UNITED STATES DEPARTMENT OF THE INTERIOR
UNITED STATES FISH AND WILDLIFE SERVICE
SOUTH BAY SALT POND RESTORATION PROJECT
FINAL ENVIRONMENTAL IMPACT STATEMENT
Don Edwards San Francisco Bay National Wildlife Refuge
Alameda, Santa Clara and San Mateo Counties, California

RECORD OF DECISION

INTRODUCTION – The United States Department of the Interior, Fish and Wildlife Service (USFWS), has prepared this Record of Decision (ROD) regarding the South Bay Salt Pond Restoration Project (SBSP Restoration Project) at the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge). This ROD documents the decision of the USFWS regarding restoration of 9,600 acres of former commercial salt ponds in Alameda, Santa Clara and San Mateo Counties, California that are now part of the Refuge (the USFWS Project). The USFWS restoration efforts are closely connected to an effort by the California Department of Fish and Game (CDFG) to restore 5,500 acres of former salt ponds located within the Eden Landing Ecological Reserve in Alameda County. The combined efforts of the USFWS and CDFG constitute the SBSP Restoration Project. This ROD includes a statement of the decision made, the basis for the decision, a description of other alternatives considered, a description of the environmentally preferable alternative, an overview of measures to minimize environmental harm and a summary of public involvement in the decision-making process.

Documents used in preparation of this ROD include the Final Environmental Impact Statement/Environmental Impact Report for the South Bay Salt Pond Restoration Project (FEIS/R) (USFWS and CDFG, December 2007); the USFWS's Biological Opinion on the Project (USFWS, August 2008); and the National Marine Fisheries Service's (NMFS) Biological Opinion on the Project (NMFS, January 14, 2009). All of these documents are incorporated by reference (40 CFR 1502.21).

BACKGROUND – The USFWS Project area comprises 9,600 acres of salt ponds and adjacent habitats in South San Francisco Bay on the Refuge. The USFWS Project Area is part of 15,100 acres which the USFWS and the CDFG purchased from Cargill, Inc. in 2003. The lands purchased from Cargill are divided into three Pond Complexes. The Ravenswood Pond Complex is managed by the USFWS in San Mateo County. The Alviso Pond Complex is managed by the USFWS mostly in Santa Clara County with five ponds in Alameda County. The Eden Landing Pond Complex is owned by the CDFG in Alameda County.

Historically, these lands were part of a large complex of tidal marshes and mudflats within the drainage of South San Francisco Bay. They were diked from the late 1800's through the mid 1900's for commercial salt production. Some of the ponds were sold to the USFWS for the creation of the San Francisco Bay National Wildlife Refuge in the 1970s with Cargill retaining the right to make salt on them. As a part of the 2003

purchase, Cargill sold their salt making rights for certain ponds to allow the USFWS to restore them. The rest of the ponds that were purchased in 2003 had been owned in fee title by Cargill. Upon purchase of the ponds from Cargill, the USFWS and CDFG implemented the Initial Stewardship Plan (ISP) for the purpose of lowering the salinity in the ponds to allow restoration upon the completion of the plan for the Project. Water control structures were built on the ponds to allow Bay waters to circulate through the ponds and discharge back into the Bay without allowing inappropriate build up of salinity. This also resulted in a 100% increase in use of the ponds by waterfowl and a 120% increase in shorebird use. Selected ponds were opened to waterfowl hunting. Also as a part of the ISP in 2006, three Refuge ponds (Ponds A19, A20, and A21) covering 479 acres were restored to tidal action and are in the process of converting to tidal marsh.

The restoration plan is both programmatic covering a 50-year period as well as project level addressing the specific components and implementation of Phase 1 to be implemented over the next five years. The Project FEIS/R evaluated options for achieving the three Project goals of restoring the former commercial salt ponds to wildlife habitat, providing wildlife-oriented public access, and flood management. Once restored, these areas will provide habitat for resident and migratory species, assist with the preservation and recovery of threatened and endangered species, enhance the public's appreciation and awareness of the natural environment, and reduce flood risk for certain South San Francisco Bay communities.

DECISION (SELECTED ACTION) – The USFWS will implement the preferred alternative as described in the FEIS/EIR issued in December 2007; there are no substantive changes or modifications. The preferred alternative is Alternative C, Tidal Emphasis Alternative (90:10 tidal habitat: managed ponds by area) resulting in approximately 90 percent of the USFWS's ponds on the Refuge being restored to tidal wetlands and approximately 10 percent being converted to managed ponds. At the same time, as a part of the overall SBSP Restoration Project, similar restoration actions will be taking place at the CDFG owned ponds that will result in a similar mix of approximately 90:10 tidal/managed ponds on the former Cargill ponds. Key elements of the approved USFWS Project include the following:

- Creation on the Refuge of a mix of wildlife habitat based on approximately 90% of the ponds being restored to tidal action and approximately 10% being maintained as managed ponds. The tidal wetlands will provide habitat for endangered fish and wildlife and resident and migratory species, absorb flood waters now restricted by pond levees and improve water quality through natural filtration. These tidal wetlands will function naturally much as the historic wetlands that existed before the commercial salt ponds were built. The managed ponds will be modified and managed for a variety of non-tidal habitats for the existing populations of resident and migratory species. Water levels in the ponds will be managed to provide seasonally shallow areas for feeding and resting of shorebirds and deeper areas for waterfowl and fish eating species. Some ponds will be mostly dry for species needing this nesting habitat such as the federally

threatened snowy plover. Other ponds will be reconfigured to contain nesting islands for the South San Francisco Bay's existing avian populations.

- Establishment of a cohesive line of flood protection along the perimeter of the Project Area. The existing ponds and their levees incidentally provide some flood protection to adjacent communities from tidal flooding. Except for a few levees, breaching would further reduce the existing levees' limited role in flood protection. Before these ponds' levees are breached, flood protection, mostly in the form of engineered levees, will be constructed to replace and improve flood protection for these communities, through the cooperation of other agencies such as the United States Army Corps of Engineers (Corps). The Corps is in a planning process with local flood agencies which has the potential to improve flood protection in the Project area.

- Provision of public access and recreation features in the form of trails and viewing platforms, interpretive stations, and opportunities for education and interpretation. This increased public use will be achieved without unacceptable effects to the Refuge's wildlife and habitat. The Project retains the USFWS's focus on 'Wildlife First' on its National Wildlife Refuges. It also provides an opportunity for the adjacent urban communities to partake in wildlife-oriented recreation such as wildlife observation and photography, hunting and fishing, environmental education and interpretation. Popular outside activities that facilitate wildlife observation such as hiking, cycling, and jogging will also be allowed on these new trails.

Adaptive management is an integral component of Alternative C and allows for lessons learned from earlier phases to be incorporated into subsequent phases of management plans as designs of future actions are updated. Adaptive management would be used to maximize the ability to achieve the Project Objectives while avoiding adverse environmental impacts by triggering specific pre-planned intervention measures if monitoring reveals the ecosystem is evolving along an undesirable trajectory. The Project will be implemented in a series of phases over many years, on the order of decades. Each phase would have its own project-level environmental analysis that would tier off of the programmatic FEIS/R. Lessons learned from adaptive management would be applied at each new phase. As the USFWS moves forward with implementation, the programmatic Project may change based on the new information provided by the adaptive management studies.

Under the Programmatic section of Alternative C, 90 percent of the USFWS's ponds will be restored to tidal wetlands. This will result in approximately 90 percent of the Refuge's 9,600 acres being managed as tidal wetlands. This will be in addition to the 3900 acres[1] of ponds that are being made tidal during the same time period at the CDFG Eden Landing Ecological Reserve. 10 percent of the USFWS's ponds will be converted to

[1] The description of pond acreages is less than the total SBSP Restoration Project Area because the 15,100 acres in the Project Area include incidental lands such as levees and existing fringe habitats.

managed ponds providing a variety of shallow, deep and dry pond habitat for nesting, feeding and roosting water birds.

Under Phase 1 of Alternative C, a number of tidal restorations, muted tidal restoration, reconfigured managed ponds, public use features and applied studies would be implemented over the next five years. Pond A6 (360 acres) would be restored to tidal marsh when the invasive *Spartina alterniflora* and its hybrids are controlled. Pond A8 (570 acres) would be converted to muted tidal habitat. Because of the low levees separating Pond A8 and Ponds A5 and A7, these two ponds would be affected by tidal inundation and result in providing deeper water habitat than they currently provide. Ponds A16 (243 acres) and SF2 (237 acres) will be reconfigured to add shorebird nesting islands and enhanced water bird foraging areas. Pond A17 would be operated jointly with Pond A16 to manage water levels within Pond A16. A key section of the Bay Trail would be opened to public access behind Moffett Field along the landward levee of Ponds A2E, AB2 and A3W connecting existing sections of the Bay Trail in Mountain View and Sunnyvale. A wildlife viewing platform, interpretive station and a section of the existing trail would be upgraded to meet Americans with Disabilities Act (ADA) standards at Pond A16. An ADA-compliant trail with bathroom, information kiosk, and two viewing platforms would be built at Pond SF2. Wildlife viewing and photography, environmental education and interpretation, hiking, jogging and bicycling will be allowed on these trails.

The adaptive management applied studies at Pond A6 would include wildlife response to increased exposure to mercury, effects of California gulls on other wildlife species, rates of marsh sedimentation, and slough scour. Applied studies at Ponds A16 and SF-2 would focus on bird use of the reconfigured ponds and effects of human activity on the ponds' birds. Applied studies at Pond A8 would include wildlife response to increased exposure to mercury, influence of slough scour and changes in storage on flood hazards and potential for fish entrainment. Applied studies along the Moffett Bay Trail would focus on effects of human activity on wildlife use of adjacent ponds.

BASIS FOR DECISION – The decision to select Alternative C was based on review and careful consideration of the analyses and impacts identified in the FEIS/R; the results of studies and hydrological modeling efforts; public comments received throughout the process; and other relevant factors. The USFWS finds that the selection of Alterative C is appropriate based on the following findings:

- A mix of approximately 90% tidal wetlands and 10% managed ponds on the Refuge after an approximate implementation period of 50 years would provide the greatest benefit to tidal dependent threatened and endangered species, migratory and resident species while maintaining the populations of pond-dependent threatened and endangered species, migratory and resident species. These benefits would extend to a variety of aquatic species including threatened and endangered fish species. It would provide benefits to water quality and flood management. In addition, Alternative C relies on more restoration of natural tidal processes that existed before the salt ponds were constructed than the other alternatives considered.

- Public use improvements would increase wildlife-dependent recreation such as environmental education and interpretation assisting Refuge management in meeting the mission of the National Wildlife Refuge System, the mandates of the National Wildlife Refuge System Improvement Act of 1997 and the purposes of the Refuge while preventing unacceptable impacts to wildlife.

- Implementation of the Phase 1 projects would improve habitat for tidal and pond dependent species while allowing adaptive management studies to address key scientific uncertainties that will be used to improve future restoration of the remaining ponds.

OTHER ALTERNATIVES CONSIDERED – The Draft and FEIS/R considered two additional alternatives which are summarized below:

No Project/No Action: Under this alternative the Refuge would continue to operate and maintain the ponds in a manner similar to the ISP, although the USFWS would likely not have sufficient funding to maintain full ISP operation over the 50-year planning horizon. Ponds that are now managed as flow-through systems resulting in excellent water bird habitat would revert to seasonal ponds if funding does not allow continued maintenance of the water control structures. Seasonal ponds do not provide the same quality of water bird habitat, so the effect would be a reduction in the amount of desirable habitat. If funding becomes constrained, the Refuge would need to prioritize maintenance of certain levees over others to the detriment of wildlife management and enhancement. No new public access or recreational facilities would occur under this alternative.

This alternative was not selected because it would not meet the goals of the Don Edwards San Francisco Bay National Wildlife Refuge and the mission of the National Wildlife Refuge System or the goals of the South Bay Salt Pond Restoration Project. It would not improve habitat for threatened and endangered species that depend on tidal marsh because only limited tidal restoration would occur under this alternative, and then only as a result of uncontrolled breaching of levees. It would not improve habitat for migratory and resident species because current pond management would be scaled back as noted above resulting in a decrease in managed pond habitat. There would be no new recreational facilities to provide wildlife oriented public access. In addition, existing recreation opportunities may decrease as a result of uncontrolled breaching of levees. Flooding may worsen as a result of uncontrolled breaching of levees.

Alternative B (Managed Pond Emphasis (50:50) tidal habitat: managed ponds by area): When fully implemented, this alternative would provide approximately 3900 acres of tidal habitat and 4900 acres of managed pond habitat on the Refuge. In addition, this Alternative would provide 2900 acres of tidal habitat and 1500 acres of managed ponds on CDFG lands as a part of the overall SBSP Restoration Project in the same time period. A significant percentage of the managed ponds would be reconfigured and intensively managed to provide foraging and nesting opportunities for shorebirds and other water birds. In addition, this alternative would provide a cohesive line of flood protection along

the perimeter of the USFWS Project Area (landward edge of the former salt ponds) as well as the perimeter of the CDFG ponds. This alternative would also provide public access recreation features in the form of trails and viewing platforms, interpretive stations, wildlife observation and photography, environmental education and interpretation, jogging, hiking and bicycling.

This alternative was not selected as the Preferred Alternative even though it has the potential to meet the SBSP Restoration Project objectives. It would be more dependent on active management of ponds than the Preferred Alternative (Alternative C) which relies on restoration of natural tidal processes that existed before the salt ponds were constructed.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE – Pursuant to guidance provided by the Council on Environmental Quality, the environmentally preferable alternative is defined as "the alternative that will promote the national environmental policy as expressed in Section 101 of the National Environmental Policy Act. Section 101 states that "...it is the continuing responsibility of the Federal Government to...

(1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
(2) assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
(3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
(4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment that supports diversity, and variety of individual choice;
(5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
(6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources."

As identified and analyzed in the FEIS/R, the environmentally preferable alternative, Alternative C, was deemed to be the USFWS's preferred alternative. Taken as a whole, the preferred alternative best satisfies the six goals. This alternative enhances the Refuge's ability to carry out the mission of the National Wildlife Refuge System and the purposes of the Refuge while limiting the amount of new environmental impacts from restoration and management of public uses. Tidal habitat will be restored to that more closely resembling the processes that were in place before the lands were developed for salt production. Pond dependent species will be protected by developing an appropriate balance of tidal habitat with ponds reconfigured and managed to meet their specific requirements. San Francisco Bay's water quality will be enhanced through tidal wetlands' natural filtering and cleansing processes. There will be increased opportunities for wildlife dependent recreation including environmental education and environmental interpretation while being protective of the resident and migratory fish and wildlife and their habitat. Therefore, the preferred alternative satisfies national goals 1, 2, 3, 4, 5 and 6

to a high degree, ensuring restoration of the long-term natural processes to provide fish and wildlife habitat native to South San Francisco Bay with emphasis on threatened and endangered species. Alternative C provides a wide range of opportunities for the public to enjoy the area with minimal adverse impacts. This alternative would enhance public understanding and preservation of the Refuge's important natural and cultural resources and fulfill the USFWS's responsibilities as trustee of the environment (goals 1 and 4).

Alternative A: The EIS/R identified that the no-action alternative would result in potentially significant impacts in the areas of hydrology and flood management; surface water, sediment and groundwater quality; biological resources; and recreation and public access. The USFWS would focus on its mission to conserve fish, wildlife and plant resources and their habitats in accordance with the National Wildlife Refuge System Administration Act of 1966 as amended by the National Wildlife Refuge System Improvement Act of 1997. The Refuge would continue to operate and maintain the ponds consistent with the ISP. With the available funding predicted to be limited, existing wildlife habitat would not be maintained due to funds being shifted to maintaining levees to afford limited levels of flood protection. There is no guarantee that these resulting impacts could be reduced to less then significant or that national goals 1 through 6 could be fulfilled with diminishing recreational opportunities, water quality, wildlife habitat quality and diversity and more limited flood management.

Alternative B: Like Alternative C, this alternative would meet the national goals 1 through 6 in the following manner:

(1) Restoration of tidal wetlands and creation of managed ponds would avoid most of the significant environmental impacts identified in Alternative A;
(2) The Adaptive Management Program's approach and design elements would avoid the remaining number and significance of the environmental impacts identified in Alternative A;
(3) Mitigation measures would reduce temporary construction related impacts.

Alternative B would have more of the Project's ponds retrofitted to be managed for waterbirds resulting in fewer being restored to naturally functioning tidal wetlands.

Alternative C: The EIS/R identified this would be environmentally superior to Alternatives A and B by providing the habitat mosaic and natural processes most closely resembling the historic pre-salt-pond landscape while providing for a significant increase in wildlife-oriented public access, education and interpretation. It would have the highest level of improvement of water quality and flood risk reduction through the restoration of the largest area of tidal wetlands. At the same time, the constructed ponds would provide habitat for the pond dependent resident and migratory species to maintain their populations. Therefore, this alternative would best meet national goals 1 through 6 by enhancing the greatest area to natural functions for future generations, increasing public health through improved water quality, lowering health and safety risks, supporting wildlife and habitat diversity, and providing balance to allow for wildlife-oriented recreation while protecting natural resources.

MEASURES TO MIMIMIZE ENVIRONMENTAL HARM – The USFWS has investigated all practical measures to avoid or minimize environmental impacts that could result from the preferred alternative. All such measures to avoid or minimize environmental harm have been identified and incorporated into the selected alternative and are described in the FEIS/R. These measures are described in the alternatives chapter and in the analysis of environmental impacts. Measures to minimize environmental harm include, but are not limited to: increasing habitat for threatened snowy plovers in Pond SF2 while continuing to manage the rest of the ponds for nesting and foraging of other waterbirds; a set of best management practices for invasive Spartina control that the USFWS developed with the Invasive Spartina Project; early coordination of future project-specific phases to minimize impacts to adjacent landowners and holders of rights-of-ways in the FWS USFWS Project Area; conducting a vigorous Adaptive Management Program with studies to reduce project uncertainty; and continued consultation with the California State Historical Preservation Office, National Marine Fisheries Service, United States Army Corps of Engineers, local flood control agencies and state regulatory agencies.

PUBLIC INVOLVEMENT – In March 2003, a Project web site was established to provide up-to-date information to the public about the Project. Quarterly newsletters were sent to all interested parties as well as being posted on the web site. The Project's Stakeholder Forum (a body of about 30 individuals representing a broad array of interests) met several times each year to provide public input. Regularly scheduled meetings were also held with local government, science teams and regulatory agencies to receive their input throughout the process.

On November 9, 2004, the USFWS published a Notice of Intent to prepare an EIS/R in the Federal Register (69 FR 216). Scoping activities included two public meetings on November 16 and 17, 2004. During the meetings, members of the public were asked what issues they felt should be addressed. Comments received in response to this notice were incorporated into the draft EIS/R.

On March 9, 2007, the USFWS published a Notice of Availability of the Draft EIS/R in the Federal Register (72 FR 46). Two public meetings to accept comments on the draft document were held on March 28 and 29, 2007.

The Draft EIS/R was jointly developed with the California Department of Fish and Game. All comments received by either the USFWS or the CDFG during either the EIR or EIS comment periods were included and considered in the FEIS/R. A total of 114 comment letters were received; nine recorded comments at the public meetings, nine from Federal and state agencies, twenty-three from regional and local agencies, eighteen from organizations, and fifty-five from individuals. The FEIS/R incorporated all changes or additions to the draft EIS/R into one complete document.

On December 19, 2007, the USFWS published a Notice of Availability of the Final Environmental Impact Statement/Environmental Impact Report for the South Bay Salt

Pond Restoration Project in the Federal Register (72 FR 243) which advised the public that a Record of Decision would be signed no sooner than 30 days from this notice.

On December 28, 2007, the U.S. Environmental Protection Agency published a Notice of Availability of the Final Environmental Impact Statement in the Federal Register (72 FR 248) which advised the public of the availability of the document.

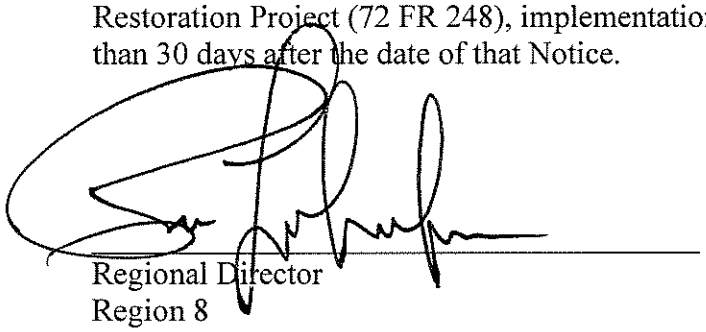
In response to the Notice of Availability of the FEIS/R, the USFWS received five letters. With the exception of one letter from Libby Lucas, the comments reiterate comments and concerns received during the comment period for the DEIS/R. Responses to the comments in the four other letters are included in the FEIS and the administrative record.

Ms. Lucas wrote with several specific concerns and recommendations that were not received before. These included concerns with the calculation of flows of South Bay creeks, special status species, the extent of tidal wetlands being created in certain ponds, and improved education. A more detailed listing and response to Ms. Lucas's comment letter (as well as a copy of the comment letter) are found in the attached Appendix.

On March 14, 2008, the U.S. Environmental Protection Agency published a Notice of Availability of EPA Comments on the FEIS in the Federal Register (73 FR 51). The notice indicated the FEIS addressed EPA's previous concerns; therefore, EPA does not object to the proposed action.

IMPLEMENTATION

As stated in the December 28, 2007 Notice of Availability of the FEIS/R for the SBSP Restoration Project (72 FR 248), implementation of this decision has not occurred sooner than 30 days after the date of that Notice.



1/27/2009

Regional Director
Region 8
Sacramento, California

Date

APPENDIX

Summary of Libby Lucas comment on FEIS and USFWS responses (a copy of the letter is included in this Appendix):

A. Ms. Lucas stated that the Project should not use the average annual discharge of Coyote and Guadalupe Creeks in our calculations but should use peak flows. *In fact, the SBSP models used both average and peak flows to develop the plan.*

B. Ms. Lucas suggested that the sloughs and marshes should be restored in a manner to diffuse flood tide and riverine storm flows. *The SBSP agrees and plans to restore the ponds in ways that diffuse these flows.*

C. Ms. Lucas did not find references for certain special status species in the EIS/R and recommended that the SBSP provide habitat for these species. *These special status species were listed in the document and the Project does provide habitat for each of the species she listed.*

D. Ms. Lucas suggested the tidal wetland be extended further into Pond A3W to further reduce the possibility of bird strike for planes using Moffett Field. *This suggestion will be considered when Project level plans are developed for this area.*

E. Ms. Lucas stated that creating 40 islands within ponds is filling of San Francisco Bay and it would be better to build wave deflecting levees within the ponds that would support upland marsh vegetation. *The SBSP agrees that creating islands in the ponds is filling of the San Francisco Bay as defined by Section 404 of the Clean Water Act but it is necessary to enhance nesting habitat for stilts, avocets and Forester terns, our target species which are dependent on pond habitat for their survival in the South Bay. These species prefer to nest without upland vegetation so this suggestion would not meet the needs of the target species.*

F. Finally, Ms. Lucas suggested that the SBSP increase its interface with the cities of the South Bay to more actively encourage the communities' education to prepare them to take over some of the management and infrastructure costs for recreation and public access to the Refuge. *The SBSP will continue to work with the local governments on all aspects of the Project.*

South Bay Salt Pond Restoration Project Draft EIS/EIR

Mendel Stewart, USFWS
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Don Edwards San Francisco Bay National Wildlife Refuge
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Dear Mendel,

It is an important aspect of this DEIR that the Appendices are available to the public and I am not finding them in the Mountain View Library. In particular the DEIR response to my comments referenced Appendix I for the Geomorphic Assessment, Appendix G for Tidal Channel Hydraulic Geometry Analyses, and Appendix J for Hydrodynamic Modeling in regards the tidal prism.

Without this reference data any further comments would be counter productive, however I would like to make an observation that the DEIR 's characterization of Coyote Creek's 'average annual' discharge as 85 cfs, and Guadalupe River's as 70 cfs is highly misleading base data. The COE's 1978 estimation of Guadalupe River peak flows at 1700 cfs has since been found to be an underestimate, while historic drought year records show no flow at all. Imported water has altered base flow criteria, and reservoirs absorb peak storm runoff but California rivers do run to extremes and global warming promises only more dramatic highs and lows.

South Bay sloughs and marshes need to be restored in manner to diffuse flood tide and riverine stormflows. I do not believe there is a reference model (except Holland), but feel restoration must be coordinated with SCVWD and US COE in this initial planning stage. For instance, sloughs and wetlands should be retained inboard of the Alviso Environmental Education Center to absorb overflows from both Coyote and Guadalupe. This is not in SBSP jurisdiction but an extension of San Francisco Bay interface with these river systems.

In regards listing of special status species I did not find Alameda Song Sparrow, Salt Marsh Yellow Throat, California Brown Pelican, Black Crowned Night Heron and Northern Harrier, (library lighting limits review). Some assurance of feeding, nesting and refugia vegetation for these species needs to be addressed. I do support alternative of Bay Trail alignment suggested by NASA as it provides buffer to Western Pond Turtles.

Alternative C treatment of tidal wetlands habitat for AB1, 2AE, and AB2, might be extended further into A3W to reduce concern for pond waterfowl strikes expressed by US Air National Guard. It is a consideration here that duck hunting and consultant auto access onto refuge levees be limited not only to reduce speeds but to manage spread of invasives, such as ditricchhia, throughout refuge levee system.

Proposed creation of over forty islands within ponds still appears to be filling of San Francisco Bay. It would seem preferable to create wave deflecting levees within ponds that would support upland marsh vegetation. These could be accessed on occasion for maintenance by portable wooden bridges or walks. It seems to me that every 'enhancement' of salt pond habitat should satisfy more than one goal, preferably three goals.

Would lastly suggest that interface with cities of South Bay be more actively encouraged for education of the body politic and to prepare them for taking over some attendant management and infrastructure costs in regards recreation and public access in general to the National Wildlife Refuge.

Thank you for taking time to review these concerns, and be assured that ultimately what we all want is what is best for sustaining refuge wildlife in as healthy a habitat as possible with its historic diversity of species.

Libby Lucas
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