



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

September 16, 2016

Ms. Alicia Kirchner
Chief, Planning Division
U.S. Army Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95814

Subject: Draft Supplemental Environmental Impact Statement for the Folsom Dam Raise Project,
Sacramento County, California [CEQ# 20160167]

Dear Ms. Kirchner:

The U.S. Environmental Protection Agency has reviewed the Draft Supplemental Environmental Impact Statement (DSEIS) for the Folsom Dam Raise Project. Our review and comments are pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

The DSEIS supplements the 2007 Final EIS for the Folsom Dam Safety and Flood Damage Reduction Project, which evaluated dam safety alternatives to be implemented by the Bureau of Reclamation, flood damage reduction measures to be implemented by the US Army Corps of Engineers (Corps), and an auxiliary spillway to be implemented by both agencies. The American River Long-Term Study Final Supplemental Plan Formulation Report EIS in 2002 analyzed the environmental impacts of a 7 foot dam raise at Folsom Dam. That project was reevaluated in the 2007 EIS with a recommendation for a 3.5 foot dam raise. The current supplemental document updates the previous environmental and programmatic analyses and is limited in scope to modifying the gates on the existing Folsom Dam and raising the dikes and wing dams by 3.5 feet to increase flood storage capacity and to provide increased flood damage protection. The DSEIS includes a single action alternative with a goal to “fully disclose revised project alternatives and updated project-related effects.”

EPA has rated the project and the DSEIS as *Environmental Concerns – Insufficient Information* (EC-2). Please see the enclosed “Summary of EPA Rating Definitions.” Our rating is based primarily on our concerns about cumulative air impacts and the need to coordinate construction scheduling to minimize impacts to the air basin. Please see the attached detailed comments for additional information about our concerns and recommendations for the Final SEIS.

We appreciate the opportunity to review and comment on this DSEIS, and are available to discuss the recommendations provided. When the FSEIS is released for public review, please send one hard copy and one CD to the address above (Mail Code: ENF 4-2). Should you have any questions, please contact me at (415) 947-4161, or contact Jean Prijatel, the lead reviewer for the project. Jean can be reached at (415) 947-4167 or prijatel.jean@epa.gov. Please include EPA on the distribution lists for all future

environmental review documents for the Folsom Dam Safety and Flood Damage Reduction Project, including the Water Control Manual.

Sincerely,



FOR

Kathleen M. Goforth, Manager
Environmental Review Section

Enclosures: Summary of EPA Rating Definitions
Detailed Comments

cc via email: Karen Huss, Sacramento Metropolitan Air Quality Management District
Matthew See, U.S. Bureau of Reclamation

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 SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR FOLSOM DAM RAISE PROJECT, SACRAMENTO COUNTY, CA SEPTEMBER 16, 2016

Air Quality

EPA appreciates the measures in the DSEIS to reduce air emissions, as recommended by the Sacramento Metropolitan Air Quality Management District (SMAQMD), including enhanced exhaust control practices, fugitive dust control measures, best management practices, and Guidance for Construction Greenhouse Gas Emissions Reductions. These emission control and air quality measures will be essential to meet Federal General Conformity *de minimis* thresholds and reduce air quality impacts to the greatest extent possible.

The DSEIS includes air emissions calculations in Appendix D, however, these emissions estimates do not correspond with either the mitigated or unmitigated emissions provided in Tables 12 and 14 of Chapter 3. The source of the document's mitigated and unmitigated emissions estimates remains unclear. Additionally, the DSEIS does not identify the model or method used for estimating emissions.

The air quality cumulative impacts discussion states that the dam raise project will be constructed at the same time as the Corps' Folsom Dam Modification Project Approach Channel and its post-construction restoration, which would contribute to a significant cumulative effect (page 211). This discussion does not provide any emissions estimates nor does it outline how these effects will be reduced, except to say that coordination with SMAQMD and Reclamation would be needed.

Recommendations: In the FSEIS clearly explain the methods used to estimate emissions and disclose and summarize all calculations that result in mitigated and unmitigated emissions for the project. The cumulative effects analysis should include emissions estimates and a description of the types of mitigation measures that would be implemented in order to reduce emissions. Describe the process for future coordination with SMAQMD, and how commitments to reduce air quality impacts will be integrated into the construction of the proposed project. If impact reductions are expected to result from coordinated construction schedules, or specific known mitigation measures at this time, include these details in the FSEIS and commit to the schedule in the Record of Decision (ROD).

EPA's General Conformity Rule, established under Section 176(c)(4) of the Clean Air Act, provides a specific process for ensuring federal actions will conform with State Implementation Plans to achieve National Ambient Air Quality Standards. The DSEIS is internally inconsistent on the applicability of general conformity for the project. For example, Section E.5 states, "even with implementation of mitigation measures, emissions would not be reduced below the USEPA's general conformity *de minimis* threshold." Table 14 Mitigated Alternative 2 Annual Emissions Summary for NEPA, however, does not list any emissions higher than the general conformity *de minimis* limit. We note that Table 14 lists carbon dioxide as exceeding *de minimis* thresholds; however, EPA's general conformity rules do not have such a threshold for carbon dioxide. In a telephone call between the Corps and EPA on August 25, 2016¹, the Corps clarified that the text of the DSEIS is in error and that the tables properly reflect the anticipated emissions with mitigation, which would be below *de minimis* thresholds.

Recommendation: In the FSEIS, revise the general conformity discussion and data to be consistent. Remove the reference to carbon dioxide *de minimis* levels.

¹ Phone conversation between Clayton Carithers and Mariah Brumbaugh, with the US Army Corps of Engineers, and Hugo Hoffman and Tom Kelly, with EPA Region 9 on August 25, 2016.

The project area is located in an area designated as non-attainment for ozone and fine particulate matter. The DSEIS includes errors in the text and tables describing the National Ambient Air Quality Standards (NAAQS) designations for the project area. For example, Table 9 lists Sacramento County as designated unclassified/attainment for carbon monoxide, but the county is designated as attainment/maintenance. This document also mischaracterizes the status of the ozone standards by stating that the 8-hour ozone standard was revoked and the 1-hour standard was established in 1997.

Recommendation: The FSEIS should include the correct air quality designations for the project area and properly characterize the status of the standards. EPA provides maps showing designations at <https://www3.epa.gov/region9/air/maps/index.html>. Information from the website can be downloaded to Google Maps or EPA can provide it in an electronic format if requested.

Climate Change

On August 1, 2016, the Council on Environmental Quality issued final guidance on considering greenhouse gas (GHG) emissions and climate change in NEPA reviews. Fundamental to this guidance are the recommendations that when addressing climate change, agencies should consider: (1) The potential effects of a proposed action on climate change as indicated by assessing GHG emissions (e.g., to include, where applicable, carbon sequestration); and, (2) The effects of climate change on a proposed action and its environmental impacts.

While the DSEIS includes an estimate of GHG emissions from the project and mitigation measures to reduce impacts to less-than-significant (page 51), it does not include a discussion of reasonably foreseeable climate change impacts in the project area. Hydrology is a resource not considered in detail in the DSEIS. The brief hydrology section describes the existing runoff regime for the watershed (page 66), but does not indicate how this may change in the future. The purpose and need for the project also notes that the dam raise is needed to provide temporary water storage during rare flood events, defined as the 1/254 year event (page 15). Changing climate conditions can exacerbate the environmental impacts of a project as well as affect the proposed project's ability to meet the flood protection purpose and need presented in the DSEIS. For example, potential changes in precipitation and frequency of drought would alter the anticipated flood frequency and could lead to changes in the project's ability to meet its flood protection objectives while also altering sediment transport and water quality, among other potential impacts. The Bureau of Reclamation's SECURE Water Act Report to Congress in 2011 states that "moisture falling as rain instead of snow at lower elevations will increase wintertime runoff by 22% (December through March) and decrease springtime runoff by 27% (April through July)" for the Sacramento and San Joaquin River basins.² The report also anticipates the need for reservoir releases earlier in the flood control period to provide more flood storage during earlier rain or snowmelt events (Chapter 8, page 7).

Recommendations: In the Affected Environment section of the FSEIS, include a summary discussion of climate change and ongoing and reasonably foreseeable climate change impacts relevant to the project, based on U.S. Global Change Research Program³ assessments or other relevant models. We recommend that the FSEIS include in the Affected Environment section a consideration of future climate scenarios to determine whether the environmental impacts of the project would be exacerbated by climate change. If impacts would likely be exacerbated by

² <http://www.usbr.gov/climate/secure/docs/2016secure/2016SECUREREport-chapter2.pdf>, page 7

³ Third National Climate Assessment (Regional impacts chapters) available at <http://www.globalchange.gov/nca3-downloads-materials>.

climate change, identify and consider incorporating additional measures that could mitigate those impacts.

In addition, we recommend that the FSEIS discuss how the design of the proposal can incorporate resilience to foreseeable climate change. Identify in the FSEIS any commitments that have been made to ensure implementation of design features or other measures to adapt to climate change impacts.

Future NEPA

The proposed dam raise project would result in an ability to sustain an increased flow of 160,000 cfs for a longer period of time, and would allow for an increase in reservoir inundations up to 486.34 feet from the current authorized top of flood pool water surface elevation of 468.34 feet. The DSEIS defers evaluation of the operational impacts of this increase in storage and release capacity, as it states that operations will remain the same as existing conditions until they can be defined and analyzed in a Water Control Manual update and its accompanying future environmental document (page 30).

Folsom Lake is a multiuse facility primarily operated to maximize flood risk management and water supply benefits (page 12). While we recognize that the proposed project would be a “dry” raise providing for an increase in the flood surcharge zone, we do have concerns about potential future conversion of this flood storage and surcharge space into water supply or multipurpose use (“wet” dam raise). Additional NEPA analysis would be required to understand the environmental impacts of more regular inundations of the reservoir capacity, particularly for water quality, fish and wildlife, and waters of the U.S.

Recommendation: We recommend the FSEIS and ROD include a commitment to future NEPA compliance, with appropriate public review processes, prior to any decision to modify operations or modify the use of the additional flood storage capacity. Include an estimated schedule of when future NEPA analyses would be initiated, if known.

Flood Protection (Executive Order 13690)

The DSEIS briefly describes Executive Order 11988 – Floodplain Management in the Compliance with Environmental Laws and Regulations chapter. On January 30, 2015 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(i) of E.O. 13690 establishes a new definition of the term “floodplain.”

Recommendation: EPA recommends that the FSEIS explain how the project would be consistent with the directives in Executive Order 13690, and discuss any changes to the project necessary to meet those directives. For more information, go to: <https://www.fema.gov/federal-flood-risk-management-standard-ffrms>.