

FINAL ENVIRONMENTAL IMPACT STATEMENT

**408 PERMISSION AND 404 PERMIT TO THREE RIVERS
LEVEE IMPROVEMENT AUTHORITY**

FOR THE

**FEATHER RIVER LEVEE REPAIR PROJECT, CALIFORNIA
SEGMENT 2**

**APPENDIX A – COMMENTS AND RESPONSES TO
COMMENTS ON THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT**

October 2008

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October 2008

Comments and Responses to Comments on the
Draft Environmental Impact Statement



408 Permission and 404 Permit to
Three Rivers Levee Improvement Authority
for the
Feather River Levee Repair Project, California,
Segment 2

Prepared for:
U.S. Army Corps of Engineers
Sacramento District

October 2008

Comments and Responses to Comments on the
Draft Environmental Impact Statement



408 Permission and 404 Permit to
Three Rivers Levee Improvement Authority
for the
Feather River Levee Repair Project, California, Segment 2

Prepared for:

U.S. Army Corps of Engineers
Sacramento District
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Sacramento, CA 95814

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October 2008

COMMENTS AND RESPONSES TO COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

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Public Meeting Sign-in Sheet

INTRODUCTION

The U.S. Army Corps of Engineers (Corps) circulated the draft environmental impact statement (DEIS) for Segment 2 of the Feather River Levee Repair Project on July 11, 2008. Approximately 145 combined hard copies and compact discs (CDs) of the DEIS were sent to a mailing list that included local, state, and federal agencies; landowners in the project area; local libraries; elected officials; and other interested organizations and individuals. The Corps also issued an “All Interested Parties” notice to an additional mailing list of approximately 25 people. A Notice of Availability was published in the Federal Register on July 11, 2008, and a public meeting on the DEIS was held by the Corps on August 4, 2008, to receive comments on the DEIS from agency representatives and other interested parties. Meeting attendees included three members of the public. No comments were submitted to Corps staff, the project applicant, or project consultants during the meeting. The sign-in sheet from the public meeting is reproduced in this appendix.

The Corps received five comment letters on the DEIS during the 45-day public review period, which ended on August 25, 2008 (see the table below). Each letter and individual comment has been assigned a number/letter designation for cross-referencing. The comment letters received on the DEIS, and the responses to comments contained in those letters, follow the table. All comment letters received, including the letter received after the close of the comment period, are addressed in this final EIS (FEIS). All comments were considered by the Corps during preparation of the FEIS. The Corps appreciates the efforts of the commenters for taking the time to participate in the public review process.

List of Commenters/Letters			
Letter Designation	Commenter	Date of Letter	Comment Number
1	Kathleen M. Goforth, Manager, Environmental Review Office, U.S. Environmental Protection Agency	August 25, 2008	1A through 1D
2	Sondra Andersson, Air Quality Planner, Feather River Air Quality Management District	August 22, 2008	2A through 2H
3	Sukhvinder (Sue) Takhar, Chief, Office of Transportation Planning – North, California Department of Transportation	August 25, 2008	3A
4	Thomas W. Eres, Attorney at Law	August 25, 2008	4A through 4M
5	Katrina Schneider, River Scientist, South Yuba River Citizens League; Ron Stork, Senior Policy Analyst, Friends of the River; Allan Eberhart, State Conservation Chair, Sierra Club	August 26, 2008	5A through 5C



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

**75 Hawthorne Street
San Francisco, CA 94105-3901**

August 25, 2008

John Suazo
U.S. Army Corps of Engineers
Sacramento District
Planning Division
1325 J Street
Sacramento, CA 95814

Subject: Draft Environmental Impact Statement (DEIS) for the Feather River Levee Repair Project, Yuba County, California (CEQ #20080263)

Dear Mr. Suazo:

The U.S. Environmental Protection Agency (EPA) has reviewed the above project pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. 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.

EPA provided detailed comments dated April 1, 2008, on the Administrative Draft Environmental Impact Statement (ADEIS) for the project, followed by additional feedback to the U.S. Army Corps of Engineers (Corps) and your consultants. We appreciate the Corps and Three Rivers Levee Improvement Authority (TRLIA) addressing several of our comments within the DEIS. In particular, we appreciate the expanded water quality and induced growth analyses. EPA agrees with the Applicant's Preferred Alternative (Proposed Project) that would construct a setback levee and remove the existing, failing levee to meet the project purpose of correcting identified levee deficiencies and improving flood protection in the Reclamation District 784 area of Yuba County. We recognize the Proposed Project benefits described in the DEIS, including improved regional flood protection and expanded riparian and floodplain habitat in the enlarged floodway. We also support removing 525 acres of farmland and actively restoring habitat in the setback area, as is currently under discussion between TRLIA, various landowners, and regulatory agencies.

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Based on our review, we have rated this DEIS LO-1, Lack of Objections, Adequate Information. We do suggest that the Corps and TRLIA consider the promotion of sustainable agricultural practices in the floodway to further reduce potential impacts to water quality in the Feather River that could result from chemical fertilizers and pesticides. We also suggest that mitigation for fill of water of the U.S. (WOUS) be clarified in a table in the FEIS, and that adequate mitigation for fill of 6.7 acres of WOUS be done onsite. Active restoration of 4.2 acres of disturbed riparian habitat, at the proposed floodway drainage swale, is recommended instead of allowing the site to revegetate on its own. Finally, we recommend the use of construction equipment meeting EPA Tier 3 engine standards, and that Tier 2 standards be required, to help reduce air quality impacts from construction. Best available emission control technologies should be used.

Thank you for the opportunity to review the ADEIS and this DEIS. We appreciate having had the opportunity to coordinate with the Corps early in the review process. Please send a copy of the Final EIS, when it is published, to us at the address above (Mail Code: CED-2). If you have any questions, please contact the lead reviewer for this project Paul Amato or me. Paul can be reached at 415-972-3847 or amato.paul@epa.gov; I can be reached at 415-972-3521 or goforth.kathleen@epa.gov.

Sincerely,



Kathleen M. Goforth, Manager
Environmental Review Office

Enclosures: Summary of EPA Rating System
EPA's Detailed Comments

cc:

Mr. Paul Brunner, Executive Director, TRLIA;
Ms. Sandra Anderson, Feather River Air Quality Management District;
Mr. Robert Solecki, Central Valley Regional Water Quality Control Board

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

Water Quality

Consider sustainable agricultural practices, for floodway lands that are not removed from agriculture, to reduce inputs of chemical pesticides and fertilizers to the Feather River. The DEIS states that placing 525 acres of agriculture into the levee setback floodway could result in increased inputs of pesticides, fertilizers, and other agricultural chemicals to the Feather River during flood inundation. Furthermore, this could result in a violation of water quality standards or waste discharge requirements (p. 3.4-5). As discussed in the document, the Feather River is currently listed on the Clean Water Act Section 303(d) list for impaired water bodies for diazinon and Group A pesticides, among other pollutants. Diazinon and other pesticides are assumed to result primarily from agricultural runoff. The TRLIA and Corps should consider working with land owners to implement sustainable agricultural practices, including reduced use of chemical pesticides and fertilizers in the floodway.

The DEIS also describes the removal of 525 acres of land from agriculture, and active restoration and conversion of this land to habitat (p. 2-8). The DEIS water quality analysis also concludes that "...the total use of pesticides, herbicides, and fertilizers, and therefore the potential for these materials to enter the Feather River, would be reduced because 525 acres of active agricultural land would be taken out of production and converted to grassland, riparian, and other habitat types." (p. 3.4-5). EPA acknowledges the potential water quality benefits of removing 525 acres of land from production in the proposed floodway and supports the conversion of 525 acres to habitat.

Recommendations:

The FEIS should commit to working with land owners to implement sustainable agricultural practices in the floodway as a way to reduce inputs of chemical pesticides and fertilizers to the Feather River. Information on sustainable agriculture can be found at EPA's website for our National Strategy for Agriculture at <http://www.epa.gov/agriculture/tsus.html#Sustainable%20Agriculture>.

We support and recommend the conversion of 525 acres of agricultural land to habitat in the proposed floodway.

Waters of the United States

The Proposed Project would impact 10.9 acres of Waters of the United States (WOUS), of which 6.7 acres would be permanently filled and 4.2 acres disturbed. In addition, a total of 56.9 acres of WOUS would be located on the river side of the new levee, and subjected to periodic inundation. The Corps and TRLIA propose to mitigate impacts to 10.9 acres of WOUS through enhancement and modifications to the new 4.2 acre floodway drainage swale, purchase of 49 acres of giant garter snake (GGS) aquatic habitat at an off-site conservation bank, and onsite creation of 20 to 30 acres of valley elderberry longhorn beetle (VELB) habitat, which includes planting of riparian vegetation (p. 3.6-16). As stated in the DEIS, GGS and VELB mitigation has been established through consultation with the U.S. Fish and Wildlife Service (USFWS) and

the California Department of Fish and Game (CDFG). EPA supports the proposed mitigation measures but it remains unclear whether they are sufficient to fully offset impacts to WOUS.

The DEIS should clarify what mitigation is proposed to offset environmental losses from fill of 6.7 acres of WOUS. As described in the April 10, 2008 Corps and EPA “Compensatory Mitigation for Losses of Aquatic Resources; Final Rule” (Mitigation Rule) 40 CFR 230, “...the fundamental objective of compensatory mitigation is to offset environmental losses from unavoidable impacts to WOUS authorized by Department of the Army permits.” GGS and VELB mitigation are discussed in the DEIS as required mitigation for impacts to their respective habitats, but not specifically for the fill of the 6.7 acres of WOUS. The FEIS should include a table that specifies what mitigations are proposed to offset environmental effects to WOUS, including permanent fill of 6.7 acres and disturbance to 4.2 acres. In addition, given the proximity of the Proposed Project to the Feather River and the potential for restoration of aquatic resources in the immediate area, the Corps and TRLIA should consider onsite mitigation opportunities for permanent fill of WOUS.

The FEIS should commit to actively restoring riparian habitat at the proposed floodway drainage swale. The DEIS states that the floodway drainage swale “...would either be actively restored to pre-project vegetative conditions, or riparian vegetation would be allowed to naturally re-colonize the site” (p. 3.6-10). We suggest the swale be actively restored in order to reduce temporal impacts and ensure environmental impacts are offset following disturbance to 4.2 acres of riparian habitat.

Recommendations:

The FEIS should include a mitigation table that specifies what mitigation is intended to offset impacts from fill of 6.7 acres and disturbance of 4.2 acres of WOUS.

Given the proximity of the Proposed Project impacts to the Feather River, onsite mitigation opportunities for fill of WOUS should be considered.

We recommend the 4.2 acres of disturbed riparian habitat be actively restored to reduce temporal impacts and ensure environmental effects are fully mitigated.

Air Quality

As described in the DEIS, the Proposed Project would occur in Yuba County within the Northern Sacramento Valley Air Basin (NSVAB). Yuba County is currently in attainment or unclassified for National Ambient Air Quality Standards; therefore, the Corps is not required to demonstrate general conformity with a State Implementation Plan (SIP). However, construction activities would result in daily construction emissions of reactive organic gasses (ROG), nitrogen oxides (NO_x), and particulate matter smaller than 10 microns (PM₁₀) that exceed Feather River Air Quality Management District (FRAQMD) thresholds. TRLIA has committed to implementing FRAQMD mitigation measures to reduce daily construction emissions; but those emissions may still exceed thresholds of significance. EPA commends the Corps and TRLIA for coordinating with FRAQMD and committing to implementing mitigation measures to reduce construction emissions. In addition to the measures described, the Corps and TRLIA should consider the use

of construction equipment that meets Tier 3 engine standards, available for the 2008 model year. Construction equipment should be required to meet Tier 2 standards and be retrofitted with the best available emission control technology.

Recommendation:

To further reduce air quality impacts, we recommend the use of construction equipment meeting Tier 3 emission standards, where available. Tier 2 standards should be required and equipment should be retrofitted with the best available emission control standards.

Comment 1A: U.S. Environmental Protection Agency (EPA) Supports Selection of the Applicant Preferred Alternative and Rates the Draft Environmental Impact Statement (DEIS) as LO-1, Lack of Objections

Response: The Corps acknowledges the importance of the ongoing consultation with the EPA in developing and preparing the environmental impact statement EIS for the project and appreciates EPA's input during development of the DEIS. The Corps also acknowledges and highly appreciates the comments submitted by the EPA affirming the adequacy of the DEIS and the assignment of an LO-1, "Lack of Objections, Adequate Information" rating to the document. The support expressed by the EPA for the Applicant Preferred Alternative will be considered by the Corps in selection of a project alternative and deciding whether to grant the requested permissions to the Three Rivers Levee Improvement Authority (TRLIA) under Clean Water Act (CWA) Section 404 and Section 14 of the Rivers and Harbors Act of 1899 (i.e., "Section 408").

Comment 1B: Promotion of Sustainable Agricultural Practices in the Expanded Floodway

Response: As discussed in the DEIS, TRLIA (the project applicant) supports continued agricultural activities that do not conflict with the flood control function of the levee setback area. The Corps has conveyed to TRLIA EPA's suggestion that promotion of sustainable agricultural practices be considered. TRLIA has already prepared agricultural lease language for lands in the setback area where agricultural operations may continue and is using this language to advertise for lessees for farmable properties in the expanded floodway. Because agricultural leases are already being advertised, there is not an opportunity at this time for TRLIA to actively promote sustainable agricultural practices on these properties.

It is important to note that the EIS includes a mitigation measure requiring compliance with the Central Valley Regional Water Quality Control Board's (RWQCB's) Irrigated Lands Program for agricultural lands in the expanded floodway. (See Mitigation Measure 3.4-b in Section 3.4, "Water Quality.") The RWQCB's Irrigated Lands Division, among other duties, is responsible for monitoring and regulating agricultural lands within the floodways of rivers to protect water quality in the rivers and maintain water quality standards. To comply with requirements of the Irrigated Lands Program, TRLIA will implement these requirements, at a minimum:

- ▶ Obtain regulatory coverage under the Irrigated Lands Conditional Waiver or file a Report of Waste Discharge for all parcels TRLIA owns which are irrigated and have the potential to discharge waste to surface waters.
- ▶ Submit a Management Plan, for review, to the RWQCB, that addresses what practices will be utilized to prevent waste associated with agricultural operations from entering surface waters of the State.
- ▶ Submit notification to the RWQCB if ownership of parcels enrolled in the Irrigated Lands Regulatory Program are transferred.

The following text, further clarifying TRLIA's participation in the irrigated lands program, has been added to the discussion of Mitigation Measure 3.4-b on page 3.4-9 of the FEIS:

TRLIA intends to enroll agricultural lands in the levee setback area within the Irrigated Lands Conditional Waiver Program. As part of this program, the RWQCB monitors agricultural runoff at various locations in the region and identifies agricultural practices that adversely affect water quality; and pesticides, herbicides, and fertilizers that jeopardize maintenance of water quality standards. The RWQCB uses these data to direct agricultural operators enrolled in the

conditional waiver program on methods, operations, and materials to use on their lands that preserve water quality standards.

Implementation of these measures will protect water quality in receiving waters in the project area, including the Feather River.

Comment 1C: Mitigation for Fill of Waters of the United States

Response: Since preparation of the DEIS for the project, a conceptual compensatory mitigation plan has been submitted to the Corps by TRLIA detailing the strategy to offset the temporary and permanent impacts to waters of the United States resulting from implementation of the Applicant Preferred Alternative. The same mitigation approach could be applied to the Intermediate Setback Levee Alternative. The discussion under Section 3.6.3 of Section 3.6 of the EIS, “Waters of the United States and Wetlands,” has been revised to reflect the proposed mitigation approach, which includes restoring a corridor of riparian habitat adjacent to the floodplain drainage swale between the Plumas Lake Canal and the Feather River and creating approximately 20.1 acres of jurisdictional waters of the United States at a site within the levee setback area. Table 3.6-4, and significant additional text, has been added to Section 3.6.3 to clarify the wetland mitigation strategy.

Comment 1D: Operating Standards for Construction Equipment

Response: The Corps acknowledges EPA’s recommendation regarding the use of construction equipment that meets EPA Tier 3 engine standards and the suggested requirement that all equipment meet at least Tier 2 standards. The Corps has coordinated with TRLIA regarding the construction equipment currently in use on portions of the Applicant Preferred Alternative site not requiring federal authorizations (see page 2-15 of the DEIS for details regarding TRLIA’s initiation of project construction). It has been confirmed that the construction equipment currently being used by Teichert Construction and its subcontractors on this project meets the Tier 2 standards, at a minimum, and is retrofitted if appropriate with the best available emission control technology. Some specific pieces of equipment used for project construction may meet Tier 3 standards, and TRLIA has expressed to Teichert and their subcontractors a preference for inclusion of equipment meeting Tier 3 standards in the construction fleet. Given the construction equipment fleets owned and operated by Teichert and its subcontractors, it is anticipated that all equipment used on the project site will continue to meet at least Tier 2 standards. However, there is the possibility that isolated pieces of equipment may be used on the project for a short period (i.e., a few days), as necessary, to meet the project construction schedule or otherwise respond to critical construction needs. However, assuming normal project construction activities, no variation from the requirement to meet Tier 2 standards will occur.



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David A. Valler, Jr.
Air Pollution Control Officer

August 22, 2008

U.S. Army Corp of Engineers, Sacramento District
Attn: Mr. John Suazo, Environmental Resources Branch
1325 J Street, 10th Floor
Sacramento, CA 95814-2922

Re: Draft Environmental Impact Statement (EIS) for the Feather River Levee Repair Project, Segment 2.

Dear Mr. Suazo,

The Feather River Air Quality Management District (District) appreciates the opportunity to review and comment on the above referenced project. The proposed project would exceed the District's Thresholds of Significance, and after incorporation of the proposed mitigation measures, would still be a significant impact. The District is currently designated nonattainment for State Ozone and Particulate Matter less than 10 microns (PM10) Ambient Air Quality Standards (AAQS). In addition, Yuba County has been proposed nonattainment for the 2006 National PM 2.5 AAQS. The project would increase emissions of ozone precursors as well as PM 2.5 and PM 10. The District has reviewed the proposed mitigation measures and has some recommendations for the lead agencies consideration.

Mitigation Measure 3.11-8 would require the proponent to reduce emissions by a specific percentage below the current statewide fleet average. The measure does not specify how these measures would be achieved or who is responsible for additional offsite mitigation if the contractor selected by the proponent does not meet these targets. The measure should describe the means by which the percent reductions will be achieved, either by use of particulate traps, engine repowers, or contribution to an offsite mitigation project that will achieve the necessary reductions.

The Mitigation Measure #1 on page 3.11-10, described in the draft EIS as "above and beyond the requirements of the FRAQMD" appears to actually be restating Mitigation Measures 2, 3, and 4 on page 3.11-9. The limit for vehicle idling is a state regulation, and the other measures are part of the District's Fugitive Dust Control Plan and Standard Mitigation for Construction Projects.

The Mitigation Measure #2 on page 3.11-10 requiring TRLIA to convey a desire for cleaner construction equipment is weak and unenforceable. Mitigation measures should quantitative where possible, setting specific targets that completeness can be verified.

Table 3.11-1 lists the National Ambient Air Quality Standard (AAQS) for 8-hour ozone average as 0.08 ppm. This AAQS was lowered to 0.075 ppm in March of 2008.

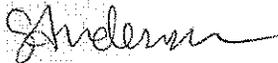
Table 3.11-1 appears to be inconsistent in regards to the National AAQS for Particulate Matter less than 2.5 microns (PM 2.5). The Table lists the standard as 35 micrograms per cubic meter along with the maximum concentrations for years 2004-2006 ranging from 39.0 to 45.0. The Table does not indicate if the maximum concentration was a 24-hour average or a 1-hour measurement. Also, the table lists the number of days that exceeded the standard as zero for the years 2004-2006. The draft EIS should explain how a maximum concentration that measured above the standard would not result in an exceedence of the standard.

Table 3.11-2 is not consistent with modeling results in Appendix G for both NOx and ROG. The modeling results in Appendix G show emissions of NOx at 42 tons/year for 2008 and 66 tons/year for 2009 (unmitigated). Table 3.11-2 lists emissions of NOx as 60 tons/year for 2008 and 61 tons/year for 2009 (unmitigated). The amount of ROG in Table 3.11-2 does not match the amount resultant of the modeling for years 2008 and 2009 as well. Table 3.11-2 in the draft EIS should summarize the modeling results included in Appendix G or the lead agency should state why their emission summaries are not consistent.

Pg 4-42 incorrectly states that Yuba and Sutter Counties are attainment or unclassified for federal standards. Sutter County has two federal nonattainment areas for ozone AAQS which are South Sutter County (part of the Sacramento Federal Nonattainment Area) and the area above 2,000 feet elevation in the Sutter Buttes. Both Yuba and Sutter County are recommended nonattainment for federal PM 2.5 AAQS. Official designations for the 2006 PM 2.5 NAAQS should be made by EPA in December 2008.

The District staff will be available to assist the Lead Agency or Project Applicant as needed. Please call me at (530) 634-7659 ext 210 if you have any questions.

Sincerely,



Sondra Andersson
Air Quality Planner

Enclosures: None

File: Chron

Comment 2A: Relationship of the FRLRP Segment 2 Project to FRAQMD's and Yuba County's Current Designations for Criteria Air Pollutants

Response: The Corps appreciates the comments provided by the Feather River Air Quality Management District (FRAQMD) on the air quality analysis for this project. The commenter states that, "The proposed project would exceed the District's Thresholds of Significance, and after incorporation of the proposed mitigation measures, would still be a significant impact." The Corps has not proposed a particular method for addressing levee repairs in Segment 2 of the Feather River Levee Repair Project (FRLRP), and could select any alternative evaluated in the EIS, including the No-Action Alternative. As identified in the discussion of "AP Impact 3.11-a," "ISL Impact 3.11-a," and "LS Impact 3.11-a," each of the action alternatives would result in construction emissions exceeding FRAQMD thresholds. As identified at the end of the description of "LS Impact 3.11-a" on page 3.11-8 of the DEIS, "As few as five or six pieces of construction equipment operating simultaneously could result in an exceedance of the FRAQMD threshold for NO_x, even with implementation of emission reduction mitigation." Therefore, all of the action alternatives would result in construction emissions exceeding FRAQMD thresholds even after mitigation.

As identified in the comment and in the DEIS (see "Local Air Quality Thresholds" in Section 3.11.2 of the DEIS, page 3.11-4), the FRAQMD portion of the Northern Sacramento Valley Air Basin is designated as a nonattainment area with respect to the state standards for ozone (1-hour) and PM₁₀. The statement in the comment that, "Yuba County has been proposed nonattainment for the 2006 National PM_{2.5} AAQS," is further evidence of the importance of the emission reduction measures included in the EIS.

Comment 2B: Enforcement Standards for Mitigation Measure 3.11-a, Part 8

Response: Item #8 in "Mitigation Measure 3.11-a" in the EIR (page 3.11-10 in the DEIR) states:

The project shall provide a plan for approval by FRAQMD demonstrating that the heavy-duty (equal to or greater than 50 horsepower) off-road equipment to be used in the construction project, including owned, leased and subcontractor vehicles, would achieve a project-wide fleet-average 20% NO_x reduction and 45% particulate reduction compared to the most recent ARB fleet average at time of construction.

Meeting emission reduction standards would be achieved through the development the plan describing the means by which the required percent reductions would be achieved, approval of the plan by FRAQMD, and implementation of the plan by the construction contractor. The plan must result in meeting the emission reduction performance criteria, and FRAQMD is provided the opportunity to review and approve the plan. It is the Corps' understanding that TRLIA has provided FRAQMD an analysis of the construction equipment fleet showing that the construction equipment to be used on the project would achieve the percentage reductions below the ARB fleet average required in "Mitigation Measure 3.11-a." Therefore, the means to achieve the desired reduction (i.e., the emission reduction plan) is for the contractor and subcontractors to use an equipment fleet with relatively new and/or low emitting equipment that results in overall emissions sufficiently below the ARB fleet average to meet the mitigation requirements.

In addition to ensuring that its construction contractors meet fleetwide emission reduction requirements as well as utilizing the best available emissions control technology on their equipment throughout the project, TRLIA has stated they will contribute funds into the Carl Moyier Program for ozone precursor reductions. This program is a grant program administered by the FRAQMD. Matching contributions are provided by the California State Air

Resources Board, the California Department of Motor Vehicles, and from other private projects. The funds provided will be used to implement clean emissions technology for vehicles and equipment related to agribusiness uses, local municipalities, and public services throughout the Yuba County area. This grant serves as an “offsite” mitigation fund for ozone precursors.

Comment 2C: Nature of Requirements Above and Beyond Those Specified in Mitigation Measure 3.11-a, Parts 1–8

Response: The FRAQMD commenter is referring to Item #1 in the final two parts of “Mitigation Measure 3.11-a” on the last page of Section 3.11, “Air Quality” (page 3.11-10 in the DEIS). This measure is intended to supplement the requirements specified under the rest of the mitigation measure by confirming the responsibilities of construction inspectors and TRLIA and ensuring that all applicable standards are met. The element of the measures that is “above and beyond” the previous requirements is identifying the responsibilities of construction inspectors as monitors of mitigation compliance and TRLIA’s engineer as an enforcer of the requirements. Item #1 is not intended to provide new emission reduction requirements but to help ensure implementation of emission reduction measures already described previously in “Mitigation Measure 3.11-a.”

It should be noted that the introduction to Items #1 and #2 near the bottom of page 3.11-10 in the DEIS states, “In addition, the following measures, above and beyond the requirements of the FRAQMD mitigation measures, shall be implemented.” The FRAQMD mitigation measures listed in “Mitigation Measure 3.11-a” are considered sufficient mitigation for construction emissions generated by the action alternatives identified in the EIS. Items #1 and #2 at the bottom of page 3.11-10 in the DEIS are intended to supplement the FRAQMD measures. Items #1 and #2 are not mitigation requirements and success of the overall mitigation approach is not reliant on these two items.

Comment 2D: Operating Standards for Construction Equipment

Response: The FRAQMD commenter is referring to Item #2 in the final part of “Mitigation Measure 3.11-a” on the last page of Section 3.11, “Air Quality” (page 3.11-10 in the DEIS). This mitigation action is intended to be advisory, and was included in the EIS in response to early input from EPA during preparation of the DEIS. The commenter is correct in stating that mitigation measures should be quantitative where possible and set specific verifiable targets. This is the case for previous mitigation actions described in “Mitigation Measure 3.11-a.” However, where sufficient quantitative, verifiable mitigation is provided elsewhere in a document, additional advisory actions can also be included that may supplement the overall mitigation approach. The introduction to Items #1 and #2 near the bottom of page 3.11-10 in the DEIS states, “In addition, the following measures, above and beyond the requirements of the FRAQMD mitigation measures, shall be implemented.” The FRAQMD mitigation measures listed in “Mitigation Measure 3.11-a” are considered sufficient mitigation for construction emissions generated by the action alternatives identified in the EIS. Items #1 and #2 at the bottom of page 3.11-10 in the DEIS are intended to supplement the FRAQMD measures. Items #1 and #2 are not mitigation requirements and success of the overall mitigation approach is not reliant on these two items. Therefore, Item #2 can be worded in an advisory manner without undermining the desired outcome or success of the mitigation measure.

Comment 2E: Correction to Table 3.11-1, National Ambient Air Quality Standard (AAQS) for Ozone

Response: The AAQS has been corrected in the FEIS as suggested by the comment. See Table 3.11-1 in Section 3.11.1.2, “Air Pollutant Sources and Concentrations,” in the FEIS, page 3.11-2.

Comment 2F: Clarification of Monitoring Data for PM_{2.5} as Presented in the DEIS

Response: The PM_{2.5} monitoring data for years 2004–2006 in Table 3.11-1 are 24-hour concentration measurements. This is clarified in Table 3.11-1 in the FEIS (see page 3.11-2). Please note that the federal PM_{2.5}

24-hour standard was officially changed from 65 $\mu\text{g}/\text{m}^3$ to 35 $\mu\text{g}/\text{m}^3$ in late 2006. Thus, when air quality monitoring data for $\text{PM}_{2.5}$ was recorded during years 2004–2006, the applicable standard during that period was not exceeded. This is also clarified in Table 3.11-1.

Comment 2G: Corrections to Table 3.11-2, Emissions of NO_x and ROG

Response: The emissions calculations in Appendix I of the FEIS (previously Appendix G in the DEIS), “Air Emissions Calculations for Segment 2,” have been updated, and Table 3.11-2 in the FEIS has been revised as necessary to reflect these changes. These updates do not result in changes in the severity of the impact or changes in the impact conclusions. The maximum average annual mitigated emissions, as shown in Table 3.11-2, remain at 12 tons/year of ROG, 49 tons/year of NO_x , and 80 tons/year of PM_{10} during project construction. Mitigated emissions of ROG, NO_x , and PM_{10} remain below the applicable federal thresholds of 50, 50, and 100 tons/year, respectively. In fact, construction emissions for 2008 were overstated in Table 3.11-2 in the DEIS. It should be noted that the air quality analysis in the EIS is very conservative in that it is based on relatively high estimates for emission sources that would generate air emissions from several overlapping project activities in the same construction year.

Comment 2H: Status of Yuba and Sutter Counties for Criteria Air Pollutants

Response: The FRAQMD commenter is referring to the cumulative impact analysis in Chapter 4 of the EIS. The relevant statement, now in Section 4.2.4.7, “Air Quality,” in the FEIS has been revised to clarify that the respective portions of Yuba and Sutter Counties where the proposed action is located are either in attainment or unclassified for federal standards. A sentence has been added to this same section identifying that both Yuba and Sutter counties are currently recommended for nonattainment for federal $\text{PM}_{2.5}$ air quality standards.

DEPARTMENT OF TRANSPORTATION

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August 25, 2008

08YUB0014
03YUB70/PM R08.29
Feather River Levee Repair Project, Segment 2

John Suazo, Environmental Resources Branch
U.S. Army Corps of Engineers, Sacramento District
1325 J Street, 10th Floor
Sacramento, CA 95814-2922

Dear Mr. Suazo:

Thank you for the opportunity to review and comment on the Feather River Levee Repair Project, Segment 2. The project proposes to construct and maintain a new setback levee along the Feather River. Caltrans has the following comments:

The truck traffic generated by the construction of this project will be substantial. In the applicant's preferred alternative, 180,000 short haul trips are generated from local borrow locations, and an additional 2,460 highway truck trips will be needed to bring in bentonite, aggregate, and other construction equipment and materials.

There will also be drivers going to the site and returning home each day. These trips will impact the local road and highway circulation. The Draft EIS identifies this concern and states traffic will "cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system." Thus, construction traffic to and from the site should be limited to 10 trucks per hour during the morning peak period from 7am to 9am, and should not be allowed during the heavier evening peak period of 3pm to 5pm.

"Caltrans improves mobility across California"

John Suazo
August 25, 2008
Page 2 of 2

If you have questions or need additional information, please contact Paulene Lorentson,
Yuba County IGR Coordinator, at (530) 740-4992 or e-mail at
Paulene_Lorentson@dot.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Paulene Lorentson for". The signature is written in a cursive style.

SUKHVINDER (SUE) TAKHAR, Chief
Office of Transportation Planning – North

"Caltrans improves mobility across California"

Comment 3A: Truck Traffic on State Route 70 during Morning and Evening Peak Periods

Response: The Corps appreciates the comments provided by the California Department of Transportation (Caltrans) on the transportation and circulation analysis for this project. The comments provided by Caltrans are focused on the potential effects of increased truck traffic and other project related trips on State Route (SR) 70 (Lorentson, pers. comm., 2008). The Caltrans commenter correctly re-states data from the DEIS that indicates the Applicant Preferred Alternative would generate 180,000 short haul trips from local borrow locations, and that an additional 2,460 highway truck trips would be needed to haul construction materials and equipment to the Segment 2 project site. As discussed under “AP Impact 3.13-a” in the DEIS (pages 3.13-3 through 3.13-5), these trips are associated with Stage 1 of construction, which includes excavation of borrow areas and construction of the setback levee embankment. However, only a small portion of these trips would affect SR 70. The following three paragraphs summarize information provided in the description of “AP Impact 3.13-a” in the DEIS and the description of the “Applicant Preferred Alternative – ASB Setback Levee Alternative” in Section 2.2.2 of the DEIS.

During Stage 1 of construction, approximately 135,000 of the total 180,000 haul trips would be required to transport borrow material from locations within the area between the existing Feather River levee and the proposed setback levee alignment. None of these haul trips would affect traffic on roadways beyond the immediate project construction area. Extracting borrow material from sites east of the setback levee alignment would require approximately 45,000 haul trips, or 25% of the total 180,000 haul trips. The borrow sites that are outside of the immediate project construction area are west of SR 70 (Figure 3.13-1 in the DEIS). Truck traffic will primarily be confined to Feather River Boulevard between Myrna Road and Rich Road and other local roads that intersect with Feather River Boulevard (Hart, pers. comm., 2008). The total 180,000 haul trips required to move borrow material to the Segment 2 project site would have little to no effect on traffic on SR 70 (Wanket, pers. comm., 2008).

The additional 2,460 highway truck trips that would originate from areas outside the construction area would mix with the existing traffic on SR 70 and possibly other state highways in the project vicinity. Approximately 2,000 of those 2,460 truck trips would be needed to haul the aggregate base and rock revetment material to the project site from the quarry of origin. The remaining approximately 460 truck trips would be needed to haul construction equipment, dry bentonite, concrete, and other construction supplies and materials to the project site.

During Stage 2 of construction, all of the approximately 150,000 truck trips required to move material from the degraded levee would use the local roadway system to access the borrow sites where the material would be deposited and used for borrow site reclamation. These trips would have little to no effect on traffic on SR 70. A total of approximately 650 highway truckloads would be needed to carry demolition debris, construction debris, and waste materials to a suitable landfill. An additional approximately 40 trailer truck round trips would be needed to remove construction equipment from the site as the work is completed. Some of these approximately 700 truck trips would use SR 70 during Stage 2 of construction.

The letter from the Caltrans commenter includes a quote from the DEIS stating traffic will “cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.” The text from the DEIS that is quoted by the commenter is one of the thresholds for determining the significance of impacts on transportation and circulation, and is not an impact conclusion (see Section 3.13.2.1, “Significance Criteria” in the FEIS). As indicated by the analysis of traffic impacts in the EIS (see “AP Impact 3.13-a,” “ISL Impact 3.13-a/b,” and “LS Impact 3.13-a/b”), the EIS concludes that no significant impact would occur as a result of the increase in traffic associated with construction of any of the action alternatives.

The Caltrans commenter requests limiting construction traffic on SR 70 to 10 trucks per hour during the morning peak period from 7 a.m. to 9 a.m. Construction and engineering staff directly associated with the project have confirmed that under almost all circumstances construction truck traffic on SR 70 will remain below 10 trucks per hour during the morning peak period described by the commenter. However, over the 20–28 month construction period, circumstances could occur where construction activities could occasionally require up to approximately 15 truck trips per an hour on SR 70 during the peak morning commute hours (Wanket, pers. comm., 2008). If conditions requiring up to 15 truck trips per an hour on SR 70 during the morning peak hours were to occur, this level of truck trips on SR 70 would be short lived and very infrequent.

The Caltrans commenter requests that no construction traffic be allowed onto SR 70 during the heavier evening peak period from 3 p.m. to 5 p.m. Due to the size, complexity, and extended construction period required to repair the FRLRP Segment 2 levee, TRLIA has indicated it is not possible at this time to commit to allowing no trucks on SR 70 in the vicinity of the project site during those evening peak hours. Delivery of materials and equipment to the project site may occasionally generate a limited number of truck trips on SR 70 during the evening peak hours. TRLIA has stated to the Corps that Teichert Construction and its subcontractors will make every effort to comply with Caltrans' requests.

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F A X C O V E R S H E E T

FAX NUMBER TRANSMITTED TO: (916) 557-7856

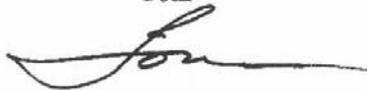
To: John Suazo
Of: U. S. Army Corps of Engineers
From: OFFICE OF THOMAS W. ERES
Client/Matter:
Date: August 25, 2008

(5 pages including cover sheet)

Comments: 

Dear Mr. Suazo,
**Attached are the comments to the DEIS on behalf of Hofman Ranch
and Frances Hofman.**

**Thanks,
Tom**



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August 25, 2008

Mr. John Suazo
U.S. Army Corps of Engineers
Sacramento District
ATTN: Planning Division (CESPK-PD-R)
1325 J Street
Sacramento, CA 95814

RE: DEIS
408 Permission/404 Permit
TRLIA – Feather River Levee
Project – Segment 2

Dear Mr. Suazo:

I represent Hofman Ranch and Ms. Frances Hofman regarding these comments to the above-referred DEIS. Hofman Ranch is approximately 1400 acres along the east levee of the Western Pacific Interceptor Channel, north of Plumas Arboga Road and west of Forty Mile Road in Yuba County. The Ranch also consists of property west of SR-70 near the Olivehurst Detention Basin and Clark Lateral as well as property north of Best Slough and adjacent to the Sleep Train Amphitheater. Ms. Hofman individually owns an approximately 785 acre ranch east of SR-65 and north of Best Slough.

The primary concern continues to be the adequacy of the impact analysis and evaluations of the hydraulics and hydrology of the entire Feather River set-back levee on the various drainage basin systems that impact Yuba County. These impacts include direct, indirect and cumulative effects of peak flow (including duration) surface elevations, velocities—cfs, weight, stresses, currents, backflows, under-seepage, impact of development and all-year drainage, in addition to the wet season.

Also of specific concern to Hofman Ranch is the inadequate review regarding adverse impacts on the Western Interceptor Channel (Canal) (WPIC). Apparently, the WPIC was originally constructed sometime in the 1930's. The specific purpose of its design and construction has not been verified. While the DEIS notes the WPIC was constructed as part of the SRFCP, there is no reference or citations as to when it was

originally built and the fact that it was a lateral with two levees of equal dimensions that protected both property west of the west levee and east of the east levee. The DEIS states that flows in the WPIC are derived from Reeds and Hutchison Creeks, and Best Slough, and that the WPIC also receives backwater from the Bear River. No mention is made of the Clark Lateral, Olivehurst Interceptor Canal and the Olivehurst Detention Basin, all contributing, not only to flood (high water flows), but also drain water and storm run-off from the residential development. The original purpose and design of the WPIC was apparently for flood control purposes only. The deposit of drain water in the WPIC dilutes its capability to channel flood flow.

There apparently is no authentication of the design capacity of the canal and the channel from its northern border to the Bear River and no entity monitors the flow.

It is also of concern that the DEIS is written as a fait accompli regarding the TRLIA preferred alternative of a new full set-back levee. It is acknowledged that TRLIA has already decided on the preferred alternative and has proceeded as if Section 408 permission and a Section 404 permit are a foregone conclusion. The primary data relied upon for the DEIS is generally by the TRLIA engineering firm, the advocate for the project. For example, Appendix C-1 appears to be a 2006 analysis prepared by MBK, the TRLIA engineers. Additionally, much of the DEIS appears to be heavily influenced by TRLIA input, also strongly advocating a position of support for its preferred alternative. The public interest requires an independent and or peer review of the basic assumptions and factual data pushing computer modeling of the hydraulics and hydrology. What is needed is a check and balance on the conclusions of TRLIA.

The bottom line of Sections relating to Surface and Groundwater Hydrology and Geomorphology (Section 3.3), Growth-Inducing Effects (Section 4.1), and Cumulative Effects (Section 4.2), is that the preferred alternative will facilitate and encourage urban growth and remove approximately 800 acres of agricultural lands from production to a significant and substantial degree. Hofman Ranch is an active farming and ranching operation directly impacted by TRLIA actions and is vitally interested in the USACOE analysis.

Conversion of agricultural land, with its highly permeable ground, does not generate off-site drainage problems. Highly impermeable ground cover will substantially increase drainage and storm flows in tributary creeks, sloughs, laterals and channels/canals feeding into the Yuba River, Bear River, Western Pacific Interceptor Channel, and Feather River. Notwithstanding the assertions on pg. 3.3-8, of the DEIS regarding downstream impacts, the fact is that the preferred alternative, in conjunction with the new Bear River set-back levee, will increase peak flows in the Feather River downstream of the set-back levee; increase water surface elevation at the confluence of the Feather and Bear River; and increase the downstream floodwater flows in high water circumstances, which in turn will increase flood stage elevations and back-up flow in the WPIC. When combined with the substantial residential development contemplated by Yuba County, cumulative impact of increased drainage, storm run-off and high/water

flood flows create a concern that back-flow will be forced up the Western Pacific Interceptor Channel and inundate Hofman Ranch property.

It is of concern that the adverse impacts of drainage from the Linda Drain, Olivehurst Drain, Olivehurst Interceptor Canal, Clark Slough and Clark Slough Lateral, Reeds Creek, Hutchison Creek, Best Slough and South Dry Creek have not been monitored nor adequately analyzed with respect to cumulative impacts on flood flows on the Feather River and shifting of flood risk on properties outside the Plumas Lake Specific Plan ring levees. It has been stated that the preferred alternative will allow a higher volume of flow for a longer period of time down the Yuba River and dump into the Feather River. This increase flowage will undoubtedly adversely impact the choke-point south of the project and force flow to either Sutter County or back up into the Bear River and thence into the WPIC.

Given the experiences gained from living through the high water events in the 1960's, 1970's, and particularly with 1986 and 1997 flood events, it would seem the reliance on the so-called "1957 design profile" is outdated and an anachronism in conducting a relevant analysis today, particularly in light of global warming and rise in sea levels. If the 1957 profile is outdated, then it should be acknowledged and addressed now! This point is amplified by the comments in DEIS that state:

Having the FRLRP Segment 2 levee provide a 200-year level of flood protection could represent an unacceptable transfer of flood risk to adjacent or downstream levee districts because of the reduction in frequency in which flood waters enter the RD 784 area. This would potentially create some degree of risk that flood water may be redirected to another basin upstream or downstream of the protected area [DEIS, P. ES-5].

It should be understood that TRLIA is a local joint power authority consisting of Yuba County and RD 784 and does not include Yuba County Water Agency or any other Reclamation District. Its purpose is to create a local flood control project by constructing essentially a ring levee system around a residential development area commonly referred to as the Plumas Lakes Specific Plan. References to the TRLIA project as an integral part of a well-analyzed and well-planned system-wide flood control project is misplaced. This issue will be exacerbated when efforts are undertaken to define areas of benefit for imposing a benefit assessment district to try to impose special fees and taxes to support the operations and maintenance of the TRLIA Project.

The DEIS attempts to deflect the point that this is a local flood control project, separate from the larger SRFCP, by asserting that federal and state permits are required and that those jurisdictions continue to be "involved." The response begs the issue: Is this a local flood control project or an integrated part of a system-wide effort such as the System Evaluation Project and the Yuba Basin Project, which will include a General Re-Evaluation Project, as well as Yuba County Water Agency actions? There is no question

this is a local flood control project to protect a specific area of residential development on agricultural land.

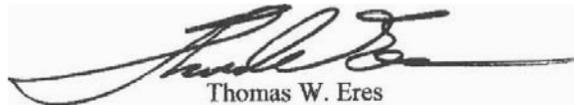
The DEIS regurgitates the TRLIA refrain that while the current new construction on the substantial portion of the levee that will be the set-back levee, does not require federal authorization prior to completion of the NEPA process, and they would not undertake such work that was not in full compliance with applicable laws and regulations. The fact is, without a NEPA review prior to evaluation of Section 408 permission and a Section 404 permit, the TRLIA is constructing "nothing more than a well-engineered pile of dirt," as stated by a member of the Central Valley Flood Protection Board, unless a decision has virtually already been determined by the USACOE, the piecemeal approach by TRLIA is inappropriate and potentially pressures the NEPA evaluation.

Section 3.16 regarding Socioeconomics and Environmental Justice needs to be re-evaluated in terms of who is and who is not protected by the local flood protection project, and not just limited to the number of residents in a limited area.

It is, therefore, incumbent for the DEIS to set aside TRLIA advocacy for their project and for the USACOE to truly conduct an independent, neutral and detached analysis of the cumulative impacts of substantial modifications to the existing Feather River levee by creation of an entirely new levee.

Thank you for the opportunity to provide these comments.

Very truly yours,



Thomas W. Eres

cc: Hofman Ranch
Frances Hofman

Comment 4A: Letter Summary and Impacts to Hydraulics and Hydrology

Response: This comment is primarily a summary of issues that are addressed in greater detail later in the comment letter. Responses to the more detailed individual comments are provided below. However, a general response to concerns regarding "... the adequacy of the impact analysis and evaluations of the hydraulics and hydrology of the entire Feather River set-back levee ..." is provided here.

The impacts to surface and groundwater hydrology, hydraulics, and geomorphology of the Applicant Preferred Alternative are described in Section 3.3.2.3 of the EIS. A hydraulic and hydrologic analysis was prepared by MBK Engineers (Appendix E of this EIS) to assess the effects of the Applicant Preferred Alternative on upstream and downstream flow volumes and water surface profiles during flood events. This analysis was used to support the assessment of hydraulic and hydrologic impacts in the EIS. As described on page 1 and shown in Figure 1 of the analysis (to be identified in the remainder of this response as "Appendix E"), the hydraulic model encompasses the Feather River between Oroville Dam to the north and the confluence with the Sacramento River in the south, a portion of the Sacramento River, and tributaries feeding the Feather River including Honcut Creek, the Yuba River, and the Bear River. Tributaries to the Bear River, including Dry Creek, Yankee Slough, and the Western Pacific Interceptor Canal (WPIC), are also included. Storm event parameters used in the model are based on model inflows developed by the Corps (see page 6 of Appendix E). Standard hydrologic and hydraulic methods were used in model development and application, and experienced hydraulic engineers conducted the analysis.

Although modeling results were generated for a variety of flood events, the hydraulic and hydrologic analysis in Appendix E focuses on effects during the 1-in-100 and 1-in-200 annual exceedance probability (AEP) events. During these peak flows, data are provided on flow volumes and elevations of the post setback levee implementation flood stage. Policy related to EO 11988 requires that with and without project conditions be evaluated for events larger than the design events. It should be noted that although the Corps has developed 1-in-500 AEP event flood profiles for the Lower Feather River Floodplain Mapping Study, it is difficult to assess actual flood effects in the Marysville/Yuba City and RD 784 areas during a 500-year event due to upstream conditions. During a 500-year flood event there would be numerous instances of levee overtopping and levee failures along the Feather River between Oroville Dam and the Marysville/Yuba City area. Many of the sites of levee overtopping/failure would result in inundation of agricultural land and floodplains that are planned for inundation during extreme flood events. Although it is certain that inundation of these upstream areas would reduce floodstage elevations downstream, it is unclear what level of flood stage reductions would occur. Given this uncertainty, it is the judgment of the Sacramento District's Chief of Hydrology Design Section that attempts to quantitatively model the extent of inundation in the Marysville/Yuba City and RD 784 areas during a 1-in-500 AEP flood event would be unreliable.

As identified on page 8 of Appendix E and Section 3.3.2.5 of the EIS, the Levee Strengthening Alternative retains the existing levee configuration in the project area, and in effect, represents a continuation of existing conditions. Therefore, implementation of the Levee Strengthening Alternative would not alter existing conditions relative to hydraulics, hydrology, flood stage elevations, flood stage flow volumes, weight of water passing through waterways, channel capacity, or other factors.

"AP Impact 3.3-a" and "ISL Impact 3.3-a" in the EIS evaluate the effects on flood hydrology upstream of the Applicant Preferred Alternative and the Intermediate Setback Levee Alternative, respectively (see "Local and Upstream Effects" under both impact discussions). In both cases, the presence of a setback levee results in reduced flood stage elevations upstream of Star Bend in the range of 1.0 to 1.6 feet depending on the severity of

the flood event (1-in-100 AEP or 1-in-200 AEP). These reductions in flood stage elevations would result in a beneficial effect relative to hydraulics, hydrology, flood stage flow volumes, weight of water passing through waterways, channel capacity, and other factors. These benefits extend to the confluence with the Yuba River and upstream into the Yuba River channel (see Tables 7 and 8 in Appendix E).

The effects of the Applicant Preferred Alternative and the Intermediate Setback Levee Alternative on flood hydrology downstream of the setback area are addressed as well (see the section, “Downstream Effects,” under both impact discussions). As identified in the EIS, increases in downstream flood stage elevation associated with the two setback levee alternatives would range from 0.02 foot (0.24 inch) to 0.08 foot (0.96 inch) depending on the alternative and severity of the flood event (1-in-100 AEP or 1-in-200 AEP). These increases would only occur in the Feather River segment between the downstream end of the setback levee and the Bear River. Downstream of the Bear River, there would be no measurable increase in flood stage elevation in the Feather River. As shown in Tables 9 and 10 in Appendix E, increases in downstream flood flow volumes would range from 0.02% to 0.62% depending on the alternative and severity of the flood event.

The impact discussions under “AP Impact 3.3-a” and “ISL Impact 3.3-a” also address the potential future influence of the planned Forecast-Coordinated Operations (F-CO) on flood control operations for the Yuba and Feather Rivers. Implementation of the planned F-CO of Lake Oroville and New Bullards Bar Reservoirs included as part of the Yuba-Feather Supplemental Flood Control Project (Y-FSFCP) would reduce any measurable increases in downstream flood-stage elevations identified in the hydraulic modeling (see the section, “Downstream Effects,” under both impact discussions). For these reasons, the identified impacts would not exceed the applicable significance criteria provided in Section 3.3.2.1 in Section 3.3, “Surface and Groundwater Hydrology and Geomorphology”; i.e., “result in increased exposure of persons or private property to flood hazards.” Therefore, no significant adverse effect on regional or local hydrology would occur for either setback levee alternative. This less-than-significant conclusion would apply to all areas related to flood stage elevations, including weight of water on levees and potential to generate backflow where rivers converge.

The comment does not specify what aspect of the analysis is not considered adequate, so it is difficult to identify additional information that could clarify the results of the analysis for the commenter. Impacts evaluated were for the large flood events that would be expected under the 1-in-100 AEP and the 1-in-200 AEP scenarios. Flows associated with all-year drainage are small enough to remain within the Feather River channel and would not be influenced by implementation of the Applicant Preferred Alternative or other action alternatives.

Comment 4B: History and Operation of the Western Pacific Interceptor Canal

Response: The commenter states that the review of adverse impacts on the WPIC in the DEIS is inadequate, but does not specify what aspect of the analysis is inadequate, so it is difficult to identify additional information that could clarify the results of the analysis for the commenter.

Although the WPIC is part of the Sacramento River Flood Control Project (SRFCP), the exact construction history of the WPIC and its levees is not known. Therefore, information on this topic is not included in the EIS. Although the WPIC west levee and the east levee below Best Slough are part of the SRFCP, there are no SRFCP levees upstream of Best Slough on the east side of the WPIC.

With regard to the origin of flows entering the WPIC, the EIS has been modified to include the other watercourses that also drain to the WPIC. The text describing flows in the WPIC under Section 3.3.1.1 of the EIS, “Hydrology and Flood Control,” have been edited to read: “Water enters the WPIC from several sources. The Olivehurst Detention Basin stores interior runoff from south Olivehurst before releasing it to the WPIC. When water levels reach certain heights in the detention basin, pumps are automatically activated which begin to drain the detention basin into the WPIC. Clark Lateral drains into the Olivehurst Detention Basin. The Linda Drain and the Olivehurst Interceptor Canal convey flows to Reeds Creek, and the flows in the WPIC are derived primarily from Reeds and Hutchinson Creeks and Best Slough.”

The purpose of the WPIC is to collect waters from a portion of the east foothills watershed and divert that runoff to the Bear River. This includes stormwater runoff from areas in the watershed near the WPIC. Although some entry points of stormwater runoff may have been modified since the original construction of the WPIC (e.g., construction of the Olivehurst Detention Basin), the purpose of collecting and transferring surface runoff to the Bear River has not changed.

Given that the WPIC is intended to collect and convey surface runoff, including stormwater flows, and based on other statements in the comment letter, it is assumed that the assertion in the comment that the "... deposit of drain water in the WPIC dilutes its capability to channel flood flow ..." is directed towards stormwater flows generated by recent nearby development and not stormwater flows generated by agricultural and natural lands which have entered the WPIC since its construction. It is important to note that local jurisdictions are required to address the impacts of development on storm drainage and flood control systems to avoid effects that could lead to localized flooding or that could contribute to regional flood effects during severe storm events. This topic is addressed as part of the growth-inducing and cumulative impacts analysis in the DEIS in the discussion of "Water Supply, Water Quality, and Drainage," specifically in Section 4.1.2.5, "Hydrology, Water Supply and Quality, and Drainage," and in Section 4.2.4.3, "Water Resources and River Geomorphology." An example of local jurisdictions addressing storm drainage is Yuba County not allowing development projects to contribute additional runoff to the local drainage system (Boeck, pers. comm., 2008). Unless there is a downstream Reclamation District (RD) 784 detention facility to collect runoff, stormwater runoff must be detained on-site. If on-site detention is required, the County typically requires flows to be detained for 24 hours during a 100-year storm event with no minimum levee height requirement. The County reviews development projects to ensure that all applicable standards are met and to assess consistency with RD 784 drainage requirements. The County also requires developers to have their projects reviewed by RD 784 engineering staff to determine the need for on-site detention facilities. The County is also currently updating its stormwater improvement standards (i.e., the County's method for calculating the required sizing of detention facilities) (Boeck, pers. comm., 2008). Based in part on the required controls on stormwater releases from development, overall flows in the WPIC from these sources are small. As discussed in response to Comment 4C below, flood stage elevations in the WPIC are influenced more by backwater from the Bear River than water flowing into the WPIC from other sources. The "... deposit of drain water into the WPIC ..." from surface sources does not compromise its ability to channel flood flows. It should also be noted that the hydraulic/hydrologic modeling conducted for the project, which includes the WPIC, includes inflows from all sources feeding the WPIC. Therefore, the modeling results account for the deposit of drain water into the WPIC.

Comment 4C: Design Capacity of the Western Pacific Interceptor Canal

Response: The 1957 design discharge for the WPIC is 5,000 cubic feet per second (cfs) from the Olivehurst Detention Basin to Best Slough and 10,000 cubic feet per second (cfs) from Best Slough to the Bear River. Recent hydrology studies conducted as part of overall TRLIA/RD 784 flood protection program (of which the Segment 2 levee repairs are a part) have determined that the 200-year discharge in the WPIC is 7,600 cfs from Best Slough to the Bear River. This is based on inflows from all sources, including the sources indicated by the commenter in Comment 4B above. Therefore, the 1957 design discharge exceeds the 200-year event discharge.

It should be noted that backwater entering the WPIC from the Bear River has a significantly greater influence on flood elevations on the WPIC than inflow from other sources. During high water events, water surface elevations along the WPIC essentially represent backwater effects from the Bear River, with inflows from surface sources adding a relatively small volume of water above the Bear River backwater volume. It should also be noted that recent modifications along the Bear River Floodway (the Bear River Setback Levee) have lowered the flood elevations for the 200-year flood by approximately 1.5 feet in the Bear River and upstream into the WPIC. Flood elevation reductions for smaller floods would be slightly less.

The commenter correctly states that "no entity monitors the flow" in the WPIC (i.e., there are no gauging stations along the WPIC). If gauging stations were present on the WPIC, it would be difficult to interpret "flow data" in

the WPIC during high water events due to the interaction of backwater from the Bear River entering from the south and surface water entering from various sources along the WPIC.

Comment 4D: Independent Review and Consideration of Alternatives

Response: The EIS provides an independent review of all project alternatives by the Corps, and the Corps has made no decision regarding the selection or approval of an alternative. The DEIS clearly identifies TRLIA's proposed setback levee alternative as the "Applicant Preferred Alternative" and does not indicate that it is a Corps preferred alternative or the Corps' proposed action. The DEIS identifies that TRLIA would be initiating construction of the Applicant Preferred Alternative prior to the NEPA process being complete and Corps approval being provided. The DEIS also identifies the potential consequences of this approach, stating in the first paragraph on Page 2-15:

TRLIA recognizes that this approach carries the risk that the Corps permissions may not be granted as requested or may not be granted according to the timing assumed in the schedule, and has proposed to assume the risk rather than delay the start of construction until fall 2008, ...

Therefore, the DEIS is not written as a "fait accompli" as asserted by the commenter, but provides a thorough analysis of the project alternatives included in the DEIS consistent with the requirements of NEPA, supports a Corps decision to select and approve any of the alternatives evaluated, and does not limit a Corps decision to deny approvals for any alternative and implement the No-Action Alternative.

Regarding the issue of independent review of data, TRLIA engineers have engaged the Corps throughout the design process regarding hydraulic/hydrologic modeling. TRLIA and the Corps have been coordinating on the hydraulic/hydrologic model since 2005, collaboratively refining and calibrating the model as various elements of the overall TRLIA/RD 784 flood protection program have been designed and implemented. The hydraulic model used for project analysis, the HEC-RAS model, was developed by the Corps. The model was refined and recalibrated to assess the effects of FRLRP alternatives as described in Appendix E of the EIS to better reflect local conditions. This refinement and recalibration was conducted in coordination with the Corps, with the model being reviewed by staff in Corps Sacramento District Hydraulic Design Section. Other elements of Segment 2 of the FRLRP have also been discussed and reviewed by the California Department of Water Resources (DWR) and the Central Valley Flood Protection Board (CVFPB). In addition, two administrative versions of the DEIS were reviewed and commented on by Corps regulatory, planning, engineering, and legal staff at the District level, Division level staff, and Corps Headquarters staff in Washington D.C. prior to release of the DEIS to the public. The EIS is the Corps' document and the analyses and conclusions of the DEIS, and the data supporting those analyses and conclusions, have been thoroughly reviewed by the Corps.

Comment 4E: Urban Growth and Relationship to the Hofman Ranch

Response: As described in Section 4.1.1, "Fostering Economic Growth," and Section 4.1.2, "Removing Obstacles to Growth – Flood Protection," in the DEIS, implementation of levee repairs in Segment 2 of the FRLRP does not encourage urban growth, as suggested by the commenter, but removes flood protection as an obstacle to growth. This effect is not exclusive to the Applicant Preferred Alternative, but would result from all action alternatives that repair the Feather River left bank levee. The environmental effects of removing flood protection as an obstacle to growth in the area protected the FRLRP Segment 2 levee are fully disclosed in Section 4.1.2 of the DEIS.

Assuming an action alternative is authorized by the Corps and implemented by TRLIA, neither the Corps nor TRLIA has authority to direct land use decisions or development in the flood protected area. Land use decisions are the authority of appropriate local jurisdictions, in this case, Yuba County. Planning for, approving, or denying land use proposals that might result in the conversion of agricultural land to another use, or might affect the Hofman Ranch, are decisions that are subject to the authority of Yuba County.

Comment 4F: Potential Increases in Surface Runoff and Feather River, Bear River, and WPIC Peak Flows

Response: The commenter suggests that the cumulative impacts analysis of the DEIS does not address the combined effects of surface runoff and stormwater runoff from nearby communities that contribute to stormwater flows in the Feather-Yuba River basin. As described above under response to Comment 4B, local jurisdictions are required to address the impacts of development on storm drainage and flood control systems to avoid effects that could lead to localized flooding or that could contribute to regional flood effects during severe storm events.

These policies support the cumulative impact conclusion under Section 4.2.4.3, “Water Resources and River Geomorphology,” in the DEIS (see Page 4-36) regarding increased runoff due to increased impervious surfaces from development:

However, these developments are required to mitigate these increases in runoff through the construction and operation of detention basins.... Any increase in runoff volumes from these developments that reaches the surrounding rivers during storm events would be a minor incremental contribution to river flows and would not result in a significant cumulative impact.

Therefore, although regional development may result in a cumulative increase in impervious surfaces, and a related increase in stormwater runoff could potentially occur, mitigation requirements for individual projects would prevent a substantial cumulative increase in stormwater flows into the nearby river systems. No significant cumulative adverse effect on flood control systems would occur. In addition, the SRFCP includes Corps-specified design capacities for channels in the project area. During severe storm events, the contribution of runoff to the Yuba River basin from pumping and other uncontrolled runoff is negligible when compared to the volume of water that the system is designed to handle. Therefore, not only are local jurisdictions required to mitigate the impacts of development on storm drainage and flood control systems, the effects of pumping during severe storm events do not result in cumulatively considerable contributions to the system.

With regard to the potential effects of the project on water surface elevations downstream of a Segment 2 setback levee, the DEIS identifies some slight increases in Feather River flood flows and water surface elevations downstream of the proposed setback levee location under the Applicant Preferred Alternative and the Intermediate Setback Levee Alternative (see the discussions under “AP Impact 3.3-a” [pages 3.3-7 through 3.3-9] and “ISL Impact 3.3-a” [page 3.3-14] in the DEIS). However, increases in flood surface elevations are small, ranging from 0.02 to 0.08 feet depending on the alternative and size of the modeled flood event (100-year or 200-year), and only occur from the southern end of the setback levee area to the confluence with the Bear River. There are no measurable increased in flood stage elevations downstream of the Bear River. These increases were found to not be significant in the DEIS. In addition, the projected increases in flood stage elevation identified in the DEIS would be reduced by implementation of the F-CO.

The hydraulic/hydrologic modeling gives no indication that implementation of a setback levee alternative would result in increased floodstage elevation on the Bear River or the in the WPIC. The commenter contends that the Bear River setback levee might contribute to increased flood stage elevations in the WPIC. However, the Bear River Setback Levee, which is now complete, is projected to lower flood elevations on the Bear River, and consequently on the WPIC, by as much as 1.5 feet compared to conditions before the Bear River Setback Levee was constructed.

Comment 4G: Drainages Contributing Flows and Changes in River Flows

Response: Hydraulic/hydrologic modeling for the Feather-Yuba Basin, which was used for the EIS analysis, included flows from the entire watershed and all watercourses in the basin, including those listed in the comment. Therefore, the cumulative effect of flows from these sources is represented in the EIS impact analysis.

See response to Comment 4F above regarding the potential for setback levee alternatives to alter floodstage elevations. The two setback levee alternatives evaluated in the EIS would result in no measurable effect on flood stage elevations along the Feather River in Sutter County, on the Bear River, or in the WPIC.

Comment 4H: 1957 Design Profile

Response: The 1957 design profile is the authorized design criteria for the SRFCP, and it was developed considering the SRFCP as a system of flood protection. Any proposed modifications to the SRFCP, such as the Applicant Preferred Alternative or the Intermediate Setback Levee Alternative, must be evaluated against this authorized design condition. The EIS does not advocate nor evaluate any changes in the authorized design criteria. The evaluation of any changes to the authorized design criteria for the SRFCP will be the subject of a larger study being undertaken by DWR.

The commenter quotes from the EIS on the topic of transference of flood risk; however, the commenter does not provide the complete text that is part of the larger discussion under Section ES.5, “Need for Improved Flood Protection.” The third paragraph in the following excerpt from Section ES.5 of the EIS addresses the topic of transference of flood risk. The two preceding paragraphs in Section ES.5 are included below for additional context.

In the reach of the Feather River encompassing FRLRP Segment 2, there is no substantive difference between the 200-year water surface elevation and the “1957 design profile” (see Appendix E in this EIS, October 17, 2007, Technical Memorandum, Figure 4). This is because the “1957 design profile” was computed before the construction of Oroville and New Bullards Bar dams and before the enlargement of the Feather River channel that has occurred over the last half century from the erosion of historic hydraulic mining debris. Due to the increased management of flows from upstream reservoirs and increased size of the Feather River channel from mining debris washing downstream, the water surface elevation corresponding to the “1957 design profile” in the FRLRP Segment 2 area is almost the same elevation that occurs when Feather River flow volumes match the 200-year event. Therefore, for repairs to the FRLRP Segment 2 levee to meet all engineering and design standards at the “1957 design profile”, the levee must, in effect, also provide a 200-year level of flood protection.

The FRLRP Segment 2 levee must also provide a 200-year level of flood protection to comply with the Central Valley Flood Protection Act of 2008 (Act) passed by the California legislature. Because of the potentially catastrophic consequences of flooding in the California Central Valley, the Act recognizes that the Federal government’s current 100-year flood protection standard is not sufficient to protect urban and urbanizing areas within flood-prone areas throughout the Central Valley and declares that the minimum standard for these areas is a 200-year level of flood protection. Due to existing development in the area protected by the FRLRP Segment 2 levee (e.g., approximately 4,000 homes), the 200-year level of flood protection required by the Central Valley Flood Protection Act of 2008 applies to this area.

Having the FRLRP Segment 2 levee provide a 200-year level of flood protection could represent an unacceptable transfer of flood risk to adjacent or downstream levee districts because of the reduction in frequency in which flood waters enter the RD 784 area. This could potentially create some degree of risk that flood water may be redirected to another basin upstream or downstream of the protected area. The question is whether the impacts of such risk shifting are significant and warrant compensatory measures outside of RD 784. The existing FRLRP Segment 2 levee has been determined to have geotechnical deficiencies and the correction of levee deficiencies that could cause a levee failure at less than the “1957 design profile” must be completed. These actions do not represent a transfer of risk or an unacceptable impact to the system because the system was intended to carry the “1957 design profile.” An example of a similar condition would

be erosion that has substantially damaged a levee. This erosion must be repaired so the levee performs to its original design standards and does not represent a transfer of risk or an unacceptable change from the existing condition. In addition, as discussed above, the planned design standard of protecting against the 200-year water surface elevation is not different from protecting against the “1957 design profile.” Therefore, the decreased risk of levee failure does not affect the intended performance of the FRLRP Segment 2 levee or other parts of the SRFCP. The decreased risk of levee failure is consistent with the design intent of the SRFCP, which did not rely on upstream levee failures to protect downstream floodplains.

Comment 4I: Responsibilities for Flood Protection in the Reclamation District 784 Area

Response: The EIS recognizes that TRLIA is a joint power authority between Yuba County and RD 784. The commenter is correct that the Yuba County Water Agency is not part of TRLIA. TRLIA was formed to finance and implement a program of levee repairs for the existing levee system that surrounds RD 784. This levee system protects the existing communities of Linda and Olivehurst, as well as developing areas such as Plumas Lake and North Arboga.

The levees of RD 784, which TRLIA was formed to repair, are a part of the SRFCP. The SRFCP is a system-wide flood protection project. Any modifications to this system must be evaluated to determine the impacts to the system as a whole. The EIS presents the results of this evaluation.

Maintenance of the existing RD 784 levee system along with repairs to that system is required to sustain the flood protection provided. This maintenance requires financial resources, which RD 784 obtains through assessments on properties provided flood protection. RD 784 is evaluating appropriate means to modify its fee collection system to better address the level and geographic area of flood protection provided by the improved system. The formation of an assessment district is being considered and will be the subject of public workshops and an election before it is implemented. However, modifications to the RD 784 fee collection system are not an issue relating to effects on the environment that must be addressed in a NEPA analysis.

Comment 4J: Relationship of the FRLRP Segment 2 Project to the Sacramento River Flood Control Project

Response: The commenter generally suggests that the proposed FRLRP is being designed and evaluated without consideration for its place in the planning and regulatory framework that encompasses the regional flood control system, which has been formed over decades by the Corps, DWR, the CVFPB, and at the local level by entities such as the Yuba County Water Agency and RD 784. To the contrary, the FRLRP has been designed based on careful study of the regional flood control system, and the EIS has been subject to review by federal and state agencies with direct roles in permitting the project.

The FRLRP Segment 2 work is a locally implemented project, but it implements actions that are considered part of, or are integrated with, system-wide efforts. On a more local level, the FRLRP Segment 2 levee repairs are one of the last elements of the overall RD 784 levee repair program. As described under Section 1.8.1 of the EIS, portions of the planned Yuba Basin Project work overlap with flood system improvements planned and/or implemented by TRLIA (see Sections 1.8.1 and 1.8.2 of the EIS). Although the FRLRP Segment 2 levee repairs evaluated in the EIS, which would be implemented by TRLIA, are scheduled to be initiated prior to the General Re-evaluation Report (GRR) submittal date, it is expected that these flood protection improvements will be found to be consistent with the recommendations contained in the GRR. The Feather River levee in the study area for Segment 2 of the FRLRP is part of the SRFCP. As discussed under Section 1.5.3 of the EIS, federal and state agencies with direct roles in permitting the project continue to be involved in review and approval of application materials. In particular, the CVFPB enforces standards for the construction, maintenance, and protection of flood control facilities in the Central Valley. DWR oversees levee operation and maintenance. Project levees in California must meet standards for design and construction specified by the Corps in Engineer Manual 1110-2-

1913 and in the 23 California Code of Regulations (CCR) Section 120. The entire FRLRP, including the Segment 2 project, has been designed to be in compliance with all applicable standards, programs, and practices of the local, state, and federal agencies with responsibilities related to the SRFCP.

The FRLRP has been designed to be in compliance with all applicable standards, programs, and practices of the local, state, and federal agencies with responsibilities related to the SRFCP. Furthermore, federal and state agencies have reviewed the EIS and continue their respective responsibilities for overseeing the permitting and certifying this flood control project.

The commenter again implies that flood protection improvements in the RD 784 area are intended to protect a specific area of residential development. This is not the case. The RD 784 flood protection improvements are intended to provide protection for the entire RD 784 area, including the existing communities of Linda and Olivehurst and thousands of acres of agricultural land.

Comment 4K: Environmental Review under the National Environmental Policy Act

Response: See response to Comment 4D above. The EIS provides an independent review of all project alternatives by the Corps, and the Corps has made no decision regarding the selection or approval of an alternative. The DEIS clearly identifies TRLIA's proposed setback levee alternative as the "Applicant Preferred Alternative" and does not indicate that it is a Corps preferred alternative or the Corps' proposed action. The DEIS identifies that TRLIA would be initiating construction of the Applicant Preferred Alternative prior to the NEPA process being complete and Corps approval being provided. The DEIS also identifies the potential consequences of this approach, stating in the first paragraph on Page 2-15:

TRLIA recognizes that this approach carries the risk that the Corps permissions may not be granted as requested or may not be granted according to the timing assumed in the schedule, and has proposed to assume the risk rather than delay the start of construction until fall 2008, ...

TRLIA, and the State of California (which is providing a majority of the funding for implementation of the Applicant Preferred Alternative) accept the financial risk of initiating construction of the Applicant Preferred Alternative prior to receiving 404 and 408 authorizations from the Corps. TRLIA and the State are accepting this risk in order to have the possibility of reducing flood risk in the portion of RD 784 protected by the Segment 2 to levee in the shortest timeframe possible. The DEIS provides a thorough analysis of the project alternatives included in the DEIS consistent with the requirements of NEPA, supports a Corps decision to select and approve any of the alternatives evaluated, and does not limit a Corps decision to deny approvals for any alternative and implement the No-Action Alternative.

Comment 4L: Socioeconomic Effects of the FRLRP Segment 2 Project

Response: A Socioeconomics and Environmental Justice analysis covering a broader geographic area, which is what the commenter appears to be requesting, is provided in the Cumulative Impact analysis in the DEIS. See Section 4.2.4, "Cumulative Impact Analysis," pages 4-51 and 4-52 in the DEIS, which is now labeled as Section 4.2.4.12, "Socioeconomics and Environmental Justice," in this FEIS. Language has been added to this section to better clarify that flood protection benefits provided by repair of Segment 2 of the Feather River levee will equally benefit people of all socioeconomic conditions and ethnic backgrounds residing and working in the flood protected area.

Comment 4M: The Corps' Review of the FRLRP Segment 2 Project

Response: As indicated in the responses above, particularly the responses to Comments 4D and 4K, it is believed that the EIS provides the "... independent, neutral, and detached analysis ..." suggested by the commenter. No further response is required.

August 26, 2008

John Suazo
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SU: Draft EIS TRLIA Feather River Levee Repair Project, Segment 2.

The South Yuba River Citizens League (SYRCL), Friends of the River (FOR), and the Sierra Club write to comment on the Draft EIS 408 Permission and 404 Permit to Three Rivers Levee Improvement Authority for the Feather River Levee Repair Project, California, Segment 2. We thank you for granting an extension for submission of these comments.

SYRCL, FOR, and the Sierra Club participated in the Yuba-Feather Working Group (YFWG), convened after the 1997 flooding in this region. We have written letters to DWR and others to affirm our support of the Feather River Levee Setback and have requested funds from Proposition 1E (the Disaster Preparedness and Flood Prevention Bond Act of 2006) for this project.

First, we commend TRLIA, DWR, the Corps, YCWA, and other partners for their efforts to implement and fund this almost six mile levee setback on the Feather River as an alternative to a “re-build in place” project. The hydrologic, public safety, ecosystem and other benefits of the levee setback clearly demonstrate the Feather River levee setback project as a model structural flood management project, with:

- ✓ *Substantial regional flood benefits and maximum flood reduction benefits to RD 784.*
- ✓ *Improved public safety, replacing a currently deficient levee with a new and more structurally sound levee.*
- ✓ *Tremendous riparian habitat restoration opportunity with up to 1,550 acres of floodplain lands reconnected with the river.*
- ✓ *An opportunity for natural riparian vegetation recruitment and anadromous and native fish foraging and rearing habitat.*
- ✓ *Long term community benefits with increased park and open space land.*

We ask you to review our letter written to DWR in February 2007 (*Attachment A*) in support of this project for more details.

Additional Comments and Areas of Concern

Clearly the levee setback alternative creates an opportunity for significant areas of former floodplains to be reconnected with the Feather River. Such a restored connection has the potential to provide substantial benefits for terrestrial and aquatic species: essential restoration during a time of widespread riparian habitat losses and threatened populations (i.e., Chinook salmon runs). It is essential that this opportunity to reconnect river and floodplains is considered in advance of project implementation with the project committing to exceed typical

mitigation efforts and designate a project outcome goal of hydrologically reconnecting the floodway with adjacent floodplains. For example, we understand that material will be removed from a borrow pit in 2009 for project levee construction, and yet there are no plans at this time to remove the material in conjunction with consideration of re-creating hydrologically connected floodplain habitat. Clearly *the time is now* to think comprehensively and with multi-objectives that include ecosystem benefits in project planning. For more details about specific actions that can affect ecological functions in the setback floodway area, we refer you to Phil Williams and Associates (PWA) 8/1/08 Feather River setback geomorphic assessment memo to GEI and TRLIA with the subject "preliminary concepts for floodplain enhancement actions." PWA identifies a series of potential enhancement actions that would enable increased inundation of the site and invigorate geomorphic and ecological functions. Such floodplain inundation and access has been demonstrated in the scientific literature to substantially benefit aquatic species, including juvenile salmon (see Sommer et al 2001, Jeffres 2008).

Our organizations have significant concerns with the new development proposed for construction behind these Feather River levees -- for there is no federal, state or local government floodplain management regulatory framework for developments in protected deep floodplains designed to insure against flood losses, minimize flood damages and releases of toxic substances, or ensure adequate emergency planning in the event of flooding. It is clear to our organizations that if floodplain development is going to occur in RD 784, then at the very minimum, flood management is best approached with time tested floodwater management methods that optimize ecosystem restoration and flood protection for communities at risk and compatibility with desirable improvements to the overall flood management system.

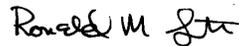
We ask that these concerns are considered in future environmental analysis and documents.

Please feel free to contact us if you have any questions.

Sincerely,



Katrina Schneider
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216 Main St., Nevada City, CA 95959, (530) 265-5961 x.212



Ronald Stork
Senior Policy Analyst, Friends of the River (FOR)
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Allan Eberhart
State Conservation Chair, Sierra Club
24084 Clayton Rd., Grass Valley, CA 95949

8/26/08 DEIS, Feather River Levee Setback

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ATTACHMENT A

February 7, 2007

Lester Snow
Director, CA Dept. of Water Resources
1416 Ninth Street, 11th Floor
Sacramento, California 95814



SU: Feather River Levee Repair Project – Support for Levee Setback

Dear Director Snow;

The South Yuba River Citizens League (SYRCL), Friends of the River (FOR), and the Sierra Club (all members of the Yuba Feather Workgroup) write now to express our **support of the Feather River Levee Setback**, as described in TRLIA's Draft EIR Alternative 2.

The Feather River Levee Setback provides the largest flood benefits for Reclamation District 784 (RD 784) simultaneous with maximizing floodplain restoration and other benefits. We commend TRLIA's levee setback alternative for its consistency with the Comprehensive Study statement:

*There are opportunities to widen selected reaches of the floodways to reduce constrictions and increase flow capacity. Reducing floodway constrictions along the lower Feather River would improve levee reliability in the Marysville-Yuba City urban area by reducing flood stage and could increase the opportunity for riparian habitat within the floodway. **The Sacramento and San Joaquin River Basins Comprehensive Study***

Broad Flood Relief Benefits

The Feather River levee setback project will provide significant flood management benefits to both Yuba and Sutter County residents including:

- The proposed setback provides more reliable protection for floodplain inhabitants by replacing a currently deficient levee with a new and more structurally sound levee moved back from the river and built on a better foundation (mostly the Modesto Formation instead of the natural levee and channel deposits that the current levee is built above).
- According to Draft EIR documents, the setback reduces high flow event flood elevations more than any other considered option, with almost two feet of reduced elevations upstream of the setback, and significant benefits for the communities of Marysville and Yuba City.

Unlike "build in place" levee strengthening projects, **the Feather River levee setback is a structural flood management approach that provides broad flood relief by actually lowering river stage**, benefiting communities on both sides of the river, as well as providing a small measure of additional floodplain storage in the overall system.

Beneficial Ecosystem and Other Attributes

The levee setback alternative creates an opportunity for over 1,500 acres of floodplain lands to reconnect with the Feather River. This setback can provide significant benefits for both terrestrial and aquatic species, especially if it commits to exceed typical mitigation efforts with the goal of hydrologically reconnecting the floodway with adjacent floodplains. Through such efforts, this setback can provide increased topographic and geomorphic diversity with a less constrained river system in dynamic equilibrium with its floodplain. DEIR documents state that natural recruitment of riparian

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species will occur rapidly and anadromous and native fishes will use the connected floodplain for foraging and rearing. The setback also allows for an overall decrease in erosion of surrounding levees and river banks. There are also long term community benefits associated with the increase in park and open space land adjacent to the river.

In conclusion, the hydrologic, public safety, ecosystem and other benefits of the levee setback clearly demonstrate the Feather River levee setback project as a model structural flood management project and a good opportunity to use Proposition 1E (the Disaster Preparedness and Flood Prevention Bond Act of 2006) funds for long term flood risk reduction. Our organizations do have significant concerns with the new development proposed for construction behind these Feather River levees -- for there is no federal, state or local government floodplain management regulatory framework for developments in protected deep floodplains designed to insure against flood losses, minimize flood damages and releases of toxic substances, or ensure adequate emergency planning in the event of flooding. We will address these concerns under a separate letter. Yet it is clear to our organizations that if floodplain development is going to occur in RD 784, then *at the very minimum*, **flood management is best approached with time tested floodwater management methods that optimize ecosystem restoration and flood protection for communities at risk and compatibility with desirable improvements to the overall flood management system.** The Feather River levee setback alternative is the only DEIR alternative that can provide such integrated multiple benefits.

Please feel free to contact us if you have any additional questions.

Sincerely,



Katrina Schneider
River Scientist, South Yuba River Citizens League (SYRCL)
216 Main St., Nevada City, CA 95959



Ronald Stork
Senior Policy Analyst, Friends of the River (FOR)
915 20th St., Sacramento, CA 95814



Allan Eberhart
State Conservation Chair, Sierra Club
24084 Clayton Rd., Grass Valley, CA 95949

Cc: Paul G. Brunner, P.E., Executive Director, TRLIA
FAX: 530 749-7312, pbrunner@co.yuba.ca.us

Comment 5A: SYRCL, FOR, and the Sierra Club Support Selection of the Applicant Preferred Alternative

Response: The Corps acknowledges the support expressed by SYRCL, FOR, and the Sierra Club for the Applicant Preferred Alternative and appreciates the comments and information provided by these organizations. The Corps will consider the comments and supporting information in selecting an alternative among those evaluated in the EIS and determining whether to grant the requested permissions to TRLIA under CWA Section 404 and Section 14 of the Rivers and Harbors Act of 1899 (i.e., “Section 408”).

Comment 5B: Reconnection of the Feather River to the Adjacent Floodplain

Response: The Corps acknowledges the comments addressing various benefits associated with reconnecting the Feather River and the adjacent floodplain. TRLIA has coordinated with the Corps to develop a conceptual wetland mitigation plan that will provide the basis to mitigate for impacts to waters of the United States from implementation of the Applicant Preferred Alternative. The proposed mitigation approach could also be applied to the Intermediate Setback Levee Alternative. The conceptual plan includes creation of approximately 20.1 acres of jurisdictional waters of the U.S. at the large borrow area adjacent to Messick Lake in the levee setback area. The plan includes the following statements that relate to the comments provided by SYRCL, FOR, and the Sierra Club:

Construction of the proposed floodplain drainage swale and removal of the existing levee after the proposed setback levee is complete would restore a hydrological connection between the Plumas Lake/Plumas Lake Canal/Messick Lake complex and the Feather River. The combined ... mitigation efforts would restore important physical and ecological floodplain processes in the levee setback area and thereby improve overall geomorphic and ecologic functions in the watershed. The mitigation effort would thus further the goals of the recently published Mitigation Rule by ‘restoring an outstanding and regionally significant aquatic resource based on rigorous and scientific analysis.’

The conceptual mitigation plan has been reviewed by Corps staff and has been incorporated into Section 3.6 of the FEIS, “Waters of the United States and Wetlands,” under “Mitigation Measure 3.6-a: Complete Section 404 Permit Process and Mitigate for Wetland Acreage Affected on a ‘No-Net-Loss’ Basis.”

Comment 5C: Floodplain Management and Flood Protection

Response: The Corps notes the concerns of the commenters related to development within the floodplain and the provision of flood protection for this development. This issue has been a subject of controversy in south Yuba County for several years. Please refer to Section 1.5.3 of the EIS, “Areas of Controversy,” which includes these statements regarding the Segment 2 setback levee:

This project would help resolve a current area of known and long-standing controversy, namely, the existing risk of flooding impacts in the RD 784 area, as demonstrated by historical catastrophic flooding events. Overall, repairs to Segment 2 of the FRLRP would reduce the ongoing concern and controversy over flood protection in communities in the area.

Refer also to Section 1.3 of the EIS, “Project Purpose,” which includes this discussion:

The primary purpose of the project is to correct identified deficiencies in the left bank levee of the Feather River, and consequently to improve flood protection in the RD 784 area of Yuba County. The goal for improved flood protection in the RD 784 area is to provide protection against the 0.5% Annual Exceedance Probability (AEP) event.

Protecting against the 0.5% AEP event corresponds to the term ‘200-year flood protection.’... In any case, flood risk to the RD 784 area would be considerably reduced by the proposed project.

Section 1.8 of the EIS, “Background on Flood Protection Efforts in the RD 784 Area,” provides a detailed history of the work undertaken over the past decades by the Corps, the California Department of Water Resources, the Central Valley Flood Protection Board, and Yuba County to evaluate and repair the levees in the project area. As discussed in this section of the DEIS (now more specifically identified as Section 1.8.3.1 in the FEIS), construction of the first homes in the Plumas Lake Specific Plan area began in 2002 at a time when it was thought the RD 784 area had 100-year flood protection. The Corps’ 2003 floodplain mapping study resulted in the conclusion that the people and property in the RD 784 area, including homes that had already been built in the Plumas Lake Specific Plan area before the release of the Corps study, are subject to a much higher flood risk than previously believed.

As described in Section 2.1 of the DEIS, “Alternatives Eliminated from Detailed Discussion”, the Corps considered various means to provide flood protection only to the existing development in the RD 784 area such as ring levees and elevating existing structures above the 100-year flood stage elevation. However, for reasons described in Section 2.1, these options are considered financially and/or logistically infeasible. In addition, they would not provide flood protection to portions of important infrastructure, such as segments of Highway 70.

As described in Section 5.1.8 in the DEIS, “Executive Order 11988, Floodplain Management,” (now Section 5.1.9 in this FEIS):

“Improvements to the levees protecting the RD 784 area have been determined by the Corps, the State, and TRLIA to be the most feasible method of providing adequate flood protection to existing development in the RD 784 area. Other options to improve flood protection for existing development, such as ring levees or raising of structures are not feasible due to the dispersed nature of development in the RD 784 area. Although the Applicant Preferred Alternative – ASB Setback Levee Alternative would fail to discourage further development within the basin, this action is consistent with efforts by the State of California to comprehensively address floodplain development and flood risk on a regional scale.”

Executive Order 11988, Floodplain Management (May 24, 1977), directs Federal agencies to issue or amend existing regulations and procedures to ensure that the potential effects of any action it may take in a floodplain are evaluated and that its planning programs and budget requests reflect consideration of flood hazards and floodplain management. The purpose of this directive is “to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.” Levee repairs under any FRLRP alternative (i.e., Levee Strengthening, Intermediate Setback Levee, ASB Setback Levee) would reduce the risk of flood loss and minimize the impact of floods on human health, safety, and welfare by strengthening existing flood control infrastructure protecting significant existing development. Because there is no practicable alternative to the floodplain development indirectly associated with the project, and because the project will improve flood control capacity, it satisfies Executive Order 11988.

In regards to proposed flood protection improvements removing an impediment to future growth in the flood protected area, it should be noted that all action alternatives evaluated in this EIS would have the same indirect growth inducing effect. Implementation of the Levee Strengthening Alternative, Intermediate Setback Levee

Alternative, or the Applicant Preferred Alternative – ASB Setback Levee Alternative would provide 200-year flood protection to the area protected by the Segment 2 levee and would remove flood protection as an obstacle to development in this area.

It is important to note that land use decisions are the responsibility of the local jurisdiction (in this case, Yuba County), and it is not the responsibility of the Corps or TRLIA to provide mitigation for the consequences of these land use decisions. It is the intention of TRLIA to complete implementation of its phased program of flood control projects to ensure that the project levees in the RD 784 area provide 200-year flood protection for the existing communities in the area.

Recognizing the risk to existing development in the RD 784 area from flooding, Yuba County, in collaboration with multiple additional agencies, has included risk reduction and emergency response measures for the RD 784 area in a “Multi-Jurisdictional Multi-Hazard Mitigation Plan for Yuba County, California” completed in May 2007. Multiple additional risk reduction and emergency response measures have also been implemented prior to development of the Multi-Hazard Mitigation Plan and since its completion. Measures include:

- ▶ Implementation of a Telephone Emergency Notification System (TENS) to quickly notify residents and businesses via phone of any emergency situation,
- ▶ Development of time inundation maps that model how long it would take for flood waters to reach certain areas if a levee breach were to occur at various locations. The time inundation maps have been used to develop evacuation routes and emergency response routes that best address various levee breach scenarios,
- ▶ Identification of special-needs populations requiring special disaster planning,
- ▶ Identification of animal evacuation protocols,
- ▶ Implementation of a public education and outreach program to inform residents and business of the flood risk, appropriate preparedness actions, and evacuation routes,
- ▶ Continuing flood preparedness training for fire departments and flood workers, and
- ▶ Identifying and implementing projects that increase infrastructure resistance to flood events, such as elevating key road segments and enlarging culverts to prevent localized road flooding.

This comment concludes with the statement “... flood management is best approached with time tested floodwater management methods that optimize ecosystem restoration and flood protection for communities at risk and compatibility with desirable improvements to the overall flood management system.” This same statement is included in the February 2007 SYRCL letter to the Department of Water Resources (DWR) included as Attachment A to this comment letter. However, in the DWR letter, the statement is followed by the sentence “The Feather River levee setback alternative is the only DEIR alternative that can provide such integrated multiple benefits.” Taken within the context of the letter to DWR, it is assumed that the statement provided in this DEIS comment letter is intended to indicate a preference for the Applicant Preferred Alternative. Please see response to Comment 5A above regarding this topic.

REFERENCES

Boeck, Van. Principal Engineer. Yuba County Public Works Department. Marysville, CA. August 29, 2008—telephone conversation with Jeanine Hinde of EDAW on the County's standards for stormwater runoff retention/detention.

Lorentson, Pauline. Yuba County IGR Coordinator. California Department of Transportation. September 11, 2008—telephone conversation with Jeanine Hinde of EDAW to confirm that the comments provided by Caltrans on the draft environmental impact statement are limited to the potential effects of the project on State Route 70.

Wanket, Dan. Project engineer. GEI Consultants, Oakland. September 12, 2008—telephone conversation with Jeanine Hinde of EDAW regarding the nature of truck trips needed to haul borrow material and construction equipment and materials to the project site.

ATTACHMENT

Public Meeting Sign-in Sheet

