

Three Rivers Levee Improvement Authority (TRLIA)/RD784 Estimate of Operations and Maintenance (O&M) Cost due to TRLIA Levee Improvements

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1. Administration, Engineering, Legal
 - a. Administration Examples:
 - i. General Manager Position – not in budget before
 - ii. Computer upgrades and training
 - iii. Increased interactions with DWR and Corps due new requirements, & legislative mandates for training and compliance
 - b. Engineering Examples:
 - i. Future levee analysis due to Corps and DWR new/revised levee criteria
 - ii. Engineering/Design/Survey work needed for emergency fixes
 - iii. Property/easement management acquisition
 - c. Legal examples:
 - i. Support of real estate easement acquisitions
 - ii.
2. Operations
 - a. New Skills examples:
 - i. Piezometers, for example, are instruments that measure water pressure and water surface levels. Training is needed to understand how water pressure impacts the foundation of levees, how to electronically record and analyze piezometers data and interpret differential pressure readings
 - ii. New relief wells require technical maintenance and monitoring to ensure they function as designed. Training is needed to take readings and interpret results, especially during high water events.
 - b. New heavy equipment will require training in proper operation
 - i. Dump Truck (2.5 Ton)
 - ii. Fork Lift
 - iii. Pickup Trucks (3/4 ton) (2)
 - iv. Tractors (w/ Side Boom Mowers) (2)
 - v. Tilt Cab Mower
 - vi. Tilt Trailer
 - vii. Small Tractor for Levee Drainage Ditch Maintenance
 - viii. Pull Grader
 - ix. Heavy Trailer

- c. New methods of pesticide application and rodent control will require both specialized training and additional manpower

3. Equipment Replacement Allowance

4. Allowance for Land Acquisition for maintenance purposes

- a. Per state and federal requirements here are examples of Levee toe access corridors being widened:
 - i. 15 feet along the Yuba levee toe
 - ii. Additional 40 feet along Feather Levee Segment 1
- b. As state and federal requirements change, additional easements may be required in the future

5. Emergencies/Contingencies

- a. Emergencies examples:
 - i. Fix of recent Beaver Den found in levee foundation
 - ii. Fix of erosion due to high water flow or vehicular traffic
- b. Contingency need:
 - i. RD784 currently has no contingency funds
 - ii. RD784 borrows money to fix emergencies and is currently in debt
 - iii. Emergency electrical expenses – increased number of pumps