

**Meeting of the Central Valley Flood Protection Board
January 28, 2011
Staff Report
Levee District No. 1
Lower Feather River Setback Levee Project at Star Bend**

1.0 – ITEM

Consider approval of the *Vegetation Monitoring Plan of Feather River Floodplain Adjacent to Unit No. 144 Levee System* as an addendum to the *Supplement to Standard Operation and Maintenance Manual*.

2.0 – APPLICANT

Levee District No. 1, contact: Jeff Twitchell 634-4555

3.0 – LOCATION

The Star Bend Setback Levee is located on the right bank of the Feather River at Star Bend near river mile 18.0.

(Feather River, Sutter County, see Attachment A)

4.0 – DESCRIPTION

A 3,400 foot-long setback levee has been constructed at Star Bend on the Feather River and is part of the strategy to provide 200-year flood protection to the surrounding area, inclusive of the southern portions of Yuba City. This setback levee was constructed by LD-1 under the provisions of the DWR Early Implementation Program (EIP). In addition to the setback levee, existing irrigation facilities were modified in order to conform to the latest safety design standards and the new levee configuration. The project also includes eco-restoration of approximately 21 acres of riparian habitat containing Valley Elderberry Longhorn Beetle (VELB) mitigation and habitat enhancement efforts on the riverside of the new setback levee. This area may be annexed into the adjoining riparian habitat enhancement area of the O'Conner Lakes Wildlife Unit of the Feather River State Wildlife Area.

5.0 – PROJECT ANALYSIS

5.1 – Project Background

1. LD-1 has completed construction of a new setback levee at Star Bend near River Mile 18.0 on the right bank of the Feather River. Reconfiguration of the levee at Star Bend has been one of LD-1's highest priorities for levee rehabilitation. The setback levee addresses flooding concerns at this site caused by the large bend of the Feather River and historical observance of under seepage, potential erosion, and subsidence. A 2004 DWR study estimated the channel migration to be 1.7 feet per year and, according to Wood Rogers engineers' estimates, the existing levee could be endangered in 10 to 20 years. A levee breach at this location would impact southern portions of Yuba City, developing communities, and farming interests, affecting nearly 25,000 people.
2. The original costs for this project were \$20.78M with a state share of \$16.33M and the project is now entering into closeout.
3. All major work on the levee system and adjoining irrigation system modification were completed November 2009 under Board encroachment permits 18191BD, 18437 BD, and 18438 BD. The Board, in its September 23, 2010 meeting, requested that LD-1 provide a Long-term Management Plan and present it at this meeting.
4. On September 23, 2010, approval by the Board was requested and granted on the issue of the OMRR&R with the stipulation that LD-1 revise the OMRR&R with the language which states that "The Local Maintaining Agency shall submit to the Board for its approval a long-term management plan for the vegetation planting area within the floodway within sixty (60) days of the execution of the agreement."
5. On December 3, 2010 the Board executed the OMRR&R Agreement and approved the plan for staff to recommend approval at the January 28, 2011 Board Meeting.

5.2 – Project Design Review

There have been three meetings since the December 3, 2010 Board meeting with representatives from LD-1, CVFPB staff, USACE staff, DWR staff, and the U.S. Fish and Wildlife Service (FWS) staff. Approval of the plan was granted by LD-1 Board, CVFPB staff, DWR staff, and FWS staff. An preliminary review by USACE has been conducted and changes made accordingly to their satisfaction. After three rounds of

review by the review team including USACE, other sections of the USACE expressed interest in reviewing the plan further, so the USACE final approval is pending.

The *Vegetation Monitoring Plan* contains:

- Assurance that “LD1 as the LMA, is committed to preserving at maintaining least 20.0 acres of VELB habitat to ensure that the compensatory habitat mitigation and enhancements are sustained in perpetuity while maintaining the integrity of the flood control and flood conveyance system”
- Vegetation Management Practices for enlarged floodplain of approximately 49.5 acres
 - 20.65 acres of VELB mitigation /enhancement area
 - 28.50 acres for future mitigation/enhancement site for LD1 and SBFCA
 - 2.46 acres of plantings to protect cultural resource area
- Maintenance of “n” values at or below .07 for enlarged floodplain at Star Bend and adjoining non-VELB areas at O’Conner Lakes
- Maintenance of 2010 hydraulic profile of the setback levees on Lower Feather River
- Identifies methods and limits of vegetation control activities, inclusive of acceptable work seasons
- Identifies current VELB maintenance, monitoring, and reporting requirements in response to USFWS Biological Opinion(s).
- Identifies current and potential funding sources for vegetation management activities

Staff finds the Vegetation Monitoring Plan acceptable and recommends the Board approve the plan presented at this January 28, 2010 Board meeting.

6.0 – AGENCY COMMENTS AND ENDORSEMENTS

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

- LD-1 Board, CVFPB staff, DWR staff, and FWS staff have reviewed and approved the *Vegetation Maintenance and Monitoring Plan*.
- This project has been approved and constructed.

7.0 – CEQA ANALYSIS

Board staff has prepared the following CEQA determination:

LD-1 is responsible for procuring all necessary environmental documentation and permits necessary for the project. Board staff, DWR and other responsible agencies have reviewed and approved all submittals to date and the project was completed in compliance with these permits and documentation.

8.0 – SECTION 8610.5 CONSIDERATIONS

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the Vegetation Monitoring Plan, and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science that related to the scientific issues presented by the executive officer, legal counsel, the Department or other parties that raise credible scientific issues.

In considering this Vegetation Monitoring Plan, the CVFPB has used the best available science relating to the issues presented by all parties, which on the important issue of hydraulic impacts, will result in a better engineered levee with no adverse upstream or downstream hydraulic impacts.

3. Effects of the decision on the entire State Plan of Flood Control:

This project has positive effects on the State Plan of Flood Control as it results in a better-constructed levee system for the Feather River and will contribute to provide the Central Valley Flood Protection Plan's goal of 200-year protection for urban areas.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

The impacts of hydrology, climate, and development are being addressed in the Vegetation Monitoring Plan review. Previous and future project designs and environmental documentation have addressed and will continue to address these

concerns through public comment periods and agency reviews. Negative impacts have been mitigated as a result of this process.

9.0 – STAFF RECOMMENDATION

After approval by DWR staff, LD-1 Board, CVFPB staff, and FWS staff, staff recommends that the Board approve this Vegetation Monitoring Plan as an addendum to the supplement to the Standard Operation and Maintenance Manual.

10.0 – LIST OF ATTACHMENTS

- A. Location Map
- B. Vegetation Monitoring Plan- see attached DVD

Design Review:	Jennifer Stephenson, Nancy Moricz
Environmental Review:	Environmental Staff Assigned, US Fish and Wildlife Service
Document Review:	Kent Zenobia, Dan Fua, Nancy Moricz

Attachment A

FEATHER RIVER SET BACK AT STAR BEND PROJECT

