



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

November 9, 2015

Ms. Alicia Kirchner  
U.S. Army Corps of Engineers  
Sacramento District  
ATTN: Michael Fong  
1325 J Street  
Sacramento, California 95814-2922

Subject: Notice of Intent to Prepare a Draft Environmental Impact Statement for the Yuba River Ecosystem Restoration Feasibility Study; Sierra, Placer, Yuba, and Nevada Counties, CA

Dear Ms. Kirchner:

The U.S. Environmental Protection Agency has reviewed the Federal Register Notice published October 9, 2015 requesting comments on the U.S. Army Corps of Engineers' decision to prepare an integrated Feasibility Report and Draft Environmental Impact Statement for the Yuba River Ecosystem Restoration Feasibility Study. Our comments are provided pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

The intention of this Feasibility Report and DEIS is to identify and respond to problems and opportunities with ecosystem restoration in the Yuba River watershed. The stated objective of the Corps' Civil Works ecosystem restoration is to "restore degraded ecosystem structure, function, and dynamic processes to a less degraded, more natural condition." As stated in the Notice of Intent, the study area begins in the city of Marysville and extends upstream approximately 90 miles, past Sierra City, California. The Yuba River has several dams that limit fish access to upstream habitat.

EPA appreciates opportunities to restore ecosystem functions in our watersheds and encourages the Corps to evaluate restoration measures throughout the Yuba River watershed. Reconnecting the tributaries to the lower segments of the Yuba River will provide the opportunity for native aquatic life to thrive in their historic ranges. Doing so in a sustainable way should be a priority; a well-designed ecosystem restoration project should be self-sustaining.

**Purpose and Need**

The DEIS for the proposed project should clearly identify the underlying purpose and need that is the basis for proposing the range of alternatives (40 CFR 1502.13). The *purpose* of the proposed action is typically the specific objectives of the activity, while the *need* for the proposed action may be to eliminate a broader underlying problem or take advantage of an opportunity.

The purpose and need should be a clear, objective statement of the rationale for the proposed project, as it provides the framework for identifying project alternatives. The DEIS should concisely identify why the project is being proposed, why it is being proposed now, and should focus on the specific desired

outcomes of the project (e.g. improve habitat connectivity) rather than prescribing a predetermined resolution.

### **Range of Alternatives**

All reasonable alternatives that fulfill the project's purpose and need should be evaluated in detail, including alternatives outside the legal jurisdiction of the Corps (40 CFR Section 1502.14(c)). The DEIS should provide a clear discussion of the reasons for the elimination of alternatives which are not evaluated in detail.

A robust range of alternatives will include options for avoiding significant environmental impacts. The DEIS should clearly describe the rationale used to determine whether impacts of an alternative are significant or not. Thresholds of significance should be determined by considering the context and intensity of an action and its effects (40 CFR 1508.27).

The environmental impacts – beneficial and adverse – of the proposal and alternatives should be presented in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public (40 CFR 1502.14). The potential environmental impacts of each alternative should be quantified to the greatest extent possible (e.g. acres of wetlands impacted; change in water quality).

The No Action Alternative should clearly describe the current quality and quantity of habitat in the watershed, including habitat connectivity and water quality metrics.

### *Fish Passage*

The DEIS will examine measures to improve aquatic habitat connectivity, including fish passage at the dams along the Yuba River. Fish passage may include fish ladders, collecting and transporting fish, or notching or removing dams. EPA supports considerations for restoring aquatic habitat, including fish access to habitat along reaches above New Bullards Bar Dam. The DEIS should provide a description of each measure available to restore this connectivity, including the environmental impacts and feasibility of each measure.

The *Yuba River Ecosystem Restoration Section 905(b) Analysis* presenting the Corps' reconnaissance study indicates that the removal of Englebright Dam would be economically infeasible due to "disposing of the toxic contaminated sediment" behind the dam. This economic determination appears to eliminate dam removal or potentially dam notching as viable restoration measures for the DEIS. Other measures for removing sediment from behind Englebright Dam seem not to have been considered at this stage in the alternatives development process. Options for passing sediment downstream of the dam should be considered in an evaluation of dam removal or dam notching measures. The Clean Water Act's recent water quality standards regulatory revisions clarify that variances are appropriate in cases when restoration activities will create a temporary exceedance of water quality criteria.<sup>1</sup>

Additionally, work conducted by the U.S. Geological Survey<sup>2 3</sup> indicates that the mercury behind Englebright dam has similar concentrations of total mercury to that found downstream. Restoration

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<sup>1</sup> <https://www.federalregister.gov/articles/2015/08/21/2015-19821/water-quality-standards-regulatory-revisions>

<sup>2</sup> Alpers, C.N., Hunerlach, M.P., Marvin-DiPasquale, M.C., Antweiler, R.C., Lasorsa, B.K., De Wild, J.F., and Snyder, N.P., 2006, Geochemical data for mercury, methylmercury, and other constituents in sediments from Englebright Lake, California, 2002: U.S. Geological Survey Data Series 151, 95 p. <http://pubs.usgs.gov/ds/2006/151/>

<sup>3</sup> Hunerlach, M.P., Alpers, C.N., Marvin-DiPasquale, M., Taylor, H.E., and De Wild, J.F., 2004,

efforts often remobilize mercury and lead to a greater bioavailability of mercury, but this reality may not persist in the environment for an extended period of time. In studies conducted as part of the South Bay Salt Ponds restoration efforts, fish and bird eggs showed an increase in mercury after restoration activities followed by a decrease back to levels observed before the restoration.<sup>4</sup>

### *Floodplain Connectivity*

The *Yuba River Ecosystem Restoration Section 905(b) Analysis* acknowledges that there are extensive flood protection efforts in the Sacramento River Basin and states that any measures included in this project cannot increase flood risk in the basin. It also lists floodplain rearing habitat restoration as a potential measure to be examined in the project; however, measures that would include restoration in the Yuba Goldfields were not retained. Restoration of the Yuba River and flood control in the Sacramento River basin may benefit from a reconnection to the historic floodplain of the Yuba Goldfields. The alternatives analysis in the DEIS should provide a more detailed description of the potential for restoration in the Goldfields than is currently available in the analysis from the reconnaissance study.

### **Water Quality**

Each of the Action Alternatives should include a robust discussion of impacts to water quality. The upper, lower, middle and south Yuba as well as the reservoirs along these reaches are all impaired by mercury from historic mining. Several stretches are also impaired by temperature. The evaluation of project alternatives should address how restoration efforts will impact the bioavailability of mercury and address temperature issues. Restoration measures that include the addition of channel complexity and shade along riparian areas can provide valuable thermal refugia for fish as well as lower the overall temperature of these reaches.

### **Climate Change**

We believe the Council on Environmental Quality's December 2014 revised draft guidance for Federal agencies' consideration of GHG emissions and climate change impacts in NEPA outlines a reasonable approach, and we recommend that the Corps use that draft guidance to help outline the framework for its analysis of these issues. Accordingly, we recommend the DEIS include an estimate of the GHG emissions associated with the project, analyze reasonable alternatives and/or practicable mitigation measures to reduce project-related GHG emissions, and qualitatively describe relevant climate change impacts. More specifics on those elements are provided below. In addition, we recommend that the NEPA analysis address the appropriateness of considering changes to the design of the proposal to incorporate resilience to foreseeable climate change and GHG reduction measures. Considerations for restoring floodplain connectivity and the effects of dam notching or removal discussed above should be analyzed in this context. The draft and final EIS should make clear whether commitments have been made to ensure implementation of design or other measures to reduce GHG emissions or to adapt to climate change impacts.

More specifically, we suggest the following approach:

#### **"Affected Environment" Section**

Include in the "Affected Environment" section of the DEIS a summary discussion of climate change and ongoing and reasonably foreseeable climate change impacts relevant to the project, based on U.S.

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Geochemistry of fluvial sediment impounded behind Daguerre Point Dam, Yuba River, California, U.S. Geological Survey Scientific Investigations Report 2004-5165, 66 p. <http://pubs.usgs.gov/sir/2004/5165/>

<sup>4</sup>[http://www.southbayrestoration.org/science/2015symposium/presentations/10\\_1\\_45\\_Ackerman%20Talk%20Oct21\\_2015%20V3.pdf](http://www.southbayrestoration.org/science/2015symposium/presentations/10_1_45_Ackerman%20Talk%20Oct21_2015%20V3.pdf)

Global Change Research Program<sup>5</sup> assessments, to assist with identification of potential project impacts that may be exacerbated by climate change and to inform consideration of measures to adapt to climate change impacts. Among other things, this will assist in identifying resilience-related changes to the proposal that should be considered.

“Environmental Consequences” Section

- The DEIS alternatives analysis should, as appropriate, consider practicable changes to the proposal to make it more resilient to anticipated climate change.
- Estimate the GHG emissions associated with the proposal and its alternatives. Example tools for estimating and quantifying GHG emissions can be found on CEQ’s NEPA.gov website<sup>6</sup>. For actions which are likely to have less than 25,000 metric tons of CO<sub>2</sub>-e emissions/year, provide a qualitative estimate unless quantification is easily accomplished.
- The estimated GHG emissions can serve as a reasonable proxy for climate change impacts when comparing the proposal and alternatives. In disclosing the potential impacts of the proposal and reasonable alternatives, consideration should be given to whether and to what extent the impacts may be exacerbated by expected climate change in the action area, as discussed in the “affected environment” section.
- Describe measures to reduce GHG emissions associated with the project, including reasonable alternatives or other practicable mitigation opportunities and disclose the estimated GHG reductions associated with such measures.

Please note that, as of October 1, 2012, EPA Headquarters no longer accepts paper copies or CDs of EISs for official filing purposes. Submissions must be made through EPA’s electronic EIS submittal tool: *e-NEPA*. To begin using *e-NEPA*, you must first register with EPA’s electronic reporting site - [https://cdx.epa.gov/epa\\_home.asp](https://cdx.epa.gov/epa_home.asp). Electronic filing with EPA Headquarters does not change the requirement to submit a hard copy to the EPA Region 9 Office for review.

We appreciate the opportunity to provide comments on the preparation of the DEIS. Please send one hard copy and one CD of the DEIS to this office at the same time it is officially filed with our Washington D.C. Office. If you have any questions, please contact me at (415) 947-4167 or [prijatel.jean@epa.gov](mailto:prijatel.jean@epa.gov).

Sincerely,



Jean Prijatel  
Environmental Review Section  
Enforcement Division

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<sup>5</sup> <http://www.globalchange.gov/>

<sup>6</sup> [https://ceq.doe.gov/current\\_developments/GHG\\_accounting\\_methods\\_7Jan2015.html](https://ceq.doe.gov/current_developments/GHG_accounting_methods_7Jan2015.html)