



**THREE RIVERS LEVEE IMPROVEMENT AUTHORITY**  
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**THREE RIVERS LEVEE IMPROVEMENT AUTHORITY**

Project Status Report dated March 12, 2012

(Submitted to The Central Valley Flood Protection Board for the March 23, 2012 meeting)

A progress report of the various phases of the Three Rivers Levee Improvement Authority (TRLIA) program is provided in the following sections of this document. *Updates are indicated with italics and underline.*

**1. Levee Design and Construction Work:**

**a. Phase 4 – Yuba River Levee between Simpson Lane and the Goldfields:**

- 1) **Environmental:** The TRLIA Board adopted a Mitigated Negative Declaration on April 20, 2010 and a Notice of Determination was filed on April 23, 2010. The Corps signed the NEPA Finding of No Significant Impact (FONSI) on December 29, 2010.

The CVFPB Anderson Elderberry Mitigation Site encroachment permit was signed and issued to TRLIA on February 7, 2011. TRLIA transplanted the final three shrubs on June 20, 2011. Because the final three shrubs were transplanted in the non-dormant season, the number of associated elderberry seedlings was increased in the revised biological opinion (BO) from 22 seedlings to 250 seedlings. CVFPB Staff has directed TRLIA to make a separate permit application for the additional seedling plantings. TRLIA will submit a new encroachment permit for the additional plantings in March 2012.

- 2) **Design:** Complete.
- 3) **Construction:** Levee embankment construction is complete. Remaining tasks include placement of aggregate base for a portion of the patrol road and installing fencing along the landside O&M corridor. Winter conditions required that construction stop for this year. Construction on the few remaining items will complete in the spring after the flood season ends.

**b. Phase 4 – Yuba River Levee between Highway 70 and Shad Road:**

TRLIA is working to improve landside levee conditions along a short stretch (400 feet) of the Yuba Levee between Highway 70 and Shad Road. The USACE Periodic Inspection noted erosion problems on the landside slope and closer evaluation found a vertical wall in the levee slope, a power line at the levee toe, and no O&M access corridor. TRLIA

continues with design and acquisition efforts that will remove the vertical wall, remove trees at the toe of the levee, relocate the power line, repair and flatten the levee slope, and provide enough land for a 20 foot O&M access corridor for operation, maintenance, and flood fight efforts. The TRLIA Board adopted a CEQA Addendum to cover these efforts at their January 17, 2012 meeting. *A relocation plan for tenants who currently live in camping trailers at the toe of the levee has completed public review and was adopted by the TRLIA Board on February 21, 2012. Design is 60% complete on the plans and specifications which are under review by USACE, DWR, and CVFPB staff. TRLIA submitted an encroachment permit application for these improvements on February 8, 2012. Construction is scheduled to occur in late summer. This work will be cost shared with DWR as part of the UYLIP EIP.*

**c. Phase 4 – Feather River Levee between Bear and Yuba Rivers:**

1) **Segment 2:** Complete

2) **Segment 3:**

a) **Parcel Encroachments North of Island Avenue (lot 155 to 120):** In the process of providing landside toe access corridors as required by the Corps, CVFPB, and DWR, TRLIA and RD 784 determined that a group of land owners had encroached onto land owned by the CVFPB. This encroachment occurs on 51 parcels that exist along the east levee of the Feather River north of Island Avenue. In most cases, the encroachment consists of a fence in the wrong place and some vegetation. In five cases, there are physical structures (only two permanent structures) that have encroached onto CVFPB land. The initial plan was to remove the encroached fences and vegetation and build a new fence on the correct property line. In those few cases that have structure encroachments, TRLIA proposed to work with the land owner to develop a way to remove or modify the encroachment that will be the least burdensome to the property owner. TRLIA held a public meeting with assistance from CVFPB Staff in the area on August 22 to present information on TRLIA's plan of action and to answer questions of the affected land owners. TRLIA has submitted an encroachment permit application to build the new fence. A hearing was held by the CVFPB on December 2, 2011 for land owners that requested a hearing regarding these encroachments. TRLIA and CVFPB Staff were directed to work together to develop options that could be implemented along this encroached reach that might allow the land owners to continue using some of the encroached area. TRLIA with assistance from CVFPB Staff held another public meeting on January 10, 2012 to discuss these options with the local parcel owners. TRLIA supports the option which sets the new fence 20 feet from the existing landside levee toe and allows the parcel owner to use the remaining State land through a license with the State. The CVFPB held a hearing on these encroachments and the fence encroachment permit at the January 26, 2012 Board meeting in Marysville, Ca. Due to an inadequate time submittal of hearing materials to the subject parcel owners, the Board could not take action on these encroachments and permit application. *Hearings on these encroachments were held by the CVFPB on March 2, 2012 in Marysville, CA. The CVFPB chose to not take actions on the encroachments at that meeting*

due to again not providing the parcel members with hearing material in the required time period. The CVFPB did approve an encroachment permit for construction of the fence. However, fence construction cannot occur until final action on the encroachments, until a drainage plan is developed and reviewed, until coordination regarding elderberry shrubs has occurred with the USFWS, and until CVFPB Staff have been consulted regarding the appropriate location of the landside levee toe.

- b) **Parcel Encroachments North of Island Avenue (lot 119 to 82A):** TRLIA is also pursuing acquisition of additional land from eight other parcels. This acquisition is needed to provide an adequate fenced toe access corridor. TRLIA has discussed acquisition with CVFPB and DWR staff and is moving forward with appraisals.

## **2. Goldfields:**

- a. TRLIA analyses of the Goldfields have identified a flood risk through the Goldfields. Working with the mining companies, TRLIA has taken steps to reduce this risk for the 2011-2012 flood season by constructing blocks at critical locations. TRLIA is pursuing additional geotechnical, hydraulic, geomorphic, and environmental studies to determine what work must be accomplished to provide permanent 100 and 200-year flood protection in the Goldfields. TRLIA has selected geotechnical, geomorphic, hydraulic, and environmental consultants to accomplish these studies. The current status report of the Goldfields High Ground Evaluation, which is provided to the TRLIA Board, is attached to this status report. TRLIA is pursuing a Proposition 13 Grant from DWR to help pay for these Goldfield evaluations. A Board of Senior Consultants (BOSC) meeting was held on February 23, 2012 to provide initial information on the Goldfields High Ground Evaluation.
- b. TRLIA remains committed to achieving 200 year flood protection for South Yuba County, and will keep the CVFPB and others up to date on our progress with the Goldfields evaluation.

## **3. Building Permits Issued in Plumas Lake Specific Plan Area and North Arboga Study Area**

- a. TRLIA will eliminate the monthly reporting of the issuance of building permits in the Plumas and Arboga Study Area for future reports. Below is the final information on issued permits which gives the rational for ceasing to provide this information.

For the last 7 years, TRLIA has reported the number of building permits issued in the Plumas Lake and North Arboga Specific Plan Areas. The permit reporting began in 2005 when development was very active in these areas and TRLIA was just getting started with RD 784 levee improvements. In fact the first TRLIA encroachment permit included a limit to the number of building permits that could be issued for these areas until levee repairs were complete. With the downturn in the economy, permits for these areas are very few with only one developer (KB Homes) active at all. RD 784 levee repairs are complete. The plotted line for the issued permits has for all intents and purposes flat lined. TRLIA proposes to eliminate this information from its monthly status

report. In today's economy and with levee repairs complete it no longer serves the purpose for which it was started and adds very little information to our monthly reports. As a historic look back and to provide a close out on this information, below is the number of permits by year since 2005.

| <u>Year</u> | <u>Number of Permits</u> |
|-------------|--------------------------|
| <u>2005</u> | <u>800</u>               |
| <u>2006</u> | <u>583</u>               |
| <u>2007</u> | <u>354</u>               |
| <u>2008</u> | <u>30</u>                |
| <u>2009</u> | <u>58</u>                |
| <u>2010</u> | <u>6</u>                 |
| <u>2011</u> | <u>29</u>                |

Attachments:

1. Goldfields High Ground Evaluation Status

**TO: Three Rivers Levee Improvement Authority  
Board of Directors**

**FROM: Paul Brunner, Executive Director**

**SUBJECT: Goldfields High Ground Evaluation Status, February 2012**

A progress report of the various phases of the Three Rivers Levee Improvement Authority (TRLIA) work in the Goldfields is provided in the following sections of this document. Future updates to this report will be indicated with italics and underline. See Attachment 1 for Project Overview.

### **STATUS OF ANALYSIS EFFORTS:**

#### **Geotechnical**

ENGEO as TRLIA's consultant has been collecting and examining historical information on dredging operations in the Goldfields. ENGEO has coordinated with the aggregate companies to obtain as much existing geotechnical exploration information as possible. ENGEO has evaluated the existing geotechnical exploration information and determined that the initial additional exploration plan of 9 test pits is adequate for now. More explorations may be proposed in the future closer to proposed projects. The Goldfields Board of Senior Consultants (BOSC), which met on February 23, concurred with this approach. Because this effort is to determine if the Goldfields will serve as high ground, an initial high ground (as opposed to a levee) definition for the dredge tailing mounds in the Goldfields has been proposed and is under review. The BOSC is in agreement with the approach proposed in the high ground definition and is waiting for more detail on specific parameters proposed in the definition. ENGEO is working with topography in the Goldfields and initial 100-year flood elevations to begin identification of potential weak points in the Goldfields conveyance corridors. ENGEO has completed developing breach geometry for the breach sites in the South Training Wall to be used in the final determination of flood elevations in the Goldfields.

#### **Hydraulic**

MBK as TRLIA's consultant has developed hydraulic models of the Goldfields to be used in determining water surface elevations in the Goldfields for identifying potential weak points. These models have just completed an independent technical review and no significant comments were received. MBK is revising documentation regarding the hydraulic models to address review comments. MBK has supplied ENGEO preliminary 100-year water surface elevations in the Goldfields for the initial screening for weak locations. MBK will perform additional hydraulic analyses to provide hydraulic parameters for use in the geomorphic and geotechnical evaluations. Geotechnical weak point identification may require the expansion of hydraulic models if new conveyance corridors are identified due to breaks in the conveying mound banks. Repair alternatives will be hydraulically evaluated to ensure that they are effective in providing flood protection.

#### **Geomorphic**

CBEC as TRLIA's consultant is conducting an historic literature review to summarize previous relevant report and papers for geomorphic research on the Lower Yuba River. CBEC will

provide comment on the relevance of the collected information with respect to the erodibility of the South Training Wall. CBEC is collecting, inspecting, and cataloging historic aerial photographs in order to map meander patterns to assist in identifying locations where the river is likely to continue to erode or begin erosion of the training wall. CBEC has installed staff gages along the Yuba River and within the Goldfields to gather information this winter that can be used to determine the Goldfields interior water elevation response to high stages in the Yuba River. The BOSC suggested that an additional interior gage be installed at the west end of the Goldfields and closer to the Training Wall. This additional gage has been installed. Lack of high river stages this winter is providing minimal information. Information on the material composition of the training wall will be gathered and used to identify locations where erosion is likely to occur and estimate a rate of erosion.

### **Historic Research**

Research is underway to identify historical reports and records to determine past Federal and State actions and responsibilities in the Goldfields related to construction and maintenance of the debris control facilities. These reports and records will be examined for pertinent information with respect to the river control features constructed in the past. The intent of the research is to define and clarify the purpose of these facilities, identify responsibilities that the State and Federal government may have to maintain these facilities and the relationship of these facilities to the Sacramento River Flood Control Project.

### **Right of Way (ROW)**

USACE owns large parts of the Goldfields even though the aggregate and dredging companies have the mineral rights on those lands. Several of the geotechnical test pits are located on USACE owned lands and TRLIA must obtain a right of entry to do these test pits. As usual with Federal agencies, obtaining approval to dig the test pits is an involved process. TRLIA met with USACE on January 31 to investigate the test pit locations and obtain geotechnical clearance. TRLIA continues coordination with USACE regarding environmental clearance for the test pits. ENGEO coordinated with the mining companies and has excavated the test pits that are not on USACE lands. As repair alternatives are identified, ROW efforts will be necessary to obtain adequate rights to implement these alternatives.

### **Environmental**

Environmental consultation continues to be minimal at the beginning of the analysis. As alternatives are developed for assurance of 100-year protection, TRLIA's environmental consultant, AECOM, will be tasked with identifying environmental impacts and providing environmental clearance for implementation.

### **BOSC Review**

The BOSC met on February 23 and was given a background of the Goldfields and provided the purpose for the current study. Status and approach was presented for the hydraulic, fluvial geomorphic, and geotechnical analysis. The agenda for the BOSC Meeting is attached.

### **FINANCIAL IMPLICATIONS:**

TRLIA has incurred costs associated with this work (including both design and construction expenses) in advance of a new or modified funding agreement covering the costs of this work by

the State. Currently TRLIA EIP funding agreements do not provide funding for this work and TRLIA is paying for this work with local prior levee funding resources. The Department of Water Resources has identified some remaining Proposition 13 Funds that can only be used in the Yuba and Feather River Watersheds. TRLIA has made application for a grant from this program and preliminary indications are that funding will be made available for this Goldfields analysis.

**RECOMMENDATIONS:**

Staff recommends that the Board receive and file this report.

**ATTACHMENTS**

Project Background

BOSC February 23, 2012 Agenda

## **Project Background:**

TRLIA has identified a flood threat from the Goldfields based on potential breaching of the South Training Wall and land form changes within the Goldfields due to mining and dredging operations. TRLIA has developed a four phase plan for reducing the flood threat and providing complete 200-year flood protection for RD 784. In order to ensure the safety of the people and property located within the area impacted by high flows through the Goldfields, TRLIA has determined that it is necessary to move forward with Phases 1 and 2.

**Phase 1** consists of immediately modifying locations within the mining areas that have been identified in the TRLIA analysis as flow paths and completing agreements with mining operators to establish maintenance responsibilities for these features. TRLIA has identified solutions that consist of re-establishing high ground mounds at key locations to prevent flow from entering RD 784. TRLIA negotiated and signed contracts with the mining companies in the Goldfields to construct these high ground mounds in the Fall of 2011. These mounds were constructed using the mining companies' authorities to mine in the Goldfields area.

**Phase 2** will entail modifications of any additional mining areas that are subsequently identified as necessary to certify that the RD 784 area meets FEMA's criteria for the 100 year flood event. TRLIA is performing additional hydraulic modeling, as needed and will have geotechnical evaluations performed to verify that mounds within the Goldfields act as high ground that must retain 100-year flows and are adequate to do so. If additional high ground solutions are needed to retain the 100-year flow, TRLIA will negotiate with the Mining Companies to re-establish additional high ground using the Mining Companies authorities to mine as was done in Phase 1. TRLIA plans to complete this phase in 2012.

**Phase 3** is devoted to development of a sustainable 200-year plan involving all stakeholders (Federal, State, Local, and Private) that:

- Ensures future mining operations do not increase flood risk
- Provides 200-year flood protection for the RD 784 area
- Repairs the South Training Wall and other land features identified that are needed for 200-year flood protection
- Maintains the South Training Wall and other land features identified that are needed for 200-year flood protection

State funding is needed for this effort. With State cost share funding, this phase is proposed to be completed by September 30, 2013. To accomplish this task will take cooperation from all involved parties: Mining Companies, USACE, CVFPB, DWR, SMGB (Mining and Geology Board), Yuba County, YCWA, and TRLIA.

**Phase 4** will be the implementation of the 200-year plan developed in Phase 3. Physical modifications to the Goldfields as identified in the sustainable 200-year plan will be accomplished. This phase will also require the implementation of a long-term mechanism for

governance and oversight of Goldfield mining operations to ensure and sustain 200-year protection. State and local funding through a new State funding agreement is proposed to be used for this effort. With State cost share funding, this phase is proposed to be completed by 2025 or earlier to meet the Senate Bill 5 date.

**Three Rivers Levee Improvement Authority  
Goldfields High Ground Evaluation Feasibility Study  
Board of Senior Consultants, First Meeting**

**February 23, 2012**

**Agenda**

1. Introductions and Administrative Details/Dacus
2. Background and Purpose/Brunner and Reinhardt
3. Hydraulic Model Development/MBK
  - a) Preliminary Likely Breach Locations
4. Geomorphic Evaluation Approach/cbec
5. Existing Geotechnical Information Research/ENGEO
6. Additional Exploration Plan/ENGEO
7. High Ground Definition/ENGEO
8. Approach for Identifying Weak Points in Tailing Mounds/ENGEO
9. BOSC Questions/Feedback