



## **Addendum to Certified Environmental Impact Report SCH number 2004032118**

**Lead Agency:** Three Rivers Levee Improvement Authority  
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**Project Title:** Feather-Bear-WPIC Levee Improvements Project

**Project Location (nearest town):** Olivehurst, Yuba County

**Project Background:** The Three Rivers Levee Improvement Authority (TRLIA) is a joint powers authority with the mission of advancing the flood safety of Yuba County, California. TRLIA's member agencies include Reclamation District 784 (RD 784) and the County of Yuba (County). The county is subject to seasonal flood threat from many rivers and creeks, including the Yuba River, Feather River, Bear River, Western Pacific Interceptor Canal (WPIC) and tributary drainages. Because of this flood risk, many local rivers have been confined by constructed levees.

The U.S. Army Corps of Engineers (USACE) has established criteria for levees that specify the height, width, permeability standards, and other factors needed to provide adequate protection for a given hydrologic event (stage and discharge) based on geotechnical, hydraulic, and hydrologic conditions. Most of the levee systems in Yuba County were built during the 1920's using construction practices of that era. Recent studies conducted by USACE (January 1990) and Kleinfelder (November 2003) have concluded that substantial segments of area levees do not meet current USACE protection standards for a 100-year event. Insufficient height, susceptibility to through-seepage and under-seepage, and susceptibility to erosion need to be remedied to meet the USACE criteria.

Deficiencies in area levee segments have been recently demonstrated by the floods of 1986 and 1997. In 1986, approximately 10,700 acres were inundated, more than 4,000 homes and businesses were damaged or destroyed, and one human life was lost. In 1997, approximately 16,000 acres were inundated, more than 850 homes and businesses were damaged or destroyed, and three human lives were lost.

TRLIA developed the Feather-Bear-WPIC Levee Project (project) to modify the levee system in southern Yuba County to address the deficiencies described above, as well as the backwater effects and rise in river stages from the lack of floodway capacity near the confluence of the Bear and Feather Rivers. The ultimate goal is to maintain and increase flood protection to a level greater than the calculated 200-year event, consistent with goals of The Reclamation Board of the State of California (Rec Board), which oversees modifications to federal project levees. The objectives of the project are to:

- provide increased flood protection greater than the calculated 100-year flood event in the overall RD 784 area, and meet 200-year standards where improvements are implemented

(i.e., where levee work is endeavored, it will meet or exceed criteria for the calculated 200-year flood event);

- avoid increasing downstream flow and stage during peak-flow conditions; and
- enhance and restore fish, wildlife, and riparian habitat.

**Original Project Description:** The project was needed to bring deficient levee sections up to standards to achieve the project objectives. Specifically, most of the northern levee of the Bear River and several reaches of the WPIC have insufficient height to provide the desired level of flood protection. Additionally, some levee reaches have problems associated with levee stability and susceptibility to erosion. The location of Pump Station No. 6, adjacent to the Bear River north levee, decreased the stability of this levee. The project design relocates the pump north of its existing location. Other flood control improvements include seepage protection, reconstruction of levee reaches that failed as a result of 1997 overtopping, erosion protection, and raising the height of the levee. The levee improvements include segments of the Bear River north levee and WPIC west levee, including filling land-side depressional areas, installing slurry cutoff walls, raising and widening levees, and installing erosion .

**Previously Certified EIR:** An environmental impact report (EIR) was prepared to evaluate potential project effects and was circulated for public review (SCH number 2004032118). TRLIA certified the final EIR in August 2004 and TRLIA adopted the project in March 2005.

**Refinements to the Project:** Since certification of the final EIR, the design of several project elements has been modified based on additional engineering analysis. The revised elements of the project description are provided in the following sections and shown in Figure 1.

### **Bear River Levee**

At the Bear River, between stations 122+00 and 140+00, the levee freeboard would need to be increased an additional 0.3 feet from what was previously described to meet 200-year flood protection criteria. The waterside of the levee will need to be widened approximately 2.0 feet to accommodate the placement of additional material on the levee crown. As a result approximately 0.08 acre of the Bear River floodway (a water of the U.S.) would be lost to accommodate widening of the levee footprint. All work will occur with the construction easements previously identified.

### **WPIC Levee**

At the Western Pacific Interceptor Levee, between stations 250+00 and 276+00, riprap will need to be placed on the waterside of the levee to repair erosion that occurred in January 2006. The levee in this location was subject to wind and wave action during the high-water events and water was observed splashing over the levee top. The additional riprap is necessary to repair areas of bank scour to dissipate wave energy. An additional 2,900 cy of riprap would be placed on 2,600 linear feet of the levee at this location.

### **Algodon Canal – Pump Station No. 6**

At Algodon Canal, the design for Pump Station No. 6 has been revised to include the construction of 4 pumps with a greater discharge capacity. The purpose of the proposed modifications to the pump station is to allow RD 784 to increase the interior drainage pumping capacity at Pump Station No.6 from 50 cfs to 200 cfs. The increase in pumping capacity would accommodate increased runoff from development adjacent to the project area. Construction would begin during May 2006 and culminate in fall 2006.

The proposed actions include the installation of four pumps in the Algodon Canal and the placement of an 8-inch concrete cap on top of the levee at the location of the 4 discharge pipes (Figure 2). The area of impact from the riprap at the outlet channel would be the same design proposed in the original certified EIR.

The overall length of the Pump Station No. 6 component would increase an additional 11.3 feet north of the previously permitted location resulting in the additional loss of .01 acre of other waters of the U.S. due to the extension of the pump station structure. The total length of this feature will be 241.3 feet, including 150 feet of earthen fill and the construction of the 91.3-foot long pump station structure. The overall width of the earthen fill area will increase from 40.5 to 51.5 feet to accommodate the new pump station design.

Prior to pump relocation and outfall construction, Algodon Canal would be dewatered using a coffer dam and allowed to dry out for a minimum of fifteen days per USFWS biological opinion. Dewatering at Algodon Canal is described below.

### **Algodon Canal – Feather River Boulevard Culvert Repairs and Upgrades**

Also at Algodon Canal, two existing culverts located under Feather River Boulevard that are damaged and partially filled with sediments would be repaired and sediment would be removed. Culvert maintenance would include cleaning out sediment and debris within the culverts. The cleaning process would be administered with high pressure washing equipment. Sediments within the culverts would be allowed to settle downstream.

A trash rack will also be constructed upstream of the culverts. A final design is pending but is expected to include the construction of a steel beam cat-walk approximately 25 feet upstream of Feather River Boulevard. The steel beams would be placed perpendicular to the canal and would be embedded into the bank above the ordinary high water mark. A metal trash rack that extends into the canal will be placed on the upstream face of the cat-walk.

Work would be limited to the banks of the canal and 25 feet upstream and downstream of the culverts, approximately 0.04 acres of the Algodon Canal would be temporarily disturbed and dewatered.

This work was not previously permitted but is necessary to allow water in Algodon Canal to reach Pump Station No. 6 unimpeded when the pump is on.

### **Algodon Canal – Dewatering**

Dewatering of Algodon Canal will be required to allow construction of Pump Station No. 6 and the Feather River Boulevard culvert repairs and upgrades. Dewatering could be implemented using one of the following methods:

- A coffer dam could be constructed north of Feather River Boulevard to dewater the area from the coffer dam to the Bear River Levee. Pump Station No. 6 would be used to dewater the canal from the cofferdam to the Bear River levee. The area temporarily affected by cofferdam construction and dewatering would be approximately 1.17 acre; or
- Three cofferdams could be constructed: one north of the new pump station location, one south of Feather River Boulevard and one north of Feather River Boulevard. The area affected by cofferdam construction and dewatering around Feather River Boulevard would be approximately 0.04 acre. The area affected by cofferdam construction and dewatering between Feather River Boulevard and Pump Station No. 6 would be approximately 0.04 acre. Pump Station No. 6 would be used to dewater the canal from the first cofferdam to the Bear River levee and temporary pumps would be used to dewater the area adjacent to Feather River Boulevard. Water removed would be spray discharged to uplands or allowed to settle in upland tanks or sumps and then allowed to infiltrate back into the soil or discharged back into Algodon Canal upon meeting regional water quality standards.

### **Analysis of Refinements:**

#### **Bear River and the WPIC Levee**

The impacts associated with the design refinements of the Bear River and WPIC Levees would result in the loss of 0.08 acres of the Bear River floodplain (a water of the U.S.). As presented in the certified EIR, the project will have several significant impacts of vegetation and wetland resources, including those on valley oak forest, and jurisdictional waters of the United States. All of these significant impacts can be mitigated to a less-than-significant level through the implementation of mitigation measures already adopted by TRLIA. This impact of this small loss would be mitigated as part of the restoration plan in the setback and floodplain area of the Bear River. The work at the Bear River and WPIC levees does not result in any other resource effects beyond those already analyzed in the certified EIR.

#### **Algodon Canal – Pump Station No. 6**

The new pump design would result in the loss of 0.01 acres of open water. The refinements of Pump Station No. 6 are minor and consist of accommodating the increase in pumping capacity. The 100-year flow in the Bear River is 44,000 cfs. A 150 cfs increase in the discharge capacity of Pump Station 6 would not result in a measurable impact on the hydrology and hydraulic characteristics of the Bear River (Dacus pers comm.). As presented in the certified EIR, the project will have several significant impacts of vegetation and wetland resources, including those on valley oak forest, and jurisdictional waters of the United States (e.g., wetlands). The impact of filling and dewatering the Algodon Canal to accommodate

the relocation of the pump station was analyzed in the previous certified EIR. This impact of this small loss would be mitigated as part of the restoration plan in the setback and floodplain area of the Bear River. The work at Pump Station No.6 does not result in any other resource effects beyond those already analyzed in the certified EIR.

#### **Algodon Canal – Feather River Boulevard Culvert Repairs and Upgrades**

The repairs and upgrades within the Feather Boulevard culvert area could temporarily impact 0.02 or 1.17 acres of the Algodon Canal depending on the dewatering method. As presented in the certified EIR, the project will have several significant impacts on vegetation and wetland resources, including the filling and dewatering of jurisdictional waters of the United States (e.g., wetlands). The proposed work is small in nature and would be located within a vegetation type, open water and annual grassland, which were analyzed in the certified EIR. The adopted mitigation measures for work in this vegetation type are appropriate for the proposed work and will be implemented accordingly. The work within the culvert area would not result in any other resource effects beyond those already analyzed in the certified EIR.

#### **Algodon Canal – Dewatering**

Dewatering of the Algodon Canal could temporarily impact up to 1.17 acres. The Algodon Canal would be dewatered using a coffer dam and allowed to dry out for a minimum of fifteen days per USFWS biological opinion. As presented in the certified EIR, the project will have several significant impacts on vegetation and wetland resources, including those on wetland resources riparian communities, and jurisdictional waters of the United States (e.g., wetlands). All of these significant impacts can be mitigated to a less-than-significant level through the implementation of mitigation measures already adopted by TRLIA. The proposed work is small in nature and would be located within a vegetation type, open water and annual grassland that which was analyzed in the certified EIR. The adopted mitigation measures for work in this vegetation type are appropriate for the proposed work and will be implemented accordingly. Dewatering would not result in any other resource effects beyond those already analyzed in the certified EIR.

TRLIA is currently notifying the U.S. Army Corps of Engineers, U.S. Fish, Wildlife Service, and Department of Fish and Game of the project refinements and TRLIA will implement their recommendations.

**Findings:** The refinements to the project are considered minor technical changes. Pursuant to Section 15164 (e) of the State CEQA Guidelines, in considering the record as a whole, there is no substantial evidence that the refinements to the project design would cause significant new environmental effects or a substantial increase in previously identified significant effects of the project.

#### **Personal Communication:**

Dacus, Larry. Engineer. MBK Engineers, Sacramento, CA. February 10, 2005—e-mail correspondence.