

US EPA ARCHIVE DOCUMENT



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX**

**75 Hawthorne Street  
San Francisco, CA 94105**

September 25, 2009

Ms. Patti Clinton  
Bureau of Reclamation  
Mid-Pacific Region  
South-Central California Area Office  
1243 N Street  
Fresno, CA 03721

Subject: Draft Environmental Impact Statement for Madera Irrigation District  
Water Supply Enhancement Project (CEQ# 20090266)

Dear Ms. Clinton:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document 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. These comments were also prepared under the authority of, and in accordance with, the provisions of the Federal Guidelines promulgated at 40 CFR 230 under Section 404(b)(1) of the Clean Water Act (CWA). Our detailed comments are enclosed.

We have rated the DEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed “*Summary of Rating Definitions*”) due to our concerns regarding the long-term feasibility of the project given increasingly constrained Central Valley Project (CVP) supplies, and potential significant impacts to vernal pools, rare alkali rain pools, and threatened and endangered species.

EPA supports the development of water banks and conjunctive use projects consistent with ecosystem protection, integrated regional water management, and sustainable water use. We advocate the alignment of water supply demands with available developed supplies. We acknowledge the potential for the Water Supply Enhancement Project (WSEP) to contribute to the operational flexibility and water supply reliability of the CVP.

Source water for the WSEP would be water from Friant Division and Hidden Unit CVP contracts, CVP uncontrolled flows provided under temporary contract, and Madera Irrigation District’s pre-1914 non-CVP water rights supply. A recent California Department of Water Resources (DWR) study of the potential impact of climate change predicts significantly reduced diversions from the San Francisco Bay and Delta over the next century. In addition, there are other projects which could utilize the same WSEP source water. Given these predicted developments, EPA believes that reduced water export scenarios and future limitations on CVP supplies should be fully evaluated in the final EIS (FEIS).

Alternative B, the Proposed Action (Preferred Action), would flood 700 acres of swales outside the regular wet season to recharge the underlying aquifer for later water supply recovery. These swales containing vernal pools, rare alkali rain pools, and associated uplands that provide important habitat for threatened and endangered species. The temporary and permanent effects of this flooding are not clearly described in the DEIS. In addition, the environmental commitment to create, restore, or preserve vernal pools does not adequately describe a mitigation plan for loss of wetlands.

Given the uncertainty of effects and lack of a detailed compensatory mitigation plan, EPA is not able to determine whether or not the Proposed Action (Preferred Alternative), as currently proposed, represents the Least Environmentally Damaging Practicable Alternative (LEDPA). We recommend that no Section 404 permit be issued without a more definitive demonstration of compliance with the Clean Water Act 404(b)(1) Guidelines. We recommend the FEIS include additional information to support the conclusion that the Proposed Action represents the LEDPA. We note that Alternative C would replace natural swale recharge with recharge basins, eliminating the potential flood-related impacts to vernal pools, alkali rain pools, and threatened and endangered species.

We appreciate the opportunity to review this DEIS. When the FEIS is released for public review, please send one hard copy and one CD ROM to the address above (mail code: CED-2). If you have any 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](mailto:fujii.laura@epa.gov).

Sincerely,

/s/ Connell Dunning for

Kathleen M. Goforth, Manager  
Environmental Review Office  
Communities and Ecosystems Division

Enclosures: Summary of Rating Definitions  
Detailed Comments

cc: Kathy Norton, US Army Corps of Engineers  
Mark Littlefield, Watershed Planning Branch, Sacramento, USFWS  
Susan Jones, San Joaquin Valley Branch, Sacramento, USFWS  
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District Manager, Madera Irrigation District

**EPA DETAILED DEIS COMMENTS ON MADERA IRRIGATION DISTRICT WATER SUPPLY ENHANCEMENT PROJECT, MADERA COUNTY, CA., SEPTEMBER 25, 2009**

**Water Supply Reliability**

*Evaluate the long-term feasibility of the project.* Source water for the Water Supply Enhancement Project (WSEP) would be water from Friant Division and Hidden Unit Central Valley Project (CVP) contracts, CVP uncontrolled flows provided under temporary contract, and Madera Irrigation District's pre-1914 non-CVP water rights supply. A California Department of Water Resources (DWR) study of the potential impact of climate change on the San Francisco Bay and Delta watershed predicts significantly reduced inflow and reduced CVP diversions over the next century. Holding regulatory, structural, and operating rules constant, the DWR study estimated climate-change induced reductions in Delta exports and reservoir carryover storage ranging from 7% to 19% at mid-century, and of 21% to 38% by year 2100.<sup>1</sup> Furthermore, the San Joaquin River Restoration Program and proposed Temperance Flat Reservoir could utilize the same source water as proposed for the WSEP. EPA is concerned with the long-term feasibility of the project given the predicted reduction in available source water.

***Recommendations:***

The FEIS should fully evaluate the long-term feasibility of the project in light of increasingly constrained CVP supplies. EPA recommends that reduced water export scenarios and future limitations on CVP water supplies be fully evaluated in the final EIS (FEIS). For instance, describe and evaluate implications for the WSEP, and environmental and water supply reliability tradeoffs of competing demands (e.g., Temperance Flats Reservoir, San Joaquin River Restoration Program), for the limited developed source water supply. The FEIS should include a rigorous evaluation of the effects of climate change on the availability of source water for banking.

The FEIS should provide additional information on the WSEP source water. For instance, describe the frequency and quantity of CVP uncontrolled flows and the existing beneficial uses supported by these flows. The quantity, potential availability, and existing beneficial uses of pre-1914 non-CVP water right supplies should also be described.

Given predicted constrained source water supplies, we recommend the FEIS consider and evaluate other potential water sources, such as agricultural spills and tail-water, treated waste water, and water transfers and exchanges.

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<sup>1</sup> See Possible Impacts of Climate Change to California's Water Supply, California Climate Center, Summary Sheet, April 2009 (Available on DWR web site at [http://www.water.ca.gov/pubs/climate/climate\\_change\\_impacts\\_summary\\_sheet\\_april\\_2009/climate\\_change\\_impacts\\_summary\\_sheet\\_4-16-09\\_lowres.pdf](http://www.water.ca.gov/pubs/climate/climate_change_impacts_summary_sheet_april_2009/climate_change_impacts_summary_sheet_4-16-09_lowres.pdf)).

***Demonstrate that the project is consistent with, and a part of, an integrated regional water management strategy.*** Water management has become more complex given climate change and the competing interests of water supply demands, flood management, environmental protection, and the need to comply with legal and regulatory requirements. DWR has provided a framework for state and local water managers to improve their capacity to handle change and to adapt to non-climate demands such as population growth, ecosystem restoration, and flood protection.<sup>2</sup> The WSEP should be consistent with DWR recommendations and demonstrate that it is part of an integrated regional water management strategy. EPA believes nonstructural water management options that avoid and minimize adverse environmental effects, should be implemented to the maximum extent feasible prior to structural measures with potential significant adverse environmental impacts.

***Recommendations:***

The FEIS should show that the WSEP is consistent with, and a part of, an integrated regional water management strategy. For example, provide additional information in the FEIS demonstrating that nonstructural water management actions are being implemented to meet water supply reliability and groundwater overdraft objectives.

We recommend immediate implementation of additional efficient agricultural water management practices such as implementation of a Supervisory Control and Data Acquisition system to provide real-time adjustment of irrigation flows. These measures would aid in meeting water supply reliability objectives during the development of the WSEP.

**Section 404 of the Clean Water Act**

***Demonstrate compliance with the Clean Water Act 404(b)(1) Guidelines.*** EPA is not able to determine whether or not the Proposed Action, as currently proposed, represents the Least Environmentally Damaging Practicable Alternative (LEDPA), the only alternative that can be permitted pursuant to CWA 404(b)1 Guidelines. Of specific concern are temporary and permanent indirect and direct impacts to vernal pool and rare alkali rain pool ecosystems and threatened and endangered species as a result of flooding 700 acres of swales outside the regular wet season.

***Recommendations:***

We recommend that no Clean Water Act Section 404 permit be issued without a more definitive demonstration of compliance with the Clean Water Act 404(b)(1) Guidelines.

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<sup>2</sup> See Managing an Uncertain Future: climate change Adaptation Strategies for California's Water. The Resources Agency, Department of Water Resources, October 2008 (Available on DWR web site at <http://www.water.ca.gov/pubs/climate>).

Include in the FEIS a separate section addressing compliance with Section 404 of the Clean Water Act and potential impacts to special aquatic sites (e.g., wetlands, open water, marshes, riparian woodlands). This section should identify Section 404 Clean Water Act requirements, underlying assumptions and conclusions, and detailed management and mitigation proposals to ensure compliance with these requirements.

The FEIS should provide information to support the conclusion that the Proposed Action (Preferred Alternative) represents the LEDPA, versus other action alternatives, such as Alternative C, which avoids the adverse effects of flooding vernal pools, alkali rain pools, threatened and endangered species habitat and the risk of type conversion of wetlands.

To comply with the Guidelines, the proposed action must meet all of the following criteria:

- There is no practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem (40 CFR 230.10(a)).
- The proposed action does not violate State water quality standards, toxic effluent standards, or jeopardize the continued existence of federally listed species or their critical habitat (40 CFR 230.10(b)).
- The proposed action will not cause or contribute to significant degradation of waters of the United States, including wetlands (40 CFR 230.10(c)). Significant degradation includes loss of fish and wildlife habitat, including cumulative losses.
- All appropriate and practicable steps are taken to minimize adverse impacts on the aquatic ecosystem (i.e., mitigation) (40 CFR 230.10(d)). This includes incorporation of all appropriate and practicable compensation measures for unavoidable losses to waters of the United States, including wetlands. The FEIS should fully address the feasibility of "in-kind" habitat mitigation measures.

***Provide a detailed wetland compensatory mitigation plan.*** The DEIS lists Environmental Commitment BIO-2b: Create, Restore, or Preserve Vernal Pools as mitigation for impacts to wetlands (p. 2-38). The proposed mitigation ratio is 1:1. A detailed description of the mitigation plan is not provided.

***Recommendations:***

The FEIS should provide a detailed wetland compensatory mitigation plan which describes mitigation location, implementation method, responsible party, funding, water sources, implementation timeframe, reporting requirements, and success criteria. We recommend the FEIS include scientific data that demonstrates the

ability to fully compensate for and create vernal pools, especially the little known and unique alkali rain pools. Given the uncertainty of successful creation of vernal pools and alkali rain pools, we recommend a mitigation ratio larger than 1:1. The FEIS should also describe other mitigation measures should creation, restoration, or preservation prove to be infeasible.

***Provide a detailed evaluation of effects of the mosquito abatement program.*** To minimize an increase in mosquito production, Madera Irrigation District will implement an agreement with the Madera County Mosquito and Vector Control District. A specific mosquito abatement program will be developed for monitoring mosquito larvae production in the recharge basins, drainages, and distribution canals. If mosquito larvae thresholds are exceeded, suppression measure using environmental, biological, and insecticides will be used (e.g., mosquito fish, control of emergent vegetation with algacides) (p. 2-47). While these control measures would not be directly applied to flooded swales, it is not clear whether recharge water from distribution canals could introduce mosquito fish or pesticides into sensitive wetlands.

***Recommendation:***

The FEIS should provide a detailed evaluation of potential adverse effects of the mosquito abatement program on flooded swales, vernal pools, alkali rain pools, and threatened, endangered, sensitive species and their habitat, and underlying aquifer. If potential adverse impacts to sensitive resources or groundwater are feasible, we recommend the FEIS include an evaluation of mitigation measures to address these effects.

**Full Disclosure**

The FEIS should provide additional information regarding the following items:

1. The Madera Irrigation District recharges the underlying aquifer through conveyances at 8 existing percolation facilities and as incidental recharge as a result of spills (p. 4.1-3). The FEIS should describe why expansion of these existing facilities was not carried forward as part of the WSEP.
2. A pilot project to determine use of flooded swales for recharge is briefly described in the DEIS (p. 4.18-4). The FEIS should provide the details of this pilot study in an appendix, including a description of the data collected, study methodology, and the baseline used to determine effects impacts. Of specific interest is whether the pilot project measured potential ecosystem changes caused by flooding of swales outside the regular wet season.
3. Two federally listed species, vernal pool fairy shrimp and blunt-nosed leopard lizard, are documented as occurring on Madera Ranch, the site of the WSEP. The blunt-nosed leopard lizard is also a fully protected species under the California Fish and Game Code (p. 4.5-27). In addition, Madera Ranch provides suitable grassland habitat for the federal and state listed endangered Fresno Kangaroo Rat and federal endangered San Joaquin kit fox (pps. 4.5-29 to -30). The FEIS should provide a detailed mitigation plan for potential adverse effects to these listed species.