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

JAN 13 2011

Ms. Becky Victorine
Bureau of Reclamation
Mid-Pacific Region
2800 Cottage Way, MP-700
Sacramento, CA 95825

Subject: Draft Environmental Impact Statement for the Suisun Marsh Habitat Management, Preservation, and Restoration Plan, Solano County, California [CEQ# 20100435]

Dear Ms. Victorine:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the above project. Our comments are provided pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. Our comments are provided in accordance with our December 14, 2010 agreement that EPA provide our comments no later than January 14, 2011. We appreciate the additional time to conduct our review.

EPA supports the overall goals of the Suisun Marsh Plan (SMP) to restore tidal wetlands and to address conflicts regarding use of Marsh resources. The SMP represents a unique restoration opportunity to begin to return Suisun Bay and Marsh to its historic role as a large contiguous tidal marsh that serves as a nursery for countless species in the San Francisco Bay-Delta (Delta) ecosystem. Tidal wetlands have a central role in the functioning of a healthy estuarine ecosystem. Restoration of historical tidal marsh land will provide habitat for declining threatened and endangered species and help buffer Suisun Marsh from adverse effects of climate change and sea level rise.

Based on our review of the DEIS, we have rated the Proposed Project and environmental document as *Environmental Concerns – Insufficient Information* (EC-2). Please see the enclosed "Summary of EPA Rating Definitions." The DEIS presents a programmatic evaluation of a 30-year restoration plan concluding that the majority of potential adverse effects would be less-than-significant due to a commitment to adaptive management and environmental commitments. EPA is concerned that anticipated improvements and reduction of adverse effects may not be achieved especially given climate change, predicted sea level rise, increasing urban pressures, and the many other environmental challenges facing the Delta.

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First developed in 1993 and revised in 2007, the San Francisco Estuary Partnership's regional planning document, the Comprehensive Conservation and Management Plan (CCMP), provides overarching guidance to resource agencies to expand the Delta wetland resource base through restoration (Objective WT-4). This guidance was refined by the Baylands Ecosystems Goals Report (Goals Report)[1] identifying alternatives for wetlands restoration by region, including the Suisun Subregion. The Goals Report identifies the need for restoration of tidal marsh "... from about 13,000 acres to about 30,000 to 35,000 acres, while maintaining approximately 32,000 to 37,000 acres of diked wetlands."

None of the three alternatives considered in this DEIS provide a significant contribution to the tidal marsh restoration recommended by the authors of the Goals Report, a cooperative effort by local, state and federal agencies. EPA strongly recommends development of an alternative with tidal marsh restoration more in alignment with recommendations of the Goals Report. We recommend reliance on nonintrusive management methods, to the maximum extent possible, such as opening up wetland parcels to tidal action and allowing "natural processes" to reconfigure and restore the tidal marsh. At a minimum, we urge selection of Alternative C: Restoration of 7,000 to 9,000 acres of tidal restoration as the Preferred Alternative for implementation.

The SMP will guide near-term and future actions related to restoration of tidal wetlands and managed wetland activities. Environmental review of specific restoration projects would tier off of this programmatic DEIS. Given the 30-year planning period, EPA recommends the Final Environmental Impact Statement (FEIS) include a firm commitment to detailed project-specific environmental analysis for tidal restoration projects and major managed wetland activities (e.g., new interior levees, riprap, dredging program).

Of concern is the ability of the Proposed Project to significantly improve water quality, levee system integrity, and the ability to adapt to climate change. We recommend the FEIS provide more information and citations supporting DEIS assumptions and conclusions regarding effects and benefits of project activities. In particular, the FEIS should better substantiate the conclusion that restoration of more than 9,000 acres of restored tidal marsh would result in the inability to meet water quality, land use, and habitat objectives of the SMP or the Delta. The FEIS should include, in an appendix, a long-term, comprehensive monitoring, assessment, and reporting plan for the SMP.

EPA appreciates the opportunity to provide input regarding the proposed restoration project. When the FEIS is released for public review, please send one hard copy and one CD to the address above (Mail Code: CED-2). If you have questions, please contact me at 415-972-3521, or contact Laura Fujii, the lead reviewer for this project. Laura can be reached at 415-972-3852 or fujii.laura@epa.gov.

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[1] See link here: http://www.sfestuary.org/userfiles/ddocs/Habitat_Goals.pdf

Sincerely,

James Munson for:

Kathleen M. Goforth, Manager
Environmental Review Office (CED-2)
Communities and Ecosystems Division

Enclosures: Summary of EPA Rating Definitions
Detailed Comments

Cc: Cay Goude, US Fish and Wildlife Service
Scott Wilson, California Dept. of Fish and Game
Jennifer Pierre, ICF International

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) 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 Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT 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 impacts that should 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 Council on Environmental Quality (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 analysed 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 analysed in the draft EIS, which should be analysed 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.

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

U.S. EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR SUISUN MARSH HABITAT MANAGEMENT, PRESERVATION, AND RESTORATION PLAN, SOLANO COUNTY, CA., JANUARY 13, 2011

Preferred Alternative and DEIS Conclusions

Support selection of Preferred Alternative and DEIS conclusions with concrete scientific-based data and references. Alternative A, Proposed Project, includes tidal restoration of 5,000 to 7,000 acres and increased managed wetlands activities on 44,000-46,000 acres. This alternative has been selected as the Preferred Alternative because it is consistent with the CALFED Bay-Delta Program Record of Decision (CALFED ROD), its ability to contribute to recovery of listed species, and its acceptability to Suisun Marsh landowners. However, consistency with the CALFED ROD and ecological superiority of this alternative is not clearly supported by information in the Draft Environmental Impact Statement (DEIS) or by current scientific data or citations. For example, the DEIS does not provide a convincing demonstration, supported by data and citations, that greater than 9,000 acres of tidal restoration would be unable to meet water quality, land use, habitat objectives for the Suisun Marsh Plan (SMP) or the Delta (p. 2-5).

> ***Recommendations:***
> The Final Environmental Impact Statement (FEIS) should include specific scientific-based data, citations, and information from the CALFED ROD and other sources supporting the DEIS conclusion that 5,000 to7,000 acres of tidal restoration is consistent with the CALFED ROD and objectives for the Delta. Include information and data to demonstrate that greater than 9,000 acres of tidal restoration would be unable to meet water quality, land use, and habitat objectives for the SMP or Delta. State why the other alternatives are not consistent with the CALFED ROD or would be less able to meet Delta ecosystem goals.
>
> The FEIS should provide the underlying rationale for each of the components that shaped the action alternatives. The FEIS should also include a description of current scientific research and findings regarding the appropriate balance of tidal and managed wetlands that would maximize ecosystem benefits for Suisun Marsh and the Delta.

Water Quality

Provide in-depth analysis of water quality effects. Suisun Bay and Suisun Marsh Wetlands have been listed by EPA and the California State Water Resources Control Board for multiple pollutants.[2] The Water Quality section of the DEIS does not appear to address all pollutants of concern, such as Polychlorinated Biphenyls (PCBs), selenium, and nutrients. As details of potential effects have not been provided for Alternatives B and C, EPA cannot ascertain how much more or less these alternatives address water quality impairment as compared to Alternative A or No Action.

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[2] For a complete list use this link:
http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/303dlists2006/epa/state_usepa_combined.pdf

Recommendation:
EPA requests a more in-depth analysis of potential water quality effects. At a minimum, the FEIS should provide a firm commitment to project-specific quantitative assessment and disclosure of potential water quality impacts.

Address in detail potential adverse impacts from, and alternatives to, the proposed dredging program. The proposed project includes yearly dredging of up to 100,000 cubic yards of material from existing tidal channels for levee improvement material. Proposed dredging activities would be tracked using geographic information systems (GIS) to ensure dredging does not occur more than once every 3 years in any specific location and would not remove material deeper than 4 feet per dredging cycle (p. 2-36). Nevertheless, EPA remains concerned that the proposed new dredging program may have adverse effects, especially indirect effects, on marsh hydrology and geomorphology (e.g. erosion), water quality, fish, and invertebrate species. In addition, the DEIS does not demonstrate whether alternative sources of material, including reuse of navigation-based dredge material, have been exhausted.

Recommendations:
The FEIS should more thoroughly evaluate other alternatives to the proposed dredging program. Project proponents should work with the Long-Term Management System for dredged material (LTMS) agencies to investigate opportunities for establishing a dredge material reuse site in the area to facilitate the use of dredge material in levee maintenance and restoration.

The FEIS should better substantiate the conclusion that any proposed dredging would not adversely affect existing habitat and restoration goals. For instance, provide information on the assumptions made, and proposed monitoring, testing, and adaptive management actions. Provide a summary of the science that indicates a net benefit would occur, such as a description of the effects of current dredging practices.

Levee System Integrity

Demonstrate that the Preferred Alternative would maintain and enhance levee system integrity. The poor condition of the Suisun Marsh levee system is well documented (p. ES-5, Section 5.4 Flood Control and Levee Stability). The DEIS states that due to "current restrictions preventing dredging from sloughs and constraints on importing materials, landowners in the Marsh have maintained their exterior levees using primarily material from ditch cleaning or pond bottom grading for more than a decade, a practice that increases subsidence and potentially weakens the existing levee foundations. These factors combined have exhausted the supply of levee maintenance material in the managed wetlands and have forced maintenance to be deferred on some exterior levees, increasing the risk of catastrophic flooding."

Recommendation:
The FEIS should provide scientifically-supported information demonstrating that the Preferred Alternative can maintain and enhance levee system integrity given the conditions described above. One approach would be to provide examples where managed

wetland activities or restoration of tidal marsh have provided a noticeable improvement in levee integrity.

Provide a more robust impact analysis of additional riprap. EPA is concerned with the potential adverse effects of the proposed additional riprap. While riprap can provide a stabilizing benefit, it does not provide marsh habitat and should not be reflected as such (p. 5.4-7), unless supported by scientific data and evidence that such ecological benefits occur.

> ***Recommendation:***
> The FEIS should include a more robust impact analysis of the proposed additional riprap. The claim that benches, berms, and erosion protection such as brush boxes, vegetation, and riprap would provide a range of marsh habitats and serve to protect the levee from wind and wave erosion should be substantiated with scientific data, demonstration studies, and other supporting information.

Climate Change

Clarify how the Preferred Alternative addresses climate change effects. The DEIS appears to discuss the threat of sea level rise without planning for it within the context of proposed activities.

> ***Recommendation:***
> The FEIS should clarify how the Preferred Alternative addresses expected climate change impacts over its 30 year planning timeframe.

Clarification and Full Disclosure

The DEIS states that "The managed wetland activities would be implemented only if at least one third of the total restoration activities would be implemented in each of the 10-year increments. … This would ensure that all actions would be implemented in a timeframe similar to that of the impacts and that restoration efforts would contribute toward recovery throughout the plan implementation period (p. ES-9)."

> ***Recommendation:***
> The FEIS should provide a more detailed explanation of the rationale for the above statement regarding "at least one third of the total restoration activities would be implemented in each of the 10-year increments." For instance, does the above statement mean that the proposed restoration is required by the CALFED ROD and US Fish and Wildlife Service and National Marine Fisheries Service Biological Opinions (FWS/NMFS BOs) to offset anticipated adverse impacts of operations of the State Water Project and Central Valley Project?

In addition, we recommend the FEIS include additional information and clarification for the following items:

1. The status of restoration science:
    a. Restoration and management techniques (e.g., contouring, water management, intervention vs. reliance on natural processes).
    b. Effectiveness of current restoration design features and construction practices, their level of success and failure, and success criteria.
    c. Evolution of tidal restoration science and practice (e.g., intervention vs. reliance on natural processes, hard vs. soft solutions).
    d. Underlying ecological science and assumptions.
2. Past and current restoration efforts and their level of success or lessons learned, including project performance or success in achieving ecosystem objectives.
3. Terms and conditions of the US Fish and Wildlife Service and National Marine Fisheries Service Biological Opinions (p. 2-66).
4. Deliberations, if any, on the appropriate balance of tidal marsh and managed wetlands for Suisun Marsh.
5. How environmental commitments were derived. For example, do the proposed environmental commitments have a proven success rate? Cite scientific support and research for the proposed environmental commitments.
6. Material excavated from cleared ditches would be side cast and allowed to dry for 1 year (vs. current 1 month) to ensure all materials are dried before beneficial use (p. 2-33). Provide the underlying science demonstrating that 1-year drying is better than 1-month drying, or describe the benefits and costs of each drying period length for dredged material.
7. The Montezuma Slough Salinity Control Gate is operated in real-time by monitoring tidal elevations and flows. The goal is tidal pumping to send low salinity Sacramento River water into the upper end of Montezuma Slough (p. 5.1-12). Explain in more detail why low salinity Sacramento River water is required in Montezuma Slough and why higher salinity in Suisun Marsh is considered undesirable.