

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
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San Francisco, CA 94105

February 27, 2015

Alicia E. Kirchner  
U.S. Army Engineer District, Sacramento  
Corps of Engineers  
1325 J Street  
Sacramento, California 95814-2922

Subject: Sacramento River Bank Protection Project Draft Environmental Impact Statement (EIS)/  
Environmental Impact Report, California [CEQ #20140380]

Dear Ms. Kirchner:

The U.S. Environmental Protection Agency (EPA) has reviewed the above referenced document. Our review and comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's (CEQ) NEPA Implementation Regulations at 40 CFR 1500 - 1508, and our review authority under Section 309 of the Clean Air Act.

The Draft EIS evaluates five programmatic alternatives -- with several subalternatives -- for a Sacramento River bank protection plan. EPA agrees with the Corps' determination that Alternative 3 "Maximum Meander Zone" is the environmentally preferable alternative. We are concerned that the Corps' Preferred Alternative -- Alternative 4B "Habitat Replacement within Economically Justified Basins" -- may overlook levee repairs that may be needed to ensure water supply protection. We also believe that selection of Alternative 4B, as currently proposed, would result in a missed opportunity to advance programs to further increase floodwater storage capacity, restore hydro-geomorphic functions and ecosystem processes, improve re-creation and management of riparian forests, and ensure protection of water supplies in the program area.

EPA has rated Alternative 4B and the Draft EIS as EC-2 -- Environmental Concerns-Insufficient Information" (see Enclosure 1: "Summary of EPA Rating Definitions"). We recommend that the Final Environmental Impact Statement include additional information regarding the costs associated with the potential impacts of levee failure on water supply. We also recommend that the Final EIS discuss the implications of the President's January 30, 2015 Executive Order on flood risk management (EO 13690) on projects that would be tiered to this EIS. Please see the enclosed detailed comments (Enclosure 2) for additional concerns and recommendations.

We appreciate the opportunity to review this Draft EIS. Please send a hard copy of the Final EIS to this office (mailcode ENF-4-2) when it is officially filed with EPA's *e-NEPA*. If you have any questions,

please call me at (415) 972-3521 or contact Jeanne Geselbracht, our lead NEPA reviewer for this project, at [geselbracht.jeanne@epa.gov](mailto:geselbracht.jeanne@epa.gov) or (415) 972-3853.

Sincerely,

/s/

Kathleen Martyn Goforth, Manager  
Environmental Review Section

Enclosures: (1) Summary of EPA Rating Definitions  
(2) EPA's detailed comments on the Sacramento River Bank Protection Project Draft EIS

cc: Kip Young, Central Valley Flood Protection Board

## SUMMARY OF EPA RATING DEFINITIONS

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 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 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 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 THE  
SACRAMENTO RIVER BANK PROTECTION PROJECT, CALIFORNIA – FEBRUARY 2015**

Alternatives

The Preferred Alternative -- Alternative 4B “Habitat Replacement within Economically Justified Basins” -- uses the approach taken over the last decade, which primarily focuses on the re-creation of streambank habitats through the use of constructed benches with riparian vegetation, but adds the use of setback and adjacent levees in a few areas. This Alternative would create replacement riparian habitat, over time, at many levee repair sites to offset the losses of habitat removed as prescribed in Engineering Technical Letter 1110-2-583 (Vegetation ETL). While EPA supports the replacement of habitat at sites where it has been removed, we agree with the Draft Environmental Impact Statement finding that Alternative 3 “Maximize Meander Zone” is the environmentally preferable alternative because of its greater inclusion of setback levees and adjacent levees. Alternative 3 would remove less riparian vegetation than Alternative 4. It would also be more effective in widening the floodwater management basins and helping promote the broader objectives of increasing floodwater storage capacity, restoring hydro-geomorphic functions and ecosystem processes, and improving re-creation and management of riparian forests along the Sacramento River and its tributaries, while increasing security for the farms and settlements beyond the levees.

**Recommendation:** We encourage the U.S. Army Corps of Engineers and the Central Valley Flood Protection Board (CVFPB) to use this planning opportunity to further advance programs that meet the above objectives. Specifically, we recommend that the Corps modify its Preferred Alternative to include setback levees wherever feasible. Describe in the Final Environmental Impact Statement specific efforts (e.g., purchase of flood easements on farmland, other real estate transactions, etc.) that the Corps and the CVFPB can make with other Federal, State, local, and private partners to develop setback levees at the identified repair sites to widen the floodwater management basin. Where setback levees would not be constructed, explain the reasons for that decision, and the implications with respect to hydrology, ecological function, and flood protection.

Cost Analysis

The Draft EIS (p. ES-12) identifies seven “economically justified basins” in which economic flood damages would be a priority consideration in site selection, and states that flood damage reduction in certain less-developed regions that are primarily agricultural with fewer damageable structures are not likely to meet the economic benefit-cost criterion to justify bank protection. Each alternative analyzed in the Draft EIS includes a sub-alternative that covers bank protection measures in only these seven economically justified basins. It is unclear, however, whether the benefit-cost analysis accounted for the costs associated with water supply disruption that could result from levee failure. Such failures could have catastrophic effects on water supply, the costs of which could far outweigh property damage.

If the benefit-cost analysis has not accounted for potential water supply disruptions from levee failures, EPA would be concerned that limiting the project to the seven economically justified basins could exclude important levee work needed elsewhere in the project area. The Draft EIS indicates that the economically justified basins that are included in the Preferred Alternative may change as subsequent economic analysis is conducted.

**Recommendation:** Identify in the Final EIS all of the locations in the project area where levee failure could adversely affect water supply, and discuss whether the benefit-cost analysis accounts for these costs. If it does not, we recommend that the economic analysis be revised to account for such costs, that the findings be discussed in the Final EIS, and that any adjustments to economically justified repair sites be identified.

#### Executive Orders 11988 and 13690

The Draft EIS (pp. 1-5 to 1-13) describes the Central Valley Flood Protection Plan (CVFPP) approach for continuing to protect lands in the Central Valley from flooding, including achieving a new 200-year flood protection standard for urban areas by 2025, and identifies several current levee improvement programs intended to achieve the CVFPP goals. The Draft EIS also describes Mitigation Measure FCGEOM-MM-1 to avoid significant effects associated with changes in local hydraulics and sheer stress based on the 100-year flood event. Furthermore, the Draft EIS (p. 22-14) states that global climate change could result in more rainfall runoff and flood flows in the Sacramento River, but cites the Corps' determination "that because of the uncertainty in the science of calculating appropriate future flows they would not be quantified. Rather, the future condition hydrology is considered equal to existing condition hydrology. Thus there are no changes in design in response to a new future condition hydrology."

On January 30, President Obama issued Executive Order 13690 – Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input, which amends Executive Order 11988 – Floodplain Management. Section 2(a) of EO 11988 requires agencies to "consider alternatives to avoid adverse effects and incompatible development in the floodplains." Section 6(c) of amended EO 11988 requires that, rather than basing the floodplain on the area subject to a one percent or greater chance of flooding in any given year, the floodplain be established using one of the following approaches:

- (1) Unless an exception is made under paragraph (2), the floodplain shall be:
  - (i) the elevation and flood hazard area that result from using a climate-informed science approach that uses the best-available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science. This approach will also include an emphasis on whether the action is a critical action as one of the factors to be considered when conducting the analysis;
  - (ii) the elevation and flood hazard area that result from using the freeboard value, reached by adding an additional 2 feet to the base flood elevation for non-critical actions and by adding an additional 3 feet to the base flood elevation for critical actions;
  - (iii) the area subject to flooding by the 0.2 percent annual chance flood; or
  - (iv) the elevation and flood hazard area that result from using any other method identified in an update to the Federal Flood Risk Management Standards.

We recognize that EO 13690 was signed after the Draft EIS was published, and that implementation guidelines may not be finalized until after the Final EIS is published or Record of Decision is signed. The Draft EIS, therefore, does not take the new standards into account or discuss their potential applicability to various bank protection measures such as setback levees or adjacent levees. It is unclear whether or how implementation of the forthcoming guidelines may influence future tiered projects to be different from those reflected in the Draft EIS alternatives. It is also unclear how the costs and benefits of the proposed project could change based on the new floodplain criteria.

**Recommendations:** Address EO 13690 in the Final EIS, and discuss its potential implications for future tiered projects, including how project costs and benefit-cost analyses could be affected.

#### Water Quality

The Draft EIS (pp. 5-2 to 5-7) discusses water quality impairment and identifies pollutants in the Sacramento River and its tributaries in the program area based on California's 2006 Clean Water Act Section 303(d) list. It appears that some pollutants are missing from the discussion. The current (2008-2010) 303(d) list can be found at

[http://www.waterboards.ca.gov/water\\_issues/programs/tmdl/integrated2010.shtml](http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml).

**Recommendation:** Include an updated discussion of impaired waters in the program area in the Final EIS.

The Draft EIS (p. 10-35) indicates that small, isolated infestations of invasive plant species could be treated with eradication methods that have been approved by or developed in conjunction with the appropriate county agricultural commissioner. It is unclear, however, whether these methods would, potentially, be used for large infestations, and whether eradication methods would include chemical treatment.

**Recommendation:** Clarify in the Final EIS whether large infestations could be treated with the same eradication methods as those used for small infestations and discuss whether pesticides might be used for small or large invasive plant infestations. If pesticides would, potentially, be used, the tiered, project-specific National Environmental Policy Act (NEPA) analyses should identify the pesticides and state the provisions for their use. This discussion should include actions needed to comply with California's general National Pollutant Discharge Elimination System permits for pesticide applications. Note that the California permits may require advance submission of a pesticide application plan, in some cases 90 days in advance. More information is available at [http://www.swrcb.ca.gov/water\\_issues/programs/npdes/aquatic.shtml](http://www.swrcb.ca.gov/water_issues/programs/npdes/aquatic.shtml)

#### Air Quality

The Draft EIS states that, because the level of activity, scheduling, and locations of potential construction activities along 80,000 linear feet of river bank are currently unknown, a quantified analysis of potential construction emissions is not feasible (pp. 8-18), and that additional project-level environmental documentation, tiering from this programmatic analysis, will be conducted to address erosion sites that will be repaired (p. 8-26). The Draft EIS indicates that, for tiered projects with volatile organic compounds, carbon monoxide (CO), and particulate matter (PM) emissions exceeding the *de minimis* thresholds after the implementation of Mitigation Measure AQ-MM-1a, there would be no other applicable measures to further reduce or offset the emissions; therefore, the effect would be significant and unavoidable under NEPA (Draft EIS, p. 8-26). If project-specific analyses indicate that *de minimis* thresholds would be exceeded, however, the Corps would need to ensure that the project conforms to the State Implementation Plan (SIP) before approving the tiered project.

Elsewhere, the Draft EIS (p. 8-21) states, "According to Table 8-6, a general conformity determination must be made for ozone, CO, and PM2.5 in Butte County; ozone, CO, and PM2.5 in Placer County; ozone, CO, PM10, and PM2.5 in Sacramento County; ozone, CO, and PM2.5 in Solano County; ozone and PM2.5 in Sutter County; ozone, CO, and PM2.5 in Yolo County; and PM2.5 in Yuba County."

Based on the discussion above, however, it is unclear that this would be the case because the project-specific emissions, and whether they exceed the *de minimis* thresholds, are unknown at this time.

**Recommendation:** Rectify this statement in the Final EIS, and commit to providing information in tiered project-specific NEPA documents that demonstrates project conformity (e.g., conformity determinations, if applicable).

Table 8-2 of the Draft EIS identifies the annual PM<sub>2.5</sub> National Ambient Air Quality Standard (NAAQS) as 15 µg/m<sup>3</sup>; however, the appropriate NAAQS is 12 µg/m<sup>3</sup>.

**Recommendation:** Include the appropriate PM<sub>2.5</sub> NAAQS in the Final EIS.

#### Climate Change

The Draft EIS (p. 8-30) indicates that the greenhouse gas emissions associated with the proposed project would be significant and unavoidable, even with the mitigation measures identified as AQ-MM-6. Please note that, on December 18, 2014, the Council on Environmental Quality (CEQ) released revised draft guidance for public comment, which describes how Federal departments and agencies should consider the effects of greenhouse gas emissions and climate change in their NEPA reviews.

**Recommendation:** The project-level NEPA analyses tiered to this programmatic document should, consistent with the revised draft guidance, estimate the greenhouse gas emissions associated with each project, and discuss the potential impacts of climate change on the project. We also recommend that these documents identify specific measures to ensure the projects are resilient to anticipated climate change, such as more rainfall runoff and flood flows in the watershed.