, please contact Ms. Tammy Conkle at 619-545-3703 or tamara.conkle@navy.mil. 3.6

Sincerely,

Peter A. Kennedy
Environmental Program Manager

Enclosures:
1. Navy Comments on the Draft Comprehensive Conservation Plan (CCP) and Environmental Impact Statement for San Diego Bay National Wildlife Refuge, Sweetwater Marsh and South Sand Diego Bay Units
2. Naval Base Coronado Letter to San Diego National Wildlife Refuge Complex, dated August 23, 2004.
3. Navy Comments on the Comprehensive Conservation Plan for the Sweetwater Marsh National Wildlife Refuge and South San Diego Bay Unit of the San Diego National Wildlife Refuge, dated November 16, 2001

2

be reduced and the number of least tern and plover nests would increase.

Predation of the least tern and snowy plover chicks by gull-billed terns is a management issue that extends beyond the control of this Refuge. The fact that species conflicts exist within the limited suitable nesting habitats that remain in and around San Diego Bay should not result in a call to avoid habitat enhancement and/or restoration. Our challenge is to provide a mix of viable habitats that can be used by as broad a range of native and special status avifauna as possible. The Service, through the Migratory Birds Program, will continue to monitor the interactions of gull-billed terns, California least terns, and western snowy plovers and develop, as appropriate, measures intended to support the conservation of all three of these species.

3.6 A meeting to address the Navy's comments was held on March 29, 2006.

Navy Comments on the Draft Comprehensive Conservation Plan and Environmental Impact Statement for San Diego Bay National Wildlife Refuge, Sweetwater Marsh and South Sand Diego Bay Units

General:

3.7 1. In order to support our military mission the Navy needs to ensure access to Navy land and established training areas. In order to properly comment on the CCP the Navy needs to understand any limitations or restrictions that the proposed management will impose in the in-water components of the South San Diego Bay Unit, specifically the area adjacent to and north of Emory Cove.

3.8 2. As requested in our letter to you on August 23, 2004 [enclosure (2)], please remove Navy lands, specifically Naval Radio Receiving Facility (NRRF), from consideration in your document and modify any management recommendations, such as solar salt production and opening the levee to public access, that may impact Navy lands. In the Summary Document Figures A-4 through A-7, as well as A-9 through A-13, show part of NRRF (east of State Route 75) as "Approved Land Acquisition Boundary" and it is not. Also, correct portions of Section 2.34 and Figures 2-5, 2-6, 2-7, 2-9, 2-12, 2-14, 2-15, 2-17, and 3-19 to reflect this comment.

3.9 3. Sweetwater Marsh Unit, Alternatives B and C: Due to the limited amount of California least tern nesting area remaining on non-Navy lands in San Diego Bay, the Navy is concerned with the removal or conversion of any upland habitat that could support federally listed species. Also, it is not clear what the current

3.10 use of the nesting site at "D" Street Fill is and how conversion

3.11 would affect past or current nesting locations. In addition, please address the potential impacts and effects from habitat conversion to tern nesting numbers in all of San Diego Bay.

3.12 4. South San Diego Bay Unit: It is not clear how the concept of enhancing nesting sites will benefit the gull-billed tern or other seabirds that could have negative consequences on the federally listed California least tern and western snowy plover populations. Please address management actions that would result in potential impacts to listed species present on the site, as well as on Navy lands. For example, please address on Page 2-114, Objective 2.1 and in Section 4.4 how least tern nesting could be affected by an increase in other seabirds within the refuge. Also, address possible effects to western snowy plovers on Page 2-117, Objective 2.4 and Section 4.4.

3.13 5. No Action Alternatives: Please change the verbiage in these alternatives throughout the document(s) to address the fact that it includes present/current and past management practices.

3.14 6. Summary Document: It is not clear where federally listed species are currently being managed. Please include language and graphics on where and how species are being managed and how this impacts the no action alternative. Without this information, it is difficult to determine the effects of proposed management.

3.15 7. Other than a statement in Section 4.10, it is unclear how this document is to be funded and implemented. Please address.

1

ENCL (1)

3.7 We understand that the Navy SEALS transit through the boat channel north of Emory Cove and use Emory Cove to access Navy lands and established training areas at NRRF. A portion of these submerged lands are leased to the Service by the State Lands Commission as part of the South San Diego Bay Unit. No management actions are proposed for the Refuge on submerged lands north of and adjacent to Emory Cove that would restrict Navy access to NRRF or their ability to train at NRRF. Since these submerged lands are not under the primary jurisdiction of the Service, Refuge compatibility determinations for uses within these leased areas are not needed.

3.8 With respect to the NRRF, refer to Response 3.2 above. During step-down restoration planning for Pond 11, we will coordinate with the Navy to determine what if any changes in pond elevation would be appropriate in this location. The preferred alternative does not include a proposal to permit public access across Navy property.

3.9 Alternative B for the Sweetwater Marsh Unit is intended to expand the management activities occurring on the D Street Fill to support nesting terns and plovers. No conversion of upland habitat to intertidal habitat is proposed. Change in landform would be limited to recontouring the southern edge of the Fill, as indicated in light orange on Figure 2-3, to improve plover chick access to intertidal foraging areas. This proposal is intended to increase fledging success for western snowy plovers at the D Street Fill.

The effects of implementing Alternative C for the Sweetwater Marsh Unit are addressed in Response 3.4 above.

3.10 Data describing the historic and current use of the D Street Fill by California least terns and western snowy plovers is provided in Section 3.4.6, however, for clarity, this data has been incorporated into a new figure, Figure 3-13, and added to Section 3.4.6 of the Final CCP/EIS under the discussion of California least terns and western snowy plovers. References to this figure have also been added to Section 3.4.4.1 (Breeding Birds, Nesting Seabirds). Under Alternative C, the D Street Fill would be reshaped to support nesting birds as well as provide additional foraging habitat for plovers and other shorebirds. Approximately 33 acres of the D Street Fill would be preserved and enhanced for tern and plover nesting and 13 acres would be designated for intertidal restoration. As stated in the draft CCP/EIS, based on past and current nesting use of the D Street, this proposal would not result in any significant adverse effects to ground nesting birds; rather it is intended to improve nesting success for plovers and terns.

3.11 The conversion of upland habitat to intertidal wetlands is not expected to result in significant adverse effects to nesting terns at this site and effects to tern nesting numbers bay wide would be neutral or positive. Although some upland habitat would be converted to intertidal wetlands, this increase in intertidal habitat would provide additional proximal foraging areas for snowy plover chicks and adults and California least tern adults and fledglings. Further, the preferred alternative includes a proposal to provide new nesting habitat within the salt works, which would offset any perceived loss of potential nesting habitat at the D Street Fill.

3.12 Refer to Responses 3.4 and 3.5 above.

3.13 In both Sections 2.2.1.2 and 2.1.2.2 of the draft CCP/EIS, the No Action alternative is described as follows: "This alternative assumes no change to past and present management activities . . ."

3.14 The Summary provides an overview of the topics addressed in the draft CCP/EIS. Past and present management activities are summarized for both the Sweetwater Marsh and South San Diego Bay Units on pages S-17 and S-19 respectively. Details regarding management of federally listed species are provided in Sections 2.2.1.1, 2.2.2.1, 2.3.1.1, and 2.3.2.1 of the draft CCP/EIS.

3.15 As stated on the inside cover of both the Summary and draft CCP/EIS Volume I, "These plans are sometimes substantially above current budget allocations and, as such, are primarily for Service strategic planning and program prioritization purposes. The plans do not constitute a commitment for staffing increases, operational and maintenance increases, or funding for future land acquisition." The CCP is intended to provide a vision of how the Refuge should be managed in the future, whether or not funding is currently available. Appendix D (CCP Implementation), which has been revised to better define existing allocations and future needs, prioritizes proposed actions and provides estimated costs and staffing needs to implement each action. Potential funding sources for implementing one or more of the proposed actions is also addressed.

3.16 8. Summary Document: On Tables and Figures, please cite which alternatives are preferred and which are no action. This would assist the reader with the review.

3.17 9. It is not clear how implementation of CCP is executed and funding is obtained to support your preferred management alternative.

Specific:

3.18 Summary Doc, Figure 1 and Page 1-3, Figure 1-2: Please label all military lands shown on the map, including Naval Base Coronado (not just NAS North Island), Naval Base Point Loma and Naval Base San Diego. We request that these areas be represented as gray in color.

3.19 Summary Doc, Figure 2, as well as Figures 3-1, 3-19 and 3-20: Silver Strand State Beach is actually on Navy land that is leased to the State. Also, it would be helpful to label Naval Amphibious Base Coronado, Naval Base Coronado, and Naval Station San Diego, Naval Base San Diego. Lastly, replace "U.S. Navy Radio Receiving Facility" with "Naval Radio Receiving Facility".

3.20 Page S-7, Required Permits and Approvals and Page 1-10, Section 1-4: Suggest adding "USFWS, Section 7 Consultation" or "Federal ESA Section 7 Consultation" so that it is clear as with the other permits.

3.21 Page S-10, Sweetwater Marsh Unit, Third Bullet: Please address the need to determine a source of the contaminants and any actions that will be accomplished to reduce such contamination.

3.22 Page S-10, South San Diego Bay Unit, Fourth Bullet: The term "recovery and conservation" is generally and more appropriately used for federally listed species. The gull-billed tern is not listed. Please clarify such in the bullets listed, as well as the remainder of the document. The Navy is concerned about the management of gull-billed terns in San Diego Bay as they are known to have an adverse affect on the Navy's populations of California least tern and western snowy plover.

3.23 Page S-11, Habitats, Fish and Wildlife and Page 3-36, Section 3.4.2: Please cite the classification system for the habitat types that is referenced in this section and in Tables 1 and 2.

3.24 Page S-13, Figures 6 and 7 and Figure 3-9: The Navy has revised eelgrass data for 2004 that may be used to update the information in these sections.

3.25 Page 1.1, Section 1.1, Paragraph 1: Due to the major role Navy lands play in the management of natural resources in and around San Diego Bay, please include a statement regarding our proximity to the refuge as has been done for adjacent urban communities.

3.26 Page 1.1, Section 1.1, Paragraph 3: Please remove all references and management considerations for the "small area near the northwest corner of Pond 11, (which) is owned by the U.S. Navy (Navy)." Also,

2

3.16 The Summary document for the Final CCP/EIS identifies the preferred alternatives for each Refuge Unit.

3.17 Refer to Response 3.15 above.

3.18 Figures 1 and 1-2 are intended to inform the reader of the general location of the Refuge, not to describe surrounding land uses; therefore, it is not necessary to add information regarding surrounding military lands to these figures. The name of Naval Air Station North Island has been corrected in the Final CCP/EIS. In addition, those military lands that support endangered species nesting are now depicted on revised Figure 3-15 and Naval Amphibious Base Coronado has been added to Figures 3-1 and 3-22 of the Final CCP/EIS. A new figure, Figure 3-23, has been added to Section 3.6.1.5 of the Final CCP/EIS that depicts the location of those military lands occurring in proximity to the Refuge.

3.19 Refer to Response 3.18 above. All graphics in the Final CCP/EIS that include a reference to the NRRF have been corrected. The fact that the Silver Strand State Beach is leased to the State by the Navy is acknowledged in new Section 3.6.1.5 of the Final CCP/EIS.

3.20 Section 1.4 of the Final CCP/EIS has been revised accordingly.

3.21 Details related to known and suspected contaminants on the Sweetwater Marsh Unit are described in Section 2.2.5.2 (Goal 3, Objective 3.1) and Section 3.3.8 of the draft CCP/EIS.

3.22 The implementation of conservation actions to address population declines, naturally small ranges or population sizes, threats to habitats, or other factors are not reserved solely for listed species.

Not only is the conservation of avian diversity in North America a primary goal of the Service, but the 1988 amendment to the Fish and Wildlife Conservation Act mandates the Service to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973." The report, Birds of Conservation Concern 2002, was prepared to carry out this mandate. The overall goal of the report is to identify bird species, such as the gull-billed tern, that are of conservation concern so as to stimulate coordinated and proactive conservation actions among Federal, State, and private partners (*USFWS 2002*).

The statement in the fourth bullet on Page S-10 is just one of a number of issues raised during the CCP scoping process. The purpose of presenting these issues, which were identified by the public, affected agencies, and the planning team, is to present the types of issues that were considered during the development of management alternatives. A more complete discussion of this issue is presented in Section 1.10.2, Issue 4 of the draft CCP/EIS, where it is stated that the gull-billed tern is not a federally listed species. This section also addresses the concern that gull-billed terns prey on the chicks of California least terns and western snowy plovers.

3.23 This citation has been added to Section 3.4.2.1.

3.24 Figures 3-8 and 3-9 have been updated to include the 2004 data.

3.25 The proximity of Navy land to the Refuge is addressed in paragraph 3 of Page 1.1. Refer also to Response 3.1 above.

3.26 Refer to Response 3.8 above.

please make this correction throughout the document and on all figures.

3.27 Figure 1-4: Please remove all Navy lands from consideration as "Acquisition Boundary" and "Stewardship Project," as requested in our letter dated August 23, 2004 [see enclosure (2)].

3.28 Figure 1-6: The area labeled as Silver Strand State Beach is Navy owned and leased to State. Also, it is confusing to label it as Silver Strand State Beach when the primary area managed under that name is on the Ocean.

3.29 Page 3-29, Section 3.3.9.3: Correct to read "fixed-wing and rotary-wing". Also please confirm that military aircraft are the primary noise contributors or provide a reference for the statement.

3.30 Page 3-31, Section 3.4.1.3: It would also be appropriate to have a section listing other relevant management plans, such as the San Diego Bay Integrated Natural Resources Management Plan (INRMP), the Naval Base Coronado INRMP, and the Naval Base San Diego INRMP.

3.31 Page 3-33, Recovery Plans: Please state here and other appropriate places in this document that the California Least Tern Recovery Plan is considered out of date and is being revised. Also, please reference any other information used in this document to support goals and objectives related to the tern, due to the out-of-date Recovery Plan.

3.32 Page 3-68, California Least Tern: The proper reference for NAB Coronado, is Naval Amphibious Base Coronado, Naval Base Coronado. If acronyms are to be used it would be NAB Coronado, NBC. And, North Island is Naval Air Station North Island, Naval Base Coronado or NAS North Island, NBC. NBC is only necessary with the first citation of the installation, which is similar to listing a state following the name of a city.

3.33 Figure 3-13: Change "North Island NAS" to "NAS North Island". Also, the arrows to the Delta Beaches are not correct. Lastly, reference to the Delta Beaches should be plural unless they are specified North and South. There is not longer nesting supported at Naval Training Center.

3.34 Page 3-70, Figure 3-14: Please explain how pair data is derived or determined from fieldwork and data.

3.35 Page 3-74, Salt Marsh Bird's Beak: This species is found at the YMCA Camp Surf (NRRF).

3.36 Page 3-76, Western Snowy Plover: Plovers are also found on NRRF. Correct the reference to NAB Coronado.

3

3.27 Refer to Response 3.8 above.

3.28 Figure 1-6 has been revised. Refer also to Response 3.19.

3.29 The text regarding fixed wing and rotary wing aircraft has been corrected. The statement on page 3-29 regarding noise does not state that the military is the primary contributor of noise; it states that fixed wing and rotary wing aircraft generate the most significant noise in the vicinity of the Refuge. This statement is based on personal communication with Refuge staff whose office is located on the Sweetwater Marsh Unit.

3.30 A discussion of INRMPs has been included in Section 3.6.1.5.

3.31 The California Least Tern Recovery Plan, approved in April 1980, is the official recovery plan for this species. Additional information regarding the least tern has been collected and the Service intends to revise the plan in the future. However, until the plan is revised, the 1980 plan is the appropriate reference for issues related to the recovery of this species. The goal to support recovery and protection efforts for the least tern is supported not only by the objectives and rationale presented in the recovery plan, but also by the purposes for which the Refuge was established. Additionally, the specific strategies for expanding and/or enhancing nesting and foraging habitat for the least tern within the San Diego Bay NWR, as described in the draft CCP/EIS, are based on recommendations provided in the 1980 recovery plan. Please note that Objective 2.1 for the Sweetwater Marsh Unit and Objective 2.1 for the South San Diego Bay Unit have been revised in the Final CCP/EIS to more accurately describe the intended outcomes of the strategies proposed within the CCP.

3.32 The text has been revised accordingly.

3.33 Figure 3-13, which is now Figure 3-15, has been revised in response to this and other comments.

3.34 Pair data is derived by balancing several different techniques depending on the site and number and species mix of birds present. For small populations or communities, it may suffice to actually count each individual bird. For larger populations or communities, an approximate estimate is made of the flock each monitoring date. Total nests versus active nest numbers on a particular date are compared throughout the season. The minimum total pair number may be derived from the maximum total of active nests on a given date in the season. However, this may be an underestimate because nest initiation dates may vary due to renesting by pairs with failed nests, late arrival by so-called second wave birds (in the case of least terns), or other factors such as abandonment of proximal colonies leading to immigration into the site being monitored. This also varies considerably species to species. For instance, elegant terns are highly synchronous and have limited renesting. Black Skimmers on the other hand are much less synchronous in their nest initiation leading to a wide variety of age classes being present at a given time later in the season.

3.35 The text has been revised accordingly.

3.36 The text has been revised accordingly.

3.37 Page 3-76, Figure 3-16: It is unclear why this figure lists nesting attempts vice number of nests or pairs. It would seem to be consistent with the tern and the rail pairs would be the preferred measurement.

3.38 Page 3-81, Western Gull-Billed Tern: Please address the impact that this species has had on listed species off of Refuge land, and specifically on Navy lands.

3.39 Page 3-99, Section 3.6.1.2: Please address military land use, as well as the development of the Silver Strand Training Complex EIS. In addition, this is another appropriate section to address the INRMPs completed on Navy lands.

3.40 Page 3-101: If it is the first citation, the proper reference for NRRF is Naval Radio Receiving Facility, NBC.

3.41 Page 4-75, Section 4.4.2.1.1, Gull-Billed Tern: Please address how monitoring will influence management of this species and what the potential effect of no control will be on federally listed species. Data has been collected for several years that provide insight regarding the effects of this species on local populations of listed species. These effects should be considered as part of the no control option.

3.42 Section 4.4.2.3 and 4.4.2.4: It is still not clear what the potential effects to listed species will be given a possible increase in seabird nesting. Please address, specifically with regard to possible increases in the population of gull-billed terns, as well as how an increased number of seabirds would influence habitat provided for the western snowy plover.

3.43 Page 4-148, San Diego Bay INRMP: This plan has been funded for revision, along with additional water bird and fisheries surveys.

3.44 Also, it might be appropriate to mention the NBC INRMP and NBSD INRMP, as well as the Silver Strand Training Complex EIS in this section.

3.45 Page 4-150, Section 4.9.2.2: Please address possible impacts to the management of wildlife in general and listed species specifically on adjacent properties (specifically Navy lands) in the Bay.

3.46 Page 5-9, Section 5.2.1.7: It is evident that the San Diego Bay INRMP was referenced heavily in this document. It would be appropriate to mention the support of that plan in this section. Please note that this document was co-developed by the Port of San Diego. They should receive credit for their contribution as well.

3.47 Appendix M, Draft Predator Management Plan: Please provide a date for this plan and when it is expected to be final. When it is finalized, please address those "appropriate actions that when implemented will ensure the recovery and conservation of all three of these trust species

4

3.37 Nesting attempts and number of nests in this case are different terms for the same number. To avoid confusion, the figure has been revised to use the term number of nests. Because snowy plovers have multiple nests within a given breeding season and not all adult plovers have been banded, it is not possible to obtain an accurate count of the number of breeding pairs simply by observation. Powell et al. (*2001*) describes the calculations used to estimate breeding populations based on the number of nests observed in the field.

3.38 The text has been revised to indicate that gull-billed terns are preying on least tern and snowy plover chicks and eggs within various nesting sites in and around San Diego Bay, including sites managed by the Navy. The summaries available to the Service that describe the results of endangered species monitoring conducted on Navy lands around San Diego Bay acknowledge that gull-billed terns have been observed preying on least terns and snowy plovers. However, the full extent of gull-billed tern predation on these species cannot be quantified because data regarding the numbers of eggs and chicks lost to gull-billed terns is not provided in these summary reports.

3.39 Mention of the Silver Strand Training Complex EIS has been included in Section 3.6.1.5 of the Final CCP/EIS. Refer also to Responses 3.1 and 3.30 above.

3.40 The text has been revised accordingly.

3.41 The results of on-going monitoring of gull-billed terns and the effects of gull-billed tern predation on listed species will be used by the Service, primarily the Migratory Birds Program, to determine how best to manage this species to protect its population numbers, as well as those of the California least tern and western snowy plover.

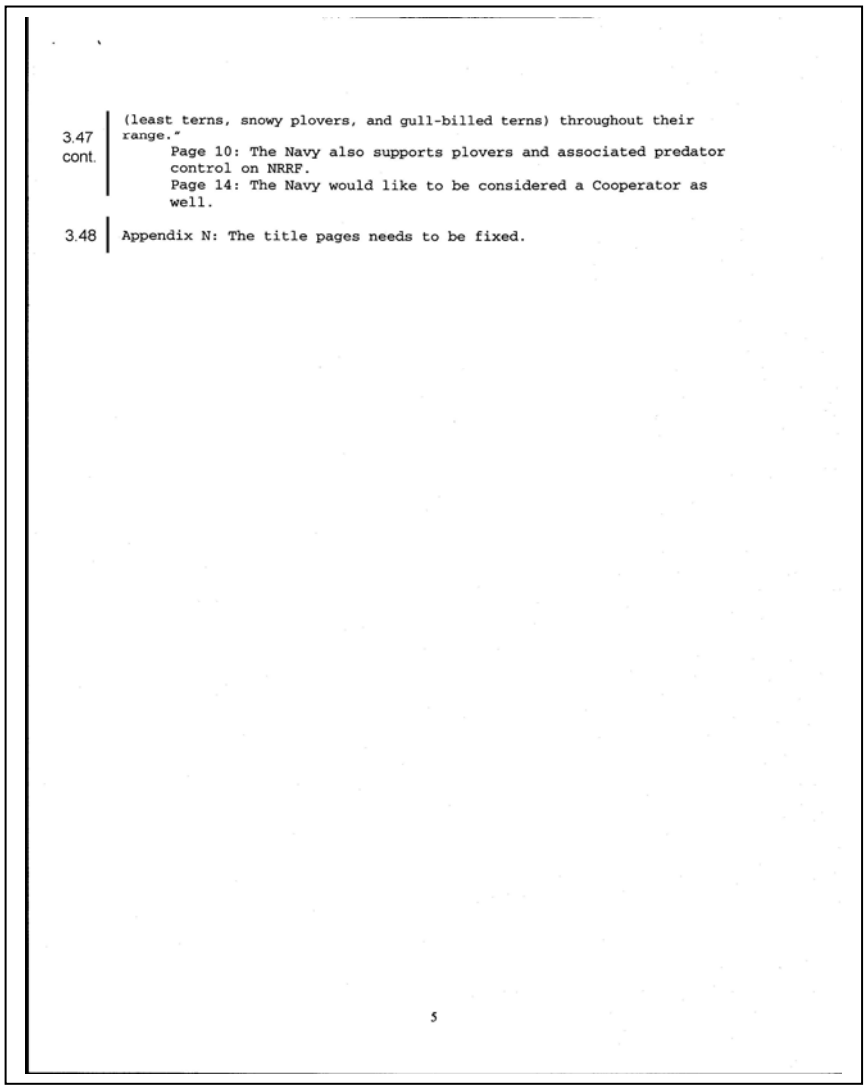
The Migratory Birds Program has determined that control of gull-billed terns on this Refuge or elsewhere throughout its limited range will not be authorized. As a result, control of this species is outside the authority of the Refuge Manager. An alternative that includes control of this species would not be considered feasible; therefore, the "no control" option discussed in the predator management plan does not address issues related to the control of gull-billed terns.

3.42 Improving seabird nesting at the salt works would be designed with the intent of having negligible adverse effects on the western snowy plover and California least tern. Plovers tend to utilize different microhabitats and with the exception of gull-billed tern predation pressures on newly hatched plover chicks, generally do not face conflicts with seabirds except in the case of needing space for nesting. The nesting habitat at the salt works is also not as attractive to plovers for nesting as are the beach and dune habitats located nearby.

In the last few seasons, the tendency has been for plover fledglings to only be observed after the gull-billed terns have abandoned the site for the season. This is occurring at current population levels for all three species. The Service acknowledges that an increase in gull-billed tern nesting numbers may influence productivity for both the western snowy plover and the California least tern at any site within San Diego Bay and the Tijuana Estuary wetland complex. Also refer to Section 3.12.

3.43 Comment noted.

3.44 Mention of the NBC INRMP, NBSD INRMP, and Silver Strand Training Complex project have been added to Section 3.6.1.5 of the Final CCP/EIS.



(least terns, snowy plovers, and gull-billed terns) throughout their range."

3.47 cont.

Page 10: The Navy also supports plovers and associated predator control on NRRF.

Page 14: The Navy would like to be considered a Cooperator as well.

3.48 Appendix N: The title pages needs to be fixed.

5

Response to Comment

3.45 The discussion of impacts to listed species on adjacent properties has been expanded in Section 4.9.2.2 of the Final CCP/EIS.

3.46 Mention of the Navy and Port's involvement in the San Diego Bay INRMP has been added to Section 5.2.1.7 of the Final CCP/EIS.

3.47 Approval of the Predator Management Plan, Appendix M, will occur as part of the approval of the Final CCP and will become effective following the issuance of the Record of Decision for this project. The final version of the plan has been dated and reference to the Navy's management activities on NRRF has been added to Section IV.

3.48 Comment noted.

DEPARTMENT OF THE NAVY
NAVAL AIR STATION
NORTH ISLAND
BOX 357033
SAN DIEGO, CALIFORNIA 92135-7033

IN REPLY REFER TO:
5216
Ser N00C/436
23 Aug 04

Mr. Mendell Stewart
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Road
Carlsbad, CA 92009

Dear Mr. Stewart:

On July 8, 2004 you and your staff kindly provided Captain Tony Gonzales, Environmental Program Manager, Commander Navy Region Southwest (CNRSW) and myself a presentation of the issues and a tour of the facilities at the South San Diego Bay Unit, San Diego National Wildlife Refuge (NWR) Complex. During this meeting as well as our regularly monthly meeting on August 13, 2004 the U.S. Fish and Wildlife Service Environmental Assessment and Land Protection Plan, Proposed South San Diego Bay Unit and Stewardship Project, San Diego NWR (EA) dated 1999 was discussed. Due to the military mission and associated training activities at Naval Radio Receiving Facility (NRRF), Naval Base Coronado we would like this project and all future documentation to remove NRRF for management consideration in your EA and all other plans. More specifically we would request that NRRF not be designated as a "Stewardship Project" boundary as mentioned on page 22 and reflected on page 23, map three of the EA.

Thank you very much for your support of the military mission and your understanding with regard to this request.

If you have any questions regarding this issue our point of contact is Ms. Tammy Conkle at (619) 545-3703 or tamara.conkle@navy.mil.

Sincerely,

T. G. ALEXANDER
Captain, U.S. Navy
Commanding Officer

Copy to: USFWS Refuges, San Diego NWR Complex (V. Touchstone)
Real Estate Department, Southwest Division, NAVFACENGCOM (5GRO)
Cadastral Department, Southwest Division, NAVFACENGCOM (C. Maves)
Public Works Officer, Naval Base Coronado (N46C)
Environmental Counsel, Legal Department, CNRSW (N53)
Environmental Operations Environmental Department, CNRSW (N45JER)

ENCL (2)

DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO:
5090
Ser N45RN.tc/353
November 16, 2001

Mr. G. Mendel Stewart, Manager
San Diego National Wildlife Refuge Complex
2722-D Loker Avenue West
Carlsbad, CA 92008

Dear Mr. Stewart:

The Navy has reviewed the Comprehensive Conservation Plan (CCP) for the Sweetwater Marsh National Wildlife Refuge (NWR) and the South San Diego Bay Unit of the San Diego NWR on San Diego National Wildlife Refuge Complex as presented on your web site. We are concerned with a proposal under the section entitled "Habitat Restoration/Management Strategies for Sweetwater Marsh NWR," specifically "D" Street Fill. Such action would convert potential habitat for the federally endangered California least tern (*Sterna antillarum browni)* and the federally threatened western snowy plover (*Charadrius alexandrinus nivosus*) to salt marsh, inter-tidal and sub-tidal habitats. The September 2000 San Diego Bay (Bay) Integrated Natural Resources Management Plan identifies that the "upland transition" community has been significantly reduced and currently is the most threatened of all San Diego habitats. Therefore, we support all efforts to retain "upland transition" habitat, especially the areas that harbor or would contribute to the recovery of federally listed species.

As you are aware, Naval Amphibious Base, Coronado, and "D" Street Fill are the two largest nesting areas adjacent to San Diego Bay. The Navy would encourage the U. S. Fish and Wildlife Service to maximize the preservation and enhancement of the existing upland habitat so that seabird nesting opportunities are enhanced, especially for the California least tern and western snowy plover. We support the broad objectives and strategies of the Sweetwater Marsh NWR. In particular, we applaud the proposal to improve existing habitat quality, which will facilitate the recovery of the California least tern and western snowy plover, as well as efforts to reduce chick mortality for both these species at "D" Street Fill.

Regarding the Restoration Alternatives for the Salt Works, South San Diego Bay Unit of the San Diego NWR, we embrace your second goal to conserve and restore those habitats that support federally threatened and endangered species and other species of concern. We are hopeful that increased nesting opportunities and a reduction in chick mortality for California least tern and western snowy plover will contribute to the conservation and recovery of these listed species.

In 2000, our management strategies at Naval Base Coronado supported 15% of California least tern nests and produced 11% of the fledglings

FNCL (3)

5090
Ser N45RN.tc/353
November 16, 2001

in California. Accordingly, we had 88% of the nests and produced 87% of the all fledglings in San Diego Bay. The Navy supports and encourages efforts by all agencies to share in the management of this species throughout San Diego Bay.

Thank you for the opportunity to comment on the development of your CCP. Please involve us in future actions associated with your planning process.

Sincerely,

Donald J. Boland
Captain, U. S. Navy
Assistant Chief of Staff
for Environment/Safety

Copy to: Ms. Victoria Aires Touchstone
Project Planner South San Diego Bay
Sweetwater Marsh National Wildlife Refuge
1080 Gunpowder Point Drive
Chula Vista, CA 91910

2

BOB FILNER
•51ST DISTRICT, CALIFORNIA

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CONGRESS OF THE UNITED STATES
HOUSE OF REPRESENTATIVES

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VETERANS' AFFAIRS COMMITTEE
SUBCOMMITTEE
VETERANS' HEALTH

website: www.house.gov/filner

September 13, 2005

Victoria Touchstone
Refuge Planner
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Road
Carlsbad, CA 92011

Dear Victoria:

As the Congressman for the 51st Congressional District, I have had a longstanding interest and involvement in the protection of the wildlife resources in South San Diego Bay. The issuance of the Draft Comprehensive Conservation Plan (CCP) and Environmental Impact Statement (EIS) for the South San Diego Bay Unit of the San Diego Bay National Wildlife Refuge (NWR) is an important step toward the careful management of these resources, and I support all stakeholders in their efforts that have brought us this far.

4.1 The past, present, and future habitat values of the refuge are an important consideration in the selection of a Preferred Alternative for the South San Diego Unit. Alternative C allows the U.S. Fish and Wildlife Service to create the highest ecological return possible over the 15-year planning period. Advancement of Alternative C will transform 90 acres of unproductive habitat to potentially beneficial wetlands—and maintain the Salt Works unique geographical position on the Pacific Flyway, where it hosts over 500,000 birds of 94 species, and is an undisturbed area for these birds to obtain food, shelter, rest, and nesting opportunities.

4.2 I am very concerned that other alternatives would either impact the current salt operations over time or eliminate the South Bay Salt Works altogether. The special and unique contributions the Salt Works provides to the Refuge and to the wildlife in the area are well-known and widely acknowledged. Those contributions to the approximately 1,100 acres of land and water within the South San Diego NWR, have helped make an environmentally productive Salt Works Habitat for over 140

"CALIFORNIA'S BORDER CONGRESSMAN"
Printed on Recycled Paper

4.1 Comment noted.

4.2 Although portions of the salt works in its current configuration provide habitat to support a variety of avian species, the phased restoration of the salt works would provide benefits to a greater range of species, including avian, fish, invertebrate, and wetland plant species.

years. Although an artificially created space, the salt ponds contain a unique ecology that simply does not exist naturally and cannot be manufactured at another time or location.

4.3 There is nothing wrong with ambitious plans for restoring habitats, and I am supportive of them. However, recognizing the current high value of the Salt Works, the Service should make sure that any actions proposed or taken that would impact the habitat values provided currently by the Salt Works must only be pursued after additional analysis and planning has occurred. Any modification to the salt pond system necessitates a studied, patient, and prudent evaluation of the long-term habitat impacts and loss/benefit that can result.

4.4 I hope that you will consider the many positive ecological and economical contributions that the Salt Works has made to the Refuge and to the South Bay when selecting your Preferred Alternative within the Draft CCP/EIS.I strongly

4.5 suggest that the U.S. Fish and Wildlife Service select Otay River Floodplain Restoration Option C2 and South San Diego Bay Unit, Alternative C Salt Works Restoration Option 1 as the Preferred Alternative within the Draft CCP/EIS

4.6 I would appreciate the opportunity to discuss my recommendations with the Service prior to issuance of the final CCP/EIS.

Sincerely,

Bob Filner

BOB FILNER
Member of Congress

BF/zs
2253226

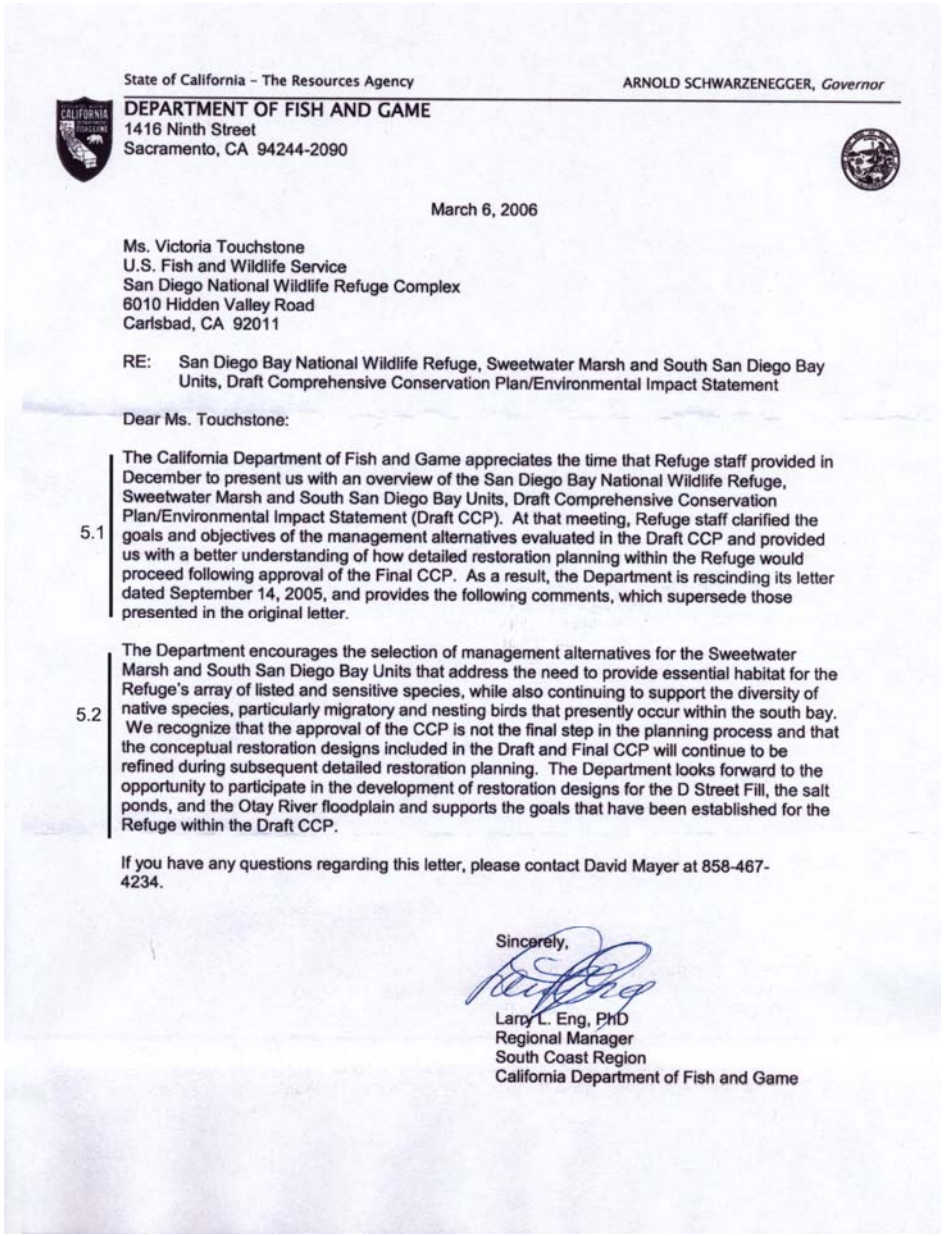
Response to Comment

4.3 We concur. The CCP provides the vision and the directions for achieving that vision, considering the various proposals at the programmatic level. The CCP process is followed by "step-down planning" during which time additional studies, as described in the draft CCP/EIS, would be conducted and detailed restoration plans would be prepared. This subsequent detailed restoration planning would be conducted in an open process similar to that used to develop the CCP. Once a final restoration plan is approved, restoration would be implemented in phases incorporating pre- and post-restoration monitoring and adaptive management (refer to revised Appendix D in the Final CCP/EIS).

4.4 The contribution of the salt works to the Refuge and the South Bay are acknowledge in the draft CCP/EIS and have been considered in developing the preferred alternative.

4.5 Comment noted.

4.6 A briefing was held prior to issuance of the Final CCP/EIS.



State of California – The Resources Agency ARNOLD SCHWARZENEGGER, *Governor*

DEPARTMENT OF FISH AND GAME
1416 Ninth Street
Sacramento, CA 94244-2090

March 6, 2006

Ms. Victoria Touchstone
U.S. Fish and Wildlife Service
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Road
Carlsbad, CA 92011

RE: San Diego Bay National Wildlife Refuge, Sweetwater Marsh and South San Diego Bay Units, Draft Comprehensive Conservation Plan/Environmental Impact Statement

Dear Ms. Touchstone:

5.1 The California Department of Fish and Game appreciates the time that Refuge staff provided in December to present us with an overview of the San Diego Bay National Wildlife Refuge, Sweetwater Marsh and South San Diego Bay Units, Draft Comprehensive Conservation Plan/Environmental Impact Statement (Draft CCP). At that meeting, Refuge staff clarified the goals and objectives of the management alternatives evaluated in the Draft CCP and provided us with a better understanding of how detailed restoration planning within the Refuge would proceed following approval of the Final CCP. As a result, the Department is rescinding its letter dated September 14, 2005, and provides the following comments, which supersede those presented in the original letter.

5.2 The Department encourages the selection of management alternatives for the Sweetwater Marsh and South San Diego Bay Units that address the need to provide essential habitat for the Refuge's array of listed and sensitive species, while also continuing to support the diversity of native species, particularly migratory and nesting birds that presently occur within the south bay. We recognize that the approval of the CCP is not the final step in the planning process and that the conceptual restoration designs included in the Draft and Final CCP will continue to be refined during subsequent detailed restoration planning. The Department looks forward to the opportunity to participate in the development of restoration designs for the D Street Fill, the salt ponds, and the Otay River floodplain and supports the goals that have been established for the Refuge within the Draft CCP.

If you have any questions regarding this letter, please contact David Mayer at 858-467-4234.

Sincerely,

Larry L. Eng, PhD
Regional Manager
South Coast Region
California Department of Fish and Game

5.1 Comment noted.

5.2 The goals and objectives proposed for the San Diego Bay NWR address the need to manage the Refuge for the array of fish, wildlife, and habitat resources found on the Refuge and within the overall bay ecosystem. Consistent with the purposes for which the Refuge was established, a number of the objectives and associated management actions included within the preferred alternatives for the Sweetwater Marsh and South San Diego Bay Units focus on conserving the Refuge's listed species, including the California least tern, light-footed clapper rail, California brown pelican, western snowy plover, and salt marsh bird's beak. Other goals and objectives address the need to provide high quality habitat for the various seabirds, shorebirds, and waterfowl species supported on the Refuge and to improve habitat quality for native plants, fish, invertebrates, and other wildlife.

The Service appreciates the Department's continued interest in this planning effort and looks forward to your participation in the detailed restoration planning for this Refuge.

SAN DIEGO COUNTY
REGIONAL AIRPORT AUTHORITY

P.O. BOX 82776, SAN DIEGO, CA 92138-2776
619.400.2400 WWW.SAN.ORG

September 19, 2005

Ms. Victoria Touchstone
U.S. Fish and Wildlife Service
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Road
Carlsbad, CA 92011

Subject: San Diego Bay National Wildlife Refuge Draft Comprehensive Conservation Plan/Environmental Impact Statement

Dear Ms. Touchstone:

Thank you for the opportunity to comment on the San Diego Bay National Wildlife Refuge Draft Comprehensive Conservation Plan/Environmental Impact Statement. The San Diego County Regional Airport Authority ("SDCRAA") is the successor to the San Diego Unified Port District in interests regarding the South San Diego Bay Wildlife Refuge, South Bay Salt Works and any potential mitigation credits that may be available under the Cooperative Agreement between the U.S. Fish and Wildlife Service and the San Diego Unified Port District (October 16, 1998). As such, SDCRAA will continue to have a vital interest in the viability of the San Diego Bay Wildlife refuge as a habitat for the California least tern and other plant and animal species.

6.1 SDCRAA Interests in South San Diego Bay

SDCRAA is responsible for the protection of nearly 20 acres of California least tern nesting habitat at San Diego International Airport and takes its responsibility seriously for protecting the California least tern and its nesting habitat. SDCRAA relies on the valuable assistance of the Zoological Society of San Diego to fulfill its habitat management responsibilities. Based on the input of the Zoological Society of San Diego and their professional expertise, the SDCRAA submits the following comments on the Draft Comprehensive Conservation Plan (CCP) and Environmental Impact Statement (EIS) for management of the Sweetwater Marsh and South San Diego Bay Units of the San Diego Bay National Wildlife Refuge.

Concerns With Habitat Modification

6.2 SDCRAA relies on the valuable assistance of the Zoological Society and their consulting biologist/Principal Investigator, Mr. Robert Patton, to fulfill its responsibility to conserve and protect nesting endangered California least terns at San Diego International Airport. It is the position of the SDCRAA, the Zoological Society and its species recovery experts that the CCP/EIS fails to adequately disclose and consider the benefits to wildlife that current environmental conditions provide. The value of the existing habitat has not been fully assessed and the proposed preferred alternative for the salt works in South San Diego Bay may be detrimental to the long-term viability of numerous species and related

SAN DIEGO
INTERNATIONAL
AIRPORT

6.1 Comments noted.

6.2 The benefits to birds that are provided by the salt ponds are addressed in detail in Sections 3.4.1.3 and 3.4.4.1 of the draft CCP/EIS. References to these sections have been added to Section 3.4.2.1 (Solar Salt Evaporation Ponds) of the Final CCP/EIS to ensure a complete understanding of the current value of the salt ponds to avian species.

Detailed analysis of the potential effects, both adverse and beneficial, to fish, benthic invertebrates, habitat quality, and avian species that could result from converting some or all of the salt ponds to intertidal habitat is provided in Sections 4.3 and 4.4 of the draft CCP/EIS.

habitat. We recommend that the U.S. Fish & Wildlife Service ("Service") ensure that the value of the existing habitat in the San Diego Bay National Wildlife Refuge be adequately assessed in the CCP and that the Service analyze carefully the extent, timing, and implementation schedule for habitat modification proposed in the CCP. In particular, the service should carefully consider the habitat modification proposed for the salt works in South San Diego Bay.

6.3

Concerns with Mitigation Credits

Under the terms of the Cooperative Agreement, restoration accomplished by SDCRAA pursuant to any restorations plan prepared by the Service will create mitigation credits for habitat impacts associated with future projects elsewhere in San Diego Bay. We are also concerned that any habitat restoration projects in which SDCRAA may be involved result in habitat of the highest quality with the least impact to the existing habitat values of the property provided to the Service under the Cooperative Agreement. Creation of lesser-value habit might reduce the value of the mitigation credits available to SDCRAA under the Cooperative Agreement. We feel it is in the best interest of all parties to ensure the highest quality habitat is provided in the South San Diego Bay Wildlife Refuge. We are concerned that the implementation of Alternative D will reduce the value of any future mitigation credits because this alternative eliminates the valuable habitat of the salt works in South San Diego Bay.

6.4

Concerns with Restrictions on SDCRAA Properties

SDCRAA will also retain ownership of the existing salt processing facility after implementation of the CCP, even if salt production is eliminated from the project area. The ponds closest to the processing facility are proposed for the following uses under the preferred alternative:

6.5

Pond 28	Mudflat
Pond 29	Pickleweed Dominated Salt Marsh
Pond 30	Cordgrass Dominated Habitat
Pond 40	Mixed Water Area
Pond 41	Managed Water Area
Pond 42	Brine Production Area

The conversion of the existing salt ponds to create the habitat types listed above raises concerns over the future use of the salt processing facility property. The CCP/EIS should discuss the impacts of the newly created habitat on land uses in the areas surrounding the site of the proposed CCP.

The "Cooperative Agreement between the United State Department of the Interior Fish and Wildlife Service and the San Diego Unified Port District", (SDUPD) Document 38129 dated October 16, 1998, assigned to SDCRAA as of January 1, 2003, was entered into between these parties to protect and enhance nesting and foraging habitats for the endangered California least tern at the salt ponds in South San Diego Bay as mitigation for the loss of the existing least tern colony site at the Naval Training Center, adjacent to

6.6

Response to Comment

6.3 The description of the preferred alternative has been expanded in the Final CCP/EIS in both Chapter 2 and Appendix D (CCP Implementation) to include a more detailed discussion of how the Refuge would be managed under this alternative, as well as how restoration could be phased to incorporate monitoring and adaptive management into the final project design. In addition, details regarding the types of studies and/or analyses that would be completed in association with subsequent detailed restoration planning have been added to Appendix D.

6.4 As stated in the draft CCP/EIS, the salt ponds provide important nesting and foraging habitat for a variety of avian species, but habitat quality for fish, benthic invertebrates, and subtidal and intertidal vegetation is poor to nonexistent. The intent of Alternative D is to maximize opportunities for habitat restoration within the Refuge, while maintaining those aspects of the existing salt pond system that support nesting seabirds and other migratory birds. The value of any future mitigation credits that might be available to the Airport Authority and/or the Unified Port of San Diego would be determined by the appropriate agencies in accordance with the terms of the Cooperative Agreement.

6.5 As stated previously in your letter, the salt ponds in their current state provide habitat value for a variety of bird species. The conversion of these ponds to intertidal habitat and managed water areas would continue to provide habitat value for birds, while also providing habitat value for fish and benthic invertebrates. Development of the lands adjacent to these ponds would be subject to the same regulations (the Federal and State Endangered Species Act, California Coastal Act, MSCP, Clean Water Act, Rivers and Harbors Act, and others as applicable) under either scenario.

and acquired by SDUPD. Paragraph C.15 states that "Upon establishment of the NWR (National Wildlife Refuge), the Service agrees that there is no "buffer" created adjacent to the NWR wherein otherwise legally allowable development would be prohibited by virtue of the existence of the NWR."

6.7 SDCRAA has made a substantial investment in the creation of the Refuge. In addition, the SDCRAA is the owner of a contiguous property and would not care to see its interests diminished through land use restrictions resulting from the future creation of sensitive habitat.

Despite these concerns, we are pleased with the progress the Service has achieved with the CCP and its accompanying EIS. We look forward to working collaboratively with the Service to achieve its restoration goals in the South San Diego Bay Wildlife Refuge.

If you have any questions regarding this letter, please contact Paul Manasjan, Director of Environmental Affairs at (619) 400-2783 or Ted Anasis, Manager of Airport Planning at (619) 400-2478.

Sincerely,

Angela Shafer-Payne
Vice President, Strategic Planning Division

cc: Authority Board Members
Thella F. Bowens, President/CEO
Breton Lobner, General Counsel
Paul Manasjan, Environmental Affairs
Ted Anasis, Airport Planning
Mary Erickson, Development – Real Estate

Response to Comment

6.6 Comment noted. Although buffers may be required to address existing conditions and regulations, as presented in Response 6.5, no buffer would be required simply by virtue of the existence of a National Wildlife Refuge adjacent to the property.

6.7 Refer to Response 6.5.

"Allison Gutierrez" <agutierr@portofsandiego.org>
09/19/2005 02:29 PM

To <Victoria_Touchstone@fws.gov>
cc
bcc
Subject San Diego Bay CCP

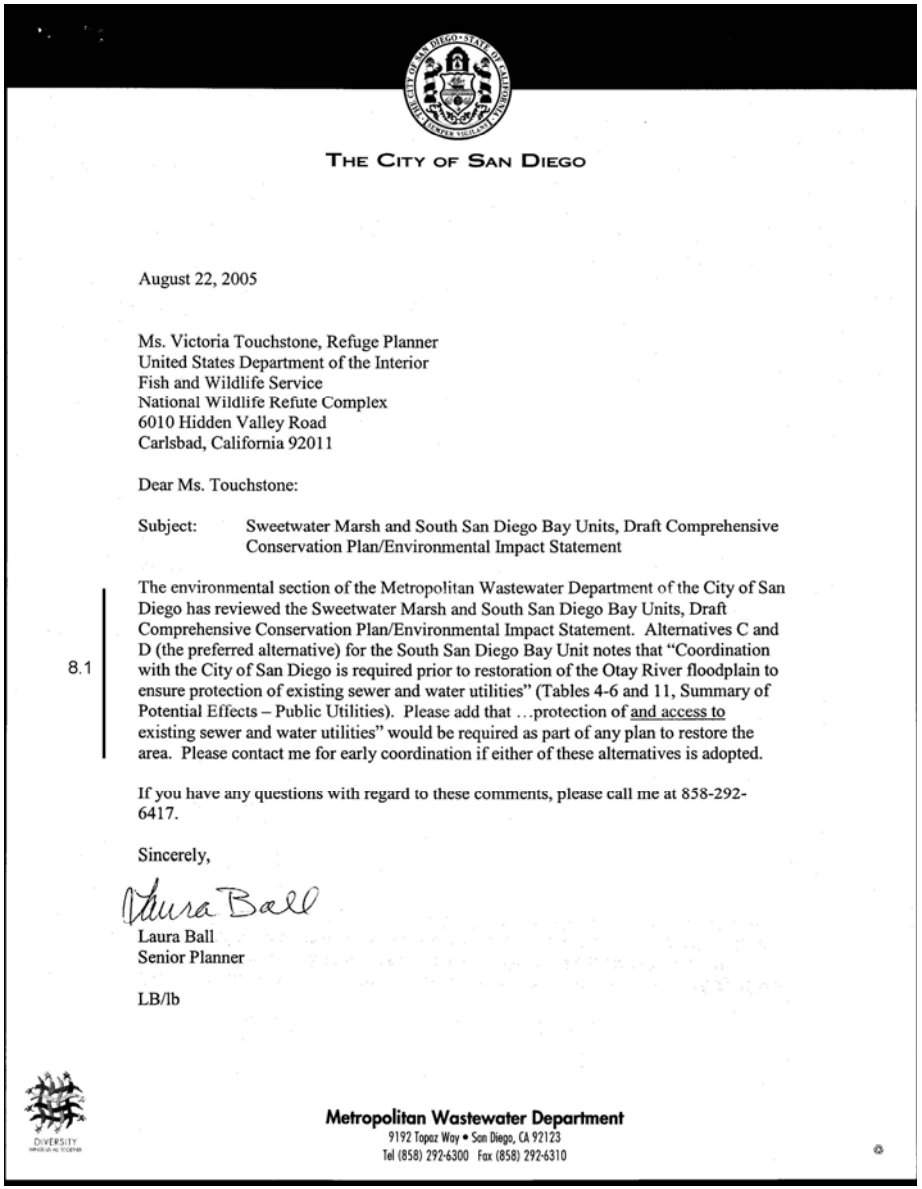
Victoria,

7.1 Port environmental services has reviewed the draft CCP and EIS for the Sweetwater and South San Diego Bay NWR. Our main concern is related to the adjacency of Port tidelands to the refuge property. Since land-use decisions and potential restoration plans may have an impact on Port developments and land-use on tidelands. We ask that we are made aware of the specific development plans in the refuge as they arise. Thank you, Allison

Allison P. Gutierrez
Environmental Services
Port of San Diego
3165 Pacific Highway
San Diego, CA 92101

office: 619.686.6434 Allison Gutierrez.vcf

7.1 The San Diego National Wildlife Refuge Complex will continue to inform the Port of all management actions that could have an impact on Port developments and land uses on tidelands.



THE CITY OF SAN DIEGO

August 22, 2005

Ms. Victoria Touchstone, Refuge Planner
United States Department of the Interior
Fish and Wildlife Service
National Wildlife Refute Complex
6010 Hidden Valley Road
Carlsbad, California 92011

Dear Ms. Touchstone:

Subject: Sweetwater Marsh and South San Diego Bay Units, Draft Comprehensive Conservation Plan/Environmental Impact Statement

8.1 The environmental section of the Metropolitan Wastewater Department of the City of San Diego has reviewed the Sweetwater Marsh and South San Diego Bay Units, Draft Comprehensive Conservation Plan/Environmental Impact Statement. Alternatives C and D (the preferred alternative) for the South San Diego Bay Unit notes that "Coordination with the City of San Diego is required prior to restoration of the Otay River floodplain to ensure protection of existing sewer and water utilities" (Tables 4-6 and 11, Summary of Potential Effects – Public Utilities). Please add that …protection of and access to existing sewer and water utilities" would be required as part of any plan to restore the area. Please contact me for early coordination if either of these alternatives is adopted.

If you have any questions with regard to these comments, please call me at 858-292-6417.

Sincerely,

Laura Ball

Laura Ball
Senior Planner

LB/lb

DIVERSITY

Metropolitan Wastewater Department
9192 Topaz Way • San Diego, CA 92123
Tel (858) 292-6300 Fax (858) 292-6310

8.1 The requested change has been made. Note that page 4-117 of the draft CCP/EIS acknowledges the need to maintain access to the public utilities in the vicinity of the Refuge. The San Diego National Wildlife Refuge Complex will coordinate all restoration efforts that might affect City utility operations, maintenance, and/or access with the Metropolitan Wastewater Department or other appropriate departments.

GREG COX
SUPERVISOR, FIRST DISTRICT
San Diego County Board of Supervisors

September 19, 2005

Ms. Victoria Touchstone, Refuge Planner
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, CA 92011

Dear Ms. Touchstone:

Having reviewed the Draft Comprehensive Conservation Plan/Environmental Impact Statement, I wanted to make the following comments for consideration by the U.S. Fish and Wildlife Service. Please note that these are my personal comments as the Supervisor representing the District in which the San Diego Bay National Wildlife Refuge, Sweetwater and South San Diego Bay Units are located. The County of San Diego, Land Use and Environment Group is sending comments on separate letterhead.

Bayshore Bikeway

9.1 Although the Draft Plan mentions the Bayshore Bikeway in Section 3.6.4.5 Bicycle Facilities (page 3-114), I want to stress the importance of the Bayshore Bikeway as a regional facility of outstanding value for recreation, ecotourism and commuting. The Bayshore Bikeway is a collaborative effort since 1979 under SANDAG's Bayshore Bikeway Working Group and is comprised of representatives from the cities that encompass San Diego Bay – The Cities of San Diego, Coronado, Imperial Beach, Chula Vista, National City and the Unified Port of San Diego and the County of San Diego.

The bikeway is a 24-mile loop around San Diego Bay. Currently, plans are being processed for a 1.5 mile stretch of the Bayshore Bikeway along the Coronado Branch Railroad between the salt ponds and the Otay River Channel. The Railroad Right-of-Way is owned by MTS and is not included within the acquisition boundary of the South San Diego Bay Unit.

County Administration Center • 1600 Pacific Highway, Room 335 • San Diego, CA 92101
(619) 531-5511 • Fax (619) 235-0644 www.gregcox.com
Email: greg.cox@sdcounty.ca.gov

9.1 The San Diego National Wildlife Refuge Complex appreciates the opportunity to coordinate with SANDAG's Bayshore Bikeway Working Group on our public use proposals for the south end of the bay. The pedestrian pathway proposed for the southwestern edge of the Refuge is expected to benefit both Refuge visitors and those traveling along the Bayshore Bikeway.

Ms. Victoria Touchstone
September 19, 2005
Page 2

Otay Valley Regional Park (OVRP)
The Otay Valley Regional Park is a multi-jurisdiction project in the Otay River Valley that stretches from the South San Diego Bay Unit to the Otay Lakes. It is governed through a Joint Exercise of Powers Agreement between the City of Chula Vista, City of San Diego and the County of San Diego.

9.2 As noted in Section 3.6.4.6 Hiking/interpretive Trails (page 3-115), the boundaries of the western-most segment of the OVRP overlap with the current boundary of the South San Diego Bay Unit. I look forward to the USF&W Service working together with the OVRP JEPA members to ensure the Otay Valley Regional Park Concept Plan and the Comprehensive Conservation Plan complement each other where they overlap in the Otay River Floodplain.

South Bay Biological Study Area

9.3 The opportunity also exists for the USF&W Service and the County of San Diego to work cooperatively to maximize the protection of this resource while also allowing for opportunities for public observation of wildlife.

Thank you for the opportunity to comment on the Draft Comprehensive Conservation Plan/Environmental Impact Statement. Please feel free to call me or Ron Kelley of my staff at (619) 531-5511 on this or any issue of importance in my Supervisorial District.

Sincerely,

Greg Cox

GREG COX
Supervisor, First District

9.2 The San Diego National Wildlife Refuge Complex continues to work with representatives from both the City and County of San Diego to identify an alignment for the Otay Valley Regional Trail that will protect Refuge resources and also meet the needs of future trail users.

9.3 The Service looks forward to working with the County to accommodate such opportunities for wildlife observation.

County of San Diego

WALTER F. EKARD
CHIEF ADMINISTRATIVE OFFICER
(619) 531-6226
FAX: (619) 557-4060

CHIEF ADMINISTRATIVE OFFICE
1600 PACIFIC HIGHWAY, STE. 209, SAN DIEGO, CA 92101-2472

September 19, 2005

Victoria Touchstone, Refuge Planner
U.S. Fish and Wildlife Service,
San Diego National Wildlife Refuge Complex,
6010 Hidden Valley Road
Carlsbad, CA 92011

COMMENTS ON THE SAN DIEGO BAY NATIONAL WILDLIFE REFUGE DRAFT COMPREHENSIVE CONSERVATION PLAN AND ENVIRONMENTAL IMPACT STATEMENT

Dear Ms. Touchstone:

The County of San Diego would like to thank you for the opportunity to comment on the above-referenced document. Through this letter of comment, the County will be expressing the serious concerns it has related to the adequacy of the document, the proposed Preferred Alternative D for the South San Diego Bay Unit, and the process that was utilized to select the preferred alternative.

OVERVIEW

10.1 Before we proceed with our specific comments, we would like to describe the importance of the South San Diego Bay to the region and express why the County of San Diego (County) has such a strong interest in the Refuge. As was indicated in the document, the County's interest in the Sweetwater Marsh and South San Diego Bay area has a long history. The County is one of three jurisdictions that own and operate the Otay Valley Regional Park (OVRP) adjacent to the project. Also, the Department of Parks and Recreation South Bay Biological Study Area is located adjacent and north of pong 11.

Overall, this area is viewed as one of the most important seabird nesting colonies on North America's west coast. While it is true that this area is not in pristine natural condition with broad natural tidal flows, present activities associated with the century-old Salt Works operation and its associated levee system have created an environment that supports an extensive population of breeding birds.

10.1 We appreciate the County's interest in this project and concur that the resources in the south bay both within the salt works and in the adjacent natural areas provide important foraging, nesting, and roosting habitat for a diverse array of avian species.

10.2 Over the last century, particularly the last 50 years, nesting seabird colonies have gradually been established on the Salt Works levees beginning with a colony of Caspian tern in 1941, and continuing with the Elegant and Royal terns in 1959, the Forster's tern in 1962, Black skimmer in 1976, and Gull billed tern in 1985. Furthermore, the endangered California least tern has nested on this site for many decades.

10.3 As an indication of the unique status of this area, the birds that breed there occur in very few locations. The Double-crested cormorant breeding site in the South Bay area is one of only three sites in San Diego County, and this is one of only eight regularly used breeding locations for the threatened Snowy plover in San Diego County. This is the only location in San Diego Bay for the American avocet and Black-necked stilts to breed. The Caspian tern site is one of only five sites in Southern California, the Royal tern, one of only three sites in the western United States, the Elegant tern, one of only six sites in the world, Forster's tern, one of only six sites in San Diego County, the Gull-billed tern one of only six sites in Western North America and one of only two in the Western United States, and for the Black skimmer one of six sites in California and the only site in San Diego County. Finally for breeding waterbirds, this location is one of only 27 sites for the California least tern.

10.4 Therefore, though artificially created, the South San Diego Bay Salt Works has evolved into a bird breeding location of major importance. Judging by the limited number of other colonies in the region for the species mentioned above -- including the coastal habitats of the Tijuana River and Santa Margarita River -- it is very likely that several of these species would not occur in San Diego County at all if it was not for the Salt Works and its associated levees. It was a fortunate coincidence that the construction of the Salt Works provided ideal environmental conditions for breeding birds that did not exist in San Diego County in the past, including: safety from terrestrial predators, availability of brine inhabiting invertebrates, and adjacency to open water.

10.5 The man-made Salt Works actually enhanced what nature provided in this area for these birds. The proposal presented in the Comprehensive Conservation Plan/EIS for the San Diego Bay National Wildlife Refuge would destroy this successfully functioning environment by replacing it with one that will undoubtedly displace the majority of the breeding birds. It should be noted that very little of what un-vegetated intertidal habitat remains within San Diego Bay is

10.6 within the direct management of a resource agency and therefore must be assumed to be more vulnerable to disturbance and adverse habitat alteration. This should put a greater burden on the Refuge to manage their habitat for shorebird species.

The U.S. Fish & Wildlife Service recognized the importance of the Salt Works to the Refuge in its Summer 2005 Edition of *Notes from the Refuge*:

2

10.2 This information is presented in Section 3.4.4.1 (Breeding Birds) on pages 3-62 and 3-63 of the draft CCP/EIS.

10.3 Page 3-64 of the draft CCP/EIS addresses the use of the salt works by nesting double-crested cormorants and the significance of the western snowy plover population within the Refuge is described throughout the document (e.g., Section 2.3.5.2, Section 3.4.1.3, and Section 3.4.6.1 under Federally-Listed Species). With respect to avocets and stilts, the text on page 3-64 of the draft CCP/EIS states, "In fact, the only recent nesting of these two species [American avocet and black-necked stilt] in San Diego Bay has been within the salt works (*Patton 2004*)." The use of the salt pond levees for nesting by Caspian terns, Royal terns, and black skimmers is discussed on pages 3-62 and 3-63 of the draft CCP/EIS and this discussion has been expanded in the Final CCP/EIS. These pages also contain a discussion of the significance of this nesting site for the elegant tern. Please note that the Final CCP/EIS has been updated to include additional information regarding the size of the elegant tern nesting colony over the past few years. A discussion of Forester's tern nesting on the salt pond levees is provided on page 3-62 of the draft CCP/EIS and statements that describe the significance of this nesting site for the gull-billed tern are provided on page 3-63. Finally, the significance of the California least tern within the Refuge is described throughout the text of the draft CCP/EIS, including the discussion of the history of refuge establishment, within the Refuge goals and objectives, and in Section 3.4.6.1 (Federally-Listed Species). Additional information about historic and current use of the pond levees for nesting by this species is provided on page 3-62 of the draft CCP/EIS.

10.4 The natural breeding habitats for the ground nesting seabirds that nest on the levees of the salt works include salt marshes, sandy beaches, and barrier islands. Although these habitats were plentiful in coastal San Diego County in the past, the vast majority of these areas has either been lost to urban and recreational development or now experiences significant levels of disturbance. With the ranges of several of these seabirds expanding northward over the past few decades and the historic breeding grounds of others now gone, these species have had to adapt to landforms that resemble in some way their preferred native habitats. Based on observations presented in the scientific literature and our own professional experience, we believe that the qualities which attract these birds to the salt pond levees include limited human disturbance, the isolated nature of the levees, the availability of extensive areas of exposed or lightly vegetated open ground, and unrestricted visual access from the levees into the surrounding area. We do not agree that these levees provide safety from terrestrial predators, that they attract these seabirds because of the availability of brine invertebrates, or that these birds would not be present here if the levees were surrounded by intertidal habitat instead of open water. The levees are not islands and unfortunately do not provide protection from mammalian predators. Predation is a serious management concern at the salt works requiring the identification of funding annually to support a predator control program during the nesting season. As stated in the San Diego Bird Atlas "the intrusion of terrestrial predators is a constant problem for all the water birds nesting there" (*Unitt 2004*).

Although current brine invertebrate populations are important prey for some avian species that nest at the salt works (i.e., western snowy plover, Belding savannah sparrow, black-necked stilt, American avocet), these organisms do not represent an essential foraging item for the seabirds that nest on the levees.

With respect to adjacency to open water, there is not enough information available to support or reject the idea that seabird nesting at the salt works is solely dependent upon the presence of open water along the levees. Many of the seabird species that nest at the salt works have been observed nesting in locations that are not surrounded by open water (refer to Section 4.4.2.3.1 of the draft CCP/EIS).

10.5 The salt works replaced the native habitat that once existed in this area, and although it provides nesting, roosting, and foraging opportunities for a variety of avian species, we do not concur that this artificial habitat provides better habitat quality for the majority of the species present in this area than would be provided by a natural intertidal environment.

The Service also disagrees with the statement that the CCP would "destroy this successful functioning environment by replacing it with one that will undoubtedly displace the majority of the breeding birds." Implementation of Alternative D is intended to maximize opportunities for habitat restoration, while also maintaining, and in some cases enhancing, those aspects of the existing salt pond system that support nesting seabirds and other migratory birds. In preparing the CCP, the Service analyzed and considered the data available regarding the diversity and abundance of avian species observed in the salt ponds. The draft CCP/EIS acknowledges that some changes in species composition and abundance could occur as a result of restoration. Based on further analysis and our best professional judgment, we do not believe that these changes would be of a sufficient scale to result in significant adverse effects to any avian species, including the site's ground nesting seabird populations. To understand how restoration could influence avian species composition and abundance, pre and post-restoration monitoring would be implemented in association with future restoration.

10.6 Activities proposed within coastal wetlands, whether they are included within a designated conservation area or not, are all regulated by a variety of local, state, and Federal agencies in an effort to conserve these resources. Therefore, the intertidal habitat areas within the bay that are not included within the Refuge are not necessarily more vulnerable to disturbance. That not withstanding, the CCP does propose to manage habitats within the Refuge for shorebird species. As presented in the vision, goals, and objectives the Refuge is proposed to be managed for multiple species, including shorebirds. There are a number of strategies proposed to maintain, enhance, and restore habitat to support shorebirds including restoring tidal mudflat habitat in the salt ponds and Otay River floodplain, reducing disturbance within the Refuge's existing foraging and roosting areas, and continuing to provide a source of brine invertebrates.

10.7 "In 1999, the area of the salt works joined the National Wildlife Refuge System because even in the current altered condition, migrating waterfowl and shorebirds and nesting seabirds utilize it extensively. Acreage converted from natural conditions for human uses are not unusual and make up a significant percentage of the acreage of the Refuge System."

SHOREBIRD CONSERVATION PLANNING

The Southern Pacific Shorebird Conservation Plan (PRBO, 2003) is a cooperative plan being prepared to address the long-term conservation of shorebirds on the West Coast of North America. It is notable that the U.S. Fish and Wildlife Service is one of the partners in preparing the plan. The plan includes information on the number of species that nest in an area for comparative purposes in depicting the value of breeding and foraging areas for shorebirds. That plan lists nine shorebird species for which coastal habitats are important. Eight of those occur on the South San Diego Bay Wildlife Refuge and rely heavily on the salt evaporation ponds as foraging habitat and refugia.

10.8 Of the seven species for which the Shorebird Conservation Plan identifies the Southern Pacific region to be of moderate significance (Black-necked stilt, Wandering tattler, Spotted sandpiper, Red knot, Sanderling, Least sandpiper and Wilson's phalarope), all have been found in the salt works and Red knot, Sanderling and Wilson's phalarope occur in large numbers at some times of year. As mentioned above, the salt ponds are the only area on the bay where Black-necked stilts regularly breed.

Of the shorebird species for which the region is identified as being of minor significance in the Shorebird Conservation Plan, ruddy turnstones occurs in the Salt Works throughout the year with significant increases during migration. Of the eight shorebird species listed by USFWS as Species of Conservation Concern six occur regularly in the Salt Works.

The Shorebird plan identifies only 12 areas outside of San Francisco Bay that support 10,000 shorebirds or more – south San Diego Bay is one of those sites; it is the only site in San Diego County and one of only four sites south of San Francisco Bay.

10.9 South San Diego Bay is one of only six coastal locations from Alaska to Mexico designated significant shorebird sites by the Western Hemisphere Shorebird Reserve Network. And a very large percentage of the shorebirds in San Diego Bay rely on the salt evaporation ponds in their existing conditions.

10.10 According to the Shorebird Plan, San Diego Bay supports a greater percentage of the 13 shorebird species examined than any other sites on the west coast of the United States except Humboldt and San Francisco Bays in fall and winter

3

10.7 Comment noted.

10.8 The Shorebird Conservation Plan and the species identified in the Plan that occur within the Refuge are addressed in Section 3.4.1.3 (page 3-34) of the draft CCP/EIS. Birds of Conservation Concern are discussed in Section 3.4.7.1 of the draft CCP/EIS, and the Birds of Conservation Concern supported within the San Diego Bay NWR are listed in Table 3-14. The importance of the habitats within the South San Diego Bay Unit for shorebirds is addressed in Section 2.3.5.2 under Objectives 1.3, 1.4, 3.2, 3.3 and 3.4.

The goals and objectives for the Sweetwater Marsh and South San Diego Bay Units are consistent with the following goals of the Southern Pacific Shorebird Conservation Plan (*Hickey et al. 2003*):

> For tidal wetlands - 1) restore tidal flats and marshes, particularly in San Francisco Bay and on the southern California coast, 2) enhance tidal action in existing wetlands as needed, 3) reduce sedimentation from alteration of wetland watersheds, and 4) limit human disturbance to shorebirds in all seasons; and
>
> For managed wetlands – 1) improve the value of existing managed wetlands by expanding wetland management strategies that benefit shorebirds, 2) restore additional wetlands to support migrating, wintering, and breeding populations, and 3) retain and manage a sufficient amount of salt ponds and other shallow open water habitat to support shorebird populations.

10.9 The designation of this site as a Western Hemisphere Shorebird Reserve Network Site is addressed in Section 3.4.1.3 of the draft CCP/EIS and the use of the ponds by shorebirds is described in detail in Section 3.4.4.1 (Migratory Birds) of the draft CCP/EIS.

10.10 Comment noted.

and is exceeded only by San Francisco Bay and two sites in Washington in spring. It is this with which the Service proposes to experiment.

10.11 The Shorebird Plan acknowledges the high value of salt evaporation systems which tend to replicate natural salt panne in their function for shorebirds. (Salt panne is not identified in the discussion of historic habitat distribution and loss for San Diego Bay in the South Bay Refuge draft plan and continues to be treated as a non-productive habitat as exhibited by the excavation of some of the very little salt panne on San Diego Bay at Emory Cove in the name of restoration.)

10.12 The Shorebird Plan also acknowledges that the threatened western snowy plover relies heavily on salt pond habitat. In intertidal zones, snowy plovers require either an unmanicured rack line or a broad expanse of shallow mudflat for foraging. This species occurs only with extreme rarity in the narrow intertidal zone that skirts most of San Diego Bay. The effects of implementation of Alternatives C or D of the South Bay segment have unidentified consequences for the plover.

BIOLOGICAL QUESTIONS

The proposal raises several questions related to biology as follows:

10.13 1. If the hydrology of the ponds was modified and the *Spartina foliosa* planted adjacent to the levees, would the birds that currently utilize the levees for nesting remain since their convenient forage areas would be altered?

10.14 2. Would the planting of *Spartina foliosa* adjacent to the levees create a haven for predators that might have better access to the bird colonies?

10.15 3. Would concentrating the brine-based ponds closer to Interstate 5 affect their use by breeding and migratory birds?

10.16 4. Is this proposal taking into account information from Zedler that describes the difficulty in growing *Spartina foliosa* since it is dependent upon a number of factors such as soil type and nutrients in addition to soil elevation?

10.17 5. Would creation of additional breeding pads increase the likelihood of the waterbirds nesting there?

10.18 6. Would the new hydrologic regime established under the preferred alternative become a management nightmare since it would require continued maintenance to insure appropriate levels of salinity and to prevent it from becoming a hyper-saline condition with no habitat value?

4

10.11 The salt ponds in San Diego Bay provide important foraging and resting habitat for an abundant and diverse array of birds, however, we do not agree that they represent disturbed natural habitat. Historic maps of San Diego Bay prepared by the U.S. Coast and Geodetic Survey in 1859 (refer to Figure 3-3 in the draft CCP/EIS) indicate that the southern shoreline of San Diego Bay was bordered by a broad band of intertidal mudflats. To the south of the mudflats was an extensive salt marsh system laced with meandering tidal channels and several freshwater drainages. Some salt pan habitat and possibly a few natural salt ponds may have occurred within the salt marsh system, but based on the details provided on this and other historic maps, it is unlikely that these habitats were very extensive in this area. The salt ponds therefore do not reflect the quality of habitat that once occurred here.

Masero (*2003*) defines these types of solar salt ponds as "anthropogenic habitats," which "can provide alternative or complementary feeding habitat for waterbirds." Studies indicate that salt ponds are important feeding habitats for many species of shorebirds, but the importance of this habitat varies among species. Masero (*2003*) notes that foraging opportunities in salt ponds are not suitable for all of the species supported by natural intertidal habitats. To provide high quality foraging habitat for an array of species, the Service is proposing to restore portions of the salt ponds to the historic habitats of intertidal mudflat and coastal salt marsh, while retaining other ponds as managed water areas to support species that favor the brine invertebrates present in the current system.

10.12 This statement from the Shorebird Plan addresses western snowy plover use in San Francisco Bay (see page 30 of the Shorebird Plan); where about 10% of the U.S. Pacific coast population of the snowy plover breeds (*Hickey et al. 2003*). Unfortunately, as stated on page 3-76 of the draft CCP/EIS, despite regular nesting of snowy plovers on the levees in South San Diego Bay, the number of nests is generally low and fledgling success is poor.

Since 1999, an average of 1.8 snowy plover nests per year have been observed at the salt works, with a total of two plover nests observed in 2004 and a high of four nests observed in 2005 (*Patton pers. comm.*).

The proposals in Alternatives C and D, which would provide additional nesting habitat within the salt pond complex and enhanced access from nesting areas to appropriate foraging areas, are intended to improve habitat quality for snowy plovers. Under both alternatives, the following habitat goals from the Shorebird Plan have been addressed: 1) manage some amount of salt ponds, especially at San Francisco Bay, Monterey Bay, and San Diego Bay, specifically for nesting, feeding, and roosting shorebirds, including some to be managed specifically for nesting Snowy Plovers, as recommended in the Snowy Plover Draft Recovery Plan; 2) maintain public closures of Snowy Plover nesting areas during the breeding season; 3) continue to manage non-native and native mammalian and avian predators to limit predation of the eggs and chicks of the Snowy Plover; and 4) use fencing and exclosures to protect Snowy Plover nests from egg predators when necessary. Actions to be implemented under Alternative D to enhance nesting and foraging opportunities for western snowy plovers, as presented in Sections 2.3.2 and 2.3.5.2 of the draft CPP/EIS, include enhancing nesting substrate on the salt pond levees, recontouring the slopes of the levees to improve access to foraging areas along the edges of the levees, and controlling water levels in Pond 20 or other suitable pond during the nesting season to provide new opportunities for plover nesting.

10.13 Section 4.4.2.3.1 of the draft CCP/EIS describes the potential effects to colonial nesting seabirds of breaching the levees. With the exception of the gull-billed tern, the seabirds that nest on the levees prey primarily on fish found within the bay and adjacent ocean. They also forage to a lesser extent for fish that have become trapped within Ponds 10 and 11. None of these seabirds rely on brine invertebrates for any significant portion of their diet.

Introducing tidal flows into the ponds would actually increase foraging opportunities for these birds in proximity to their nesting habitat. Section 4.4.2.3.1 of the Final CCP/EIS has been revised to include a discussion of the potential effects of pond restoration on American avocet and black-necked stilts, which also nest within the salt ponds.

10.14 Currently, mammalian predators can and do access the nesting areas via the existing levee system, as well as via the Otay River either by swimming across the narrow channel or by walking across the channel during low tide. Avian predators are also present. Both are controlled when deemed appropriate. Restoration would however improve access for mammalian predators, particularly during low tide, and would provide additional foraging habitat for potential predators such as northern harriers. Increased accessibility to the levees by predators is acknowledged in Section 4.4.2.4.1 of the draft CCP/EIS. Actions, such as continuing to implement predator management, installing new fencing around the perimeter of the salt pond complex, design new nesting areas in a manner that reduces accessibility from mammalian predators, and implementing a monitoring and adaptive management program to record and address any increases in predator activity within the restored areas, have all been incorporated into the preferred alternative in an effort to minimize the effects of predation on ground nesting birds within the South San Diego Bay Unit.

10.15 The eastern edge of the Refuge, which is separated from the I-5 right-of-way by approximately 820 feet, is much lower in elevation than the distant freeway; therefore, the proximity of the ponds to I-5 is not expected to have any effect on breeding or migratory birds.

10.16 As described in Sections 2.3.2.3, 2.3.2.4, and 4.3.2.3.1 of the draft CCP/EIS, sediment analysis would be conducted during subsequent detailed restoration planning to ensure that the characteristics of the sediments present or to be added to the various restoration areas would support future restoration per the findings of Zedler, Nordby,

and others who have successfully restore salt marsh habitat in southern California coastal areas.

10.17 Enhancing and expanding nesting habitat within the salt works is expected to improve nesting conditions for all of the seabirds that nest along the levees. The provision of new nesting habitat elsewhere along the southern California coast has proved to be beneficial to several species of terns. In addition, managing some salt ponds for western snowy plover nesting is a priority conservation action included in the Southern Pacific Shorebird Conservation Plan (*Hickey et al. 2003*).

10.18 As discussed in Section 2.3.2.4 (page 2-93) of the draft CCP/EIS, additional modeling and analysis of the water management and brine management areas would be conducted during subsequent step-down planning. In addition, a water management plan would be prepared to establish the operating, maintenance, and monitoring activities and associated costs required to maintain the managed water systems. Prior to implementing this aspect of the restoration proposal, funding adequate to maintain the system for the life of the project would be identified. Water management to support the habitat needs of fish and wildlife has been and continues to be a common management practice on various refuges throughout the National Wildlife Refuge System.

7. The purpose of carrying out Preferred Alternative D for the South San Diego Bay Unit is unclear. Though it may be a noble cause to generate more habitat for Light-footed clapper rail, how do we know that dredging and recontouring the ponds and planting cordgrass if successful would provide more habitat that would be used by the rails? Even if it was certain that this proposal would increase Light-footed clapper rail habitat and populations, is it appropriate to change the dynamics of the Salt Works to the detriment of thousands of nesting waterbirds including the endangered and threatened California least tern and Snowy plover?

10.19

The document fails to answer these questions. In fact, the document uses shocking statements such as, "There is not sufficient data available to predict how this shift in prey availability might affect the avian diversity and abundance in San Diego Bay (page 4-91)" referring to the effect the proposal may have on invertebrate food sources. While the continuous and extensive level of excavation and construction over a series of years associated with Preferred Alternative D would displace breeding birds, **this statement in the document indicates that the overall negative effects of the preferred project are unknown** when in reality the impacts would be enormous. The purpose of the National Wildlife Refuge branch of the U.S. Fish and Wildlife Service is to protect the priceless natural resources that occur in this region. Implementation of this proposal would be a violation of that purpose.

10.20

BASIC ISSUES

1. Federal and State Endangered Species Acts

The California least tern is listed as endangered under the Federal and State Endangered Species Acts and the Snowy plover is listed as threatened under the Federal Endangered Species Act. This document and plan does not account for insuring the protection of those species. In fact, as indicated above, modification of the terrain in the location of the salt works would likely displace these birds at least temporarily and probably permanently in violation of the Acts. Further, information concerning the impacts of such habitat modification has not been adequately defined or analyzed, thus rendering the EIS inadequate. The document should be revised to provide the information noted in the comments under Section A. above.

10.21

2. Migratory Bird Treaty Act

The birds that breed on the levees in the South San Diego Bay are included on the Migratory Bird Treaty Act list of Migratory Birds. The Migratory Bird Treaty Act prohibits any taking of listed birds, nests or eggs. For birds such as Elegant terns that utilize the same nests year after year, this disturbance is of particular importance. The assertion in the Tables in Section 4, that implementation of alternatives C or D will have essentially no adverse effects

10.22

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10.19 As stated in the goals for this Refuge Unit in Sections 1.8.2.2. and 2.3.5.2 of the draft CCP/EIS, the purpose of carrying out Alternative D is to protect, manage, enhance, and restore native habitats to benefit native fish, wildlife, and plants supported within the South San Diego Bay Unit, to support the recovery and protection the listed species that occur here, and to provide high quality foraging and breeding habitat for migratory and resident avifauna. The Refuge was established to conserve listed species; therefore, the actions included within the CCP must be consistent with this purpose. It is our intent to enhance and restore habitat for listed species, while also providing habitat to maintain a diverse and abundant array of avian species within the Refuge. Final restoration plans would include monitoring and adaptive management components to ensure that all of the objectives presented in the CCP are being achieved (refer to Appendix D in the Final CCP/EIS).

10.20 This CCP/EIS is intended to present a program level analysis of the various management alternatives considered for implementation. As a result of this analysis, a number of uncertainties and knowledge gaps were identified that will require further study and consideration before final restoration plans are completed. Following approval of the CCP, work will begin to address these uncertainties and develop more comprehensive baseline data. Some of the data to be obtained includes updated species abundance, diversity, and use patterns within the salt ponds; sediment characterization and groundwater and surface water chemistry in the salt ponds and Otay River floodplain, and hydrologic modeling of tidal flow within the salt ponds following breaching. This and other information will enable the planning team to refine the restoration strategies and develop the applied studies to be incorporated into a monitoring and adaptive management program. Appendix D (CCP Implementation) has been revised to include detailed information regarding the steps to be completed in developing a final engineering and restoration plan as proposed under Alternative D.

We do not agree that the proposal to restore many of the salt ponds to tidal influence would result in significant adverse effects. An assessment of the impacts expected to result from the conversion of the salt ponds to intertidal habitat is provided in Sections 4.4.2.3.1 and 4.4.2.4.1 of the draft CCP/EIS. By implementing the strategies presented in the CCP, we believe the goals and objectives for the Refuge will be achieved and as such would be consistent with the mission of the National Wildlife Refuge System and the purposes for which the Refuge was established.

10.21 The goals, objectives, and strategies for ensuring the protection of the endangered California least tern and threatened western snowy plover are presented in Section 2.3.5.2 of the draft CCP/EIS. We do not agree that the restoration proposals for the salt ponds would result in the displacement of least terns and snowy plovers from this site. Rather, the actions included under this alternative are expected to improve nesting success for these species as a result of improved nesting habitat and better access to foraging areas. Refer also to Response 10.20 above. (The comment letter does not include a Section A; therefore, we are unable to respond to the last sentence in this portion of the letter.)

10.22 The development of these alternatives and the impact analysis related to biological resources that is included in the draft CCP/EIS were coordinated with the Migratory Birds and Ecological Services Programs of the Service to ensure consistency with the Endangered Species Act and the Migratory Bird Treaty Act, as well as other relevant regulations and policies related to fish and wildlife. Although some of the strategies to be implemented under Alternative D focus on protection and recovery of listed species, which is consistent with the purpose of the Refuge, this alternative also proposes to retain those aspects of the salt ponds that support various migratory birds and nesting seabirds.

10.22 cont.

to any waterbirds except possibly Eared grebes and Red-necked phalaropes is naïve at best and unsubstantiated by the document and existing data. To dismiss wholesale change to the environment of so many migratory bird species as of no significance and the acknowledged loss of local populations of two migratory bird species as of little consequence would seem to fly in the face of any protections afforded by the Migratory Bird Treaty Act and jeopardize not only the bird populations but the regulatory protections on which their well-being relies. The draft EIS fails to provide any analysis or discussion of compliance with the Migratory Bird Treaty Act or to identify impacts to the species. The document should be revised to address impacts to the birds protected under the Migratory Bird Treaty Act, and provisions or project changes added to mitigate any identified impacts.

3. Multiple Species Conservation Program Plan

10.23

A number of species that would be affected by the project are covered under the County's, the City of San Diego's and City of Chula Vista's Multiple Species Conservation Program plans. These species include the Elegant tern, California least tern, Snowy plover, Light-footed clapper rail, and Belding's savannah sparrow. The effects of the proposal, while arguably intended to benefit the clapper rail, would likely result in the elimination of the breeding location for the Elegant tern. This could result in an adverse affect on the Multiple Species Conservation Programs that were the culmination of nearly a decade of work between the two Cities, the County, and the State of California and Federal Wildlife Agencies. The permits obtained by the County and cities under their respective MSCP's relied on coverage of the species by looking to the preservation proposed under the plan, and preservation that was already taking place, including the project location. In fact, under the take permit the County obtained for its MSCP Special Terms and Conditions were included addressing certain species. The following conditions apply to species located in the project area that would be affected by the proposed project:

Light-footed clapper rail	No harm, harassment or lethal take authorized.
Elegant tern	No harm, harassment, or lethal take authorized. Human disturbance of active nests must be avoided. Incidental take during the breeding season associated with maintenance/removal of levees/dikes is not authorized except as specifically approved on a case-by-case basis by the Service and California Dept. of Fish and Game.

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The potential outcomes of implementing restoration within the salt ponds are presented in the draft CCP/EIS at the program-level. As additional baseline data is obtained and additional analysis is conducted in association with detailed engineering and restoration planning, the potential outcomes will become more defined. To ensure that the objectives established for the Refuge that relate to endangered species, migratory birds, and colonial nesting seabirds (all of which are presented in Section 2.3.5.2 of the draft CCP/EIS) are achieved, monitoring and adaptive management will be an integral part of this restoration proposal.

10.23 As stated in Response 10.21 above, we do not agree that the implementation of Alternative D would adversely affect listed species. In fact, the strategies proposed for achieving the Refuge goals and objectives are intended to improve conditions for these species consistent with the recommendations included in each species' approved recovery plan.

With respect to elegant terns, it is the intent of Alternative D to maintain the isolated nature of the salt works and expand and improve potential nesting sites for this and other species of ground nesting birds within this area. The proposal would also provide new fisheries habitat in proximity to these nesting areas, ensure the continued presence of open ground with substrate suitable for nesting, provide for predator management, and preserve unrestricted visual access from the levees into the surrounding area. As identified in the draft CCP/EIS in Section 4.4.2.3, there is insufficient information available to state with certainty how salt pond restoration might affect the elegant tern and other colonial nesting seabirds that breed on the salt pond levees. However, those characteristics of the salt works that we believe have attracted these birds to the salt pond levees (isolation, appropriate nesting substrate, and unrestricted visibility) would be maintained and in some cases enhanced. Further, observations of seabird nesting elsewhere in coastal California indicate that several of these species, including elegant terns and California least terns, are successfully

California least tern	No harm, harassment, or lethal take authorized. Human disturbance of active nests must be avoided. Incidental take during the breeding season associated with maintenance/removal of levees/dikes is not authorized except as specifically approved on a case-by-case basis by the Service and California Dept. of Fish and Game.
Western Snowy Plover	No harm, harassment, or lethal take authorized. Human disturbance of active nests must be avoided. Incidental take during the breeding season associated with maintenance/removal of levees/dikes is not authorized except as specifically approved on a case-by-case basis by the Service and California Dept. of Fish and Game.

10.23 cont.

The take authorizations and Biological Opinions were premised on the protection of these species and the prohibitions contained in these Special Terms and Conditions. Any proposed changes to these conditions would require a new, supplemental Biological Opinion and analysis of the effect on the County and Cities' MSCP Plans.

Furthermore, any proposal that would jeopardize the Endangered Species Act permits, the Implementing Agreements, and the Biological Opinions would frustrate the local agencies' ability to carry out their plans and should be required to be coordinated with the Cities of San Diego and Chula Vista and the County.

4. Department of Interior Policy

10.24

From August 29 through 31 of this year, a White House conference on Cooperative Conservation was held in Saint Louis. Secretary of Interior Gale Norton took a prominent role in the orchestration of the conference. During the conference, examples of cooperative conservation were discussed and a series of workshops were held discussing approaches to increase cooperative conservation at all levels. The conference discussion included what are referred to as Secretary Norton's four C's "Conversation, Consultation, Cooperation in service of Conservation." The process utilized to generate this proposal -- and in particular the preferred project -- did not conform to the policies and direction given by Secretary Norton.

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nesting in areas that are not surrounded by open water. The intent of Alternative D is to ensure the continued nesting of seabirds and shorebirds at the salt works prior to, during, and after restoration. The effects of restoration on these and other avian species will continue to be considered during the development and implementation of a phased restoration plan.

Under the Multiple Species Conservation Plan, the County of San Diego currently has no take authorization for California least tern, western snowy plover, or elegant tern. This is because the habitats that support these species are not located within the County's Subarea Plan boundary. Therefore, any effects to these species are outside the County's control and would have no effect on the County's Implementing Agreement or Biological Opinion. Further, it is not the intent of this CCP to cause any take of these species, as described above.

Prior to the implementation of any restoration, the project will undergo internal Section 7 review to ensure that the project will not jeopardize the recovery of any listed species.

10.24 The public involvement component of the CCP process for the San Diego Bay NWR included numerous public meetings, opportunities to provide comments through public workshops and on-line at the CCP webpage, and an extended public comment period for the draft document. A summary of the public outreach program is provided in Section 5.2.1 of the draft CCP/EIS. It should also be noted that the public involvement component of the CCP process will continue beyond the completion of the Final CCP/EIS to include step-down planning for the development of detailed restoration plans, as well as for the various public use proposals included within the CCP.

5. Fatal Flaws in the Proposed Document

10.25 The fact that the document fails to disclose the full impact of the preferred project and its alternatives is a fatal procedural flaw. More data is needed to fully describe the existing conditions in the Salt Works. The discussion of the No Project Alternative is also insufficient. Without a complete assessment of the existing conditions and a complete analysis of the ultimate impacts of the Preferred Alternative D, the document is legally inadequate and the project cannot proceed. Furthermore, there is inadequate discussion of mitigation due to the fact that the impacts are not adequately analyzed. In fact, with a resource this valuable, it is questionable that adequate mitigation could be attained. A project cannot move forward until potentially significant impacts are adequately addressed, analyzed, and mitigated. The County is quite certain that the U.S. Fish and Wildlife Service would not have accept a document with this many flaws if it was prepared by another agency or jurisdiction.

SPECIFIC ISSUES

10.26 1. The report fails to provide the best available science regarding the existing conditions in the area. The species discussed in the report and in this letter are only a subset of those that utilize the area. A large amount of breeding and other bird data exists for the South San Diego Bay that is not reflected in the document.

10.27 2. The amount of excavation and earth movement that would be required to implement the plan can only be considered a very rough estimate. Before the project can procedurally move foreword, it is necessary to generate a more complete set of data regarding these aspects of the proposal.

10.28 3. The last line of page 2-85 states that the preferred alternative maximizes opportunities for habitat restoration, reflects the need to restore sensitive coastal habitats within San Diego Bay while maintaining the aspects of the existing salt pond system that support nesting seabirds and migratory birds. This cannot be substantiated according to statements within the document regarding the effect of the change in prey for the species.

10.29 4. While one of the goals of the recovery plan for the Light-footed clapper rail may have been to restore areas of cordgrass in San Diego Bay, it is not correct to assume that it should be done at the expense of major breeding colonies for other birds, including endangered and threatened species.

10.30 5. With the existing salt works operation, the hydrologic system is self-contained and self-managing. The preferred project would create a

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10.25 The issues raised regarding the adequacy of the analysis in the draft CCP/EIS are addressed in Responses 10.13 - 10.22 above.

10.26 The Service has used the best information available (e.g., agency studies, scientific literature, consultant reports, monitoring data) to conduct this program-level impact analysis of the various management alternatives. To ensure that this information is clearly presented, some revisions to Sections 3.4.4.1, 3.4.6, and 4.4, including the incorporation of additional maps and tables, have been made in the Final CCP/EIS. A number of uncertainties and data gaps were identified in the draft CCP/EIS that will be addressed as the restoration planning process moves forward. Appendix D (CCP Implementation) has been revised to describe in greater detail the steps that will be completed prior to beginning any restoration within the Refuge.

10.27 We agree and have clearly stated this throughout Sections 2.3.2.3 and 2.3.2.4 of the draft CCP/EIS. Grading estimates were calculated based on preliminary restoration plans for the purpose of evaluating potential impacts at the program level for air quality, noise, traffic, and other issues typically analyzed in an EIS.

10.28 Alternative D includes a brine invertebrate component that is intended to meet the foraging needs of those birds that have historically stopped at the salt ponds during migration. As stated in Response 10.26, the draft CCP/EIS has identified data gaps and uncertainties, which include the response of phalaropes and eared grebes to changes in the current salt pond system. This issue will continue to be considered during the step-down planning.

10.29 The CCP does not make the assumption that habitat for the light-footed clapper rail will be provided at the expense of other species. Please refer to the goals and objectives of the CCP that are presented in Section 2.3.5.2 of the draft CCP/EIS.

10.30 Refer to Response 10.18 above.

system that needs continually funded maintenance in order to achieve a salt balance.

10.31 6. The preferred alternative proposes increased public access. The level and details of the public access is not well described in the document. Neighboring agencies were not consulted with prior to the release of this document for input relating to increased public access.

10.32 7. Increases in cordgrass in this location may increase mosquito breeding levels for several species identified in the report.

CONCLUSION

10.33 In conclusion, the County supports the No Project Alternative that would allow the lands in the area to be managed in the manner that they have for the last 100 years in order to support the continued existence of the high value breeding bird habitat. We also request that the Preferred Alternative D proposal for the South San Diego Bay be withdrawn. The only area where we would consider any improvements would be potential restoration of portions of the Otay River floodplain. Thank you again for the opportunity to comment on this document.

If you have any questions regarding this letter, please contact Thomas Oberbauer, Chief of the Multiple Species Conservation Program at (858) 694-3701 or thomas.oberbauer@sdcounty.ca.gov.

Sincerely,

ROBERT R. COPPER
Deputy Chief Administrative Officer

RRC:ew

cc: Gale Norton, Secretary of the Interior, U.S. Department of the Interior, 1849 C Street, NW, Washington, DC 20240
Lynn Scarlet, U.S. Department of the Interior, 1849 C Street, NW, Washington, DC 20240
Supervisor Greg Cox, District 1, M.S. A500
Matthew Hogan, Acting Director, USFWS, U.S. Fish and Wildlife Service, 1849 C Street, NW, Washington, DC 20242
Dave Allen, Regional Director, USFWS – Pacific Region, 911 NE 11th Avenue, Portland, OR 97232
Steve Thompson, Operations Manager, USFWS – California/Nevada Operations Office, 2800 Cottage Way, Sacamento CA 95825

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10.31 The public uses proposed under the preferred alternative are described in detail on pages 2-99 through 2-103 of the draft CCP/EIS and in Appendix K (Compatibility Determinations).

With respect to neighboring agency coordination, the Refuge is involved in ongoing discussions with both County and City of San Diego park staff to determine the most appropriate alignment for the Otay Valley Regional Trail. We are also working closely with the City of Imperial Beach on proposals that would compliment their ecotourism planning. Public uses on the Sweetwater Marsh Unit have been discussed with the Chula Vista Nature Center and the City of National City and issues related to public use have also been discussed before the Coronado City Council.

10.32 Mosquito production in fresh and salt water habitats is addressed in Section 4.7.5.2 of the draft CCP/EIS. Although potential habitat for salt water mosquitoes could be created in portions of the South San Diego Bay Unit, low and mid-marsh habitat, such as cordgrass-dominated salt marsh, is inundated daily by the tides and therefore provides little habitat suitable for salt marsh mosquito production (*Maffei in Goals Project 2000*).

10.33 Although the implementation of the No Action Alternative would maintain the existing diversity and abundance of avian species currently found within the salt ponds, there would be little improvement in habitat quality for the listed species supported on the Refuge. Alternative B would provide new benefits for terns and plovers in the form of expanded nesting opportunities, however, the benefits for light-footed clapper rails and fisheries would not be realized. The Service continues to support the vision of a restored south bay, including restoration of both the salt ponds and the Otay River floodplain.

Appendix D of the Final CCP/EIS has been revised to more clearly describe how restoration that would be implemented under the

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Renée Bahl, Director, Department of Parks and Recreation, M.S. O650
Thomas Oberbauer, Chief, Department of Planning and Land Use, M.S. O650

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Preferred Alternative. Step-down planning would involve the collection of additional baseline data and the completion of additional studies related to hydrology, sediment characterization, contaminants, and other topics, followed by the preparation of final engineering and restoration plans that would incorporate pre- and post-restoration monitoring and adaptive management into the restoration design.

Environmental Health Coalition

COALICION de SALUD AMBIENTAL

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September 19, 2005

Ms. Victoria Touchstone
Refuge Planner
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Road
Carlsbad, CA 92011

RE: Environmental Health Coalition (EHC) comments on the Draft Comprehensive Conservation Plan and Environmental Impact Statement.

Dear Ms. Touchstone:

Environmental Health Coalition (EHC) is a 25-year old, grassroots environmental justice organization working to protect human health and the environment in the San Diego /Tijuana region. EHC has worked since 1990 for the establishment of the South San Diego Bay NWR and has consistently worked to protect the sensitive habitats and wildlife resources in the South Bay. EHC has a tremendous interest, and investment, in the successful implementation of a Comprehensive Conservation Plan for the management of these precious resources.

11.1 This is a very important document. We have to have a plan. No action is not an option. For one thing, we have to take some action because we have two species of birds on the brink of extinction and needing immediate attention, the Snowy Plover and light-footed Clapper Rail. They are highly at-risk and declining. Also changes are occurring on neighboring property and upstream in the Otay and Sweetwater Rivers and at other sites that support species that also use the refuge. For another reason, as has been noted before, "the only constant is change". Things will change, and we need a plan to address the changes that will occur. However, that said, management of these resources must be done in a thoughtful, planful, fail-safe manner. As we have considered the best course of action, we are mindful of some of the following issues that face us here that have had bearing on our recommendations to the Service.

11.2 1. Some of the refuge lands have exceedingly high values in their current condition (e.g. Sweetwater Salt marshes, central Salt ponds, nesting dikes). Other areas of the refuge have virtually no wildlife values (e.g. high salinity and harvesting ponds, Otay parcels). Others are severely degraded and are in urgent need of restoration (e.g. restoration targets in the Sweetwater, Otay river mouth).

11.3 2. Some restoration actions are clear and well understood and could be pursued with a minimum of risk or controversy as soon as funding is available. (e.g. predator control, control of human intrusion, Otay River mouth, the connection between the FG Street marsh and the Bay, Sweetwater marsh, enhancement of nest surfaces, enhanced nesting islands).

11.1 The need to maintain and where appropriate expand those habitats within the Refuge that support species with declining populations is addressed in several of the goals and objectives presented in the draft CCP/EIS (refer to Sections 2.2.5.2 and 2.3.5.2 of the draft CCP/EIS). Although adaptive management is addressed in Appendix D of the draft CCP/EIS, this discussion has been expanded in the Final CCP/EIS.

11.2 Information about the current habitat conditions on the Refuge is summarized in Section 3.4.1.3 of the Final CCP/EIS.

11.3 Comment noted.

3. The salt harvesting operation has been in the Bay for over 100 years and has significant benefits to bird species in it current form. However, there are no guarantees that it will continue to be profitable or a desirable business forever. There are many reasons that the salt works could cease to operate that are outside of the control of the Service. If our planning horizon is 10 -100 years (an appropriate planning horizon in our view), we must be able to accommodate this inevitability without severe loss of wildlife support value. 11.4

4. While all parties are clearly and passionately committed to the wildlife in the South Bay, there is a division in the conservation community about the best way to proceed, or if to proceed at all. Many believe that we are in a situation of a wildlife version of 'Sophie's Choice" pitting one beloved resource against another. Others believe that net improvements can be made if they are made very carefully and deliberately. However there is general opposition for a mechanistic plan to quickly revamp the refuge, especially at the saltworks. 11.5

5. Over the past many years we have had frequent changes in our refuge managers. While they have all been excellent, because of our "urban" nature, refuge managers seldom stay in their position here long (generally 3-5 years) before moving on. This does not allow enough time for managers to understand the systems (ecological and political) fully. We have to ensure that the CCP is explicit enough in terms of what needs to happen, in what order, and with what decision criteria so that our resources will not be subject to "management by whim". 11.6

6. San Francisco NWR is also in the process of restoring salt ponds. They have a well-funded effort and there will be important lessons to learn as they move through their restoration. We are fortunate that Mendel Stewart, our former manager, is the current manager at SFNWR and will be a good resource for us as he has a good understanding of both efforts. 11.7

7. San Francisco is outlining an "adaptive management" process that we may be able to use for our own referred alternative and course of action.

8. Significant development is proposed adjacent to the refuge lands. The Chula Vista Bayfront Master Plan, while greatly improved over past proposals, will significantly increase densities. The Charles Company is also proposing fill and development of a large property adjacent to the refuge. Others have aspirations to fill and develop old Pond 20 on Palm Avenue.

9. The current federal administration is hostile to the environment in the extreme and we cannot guess how long this will continue. We also must anticipate that the current bent of the federal government and the Navy to secure waivers of environmental laws will impact current and future efforts to protect the terns and plovers on naval lands. Certainly, the triple border fence will degrade current habitat values in the Tijuana estuary which may impact all kinds of species overall. We will need to try to coordinate and organize a local, bipartisan unified agreement on the future of the refuge if we are to be at all successful in our mission to protect wildlife. 11.8

10. Many of our local refuges are "urban islands". They will only thrive over time if linkages between habitat areas are created where they don't exist and enhanced where they do. As we look to the next 50 and 100 years, land purchase and restoration will be important priorities for future funding.

11.4 The potential for premature closure of the commercial solar salt operation is addressed in Sections 2.3.2.1 and 2.3.1.4 (Construction Phasing) of the draft CCP/EIS.

11.5 The goals and objectives addressed in the draft CCP/EIS for the Sweetwater Marsh and South San Diego Bay Units describe a multiple species approach to refuge management, with strategies proposed to benefit bird, fish, and other wildlife species and their habitats (refer to Sections 2.2.5.2 and 2.3.5.2 of the draft CCP/EIS). Because this Refuge was established to protect listed species, an emphasis is placed on actions that support the recovery of those listed species that occur within the Refuge. The draft CCP/EIS evaluated a range of restoration scenarios for the salt ponds, including a phased approach to restoration.

11.6 Comment noted. Appendix D (CCP Implementation) has been revised to include a more detailed discussion of how implementation of the preferred alternative should proceed.

11.7 Coordination between the San Diego NWR Complex and the San Francisco Bay NWR is occurring to ensure that information regarding salt pond restoration is exchanged in a timely manner. Research and modeling efforts underway for the South Bay Salt Ponds in San Francisco Bay will provide useful information for restoration proposals in San Diego Bay. Where applicable, the recommendations developed for the South Bay Salt Ponds would be incorporated into detailed planning efforts for the San Diego Bay NWR. However, just as there are similarities between the two projects, there are also significant differences in the characteristics of the two restoration areas, and both these similarities and differences must be considered when evaluating specific approaches to restoration for either area.

11.8 Comments noted.

In light of these varied challenges and opportunities, EHC offers the following comments and recommendations on the CCP.

PREFERRED ALTERNATIVES AND PRIORITY ACTIONS

11.9 There are many well analyzed and important actions contained in the CCP that should be prioritized for action and efforts for funding fast-tracked. These early actions will bring considerable improvement at low risk to existing resources.

Sweetwater Marsh

11.10 The preferred alternative outlined in the CCP should be fast-tracked for implementation with a priority on those actions that encourage and enhance nesting and habitat for Snowy Plovers and Clapper Rails such as those actions outlined under Objective 2.1 on page 2-39.

Otay River Floodplain Restoration

11.11 EHC prefers Option 2 for restoration of the Otay River floodplain because it provides maximum benefits to rails and creates the largest quantity of mudflats. However, either option chosen should be fast-tracked for any needed additional analysis and implementation. The CCP already commits to additional testing of soils to be excavated (2-103) and prior to reuse of any of the material in a marine environment or other use that could expose people or wildlife to contamination. It will also be important to test for suitability of organic matter, grain size etc… if this material will be used for habitat restoration elsewhere. If the material is to be trucked off site, it should be noted that additional environmental analysis may need to be done on the emissions of trucks and mitigations implemented to reduce diesel air emissions if number of trucks is significant. While we are confident that such analyses will be done prior to actions, it will be important for the CCP to outline and commit to these actions so the public is confident that all needed analysis will be done in advance of taking action.

Expansion of Managed Areas

11.12 We request that the EIR and CCP be expanded to include management actions and plans for the Sweetwater Tidal Flats and the J Street Marsh and tidal flat areas. The Sweetwater area has already required to be managed for the protection of wildlife as part of a 2000 Coastal Commission action and the CCP should include this area in its plans. J Street is included in the South Bay Unit acquisition boundary and now would be a good time to bring this area under protection and management for wildlife.

11.13 We also recommend that the restoration of the eelgrass habitat in the Emory Cove be reinstated as an action to the pursued by the Service. (2-105) Once the power plant operations are ended, we will want to maximize the amount of area where eelgrass can recover so that endangered sea turtles will have safe feeding grounds to frequent when in the Bay.

11.9 The various actions or projects proposed within the preferred alternative for each Refuge Unit are prioritized in Table D-1 of Appendix D (CCP Implementation). This table has been revised in the Final CCP/EIS to prioritize all of actions or projects proposed for each Refuge Unit within one overall priority list for the Refuge.

11.10 Enhancements that support the recovery of listed species are identified as high priorities for implementation in Table D-1 of Appendix D (CCP Implementation) in the Final CCP/EIS.

11.11 The preparation and implementation of restoration plans for the Otay River floodplain are dependent upon the availability of funding. No funding has been identified to date that would allow for the initiation of such efforts.

As described in the project description (see page 2-74 of the draft CCP/EIS), substrate analysis of the pond sediments and the material excavated from the Otay River floodplain would be completed prior to detailed restoration planning to characterize the extent and type of contamination, if any, and to determine its suitability for salt marsh restoration. Factors to be considered for suitability include, but are not limited to, grain size, salinity levels, and availability of nutrients. Incorporating these actions into the project description represents a commitment to implement them should this alternative be selected as the proposed action.

Sections 4.2.2.3.4 and 4.2.2.4.4 and Appendix H of the draft CCP/EIS address the potential effects to air quality of implementing the restoration proposals for the South San Diego Bay Unit. As stated on page 4-36, the projected duration of the project, soil import and export estimates, estimated truck trips needed to haul material, and the types and numbers of construction equipment to be used to implement the various phases of restoration were considered in generating the exhaust and fugitive dust (PM 10) emission that could result from project implementation. If it is determined that the

grading quantities associated with implementing the final restoration plan are significantly greater than the estimates used to conduct the current analysis, additional air quality analysis would be conducted in association with step-down restoration planning.

11.12 At this time, the Service is not considering any proposals to expand the approved acquisition boundary for the San Diego Bay NWR. A discussion of the existing opportunity for the Service to enter into a cooperative agreement with the Port is provided in Section 2.2.3.1 of the draft CCP/EIS. Unlike the tidal flats adjacent to the Sweetwater Marsh Unit, the J Street Marsh is located within the approved acquisition boundary for the Refuge. However, this area can only be incorporated into the Refuge if the current land manager (the Unified Port of San Diego) is willing to turn over its interest in the property to the Service. As stated on page 2-45 of the draft CCP/EIS (Features Common to All Alternatives for the South San Diego Bay Unit), the Service is proposing to work with the Port, the City of Chula Vista, and the State Lands Commission to secure management authority for the remaining state tidelands that are located within the Refuge's approved acquisition boundary.

11.13 The Service agrees that restoration of eelgrass habitat within San Diego Bay is an important component in the overall restoration of the bay ecosystem. Eelgrass restoration within Emory Cove was not included as a proposed action in the current CCP due to funding constraints and the need for additional coordination with other partners in the bay. The Service's CCP Policy (Policy) does however include a process for plan review that allows for modifications to an approved CCP, including the incorporation of new projects, if the proposed project is deemed appropriate for inclusion in the plan. According to the Policy, review of the CCP should occur at least annually to decide if the plan requires any revisions. Modification of the plan and associated management activities can occur whenever this review or other monitoring and evaluation determine that we need changes to achieve planning unit purpose(s), vision, and goals.

Reduce Human Intrusion to Sensitive Areas

11.14 We strongly support intense enforcement of the 5 mph rule. We recommend that the Service consider a ban on high-speed motorized boats if problem cannot be managed or restrict to small engines for small fishing boats.

Raising funds for enforcement and management staff should be pursued as early priority actions to limit the impacts of intrusion and disturbance of existing populations.

Salt Ponds

11.15 EHC suggests a more phased and hybridized "preferred alternative" for the Salt Ponds restoration and management. The current alternative needs revision and expansion to include more possible directions and more specification about how the phased, adaptive approach will be followed. We very much support an overall vision that will retain current values while enhancing other values. It is clear to us that achieving that vision will take time and considerable additional analysis to ensure that actions taken will bring the desired results. This is especially crucial where the current salt pond operations are proposed for major changes. The ponds, right now, provide a lot of value and we need to commit to a high level of care and discipline before we make any changes.

We would also request that the CCP clearly state that as projects move forward the Service reserves the right to change or modify plans to the degree necessary based on results of a prior action. We are all in agreement that this must be a carefully planned, phased approach based on the success of each successive action. Any action taken must be reversible in the event that it doesn't achieve the desired results.

For the "preferred" course of action, EHC recommends that a multi-aspect alternative that clearly outlines, the steps, phases, and conditions under which any significant changes to the salt works will occur. We agree that the plans we pursue should seek to preserve existing uses while enhancing other values. We are confident that this can be done, and the South Bay can become even more productive than it is today.

We strongly support a careful, disciplined, scientific-based, phased, success-based approach to this. The resources at the Salt Works are unique and any alteration should be done with appropriate caution beginning on a small experimental scale with continual re-evaluation of the methods and consequences.

The following are our suggestions for the major phases and sequencing.

A. ADDITIONAL ANALYSIS AND DATA COLLECTION FOR CCP

1. Update Bird Use data

While the aforementioned priority actions are being pursued for restoration, staffing, acquisition, and funding, the Service should use the time to commit to collecting existing,

11.14 Page 2-103 of the draft CCP/EIS states that recreational boating would continue to be permitted within the Refuge, provided boaters adhere to the existing five mile per hour speed limit. The text goes on to say that this issue could be revisited should problems arise in the future related to wildlife disturbance from the various boating activities on the Refuge. The San Diego NWR Complex currently employees a law enforcement officer who is responsible for enforcement of applicable rules and regulations within the Refuge. In addition, we have initiated discussions with the Harbor Patrol to discuss the need for increased enforcement of boating regulations in the south bay. Acquisition of a Refuge patrol boat is included on the priority list of Refuge Operating Needs (refer to Table D-1, Appendix D of the Final CCP/EIS).

11.15 The CCP/EIS, which is only the first step in the process of developing a restoration plan for the salt pond complex, sets forth the long-term vision for the Refuge and makes recommendations for various actions to be taken to achieve that vision. The concerns raised here regarding phasing, adaptive management, and restoration design will be explored in greater detail during subsequent project-level restoration planning. Appendix D (CCP Implementation) of the Final CCP/EIS has been revised to more clearly describe the next steps in the planning process. These steps include the collection of baseline data and the completion of the additional studies related to hydrology, sediment characterization, contaminants, and other topics that are addressed in the draft CCP/EIS. Once this information has been obtained, a detailed restoration plan for the salt ponds will be prepared. Appendix D has been revised in the Final CCP/EIS to include an expanded discussion of restoration phasing under Scenario 2.

11.16 updated information about the current use of the Salt Ponds which, apparently, has significantly changed since the establishment of the refuge in 1999. EHC supports inclusion of this new data in the CCP document as it helps to identify trends, positive and negative, in the current land uses. It will be important to track existing values to bird communities and assure the preservation of those values while we develop plans to restore depleted wetland habitats. We have attached one summary of nesting trends to this letter.

2. Alternative to brine discharge to the Bay

11.17 EHC is concerned about the proposal to create a discharge of waste into San Diego Bay of brine as currently contemplated in Alternative D. We strongly supported the move by the Western Salt years ago when it ceased its brine discharge to the Bay and we would hate to see that discharge come back. We request that the Service commit to doing additional analysis of this issue in the CCP to look, at a minimum, at any other potential for closed-cycle methods of managing water and to evaluate the development of a series of dilution ponds so that that brine would be re-diluted to the a salinity that is reasonably consistent with normal Bay salinity levels prior to reaching the Bay again.

B. TAKE EARLY, PRIORITY ACTIONS

1. Implement obvious, easy actions

11.18 There are many recommendations that are included in the various alternatives for the salt ponds that are non-controversial and involve little to no "risk". Actions such as improvement of substrate enhancement, aggressive predator control, nesting islands, and enhancement of internal levees for ground-nesting birds, widening the levees, creation of spits and beaches, and eradication of non-native invasive vegetation.

2. Mudflats and Plovers should receive priority enhancement actions

11.19 Mudflat habitats are severely reduced in the Bay and one of the most biologically productive habitats for many species of shorebirds. Recent data shows that the Snowy Plover nesting at the Salt works is not thriving. We are very concerned about the future of the plover nests on navy lands and the impacts of the border fence on the current nests in the Tijuana Estuary in the future. Immediate actions to help the Snowy Plover nesting success (such as the first 3 actions outlined under Objective 2.4, page 2-117) should be fast-tracked for early funding along with the other priority actions described above.

C. COMMIT TO CONDUCTING NEEDED ADDITIONAL STUDIES AND ANALYSIS

11.20 CCP should more clearly indicate how the Service intends to move forward with plans for specific projects where needed. Additional soils and suitability chemical analysis on soils and sediments planned for pond restoration, trucking and air quality impacts on neighbors should be addressed if the quantity of material to be moved by truck is large, and other such issues should be noted as needed further analysis as the projects move forward.

11.16 Information about the current use of the salt pond levees by colonial nesting seabirds is collected annually through a monitoring program funded by the Service. Preliminary monitoring results are provided to the Service weekly during the nesting season followed by an annual summary report. We are not aware of the existence of any other current information regarding bird use at the salt works. The data obtained during this annually monitoring assists the Service in identifying any short or long term changes in nesting attempts and/or fledgling success, provides information about how these seabirds respond to substrate enhancement activity on the levees, and provides clues regarding the presence of contaminants or other factors that could be adversely affecting eggs, chicks, and/or adult birds. Pages 3-61 through 3-63 of the draft CCP/EIS address the variety of colonial seabird species that nest on the salt pond levees. To make this information more accessible to the reader, a new table (Table 3-13) has been added to the Final CCP/EIS, and the nest numbers for 2005, which were not available until after the draft CCP/EIS was completed, have been added to this Table.

Based on the data, we do not agree that current use of the salt ponds has changed significantly since 1999. It would be more appropriate to state that the number of nests per species within the salt works varies, sometimes significantly, from year to year. The reasons for such fluctuations are not easy to identify and may relate to factors outside the influence of Refuge management (climate change, changes in prey availability, etc.).

11.17 As stated on page 2-91 of the draft CCP/EIS, discharge from the managed water areas proposed under Alternative D would have salinity levels no greater than 39 ppt or approximately 5 ppt above the ambient salinity levels in the bay. This level of discharge is expected to have no deleterious effect on water quality within the south bay; however, additional water quality analysis would be

conducted in association with the completion of detailed restoration plans and our request for a discharge permit from the Regional Water Quality Control Board. Additional analysis of how best to implement a managed water system within those ponds that are too high to benefit from tidal action would also be conducted during subsequent step-down restoration planning. This effort would examine options that minimize costs and staffing requirements, while also providing the appropriate conditions to manage water levels in some ponds and support the production of brine invertebrates in other ponds.

11.18 All of these recommendations are included as proposed actions in the preferred alternative and will be implemented as funding permits. Specific phasing for implementing these actions will be dependent upon a variety of factors that we may or may not have control over. Appendix D of the Final CCP/EIS has been revised to describe in greater detail a phased approach to restoration of the salt ponds.

11.19 Refer to Responses 11.10 and 11.18 above.

11.20 Refer to Responses 11.11 and 11.15 above.

1. Evaluate Lessons Learned from San Francisco

11.21 We understand that the restoration of salt ponds in San Francisco is farther along. We request that the Service personnel visit with the scientists involved with that effort, get their comments on our plans, and revise or create additional options and opportunities where new information about their efforts supports such actions as we progress. We recommend that an evaluation of the San Francisco NWR restoration progress be made available and the potential local implications be studied prior to making major changes to the salt ponds.

2. Continued, Long-term resource monitoring

We support the recommendation in the April 12, 2001 letter from Robert Patton to the USFWS to ensure that continued and long-term monitoring of resources in the refuge is an important part of successful restoration and adaptive management efforts. This monitoring needs to be sensitive enough to detect fluctuations in the support value of the ponds to natural and human caused changes external to the Refuge as well as to modifications and management actions within the Refuge.

11.22 Bird populations and nesting success can vary substantially from year to year due to variations in many parameters, we urge that monitoring include a range of relevant conditions such as availability of fish and brine flies, climate variations, predator problems, climate, etc. We urge that some modeling of the interaction of a relevant range parameters with the populations and nesting success so that annual population and nesting success can be better interpreted in light of these annual fluctuations. It is important that we not deem a management action a great success as a result of a population increase if that increase was due mainly to a change other than that management action. Similarly it is important that we not try to undue a change or management action if a reduction in population or breeding success was due mainly to an external circumstance such as an external oceanographic fluctuation causing a reduction in fish population or a new source of disturbance or lighting from outside the refuge.

3. Clearly articulate the process of "adaptive management and evaluation" that will be followed in preparation for major changes to refuge lands and management actions.

11.23 Part of the concern that we have heard about the Draft CCP is that where the phasing is outlined, it only includes the construction aspects and is less clear on the monitoring, analysis, and evaluation components of each significant management action. Again, we may have something to learn from the progress in San Francisco. The adaptive management and evaluation process we intend to follow should be clearly specified. The Adaptive Management discipline must be oriented toward providing as fail-safe an enhancement process as possible. It should include clear success criteria allowing a move to the next step, clear criteria for identifying the need to move to a retreat or alternative step, and very clear criteria for indicating that enough information is not available to decide the next step, for each action taken

It is very important that the Adaptive Management discipline be well defined. However, the Adaptive Management system must itself be constantly monitored and adapted based on what is learned as it is applied. And the process must be bold enough to look at step by step

11.21 Comment noted. Please refer to Response 11.7 regarding coordination with efforts underway at the San Francisco Bay NWR Complex. Details regarding restoration progress in San Francisco Bay are available at www.southbayrestoration.org.

11.22 We concur with the need for monitoring of endangered species, as well as other migratory birds, prior to, during, and following restoration efforts in the south bay. Such monitoring is identified as a strategy for achieving Objectives 2.1, 2.3, 2.4, 3.1, and 3.3 in the draft CCP/EIS. The Refuge Complex also proposes to expand the current avian monitoring program conducted at the salt works to include a year-long avifauna survey of the ponds, levees, and adjacent mudflats.

11.23 As a program-level document, this CCP provides the long term vision and goals for the Refuge. The objectives and strategies presented in the CCP describe the options for how the vision and goals can be achieved. The strategies, which include restoration actions under the preferred alternative, are intended to be further defined during subsequent project level planning. This process is described in revised Appendix D of the Final CCP/EIS. It is during the step-down planning phase of CCP implementation that the full details of restoration design, monitoring, and adaptive management will be developed. Just as is the case with the CCP process, this subsequent step-down planning would be a public process involving opportunities for public review and comment.

We concur with your comments regarding adaptive management and intend to incorporate an adaptive management approach into our final restoration design. Jacobson (*2003*) defines adaptive management as "a cyclic, learning-oriented approach to the

observation, analysis, decisions, and actions and simultaneously system level decisions and actions. This is a very complicated system. Hopefully we will learn a lot as we move through the restoration whether the early intentions were appropriate or not. The process must be thoughtful and flexible enough to recognize and use such information as it becomes available.

4. Brine shrimp/flies life history

We don't know if SFNWR will be addressing retention of the brine shrimp and brine flies, but if so, this would be important information for us to have to ensure that any course of action we pursue preserves this use. The CCP should also state that a local study on the requirements for retention of brine shrimp/flies will also be undertaken as this is a key factor that supports the large amount of shorebird use. We are especially concerned about preservation of the brine shrimp/fly production as this is one of the habitats created by the artificial conditions of the Salt Works but highly desirable and valuable to birds in the South Bay. This is a key value that must not be lost as a result of these plans and extreme care must be taken around this value. We would also ask that the CCP contemplate public subsidy of a smaller salt works in the event that the best plan for habitat leads in that direction but the size of the plant is too small to compete economically.

11.24

The current salt works is optimized for the reliable production of salt, with significant accommodations for the protection of the birds that use the berms. But, since the brine shrimp/flies are very important to the current wildlife uses, a substantial effort should be made to understand and to seek to develop ways to adjust the salt pond operation to enhance the secure and stable production of the brine fauna. Such research might be of value for the San Francisco and other NWRs as well. These adjustments might or might not effect the salt production.

D. MAJOR CHANGES TO SALT PONDS

This is the area were the most caution is warranted. What we have learned over the years of working on the refuge is that managing the ponds requires, probably equal parts, science, art, experience, and skill to successfully operate. We believe that the CCP should contemplate a slower rate of change and look at modifying only one pond at a time in order to be able to evaluate impacts and new benefits.

11.25

EHC views the CCP as an overarching, vision document. A description of where we think we are ultimately headed over time, but the document must include enough information and flexibility to allow us to redirect the process from any one course if the results of our actions direct us differently. We request that as part of the potential actions (again based on the lessons learned in earlier actions) the CCP contemplate two potential directions in the "preferred" alternative. A final "Preferred" Alternative must allow a "mix and match" depending on the outcomes of early management actions. We believe that such as intent to revise and modify actions based on results as needed be more clearly stated in the CCP.

Our suggestions follow.

management of complex environmental systems that are characteristic of high levels of uncertainty about system processes and the potential ecological, social, and economic impacts of different management options." To successfully implement adaptive management, it is essential to have clear restoration goals and targets, sound conceptualization of the system, an effective process for learning from restoration and management actions (i.e., monitoring and evaluation of the monitoring results), and an explicit process for refining and improving current and future management actions. It is this approach we propose to implement on the Refuge.

11.24 Much information regarding the life history requirements of brine shrimp and brine flies, such as reproduction, food requirements, habitat preferences, and potential limiting factors, is already available in the scientific literature. Using this information as a starting point, additional data would be gathered to ensure that the brine management ponds would meet the CCP objective of maintaining a stable source of brine invertebrates for migratory birds (Objective 3.2 for the South San Diego Bay Unit). The need for additional studies and monitoring is addressed in revised Appendix D. Different approaches to implementing the managed water system are addressed in Response 11.17.

11.25 The specific issues related to phasing such as temporality, maintaining various sizes of a possible smaller footprint salt works, construction mobilization, and funding are quite complex and not addressed to the project level within the CCP. The suggestion that one pond at a time should be evaluated for restoration and adaptive management does not appear to be feasible for those ponds located to the east of the Otay River due to the current configuration of the of the pond system. However, a phased approach to the restoration of the salt ponds (while still maintaining a functioning salt works) is feasible by grouping certain ponds into phased modules.

1. Contemplate and allow for two water management directions as the preferred alternative

Part of the recommendation of a phased, iterative approach necessarily directs us to ensure that this CCP will allow several types of actions, based on the results of earlier actions. We do not want to be locked into any course of action that may not be the best direction as we move down this path. We also cannot assume that funding will be available for another significant re-assessment of the entire CCP in 15 years. **It is our firm belief, that while this plan is technically for 15 years, it may well serve us far beyond that timeline**. It is very likely that most of the alternatives presented will take more than 15 years to implement if they are done in a thoughtful and fail-safe process. However, the 15 year point may be an excellent evaluation point to evaluate progress and results to make the final decisions about the restoration process.

11.26

A1. Salt operations phase out over time

One issue that must be allowed for in the CCP is to establish a planned course of action in the event that the phased approach determines that salt harvesting operations are not needed or optimum for to preserving existing uses and enhancement of others. This must also be included in the event that, for whatever reason, the salt harvesting stops. We believe that it would be very irresponsible not to have a plan in the event that this occurs. We remember the panic that we all felt when, after the land transfer, Western Salt announced that it would shut down operations in a matter of months. At that point, we were told the ponds would go toxic in six months. We are very grateful to the Port, Service, and **especially** the current operators of South Bay Salt for stepping in and avoiding a catastrophe. However, we should have a plan in place that will allow the refuge to a phase out of a commercial salt operations in time without negative wildlife consequences, and preferably with positive wildlife consequences.

11.27

This approach should maintain the broad range of habitat values that the working saltworks provides, seek to provide additional healthy mudflat and marsh habitat and fish nurseries, and not degrade the marine habitats of the South Bay.

A2. Plan in the event of an unplanned, unanticipated shut down of salt operations

As a fail-safe, some version of the Construction Phasing Scenario 3 (2-95), while far from optimal, must included as one possible outcome in the event that the Service was faced with unanticipated shut down of the solar salt operation at any time. This is, certainly, not preferred and a more planful and carefully evaluated transition to any changes in the ponds is preferable. However, it must also be noted (and is of considerable concern) that, at least today, there is not expertise on the staff nor funding available for the Service to manage water as described in the current preferred alternative.

11.28

For A1 or A2, Service must secure expertise in water management.

If and when the Service moves toward managing water on their own, the biggest long term problem in managing these brine values in the coming years will be having a permanent position on Refuge staff that is a "brine expert"-- a person who truly understands how to move the water through the salt ponds to achieve optimum conditions to meet the life requirements of the biological species the Refuge has targeted in its management goals. Nobody associated with the Refuge has this knowledge and the Service has to acknowledge that this is a key position that

Response to Comment

The concern related to flexibility in future restoration design is best addressed through the adaptive management process, which is discussed in revised Appendix D (CCP Implementation) of the Final CCP/EIS. The specific details of any restoration plans for the Refuge would be developed during a subsequent planning process, which would include public involvement and completion of any required environmental compliance documents.

11.26 As stated in Response 11.13, the CCP Policy includes a process for plan review that could result in modifications to plan strategies or the inclusion of new projects if deemed appropriate. However, such modifications, if needed, could also be addressed through the adaptive management process rather than through the need to revise the CCP. The need to further evaluate and refine the water management options under the preferred alternative has been added to the Final CCP/EIS under Section 2.3.2.4 (Habitat Restoration).

11.27 We believe that the implementation of Alternative D, Scenarios 1, 2, or 3, as presented in the draft CCP/EIS, would adequately address the actions necessary to protect habitat values in the south bay should the salt works be closed prematurely. The specific scenario to be implemented would be dependent upon such factors as the availability of funding and the extent to which appropriate material is available to alter the pond elevations. If such a situation were to occur, there would still be an opportunity for public input through the step-down planning process and all necessary permits would have to be acquired.

11.28 Water management to support the habitat needs of fish and wildlife has been and continues to be a common management practice on numerous refuges throughout the National Wildlife Refuge System, therefore, staff training or expertise from elsewhere in the Refuge System is available if required to address any future water management needs on this Refuge.

must be filled through a person who is on Refuge staff or is under a long term contract with the Service.

B1 Continued economically viable salt operations

11.29 A second direction that should be held open as a water management option would involve maintenance of the salt works at a smaller size. The salt operation is already being downsized due to the Charles company issue. We understand that South Bay Salt is confident that it could remain economically viable with the loss of the use of pond 11. This would keep progessional managers in place, at no cost to the Service and preserve many of the existing uses. Under the current option 1 and 2 for the western ponds, restoration of up to 3 ponds should be undertaken in the adaptively managed phased approach.

B2. Continued subsidized salt operations

11.30 As we look at improving this system while retaining the current wildlife values, the Service should also address the possible need to subsidize the operations of the salt works in the event that the science leads us in the direction of needing to keep the salt harvesting operations for a period of time in a size that can't successfully compete in the market place or if economic or other circumstances reduce the economic value of the salt production. Subsidizing the salt works to stay may be an option that we want to pursue and should be included in the CCP as an option for future water management.

All of these directions should remain open as part of the preferred alternative for managing the salt ponds.

E. OPEN FORUM FOR DISCUSSION AND EVALUATION

11.31 We also believe that there should be some key "check points" outlined and described such as annually after each nesting or migration season data is collated, to review lessons learned from SFNWR or other restoration actions are planned or completed, etc… We recommend that the Service plan to convene briefing or "listening" sessions of local and regional agency and independent fish and wildlife experts and other stakeholders to provide input in an open forum so that all parties may benefit from the information of other entities. We also urge that information sharing events include relevant information from the San Francisco project. We understand that sometime such meetings can be messy and frustrating. However, they are a necessary part of building the local consensus we need if we are to have any success at all. Wildlife is hard enough to protect in this place and this time, so we must make every effort to be as unified as we can as a conservation community about how best we can meet our mission.

11.32 We urge that the Service provide for public review and input at many decision points, and that NEPA review be considered for potentially controversial decision points.

INTERPRETATION

11.33 We support the inclusion of the section on Environmental Justice. However, the actions that will be taken in response to the location of this project adjacent to EJ communities is not as

11.29 Comment noted.

11.30 The description of the managed water system has been revised in the Final CCP/EIS to include consideration of other options for managing the water and for providing a source of brine invertebrates within the restoration plan.

11.31 Appendix D has been revised in the Final CCP/EIS to include a detailed discussion of restoration phasing. This phasing plan includes various opportunities for public involvement, as well as public workshops to review monitoring results prior to and following initial restoration. Research opportunities have also been incorporated into this phasing plan to expand our ability to learn from the various restoration actions taken in the south bay. The Refuge Complex is also committed to continuing to maintain a dialogue with researchers and Refuge staff who are planning and implementing salt pond restoration in San Francisco Bay.

11.32 With respect to public review and input in general, public involvement will continue to be an important component of the CCP implementation process, with opportunities for public input during step-down planning. Refer to the phasing plan presented in revised Appendix D for additional details on how public review and input would be incorporated into the process. Environmental analysis would be conducted in accordance with NEPA and the Department of Interior's NEPA guidelines.

11.33 We appreciate these suggestions. The use of multi-language materials is addressed in the draft CCP/EIS and Final CCP/EIS has been revised to address directional signage to the Refuge.

clear. It will be very important for all signage and materials to be produced in, at least, three languages- English, Spanish, and Tagalog. There are concentrations of these ethnic populations in the South Bay and we will want to ensure that they have full access to the information about the refuge. It will also be important to have free activities for local residents so this can be resource for the public to enjoy the area to the maximum degree possible and that is consistent with protecting the wildlife resources of the area.
Since one of the great benefits of the location of the refuge is that it is served by mass transit, plans to develop clear paths and signage, in multiple languages, that allow people to get from the trolleys and bus stops to refuge areas will be important.

11.33 cont.

EHC strongly supports the loop trail proposed on the east side in Option D. Such public access and views for the public will be an important factor in developing the community's love and commitment to protection of the area. We recommend that the various public uses be separated from the restoration alternatives as this trail should be implemented no matter what ultimate restoration plan is adopted.

11.34

We request that the Service add, funding permitting, the ability to locate remote cameras in interesting locations like on the tern colony or near a rail nest so that people can see the activity "up-close" but without bothering the birds. We have seen these cameras very successfully used in other areas.

11.35

We do not support the interpretation of waterfowl hunting as a priority. We recommend that the interpretation of Native American use, salt production, and other historic use of the area should be prioritized more highly than hunting uses.

11.36

Water and Sediment Quality and Fish Consumption

Water and Sediment Quality

EHC recommends that the Service remove the following statement. *"Over the years, these concerns have been reduced as water quality in the Bay has improved."* There has been no credible baseline or trend monitoring that can be referenced on this issue. Significant water quality and contaminated sediment issues remain in the Bay. *(Pg* 3-112, para. 1) There is also a significant impact to juvenile fishes and microscopic marine life from the impacts of the South Bay Power Plant cooling system.

11.37

We suggest that the following statement be inserted. *"Areas of the Bay have been cleaned-up and discharges into the Bay from multiple sources have been reduced. However, significant contamination remains in Bay sediments and fish.(survey references) Health risks from eating fish remain and health advisories are being updated on public fishing piers by the Port of San Diego."*

Health Risks of eating Bay fish should be acknowledged.

The statement is inaccurate that reads, "Currently, there are no specific fish consumption advisories posted for San Diego Bay" is inaccurate and should be removed. There is a current Department of Health Services posting on fish consumption based on the 1990 study. There have also been several subsequent health risk and sediment studies since 1990, all of which have

11.38

11.34 Because of the nature of the commercial salt operation, which involves the use of heavy equipment and requires the need for full time security around the salt plant, it would not be feasible from a security or safety perspective to construct and maintain a loop trail around Pond 28 under any circumstances other than a restored system. There would however be other opportunities for the public to enjoy the wildlife and views within the Refuge by participating in organized tours around the salt works and taking advantage of future opportunities for wildlife observation, environmental education, and interpretation along the southern edge of the Refuge.

11.35 We agree. The potential use of remote cameras and other innovative approaches for interpreting the resources supported within the Refuge are described on page 2-102 of the draft CCP/EIS.

11.36 It is important to interpret all aspects of the history of this area. The market hunting that occurred in the south bay in the 1800s is an important part of the history of San Diego Bay. Hunting is also a traditional and legitimate form of wildlife-dependent recreation on National Wildlife Refuge's when determined to be compatible with Refuge purposes. The revenues generated from the Duck Stamp Program and the excise tax on hunting related merchandise has provided a steady stream of revenue to build the National Wildlife Refuge System over the past 60 years. The benefits that these contributions have provided to wildlife should not go unrecognized. With respect to how implementation of a future interpretive plan for the Refuge would be prioritized, it is likely that the plan would be implemented based on the availability of funding from a variety of sources.

11.37 The discussion of water quality within the Bay has been revised in the Final CCP/EIS.

11.38 The Final CCP/EIS has been revised to reflect the findings of the San Diego County Department of Health Services (*1990*).

demonstrated health risks to people consuming Bay fish frequently and significant, existing sediment contamination. We have attached our pier survey and appendices that summarize these studies.

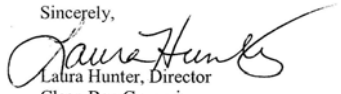
11.39 We recommend that the CCP be revised to include the Monofilament Recovery & Recycling Program (MRRP) in the education component of the Refuge. The U.S. Fish and Wildlife Service is listed as a partner to the program in Florida. http://www.fishinglinerecycling.org/index.asp

CONCLUSION

11.40 We appreciate all the excellent work done by the Service in preparing this plan. We hope that our cautions to go proceed carefully and deliberately, with plenty of stopping and evaluating, are not misunderstood as a lack of support for your work. It is not.

We are very excited about the future and look forward to a continued process to preserve and enhance these resources so precious to all of us.

Sincerely,



Laura Hunter, Director
Clean Bay Campaign

Response to Comment

11.39 The need for public outreach regarding the problems associated with monofilament accumulation in the South San Diego Bay Unit is addressed in Objective 1.7 of the draft CCP/EIS and described in greater detail under Alternative B for the South San Diego Bay Unit. This proposed action should have also been identified under Section 2.3.1.2 (Features Common to All Action Alternatives) but was inadvertently omitted from this section. The Final CCP/EIS has been revised accordingly. In addition we have reviewed the details of the Monofilament Recovery & Recycling Program (MRRP) being implemented in Florida by the Florida Fish and Wildlife Conservation Commission and concur that this program provides an excellent model for developing a similar program in South San Diego Bay. The details of this program have been included in the Final CCP/EIS.

11.40 Comment noted.

Appendix A

SUMMARY OF SELECTED STUDIES AND ANALYSIS RELATED TO TOXIC CONTAMINATION IN SAN DIEGO BAY FISH AND SEDIMENTS AND HUMAN HEALTH RISKS

Detailed Sediment Investigation NASSCO and Southwest Marine Shipyards, Public Workshop presentation materials, Exponent Technical Report, Phase 2 Human Health Risk Assessment, November 14, 2003

Tissue concentrations in fillets in fish examined in the study were as high as 400 ppb for PCBs. The Tissue Residue Guideline (TRG) is 20 ppb for PCBs. Mercury levels in lobster edible tissues were 521 ppb. Mercury levels in Spotted Sand Bass fillets (210-215 ppb) were close to the TRG of 300 ppb. In a detailed letter from the Office of Environmental Health Hazard Assessment (OEHHA) commenting on this Exponent Study, Dr. Robert Brodberg re-calculated the risks to fishers using the same data provided by Exponent but making more protective assumptions. The memo states, *"Some risks and hazards from this scenario are high and suggest that remediation is in order. Risks for some subsistence consumers might be three or more times higher than shown in my tables if they prepare and consume whole body fish."* Dr. Brodberg also noted that Exponent had failed to analyze health risks to subsistence fishers in or near the leaseholds. *(Memorandum from Robert K Brodberg, Ph.D., Senior Toxicologist, OEHHA to Tom Alo, San Diego Regional Water Quality Control Board, Review of the Exponent NASSCO and Southwest Marine Detailed Sediment Investigation; April 29, 2004.)*

***Necropsy and Histopathology of Spotted Sea Bass Sampled from San Diego Harbor*; Dr. Gary Marty, Included in the Exponent Detailed Sediment Investigation; September, 2003 and NOAA comment letter on this study.**

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San Diego Bay Fish Health Risk Study, prepared by the San Diego County Department of Health Services, June 12, 1990
Found elevated levels of mercury, arsenic, and PCBs in some Bay fish. PCBs were found at levels which represent a potential elevated cancer risk when consumption rates were estimated at only 1.1 oz a day. Mercury was estimated as a potential level of concern for unborn or young children at average consumption rates and for individuals who consume fish at higher rates. PCDD/PCDFs (dioxins) were found in round stingrays in level exceeding an acceptable health risk but the concern was dismissed since the species was assumed not to be consumed. However, 18 fishers in EHC's Pier Fishers survey reported that stingray were a fish they caught.

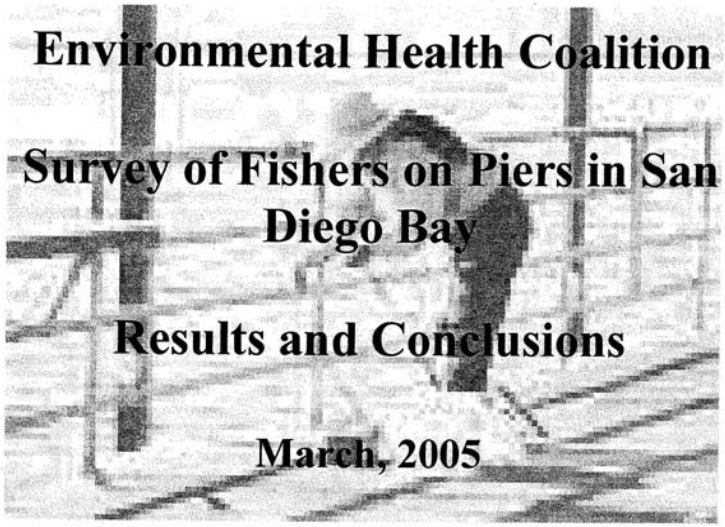
Evidence of radiation was also found in some fish and further study was recommended. Study led to the posting of San Diego Bay to limit consumption of fish by sensitive populations.

Coastal Environmental Quality in the United States, 1990, National Oceanic and Atmospheric Administration
San Diego Bay sediment exhibited high concentrations of cadmium, copper, lead, mercury, silver, zinc, PCB, PAH and total chlordane. On the basis of this contamination, San Diego Bay was rated as one of the most contaminated urbanized coastal areas in the nation.

Appendix B

Appendix . Numbers of waterbird nests at San Diego National Wildlife Refuge Complex, 1999-2005.

	1999	2000	2001	2002	2003	2004	2005
Tijuana Slough NWR/Border Field SP							
Western Snowy Plover	9	15	12	24	14	18	19
California Least Tern	128	210	313	232	473	520	458
Sweetwater Marsh NWR D Street Fill							
Western Snowy Plover	2	1	0	0	0	0	0
California Least Tern	36	34	32	24	91	111	101
South San Diego Bay NWR Saltworks							
Western Snowy Plover	0	1	3	3	0	2	4
California Least Tern	25	44	45	39	62	49	34
Gull-billed Tern	29	27	47	39	59	49	73
Double-crested Cormorant	80-84	41	39-53	49+	74-77	49	77
Caspian Tern	281-369	500-574	364-450	379	332	313	357
Royal Tern	36	1-2	3	1-3	28-31	38	52
Elegant Tern	3100	86	107-110	37-100	10303-10500	1020	3051-3201
Forster's Tern	174-188	325-327	419-438	390+	266	275	415
Black Skimmer	395-410	224-231	419-430	443+	541	496	752



Executive Summary

The study establishes that a significant subset of San Diego Bay fishers regularly catch and eat fish from the piers near contaminated areas of the Bay. Environmental Health Coalition (EHC), a nonprofit environmental justice organization, has long been concerned about contaminated sediments in San Diego Bay and the possibility that disproportionate health impacts of the contamination are borne by the low-income communities of color that catch and eat fish from the Bay. Previous studies of fish contamination in San Diego Bay did not adequately explore the fish consumption patterns of people who consume fish at subsistence-level rates and did not assess the health risks associated with consumption of portions of a fish other than the fillet. EHC conducted a survey of people fishing from piers near areas where contaminated sediments have been found in San Diego Bay. A total of 109 fishers were interviewed in English, Spanish, or Tagalog as appropriate, during the winter and spring of 2004. Piers surveyed included Convention Center pier (downtown), Pepper Park pier (National City), and the Chula Vista pier. 96% of the fishers (57% Latino, 39% Filipino) were people of color. 58% of the surveyed fishers fish at least once a week and 25% fish daily. Almost two thirds of the fishers eat their catch. 41% of the children of fishers eat the fish as well. Fish were prepared in a variety of methods including those that maximize exposure to contaminants. The survey group represents an opportunity sample of fishers from South Bay piers; it is not a randomized sample. The survey results demonstrate a compelling reason for environmental regulators to take swift and protective action to cleanup San Diego Bay's toxic sediments.

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Environmental Health Coalition is a private, non-profit organization founded in 1980 with offices in San Diego and Tijuana. EHC is dedicated to environmental and social justice. We believe that justice is achieved when empowered communities act together to make social change. We organize and advocate to protect public health and the environment threatened by toxic pollution. EHC supports efforts that create a just society and foster a healthy and sustainable quality of life.

Introduction

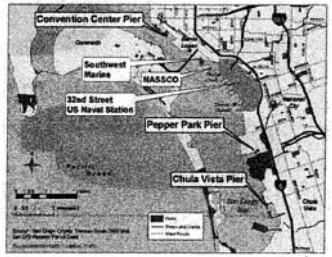
Environmental Health Coalition's Clean Bay Campaign was established in 1987 in response to data that found high levels of dangerous chemicals in the shellfish of San Diego Bay. Since then multiple studies have documented elevated levels of toxic chemicals in fish and shellfish in the Bay. For almost two decades, EHC has advocated for the clean up of contaminated sediment sites in the Bay, for reevaluation of health risks of eating fish from the Bay, and for appropriate health warnings to advise community members of these risks.

As an environmental justice organization, EHC is very concerned about communities of color and low-income communities that rely on "subsistence fishing." While there is no standard definition of subsistence fishing, it can be generally used to describe local, non-commercial fishing oriented primarily for the procurement of fish for consumption by the fishers, their families, and community. To date, the limited studies of the health risks of eating Bay fish have suffered from significant flaws and data gaps and have not specifically addressed the risks to subsistence-level fishers. One study, the 1990 *San Diego Bay Fish Health Risk Study,* makes a passing reference to subsistence-level fishers stating that if fish (especially Barred or Spotted Sand Bass) were to be consumed at subsistence rates of 165 grams per day (5.8 oz) it "*...may present a potential adverse health risk to adult consumers....*"[i] This study also concluded that risks, even at their estimated average rates of 31.2 g/day (1.1 oz) *"could potentially be significant to an unborn child, through ingestion of contaminated fish by pregnant women, or to a young child.*"[ii] However, generally when human health risk studies have been done for consumers of Bay fish, the methodologies used have consistently underestimated exposure rates and risks to frequent consumers.

Ecological and human health risks are a significant issue related to the clean up of San Diego Bay's contaminated sediments at commercial shipyards (NASSCO and Southwest Marine) and the Naval Station. EHC conducted this community survey in order to obtain basic information about fishing off piers near the shipyards and Navy base and in the south end of the bay to ensure the interests of this population were considered in the decision-making process.

Methods

EHC surveyed a total of 109 people fishing from the Convention Center, Pepper Park, and Chula Vista fishing piers. A total of ten surveys were completed at the Convention Center pier, 79 at Pepper Park pier, and 20 at the Chula Vista pier during the winter and spring months of 2004. The questionnaire was developed by EHC staff and pilot-tested for clarity. An EHC community organizer administered the survey orally, along with associates who were fluent in Tagalog, Spanish, or English as required. Each survey took approximately 7-10 minutes to administer. Survey data was then entered into an Excel spreadsheet, and analysis was done using Statistical Package for the Social Sciences software, Version 9. The survey questionnaire is attached.



Results

The survey population of 109 fishers was primarily people of Latino or Filipino descent, with smaller numbers of Native American, African American, and European Americans. Many surveyed fishers were from the South Bay area, including the Logan area of San Diego, National City, Chula Vista, Bonita, Spring Valley, and Tijuana. The survey group represents an opportunity sample of fishers from South Bay piers; it is not a randomized sample.

Who is fishing? How often are they fishing? Where do they live?
Of 109 fishers surveyed:

- 39% were Filipino
  - 58% fish daily or almost daily (4 to 7 times per week)
  - 40% of the Filipino fishers fish weekly
- 57% were Latino
  - 3% of Latino fishers fish daily or almost daily (4 to 7 times per week) and
  - 23% fish weekly
- 4% Other. (Other ethnic groups were too small to be tabulated separately)

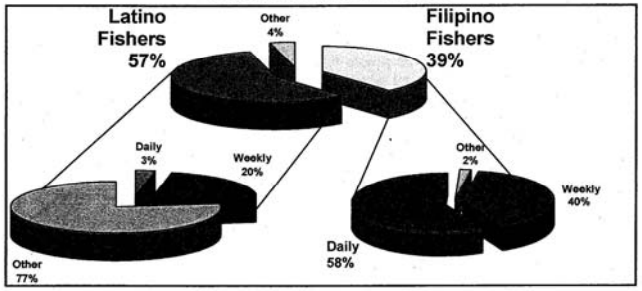
Of all of the fishers surveyed:

- 25% fish daily or almost daily (4 to 7 times a week)
- 31% fish weekly

Of all of the fishers surveyed:

- 87% of surveyed fishers supplied an address or zip code
  - 83% live in EHC target communities such as National City (59%), Barrio Logan (14%), and Western Chula Vista and Imperial Beach (10%)
- 7% live in Tijuana, Mexico

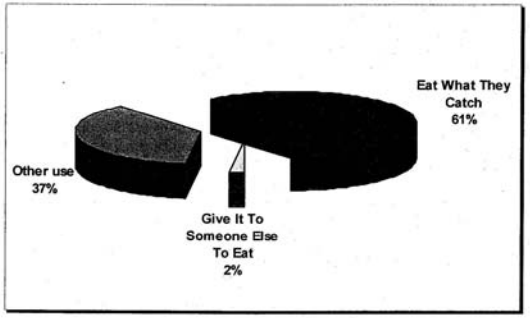
FREQUENCY AND ETHNICITY



Are people eating the fish they catch?

- 61% of fishers eat the fish they catch
- 2% give it away for someone else to eat
- 73% of fishers eat other types of seafood in addition to what they catch.

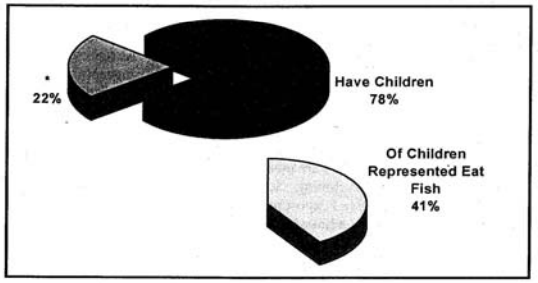
CONSUMPTION



Do they have children and are they eating the fish?

- 78% have children with an average of two.
- 41% of the 209 children represented in this survey eat fish caught from the Bay.

PRESENCE OF CHILDREN AMONG PIER FISHERS



Discussion and Conclusions

Our survey group is a selective sample that is highly exposed to fish from near the shipyards, Naval Station, and the southern portion of San Diego Bay. It is not a representative sample of all San Diego Bay fishers or all South Bay residents. The survey assumed income based on place of residence and they appear to be engaged in subsistence fishing. The number of fishers found at the three piers establishes that subsistence pier fishing is a common practice and may be thought of as a subculture rather than an isolated hobby of a few individuals.

Method of consumption can impact exposure rates

It is well documented that the manner of food preparation and the consumption of different parts of a fish can contribute to increased exposure to contaminants in the fish.[iii] For example, stewing and frying are known to elevate exposure rates as opposed to broiling or grilling. While mercury does collect in the fillets or muscle tissue of fish, many contaminants collect in the fatty tissues like the skin and in organs. For this reason, people who consume whole fish, organs, or skin of the fish, can increase their exposure levels. Our survey also establishes that fish are not always filleted. 13% of our sample reported eating fish skin, among them people who fish frequently and who catch large amounts of fish. A health-conservative estimation of the exposure to fish contaminants must assume that whole fish is eaten. EHC's study supports the findings of the 1990 County Fish Health Risk Study that found that 40% of Filipinos and Asians consume the entire fish as compared to 5.6% of Caucasians.[iv]

Common cultural practices for fish consumption[i]

- *Fish is a traditional staple of a Filipino diet.*
- *Many traditional recipes call for steaming, stewing, or frying of the fish.*
- *Traditional consumption patterns include whole fish as opposed to fillets only.*
- *The Philippine Department of Science and Technology recommends when fish is consumed for protein, a normal adult needs three servings a day; babies 6 to 12 months need one serving a day (equivalent to a medium-size fish, 16 centimeters long).*

Children, the unborn, and frequent consumers are at highest-risk

Contamination in fish consumed by pregnant or breast-feeding women can put their children at higher risk to health impacts. Most at risk is the developing fetus. As reported by USEPA, new research has shown that "cord blood" (blood in the umbilical cord) concentrates mercury by 70% above the level in the maternal blood. This means that mercury concentrations in the mother's blood can be expected to be 70% higher in the fetus.[v] The EPA estimates that one in every six children born in the United States -about 630,000 children annually- is exposed in the womb to mercury levels that exceed the current safety level.[vi] This places children at risk for a loss of IQ, learning disabilities, and other cognitive impairments. Children are more susceptible to contaminants that affect the nervous system because their brains are developing. Scientists who study mercury are finding subtle damage to the brain at lower and lower levels of exposure.[vii] Another concern is that damage caused by mercury is permanent. PCBs have also been linked to developmental problems in children at very low exposures.[viii]

It has also been demonstrated that mercury exposures are higher among women who eat fish and higher among Asians and people of Pacific Islander background. Blood mercury concentrations were seven times higher among women who reported eating fish two or more times a week in the past 30 days compared to non-fish eaters.[ix]

This survey provides the first San Diego Bay-specific data on subsistence fishing. It confirms that estimates of the quantities of fish eaten by subsistence fishers in other places could also apply here. The frequency of fishing and fish eating in our survey population is very different than that of statistically average Americans and may reach the 161-165 grams per day (5.8 oz) level, which is a level of higher, or "subsistence" consumption.

Cumulative Impacts, Exposures, and Risks should be considered in regulatory decisions

Many of the surveyed fishers live in Barrio Logan, Sherman Heights, Logan Heights, National City, and Tijuana. These communities are low income and suffer from a disproportionate burden of toxic exposure. According to the 2000 Census, 35% of families in the Logan area of San Diego have incomes below the federal poverty level. In National City, 20% of families live below the federal poverty level. No comparable census numbers exist for Tijuana, however, we know that 67% of homes have dirt floors, 66% of homes do not have piped water,[x] and two adults employed full-time in the maquiladora industry cover only 2/3 of the basic needs of a family of four in Tijuana.[xi]

These communities are also the most heavily burdened with toxic exposures in the area. Among the co-risk factors of these communities, as detailed in other EHC research, are the highest lead contamination in housing stock, highest cancer, reproductive, respiratory risks from air contaminants, presence of toxic waste sites and toxic emitting industries, and high poverty rates. These co-exposure rates necessitate additional, more protective actions to respond to the high cumulative burdens of these community residents and should be reflected in regulatory findings and decision-making by local environmental regulators.

In conclusion, our survey provides evidence that a subpopulation of San Diego County residents engages in subsistence fishing off of piers near the shipyards and contaminated areas in San Diego Bay. Among this subpopulation are individuals who fish daily, who catch an average of 1.7 fish but have been recorded to catch up to 20 fish at a time, cook the fish and eat fish parts that maximize their exposure to contaminants, and who feed the fish caught in the Bay to their children and families. These results suggest that, at the high end of the exposure continuum, a subset of fishers and their children may be eating fish once to several times weekly, eating relatively large amounts, and eating other seafood as well. The results also suggest that the method of fish preparation can increase exposure. They also live in communities that already bear a disproportionate burden of toxic exposure.

Recently adopted measures by State of California support action to protect impacted Communities such as those identified in this survey

On February 16, 2005, the California Environmental Protection Agency (Cal EPA) Interagency Working Group, consisting of the Cal EPA Secretary and the heads of all Boards, Departments, and Offices, adopted guidelines that incorporate cumulative impacts assessment and precautionary approach methods to direct their work. This policy foundation is key to ensuring that disproportionately impacted communities, like those documented in the survey, are afforded equitable protection through the regulatory process. The newly adopted definitions that will be used to guide future work are:

Precautionary Approach means taking anticipatory action to protect public health or the environment if a reasonable threat of serious harm exists based upon the best available science and other relevant information, even if absolute and undisputed scientific evidence is not available to assess the exact nature and extent of risk.

Cumulative Impacts means exposures, public health or environmental effects from combined emissions and discharges, in a geographic area, including environmental pollution from all sources, whether single or multi-media, routinely, accidentally, or otherwise released. Impacts take into account sensitive populations and socioeconomic factors, where applicable and to the extent data are available.

Environmental Health Coalition Recommendations

Several decisions will soon be made regarding sediment cleanup in San Diego Bay. Environmental justice demands that additional considerations are required in order to protect the communities that fish and consume fish from the Bay. All decisions made regarding cleanup, remediation, and permitting of additional discharges to the Bay must be made in the context of protecting the health of the most exposed and the most vulnerable communities.

As a result of this study, EHC proposes the following recommendations be pursued:

1. The Regional Water Quality Control Board should follow Cal EPA guidelines for precautionary approach and cumulative impacts and require clean up to background levels for remediation of toxic sediments in San Diego Bay at the commercial shipyards, NASSCO and Southwest Marine, and for cleanup efforts at Navy bases such as Naval Station.

2. The State Water Resources Control Board should adopt protective sediment quality objectives for all the sediments in the State.

3. The County Department of Health Services and the Port District should revise the Fish Consumption Warning for San Diego Bay based on higher consumption levels and update and replace fish warning signs to include Tagalog.

4. The Department of Toxic Substances Control in conjunction with the Office of Environmental Health Hazard Assessment should initiate an outreach and education program to educate fishers of the Bay of the risks of consuming Bay fish and some means to reduce them.

5. State and Federal regulators and the military should consider the environmental justice impacts in decision-making and implement precaution in budgeting, permitting, and regulatory decisions and ensure that communities that are disproportionately impacted receive quick, additional protection to off-set cumulative toxic burdens.

6. State and federal agencies with trust responsibilities for ecosystem and human health should be included in all decision-making and should actively participate in environmental and land use planning decisions that impact the safety of the food chain in San Diego Bay.

ENDNOTES

[i] *San Diego Bay Health Risk Study*, County of San Diego, June 12, 1990; pg xxi
[ii] 1990 Health Risk Study, pg xxi
[iii] National Environmental Justice Advisory Committee (NEJAC), Fish Consumption and Environmental Justice Report, November 2002, page 34 and Memorandum from Robert K Brodberg, Ph.D., Senior Toxicologist, OEHHA to Tom Alo, San Diego Regional Water Quality Control Board, Review of the Exponent NASSCO and Southwest Marine Detailed Sediment Investigation; April 29, 2004, page 3.
[iv] 1990 Health Risk Study, page xix
[v] *Estimated Number of Newborns with In Utero Methylmercury Exposures*, slide in Methylmercury Epidemiology Update, presented by Kathryn Mahaffey, USEPA, National Forum on contaminants in Fish, San Diego, January 2004 http://www.epa.gov/waterscience/fish/forum/2004/presentations/monday/mahaffey.pdf
[vi] Mahaffey, USEPA and *Scientists worry that mercury dangers mimic deadly lead*, Joan Lowy, Scripps Howard News Service, January 26, 2005
[vii] Lowy, ibid, January 26, 2005
[viii] National Environmental Justice Advisory Committee (NEJAC), Fish Consumption and Environmental Justice Report, November 2002, page 73
[ix] EPA National Contaminants in Fish presentation, USEPA, report on the 1999-2000 NHANES Blood mercury study
[x] INEGI, XII censo general de población y vivienda, 2000. Found at http://www.ini.gob.mx/indica2000/mpo/bc4.htm. Encuesta Nacional sobre Desarrollo Institucional Municipal 2000, INEGI and INDESOL and North American Development Bank.
[xi] Ruth Rosenbaum, Making the Invisible Visible: A Study of the Purchasing Power of Maquila Workers in Mexico, CREA: Center for Reflection, Education, and Action, 2000.
[1] As reported by the Philippines Food and Nutrition Research Institute, and described by the Council of Philippine American Organizations of San Diego County and the Fish Consumption and Environmental Justice Report of the EPA's National Environmental Justice Advisory Council.

SUMMARY OF SELECTED STUDIES AND ANALYSIS RELATED TO TOXIC CONTAMINATION IN SAN DIEGO BAY FISH AND SEDIMENTS AND HUMAN HEALTH RISKS

Detailed Sediment Investigation NASSCO and Southwest Marine Shipyards, Public Workshop presentation materials, Exponent Technical Report, Phase 2 Human Health Risk Assessment, November 14, 2003

Tissue concentrations in fillets in fish examined in the study were as high as 400 ppb for PCBs. The Tissue Residue Guideline (TRG) is 20 ppb for PCBs. Mercury levels in lobster edible tissues were 521 ppb. Mercury levels in Spotted Sand Bass fillets (210-215 ppb) were close to the TRG of 300 ppb. In a detailed letter from the Office of Environmental Health Hazard Assessment (OEHHA) commenting on this Exponent Study, Dr. Robert Brodberg re-calculated the risks to fishers using the same data provided by Exponent but making more protective assumptions. The memo states, *"Some risks and hazards from this scenario are high and suggest that remediation is in order. Risks for some subsistence consumers might be three or more times higher than shown in my tables if they prepare and consume whole body fish."* Dr. Brodberg also noted that Exponent had failed to analyze health risks to subsistence fishers in or near the leaseholds. *(Memorandum from Robert K Brodberg, Ph.D., Senior Toxicologist, OEHHA to Tom Alo, San Diego Regional Water Quality Control Board, Review of the Exponent NASSCO and Southwest Marine Detailed Sediment Investigation; April 29, 2004.)*

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1

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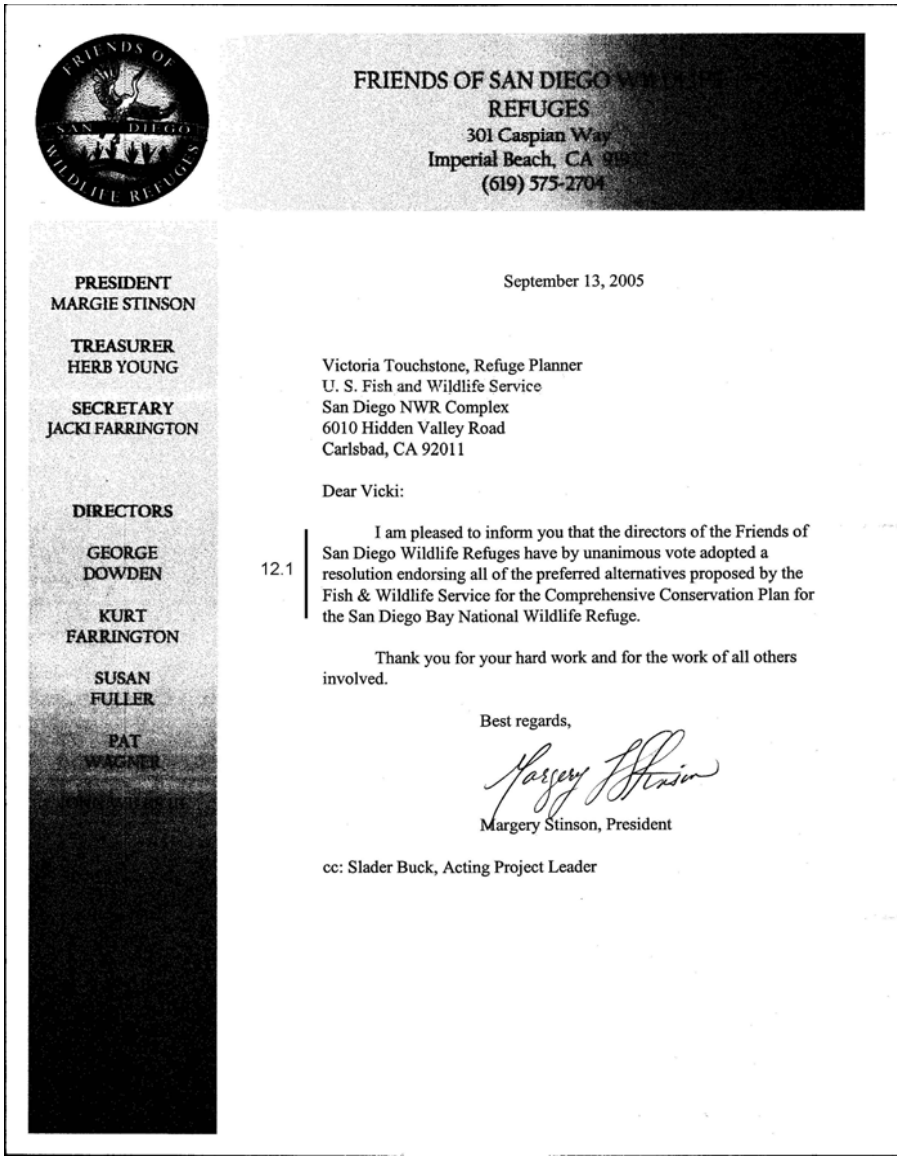
Investigated total arsenic exposures from fish collected within and outside the bay. Excess carcinogenic risks at high rates of consumption found to be as high 1.93 in a 100. These are very high estimated cancer risks.

San Diego Bay Fish Health Risk Study, prepared by the San Diego County Department of Health Services, June 12, 1990
Found elevated levels of mercury, arsenic, and PCBs in some Bay fish. PCBs were found at levels which represent a potential elevated cancer risk when consumption rates were estimated at only 1.1 oz a day. Mercury was estimated as a potential level of concern for unborn or young children at average consumption rates and for individuals who consume fish at higher rates. PCDD/PCDFs (dioxins) were found in round stingrays in level exceeding an acceptable health risk but the concern was dismissed since the species was assumed not to be consumed. However, 18 fishers in EHC's Pier Fishers survey reported that stingray were a fish they caught. Evidence of radiation was also found in some fish and further study was recommended. Study led to the posting of San Diego Bay to limit consumption of fish by sensitive populations.

Coastal Environmental Quality in the United States, 1990, National Oceanic and Atmospheric Administration
San Diego Bay sediment exhibited high concentrations of cadmium, copper, lead, mercury, silver, zinc, PCB, PAH and total chlordane. On the basis of this contamination, San Diego Bay was rated as one of the most contaminated urbanized coastal areas in the nation.

2



FRIENDS OF SAN DIEGO WILDLIFE REFUGES
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PAT WAGNER

September 13, 2005

Victoria Touchstone, Refuge Planner
U. S. Fish and Wildlife Service
San Diego NWR Complex
6010 Hidden Valley Road
Carlsbad, CA 92011

Dear Vicki:

12.1 I am pleased to inform you that the directors of the Friends of San Diego Wildlife Refuges have by unanimous vote adopted a resolution endorsing all of the preferred alternatives proposed by the Fish & Wildlife Service for the Comprehensive Conservation Plan for the San Diego Bay National Wildlife Refuge.

Thank you for your hard work and for the work of all others involved.

Best regards,

Margery Stinson

Margery Stinson, President

cc: Slader Buck, Acting Project Leader

12.1 Comment noted.

SAN DIEGO AUDUBON SOCIETY
4891 Pacific Highway, Suite 112 • San Diego CA 92110 • 619/682-7200

September 19, 2005

VIA FACSIMILE: 760-930-0256

Ms. Victoria Touchstone, Refuge Planner
U.S. Fish and Wildlife Service
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Road
Carlsbad, CA 92011

Dear Ms. Touchstone:

Subject: San Diego National Wildlife Refuge Complex
Draft Comprehensive Conservation Plan/Environmental Impact Report

The San Diego Audubon Society (SDAS) would like to submit the following comments regarding the San Diego Bay National Wildlife Refuge Complex Draft CCP/EIS. The SDAS is in full support of the development of this Comprehensive Conservation Plan (CCP) for the Sweetwater Marsh and South San Diego Bay Units of the National Wildlife Refuge. The approved CCP should provide cohesive guidance with well-defined goals, objectives, and strategies by which the Refuge can be managed.

13.1 We strongly support the comment letter provided by the Environmental Health Coalition on this document. We especially support the comments on making sure that the improvements of the CCP do not degrade the unique avian uses of the salt ponds. It seems very likely that significant improvements may be possible, but they must be done carefully and incrementally and guided by careful monitoring and analysis of each step.

The SDAS supports the goals and objectives of the CCP for both Refuge Units. The protection, management, enhancement, and restoration of coastal wetland and native upland habitats, supporting recovery and protection of threatened and endangered species, and providing habitat for both native and migratory bird species, should always be the primary intents of the Refuge. Providing public use opportunities that are consistent with the primary goals and that foster appreciation of the Refuge is also a goal that is supported by the SDAS.

13.2 But, it is extremely important that the future development not degrade the current wildlife support values of the highly functioning portions of the Refuge, especially portions of the salt ponds. We urge that the FWS obtain a sufficient baseline of population and nesting success data and use it to evaluate the impact of each step along the process and to back down if a step appears to be counterproductive.

SWEETWATER UNIT
The SDAS supports Alternative C for the management of the Sweetwater Marsh Unit. Implementation of this alternative will provide restoration of the wetland and upland habitats that

13.1 Comment noted.

13.2 Please refer to Responses 11.5, 11.15, and 11.23 above.

once existed in the Sweetwater Marsh complex. Through the removal of roads and berms and opening of levees within the salt marsh habitats, enhanced tidal circulation would increase the coverage of cordgrass-dominated low salt marsh within the Sweetwater Marsh and small portions of the D Street Fill, Gunpowder Point and the F&G Street Marsh. Cordgrass marsh
13.3 would provide habitat to threatened and endangered species such as light-footed clapper rail and other salt marsh-dependant wildlife. In addition to restoring salt marsh habitat, the restoration of native upland habitats at Gunpowder Point proposed in this alternative would provide habitat to California gnatcatcher and other native upland birds. This alternative would also provide for the management of least tern and snowy plover nesting habitats at the D Street
13.4 Fill. The stated goal is 30 pair of least terns and 20 snowy plover nests per season, which should be accomplished through the management of vegetation, substrate, predators, and
13.5 human influence. The SDAS would also like to ensure that watershed management is a component of this alternative to the extent possible.

OTAY RIVER MOUTH

The Otay River mouth has been badly degraded by sedimentation, channelization, pollution, and fragmentation. In most cases it has little to lose and much to gain from restoration projects. In the Otay River Mouth region, we urge that intertidal wetlands, mud flats, freshwater marsh,
13.6 riparian and native upland habitats be restored within the Otay River Floodplain. The SDAS supports the Otay River Floodplain Restoration Option 1 because the riparian restoration in this option would provide a habitat that would normally be found in a river floodplain but is currently missing from the Refuge. The riparian habitat would provide potential habitat to the least Bells vireo, which is not provided for in any other restoration option. Please add some element for
13.7 vireo habitat restoration where appropriate. The SDAS would like to ensure that watershed management be a part of this alternative to the extent possible.

SALT PONDS

The SDAS supports the direction of Alternative D for the South San Diego Bay Unit. This alternative would increase the wetland habitats within the salt ponds, while still providing the unique foraging and nesting areas for birds that the salt ponds have come to provide over the last 100 years. Under this alternative a significant portion of the salt ponds would be opened to tidal influence through levee breaching, facilitating the restoration of up to 650 acres of intertidal
13.8 wetlands consisting of shallow subtidal, mudflats, cordgrass marsh and pickleweed marsh. However these conversion targets should be significantly reduced if it is found that the reduction in salt ponds is reducing the habitat value for the birds that depend on the isolated nesting berms and that depend on the intense level of brine fauna. It is doubtful that the full Alternative D implementation could be completed in a fail-safe manner in the nominal 15 year period of this plan. We urge that the final CCP make it clear that the plan should not be hurried to achieve that goal.

The valuable nesting and roosting opportunities for seabirds and shorebirds of the salt pond
13.9 levees should be maintained and enhanced in this alternative by recontouring of the levees and improving nesting substrate. In addition, nesting islands would be created within some salt ponds to provide protected nesting habitat for seabirds and shorebirds. This alternative also proposes to create additional roosting habitats for brown pelicans. However, open water
13.10 nesting areas would be difficult to create under this scenario because most of the open water habitat within the ponds would be restored to intertidal habitat. The SDAS would like to ensure that pelican roosting habitat is incorporated into this alternative if it does not result in additional predation of the chicks and eggs of the other sensitive species that nest in the area.

2

13.3 Comment noted.

13.4 These target numbers have been revised in the Final CCP/EIS.

13.5 As described under Objective 1.5 for the Sweetwater Marsh Unit in the draft CCP/EIS, participation in watershed management planning for those watersheds that influence habitat quality in this Refuge Unit is a strategy to be implemented under this alternative.

13.6 Comment noted.

13.7 The Environmental Consequences section of the draft CCP/EIS addresses the potential benefits to least Bell's vireo as a result of restoring the Otay River floodplain. However, this species is not specifically addressed under Objective 1.2 for the South San Diego Bay Unit; therefore, Section 2.3.5.2 of the Final CCP/EIS has been revised to include a discussion of this species.

13.8 Appendix D has been revised to better define how restoration could be phased within the salt pond complex. Refer also to Responses 11.23 and 11.26 above.

13.9 These actions are included in the preferred alternative, as discussed on page 2-93 of the draft CCP/EIS.

13.10 As stated on page 2-99 of the draft CCP/EIS, pelican roosting platforms are included as a component of this alternative. Objective 2.5 has been added to the Final CCP/EIS to address the need to maintain appropriate pelican roosting opportunities within this Refuge Unit. No substantive conflicts between pelican roosting and seabird nesting have been documented on this Refuge Unit and this situation is not expected to change following restoration.

13.11 The current salt production results in a huge volume of brine flies and brine shrimp which are a great source of food for many birds. However, there is no certainty that the production of salt will always be economically viable at this location. It is important that a similar or greater level of brine fauna be maintained whether or not salt is commercially harvested. One possibility is that traditional salt pond management could be used to get water up to the salinity optimum for these invertebrates, kept there for some period of time, and then to dilute the water back down, using bay water and possibly stormwater, to salinity levels at which the water can be discharged back into the Bay without ecological impact. Developing and tuning such a system would be time consuming. We urge that research and experimentation be initiated early in the process to better understand the value of the brine fauna, how the system could be adjusted to optimize their food value, and how and whether the no-harvest sort of salt works could support as much or even more of the range of wildlife that uses the salt ponds now. It is important that the development of such a process be done soon so it can be established whether or not it is feasible so that we can better assess future possibilities. But, as mentioned before, there should be no hurry to implement such an alternative unless the salt processing is terminated for other reasons.

13.12 While Alternative D for the South Bay unit is preferred due to habitat possibilities for birds, fish and other endangered and threatened species, it might or might not be more costly management than Alternative C to be successful. The cost and reliability of the operation of either alternative might become a deciding factor in future years or decades.

GENERAL

13.13 The SDAS believes that the CCP should provide a cautious and fail-safe strategy for management and enhancement of the Refuge. It should focus on reversing the trend of wetland loss in San Diego Bay while carefully preserving the unique wildlife support value that has developed in the most productive portions of the current refuge - a difficult balance that will require a lot of thought, discipline, and work - but well worth it.

In case of questions or follow-up, the undersigned can be reached at 619-224-4591 or peugh@cox.net.

Respectfully,

James A. Peugh

James A. Peugh
Coastal and Wetlands Conservation Chair

3

13.11 Refer to Responses 11.17 and 11.30 above.

13.12 Comment noted.

13.13 We concur and believe that the goals and objectives presented in the draft CCP/EIS address this desire to balance existing values with the need to restore a portion of the historic habitats that have been lost in San Diego Bay.

Buena Vista Audubon Society
P.O. Box 480
Oceanside, CA 92054

September 15, 2005

Victoria Touchstone, Refuge Planner
SDNWR Complex
6010 Hidden Valley Road
Carlsbad, CA 92011

Transmitted via e-mail to Victoria_Touchstone@fws.gov

RE: SDBNWR, Draft CCP and EIS, South San Diego Bay Saltworks

Dear Ms. Touchstone,

14.1 The Buena Vista Audubon Society has reviewed the draft CCP and EIS prepared by USF&W, and would like to make several brief comments. We generally support habitat restoration projects which attempt to recreate a historic natural ecosystem. Sometimes however, as the unintentional result of human endeavors, critical habitats and fully functioning ecosystems have been created and become established where they had not historically existed. The Salton Sea ecosystem quickly comes to mind, of course, as do the unique salt ponds and bare earthen dikes of South San Diego Bay.

14.2 The draft CCP identifies the thriving tern and shorebird breeding and wintering grounds of South San Diego Bay as an existing natural resource. The draft CCP understates, however, the fact that this area as it presently exists seems to satisfy the habitat requirements of these specific bird populations as do few other areas on the North American continent. South San Diego Bay has to be considered globally significant habitat for a number of bird species. The preferred restoration and resource management alternative consciously seeks to reduce or eliminate the unique wetland ecology that has caused thousands of birds to choose this area for their annual breeding and wintering grounds.

14.3 We don't know all the reasons why the salt ponds and dikes work so well for these birds, but the empirical evidence is definitive. Whether it's the shallow water pools and the relative absence of tidal fluctuation, freedom from many of the predators found in a typical salt marsh, an extensive expanse of bare dirt nesting and roosting sites, or the year-round abundance of a dependable food source of brine flies and shrimp, we know the system works. Perhaps more extensive research over time will explain why so many birds pass over the remaining coastal salt marsh habitat that still exists in Southern

14.1 Although we agree that a number of the salt ponds provide important habitat for an abundant and diverse array of avian species, we do not agree that this system represents a fully functioning ecosystem. The salt works is a closed system that does not contribute to the bay's fish population nor does it support the benthic invertebrates or plants that are found within the tidally influenced portions of the bay.

14.2 The draft CCP/EIS describes the significance of the existing ponds to the array of birds that utilize the site on a year-long basis, during migration, or as a wintering area. As stated in Section 3.4.1.3 of the draft CCP/EIS, the southern portion of San Diego Bay, including the salt ponds, the mudflats, and the shallow subtidal habitat in the bay, is designated as a Western Hemisphere Shorebird Reserve Network Site. This portion of San Diego Bay is also recognized for providing habitat for globally significant numbers of nesting gull-billed terns and continentally significant numbers of Caspian Terns and western snowy plovers, all of which nest on the salt pond levees, as well as continentally significant numbers of surf scoters, which occur in greater numbers outside the salt ponds than within them.

Implementation of the preferred alternative (involving the restoration of the salt ponds and Otay River floodplain, as well as expansion of and improvements to nesting opportunities for listed and sensitive seabird species) is intended to maximize opportunities for habitat restoration, while also maintaining, and in some cases enhancing, those aspects of the existing salt pond system that support nesting seabirds and other migratory birds. The Service analyzed and considered all of the data available regarding the diversity and abundance of avian species that currently utilize the salt ponds. The environmental consequences chapter of the draft CCP/EIS acknowledges that some changes in species composition and abundance could occur as a result of restoration. However, based on the analysis of the existing data, our experience with other restoration projects, and our best professional judgment, we do not believe that these changes would be of a sufficient scale to result in

significant adverse effects to any avian species. On the other hand, converting the salt ponds to tidal action would increase the abundance and diversity of fish, invertebrate, and plant species, which would benefit the entire bay ecosystem.

14.3 Based on the data available, it is likely that the salt pond levees are favored by colonial seabirds because of the minimal human disturbance that occurs in this area and the availability of unvegetated level nesting areas that provide unobstructed views of the surrounding area. We do not agree with the statement that this area is free of predators; in fact, predation by mammalian and avian predators is a continuous problem that must be addressed through intensive refuge management.

Although additional studies are needed to fully understand how migratory birds are utilizing the site, observations made during the 1993/1994 avian survey of the salt ponds and adjacent mudflats provide some insight. A number of species utilize the ponds or pond levees for rafting or roosting during high tide and periods of strong winds, while other species, such as eared grebes and phalaropes, spend much or all of their time in the ponds and prey on the abundant brine invertebrates present in some ponds. Other species that feed on the mudflats during low tide have been observed supplementing their diet by feeding on brine invertebrates during high tide. The assertion that birds favor the salt works over coastal salt marsh habitat cannot be supported by the data. The native coastal salt marsh habitat that remains in Southern California provides essential foraging, roosting, and in some cases nesting habitat for the many birds that migrate along the Pacific Flyway.

California in favor of what would appear to be the alien and artificial environment of the saltworks.

14.4 We know there are limited opportunities to expand the critically impacted inventory of coastal salt marsh habitat in San Diego County. At Buena Vista Audubon, we are on record as supporting the restoration of the Buena Vista Lagoon from its current status as an artificial fresh water impoundment to a functioning salt water tidal estuary. At South San Diego Bay, however, we feel that nature has already stepped up and given a vote of approval for maintaining the status quo. It would seem folly in the highest degree to destroy a functioning ecosystem which provides a unique habitat which has been selected by thousands of birds, with the hope that these birds will accept and continue to flourish in a recreated habitat with an entirely different mix of regimes and characteristics.

14.5 We hope you will select an alternative for managing the resources of South San Diego Bay which inflicts as little change as possible on the thousands of birds which currently utilize this habitat.

Sincerely,

Andrew Mauro
Director, Conservation Chair
Buena Vista Audubon Society

(760) 753-1266
akamauro@cox.net

14.4 Maintaining the status quo would retain the potential for continuing ecosystem support of the existing diversity and abundance of avian species currently found within the salt ponds, however, no improvements in habitat quality for the listed species that are currently supported on the Refuge would be provided. Restoration of salt ponds in accordance with Alternative D, which also includes strategies for maintaining and in some case enhancing those aspects of the system that support specific avian species, would continue to support a diverse and abundant array of avian species, while also expanding habitat for a variety of other species supported within the bay ecosystem. Under current conditions, a number of ponds provide little or no habitat value for birds or other wildlife. Restoration of the salt works would substantially increase the habitat value of these areas. The no action approach also ignores the opportunity to restore tidal influence to a very significant portion of the bay, returning some 650 acres of the bay to native coastal habitat. Of this, a minimum of 120 acres would be restored to mudflats, a habitat that has been severely reduced from historic levels in the Bay and elsewhere in southern California. The loss of this habitat has resulted in the decline of many dependent shorebirds along the Pacific Flyway (*Hickey et al. 2003*). Another benefit of restoration would be the ability to maintain water levels in the managed ponds at elevations appropriate to support shorebird foraging. Under current conditions, water levels in the ponds are maintained to facilitate salt production, not foraging habitat.

To ensure that the goals and objectives of the CCP are achieved, the detailed restoration planning that would occur following approval of the CCP is proposed to incorporate monitoring and adaptive management as essential components of the restoration process.

Appendix D (CCP final Implementation) has been revised to address in greater detail the next steps in restoration planning.

14.5 Comment noted.

SWIA

August 24, 2005

Victoria Touchstone, Refuge Planner
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Rd.
Carlsbad, CA 92011

Re: Southwest Wetlands Interpretive Association's Response to the San Diego Bay National Wildlife Refuge Draft Comprehensive Conservation Plan and Environmental Impact Statement

Dear Vicki:

The Draft alluded to the fact that these wetland resources are vestiges of what once existed, and presently are isolated in a sea of urbanization. We would like to emphasize the fact that this realization needs to be addressed and re-evaluated looking at the importance of connectivity as a major issue.

15.1 We would emphasize connecting the San Diego Bay with the Sweetwater Marsh/Paradise Marsh Complex and the Sweetwater Watershed and the South San Diego Bay unit as a complex connecting the Bay with the Otay River Watershed. It becomes necessary to evaluate management, education, interpretation, restoration, and planning on the grounds that there will be cooperative working interrelationships between the public, NGOs, agencies and elected officials, in order for these resources to survive and thrive in perpetuity. Connectivity will reverse fragmentation and cumulative impact on these resources as we move forward into the future. We would encourage the final Plan to include an addendum incorporating the City of San Diego Natural Resource Management Plan, which is a policy document, the Habitat Restoration Plan for the Otay Valley Regional Park, and the Otay Watershed Management Plan. By including these plans it will encourage and enable a comprehensive approach to resource management.

1. **Recreation & Interpretation**
   a. 15.2 There needs to be strict monitoring of public impact on both the South San Diego Bay (SSDB) and Sweetwater Marsh Complex (SMC). Public use should initially be restricted when there is no supervision. In SSDB the levee on Pond 28 should have a restrictive gate or other means that prevents after hour use to prevent vandalism, human intrusion into sensitive habitat, dogs and other domestic pets, and predators.

Southwest Wetlands Interpretive Association • P.O. Box 575 • Imperial Beach, CA 91933
tel. (619) 575-0550 • fax (619) 424-6420 • www.swia4earth.org

15.1 Section 3.6.1.3 of the Final CCP/EIS has been revised to address the relationship between the Refuge and the various regional resource planning efforts, such as the Otay Valley Regional Park, the Otay Watershed Management Plan, and the MSCP, that have been completed or are currently underway in the South Bay region.

15.2 We agree and the Final CCP/EIS has been revised to incorporate hour and access restrictions for this interpretive trail.

b. Interpretation, education and recreation fall under the basic heading of public use. All activities should fall within the guidelines of the mission of the USFWS (Service). Above all people need to understand the natural condition of the Bay before European settlers arrived and the deterioration that has occurred since that time. The public needs to understand the damage done and the effort and cost it takes to restore these areas. They need to understand how important salt marshes are to fisheries, as natural filters for waste materials, for natural flood management, and for providing habitat for countless different species of wildlife including mammals, reptiles, amphibians, fish, invertebrates and an amazing variety of plant life.

15.3

c. Acquisition of the Egger/Ghio property led to an agreement between the Service, the City of San Diego, the County of San Diego and the City of Chula Vista to set aside a piece of property near the southern boundary of the acquisition for active recreation. We need a buffer between the lands set aside for active recreation and those that will be restored back to viable flood plain by the Service. The design of this recreational area must be consistent with flood plain zoning and management. This recreational area will be part of the Otay Valley Regional Park. Such things as noise and lighting have to be taken into consideration in the design of this area.

15.4

d. Imperial Beach received an eco-tourism planning grant from the California Coastal Conservancy. This planning process should be integrated with the recreational and interpretive program at the SSDB unit.

15.5

e. The section of the Bay Bike Path that crosses the trestle at 13th St. in Imperial Beach and runs along the old railroad right of way to the Fenton Salt works plant, will be started in September of 2006. This should be looked at as a temporary route. If we can restore Pond 20A and move this path to another area this will allow us the restoration of the railroad right-of-way back to wetland habitat in the future. When the bike path is completed, a barrier needs to be constructed along each side to separate the bike path from the Refuge. This would prevent intrusion of domestic pets, vandals, trash and general human impact on the sensitive habitat.

15.6

2. **Fishing** – Any fishing activities that might harm the environment or wildlife, for example abandonment of fishing gear including line and lures, must be monitored closely.

15.7

3. **Restoration & Management of Sweetwater Marsh Unit**

a. On the Sweetwater Marsh unit we strongly encourage adaptive management on the D Street fill for protection of tern and plover nesting and foraging.

15.8

b. We request that the Refuge be expanded to include the mud flats just west of Gunpowder Point. We encourage the Service to move forward on the inclusion of this resource within the boundary of this unit.

15.9

15.3 We agree. These are some of the topics that will be addressed within future public outreach, environmental education, and interpretation programs.

15.4 The City of San Diego is the lead agency for this project and is therefore responsible for the design and development of the recreational facility proposed in the area south of the Refuge. City staff has been coordinating with Refuge staff and the Service's Ecological Services Program in an effort to design the future recreational center in a manner that would be compatible with the habitat goals of the Refuge.

15.5 The Service is coordinating with the City of Imperial Beach on these issues and hopes that such a partnership will facilitate new grant funding opportunities that will allow both agencies to meet their individual public use goals and objectives.

15.6 The alignment of the Bayshore Bikeway in this area will be determined by the City of San Diego and SANDAG's Bayshore Bikeway Working Group. The Service has requested that fencing and other appropriate measures be incorporated into the project design to minimize disturbance to sensitive resources.

15.7 Various objectives described within the draft CCP/EIS address these concerns including Objectives 1.4 and 1.7. Refer also to Response 11.39 above.

15.8 Refer to Response 11.23 above.

15.9 Refer to the first section of Response 11.12 above.

c. We want to encourage the Service to increase the tidal prism of the F and G Streets Marsh, getting rid of obstructions such as roads or fill or anything restricting tidal flow from the Marsh to the Bay. 15.10

d. The connection between the old Sweetwater River channel, which borders National City and Chula Vista and comes under interstate 5 into the Sweetwater Marsh, is known as the Lovett Marsh. The California Coastal Commission used the Lovett Marsh Restoration Project as mitigation for the Midway Aircraft Carrier Project. This marsh restoration acts as a connection between the old Sweetwater River corridor into the watershed. It promotes connectivity from the Bay to the larger watershed. We would encourage the Service to follow up and make sure this project is completed and meets the terms and conditions that the Coastal Commission intended. 15.11

4. **Restoration & Management of South San Diego Bay Unit**

a. Fenton Corporation sold properties for development on the west side of Bay Boulevard to the Charles Company. It is our understanding that these properties are within the Multiple Habitat Planning Area. These plans are not compatible with the restoration and protection of this unit. It creates significant human impact on the resource. It compromises the salt operation and decreases the footprint of the solar evaporation ponds. A land swap would be preferable enabling us to maintain the integrity of this unit. If this project goes forward and the salt operation continues, then the so-called "dead zone" will need to be moved west because of the loss of these ponds to the Charles Company. 15.12

b. The importance of maintaining, protecting, enhancing, and restoring mudflats for wading and shore birds, both migratory and resident species, is very important. The Tijuana Estuary and South San Diego Bay National Wildlife Refuge act as a unit separated by the City of Imperial Beach. Because of sediment problems at the Tijuana Estuary, the mudflats in the southern arm have been destroyed. In 1984 the levies on the old sludge ponds at the Estuary were breached and since then have been converting to cord grass. This is very encouraging for restoring rail habitat, but we need to maintain forage areas and mudflats for wading and shore birds as well. This plan looks adequate, but we do want to emphasize the importance of mudflats for these species. This was mentioned before when we discussed the mudflats off Gunpowder Point. 15.13

c. We totally agree with the concept of phased tidal restoration of the salt ponds and the concept of adaptive management and feel that this approach will help enhance the food chain, including invertebrates, fish, and avian species and at the same time decrease the cost of human intervention, maintenance and management. We are concerned about the long term management of the brine ponds. There is a concern about the need for expertise and cost and artificial management of salinity. If the ultimate goal is to utilize tidal influence as a means of management and to phase out the salt operation and minimize the costs, then moving to a more 15.14 15.15

15.10 Restoration of the disturbed areas of the F&G Street Marsh and expansion of the tidal prism is described in the draft CCP/EIS as a strategy proposed in the preferred alternative (Alternative C) for the Sweetwater Marsh Unit.

15.11 This project is located outside the approved acquisition boundary for the Refuge and is therefore not addressed in the CCP. The Ecological Services Program of the Service should be contacted regarding this project.

15.12 The property sold to the Charles Company is outside the approved acquisition boundary for the Refuge. Any development on this site would require prior approval from the affected local jurisdictions and various resource agencies. The South Bay Salt Works is in the process of relocating its facilities from this property to the ponds located to the west of the railroad right-of-way in accordance with approved permits from the California Coastal Commission and the Service and review from the U.S. Army Corps of Engineers and the Regional Water Quality Control Board.

15.13 The preliminary restoration plans included in Alternative D propose to restore a minimum of 120 acres of intertidal mudflat habitat within the salt ponds, with additional intertidal areas to be restored within the Otay River floodplain. In addition, benthic invertebrates would be expected to colonize the 230 acres of managed water that would be regulated to provide foraging and roosting habitat for migratory shorebirds and waterfowl. These acreage figures would be further refined during subsequent detailed restoration planning.

15.14 Refer to Response 11.28 above.

15.15 Comment noted.

15.15 cont. natural system would be preferable. The original intent in buying the Egger/Ghio property in the Otay Flood Plain and transferring the property for restoration and management by the Service was to rejuvenate the Otay River corridor as a part of the tidal salt marsh system in the South San Diego Bay Unit.

d. Pond 20A should be a mitigation bank for whoever owns the property. It should be totally restored by funds from whoever needs the mitigation credits. Funds for monitoring, management, and maintenance should be given to the Service. The ownership should be handed over to the Service and become a part of the Refuge. We suspect this is a jurisdictional wetland and we would request that the wetland determination under the Army Corps of Engineers be presented in this document. It would be a waste of money to build a levee between Pond 20A, currently Port property, and the Refuge. Pond 20A is too expensive to build in. The mitigation credits are too valuable ecologically and economically to allow anything but restoration. It needs to be restored to natural tidal flow. This spring SWIA board members and the Service photographed stilts, avocets, and curlews and other over-wintering birds utilizing the wetlands throughout Pond 20A from Palm Ave. back into the Refuge. In the past, Pond 20A has been an important area for phalaropes. If Pond 20A is restored as mentioned before, the bicycle path should be re-routed around Pond 20A and the old railroad right-of-way should be restored back to salt marsh. 15.16

15.17 5. **Agriculture** -The Otay River Flood Plain was acquired for restoration and management, which we completely encourage. No consideration should ever be given to agriculture again.

15.18 6. **Vector Control** – Any vector control agent used should be ecologically acceptable and minimize harm to wildlife, water quality and the environment in general.

15.19 In closing, we totally support Alternative D, the Preferred Alternative, for the South San Diego Bay Unit, and Alternative C, the Preferred Alternative, for the Sweetwater Marsh Unit, but including the concerns we have listed above.

Sincerely,

mike

Michael A. McCoy
Vice-President
SWIA

15.16 The southern end of Pond 20A is owned by the Unified Port of San Diego and is located outside the acquisition boundary of the San Diego Bay NWR; therefore, the Service has no authority to direct the Port to use this property for a specific purpose. Should the Port decide to restore the pond to coastal wetlands, the draft CCP/EIS does describe how restoration of the Otay River floodplain could be implemented to facilitate restoration within the lower portion of Pond 20A.

15.17 Comment noted.

15.18 The Service has a policy in place to address mosquito control on Refuges. Adherence to this policy and the stipulations included in the Compatibility Determination for this activity (Appendix K) would limit or avoid adverse effects to Refuge resources. Currently, mosquito control operations on the San Diego Bay NWR, as well as in Tijuana Estuary, are conducted by the County of San Diego, Department of Environmental Health under the auspices of a Refuge Special Use Permit #11681 04006. Special conditions in the permit spell out the protocols all personnel are to follow in conducting vector control activities, and all activities are implemented under the supervision of the Refuge Manager.

15.19 Comment noted.

San Diego County Archaeological Society, Inc.

Environmental Review Committee

6 September 2005

To: Ms. Victoria Touchstone
San Diego National Wildlife Refuge Complex
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, California 92011

Subject: Draft Comprehensive Conservation Plan and Environmental Impact Statement
San Diego Bay National Wildlife Refuge
Sweetwater Marsh and South San Diego Bay Units

Dear Ms. Touchstone:

I have reviewed the cultural resources aspects of the subject DEIS on behalf of this committee of the San Diego County Archaeological Society.

16.1 Based on the information contained in DEIS, we note the appropriate inclusion of archaeological monitoring in those areas where excavation will occur. Our only comment is that we would suggest that 36 CFR 79, which provides for curation of archaeological collections and their associated records, be added to Section 5.1.3, Cultural Resources Regulations.

Thank you for providing these documents to SDCAS for our review and comment.

Sincerely,

James W. Royle, Jr., Chairperson
Environmental Review Committee

cc: SDCAS President
File

P.O. Box 81106 • San Diego, CA 92138-1106 • (858) 538-0935

16.1 The Final CCP/EIS has been revised accordingly.

SIERRA CLUB
FOUNDED 1892

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September 7, 2005

Victoria Touchstone, Refuge Planner
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Rd.
Carlsbad, CA 92011

Re: San Diego Sierra Club's Response to the San Diego Bay National Wildlife Refuge Draft Comprehensive Conservation Plan and Environmental Impact Statement

Dear Ms Touchstone:

The Sierra Club would like to thank-you for your work on this Draft Comprehensive Conservation Plan and Environmental Impact Statement. It is a very thorough discussion of the issues and the tables and illustrations are very well done. This is an extremely important project due to the fact that so little of our historic marsh land, wetland and upland habitat is left in San Diego Bay or indeed in California. The South Bay National Wildlife Refuge is an extremely critical area for shorebirds and wintering waterfowl to stop and feed as they travel along the Pacific Flyway. The amount of urbanization occurring around this important asset has the potential to greatly degrade it without extreme measures being undertaken to protect it. All three cities, the Port Authority, the Airport Authority and the citizens of the south bay area must joint with the Fish and Wildlife Service in the protection of this extremely valuable resource. The city of Imperial Beach is currently taking a lead role with their Ecotourism efforts.
Everyone's goal needs to be to increase and enhance the few natural resources left in the San Diego Bay.

17.1

Connectivity is a worthwhile goal. The improvements suggested in Alternative C for the Sweetwater Unit have the potential for increasing the connectivity of the Sweetwater Marsh, bay, Paradise Marsh, and the Sweetwater River. To increase the connectivity and thereby sustainability of the various elements it is important that the Port allow the service to manage the 1,075 acres of port managed water, including all mudflats, eel grass beds and the J Street Marsh to ensure uniform enforcement of existing regulations and allow the Service the opportunity to manage this area to benefit the migratory and wintering birds that utilize the shallow bay waters within and outside of the acquisition area. While

17.2

17.1 Comment noted.

17.2 Refer to Response 11.12.

environmental protection is a part of the Port District's Mission the port has many other conflicting concerns that lessen its ability to manage sensitive environmental areas such as these. The primary mission of the Service is this protection. Therefore, the Fish and Wildlife Service is the best agency to undertake this management.

17.2 cont. This would allow the service to increase the connectivity of all the parts of the Refuge as well. The inlet for the F and G Street marsh needs to be widened and the tidal flushing needs to be enhanced as suggested in Alternative C. The Service could ensure that the inlet area and the mudflats extending to Gun Powder Point were maintained as excellent connections to the Sweetwater Unit. The open waters could be managed to ensure a connection to the Chula Vista Wildlife Refuge and the J Street Marsh. The J Street Marsh is the second largest marsh in the entire San Diego Bay. Its management needs to be turned over to the FWS to ensure its protection from urban encroachment.

THE SIERRA CLUB SUPPORTS ALTERNATIVE C FOR THE SWEETWATER UNIT. Not only would Alternative C provide the greatest Habitat Enhancement and Restoration, but it would also improve existing public uses. Making the Gunpowder Point trail a circular trail would be a positive means of

17.3 improving public enjoyment of the refuge without compromising wildlife protection. C is superior to B in that it provides more strategies for all objectives except 1.4, 2.2, 3.1 and 5.3. The environmental education plan in C is particularly superior. Environmental education is very important in order to enlist the public's aid in protecting the refuge.

It is our understanding that the original intent of Southwest Wetlands Interpretive Association (SWIA), in buying the Egger/Ghio property in the Otay Flood Plain and transferring the property for restoration and management by the Service was to rejuvenate the Otay River corridor as a part of the tidal salt marsh

17.4 system in the South San Diego Bay Unit. This is the plan in Alternative D for the Otay floodplain lands. This restoration has the potential for helping eliminate the backwater effect that currently occurs at the confluence of Nestor Creek and the Otay River, which results in higher flood levels upstream of Nestor Creek. It has been suggested that 40 acres to the south of the refuge lands become an athletic complex as part of the OVRP. This is a completely unacceptable use of this land. More than half of it is in the City of San Diego's Multiple Habitat protection area. The lights and noise from fields and cars would have an extremely adverse effect

17.5 upon the refuge lands. There is now only a dirt road in this area, it lacks infrastructure, and it is in the 100- year flood plain of the Otay River. Mitigating and preventing adverse effects would greatly increase the costs of such a facility. The Sierra Club believes it is very important that the Otay Floodplain be restored

17.3 Comment noted.

17.4 You are correct; the purpose of the acquisition was to establish a critical link between the coastal marine environment of San Diego Bay and the native habitats of the Otay River Valley. The funds for purchasing the Egger-Ghio property came from the California Coastal Conservancy, which transferred the money to SWIA in order to complete the acquisition and transfer the bulk of the property to the National Wildlife Refuge System and a smaller area to the City of San Diego.

17.5 Refer to Response 15.4.

as the wetland and upland habitat it historically provided. The adjacent San Diego City lands should become part of the habitat restoration plan for the OVRP. Restoring these lands would also provide a seamless transition between the OVRP and the South Bay Wildlife Refuge. There are other options for the Athletic
17.5 cont. Complex. Montgomery Waller has adequate space for the Aquatic facility. In fact that was promised to the community there many years ago. The property currently used by Hanson Aggrates either on the west or east side of Byer would be ideal. They supposedly are going to quickly consolidate at Rock Mountain to relieve the impact on the residents to the south. That land is flat, has infrastructure and is much more conveniently located for people from three cities. There is also the lot on Beyer and Faivre that originally was to be part of the park.

THE SIERRA CLUB SUPPORTS ALTERNATIVE D, the preferred alternative, for the South Bay Unit, because it would provide the greatest restoration and enhancement of the refuge as well as increase public use and enjoyment. Preferred construction phasing plan 2 should be implemented to allow for gradual diminishing of salt production. This would allow a natural phasing and give Fish and Wildlife staff more time to master the levees and pumps needed to
17.6 maintain desired salinities. It would also allow more study of the impacts of discharging accumulated salts into the bay, if they were not sold. The current lease requires the Salt Works to take care of the levees. Considering the availability of funding, it would seem that this is a valuable resource to the Fish and Wildlife Service at this time. It would also give the County more time to work with the Airport Authority to obtain the Salt Works buildings as a possible museum/headquarters site.

Every effort should be taken to convince the Airport Authority to turn over
17.7 Pond 20A to the Service as a mitigation bank for its aviation impacts. The Fenton Ponds are possible mitigation banks as well for private parties if some way cannot be found to acquire them for the refuge.

In Summary Table 2-17 clearly shows the superiority of alternative D for protecting habitat values for all species, not just listed species and restoring upland and wetland habitat in the Otay River floodplain. It provides new opportunities for
17.8 wildlife observation and interpretation at Pond 28 and around the Unit's southern perimeter, more acres of nesting- 33 as opposed to 25 in C, more acres of restored habitat- 650 as compared to 440, more acres of cord grass- 470 to 180, and more plover nesting- 33 to 25. Objective 4.1 provides 3 added areas of wildlife observation. Objective 4.2 provides 5 additional opportunities for environmental interpretation and 2 more for environmental education.

We agree increased fishing access should not be allowed. We hope that
17.9 some kind of educational program can be started to emphasize the importance of not discarding fishing line, etc. in the bay. As mentioned this is now a problem that is negatively affecting wildlife.

While the Sierra Club supports increased public education, we would
17.10 like to urge that the proposed trail around pond 28 be open only during hours when

17.6 Comment noted.

17.7 Refer to Responses 15.12 and 15.16 above.

17.8 Comment noted.

17.9 Refer to Response 11.39 above.

17.10 Refer to Response 15.2 above.

17.10 cont.

it can be monitored or only for guided tours. It is important to prevent vandalism and the intrusion into sensitive habitat of humans, dogs, other domestic pets, and predators. When the bike path is completed a barrier needs to be constructed along each side to separate the bike path from the Refuge in order to prevent intrusion of domestic animals and human impact on the sensitive habitat.

Thank-you for your consideration of these comments,

Ellen Shively
Conservation Chair
Sierra Club San Diego Chapter

Theresa Acerro
Land Use Committee

SOUTH BAY SALT WORKS

September 14, 2005

Victoria Touchstone
Refuge Planner
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Road
Carlsbad, CA 92011

Subject: San Diego Bay CCP

Dear Ms. Touchstone:

On behalf of South Bay Salt Works and its management team, with more than 75 years of experience operating the Salt Works portion of the Refuge, we respectfully submit our comments regarding the combined Draft Comprehensive Conservation Plan ("DCCP") and Environmental Impact Statement ("DEIS") July 2005, (collectively "CCP")for the San Diego Bay National Wildlife Refuge. Thank you to the U.S. Fish and Wildlife Service ("Service"), in particular to the CCP Planning Team of Mendel Stewart, Slader Buck, Victoria Touchstone, Jack Fancher, Brian Collins, Barbara Simon, Tom Pokalski and Bill Molumby, for your countless hours and commitment to produce this most needed CCP to guide the Refuge management over the next 15 years. 18.1

We are writing to request that the U.S. Fish and Wildlife Service ("Service") select Otay River Floodplain Restoration Option C2, and South San Diego Bay Unit, Alternative C Salt Works Restoration Option 1 as the Preferred Alternative within the CCP for the South San Diego Bay Unit of the San Diego Bay National Wildlife Refuge and that the implementation be done on a phased basis. Throughout this document references to the "Alternatives" are specific to the South San Diego Bay Unit Alternatives, unless specified otherwise.

The Sweetwater Marsh and Otay River Floodplains Refuge lands were highly degraded due to heavy industrial and agricultural uses prior to their acquisition. The inclusion of the Salt Works within the wider plan for the entire San Diego Bay Refuge is important, but frequently causes confusion in assessing the unique Salt Works habitat issues. The Salt Works, while not a naturally occurring environment, was disturbed more than 100 years ago and since that time it has served as an island of habitat in a sea of urban development, creating and protecting isolated nesting, foraging and rafting sites for a diverse assembly of migratory birds. During this time the salt ponds have been a stopover point for a number of species of migratory and wintering birds. In addition, the salt pond levees provide regionally important nesting habitat for seven species of migratory shorebirds. We believe that the Salt Works only exists today because of the positive contribution our operation makes to the 1,100 acres of Salt Works habitat. 18.2 18.3

A guiding principal in developing the CCP was to identify opportunities for reversing the trend of historical wetland loss in San Diego Bay. We feel the CCP guiding principal neglects the significant species and habitat dependent upon the current Salt Works portion of the Refuge and simply seeks to recreate a "natural state" that has not existed since 1870. Without appropriate science, study, 18.4

1

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18.1 We appreciate your recommendations. However, having considered among other factors the mission of the National Wildlife Refuge System and the purposes for which the Refuge was established, Alternative D was selected as the preferred alternative. As described in Appendix D (CCP Implementation), which has been revised in the Final CCP/EIS, restoration under the preferred alternative would include monitoring and adaptive management as important components of the final restoration design.

18.2 We agree that the salt ponds in their current condition provide important resources for a variety of migratory and resident birds.

18.3 Comment noted.

18.4 Although habitat restoration to reverse the trend of historical wetland habitat loss in San Diego Bay is an important consideration in the development of the San Diego Bay NWR CCP, the "guiding principals" in the development of the CCP, as described in Section 1.2 of the draft CCP/EIS, are to prepare a plan that fulfills the mission of the National Wildlife Refuge System (NWRS), achieves the Refuge purposes, is consistent with sound fish and wildlife management, and maintains the biological integrity, diversity, and environmental health of the NWRS.

The Service recognizes the existing value of the salt ponds to a variety of migratory and resident birds and has provided information regarding current habitat values in Sections 1.10.2 and 3.4.4.1 of the draft CCP/EIS. It is the intent of the preferred alternative to improve habitat values in the south bay for a variety of organisms, including many of the migratory and resident bird species that currently utilize the foraging, roosting, and nesting

habitats provided within the salt works. It is also our intent to sustain the resources of the Refuge and provide ecosystem support that is not dependant upon the continuation of the current salt operation, as the continuation of the current operation is based on several factors that are out of the control of the Service. Based on our best professional judgment and taking into consideration field experience, knowledge of the resources, the Refuge's role in the ecosystem, applicable laws, and best available science, Alternative D was selected as the preferred alternative. If implemented, this alternative would provide the management direction and long-term vision for the Refuge, a vision that would be achieved through monitoring and adaptive management.

Developing a long-term vision for the Refuge and completing the CCP is just the first step in achieving the Refuge vision. The CCP is designed to make major "programmatic" decisions for the Refuge. The details required to implement these proposals would be further refined once the major policy and direction decisions are made. It is during subsequent project level planning that additional studies, as described in the draft CCP/EIS and further defined in Appendix D of the Final CCP/EIS would be implemented, all of the necessary permits would be acquired, and final engineering and restoration planning would be completed. Public involvement would continue to be an important component of this "step-down" planning process.

practicability or cost/benefit evaluations the Service has arrived at a Preferred Alternative for the Salt Works of Alternative D. The Service is required in the management of a Refuge to ensure that the biological integrity, diversity and environmental health of the system are maintained. Scientific studies and evaluations are necessary steps to establish baseline standards in order to evaluate the range of reasonable alternatives that can feasibly attain project objectives, that demonstrate compliance with federal, state and local laws and regulations, and that must be performed before an alternative is deemed the Preferred Alternative. 18.5

Scientific Work Recommended

1) Monitoring of Listed Species and Migratory Birds – The Service relies on a comprehensive bird survey conducted from February 1993 to February 1994, wherein weekly counts were conducted of water-associated bird use within a 1728 acre area (1219 acres of salt ponds and 508 acres of adjacent tidal habitats) for a baseline. In that year, a total of 522,552 birds of 94 species were observed. Only selected species counts have been completed seasonally since then. The CCP only talks in terms of habitat acreage, but not current populations of existing birds dependent upon the habitat created by the Salt Works. The Service's "refugenet" website asks two questions of CCP's: "Is the Refuge Managing for Multiple Species?" and, "Is it engaged in Endangered Species Recovery?". In the preferred alternative, the focus is on one species and one habitat: "restoration would emphasize the creation of cordgrass-dominated salt marsh to support the endangered light-footed clapper rail." Negative impacts to the endangered California Least Tern through changed habitat are not addressed. In section 4.4.2.3.1, the document states relative to nesting opportunities for terns, gulls, pelicans, and shorebirds post breaching of the outer levees and establishment of salt marsh: "No research has been conducted that would support an accurate prediction of how nest site selection could be affected by this change in conditions around the levees." Alternative D has been set without baselines or scientific studies and this results in insufficient information about this and other alternatives which together lack a meaningful evaluation, analysis and comparison with the proposed project. 18.6 18.7 18.8

2) Multiple Species Conservation Program Monitoring- Surveys must be done to identify the presence of birds in accordance with the City of San Diego's MSCP and any changes would necessitate working in consultation with the County of San Diego and other municipalities, to determine the in-place habitat values and develop plans to mitigate habitat and species loss associated with the proposed changes as a consequence of the Preferred Alternative. Deferring all such survey work to the future precludes any opportunity to adjudge the significant environmental effects of this project and of this plan. 18.9

3) Facilitation of Scientific Research – Scientific research activities should be the starting point to develop baseline status of the Salt Works habitat and to insure that the biological integrity, diversity and environmental health of the habitat are maintained. The probability of success from transplanting and recruitment of cordgrass habitat is presumed in the CCP. The sediment in the South Bay is composed of clay and silt material that may not compress or compact well, and that may be subject to liquefaction. That sediment may contain hazardous or toxic materials as set out below. The tidal influence in South San Diego Bay may remove these relocated sediments and 18.10

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Response to Comment

18.5 We do not agree that all of the scientific studies and evaluations associated with project-level analysis of specific restoration projects need to be completed in order to select a preferred alternative at the programmatic stage of planning. The draft CCP/EIS includes analysis of all issues at a programmatic level, and where adequate details regarding a specific proposal are available, project level analysis is provided.

18.6 The 1993/1994 avifauna study provides the most comprehensive data available regarding bird abundance and diversity within the south end of San Diego Bay. The findings of this study are presented in detail in Section 3.4.4.1 of the draft CCP/EIS. Within this discussion is information regarding species richness, distribution of specific bird guilds within the salt ponds, bird abundance within the individual ponds, and specific numbers of birds observed for selected species of interest, such as phalaropes and eared grebes. In addition, the impact analysis included in Sections 4.4.2.3.1 and 4.4.2.4.1 of the draft CCP/EIS provides information regarding the types and number of species observed within individual ponds and the effects that restoration could have on these species. In recognition of the need to obtain additional baseline data for use in subsequent project-level planning, the current avian monitoring program will be expanded to include a year-long study of the avifauna in south San Diego Bay similar to that conducted in 1993/1994.

18.7 The focus of the preferred alternative is on managing the Refuge to support the recovery of several federally listed species, as well as the array of fish, wildlife, and plants that occur within the south bay. The focus is not on "one species and one habitat." The goals and objectives included in Section 2.3.5.2 of the draft CCP/EIS provide the direction for how the Refuge should be managed and therefore represent the focus of this CCP. The strategies proposed under the preferred alternative are intended to increase the successful reproduction of the Refuge's listed species including the California

least tern, light-footed clapper rail, and western snowy plover, expand and enhance nesting habitat for ground nesting birds, maintain significant numbers of shorebirds, expand habitat for fish and invertebrates, and minimize disturbance to wintering waterfowl and other migratory birds. The strategies included in the draft CCP/EIS for the light-footed clapper rail and the other listed species supported by the Refuge are consistent with the recovery actions recommended in the Service's recovery plans for these species and the strategies proposed to support other bird species are consistent with various bird conservation plans.

18.8 The potential effects to listed species from implementing Alternative D are presented in Section 4.5.2.4 of the draft CCP/EIS. Refer also to Response 10.21.

18.9 Monitoring in accordance with the implementing agreement of the MSCP is conducted annually on the Refuge (see Section 2.3.1.1 of the draft CCP/EIS). Specifically, annual monitoring of nesting activity at the salt works and D Street Fill is conducted for the federally-listed California least tern and western snowy plover and other seabirds, such as the elegant tern, that nest at the salt works. Annual surveys are also conducted for salt marsh bird's beak and Nuttall's lotus. As stated in Response 10.23, the actions proposed for this Refuge would have no effect on the County's MSCP responsibilities.

The analysis of the consequences to MSCP covered species such as the California least tern, western snowy plover, and elegant tern that is provided in the draft CCP/EIS takes into consideration more than eight years of California least tern, western snowy plover, and ground nesting seabird monitoring data, data compiled from other known nesting sites, and our best professional judgment. The proposal to conduct additional baseline surveys and pre- and post-

restoration monitoring is an important component of detailed restoration planning and does not represent an attempt to defer survey work to the future. Further, the continued collection of data under current conditions is not likely to provide a definitive answer to the question of how individual species might respond to the restoration of the salt ponds. However, observations made at other nesting sites in southern California confirm that ground nesting seabirds do not restrict their nesting locations to sites that are surrounded by water, nor do they always select sites that are located immediately adjacent to water. We also know from data obtained both at this site and at other sites that ground nesting seabird diversity and abundance varies from year to year. A species might "abandon" a site either temporarily or for several years due to various factors that are unrelated to existing landscape conditions. This is the type of data that would be considered during the preparation of detailed restoration plans.

18.10 Successful and marginally successful attempts to restore cordgrass habitat in Southern California have provided important insight about those factors, such as tidal inundation, elevation, slope, soil salinity, sediment grain size and organic content, wave force, presence of contaminants, and availability of nutrients (*Zedler 1984*), that influence restoration success. The data and recommendations provided from previous projects would be used to develop project-level restoration plans for the Refuge. To address this concern at the program-level, the draft CCP/EIS states on page 2-74, "Prior to final restoration planning, substrate analyses of pond sediments and the material to be excavated from the Otay River floodplain would be completed to determine the suitability of the sediments for salt marsh restoration. This analysis would consider factors such as grain size and salinity levels. An investigation would also be conducted to characterize the extent and type of contamination, if any, within the areas to be excavated." Similar language is also provided on pages 2-89 and 2-90 of the draft CCP/EIS. The susceptibility of the underlying soils to liquefaction has no relevance to its suitability for cordgrass restoration.

18.11 thereby affect the ability of the cordgrass habitat to succeed and may discharge toxic materials. The brine manage area may incur a failure that results in a sudden and deadly release of hyper-saline waters. This is an example of why thoughtful scientific study and demonstration projects should be performed.

4) Environmental Effects of the Proposed Alternatives - The draft CCP fails to adequately discuss the significant environmental impacts of the alternatives identified as the preferred action. Assessment of the adverse environmental effects which cannot be avoided and the relationship between the irreversible and irretrievable resource impacts resulting from that preferred alternative should be identified and supported with basic scientific and analytical data that allows for a comparison among

18.12 the alternatives. This failure to define the issues and provide a clear basis for choice among the options by the decision makers creates a serious defect in the existing document. Considering that the preferred alterative is to maximize the change of habitat of the salt ponds while restoring approximately 650 acres to tidal influence with a preference for cordgrass dominated salt marsh habitat fails, even as a general planning document, to properly assess the environmental impacts of this preference. The refuge currently contains approximately 214 acres of salt marsh, and this preferred alternative would add approximately 450 additional acres to the South Bay unit. There is

18.13 little evidence to demonstrate the effect and vitality of the existing cordgrass habitat or whether improvements to that segment of the South Bay unit would be an appropriate first step to protect the clapper rail, and there is even less assessment of what the collateral consequences of selecting Alternative D would be to existing habitat and species.

5) Impact of the Dredging Activities - Alternative D includes restoration to the Otay River Flood Plain which would involve dredging between 723,000 and 970,000 cubic yards of material that would be relocated within the Otay Flood Plain area. This relocation could raise the ground level between 12 and 18 feet above the existing elevations and would block previously open westward views. The

18.14 proposed mitigation is to reduce the height of the new upland area to a maximum of 8 feet and by use of view corridors at 3 of the relocation sites. However it is not clear what happens to the additional 10 feet of material removed from these areas, nor is there any mention of the additional truck traffic, air pollution, noise, and other factors associated with implementing this plan. Equally troubling is uncertainty of the probability of success of this proposal for the Otay River Flood Plain.

(a) Stability of Soils

(i) The Otay River Flood Plain contains 2 to 3 feet of uncompacted fill soils. Below

18.15 the fill is relatively soft and compressible alluvial/bay deposits (GEOCON 1986). These soil characteristics represent a geotechnical constraint and the placement of the soil onto upland areas. Prior geotechnical analysis indicates the low sheer strength of the existing soil and that it could adversely affect the long-term stability of the fill slopes, as well as the new channel slopes constructed within the Otay River to accommodate channel widening as proposed by the plan. While it is true that no structures are proposed in the Otay River Flood Plain area, the adverse effects of the existing soil conditions could undermine the entire project. The attempt to address this dilemma through a slope gradient ratio has not been adequately analyzed, and if this design proves geotechnically unstable much

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Response to Comment

18.11 The need for routine monitoring and occasional maintenance of the internal and external levees following breaching is addressed in Sections 2.3.2.3 and 2.3.2.4 of the draft CCP/EIS. Although there would always be the potential for levee failure, just as there is today under current conditions at the salt works, the final restoration design would take into consideration the various factors that could trigger such a failure and incorporate, as appropriate, measures to minimize such an occurrence. An example of this is provided on page 2-80 of the draft CCP/EIS, where a stone revetment is proposed along the southeastern edge of the salt works to protect the internal and external levee system from damage due to overtopping during a major flood event on the Otay River. Failure of a levee within the brine management area could result in temporary impacts to resources within the restored habitat area, however, based on the hydrodynamic and salinity transport modeling conducted by Philip Williams & Associates to evaluate the potential effects of pond breaching on salinity levels in the bay (refer to Sections 4.2.2.3.3 and 4.2.2.4.3 of the draft CCP/EIS), it is unlikely that any significant adverse impacts to the bay environment would result from such a levee failure.

18.12 Chapter 4 of the draft CCP/EIS includes an extensive discussion of environmental consequences. This analysis addresses issues related to the physical environment, biological resources, cultural resources, and the social and economic environment. In addition, issues are defined in Chapter 2 of the draft CCP/EIS and Table 2-17 provides a comparison of the alternatives by issue. See also Response 10.20.

18.13 Cordgrass habitat within the South San Diego Bay Unit is extremely limited due to the extent of habitat modification that has occurred in this area over the last 100 years. Currently, only one or two clapper rails occupy the habitat within the Otay River channel upstream of the salt works. Based on experience elsewhere, we believe that if additional suitable rail habitat were to be provided in this area, the

number of clapper rails would increase. The importance of restoring cordgrass-dominated salt marsh habitat as an appropriate first step in the recovery of this species is discussed in the Light-footed Clapper Rail Recovery Plan (*USFWS 1985*). The primary objective of the recovery plan is to increase the species' breeding population by preserving, restoring, and/or creating adequately protected, suitably managed wetland habitat consisting of at least 50 percent marsh vegetation, and the recovery plan proposes increasing the amount of suitable habitat in the vicinity of the Otay River mouth in an effort to increase rail numbers in this area (*USFWS 1985*).

18.14 Page 2-68 of the draft CCP/EIS states "Depending upon the soil characteristics, grain size, and other factors, this material [the material excavated from the Otay River floodplain to restore coastal wetland habitat] could be exported from the site; placed on those areas of the site proposed for upland restoration; used to construct the levee that would be relocated to the southern Refuge boundary in Pond 20A; and/or used to restore and enhance habitat within the salt ponds . . ." Tables 4-3 and 4-4 in the draft CCP/EIS present the estimated truck trips that would occur over the life of the project for all potential earthmoving scenarios that could result from the implementation of Alternatives C and D, respectively. In addition, Sections 4.7.2.2.3 and 4.7.2.2.4 include a discussion of estimated truck trips per day for implementing each alternative. An analysis of potential air quality impacts as they relate to truck traffic, excavation, worker commute trips, and vendor trips is presented in Sections 4.2.2.3.4 and 4.2.2.4.4 and Appendix H of the draft CCP/EIS. The potential effects of noise on sensitive receptors, as well as recommended mitigation measures, are addressed in Sections 4.2.2.3.5 and 4.2.2.4.5 of the draft CCP/EIS.

18.15 The geotechnical engineering investigation conducted in the Otay River floodplain by GEOCON in 1986 identified the soils conditions and geotechnical constraints on the property and made recommendations for mitigating the existing soil conditions. These recommendations were intended to be adequate to support industrial

development on the site, as well as an associated wetland enhancement project proposed for a realigned Otay River. These recommendations were reviewed for applicability to the current restoration project and addressed in the draft CCP/EIS. Based on the conclusions in the report, it would appear that all of the site conditions related to geotechnical issues can be mitigated for the proposed restoration project through proper design and site construction. The specific mitigation measures and appropriate construction techniques for the proposed restoration of the Otay River floodplain would be determined following completion of the additional site analysis that would be conducted during step-down restoration planning. As stated in the draft CCP/EIS on page 4-22, "A qualified geologist would review these and other geotechnical issues prior to project implementation."

or all of these relocated sediments could end up being released into the shallow South San Diego Bay waters. Such an environmental impact is not considered in this CCP.

18.16 (ii) Causing further concern in regards to the stability of the Otay River Flood Plain work is the fact that some of the final grading will need to be conducted below the groundwater table and will require dewatering measures to accomplish this project. Because the soils below the groundwater table will be too wet to allow for proper compaction they will need to be dried and mixed. No modeling has been undertaken to determine the impact of this phenomena, no estimate of the amount of drying and mixing required nor of the costs associated with this activity has been addressed, nor has the location been identified where this activity might occur.

18.17 (iii) Even if the soil stability question could be adequately addressed through slope construction, the impact to this project during a significant storm event, such as the 50 or 100 year storm, has not been addressed. The fact that the soil in this area will in part be underwater and subject to liquefaction and lack of stability is particularly troubling in light of the experience with the mitigation required for the construction of the Chula Vista Marina. That restoration project, sometimes referred to as Bird Island, has shown that created mitigation lands in South Bay can sink below sea level. And that phenomena occurred in a location where the floodwaters of a river were not directly impacting it. Clearly, the soils stability aspects of this project need further analysis if it is to satisfy DEIS requirements.

(c) The Salt Works Dredging.

18.18 (i) It is estimated that approximately 165,000 cubic yards of material will need to be cut from the salt ponds and that approximately 900,000 to 1.1 million cubic yards of material will need to be brought on site to implement Alternative D. The service does note that they will need to import approximately 300,000 to 500,000 cubic yards of this fill material and an estimated 65,000 cubic yards of clean sand to accomplish Alternative D. The remainder of the fill material is to be borrowed from the Otay River dredging activities. The imported fill and sand will generate 18,000 to 28,000 truck trips to the site over the life of the project and it would require the use of numerous vehicles to implement the project. Impacts to the surrounding neighborhood from these activities is not addressed.

18.19 (ii) Under Alternative D, the existing elevation within ponds 10, 10A and 11 would be altered to achieve the elevations known to support cordgrass. The desired elevations would be achieved by filling some ponds and re-contouring other ponds. Thus, the appearance of these western ponds would change from water-filled to inner-tidal mud flats or cordgrass. The rest of the salt pond restoration would likewise be achieved by raising the elevation of the ponds. Again the geotechnical constraints of this approach are not adequately analyzed. Recognizing that further soil and geotechnical analysis must be conducted with the development of the final restoration plans begs the question of whether this comprehensive plan itself should include such a drastic approach when the consequences are admittedly not understood. The report fails to provide any analysis of significant alternative environmental impacts, nor a clear basis for the choice among the alternatives

(d) Stagnation of South Bay Waters.

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18.16 Dewatering and soil drying prior to compaction, which are typical construction practices in floodplains, would occur on upland areas within the Otay River floodplain. Placing, spreading, and compacting of fill material would be undertaken with oversight by a qualified soils engineer. No modeling is required to accomplish these tasks; however, soil testing would be necessary in order to complete final restoration plans. These are project-level details that would be addressed during step-down planning. The environmental consequences of implementing these types of activities are addressed in the draft CCP/EIS.

18.17 Liquefaction is a process that occurs during significant ground shaking associated with an earthquake, not during a flood event. The hazards caused by liquefaction are related to potential structural damage to buildings and infrastructure, not to undeveloped land. Ground subsidence could be a concern for restoration areas; however, in this case, the geotechnical investigations that have been conducted on this site have not identified a significant concern related to subsidence. Additionally, the erosion hazard of the soils present within the floodplain is described as slight (*USDA 1973*). The potential effects of a significant storm event are described in Section 4.2.2.3.3 and Appendix I of the draft CCP/EIS. Additional hydrodynamic modeling would be conducted during the preparation of detailed restoration plans.

18.18 Impacts to the surrounding neighborhood from truck traffic are addressed in Sections 4.7.2.2.3 and 4.7.2.2.4 of the draft CCP/EIS. Imported soil could come from the adjacent Otay River floodplain (which would generate trips internal to the project, creating no adverse effects to the surrounding neighborhoods) or could be transported onto the site via Main Street, following the same truck route currently used to transport salt from the existing salt works.

18.19 We disagree with the statement that sufficient geotechnical information is not provided within the draft to conduct an adequate

program-level analysis of potential impacts. As described in Section 3.3.3.2 of the draft CCP/EIS, several geotechnical engineering investigations have been conducted within the South San Diego Bay Unit over the years and these investigations provide important information regarding surface and subsurface soil conditions, as well as provide recommendations relative to the geotechnical engineering aspects of future site development. A more detailed analysis would be conducted during project-level restoration planning.

SOUTH BAY SALT WORKS

Significant dredging activities affecting almost a hundred acres of land in the Otay River flood plane will create local and downstream impacts in South San Diego Bay. Substantial modifications to the landscape will increase sedimentation during the grading and the fill activities. The potential for the generation and release of pollutants from the sediment as well as from the construction equipment itself, the release of poor quality groundwater into the surface water as a result of de-watering during the
18.20 construction phase, and the alteration of water circulation patterns which can inhibit mixing and promote stagnation, are all substantial concerns that are not addressed in the CCP. South San Diego Bay already has limited mixing capacity and the mixing that currently exists is in some part due to the hundreds of millions of gallons of cooling water discharged from the South Bay Power Plant. However, that discharge cannot be counted on to exist in the future. The Port of San Diego owns the power plant and Duke Energy operates it. The Duke lease has a phase out and shut down provision regarding the power plant and Duke recently announced it plans to sell its generating plants in California. The CCP makes no mention of this loss of mixing water in South Bay or what the environmental effects might be.

(e) Toxicity in Otay River Flood Plain and South Bay.

A 1991 survey identified DDE, a breakdown product of DDT, in the Otay River flood plane. PCBs were also identified at detectable concentrations. The service has continued to pursue funding to complete these 1991 studies but has not yet undertaken any further analysis. In 2004 the service conducted a contaminants assessment process (CAP) that noted the presence of organochorline
18.21 pesticides within the Otay River flood plane and detectible levels of barium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc just to the northeast of pond 20A. They also noted that a sewer treatment plant that operated within the Otay River flood plane between the 1950's and the early 1960's may have been the source of the various metals and that historical agricultural production in the area may have contributed the pesticides. Clearly additional assessment and characterization must be conducted before a plan to reuse on-site cut and fill material both in the Otay River flood plain and in the salt ponds must be undertaken before further planning dollars are spent on the preferred alternative.

Even if adequate studies are instituted for the above concerns, there are additional aspects of the CCP that require further analysis and support.

Major Concerns Regarding Elimination of the Salt Works

1) Loss of closed system: Alternative D proposes the elimination of the Salt Works primarily because
18.22 it is an "artificially" created space. The current albeit manmade "Salt Works Habitat" is unique in that the continuous water movement of the Salt Works advances the biological viability of critical habitat and species that are threatened by development and collateral human activity. Although an artificially created space, the salt ponds are a "closed" system that produce a unique ecology and the Service should move cautiously before it removes a system which the wildlife species themselves have expressed as a preferred and proven environment, and that simply does not exist "naturally" and cannot be "mitigated" at a later time or another location. The Service proposes replacing the "closed" system, one without any effluent discharge, with managed brine ponds that is planned to discharge above background saline water into the bay.

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18.20 The potential for water quality impacts as a result of implementing restoration within the Otay River floodplain is addressed on page 4-28 of the draft CCP/EIS. Measures, such as limiting grading activity during the rainy season and implementing appropriate Best Management Practices (BMPs), that would be implemented to avoid or minimize impacts to below a level of significance are also discussed. The specific BMPs to be implemented would be determined during detailed restoration planning and in coordination with the Regional Water Quality Control Board through the Section 401 Water Quality Certification process (per Section 401(a) of the Clean Water Act). Page 4-28 of the draft CCP/EIS acknowledges the potential presence of contaminated soil and groundwater on the site and states that if contamination is verified, remediation or removal of the contaminants would be implemented prior to or in association with site excavation.

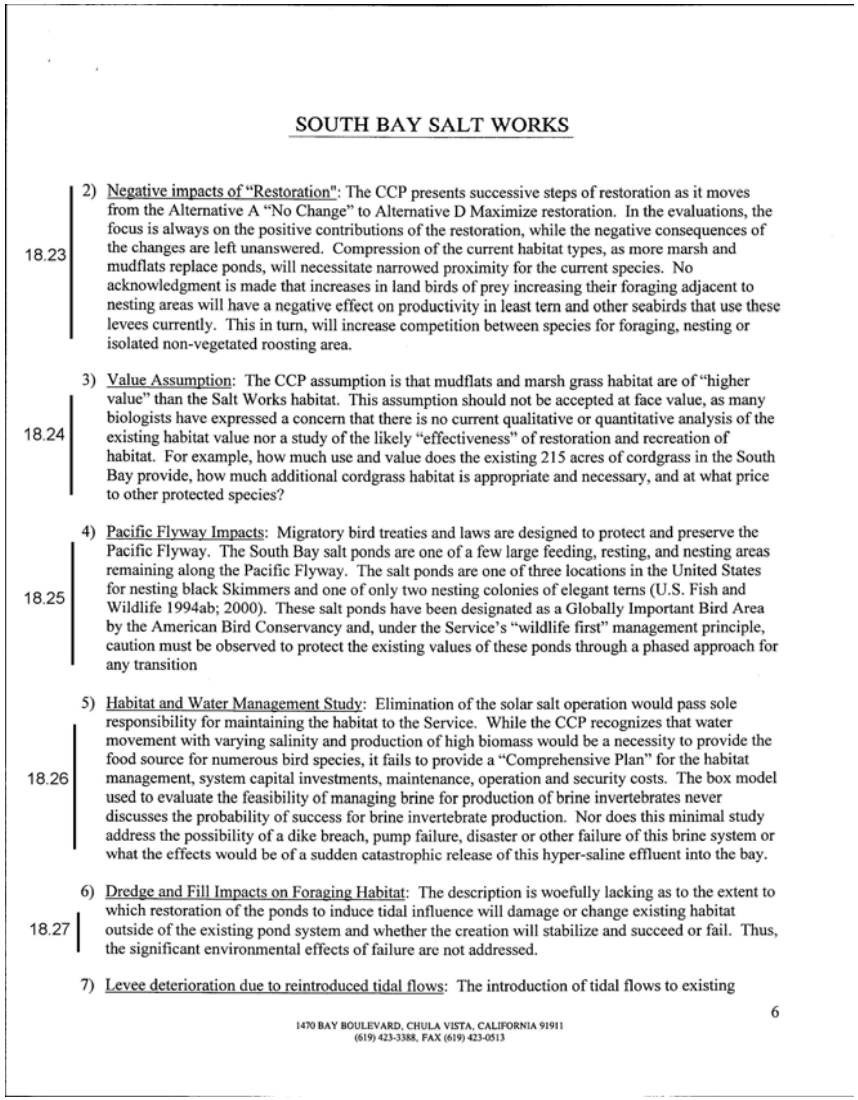
The proposed restoration is intended to restore historic circulation patterns in a manner that would not inhibit mixing or promote stagnation; no significant alteration of existing water circulation patterns is proposed. Page 4-28 of the draft CCP/EIS states: "Any measures necessary to ensure proper tidal mixing and water circulation would be incorporated into final restoration plans." The long residence time in the south bay is acknowledged in Section 3.3.6.2 (San Diego Bay) of the draft CCP/EIS.

The implication that cooling water discharge from the South Bay Power Plant has a significant effect on water circulation in the south bay is incorrect. The results of modeling conducted to examine the environmental factors that influence eelgrass distribution in the South Bay revealed that the natural tidal circulation of the bay far exceeds the relatively minor influence that the South Bay Power Plant has on circulation in the south bay (*Merkel & Associates, Inc. 2000*). Therefore, should the power plant cease to operate, the effects to tidal circulation within the bay would be inconsequential.

18.21 We agree. The need to conduct additional studies to characterize the type and extent of contaminants present within the Otay River floodplain prior to restoration is clearly stated on page 4-28 of the draft CCP/EIS. Appendix D (CCP Implementation) has been expanded to delineate the types of studies and baseline data that would be obtained prior to completing detailed restoration plans for the Otay River floodplain and other portions of the Refuge.

18.22 Restoration of the salt ponds is proposed to improve conditions for federally listed species, including the endangered California least tern and light-footed clapper rail and the threatened western snowy plover. Additionally, Alternative D proposes to maintain, and in some cases enhance, those aspects of the existing salt pond system that support nesting seabirds and other migratory birds. The Service agrees that the salt ponds provide important habitat for a variety of avian species, however, under current conditions, habitat for benthic invertebrates, vegetation, and fish species is extremely limited to non-existent in this closed system. To improve habitat quality for all organisms supported within and around the bay, the Service proposes to restore the salt ponds. Final restoration plans would take into consideration the results of subsequent studies, and monitoring and adaptive management would be incorporated into the project design.

As stated in the draft CCP/EIS, discharge from the managed ponds into the bay would not exceed 5 ppt above ambient salinity levels. The proposed discharge would not result in significant adverse effects to water quality within the bay.



SOUTH BAY SALT WORKS

18.23 2) Negative impacts of "Restoration": The CCP presents successive steps of restoration as it moves from the Alternative A "No Change" to Alternative D Maximize restoration. In the evaluations, the focus is always on the positive contributions of the restoration, while the negative consequences of the changes are left unanswered. Compression of the current habitat types, as more marsh and mudflats replace ponds, will necessitate narrowed proximity for the current species. No acknowledgment is made that increases in land birds of prey increasing their foraging adjacent to nesting areas will have a negative effect on productivity in least tern and other seabirds that use these levees currently. This in turn, will increase competition between species for foraging, nesting or isolated non-vegetated roosting area.

18.24 3) Value Assumption: The CCP assumption is that mudflats and marsh grass habitat are of "higher value" than the Salt Works habitat. This assumption should not be accepted at face value, as many biologists have expressed a concern that there is no current qualitative or quantitative analysis of the existing habitat value nor a study of the likely "effectiveness" of restoration and recreation of habitat. For example, how much use and value does the existing 215 acres of cordgrass in the South Bay provide, how much additional cordgrass habitat is appropriate and necessary, and at what price to other protected species?

18.25 4) Pacific Flyway Impacts: Migratory bird treaties and laws are designed to protect and preserve the Pacific Flyway. The South Bay salt ponds are one of a few large feeding, resting, and nesting areas remaining along the Pacific Flyway. The salt ponds are one of three locations in the United States for nesting black Skimmers and one of only two nesting colonies of elegant terns (U.S. Fish and Wildlife 1994ab; 2000). These salt ponds have been designated as a Globally Important Bird Area by the American Bird Conservancy and, under the Service's "wildlife first" management principle, caution must be observed to protect the existing values of these ponds through a phased approach for any transition

18.26 5) Habitat and Water Management Study: Elimination of the solar salt operation would pass sole responsibility for maintaining the habitat to the Service. While the CCP recognizes that water movement with varying salinity and production of high biomass would be a necessity to provide the food source for numerous bird species, it fails to provide a "Comprehensive Plan" for the habitat management, system capital investments, maintenance, operation and security costs. The box model used to evaluate the feasibility of managing brine for production of brine invertebrates never discusses the probability of success for brine invertebrate production. Nor does this minimal study address the possibility of a dike breach, pump failure, disaster or other failure of this brine system or what the effects would be of a sudden catastrophic release of this hyper-saline effluent into the bay.

18.27 6) Dredge and Fill Impacts on Foraging Habitat: The description is woefully lacking as to the extent to which restoration of the ponds to induce tidal influence will damage or change existing habitat outside of the existing pond system and whether the creation will stabilize and succeed or fail. Thus, the significant environmental effects of failure are not addressed.

7) Levee deterioration due to reintroduced tidal flows: The introduction of tidal flows to existing

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18.23 The adverse effects of restoration on the different guilds of birds that utilize the salt ponds, as well as the potential for increased predation, are presented in Sections 4.4.2.3.1 and 4.4.2.4.1 of the draft CCP/EIS. In addition, a predator management plan (Appendix M) accompanies the CCP and is intended to address the adverse effects of predation on listed species.

Competition for foraging, nesting, and isolated non-vegetated roosting areas by shorebirds and seabirds would not increase should the number of avian predators increase within the Refuge following restoration. Further, the preferred alternative includes proposals to enhance and expand suitable nesting habitat for ground nesting birds and improve foraging opportunities adjacent to nesting areas.

18.24 The CCP does assume that intertidal wetlands, including mudflats and cordgrass-dominated salt marsh, have a higher value for listed species and wildlife in general than do the existing salt ponds. Although monitoring shows that some of the salt ponds provide very good foraging habitat for certain species of birds, the ponds do not provide adequate habitat for fish, bay invertebrates, or aquatic vegetation, each of which represents an important food source for the various species of shorebirds, waterfowl, and other waterbirds that migratory through or reside in the south bay. Further, there are portions of the salt pond complex that provide little, if any, habitat value for birds or other wildlife. Restoration of coastal wetlands has been identified as a recovery action for several of the listed species supported by the Refuge, including the California least tern, light-footed clapper rail, and western snowy plover. During step-down planning, the mix of vegetation types to be provided within the restored ponds would be analyzed in greater detail, with the intent of ensuring that the objectives described in the CCP for listed species, migratory birds, colonial nesting seabirds, and wildlife in general will be achieved.

18.25 Refer to Response 10.22. The statement that the salt ponds are designated as a Globally Important Bird Area is not entirely accurate; the designation applies to the entire South San Diego Bay Unit and includes the shallow subtidal and intertidal mudflat habitats in the bay, as well as the salt ponds.

18.26 The brine management ponds are proposed to supply forage for a specific suite of avian species that rely on the brine invertebrates currently available at the salt works to meet their foraging needs. A water management plan, as described on pages 2-93 and 4-59 of the draft CCP/EIS, would be prepared in association with the completion of detailed restoration plans to establish the operating, maintenance, and monitoring activities and associated costs required to maintain the water management systems proposed under Alternative D. Refer to Response 11.24 for a discussion of the life history requirements of brine invertebrates, and Response 18.11 for a discussion of the potential for levee failure.

18.27 Sections 4.3.2.3.1 and 4.3.2.4.1 of the draft CCP/EIS include a discussion of the potential impacts to existing habitats that could occur as a result of restoring tidal influence within the ponds. The Service has been involved in various coastal restoration projects over the past few decades and has significant expertise in such actions. We believe that the program-level analysis of the potential outcomes of restoration is adequate to enable us to move to the next level of project development; preparation of detailed restoration plans.

SOUTH BAY SALT WORKS

18.28 interior levees that have never seen tidal flows is not addressed, neither is the loss of levee habitat. The Upper Newport Bay Ecological Reserve (former salt works) performed dredging during the late 1980's again in 1998 and an additional $38 million was recently approved to prevent mud-choked marsh from turning into grasslands. Despite Refuge similarities, there is no recognition in the CCP of maintenance dredging required due to silting of low lying areas after restoration breaches levees.

8) Economic Impacts: The CCP states, "moderate benefits would result from short term construction jobs, but these benefits would be offset by the loss of 22 jobs at the salt works." Mitigation issues left unaddressed are:

18.29 i) The Port acquired the Salt Works business in 1999 for $5.0 million, South Bay Salt Works pays rent of $150,000 a year to the San Diego County Regional Airport Authority and in 2009 will pay that rent to the Service, unless it is no longer able to operate the salt ponds.

18.30 ii) Morton Salt Company and South Bay Salt Works are the principal providers of industrial salt in Southern California. The elimination of South Bay Salt Works from the market would result in a virtual monopoly for Morton Salt and create North American Fair Trade Acts (NAFTA) mitigation responsibilities.

18.31 iii) South Bay Salt Works annually pays more than $300,000 in sales taxes to state and to local municipalities resulting in notification of loss and mitigation responsibilities.

18.32 iv) Mitigation lands and habitat replacement for least tern, snowy plover and other species lost as a result of elimination of Salt Works habitat is not adequately addressed as required by environmental impact statements.

18.33 v) Cost to mitigate loss of levee habitat and maintenance expense to retain desired levees is not considered.

18.34 vi) Dredging cost, hazardous materials, geotechnical study and work, effluent discharge impacts, and catastrophic events and associated contingency costs are not considered.

Major Concerns Regarding Environmental Impacts

18.35 1) Water Quality Standards-The CCP does not describe the water quality standards that would apply in the mitigation area. This information is crucial to any finding of "significant" or "no significant" impact. The CCP cannot compare project impacts against water quality standards, if the standards are not set forth in the document.

18.36 i) Grading Activities – this alternative would result in approximately one million cubic yards of grading related activity (cut and fill). As stated above, the CCP fails to provide sufficient analysis of the environmental impacts associated with the grading work.

18.37 ii) Sediment Quality - The Otay Floodplain is at the tail end of a watershed that is surrounded by industrial (power plant) and agricultural activities. It is likely to contain pesticides such as DDE and may contain toxic substances such as chromium, copper, lead, mercury, zinc, PCBs, and PAHs, which have been found in sediment quality in San Diego Bay. Limited water circulation and flushing exacerbate any such contamination problems; yet, no meaningful assessment of these risks is provided.

18.38 iii) Salinity-The CCP indicates that the proposed brine management system is based on a "Desalinization and Brine Management Feasibility Assessment" which included "several simplifying assumptions for the purpose of preliminary feasibility assessment." We need

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18.28 The issue of levee maintenance is addressed in Response 18.11. The draft CCP/EIS (Section 4.2.2.3.2) also acknowledges that wind and tidal action could affect the internal pond levees. This issue would be studied in greater detail during step-down planning.

We do not anticipate the need for maintenance dredging in the ponds following breaching due to the limited amount of sediment movement and accumulation in San Diego Bay. Fluvial sediment contributions to the bay are limited due to the small number of drainages that enter the bay, the fact that many of these drainages are controlled by dams, and the generally non-scouring stream velocities experienced downstream from the dams (*Smith and Graham 1977*). Additionally, because sediment is trapped within the series of ponds located just to the east of Interstate 5, the majority of the sediment generated to the west of the Upper and Lower Otay reservoirs never enters the bay.

18.29 The Port acquired the land and equipment used by the salt works in 1999 with the understanding that salt production on the site could eventually be phased out. Sections 3.6.6 and 4.7.6.2 have been revised in the Final CCP/EIS to describe the South Bay Salt Works contributions of annual sales tax and lease revenue. It also notes that rent could also be paid to the Service in the future should salt production continue beyond 2009.

18.30 Based on our review of the North American Free Trade Agreement (NAFTA), we disagree that NAFTA imposes any such mitigation obligations on the FWS. As required by NEPA, the draft CCP/EIS discloses the economic consequences of eliminating commercial solar salt production in the south bay.

18.31 As described on page 4-123 of the draft CCP/EIS, Congress allocates payments to the counties under the Refuge Revenue Sharing Act to partially compensate for the loss of property taxes. The fact that there is a commercial operation on the Refuge that generates revenue for local and state government above what is allocated through the Refuge Revenue Sharing Act is an unusual situation that will provide added benefits while the operation exists, but does not result in the need for mitigation should the sales tax revenue cease to be available.

18.32 No habitat for least terns and snowy plover would be lost as a result of implementing Alternative D. In fact, the proposals included in Alternative D are intended to increase the amount of nesting and foraging habitat for these species. Refer also to Response 10.21.

18.33 Cost is not one of the factors considered when evaluating management alternatives for a CCP. The factors that are considered are described in Response 18.4. Once an alternative is selected as the proposed action, the process of identifying funding to implement the various strategies would be initiated. Potential funding sources are described in Appendix D.

18.34 Refer to Response 18.33.

18.35 Water quality impacts have been evaluated at the program-level and the Service has coordinated with the Regional Quality Control Board, NOAA Fisheries, and California Department of Fish and Game regarding our preliminary modeling results related to pond breaching. The impact analysis for this issue is presented in detail in Section 4.2.2.3.3 and 4.2.2.4.3 of the draft CCP/EIS. Additional analysis would be implemented in association with the preparation of step-down restoration plans and the processing of the required discharge permits from the Regional Water Quality Control Board.

18.36 In Section 4.2 (Effects to the Physical Environment) of the draft CCP/EIS, there are detailed descriptions of how the grading proposed to implement restoration within the Otay River floodplain and the salt ponds could affect topography, visual quality, geology and soils, agricultural resources, hydrology, water quality, air quality, and noise. Sections 4.3 and 4.4 describe how the proposed grading would affect habitat and vegetation resources and wildlife and fisheries, respectively. Section 4.5 presents the potential effects to listed species. Section 4.6 describes the potential effects of grading on cultural resources and Section 4.7 addresses the potential effects to the social and economic environment, including land use, traffic circulation (truck traffic), public utilities, public access, and odors. Refer also to Response 18.14 above.

18.37 The information known about potential contamination within the Otay River floodplain is presented in detail in Section 3.3.8.3 of the draft CCP/EIS and the need to conduct additional studies to characterize the type and extent of contaminants present on the site and to remove or otherwise remediate the contaminated sediments or groundwater prior to or in association with excavation of the site is stated on page 4-28 of the draft CCP/EIS.

18.38 The purpose of the brine feasibility assessment was to determine if it would be feasible to maintain a brine operation as described in the draft CCP/EIS. The assessment considered the flow rates required to provide suitable habitat for brine invertebrates and to dilute the brine back to salinity levels no higher than 5 ppt above ambient bay levels prior to discharge into the bay. The modeling indicates that it is feasible to achieve these conditions. Additional modeling would be conducted during detailed restoration planning to determine the most feasible method, in terms of cost and efficiency that is available to achieve the objectives of the managed water component of this action. At the program level, the analysis assumed that discharge into the bay would not exceed 5 ppt above ambient bay levels. Based on our current analysis, no significant adverse effects to the bay

18.38 cont. only refer to the study author's list of the many deficiencies and limitations of the model to demonstrate the inadequacy of this data for EIS purposes. Without Regional Water Quality Control Board standards for discharge back into the bay, the oversimplified modeling done on brine discharge is meaningless, demonstrating that the CCP does not provide a reasonable basis for Alternative D.

18.39 2) Water Quality Parameters- The CCP use of recent studies conducted as part of a regional survey is inappropriate. Water quality parameters at the project site can and should be measured for purposes of establishing baseline conditions, and they should factor in other reasonably foreseeable projects in South Bay.

18.40 3) Air Quality -The CCP fails to list the state numeric threshold for lead and priority pollutants. There is no evaluation of the health risk associated with the project's diesel exhaust as required by the San Diego County Air Pollution Control District. NEPA requires federal agencies to consider "the degree to which the proposed action affects public health or safety," in determining whether its proposed project "significantly" affects the environment. The "cumulative" air quality impacts are not addressed in the CCP.

South Bay Salt Works Preferred Alternative Phased

18.41 We request that the Service select the "Otay River Floodplain Restoration Option C2" followed by a phased "Salt Works Alternative C, Option 1" and that the Service designate this as the Preferred Alternative for the South San Diego Bay Unit. The nature of the salt-making process requires a biologically healthy and abundant environment consistent with the Service's objective for the refuge.

18.42 Any modification of the salt ponds requires a thorough and prudent scientific consideration of long-term habitat impacts. There must be recognition that a viable Salt Works has contributed positively to the ecological value of the refuge; that the Salt Works requires a sufficient acreage to retain its economic viability, and thereby its ability to continue to support the habitat value within this intense urbanization node.

18.43 The past, present and future habitat values of the refuge are an important consideration in the selection of a preferred alternative for the South San Diego bay Unit. Given the high value of the existing habitat, the presence of federal and state endangered and threatened species, the unpredictable success of potential restoration plans, we believe that it is critically important to take a "phased" approach to the proposed restoration.

18.44 South Bay Salt Works suggests that the initial phase of restoration be the restoration as described in the CCP as South San Diego Bay Unit Alternative C- Otay River Floodplain Restoration Option 2 as it would transform 90 acres of unproductive habitat to potentially beneficial wetlands. We use the term "potentially" benefit" to the refuge because the biology of creating natural habitats does not always generate the ecological value expected.

Successive phases of restoration could be the plans proposed under "South San Diego Bay Unit

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environment, or to bay water quality, would occur under these conditions. Additional analysis would be conducted in association with subsequent step-down restoration planning.

18.39 The use of recent studies is appropriate as the results of these studies provide a regional perspective and present information relevant to the existing water quality conditions within that portion of the Refuge that includes the open waters of the bay. As discussed previously, the information provided is adequate to address the potential impacts of the various management alternatives at the program-level. Additional analysis would be conducted as deemed appropriate by the Service, the Regional Water Quality Control Board, and others during detailed restoration planning.

18.40 Air quality issues are discussed in Section 3.3.7 of the draft CCP/EIS and the current national and state ambient air quality standards are provided in Appendix G. The emission rates, including those for lead, that must be evaluated for Federal Actions are stated on page 3-21. Sections 4.2.2.3.4 and 4.2.2.4.4 describe how the air quality calculations were conducted, the assumptions that were made, and the results of the calculations. Lead emissions were not analyzed as leaded gasoline is no longer produced and therefore lead emissions from gasoline-powered motor vehicles have been eliminated. Diesel fuel does not contain lead, so lead emissions from diesel-powered construction vehicles is also not an issue. Cumulative air quality impacts are addressed in the draft in Section 4.9.2.1.

18.41 Comment noted.

18.42 The Service recognizes the contributions of the current salt operation to Refuge resources and agrees that regardless of the management direction, implementation must occur in a manner that will achieve the Refuge purposes, goals, and objectives.

18.43 Comment noted. A phased approach to restoration is described in revised Appendix D of the Final CCP/EIS.

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18.44 cont. Alternative C, Salt Works Restoration Option 1; after serious scientific study of the Otay River Floodplain Restoration, to establish population and habitat goals and expectations. Within Alternative C Option 1, restoration should be phased, beginning with Pond 11. Most importantly, the modified ponds can be analyzed for effectiveness in recruitment of target flora and fauna against baseline goals, along with quantitative and qualitative analysis of the new habitat compared to the former habitat values as salt works.

The third phase of restoration should be undertaken only after a serious scientific evaluation of the successful restoration of the Otay River Floodplain and Pond 11. Based on adaptive management, population and habitat goals and expectations for Ponds 10 and 10A should be established, and only then should restoration on these ponds begin.

18.45 We thank the Service for this opportunity to present comments regarding the CCP. We believe that it is very important that the Service consider the contributions that the Salt Works has provided for more than 100 years, to the habitat and wildlife of San Diego Bay. We would like to continue partnering with the Service on the stewardship of this valuable habitat. We would appreciate the opportunity and would be available to discuss our requests and concerns with the Service at your convenience prior to issuance of the final CCP.

Respectfully,

For South Bay Salt Works
Tracy Strahl
Vice President
GGTW LLC dba South Bay Salt Works

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18.44 The suggestions for restoration phasing are noted. We agree that restoration should be implemented in association with monitoring and adaptive management, as addressed in revised Appendix D.

18.45 Several meetings were held to discuss project phasing and other aspects of the project.

SOUTH BAY SALT WORKS

September 14, 2005

Victoria Touchstone
Refuge Planner
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Road
Carlsbad, CA 92011

Subject: San Diego Bay CCP

Dear Ms. Touchstone:

18.46 On behalf of South Bay Salt Works we respectfully submit as an attachment to this letter the text of comments regarding the Draft Comprehensive Conservation Plan for the San Diego Bay National Wildlife Refuge made during the Public Meeting held August 31, 2005.

18.47 We request that the U.S. Fish and Wildlife Service ("Service") select Otay River Floodplain Restoration Option C2 and South San Diego Bay Unit, Alternative C Salt Works Restoration Option 1 as the Preferred Alternative within the Draft Comprehensive Conservation Plan and Environmental Impact Statement ("CCP") for the South San Diego Bay Unit of the San Diego Bay National Wildlife Refuge and that the implementation be done on a phased basis.

We thank the Service for the opportunity to present our comments regarding the CCP.

Respectfully,

For South Bay Salt Works
Tracy Strahl
Vice President
GGTW LLC dba South Bay Salt Works

GGTW Comments 9-15-05wcdcomments cover letter

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18.46 Submission of the attachment is acknowledged.

18.47 Refer to Response 18.44 above.

18.48

My name is Warren Dodd.

I am the Chief Financial Officer of South Bay Salt Works and a member of the management team. The management team represents more than 75 years of experience operating the Salt Works. I will be speaking on behalf of the South Bay Salt Works and only as the 1,100 acre portion of the Refuge that is involved in solar evaporative salt production.

Thank you to the Service, Slater Buck, Mendall Stewart, Brian Collins and in particular Vickie Touchstone for the countless hours and commitment to produce this most needed Conservation Plan to guide the Refuge management over the next 15 years. Also, thank you to the Service for their assistance with the daily on going operational issues faced by South Bay Salt Works.

The 300 acre Sweetwater and 2,300 acre South San Diego refuge areas have been combined confusing the assessment of the unique Salt Works habitat issues. The Salt Works is an island of habitat in a sea of urban development, protecting isolated nesting, foraging, and resting habitat sites for the diverse assembly of migratory birds. Over the past hundred years, the salt ponds have been a stopover point for a number of species of migratory and wintering birds. In addition, the salt pond levees provide regionally important nesting habitat for seven species of colonial seabirds.

We believe that the Salt Works only exists today because of the positive contribution our operation makes to the **1,100** of Salt Works habitat.

A guiding principal in developing the CCP was to identify opportunities for reversing the trend of historical wetland loss in San Diego Bay.

We feel that the CCP guiding principal neglects the significant habitat dependence upon the current Salt Works portion of the Refuge and simply seeks a natural state that has not existed since 1870.

The Service is required in the management of a Refuge to ensure that the biological integrity, diversity and environmental health of the System are maintained. Either the Port of San Diego or possibly now the Airport, in conjunction with the Service, are to advance a "holistic habitat restoration plan" for the Salt Works.

Without serious science, study, practicality or cost evaluation the Service has arrived at a PREFFERED ALTERNATIVE; Alternative D. The consideration of alternatives is "the heart of the environmental impact statement".

Study, science and the establishment of baseline standards, compliance with Federal, State and Local regulations should be performed before an alternative is deemed the "Preferred Alternative". Examples of recommended work include the following:

. *Monitoring* of *Listed Species and Migratory Bird* - From February 1993 to February 1994, the Service conducted a comprehensive evaluation wherein weekly counts were conducted of water-associated bird use within a I, 728-acre area (1,219 acres of salt ponds and 508 acres of adjacent tidal habitats). In that year, a total of 522,552 birds of94 species were observed.

We point out that the CCP only talks in terms of habitat acreage and not the population of existing birds dependent upon the habitat created by the Salt Works.

18.48 Responses to these verbal comments are addressed in Responses 39.12 – 39.21.

Multiple Species Conservation Program (MSCP) Monitoring - Surveys should be done to identify the presence of birds in accordance with the City of San Diego's MSCP.

. *Facilitation* of *Scientific Research* - scientific research activities should be encouraged to develop baseline status of the Salt Works to insure the that the biological integrity, diversity and environmental health of the Salt Works habitat are maintained.

Major Issues Identified for the Salt Works - Alternative D

Habitat Management - Following the elimination of the solar salt operation, the Service would have sole responsibility for maintaining the System. The CCP does not provide for this cost of management, system capital investment, operating and possible fresh water costs. The viability of the biomass food source is not supported in the CCP.

Discharge from the Managed Water Areas - The Service Preferred Alternative will result in the annual discharge of millions of gallons of wastewater into South San Diego Bay without serious supporting science, study, practicality or cost evaluation. Additionally, the chemistry of putting hyper-saline waters back into solution is untested.

We express our concern that the CCP list of Required Permits and Approvals was incomplete and entitlement efforts may be wasteful if a Preferred Alternative was perused and ultimately defeated due to inadequate or unrealistic restoration planning. An example of such a permit would be required Wastewater Discharge Permits.

Economics/Employment - the CCP states, "moderate benefits would result from short term contraction jobs, but these benefits would be offset by the loss of22 jobs at the salt works". Issues left unaddressed are:

- The Port acquired the business in 1999 for $5.0 million.
  - Morton Salt and South Bay Salt Works are the principal providers of to Southern California.
  - The elimination of South Bay Salt Works from the market would result in a virtual monopoly for Morton Salt.
  - South Bay Salt Works annually pays more the $300,000 in Sales Tax.

Alternative C1 - South Bay Salt Works "Preferred Alternative": Phased

South Bay Salt Works suggests that the initial phase of restoration be the Otay River Floodplan Restoration Option C2 as it restores 90 acres of unproductive habitat to beneficial Wetlands immediately.

South Bay Salt Works suggests that the second phase of restoration be the South San Diego Bay Unit, Alternative C, Salt Works Restoration Option 1; after serious scientific study of the Otay River Floodplain Restoration to establish population and habitat goals and expectations. Phasing Scenario 2 restoration should begin with the western Pond 11.

South Bay Salt Works suggests that the third phase of restoration be undertaken only after a serious scientific evaluation of the successful restoration of the Otay River Floodplain and Pond 11.

The third phase of restoration, Phasing Scenario 3, should begin once the Service has established population and habitat goals and expectations; then and only then should the restoration of Ponds 10 and 10A begin.

We thank the Service for this opportunity to present comments regarding the CCP.

JOHNSON & HANSON LLP

KEVIN K. JOHNSON*
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September 23, 2005

VIA E-Mail

Ms. Victoria Touchstone
Fish and Wildlife Service
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Road
Carlsbad, California 92011

Re: South San Diego Bay NWR CCP Restoration Options

Dear Ms. Touchstone:

Our law firm has been asked by a number of environmental organizations to comment on the South San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units Draft Comprehensive Conservation Plan and Environmental Impact Statement.

19.1 We are very concerned about the broad changes proposed for the South Bay eco-system in the preferred alternative D. This alternative has the potential to bring major negative impacts to the existing breeding colonies and shorebird habitat in the South Bay.

19.2 The Draft does not accurately address the unique value of these resources nor the very real potential for unintended harm. Additional studies comparing invertebrate prey and bird use of tidal mudflat and non-tidal salt ponds should be conducted to better assess the biological value of each habitat.

19.3 Given the sensitivity and preciousness of the area we also recommend adaptive assessment at each phase of the project as opposed to a single, massive project. For example, restoration of the Otay floodplain would logically be used as a first phase of the project. Once the work is completed, the area should be carefully monitored and then assessed before planning additional phases.

19.4 We respectfully request that the Service reconsider its alternatives analysis and conclusions, including the consideration of other locations for potential restoration of salt marsh habitat.

19.1 The potential effects to ground nesting seabird and shorebird habitat as a result of implementing Alternative D are described in Sections 4.4.2.3.1 and 4.4.2.4.1 of the draft CCP/EIS. As described in the draft CCP/EIS, Alternative D is intended to expand seabird nesting and shorebird foraging habitat, therefore, we do not concur that implementation of Alternative D would have significant adverse effects on seabird or shorebird habitat within the south bay.

19.2 The benefits to birds that are provided by the salt ponds are addressed in Sections 3.4.1.3 and 3.4.4.1 of the draft CCP/EIS. Section 4.4 of the draft CCP/EIS provides a detailed analysis of the potential effects, both adverse and beneficial, to fish, benthic invertebrates, habitat quality, and birds and other wildlife that could result from converting some or all of the salt ponds to intertidal habitat. The need for additional studies prior to completing detailed restoration plans is acknowledged in the draft CCP/EIS and described in detailed in revised Appendix D of the Final CCP/EIS.

19.3 A phased approach to restoration of the salt ponds is addressed in Section 2.3.2.4 and Appendix D of the draft CCP/EIS and further described in revised Appendix D of the Final CCP/EIS.

Ideally, restoration of the Otay River floodplain and the salt pond complex would occur as one comprehensive project, as this would reduce costs and allow grading to be balanced on-site. However, because the timing of restoration is dependent upon the availability of funding, such a comprehensive approach may not be possible. Fortunately, restoration of one of these areas is not dependent upon the restoration of the other. Monitoring and adaptive management can be incorporated into each of the projects' final restoration design.

Thank you for your continuing hard work on these studies which will have such a broad and long term affect on some of San Diego's most precious natural resources.

Very Truly Yours,

Kevin K. Johnson
Johnson and Hanson, LLP

Finally, the lessons learned during the restoration of the Otay River floodplain would not be fully transferable to the restoration design for the salt pond complex. Therefore, there is no basis for assuming that restoration of the Otay River floodplain would be the logical first phase of restoration within the Refuge.

19.4 The Service has reviewed the analysis and conclusions included in the draft CCP/EIS in light of the various comments received during the public review and comment period. As a result, revisions/ corrections have been made in the Final CCP/EIS to address specific concerns and/or to clarify intent.

The intent of the statement in the comment letter regarding the consideration of other locations for potential restoration of salt marsh habitat is unclear. The CCP recommends salt marsh restoration in various locations throughout the Refuge. Those areas that are not proposed for coastal wetland restoration represent either native upland habitat, or in the case of the western end of the D Street Fill, represent an area important for seabird nesting. There are no other areas within the Refuge boundary available for salt marsh restoration. The purpose of the CCP is to prepare a management plan for the Refuge. We have no authority to suggest restoration proposals for properties located outside of the Refuge boundary.

"Nils Warnock" <nwarnock@prbo.org>
09/06/2005 01:05 PM

To <Victoria_Touchstone@fws.gov>
cc
bcc
Subject San Diego CCP

Victoria Touchstone, Refuge Planner
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Rd.
Carlsbad, CA 92011

Dear Ms. Touchstone,

I would like to provide written comments regarding the San Diego Bay Draft Conservation Plan/Environmental Impact Statement (hereafter called the CCP). I am afraid I have had limited time to assimilate the CCP but given the importance of this restoration project to birds that use the Pacific Flyway I thought it important to comment.

As a bit of background, I currently co-direct the Wetlands Ecology Division of PRBO Conservation Science. I have over 20 years of experience studying wetlands birds along the Pacific Flyway and am particularly interested in the use of salt ponds by waterbirds (e.g. Warnock et al. 2002). I am a member of the scientific advisory board of the Western Hemisphere Shorebird Reserve Network (WHSRN), and I helped evaluate San Diego Bay's nomination as a WHSRN site of regional importance for shorebirds. Additionally, I am a Science Strategy Team Member for the South San Francisco Bay Salt Pond Restoration Project.

As a consequence I have read with interest the CCP since the South San Diego Bay Unit currently has 964 acres of salt ponds that are used by a diverse and abundant assortment of waterbirds (Stadtlander and Konecny 1994). . I would particularly like to comment on the South San Diego Bay Unit (hereafter called South Bay Unit) part of the plan because the majority of salt pond habitat is in that unit. While I support the idea of maximizing habitats for the widest diversity of birds (and therefore I agree that the South Bay Unit Alternative D has the widest appeal), I am concerned that the costs and benefits (in particular on the diversity and abundance of waterbirds) of this type of habitat conversion to bird populations have not been rigorously evaluated. Because San Diego Bay is a WHSRN site, a site of special significance to shorebirds, I would suggest that a more quantified approach is needed to properly evaluate the effects of this habitat conversion on bird populations. PRBO has done this type of predictive assessment and we are in the process of doing these types of assessments of the effects of habitat conversions on bird populations in San Francisco Bay (see Stralberg et al. 2003) and at the Salton Sea (Warnock et al. unpubl. data). We have shown that the conversion of salt ponds to various types of tidal marsh benefit some birds but can negatively impact other birds especially shorebirds and other species. Much of this information has been synthesized to date in Stralberg et al. (2003) and Warnock (2005).

20.1

In the CCP there are statements such as seen in Table 11 (page S-37 of the CCP summary) under alternative C where it states "Restoration of coastal wetlands within the Otay River Floodplain

20.1 We believe that there is adequate information available today to disclose and evaluate, at the program-level, the potential environmental consequences of converting the existing commercial salt ponds to a combination of coastal wetland habitat and managed saline ponds to provide habitat for shorebirds, waterbirds, and waterfowl, as described in the CCP. The restored ponds would provide a combination of subtidal, intertidal mudflat, and salt marsh habitat to optimize support for a diverse community of avian and other wildlife resources, with specific acreages of each type of habitat to be determined during the next step in restoration planning. We agree that additional baseline data and analysis of that data would benefit the detailed restoration planning for the South San Diego Bay Unit. Assuming the preferred alternative is adapted as the proposed action, we plan to fully consider the results of ongoing salt pond restoration studies being conducted by PRBO Conservation Science and others for San Francisco Bay and elsewhere in developing specific project-level restoration plans for the salt ponds in San Diego Bay.

20.2 and the salt ponds would provide additional foraging habitat for shorebirds, representing a significant benefit." Results of our studies that I have cited do not support this statement for all shorebirds. In fact as ponds are converted to vegetated wetlands, shorebirds numbers as well as other waterbird numbers are largely predicted to decline.

20.3 Other statements on the same page (page S-37 of the CCP summary, Alt C) that reduction in availability of brine invertebrates within salt ponds will not result in significant adverse effects to these species range wide also cause concern. It is not clear how this was evaluated. Given that at least for phalaropes, we have an incomplete picture of the Pacific Flyway population status for phalaropes, and we know little about how these birds move from site to site within the flyway, I am not sure how such a definitive statement can be made.

20.4 On page S-40, under Alt C and D it is stated that foraging opportunities will be expanded for Snowy Plovers. If salt pond habitat is being reduced (one of the preferred feeding areas for Snowy Plovers) how will their feeding benefits be increased? A more quantitative analysis of the potential impacts of reducing salt pond habitat that Snowy Plovers rely on is especially desirable since this is a federal listed species and breeding plovers in the South Bay Unit have decreased steadily since the early 1990s. Are remaining ponds going to be managed to be "better" plover ponds. What would these ponds look like and what depths and salinities will be managed for?

20.5 One thing that I my have missed in the CCP is a description of how bird populations will be monitored through all the restoration. I read that listed species will be monitored but failed to find mention of other monitoring. I trust all birds will be monitored throughout the restoration, since lack of monitoring of all bird populations through the restoration will result in not being able to adaptively manage the project.

20.6 In summary, I applaud the efforts that have gone in so far towards designing a 15 year CCP for the San Diego Unit – it is a difficult task. However, I would like to encourage the effort to incorporate what we have learned and written about with regards to the conversion of salt ponds in San Francisco Bay, a much larger endeavor but with many of the same problems that you face. I have attached a summary (Warnock 2005) of some of the cost and benefits birds face in efforts to convert San Francisco Bay salt ponds to a mixture of other habitats (a pdf is also available at the web address below).

Please do not hesitate to contact me with questions or comments. I will be in Alaska from 7-17 September 2005 but otherwise available.

Best wishes,

Nils

Literature Cited:

Stadtlander, D. and J. Konecny. 1994. Avifauna of South San Diego Bay: The Western Salt Works 1993-1994. U.S. Fish and Wildlife Service, Coastal Ecosystems Program,

20.2 Restoration of the Otay River floodplain alone would convert a minimum of 60 acres of disturbed upland habitat to tidally influenced wetland habitat, providing significant new acreage of foraging habitat for shorebirds. In addition, restoration of the salt ponds would provide a minimum of 125 acres of intertidal mudflat habitat and approximately 275 acres of ponds which would be managed to accommodate shorebird foraging during migration. Because of the relatively small size of the San Diego salt pond complex (approximately 1,000 acres), the proximity of extensive intertidal areas immediately to the north of the salt ponds, the extent of new habitat that would be provided adjacent to these existing intertidal areas, and the existing depths of the salt ponds in San Diego Bay, we do not believe that the predicted declines in shorebird numbers for the San Francisco Bay salt pond complex is directly comparable to either the pre- or post-restoration conditions in San Diego Bay. In fact, we believe that shorebirds would benefit from the proposed changes in habitat type within this Refuge Unit.

20.3 Information regarding current use of the San Diego Bay salt ponds by phalaropes is provided in Section 3.4.4.1 of the draft CCP/EIS and the environmental consequences of salt pond conversion on this species are addressed in Sections 4.4.2.3.1 and 4.4.2.4.1.

20.4 The significant benefit to snowy plovers described under Alternatives C and D should have addressed foraging opportunities for plover chicks. Under both of these alternatives, enhancements to the existing levees would be made to improve access for chicks to existing and new foraging areas (intertidal mudflats and managed ponds). The Summary of Potential Effects has been revised to state "Expanded nesting and improved chick foraging opportunities would provide significant benefits." Currently, snowy plover fledgling success is poor at the salt works and use of the existing levees for nesting by adult pairs is very limited. It should be noted that the salt ponds used by snowy plovers in San Francisco Bay are very different from the salt ponds in San Diego Bay as extensive areas of

Carlsbad, CA.
Stralberg, D., N. Warnock, N. Nur, H. Spautz and G.W. Page. 2003. Predicting the effects of habitat change on South San Francisco Bay bird communities: an analysis of bird-habitat relationships and evaluation of potential restoration scenarios (Contract # 02-009, Title: Habitat Conversion Model). Final report, California Coastal Conservancy, Oakland, CA. [online] URL: http://www.prbo.org/cms/index.php?mid=131&module=browse
Warnock, N. 2005. Synthesis of Scientific Knowledge for Managing Salt Ponds to Protect Bird Populations. Technical Report of the South Bay Salt Pond Restoration Project. State Coastal Conservancy, Oakland, California. [online] URL: http://www.southbayrestoration.org/Science.html
Warnock, N., G. W. Page, T. D. Ruhlen, N. Nur, J. Y. Takekawa, and J. Hanson. 2002. Management and conservation of San Francisco Bay salt ponds: effects of pond salinity, area, tide, and season on Pacific Flyway waterbirds. Waterbirds 25:79-92.

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Birdsynthesis021405.doc

dry salt pan and unvegetated sand flats are not present in the San Diego Bay salt ponds. Additionally, the levees at San Diego Bay are space limiting to snowy plovers due to competition from the variety of other seabirds and shorebirds that use the levees for nesting. The intent of the proposals in Alternatives C and D is to provide additional nesting habitat within the salt pond complex and enhanced access from nesting areas to foraging areas. We believe the actions included in the preferred alternative to address snowy plover fledgling success would result in significant benefits to this species. Section 4.5.2.4 of the Final CCP/EIS has been revised to provide a more detailed discussion of how the remaining ponds would be managed in relation to snowy plovers.

20.5 Monitoring of the physical and biological conditions of the ponds following restoration is addressed for the preferred alternative in Section 2.3.2.4 of the draft CCP/EIS. In addition, the need for pre- and post-restoration monitoring is presented in revised Appendix D (CCP Implementation) of the Final CCP/EIS.

20.6 Refer to Responses 11.7 and 20.1.

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San Diego, CA 92124
(858) 560-0923
rpatton@san.rr.com

Victoria Touchstone
Fish and Wildlife Service
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Rd.
Carlsbad, CA 92011
Victoria_Touchstone@fws.gov

19 September 2005

Re: San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units Draft Comprehensive Conservation Plan and Environmental Impact Statement

Thank you for the opportunity to review and comment on the San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units Draft Comprehensive Conservation Plan and Environmental Impact Statement. I commend you and the others involved in compiling and refining the project alternatives and options from the diverse and in some cases contradictory recommendations received during earlier scoping and public comment sessions.

As you are aware, I have been involved in least tern and snowy plover monitoring and management around San Diego Bay since 1981. For the 1983 through 1986 seasons, I was one of three monitors covering all sites in San Diego County south of Camp Pendleton. Since then, I have been involved off and on seasonally in monitoring and management of the D Street Fill and South Bay Saltworks sites within what is now the San Diego Bay NWR. I have been contracted with as the primary monitor at South Bay each season since 1999, at D Street/Sweetwater Marsh since 1997, and at Tijuana Estuary since 1984.

I was involved in discussions on planning at Sweetwater Marsh prior to acquisition and have provided review and recommendations throughout this CCP process. Generally, my views on proposed actions within the two units of the Refuge have remained consistent with my previously submitted letters of April and July 2001. As stated then, my primary concern has been the conservation of the existing shorebird and seabird habitats and resources, particularly the multi-species breeding colonies, fish and invertebrate preybase, intertidal mudflat and shallow saltpond foraging habitat, and levees providing nesting and roosting habitat.

21.1 Due to the potential for significant negative impacts to these existing biological resources from some of the proposed conceptual project alternatives, particularly that of restoration of the saltponds to saltmarsh and intertidal habitat, I urged the Service to postpone consideration of any restoration alternatives that may affect hydrology until after a detailed hydrologic survey of the

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21.1 The CCP, once approved, will provide guidance on how the Refuge should be managed over the next fifteen years, as well as provide a vision for achieving the Refuge purposes. As stated in draft CCP/EIS, the EIS is intended to address all proposed actions at the program level. However, where adequate information is available about a proposed action, such as predator management, the analysis is intended to provide project level review. Most of the restoration proposals included in the preferred alternatives for the Sweetwater Marsh and South San Diego Bay Units will require additional "step-down" planning to more fully develop the restoration design. This step-down planning process includes public involvement and requires completion of appropriate environmental compliance documents. As stated in the draft, "the extent of analysis provided for each restoration proposal reflects the level of detail currently available for the specific restoration or enhancement proposal." Also on page 2-87 of the draft CCP/EIS there is a discussion of the need for step-down planning prior to implementation of the restoration proposals including within the preferred alternative. To further clarify the purpose and intent of the CCP/EIS, the Reader's Guide, Section 1.3, and Appendix D (CCP Implementation) have been revised in the Final CCP/EIS. In addition, Appendix D has been expanded to describe how restoration could be implemented through a phased approach that incorporates monitoring and adaptive management. Revised Appendix D also describes the various steps that would be implemented prior to approving final restoration plans for the Refuge. These steps include the completion of additional technical studies and the gathering of updated baseline data.

saltworks, South San Diego Bay, and lower Otay River, and subsequent detailed planning and engineering design. Despite this and the lack of any such studies other than a preliminary model for a portion of the lower Otay floodplain, the preferred alternative identified in the draft CCP proposes large-scale habitat conversion of the saltponds and habitat restoration of the lower Otay floodplain. As the CCP document also serves as an EIS, it is inadequate to address impact assessment and to weigh potential benefits while lacking such studies and more detailed design. 21.1 cont.

I also argued previously that it is essential to maintain salt production operations at South San Diego Bay in order to ensure continued functioning of the saltworks system and to maintain existing biological resources and habitat values. The CCP lacks clarification on the effect particular modifications to the saltponds would have on salt production, and the preferred alternative eliminates salt production without adequate supporting studies, design, or permit for the proposed brine and water management processes. 21.2

It was noted earlier as well that the benefits of saltmarsh and intertidal mudflat restoration should be carefully weighed against the existing habitat values of the shallow saltponds. The CCP does not provide data with which to compare biological values of these habitats nor to support the habitat conversion proposed in the preferred alternative. There is need for baseline fish and invertebrate studies, particularly to document life history requirements for the brine shrimp and brine fly preybase. Comparative data and discussion on bird use of tidal and non-tidal habitats, and the percentage of each species' population relying on this site are lacking and should be studied before such large-scale habitat conversion as that proposed in the preferred alternative is considered. While the information presented may be suitable for planning purposes and a CCP, it is not sufficient for impact assessment for an EIS. 21.3 21.4 21.5 21.6

As expressed previously, discussions with members of Audubon Society chapters, San Diego Field Ornithologists, San Diego Natural History Museum, SWIA, and Sierra Club indicate a general consensus that the public support for the San Diego NWR Complex is based on an impression that USFWS NWR has acquired these lands and resources to fulfill the Refuge goals of preserving and enhancing the existing species and habitats of the South Bay, particularly the avian resources that are so visible and unique, but also highly sensitive. Due to the results of past "restoration" and "enhancement" projects in the area and the processes that led to those projects, there is fear and suspicion of management or restoration alternatives that can be perceived as potentially threatening to these existing resources. Many felt that adequate data and studies were lacking to support any of the proposed alternatives for the saltworks as they were presented in earlier meetings, although components of some of the alternatives have broad support. As stated above, I feel that adequate studies and data are still lacking in the draft CCP/EIS, but there are some components of proposed actions that I support. 21.7

In particular, thank you for preserving the current dike acreage and configuration in the project alternatives of the CCP, as well as for stressing the need for a phased approach and adaptive management. I agree with the proposed enhancement of nesting areas at saltworks and recontouring of the southern slope at D Street Fill. Also, thank you for the assessment and planning for the proposed enhanced but compatible human access and environmental education programs. 21.8

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21.2 To achieve the CCP objectives related to the salt pond restoration proposals in Alternative C or Alternative D, it would be essential to work closely with the operator of the salt works to ensure the continued production of salt within the remaining ponds. Appendix D of the Final CCP/EIS has been revised to include a salt pond restoration phasing plan that could be implemented under Alternative D.

With respect to the need for additional analysis and permits before implementing the proposal to manage water in some of the salt ponds, the draft CCP/EIS (Alternative D, Habitat Restoration) states that additional modeling and analysis, including the development of a water management plan, would be required to address water management in the absence of salt production. This analysis would be coordinated with the appropriate regulatory agencies. Once the design is completed and a detailed design of the water management plan is available, the public process of obtaining the necessary permits and approvals would occur.

21.3 During our evaluation of alternatives, we considered the important benefits that the salt ponds currently provided to a wide variety of bird species, as well as the benefits that salt pond restoration would provide not only to birds, but also to fish, benthic invertebrates, other wildlife, and plants. We believe that the preferred alternative includes a variety of components to meet the needs of most, if not all, of the bird species currently supported by the salt ponds and associated levees, while also providing habitat for the variety of organisms that rely on the natural habitats of the bay for survival. A full accounting of the consequences to biological resources of converting the salt ponds to intertidal and salt marsh habitat is presented in Section 4.3, 4.4, and 4.5 of the draft CCP/EIS.

21.4 The need to conduct additional baseline studies in the salt ponds prior to completion of a detailed restoration plan has been added to Appendix D (CCP Implementation) of the Final CCP/EIS. The life history requirements of brine shrimp and brine flies are well

documented in the literature. Any additional information that is required will be compiled during the development of detailed restoration plans.

21.5 All available information regarding bird use of tidal and non-tidal habitats within the Refuge is included in Sections 3.4.4.1, 4.4.2.3.1, and 4.4.2.4.1 of the draft CCP/EIS. Additional information would be acquired as a result of subsequent studies to be conducted at the salt works in accordance with revised Appendix D of the Final CCP/EIS.

21.6 Refer to Response 21.1 above.

21.7 The Service believes that all of the alternatives evaluated in the draft CCP/EIS are consistent with the goals of the Refuge and the purposes for which each Refuge Unit was established. As stated in the draft CCP/EIS, some alternatives would provide greater benefits for listed species (the primary Refuge purpose) than others. It is the intent of the Service to implement management actions that will improve habitat conditions for listed species, while also providing habitat to support the other migratory and resident species found on the Refuge.

21.8 Comments noted.

21.9 In summary, the draft CCP/EIS does not adequately identify the biological value and significance of the existing resources, nor the potential negative impacts to those resources, particularly waterbirds and saltpond habitats. Additional studies should be performed and data analyzed before any of the alternatives at saltworks are implemented that involve conversion of saltponds to tidal habitat. In concept for Sweetwater Marsh, I support preferred Alternative C without the proposed excavation of the D Street Fill for saltmarsh creation. For South San Diego Bay, I support Alternative B, without breaching of ponds 28 or 29, with modified Option 1 for the Otay floodplain, the possibility of future habitat conversion in pond 11, and human access options proposed in all alternatives.

21.10

21.11 The CCP process is based on a 15-year cycle, and I see no reason to rush into the significant habitat conversion proposed for the saltworks in preferred Alternative D. Too little is known of baseline conditions and habitat values have not been quantitatively compared. The existing biological resources are too valuable to experiment with. The less invasive alternatives will allow refinement of restoration techniques in less sensitive areas and time to complete studies to assess whether Alternative D would truly benefit regional values or result in significant negative impacts to the existing biological resources.

A detailed review of the document follows. Feel free to contact me if clarification is needed.

Sincerely,

Robert Patton

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21.9 Refer to Responses 6.2, 10.20, and 21.1 above.

21.10 Comments noted.

21.11 Comment noted.

Concerns on the Draft CCP/EIS

Chapter 1

21.12 | page 1-21 – "primary management activities include monitoring California least tern and snowy plover" – monitoring and predator control at D Street Fill is actually funded and coordinated by the San Diego Unified Port District rather than USFWS

21.13 | p. 1-23 – "wildlife-dependent recreational uses…limited to the open waters of the bay" – should note guided tours, and that the bikepath along the southern and western boundaries of the Refuge provides viewing access for significant numbers of visitors, as do the parking lot and observation platforms at the adjacent Biological Study Area

21.14 | p. 1-24, section 1.8.1 – Refuge Vision – "undisturbed expanses of cordgrass" – appropriate for Tijuana Slough NWR but questionable for San Diego Bay – I can find no reference to this creed in the 1999 EA nor the earlier CCP handouts and mailings – when was this adopted and was there public review? It implies an inherent and pre-established "vision" of extensive saltmarsh restoration that was not previously communicated to the public. The EA listed "up to 282 acres could potentially be restored" for clapper rail habitat in the proposed Refuge, rather than the 479 acres now proposed in CCP Alternative D.

21.15 | p. 1-27, last paragraph – "Sweetwater Marsh Unit includes…intertidal mudflats…the only other significant area of intertidal mudflat habitat on the bay is located within the South San Diego Bay Unit" – however, significant flats exist adjacent to the South Bay Unit at Emory Cove, at the mouth of Telegraph Canyon Creek near the J Street Marina/Bayfront Park, and most notably between the Delta Beach tern sites at Naval Amphibious Base, where the majority of snowy plovers in the vicinity of the bay forage

21.16 | p. 1-33, 2nd para. – "area now occupied by the salt works historically supported coastal wetlands" – the saltponds of the saltworks are coastal wetlands of significant habitat value

21.17 | p. 1-33, 3rd para. – "salt works displaced a large area of historical migratory bird habitat" – saltmarsh and tidal mudflat habitat was converted to saltpond habitat, possibly of higher value to migratory species
"ponds and levees provide some benefits…in the form of resting and loafing areas" – actually they provide significant benefits for roosting and foraging by large groups of multiple species and guilds regardless of tidal conditions in at least 85% of the saltworks
see p. 40 of the 1999 EA for a more objective summary review of existing conditions and habitat use – the saltponds were identified in that document as "particularly important", a "specialized habitat type", "used by many species", and "provides abundantly for birds' needs"

21.18 | p. 1-35 – "visual access…available from…Bayshore Bikeway" – should include Biological Study Area

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21.12 Although the Port currently funds endangered species monitoring and predator management on the D Street Fill, the statement in the draft CCP/EIS is not incorrect; monitoring and predator management are primary management activities that occur on the Sweetwater Marsh Unit. Additional discussion regarding the Port's participation in predator management is provided in Section 2.2.2.1 (Predator Management Plan) of the draft CCP/EIS.

21.13 This paragraph has been revised in the Final CCP/EIS to include a discussion of limited guided tours around the salt ponds. The other uses noted in the comment do not occur within the current Refuge boundary and are not uses managed by Refuge staff. More detailed information about existing public uses on the Refuge is provided in Section 2.3.2.1 (Public Use Program) of the draft CCP/EIS.

21.14 All aspects of the draft CCP/EIS, including the vision, goals, and objectives, are considered draft proposals until the Final CCP is approved. The public comment period provided an opportunity for the public to address any and all proposals described in the draft.

The Refuge Vision was prepared to address the entire San Diego Bay NWR, which includes the Sweetwater Marsh and South San Diego Bay Units. The reference to expanses of cordgrass-dominated salt marsh applies to both Refuge Units. The vision does not specify the amount of cordgrass to be restored, nor does it state where the cordgrass would be provided. There are opportunities for cordgrass restoration within the Otay River floodplain, as well as the salt ponds. In accordance with the Refuge purpose, which is to conserve federally listed endangered and threatened species, the Refuge vision includes restoring habitat to support the endangered light-footed clapper rail. The Refuge purpose and the desire to improve conditions for the light-footed clapper rail have been communicated to the public on numerous occasions, including within the Environmental Assessment prepared for the establishment of the South San Diego Bay Unit (*USFWS 1999*).

21.15 You are correct; the statement should have said the largest remaining area of intertidal mudflat habitat in the bay. Because the statement is not essential to the discussion, it has been removed in Final CCP/EIS.

21.16 The habitat value of the salt ponds does not change the fact that the area now occupied by the ponds historically supported native shallow subtidal, intertidal mudflat, and salt marsh habitat. The value of the ponds to an array of bird species is addressed elsewhere in the document.

21.17 The benefits to birds that are provided by the salt ponds are addressed in detail in Sections 3.4.1.3 and 3.4.4.1 of the draft CCP/EIS, as well as noted in the paragraphs that precede paragraph 3 on page 1-33. We do not agree that the salt ponds provide higher value habitat for migratory birds than do the native habitats of intertidal mudflat and coastal salt marsh.

21.18 This addition has been made to the text.

Chapter 2 - Alternatives

21.19 p. 2-4, section 2.2.1.1 – Monitoring of Listed Species and Predator Management – "annually per available funding at the D Street Fill" – should seek cooperative agreement with the Port District to ensure annual adequate funding for site preparation, monitoring, and predator management, as elimination would result in negative impacts to the species and possible abandonment of the site

21.20 Section 2.2 Alternatives for the Sweetwater Marsh Unit – Alternatives A & B are acceptable. The proposal to recontour the existing slope along the southwest edge of the D Street Fill should be given priority due to its potential value to snowy plovers. Plovers have abandoned nesting at the site in part due to encroaching saltmarsh vegetation along the western perimeter limiting access between the nesting habitat of the fill and foraging habitat of the mudflats. Details of

21.21 elevations and slope for the recontoured area should have been included for review before the draft CCP/EIS. Slope design will need to carefully balance creation of suitable foraging habitat for plovers and potential loss of nesting habitat for both plovers and terns. Vegetation control will be required for the new slope and should be included in planning and budgeting.

21.22 I question the need for substrate enhancement at the D Street Fill. Substrate appears suitable, but more vegetation control is needed.

21.23 I can support most of the components of preferred Alternative C, with the notable exception of proposed restoration of saltmarsh on the D Street Fill. When the Service received the D Street Fill from Caltrans and other agencies, the entire area west of the Marisma restoration project had relatively sparse strand vegetation and was intended for and used by least terns and snowy plovers. Plovers particularly nested on saltpanne in the southeastern portion of the site. Lack of vegetation management led to invasion of large expanses of the southern site by iceplant, saltgrass, and more recently mulefat and coyote bush, eliminating the possibility of nesting by the endangered and threatened species. The proposed enhancement of the western portion of this area that has been lost is overdue. However, the conversion of the eastern portion of the site, including the saltpanne habitat, to intertidal represents a net loss of nesting habitat for these two species. There is no where else that suitable mitigation acreage exists. Yes, saltmarsh acreage has been lost around the bay, but so has potential nesting acreage for least terns and snowy plovers. If population recovery of these endangered species is truly a goal of the Service, increasing potential acreage to accommodate a growing population should be a priority rather than reducing such acreage. I recognize that this area of the fill is subject to a mitigation leasehold overlay, but it is due to expire within 5 years. There is possibility that the leasehold will expire before it is claimed for mitigation use, so plans should not assume a mitigation claim.

21.24 Per above, objective 1.2 (p. 2-35 to 36) should be modified to not include saltmarsh restoration on D Street Fill.

21.25 I agree with the rejection of the Alternatives Considered but Eliminated, although the Refuge should continue pursuing a cooperative agreement with the Port to enhance protection of the Gunpowder Point mudflats.

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21.19 The Service does not have the authority to commit future funds, only the United States Congress has that authority. The Refuge Complex can however propose specific activities for inclusion in the Refuge Operating Needs System (RONS) and Maintenance Management System (MMS). Appendix D (CCP Implementation) of the Final CCP/EIS describes and prioritizes the various actions proposed in the CCP for the preferred alternative. It should be noted that once the National City Marina is opened, predator management activities on the D Street Fill will be funded through the Port for the life of the marina.

21.20 Comment noted.

21.21 As a program-level EIS, the level of analysis is limited to the information available. Page 2-21 of the draft CCP/EIS states "the details of how and when these proposals would be implemented would be further defined in a future step-down HMP" (Habitat Management Plan). According to Service policy, the HMP "steps down" the direction provided in a CCP to provide refuge managers specific guidance for the implementation of habitat management strategies. Preparation of HMPs is an open process involving the public and other interested parties.

21.22 Based on the nest site data for the years 2003 through 2005 (and initial data for 2006), the majority of the least tern nest sites are concentrated near the center of the D Street Fill. In addition, snowy plovers have not nested on this site since 2000 when one nest was observed. The habitat enhancement proposals for the D Street Fill in Alternatives B and C are intended to increase the habitat quality of this portion of the Fill for these two ground nesting birds. Based on the data, the existing conditions in the area proposed for enhancement are not providing favorable nesting habitat for least terns or snowy plovers (refer to Figure 3-13 in the Final CCP/EIS).

Enhancement activities would involve vegetation removal, improved access to the adjacent tidal areas, enhancement of nesting substrate where appropriate, and installation of new fencing to reduce human disturbance and mammalian predation. These strategies are proposed to support the plan objective of increasing productivity for least terns and reestablishing snowy plover nesting at this site.

21.23 Under Alternative C, the Refuge's 55.5-acre D Street Fill site would include 33 acres of upland managed for nesting California least terns and western snowy plovers and 13 acres of restored intertidal habitat. An additional eight acres of uplands would be retained to provide access to the nesting site and to protect sensitive plant species. Portions of this eight-acre area would also be available for nesting by various ground nesting birds. In total, the D Street Fill would support about 45 acres of potential nesting habitat with at least 33 acres provided on the Refuge and an additional 12 acres provided on the adjacent Port property. As of the 2005 nesting season, less than ten acres of Refuge land on the D Street Fill are being used by least terns for nesting and snowy plovers have not nested at this site since 2000. The amount of acreage available to these species at the D Street Fill under current or future conditions is not considered a limiting factor; however, the quality of available nesting habitat, the distance from and accessibility to appropriate foraging areas, current predation levels, and the amount of lighting and other human-related disturbances are all factors that could be limiting the use of this area by terns and plovers. The intent of the preferred alternative is to improve the quality of this area for nesting in an effort to increase the number of nest and fledging productivity. Tidal restoration would be designed to complement the adjacent nesting area by providing appropriate foraging areas in proximity to nesting and establishing and maintaining access routes for snowy plover chicks and adults from the adjacent nesting area. A minimum of 33 acres of new nesting habitat would be provided within the salt pond complex, which would more than compensate for any loss of 13 acres of potential nesting habitat at the D Street Fill.

21.24 Refer to Response 21.23 above.

21.25 Comment noted.

21.26 p. 2-38, objective 2.1 – the objective of 30 pairs of least terns is too low, and should be increased to at least 100 given the recent colony size of 91 nests in 2003, 111 in 2004, and 101 in 2005. Predator control and monitoring should be fully funded and not subject "per available funding".

21.27 Section 2.3 Alternatives for the South San Diego Bay Unit - I support Alternative A, including continued enhancement of dike substrates for nesting birds, but with notable exceptions to some elements. I was alarmed to see included in it on p. 2-50 mention of the possible breaching of levees around ponds 28 and 29 to increase least tern foraging habitat. No details are provided as to design, elevations, restoration, impacts from salinity on adjacent saltmarsh and bay, impacts to shorebirds that currently roost and forage in the ponds, impacts to salt production. This action hardly makes Alternative A a "no action" alternative, and it should be subject to full environmental review. Later mention under Alternative D of the need for excavation of these ponds to bring them down to intertidal level reinforces the need for more indepth planning, discussion, and assessment.

21.28 p. 2-49 to 50 – notes that should the salt pond production leaseholder cease operation or the SDCRAA fail to extend the lease, the Service would either continue to operate the system or breach the dikes per alternative D scenario 3 – again, to be considered a "no action" alternative, continued operation of the pond system is necessary. Regardless of whether breaching of the dikes is triggered by an administrative and managerial move such as loss of the leaseholder or by implementation of a proposed alternative, breaching of the dikes requires significantly more environmental assessment than what is currently presented and would require discharge permits due to the potential for and high probability of significant impacts to water quality and aquatic resources in the adjacent saltmarsh and tidal channel and bay.

21.29 p.2-51 – Public Access – should include view access from the bikepath & Biological Study Area

21.30 I support Alternative B, although details for fill to create new nesting areas should be included for assessment in the CCP/EIS. Although management of water levels within pond 20 to provide potential nesting and foraging habitat for snowy plovers sounds good in theory, I question the

21.31 choice of location, since pond 20 has relatively steeply sloped sides, three sides are heavily vegetated, three sides are primary access roads, and adjacent utility poles and chainlink fencing provide raptor perches.

21.32 I agree that water patrols should be conducted on the bay, but question the practicality given limited staff and funding. Additional signs and fencing are much needed. As proposed, outreach regarding impacts to waterbirds from discarded monofilament line should be pursued. Continuation of solar salt production ensures continued management and function of the system.

21.33 Although I think restoration of the Otay floodplain as proposed in Alternative C should be a high priority, there is insufficient information provided for adequate assessment in the EIS. The lack of engineering, design, & topographic studies make discussion beyond the conceptual meaningless. I support the higher acreage of saltmarsh proposed in Option 2, but prefer the

21.34 habitat and hydrological alignment of Option 1. Option 2 proposes an island of upland habitat near the saltmarsh/freshwater marsh interface. Such a constriction would disrupt flow and the value of such an isolated fragment of upland habitat would be questionable. I suggest examining an alignment similar to Option 1, but with the central upland habitat area reduced in its northern

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Response to Comment

21.26 The Sweetwater Marsh Unit objective for least terns on has been revised to address productivity rather than simply relying on numbers of nesting pairs. The revised objective is to maintain a 15-year average of at least one fledged chick per least tern nest on the D Street Fill. The objective for western snowy plovers has been revised to state that the proposed enhancements should achieve one fledged chick per male snowy plover averaged over a 15-year period, with at least 20 nests established annually within five years of implementing the proposed enhancements. Funding concerns are addressed in Response 21.19 above.

21.27 The proposal to increase foraging habitat for least terns is included in the No Action Alternative because it is one of the terms and conditions of the biological opinion issued for the agreement to exchange the Naval Training Center least tern nesting site for the salt works site. (This exchange resulted in the establishment of the Refuge.) This action must be implemented regardless of which alternative is selected. Specifically, the biological opinion states that habitat enhancement, including expansion of tern foraging habitat and enhancement of nesting substrate shall be implemented to minimize incidental take of the California Least Tern. Substrate enhancement began several years ago, with the requirement for increased foraging habitat still to be implemented. A discussion of terms and conditions of the biological opinion has been added to Section 1.6.3 of the Final CCP/EIS. Additional planning, involving preparation of a step-down restoration plan and public outreach, will be conducted prior to implementing any proposal to restore all or a portion of Pond 28 or 29 to shallow subtidal habitat.

As stated in Response 21.1, the draft CCP/EIS is a programmatic document intended to analyze proposed actions on a conceptual level, except in those cases where sufficient information is available to provide project-specific analysis. All subsequent step-down plans will be evaluated in accordance with NEPA and processed in accordance with the Service's CCP Policy.

21.28 The discussion of the various scenarios related to the future of the salt works was included under the No Action Alternative, because it would be misleading to imply that the Service has complete control over the fate of the salt works. Even if the No Action Alternative were to be adopted as the proposed project, there is the potential that the salt works would cease to operate as described in Section 2.3.2.1 of the draft CCP/EIS. We do however agree that prior to implementing any actions that would change the existing conditions within the salt ponds, further analysis and planning would be necessary. We also agree that a discharge permit would be required if any such actions resulted in the discharge of water into the bay.

21.29 The discussion of public access on page 2-51 relates to physical access onto the Refuge. The discussion of visual access is included on page 2-52 of the draft CCP/EIS under Wildlife Observation and Photography. That discussion has been revised to reference visual access from the Biological Study Area.

21.30 Pages 2-57 through 2-62 of the draft CCP/EIS include a detailed discussion of how the nesting sites would be created. Additionally, this section describes the magnitude of fill material that would be required to create nesting areas ranging from 5.5 to approximately 8.0 acres in size, as well as the anticipated construction methods, recommended slope gradients, and substrate capping requirements. An analysis of the environmental consequences of creating these nesting areas is provided in Sections 4.2.2.2, 4.3.2.2, 4.4.2.2, 4.5.2.2, 4.6.2.3, 4.7.1.2.2, 4.7.2.2.2, 4.7.3.2.2, 4.7.4.2.2, 4.7.6.2, and 4.7.7.2.2 of the draft CCP/EIS.

21.31 The text has been revised to state that Pond 20 would be maintained in a manner that would support snowy plover nesting under Alternatives B and C, while under Alternative D, any one of a number of ponds or portions of ponds could be managed to provide nesting habitat for plovers. Because Alternatives B and C assume that salt production would continue, Pond 20 provides the only feasible location for controlling water levels during the nesting season. The intent of this proposal under Alternatives B and C is to lower the water level in Pond 20 during the nesting season to provide exposed areas for plover nesting, while other areas of the pond which still contain shallow areas of brine water that would continue to support brine invertebrates, providing a food source for the plovers during the nesting season. The conditions of the levee slopes would have no relevance since nesting and foraging habitat would be provided within the same pond. American avocets and black-necked stilts, which already nest in this pond on an annual basis, no not appear to be adversely affected by predation as a result of the proximity of the access road, utility poles, and fencing to this pond. Additionally, much of the pond is located well away from this infrastructure, therefore, these facilities are not expected to reduce the quality of potential nesting habitat within the pond for plovers. The benefits of managing water levels in this pond for plovers and other avian species would be evaluated based on data obtained during annual monitoring. If this strategy proves to be ineffective, then we could simply cease to manage water levels in this pond.

21.32 Implementation of patrols within the bay would involve existing law enforcement personnel; however, this activity would only be implemented if funds are provided to acquire and maintain a patrol boat and other ancillary equipment. Revised Appendix D (CCP Implementation) identifies the need for funding to implement the patrol of Refuge waters to reduce wildlife disturbance. The need for signage, fencing, and a monofilament outreach program is also addressed in Appendix D.

21.33 Analysis of the restoration options for the Otay River floodplain took into consideration the results of preliminary hydrodynamic modeling (described in Section 4.2.2.3.3 of the draft CCP/EIS) conducted by Philip Williams and Associates for each restoration option, the topographic data for the site that was compiled by Ducks Unlimited, the preliminary engineering work conducted by Ducks Unlimited to estimate cut and fill volumes for each restoration options, and the results of previous geotechnical surveys conducted on the site. Refer also to Response 21.1.

21.34 We appreciate these suggests and recommend that you continue to be involved in the next step of restoration planning, when detailed restoration plans for this area would be developed.

and western thirds to allow upland connection to the south and increased saltmarsh to the north and west.

21.35 Alternative C significantly reduces salt production, possibly to the point of the system no longer being functional and likely to the point of salt production no longer being economical. Option 2 would significantly reduce existing habitat values by converting non-tidal saltponds to tidal habitats. Again, there is inadequate detail to allow EIS level assessment. The value of these ponds to shorebirds cannot be stressed enough. Likewise, the potential negative impact to nesting colonies could be significant. Details are lacking on the size of the proposed breaches, the bridges and footings necessary to allow continued maintenance and monitoring of the levees, the resulting tidal channels and erosion to the existing intertidal mudflats of the north perimeter of the saltworks, and the necessary armoring of the levees to protect them against wind, tide, and wave erosion. Such reinforcements would also further reduce nesting and foraging habitat.

21.36 Alternative C Option 1 poses similar problems but not to the extent of option 2. Again, details are lacking despite the acknowledgement of the need for extensive excavation. Rather than breaching all three of the western ponds, I suggest that the first phase of the CCP examine breaching only pond 11. This would allow continued saltworks system function and salt production, a smaller scale experimental restoration plot without the significant negative impacts of other proposed Alternative C and D options, and time to assess methods and habitat value and habitat re-establishment time on which to base planning alternatives in the CCP for the next 15 years.

21.37 p. 2-81 – Public Access – I support the proposed enhancements to access and compatible recreation. Details of bikepath realignment and protection of adjacent resources from incursion need to be determined.

21.38 The preferred Alternative D proposes significant habitat conversion with the potential for significant negative impacts to existing resources. While focused on enhancement for clapper rails, it has the potential to reduce existing habitat values for all other bird species relying on the saltworks. Details and data that would allow weighing of benefits or values of habitat types are lacking. Conceptual design of brine and water management areas and methods are discussed, but

21.39 details of implementation are lacking and potential for significant negative impacts from high salinity discharge or build-up is great. Assessment of potential discharges and discussion from

21.40 RWQCB on the possibility of awarding a discharge permit should be included.

21.41 The filling of pond 44 to create a 14 acre nesting site represents a net loss of wetland habitat with no mitigation proposed. Likewise, no discussion of mitigation for the loss of saltpond habitat is provided.

21.42 The discussion of the three construction phasing scenarios is confusing. A comparative table would help. The apparently longer phasing of preferred scenario 2 would allow adaptive management and revision of the project, and potentially lessen impacts, although I view the overall Alternative D as significantly damaging to the existing biological resources.

21.43 The one component of Alternative D worth considering is that of public access. The discussion of the proposed northeast interpretive trail should include the possibility of seasonal closure depending on reactions by nearby nesting colonies, alternatives for restricting access beyond the trail

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21.35 Restoration of the primary ponds would result in changes to existing habitat values in the salt works; however, we do not agree that the introduction of tidal influence into these ponds to restore intertidal habitat and associated tidal channels would represent a significant adverse effect as it relates to habitat quality or avian species abundance or diversity. Refer also to Responses 10.5, 10.23, 18.28, and 19.1.

Information regarding the anticipated size of proposed breaches, the potential need for bridges and/or levee protection, and long-term levee monitoring and maintenance requirements is presented on pages 2-79 through 2-80 of the draft CCP/EIS. As stated previously, this preliminary information is provided to allow for impact assessment at the program-level; these preliminary proposals would be evaluated and likely refined during subsequent detailed restoration planning. No dredging of the existing mudflats is proposed and pond breaching is not anticipated to result in significant adverse effects as a result of the creation of any small tidal channels through the existing mudflats. This issue would however be further analyzed during step-down planning. Any changes to the existing mudflats that might occur would be more than offset by the restoration of similar habitat within the ponds.

This alternative includes provisions to increase the available nesting habitat within the salt pond complex by approximately 18 acres, therefore, any reduction in nesting habitat due to the need for levee breaching or levee protection would be offset by the proposal to provide these new nesting areas.

21.36 Comment noted. Refer also to Response 21.35 above.

21.37 The need to temporarily or permanently realignment of the bike path that extends down Saturn Boulevard would be determined during detailed restoration planning for the Otay River floodplain.

The right-of-way to be used to extend the Bayshore Bikeway from Main Street to 13th Street is not located within the Refuge; therefore, the construction of this project is not addressed in the CCP/EIS. The City of San Diego, which is the lead agency for this project, is currently preparing an Environmental Impact Report to address this project.

21.38 Refer to Responses 14.4, 18.7, and 21.3.

21.39 The water management component of Alternative D is addressed at the program level in this document. As stated on page 2-91 of the draft CCP/EIS, the proposed brine management system was modeled to assess the feasibility of maintaining the desired salinity levels in the ponds and the feasibility of adequately reducing the salinity levels to facilitate discharge in the bay. The modeling results indicated that such a system could be designed to meet these objectives. This discussion goes on to state that additional modeling and analysis would be conducted as part of final engineering design. Similarly, on page 2-93, the discussion of management of bay water levels in other ponds includes the proposal to develop a water management plan in association with the preparation of final engineering and restoration plans. This water management plan would address among other factors the operation and maintenance of the system and initial and long-term monitoring of the system.

21.40 As indicated in Section 5.2.1.7 of the draft CCP/EIS, we have been coordinating with the Regional Water Quality Control Board on the issue of levee breaching. All of the data currently available on this topic has been shared with Regional Board staff, as well as the California Department of Fish and Game and NOAA Fisheries. We propose to continue to work with these agencies during the next step in restoration planning, when additional studies would be designed and data collected to address the potential effects of levee breaching on bay resources. Refer also to Response 11.17.

21.41 Implementation of Alternative D would result in the restoration of at least 60 acres of wetland habitat within the Otay River floodplain. This component of the restoration plan would more than offset any loss of existing wetland habitat within the salt ponds as a result of providing new nesting areas. Restoring tidal influence to a salt pond does not result in the loss of wetlands; therefore, no compensation for wetland loss is required for this action.

21.42 The discussion of the three scenarios has been revised in the Final CCP/EIS, and a discussion of how salt pond restoration could be phased under Scenario 2 has been added to Appendix D in the Final CCP/EIS.

21.43 We agree and the issue of potential disturbance during migration as a result of opening an interpretive trail around Pond 28 is addressed as follows in Section 4.4.2.4 of the draft CCP/EIS, "To ensure that disturbance impacts are minimal, use of the trail would be monitored periodically during fall and spring migration. If disturbance levels are found to be higher than anticipated, use of the trail would be regulated in a manner that would reduce disturbance to an acceptable level. Various approaches could include closing the trail during fall and spring migration, closing the trail during low tide, or only permitting trail use on weekends. The specific approach would be determined based on the level of disturbance identified."

21.44 | p. 2-106 – Refuge Management Direction – by writing each objective geared toward Alternative D, a very biased discussion is presented

21.45 | p. 2-111 – Objective 1.3 Restore Tidal Wetlands – again, focus is entirely on historic loss of tidal wetlands with no acknowledgement of existing and possibly higher biological value of saltponds wetland habitat. This is then used to justify experimental habitat conversion without mitigation.

21.46 | p. 2-114 – Objective 2.1 California Least Tern Nesting – target of 20 pairs of breeding terns is odd since 25 to 62 nests have been established each of the past seven years.

21.47 | p. 2-115 - Objective 2.2 California Least Tern Foraging – proposes to "restore 200 acres of existing salt pond habitat to tidal influence" due to loss of foraging areas – the loss of foraging acreage is questionable and the terns currently forage offshore, in the bay, along the Otay River, and in the primary ponds of the saltworks

21.48 | p. 2-117 – Objective 2.4 Western Snowy Plover – goal of 20 nests is unrealistic, considering there may only be 36 pairs in the County south of Camp Pendleton and there have not been more than 7 nests at saltworks in the past 13 years

21.49 | p. 2-118 – Objective 3.2 - Brine Invertebrates – acknowledges lack of studies but observation that "brine invertebrates…provide important forage for a number of avian species" – so why reduce the habitat of such an important food source from over 700 acres to 44 acres?! Table 3.2 states that Alternative D will "improve shorebird access to brine invertebrates" – I'm sorry, but a 94% reduction in habitat does not improve access.

21.50 | p. 2-119 – Objective 3.3 – Shorebirds – "manage…in a manner that would continue to support significant numbers of shorebirds" – again, the existing saltpond habitat supports significant numbers of shorebirds, but conversion to saltmarsh of 400+ acres reduces their habitat by over 50%

Chapter 3 – Affected Environment

21.51 | p. 3-8, Section 3.3.3.2 – no information given as to substrate/soil types of floor of saltponds

21.52 | Figure 3-4 – an overlay of existing landforms on the historic map (similar to that in Fig. 3-3) would help

21.53 | p. 3-14 – "alterations to the river channel…limit the channel capacity, and during major flood flows, the river backs up and causes shallow flooding over much of the community" – I don't challenge the constricting effect of the channel alterations or that they slow river flow, but "much" flooding should be quantified, and I question how much of the "community" that floods is development within the historic floodplain and prone to flooding regardless of downstream alterations. The modeling indicates overtopping of levees, but have recent significant winter storms and associated flow resulted in overtopping? Field-truthing or even anecdotal accounts would help.

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21.44 The rationale statements provided for each objective described in Chapter 2 relate to the overall intent of the objective (which is presented in ***bold italics*** following the objective number) rather than the measured objective described below the summary statement. These rationale statements provide factual information about historic and existing conditions, adapted policies, recovery plan recommendation, recommendations of other conservation plans, and Refuge goals and purposes. We do not agree that these statements favor one alternative over another. Each alternative would meet to some degree the intent of this summary objective.

21.45 Comment noted. Refer to Responses 10.5 and 21.41.

21.46 This objective for least terns on the South San Diego Bay Unit has been revised to address productivity rather than nesting pairs. The revised objective is to maintain a 15 year average of at least one fledged chick per nest within the salt pond complex.

21.47 Reproductive success of least terns is closely related to the availability of suitable undisturbed nesting sites, as well as nearby waters with adequate supplies of appropriately sized foraging fish. The least tern will typically travel farther and capture larger fish when feeding itself, but when feeding newly hatched chicks, the least tern must capture very small fish and make frequent trips to nearby shallows (*Massey 1988, Cimberg and Dock 1988, Keane 1996*). The reintroduction of tidal influence into portions of the salt ponds would provide additional habitat for fish, particularly smaller fish, in proximity to the salt pond levees. Although some fish are trapped in Ponds 10 and 11 when bay water is introduced into them as part of the salt making process, the fish densities are not comparable to those that would occur under tidal conditions. The Service believes that the provision of new foraging areas (restored ponds) in proximity to existing and future least tern nesting sites within the salt pond complex is necessary in order to achieve increased least tern reproductive success at this site.

21.48 This objective for snowy plovers has been revised to address both productivity and numbers of nests. We do not agree that an objective involving 20 snowy plover nests is unrealistic. The intent of the various strategies included within the preferred alternative (e.g., improving nesting and foraging habitat within the salt pond complex) is to encourage new snowy plover nesting activity that will eventually result in increased productivity within the San Diego Bay NWR.

21.49 With the exception of some avifauna, such as phalaropes and grebes that feed on brine invertebrates while swimming, most of the shorebirds that forage on brine invertebrates in the salt ponds can only do so along the edges of the ponds or within those portions of the ponds that are shallow enough to accommodate foraging. At present, the water levels in the ponds are controlled to accommodate commercial salt production, not avian foraging. Therefore, large portions of the 600 or so acres of ponds that have conditions favorable for brine invertebrate production are unavailable for foraging by many of the species of migratory birds observed in the south bay. Under the preferred alternative, restoring tidal influence to a portion of the pond system would increase foraging opportunities for many shorebirds within the ponds during lower tides. A minimum of 120 acres of salt ponds would be restored to intertidal mudflat, with additional tidal flats located along the tidal channels that would be present in areas restored to salt marsh. An additional 275 acres of foraging habitat would be provided within the managed ponds and the water levels within these ponds would be controlled to facilitate avian foraging. All of these actions would increase shorebird foraging opportunities over what is currently available within the salt ponds. During the preparation of detailed restoration plans for this area, the Service would seek input from experts who can assist in designing a water management system that would maximize such foraging opportunities. Data from ongoing studies, such as one in the Mojave Desert that is examining how salt ponds can be managed to support invertebrate production for migratory birds, could help us achieve this objective.

21.50 Refer to Response 21.49.

21.51 The information that is available regarding the geology and soil types present within the ponds is provided on page 3-8 of the draft CCP/EIS and the need to sample and characterize the sediments within ponds is provided on page 3-24. Additional analysis of ponds sediments would be conducted prior to completion of final restoration plans. Appendix D (CCP Implementation) has been revised to more clearly present the types of studies and data that would be completed during subsequent step-down planning.

21.52 The graphic has been revised in the Final CCP/EIS.

21.53 The text in the Final CCP/EIS has been revised to more specifically describe the properties that are subject to inundation. These properties, which are illustrated in Figure 2-5 of Appendix I (Hydrodynamic Modeling Analysis), include the mobile home park to the south of the Refuge, the parking lots near Home Depot, Swiss Park, and areas in the vicinity of Palm Avenue and 19th Street. One such flood event, which affected homes and businesses in the vicinity of Palm Avenue and 19th Street, occurred in February 1983 (*City of San Diego 1988*). With respect to levee overtopping, the modeling conducted by Rick Engineering (*1987*) and Philip Williams and Associates, Ltd. (*2003*) both indicate that the salt pond levees are subject to overtopping during a 20-year or greater flood event. No such events have occurred in recent times.

21.54 p. 3-30, 4th para., 4th sentence – " the salt marsh and intertidal mudflat habitats that had historically occupied this area were eliminated by the formation of the diked evaporation ponds" – this statement is not true according to Fig. 3-3 and other historic photos – a significant portion of the historic mudflats have been undisturbed and still exist along the northern edge of the saltworks

21.55 p. 3-31, 4th para. – note that the saltponds as significantly valuable habitat have been designated as a Western Hemisphere Shorebird Reserve Network Site and Globally Important Bird Area – these designations were not awarded pending "restoration"

21.56 p. 3-34, 2nd para. – note that the Shorebird Conservation Plan specifies "enhancing tidal action in existing wetlands as needed" and "retaining and managing a sufficient amount of salt ponds …to support shorebird populations" – the need to restore tidal action and convert saltponds to tidal saltmarsh has not been scientifically presented in the CCP and is contrary to the goals of the SCP

21.57 p. 3-35, 1st sentence – includes Brandt's cormorant, yet this species does not occur on the bird list App. C

21.58 p. 3-36 Regional Restoration Needs – "restoration is needed…because of the regional need to provide appropriate habitat for coastal wetland dependent species" – however, the existing saltpond habitat provides possibly higher value habitat for coastal dependent shorebirds than the proposed tidal saltmarsh habitat that the CCP preferred alternative proposes to replace it with. "primary reasons that the California least tern is endangered is reduction in available suitable nesting areas" – yet the CCP preferred alternative for D Street Fill reduces available nesting habitat

21.59 p. 3-49 Solar Salt Evaporation Ponds – notes saltponds are "not considered a natural habitat" - yet hypersaline ponds are a highly productive component within natural saltmarsh
notes saltponds provide "some foraging habitat for several species of birds" – yet they provide significant foraging habitat to 10s of thousands of shorebirds
section is notably lacking in recognition of significance of saltponds to waterbirds

21.60 p. 3-50, 2nd para. – notes "comprehensive survey to determine the diversity and abundance" of invertebrates "within this system has not been conducted" – such a survey is necessary to attempt to compare habitat values between the existing saltponds and proposed tidal habitats

21.61 p. 3-53 Disturbed Coastal Dune – notable lack of any mention in this section of the presence of Nuttall's Lotus and San Diego jackrabbits, the nesting by least terns, snowy plovers, horned larks, and killdeer, the use of the site for high tide roosting by large numbers of shorebirds, etc

21.62 p. 3-55, 3rd para. – "intertidal mudflats and coastal salt marsh habitats…are important wintering areas for many species" – notable lack of mention of saltponds as important areas

21.63 p. 3-59, 5th para. – "many shorebird species are probably resting in the safety of the saltponds, while the nearby tidal mudflats that are their primary feeding area" – is there data to support this? Need to quantitatively evaluate foraging use of saltponds compared to tidal mudflats.

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21.54 The intent here was to state that the salt marsh and intertidal mudflat habitat included within the boundaries of the salt works was eliminated upon the creation of the ponds. This paragraph has been revised to clarify the intent.

21.55 The paragraph has been revised in the Final CCP/EIS to state that the Refuge, which includes both natural wetland habitats and a system of salt ponds, protects habitats essential to the migratory birds of the Pacific Flyway. The statement that the salt ponds have been designated as a Western Hemisphere Shorebird Reserve Network (WHSRN) site and a Globally Important Bird Area is not entirely accurate. It is more appropriate to state that the entire south end of San Diego Bay is designated a WHSRN site. The habitats included in this WHSRN site, as described on the Manomet webpage (http://www.manomet.org/WHSRN/viewsite.php?id=52), consist of the open waters of the bay, tidal mudflats, coastal salt marsh, salt ponds, dikes, sub-tidal habitats, and channelized river/riparian habitats. The Globally Important Bird Area designation also applies to the entire South San Diego Bay Unit. The site is recognized for providing habitat for globally significant numbers of nesting gull-billed terns and continentally significant numbers of Caspian Terns and western snowy plovers, all of which do nest on the salt pond levees, as well as continentally significant numbers of surf scoters, which occur in greater numbers outside the salt ponds than within them (*Stadtlander & Konecny 1994*). References to these designations have been added to Section 3.2 of the Final CCP/EIS.

21.56 We do not agree that restoring the salt ponds as proposed under Alternative D is contrary to the Southern Pacific Shorebird Conservation Plan (*Hickey et al. 2003*). The habitat goals and conservation actions presented in the Shorebird Plan, which are presented in Section 3.4.1.3 of the draft CCP/EIS include:

- Increase the extent and habitat quality of tidal flat;
- Increase the amount and quality of shorebird habitat within salt marshes by:
  - incorporating shorebird habitat components in tidal marsh restorations and creating broad channels with exposed mudflat during low tides, shallow ponds for foraging and breeding, and undisturbed roost sites, and
  - increasing tidal circulation and water quality in marshes to enhance invertebrate productivity and shorebird foraging areas; and
- Maintain sufficient amount of high quality salt pond habitat to support breeding shorebirds, including the Western Snowy Plover, as well as migrating and wintering shorebirds.

The priority conservation action for salt ponds is to manage some amount of salt ponds at San Diego Bay specifically for nesting, feeding, and roosting shorebirds, including some to be managed specifically for nesting snowy plovers, as recommended in the Snowy Plover Draft Recovery Plan. Alternative D addresses all of these actions (providing a minimum of 125 acres of tidal flats, designing salt marsh habitat areas that include shorebird habitat components, and managing 275 acres of salt ponds to support shorebird foraging). Within these managed ponds, about 44 acres would be maintained to support brine invertebrates and one or more ponds would be maintained to support snowy plover nesting.

21.57 Brandt's cormorant has been added to the bird list for South San Diego Bay in Appendix C in the Final CCP/EIS. According to Unitt (*2004*), this species, although common to San Diego Bay, is rarely seen in the southern end of the bay. Observations of this species during winter months range from zero to 10 in a given year.

21.58 As stated in Response 21.56, Alternative D proposes to restore a range of habitats to support a variety of species, including several listed species that each has its own habitat requirements. The Shorebird Plan states that about two-thirds of the prime tidal wetlands that existed along the California coast at the turn of the century have been degraded or destroyed by various human activities. It is generally accepted that these changes have had an adverse effect on the abundance and distribution of shorebirds in the region (*Hickey et al. 2003*). These changes have undoubtedly also negatively affected other waterbird populations. The restoration proposals included in the preferred alternative are intended to address the habitat needs of the south San Diego Bay ecosystem, and in particular, the habitat needs of the listed species supported on the Refuge. To do this, it is necessary to balance the needs of shorebirds, like the western snowy plover, with the needs of other species, such as the light-footed clapper rail and the California least tern. This direction is consistent with the purpose for which the Refuge was established. See also Response 21.23.

21.59 Refer to Response 6.2.

21.60 We agree. A survey of the diversity and abundance of invertebrates in the salt ponds and adjacent mudflats is one of the studies to be completed in association with the preparation of detailed restoration plans. Additionally, a study of bird use within the ponds would be conducted to assist us in designing the managed water component of the restoration plan. The proposal to complete these and other studies is addressed in revised Appendix D of the Final CCP/EIS.

21.61 This discussion has been revised in the Final CCP/EIS to address the presence of these species on the D Street Fill. This information is already presented in Table 3-12, Table 3-15, and Sections 3.4.4.1 and 3.4.6.1 of the draft CCP/EIS.

21.62 The section that follows this paragraph is devoted to a discussion of the importance of the salt ponds to migratory birds; however, in response to this comment, additional text has been added to this paragraph in the Final CCP/EIS.

21.63 This statement is based on observations by Refuge staff over the past five years, as well as observations noted during the comprehensive surveys conducted in 1993 and 1994 (*Stadtlander and Konecny 1994*). Refer also to Response 21.60.

21.64 p. 3-59, 6th para. – "importance of the mudflats…is also evident from the data provided by the Pacific Flyway Project" – the data from PRBO for this project did not separate birds counted on the mudflat from those on the saltponds – all that can be said from the data is that the South Bay supported a significant number of shorebirds & what those numbers were

21.65 p. 3-61 through 64 – section on nesting birds fails to note the regional and international significance of the saltworks as a nesting location, also fails to note the relatively recent colonization of the saltworks by these breeders and its significance to state, regional, and international bird distribution, and its indication as to the significance of the saltworks' physical structure and configuration

There is a lack of recognition of significance of existing resources in chapter 3:

21.66 Colonial waterbird breeding sites
- Double-crested cormorant – 1 of only 3 sites in San Diego County
- Western snowy plover (federally threatened) – 1 of only 8 regularly used sites in San Diego County; recent significant mortality with local breeding population dropping to as low as 36 pairs
- American avocet and black-necked stilt – only breeding site on San Diego Bay
- Caspian tern – 1 of 5 sites in S. Calif., only site in SD County
- Royal tern – 1 of 3 sites in W. US, only site in SD County
- Elegant tern (state special concern) – 1 of only 6 sites in the world!, saltworks colony contained up to 30% of the entire breeding population in 2003; 1 of 3 sites in W. US, only site in SD County
- Forster's tern – 1 of only 6 sites in SD County
- California least tern (federal & state endangered) – 1 of 27 sites in Calif., 1 of 14 sites in SD County
- Gull-billed tern (state special concern) – 1 of only 6 sites in W. N. Amer., 1 of 2 in W. US, only site in SD County & coastal Calif.
- Black skimmer (state special concern) – 1 of 6 sites in Calif., 1 of 2 sites in SD County

Shorebird roosting & refuge site

21.67 - 44% of shorebirds in Coastal SD County documented within saltworks (PRBO Pacific Flyway Project)

21.68 - protected dikes & stable non-tidal waterlevels provide resting & feeding habitat despite tidal condition or time of day

21.69 - over 10,000 phalaropes recorded regularly during migration

21.70 - primary staging area & concentration of population of red knots (state special concern) in SD County

Shorebird foraging site & prey base

21.71 Observations suggest primary prey base of brine flies and brine shrimp

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21.64 The sentence has been changed in the Final CCP/EIS to "the importance of the wetlands in South San Diego Bay. . ."

21.65 The significance of the seabird nesting that occurs within the Refuge is reflected in the proposed Refuge goals and objectives, particularly Goal 3 and Objective 3.1 (page 1-25 of the draft CCP/EIS). With respect to the dates of colonization, Section 3.4.4.1 (Breeding Birds) of the draft CCP/EIS includes the date on which nesting was first recorded for each species described. Status information is also provided, and where this location is one of only a few nesting locations in the United Stated for a particular species, it is noted. The discussion of unvegetated upland on page 3-54 addresses the significance of the levees as nesting habitat for seabirds and some shorebirds. A summary of the importance of the pond levees as seabird nesting habitat has been added to Section 3.4.1.3 (Regional Context) in the Final CCP/EIS.

21.66 Refer to Response 10.3.

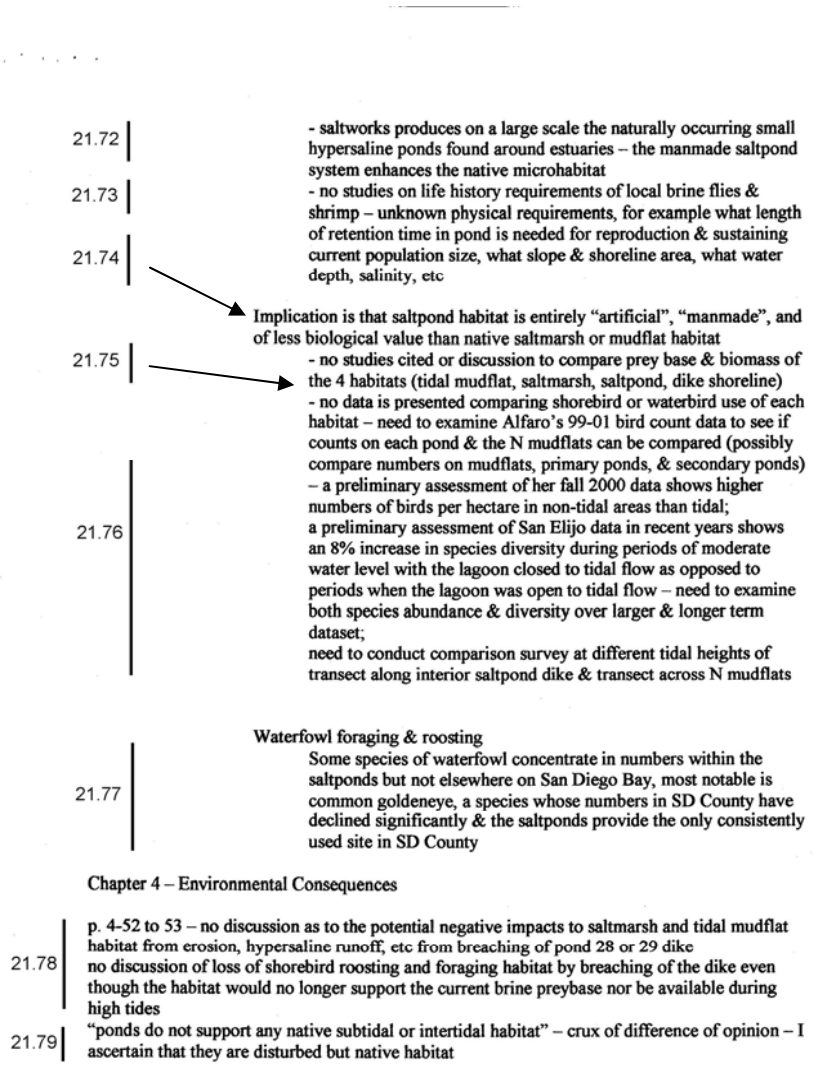
21.67 Information regarding the diversity and abundance of shorebirds within South San Diego Bay is provided in Sections 3.4.4.1 and 3.4.7.1 of the draft CCP/EIS. As indicated in Comment 21.64, the Pacific Flyway Project did not separate birds counted on the mudflat from those on the salt ponds.

21.68 Shorebird use of the salt ponds and levees for foraging and resting is addressed in Section 3.4.4.1 of the draft CCP/EIS.

21.69 The large numbers of phalaropes that visit the salt ponds annually is addressed on page 3-57 of the draft CCP/EIS.

21.70 According to Unitt (*2004*), red knots are most abundant on the tidal mudflats of San Diego and Mission Bay, with the mudflats at and near the Sweetwater River mouth especially favored by this species. Red knots were also observed in relatively high numbers to the south of Emory Cove and in Ponds 10 (the initial intake pond) and Pond 28 (a crystallizing pond) during the 1993 -1994 avian survey of the salt works. They were also observed in lower numbers throughout much of the salt works and the mudflats immediately to the north. Terp (*1998*), while studying the role of the salt ponds in the habitat use patterns of red knots and other shorebird species, observed that during low tide red knot densities were significantly higher on the mudflats to the north of the salt ponds than they were within the salt ponds. Knots were observed in the salt ponds during high tide, using the secondary ponds during the winter for roosting at densities of almost 200 birds/hectare, and to a lesser extent (up to four birds/hectare) in the early fall for foraging (*Terp 1998*). Studies of knots in Cadiz Bay by Masero (*2002*) during spring migration also indicate that only a small percentage of staging knots feed on brine shrimp at high tide. Based on the current distribution of red knots in San Diego Bay and information known about their foraging habits, restoration of the salt ponds as proposed under Alternative D is not expected to adversely affect the local or global red knot population.

21.71 A discussion of the brine invertebrates supported by the salt ponds is provided on pages 3-50 and 3-51 of the draft CCP/EIS. The document also acknowledges the need to survey the ponds to determine what other foraging opportunities may be available in the ponds. The need for such a survey has been added to Appendix D (CCP Implementation) in the Final CCP/EIS.



21.72 - saltworks produces on a large scale the naturally occurring small hypersaline ponds found around estuaries – the manmade saltpond system enhances the native microhabitat

21.73 - no studies on life history requirements of local brine flies & shrimp – unknown physical requirements, for example what length of retention time in pond is needed for reproduction & sustaining

21.74 current population size, what slope & shoreline area, what water depth, salinity, etc

Implication is that saltpond habitat is entirely "artificial", "manmade", and of less biological value than native saltmarsh or mudflat habitat

21.75 - no studies cited or discussion to compare prey base & biomass of the 4 habitats (tidal mudflat, saltmarsh, saltpond, dike shoreline)

- no data is presented comparing shorebird or waterbird use of each habitat – need to examine Alfaro's 99-01 bird count data to see if counts on each pond & the N mudflats can be compared (possibly compare numbers on mudflats, primary ponds, & secondary ponds) – a preliminary assessment of her fall 2000 data shows higher numbers of birds per hectare in non-tidal areas than tidal;

21.76 a preliminary assessment of San Elijo data in recent years shows an 8% increase in species diversity during periods of moderate water level with the lagoon closed to tidal flow as opposed to periods when the lagoon was open to tidal flow – need to examine both species abundance & diversity over larger & longer term dataset;

need to conduct comparison survey at different tidal heights of transect along interior saltpond dike & transect across N mudflats

Waterfowl foraging & roosting

21.77 Some species of waterfowl concentrate in numbers within the saltponds but not elsewhere on San Diego Bay, most notable is common goldeneye, a species whose numbers in SD County have declined significantly & the saltponds provide the only consistently used site in SD County

Chapter 4 – Environmental Consequences

21.78 p. 4-52 to 53 – no discussion as to the potential negative impacts to saltmarsh and tidal mudflat habitat from erosion, hypersaline runoff, etc from breaching of pond 28 or 29 dike

no discussion of loss of shorebird roosting and foraging habitat by breaching of the dike even though the habitat would no longer support the current brine preybase nor be available during high tides

21.79 "ponds do not support any native subtidal or intertidal habitat" – crux of difference of opinion – I ascertain that they are disturbed but native habitat

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21.72 The draft CCP/EIS does address the significance of the salt ponds to birds. Refer also to Responses 6.2 and 10.11.

21.73 Refer to Responses 11.24 and 21.49.

21.74 The salt works replaced the native habitat that once existed in this area, and although it provides nesting, roosting, and foraging opportunities for a variety of avian species, we do not concur that this artificial habitat provides better habitat quality for the majority of the species present in this area than would be provided by a natural intertidal environment. Section 3.4.4.1 of the Final CCP/EIS has been revised to clarify the discussion of the value of tidal flats, salt ponds, and salt marsh habitat for shorebirds. This information comes from the discussions included in the Southern Pacific Shorebird Conservation Plan (*Hickey et al. 2003*). Specifically, the Shorebird Plan states that tidal flat is "the most important shorebird habitat within the coastal embayments of California." The Plan also states that shorebirds use salt marsh to a lesser degree than tidal flats, but the larger non-vegetated channels in salt marsh are used as foraging habitat by the same species that feed on tidal flats. Also of note, the Plan states that some shorebird species such as the willet, least sandpiper, and long-billed dowitcher use salt marsh as diurnal and nocturnal roost sites "possibly to provide some protection from predators" (*Hickey et al. 2003*). With respect to salt ponds, the Plan states that the ponds and levees provide roosting and nesting sites for a wide variety of non marsh-dependent species, and the ponds provide important foraging areas for a diverse and abundant array of wetland dependent avian species.

21.75 The draft CCP/EIS addresses the need for additional studies to be conducted in association with the preparation of detailed engineering and restoration plans. A list of the studies described throughout Volume 1 has been compiled and added to Appendix D (CCP Implementation) in the Final CCP/EIS.

21.76 The bird survey data collected in 1999/2000 cannot be compared to the data collected during the 1993/1994 survey because it was not collected using the same protocols as the original survey. The Service will be initiating a new year-long survey in the near future that will enable us to compare the results of the original survey with current conditions in the ponds and on the adjacent tidal flats. This information will provide baseline data needed for the next step in restoration planning for the salt ponds.

21.77 As noted in the comment, the population of the common goldeneye has declined in the county since the 1960s, but Unitt (*2004*) speculates that this decline is most likely the result of a shift in the species' winter distribution rather than a decline in the total numbers of the species. Over the past few years, less than forty individuals of common goldeneye have been observed annually in San Diego Bay. Although an uncommon visitor to San Diego, the worldwide population of common goldeneye is considered stable (*Eadie et al. 1995*) and despite its inclusion on the list of Birds of Management Concern developed by the USFWS Migratory Birds Program, the common goldeneye is currently considered to be at or above long-term averages or management goals (*USFWS 2004*). During the 1993 – 1994 avian study of the salt works, this species was observed both within the ponds and in the bay immediately to the north of the ponds. Because the diet of the common goldeneye consists largely of mollusks and crustaceans, with some portion also attributed to insects (*Eadie et al. 1995*), it is unlikely that this species is solely depended upon the limited resources within the salt ponds to satisfy its foraging requirements. Restoration of the salt ponds to intertidal habitat is therefore not expected to result in any significant adverse effects to common goldeneye.

21.78 The Final CCP/EIS has been revised to include additional information about the potential effects of breaching all or a part of Pond 28 or 29 to provide additional foraging habitat for least terns.

21.79 Refer to Response 10.11.

21.80 p. 4-54 to 55 – last paragraph of p. 54 is repeated as first on p. 55
"no subtidal or intertidal habitat is currently supported within the salt ponds" – as above
"because so little of the historic coastal wetland vegetation that once occupied the south end of San Diego Bay still exists, the restoration of these ponds…would represent a significant benefit to the bay's ecosystem" – regardless of the habitat loss to the significant portion of the County's migratory population of eared grebes, phalaropes, and shorebirds!

21.81 p. 4-70, para. 6 – "the 13 acres to be converted to wetland habitat have not historically supported seabird nesting" – I challenge this statement and contend that snowy plover nesting has occurred within the 13 acres and it is likely that examination of data would reveal least tern nesting previously occurred.

21.82 p. 4-71, 1st sentence – "if over time the area is not utilized by nesting seabirds and plovers, it could be considered for restoration" – and where are future colonies to nest? If 80 acres of potential nesting habitat at the D Street Fill is reduced to 23, then those 23 are whittled away by such restoration projects, how will the Service accommodate a recovering population of either of these endangered species?!

21.83 p. 4-73 – again, no mention of negative impacts to shorebirds or habitats by the breaching of ponds 28 or 29

21.84 p. 4-81 to 82 – "as a result of converting these ponds to tidally influenced areas, some avian species could be displaced, while many other avian species would benefit from expanded foraging opportunities" – question where 10s of thousands of phalaropes and eared grebes are supposed to relocate to – no similar resource exists in the area; also question whether the number of shorebirds would increase with tidal restoration

21.85 the discussion of impacts to bird species currently using the saltponds by conversion of the habitat to intertidal is inadequate and there is no discussion of mitigation measures

21.86 p. 4-84, para. 1 – "no research has been conducted that would support an accurate prediction of how nest selection could be effected by this change in conditions around the levees" - discussion about physical conditions of tern colonies elsewhere fails to focus on the fact that most of these colonies are established without adjacent extensive marsh vegetation but rather surrounded by open water
"various tern species have been observed nesting along the outer levees" – this is misleading, as only Forster's tern, a marsh nesting species, and black skimmers have nested with any regularity and in any numbers along the outer perimeter dikes adjacent to saltmarsh and mudflats. One season, four Caspian tern nests were established along an outer levee. Other than that, all other establishment of nesting colonies is within the interior, on dikes surrounded by water.
"there is potential that one or more species could be displaced" – which would be a significant negative impact but is not acknowledged. Neither is it acknowledged that most of these species nest nowhere else in the County or in very limited locations, and thus are unlikely to relocate locally (they haven't expanded in the 60 years since they first started nesting at saltworks).

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21.80 Refer to Response 21.87 above.

21.81 A graphic indicating known locations of tern nest sites on the D Street Fill over the past few years has been added to the Final CCP/EIS. In addition, Section 4.5.1.3 of the Final CCP/EIS has been revised to indicate that plover and tern nesting may have occurred in the distant past on the portion of the D Street Fill proposed for restoration, but have not been observed in many years. No maps indicating the presence of nests in this portion of the Fill have been located, nor were any maps provided in the environmental documentation prepared for the original Combined Federal Project that ultimately resulted in including a portion of the D Street Fill within the National Wildlife Refuge System.

21.82 To restore more than 13 acres to intertidal wetland on the D Street Fill would require a revision to the CCP and subsequent public input and evaluation under NEPA. The portion of the D Street Fill located within the Refuge boundary consists of 55.5 acres. Of that, 23 acres are permanently committed to nesting habitat through previously approved mitigation agreements and about 1.5 acres has been committed to fish habitat. Of the remaining 31 acres, 13 acres are proposed under Alternative C for the Sweetwater Marsh Unit to be restored to intertidal habitat and 18 acres would be retained as upland habitat (with at least 10 of those upland acres managed for nesting habitat). The other eight acres, located to the north and east of the proposed wetland area would provide access to the nesting area and preserve areas of the fill that support sensitive plant species. The 13 acres of intertidal habitat would be designed to complement the adjacent nesting habitat by including easy access from the nesting area to the tidal areas for snowy plovers and by providing fish habitat to support least tern foraging.

21.83 Refer to Response 21.78.

21.84 The draft CCP/EIS acknowledges that phalaropes and eared grebes may be lost from the site as a result of restoration, particularly under Alternative C, Salt Works Option 2 or Alternative D. However, to maintain foraging opportunities for these species, habitat suitable for the production of brine invertebrates is included in the preliminary restoration plan under either alternative.

The draft CCP/EIS does not state that shorebird numbers would increase as a result of restoration; rather the last paragraph on page 4-82 reads, "foraging . . . opportunities for . . . shorebirds, which frequent these ponds, would be expected to increase . . ."

21.85 Section 4.4.2.3.1 and 4.4.2.4.1 of the draft CCP/EIS provide a discussion of how restoration could affect the variety of bird species currently supported at the salt works. Management actions that have been incorporated into the preliminary project design to address potential adverse effects to these species as a result of pond restoration include: maintaining some ponds as managed ponds to support shorebirds and waterfowl, monitoring the effect of pond restoration on seabird nesting, and ensuring that detail restoration plans include phasing and an adaptive management approach to restoration. With respect to mitigation, the conversion of salt ponds to intertidal habitat does not require compensation, as the conversion would not result in any loss of wetland habitat. Impacts to wetlands as a result of providing new nesting opportunities within the salt ponds would be offset by the proposal to restore a minimum of 60 acres of intertidal habitat in the Otay River floodplain. Additionally, a minimum of 50 acres of salt ponds (crystallizer ponds) that currently provide limited if any foraging opportunities for birds would be converted to managed ponds.

21.86 We agree and the text does not dispute that most of the colonies at the salt works were established on levees that are surrounded by water. We also acknowledge that on-going monitoring of these colonies before, during, and after the proposed restoration phases is essential to understanding the actual effects of restoration on the colonial nesting seabirds that have historically nested here. An understanding of the conditions at other nesting colonizes in coastal California is also important in predicting potential outcomes. The data available in the literature about these other areas provides some insight into what factors may be important in protecting the existing nesting colonizes. Refer also to Responses 10.4, 10.5, and 10.23.

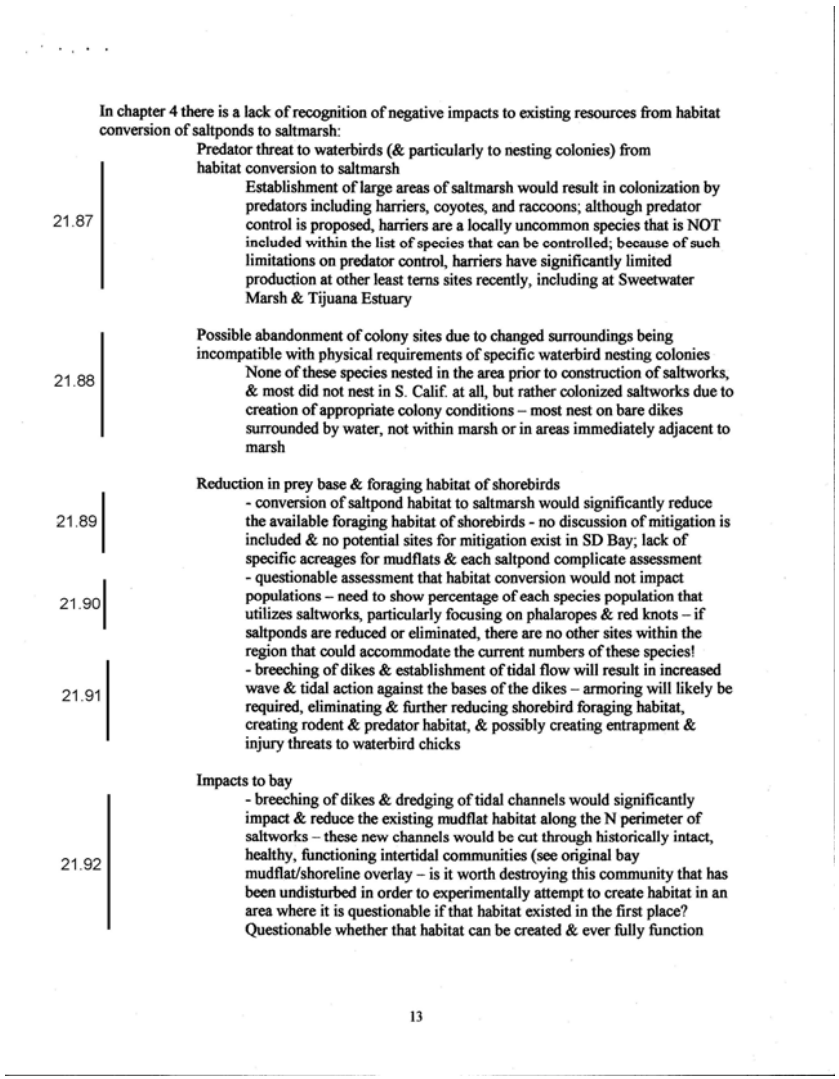
With respect to those species that currently nest on the outer levees, the text on page 4-84 of the draft CCP/EIS identifies the three species that have been observed nesting in these locations.

The statement that the species that nest within the salt works have not expanded into other areas in the 60 years since they first started nesting at the salt works is not accurate. The elegant tern expanded its breeding range in California in 1987, when it was first recorded nesting at Bolsa Chica, and again in 1998 when many of the Bolsa Chica birds relocated to the Los Angeles Harbor. Burness et al. (*1999*) indicates that the first adult elegant terns in Bolsa Chica were probably from the crowded San Diego colony. Elegant tern nesting was also attempted in 1998 at Zuniga Point in northwest San Diego Bay.

Caspian terns colonized the salt works in 1941 as part of range expansion covering the entire Pacific Coast (*Unitt 2004*). It breeds at San Francisco Bay and Bolsa Chica among other locations. The salt works is the only breeding location in San Diego County, although this species also attempted breeding at Zuniga Point in 1998. Similar to the elegant tern, the royal tern has also expanded its breeding range from San Diego to Bolsa Chica and Los Angeles Harbor.

The Forster's tern first appeared at the salt works in 1963 and subsequently expanded its breeding range to the Chula Vista Wildlife Reserve and to the new nesting sites in Batiquitos Lagoon in 1990. Following the construction of new nesting sites, the black skimmer also began nesting at Batiquitos Lagoon in 1995.

It is a goal of the CCP to retain the diversity of seabirds nesting within the South San Diego Bay Unit. Several management actions are proposed to improve nesting opportunities including expanding the area available for nesting and continuing to improve nesting substrate on the existing levees. Included on pages 4-84 and 4-85 of the draft CCP/EIS are a number of actions that would be implemented in an effort to ensure the continued use of the levees for seabird nesting.



In chapter 4 there is a lack of recognition of negative impacts to existing resources from habitat conversion of saltponds to saltmarsh:

Predator threat to waterbirds (& particularly to nesting colonies) from habitat conversion to saltmarsh

21.87 Establishment of large areas of saltmarsh would result in colonization by predators including harriers, coyotes, and raccoons; although predator control is proposed, harriers are a locally uncommon species that is NOT included within the list of species that can be controlled; because of such limitations on predator control, harriers have significantly limited production at other least terns sites recently, including at Sweetwater Marsh & Tijuana Estuary

Possible abandonment of colony sites due to changed surroundings being incompatible with physical requirements of specific waterbird nesting colonies

21.88 None of these species nested in the area prior to construction of saltworks, & most did not nest in S. Calif. at all, but rather colonized saltworks due to creation of appropriate colony conditions – most nest on bare dikes surrounded by water, not within marsh or in areas immediately adjacent to marsh

Reduction in prey base & foraging habitat of shorebirds

21.89 - conversion of saltpond habitat to saltmarsh would significantly reduce the available foraging habitat of shorebirds - no discussion of mitigation is included & no potential sites for mitigation exist in SD Bay; lack of specific acreages for mudflats & each saltpond complicate assessment

21.90 - questionable assessment that habitat conversion would not impact populations – need to show percentage of each species population that utilizes saltworks, particularly focusing on phalaropes & red knots – if saltponds are reduced or eliminated, there are no other sites within the region that could accommodate the current numbers of these species!

21.91 - breeching of dikes & establishment of tidal flow will result in increased wave & tidal action against the bases of the dikes – armoring will likely be required, eliminating & further reducing shorebird foraging habitat, creating rodent & predator habitat, & possibly creating entrapment & injury threats to waterbird chicks

Impacts to bay

21.92 - breeching of dikes & dredging of tidal channels would significantly impact & reduce the existing mudflat habitat along the N perimeter of saltworks – these new channels would be cut through historically intact, healthy, functioning intertidal communities (see original bay mudflat/shoreline overlay – is it worth destroying this community that has been undisturbed in order to experimentally attempt to create habitat in an area where it is questionable if that habitat existed in the first place? Questionable whether that habitat can be created & ever fully function

13

21.87 Refer to Response 10.14. The statement that northern harriers are not controlled within the Refuge when necessary to protect listed species is incorrect. As stated in Sections 2.2.2.1 and 4.4.1.1.2 of the draft CCP/EIS, if an individual harrier is determined to pose a threat to listed species, it can be live-trapped, or if necessary, lethally removed following consultation with the Refuge Manager.

21.88 As described in Section 4.4.2.3.1, there are various examples of colonial seabirds nesting in areas surrounded by intertidal habitat rather than open water. These areas include Bolsa Chica (*Seto et al 2003*), Upper Newport Bay (*Seto et al 2003*), Seal Beach NWR (*S. Buck, pers. comm.*), and Isla Montague in the Gulf of California (*Burness et al. 1999*). Additionally, when the elegant tern and black skimmers expanded their breeding range north to Bolsa Chica and then to Los Angeles Harbor, the sites on which these species chose to nest were not surrounded by water. The sites did however include flat, generally unvegetated areas with open views of the surrounding area, physical characteristics that appear to be important to many of the seabirds that nest at the salt works (*Parnell et al. 1995, Burness et al. 1999, Buckley and Buckley 2002*). Based on these observations, the proposed conversion from open water to intertidal habitat may not be as significant as assumed. The draft CCP/EIS does however acknowledge the potential for abandonment of this area by one or more species and includes a discussion of possible measures that could be implemented to avoid abandonment.

21.89 We do not agree that conversion of the salt ponds to intertidal habitat would result in a reduction in available foraging habitat for the diversity of shorebird species that currently occur in the south bay. Under present conditions, foraging areas for most shorebirds (the primary exception being phalaropes and eared grebes) is limited in many ponds to the shoreline. In other ponds, such as Ponds 10, 10A, 20 and 22, additional foraging opportunities are only available when water levels are lower due to fluctuations controlled by the salt evaporation process (*Stadtlander and Konecny 1994, Collins per.*

comm.). Following restoration, larger areas of the ponds would be available for shorebird foraging. Specifically, opportunities for foraging would be provided in those ponds to be restored to intertidal mudflat habitat (at least 125 acres), the ponds in which water levels would be managed to accommodate shorebirds and waterfowl (approximately 230 acres), the brine management ponds (approximately 45 acres), and within the tidal channels and associated mudflat areas to be included in ponds proposed for cordgrass restoration. All acreages presented in Chapter 2 of the draft CCP/EIS are based on preliminary restoration planning. Actual acreages would be determined following the completion of subsequent detailed engineering and restoration plans.

A discussion of mitigation is provided in Response 21.85.

21.90 Sections 4.4.2.3.1 and 4.4.2.4.1 of the draft CCP/EIS provide a discussion of the potential effects to phalaropes. With respect to red knot, refer to Response 21.70.

21.91 As stated in Section 4.2.2.3.2 of the draft CCP/EIS, the anticipated effects of settlement prone soils and wind and tidal action on both external and internal pond levees would be studied in greater detail prior to the completion of detailed engineering and restoration plans. The outer levees already include a significant amount of informal protection that has been added over the years in association with the solar salt operation. It is possible that some armoring around the levee breaches, particularly breaches in the outer levees would be required, however, this armoring can be designed in a manner that deters the potential for rodent and predator use and minimizes impacts to shorebird foraging areas. Such designs would be explored during subsequent restoration planning.

21.92 Although not illustrated in the 1859 depiction of the mudflats (Figure 3-3 of the draft CCP/EIS), it is likely that the tidal channels

that existed within the adjacent salt marsh habitat extended through the mudflats to the shallow subtidal habitat. Similar channels would likely form in association with levee breaching. No dredging within the existing mudflats is proposed to create such channels. Any channels that form would form naturally in association with daily tidal action. Although the creation of two or three such channels is not expected to result in any significant adverse effects to the existing mudflat habitat, additional hydrological modeling conducted in association with detailed restoration planning would provide a more detailed assessment of where and to what extent such channels could be created.

With respect to habitat value, the Service upon considering the data available from this site and other restoration sites and using our best professional judgment believe that the implementation of Alternative D, which would incorporate monitoring and adaptive management into the final restoration plans, would improve habitat value within the South San Diego Bay Unit for listed species, fish, benthic invertebrates, and a variety of migratory birds. At the same time, the actions included under this alternative would maintain those aspects of the existing salt pond system that support nesting seabirds and other migratory birds.

biologically? Questionable whether that habitat is of higher value or more productive than what currently exists?)

21.93 - currently saltworks operates a closed system, with no discharge to the bay – proposed water management would require discharge of highly saline & bacterial waters, potentially significantly impacting south bay water quality, eelgrass beds, invertebrates, fisheries, & the turtle population – unlikely that RWQCB would approve such a permit

Appendix C, Sweetwater Marsh Unit – includes American but not Pacific golden-plover – suggest checking original source since Pacific is more common of the two species to occur in San Diego County
- add Brewer's sparrow to list (date of observation at D Street Fill can be provided if needed)

21.94 App. C, South San Diego Bay Unit - includes most recent commonly occurring species, but omits some common species that would be expected in the Otay River floodplain portion of the refuge, such as red-shouldered hawk, Virginia rail, sora, great-horned owl, Vaux's and white-throated swifts, Costa's, rufous, and Allen's hummingbirds, scrub jay, wrentit, Bewick's and house wrens, California thrasher, ruby-crowned kinglet, blue-gray gnatcatcher, Swainson's and hermit thrushes, warbling vireo, phainopepla, black-headed grosbeak, spotted towhee, Lincoln's sparrow, brown-headed cowbird, American goldfinch, etc.
- omits common species observed within saltworks, such as Say's phoebe, Cassin's kingbird, orange-crowned warbler, white-crowned sparrow, uncommon but regular species such as cattle egret, golden eagle, prairie falcon, large-billed savannah sparrow, rare but regular species such as Baird's & semipalmated sandpipers, bank swallow, yellow-headed blackbird, and other rarities including but not limited to sooty tern (only nesting site in the state), ruff, glaucous gull, etc.
- includes American but not Pacific golden-plover – suggest checking original source since Pacific is more common of the two species to occur in San Diego County

21.95 Appendix D, p. D-3, para. 4, 2nd sentence – missing vowel "allow"? – "restoring salt ponds in a phased approach will management techniques"

21.96 **[check app. table against chapt. 1-3 text] management of pond 20 for WSPs – what about adj. utility pole perches?

21.97 Note 5 yr review process p. D-11

21.98 App. I – Otay floodplain hydrologic modeling but none for salt pond restoration?

21.99 App.J – lack of salinity reduction or hydrologic modeling of ponds 10, 10A, & 11
Biological impacts from hypersaline plume release into bay? Permits?
Salinity reduction timing relative to biological needs of retention times for brine shrimp & flies?

21.100 Bridge design & funding for breach areas?

21.101 p. J-4 – identifies report as "preliminary feasibility study" & notes "simplifying assumptions" & need for more studies before implementation & re-assessment of assumptions
states "study addresses spatial and temporal extent of salinity changes" to be "used to assess ecological or other potential impacts associated with salinity changes" to be "addresses in

14

21.93 Refer to Responses 11.17, 18.35, and 21.40.

21.94 As stated in draft CCP/EIS, a comprehensive survey of the avian species observed within the San Diego Bay NWR has not be completed, therefore, Appendix C only includes those species that have been recorded to date on the site. We acknowledge that other species are expected to occur here and the list will be expanded as additional baseline studies are completed. The listing for the Sweetwater Marsh Unit has been corrected to include the Pacific golden plover and delete the American golden plover.

21.95 Appendix D (CCP Implementation) has been revised in the Final CCP/EIS to more clearly define the steps that would be involved in implementing a restoration design that incorporates monitoring and adaptive management.

21.96 Refer to Response 21.31 above.

21.97 Comment noted.

21.98 The draft CCP/EIS provides a program level analysis of the various management alternatives considered for implementation. The next step in the planning process is to conduct additional modeling and gather additional data necessary to prepare detailed engineering and restoration plans. With this information, the planning team can refine the restoration design and develop a monitoring plan with applied studies that would enable the incorporation of an adaptive management approach into project implementation. Appendix D has been revised to include detailed information regarding the steps to be completed in developing detailed engineering and restoration plans for the Refuge.

21.99 As discussed in Section 4.2.2.3.3 (Water Quality) of the draft CCP/EIS, no adverse effects of breaching Ponds 11, 10, and 10A are anticipated due to the relatively low salinity levels in these ponds. This assumption is supported by the modeling results for the breaching of Ponds 12, 13, 14, and 15. The need to analyze the salinity levels in the sediments prior to completion of final restoration plans is also acknowledged in this section. The need to coordinate with the Regional Water Quality Control Board is acknowledged in Section 1.4 of the draft CCP/EIS. Refer to Responses 10.18 and 11.24 for information related to brine invertebrates.

21.100 Intent of this comment is unclear.

21.101 Page 4-45 of the draft CCP/EIS states ". . . the model includes several simplifying assumptions for the purpose of preliminary feasibility assessment. To implement the brine management component, these assumptions would be assessed in greater detail in association with the development of final restoration plans."

21.101 cont. subsequent environmental review" yet no additional assessment or discussion in this the project EIS
warns that "sufficient safeguards would be required to avoid high salinity discharges in the event of extreme wet and dry years, pump failure, or other atypical conditions" yet no safeguard possibilities discussed

21.102 p.J-16-17 – reiterates above & adds the recommendation "that the model be refined" and notes the need to "reduce uncertainties" for the breaching salinity reduction alternative "to be carried forward in project planning"
notes that "dissolution of precipitated salts was not taken into account", raising the question of long-term impacts and the potential for scorching of benthic life as deposits in the substrate of the current salt ponds and dikes break loose, are unearthed, or shifted by currents following breaching

21.103 p. J-18 – notes that brine feasibility analysis "was carried out at a conceptual level. No numerical modeling was performed"

21.104 Appendix K – Sweetwater Marsh - recreational fishing – agree with assessment that additional fishing would not be compatible
-South San Diego Bay - wildlife observation & photography – agree with compatibility assessment & support seeking funding to implement
regional trail – agree in principle, but actual alignment would determine compatibility & potential impacts to shorebirds & breeding waterbirds

21.105 Appendix M – at least minimal predator control & monitoring need to be budgeted annually rather than subject to the availability of funds

21.106 p.8, end of 3rd para. – predation by gull-billed terns on least tern chicks had been documented at D St. Fill prior to 1999 (dates can be retrieved from data if needed)

21.107 p.11, 5th para. – argue that all control of all avian species should not be subject to approval by refuge manager, to avoid continued or increasing losses to common and efficient raptors such as kestrels, predator control personnel should be permitted to assess whether lethal removal is warranted at the time

21.108 p. 13, 2nd para. – as above but in reference to corvids and kestrels

21.109 p. 15-16 – as noted, the alternatives of no predator management, indirect control only, or non-lethal control only would result in significant losses of endangered species

15

21.102 The need for sediment analysis and soil characterization is addressed in several places within the draft CCP/EIS including page 4-40 where the need for subsequent analysis of the existing gypsum crust is addressed in detail. Refer also to Response 11.15.

21.103 Refer to Response 18.38 above.

21.104 Comment noted.

21.105 Comment noted.

21.106 This information has been revised accordingly.

21.107 The text has been revised to read: Prior approval from the Refuge Manager is required for all actions involving the lethal removal of a predator. This approval for lethal removal may be in the form of blanket discretionary removal of certain species found within the confines of the breeding colony site (such as for corvids, feral dogs, or feral cats where live trapping has been ineffective and nesting has begun) or on a case-by-case basis (such as for identified individual raptors).

21.108 The Predator Management Plan provides blanket approval for the lethal removal of corvids that are a threat to listed species. We do not however agree that blanket approval should be provided for the removal of kestrels.

21.109 Comment noted.

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Re: San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units Draft Comprehensive Conservation Plan and Environmental Impact Statement

Thank you for the opportunity to comment on the San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units Draft Comprehensive Conservation Plan and Environmental Impact Statement (CCP).

22.1 I appreciate the extensive effort that has been expended in the preparation of this document but the document is currently inadequate to allow the reader to draw informed conclusions about the alternatives presented. The primary flaw of this document is the failure to identify the unique bird values present under existing conditions within the San Diego Bay Refuge. The salt evaporation ponds which are the focus of the South Bay Unit preferred alternative D currently support a unique group of nesting seabirds and are an integral part of the habitat for one of the most important shorebirds assemblages on the west coast of North America. This document fails to provide the reader an accurate picture of the importance of this area and then proceeds to

22.2 advocate wholesale alteration of this habitat while acknowledging that there has not been sufficient study to understand what the relevant components of the habitat are. This is followed

22.3 with an assertion (Chapter 4 – Environmental Effects Tables) that only two water bird species are likely to suffer adverse effects and that despite ignorance about the current system, all other current bird values will be maintained or enhanced. This cavalier treatment of one of San Diego's most valuable natural resources, the salt evaporation ponds, casts significant doubt on

22.1 Sections 3.4.1.3, 3.4.2.2 (Salt Evaporation Ponds), and 3.4.4.1 of the draft CCP/EIS include detailed information about the importance of the habitats, including the salt ponds, in the south bay for an abundant and diverse array of avian species. In the Final CCP/EIS, some of this information has been incorporated into tables and maps to make the information easier to locate within the document. The importance of the habitats within the South San Diego Bay Unit for shorebirds and colonial nesting seabirds is also addressed in Section 2.3.5.2 under Objectives 1.3, 1.4, 3.1, 3.2, 3.3, and 3.4.

As described in greater detail in Response 14.2, the focus of Alternative D is to restore historic coastal wetland habitats in the south bay, while also maintaining and in some cases enhancing those aspects of the existing salt pond system that support nesting seabirds and other migratory birds.

22.2 The relevant components of the habitats present within the South San Diego Bay Unit are acknowledged within the Refuge goals, objectives, and strategies (Section 2.3.5.2 of the draft CCP/EIS), as well as in the Effected Environment Section of the draft CCP/EIS (refer to Response 22.1 above). It is through the implementation of the various strategies that the relevant components of these habitats would be maintained, enhanced, and restored to optimize habitat quality for an array of organisms, including the existing avian species that utilize the site.

22.3 Sections 4.4.2.3.1 and 4.4.2.4.1 of the draft CCP/EIS include detailed discussions of the potential environmental consequences to avian species that could result from restoring the existing salt ponds to intertidal habitat.

the validity of the CCP as a whole.

22.4 The inadequacies of the CCP argue for at minimum an extension of the comment period so that some of most serious omissions can be addressed, an accurate description of existing conditions in a meaningful context can be provided, available relevant data can be incorporated and the data gaps can be clearly identified. Also, it appears that the document has had limited distribution

22.5 outside San Diego County and given the significance of the areas proposed for alteration, it would be appropriate to assure a wide reviewing audience.

22.6 The standards set by this document as an EIS are of great concern. Likely adverse impacts are not acknowledged. If no impact is acknowledged no mitigation is offered or required. The description of existing conditions is inadequate. The proposed project implementation is not described in sufficient detail to allow evaluation of the ability to achieve the proposed end result or the impacts resulting from implementation. The cavalier treatment of migratory birds with a project that proposes wholesale alteration of their habitat puts the usefulness of the Migratory Bird Treaty Act as a regulatory tool in jeopardy.

22.7 I do support prompt action for those components of the CCP for which good data exist, which are of an appropriate scale in size and time, and which do not jeopardize current high value areas.

22.8 I support all the proposed actions of the preferred alternative for the Sweetwater Unit except those that will result in a continued conversion of the upland acreage of the D Street Fill. I hope the Service will re-evaluate the Fill in light of the loss of available upland habitat for the tern and plover and the inability to replace that habitat. I hope that an amended Draft of this document or the Final will incorporate a discussion of historic upland habitat loss and existing acreages.

22.9 For the Sweetwater Unit, the differences between alternatives B and C with regard to the use of the D Street Fill are sufficiently unclear to make it impossible to choose an alternative. It appears that some portion of the Fill would be converted to salt marsh regardless of the expiration of the leasehold. If this is incorrect, my apologies, but I just couldn't tell. In addition to being unable to understand the outcome of the alternatives there is not information provided to indicate the relative significance of this site for the least tern and snowy plover and the potential adverse consequences of a further reduction in the upland acreage available for nesting. Historically, the terns used most of the current fill for nesting, despite the presence of uncontrolled off-highway vehicle use. The area currently managed for them is reduced from that historical acreage. In addition, there is no upland habitat around the bay that is likely to be added to the acreage available for nesting for snowy plovers and least terns. Much of the habitat in the San Diego Bay area is vulnerable to decisions about military use versus listed species and yet the CCP fails to identify historical upland acreage lost or the consequence of additional reduction in that habitat.

22.10 The near absence of unvegetated intertidal habitat within the boundaries of the Sweetwater Unit would argue for some effort to enhance that habitat if shorebird numbers and diversity are going to be addressed and yet saltmarsh is the only wetland habitat that is clearly identified for enhancement. Despite its "un-natural" condition the interior of the Sweetwater marsh prior to the Refuge acquisition supported unvegetated intertidal habitat within the Refuge boundaries

22.4 The Service provided a 60-day comment period for the draft CCP/EIS and no requests for additional review time were received. All data available to the Service has been considered in developing and evaluating the range of alternatives presented in the draft CCP/EIS; however, the Service welcomes the opportunity to review any additional data that to this point has not been available for consideration. Refer to Response 22.1 regarding the description of existing conditions. Refer to Response 10.20 for a discussion of the identification of data gaps.

22.5 Advanced notice of the availability of the draft CCP/EIS was distributed to approximately 1,000 individuals, organizations, and agencies throughout the country. This notice was followed by another notice to the same distribution list announcing the start of the comment period. A Notice of Availability was also published in the Federal Register on July 22, 2005. The draft CCP/EIS was distributed to all who requested a copy, including various organizations and individuals outside San Diego County, such as the Point Reyes Bird Observatory, Manomet Center for Conservation Sciences, National Audubon Society, National Wildlife Federation, and many others. In addition, the document was available for review on-line. The distribution list for this document is provided in Appendix B of the draft CCP/EIS.

22.6 Refer to Responses 21.1, 22.1, and 22.3.

22.7 Comment noted.

22.8 Refer to Response 21.23 above.

22.9 The Final CCP/EIS has been revised to clarify that until the Memorandum of Understanding (MOU) related to the Mitigation Leasehold Overlay expires in 2010, a maximum of 27 acres of the D Street Fill could be restored to intertidal wetlands under any of the three alternatives presented for the Sweetwater Marsh Unit. After 2010, any portion of the D Street Fill that is not restored in accordance with the Mitigation Leasehold Overlay MOU would under Alternative A, continue to be managed as it is presently (this includes managing 23 acres of Refuge land on the D Street Fill for least tern nesting in accordance with previous mitigation requirements); under Alternative B, enhancement of current nesting areas, including additional fencing, exotic vegetation control, and substrate enhancement over approximately 15 acres of the fill, would be implemented; and under Alternative C, the D Street Fill would be redesigned to provide 33 acres of enhanced nesting area and 13 acres of restored intertidal wetlands. With respect to impacts related to these projects: based on the best professional judgment of the Service, the enhancement of 33 acres of nesting area with accessible adjacent chick foraging areas would provide greater benefits to terns and particularly snowy plovers than do the current conditions on the man-made D Street Fill. The objective of this action is to improve nesting success over current and historic levels at this site. Through enhancement, annual maintenance, monitoring, and implementation of an adaptive management program, we believe this objective can be met.

22.10 Both Objectives 1.1 and 1.2 in Section 2.2.5.2 of the draft CCP/EIS address the need to improve tidal circulation and reduce sediment build up in the marsh. The implementation of the various strategies described for these objectives would result in expanded unvegetated foraging areas for shorebirds, particularly along the marsh channels. Objective 1.2 addresses the full range of intertidal habitats, including mudflats and salt marsh habitat. In addition, the strategies proposed under Objective 1.2 are intended to address the loss of foraging area along the existing tidal channels as a result of the invasion of the Australasian isopod *Sphaeroma quoyanum*.

which has been lost to the expansion of saltmarsh vegetation. The recontouring of the south edge of the Fill is desirable, but will also reduce the available suitable nesting acreage. The failure to
22.11 incorporate mudflats adjacent to the Fill into the Refuge may put this area outside the boundaries of funding efforts to enhance the Refuge and its function for shorebirds. Currently, saltmarsh
22.12 vegetation has emerged to present a barrier to snowy plovers seeking foraging habitat from the fill and the presence of this vegetation may be a factor in the disappearance of the species from this site.

22.13 For the South Bay Unit only alternatives A and B are sufficiently limited in the effects to the salt ponds to be supported with the data provided. However, the wetland restoration of the Otay River parcel should be attached to alternatives A and B along with efforts to enhance public access.

22.14 It would appear that the preferred alternative choice of conversion of the salt ponds to salt marsh was a goal identified before this process began. The salt works were excluded from the initial proposed Critical Habitat for the snowy plover with the stated reason being in part the determination that this area was to be used for habitat restoration for the light-footed clapper rail. The continued focus on salt marsh creation has the appearance of a single-species plan which could result in a dramatic reduction in the biodiversity of the Refuge and inflict significant habitat loss on a very large number of sensitive water birds. The description and discussion of the South Bay Unit alternatives appear to be written in an other than objective way to direct the
22.15 reader to the choice of the preferred alternative without divulging the potential resource cost of that choice. The priority assigned to salt marsh conversion would appear to be contrary to the mandate for refuge conservation plans to emphasize diversity and avoid single species plans. The focus on salt marsh restoration would also seem to be contrary to the fact that the Refuge was acquired as mitigation for the loss of nesting habitat for the California least tern.

22.16 The choice of any but alternatives A or B for the South Bay Unit will result in significant alteration of the salt evaporation ponds which currently support a unique assemblage of water birds. The CCP offers a preferred alternative that would eliminate the salt production process which currently supports this assemblage of birds without any data that accurately characterizes the importance of this area in its existing condition, and without the data to understand why the current system is able to support this remarkable bird population. In the Effects section the document asserts that the current values with few exceptions can be maintained but acknowledges not knowing what the current values are.

Some information that would have been appropriate to include in the CCP to describe the value and uniqueness of the salt ponds in their current condition:

22.17
- One of only 8 regularly used nesting sites in San Diego County for the western snowy plover (federally threatened) which has dropped to a low estimated 36 nesting pairs around all of San Diego Bay/Tijuana Estuary.
- Only breeding site on San Diego Bay proper for American avocet and black-necked stilt (small numbers have nested at the Navy Radio Receiving Facility and in the Tijuana Estuary)

22.11 Refer to the first part of Response 11.12.

22.12 We concur, which is why both Alternatives B and C include proposals to improve access for plover chicks and adults from the D Street Fill to adjacent foraging areas.

22.13 Comment noted. As stated in the draft CCP/EIS in Section 2.1, the document has been prepared in a manner that would permit the proposed decision to include any of the alternatives evaluated in the document or to include a combination of components from two or more of the alternatives.

22.14 This information is inaccurate. The salt works did not meet the criteria for western snowy plover critical habitat as defined in section 3 of the Endangered Species Act. Further, none of the alternatives, including the preferred alternative, include objectives that would result in management for just one species. This can be verified by reviewing the various objectives presented in Chapter 2. Additionally, the preferred alternative proposes to implement several strategies or actions that are intended to increase productivity of western snowy plovers within the salt works.

22.15 Refer to Responses 11.5, 18.7, and 21.44.

22.16 In Sections 4.4.2.3.1 and 4.4.2.4.1 of the draft CCP/EIS an evaluation of potential effects to various avian species is presented that is based on the best available data. Current use of the ponds and levees by various guilds of birds are described as are the potential effects of restoration on current use. This analysis relies not only on information available for this site, but also on the results of investigations and observation made in similar situations as reported in published scientific literature. As stated in Response 21.1, the draft CCP/EIS is intended to present the vision and management direction for the Refuge over the next 15 years. As a result, much of the analysis has been conducted at the program-level. Subsequent step-down plans will be prepared following the approval of the CCP

to address the specific details of the various proposals. The next steps in the planning process are described in greater detail in revised Appendix D of the Final CCP/EIS. Refer to Response 14.2 of additional discussion of the effects of salt pond conversion on avian diversity and abundance and to Responses 18.6, 21.5, 21.17, and 21.76 for information related to the characterization of existing conditions.

22.17 Refer to Response 10.3.

22.18 • According to the Pt. Reyes Bird Observatory Flyway Project, 44% of the shorebirds in coastal San Diego County were documented within the salt works.

- One of only 3 sites in San Diego County supporting nesting double-crested cormorants.
- Only site in North America supporting the variety of tern species – regularly nesting – elegant tern, royal tern, Caspian tern, Forster's tern, California least tern, gull-billed tern, black skimmer; sooty tern nested one year; first record of sandwich tern for California; common tern – migrant; black tern – annual occurrence.
- Caspian tern – 1 of 5 nesting sites in southern California and the only regularly used site in San Diego County.
- Royal tern – 1 of only 3 nesting sites in the western United States and the only one in San Diego Count.
- Elegant tern (California Species of Special Concern) – 1 of only six nesting sites in the world! 1 of 3 in the western United States; only site in San Diego County. In 2003 the Salt Works supported up to 30% of the entire breeding population.

22.19

- Forster's tern – one of only six nesting sites in San Diego County.
- California least tern (federal and California endangered) 1 of 27 regularly used nesting sites in California; 1 of 14 sites in San Diego County
- Gull-billed tern (California Species of Special Concern; being considered for federal listing) – 1 of only 6 sites in western North America, 1 of 2 in the western United States, the only coastal nesting site and the only site in San Diego County.
- Black skimmer (California Species of Special Concern) – 1 of 6 nesting sites in California; 1 of 2 sites in San Diego County

22.20 • The salt works provide a primary staging area and concentration of red knots (Calfiornia Species of Special Concern) in San Diego County.

22.21 • Only consistently used site for common goldeneye in San Diego County.

22.22 • Only area of San Diego Bay for waterfowl which is fully protected from disturbance from boating activity.

22.23 • More than 10,000 phalaropes have been recorded regularly during migration.

22.24 The document does not provide a clear understanding of the current distribution of birds in both the intertidal and salt pond habitats. The data presented and data gathered by the Service but not yet published both strongly suggest that there is greater diversity and abundance in the salt ponds

22.18 The findings of the Pacific Flyway Project are described in Section 3.4.4.1 of the daft CCP/EIS. It should be noted that according to Robert Patton, the Pacific Flyway Project did not separate birds counted on the mudflats from those on the salt ponds, therefore, some revisions to this discussion have been made in the Final CCP/EIS.

22.19 Refer to Response 10.3.

22.20 Refer to Response 21.70.

22.21 Refer to Response 21.77.

22.22 Waterfowl use in the salt ponds is described in Section 3.4.4.1 of the draft CCP/EIS and an analysis of the effects for restoring the ponds is provided in Sections 4.4.2.3.1 and 4.4.2.4.1 of the draft. Of the waterfowl observed in the salt ponds during the 1993/1994 avifauna study of the south bay: brant were observed most often within the bay outside the confines of the salt works; American widgeon, gadwall, mallard, northern pintail, cinnamon teal, northern shoveler, bufflehead, ruddy duck, red-breasted merganser, and American coot were recorded both within the bay and within the salt pond complex; redhead, ring-necked duck, and common merganser were observed in very low numbers (seven, six, and one or two, respectively) occurring within the initial primary ponds and outside the salt pond system along the tidal flats; greater scaup was only observed outside the confines of the salt ponds; and lesser scaup and surf scoter were observed both within and outside the salt ponds with the highest concentrations of these species occurring outside the salt pond system and within the initial intake ponds. All of the grebe species observed during this survey were observed both within and outside the salt ponds, however, the highest concentrations of eared grebes were observed within the salt pond complex.

22.23 A discussion of phalarope use in the salt ponds is provided on page 3-59 of the draft CCP/EIS.

22.24 The distribution of birds in both the intertidal areas and the salt ponds is presented in Section 3.4.4.1 of the draft CCP/EIS. This information is addressed in the text and summarized in Table 3-10 and Figure 3-12. The data is based on the result of the 1993/1994 avian survey of the salt ponds and adjacent mudflat and shallow subtidal areas of the south bay. This survey provides the most comprehensive data available to date to address bird distribution in this portion of the Refuge. Although some additional data has been collected in subsequent years, this shorebird monitoring work does not provide sufficient data to allow for comparisons between to the two data sets. A new year-long survey will be conducted in the near future using protocols that will permit comparison of data from this survey with that obtained during the 1993/1994 survey.

than in comparable acreage of un-vegetated intertidal. The available intertidal habitat is not described or defined and the projected intertidal habitat resulting from the alternatives is also not described in a sufficiently quantitative way. Not all intertidal habitat is equal with breadth, slope, elevation and grain size all being significant in the bird populations that will be attracted and supported by the varying conditions.

22.25

In Chapter 3, the prey base within the hyper-saline environments of the salt ponds for the thousands of shorebirds and other water birds dependent on these ponds is acknowledged as not well understood and not studied prior to the development of these alternatives. This is a fundamental piece of information needed to evaluate existing conditions, to understand the consequence of habitat alteration, and to be able to hope to maintain the species dependent on this prey base. This omission alone is indicative of how premature the preferred alternative is.

22.26

The discussion of water birds in the South Bay Unit is based primarily on a single year's data which is functionally only a single data point. There was not a focused effort to study the distribution of birds in intertidal areas vs. salt ponds. The year was not representative in terms of nesting seabird numbers. This is inadequate to support a habitat alteration of the magnitude proposed in the preferred alternative.

22.27

Shorebird Conservation Planning

Only Alternatives A or B for the South Bay Unit are appropriately cautious in their treatment of the of this area for shorebirds. The preferred alternative D flies in the face of common sense.

22.28

It should be noted that very little of what un-vegetated intertidal habitat remains within San Diego Bay is within the direct management of a resource agency and therefore must be assumed to be more vulnerable to disturbance and adverse habitat alteration. This should put a greater burden on the Refuge to manage their habitat for shorebird species.

22.29

The Southern Pacific Shorebird Conservation Plan (PRBO, 2003) lists nine shorebird species for which coastal habitats are important. Eight of those occur on the Refuge and rely heavily on the salt evaporation ponds as foraging habitat and refugia.

Of the seven species for which the Shorebird Conservation Plan identifies the southern Pacific region to be of moderate significance (black-necked stilt, wandering tattler, spotted sandpiper, red knot, Sanderling, least sandpiper and Wilson's phalarope all have been found in the salt works and red knot, Sanderling and Wilson's phalarope occur in large numbers at some times of year. The salt ponds is the only area on the bay where black-necked stilts regularly breed.

22.30

Of the shorebird species for which the region is identified as being of minor significance, ruddy turnstones occurs in the Salt Works throughout the year with significant increases during migration.

Of the eight shorebird species listed by FWS as Species of Conservation Concern six occur regularly in the Salt Works.

22.25 A discussion of the intertidal mudflat habitat currently supported within the Refuge is provided in Section 3.4.2.2 of the draft CCP/EIS. Table 2-12 of the draft CCP/EIS indicates that a minimum of 124 acres of tidal mudflats would be provided under Alternative D. Based on historic mapping of this area and current elevations within the ponds, the area proposed for intertidal mudflat restoration historically supported this habitat, therefore, the characteristics of the habitat following restoration are expected to be comparable to those that exist immediately to the north outside the boundaries of the salt works. These assumptions will be verified during subsequent detailed restoration planning when the pond sediments will be characterized to determine grain-size, nutrient and salinity levels, and the possible presence of contaminants.

22.26 Section 3.4.2.2 (Solar Salt Evaporation Ponds) of the draft CCP/EIS indicates that a comprehensive study of the brine invertebrates in the salt ponds has not yet been completed. This section goes on to describe the results of investigations conducted by Terp (*1998*), which provide insight into the species diversity within the water column and sediments of several of the salt ponds within the system. Based on this information and data published within various scientific journals regarding brine shrimp and brine flies, we believe there is adequate information available to support the proposals included in any one of the alternatives evaluated in the draft CCP/EIS at the program level. The need to conduct additional analysis of the brine invertebrate populations within the various ponds prior to completion of a final restoration plan is included in revise Appendix D (CCP Implementation) of the Final CCP/EIS.

22.27 The 1993/1994 avian survey, seven years of management and monitoring at the salt works by the Service, the findings of investigations conducted in the south bay and at other salt ponds throughout the world, and the results of other coastal restoration projects in Southern California have provided the information necessary to develop and analyze the range of restoration options presented in the draft CCP/EIS. To further expand our

understanding of avian use of the south bay, another year-long survey will be initiated prior to completion of final restoration plans. All of this data will be important in implementing an adaptive management approach to restoration within the salt ponds. With respect to nesting seabird numbers, the Refuge Complex has funded annual monitoring of the seabird nesting colonies at the salt works since 1999 and the results of that monitoring have also been taken into consideration.

22.28 Based on the data available and the best professional judgment of Service biologists, the draft CCP/EIS concludes that shorebirds would not be adversely affected by restoration of the salt ponds in accordance with Alternatives C or D. Further, through restoration planning and implementation that incorporates monitoring and adaptive management, the Service believes that the various goals and objectives described in Chapter 2 of the draft CCP/EIS would be achieved.

22.29 Refer to Response 10.6.

22.30 Refer to Response 10.8.

22.30 cont. The Shorebird plan identifies only 12 areas outside of San Francisco Bay that support 10,000 shorebirds or more – south San Diego Bay is one of those sites; it is the only site in San Diego County and one of only four sites south of San Francisco Bay.

22.31 South San Diego Bay is one of only six coastal locations from Alaska to Mexico designated significant shorebird sites by the Western Hemisphere Shorebird Reserve Network. And a very large percentage of the shorebirds in San Diego Bay rely on the salt evaporation ponds in their existing conditions.

22.32 According to the Shorebird Plan, San Diego Bay supports a greater percentage of the 13 shorebird species examined than any other sites on the west coast of the United States except Humboldt and San Francisco Bays in fall and winter and is exceeded only by San Francisco Bay and two sites in Washington in spring. It is this with which the Service proposes to experiment.

22.33 The Shorebird Plan acknowledges the high value of salt evaporation systems which tend to replicate natural salt panne in their function for shorebirds. (Salt panne is not identified in the discussion of historic habitat distribution and loss for San Diego Bay and continues to be treated as a non-productive habitat as exhibited by the excavation of some of the very little salt panne on San Diego Bay at Emory Cove in the name of restoration.)

22.34 The Shorebird Plan also acknowledges that the threatened western snowy plover relies heavily on salt pond habitat. In intertidal zones, snowy plovers require either an un-manicured rack line or a broad expanse of shallow mudflat for foraging. This species occurs only with extreme rarity in the narrow intertidal zone that skirts most of San Diego Bay. The effects of implementation of alternatives C or D of the South Bay segment have unidentified consequences for the plover.

22.35 The assertion in the Tables in Section 4, that implementation of alternatives C or D will have essentially no adverse effects to any water birds except possibly eared grebes and red-necked phalaropes is naïve at best and unsubstantiated by the document and existing data. To dismiss wholesale change to the environment of so many migratory bird species as of no significance and the acknowledged loss of local populations of two migratory bird species as of little consequence would seem to fly in the face of any protections afforded by the Migratory Bird Treaty Act and jeopardize not only the bird populations but the regulatory protections on which their well-being relies.

22.36 The focus on salt marsh creation perpetuates the impression that salt marsh is the highest value habitat within the intertidal system – when it must be put in context with other habitats within that system. The CCP should include historic data on other habitats including salt panne, un-vegetated intertidal, brackish intertidal, brackish marsh as well as historic subtidal habitat acreage in the bay.

22.37 Data on the success of salt marsh creation efforts should also be included in the CCP including the standards for measuring success of a "restoration" effort and the identification of standards based on function, i.e., what lives in the salt marsh.

22.31 Refer to Response 10.9.

22.32 Refer to Response 10.10.

22.33 Refer to Response 10.11.

22.34 Refer to Response 10.12.

22.35 Refer to Response 10.22.

22.36 Data regarding the historic conditions in this area are provided in Sections 3.2, 3.4.1.2, and 3.4.1.2 of the draft CCP/EIS. Refer also to Response 21.74.

22.37 Objective 2.3 for the South San Diego Bay Unit describes the standards for measuring success of cordgrass-dominated salt marsh restoration in terms of plant coverage, height, and density. Additional criteria for measuring restoration progress and success would be developed in association with detailed restoration and monitoring plans and should provide to be an important tool in implementing adaptive management.

22.38 Context data should be provided for all sensitive species occurring within the Refuge Units so that potential changes to their habitat or status can be fairly evaluated. For the listed species population wide data should be provided as well as population trends.

22.39 Among the existing data that should be provided in an amended Draft would be information on similar restoration efforts such as those ongoing in San Francisco Bay

22.40 Little of what remains of un-vegetated intertidal habitat in the bay is actually in the ownership of a resource management agency. Shorebirds are reliant primarily on un-vegetated intertidal habitat and the salt ponds as a forage base. . Failure to manage protected un-vegetated intertidal and shorebird habitat within the salt works may affect management of un-vegetated intertidal habitat elsewhere in the bay. The Service's willingness to experiment with a very large percentage of the shorebird habitat that they control is an invitation to the other land managers on the bay to be equally cavalier. There is currently ongoing discussion about training activities that would affect the shorebird habitat at NAB. If the same standards of data quality and assurance are applied the regulatory arm of the Service with be challenged to provide protection for that which is being offered up for experimentation in the Refuge. If the habitat within the Refuge is significantly altered the burden the Bay's other land managers will be even greater to manage and enhance for shorebirds.

22.41 The Salt Works is one of those rare commodities – a money-making business with extremely high natural resource values. It would seem a shame to step away from such an opportunity. Some significant effort should be expended to encourage a business which is generating approximately $300,000/year in tax revenue and generates some of the best water bird habitat in California.

22.42 The first 15-years of the plan should be the time to acknowledge what is unknown, to gather the data to be sure that the real value of the existing system is understood and put in context and to focus on implementing only enhancement measures with little or no risk while studying the existing conditions so that the next phase can proceed in a scientific manner from a data-based foundation.

Thank you,

Elizabeth Copper

22.38 This information is provided in Section 3.4.6 of the draft CCP/EIS.

22.39 Discussion of the restoration planning occurring in San Francisco Bay has been added to Section 4.9 of the Final CCP/EIS. In addition, a new strategy has been added to South San Diego Bay Objective 3.3 that addresses the importance of maintaining communication among those involved in salt pond restoration efforts at San Diego Bay, San Francisco Bay, and other locations along the Pacific Flyway.

22.40 According to the data provided in the San Diego Bay Integrated Natural Resources Management Plan (INRMP) (*U.S. Navy 2000*), approximately 34% of the intertidal mudflat habitat within the bay is currently included with the Refuge boundary. Much of the remaining area is included within the San Diego Bay NWR acquisition boundary, but is currently managed by the Port. To facilitate long term habitat protection and allow the Service to manage the uses that occur within and adjacent to this area, Objective 1.1 for the South San Diego Bay Unit addresses the need to incorporate all of this area into the Refuge.

With respect to the management of the existing mudflats and existing and future habitat within the salt pond complex, Chapter 2, and in particular Section 2.3.5.2 of the draft CCP/EIS, describes in detail the objectives and strategies that would be implemented under the various alternatives.

22.41 We acknowledge that the byproducts of the existing commercial solar salt operation include benefits to a diverse and abundant array of bird species, as well as tax and lease revenues to state and local agencies. However, this commercial operation exists on a National

Wildlife Refuge, and in accordance with the mission of the National Wildlife Refuge System ("wildlife first") and the purposes for this Refuge was established (to protect and recover listed species), the Service must consider management of the Refuge in a manner that maximizes habitat value for listed species and the other fish, wildlife, and plants supported within the Refuge boundaries. Although the operator of the salt works has always worked with the Service to ensure the protection of wildlife during its operation of the facility, it is not possible for the operator to manage salinity or water levels in the ponds to maximize benefits for wildlife. Further, the existing salt pond system provides no benefits for the fish, invertebrates, and plants that exist in the adjacent bay ecosystem. The preferred alternative for the South San Diego Bay Unit proposes to improve habitat conditions for listed species, while also providing the habitat needed to support the variety of species known to occur within the Refuge boundaries.

22.42 Additional data gathering and analysis, as described in revised Appendix D, would occur prior to implementing any restoration proposals within the Refuge. However, we do not believe that 15 years of study are required before restoration to achieve the local, regional, and national goals and objectives for endangered species recovery, migratory bird habitat restoration, and Essential Fish can begin.

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Re: San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units Draft Comprehensive Conservation Plan and Environmental Impact Statement

Thank you for the opportunity to comment on the Draft Comprehensive Conservation Plan and Environmental Impact Statement (CCP) for San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units. I have worked with endangered California least terns and western snowy plovers for many years, including managing the largest colony of least terns in the State at Marine Corps Base, Camp Pendleton. As you know, I have also had the pleasure of monitoring at D Street and for the past several years at the San Diego Bay Salt Works.

23.1 The CCP embraces the most extreme of the presented alternatives, Alternative D, which proposes to essentially remove the existing Salt Works and to paraphrase the Refuge's vision statement, seeks to return the area to "undisturbed expanses of cordgrass" with "quiet nesting areas, buffered from adjacent urbanization." Although this serene image is quite seductive, it ignores the need to also preserve current habitat values rather than to only restore the area to what will ultimately be reduced biodiversity. The current diversity is only possible with the presence of the Salt Works and its dikes and ponds. Further, the CCP is essentially two, perhaps three (Sweetwater Marsh, Salt Works/Otay River), interwoven draft EIS documents, the resulting

23.2 obfuscation making it very difficult for the average reader to comprehend. While the CCP was obviously an enormous undertaking, it has significant problems that make this document fatally flawed and should, therefore, be withdrawn.

23.3 In all documents of this sort, a No Action Alternative is a base on which to compare the proposed actions and their possible outcomes. In this case, this baseline cannot be adequately established. First of all, several of the terminal salt ponds (Fenton ponds) are excluded from the current configuration of the Salt Works since they are on property not owned by the Refuge. In order to continue salt production in its current state at this facility, these ponds have to be relocated to within the footprint of the Refuge. In addition, the main production buildings and one pond and large portions of another are located on another property (belonging to the Airport Authority) that is not assured of use past expiration of the lease in 2007.

The No Action Alternative goes on to include the proposed breaching of either pond 28 or pond 29, further modifying the baseline from current conditions. The justification for this breaching is supposed to benefit least tern foraging. This

23.1 We disagree with the conclusion that restoration of the salt ponds would result in reduced biodiversity. On the contrary, pond restoration would restore biodiversity to this portion of the bay by providing habitat that supports an abundant and diverse population of birds, as well as numerous species of fish, invertebrates, and plants. The salt ponds provide the most significant opportunity for restoring historic native habitat in San Diego Bay, and we believe that restoration can occur in a manner that also maintains and in some cases enhances those aspects of the existing salt pond system that support nesting seabirds and other migratory birds.

23.2 This CCP/EIS is a programmatic document that must address all aspects of management within the Refuge, which in this case includes two distinct Refuge Units, Sweetwater Marsh and South San Diego Bay. The alternatives for each unit, as well as the environmental consequences of implementing the various alternatives, have been included in separate sections to aid the reader in understanding how the various actions related to the specific unit. The next step in the planning process is the development of "step-down" or detailed action plans. This is the point in the planning process where more detailed restoration planning for specific areas of the Refuge will be prepared. Refer also to Response 21.1 above.

23.3 Refer to Responses 21.27 and 21.28.

breaching would have questionable value to least tern foraging since years would likely be required to establish the small fish populations in the pond upon which the terns could forage. Simply breaching the dikes to restore tidal flooding is insufficient since the ponds currently are full of gypsum precipitate and require significant renovation to make either pond attractive to juvenile fish. The acreage increase of forage potential for the terns is miniscule compared to the larger bay and nearby Pacific Ocean. The location of the ponds is also of concern since they are at the northeast edge of the facility, adjacent to urbanization providing abundant predator perches overlooking the ponds. In the Preferred Alternative, the breached ponds would have pedestrian loop trails on the dikes which would add still more disturbance and potentially further reducing foraging potential.

23.3 cont. Statements on pages 2-49 and 2-50, give light to the overall plan process and shows all other alternatives are unacceptable to the Service except for Alternative D. The passage states: "the current operator may determine that salt production is no longer economically viable and decide to cease operations at the facility. There is also the possibility that the Airport Authority, which owns Pond 40, a portion of Pond 42, and the salt processing plant, may chose not to extend the current lease for solar salt production and/or sell its property when the current lease expires in 2007. If solar salt production were to be discontinued for any reason, the Service would have two options for managing the ponds in the absence of salt production: 1) continue to move water through the system until restoration planning is complete, or 2) immediately obtain the necessary approvals to breach the ponds and reestablish tidal action without altering the existing elevations within the ponds (refer to Alternative D, Scenario 3)."

Thus, a trigger exists within the plan that is extremely sensitive. Should the facility operators find they can no longer operate for whatever reason, Alternative D engages. Should the Airport Authority not extend the lease, Alternative D engages. If a flood breached the levees, Alternative D engages. No matter what, Alternative D engages. No other alternatives, only Alternative D is acceptable.

23.4 It appears Alternatives B and C are not only not preferred, they were probably never considered viable. Alternative B is scarcely different from the No Action Alternative by including additional nesting habitat by filling dike edges or building nesting areas within a few ponds to add 22.3 acres (Table 2-6). While these new nesting areas are intended for least terns and snowy plovers, they would almost certainly be usurped by the elegant tern/royal tern /Caspian tern/black skimmer/gull-billed tern nesting flocks. It would be nearly impossible to prevent these highly mobile flocks from selecting the supplemental nesting areas.

23.5 Alternative C appears to be a stepping stone transition to the Preferred Alternative. The boardwalk at ponds 10 and 23 is added into the mix and could easily have been included in Alternative B. Alternative C introduces levee breaches and the conversion of salt ponds described as open water to intertidal areas in the 200 to 440 acres. With this

23.4 Both Alternatives A and B for the South San Diego Bay Unit are viable alternatives in terms of implementation, however, the primary focus of each would be little or no change to current management practices on the Refuge. Under either alternative, the salt ponds would continue to be managed for commercial solar salt production and migratory birds would continue to derive the same benefits as they do now from this operation. Although some water level manipulation could occur to improve habitat quality for shorebirds, the primary purpose for water movement in the ponds would be to produce salt rather than optimize conditions for wildlife. Additional benefits to nesting seabirds would result from the implementation of Alternative B, with the intent of providing adequate nesting opportunities to support the diversity of seabird nesting that occurs on the Refuge, while also improving conditions for western snowy plover and California least tern.

23.5 The restoration options for the salt works that are included in Alternative C represent a compromise between restoring some portion of the salt ponds to tidal influence, while retaining the remainder of the pond system in solar salt production. It is not intended to be a stepping stone to the complete restoration of the ponds. We agree that there is no guarantee that salt production under Option 2 is commercially viable, although from a water management perspective, it may very well be economically feasible. If this alternative were to be selected as the proposed decision in the Record of Decision, further analysis would be required during detailed restoration planning. Based on previous discussions with the salt operator, we do believe that Option 1 is both commercially viable and economically feasible from a water management perspective, but once again additional analysis would be required as part of detailed restoration planning. We also agree that if Alternative B is identified in the proposed decision; it could include one or more of the proposed public uses or other management proposals that are included in Alternatives C or D. This is verified on page 2-1 of the draft CCP/EIS where it states: "The proposed

23.5 cont. conversion is the assumption that salt production would continue. There certainly is no guarantee that salt production is economically possible with such a reduced footprint. Of course, as mentioned above, discontinued salt production for any reason results in Alternative D.

23.6 Alternative D, the Preferred Alternative, is put forward stating that 33 acres of new nesting areas would be available. Table 7 in the summary states that 36 acres will be available, a small inconsistency. Within the text of Chapter 1 of the document, it is stated that 600 acres of so-called "open water" (i.e. salt ponds) will be converted to intertidal habitat. Elsewhere, the references are to 650 acres slated for conversion. Several items are left out of the numbers summaries. Some 44 acres of ponds are assigned to future brine production. The brine ponds would be substantially closer to the urbanized areas with reduced buffer zones than are currently available, in contrast to the vision of the refuge. These brine ponds would be managed to maintain salinities in the range of 80-120 ppt. These areas are to produce the brine shrimp and brine flies that now attract so many of the migratory bird species that utilize the Salt Works. How many acres are currently producing similar salinities? There is no estimate of the biomass currently produced by these brine species and no goal of production for the final design. Would a cup or two of each brine species be sufficient or is the goal to produce a significant portion of what is currently available? I have not found any estimations of brine species production within the document. Further, the Saltworks currently has no effluent release back into the bay. The result of the proposed brine production from the crippled design would necessitate regular or perhaps constant releases into the bay.

23.7

23.8

23.9 The CCP states that water quality effects as being "less than significant." However, there are several assumptions underlying this finding. The base assumption seems to be the brine is just concentrated seawater that needs to be diluted. In fact, the brine will have been isolated from the bay for an extended period of time in which it may have been altered significantly. The brine will have been held in shallow, warm ponds subject to vastly different bacterial growth and potentially concentrated contaminants left over from years of salt production. Since the brine ponds may or may not have the same salt concentrations as the original pond, contaminants could leach out into the brine and ultimately be released back into the bay. The CCP does not address these potential contaminant issues nor does it provide any data to that effect. These regular releases would require significant water quality district compliance restrictions. It seems to me, a Federal agency acting on acquired lands and having a contaminants branch with its own divisions would be able to perform at least preliminary testing of the sediments in question.

23.10 Within the CCP, there is only passing recognition of brine invertebrates as biomass resource for migratory waterfowl. There is a clear need in the CCP to conduct formal studies of the foraging habits of the birds that frequent the salt ponds, not to just rely on anecdotal observations from similar projects such as Mono lake (p 2-118, Objective 3.2). Anecdotal observations do not rise to the level of Scientific observation. Anecdotal observations, once scientifically tested, may be shown to be invalid or may be validated but do not carry any weight unless so tested. Further, the current document relies on

vision may look very similar to the preferred alternative, or it could include a combination of components from two or more of the alternatives presented in the draft CCP/EIS."

23.6 Table 7 and Table 2-12 are correct in stating that 36 acres of the new nesting habitat are proposed under Alternative D and 650 acres of salt pond habitat would be restored to tidal influence. The text has been corrected in the Final CCP/EIS to reflect these acreages.

23.7 Refer to Responses 10.15, 10.18, 10.28, 11.24, and 21.60.

23.8 Refer to Responses 11.17, and 18.38.

23.9 Substrate analysis and contaminants assessment of the pond sediments would be completed as part of the detailed restoration planning that would occur once a CCP is approved and funding is identified. The need for these studies prior to the completion of detailed restoration plans is addressed on pages 2-89 and 4-40 of the draft CCP/EIS. In addition, page 2-93 of the draft CCP/EIS describes the water management plan, which would include an initial intensive monitoring program, that would also be prepared as part of the final restoration planning under Alternative D. To ensure consideration of the potential effects to water quality as they might relate to residence time and bacterial growth, analysis of these issues has been added to the water management plan discussion in the Final CCP/EIS.

23.10 A year-long avian study similar to that conducted in the south bay in 1993/1994 will be initiated in the near future. In addition to documenting abundance and diversity, this study will also include an analysis of bird use within the ponds and adjacent mudflats. The need for the implementation of such studies prior to the approval of final restoration plans for the salt ponds has been added to Appendix D (CCP Implementation) of the Final CCP/EIS.

decade old surveys conducted without purposes related to the current questions. New surveys showing specific uses of the various ponds by bird species are needed. These data could then be related to known or determinable characteristics of the ponds, such as brine fly biomass, brine shrimp abundance, salinity, distance from refuge edge, pond acreage or other variables. Without such focused studies, potentially significant consequences of the plan to specific species would be unforeseen.

23.11 The CCP fails to list Migratory Bird Treaty Act (MBTA) compliance requirements in "Required Permits and Approvals" (1.4 on page 1-10). The reason for this omission may be related to the brevity given to the migratory species impacts. The southern San Diego Bay is highly valued as a migratory stopover and wintering area for a variety of species beyond phalaropes and eared grebes. While the restructuring of the Salt Works will negatively affect these species, several other species will be affected as well. There is a large migratory shorebird element that would be affected by reconfiguring the ponds, perhaps some positively, some negatively. The salt ponds regularly attract a large assortment of duck species including the locally rare common goldeneye, bufflehead, northern pintails, northern shovelers, teal, mallards and others such as barn, cliff, tree and violet-green swallows that probably consume vast quantities of brine flies which would be negatively affected. The ponds are breeding grounds for several species covered by MBTA such as American avocet, black-necked stilt, Forster's tern, elegant tern, Caspian tern, royal tern, gull-billed tern, double-crested cormorant, Belding's savannah sparrow, and coast horned lark. All of these species are likely to be impacted

23.12

23.13 One of the positive enhancements proposed in Alternative D is regulation of water levels in Pond 20 (25 acres) for nesting western snowy plovers. The proposal describes attracting 20 plover nests to the pond, this assumes any plovers will ever nest there. The Salt Works currently attracts about three plover nests yearly in total with limited fledgling production. Pond 20 is closest to upland areas directly across the Otay River channel used for foraging by numerous avian predators such as American kestrels, red-tailed hawks, assorted owls and mammals such as coyotes. The presence of the now abundant gull-billed terns (at least 73 nests last year) would prevent such concentration of nesting plovers from occurring as well.

23.14 Alternative D proposes the breaching of several dikes which would release significant discharges into the bay. These discharges would be of highly saline waters if the ponds were full at the time. The released water would dramatically increase local salinity for a relatively short time span. The effects of such a release would probably still be catastrophic to local marine invertebrates in the immediate area. Draining of the ponds prior to breaching would reduce the initial salinity estimates except as salts dissolve into the tidal flush waters coursing through the now opened ponds.

23.15 The breaching proposal has another significant and yet unforeseen effect. Predator management will be severely compromised. The size of the breaches is undetermined (Appendix J, modeled for 5 meters to 30 meters), the perimeter road will be cut in at least two places. Internal dikes would also be cut in six places and ponds 10, 10A and 11 would have 4 breaches (Appendix J, Figure 2). Road access to several parts of the

23.11 The Migratory Bird Treaty Act of 1918, as amended, is addressed in Section 5.1.4 of the draft CCP/EIS. We have consulted with the Service's Division of Migratory Birds and Habitats Program in the development of this CCP and will continue to work with them during step-down planning (see also Response 10.22).

23.12 The effects of pond restoration on waterfowl, seabirds, shorebirds, other waterbirds, Belding's savannah sparrow, and land birds are presented in Sections 4.4.2.3.1 and 4.4.2.4.1. Refer to Response 21.77 for a discussion of common goldeneye and to Reponses 10.3 and 22.22 for additional discussion related to seabirds and waterfowl. Sections 4.4.2.3.1 and 4.4.2.4.1 have been revised in the Final CCP/EIS to address in greater detail the potential effects to swallows and horned larks as a result of pond restoration.

23.13 Plover nesting located anywhere within the salt pond complex would be subject to predation by all of the species included in your comment. Therefore, as described in the draft CCP/EIS, any attempts to improve nesting success by the western snowy plover within the South San Diego Bay Unit would require intensive management (predator control, use of exclosures, etc.). The implementation of these actions is addressed in the project objectives and strategies (see Chapter 2 of the draft CCP/EIS).

23.14 The effects of pond breaching on bay water quality and adjacent subtidal and intertidal habitats are described in Sections 4.2.2.3.3, 4.2.2.4.3, 4.3.2.3.1, 4.3.2.4.1, 4.4.2.3.2, 4.4.2.3.3, 4.4.2.4.2, and 4.4.2.4.3. The concern regarding dissolved salts entering the bay during tidal flushing is addressed on page 4-35 of the draft CCP/EIS where it states: "To avoid the potential for such water quality impacts, sediment sampling within the salt ponds would be conducted prior to the completion of final restoration plans. If contaminants [including elevated salinity levels] are present at levels that warrant remediation, contaminated sediments would be removed or appropriately remediated prior to pond breaching."

23.15 Continued access to accommodate future management activity is discussed in the draft CCP/EIS. Please refer to page 2-80 of the draft CCP/EIS which states: "Some of these breaches may be bridged to maintain access around the outer levees for maintenance, monitoring, law enforcement, and specific public uses. Because of the potential for erosion, particularly to the outer levees, from wind, wind-generated waves, and tidal currents moving in and out of the ponds, the levees would require routine monitoring and occasional maintenance to ensure the long-term stability of the levees." The actual size of the breaches and the infrastructure needed to maintain access to the outer levees for management activities such as predator control and listed species monitoring would be determined during final restoration planning.

system will be eliminated. The time required to follow a depredating avian predator observed on a nearby dike could escalate from a few minutes currently to half an hour, one hour, or more once the breaches have been made. Since there is no mention of bridges or any engineering of the breaches, it must be assumed the breaches are planned as destructive holes in the dikes. Thus, a single breach could handicap an already difficult job of limiting predation pressures within the Salt Works. Just maintaining and checking traps will have significantly increased costs with decreased vehicle access. Some may think the breaches will also limit predators. To the contrary, avian predators will not be impinged in any way, mammals can and do swim. In fact, the breaches will intensify mammalian predation since such a predator may hunt the same area twice in making a loop through an area if it decides not to swim across to a new area.

23.15 cont.

The barren, earthen dikes provide a habitat value that is otherwise not available in any "natural" setting. They supply an abundance of habitat edges that are flanked on both sides with the open waters of the saline ponds. The natural configuration of the area would not provide any such structure and would not be capable of supporting the huge diversity of birds currently present. The natural conditions would be a large salt marsh with extensive mudflats with cordgrass components. The preferred alternative now allows the dikes to remain with breaches. These breaches would increased erosion of the dikes with increased flushing and hasten their degradation along the outer sections. The dikes also allow the tern/skimmer nesting flocks to relocate their nesting areas periodically from year to year. The proposed actions would ultimately limit the relocations with the eventual loss of the outer dikes and eventual growth of salt marsh vegetation along others exposed to tidal flushing. While species such as Forster's terns may benefit from the additional salt marsh, others like the least tern and snowy plover will be impeded from nesting by vegetation. Snowy plovers also do not nest in areas where access to water has been cut off by thick vegetation, further limiting nesting potential.

23.16

Several environmental interpretation opportunities are reserved for either Alternative C or Alternative D (4.2 p2-121). The interpretation opportunities serve to enhance the extreme alternatives at the expense of both A and B.
All alternatives could do these, not just D.

1. Partner with other agencies to incorporate topics related to Refuge resources in other interpretive programs around San Diego Bay.
2. Prepare and implement an interpretive plan for three observation areas along the Bayshore Bikeway (at 13th, 10th, and 8th Streets).
3. Develop a program to interpret historic hunting activities on the South Bay and hunting within the NWRS.
4. Develop an interpretive program to address the historic significance of the salt works to the solar salt industry and the region.

23.17

In an example of the inadequacy of the document, Figure 3-13 shows nesting locations of least terns in San Diego Bay, including two nesting locations that are not available currently in Coronado Cays and have not been available for many years. In fact, one of these is now the location of the Loews resort hotel.

23.18

23.16 We disagree with the statement that no natural settings provide the habitat value available today at the salt works. If this statement were true, there would be no need to conserve what natural habitat remains along coastal California to support migratory birds. This statement is contrary to the habitat goals of the Southern Pacific Shorebird Conservation Plan (*Hickey et al. 2003*) and the Seabird Conservation Plan Pacific Region (*USFWS 2005*). We do however agree that the levees provide important habitat for nesting and roosting birds, which is why all of the alternatives considered for the South San Diego Bay Unit include the proposal to retain and maintain the existing salt pond levee system. Page 2-99 of the draft CCP/EIS includes a description of the various actions that would be taken to maintain the habitat quality on the levees following pond restoration.

23.17 Refer to Response 22.13.

23.18 This graphic has been revised to distinguish between historic nesting sites and current nesting sites in San Diego Bay. The text on page 3-68 of the draft CCP/EIS correctly identifies the six areas where least tern nesting occurs within the bay.

23.19 In summary, I feel this Draft CCP to be severely and significantly flawed in many respects. There is a lack of design, scientific validation and thoroughness throughout the document. There is now and has been a clear bias toward the preferred alternative since the inception and fatal flaws in the No Action Alternative. I understand the enormous work that this document entails and, frankly, hoped for a much better product.

Sincerely,

Brian Foster, PhD
Consultant/Biologist

23.19 Comment noted. Refer to Responses 10.20, 21.1, and 21.44.

Monica Alfaro
6104 Nelson Street
San Diego, CA 92115

September 19, 2005

Ms. Victoria Touchstone
U.S. Fish and Wildlife Service
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Road
Carlsbad, CA 92011

Subject: San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units Draft Comprehensive Conservation Plan and Environmental Impact Statement

Dear Ms. Touchstone

Thank you for the opportunity to comment on the San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units Comprehensive Conservation Plan (CCP). I commend you and all staff involved in the preparation of this document as it is well written. The comments included in this letter reflect my concerns over the future of an area I consider to be unique and should not be interpreted as a criticism of U.S. Fish and Wildlife Service (USFWS) staff.

24.1 I agree with the preferred alternatives for the Sweetwater marsh and Otay River floodplain as well as enhancement of existing levees for the benefit of nesting seabirds and find them to be consistent with the mission statement of the National Wildlife Refuge System Draft Mission, Goals, and Purposes Policy (January 16, 2001) presented on page 1-11 of the CCP. The CCP designates Alternative D as the preferred restoration alternative for the South San Diego Bay Unit. I assume that this alternative was selected by the USFWS because it was determined that its implementation would increase biodiversity and benefit existing biological resources. I do not feel that construction of Alternative D would benefit existing biological resources and do not agree that Alternative D should be the preferred alternative. For the purposes of this comment letter, existing biological resources refers to nesting, migratory, wintering, and year round resident avian species.

I am concerned that the CCP in its discussion of the preferred alternative either did not include or did not thoroughly evaluate the following issues:

24.1 Comments noted.

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24.2 1) Scientific analysis of existing prey (brine flies and brine shrimp) density within the evaporation ponds and how it relates to avian diversity and abundance
24.3 2) Characteristics that may have attracted nesting waterbirds to the saltworks
24.4 3) Approximation of the prey density and carrying capacity for the proposed brine pond areas
24.5 4) Quantification of impacts to avian species no longer able to forage in the proposed 40 acres of brine production areas and potential mitigation
24.6 5) Declining light-footed clapper rail population in Sweetwater Marsh National Wildlfe Refuge despite the existence of appropriate salt marsh habitat

Consequently the construction of Alternative D may result in the following:

24.7 1) Reduction of available foraging habitat for migrating and wintering bird species
24.8 2) Less appealing nesting habitat for waterbirds
24.9 3) Further decline of golden eye population in the San Diego Bay
24.10 4) No increase of the light footed clapper rail population.

Shorebirds

24.11 According to the CCP the highest quality intertidal mudflat habitat occurs north of the saltworks. The richness of this habitat is reflected by the high density of shorebirds observed foraging during the winter months. High quality mudflat is unavailable to shorebirds during the high tide. Species of sandipipers including least (*Calidris minutilla*), western (*C. mauri*), and dunlin (*C. alpina*) have been observed foraging on the edge of primary and secondary ponds during the high tide. Larger shorebirds such as willets (*Catoptrophorus semipalmatus*) and marbled godwits (*Limosa fedoa*) forage in shallow portions of the ponds during the high tide. Thus the evaporation ponds provide a prey base that is available when the mudflats are submerged. Although most shorebirds can be observed foraging on the mudflat during the low tide, some remain foraging in the ponds. Furthermore, red-necked phalaropes (*Phalaropus lobatus*) and eared grebes (*Podiceps nigricollis*) were observed foraging in the ponds and not the mudflats. Therefore, while the conversion of ponds 14 and 15 to intertidal mudflat habitat would provide foraging habitat for many shorebird species during the low tide, the constant prey source provided by the evaporation ponds would be lost. In addition, habitat preferred by phalaropes and eared grebes also would be lost.

24.12 Managed water habitat will be kept at bay salinity levels to allow for the colonization of benthic invertebrates. It is proposed that managed water habitat will be submerged. While larger shorebirds such as willets and godwits may be able to forage in shallow areas, smaller shorebirds may only be able to forage at the waters edge. Furthermore, by eliminating hypersaline conditions, species typically observed foraging in the secondary ponds such as phalaropes, American avocets (*Recurvirostra americana*) and black-

24.2 Although the restoration and water management proposals in Alternative D would eliminate some portion of the brine invertebrates currently present in the system, these proposals would also result in increases in the availability of an array of other invertebrates within both the managed water ponds and the 120 or more acres of intertidal mudflat habitat that would be created within the system. Some of the questions related to changes in food supply within the system that would be examined during step-down restoration planning include: 1) to what extent are the various bird species observed within the salt works dependent upon the availability of brine invertebrates; 2) is there a relationship between the presence of brine invertebrates in the ponds and the abundance and diversity of avian species that use the system; and 3) would the proposed changes to the system result in a net loss of food supply for one or more avian species, and if so, should modifications to the proposal would be made to increase the availability of prey within the system. This discussion has been included in Appendix D (CCP Implementation) of the Final CCP/EIS.

24.3 Page 4-84 of the draft CCP/EIS includes a discussion of those characteristics that likely attract nesting seabirds to the salt works. Limited human disturbance and the generally isolated nature of the salt ponds are believed to play the biggest role in attracting nesting seabirds to the salt pond levees. Refer also to Response 10.23.

24.4 Refer to Response 24.2 above.

24.5 It is unclear what the commenter is referring to in stating that some species would no longer be able to forage within the brine management area. Water levels within all of the managed ponds would be regulated to support shorebird and waterfowl foraging and roosting. As stated in Response 24.2 above, additional analysis of food supply availability would be conducted as part of detailed restoration planning.

24.6 The quality of the salt marsh habitat at Sweetwater Marsh has been degraded over the years as a result of the continuous increase in human-related disturbances within and surrounding the marsh, the introduction of *Sphaeroma quoyanumas*, which alters the natural form of the tidal channels, the significant hydrological changes within the Sweetwater River watershed that have reduced freshwater flow into the marsh, high levels of herbivory on cordgrass plants, and sediment accumulation within those areas of the marsh where tidal circulation has been reduced or eliminated through disturbance. Several strategies are proposed that if implemented could improve habitat quality for clapper rails. One example is Objective 1.1 which addresses the need to improve tidal circulation in the marsh. This proposal is consistent with the recovery actions described in the Light-footed Clapper Rail Recovery Plan (*USFWS 1985*).

24.7 Refer to Responses 24.2.

24.8 It is a goal of the CCP to retain the diversity of seabirds nesting within the South San Diego Bay Unit. Objective 3.1 in the draft CCP/EIS for the South San Diego Bay Unit included various management actions intended to improve nesting opportunities including expanding the area available for nesting and continuing to improve nesting substrate on the existing levees. Refer also to Response 21.88.

24.9 Refer to Response 21.77.

24.10 The habitat requirements of the light-footed clapper rail have received significant attention in the literature (*Zembal and Fancher 1988, Zembal 1989*), and sufficient data is available to conclude that there is a tremendous opportunity for providing high quality habitat for clapper rails at the south end of San Diego Bay. This site offers good tidal flushing, separation from intensive development, and proximity to productive tidal flats. As stated in the draft

CCP/EIS, monitoring and adaptive management would be an important component of ensuring successful restoration.

24.11 A prey source would continue to be available in the managed ponds (including the brine ponds) during high tide under Alternative D. The brine ponds would provide a source of brine invertebrates, albeit at a smaller scale, and the other ±230 acres of managed ponds would support benthic invertebrates and other organisms found in the bay. Depending upon the time of year, the water levels in these ponds would be managed to support shorebird foraging or waterfowl rafting. The amount of foraging area for phalaropes and eared grebes would be reduced, but not lost.

24.12 The conclusion that foraging in the managed ponds would be limited to larger shorebirds is incorrect. As stated on page 2-91 of the draft CCP/EIS, "the water levels in the ponds would be regulated throughout the year to support the foraging and loafing activities of migratory birds." Currently, water levels are managed to optimize conditions for making salt, while under Alternative D, water levels would be optimized for wildlife. Foraging areas for phalaropes, avocets, and stilts would be altered; however, based on the current distribution of avocets and stilts in San Diego County (*Unitt 2004*), it is likely that these species would forage in the managed pond system as well as the ponds managed to produce brine invertebrates.

necked stilts (*Himantopus mexicanus*) would not benefit from managed water habitat. Therefore, conversion of evaporation ponds to managed water habitat may also result in a net loss of foraging habitat for these species of shorebirds. It should be noted that the saltworks is the only nesting site for American avocet and black-necked stilt in the Bay. Prior to reducing foraging habitat an analysis that determines what percentage of birds will be affected should be conducted.

24.13

24.14

Census surveys conducted by the USFWS between 1993 and 1994 (Stadtlander and Konecny, 1994) found that bird abundance was greater in ponds 23 (71.4 acres), 28 (31.1 acres), and 22 (61.4 acres) than it was in tidal areas. Furthermore, only 24% of the birds observed during the year-long survey were observed in tidal areas. This implies that evaporation ponds have a greater prey density than tidal areas. Studies of prey densities in the evaporation ponds have not been conducted. Based on personal observations and information provided in the CCP, I believe that the conversion of ponds supporting tens of thousands of birds to salt marsh, intertidal mudflat habitat, managed water habitat, and brine production areas (44 acres) with unknown prey densities will result in a net loss of bird abundance and diversity. Therefore, Alternative D would have a negative impact on migratory and wintering birds. Shorebirds comprise approximately 70 percent of all birds observed on the South San Diego Bay Unit (Draft CCP and EIS, 2005). I therefore believe that this impact will be significant and should require mitigation. In addition, Alternative D does not meet Objective 3.3 of the CCP to "manage the south San Diego Bay Unit in an manner that would continue to support significant numbers of shorebirds prior to, during, and after proposed enhancement and restoration actions. The rationale for objective 3.3 identifies many of these shorebirds either as Birds of Conservation Concern or considered highly imperiled or of high conservation concern by the U.S. Shorebird Conservation Plan.

24.15

I am aware that restoration projects often result in impacts to existing biological resources. However, typically the overall benefit to the resource outweighs the temporary and sometimes small permanent impacts. I do not believe that Alternative D will result in an overall benefit, and its construction will not justify significant impacts to existing resources.

24.16

Colonial Waterbirds

Seven species of colonial waterbirds nest at the saltworks. As their nesting areas, they have selected levees located in the center of the saltworks that are surrounded by water. This island like characteristic of these leveestranslates to safety from mammalian predators. At the saltworks, nesting areas have not been documented adjacent to the bay. Perhaps the static water levels are key in providing water birds with a sense of safety. The preferred Alternative proposes to enhance existing levees by widening and improving the soil substrate. However, such enhancements may prove to be in vain if the levees are located adjacent to salt marsh and are subject to fluctuating tides. These levees would be more vulnerable to predation from mammalian predators and raptors that

24.17

24.13 This is acknowledged on page 3-64 of the draft CCP/EIS.

24.14 Further analysis of current bird use would be conducted in association with the preparation of detailed restoration plans.

24.15 The data obtained from the 1993/1994 survey (*Stadtlander and Konecny 1994*) is not adequate to support the conclusion that the high bird abundance figures for Ponds 22, 23, and 28 are directly related to prey density. For instance, the study reports that although shorebird foraging was observed in Pond 28, the majority of the birds appeared to utilize this location as a roosting site when the mudflats were inundated. The high numbers in Pond 23 were attributed to a few species, including phalaropes and eared grebes, while Pond 30, which experienced water level fluctuations that resulted in land exposure within the pond, had high abundance and high species diversity. In reviewing the results of the study, it is equally important to note that all of the tidal areas to the north of salt ponds that were included in the study were found to support high species diversity and high to moderate species numbers. The results of the study do indicate that both the ponds and the adjacent tidal areas provide habitat important to a variety of bird species, which is why Alternative D includes proposals to restore tidal influence to some ponds, while retaining the ability to manage water and salinity levels in others. Appendix D describes the additional baseline data, including data regarding bird use, that would be obtained prior to completing detailed restoration planning.

24.16 Comment noted. Refer to Responses 21.89 and 22.28.

24.17 Refer to Responses 10.4, 10.13, 14.3, and 21.88. The statement that nesting has not been documented adjacent to the bay is incorrect. During the 1998 nesting season, Caspian terns, black skimmers, and Forster's terns were observed nesting on the outer levees.

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typically forage in the marsh such as the northern harrier. The safety provided by the ponds surrounding the levees would be lost as would the appeal of the new enhanced levees.

24.18 Creation of colonial waterbirds nesting habitat has also been proposed under the preferred alternative. Pond 44 would be filled to create nesting habitat. This area would be surrounded by managed water habitat and would therefore share the island characteristic with the existing levees.

24.19 Currently, colonial nesting birds assort themselves by species throughout the levee network. Interspecific aggression where two species are adjacent to one another or overlap can be great and sometimes deadly. By distributing them throughout a linear network of habitats, the shared boundaries between species are small, reducing the number of incidents of aggression between species.

If most of the colonial nesting birds selected the filled ponds surrounded by water and not the ponds adjacent to the bay, areas where two species nest adjacent to one another would increase. Under such circumstances, an increase in interspecific aggression is also anticipated.

24.20 In addition, the network of levees provides alternative nesting areas in the event that a predator eats their eggs. If Alternative D is constructed, the only option available to nesting birds utilizing pond 44 would be to nest on levees where they would be more vulnerable to predation. It is possible that under such circumstances nesting waterbirds would abandon the saltworks altogether.

24.21 Furthermore, habitat created specifically for the use of least terns and other colonial nesting waterbirds within San Diego Bay (Chula Vista Wildlife Reserve and D Street) have been unsuccessful. The configuration of the saltworks, although not designed specifically for these species has attracted them. Elegant terns nest in two other sites within the western U.S. The Saltworks is the only nesting site for royal terms, black skimmers, Caspian terns, and gull-billed terns in San Diego County.

Light-footed Clapper Rail

24.22 Successful salt marsh restoration projects such as the Model Marsh, the tidal linkage and the Napolitano site all share a common characteristic, that is that they are surrounded by salt marsh habitat that supports a relatively healthy clapper rail population. It is stated in the CCP that light-footed clapper rail populations have continued to do poorly in the San Diego Bay. Areas where this species occurs such as Sweetwater Marsh National Wildlife Refuge, support appropriate salt marsh habitat. Possible causes for the decline of this speciesinclude predation. Light-footed clapper rails in the Otay River consist of a maximum of 5 pairs (Draft CCP and EIS, 2005). The proposed saltworks salt marsh restoration area does not share the characteristics mentioned above. I believe that

24.18 Comment noted.

24.19 The assumption here is that no seabirds would nest along the levees following restoration. That assumption is not supported by the observations of past seabird nesting habits within the existing system and at other locations where these species nest. It is the intent of the nesting enhancement proposals to both improve existing nesting areas and expand opportunities for new nesting activity.

24.20 The seabirds nesting on the salt pond levees are currently subject to mammalian and avian predation. The level of predation is not expected to increase significantly under Alternative D. Under either situation, predator management to protect listed species would continue to provide indirect benefits to the other nesting seabirds.

24.21 The Chula Vista Wildlife Reserve was not originally created to provide nesting habitat, however, the site has proved to be attractive to some nesting birds, such as California least tern and Forster's terns. Additionally, the creation of the D Street Fill in 1969 was the result of the need to dispose of excess fill, it was never intended to provide nesting habitat for seabirds. Nevertheless, least terns and other species were attracted to the site and subsequently, portions of this area have been set aside for protection as tern nesting habitat. Refer also to Response 10.3.

24.22 There is no evidence to indicate that cordgrass restoration would not be successful at this location or that clapper rails would not move into the area following restoration. The area within the breached ponds would remain permanently open to tidal flushing, which is an important factor in maintaining high quality low marsh habitat. In addition, clapper rails have been observed in the relatively small areas of cordgrass that exist within the Biological Study area located

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conservation efforts for this species should be implemented in areas that have a higher probability of success.

24.23 I would like to add that thorough surveys of brackish and freshwater marsh habitats need to be conducted to obtain a more accurate sense of the clapper rail population in San Diego County. During the 2004 breeding season, during a general survey, light-footed clapper rails were detected in the San Dieguito River. Dick Zembal was contacted so that a focused survey could be conducted. This area was outside of the census survey area. It is possible that clapper rails utilizing brackish and freshwater marsh habitats are excluded from census surveys. In order to understand the distribution and population dynamics of this species, their use of brackish/freshwater marsh needs to be better understood.

24.24 Finally, I would like to state that at a time when economic growth equates the decline of biodiversity, examples of where both can coexist, are of critical importance. Western Saltworks serves as a model to other business entities that utilize the San Diego Bay and other sensitive wetland habitats.

24.25 Based on my personal observations, research and discussions with other biologists it appears that the saltworks although "man" created provides a variety of avian species a unique complex of foraging, nesting, and roosting, habitats all in close proximity. I agree that there is much room for improvement but do not feel that Alternative D will benefit existing biological resources. Again thank you for the opportunity to comment on the San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units Draft Comprehensive Conservation Plan and Environmental Impact Statement.

Sincerely,

Monica Alfaro

to the north of Pond 11. Human disturbance and habitat degradation have significantly reduced the available habitat for this species, which continues to contribute to the decline of the overall light-footed clapper rail population. The proposals included in Alternatives C and D to restore significant areas of light-footed clapper rail habitat in the south bay are consistent with the purpose for which the Refuge was established, as well as consistent with the proposed recovery actions included within the approved recovery plan for this species (*USFWS 1985*).

24.23 This is an interesting observation; however, this proposal is outside the scope of the CCP. We will forward this proposal to those responsible for conducting the annual clapper rail surveys. In understanding the results of such surveys, it is important to consider that rails may be using brackish and freshwater marsh areas because their preferred habitat, cordgrass-dominated salt marsh, is so limited. Further, reproductive success in these more marginal areas may be adversely affected by predation, as predator density in these habitats is generally higher for a number of reasons, including proximity to development.

24.24 Refer to Response 22.41.

24.25 Comment noted.

Victoria Touchstone
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September 16, 2005

Dear Ms. Touchstone:

Thank you for the opportunity to review the Draft Comprehensive Conservation Plan and Environmental Impact Statement for the San Diego Bay National Wildlife Refuge - Sweetwater Marsh and South San Diego Bay Units. Overall, the plan is impressive and the preferred alternative promises benefits for the Sweetwater March and Otay River floodplain areas. However, I am concerned about the preferred alternative for management of the South San Diego Bay Saltworks (saltworks), which proposes massive alteration of the area.

25.1

The saltworks are an incredibly valuable bird habitat and support great densities of nesting and migratory waterbirds (see attached table). The unique properties of this area – the dikes and hypersaline pools – support substantial populations of brine flies and brine shrimp. The flies and shrimp are a rich food source for these waterbirds, similar to that at Mono Lake, one of the most important bird areas in the world. The saltworks is unique in the assemblage and abundance of waterbirds that it supports:

Breeding birds at the saltworks:

- Double-crested Cormorant – 1 of only 3 sites in San Diego County
- Western Snowy Plover (federally threatened) – 1 of only 8 regularly used sites in San Diego County
- American Avocet and Black-necked Stilt – only breeding site on San Diego Bay
- Caspian Tern – 1 of 5 sites in S. Calif., only site in SD County
- Royal Tern – 1 of 3 sites in W. US, only site in SD County

25.2

- Elegant Tern (state special concern) – 1 of only 6 sites in the world, saltworks colony contained up to 30% of the entire breeding population in 2003; only site in SD County
- Forster's Tern – 1 of only 6 sites in SD County
- California Least Tern (federal and state endangered) – 1 of 27 sites in Calif., 1 of 14 sites in SD County
- Gull-Billed tern (state special concern) – 1 of only 6 sites in W. N. Amer., 1 of 2 in W. US, only site in SD County and coastal Calif.
- Black Skimmer (state special concern) – 1 of 6 sites in Calif., 1 of 2 sites in SD County

25.1 Comment noted.

25.2 Refer to Response 10.3.

Shorebird roosting at the saltworks:

- protected dikes and stable non-tidal water levels provide resting and feeding habitat despite tidal condition or time of day
- over 10,000 phalaropes are recorded regularly during migration
- primary staging area and concentration of population of red knots (state special concern) in SD County

Waterfowl foraging and roosting at the saltworks:

- Some species of waterfowl concentrate in numbers within the saltponds but not elsewhere on San Diego Bay
- Most notable is Common Goldeneye, a species whose numbers in SD County have declined significantly; the saltponds provide the only consistently used site in SD County

Alteration of the saltworks is likely to cause huge reductions in the prey base as brine flies and brine shrimp populations decline or die out. This may well result in the loss of the breeding colonies of waterbirds and will reduce the value of the area for migratory bird species. The plan implies that the habitat value of the saltworks is less than that of more natural areas, when the data (see attached spreadsheet) show that the existing character of the saltworks greatly enhances the value of this area for waterbirds. The plan does not acknowledge the adverse impacts that will result if the saltworks are converted to salt marsh.

- Predator threat to waterbirds (and particularly to nesting colonies) from habitat conversion to salt marsh
  Establishment of large areas of salt marsh would result in colonization by predators - including harriers, coyotes, and raccoons; although predator control is proposed, harriers are a locally uncommon species that is NOT included within the list of species that can be controlled; because of such limitations on predator control, harriers have significantly limited production at other least terns sites recently, including at Sweetwater Marsh and Tijuana Estuary

- Possible abandonment of colony sites due to changed surroundings being incompatible with physical requirements of specific waterbird nesting colonies
  None of the species in the attached table nested in the area prior to construction of saltworks, and most did not nest in S. Calif. at all, but rather colonized saltworks due to creation of appropriate colony conditions – most nest on bare dikes surrounded by water, not within marsh or in areas immediately adjacent to marsh

- Reduction in prey base and foraging habitat of shorebirds
  Conversion of saltpond habitat to saltmarsh would significantly reduce the available foraging habitat of shorebirds - no discussion of mitigation is included and no potential sites for mitigation exist in SD Bay

2

25.3 The important of the salt pond system for shorebird roosting and foraging is addressed in Section 3.4.4.1 of the draft CCP/EIS.

25.4 Refer to Response 22.23.

25.5 Refer to Response 21.70.

25.6 Refer to Response 22.22.

25.7 Refer to Response 21.77.

25.8 Refer to Responses 10.13, 22.26, 24.11, 24.12, and 24.15.

25.9 An assessment of the impacts expected to result from the conversion of the salt ponds to intertidal habitat is provided in Sections 4.4.2.3.1 and 4.4.2.4.1 of the draft CCP/EIS and measures have been incorporated into the project design to compensate for the loss of brine invertebrates within the secondary ponds. Refer to Responses 6.2, 6.5, 10.5, 14.4, 18.24, 21.35, and 23.16.

25.10 Refer to Responses 10.14 and 21.87.

25.11 Refer to Responses 21.88 and 24.17.

25.12 Refer to Response 21.89.

25.13 • Impacts to bay
Breaching of dikes and dredging of tidal channels would significantly reduce the existing mudflat habitat along the northern perimeter of saltworks –new channels would be cut through historically intact, healthy, functioning intertidal communities (see original bay mudflat/shoreline overlay)

25.14 Wildlife refuges commonly engage in various human interventions and modifications, such as growing grain crops to attract geese and cranes. These practices are widely and correctly understood to increase the value and importance of the refuges for those species. I encourage you to select the "no action" alternative for the saltworks to protect this remarkable resource for the waterbirds that depend upon it. Future management of the saltworks should take a phased

25.15 approach to any proposed changes, with monitoring and adaptation of management plans as needed to protect the resident and migratory birds that use this area.

Sincerely,

Kirsten J. Winter

Kirsten J. Winter
15115 Eastvale Road
Poway, CA 92064

3

25.13 Refer to Response 21.92.

25.14 Under the "no action" alternative, the existing diversity and abundance of avian species currently found within the salt ponds would be maintained; however, there would be little improvement in habitat quality for the listed species supported on the Refuge. Alternative B would provide new benefits for terns and plovers in the form of expanded nesting opportunities, but no benefits for the light-footed clapper rail or fisheries in the bay would be realized. We believe that an approach that continues to support a diverse and abundant avian population, while also restoring habitat to benefit listed species and a diversity of other species historically supported in this portion of the bay, is the best approach for achieving the Refuge purposes and mission of the National Wildlife Refuge System.

25.15 Comment noted. Refer to revised Appendix D of the Final CCP/EIS.

Appendix . Numbers of waterbird nests at San Diego National Wildlife Refuge Complex, 1999-2005.

	1999	2000	2001	2002	2003	2004	2005
Tijuana Slough NWR/Border Field SP							
Western Snowy Plover	9	15	12	24	14	18	19
California Least Tern	128	210	313	232	473	520	458
Sweetwater Marsh NWR D Street Fill							
Western Snowy Plover	2	1	0	0	0	0	0
California Least Tern	36	34	32	24	91	111	101
South San Diego Bay NWR Saltworks							
Western Snowy Plover	0	1	3	3	0	2	4
California Least Tern	25	44	45	39	62	49	34
Gull-billed Tern	29	27	47	39	59	49	73
Double-crested Cormorant	80-84	41	39-53	49+	74-77	49	77
Caspian Tern	281-369	500-574	364-450	379	332	313	357
Royal Tern	36	1-2	3	1-3	28-31	38	52
Elegant Tern	3100	86	107-110	37-100	10303-10500	1020	3051-3201
Forster's Tern	174-188	325-327	419-438	390+	266	275	415
Black Skimmer	395-410	224-231	419-430	443+	541	496	752

Victoria Touchstone
Fish and Wildlife Service
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Rd.
Carlsbad, CA 92011
Victoria_Touchstone@fws.gov

Re: San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units Draft Comprehensive Conservation Plan and Environmental Impact Statement

Thank you for the opportunity to comment on the San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units Draft Comprehensive Conservation Plan and Environmental Impact Statement (CCP). I have been looking at birds in San Diego since **1960**. I am currently and have been for **41** years a regional editor for North American Birds. I am a long-term member and currently secretary of the California Bird Records Committee. I am one of the founding members of Western Field Ornithologists. I have authored several books and numerous articles on birds of the area. I am unequivocally opposed to the Alternatives C and D proposed for the South Bay Unit of the Refuge. 26.1

The CCP preferred alternative and alternative C propose large-scale short-term change to the system of salt evaporation ponds that currently support a unique bird community including several listed species as well one of the most significant shorebird populations in western North America. The description of the potential adverse effects to waterbirds resulting from these alternatives – none except to phalaropes and eared grebes – is unsubstantiated and defies common sense. 26.2

The value and uniqueness of the salt ponds in their current condition is indicated in part by the following information::

- One of only 8 regularly used nesting sites in San Diego County for the western snowy plover (federally threatened) which has dropped to a low estimated 36 nesting pairs around all of San Diego Bay/Tijuana Estuary. 26.3
- Only breeding site on San Diego Bay proper for American avocet and black-necked stilt (small numbers have nested at the Navy Radio Receiving Facility and in the Tijuana Estuary)
- Eight of the nine shorebird species identified by The Southern Pacific Shorebird Conservation Plan (PRBO, 2003) as relying on southern California coastal areas occur on the Refuge and depend in large part on the salt evaporation ponds as foraging habitat and refugia. 26.4
- The Shorebird plan identifies only 12 areas in coastal California outside of San Francisco Bay that support 10,000 shorebirds or more – south San Diego Bay is one of those sites; it is the only site in San Diego County and one of only four sites south of San Franciso Bay.
- South San Diego Bay is one of only six coastal locations from Alaska to Mexico designated significant shorebird sites by the Western Hemisphere Shorebird Reserve Network. And a very large percentage of the shorebirds in San Diego Bay rely on the salt evaporation ponds in their existing conditions. 26.5
- According to the Pt. Reyes Bird Observatory Flyway Project, 44% of the shorebirds in coastal San Diego County were documented within the salt works. 26.6
- One of only 3 sites in San Diego County supporting nesting double-crested cormorants. 26.7

26.1 Comment noted.

26.2 Sections 4.4.2.3.1 and 4.4.2.4.1 of the draft CCP/EIS describe the environmental consequences to the various guilds of birds that utilize the salt ponds for foraging, loafing, and nesting.

26.3 Refer to Response 10.3.

26.4 Refer to Response 10.8.

26.5 Refer to Response 10.9.

26.6 Refer to Response 22.18.

26.7 Refer to Response 10.3.

- Only site in North America supporting the variety of tern species – regularly nesting – elegant tern, royal tern, Caspian tern, Forster's tern, California least tern, gull-billed tern, black skimmer; sooty tern nested one year; first record of sandwich tern for California; common tern – migrant; black tern – annual occurrence.
- Caspian tern – 1 of 5 nesting sites in southern California and the only regularly used site in San Diego County.
- Royal tern – 1 of only 3 nesting sites in the western United States and the only one in San Diego Count.
- Elegant tern (California Species of Special Concern) – 1 of only six nesting sites in the world! 1 of 3 in the western United States; only site in San Diego County. In 2003 the Salt Works supported up to 30% of the entire breeding population.

26.7 cont.

- Forster's tern – one of only six nesting sites in San Diego County.
- California least tern (federal and California endangered) 1 of 27 regularly used nesting sites in California; 1 of 14 sites in San Diego County
- Gull-billed tern (California Species of Special Concern; being considered for federal listing) – 1 of only 6 sites in western North America, 1 of 2 in the western United States, the only coastal nesting site and the only site in San Diego County.
- Black skimmer (California Species of Special Concern) – 1 of 6 nesting sites in California; 1 of 2 sites in San Diego County

26.8

- The salt works provide a primary staging area and concentration of red knots (Calfiornia Species of Special Concern) in San Diego County.

26.9

- Only consistently used site for common goldeneye in San Diego County.

26.10

- Only area of San Diego Bay fully protected from disturbance from boating activity.

26.11

- More than 10,000 phalaropes have been recorded regularly during migration.

26.12 It is this habitat which the CCP proposes in its preferred alternative to eliminate without supporting data or compensation. This is a flawed document which needs to be revised to include data which puts the current value to waterbirds of south San Diego Bay and the salt ponds in context and clearly identifies the consequences of such dramatic change.

Guy McCaskie
954 Grove Avenue
Imperial Beach, CA 91932

26.8 Refer to Response 21.70.

26.9 Refer to Response 21.77.

26.10 This is correct, boating is not permitted within the ponds and there are no proposals within any of the alternatives to permit boating within the confines of the salt pond complex.

26.11 Refer to Response 21.69

26.12 Refer to Responses 10.25 and 23.19.

Shauna Wolf
<shawolf@san.rr.com>
09/19/2005 10:45 PM

To Victoria_Touchstone@fws.gov
cc Humberto.Peraza@mail.house.gov, zachary.schlagel@mail.house.gov
bcc
Subject San Diego Bay National Wildlife Refuge Draft Comprehensive Conservation Plan and EIS

Shauna M. Wolf
Consulting Biologist
10041 Northrup Pt.
San Diego, CA 92126
shawolf@san.rr.com
858-695-6604

Victoria Touchstone
Fish and Wildlife Service
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Rd.
Carlsbad, CA 92011
Victoria_Touchstone@fws.gov

Re: San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units Draft Comprehensive Conservation Plan and Environmental Impact Statement

27.1 Thank you for the opportunity to comment on the San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units Draft Comprehensive Conservation Plan and Environmental Impact Statement (CCP). I do not think Alternatives C and D proposed for the South Bay Unit of the Refuge are the appropriate plans for management of the Salt Works area.

27.2 While some may view going back to the historical habitat as the ultimate goal of restoration that is not necessarily in the best interest of the many avian species currently using the salt works as nesting and/or wintering areas. The salt ponds provide a valuable foraging opportunity for many species of shorebirds that is not available anywhere else in San Diego County. The changes proposed by alternatives C and D are large-scale changes with implementation planned over too short a time scale to allow for adequate study of the impacts. These are significant changes with potentially negative impacts which should be studied more thoroughly prior to implementation of any changes.

The value and uniqueness of the salt ponds in their current condition is indicated in part by the following information:

27.3 · One of only 8 regularly used nesting sites in San Diego County for the western snowy plover (federally threatened) which has dropped to a low estimated 36 nesting pairs around all of San Diego Bay/Tijuana Estuary.

· Only breeding site on San Diego Bay proper for American avocet and black-necked stilt (small numbers have nested at the Navy Radio Receiving Facility and in the Tijuana Estuary)

27.4 · Eight of the nine shorebird species identified by The Southern Pacific Shorebird Conservation Plan (PRBO, 2003) as relying on southern

27.1 Comment noted.

27.2 Refer to Responses 21.2, 21.58, 21.85, 21.89, and 25.15.

27.3 Refer to Response 10.3.

27.4 Refer to Response 10.8.

California coastal areas occur on the Refuge and depend in large part on the salt evaporation ponds as foraging habitat and refugia.

27.4 cont.

- The Shorebird plan identifies only 12 areas in coastal California outside of San Francisco Bay that support 10,000 shorebirds or more - south San Diego Bay is one of those sites; it is the only site in San Diego County and one of only four sites south of San Francisco Bay.

27.5

- South San Diego Bay is one of only six coastal locations from Alaska to Mexico designated significant shorebird sites by the Western Hemisphere Shorebird Reserve Network. And a very large percentage of the shorebirds in San Diego Bay rely on the salt evaporation ponds in their existing conditions.

27.6

- Only site in North America supporting the variety of regularly nesting tern species - elegant tern, royal tern, Caspian tern, Forster's tern, California least tern, gull-billed tern, black skimmer

- Caspian tern - 1 of 5 nesting sites in southern California and the only regularly used site in San Diego County.

- Royal tern - 1 of only 3 nesting sites in the western United States and the only one in San Diego County.

- Elegant tern (California Species of Special Concern) - 1 of only six nesting sites in the world! 1 of 3 in the western United States; the only site in San Diego County. In 2003 the Salt Works supported up to 30% of the entire breeding population.

- Forster's tern - one of only six nesting sites in San Diego County.

- California least tern (federal and California endangered) 1 of 27 regularly used nesting sites in California; 1 of 14 sites in San Diego County

- Gull-billed tern (California Species of Special Concern; being considered for federal listing) - 1 of only 6 sites in western North America, 1 of 2 in the western United States, the only coastal nesting site and the only site in San Diego County.

- Black skimmer (California Species of Special Concern) - 1 of 6 nesting sites in California; 1 of 2 sites in San Diego County

27.7

- Only area of San Diego Bay fully protected from disturbance from boating activity.

27.8

- More than 10,000 phalaropes have been recorded regularly during migration.

27.9 The CCP proposes in its preferred alternative to eliminate this habitat without compensation. The salt ponds are a valuable resource and the plan needs to be revised to reflect the importance of this habitat to the wide range of waterbirds that use it.

Sincerely,

Shauna Wolf

27.5 Refer to Response 10.9.

27.6 Refer to Response 10.3.

27.7 Refer to Response 22.22.

27.8 Refer to Response 22.23.

27.9 An assessment of the impacts expected to result from the conversion of the salt ponds to intertidal habitat is provided in Sections 4.4.2.3.1 and 4.4.2.4.1 of the draft CCP/EIS and measures have been incorporated into the project design to compensate for the loss of brine invertebrates within the secondary ponds, to ensure protection of the existing pond levees for seabird nesting and high tide refuge for shorebirds, and to reduce the potential for increased predation and disturbance following the closure of the salt works. Refer also to Response 21.85.

September 19, 2005

Victoria Touchstone
Fish and Wildlife Service
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Rd.
Carlsbad, CA 92011

Victoria_Touchstone@fws.gov

Dear Ms. Touchstone:

RE: Comments on the San Diego Bay National Wildlife Refuge, South San Diego Bay Unit, Draft Comprehensive Conservation Plan and Environmental Impact Statement

My name is Michael Evans, and I have been visiting and studying birds using the former Western Salt evaporator ponds in South San Diego Bay since 1967. My Master of Science Thesis from San Diego State University involved describing the reproductive behavior of Caspian, Elegant and Forster's Terns nesting on the salt pond dikes. I was also a member of the California Least Tern Recovery Team that prepared the recovery plan for that Endangered species, and was later on the informal planning team for Least Terns, Western Snowy Plovers, Light-footed Clapper Rails and Belding's Savannah Sparrows. During the years leading to my thesis work finalized in 1973, I spent more than 900 hours observing birds at the salt works and have spent countless hours there in the past 38 years. I have also performed or assisted in numerous coastal wetland water bird and shorebird surveys and conservation plans from Orange County through Baja California, Mexico.

28.1 The salt evaporator ponds in south San Diego Bay have been in existence for over one hundred years (with some changes) and have formed a unique water bird habitat that has no match for numbers of nesting bird species along mainland California or Baja California. The idea of implementing the preferred alternative D demonstrates that the preparers of the plan have very limited knowledge of the resources at the salt works and the biota they support. The salt works area needs to be considered in the context of the other protected wetlands in San Diego County and the particular species they support.

28.2 There is no need to convert the area into substantial areas of Cordgrass-dominated salt marsh; this habitat is available and successful at the Tijuana Slough and other areas.

28.3 The south San Diego Bay mud flats surrounding the outer dikes of the salt works presently support tens of thousands of migrating shorebirds, gulls and terns at low tide and the pond dikes are critical for these birds as roost sites to wait out high tides and as nocturnal roosts to avoid predators. If the dikes are breached and cut down, the loss of

28.1 Refer to Responses 6.2, 18.4, and 21.58.

28.2 There are very few successful light-footed clapper rail populations in southern California due to continually increasing levels of disturbance in existing habitat area, upstream changes in watershed hydrology which adversely affect the habitat quality within existing marshes, and increased predation by mammalian and avian predators. The importance of restoring cordgrass-dominated salt marsh habitat to clapper rail recovery is addressed in the Light-footed Clapper Rail Recovery Plan (*USFWS 1985*). Objective 2.3 in the draft CCP/EIS proposes to increase habitat within the South San Diego Bay Unit to support the light-footed clapper rail. This proposal is consistent with the Recovery Plan's recommendation that the amount of suitable habitat for this species in the vicinity of the Otay River mouth be increased.

28.3 As described in Section 2.3.2.4 of the draft CCP/EIS, although the levees would be breached under Alternative D, the majority of the levee structures would be maintained in their current or enhanced condition to ensure the long-term availability of these areas for nesting seabirds and roosting shorebirds, pelicans, and other avifauna. Refer also to Responses 21.35 and 21.92.

these critical microhabitats would adversely affect the viability of the mudflats for shorebirds, including the listed Western Snowy Plover.

28.4 Reduction of the salt ponds would reduce the brine shrimp and brine fly habitat and have the potential to substantially reduce the hundreds and sometimes thousands of phalaropes and Eared Grebes that use the salt ponds as critical stop-over points during migration.

28.5 There is no evidence that the area of the existing dike surfaces is a limiting factor for nesting shorebirds such as Black-necked Stilts, American Avocets, Killdeer or Western Snowy Plovers. A new preferred alternative should include specific measures to produce microhabitats and associated spatial conditions to encourage these species to nest and forage successfully. Note that all these species forage either on the dikes or along the shoreline of the dike and pond system. Substantial reduction in dikes and the salt ponds they form would likely reduce the potential production of these species. Remember, that the habitats needed for solar salt production during the last 100 years is the reason that these unique habitats exist to support one of the highest number and density of tern and

28.6 shorebird habitats along coastal California. The draft Conservation Plan and EIS supply no evidence that the results of implementing Alternative D would either maintain or increase the existing numbers and diversity of nesting and roosting birds, including listed species.

28.7 The comments stated above strongly indicate that implementation of the preferred alternative would have significantly adverse and irreversible impacts on both listed species as well as other species protected by the Migratory Bird Treaty Act.

Sincerely,

/s/

Michael U. Evans, M. S.

28.4 Refer to Responses 10.28, 11.24, 18.26, and 24.2.

28.5 The draft CCP/EIS does address the need to provide appropriate nesting habitat for the western snowy plover (refer to Objective 2.4 in the draft CCP/EIS). We also concur that appropriate habitat should be provided for nesting avocets, stilts, and killdeer. Although the specifics of the nesting habitat design would be addressed during step-down restoration planning, we have expanded Objective 3.3 in the Final CCP/EIS to include specific strategies for supporting these nesting shorebirds under Alternatives C and D.

28.6 As described in Responses 10.12, 18.7, 18.13, 21.56, and 21.58, the strategies presented for Alternative D are consistent with the recommendations and recovery actions included within the Southern Pacific Shorebird Conservation Plan, the Light-footed Clapper Rail Recovery Plan, the Western Snowy Plover Recovery Plan, and various other conservation and recovery plans. Considering the expertise of the federal and state resource agencies, conservation groups, academics, and professional biologists responsible for the preparation of these recovery and bird conservation plans, we believe that implementation of these strategies would benefit avian species by providing additional foraging, resting, and nesting opportunities within San Diego Bay.

28.7 We disagree with this conclusion, as this alternative has been designed to improve nesting and foraging conditions for listed species and maintain and in some cases enhance nesting and foraging conditions for the migratory birds. Also refer to Responses 10.21 and 10.22.

"T R Clawson"
<trclaws@pacbell.net>
09/19/2005 10:54 PM

To <Victoria_Touchstone@fws.gov>
cc
bcc
Subject San Diego Bay National Wildlife Refuge CCP

Victoria Touchstone
Fish and Wildlife Service
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Rd.
Carlsbad, CA 92011
Victoria_Touchstone@fws.gov

Re: San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units Draft Comprehensive Conservation Plan and Environmental Impact Statement

I have been birding in San Diego since 1990. I was very upset to hear of the changes (Alternatives C and D) planned for the south end of San Diego Bay, also known as the salt works.

29.1

This is a wonderful area to see a great variety of terns, grebes, phalaropes and shorebirds in large numbers. I simply can not imagine why our government would want to destroy this fine birding area. The proposals under consideration would in fact turn the area into the exact opposite of a "refuge."

If this plan is implemented, where will I be able to see so many birds? This is where I, and many visitors to our area, go to see Elegant Terns, Least Terns, Gull-billed Terns, Black Skimmers, and Snowy Plovers, shorebirds
29.2 and phalaropes.

Far more importantly, where will all these birds find refuge? Where will they nest? To deliberately destroy this marvelous area would be criminal. Please reconsider. It isn't broken, so I beg you not to "fix" it.

Sincerely,

Therese Clawson
10926 Via Banco
San Diego CA, 92126
619-423-7800
trclaws@pacbell.net

29.1 Refer to Response 14.4.

29.2 Refer to Responses 18.4 and 21.58.

<gnatcatcher@sbcglobal.net>
09/19/2005 04:35 PM

To <Victoria_Touchstone@fws.gov>
cc
bcc
Subject Re: Draft Comprehensive Conservation Planning for the South Bay Saltworks

Dear Mrs. Touchstone,

30.1 I wish to state my opposition to any drastic alteration of the South Bay Saltworks portion of the San Diego Bay National Wildlife Refuge.

30.2 U.S. Fish and Wildlife Service needs to recognize the value of the natural resources already existing in this area, including the presence of rare and endangered species, colonial-nesting shore and seabirds, and feeding and resting habitat for a wide range of birds. Any plans regarding alteration of this valuable habitat should proceed on a slow and closely-monitored basis in conjunction with other conservation

30.3 planning in San Diego County. I urge the service to adopt a less extreme method for managing this valuable area than the "preferred" alternative.

Sincerely,

Kenneth Weaver
Fallbrook, California

30.1 Comment noted.

30.2 Refer to Responses 6.2 and 18.4.

30.3 Refer to Response 25.15.

Susan Yamagata
<suysan@netzero.com>
09/15/2005 03:43 PM

To Victoria_Touchstone@fws.gov
cc
bcc
Subject South San Diego Bay saltworks

Dear Ms. Touchstone,

31.1 I received the following information. I am not a scientist but I am a "birder" volunteer that had an opportunity to help in a study at the Saltworks. I realized then when driving thru the works, what a great place it was for the numerous birds to have.

I trust in the concerns that Mr. Patton and others have. And hope that there will be an advocate for this position when you are making your decisions.

Thank you for attending my concerns.

Sincerely,
Susan Yamagata
Imperial Beach

"Those of us monitoring the endangered species, colonial waterbirds, and migratory birds around San Diego Bay have been impressed with the handling of the Comprehensive Conservation Planning process by staff of the US Fish & Wildlife Service National Wildlife Refuge Complex. We agree with many of their preferred alternatives relating to Sweetwater Marsh, the Otay River floodplain, and enhanced human access. However, we were alarmed when they identified the most extreme of the proposed alternatives for South San Diego Bay saltworks as their preferred alternative."

Robert T. Patton
Consulting Biologist

31.1 Comment noted.

Jack Daynes
<jc_daynes@spamcop.net>
09/16/2005 10:48 AM

To Victoria_Touchstone@fws.gov
cc
bcc
Subject CCP & South San Diego Bay Saltworks

To:
Victoria Touchstone
Fish and Wildlife Service
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Rd.
Carlsbad, CA 92011

Dear Madam,

32.1 I speak as a concerned citizen. It has recently come to my attention that there are several plans in consideration for the 'development' and 'management' of habitats in San Diego Bay. I find it very alarming that there is a discussion that would break the levees at the saltworks. Such a plan has been discussed to provide POSSIBLE habitat restoration to areas that have been disturbed for 140 years. The ecology that has adapted along these levees (in particular, the terns and skimmers) are well enough established to deserve protection. Disturbing the levees could not possibly benefit these colonial nesters, and could result in the decimation of their viability.

Please no not consider any plan that would jeopardize the levees at South San Diego Bay NWR. "If it works, don't fix it."

Regards,
Jack Daynes
12202 Boulder View Drive
Poway, CA 92064
--
-- Jack --
==========
Poway, California (San Diego Co.)
N 32° 57' W 117° 04'
At 508' Elevation
==========

32.1 One of the objectives of the CCP is to retain the diversity of seabirds nesting within the South San Diego Bay Unit. Several management actions are proposed to improve nesting opportunities including expanding the area available for nesting and continuing to improve nesting substrate on the existing levees. Refer also to Responses 10.5 and 10.12.

1

SAN DIEGO BAY CCP REVIEW COMMENTS

TO: VICTORIA TOUCHSTONE, REFUGE PLANNER

FROM: JAMES SANDS, RESIDENT, IMPERIAL BEACH (POND 10A)

SUBJECT: SAN DIEGO BAY CCP

DATE: 8/14/2005

This letter is in response to our recent phone conversation regarding the impact of the CCP South San Diego Bay Unit, Alternatives C and D. As I mentioned on the phone, my wife and I recently constructed a home on the southern shore of salt pond 10A, where we enjoy the daily activities of several shorebirds, such as brown and white pelicans, egrets, terns, herons, skimmers, and divers. We are concerned that we will lose most, if not all of these birds if ponds 10A, 10, and 11 are restored to 100% cord grass for the clapper rails.

Is there a way that the ponds can be partially restored to grass, to afford both cord grass and open water in each of the three ponds? This would maximize the biodiversity, and increase the visual impact instead of just creating a sea of marsh grass where open water had formerly existed. For example, in Wisconsin's Horicon NWR, ponds have open water areas, with taller grasses on islands and perimeter areas. The islands provide complete shelter, the marshy perimeter prevents human intrusion, and the open water allows migratory bird landing areas. In short, the area is not dedicated 100% to any single species or usage.

33.1 In pond 10A, about 40-50% of the pond area (southeastern portion-see attached drawing) is currently dry and not used by most birds. The remaining 50-60% is water. Why can't the area that is currently dry be excavated and converted to cord grass and the remainder of the pond left as open water? Likewise, why not construct grassy islands in pond 10, rather than converting the entire pond to cord grass?

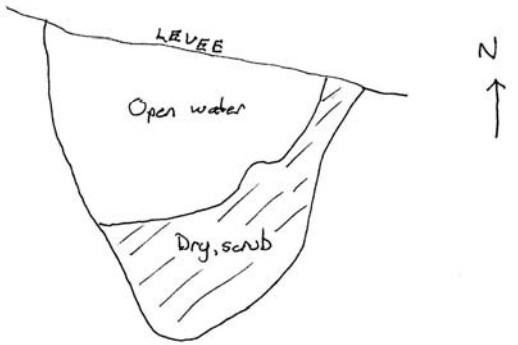
In summary, it seems that it might benefit both birds and man if these three salt ponds could be as diverse as possible. I am asking that the USFWS consider the above suggestions, and restore this area in such a way that it is enhanced for everyone, and that we don't wind up with just a sea of grass dedicated solely to one bird species. I would hope that we could be a bit more creative and make it a far better environment for all, including man.

James Sands

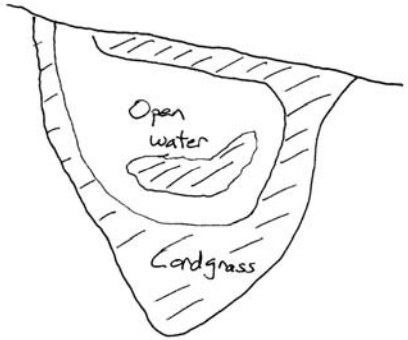
James Sands
500 Highway 75, #109
Imperial Beach, CA
619-424-9931

33.1 We appreciate your input and encourage you to continue to be involved in the next step of CCP implementation, which will include the development of detailed restoration plans for the various restoration areas identified in the proposed action. This "step-down" planning process would include opportunities for public input, similar to those provided during the development of the CCP. At this time, restoration within many of the salt ponds is intended to include a mix of habitat types, including tidal channels, unvegetated mudflats, and cordgrass and pickleweed-dominated salt marsh. Various factors would be considered in determining the appropriate mix of habitat types within an individual pond. These include such factors as the physical and hydrological characteristics of the pond, the potential habitat value for fish and wildlife, and the proximity of an area to disturbance. Appendix D of the Final CCP/EIS has been revised to more clearly describe this next step in restoration planning.

SALT POND 10A – CURRENT CONFIGURATION



SALT POND 10A – SUGGESTED CONFIGURATION



2

"David Seay" <dgseay@pol.net>
09/18/2005 09:56 PM

To <Victoria_touchstone@fws.gov>
cc
bcc
Subject David Seay replies to CCP Plan

Victoria,

Thanks for giving me your email address, and for the brief discussion the other day. I am a general birder now only interested in shorebirds. So I am very different from the more usual listing birder. I find the north south migration of the birds in the Western Fly Way particularly interesting , and have been and banded in certain places on the East Asian Fly Way to compare differing races or different species related to those we have here. At some future time I suspect our community will become interested in these just as there has been an interest in hunting ducks etc. That, or there are the wonderful possibilities if suitably promoted, to see these truly wild creatures in the Refuge, for locals or visitors, just as the latter now go to the Zoo. Whatever, various folk are very interested in maintaining habitat for these winter visitors or migrants and your plan ..the third choice if instituted looks very good. And I complement you for wading thru the various legal hurdles, quite amazing .. So I would suggest the following minimal changes.

34.1

At 1.8.1 the wording could be modified to say...."Waterfowl and Shorebirds either over-wintering here, or stopping over in migration along the Pacific Flyway"..... Some definitely stop here for the winter, and some continue further south. Ie Turnstones and Sanderlings spread out as far as Chile, whilst some of the Western S/Pipers get as far as Peru. Certainly we have a population of Knots wintering here. So not all are just migrating,

Then, the circular pathway outlined as a trail near the Salt works, seems at least to me, overly restrictive. The ¾ or one mile southern edge to the South San Diego bay is a very very good place to observe shore birds feeding and behaving differently as per species, at low tide . One sees several species at relatively close range and for most of the day the light is behind one and excellent. This is an optimal site for census-ing and for ? birds with bands, and in general for study. This length of mud flat is by far the best tidal place around Mission bay and the San Diego Bay area to see shore birds. Along the Strand the birds are too far away for good viewing. A few parts of Mission bay are medium good, and from B.C. in Canada south, few areas have as good viewing. The main time of the year for this would be the winter months.

34.2

To allow more access here... without special permission, ? might a special set of rules..for the winter months only, be allowed for bird leaders say on weekends or by permission during the week. Leaders would be from a formal group ie Audubon, SDFO, or say the Sea and Sage Audubon in Orange County, or a local biology teacher, and the leader would be responsible for any group and it would be required to stay together ie confirm to rules clearly set up.. The leader would have to be recognized in some way and register with your organization in a simple phone call way. Whatever, some way without it being locked all the time, so that a special visitor if need be could be shown this, or those with serious intent could find this area available for teaching or study. With some form of regulation certain members of the science, bird or ornithological community might therefore have access to this strip and thereby in the winter months see the shorebirds as they feed as apposed to seeing them roosting at a distance on the various dykes. This is a bit long winded but intended to give you some suggestion without fully opening up this lengthy area with associated risk. The area would be closed in summer of necessity.(I remember when a friend reported a rare Redshank in Camp Pendleton early in the summer breeding season, and crazy bird listers went in and drove over nests of nesting stilts just to see and tick this vagrant species).

34.3

A third thing I have already put forward would be re future planning. The opportunity is there..... near the Salt Works for a quite fantastic nature center at sometime in the future. Shorebirds in the Winter, and the breeding terns etc on closed circuit TV in the Summer. Some places in the World manage to do this with only 6 months of activity. Here there is a potential for year round. Within the plan. I would suggest that there needs to be space allotted and parking allowed for this in the future. Being almost immediately off the freeway public access to a center close to the road would give it a head start in a variety of ways .... versus the difficulty in getting to the Chula Vista nature center. This may

34.1 The text has been revised per your suggestion.

34.2 Because of the potential for disturbance during peak migration, as well as during the nesting season, the majority of the salt works levees would be restricted to guide tours only. We believe that the combination of trails proposed under Alternative D (an interpretive trail around Pond 28 and a pedestrian pathway along the southern edge of the Refuge) would provide good opportunities for the public to observe the variety of birds supported within the restored salt pond complex. These opportunities for "self guided" wildlife observation would be supplemented by guide tours within the salt pond complex, as described in the draft CCP/EIS.

34.3 Due to the limited acreage of developable upland area within the boundary of the South San Diego Bay Unit, the CCP does not include a proposal to construct a visitor center near the salt pond complex. It is possible that some other agency may at some time in the future propose an interpretative center in the immediate vicinity of the Refuge, which could provide opportunities for partnerships that would enable some interpretation of Refuge resources. Page 2-102 of the draft CCP/EIS addresses the potential use of remote cameras and other innovative approaches for interpreting the resources supported within the Refuge.

seem pie-in-the-sky presently but big nature things have been done in San Diego before.
Finally I am not sure whether in plans one would put a yearly allowance for travel for the staff. I would certainly suggest this if allowable. In this way new ideas could be got from national or international sites and conferences.
I did not review your disk completely but did not see any of the above so pass this on for what it is worth.
My best wishes in completing this. Yours David Seay Retired Physician.

34.4 Comment noted.

Ed Kravitz
<ekatsdrp@yahoo.com>
09/15/2005 10:50 AM

To TOUCHSTONE VICTORIA <victoria_touchstone@fws.gov>
cc
bcc
Subject EIR INPUT FOR SOUTH BAY REFUGE AREAS

Dear Victoria:

35.1 I know we are getting down to the wire on submissions and comments on the EIR. Because of the ruling this last Tuesday's San Diego City Council Meeting regarding the Coronado Beltline Historic Status, I need to make some changes to the document I was going to submit. I will still try to meet the deadline but, I wanted to be on record that something is coming from us regarding potential impacts in the vicinity of the Otay River berm and trestles.

I want to be very clear right from the beginning.....Although we may have different goals, we have much in common. I am offering my services to help bring all the parties involved together and find solutions that will meet everyone's goals. I have an open dialog with Railamerica management and their consultant John Hoegemier. I have open dialog with SOHO principles and their attorney. I have open dialog with MTS Right of Way person Tim Allison. I have good communications with the museum and "rail foamer" groups.

I believe that we can accommodate the bike trail's needs . I believe we can come up with some limited "special" rail uses which may actually benefit or compliment the goals of your refuge plan. Interpretive wildlife opportunities may be opened up that have not been considered. It will require some open minded thinking and cooperation between all the parties or this thing could fester for another 6 years.

35.2 I pledge my willingness to work with U.S. Fish and Wildlife Service, Army Corp of Engineers, and all of the parties mentioned above to arrive at a plan which will have benefits to all parties. As I have suggested repeatedly to Mendel Stewart in the past....renewal of the rail line could provide opportunities for improved waterflows at several choke points currently located where decaying trestles now exist.This is true in both the Sweetwater and Otay River segments of the Coronado Belt Line. From National City south to F Street are areas where Railamerica still see's freight potential. The environmental issues for that segment are allready being dealt with by John Hoegemier on behalf of Railamerica . Railamerica an Mr. Hoegemier do not see potential freight potential for the segment which was recently given historic status. That is an area of which I have conducted special study over the last six years.

Although local political forces promoting the bike trail have exerted maximum political pressure, the views of historians, preservationists and rail entrepreneurs can no longer be ignored. I just want to make it very clear to you in your position, that unlike what the opposition may portray us as.....we are reasonable people pursuing a worthy and noble effort just as you are reasonable people pursuing your worthy noble cause. We have earned a right to sit at the table and must be recognized. I will do my best to seek out the common ground and provide options that will let everyone obtain their goals.....or get as close to them as is possible.

35.1 Comments noted.

35.2 The railroad right-of-way addressed here is located outside the boundary of the San Diego Bay NWR; therefore, the draft CCP/EIS does not propose to implement any management actions or public uses within this area. The use of this right-of-way would be determined by the underlying landowner and the agencies that have approval authority over the development proposals that may be initiated for this area.

The data and proposals which I am submitting in documents to follow are suggestions which hopefully will spark further and more detailed discussions. I look forward to working with you and trying to maintain the peace and cooperation of the various historic and rail groups with an interest.

Best Regards,

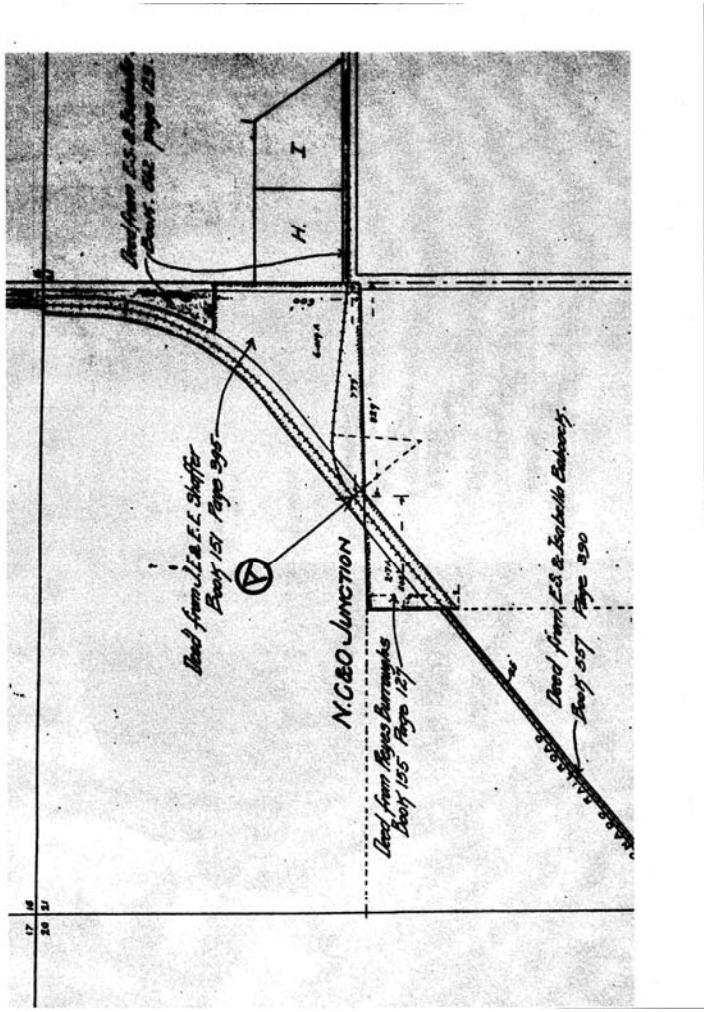
Ed Kravitz
rent-a-train.com
San Diego & Midwestern Railway Partners ; LLC
charter@rent-a-train.com
619-890-8894

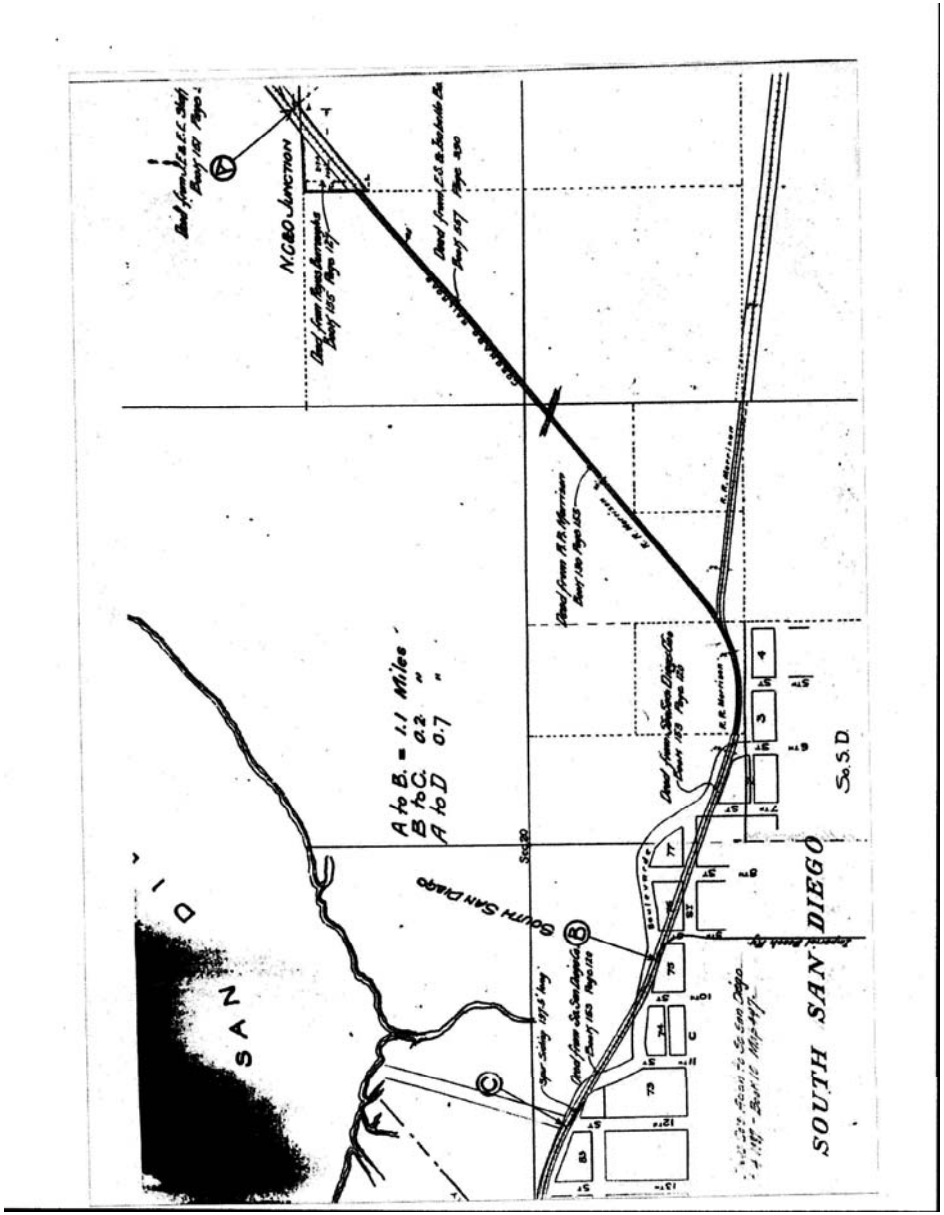
I have data for proposed compromises on the Otay River segment from the Salt Works to Imperial Beach.

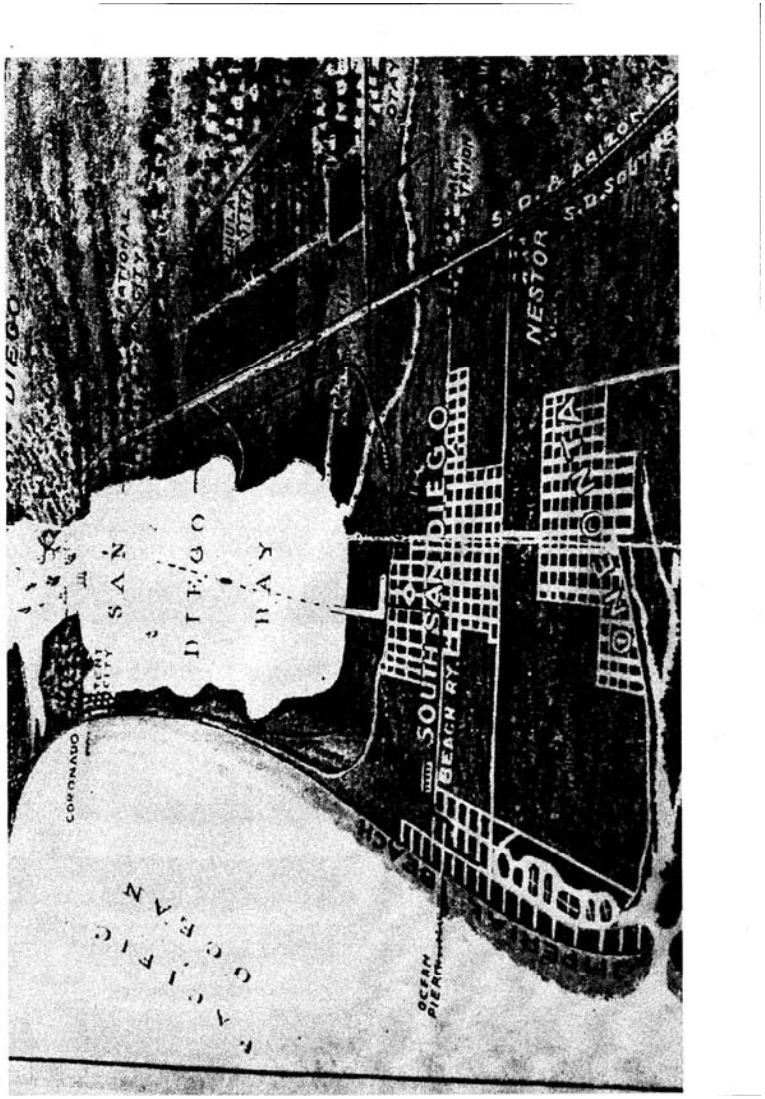
Yahoo! for Good

Click here to donate to the Hurricane Katrina relief effort.

01.JPG 02.jpg 23.jpg 24.jpg 100.jpg


N.G.&O. JUNCTION


SAN DIEGO BAY
SOUTH SAN DIEGO
S.D.
A to B. = 1.1 Miles
B to C. 0.2 "
A to D 0.7 "
N.G.B.D. JUNCTION
SOUTH SAN DIEGO
So. S. D.


S. D. & ARIZONA
S. D. & SOUTH
NESTOR
SOUTH SAN DIEGO
BEACH RY.
SAN DIEGO BAY
CORONADO
PACIFIC OCEAN
OCEAN BEACH

SILVER STRAND

DAILY EXCURSIONS

OVER THE

SURF LINE

OF THE

CORONADO RAILROAD

A Grand Trip Around the Bay

Through Chula Vista's Orange and Lemon Groves, and Along the Shores of the Rolling Pacific

Trains leave foot of Fifth Street, San Diego, at 11:25 a. m., and 5:00 p. m.; arriving at Hotel del Coronado, at 12:24 and 6:04 p. m.

Trains leave Ferry Landing, Coronado, 9:50 a. m. and 3:30 p. m.; arriving at San Diego at 11:10 a. m. and 4:40 p. m.

Tourists should not fail to take this Excursion and visit the famous Hotel del Coronado, with its numerous attractions, and enjoy a swim in the Warm Salt Water Plunge Baths, or a dip in the surf, a walk over the breakers on the new jetty extending 1000 feet into the ocean—affording the finest fishing in the world; or a visit to the baby monkeys and museum.

NO TRAINS ON SUNDAY.

Fare for Round Trip, either way, including Street Car and Ferry, 75c.

Train leaving Ferry Landing, Coronado, at 9:50 a. m., gives a delightful ride down the silvery Strand, connecting with the NATIONAL CITY AND OTAY RAILWAY, at National City, for

TIA JUANA (OLD MEXICO)

AND SWEETWATER DAM.

Round Trip Excursion Ticket to Tia Juana, returning to San Diego, $1.25.

For further information and Tickets apply to all leading drug stores, or at Station, foot of Fifth Street.

JOSEPH A. FLINT.

Ed Kravitz
<ekatsdrp@yahoo.com>
09/15/2005 12:31 PM

To TOUCHSTONE VICTORIA <victoria_touchstone@fws.gov>
cc
bcc
Subject Photo Attachments from Ed Kravitz (Part 2 of a response for input on an EIR)

Dear Victoria:

I sent these attachments in a second e-mail. Did not want to overload your files.

A couple of these photographs suggest potentials which should be considered.

The satellite photos indicate the 25 foot flat area across the top of the berm. The title to the property was generated in 1887 from the estate of Elija and Isabella Hancock to the Coronado Railway Company later purchased by Spreckels, Southern Pacific and now MTS . In 1887 at the time the Babcocks's transferred the ownership of their property to the railroad he was partners in, very little consideration was made to who owned what parcel down in the "bottoms". Before construction of the railroad and salt ponds the entire area was native tidal marsh with freshwater input from the Otay River. Satellite photos indicate that the entire south portions of the bay were once tidal marshes with their squiggly waterways visible from the air. I have included a 1928 aerial photo of the area. I have a 1928 aerial photo of gunpowder point and the Sweetwater River which portrays the types of natural waterways and habitat that once existed.

35.2 cont.

The property boundary on the County Recorders Map reflects a blueprint drawn by a surveyor prior to the construction of the levee and trestles through the marsh. I merely showed that the rail line would require a flat area "at grade" of 25 feet. A levee which would support 25 feet wide "at grade" would have to be constructed through the bottoms. It is logical that the base of this levee or berm would be wider than the 25 feet at grade. A little geometry would indicate that the railroad right of way would have to be wider than 25 feet at the waterline ! It was never brought into question until now.

Subsequent to the 1916 flood this segment was repaired back to the condition in which it existed prior to the flood. There is some evidence to indicate that there may have only been one trestle prior to the flood which was replaced with the current configuration with two trestles and a divided waterflow. The engineering for construction of the trestles in this manner is right from the Southern Pacific Railroad Book of Specifications. By dividing the river into two channels, worker were able to do the trestle construction in the dry while diverting the waterflows to the other channel. This manner of construction also reduced pressures from flood waters on any single element of the right of way.

Records indicate that the Army Corp of Engineers has dredged the Otay River channels in the past and deposited the materials on railroad right-of-way. In order to deposit the dredge materials the Corp had to seek permission from the railroad to deposit those materials on the right-of-way. At the time they were deposited on the railroad right-of-way, they became the property of the

railroad. In a future attachment I will send some legal references to support this concept. The sat elite photos I have sent you seem to indicate quite clearly that the island between the two Otay River Trestles is in fact....significantly wider than the 1887 survey on the county platt indicates. The true boundary was never contested before now because the land adjacent to the berm was not considered usable for agriculture or construction. Until the construction of the salt ponds it was just considered 'SWAMP LAND". 35.2 cont.

The adjacent land was wetland marsh prior to the construction of the Salt Works and Railroad construction. Although it is politically correct to call these lands "wetland marshes", in 1887 they were called "swamps". I have additional legal references which indicate that title to a property may be modified due to "recovery of swamp lands" to reflect their actual boundaries.If the sat elite photos are any indication of the true boundaries of the property, an opportunity exists to further accommodate a potential bike trail. I contend that the actual boundaries of the island between the Otay Trestles includes all of the land between the high tide marks of both the upper and lower channels of the Otay river. There may be some efforts to modify title to the property as mandated by law. 35.3

As a part of normal maintenance and renewal the railroad can perform its functions within the right-of-way without permitting. That is not to say that we would be so insensitive to do that without prior announcement, but the jurisdiction of the U.S. Fish and Wildlife Service may be somewhat limited under the "Grandfather Clause" and the "Railroad Act". We're not looking for a test case in any of these categories, but merely trying to state that the railroad has not only a right to exist in it's property boundaries, but it has the right to protect itself from flood and erosion and it has a right to maintain it's ballast, trestles, ties, rails and other infrastructure. 35.4

Because of the condition of the two trestles , any operational use by either rail or bike trail will require modifications or replacement. If the trestles could be replaced or upgraded in such a manner as to allow significantly higher tidal waterflows to the south and east of the right-of-way. I believe this would help meet some of your goals regarding portions of the former MKEG property which I have been told, you want to restore as a tidal marshland. 35.5

Because of the historic designation, replacement of the trestles could be more difficult, however the goal of the preservation and rail groups is to preserve the right-of-way as a "railroad". Railroads evolve too. New ties, rails and other items need to be replaced from time to time. The same is true of aging trestles. I believe that even with historic designation , the key players in the historical community would not oppose box culverts or other bridge components and configurations.....as long as it makes it "operational" as a railroad. I believe again that this is an opportunity for cooperation and cost savings to all the groups with interest.

We believe that the "island" between the two trestles is in need of shoring on the southeast side. We believe that shoring will prevent excessive erosion and damage in the event of a flood condition. It would also provide an opportunity to widen the "at grade" portion of the berm without going outside the "near water" boundaries of the property. It is my understanding that future dredging is being contemplated. Such shoring could provide an easy location for depositing that dredge material while backfilling shoring at the same time. Careful study could 35.6

35.3 We are not aware of any disputes over the approved boundary of the Refuge. Revisions to an approved Refuge boundary would occur through an amendment the Refuge's Land Protection Plan, rather than through the CCP process.

35.4 Refer to Response 35.2 above.

35.5 Comments noted.

35.6 Any uses proposed on Refuge lands would have to be evaluated to determine if the proposed use would be compatible with Refuge purposes and mission of the National Wildlife Refuge System (refer to Section 1.5.2.1 of the draft CCP/EIS).

make it possible for "habitat and nesting improvements" to be incorporated in any plan to place shoring. It's an area where there could be great flexibility and cooperation. It's an area where the railroad could play a positive role in the improvement of the habitat while accomplishing the goal of providing access for the bike trail.

35.6 cont.

Besides creative nesting opportunities being incorporated into any potential shoring or bridge construction , the railroad could also take an active role in re-introducing native plants to the refuge areas. Considerable acreage exists on the right-of-way to propagate native species of plants. Some of these plants could be later transplanted to other areas of the refuge, and some of them would be incorporated into erosion control for the right-of-way.

The location is currently very isolated. It is relatively quiet and dark and wildlife abounds. I sat down by the trestle at 13th Street watching the fish jumping in the river and the Egrets and other birds hunting. The segment is much as it was long ago. Although the city is vi sable in the distance, it is an oasis for wildlife. Wildlife viewing from a blind has long been established as a way to view birds and other wildlife without impacting them. Because migratory and endangered species have never been hunted by trains or other large objects, they are not genetically imprinted to be afraid of such in the same manner as a pr editor. I have a study which indicates viewing migratory birds from inside an automobile presents much less impact than standing out in the open. A man...a dog.....or a person on a bike.....could be perceived as a predator by these migratory birds. I do not believe that a static railcar would be perceived as a threat. As one of the ideas for rail use I want to put forward is the use of static passenger railcars as wildlife viewing blinds. Whether these were "quiet viewing areas" or "bed and breakfast" accommodations , the potential should be considered. Inexpensive static passenger railcars would be ideal blinds for taking in the view without disrupting the birds and other wildlife from their routines.

35.7

At some point in the future operational rail operations may be proposed. I would like to make some comments in regards to potential future rail operations:

While Railamerica does not currently see any freight potential for this segment, There are several scenarios which might change that.

Pond 20 development plans could require that millions of cubic yards of fill material be moved to the area. Rail should not be dismissed as a means of moving large quantities of material.

35.8

Beach Sand Replenishment Projects. Beach Erosion is a significant concern to Imperial Beach. Replenishment efforts will need to continue to keep Imperial Beach from disappearing into the surf. Sources of uncontaminated sand are dwindling in the immediate area. Cleaner sands may be available in other areas which could be moved more economically by rail to the beach.

United States Navy and SPECWAR at Ft. Emory could be freight rail customers. Although the Navy currently moves most materials at Ft. Emory by truck , unforeseen future needs might require movement of large objects or packages. While the Navy is not actively seeking rail service to Ft. Emory, they would likely not object to it being available as an option. Potential for not only

35.7 Refer to Response 35.2 above.

35.8 Comments noted.

freight but for "training purposes" could be a benefit to the Navy.

Heritage Tourism and Wildlife Interpretive opportunities. Using an open carriage self propelled trolley car history buffs and birders could be taken through various portions of the refuge for photo opportunities and interpretive lectures. By keeping riders on a trolley or tram the public can have an opportunity to view wildlife close up without walking and running directly through the habitat. Just because the rail is operational for such passenger traffic does not necessarily mean that trains will be roaring through constantly.

Public Transportation opportunities exist which have been largely ignored. These options have not been fully considered by MTS and SANDAG due to the BIKETRAIL's political influence. We intend on opening this dialog again now that the rail line is protected somewhat by historical status. The use of MDU self propelled passenger equipment which does not require and overhead catenary and meets some emission requirements is a very economical answer to several transit and economic development issues. Camp Surf, Imperial Beach Pier and Beach could become accessible as well as the T.J. Estuary as destinations for the rail line. The multiple refuge locations along the rail line can also be connected with marinas, future bayfront development, wildlife interpretive centers and historic locations. With some forsighted planning this can also be plugged into downtown ballpark, convention center, embarcadero and AMTRAK.

35.8 cont.

Plans are being developed regarding portions of the railroad from National City through the Paradise Creek Marsh and Sweetwater river tributaries. I will not interfere with these efforts as they are in good hands. I will cooperate as far as defusing any opposition from historical or rail groups in making improvements to this segment. Although Railamerica only has interest as far south as F Street, the proposed connections to the BNSF lines at National City would allow us an opportunity to charter private Amtrak compliant equipment from Los Angeles to the southbay.

San Diego & Midwestern Railway Partners ; LLC currently has a proposal to place a static train on the Coronado Belt Line at J Street in Chula Vista. I am active in the charter rail industry and have access to a lot of passenger railcars. Some are for rent, lease and sale. I also have some flatcars available which could be used for bridges (biketrail or footpath) . They are rated at 175 tons ! This area could potentially be a weekend or winter destination for private railcharters. Marketing opportunities are increased by San Diego's mild winter and the proliferation of wildlife in the southbay refuge areas. We feel that opportunities to specialize in ecotourism would be greatly increased by any improvements to the existing rail infrastructure. I am sensitive that the refuge wants neither a catenary (preditor perch) nor diesel exhaust spewing over the wetland marshes, but I am also aware that you are mandated to provide maximum access to the public with minimal impacts. I think we are the choice for minimal impacts. I hope I can convince you that we are your friends and can help facilitate you to your refuge goals and mandates.

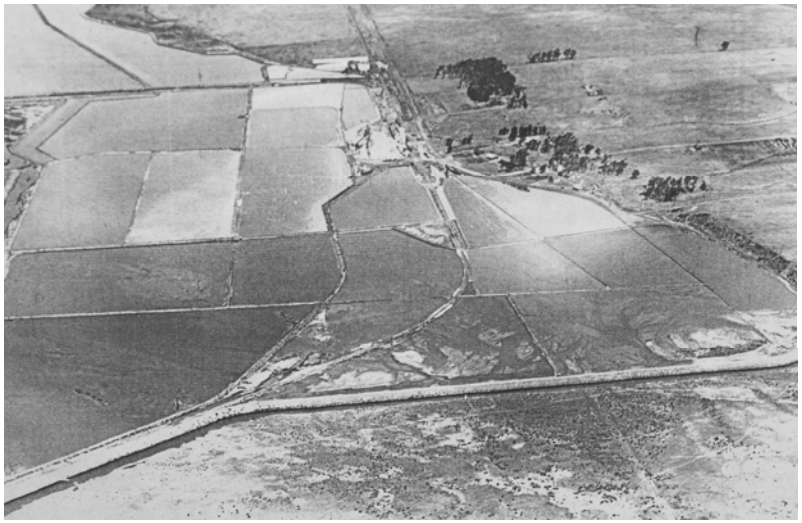
Please consider these and previous comments to be a part of my submitted response to the EIR process.

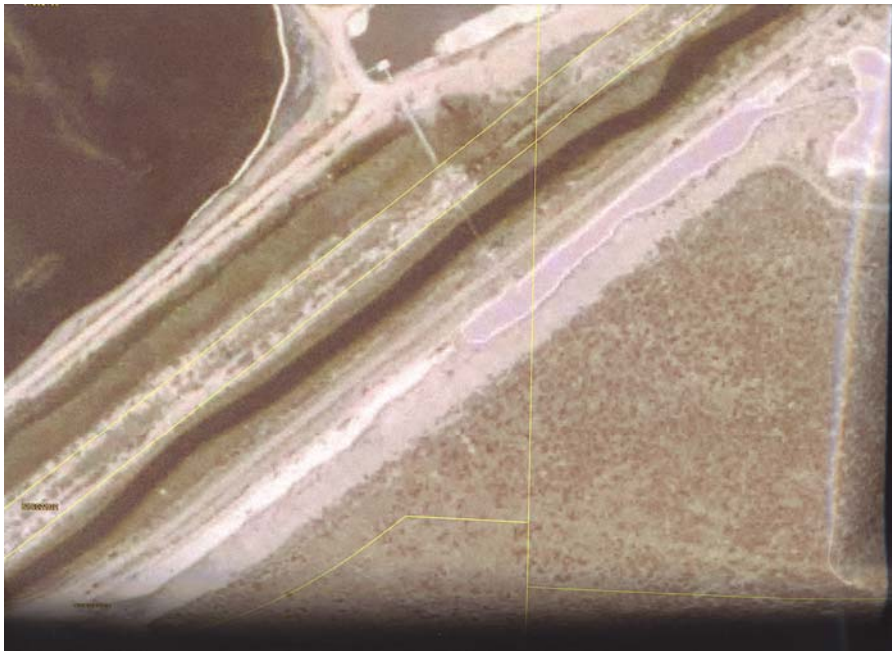
Ed Kravitz
rent-a-train.com

San Diego & Midwestern Railway Partners ;LLC
charter@rent-a-train.com
619-890-8894

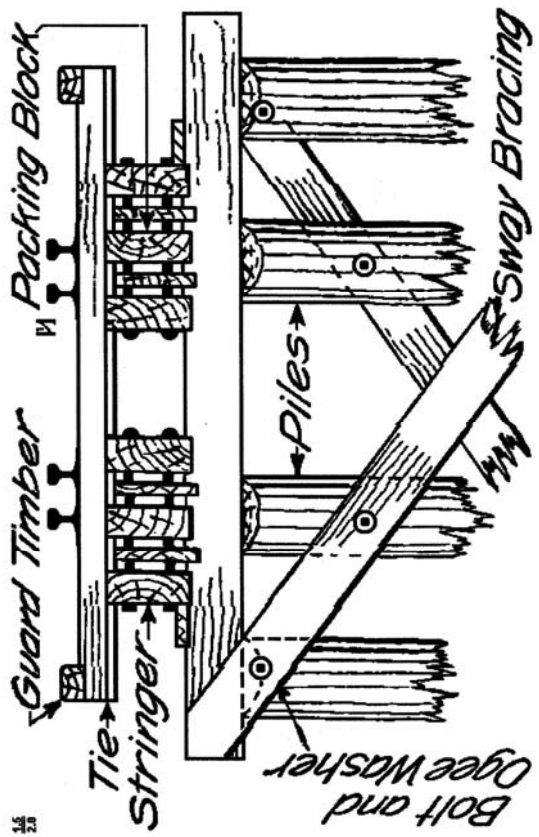
Yahoo! for Good

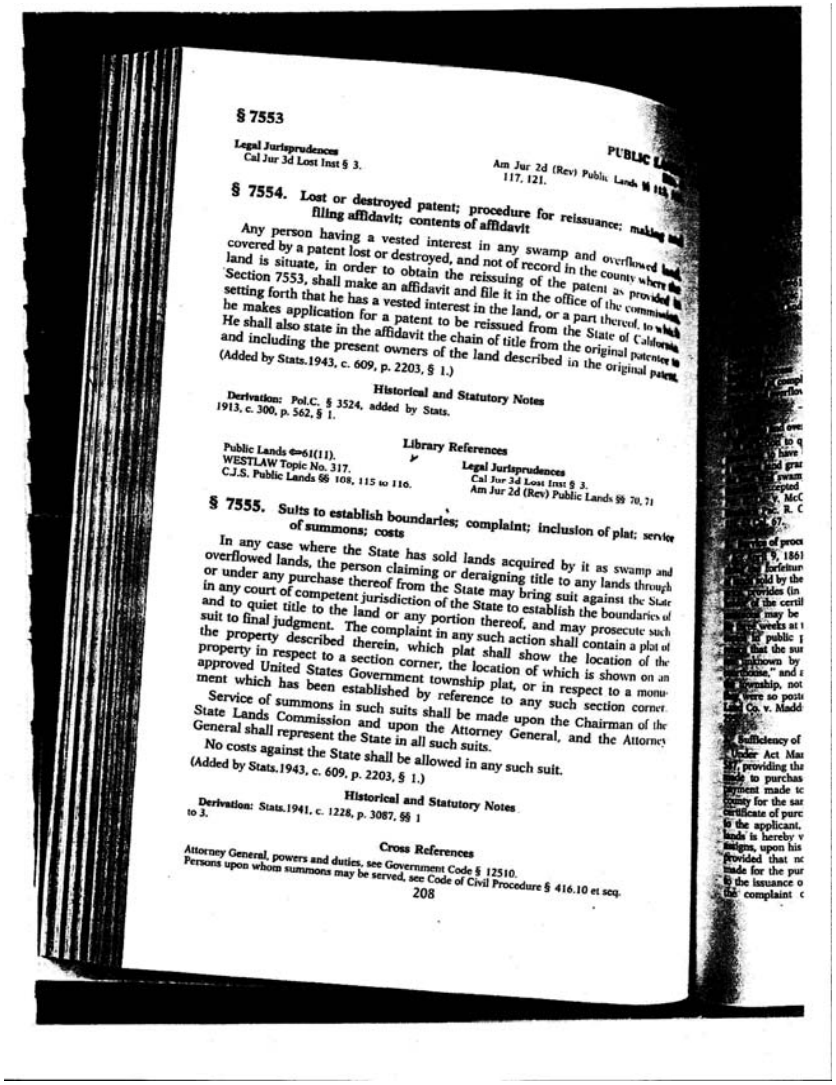
Click here to donate to the Hurricane Katrina relief effort. 102.JPG 55.jpg 56.jpg 78.jpg 79.jpg





1887 Coronado Belt Line
RAILROAD Right-of-Way
(typical SALT PONDS cross section)
RailBerm
8.5 R2
2.3
bayside
(north)
10'
10'
pond 20 side
(south)
58.5"
12-24"
track maintainance way
(compacted 1:4 slope)
existing berm
(dredged material)
45-60° slope
depending on
compaction
& erosion
Anti-Erosion
Shoring
(req. some places)
25' (waterline to waterline)
(mean high tide)


Guard Timber
Packing Block
Tie
Stringer
Piles
Sway Bracing
Bolt and
Ogee Washer



§ 7553

Legal Jurisprudences
Cal Jur 3d Lost Inst § 3.

Am Jur 2d (Rev) Public Lands § 115, 117, 121.

§ 7554. Lost or destroyed patent; procedure for reissuance; making and filing affidavit; contents of affidavit

Any person having a vested interest in any swamp and overflowed land covered by a patent lost or destroyed, and not of record in the county where the land is situate, in order to obtain the reissuing of the patent as provided in Section 7553, shall make an affidavit and file it in the office of the commission, setting forth that he has a vested interest in the land, or a part thereof, to which he makes application for a patent to be reissued from the State of California. He shall also state in the affidavit the chain of title from the original patentee to and including the present owners of the land described in the original patent.
(Added by Stats.1943, c. 609, p. 2203, § 1.)

Historical and Statutory Notes

Derivation: Pol.C. § 3524, added by Stats. 1913, c. 300, p. 562, § 1.

Library References

Public Lands ⇐61(11).
WESTLAW Topic No. 317.
C.J.S. Public Lands §§ 108, 115 to 116.

Legal Jurisprudences
Cal Jur 3d Lost Inst § 3.
Am Jur 2d (Rev) Public Lands §§ 70, 71

§ 7555. Suits to establish boundaries; complaint; inclusion of plat; service of summons; costs

In any case where the State has sold lands acquired by it as swamp and overflowed lands, the person claiming or deraigning title to any lands through or under any purchase thereof from the State may bring suit against the State in any court of competent jurisdiction of the State to establish the boundaries of and to quiet title to the land or any portion thereof, and may prosecute such suit to final judgment. The complaint in any such action shall contain a plat of the property described therein, which plat shall show the location of the property in respect to a section corner, the location of which is shown on an approved United States Government township plat, or in respect to a monument which has been established by reference to any such section corner.

Service of summons in such suits shall be made upon the Chairman of the State Lands Commission and upon the Attorney General, and the Attorney General shall represent the State in all such suits.

No costs against the State shall be allowed in any such suit.
(Added by Stats.1943, c. 609, p. 2203, § 1.)

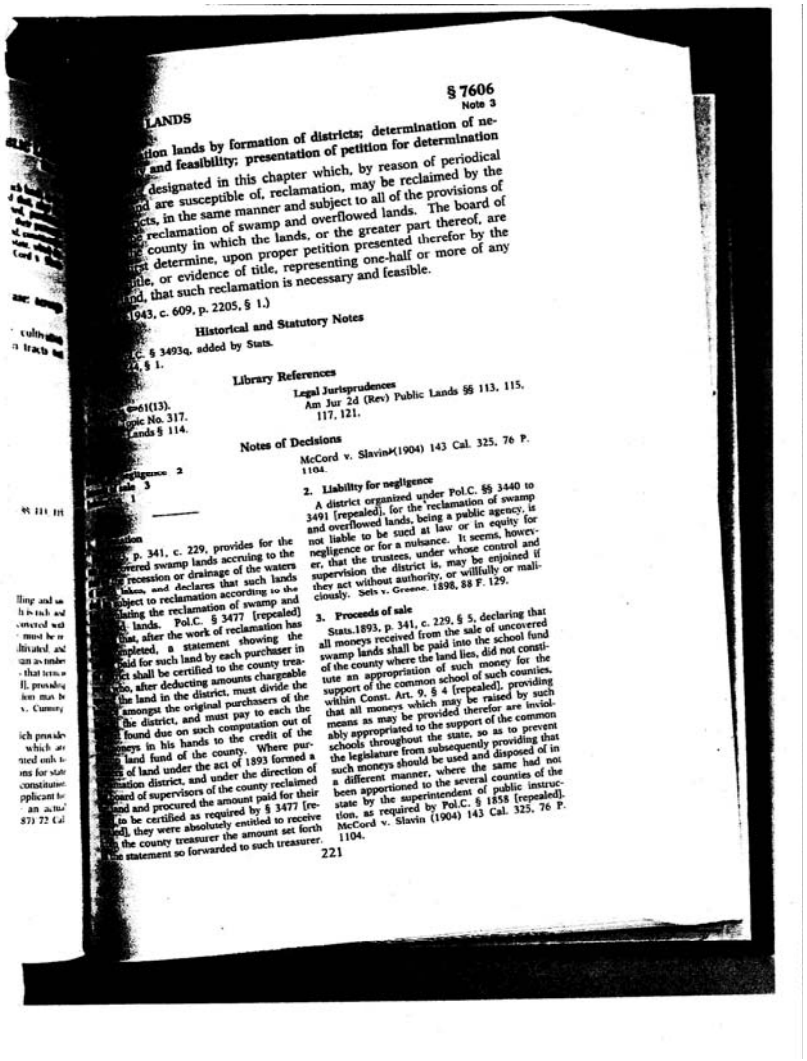
Historical and Statutory Notes

Derivation: Stats.1941, c. 1228, p. 3087, §§ 1 to 3.

Cross References

Attorney General, powers and duties, see Government Code § 12510.
Persons upon whom summons may be served, see Code of Civil Procedure § 416.10 et seq.

208



§ 7606
Note 3

LANDS

tion lands by formation of districts; determination of ne- and feasibility; presentation of petition for determination

designated in this chapter which, by reason of periodical nd are susceptible of, reclamation, may be reclaimed by the cts, in the same manner and subject to all of the provisions of reclamation of swamp and overflowed lands. The board of county in which the lands, or the greater part thereof, are st determine, upon proper petition presented therefor by the tle, or evidence of title, representing one-half or more of any nd, that such reclamation is necessary and feasible.

1943, c. 609, p. 2205, § 1.)

Historical and Statutory Notes

C. § 3493q, added by Stats.

4, § 1.

Library References

pc61(13).
pic No. 317.
Lands § 114.

Notes of Decisions

igence 2
ale 3
1

McCord v. Slavin(1904) 143 Cal. 325, 76 P. 1104.

2. Liability for negligence

A district organized under Pol.C. §§ 3440 to 3491 [repealed], for the reclamation of swamp and overflowed lands, being a public agency, is not liable to be sued at law or in equity for negligence or for a nuisance. It seems, however, that the trustees, under whose control and supervision the district is, may be enjoined if they act without authority, or willfully or maliciously. Sels v. Greene, 1898, 88 F. 129.

3. Proceeds of sale

Stats.1893, p. 341, c. 229, § 5, declaring that all moneys received from the sale of uncovered swamp lands shall be paid into the school fund of the county where the land lies, did not constitute an appropriation of such money for the support of the common school of such counties, within Const. Art. 9, § 4 [repealed], providing that all moneys which may be raised by such means as may be provided therefor are inviolably appropriated to the support of the common schools throughout the state, so as to prevent the legislature from subsequently providing that such moneys should be used and disposed of in a different manner, where the same had not been apportioned to the several counties of the state by the superintendent of public instruction, as required by Pol.C. § 1858 [repealed]. McCord v. Slavin (1904) 143 Cal. 325, 76 P. 1104.

p. 341, c. 229, provides for the vered swamp lands accruing to the recession or drainage of the waters aken, and declares that such lands bject to reclamation according to the laring the reclamation of swamp and d lands. Pol.C. § 3477 [repealed] hat, after the work of reclamation has mpleted, a statement showing the aid for such land by each purchaser in ct shall be certified to the county trea- ho, after deducting amounts chargeable the land in the district, must divide the amongst the original purchasers of the the district, and must pay to each the found due on such computation out of neys in his hands to the credit of the land fund of the county. Where pur- s of land under the act of 1893 formed a nation district, and under the direction of oard of supervisors of the county reclaimed and and procured the amount paid for their to be certified as required by § 3477 [re- d], they were absolutely entitled to receive the county treasurer the amount set forth statement so forwarded to such treasurer.

221

Interim Goals for the Sweetwater Marsh and San Diego National Wildlife Refuge

Providing safe and high quality opportunities for compatible wildlife-dependant educational and recreational activities that foster public appreciation for the unique natural heritage of the San Diego Region.

Linking the public uses on the refuges to other public use areas or other parts of the refuge.

Promote ecotourism with minimal impacts to the resources

Restore the population of native plants

Provide opportunities to migratory birds for:

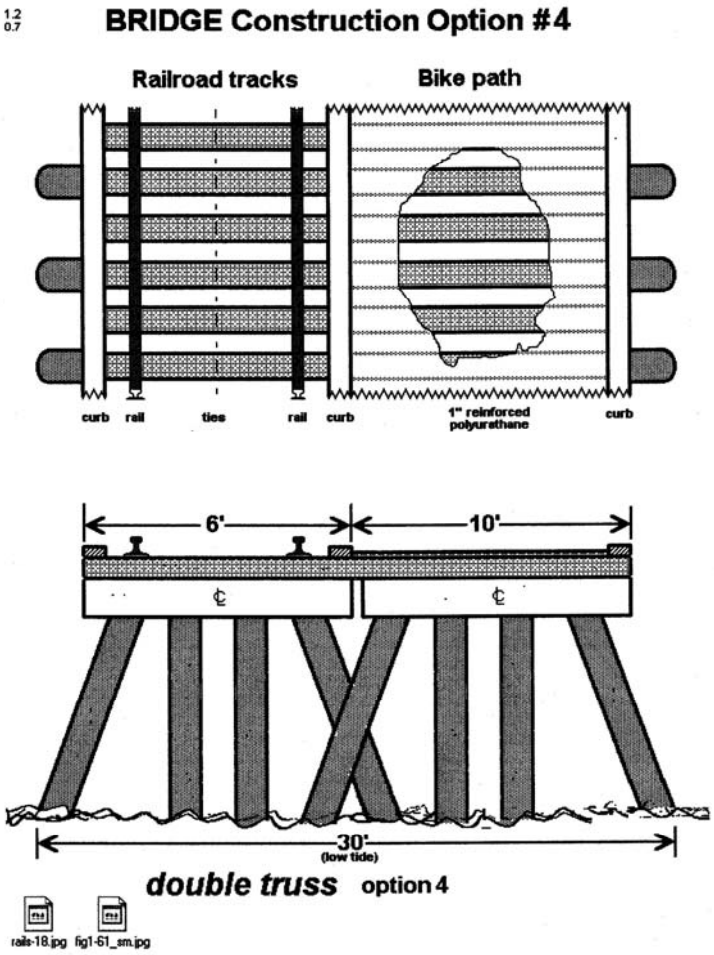
1. Eating
2. Breeding
3. Resting

Ed Kravitz
<ekatsdrp@yahoo.com>
09/15/2005 01:14 PM

To TOUCHSTONE VICTORIA <victoria_touchstone@fws.gov>
cc
bcc
Subject EIR ATTACHMENTS 4

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

1.2
0.7


BRIDGE Construction Option #4
Railroad tracks
Bike path
curb
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1" reinforced polyurathane
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6'
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(low tide)
double truss option 4
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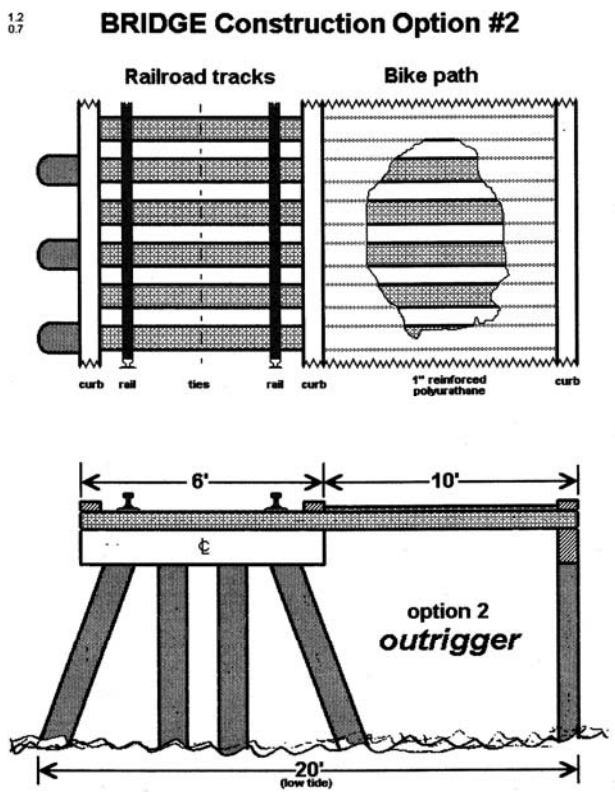
BRIDGE Construction Option #2
Railroad tracks
Bike path
curb
rail
ties
rail
curb
1" reinforced polyurathane
curb
6'
10'
option 2
outrigger
20'
(low tide)

gerbod@webtv.net
(Gerrold Adler)
07/29/2005 03:09 PM

To: Victoria_Touchstone@fws.gov
cc:
Subject: Draft CCP/EIS for SD Bay NWR

Ms. Touchstone:
I really appreciate having a chance to review the Draft CCP/EIS and will provide a detailed commentary on it, but one item reached out at me.

On page S-10 under South SD Bay Unit - last item - I read something from you not long ago that said making the Bay a "Duck Factory" was "off the table."

There is little point in my continuing or attending any meetings if this plan has any chance of being carried to fruition. I feel much too strongly about this, especially since the same organization that prohibits my kayaking in the marshes, picking up others' trash as I go and harming nothing, wants to evaluate waterfowl hunting in one of those areas. It is inconceivable to me (except that I know the duckhunters have money and a lobby).

Sincerely,
Gerrold Adler
San Diego

36.1 Hunting is not included as a proposed use within any of the management alternatives evaluated in the draft CCP/EIS for the reasons described in Section 2.3.3.3 of the draft CCP/EIS.

Theresa Jancek
<tjancek@slic.com>
08/10/2005 10:49 AM

To Victoria_Touchstone@fws.gov
cc
bcc
Subject San Diego Bay NWR Hunting & Other Uses

Ms. Victoria Touchstone
Refuge Planner
San Diego National Wildlife Refuge Complex
6010 Hidden Valley Road
Carlsbad, CA 92011

RE: Draft CCP/EIS, Sweetwater Marsh and South San Diego Bay Units of the San Diego Bay National Wildlife Refuge

Dear Ms. Touchstone:

37.1 I'm dismayed to learn that waterfowl hunting in South San Diego Bay NWR is under consideration by the Fish and Wildlife Service. It is my fervent belief that wildlife reserves should be off-limits to extractive pursuits such as hunting, which is terribly disruptive to wildlife and is no longer justified for conservation purposes. Additionally, far more people engage in wildlife watching than hunting, but hunting is often permitted on federal lands when non-blood sports activities are not. It's time to relegate waterfowl hunting to the same back closet as bear baiting, cock fighting, and dog fighting, activities that are not consistent with a civilized culture.

37.2 It is also my understanding that self-powered boaters (kayakers and canoeists) are prohibited from enjoying these wetlands or from taking steps to clean up what has become a dumping ground for trash, much of it dangerous to wildlife. Plastic bags are eaten by reptiles, amphibians and aquatic birds, plastic six-pack rings and wads of monofilament strangle wildlife and cause necrosis of their limbs, and so on. Allowing trash to accumulate is unacceptable, particularly in view of the willingness of volunteers who individually and collectively can make a change for the better. I would think this is especially important in an era of reduced operating budgets and limited personnel.

37.3 Please do not reduce the status of the South San Diego Bay National Wildlife Reserve to the level of a "duck factory" by opening it to hunting. And please consider opening the reserve outside the breeding season to self-propelled boaters who wish to engage in wildlife watching and clean-up. I ask as a very concerned environmental geologist, outdoors writer, wildlife watcher, and soon-to-be resident of San Diego.

Sincerely yours,

Theresa Jancek

37.1 Refer to Response 36.1 above.

37.2 The tidal channels within the San Diego Bay NWR are not proposed for use by self-propelled boaters because of the potential adverse effects to listed species and other wildlife that could result from such activity. Please refer to the Compatibility Determination for an Interpretive Water Trail that is provided in Appendix K of the draft CCP/EIS. Opportunities for organized clean-ups are provided by the Refuge in cooperation with various organizations, such as the San Diego Audubon Society and the Friends of the San Diego Refuges. During these clean-ups, access to the shoreline from the salt pond levees and the D Street Fill are provided to enable volunteers to remove trash, fishing line, and other debris from the water's edge.

37.3 Refer to Response 36.1 above. Opportunities for wildlife observation from boats are available within the Refuge from points within the bay itself. The areas closed to boating activity are the tidal channels that meander through sensitive salt marsh and tidal flat habitat within the Sweetwater Marsh and South San Diego Bay Units.

jean public
<jeanpublic@yahoo.com>
07/22/2005 06:45 AM

To: VICTORIA_TOUCHSTONE@FWS.GOV
cc: RODNEY.FRELINGHUYSEN@MAIL.HOUSE.GOV
Subject: PUBLIC COMMENT ON FEDERAL REGISTER OF 7/22/05 VOL 70 #140 PG 42359

USDOI USFWS CCP EIS SWEETWATER MARSH
SAN DIEGO BAY NATIONAL WILDLIFE REFUGE

38.1 THIS IS A NATIONAL REFUGE AND THE NATIONAL TAXPAYERS WHO SUPPORT IT NEED THEIR WISH FOR SAFE, PEACEFUL PLACES FOR WILDLIFE TO EXIST NEED TO BE RESPECTED.

WILDLIFE WATCHERS OUTSPEND WILDLIFE KILLERS 10-1 SO THEIR NEEDS SHOULD BE PARAMOUNT.

38.2 I THINK THE FOLLOWING SHOULD BE COMPLETELY BANNED IN THIS AREA:
1. HUNTING
2. TRAPPING
3. NEW ROADS
4 ALL TWO STROKE VEHICLES
5 MINING, GRAZING, LOGGING OR DRILLING
6. PRESCRIBED BURNING WHICH RELEASES FINE PARTICULATE MATTER WHICH FLOATS WEST ON THE WIND AND GOES INTO HUMAN LUNGS CAUSING LUNG CANCER, HEART ATTACKS, STROKES, PNEUMONIA AND ASTHMA.

B. SACHAU
15 ELM ST
FLORHAM PARK NJ 07932

38.1 Refer to Response 36.1.

38.2 No trapping, new roads, mining, grazing, logging, drilling, or prescribed burning are proposed on this Refuge. Motorized boats would continue to be permitted to operate within the open waters of San Diego Bay.

Public Comment Portion of the August 31, 2005
Public Meeting on the Draft CCP/EIS

1) Jim Peugh, San Diego Audubon Society

I think that alternatives you have shown are all really neat. We currently hope you go towards the more dramatic ones, Alternative C for Sweetwater and Alternative D for South Bay. But I think, I am sure you that the idea in mind, that I think of these things as almost a linear process where you do A kinda, you kind of do B after that, you kind of do C, and then you kind of do D. You can actually make the system more like that by thinking about it. The important thing is that you make this thing so you can always back down, so you can use, what did you call it "knee jerk" management – that's it, pardon me, adaptive management. You do the adaptive management so you can always back down two steps. If you see that the step you have taken previously hasn't done it. That is probably not part of this EIS/CCP, but I hope that is inherent in the thought you go into and that you discuss that possibility that you think about the possibility because it is really frightening when you see D, if you just talk about I'm going to D and then that would work dreadfully. So, I hope you have that sort of iterative process in mind.

39.1

The other thing is that it is going to take a lot of public support. San Diego is not very good at getting public money. So an important part of that is making sure the public is heavily involved. You have mentioned that several times. A lot of the design of the refuge and how you manage it will affect how much the public feels apart of it and how much dedication they have to it. So things like, you can say well public access isn't a biological issue, but it really is because if you want money to do things that are biologically beneficial you have to have hundreds of people who really care and are willing to scream at their Congress people and even elect Congress person that promises to do these kinds of things. So things like trails and even the idea of a kayak trail and things about neat tours that really impress people that make them think important are an essential part of making the biological part of this work. So I hope that is featured as something that we will get to.

39.2

I think that is it, everything else was covered by questions.

2) Laura Hunter representing the Environmental Health Coalition

This is obviously a very exciting day that we are finally here after many, many years. The study is really well done and comprehensive and I know Vicki special thanks goes to you for having done a really good job on this. I like what you said about it reducing "whim" management. As an urban refuge, as we have seen in the last few years, we tend to go through Refuge Manager's on a regular basis. Some of us are hard core old timers, but it is not like the most exotic place maybe for a refuge manager to be. We love it, but. So I think it is great that we are getting a plan and the new managers can help us, but when they move on we still here with a plan and we got something. I think that is really important.

39.3

39.1 Refer to Response 4.3.

39.2 A variety of public use opportunities have been incorporated into the preferred alternative that would provide the public with the opportunity to observe wildlife and participate in environmental education and interpretation activities (refer to Section 2.3.2.4, Public Use Program, of the draft CCP/EIS). Kayaking would continue to be permitted within the open bay portion of the Refuge, providing on the water opportunities for wildlife observation.

39.3 Comment noted.

I want to put on the record that I think it is very, very important that you do analyze inclusion of the Sweetwater mudflats. I brought just on any old day that we went out there, and this is very typical. Just two pictures that we took of both a flock in that corner at the mouth of the channel and then a large huge flock being flushed just from us
39.4 standing there looking at them. I think this is not unusual; we do have hundreds, sometimes thousands, of birds there. The other thing that you noted in the document that I think is really significant is that this has kinda been prepromised to somebody who manages wildlife resources for a living by the Port District, Port Master Plan, and the conditions under the California Coastal Commission approval of that. So we are going to be pressing hard to get put in some level managed by you comprehensively with all of these resources. We also feel as strongly about J Street and the wildlife island. It just makes sense to have all of these managed together so that we can accomplish maximum public access to these areas and maximum biological benefits to the uses.

39.5 One of the things I don't know if you have touched on but I think is important in terms of adjacency issues is the lighting and you probably covered it in the document, but we will be looking at that, particularly the 24th Street lighting issues and there is going to be lighting issues related to the new bay front development. So I really think we have to have the focus on how that is lighting up which marshes and what can we do to minimize that.

When you do maps for the Refuge, I think it is really important because this really is a very restricted, fragmented area even Paradise is fragmented from Sweetwater, fragmented from F&G, fragmented from this, fragmented from the open water area. So I think we have got to start, even if there are not in the Refuge, showing the regional
39.6 resources that are available. Particularly so all of the ways to have public access to the bay are shown even if they are not shown within the actual Refuge boundary. So the bike path should be on everything, the other fishing piers should be on everything. When we have the buffers, we are going to have passive trails and overlooks within the bay front development plan. That should be shown on there. I think we just need the comprehensive picture of the South Bay and not just having it focused on these different little areas.

We are very supportive in Alternative C for Sweetwater of getting rid of the fill of F&G Street and I like really like how you said that Brian, we need to heal the health of that system. I think with good planning and a vision and passion in our hearts, we can do a really good thing to restore that historic connection. The Sweetwater District plan's contemplate that and maximize the ability to improve the F&G Street and allow a
39.7 corridor passage to reconnect that area back to the Sweetwater. I think that is something that can be done and should be done.

We know you are going to do it carefully, incrementally, adaptively. The salt works are clearly a partner in that and I am looking forward to a meeting that we are going to have with Tracy, I hope, and other representatives, because I think they are a very important part of the success of all of this. So, we have not reviewed it completely, we are

39.4 Refer to Response 11.12.

39.5 The need for the Refuge to increase its participation in regional planning issues that could affect Refuge resources is addressed under Alternatives B and C for the Sweetwater Marsh Unit in Chapter 2 of the draft CCP/EIS. This issue is also addressed within Objective 1.4 for the Sweetwater Marsh Unit.

39.6 These types of uses, activities, and resources are shown on various maps throughout the draft CCP/EIS.

39.7 Comment noted.

generally supportive of the things that Mike McCoy put in his letter, but I am looking forward to getting more input and reading it in detail.

39.8 I wanted to just add one thing, there has been a book published this year called The Last Child in the Woods by Richard Louv about Nature-Deficit Disorder. He makes a case for what our next generation is losing because they don't have direct interactions with nature or places where they can get close to it. We are in an urban environment, I think the loop trail is really wonderful and I hope we can keep that in there and identify all those places where we can maximize that kind of experience. I have been out with Ted Godshalk and his little egret kids in those kayaks and I am telling you that is the experience that many of us had the luxury of when growing up. Our urban kids today don't have it. So we will be looking to make sure that those opportunities that we get you the money to allow the management of that. But we have got to keep those kids in mind and I think those are really good programs.

I want to thank you for your hard work on this and I look forward to more forward.

Thanks.

3) Dan McKirnan, Member of the Board of the Environmental Health Coalition and have been involved in the Clean Bay Campaign since it started back in the mid '80s.

39.9 I would also like to go on record as saying, I support for the Sweetwater the preferred Alternative C and for the South Bay, I prefer Alternative D. I would also like to thank Vicki and everyone for their hard work. We have been following this for I can't remember how many years now. Thank you, we really appreciate it.

39.10 As you might guess, I might be making some comments about fishing because I specifically asked that question. First of all I would like to refer to the document and make a specific comment related to statement made, because I think in all honesty, if we are going to look at the facts, they are probably going to need to be corrected. I know we don't like to think of the fish in the bay as being toxic but clearly there is a lot of evidence that they are. The statement that were made over the years regarding the health effect concerns, must of these are related to the County Health study that was done in 1990 that actually put up advisories on the piers in the bay. In fact, warning at risk populations, children and pregnant women, that consumption of fish could be hazardous to their health. I noticed the comment, over the years these concerns have been reduced as water quality in the bay has improved. I would agree that clean up has occurred and there have been some improvements. Also, it was stated, currently there are no specific fish advisories posted for the San Diego Bay. Well, actually there are some there and we are working with the Port to get the signage back up. We are trying to get some additional language so that Tagalog is included. There are reasons for this; recently, well back in 2004, a staff member, Sonya Rodriquez, and some of her team did a survey of the piers in San Diego Bay. If you don't have a copy, we will provide that in the record. Clearly there are fishermen that are fishing on a regular basis off the piers. They are consuming, some of whom at least a third, are consuming subsistence levels of the fish.

39.8 Various public use proposals are included within the preferred alternative that would provide opportunities for children and others to become connected with the natural environment. Several very successful environmental education programs are already being implemented on the Refuge, including Sweetwater Safari and Habitat Heroes. Both of these programs are implemented through partnerships with local agencies, public school systems, and not for profit organizations. Additional funding comes from local businesses and corporations.

39.9 Comment noted.

39.10 The discussion of current fishing activities in the bay has been revised in the Final CCP/EIS to include this information. Refer also to Response 11.38.

39.10 cont. They are primarily people of color and low income. Why is that important, because well since the health risk study there have been at least five studies that have documented toxic levels of pollutants in fish in the bay. The most recent that has had a lot of press of course is related to the clean up at NASSCO and South West Marine. Some of the target fish that we talk about in the South Bay are there. They have toxic levels of a number of chemicals. So anyway, I will provide those studies, there are probably five and they should be included.

39.11 The next, in terms of issues related to health and public health. The other issue has to do the fishing and I asked you about where to fish and whether it is accessible. I am a fisherman. I know now in the bay there are fisherman tournaments, the San Diego Anglers hold tournaments twice a year. There are also two or three guides that guide people on sand bass fishing. As a fisherman, I think it is a resource that I think we need to promote, but I am also concerned about the monofilament issues. That is why I say I agree with you on Alternative D. Maybe Laura is right that you can have the overlook on Option C where you go out into the bay but the monofilament issue is really a big one. That is why I wanted to make some comments about the program which you are probably aware of that started in Florida. It is called the MMRP, which is monofilament recovery and recycling program. In fact it lists on its website; it lists as a partner, the U.S. Fish and Wildlife Service. We have all seen pictures of manatees wrapped in monofilament. On their website they make claims that monofilament lasts 600 years in the environment and now we have fluorocarbon which fools the fish more. I have used that in fly fishing and in fact that probably lasts longer in the environment. My point about that is that I think it would be great if we could incorporate that into part of the education. In fact, start a program like they have in Florida where they have recycling bins on, particularly if there is a berm there, people are going to go out and use it, you are giving them an opportunity to recycle it. Also of course the issue, if they are going to fish in the south bay, there is the issue of lead weights. Split shot particularly, that is obviously why hunters don't use lead shot anymore. I think there should be some education surrounding that. Tin and tungsten and some of the other metals appear to work just as well.

Thank you.

4) Warren Dodd, Chief Financial Officer, South Bay Salt Works and a member of the management team.

39.12 The management team represents more than 75 years of experience operating the salt works. I will be speaking on behalf of South Bay Salt Works and only as the 1,100 acre portion of the Refuge that is involved in solar evaporative salt production. We want to thank the Service, Slader Buck, Mendel Stewart, Brian Collins, and in particular Vicki Touchstone for the countless hours needed to produce this most needed conservation plan to guide the Refuge over the next 15 years. Also we want to thank the Service for their assistance with the daily ongoing operational issues faced by South Bay Salt Works.

The 300 acre Sweetwater and 2300 acre South Bay Refuge areas have been combined, confusing the assessment of the unique salt work habitat issues. The salt work is an

39.11 Refer to Response 11.39.

39.12 Refer to Response 18.2.

island of habitat in a sea of urban development protecting isolated nesting, foraging, and resting habitat sites for a diverse assembly of migratory birds. Over the past 100 years, the salt ponds have been a stop over point for a number of species of migratory and wintering birds. In addition, the salt pond levees provide regionally important nesting
39.13 habitat for seven species of colonial birds. We believe the salt work exist only because of the positive contribution our operation makes to the 1,100 acres of salt work habitat. A guiding principal in developing the CCP was to identify opportunities of reversing the trend of historical wetland loss in San Diego Bay. We feel that the CCP guiding
39.14 principal neglects the significant habitat dependence upon the current salt work portion of the Refuge and simply seek a nature state that has not existed since 1870. The Service is required in the management of a refuge to ensure the biological integrity, diversity, and environmental health of the system that they maintain. Either the Port of San Diego or possibly now the Airport in conjunction with the Service are to advance a quote holistic habitat restoration plan closed quote for the salt works. Without serious science study
39.15 practicality or cost evaluation the Service has arrived at a preferred alternative, Alternative D. The consideration of alternatives is the heart of an environmental impact statement. Study, science, and the establishment of baseline standards in compliance with Federal, State, and local regulations should be performed before an alternative is deemed to be quote preferred alternative. Examples of recommended work that we would suggest would include monitoring of listed species and migratory birds. In the CCP, the only study presented showed that from February 1993 to February 1994 the
39.16 Service conducted a comprehensive evaluation where in weekly counts were conducted of water associated bird use on the 1,700 acres, 1,200 of which was the salt ponds and 500 adjacent tidal habitats. In that year, a total of 522,552 birds of 94 species were observed. We point out that the CCP talks in terms of habitat acreage and not of the population of existing birds dependent upon the habitat created by the salt works. Another example is the Multiple Species Conservation Program monitoring. The surveys
39.17 that are needed to be in conformance with the City's MSCP or the County's MSCP seem to be lacking. And finally, facilitation of scientific research, we would highly encourage scientific research activities that would encourage and develop baseline status to ensure that the biological integrity, diversity, and the environmental health of the salt works habitat are maintained.

The major issues identified in D that are problematic from our standpoint are the habitat management. Following the elimination of the solar operation, the Service would have the sole responsibility for maintaining the system. The CCP does not provide for the
39.18 costs of management, system capital investment, operating, and possible freshwater costs. The viability of the biomass food source is not supported in the CCP. Secondly, water quality, the discharge of managed water back into the bay. The Service preferred alternative will result in annual discharges of millions of gallons of waste water into San Diego Bay without serious supporting science, study, practicality, or cost evaluations. Additionally, the chemistry of putting saline waters back into solution is at best untested.

39.19 We express our concern to the CCP list of required permits and approvals are incomplete and efforts may be wasteful if a preferred alternative were pursued and ultimately

39.13 Refer to Response 18.3.

39.14 Refer to Response 18.4.

39.15 Refer to Response 18.5.

39.16 Refer to Response 18.6.

39.17 Refer to Responses 10.23 and 18.9.

39.18 Refer to Responses 10.18, 11.17, 18.22, and 18.26.

39.19 We believe the list of required permits is complete; however, the types of permits required would be further evaluated during the step-down restoration planning that would occur following approval of the CCP.

defeated due to inadequate or unrealistic restoration planning. Examples would be the permit and approval for the wastewater discharge.

39.20 Finally, economics and employment are problematic. The CCP states that moderate benefits would result from short term construction jobs, but these benefits would be offset by the loss of 22 jobs at the salt works. The Port acquired this business in 1999 for $5 million. Morton salt and South Bay Salt Works are the principal providers of salt in Southern California. If the closure of South Bay Salt Works were to occur, it would result in a monopoly for Morton salt. And finally, currently, the salt works pays in terms of sales tax approximately $300,000 per year. South Bay Salt Works would suggest that the initial phase of restoration, and we applaud the document and the intension of the document, should be the restoration of the Otay River floodplain, Restoration Option C – 2, as it restores 90 or more acres of unproductive habitat to beneficial wetlands immediately. Secondly, we would endorse and encourage the selection of Alternative C and Option 1 under C which would have the closure of Pond 11, 10, and 10a. But we would suggest that Pond 11 and the conversion of Pond 11 should occur and then serious scientific evaluation of the benefits of that closure would be made before moving forward with the closure and the increased cost of closing Ponds 10 and 10a because of the pumping requirements in those ponds.

39.21

We want to thank the Service for this excellent work. It is much needed because this habitat and the Refuge has been operating without guidance and this document puts that forward and we encourage the process.

Thank you.

39.20 Refer to Responses 18.29 and 18.31.

39.21 Refer to Response 18.44.

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