
MADERA IRRIGATION DISTRICT WATER SUPPLY ENHANCEMENT PROJECT

FINAL ENVIRONMENTAL IMPACT STATEMENT

Appendix A: Comments and Responses

June 2011

This Appendix addresses comments received on the Draft Environmental Impact Statement (EIS). Because several comments involved similar topics, it was determined that single comprehensive responses would be more informative than several specific responses.

These “Master Responses” involve the least environmentally damaging practicable alternative (LEDPA), mitigation measures (also referred to as environmental commitments) and water rights.

Master Responses

Master Response 1. Least Environmentally Damaging Practicable Alternative

The Bureau of Reclamation (Reclamation) coordinated with the U.S. Army Corps of Engineers (USACE) and Madera Irrigation District (MID) to ensure that MID avoids discharges of dredged or fill material into waters of the United States to the maximum extent practicable. Reclamation has been facilitating the application process for a Section 404 Clean Water Act (CWA) permit, and Reclamation recognizes that because a Standard Individual Permit would be needed, the USACE can permit only the least environmentally damaging practicable alternative (LEDPA). While the evaluation of the LEDPA is not specifically a National Environmental Policy Act (NEPA) issue, additional information is provided below. Final determination of the LEDPA would be made as part of the 404 permit process and would be made by USACE.

The USACE cannot officially determine the LEDPA until they issue their own decision document. In April, MID provided additional alternatives information for USACE to analyze and/or modify the alternative to further avoid and minimize impacts to water of the United States prior to making a positive permit decision. In addition to the alternatives information, before USACE can issue a Department of Army (DA) permit, Reclamation would need to provide the USACE a Section 7 Endangered Species Act (ESA) Biological Opinion (BO) from the U.S. Fish and Wildlife Service (USFWS) (Appendix B of the Final EIS) and a Section 106 National Historic Preservation Act (NHPA) concurrence letter from California State Historic Preservation Officer (SHPO) (Appendix D and E of the Final EIS). MID would also need to provide USACE a finalized mitigation plan and Water Quality Certification from the Regional Water Quality Control Board prior to the issuance of a DA permit. The mitigation plan must meet USACE regulations stated under 33 CFR Parts 325 and 332 and District guidelines.

Reclamation and MID have gone through an extensive alternative screening process as outlined beginning in Section 2.9 Alternative Screening Process, page 2-66 of the Final EIS. Efforts have been made to avoid the discharge of dredged or fill material into waters of the United States, particularly sensitive wetland resources, by aligning canals and siting wells to avoid the fill of waters of the United States. Reclamation used information on the purposes and need, reasonableness, technical feasibility, cost, and environmental impacts to screen alternatives for consideration. MID also prepared additional information to support the alternative screening process in a report to USACE titled *Madera Irrigation District Water Supply Enhancement Project Information to Support Section 404(b)(1) Evaluation* in early April 2010 with a revision to the report based on USACE input at the end of April 2011. This document highlighted the alternative screening process to support the USACE’s permitting decision. Upon review of this document, the USACE has indicated that effects to wetlands, particularly vernal pools, can be

further reduced by using swales with the fewest vernal pools, creating soil berms in certain areas to minimize effects to vernal pools, and constructing some recharge ponds. The ultimate project configuration that the USACE indicated would likely achieve the LEDPA is to use approximately 550 acres of swales and to construct up to 323 acres of recharge ponds. Therefore, Reclamation and MID modified Alternative B, the Proposed Action/Preferred Alternative from the Draft EIS, to reduce the effects associated with Phase 1 and Phase 2. The Final EIS includes Reduced Alternative B which has been identified as the Proposed Action/Preferred Alternative and the LEDPA in the Final EIS. A table summarizing the differences between Alternative B and Reduced Alternative B is provided below.

Table 1. Differences between Alternative B and Reduced Alternative B

Alternative B	Reduced Alternative B
Approximately 700 acres of swales for recharge	Approximately 550 acres of swales for recharge
Approximately 5.5 acres of vernal pool effects from banking actions	Approximately 1.4 acres of vernal pool effects from banking actions
Up to 1,000 acres of recharge ponds	Up to 323 acres of recharge ponds
Section 8 canal southwest extension	No Section 8 canal southwest extension

The Final EIS describes the maximum effects of Reduced Alternative B. However, these effects are also being minimized through the NEPA and environmental permitting process.

Several commenters have indicated that they think Alternative C is the LEDPA. Alternative C is not the LEDPA primarily because of the non-wetland environmental impacts associated with it and its prohibitive cost. Alternative C, which includes construction of the 1,000 acres of ponds at the outset, would have greater environmental impacts on air quality from pond construction and on terrestrial biological resources from permanently converting grassland to recharge ponds. In the Draft EIS, Alternative B is analyzed as if it would be constructed in its entirety to ensure that the full magnitude of the project's effects are analyzed; however, as described in Section 2.4 of the Final EIS and as noted in this response, the final acreage of recharge ponds would be substantially smaller than 1,000 acres for the Proposed Action. Additionally, under Alternative C, the project would cost MID approximately \$46.4 million to begin applying water to the site. However, under Alternative B, the project would initially cost MID approximately \$33.7 million (Bookman-Edmonston 2005). Pond construction at the outset, totaling approximately 20% of construction costs before any water can be banked, is cost-prohibitive.

The water quality effects associated with the project are analyzed in Section 3-17 and are not expected to violate local, state, or federal water quality standards. Effects on federally listed species associated with the project are analyzed in Section 4.5 of Reclamation's Biological Assessment for the project, summarized in Section 3-4 in the Final EIS, and described in the Biological Opinion from the USFWS (Appendix B of the Final EIS). As indicated in the Biological Opinion, these effects are not expected to jeopardize the continued existence of federally listed species. Furthermore, MID has increased the mitigation for the project to ensure project effects on waters and wildlife habitat are fully mitigated (see Master Response 2 below). MID also has included other environmental commitments to minimize adverse effects on the aquatic ecosystem. In summary, Reclamation believes the Reduced Alternative B (Proposed Action/Preferred Alternative) is the LEDPA because:

1. it would result in the least environmentally damaging practicable project;
2. it would not violate state water quality standards or toxic effluent standards, or jeopardize the continued existence of federally listed species or their critical habitat;
3. it would not cause or contribute to significant degradation of waters of the United States because of substantial avoidance of sensitive wetland effects or a significant degradation of fish and wildlife habitat, including cumulative losses because of associated habitat improvements and mitigation; and
4. it would include all appropriate and practicable measures to minimize adverse impacts on the aquatic ecosystem.

Master Response 2. Mitigation

A detailed mitigation plan, which was included in the Biological Assessment, was inadvertently omitted from the Draft EIS. Since that initial plan was created, MID has revised its environmental commitments to further ensure that effects on habitats and species are fully mitigated. MID has developed a management plan that describes future management issues associated with Madera Ranch related to grazing, water management, endangered species, vernal pools, and monitoring. MID has proposed that compensation (mitigation) for the effects to protected species and their habitats that would result from implementation of the Proposed Action could be accomplished on a mosaic of lands that would include approximately 2,357 acres of land managed to provide suitable habitat for the affected species, and an additional 3,456 acres that is the location of a significant portion of the recharge swales (350 of 550 acres). These lands would be managed primarily for recharge purposes, but would provide relatively natural lands between the swales that can provide habitat for the effected species and connects the two compensation parcels.

Mitigation for the loss of 3.3 acres of vernal pool habitat would be in the form of approximately seven acres of created vernal pools and preservation of vernal pools at a 3:1 ratio in the mitigation area. These created pools would be inoculated with cysts and seeds from other high quality vernal pools on site in accordance with USFWS-approved methods.

MID would record a conservation easement on an area of land with these ratios to mitigate project effects before they occur. MID or the conservation easement holder would implement a management plan to improve existing on-site habitat through grazing management and species monitoring. The mitigation plan must be approved by the USACE prior to the issuance of a DA Permit and must meet USACE regulations stated under 33 CFR Parts 325 and 332 and District guidelines. The mitigation plan is now included in Appendix C of the Final EIS.

Conceptual mitigation areas are depicted in Figure 2-7 of the Final EIS and would be implemented in phases as the project progresses. MID initially would provide a conservation easement over the Phase 1 mitigation area to address the effects of swales and canals that would be constructed. Swales and other water banking facilities within the mitigation areas would be subtracted from mitigation totals. Should ponds be needed because swales are not performing as anticipated or not all swales are used, MID would proceed with construction of approximately 323 acres of ponds and begin implementing the Phase 2 mitigation area. In total, approximately 2,724 acres of mitigation would occur as a result of full project build-out. MID would use an area on the property for vernal pool restoration/creation; these are conceptually illustrated on

new 2-7. This could result in 60 acres of temporary effects and 10 acres of permanent effects on annual and alkali grasslands and are within the initial total estimates of Alternative B. MID would preferentially use the prior cultivated agricultural lands in Section 11 but may need to construct the vernal pools in native uplands if the soils are not appropriate. Should this be necessary, the restoration/creation effort would be integrated into the landscape as naturally as possible, and permanent effects on habitat for listed upland species would be mitigated. USFWS, California Department of Fish and Game (DFG), Environmental Protection Agency (EPA), and the USACE would have to approve the mitigation plan prior to issuance of a CWA 404 permit for this project.

The permanent protection of these areas, and their ongoing management and monitoring, is expected to fully mitigate the effects of the project. The preserve design is intended to conserve a large area of lands on Madera ranch adjacent to the project impact sites to maintain the movement, foraging, rest, and reproduction of threatened and endangered species on the property. These areas were selected for their resource values. For example, there are a large number of vernal pools and alkali rain pools within these conservation areas, plus Endangered Species Recovery Program (ESRP) confirmed sightings of blunt-nosed leopard lizards in Sections 3 and 10 and identified suitable habitat in other sections proposed for conservation.

Vernal pool restoration/creation efforts would adhere to current design and monitoring standards created by DFG, USACE, and USFWS. MID has contracted with an experienced vernal pool restoration/creation contractor to design, build, and monitor the created pools. A detailed monitoring program, developed in coordination with the USACE, would include reference pools plus the monitoring of soils, hydrology, vegetation, and species. As stated above, the mitigation plan must be approved by the USACE prior to the issuance of a DA Permit and the mitigation plan must meet USACE regulations stated under 33 CFR Parts 325 and 332 and District guidelines.

MID's proposed revised environmental commitments would be reflected in the FEIS and would be revised as follows:

Environmental Commitment BIO-1: Establish a Grasslands Conservation Easement

Mitigation for the loss of California annual grassland, alkali grassland, or Great Valley iodine brush scrub would consist of establishing a grasslands conservation easement at Madera Ranch over an area of habitat larger than the area subject to long-term degradation (2 acres conserved: 1 acre affected for swales) or permanent displacement (3 acres conserved: 1 acre lost for permanent facilities). MID also would implement a management plan to improve existing on-site habitat through grazing management and species monitoring. This measure would compensate completely for the loss of these habitats.

Environmental Commitment BIO-2b: Create, Restore, and Preserve Vernal Pools

MID would create, restore, and preserve vernal pool habitat at Madera Ranch in the area protected under a conservation easement. Five acres of vernal habitat would be created, restored, and preserved for each acre of vernal pool or alkali rain pool habitat lost as a result of activities associated with the Proposed Action (5 acres created/restored/preserved: 1 acre lost). MID anticipates that the approximate split of these acreages would be 3:1 preservation and 2:1 creation/restoration. This ultimately would be determined based on wetland locations, soil

conditions, and consultation with the USACE; soils, hydrology, vegetation, and species would be monitored. The performance standard for created vernal pools is to ensure the new vernal pools emulate the natural pools at Madera Ranch. Created vernal pools would have similar plant species composition, and vegetation cover and invertebrate fauna as the vernal pools that are being removed by activities associated with the Proposed Action. Success of the vernal pool creation would be assessed by comparing the pools with undisturbed natural vernal pools at Madera Ranch. Restored vernal pools would have similar success criteria. MID also would implement a management plan to improve existing on-site habitat through grazing management and species monitoring. This mitigation would compensate completely for the loss of vernal pool habitat. Restoration is more likely to be successful in areas with degraded habitat and where preservation is the most assured. This mitigation ratio ensures that MID would comply with Reclamation's wetlands mitigation and enhancement policy, which focuses on protecting, restoring, and enhancing wetlands and ensuring no overall net loss of wetlands. Wetland mitigation creation and restoration sites would be monitored until it is proven successful to the USACE, USFWS, and DFG. Mitigation sites must function for at least three years without human intervention.

Master Response 3. Water Rights

These comments do not raise environmental issues or address physical effects on the human environment; instead they raise legal and/or policy issues. However, a response is provided to address each comment. In addition, Reclamation would not take an action that threatens to violate federal, state, or local law or requirements imposed for the protection of the environment.

Specific Responses

Scanned copies of each of the comment letters received during the public review and comment period on the Draft EIS are presented below. Each comment on each letter is coded using the acronym and the number of the comment. For example, the first comment in the letter from the EPA is labeled as EPA-1. Responses to each designated comment are provided following each letter. The responses are numbered to correspond to the comments they address. Where a comment addresses an issue already addressed in another comment, a reference to the response to the previous comment is provided. All comments on the content and adequacy of the Draft EIS have been responded to in full.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

SEP 25 2009

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.

Sincerely,

Kathleen M. Goforth

KMG
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
W. Dale Harvey, Central Valley Region, California RWQCB
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 2100.¹ 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.

EPA-1

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.

EPA-2

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.

EPA-3

¹ 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).

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.² 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.

EPA-4

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.

EPA-5

² 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

EPA-5
cont'd

EPA-6

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.

EPA-6
cont'd

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 algaecides) (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.

EPA-7

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.

EPA-8

EPA-9

EPA-10

Responses to EPA Comment Letter

EPA-1

The EIS evaluates the project's effects on water supply, including the feasibility of the project in light of constrained Central Valley Project (CVP) supplies and climate change. The proposed Water Supply Enhancement Project (WSEP) would not interfere with other potential CVP operations or other programs or projects that would affect San Joaquin River flows or water supply, and in fact helps to meet restoration goals by reducing the strain on the system during dry years. The WSEP was evaluated with the assumption that the San Joaquin River Restoration Project (SJRRP) is in place. As such, the WSEP would operate in compliance with this broad restoration and operation criteria and is not a competing project. Specifically, Effect WS-5, on page 3-163 in the Final EIS addresses surface water availability and explains that the project would provide a net benefit for water supply and would be feasible with the SJRRP (Table 3-39).

The Final EIS also provides a discussion of the performance of the project in light of climate change in Section 3.8. Because the project is designed to capitalize on wet years to bank surface water for use in dry years, the WSEP can provide substantial benefits relative to water supply reliability under many different hydrologic scenarios. Overall, the WSEP provides an opportunity to respond to the effects of climate change by providing storage capacity during wet years for use in dry years. If water becomes scarcer, the project becomes more necessary. It provides increased operational flexibility within the existing regulatory and water rights framework.

While Temperance Flat Reservoir is still being considered, it is in the early planning phases and no environmental documents have been prepared on this project. However, this year Reclamation and the California Department of Water Resources (DWR) developed a Plan Formulation Report as an interim product of the Upper San Joaquin River Basin Storage Investigation. The purpose of the report was to determine the type and extent of federal, state, and regional interests in a potential project(s) in the upper San Joaquin River watershed to expand water storage capacity; improve water supply reliability and flexibility of the water management system for agricultural, urban, and environmental uses; and enhance San Joaquin River water temperature and flow conditions to support anadromous fish restoration efforts. Other purposes of the report were to describe the formulation, evaluation, and comparison of alternative plans that address investigation planning objectives, and to define a set of alternative plans to be considered in detail in a Feasibility Report and EIS/Environmental Impact Report (EIR) to be prepared next year. However, it should be noted that groundwater banking was "retained in concept" in the Plan Formulation Report, but MID's WSEP was not analyzed in the report as it is a local project, currently without direct state or federal participation in water banking. Groundwater banking was retained in concept because groundwater banks often have lesser effects on air quality, biological, transportation, and other resources. Also, groundwater banks often cost less than new dams but can provide similar water supply benefits.

EPA-2

The Final EIS provides information on the WSEP source water, including Friant Division supplies, Hidden Unit supplies, and other supplies in Section 3-18. The frequency and quantity of CVP uncontrolled flows and the existing beneficial uses supported by these flows are analyzed as part of overall operational permits Reclamation has obtained for the operation of the

CVP. Reclamation is obligated to comply with the USFWS and the National Marine Fisheries Service (NMFS) CVP Long-Term Operations Biological Opinions, and MID's diversions would be consistent with their CVP contract allocations. Similarly, MID is not proposing to alter their water right, though MID would be more likely to exercise its full entitlement.

EPA-3

MID would continue to evaluate the potential for water exchanges and transfers to meet their overall water supply needs. However, these types of transactions typically are temporary in nature and are difficult to implement over a series of drought years. Additionally, there are no known potential long-term transfer partners, and these actions do not meet the project purposes as described in Section 1. MID does participate in short-term water transfers and exchanges when possible. The proposed project would enhance MID's ability to continue to engage in short-term transfers and exchanges. As such, even with transfers and exchanges, the WSEP is still needed to meet water supply reliability objectives. Similarly, agricultural spills, tailwater, and treated wastewater are not of high enough quality to meet MID's needs for the project, and if available, would not be of a quantity large enough to provide a substantial increase in water supply reliability. None of these alternative actions would meet the stated purpose and need of the WSEP.

EPA-4

The County Board of Supervisors approved an Integrated Regional Water Management Plan (IRWMP) in 2008 (Madera County 2008). The IRWMP documents the collective approach of the County and its stakeholders to water management to deal with water supply, water quality, and flood management through 2030. The main objectives of the IRWMP are water resource management optimization, evaluating and increasing water supplies, water quality protection and improvement, and flood control planning. Five advisory committees with more than 80 community members assisted the County and its consulting team in the deliberation of the issues contained in the report.

The IRWMP contains detailed recommendations for long-term water quality protection and water supply planning in Madera County. It identifies the need to conduct regional water planning and describes a variety of approaches to resolve the current water supply issues, including water banking. The proposed project is consistent with the IRWMP. The IRWMP also identifies nonstructural water management actions, and these are one component of the solution but are insufficient to independently meet the future demand and shore up water supplies.

EPA suggests MID implement a Supervisory Control and Data Acquisition (SCADA) system. SCADA generally refers to an industrial computer-control system and monitoring process, typically used in manufacturing, production, power generation, fabrication, and refining. This type of system is not practical for this irrigation district as it would be extremely expensive and challenging to implement throughout MID's service area because MID's facilities are generally not mechanized. MID's canal turnouts are operated manually, and MID provides water when available and called by its customers. MID would like to move toward a SCADA system and anticipates that data collection efforts in the future would support the future development of a SCADA system. However, a SCADA system would require reconstruction of MID's delivery system and more uniform management of supplies based on planting schedules, crop watering

requirements, and farmer demands, and not necessarily improve water supply reliability given the existing conjunctive use efforts, the overdrafted nature of the basin, and that SCADA does not provide additional supplies. Additionally, it does not meet the stated purpose and objective of the WSEP.

Reclamation has a very active Water Conservation Field Services Program and just awarded MID grant money to MID for their meter replacement program for aging open-flow propeller meters located at farm turnouts. The funds would be used to upgrade old mechanical read-out meters, which frequently fail, with new electronic read-out meters.

EPA-5

Please see the responses to USACE-1, 2.

EPA-6

More detailed information on the mitigation plan was included in Reclamation's Biological Assessment to the USFWS, but was inadvertently omitted from the Draft EIS. The mitigation plan has been revised further as indicated in Master Response 2 and is included in Appendix C of the Final EIS.

No off-site compensation is proposed. No alkali rain pools are proposed to be created as the unique nature of these features are unlikely to be able to be engineered. MID has a variety of environmental commitments to avoid and minimize effects and has significantly increased the mitigation ratios to offset project effects. If alkali rain pools are to be impacted through direct fill or inundation, then MID would mitigate for the loss of these features via creation of vernal pools and preservation of both vernal pools and alkali rain pools.

EPA-7

Reclamation has analyzed the effects of the mosquito abatement program on sensitive biological resources as described on in Section 3.10 of the Final EIS. This analysis uses the best available information. As described, mosquito control is unlikely to be necessary but it should be noted that these areas already would be subject to a change in hydrology, which is expected to permanently adversely affect wetland resources in the flooded areas. The secondary effects of mosquito control, should it be necessary, are not entirely additive to the adverse effects of flooding, and additional mitigation is not necessary for those effects.

EPA-8

MID's eight other percolation facilities do not have the capacity to accommodate the maximum flows proposed to be banked at Madera Ranch. MID's other percolation facilities are located throughout MID's service area, and the total capacity of these facilities is less than 5,000 acre-feet (AF). The expansion of these facilities was eliminated from consideration because of an inability to expand them because of surrounding land uses, the price of adjacent lands at these locations, soil percolation ability, and overall project costs. This option was described generally in Section 2.9 of the Final EIS.

EPA-9

In 2005, MID conducted a pilot project with the primary objectives of:

- measuring the percolation rates in an unimproved swale over a sufficient period of time to allow estimation of long-term performance using the same waters that MID plans to use for the long-term project; and
- extrapolating pilot results to estimate performance of Phase 1 swales, taking into account soil types and underlying geologic conditions.

The purpose of this test was to measure the sustained percolation performance and not to measure impacts on the water table. Therefore, while water levels were measured from nearby wells throughout the test, new monitoring wells and vadose zone monitoring devices were not installed. The pilot project did not measure or monitor swales within the Fresno soil series, where the hardpan is located, so the percolation rates would likely be different in areas with this soil type.

Water was applied to a 12.5-acre pilot swale for 107 days to date at an average rate of 5.4-cubic feet per second (cfs). Approximately 1,000 AF was applied as of May 3, 2005. Water application rates stabilized at an average of 0.91 feet/day. The following interpretations were used to extrapolate this result to Phase 1 recharge areas:

- the rate was reduced to 0.90 ft/day after taking into account evapotranspiration,
- the rate was reduced to 0.88 ft/day after taking into account deviation from average temperatures,
- the rate was reduced to 0.72 ft/day after taking into account variations in depth to clay, and
- the rate was reduced to 0.67 ft/day after taking into account geometry differences.

Overall, the 2005 pilot demonstrated a sustainable percolation rate of 0.88 feet/day in the pilot swale, and taking into account variations in underlying geology and recharge area geometry, the Phase 1 percolation rate was reduced 24%, and estimated to be 0.67 feet/day. Additional recommendations from this technical study included:

- project cost estimates assume a long-term recharge rate of 0.67 feet/day with an average, 84% inundation of the Phase 1 area;
- while significant soil sealing has not been observed, detailed design should include evaluation of the potential need for amendments and mixing of surface water with groundwater during the first recharge season to ensure that soil sealing does not occur (the Phase 1 recharge ponds have been specifically placed to accommodate this operation, if needed);
- conservative scenario project cost estimates should assume a potential 50% long-term reduction of percolation capacity from 0.67 to 0.34 feet/day with an accompanying reduction of effective recharge area to 50% of the original Phase 1 area.

The memorandum indicates it can be reasonably concluded that Phase 1 systems could provide up to 100% of the project's recharge capacity depending on how the swales perform over time (Western Development and Storage 2005).

The study was conducted during the wet season and did not specifically measure the potential ecosystem changes over time. During the time since the pilot project, water intermittently has been recharged in the swale during both the wet and dry season. Subsequent site visits indicate additional wetland plant species are occurring in the swale. Portions of the swale with water look different because of differences in vegetation, but portions of the swale without water look the same as adjacent uplands (namely because wetland species do not persist if water is not present). Areas outside the swale visually appear to be unchanged by use of the swale. A subsequent memorandum providing an update with additional pilot test data and clarifying several statements of the earlier study was also prepared in 2010 that indicates the swales are feasible for recharge (Western Development and Storage 2010).

EPA-10

Please see the response to EPA-6 and Master Response 2.



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

Comment Letter USACE

September 25, 2009

Regulatory Division (SPK-2004-00284)

Patti Clinton
Bureau of Reclamation
South-Central California Area Office
1243 N Street
Fresno, California 93721-1813

Dear Ms. Clinton:

We are responding to your request for comments on the Draft Environmental Impact Statement (DEIS) for the Madera Ranch project. This approximately 13,600-acre project site, plus additional area for canal modifications, is being proposed to be used to construct a groundwater bank. The bulk of the project site, excluding the canal modification areas is located on Cottonwood Creek, Gravelly Ford Canal, and numerous wetlands which are located in Sections 1-11, 13-18, 20-22, and 28-29, Township 12 South, Range 16 East, MDB&M, Latitude 36.8934283247801°, Longitude -120.22555925114°, Madera, Madera County, California. The Corps of Engineers is a cooperating agency for this project.

The Corps of Engineers' jurisdiction within the study area is under the authority of Section 404 of the Clean Water Act for the discharge of dredged or fill material into waters of the United States. Waters of the United States include, but are not limited to, rivers, perennial or intermittent streams, lakes, ponds, wetlands, vernal pools, marshes, wet meadows, and seeps. Project features that result in the discharge of dredged or fill material into waters of the United States will require Department of the Army authorization prior to starting work.

The range of alternatives considered for this project should include alternatives that avoid impacts to wetlands or other waters of the United States. Every effort should be made to avoid project features, which require the discharge of dredged or fill material into waters of the United States. In the event it can be clearly demonstrated there are no practicable alternatives to filling waters of the United States, mitigation plans should be developed to compensate for the unavoidable losses resulting from project implementation. The Corps of Engineers may only permit the least damaging practicable alternative (LEDPA) for any permit decision.

USACE-1

USACE-2

The Corps of Engineers has notice that there are several differences within the project description of this DEIS as compared to what has been submitted to our office for the project application for a Section 404 of the Clean Water Act permit request. We would like to discuss with you these differences and come to a resolution on which description is correct. We will need to resolve these differences before the Corps of Engineers can publish our Public Notice for the application request so we may present correct information to the public. These differences include, but are not limited to, the creation of turnouts in Gravelly Ford, differenced in the cubic

USACE-3

yards of soil to be removed in Canal 24.2, the creation of monitoring stations, and the statement various culverts may need to be replaced for this project.

USACE-3
Cont'd

Please provide the estimated amount of impacts to waters of the United States if deep ripping is to occur within the proposed basins. Based on our September 16, 2009 meeting with your office, Figure 2.5 for Phase I shows that recharge basins are being proposed outside of the area that was actively surveyed for rare species. How does your office propose to assess these potential impacts to the listed species that may occur in these areas? Please provide additional information on how the remaining wetland landscape will be functioning after the retention basins are constructed four to five feet deep throughout the project site.

USACE-4

USACE-5

USACE-6

Under Chapter 3, please be advised that this project must also comply with the federal Fish and Wildlife Coordination Act. Page 2-20 of the DEIS describes the creation of the Madera Ranch Oversight Committee to maintain and monitor this project. Because of the highly sensitive nature of this landscape and the proposed impacts to waters of United States and rare species this oversight committee must have an active independent biological presence represented on this committee. This is necessary to ensure that the functions and values of the waters of the United States on the property are allowed to exist to their full potential, and concerns for these waters will be equally considered along with the operation and uses of this proposed groundwater bank. Table 4.1-2 should be expanded to at least the 1970's so we may assess the project during times of severe drought.

USACE-7

USACE-8

USACE-9

Please refer to identification number SPK-2004-00284 in any correspondence concerning this project. If you have any questions, please contact me at the letterhead address, email Kathy.Norton@usace.army.mil, or telephone 916-557-5260. For more information regarding our program, please visit our website at www.spk.usace.army.mil/regulatory.html. Thank you for your attention in these matters.

Sincerely,

~S~

Kathy Norton
Sr. Project Manager
California South Branch

Copy furnished:

Susan Jones, San Joaquin Valley Office, U.S. Fish & Wildlife Service, 2800 Cottage Way, W-2605, Sacramento, California 95825-1846
Eric Raffini, U.S. Environmental Protection Agency, Wetlands Office, 75 Hawthorne Street, San Francisco, California 94105-3901
Jeff Single, California Department of Fish and Game, 1234 East Shaw Avenue, Fresno, California 93710-7802

Response to USACE Comment Letter

USACE-1

Some of the project features are water-dependent for all feasible alternatives. For instance, the turnouts are required to move water onto the site for banking, regardless of whether swales or recharge basins would be used. So, it appears the purpose and need requires some fill of waters of the United States.

USACE-2

Reclamation coordinated with the USACE and MID to ensure that MID avoids discharges of dredged or fill material into waters of the United States to the maximum extent practicable. MID, as Reclamation's applicant, must prepare a mitigation plan that would satisfy the requirements of the USACE (MID's mitigation plan has been updated; see Master Response 2). Reclamation has been facilitating the application process for a CWA Section 404 permit, and recognizes that because a Standard Individual Permit would be needed, the USACE can permit only the LEDPA. Please see Master Response 1.

USACE-3

MID has indicated that the project has not yet undergone detailed engineering, and as such, disturbances are estimated based on preliminary plans. Reclamation and MID would work with the USACE to ensure disturbance estimates are accurate but believes these are appropriately estimated and described in the EIS. Brief responses to the items mentioned are:

1. turnout information was described in Section 2 of the Draft EIS. The Final EIS includes this information as well as additional clarification and a figure;
2. 76,000 cubic yards (cy) of soil movement for the 24.2 canal in the Draft EIS was an overestimate from early planning documents – revised calculations are closer to approximately 36,000 cy;
3. monitoring stations are illustrated in Figure 2-5 of the EIS but not described in detail in the text of the EIS because these monitoring stations require nominal earth work, and additional clarification has been added to the text of the Final EIS; and
4. Section 8 canal upgrades described in the EIS discuss the need to obtain approximately 30 acres land and additional right-of-way along the existing facility corridor, and resize facilities—this included the replacement of culverts along this path.

USACE-4

MID would avoid impacts on waters to the United States if deep ripping occurs within the proposed recharge pond window associated with Phase 2. Currently there are approximately 40 acres of seasonal wetland, as identified in the preliminary jurisdictional determination, within this window; this area is identified as seasonal wetland because of MID's pilot application of water to this swale.

USACE-5

As shown in Figure 3-5, the Phase 1 recharge basins are proposed for lands that are currently in agricultural production. As agricultural lands do not provide habitat for species such as the blunt-nosed leopard lizard and Fresno kangaroo rat, these areas were not surveyed. Regarding the Phase 2 recharge ponds, the entire property has been surveyed for rare species, although the

survey intensity has varied. The EIS assumed the presence of blunt-nosed leopard lizards and potential presence of the Fresno kangaroo rat. Recent surveys have confirmed the presence of blunt-nosed leopard lizards in low densities on the eastern half of the property. These surveys also have indicated the lack of presence of the Fresno kangaroo rat within the detailed survey area; however, given the homogeneity of the habitat and previous lack of presence of this species, it can be concluded that there would not be an adverse effect on the Fresno kangaroo rat. The potential effects on these species associated with the project in its entirety are currently described in the Final EIS in Section 3.4.1.

USACE-6

The recharge basins would be constructed only in upland areas, and would not, in and of themselves, affect the functioning of the remaining wetland landscape. The swale wetlands would continue to convey water across the site, though the frequency and duration would change depending on which swales are used and water availability; wetlands within the swales, particularly vernal pools, are expected to be degraded. The surface area of the watershed feeding the swale would be reduced by the creation of ponds, but without the application of water by MID, the swale would not be a wetland because it does not contain typical wetland soil or hydrologic characteristics.

USACE-7

As required by both the Fish and Wildlife Coordination Act (FWCA) and NEPA, Reclamation initiated early involvement with both USFWS and CDFG to obtain their recommendations on fish and wildlife resources, giving those recommendations equal consideration with respect to the project purpose and need. The Final EIS describes action-related effects to wildlife resources and identifies alternative means and measures necessary to enhance or mitigate impacts to wildlife resources. Because FWS was a cooperating agency, Reclamation consulted with CDFG, and all recommendations for wildlife enhancement were fully considered by Reclamation, this EIS provides Reclamations compliance with the FWCA.

USACE-8

The Oversight Committee comprises five MID board members, one elected board member from Gravelly Ford Water District, three independent members representing adjacent landowners, and one County Board of Supervisors member and is not designed to deal with information beyond the impacts on groundwater resources (e.g., water levels, water quality, subsidence). The Monitoring and Operational Constraint Plan (MOCP), which the Oversight Committee would use, focuses strictly on groundwater resources, and so it is not possible to simply add one or two biologists to the committee. However, as Reclamation previously told the USFWS when they made a very similar request, Reclamation recognizes the value of ongoing monitoring of biological resources and potential resource effects, and therefore we have worked out a process with the USACE, DFG, USFWS, EPA, and MID in which the raw monitoring data that is viewed by the Oversight Committee would be made available to all the agencies, and the agencies would be kept apprised of voting outcomes. In addition, the Oversight Committee's meetings would be open to the public, so any of the agencies' personnel could attend. This would allow Reclamation and the regulatory agencies to see what data is being generated, and how it is being used pursuant to the MOCP. Furthermore, there has been refinement of the Management plan, and the manager of the conservation easement lands would also report back to DFG, the USFWS, and the USACE if any unanticipated impacts are seen to occur as a result of the project.

USACE-9

Table 3-39 currently captures a period of severe drought, including 1987 through 1992 and other representative years. This table indicates how much water would be available for banking given the historical record from this period and current supplies available from Reclamation given San Joaquin River restoration. Data prior to 1985 is not readily available given the lack of consistent use of some facilities and lack of consistent records for some conjunctive use quantities.



Linda S. Adams
Secretary for
Environmental
Protection

California Regional Water Quality Control Board

Central Valley Region

Karl E. Longley, ScD, P.E., Chair

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Arnold
Schwarzenegger
Governor

17 August 2009

Comment Letter RWB

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Patti Clinton
Bureau of Reclamation, Mid-Pacific Region
South-Central California Area Office
1243 N Street
Fresno, CA 93721

DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE MADERA IRRIGATION DISTRICT WATER SUPPLY ENHANCEMENT PROJECT, MADERA COUNTY

On 30 July 2009, we received the Draft Environmental Impact Statement (DEIS) for the proposed project located on the Madera Ranch for a groundwater recharge and storage project.

Regarding the impact to wetlands, it is unclear how many acres of wetlands will be permanently and temporarily impacted by project activities. In the Final Environmental Impact Report (FEIS), please include a map illustrating the locations of impacts to wetlands and surface waters, along with a description of the impacts. It is unclear how flooding the existing wetland swale areas will impact the wetland ecosystems; there are no references to studies or examples where this has been done in other areas with a corresponding description of the resulting impacts and proposed mitigation measures. It appears that perhaps all areas of flooding with recharge water will result in permanent impacts to wetlands, since inundation outside of the regular wet season would degrade the natural seasonal wetland ecology.

RWQCB-1

RWQCB-2

Figure 4.5-1 includes areas labeled as "Artificial Wetlands," but there is no corresponding description of these features, or a description of project impacts to them. It is unclear whether these are waters of the U.S. In any case, they are waters of the State, and as such, must be adequately described in the FEIS, along with potential impacts and compensatory mitigation for any impacts to their functions and values. The applicant must submit a Report of Waste Discharge for any dredge or fill activities in any wetlands that may be deemed non-jurisdictional waters of the U.S.

RWQCB-3

RWQCB-4

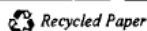
Environmental Commitment BIO-2b: Create, Restore, or Preserve Vernal Pools does not adequately describe a mitigation plan for loss of wetlands. The FEIS should describe the acreage of vernal pools that will be permanently impacted, along with a detailed compensatory mitigation plan. Executive Order W-59-93 enacts the California Wetlands Conservation Policy, which calls for no net loss of wetlands acreage and values. In order to verify the project will result in no net loss of wetlands acreage and values, the FEIS must describe in detail how all wetland impacts will be replaced. The text of this section states in part, "One acre of vernal habitat would be restored or preserved for each acre of vernal pool or alkali rain pool habitat lost..." Under this description, half of the wetlands could be "preserved" and half could be destroyed, which would result in a 50% loss of wetlands from the site. The compensatory

RWQCB-5

RWQCB-6

RWQCB-7

California Environmental Protection Agency



Classification
Project CVP
Control No. 04054024
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ENV-6.00

mitigation plan must include an adequate description of monitoring of vernal pools and wetlands created as compensatory mitigation, and an explanation of how success will be measured and monitored over time. Proposed compensatory mitigation will be evaluated when the applicant submits an application for a federal Clean Water Act Section 401 Water Quality Certification, which is required for any temporary or permanent discharges of fill to waters of the U.S. on the site. The proposed compensatory mitigation must also be consistent with Executive Order W-59-93.

RWQCB-7
cont'd

In regards to the discussion of Cottonwood Creek, the DEIS states on page 4.5-5, "MID periodically removes sediment, debris, and vegetation from the creek channel and banks using a variety of heavy equipment that moves up and down the dry creek channel." A review of our records shows that the Madera Irrigation District does not have any current federal Clean Water Act (CWA) Section 401 Water Quality Certifications that authorize this work. Please be advised that any dredge or fill activities in Cottonwood Creek require a CWA Section 404 permit from the U.S. Army Corps of Engineers and a federal CWA Section 401 Water Quality Certification from the Central Valley Regional Water Quality Control Board.

RWQCB-8

Thank you for the opportunity to comment on this DEIS. For any questions, please contact Bridget Supple at (559) 445-5919 or by email at bsupple@waterboards.ca.gov.


W. DALE HARVEY
Senior WRC Engineer
RCE No. 55628

Response to Central Valley Regional Water Quality Control Board Comments

RWQCB-1

Table 3-40 shows the wetland impacts that would be associated with each of the alternatives. It includes the possibility that flooded swales could turn into seasonal wetlands. However, please see USACE-3 and note that Reclamation became aware of certain differences between the application submitted to the USACE and the Draft EIS. Reclamation worked with MID and USACE to clarify these differences, and regardless, the Draft EIS captured the range of potential effects, and most of the differences relate to open waters of canals, rather than wetlands.

RWQCB-2

Section 3.19.2 provides an analysis of anticipated wetland impacts. Flooding of swales is expected to adversely affect the functioning of those vernal pools interconnected with the flooded swales, and this is described in the Final EIS. MID conducted a pilot project that evaluated the percolation ability of the swales (see response to EPA-9) but there are no other studies on the effects on local hydrology and uplands; this is why MID is also proposing mitigation that includes ongoing monitoring (see Master Response 2). This project would be the first of its kind. That is one of the reasons that Reclamation chose to do an EIS. MID's pilot project did not include an area with the Fresno Series soil type. On U.S. Department of Agriculture (USDA) maps some of these areas indicate there is a hardpan restrictive layer, though the soil series is generally defined to have poor to moderate drainage. The pilot study doesn't give any indication as to what would happen in this soil type, though there are multiple soil types throughout the swale systems across the property, and the swales proposed for use were historic channels that are expected to percolate water.

RWQCB-3

These "artificial wetlands" are synonymous with "seasonal wetlands" and are swales that have had agricultural water spilled into them for such a duration that they have changed from upland areas into seasonal wetlands. The terminology has been changed in the Final EIS to reflect the USACE' jurisdictional assessment as seasonal wetlands. It has been challenging to classify these features as they typically lack hydric soil indicators. Please see Section 3.19 for an explanation of why the resource is classified as a seasonal wetland. Figure 3-5 generally shows the construction overlaid on habitat types, including the artificial/seasonal wetlands. These features currently are considered jurisdictional. There may be a small amount of impact from recovery pipeline construction. Please see USACE-3 and note that the exact impacts are still being resolved; MID submitted a CWA 404 application after the Draft EIS was out for public review.

RWQCB-4

MID would need to comply with State law. While this is an important issue, it is not under Reclamation's jurisdiction as a federal action agency. Please also see Reclamation's response to RWQCB-3.

RWQCB-5

MID has revised its mitigation for project effects as described in Master Response 2.

Updated Tables 3-12 and Table 3-40 in the Final EIS now more clearly show the extent of the project effects on wetlands and these effects are proposed to be mitigated through creation/reestablishment and preservation as outlined in the Mitigation, Monitoring, and Reporting Plan (Appendix A of the Final EIS).

RWQCB-6

MID has revised its mitigation for project effects as described in Master Response 2. MID would ensure there is no net loss of wetlands for this project.

RWQCB-7

MID has revised its mitigation for project effects as described in Master Response 2. It is MID's intent to ensure the mitigation complies with the CWA and the State Water Resources Control Board's Executive Order W-59-93.

RWQCB-8

While Reclamation recognizes that the concern Central Valley Regional Water Quality Control Board has raised is important, this does not bear on the adequacy of the Draft EIS, and is to be addressed by MID as part of their state permitting requirements. Reclamation has accurately described that the affected environment includes these activities in Cottonwood Creek.



California Natural Resources Agency
DEPARTMENT OF FISH AND GAME
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
<http://www.dfg.ca.gov>

ARNOLD SCHWARZENEGGER, Governor
DONALD KOCH, Director



Comment Letter DFG

September 30, 2009

Patti Clinton
United States Bureau of Reclamation
Mid Pacific Region, South-Central Area Office
1234 N Street
Fresno, California 93721

Subject: Madera Irrigation District
Water Supply Enhancement Project
Draft Environmental Impact Statement

Dear Ms. Clinton:

The California Department of Fish and Game has reviewed the Draft Environmental Impact Statement (DEIS) submitted by the United States Bureau of Reclamation (Reclamation) for the Madera Irrigation District (MID) Water Supply Enhancement Project (Project). Project approval would allow for the construction and operation of a water supply enhancement bank on the property commonly referred to as Madera Ranch. The Madera Ranch is comprised of approximately 13,646 acres and is located in southwestern Madera County, south of the Fresno River and north of the San Joaquin River, approximately 5 miles southwest of the City of Madera. The primary purpose of the Project is to meet current and future water storage needs and to enhance water supply reliability and flexibility through subsurface storage of a portion of MID's Central Valley Project (CVP) Friant Division contract water supply.

The Project includes the conveyance and storage of up to 15,000 acre feet of MID's long-term CVP supply on the Madera Ranch Project site, which is outside of its contractual service area, and the authorization to alter and extend the Federally owned 24.2 Canal. In September 2005, and in accordance with the California Environmental Quality Act (CEQA), MID certified the Final Environmental Impact Report (FEIR) and approved the water enhancement supply Project (SCH No. 2005031068). At the time, there was no Federal Action. However, Reclamation did comment on the draft Environmental Impact Report, and it was stated that once MID proposed a Federal action, Reclamation would need to complete a National Environmental Policy Act (NEPA) analysis and satisfy all the Federal Endangered Species Act (FESA) requirements before approving any Action. In August 2007, and in response to MID's request for approval of the Project, Reclamation circulated a Notice of Intent (NOI) to prepare a DEIS and this document has been submitted for review by Reclamation as the Federal Lead Agency and to comply with the NEPA requirements prior to approving the Action.

Based on information presented in the FEIR, NOI and the DEIS, the Project will occur in two phases. Phase 1 would result in reconditioning and extension of conveyance structures into the Project site and initiating recharge flows into the natural swale system. Phase 2 would result in building additional recharge facilities and conveyance structures, the construction of water

Conserving California's Wildlife Since 1870

extraction infrastructure for recovering stored waters from the underlying aquifer, and installation of lift stations to transport recovered waters to MID customers. Implementation of Phase 2 would not occur until after Phase 1 facilities have been operating for at least a year. Under Phase 1, the infrastructure necessary to operate the water conveyance and recharge portions of the Project would be constructed and include engineered improvements to multiple structures (Section 8 Canal, Cottonwood Creek, Main No. 1 Canal, Gravelly Ford Canal, and 24.2 Canal) to provide at least 200 cubic feet per second of conveyance capacity into Madera Ranch; reconditioning of an unknown number of laterals and ditches; installation of new, and the renovation of existing, water delivery turnouts; constructing 55 acres of sediment-settling ponds and flow regulation basins on irrigated agriculture lands within the Project area; and inundation and use of 700 acres of natural swales as groundwater recharge areas. Under Phase 2 of the Project, the recovery infrastructure would be constructed, including siting up to 49 wells to provide 200 cubic feet per second of banked water recovery capacity; electrical facilities to serve well pumps; installation of 12 miles of up to 60-inch diameter pipeline below ground surface that will traverse the Project site; 12 lift stations to transport recovered water into conveyance structures; up to 1,000 acres of constructed recharge basins over a 1,300-acre footprint; and access roads to facilitate the operations and maintenance of the water bank.

The DEIS considers and analyzes four actions or alternatives for the construction of varying configurations of the necessary infrastructure to operate the Project:

- Alternative A (No Action).
- Alternative B (Proposed Action and Reclamation's Preferred Alternative) would consist of completing the infrastructure outlined above under Phase 1 activities; and under Phase 2, includes the probability of potentially constructing up to 1,000 new acres of on-site recharge basins if necessary to meet the proposed 15,000 acre feet per year recharge goals.
- Alternative C is described as a variation of Alternative B in that the use of the natural swale system for recharge under Phase 1 would not occur; and under Phase 2, would require the construction and operation of 1,000 acres of on-site basins for use as the sole recharge facilities.
- Alternative D would require MID to enter into an agreement with Gravelly Ford Water District to improve the Gravelly Ford Canal. This is to allow water to be conveyed from the San Joaquin River, through the Canal, to Madera Ranch for recharge and recovery. Construction and recharge activities under Phase 1 would be completed as in both Alternative B and Alternative C and would use the natural swale system for recharge. Phase 2 would be implemented similar to Alternative B, including the potential to construct 1,000 acres of on-site basins.

The Department continues to believe that conservation of the existing habitat values on the Madera Ranch is very important for the protection and recovery of several San Joaquin Valley endemic species, including the State and Federally endangered and State fully protected blunt-nosed leopard lizard (*Gambelia sila*) and the Federally endangered and State threatened

DFG-1

San Joaquin kit fox (*Vulpes macrotis mutica*). Because there is tremendous value in the upland and wetland habitat that currently exists on the site, the Department has worked extensively over the past several years with MID towards development of a Project that will both meet water storage goals and conserve the endangered, threatened, and species of concern that are supported by the habitat types on Madera Ranch. The Department remains committed to continuing these efforts. However, in examining the Alternatives, the Department believes that with the exception of Alternative A, the DEIS in all probability underestimates the potential environmental impacts of the Project regardless of the recharge configuration.

DFG-1
cont'd

Specifically, under the Proposed/Preferred Alternative B, the DEIS calculates approximately 2,100 acres of Madera Ranch could be impacted at full Project build out, with 700 acres of that total being the permanent loss of a wetland ecosystem. Moreover, the analysis for Alternative B does not appear to account for the conversion of 1,300 acres of additional upland/wetland habitat if it becomes necessary to construct the 1,000 acres of recharge basins in the event MID deems the swale system is not meeting the expected recharge performance goals. The DEIS is also unclear regarding how many acres of on-site wetland restoration/creation will need to be accomplished to meet the no net loss standard under Reclamation's wetlands mitigation and enhancement policy, nor how much restoration may be required to meet the requirements under the Clean Water Act Section 404 permitting process that is yet to be determined by the United States Army Corps of Engineers (ACOE). Therefore, depending on the amount of land needed and the location of acreage set aside for on-site wetlands creation/enhancement, the Project has the potential to impact a far greater quantity of an unknown quality of upland habitat than is analyzed in the DEIS. Even more problematic is that the DEIS states mitigation for the loss of wetlands will occur at a rate of 1:1 (acres lost to acres conserved). This same rate of conservation is proposed to mitigate for the permanent impacts to upland habitat.

DFG-2

DFG-3

DFG-4

The Department has also identified the following biological resource impacts and issues of concern with regard to the Project and subject to the Department's jurisdictional authority:

- "Take" ("take" as defined in Fish and Game Code Section 86) of State-listed species such as the San Joaquin kit fox, and State Species of Special Concern.
- "Take" ("take" as defined in Section 3 of the Federal Endangered Species Act of 1973) of Federally listed species and Federal species of concern.
- The potential unpermitted "take" of the Fully protected blunt-nosed leopard lizard.
- Substantial loss or degradation of vernal pool, wetland, and surrounding upland habitat, and the species dependent upon such habitat.
- Substantial loss or degradation of riparian habitat.
- Substantial loss or degradation of non-native grassland.
- The loss of habitat ("take") for State- and/or Federally listed plant species and impacts to other special status plants that may occur on the Project site.

DFG-5

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DFG-7

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DFG-11

- Potential impacts to the water quality of the San Joaquin River, Cottonwood Creek, and other blue-lined streams from construction activities, polluted runoff from equipment usage, changes in deposition of sediment to the stream and river courses, and erosion.

DFG-12

Department Jurisdiction

Responsible Agency Authority: Pursuant to Fish and Game Code Section 1802, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. As a Trustee Agency for fish and wildlife resources, the Department is responsible for providing, as available, biological expertise to review and comment on environmental documents and impacts arising from project activities. Based on our review of the DEIS, the Department has determined the Project has the potential to reduce the number or restrict the range of the following State and Federally endangered and/or threatened species that are known to occur within the Project site and in the area.

Species

Listing

Palmate-bracted bird's beak
Cordylanthus palmatus

State – Endangered
Federally – Endangered

Vernal pool fairy shrimp
Branchinecta lynchi

Federally – Endangered

California tiger salamander
Ambystoma californiense

State Candidate Species for Listing
Federally – Threatened

Blunt-nosed leopard lizard
Gambelia sila

State – Endangered and Fully Protected
Federally – Endangered

San Joaquin kit fox
Vulpes macrotis mutica

State – Threatened
Federally – Endangered

Fresno kangaroo rat
Dipodomys nitratoides exilis

State – Endangered
Federally – Endangered

Golden eagle
Aquila chrysaetos

State Fully Protected

Greater sandhill crane
Grus canadensis tabida

State Fully Protected

White tailed kite
Elanus leucurus

State Fully Protected

DFG-13

Species

Swainson's hawk
Buteo swainsonii

Listing

State – Threatened

DFG-13
Cont'd

Further, the Department expects the proposed Project would likely require a permit for "take" of listed species, pursuant to Section 2081 of the California Endangered Species Act (CESA). CESA permit issuance criteria require that Project-related impacts to San Joaquin kit fox, as well as other State-listed species for which "take" authorization would be needed, are minimized and fully mitigated. This means that the Project must not diminish the overall populations of State-listed species.

DFG-14

The Department has some concerns about the issues summarized above with respect to the description of the analysis of the Project impacts as are outlined in the DEIS. If MID requests a Consistency Determination, pursuant to Fish and Game Code Section 2080.1, from the Department to streamline the Incidental Take permitting process for species listed jointly under FESA and CESA, the Department will need additional details to determine that full mitigation will occur. In order for a Consistency Determination to be feasible, the Biological Opinion/ Incidental Take Statement prepared by the United States Fish and Wildlife Service (USFWS) must substantially meet the requirements of CESA. Specifically, Fish and Game Code Section 2081(b)(2) states the impacts of any authorized "take" shall be minimized and fully mitigated (emphasis added). Pursuant to Title 14, California Code of Regulations, Section 783.4, projects are required to quantify and include the impacts of the permitted "take" of a State-listed species, together with all other impacts on the species that result from any act that would cause the proposed taking. When all the impacts are taken into consideration and a demonstration that the outcome of the instituted mitigation ensures that the covered species is conserved to the degree it is able to continue to survive and reproduce after completion of the project and through the mitigation, then the fully mitigate standard can be said to be met.

DFG-15

Based on the current information, as presented in the in the DEIS, the Department feels the Description of the Proposed Action for the Project is inadequate to complete an appropriate analysis of all of the Project impacts and that the avoidance, minimization, and mitigation measures described in the DEIS may not be adequate to reduce some of the potentially significant biological impacts that have been identified. At this juncture, with the information available, it appears it may not possible for the Department to quantify the "taking" for several species potentially proposed to be covered under the Biological Opinion and subsequently under a Consistency Determination, and therefore, it is difficult to determine what constitutes the appropriate mitigation obligation for the Project that will assure and support that the fully mitigate standard can be met. One such example is the projected 1:1 mitigation for upland and wetland habitat in the DEIS. Based on the currently available information, this proportion of conservation to loss appears to be insufficient to compensate for short-term, cumulative, permanent, and operational effects to the State-listed species known to be present and those potentially present in the Project area.

DFG-16

If the Department cannot issue a Consistency Determination, MID would need to acquire an Incidental Take Permit, pursuant to Section 2081 of the Fish and Game Code, in order to comply with CESA. As previously mentioned, the CEQA document for this Project was certified by MID in 2005. If an Incidental Take Permit under CESA or a Lake and Streambed Alteration Agreement under Section 1600 of the Fish and Game Code is required for any portion of the Project, the Department would use MID's FEIR for any subsequent discretionary actions which are subject to CEQA. If the CEQA document did not correctly analyze and disclose all Project-related impacts to listed species and other biological resources, the Department may have to act as Lead Agency for additional Project-related CEQA analysis, which would delay Project implementation. Based on our comments on the previous environmental documents and recently conducted biological surveys that reveal additional potentially significant impacts, if the Department were to issue an Incidental Take Permit, it may warrant a re-analysis under CEQA to examine alternatives to substantially reduce or eliminate those impacts. Therefore, the Department encourages continued flexibility in the Project design in order to avoid and minimize impacts to sensitive biological resources.

DFG-17

Other Sensitive Species: The Project also has the potential to reduce the number or restrict the range of the State Species of Special Concern burrowing owl (*Athene cunicularia*), tricolored blackbird (*Agelaius tricolor*), and the American badger (*Taxidea taxus*). Additional plant species with the potential to occur on the Project site include recurved larkspur (*Delphinium recurvatum*), heartscale (*Atriplex cordulata*), lesser saltscall (*Atriplex minuscula*), vernal pool smallscale (*Atriplex persistens*), and subtle orache (*Atriplex subtilis*).

DFG-18

Although burrowing owls are not listed under CESA, impacts to burrowing owl and their nest burrows must be avoided in order to comply with the Federal Migratory Bird Treaty Act (MBTA) and Fish and Game Code Sections 3503, 3503.5, and 3513, which are explained in more detail below.

DFG-19

Fully Protected Species: The Department has jurisdiction over fully protected species of birds, mammals, amphibians and reptiles, and fish pursuant to Fish and Game Code Sections 3511, 4700, 5050, and 5515. "Take" of any fully protected species is prohibited in all circumstances, and the Department cannot authorize their "take." Fully protected species that are known to occur on-site include the golden eagle, greater sandhill crane, and white-tailed kite.

DFG-20

The fully protected blunt-nosed leopard lizard (BNLL) is also present on-site and the Department has stated previously when commenting on this Project that additional mitigation measures are needed to ensure this species would not be impacted by the construction or operation of the water supply enhancement bank.

Additional comments on potential Project-related impacts to these fully protected species follows below.

Bird Protection: The Department has jurisdiction over actions which may result in the disturbance or destruction of active nest sites or the unauthorized "take" of birds. Sections of the Fish and Game Code that protect birds, their eggs and nests include Sections 3503

(regarding unlawful "take," possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the "take," possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful "take" of any migratory nongame bird). Specific remarks on potential Project-related impacts to birds are included in the following comments.

Project Impacts and Recommendations

Blunt-nosed Leopard Lizard: Surveys for this species were conducted along the footprint for the hard infrastructure (recharge swale areas and conveyance structure construction footprints) east of the Gravelly Ford Canal alignment only. The surveys began in late April and concluded in July 2009, and confirmed the presence of BNLL on the Madera Ranch site by photographing/capturing four adult BNLL along with three other unconfirmed visual sightings. The Department considers these observations of BNLL on the Madera Ranch Project sight to be significant because:

- This is the second confirmed observation of this species in northwestern Madera County since the early 1990s and documents the continued presence of this species in its historic range.
- It represents the northern-most documented population for the species and the population is geographically isolated from the closest known occurrence of BNLL in northwestern Fresno County. The BNLL on Madera Ranch may constitute a genetically distinctive relic population and as such it warrants singular consideration in terms of research and conservation value and for future survival.
- The surveys for BNLL were completed on roughly half the hard infrastructure footprint proposed for the Project site (Phase 1 construction activities) so that a relative density and distribution of the BNLL population throughout the Madera Ranch site is unknown, though it is presumed to be located on suitable habitat within the entire 13,646-acre Project site.

DFG-21

The U.S. Fish and Wildlife Service Recovery Plan for Upland Species of the San Joaquin Valley (1998) (Recovery Plan) specifies that the most important aspect of recovery for this species is to preserve and enhance populations on existing habitat; the Recovery Plan states that one of the areas of highest priority to target for protection are natural lands in western Madera County, which includes the Project site. The Madera Ranch Project site is one of the last remaining expanses of upland grassland/alkali scrub habitat in western Madera County and is integral to meeting the Recovery Plan goal for sustaining this northern most population of BNLL documented to date in the San Joaquin Valley. In the course of the discussion for this species, the DEIS states that any potential impacts to this species are considered moderate with the implementation of mitigation proposed under Environmental Commitment BIO-1 (Establish a Grasslands Conservation Easement) and BIO-5 (Pre-construction Surveys for Blunt-nosed Leopard Lizard). Under Commitment BIO-1, the proposed conservation of lost grassland/alkali scrub habitat through the execution of the Project to the quantity of habitat to be placed under the conservation easement on the Project site is suggested to be at a rate of 1:1. The DEIS states "that while this measure would not compensate completely for the loss of these habitats, it would help slow the rate of loss of these habitats in this region."

DFG-22

The Department does not concur that BIO-1 is appropriate to meet the potential and cumulative impacts of the loss of habitat for this species. As has been discussed previously, the Department is unclear whether all the losses of upland grassland/alkali shrub habitat have been disclosed or accounted for in the DEIS. This is an issue in terms of determining if the proposed compensation and permanent protection and management of habitat on the Madera Ranch Project site is suitable to offset the extent of lost habitat in the execution and operation of the water storage bank; and if the proposed conserved acreage is of appropriate quality to support the potential use of the site for movement, foraging, estivation, and reproductive activities for the BNLL that currently exist there. Given the habitat displacement that has occurred and which is expected to occur in western Madera County from conversion to irrigated lands and urban development, cumulative habitat fragmentation is a threat to the area and will likely contribute to increasing isolation of this known population of BNLL which may limit the exchange of genetic material with the greater population to the south and the west. This has the potential to hinder the recovery of the species, which is in direct contrast to the habitat and population conservation goals set forth in the Recovery Plan.

DFG-22
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Because BNLL is fully protected, and therefore no "take" incidental or otherwise can be authorized by the Department, Environmental Commitment BIO-5 (Pre-construction Surveys for Blunt-nosed Leopard Lizard) as outlined in the DEIS appear to be ineffective in demonstrating to the Department that "take," as defined in Fish and Game Code Section 86, of this species will not occur. Under Commitment BIO-5, pre-flooding surveys will be conducted one to two years prior to the wetting of the natural swales and will be valid for five years. Moreover, the DEIS states no additional surveys will be conducted of any swale areas that have been surveyed twice with neither survey resulting in a single observation of BNLL. The Department believes that surveys for BNLL need to be conducted of the dry natural swale system each and every time prior to flooding. If prolonged periods of dry conditions occur between wetting it is highly likely that BNLL could move in and occupy burrows in the side walls of swales with gently sloping elevations, or use the alkali wash areas as travel corridors as part of their home range. The Department also continues to have concerns that implementation of the proposed Project could result in unintentional flooding outside of swales while recharge is occurring. Unchecked flooding could result in additional impacts to upland habitat and BNLL that may use this habitat for burrowing or foraging. In order to reasonably assure the Department that "take" will not occur when waters are introduced into the swale recharge system, surveys of the entire recharge system, including 100 feet into the upland habitat from the edge of the swale banks, should be conducted by qualified individuals in accordance with accepted protocol-level methodology to determine the likelihood of the presence of BNLL within the recharge area. In the event a BNLL is detected, the Department should be notified immediately to determine the best course of action.

DFG-23

DFG-24

In addition, the interconnection between the upland and the swales could be through underground warrens which may be impacted by lateral below ground hydrology. Once the swale system is inundated with water, this could cause estivating BNLL to be compromised physiologically or even to drown as the water table rises adjacent to the recharge system. Routine pre-flood surveys will not prevent this potential for "take." Therefore, the Department is recommending the DEIS be amended to include a comprehensive analysis of vertical versus

DFG-25

lateral soil infiltration rates based on pre Project pilot studies, micro topography and soils mapping, depths of the swale complex, and distribution and density of existing burrows throughout the natural swales area including burrows immediately adjacent to the wetlands. This information will assist the Department in determining which areas of the natural swales complex could potentially support active and estivating BNLL. Any areas with positive BNLL sightings should be targeted for protection with conservation easements.

DFG-25
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DFG-26

For construction activities including excavation, trenching, soil movement, and the increased vehicle traffic (including up to 70 separate pieces of heavy equipment that could be on-site during construction of Phase 1 and 2 facilities) walking transect surveys are proposed in Commitment BIO-5 of the DEIS. These pre-construction surveys are to be conducted along the proposed hard infrastructure alignments for eight days between April 15 and July 15 and the surveys are expected to be conducted as close to the construction period as possible. The DEIS states that if a BNLL is detected, the lead biologist will determine whether there is value in continuing the survey effort and MID, USFWS, and the Department will be contacted. The Department believes surveys need to be conducted along the entire construction and equipment transport route no more than 30 days before ground disturbance will commence. Moreover, Department-approved exclusion barriers for BNLL need to be installed in areas with negative detection survey results to prevent immigration of BNLL into an area slated for ground disturbance, and that biological monitor(s) should be on-site at all times during active building. Additional measures, such as ceasing all ground-disturbing activities in the event a BNLL should be detected in an active construction site until the animal safely removes itself from the area, need to be incorporated in the Environmental Impact Statement. All accidental mortalities from vehicle strikes or other means need to be reported to the Department immediately.

DFG-27

DFG-28

San Joaquin Kit Fox: In our comment letter to Reclamation in response to the NOI for the DEIS (November 2007), the Department recommended that presence be assumed for this species. This was in part based on information from Jones & Stokes (2000) generated during previous surveys of the Project site which were conducted using limited spotlighting, den, and camera stations. After a review of data from the 2000 survey effort, the Department concluded the negative results considered for the San Joaquin kit fox were based on a limited effort (roughly 1 camera station per 300 acres) and that this was not sufficient to support such an assessment. More importantly, San Joaquin kit fox are known to occur in the general vicinity, and the Project area provides high quality denning and foraging habitat as evidenced by the distribution and density of potential dens and kangaroo rat burrows within the Project area. San Joaquin kit fox populations are known to fluctuate over years and presence/absence in any one year does not necessarily exclude the potential for kit fox to occur on-site, nor the potential value of the site for species recovery.

The DEIS does assume presence for the San Joaquin kit fox. In the course of the discussion for this species, the DEIS states that any potential impacts to this species are considered moderate with the implementation of Environmental Commitment BIO-1, (Establish a Grasslands Conservation Easement) and BIO-8 (Pre-construction Surveys for San Joaquin Kit Fox). Again, under Commitment BIO-1, the proposed conservation of lost grassland habitat through the execution of the Project to the quantity of habitat to be placed under the

DFG-29

conservation easement is suggested to be at a rate of 1:1; and again, the Department does not concur that BIO-1 is appropriate to meet the moderate designation of impact on the loss of habitat for this species.

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The Recovery Plan specifies that in addition to grasslands and scrub brush, other San Joaquin Valley vegetation communities that provide kit fox habitat include alkali meadow and alkali playa, both of which exist on the Project site. Furthermore, the Recovery Plan expressly lists as one of its recovery actions for the species the maintenance and enhancement of kit fox corridors between the Mendota Wildlife area, Fresno County; natural lands in western Madera County; and the natural lands along Sandy Mush Road in southern Merced County. Specifically, the Recovery Plan states that protection and enhancement of links to these areas need to be considered a priority to be maintained along the Chowchilla or Eastside Bypass. The Madera Ranch Project site is one of the last remaining expanses of upland grassland alkali scrub habitat in western Madera County and is central to meeting the Recovery Plan goal for sustaining a linkage corridor into Merced County and is located within a known satellite population occurrence area (USFWS, August 1, 2006). The Project site is geographically key in maintaining linkage between potentially genetically diverse populations of kit fox located on the eastern and western corridors of the San Joaquin Valley. Protection of the habitat values through a conservation easement, minimization of impacts to the upland habitat within the Project area, and an appropriate level of and location of conservation acreage on-site to fully mitigate the cumulative and permanent impacts to habitat through the construction and operation of the water supply enhancement bank needs to be fully discussed in the DEIS. If the DEIS cannot commit to placing specific parcels on-site under a conservation easement to meet the fully mitigate standard, it should identify the larger area within which mitigation lands could be acquired, along with the amount of land required to fully mitigate the Project's individual temporary, permanent, and cumulative kit fox impacts.

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DFG-31

In addition, BIO-8 describes a two-tiered approach to conducting preconstruction surveys for kit fox natal dens, non-native active dens, and potential dens prior to excavation activities for pipelines by examining aerial photographs from the current year and then ground truthing by a qualified biologist any potential dens identified in the photographs. When surveys for active dens are conducted, the DEIS states they will be meandering walking transects out to 250 feet from the proposed facilities, which will involve simultaneous surveys for potential den sites out to 100 feet. This is inconsistent with the USFWS's Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance. The problem with using aerial photographs to detect potential dens is that not all dens will be easily visible from the air and only those in relative open flat areas will be distinguishable. Therefore, in order to ensure that dens which could be impacted by the extensive excavation and construction activities planned during both Phase 1 and Phase 2 of the Project, the Department recommends that at a minimum, walking transect surveys for dens need to be conducted out to 500 feet from the edge of the proposed construction zone no more than 30 days prior to ground-disturbing activities. All other avoidance, minimization, and mitigation measures (such as collapsing dens) need to be consistent with those outlined in the USFWS standardized recommendations. Without these measures in place, the Department cannot be certain that the potential for "take" has been minimized and fully mitigated as required by CESA and we would therefore be unable to issue a Consistency Determination. These measures would be required in a 2081 permit.

DFG-32

DFG-33

Listed Kangaroo Rats: Extensive supplemental trapping efforts for listed Fresno kangaroo rats were conducted by the Endangered Species Recovery Program (ESRP) during 2009. Trapping occurred adjacent to the natural swale recharge area and along all the hard infrastructure route in the sections of the Project site east of the Gravelly Ford Canal alignment. The results of this trapping effort do not indicate the presence of Fresno kangaroo rats on the Madera Ranch site in the areas where the most recent trapping efforts occurred. The Department understands from communication with Dr. Patrick Kelly of ESRP that trapping surveys will be conducted to determine if Fresno kangaroo rats are present on that portion of the Project site west of the Gravelly Ford Canal at a yet to be determined point in the future.

The DEIS states that pre-flooding surveys of the natural swale recharge area for Fresno kangaroo rat will be conducted as outlined under Environmental Commitment BIO-9 and under a similar methodology as proposed for BNLL under Commitment BIO-5. The DEIS proposes that biological surveys for Fresno kangaroo rat will occur one to two years prior to wetting the swales and survey results will be valid for up to five years. The Department does not agree with the methodology described above and recommends trapping in all areas where kangaroo rat sign or activity is evident between extended periods consisting of drying and subsequent wetting of the swale system. Since the soil in the bottom and periphery of the recharge swales are sandy, during the dry periods these may be attractive areas for burrowing animals such as kangaroo rats. The results of these trapping surveys should be submitted to the Department for review.

DFG-34

If Fresno kangaroo rat is observed during subsequent pre flooding and/or preconstruction trapping efforts and if "take" could occur as a result of Project implementation, consultation with the Department is immediately warranted. Any occupied habitat should be completely avoided to preclude the potential for a Jeopardy determination by the Department and the occupied habitat should be permanently protected with conservation easements. This would be consistent with the Fresno kangaroo rat Recover Action 6 of the Recovery Plan. This should be added to the discussion of the DEIS.

DFG-35

California Tiger Salamander (CTS): CTS is now listed as a State candidate and as a result, the Department now has jurisdiction over this species under CESA. Protocol-level surveys for CTS have yet to be conducted on the Madera Ranch Project site. In March 2000, limited dip net surveys were completed incidental to fairy shrimp surveys, and supplemental surveys in 2009 were again conducted incidental to vernal pool invertebrate and plant surveys. In addition, the wet season of 2008-2009 recorded a below average rainfall year so that pools filled later in the season and had less of a volume of water than would be expected to support the breeding activities and life cycle requirements of the larval and juvenile stages of CTS. Therefore, the Department is continuing to recommend that protocol biological surveys be conducted in the largest and deepest pools within the project area and in areas with identified swales/vernal pools and associated uplands at the appropriate time of year. These surveys are necessary to identify, map, and quantify the number of acres of pools/swale complex size where CTS breeding, if any, occurs and to determine if these wetland resources would be impacted by inundation outside of the normal wet season. The results of these surveys should be submitted to the Department and the USFWS. The surveys should be completed prior to beginning construction of the project or flooding the natural swales in anticipation of the first recharge event.

DFG-36

In addition, Environmental Commitment BIO-4a and 4b require preconstruction surveys for CTS in suitable aquatic and upland habitat and to minimize the potential mortality and injury of breeding and dispersing CTS during construction of hard infrastructure and excavation for pipelines will take place during the "dry season" (April 1 through November 1) when CTS are unlikely to be above ground, so pre-construction surveys would likely detect this species even if present. Commitment BIO-4c implements erosion control (silt fences) and exclusion fencing to restrict equipment from moving into sensitive habitat, exclude CTS from the construction zone, and prevent silt and soils from eroding into wetland areas. These measures are consistent with Department recommendations provided that burrows potentially supporting CTS are avoided and are not within the construction zone.

DFG-37

Listed Plant Species: The Department understand from the DEIS that surveys for rare, threatened, and endangered plants including palmate-bracted bird's-beak, and natural communities were conducted in May and June 2009 in the hard infrastructure areas of the Project site. The results of these surveys have yet to be submitted to the Department for review. As such, the Department can neither concur nor determine if the results require additional efforts to conclude that there is no potential for State-listed or other rare plant species to occur within the Project site. The Department does have some concern that vernal pool plant surveys were conducted during a record low precipitation year. Under this condition, certain plant species may not germinate or persist for a long enough period of time to be detected in the vegetative state. Depending on the results of the surveys conducted this year, the Department may request that additional surveys be conducted by a qualified botanist multiple times during the appropriate floristic period(s) in order to adequately assess the potential Project-related impacts to listed plant species (DFG, 2000; USFWS, 2000). If State-listed plants are detected during surveys, consultation with the Department is warranted to discuss the potential for "take" under CESA. Plants listed as threatened or endangered under CESA cannot be addressed by methods described in the Native Plant Protection Act without incidental "take" authority secured under Sections 2080.1 or 2081 of the Fish and Game Code.

DFG-38

Swales and Vernal Pools and Associated Species: As has been discussed previously, implementation of the proposed Project could result in unintentional flooding that could impact upland habitat. With the exception of using constructed turnouts and check stations at the head of each swale to control the rate of flow of waters into the natural channels, the DEIS does not appear to adequately address the mechanism that will ensure water will remain in the footprint specified. The Department remains uncertain as to how flooding will be controlled.

DFG-39

The condition of permanent and/or ponded water for longer durations also may result in the establishment of species such as bullfrogs, which could compromise the existing community structure in the swales. The most secure and reproductively successful aggregations of species, such as western spadefoot toad and CTS, are in aquatic sites that lack invasive predators.

DFG-40

In the event that vernal pool creation is required under Section 404 of the Clean Water Act, the Department recommends that: 1) MID avoid placement of created vernal pools in occupied sensitive plant habitat and that plant surveys conducted of the area are determined by the Department to demonstrate the area could not support palmate-bracted bird's-beak or any other

DFG-41

listed plant species; 2) MID should record the dimensions of the pools to be impacted by the Project footprint so that the created pools are similar to those impacted. Seeds, cysts, etc., should be salvaged by vacuuming the litter from the existing pools for inoculation into the created pools; and 3) MID should specify the target species composition, cover, duration of inundation, etc., for the created pools and the remedies in the event the pools don't meet the performance standard. It should be noted the Department is not in favor of vernal pool creation as a mechanism to mitigate impacts to vernal pool species. The Department strongly recommends habitat (vernal pool and associated uplands) protection occur at a rate that expands and enhances wetland habitat values in perpetuity as a mitigation measure. Vernal pool creation in upland habitat areas, particularly upland habitat within Madera Ranch, may result in additional and significant impacts to listed species that inhabit upland areas and should be avoided.

DFG-41
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Burrowing Owl: Burrowing owls have been documented throughout the Project site. Additional surveys of the hard infrastructure and the pipeline alignment will be necessary to determine the presence of any additional potential burrows prior to Project implementation and this is consistent with what is proposed under Commitment BIO-7 in the DEIS. For any nesting burrowing owls found on or adjacent to the Project site, the Department's Staff Report on Burrowing Owl Mitigation (DFG, 1995) (Staff Report) recommends that impacts to occupied burrows be avoided by implementation of a no-construction buffer zone of a minimum distance of 250 feet, unless a qualified biologist approved by the Department verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Failure to implement this buffer zone could cause adult burrowing owls to abandon the nest, cause eggs or young to be directly impacted (crushed), and/or result in reproductive failure. Impacts of this nature are violations of Fish and Game Code Sections 3503, 3503.5, 3513, and the MBTA.

DFG-42

DFG-43

If the Project proposes to evict burrowing owls that may be present, the Department recommends passive relocation during the nonbreeding season. The Department also recommends a minimum 1:1 replacement of dens with artificial dens in the vicinity. The Staff Report recommends that foraging habitat should be acquired and permanently protected to offset the loss of foraging and burrow habitat, preferably on the Project site.

DFG-44

Swainson's Hawk and Other Raptors: There is a known Swainson's hawk nest within and adjacent to the Project site, including a previously documented nest along the San Joaquin River. There is further documentation that other raptor species such as the white-tailed kite and the golden eagle also use the site for nesting/foraging. While the Project may not result in impacts to nest trees or nesting birds, loss of suitable foraging habitat may occur as a result of Project implementation. The DEIS document does analyze the potential impacts to Swainson's hawk foraging habitat and proposes mitigation to reduce those impacts. However, the proposed mitigation to offset the impacts to Swainson's hawk foraging habitat is not consistent with the recommended 1.5 acres of habitat protection in perpetuity for every acre of foraging habitat impacted, as discussed in the Department's Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (1994). We recommend that the DEIS be revised to reflect the higher rate of mitigation.

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Patti Clinton
September 30, 2009
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Nesting Birds: Trees or shrubs in the Project area likely provide nesting habitat for songbirds and/or raptors, and ground-nesting birds also exist in the Project area. Any tree or shrub removal or ground disturbance should occur during the non-breeding season (mid-September through January). If construction activities must occur during the breeding season (February through mid-September), surveys for active nests should be conducted by a qualified biologist no more than 30 days prior to the start of construction. A minimum no-disturbance buffer of 250 feet should be delineated around active nests until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.

DFG-46

Depending upon the results of the previously mentioned biological surveys, we may have additional comments and recommendations regarding avoidance, minimization, and mitigation of Project impacts to habitat and special status species. Thank you for the opportunity to comment on the MID water supply enhancement project DEIS. If you have any questions regarding these comments, please contact Annee Ferranti, Senior Environmental Scientist, at the address provided on this letterhead or by telephone at (559) 243-4014, extension 227.

DFG-47

Sincerely,


Jeffrey R. Single, Ph.D.
Regional Manager

cc: See Page Fifteen

Response to California Department of Fish and Game Comment Letter

DFG-1

Reclamation has worked with MID to ensure all environmental effects associated with the project are described and analyzed. Both Reclamation and MID believe water banking and habitat conservation are compatible uses on Madera Ranch, and MID has proposed a revised mitigation program as described in Master Response 2 to ensure project effects are avoided, minimized, and fully mitigated. Reclamation provided detailed species effects analysis in the Draft EIS and in its Biological Assessment provided to the USFWS, and DFG has been presented with copies of species survey results from 2009; please see additional discussion about the magnitude of effects below and in Reclamation's response to DOW-33.

DFG-2

DFG is correct in its characterization of the impact numbers. Based on survey reports and Reclamation's observations from a May 2009 site visit, the approximately 550 acres of swales that would be flooded are predominantly upland areas. With the exception of those that have been inundated regularly by pilot project flows and agricultural tailwater and other agricultural flows, the swales are floristically similar to the surrounding areas and are often very slight depressions in the topography. They lack wetland vegetation, which is one of the three indicators of a wetland. Reclamation does agree that the habitat could be permanently affected by conversion to a different vegetation type, but this conversion could revert to annual grassland during consecutive dry years. Consequentially, this permanent change is different from installing hard infrastructure. MID is proposing to monitor these changes over time.

DFG-3

Table 3-12 of the Final EIS includes both swale effects and recharge basin construction effects and has been updated to address an error from the Draft EIS and revised to include Reduced Alternative B. The numbers in the far right-hand column for Alternative C were modified for not using swales and the numbers for Alternative D were modified for not using swales in Sections 2 and 3.

DFG-4

Please see Master Response 2 and CVRWQCB-5.

DFG-5

Comment noted. Obtaining authorization from DFG for this take is MID's responsibility. MID has coordinated with DFG, the USFWS, and Reclamation and applied for an incidental take permit under section 2081 of California ESA (CESA).

DFG-6

Reclamation expects that the Proposed Action would result in the take of federally listed animal species, and Reclamation is consulting with the USFWS on the adverse effects on those species. The Sacramento Field Office of the USFWS no longer maintains a species of concern list. MID worked with DFG to determine appropriate CESA permitting.

DFG-7

Reclamation is aware of this issue, and MID has proposed additional avoidance and minimization measures to ensure take under CESA does not occur. Reclamation has disclosed potential effects on this species in the Draft EIS, and Reclamation has cooperated with DFG and MID so that MID can meet their obligation to avoid all take of the blunt-nosed leopard lizard (BNLL), as take is defined under State law. MID's new Environmental Commitments for blunt-nosed leopard lizard include:

Environmental Commitment BIO-5: Pre-Activity Surveys for Blunt-Nosed Leopard

Lizard The objective of the BNLL surveys is to avoid take of BNLL during use of the swales for water banking and construction of water delivery canals and other facilities. Specific measures for linear facilities and swales are described below.

Environmental Commitment Bio-5a: Install exclusion fencing and conduct clearance surveys and construction monitoring for blunt-nosed leopard lizards

Linear Facilities

- A. Prior to construction of linear facilities in grassland and/or saltbush scrub/Valley sink scrub habitat and adjacent dirt roadways MID, in consultation and coordination with qualified wildlife biologists, shall create exclusion corridors based on habitat suitability and the need to create exclusion zones for burrows, scalds, and wetlands. Construction of linear facilities is restricted to May 1st through August 1st and may commence in areas only after BNLL pre-construction surveys are completed. Pre-Construction BNLL surveys shall consist of the following minimum parameters:
 1. Surveys for adult BNLL shall be conducted between April 28th and July 1st and shall occur when the air temperature (as measured at 1-2 cm above the ground over a surface most representative of the area being surveyed) is between 25 °C - 35 °C (77 °F – 95 °F). Once the air temperature falls within the optimal range, surveys may begin after sunrise (once sun is high enough to shine directly on the ground surface being surveyed) and must end by 1400 hours or when the maximum air temperature is reached, whichever occurs first.
 2. Time of day and air temperature shall be recorded at the start and end of each survey.
 3. Surveys would not be conducted on overcast (cloud cover > 90%) or rainy days or when sustained wind velocity exceeds 10 mph (>3 on Beaufort wind scale).
 4. Surveys shall be conducted on foot and transects shall be no larger than 10 meters wide, consist of a slow pace, and be conducted on a north-south orientation when possible.
 5. Surveys shall be conducted for 12 days over the course of a 30 day period. Surveys shall be conducted for 4 consecutive days, weather permitting with at least one survey session consisting of a 4 consecutive day period.
 6. The starting/ending locations of surveys should be modified/alternated to the extent practicable, but resulting in the same area surveyed. This is so that different portions of the site are surveyed at different time/temp periods.
 7. Surveyors must be approved by the DFG and USFWS to conduct the BNLL reconnaissance surveys. The survey crew conducting focused BNLL surveys shall consist of no more than 3 Level I surveyors for every Level II surveyor. The names of every surveyor must be recorded for each survey day.

8. All herpetofauna observations shall be recorded/tallied. All BNLL observations shall be recorded with GPS, time of observation, name of observer, sex (if evident), and lifestage (adult, juvenile, hatchling). If BNLL is observed in association with or observed entering a particular burrow, burrow location (via GPS) should be recorded as well.
9. If a BNLL is observed within such areas, consultation with DFG must immediately occur. However, if BNLL observations are made, BNLL surveys should not be halted; the entire survey should be completed for the entirety of the construction footprint; continuing the surveys is important to maximize detections and to best help inform where the lizards occur and may not occur. Partial surveys cannot be used to inform whether or not avoidance can or would occur.
10. (hereafter 1- 9 collectively referred to as, "BNLL Pre-Construction Survey Parameters".)

- B. **Installation of Barrier** - Within 3 days after BNLL pre-construction surveys are completed, biologists shall oversee the creation an exclusion area by installing a non-gaping non-climbable barrier using a material approved by DFG and the USFWS along 3 sides of the planned linear facility construction perimeter. The barrier installation shall be overseen by biologists who have BNLL experience and who have been approved in advance by USFWS and DFG (hereafter, qualified BNLL biologists). The barrier fencing shall be installed perpendicular to the ground (vertical) and shall be sealed to ensure there are no gaps between segments or under the fencing. An example of possible suitable material can be found at <http://www.ertecsystems.com/>. Small mammal burrows and burrow complexes shall be excluded from the liner facility construction areas to the maximum extent practicable and a no disturbance buffer zone shall be established and clearly delineated from any burrows / burrow complexes. The day following the installation of the fencing, the qualified BNLL biologists shall walk approximately 10 meter transects along the partially fenced linear facility construction area during the time of day when air temperatures fall within the optimum range for species detection, during the peak BNLL activity season, and as outlined above. If no BNLL are detected, the fourth side of fencing may be installed and MID may begin work within the fenced area. At least two DFG and USFWS approved biologists would be present within the construction area when construction and other activities within the exclusion area are in progress.
- C. **Walking Surveys Throughout Construction** - Throughout construction, the biologists shall conduct walking surveys of the construction area, looking for BNLL. All open holes and trenches within habitat would be inspected at the beginning of the day, middle of the day, and end of day for trapped animals. If BNLL are detected at any time and within any area of the basin construction site, biologists would halt all work, open a section of the exclusion fencing, and allow the lizard to leave the area on its own (no chasing, following, etc. can occur).
- D. **Inadvertent Entrapment Prevention**-- To prevent inadvertent entrapment of BNLL or any other wildlife during the construction phase of the linear facilities, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps (with no greater than a 3:1 slope) constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals by a

qualified biologist. If BNLL are trapped, then it shall be allowed to escape on its own. In addition, all construction pipe, culverts, or similar structures with a diameter of 7.6 centimeters (3 inches) or greater that are stored at the construction site for one or more overnight periods would be thoroughly inspected for BNLL before the pipe is subsequently moved, buried, or capped. If during inspection one of these animals is discovered inside a pipe that section of pipe shall not be moved until the animal has escaped on its own.

- E. **Construction Time** - The permitted construction time is from one hour after sunrise to one hour before sunset, and two biological monitors shall also be active at all times when construction or other activities are in progress. The biological monitors shall survey the construction area during construction, scanning the ground for BNLL and routinely checking excavated soils to ensure that BNLL are not present. The biological monitors shall stop work if a lizard is found within the construction area until the lizard has been excluded from the work area.
- F. **Multiple Construction Areas** More than one linear facility construction area may be established and under construction at the same time provided the minimum number of biologists and biological monitors are present at each of the sites at all times during construction or other related activities.
- G. **Notification of Dead or Injured BNLL** -- If any dead or injured BNLL are observed on or adjacent to the construction site, or along haul roads/travel routes for worker and/or equipment, regardless of assumed cause, DFG and USFWS shall be notified. The initial notification to DFG and USFWS shall include information regarding the location, species, and the number of animals injured or killed. Following initial notification, MID shall send DFG and USFWS a written report within 2 calendar days. The report shall include the date and time of the finding or incident, location of the carcass, and if possible provide a photograph, explanation as to cause of death, and any other pertinent information.
- H. **Fully Protected Species** - These measures shall not be required if the species' fully protected status is rescinded and MID obtains incidental take authorization from DFG for this species for this project.

Recharge Basins MID, in consultation and coordination with qualified wildlife biologists, shall create appropriately sized recharge basin construction areas before construction of recharge basins in grassland and/or saltbush scrub/Valley sink scrub habitat and adjacent dirt roadways within the former center pivot areas of Section 16, 17, and 18 on Madera Ranch. Construction areas shall be prioritized initially by reconnaissance surveys no more than 60 days prior to any basin construction activities or ground disturbance to identify areas with the fewest burrows and least suitable habitat for BNLL. Construction of basins would be restricted to May 1st through August 1st and may commence in areas identified through the above referenced reconnaissance surveys only after BNLL pre-construction surveys are completed by way of the BNLL Pre-Construction Survey Parameters (See paragraph I.A. above).

The information gathered from these surveys would be used by DFG to determine which habitat is most likely occupied and to identify appropriate exclusion areas (Basins shall initially be planned to be sited in the former center pivot areas of Section 16, 17, and 18). If no BNLL is observed within 3 days after the completion of the BNLL pre-construction survey, biologists

shall create an exclusion area by installing non-gaping non-climbable barrier. The installation for such barrier shall comply with the installation guidelines listed above under linear facilities, and must be supervised by a qualified BNLL biologist (See paragraph I.B above).

Construction of the recharge basins is permitted from one hour after sunrise to one hour before sunset (See I.E above). More than one percolation basin construction area may be establish and under construction at the same time provided the minimum number of biologists and biological monitors are present at each of the sites at all times during construction or other related activities. Throughout construction, Biologists shall conduct walking surveys of the construction area to determine whether there is any detection of the BNLL. The survey procedures shall comply with paragraph I.C. listed above. Also during construction, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered as described under I.D above, to prevent inadvertent entrapment of BNLL or any other wildlife.

Finally, if any dead or injured BNLL are observed on or adjacent to the construction site, then MID must notified DFG and USFWS in accordance with the outline procedures listed above under I.G. If the BNLL fully protected status is rescinded and an incidental take permit is granted, then these measures would not be required.

On-Ranch Ground Disturbing Facility Maintenance MID would have an agency approved biologist review future ground disturbing facility maintenance work locations and sizes to evaluate the potential for effects to BNLL. If the activity is in suitable habitat and could affect burrows, MID would conduct the work during the appropriate seasonal window and implement site-specific exclusion measures such as fencing and additional surveys as prescribed above for linear facilities.

Environmental Commitment Bio-5b: Conduct blunt-nosed leopard lizard and burrow surveys of swales proposed for inundation MID would conduct BNLL and burrow surveys of swales prior to inundation in swales. Those portions of swales that have been inundated annually for extended periods prior to Project approval would not be surveyed because potential burrows likely have been inundated and eroded, and BNLL are unlikely to aestivate in these areas. Pre-wetting BNLL surveys would be consistent with the *BNLL Pre-Construction Survey Parameters* listed above under I.A. The information from these surveys would be used to determine which habitat is most likely occupied and to identify appropriate swale use areas. If no BNLL are found during the surveys, water may be applied throughout that following year. If a BNLL is sighted within the low point of a swale (i.e., the expected inundation area) it would be difficult to determine whether the burrows in the area are being used for nesting or refugia. Therefore, MID would delay using the swale for banking until the active season (April 28 to July 1); then MID would apply water to the swale slowly (i.e., approximately 12 inches per minute) to ensure lizards can escape burrows. These measures shall not be required if the species' fully protected status is rescinded and MID obtains incidental take authorization from DFG for this species for this project.

Environmental Commitment Bio-5c: Implement other protective measures for blunt-nosed leopard lizard MID would implement other protective measures for BNLL. MID would create at least three canal crossings along Gravelly Ford Canal and six canal crossings along the Section 8 Canal Northern Extension; the width of the crossings would vary from approximately 16 feet along Gravelly Ford Canal to approximately eight feet along the Section 8 Canal Northern Extension. While making Gravelly Ford Canal improvements and installing the Section 8 Canal Northern Extension, MID would excavate slightly below the bottom grade of the canal to install a culvert and provide for a crossing to connect the habitat units. The area would be backfilled, covering the crossing with soil from the canal improvement. A similar concept would be employed for the Section 8 Canal Northern Extension, though the length of the pipe segment would be four to eight feet and because of the flat hydraulic grade one larger pipe may be used. Additionally, on-ranch canal side slopes would be designed to allow BNLL to avoid entrapment (3:1).

Environmental Commitment Bio-A: Conduct an employee and contractor education program MID would contract with an agency approved biological monitor to conduct an educational class for this project and ensure all construction/contract workers receive the training prior to any work beginning on-site. This work includes flooding of the swales. All workers would be educated in the sensitivity of the site including waters of the United States and protected species and measures to avoid and minimize effects.

Environmental Commitment BIO-8: Preconstruction Surveys for San Joaquin Kit Fox Because of historical records and suitable San Joaquin kit fox (*Vulpes macrotis mutica*) habitat on or in the vicinity of Madera Ranch, it is assumed that kit foxes could be present at Madera Ranch. To avoid potential mortality of kit fox, agency approved (by USFWS and DFG) experienced biologists would survey to locate any natal dens, non-natal active dens, and/or potential dens in the Proposed Action area. Visual surveys would be conducted during meandering transects of the 1,000 foot corridor. If an active natal den is found, USFWS and DFG would be notified and MID would delay construction within 1,000 feet of the den until the pups have been weaned or moved to an off-site den, and/or reroute the construction corridor to avoid impacts on the kit foxes.

Surveying would include meandering transect surveys for active dens (non-natal) out to 250 feet from the proposed facilities, which would involve simultaneous surveys for potential den sites out to 100 feet. If an active den is found, it would be avoided until the foxes have vacated the den. All potential dens would be flagged. Any potential den immediately in the construction corridor may need additional monitoring. Because construction is expected to proceed quickly—approximately 1,000 feet per day with trenches being open for 1 to 2 nights—potential dens would not be collapsed. All surveys would be conducted within 30 days of site-specific construction by a qualified biologist. In addition, during construction, USFWS standard kit fox conservation measures such as speed limits, exit ramps, controlling toxic (oil or gas) spills from construction equipment, and covering pipes would be implemented to prevent harm or disturbance to kit foxes using the area. Any open pipes, newly dug pipeline trenches, and canals would be surveyed daily prior to construction to ensure kit foxes are not present.

Environmental Commitment BIO 9: Additional Surveys for Fresno Kangaroo Rat

Kangaroo rat trapping efforts west of Gravelly Ford Canal would be conducted 1-year prior to construction or swale inundation by a surveyor holding a recovery permit/scientific sampling permit for the Fresno kangaroo rat (10(a)(1)(A) permit). Meandering visual transect surveys for kangaroo rat burrow complexes and sign (e.g. tail drags, sand baths, food caches) would be conducted by 2-4 biologists over all habitat within and out to 250 feet from the edge of the project footprint, including swales, and within 100 feet of the top of Gravelly Ford Canal. All burrow complexes found would be recorded using a GPS unit, and data on the number of burrows, level of activity and general suitability for kangaroo rats would be recorded on data sheets and/or in field notes (burrows potentially suitable for kit fox use would also be mapped using a GPS as part of this effort); information on vegetation type and percent cover would also be recorded.

Following completion of the survey, potential trapping sites would be prioritized by permitted ESRP biologists based on a combination of the level of kangaroo rat activity (as evidenced by burrow density and/or the presence of other sign, though some area without obvious sign may also be trapped) and project area coverage. Trapping stations and trap lines would then be established (staked and recorded with a GPS unit) at priority sites. Traps (Sherman live-traps [Model XLKR: 13"x3.5"x3"]) would be set near active burrows, dust baths, or tracks, particularly along evident runways. Ten or more traps (or at the discretion of the surveyor) would be set in relatively tight clusters (i.e., 2-meter trap spacing) at high activity areas. Traps would also be set at 10- to 15-meter intervals (2 traps per station) along potential movement corridors.

Traps would be baited with millet seed, or a mixture of crimped oats, wild birdseed or other suitable seed. Bedding (crumpled unbleached towel) would be placed at the inside end of each trap and would not be allowed to contract the tripping mechanism. Paper towels would be replaced each time an animal is captured in the trap. Traps would be opened and baited at sunset and checked 1-2 times/per evening as deemed appropriate by the lead biologist. All traps would be closed after they have been checked at dawn. Trapping would be conducted at each trap site for 5 consecutive nights. Trapping would not be conducted during the week of a full moon, unless the sky is overcast and moonlight is substantially reduced. Trapping would not be conducted in periods of cold-inclement weather detrimental to kangaroo rats and as stipulated in the surveyor's recovery permit.

All non-Fresno kangaroo rats captured shall be marked on its back with a non-toxic semi-permanent ink marker to determine the re-trapping of the same animal(s). Trapping shall cease with the capture of a Fresno kangaroo rat and MID, the USFWS and DFG shall be notified as soon as possible, if not the same day, then the next workday or no less than the Monday following the capture should it occur on a Friday or Saturday night. Any measurements obtained to provide evidence that the animal captured is a Fresno kangaroo rat would be achieved with minimal and delicate handling; fur and tissue samples may only be obtained as authorized by the USFWS and DFG under appropriate permits. A photo of the animal's hind legs (showing toes and including a ruler) would be taken and, unless otherwise authorized by the USFWS and DFG, the animal would be immediately released; the animal's eyes would be shielded from the flash. The lead biologist would notify MID, the USFWS and DFG of the proposed trapping schedule and weekly which trapping areas have been completed.

DFG-8

This potential impact has been analyzed in the Draft EIS (and see Section 3.4, Biological Resources and Section 3.19, Wetlands in the Final EIS), and MID would ensure no net loss of wetlands. Please also see Master Responses 1 and 2. The Final EIS now includes the Mitigation, Monitoring, and Reporting Plan in Appendix A.

DFG-9

The proposed project results in very limited impacts to riparian habitat for this project.

DFG-10

This impact is disclosed in Section 3.4, Biological Resources, in the Final EIS and mitigation is proposed as described in the mitigation, grazing, and management plan in Appendix C.

DFG-11

There are no documented state-listed plant species on Madera Ranch and MID is working to avoid and minimize effects on sensitive plant species based on recent botanical surveys (ICF Jones & Stokes 2009a). Reclamation has requested formal consultation with the USFWS for two federally listed plant species, Greene's tuctoria and the palmate-bracted bird's-beak though neither species was detected in last year's botanical surveys (ICF Jones & Stokes 2009a). There is no take of federally listed plants. However, Reclamation obtained a Biological Opinion for these two species, as Reclamation must ensure that MID's actions avoid jeopardizing these species.

DFG-12

Reclamation has disclosed potential wetland and water quality effects in the Draft EIS, and MID has a series of Environmental Commitments to avoid and minimize the potential for adverse effects. Also, MID would obtain a CWA 404 permit and has obtained a 401 water quality certification, which would ensure that these impacts are avoided, minimized, and mitigated appropriately.

DFG-13

The Final EIS includes an analysis of the habitat and species effects associated with the project in Section 3.4.2. While localized direct and indirect effects may occur on some species, MID's environmental commitments would help avoid, minimize, and mitigate these effects and ensure there is not a *substantial* reduction in the local or regional populations. As described in Master Response 2, the area set aside and managed for endangered species would improve the species' habitat and contribute to their conservation, and is expected to fully mitigate the effects of the project. It should be noted that Reclamation determined that the Proposed Action may affect, but is not likely to adversely affect, the San Joaquin kit fox. Subsequently, not only did the USFWS disagree with that determination, but Reclamation found that vegetational changes in the pilot swales were great enough that a Biological Opinion was needed for this species, and so the San Joaquin kit fox was included in the Opinion issued by the USFWS for this project on April 26, 2011.

DFG-14

Reclamation is aware that MID must meet the “fully mitigated” standard for species that need take authorization from DFG. MID has revised their mitigation proposal as described in Master Response 2. Reclamation would continue to coordinate with DFG, the USFWS, and MID, to aid MID in meeting this requirement, even though it is not a federal requirement.

DFG-15

Please see the response to DFG-14.

DFG-16

Through the information provided in the Draft EIS, in the Final EIS (including responses to comments), and in a meeting with DFG, the USFWS, and MID on October 13, 2009, Reclamation has provided as much information as is currently available regarding the Proposed Action. Effects are as summarized in Tables 3-12 and 3-13 and these tables have been modified for clarity and now include Reduced Alternative B. MID has revised its mitigation proposal as described in Master Response 2.

DFG-17

Comment noted. Reclamation recognizes that, although this is not directly a concern for the federal action agencies, it is a concern for MID and DFG. Reclamation has coordinated with MID and DFG to accommodate the State law requirements to the degree that it is possible to do so.

DFG-18

Comment noted. These effects are described in the Final EIS in Section 3.4. The Mitigation, Monitoring and Reporting Plan (Appendix C) provides a framework for the conservation and management of species. It is expected to benefit these species by permanently protecting habitat.

DFG-19

The Final EIS includes measures to protect the western burrowing owl to ensure compliance with the Migratory Bird Treaty Act (MBTA). Environmental Commitment BIO-7 is designed to avoid take pursuant to the MBTA.

DFG-20

Take as defined under CESA and MBTA, for greater sandhill crane, or MBTA for golden eagle and white-tailed kite, is not expected to occur because of the lack of nesting habitat and small level of habitat effects relative to the species’ foraging needs. Take of BNLL as defined under Fish and Game Code would be avoided as required by the consultation with DFG. Please see DFG-7.

DFG-21

Reclamation agrees with these statements but also believes that water banking conducted with an environmentally sensitive design, is compatible with habitat protection. Given that no other grant funds have been available to fulfill the acquisition of the parcel under the recovery plan, a water bank with large areas of compensation appears a reasonable way to ensure the protection of much of the habitat on the property. Also, please note that the surveys conducted by the ESRP indicate that currently the density of the species on site is low. The reason for low species

density is unknown, and there are several hypotheses that could be tested over time regarding home range size, including management's effects on the species and habitat conditions' effects on the species. It is possible that the species may be at a lower density because of habitat conditions on the property compared to habitat conditions at Lokern. It is clear that additional conservation, including surveys and study of blunt-nosed leopard lizard on the entire site, would be valuable.

DFG-22

MID has revised their mitigation program to fully mitigate the project's effects. Their revised program is described in Master Response 2. Project effects have been fully disclosed (as indicated in response to DFG-3). Please see the Mitigation, Monitoring, and Reporting Plan included in Appendix C of the Final EIS.

DFG-23

Reclamation and MID recognize this concern and have proposed a series of additional environmental commitments to ensure take under CESA does not occur for this species (see response to DFG-7). Please see the Mitigation, Monitoring, and Reporting Plan included in Appendix C of the Final EIS.

DFG-24

MID would conduct pre-wetting surveys for BNLL as described in response to DFG-7. The creation of control check dam structures would contain the flooding of the landscape and lessen the effects of horizontal movement of water, thus avoiding flooding impacts to the upland habitat and swales that are part of the project.

DFG-25

Please see the pilot project study report summary in response to EPA-9. MID prepared an additional map for the USFWS, DFG, and Reclamation illustrating burrow densities, soils, and swales proposed for recharge. However, the map and the data were inconclusive regarding the vertical versus horizontal effects on burrows. Visual inspection of previously wetted swales confirms that the wetted areas primarily recharge water vertically, not horizontally. MID would also employ multi-spectral imaging to monitor the area of inundation. Areas with regular annual recharge (for example, the swale in Section 2 and Sections 14 and 15 that have been used regularly in recent years) are expected to have fewer burrows and hence lower likelihood of occurrence of blunt-nosed leopard lizards. No additional changes to the EIS beyond MID's environmental commitments are proposed. The pilot study was conducted in an area where a different soil types exists (non-hardpan soils), so the infiltration rates determined for this area would be different than the Fresno Series soils. Horizontal movement above the hardpan is a concern for this project site according to DFG and the USACE. However, monitoring of the swales and wetted area would occur to determine and resolve unexpected effects. This lateral movement near the surface has not been observed in the pilot study area.

DFG-26

While Reclamation recognizes the reasons for focusing conservation efforts on areas where the species, BNLL, was detected, because of the likely large home range size (possibly as large as 40 acres, according to Germano [pers. comm.]), the species could occur in suitable habitat within a large area surrounding sighting locations. It may not be possible for MID to place conservation

easements on all areas where the species was detected, especially because of its large home range sizes, but MID's proposed conservation area does include known sightings and many other areas with suitable habitat. Please see the Mitigation, Monitoring, and Reporting Plan included in Appendix C of the Final EIS.

DFG-27

MID would conduct additional preconstruction surveys during the appropriate seasonal window as DFG has requested; please see response to DFG-7.

DFG-28

DFG-approved exclusion barriers would be installed along the construction corridor, and appropriately monitored; please see response to DFG-7.

DFG-29

Please see Master Response 2, and the Mitigation, Monitoring, and Reporting Plan included in Appendix C of the Final EIS.

DFG-30

Comment noted; no changes to the Draft EIS were recommended, and no additional changes are proposed.

DFG-31

Please see earlier responses to DFG's comments; the issues of mitigation and the "fully mitigate" standard have been addressed above. Please see the Mitigation, Monitoring, and Reporting Plan included in Appendix C of the Final EIS.

DFG-32

This measure has been revised through discussion with DFG, the USFWS, and MID, and made consistent with the USFWS' 2011 standardized measures.

DFG-33

Comment noted. Reclamation requires this of MID as well; please see Section 2.7 in the Final EIS.

DFG-34

Please see the responses to DFG-7 and DFG-23.

DFG-35

Reclamation believes that based on trapping by ESRP, it appears that the Fresno kangaroo rat likely does not currently occur on the east side of Madera Ranch. The west side would be subject to the same level of pre-activity surveys prior to use of that side of the ranch. If future trapping identifies a population of Fresno kangaroo rat, the USFWS and DFG would be notified immediately, and all work including any flooding of the landscape would completely avoid the location and surrounding habitat. The Biological Opinion includes this as a commitment.

DFG-36

Reclamation has disclosed potential effects on California tiger salamander, using the best available data (Effect Bio-8 and Bio-9, beginning on page 4.5-38). California tiger salamanders could possibly occur on site, although the vernal pools on Madera Ranch are not very large (median vernal pool size on the property is 0.024 acre) and do not pond for a very long duration (typically less than 8 weeks). Previous vernal pool surveys in 2001 discovered Western spadefoot toad in the bottom of Gravelly Ford Canal; no California tiger salamanders were collected or observed. MID is proposing a series of Environmental Commitments (Bio-1, Bio-2a and Bio-2b) to ensure that potential effects are fully mitigated. As Reclamation explained to the USFWS, regarding the BA and Section 7 ESA consultation, Reclamation has no authority to require MID to conduct these surveys. In March 2010, DFG also evaluated the site for potential suitable habitat; however, there were very few ponded vernal pools so extensive sampling was not conducted. There were two locations with large amounts of standing water, the Swale in Section 14 and a pond in Section 28. The Section 14 swale had an approximate average depth of 20 inches and used for water delivery across the site. The Section 28 pond had an approximate average depth of 22 inches located in the southeastern corner of the ranch. Both of these locations were sampled by dip netting and seine netting.

The Section 14 swale did not have any vernal pool crustaceans or amphibian larvae. However, adult bullfrogs, crayfish, and mosquito fish were detected along with water boatman and backswimmers. The Section 28 pond had only very small Western toad larvae. The pond had a significant amount of green algae, which may have depleted the oxygen to a level where only very small organisms could survive.

DFG-37

Comment noted. Please see the Mitigation, Monitoring, and Reporting Plan included in Appendix C of the Final EIS.

DFG-38

Additional botanical surveys of the hard infrastructure areas and east-side swales were conducted in April and August 2009. A copy of the botanical survey report was provided to the USFWS and DFG on October 13, 2009. No state- or federally listed plants were discovered during these or previous surveys. Please see the response to DFG-11.

DFG-39

Reclamation worked with MID to determine the maximum area that would be inundated and has discussed this approach with the USFWS, USACE, and DFG in February 2010. MID has added additional information to the management plan that describes the evaluation process with the wetting of the swales; please see the Mitigation, Monitoring, and Reporting Plan included in Appendix C of the Final EIS. In general, when doing initial operations, MID would step up the flow into a swale in discrete increments (typically around 2-5 cfs per increment) and once the inundation for that flow has stabilized (typically within one day), MID would GPS the wetted extent. MID would then step up to the next higher flow increment and repeat the process. In the pilot project, MID followed this process until they reach the maximum wetted extent. These flow-versus-inundated acreage data pairs allow MID to build a "rating curve" for that swale. This curve allows MID to predict very accurately the wetted area given a certain flow. MID would then repeat the construction of the rating curves approximately 2-3 more times during a

recharge season so that MID can observe how the swales perform over time. Because MID is stepping up from low to high flows, MID is able to observe how each incremental segment of a swale contributes to or detracts from performance. The Draft EIS describes the maximum magnitude of these effects. MID's experience with the pilot project indicates a regular inundation footprint would become established over time. Also, MID would monitor the extent of the wetted area to determine that their avoidance, minimization, and mitigation measures are adequate; additional refinements to the environmental commitments such as berm installation have been added to ensure adverse effects are avoided and minimized. Please also see the response to DFG-25.

DFG-40

Comment noted. Reclamation identified and addressed this potential impact in the Final EIS (see Section 3-4). Focused use of swales with minimal impacts to vernal pools would lessen these potential effects. Please see the Mitigation, Monitoring, and Reporting Plan included in Appendix C of the Final EIS.

DFG-41

Reclamation appreciates these concerns and guidance. The USACE is requiring replacement and/or creation of vernal pools, and to that end, MID coordinated with the USACE, DFG, and the USFWS to try to find a solution that would balance all competing concerns. Please see Master response 2, which partly address this issue. It was determined in consultation with the USACE and USFWS that created pools would be inoculated with litter vacuumed from portions of pools known to have vernal pool fairy shrimp, rather than taking inoculate only from pools that would be impacted. It was also determined that of the remaining areas available for vernal pool creation, it would not be possible to create enough acreage of vernal pools of appropriate size without using section 5, even though section 5 contains grassland habitat that has not been surveyed yet for the blunt-nosed leopard lizard and has not been surveyed recently for the Fresno kangaroo rat.

DFG-42

Comment noted. Please see the Mitigation, Monitoring, and Reporting Plan included in Appendix C of the Final EIS.

DFG-43

Please see the response to DFG-19.

DFG-44

Burrows are not a limiting factor on Madera Ranch, and the mitigation lands provided also would serve to benefit burrowing owls. If MID must collapse burrows used by burrowing owls, they would replace them with artificial burrows. However, MID would strive to minimize the need to evict burrowing owls during the non-breeding season.

DFG-45

Reclamation described effects on other raptors (Bio-16 in Section 3.4.2 in the Final EIS), and this effect could be ascribed similarly to Swainson's hawk and white-tailed kite. MID proposed to increase the mitigation ratio as described in Master Response 2, and this would benefit many species present on-site.

DFG-46

There are very few trees and shrubs on Madera Ranch, and MID is proposing to implement Environmental Commitment BIO-6 and BIO-7. If nests for sensitive migratory bird species are observed during these preconstruction surveys they would be noted and avoided until it has been determined the breeding season has ended or until a qualified biologist has determined the birds have fledged and are no longer reliant upon the nest or parents for survival.

DFG-47

Comment noted. Reclamation would continue to coordinate with the USFWS, DFG, the USACE, EPA, and MID.



California Office
1103 J Street, Suite 170 | Sacramento, CA 95814 | tel 916.313.5800 | fax 916.313.5812
www.defenders.org

Comment Letter DOW

September 25, 2009

By Email

Ms. Patti Clinton
Bureau of Reclamation
South-Central California Area Office
1243 N Street
Fresno, CA 93721-1813
pclinton@usbr.gov

Re: Comments on the Draft EIS for the Madera Irrigation District Water Supply Enhancement Project

Dear Ms. Clinton:

Defenders of Wildlife ("Defenders") appreciates the opportunity to comment on the Draft EIS for the Madera Irrigation District Water Supply Enhancement Project ("MID Project").

Defenders is a national, not-for-profit conservation organization with more than 440,000 members, including approximately 75,000 members and supporters who reside in California. Defenders is dedicated to the protection of all native wild animals and plants in their natural communities. Defenders has advocated for heightened protection of aquatic, wetland and riparian habitats along with resident species, including the Giant Garter Snake, Chinook salmon and Steelhead trout. Defenders' 75,000 members residing in California regularly use the wildlife refuges, recreation areas and private lands within the relevant "zone of interest" – Madera County - for wildlife viewing, and therefore have a vested interest in the project. *City of Los Angeles v. National Highway Traffic Safety Admin.*, 912 F.2d 478, 483 (D.C. Cir. 1990). These members will be adversely affected and aggrieved by the proposed project actions because populations of certain wildlife species, namely Fresno kangaroo rat and San Joaquin kit fox.

Madera Irrigation District has not conducted the necessary surveys for the MID Project

In a letter dated April 4, 2007 (attached), the Bureau of Reclamation ("BOR") advised Madera Irrigation District to include new survey information and results in the draft EIS and the BA during formal Section 7 consultation pursuant to the ESA. However, the draft EIS for the MID Project as written does not indicate that additional surveys have been completed since receipt of BOR's April 4, 2007 letter. Chapter 4.5 of the draft EIS does not include individual survey results for federally listed species such as Fresno kangaroo rat and San Joaquin kit fox, although BOR concedes that the project area is suitable habitat for these species.

DOW-1

National Headquarters
1130 17th Street, N.W.
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The EIS does not contain sufficient mitigation measures for affected species

BOR has not included all available mitigation measures in the EIR. All relevant, reasonable mitigation measures that could alleviate the environmental effects of a proposed action must be identified, even if they are outside the lead or cooperating agencies' jurisdiction. Forty Questions No. 19(b). For example, BOR proposes to implement Environmental Commitment BIO-1 – establishment of a Grasslands Conservation Easement - as a means of compensating for the disturbance of Fresno kangaroo rat habitat, mortality of western burrowing owl, and other federally listed species. Per the CEQ NEPA regulations, mitigation includes avoidance, minimization, restoration, reduction, and compensation. 40 C.F.R. 1508.20. BOR has only analyzed compensation, the fifth tier of mitigation measures, and has not enumerated all "relevant, reasonable mitigation measures."

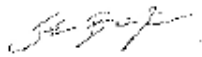
DOW-2

The EIS does not contain an adequate cumulative effects analysis

BOR's analysis in Chapter 4 of the Proposed Action (Alternative B) does not provide an adequate cumulative effects analysis. BOR is required to engage in a two-step process for assessing cumulative effects. First, the agency must list all impacts from other past, present, and reasonably foreseeable future actions, regardless of the agency or person who undertakes them. 40 C.F.R. 1508.7. Second, BOR must assess whether the Proposed Action's impacts are cumulatively significant. 40 C.F.R. 1508.25(a)(2). BOR has failed to analyze the cumulatively significant impacts from the Proposed Action on *individual* listed species, instead including two paragraphs with only general summaries of cumulatively significant impacts to habitat. This does not constitute an adequate cumulative effects analysis.

DOW-3

Sincerely,



Joshua Basofin
California Representative

Response to Defenders of Wildlife Comment Letter

DOW-1

Reclamation has no authority to require MID to conduct additional surveys to document the affected environment. However, MID has conducted additional surveys at the request of the USFWS and DFG since Reclamation prepared its April 4, 2007, letter.

As explained in Section 3.4, in May 2009, additional surveys for wildlife, specifically the BNLL and Fresno kangaroo rat were conducted. The ESRP was selected to do the surveys based on the recommendation by the USFWS because of their experience and expertise with these species and as a Section 10(a)1(A) permit holder approved by USFWS. Transect surveys in the area east of Gravelly Ford Canal confirmed that the BNLL currently occurs on site. Trapping was conducted for the Fresno kangaroo rat east of Gravelly Ford Canal, at a more intensive level than previous trapping; no Fresno kangaroo rats were found, and the habitat appears too homogenous in this part of the property to support the species. ESRP's findings were used to create more restrictive environmental commitments and a larger conservation area (see Master Response 2), and their findings are expected to inform agency actions and permits for the project. No additional "baseline" surveys are to be conducted for the San Joaquin kit fox. They have large home ranges, use multiple dens, and would be at a low density on the site, and therefore, further baseline surveys would not be productive. Furthermore, because the species is more easily detected by preconstruction surveys than other species such as the Fresno kangaroo rat because they use fairly conspicuous dens, preconstruction surveys would be adequate to avoid and minimize effects on individuals themselves.

Consultant botanists completed additional spring plant surveys in April 2009 and summer surveys in July (see Section 3.4.1 in the Final EIS); Reclamation received the survey report in October 2009 (ICF Jones & Stokes 2009a). These surveys were conducted east of Gravelly Ford Canal. The botanists checked reference populations for the surveys and found no federally listed plant species. The report has not changed any of Reclamation's impact determinations for special-status plant species.

Additional detailed surveys would be required before MID can construct project features west of Gravelly Ford Canal.

DOW-2

Reclamation has complied fully with 40 CFR §1502.16(h) with regard to the need to identify all relevant, reasonable mitigation measures; with the Council on Environmental Quality (CEQ) regulations (40 CFR §1508.20); and with Reclamation's wetlands mitigation and enhancement policy with regard to mitigation sequencing. The five categories of mitigation under the CEQ regulations are: avoid, minimize, rectify, reduce over time, and compensate for project effects.

Grassland impacts have been avoided and minimized as much as possible with focusing banking in swales with fewer vernal pools and installing check berms to control the flooding of the landscape. For instance, recharge basins have been sited on either agricultural lands or disturbed grasslands (grasslands that were previously cultivated). It should be noted that because of other environmental effects and up-front costs, Alternative C, which would result in about 700 fewer acres of grassland (swale) impacts, is not considered feasible (see Section 2.9 in the Final EIS

and Master Response 1). It should be noted that, to reduce cumulative impacts, the grassland preservation ratio was increased; MID's overall mitigation approach also has changed as described in Master Response 2.

MID has designed the project first to avoid vernal pools and alkali rain pools to the maximum extent practicable. All recharge basin construction is proposed for areas that do not contain vernal or alkali rain pools and are not within the microwatersheds (the USFWS uses 250 feet as a general distance) of the pools. Pipeline and other hard infrastructure placement has been designed to be either outside the 250-foot borders around pools, or along existing roads, wherever possible (see Section 2 of the Final EIS). These measures avoid impacts on the pools. To minimize effects, all of the alternatives that involve swale recharge propose to use swale systems that have as few vernal pool and alkali rain pool complexes as possible, and not just to maximize recharge.

MID's efforts to rectify, reduce, and compensate were utilized only after avoidance and minimization was proposed. MID's environmental commitments beginning on page 2-58 of the Final EIS also demonstrate MID's efforts to rectify, reduce, and compensate for project effects. MID's overall mitigation approach also has changed as described in Master Response 2. Please see the Mitigation, Monitoring, and Reporting Plan included in Appendix C of the Final EIS.

DOW-3

Reclamation believes the cumulative effects analysis is appropriate and reasonable for this project. As described on page 3-1 of the Final EIS, it includes past, present, and reasonably foreseeable projects, and cumulative effects are summarized at the end of each resource section. In the biological resources chapter, Reclamation provided a cumulative impacts analysis that focused on habitats. By extension, these impacts apply to species that require the particular habitats. There is no requirement to provide a cumulative impacts analysis for individual species. Please note that, pursuant to 40 CFR §1502.7, the text of final EISs "shall normally be less than 150 pages and for proposals of unusual scope or complexity shall normally be less than 300 pages." Our Draft EIS is 432 pages long, without appendices. Reclamation has addressed more than 15 different resources/issues, and the biological resources section is by far the longest in the document (approximately 50 pages, including measures, affected environment, and environmental consequences).

Past losses of sensitive habitats in the region have been very extensive. Madera Ranch represents one of the last large pieces of semi-natural open space in the San Joaquin Valley.

Vernal pools and alkali rain pools have been subject to extensive losses, especially on the valley floor. Holland (1998) estimated that almost three-quarters of vernal pool habitats in the Central Valley of California had been lost by 1997. This has reduced the extent of suitable habitat for vernal pool-associated plants and invertebrates, and the California tiger salamander. Much habitat was lost to agricultural development; more recently, municipal and industrial development, especially in the foothills to the east, continues to remove and threaten remaining habitat.

Alkali sink and scrub habitats and grasslands have been reduced tremendously in the area surrounding the project. The known historical geographic range of the Fresno kangaroo rat

encompassed an area of grassland and chenopod scrub communities on the San Joaquin Valley floor, from about the Merced River in Merced County, on the north, to the northern edge of the marshes surrounding Tulare Lake, Kings County, on the south and extending from the edge of the Valley floor near Livingston, Madera, Fresno, and Selma, westward to the wetlands of Fresno Slough and the San Joaquin River. The largest remaining block of natural land that was historical habitat for Fresno kangaroo rats is located in western Madera County (Wouldiams 1990). Madera Ranch supports the northernmost remaining population of the blunt-nosed leopard lizard. So much alkali scrub and arid grassland habitat has been lost and otherwise subject to detrimental anthropogenic effects that the Fresno kangaroo already was believed to be extinct by the early 1930s, until its rediscovery by Culbertson (1934). Currently, there are no known populations. These past losses along with over grazing of remaining habitat have adversely affected upland federally listed species and migratory birds that occur in the area, and they are the likely reason that the Fresno kangaroo rat appears to be absent from at least the eastern portion of Madera Ranch (habitat too altered to allow coexistence with Heermann's kangaroo rat). Likely as a result of cumulative habitat loss and edge effects, the San Joaquin kit fox appears at best to be at a very low density on Madera Ranch.

Edge effects (such as pesticide use in surrounding grasslands) continue to affect species on Madera Ranch. Future development projects planned for the vicinity are expected to reduce available habitat further; those projects listed in the Growth-Inducing Effects section have no certainty of being indirectly caused by the project, and as such, they are best considered as cumulative actions.

9/23/09

To Ms. Patricia Clinton, Bureau of Reclamation
1243 N Street Fresno, CA 93721

Fresno Audubon Society comments on the Madera Irrigation District WSEP draft EIS

The Fresno Audubon Society would like to go on record as supporting Alternative D over the proposed alternative B because fewer acres of swales would be flooded than in alternatives B or C (sec.2.5.5) and it could potentially be a benefit to migrating fish. We firmly oppose Alternative A because we believe that grasslands in western Madera County are disappearing at an alarming rate by conversion to forage crops for large dairy operations. We do not agree with the statement in 2.7 (Environmentally Preferable Alternative) that Alternative D would result in increased air quality effects during construction, but even if it did, that would be a temporary and minor effect and would not be of sufficient concern to tip the scales in favor of either Alternative B or C. Even though MID would not be able to use the water banked under Alternative D, releases to the San Joaquin River would be matched by additional releases from Millerton of SJR Restoration water and would actually increase the net supply of available water in Madera county (Effect WS-8). MID is dependant on other agencies for its water now and it can remain so in our opinion. There is no indication anywhere that MID cannot get a wheeling agreement or any other contract needed to get its water under Alternative D in this document. This document also does not address the difference in costs involved with the various alternatives. We suspect that the alterations to Gravelly Ford Canal and additional monitoring stations in Alternative D would not be as expensive or involve nearly as much inconvenience to local traffic and landowners or as much construction-related air pollution as building 12 lift stations and reconditioning miles of canals and digging miles of new connectors called for in the proposed alternative, but that isn't discussed in the EIS that we can see. In section 4.1 Cumulative Effects it states that Alternative D would not result in any more cumulative effects than B or C in terms of water supply and in 4.3 Air Quality it states that Alternative D's operational needs would be similar to those of C and B, none of which are considered adverse. Our primary concern is the effects this project will have on birds and the report leaves a lot to be desired in that area. It also doesn't address the possibility of public involvement in terms of potential consumptive or non-consumptive recreational or cultural usage. We would like to see plans incorporated that will allow for some use by the public for wildlife viewing under controlled conditions that will not interfere with daily operations or the main purpose of the project. If the water level in flooded swales could be manipulated to provide prime shorebird habitat during spring migration in April and fall migration in August-October it would greatly benefit those birds coming and going between their nesting and wintering areas that we know migrate through central California such as Long-billed and Short-billed Dowitchers, Black-bellied Plovers and Pacific Golden-plovers, Western and Least Sandpipers, Pectoral Sandpipers, Willets, Snowy Plovers and the occasional Ruff or Curlew Sandpiper. All have been detected in the valley and most of them as close as the Madera Wastewater Treatment Plant. Suitable open water habitat

AUD-1

AUD-2

AUD-3

AUD-4

AUD-5

AUD-6

AUD-7

AUD-8

for these migrants is severely lacking in Madera County and this project has the potential to increase the attractive habitat exponentially if managed right. Demands by agricultural users are decreased in August and September as raisins and almonds are being harvested so the delivery of water at that time to swales should be feasible. Less water is used in April as well when vines are just leafing out so that shouldn't interfere with water delivery demands being met either. We would also like to see a program implemented that would allow groups to come in and observe the diversity of birds this project will attract under limited and controlled opportunities, like periodic Audubon field trips for instance. The Madera County Office of Education's after-school program could even bring kids out to see the wildlife through their birding program. Both programs cover their participants under their own liability insurance so that shouldn't be a limiting concern. We also would like more consideration given to possible disturbances to wintering Mountain Plovers. Jones & Stokes didn't survey during prime time to census these potentially-federally-listed birds and are un-aware of our data documenting this ranch as a historic wintering site with high fidelity to specific sections the past 3 years. Mountain Plovers banded mainly in Southeastern Colorado start showing up on the Madera Ranch in early December and are gone by the second week in March. According to the document, surveys were conducted from February to April 2000, June-November 2000 and April 2001. We have documented data showing flocks of Mountain Plovers using sections 16, 17 and 20 in flocks ranging from 7 to 85 birds. They also used sections 8,9 and 15 to a lesser extent. Mountain Plover movements are highly fluid during migration and birds are continually coming through the area looking for the short grazed land that is provided in many parts of the ranch. They have been documented to forage on Jerusalem Crickets that hide under the cow pies and we have seen Long-billed Curlews, Loggerhead Shrikes and American Kestrels forage on Jerusalem Crickets either on this ranch or on neighboring rangeland of similar make-up to the northwest. This type of grazing land is being leveled at an alarming rate by dairy operators to provide forage for an expanding segment of the county's ag sector and in the future the value of having native upland grassland that's been grazed properly will become greater and greater for this species whose numbers have fallen by at least 66% in the last 20 years. Table 4.5-3 lists Mountain Plover but they are not discussed further at all on pages 4.5-28 or 29. To date we have documented 9 banded Mountain Plovers either on Madera Ranch or another neighboring ranch within 2 miles and one came from southern Montana and the rest were from the Pawnee National Grasslands. The county's only record of Lapland Longspur was also from Madera Ranch several years ago by a biologist doing surveys for the previous owner. We agree with the assessment that about 200 Long-billed Curlews winter on the area, although we have seen flocks of over 400 visit the ranch and use it in the past to feed and rest on. It's also a big magnet for Ferruginous Hawks due to the high ground-squirrel population. We saw an adult Bald Eagle sitting on a fencepost last winter near the farm buildings and Golden Eagles and Prairie Falcons are regularly seen there in winter. We'd also like to add that we would be all for an attempt to re-locate San Joaquin Kit Foxes on the ranch as long as many of the mistakes made in previous re-introduction attempts that failed are identified and addressed first, and we would not be opposed to coyote population reductions as part of such a plan.

Gary Woods, Conservation Committee Chairman, Fresno Audubon Society
woodshots@earthlink.net

AUD-8
cont'd

AUD-9

FAS-10

FAS-11

Response to Fresno Audubon Society Comment Letter

AUD-1

Alternative D would result in slightly fewer acres of flooded swales than Alternative B, but not fewer than Alternative C. Alternative C would result in fewer acres of flooded swales because of the exclusive use of constructed recharge basins. Also, it should be noted that Alternative D would not immediately benefit migratory fish (salmon and steelhead) through project operation, but may directly benefit them in the long term if operations were timed to be integrated with the SJRRP. However, implementation of Alternative D also could adversely affect migratory fish by resulting in impingement at the screened intake that likely would be needed to divert water from the San Joaquin River (see Section 2 and Section 3.4 in the Final EIS).

AUD-2

Comment noted.

AUD-3

Alternative D would result in greater air quality impacts because Alternative D has the air quality impacts of the other alternatives plus those associated with the construction of Gravelly Ford Canal improvements. The air basin is already in nonattainment for certain regulated pollutants, so despite the temporary nature of the impact, it is of concern (See also Master Response 1). MID's environmental commitments AQ-1 and AQ-2 would help reduce the level of effects, but it would still be adverse (see Section 3.3.2 in the Final EIS).

AUD-4

The comment appears to indicate that the net supply of available water would be increased under Alternative D. As described in WS-8, this alternative is not expected to reduce surface water availability in Madera County or the area of origin. There could be a net benefit in supplies from MID's leave-behind requirement (i.e., the 10% that would be left behind) but there also would be reductions from implementation of the SJRRP. Overall, the impact conclusion remains the same, and no changes are proposed for the Final EIS.

AUD-5

With regard to the statement that "MID is dependent on other agencies for its water now and it can remain so in our opinion," the comment is noted. MID probably could get a wheeling agreement with Reclamation, and this is not the issue that makes the alternative infeasible. No changes are proposed in the Final EIS.

AUD-6

Cost of alternative implementation is not discussed in the Draft EIS, except to the degree that it would make an alternative infeasible or would result in a socioeconomic impact. Unless costs affect feasibility or relate to a socioeconomic impact, cost is not of issue when disclosing and analyzing impacts on the quality of the human environment. Traffic, noise, and air quality effects of all alternatives are described in their respective chapters. For these resources, the effects are nearly equivalent because the majority of the project work would be conducted on Madera Ranch. There could be localized differences, but implementation of the Environmental

Commitments would reduce the intensity of the effect irrespective of the alternative. No changes are proposed to the Final EIS.

AUD-7

Reclamation cannot address this comment because it does not offer any details on the deficiencies that the Fresno Audubon Society believes that the Draft EIS has with regard to analysis of impacts on birds. The Proposed Action's effects on waterfowl, described in the Biological Resources section of the Draft and Final EIS, indicates seasonal wetlands are expected to result in a difference in wetland functions and values that could benefit waterfowl.

AUD-8

The purpose of the Draft EIS is to analyze and disclose environmental impacts and resolve conflicts among different resources, and the purpose and need of the project are to meet a portion of MID's current and future water storage needs, enhance water supply reliability and flexibility by using the space underground for surface water storage (water banking), reduce aquifer overdraft, and encourage conjunctive use in the region as a means toward regional self sufficiency. The purpose of the project is not to provide wildlife-related recreational opportunities, nor are such opportunities appropriate as mitigation measures for impacts on migratory birds. Therefore, these concerns are not appropriate in the DEIS, and it would be at MID's discretion with approval from the USFWS and DFG to allow such activities, separate from Reclamation's Proposed Actions. MID would bank water when it is available and the timing of the banking of water periodically may coincide with periods of time that could benefit migratory waterfowl. No changes are proposed for the Final EIS.

AUD-9

This information is useful and provides additional context for the importance of grasslands to numerous species. However, Reclamation's effects analysis describes both the temporary disturbance and permanent removal of California annual grassland and alkali grassland habitats, and thereby the effects on all grassland-dependent species on site. Although there is not a specific impact listed for mountain plovers, primarily because the species no longer is proposed for federal listing, the effects would be similar to those of other grassland-adapted bird species addressed in the DEIS. MID is proposing an expanded mitigation program as described in Master Response 2. Please see the Mitigation, Monitoring, and Reporting Plan included in Appendix C of the Final EIS.

AUD-10

Comment noted.

AUD-11

Comment noted. This would be at the discretion of MID and a potential future unrelated activity.



CALIFORNIA FARM BUREAU FEDERATION

NATURAL RESOURCES AND ENVIRONMENTAL DIVISION

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Sent Via E-Mail (pclinton@usbr.gov)
And U. S. Mail

September 25, 2009

Ms. Patricia Clinton
Bureau of Reclamation
1243 N Street
Fresno, CA 93721-1831

RE: Comments on the Draft EIS for the Madera Irrigation District Water Supply Enhancement Project (MID WSEP)

Dear Ms. Clinton:

The California Farm Bureau Federation (Farm Bureau) is a non-governmental, non-profit, voluntary membership California corporation that's purpose is to protect and promote agricultural interests throughout the state of California and to find solutions to the problems of the farm, the farm home and the rural community. Farm Bureau is California's largest farm organization, comprised of 53 county Farm Bureaus currently representing approximately 85,000 members in 56 counties. Farm Bureau strives to protect and improve the ability of farmers and ranchers engaged in production agriculture to provide a reliable supply of food and fiber through responsible stewardship of California's resources.

Farm Bureau appreciates the opportunity to comment on the Draft Environmental Impact Statement (Draft EIS) for the Madera Irrigation Water District Water Supply Enhancement Project (MID WSEP).

Statewide, California is in our third year of natural drought, which has reduced water deliveries this year by 1.6 million acre feet. This year, an additional 500,000 acre feet of water has been lost due to federal Endangered Species Act (ESA) regulations intended to protect the Delta smelt. As a result, water deliveries have been drastically reduced to some 2 million acres of highly productive farmland on the Westside of the San Joaquin Valley. Meanwhile, the recently formalized San Joaquin River Restoration Settlement will translate into a 25 percent loss of water supplies on the Eastside of the Valley, including the area served by the Madera Irrigation District (MID).¹ Clearly, these

¹ Draft EIS at 4.1-16.

regulatory developments have created a crisis for California agriculture of unprecedented magnitude and effective solutions are needed without delay.

Given the conditions resulting from the natural and regulatory drought, the need for new water storage facilities, both above and below ground, is imperative. Once operative, the Madera Irrigation Water District Water Supply Enhancement Project will be part of the solution for storage for the state. Projects aiming to increase water storage and enhance water supply reliability and flexibility for current and future water demand, such as the MID WSEP, must be implemented in the near term in order to alleviate some of the numerous burdens on the state's troubled and failing water supply system. For numerous reasons, some of the most salient of which are highlighted herein, Farm Bureau strongly supports expeditious implementation of the project.

The Project's Proposed Purposes Benefit Madera County and the State as a Whole:

Purposes of the proposed project, as described in the draft EIS, include:

- Meeting a portion of MID's current and future water storage needs,
- Enhancing water supply reliability and flexibility by using the space underground for surface water storage (water banking),
- Reducing aquifer overdraft, and
- Encouraging conjunctive use in the region as a means toward regional self-sufficiency.⁷

Current and projected future trends for Madera County, the San Joaquin Valley generally, and much of the South State—including declining surface water deliveries and groundwater levels—argue strongly in favor of regional projects, like MID's proposed WSEP, that can feasibly and cost-effectively produce critical water supply benefits of the kind here described.

As noted in the draft EIS, the vicinity of the proposed project is an area which has "long been considered a viable area to operate a water bank because of the aquifer space availability, fast percolation rate, and other characteristics."³ Having the water supply equivalent of a large to medium surface water reservoir, the proposed water bank would have a capacity of up to 250,000 acre-feet and a maximum annual recharge and recovery capacity of 55,000 acre-feet.⁴ While modeling completed for the draft EIS shows banking rates would likely vary widely from year to year,⁵ those same results show that, on average, MID would bank 20,000 acre-feet a year—and, in no year, less than 18,000 acre-feet.⁶

² Draft EIS at ES-6.

³ Draft EIS at 1-1.

⁴ Draft EIS at 2-3.

⁵ See, e.g., Draft EIS at 4.1-4 (Table 4.1-2).

⁶ Draft EIS at 2-19.

Intended Beneficiaries Include Agriculture:

The intended primary beneficiaries of the project would be agricultural water users in Madera County (up to 35,000 af/year of the water bank's total maximum annual capacity of 55,000 af/year, including 20,000 af/year to in-district agricultural use, 5,000 af/year for individual MID agricultural users, and 10,000 af/year for others Madera County agricultural users). In addition, however, the project allocates capacity for up to 10,000 af/year for industrial, commercial, and residential use within Madera County, and up to 10,000 af/year to assist in meeting environmental water obligations, including obligations under the San Joaquin River Restoration Program and Settlement.⁷ In addition, subject to subsequent environmental review and any necessary approvals, the ability to divert, bank, and subsequently recover large volumes of water at Madera Ranch could potentially facilitate a variety of water exchange agreements, transfers, and the like between MID and other non-MID parties.⁸

The Project Aims to Reduce Overdraft and Improve Water Quality:

The project would help greatly to stabilize and gradually reverse patterns of severe, long-term groundwater overdraft in the sub-basin underlying the proposed water bank.⁹ In addition, because of the significantly higher quality of MID's recharge water sources, it is anticipated that the project would improve the (currently degraded) quality of water in the underlying groundwater basin over time.¹⁰ In addition, the project would help to eliminate the hydrologic and economic volatility associated with the highly variable runoff conditions in the area of the proposed project. Thus, importantly, this would curtail excessive reliance on an over-taxed groundwater basin in dry and critical dry years, followed by years of abundant runoff, in which a lack of adequate facilities have historically prevented MID from diverting and storing surplus water to which it is contractually entitled.

CFBF-1

As a matter of great importance—and another point in favor of the proposed WSEP—the project would not impact implementation of the San Joaquin River Restoration Program, but would rather assist to ensure that the various environmental obligations associated with the program are met, while lessening some of the program's significant water supply implications.¹¹

In terms of water quality, MID commits "not [to] impair any designated beneficial uses of water or violate the water quality standards and objectives as defined in the Water

⁷ Draft EIS at 2-24.

⁸ EIS at 2-25, 4.1-10.

⁹ EIS at 4.1-9, 4.1-13, 4.1-19.

¹⁰ EIS at 4.14-3.

¹¹ See DEIS at 4.1-2, 4.1-7, 4.1-8, 4.1-16, 4.1-17.

Quality Control Plan for the Sacramento and San Joaquin River Basins.”¹² Furthermore, the draft EIS clarifies that water would be diverted for recharge during the wettest months of year, between mid-October and mid-April—and *not* during the peak irrigation season, when demand is highest in the river below and downstream water quality issues are most acute.

CFBF-1
cont'd

The Project Involves Local Interests:

MID has developed a proactive plan to effectively and collaboratively address local concerns regarding water levels, pumping costs, and potential aquifer losses, through a proposed stakeholder Oversight Committee and Monitoring and Operational Constraints Plan and MID’s commitment to leave 10 percent of any banked water in the ground.¹³ Similarly, analyses in the draft EIS show that the proposed project would not adversely impact on the area or county of origin. For example, by putting MID’s WSEP water banking purposes last, behind all other uses, allocation priorities that would govern operations of the proposed project are intentionally designed to ensure the WSEP “will not reduce other uses [or] recharge” in Madera County.¹⁴ More fundamentally, as noted in the EIS, “MID is not proposing to increase the amount of water it diverts, reduce deliveries to farmers, or reduce deliveries to existing recharge basins, on average...”¹⁵ Moreover, the proposed project would not involve “diversion of water directly from the San Joaquin or Fresno river,” but rather from Millerton and Hensley Lake, under MID’s existing long-term contract and existing biological opinion, and would be “within the range of historical diversions.”¹⁶ In short, as stated in the EIS, the project “would [not] allow MID or its participants to divert or transfer water out of the area or origin, and would not deprive those with legal rights or entitlements to the San Joaquin River or Fresno River from obtaining water supplies currently available.”¹⁷

CFBF-2

The Project Appropriately Anticipates and Plans for Impacts Due to Future Climate Changes:

As noted in the draft EIS, winter snowpack in the Sierra Nevada supplies “the vast majority of water” in the San Joaquin Valley. Anticipated changes analyzed in the draft EIS include:

- Changing regional weather patterns (including higher ambient air temperatures, alternating periods of more frequent and intense flooding and more severe and prolonged drought);

CFBF-3

¹² DEIS at 2-22.

¹³ EIS at 2-20, 2-21, 2-23.

¹⁴ DEIS at 4.1-5.

¹⁵ DEIS at 4.1-7.

¹⁶ DEIS at 4.1-15.

¹⁷ DEIS at 4.1-15, 4.1-18.

- Loss of "5 million acre-feet or more of average annual water banking in the Sierra Nevada snowpack";
- Changes in agricultural cropping patterns and increased agricultural demand;
- Increasing reservoir management problems (including increasing conflict between competing flood control, ecosystem, and water supply needs).

All of these anticipated changes highlight the need for additional capacity to capture and store water in times of abundance and, subsequently, draw on those stored water sources in times of scarcity or drought. In this regard, the proposed WSEP is an excellent example of a project that would provide just such flexibility.

CFBF-3
cont'd

Challenges of a changing climate, such as these, and increasing water demand, particularly in the urban and environment sectors, will necessitate significant investment and decisive action statewide on new above- and below-ground storage facilities. Given the political and financial challenges to the development of new surface water supplies, however, as well as the lengthy lead times required for such projects, groundwater banking and so-called "regional self-sufficiency" projects, like the proposed WSEP, represent more readily implementable and less controversial alternative methods of storing water and finding partial solutions to the state's steadily widening supply-demand disconnect.

Conclusion:

Thank you for the opportunity to provide our comments. For the reasons stated above, Farm Bureau supports the MID WSEP. We look forward to further involvement and discussion with the Bureau of Reclamation on the development of the Madera Irrigation District Water Supply Enhancement Project.

Sincerely,



Kari E. Fisher
Associate Counsel



Justin E. Fredrickson
Environmental Policy Analyst

Response to California Farm Bureau Federation Comment Letter

CFBF-1

Comment noted.

CFBF-2

Comment noted.

CFBF 3

Comment noted.

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Comment Letter TAX

September 25, 2009

VIA FAX 559-487-5397, e-mail, & U.S. MAIL

Patti Clinton
BUREAU OF RECLAMATION
South Central California Area Office
Mid-Pacific Region
1243 N Street
Fresno, CA 93721

Re: Madera Irrigation District (MID) Water Supply Enhancement Project
Draft Environmental Impact Statement (EIS) dated July 2009

Dear Ms. Clinton:

This letter is submitted on behalf of the Taxpayers Association of Madera County and contains the comments of the Association on the Draft EIS for the above Project. The following matters need to be addressed in the EIS:

1. The legal basis for diversion of San Joaquin River water to underground storage in the proposed water bank.

A post-1914 appropriative water right issued by the California State Water Resources Control Board is required for this project. Otherwise water cannot lawfully be diverted to underground storage at the Madera Ranch site.

Diversion of water to underground storage is a form of appropriation of water which requires a post-1914 appropriation perfected according to California law. See Cal. Water Code § 1242; Pasadena v. Alhambra (1949) 33 Cal.2d 908, 925 (appropriation "any taking of water other than for riparian or overlying uses"). Neither MID or the United States have appropriative rights to divert water to underground storage.

Two federal water service contracts are the means by which MID receives water from the San Joaquin and Fresno Rivers. These contracts are identified as No. 175r-2891 LTR1 (San Joaquin River) and No. 14-06-200-4020A-LTR1 (Fresno River). Neither contract gives MID the right to divert San Joaquin or Fresno river water to underground storage at Madera Ranch.

TAX-1

The United States cannot grant any water rights to MID, as such rights are creatures of state law. The water rights of the United States to the San Joaquin and Fresno Rivers are defined by California State Water Right Decisions D 935 (San Joaquin River) and D 1407 (Fresno River). None of the water rights permits or licenses approved under these water right decisions authorizes the United States to divert waters of the San Joaquin or Fresno Rivers to underground storage at Madera Ranch, or to allow anyone else to do so.

TAX-1
cont'd

None of the water right permits the United States obtained pursuant to D 935 allow diversion of water of the San Joaquin River to underground storage. D 935 approved a petition¹ for change in place of use under License 1986 (Application 23) and approved Permits 11885, 11886 and 11887 issued on Applications 234, 1465 and 5638. The latter three have never been perfected to License status and therefore the United States' water rights on the San Joaquin River have never been finalized.

MID's Soquel water allegedly originates under a claim of a pre-1914 appropriation but the water attributable to that right is currently regulated by post-1914 diversions and storage. The original pre-1914 right had no such regulation and therefore any current claimed exercise of this right is illegal and in violation of California water rights law.

TAX-2

In addition, most of the land area of the Madera Ranch site is outside the present boundaries of MID. Contract Nos. I75r-2891 LTR1 (San Joaquin River) and 14-06-200-4020A-LTR1 (Fresno River) do not allow MID to deliver water to lands outside its boundaries without Bureau approval and without compliance with applicable law including state water rights law.

TAX-3

As you are aware, on May 24, 1939, the United States and MID entered into a contract entitled "Contract for Purchase of Property and Water Rights No. 11r-1126" (1939 Contract). Under the 1939 Contract, MID, among other matters, granted and conveyed to the United States all of MID's right, title and interest of every kind and character in and to any of the waters of, and its right to store, any of the waters of the San Joaquin River, including its tributaries, channels and sloughs, other than those which drain to the San Joaquin River below Mendota Dam. Therefore, MID has no rights to divert San Joaquin River water to underground storage at Madera Ranch.

TAX-4

MID's water bank project, as currently proposed, violates California water law, and will result in violation of the state law water rights held by the United States for the Buchanan Unit and the Friant Division of the CVP. The United States, MID or both need to apply to the California State Water Resources Control Board for the appropriative water rights required for diversion to underground storage at Madera Ranch. Otherwise no water attributable to the water rights of the

TAX-5

¹The petition was denied as to diversion from points downstream from Friant Dam. D 935 at 49.

United States on the Fresno or San Joaquin Rivers may be delivered for diversion to underground storage in the MID water bank. The Bureau should not support the project in its present form until the United States and/or MID process and obtain water rights which specifically permit the diversion of water from the Fresno and San Joaquin Rivers to under ground storage at the Madera Ranch site.

TAX-5
cont'd

2. Whether and what quantity of water is available for banking under various water year types and hydrologic conditions. Whether MID has the "extra water" described in MID's EIR for the water bank is an open question. According to the MID EIR, all of the water delivered to MID is put to reasonable beneficial use either by direct delivery to farmers or by intentional or incidental recharge. See MID 2005 EIR at 2-2. If MID already puts all its water to beneficial use, where will MID get the water for the water bank? If Madera County currently has an overdraft, how can there be "extra" water for a water bank?

TAX-6

In its June 2005 EIR for the water banking project, MID represented that its diversion of water to underground storage will not increase the amount of water MID receives under its contracts with the United States. See MID 2005 EIR at p. 2-2 (enclosed). MID also represented that all of the water it receives from the United States is put to reasonable beneficial use within MID by MID and farmers in MID. Id. Therefore, there is no showing that any water will be available for banking if all water received is already put to reasonable beneficial use. If historically MID received water it did not put to reasonable beneficial use, then that water was improperly diverted and delivered to MID by the United States, is not properly attributable to the water rights of the United States, and therefore is water available for use by others, including new appropriations. Also note that the Final EIR reduces the amount of water allegedly available for banking from the amount stated in the Draft EIR. Compare Tables 3.13-2 from Final EIR v. Draft EIR enclosed.

3. MID's CEQA review of the Project is not yet complete and remains subject to court action.

On December 22, 2008, the Madera County Superior Court issued its "Writ Granting, in part, Petition for Decertification of EIR and Remand" in Taxpayers Association of Madera County v. MID, et al., Madera County Superior Court No. MCV 030252 (consolidated with no. MCV 030242).

TAX-7

The Court's writ of mandate set aside and vacated the "Affected Environment, Surface Water Supplies" Section of the MID EIR (Draft EIR, p. 3.13-1), and that portion of the EIR Cumulative Impacts Section found to be deficient under CEQA (Draft EIR, at pp. 4-8 to 4-10). The Court's writ also suspended Phase I Project activities involving application by MID of recharge flows or surface supplies to Madera Ranch for banking. Unless and until this writ is discharged, it is completely inappropriate for the United States to be implementing any project under NEPA in connection with the so-called "Water Supply Enhancement Project."

The Superior Court has set a status conference and OSC re: setting a date for return on the writ for November 19, 2009.² The passage of section 9102 of the Omnibus Public Land Management Act of 2009 (P.L. 11-111; H.R. 146-308), the "Madera Water Supply Enhancement Project, California" was likewise inappropriate, as would be any federal funding appropriation for this project in FY 2010, since that legislation was apparently passed on the mistaken impression that MID has completed its CEQA review for the Project. The fact is that until the Court's writ is discharged, the WSEP CEQA process will not be concluded.

TAX-7
cont'd

4. Whether the proposed water bank will retain as much water as claimed in the MID EIR. The amount of "lost" water will not be known until more tests are completed.
5. Whether the 10% dead storage, or mitigation, factor is adequate. Water removed from the water bank will increase Madera County's overdraft and cause economic damage if the withdrawals and losses exceed the amount of water available in the bank. There must be a water accounting based on measurable results, not unproven assumptions. Project operation must be evaluated in the context of historical fluctuations in the groundwater levels where the banking occurs. What will be allowable extractions in dry years or a series of dry years and what impact will these withdrawals have on adjoining landowners? Dry year withdrawals or a series of dry year withdrawals must not have the potential to make conditions worse for neighboring landowners than they would be without the project.
6. Some water placed in the water bank will be used by neighboring properties and other stored water will migrate away from the water bank as a result of mounding. No simulated operational studies of the water bank have been prepared, based on historical hydrology on the Fresno and San Joaquin Rivers. The validity of the 10% dead storage factor has not been established; it cannot simply be assumed.
7. Water stored in the water bank may cause an upward shifting of salty or nitrate bearing water for neighboring property owners by interfering with down gradient movement of water originating as discharge from the City of Madera waste water treatment plant. This could cause damage to neighbors' property and the economy of Madera County on account of the sensitivity of grapes and other crops grown on these down gradient lands. Under no circumstances should operation of the water bank result in diminution of ground water quality.
8. Whether water stored in the water bank will be too expensive for use by Madera County or San Joaquin Valley farmers. The cost of the recovered water has not been analyzed.

TAX-8

TAX-9

TAX-10

TAX-11

²The writ states November 19, 2008 but it is clear that the Court meant 2009.

- | | | |
|-----|--|--------|
| 9. | Whether the Madera Canal and other conveyances have adequate space available to transport the "extra water" to the water bank above the space needed for deliveries to MID farmers and current MID commitments for canal space. There need to be simulated operations studies to show that the water earmarked for banking can be delivered to the banking site during various hydrologic regimes. | TAX-12 |
| 10. | Whether the proposed San Joaquin River settlement in the <u>NRDC v. Rogers</u> case will impact the amount of water available for banking under various hydrologic scenarios. For example how much 215 and Class II water will be lost to the Settlement, that would have been available for banking? What is the effect, if any, of Judge Oliver Wanger's August 31, 2007 ruling in the Delta Smelt case? Again these are matters of updated operational studies which have not been performed. These studies should be based on historical hydrology or plausible hydrology based on reasonable assumptions. | TAX-13 |
| 11. | Whether water stored in the water bank will be offered for transfer elsewhere. To date, in its EIR, MID has only committed in writing not to export "native groundwater." EIR at p. 2-3. While MID has insisted it will not allow transfer of banked water outside Madera County, it has adopted no formal policy or resolution to that effect. Furthermore the Draft EIS fails to address the impacts of out of county transfers of banked water, whether such transfers occur through indirect or direct exchanges. | TAX-14 |
| 12. | The United States should recognize that landowners own the underground storage space beneath their land and are entitled to compensation for that space if banked water encroaches into that space. | TAX-15 |
| 13. | The United States and MID should not get credit for banked water that merely displaces water that would otherwise occur or be present but for the artificial diversion of banked water into the underground pore space. | TAX-16 |

Patti Clinton
BUREAU OF RECLAMATION
September 25, 2009
Page 6

14. Whether parties other than MID will be allowed to store water in the water bank, and if so, the identity of these non-MID parties, the sources of water such non-MID parties would propose to divert to under ground storage, and the environmental impacts on the source(s) of the water diverted to under ground storage.

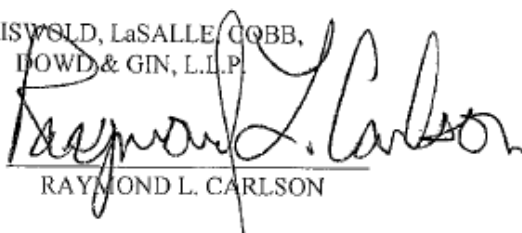
TAX-17

The Draft EIS should be withdrawn and re-circulated for comments after the above matters have been properly addressed.

Very truly yours,

GRISWOLD, LaSALLE COBB,
DOWD & GIN, L.L.P.

By:


RAYMOND L. CARLSON

Enclosures

cc: w/encl.
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Response to Taxpayers Association of Madera County Comment Letter

TAX-1

See Master Response 3. Commenter expresses a legal opinion regarding the basis for the placement of water into underground storage within the proposed water bank. Implementation of this project is premised on compliance with California water rights law. However, the comment is beyond the scope of preparation of a Final EIS and is noted.

TAX-2

Commenter expresses a legal opinion regarding the basis for the placement of water into underground storage within the proposed water bank. Implementation of this project is premised on compliance with California water rights law. However, the comment is beyond the scope of preparation of a Final EIS and is noted.

TAX-3

See Master Response 3. As the Final EIS explains in Section 2.3, Alternative B—Water Banking outside the MID Service Area and Alteration of Reclamation-Owned Facilities (page 2-5), MID is seeking an MP-620, a Mid-Pacific Region-specific permit for modification of its facilities and approval from Reclamation to bank CVP water outside MID's service area for later use within their service area. These are the federal actions that triggered NEPA. The project is expected to comply with applicable laws.

TAX-4

Please see response to comment Tax 1 and Tax 2.

Pursuant to MID's CVP long-term water service contracts for Friant Unit and Hidden Unit supplies, Reclamation may approve MID's proposal to bank the CVP water it receives under its contracts for later recovery for beneficial use on lands within MID's service area. The Contract for Purchase between Reclamation and MID provides that Class 2 water "is intended primarily, but not exclusively, for use in augmenting and recharging underground storage." MID's 1951 Friant Water Supply Contract provides:

Water furnished to the District by the United States pursuant to Part A shall not be delivered or furnished by the District for any purposes other than agricultural purposes, including, *but not restricted to*, the watering of livestock, or *underground water replenishment*, without the written consent of the contracting officer. (1951 Contract, Art. 11 [emphasis added])

Decision 935 expressly identifies the 1939 Contract for Purchase and the 1951 Contract (Decision 935, pages 2, 17). With such express references, the State Water Board and Reclamation incorporated into Decision 935 the obligations, rights, and conditions contained in the 1939 and 1951 contracts between Reclamation and MID.

TAX-5

Please refer to Tax-1 and Tax-2.

TAX-6

See Master Response 3. This comment appears to evaluate the environmental documents MID approved pursuant to CEQA. Reclamation has no authority or control over the CEQA process.

Reclamation has included an analysis of water supply and water quality in the Final EIS. The water supply analysis includes information on the feasibility of the project during different water supply year types and with the SJRRP (see Table 3-39 and Section 3.18). Further, Reclamation respectfully disagrees with the conclusions asserted under this comment. The proposed project does not include MID seeking to add to, or amend, its water supply entitlements. As Table 3-39 shows, MID has recharged 35,511 AF since 1985 through MID conveyances at eight existing percolation facilities, or incidentally recharged as a result of spills.

TAX-7

See Master Response 3.

No law requires a federal agency to cease its environmental review and approval of a project it undertakes until after a state public agency completes its review under CEQA. As a result, the pending return of the state-court writ to ascertain whether the CEQA document fully complies with CEQA does not preclude Reclamation's evaluation and review of the NEPA document in accordance with NEPA. Further, Reclamation anticipates the project would comply with all applicable state and federal laws.

TAX-8

This comment addresses MID's CEQA document. CEQA requires state and local public agencies to consider the environmental consequences of projects they undertake, fund, or permit. This comment, therefore, is not directed to Reclamation's Draft EIS for which it has solicited public review and comment.

However, the comment addresses the overall ability of the water bank to retain water. Previous geotechnical studies and the feasibility reports prepared for MID have demonstrated the feasibility of the project, and the Oversight Committee, in accordance with the MOCP, would review monitoring data and would ensure operations do not adversely affect neighbors. See Section 2 and subsequent text.

No changes are proposed for the Final EIS.

TAX-9

The commenter is addressing MID's project description commitment to leave 10% of banked water in the aquifer. The County's IRWMP describes the importance of groundwater storage and identifies this project as an important regional solution. Under this project, the 10% leave-behind is not a mitigation measure as this comment suggests. Pursuant to NEPA, Reclamation must use all practical means consistent with NEPA to avoid or minimize possible adverse effects of its actions on the environment, including the mitigation of adverse effects. Overdraft is not a possible adverse effect of the Proposed Action, it is an existing condition furthered by current practices. See Section ES-2 (Purpose and Need) in the Final EIS. One of the purposes of the project is to reduce aquifer overdraft, and Reclamation anticipates that the project would help replenish the aquifer, which has been severely overdrafted by overlying users for the past century.

(see Section 3.18 in the Final EIS). Project operations would recover only 90% of the water it banks, and 10% would be left behind to reduce overdraft rates. The 10% leave-behind is in addition to the recharge that occurs during conveyance through the MID system located off Madera Ranch which is a part of normal MID operations and thus would not be considered part of the 90% banked water because it is an existing condition that would not be changed by the project.

MID also has proposed an MOCP to ensure water accounting, both storage and withdrawal, is accurate and adjacent land owners are not adversely affected. See Section 2 and Section 3.18 in the Final EIS. Detailed modeling is unnecessary. In general, any new amount of water left in the aquifer as a result of groundwater banking is of benefit.

The Final EIS contains an analysis of water supply and water quality. The water supply analysis includes information on the feasibility of the project during different water supply year types and with the SJRRP (see Table 3-27 and page 3-39). Water quality is described in Section 3.17 in the Final EIS. MID has concluded that all actual losses cannot be predicted with absolute certainty. Further, Table 3-39 provides details regarding historical water supplies that would be available for the project and conservatively excludes all water that returns to the Fresno and San Joaquin Rivers from diversions of MID's entitlements from calculations for available water for the project. MID uses an approximately 12-mile reach of the Fresno River to convey water from the Madera Canal and Hensley Unit to the main intake of the MID distribution system. All losses and non-MID uses of water along this reach of the Fresno River have been excluded from the calculations of water availability for the project. Thus, the 10% leave-behind ensures the project would not have any net reduction.

TAX-10

The Taxpayers Association offers no studies or causal mechanism to support or explain impacts on the economy of Madera County concerning "sensitive grapes or other crops from the Proposed Action." The Final EIS includes information on the existing quality of the groundwater below Madera Ranch, and it shows that the water is of good quality; MID is very concerned about protecting the water quality of the underlying aquifer, in order to serve their customers' needs, and would not have chosen this site if it was not suitable in that regard. The commenter also raises concerns regarding the potential to interfere with down gradient movement of water, and thereby an associated mounding of the water table in the vicinity of the City's Waste Water Treatment Plant (WWTP) resulting in the spread of groundwater impacts from the WWTP beyond the current area of impact. However, this is unlikely to occur for several reasons. First, the City is taking substantial steps to address its nitrate issue and minimize the potential for localized effects through improved treatment processes and installation of anti-mounding extraction wells. Second, the Project is unlikely to raise groundwater levels in the vicinity of the WWTP because the plant is several miles up gradient to the northeast of where recharge would occur on Madera Ranch. Groundwater in the vicinity of Madera Ranch predominantly flows to the west and northwest. Thus, water recharged on Madera Ranch (and any resultant mound) is expected to migrate in a different direction from the City WWTP. The Final EIS evaluates groundwater hydrology in Section 3.17. Additionally, any potential effects would be detected during sampling proposed under the MOCP (see Section 2 of the Final EIS). This plan includes a complete array of wells between the ranch and the WWTP, including domestic wells within a mile of Madera Ranch. MID and the MROC would

be able to detect potential changes attributable to the proposed project and implement operational changes if necessary. Implementation of the MOCP would ensure that operational impacts on groundwater or surface water quality from recharge or recovery operations are avoided or minimized.

See also responses to Tax 9 and 11.

TAX-11

Reclamation addressed the socioeconomic issues associated with the project in Section 4.15 in the Draft EIS. It includes an analysis of water cost implications on the local economy (Effect SE-3). No additional changes to the Final EIS are proposed.

TAX-12

MID has determined that capacity in the Madera Canal and other conveyances would be sufficient to transport its water supplies for project operations. Water deliveries for the bank would be coordinated with other operations; water generally would not be applied during the peak irrigation season. Simulated operational studies are not needed to inform the preparation of the Final EIS.

TAX-13

MID's proposed banking operations would be subject to the conditions of MID's existing long-term water supply contracts with Reclamation (Friant and Hidden Unit supplies), MID's pre-1914 water rights, and, occasionally, Friant Section 215 water (CVP nonstorable uncontrolled flows delivered under temporary and independent contracts). See Final EIS, Section 3.18, Water Supply.

The Final EIS evaluates the impacts concerning the litigation to which this comment refers, *NRDC v. Rodgers*, and the resulting San Joaquin River Settlement (SJRS), in the Affected Environment in Section 3.18, Water Supply. The EIS concludes that while the overall effects of the SJRS would be considered cumulatively, the water supply effects of the SJRS would be considered in the EIS as an existing constraint on the availability of future water supply. See Table 3-39 in the Final EIS.

The EIS states that the litigation for the SJRS was filed in 1988 by a coalition of environmental groups, led by NRDC, challenging the renewal of long-term water service contracts between the United States and the CVP Friant Division contractors, including MID's long-term contract concerning Friant Unit supplies from Millerton Lake. The litigation has resulted in the SJRS between the Settling Parties, including MID, on September 13, 2006. The SJRS, approved by the U.S. District Court on October 23, 2006, contains a Restoration Goal and a Water Management Goal.

The SJRS would result in a decrease in available water from the Friant Unit, as necessary to support the San Joaquin River restoration. The EIS evaluates the project's effects on water supply, including the feasibility of the project in light of constrained CVP supplies. The project does not interfere with the twin goals of the SJRS and in fact helps to meet restoration goals by reducing the strain on the system during dry years. The SJRS has no effect on the project's water supplies other than the decrease of MID's supplies from Millerton Lake.

As a result, the EIS explains that the Proposed Action would not result in adverse water supply effects associated with the diversions of Class 1, Class 2, or Section 215 water because the quantities would be diverted within the historical range of diversions and the water is diverted from Millerton Lake and Hensley Lake, not the San Joaquin River or Fresno River. The water is available as part of permitted operations of the Friant Division, reductions in diversions resulting from the SJRS would not interfere with the proposed project's purpose and need, MID operations are already conditioned under the existing Biological Opinion, and current facilities would be used.

Judge Wanger's decision and the subsequent CVP/SWP coordinated operations from the USFWS and NMFS are not expected to affect the project operations because DWR and Reclamation are obligated to comply with the USFWS and NMFS CVP Long-Term Operations Biological Opinions and because diversions would be consistent with their CVP contract allocations. Here, as with the SJRS, the proposed banking project is anticipated to produce a net benefit by improving water supply reliability during dry years. Additional operational modeling is not required for this EIS to be adequate. Please also see EPA-1.

TAX-14

This comment appears to evaluate the environmental documents MID approved pursuant to the CEQA. Reclamation has no authority or control over the CEQA process.

Reclamation need not analyze out-of-County transfers or exchanges as none currently are proposed. Reclamation cannot analyze speculative actions in the DEIS. The DEIS explains that "Water exchanges between MID and other potential users would require additional analysis, but generally would include only water that historically was diverted for agricultural use or that previously has been exchanged between parties in a similar manner" (DEIS, page 4.1-15). Reclamation likely would be a party to future transfers or exchanges, given water supplies and facilities, and subsequent NEPA analysis may be required. Banking participants other than MID that want to bank water at Madera Ranch first must secure the water supply for themselves (including obtaining appropriate environmental approvals). They would purchase storage capacity in the water bank. MID cannot transfer their own banked water to another party without Reclamation approval.

TAX-15

The commenter expresses a legal opinion regarding the basis for the placement of water into underground storage in the proposed water bank (including encroachment on underground areas of adjacent landowners). Implementation of this project is premised upon compliance with California water rights law. This comment does not specifically ask for a change or new analysis in the Draft EIS. Adverse effects of operating under the MOCP would be avoided, minimized, and mitigated, but beneficial effects would not.

TAX-16

The comment is unclear about what water would be "displaced" from water banking activities. There would be detailed accounting of water moved into and out of the bank. Adequate storage space exists, and water would not just be displaced or forced to migrate off site regionally. The

water table has dropped from historical levels because of regional overdraft and because surrounding land use changes have reduced natural flooding and sheet flow on the site (see Figure 1-1). Groundwater levels have dropped over 65 feet in the past 60 years (Figure 1-1) and regional overdraft is approximately 20,000 AF/year (Madera County 2008). Additionally, aquifers have natural gradients where water moves depending on many characteristics, including geophysical properties, pressure, water elevations, and other variables. There would be detailed accounting of water moved into and out of the bank, and MID would not extract more than 90% of what is deposited. Please also see the responses to Tax-8 and Tax-15.

MID would bank available water from its water entitlements and recover 90% of the water it banks. See generally Section 3.18 in the Final EIS. The Final EIS describes the water banking operations in Section 2 and evaluates the groundwater hydrology in Section 3.17.

TAX-17

Reclamation need not analyze out-of-County transfers or exchanges, as none currently are proposed. Reclamation cannot analyze speculative actions in the EIS. The Draft EIS explained that “Water exchanges between MID and other potential users would require additional analysis, but generally would include only water that historically was diverted for agricultural use or that previously has been exchanged between parties in a similar manner” (Section 3.18 in the Final EIS). Reclamation likely would be a party to future transfers or exchanges, given water supplies and facilities, and subsequent NEPA analysis may be required. Banking participants other than MID that want to bank water at Madera Ranch first must secure the water supply for themselves (including obtaining appropriate environmental approvals). They would purchase storage capacity in the water bank. MID cannot transfer their own banked water to another party without Reclamation approval.

Further, the EIS does not identify non-MID bank participants because currently they are unknown. However, MID does intend to sell banking space to local municipal and industrial (M&I) users (Section 3.18.2 [Effect WS-4]). All potential users would require separate environmental approvals to have their water entitlements banked and recovered at MID facilities (Section 3.18 in the Final EIS). Potential M&I users are broadly evaluated in Section 3.9, “Growth Inducing Effects” of the Final EIS.