

**MEMORANDUM**

March 18, 2020

**TO:** Reclamation District No. 756

**FROM:** Nathan Hershey

**SUBJECT:** **March 2020 Engineer's Report**

Described below are the engineering items to be discussed at your March 18, 2020 meeting.

**Subventions 2018-19** – The District submitted an application for participation in the Program in the amount of \$845,000. \$12 million has been approved for Program funding for FY 2018-19, consistent with recent previous years. The District's final claim was submitted in the amount of \$253,623.03. DWR and CDFW have performed their annual inspection and the claim is currently being processed.

**Subventions 2019-20** – The District submitted an application for participation in the Program in the amount of \$750,000. DWR has lowered the Program funding amount to \$10 million for FY 2019-20.

**Subventions 2020-21** – Applications for participation in the Program are due April 1. A draft of the application is attached. We will incorporate any final comments and submit prior to the deadline.

**Annual Maintenance** – Attached are the current maintenance items we are tracking. We have reviewed the status of the stationing paddles on the island, and missing paddles are scheduled to be installed later this month.

**Special Projects** – We received a letter from DWR informing us that the Department has decided to withdraw its offer of a Project Funding Agreement due to the current funding availability, or lack thereof. There are several inaccuracies in the letter and a response should be considered. We will work with the District on how to proceed.

We submitted a Full Application for a Directed Action project to rehabilitate the north levee in January 2019. DWR has agreed to fund the project design and the District has signed the funding agreement for the non-construction portion of the project. Once the agreement is fully executed, we can begin work on the design.

**Five Year Plan** – Work on the Five-Year Plan is currently in progress. A draft of the plan has been distributed via email and we will be working to incorporate comments. The Plan must be completed by the end of 2020.

**SB 88** – Work under Phase 2 of the measurement experiment (work plan for 2019 through Feb 2020) has concluded and work under Phase 3 will soon commence. MBK is awaiting MWD comments on a draft report summarizing MBK's efforts relative to Phase 2, and then will finalize the report. Phase 3 will include the installation of new measurement devices (flange magnetic meters, channel water level sensors, and telemetry equipment) on Bacon Island, Bouldin Island, Webb Tract, and Holland Tract, on the water side of the siphons. In addition, some existing equipment will continue to be used. MBK recently obtained approval of the budget for Phase 3 and will move forward with purchasing new equipment, removing existing equipment

that is no longer functioning, and relocating/repurposing existing equipment that is functional. MBK will continue to perform regular field visits to inspect the equipment and perform portable meter testing on any siphons running at the times of the visit.

On February 27th, MBK and MWD attended the quarterly Delta Measurement Consortium meeting to provide an update to the Consortium on the planned efforts for Phase 3. At the meeting, the Delta Watermaster informed the group that his office will be pursuing a Delta-wide Alternative Compliance Plan focused on Open ET; he asked for the cooperation of the Consortium in that effort. MWD and the RDs plan to proceed with the planned Phase 3 efforts while continuing participation with the Consortium and investigating the potential use of Open ET.

**RECLAMATION DISTRICT NO. 756 – BOULDIN ISLAND**  
**DELTA LEVEES MAINTENANCE SUBVENTIONS PROGRAM APPLICATION**

**MARCH 2020**

**TOTAL AMOUNT REQUESTED 2020–2021: \$1,595,000**

### **District Summary**

The levee system surrounding Bouldin Island is under the jurisdiction of Reclamation District No. 756 (District). The 17.95 miles of non-project levees includes 3.92 miles along Little Potato Slough, 4.53 miles along the right bank of Potato Slough, 0.66 mile along the right bank of the San Joaquin River, 3.99 miles along the left bank of the Mokelumne River, and 4.85 miles along the left bank of the South Fork Mokelumne River (**Sheet 1**).

The District was formed in 1904 to maintain the levee system that protects 6,006 acres of agricultural land<sup>1</sup>, 20 residents, local infrastructure, and on-island assets. The levee also protects State Highway 12, one of the main corridors through the Delta.

### **Financial Information and Method of Assessment**

The District obtains revenues primarily through property assessment. The District has the ability to assess landowners up to \$460,000 each year. The District uses the assessment to pay for District operations, levee maintenance and levee rehabilitation. Assessment rates are determined by dividing the total benefit by the number of Benefit Units (BUs) in order to determine an assessment rate per BU. The base rate for the benchmark Vacant/Open Range parcel is set at \$66.85 per year per acre. Rates for other types of parcels are based upon relative replacement costs. As of June 30, 2018, the District's liabilities total \$722,543, see page 6 of the audit report for additional information regarding the District's long-term obligation. The District does not receive any ad valorem property tax.

### **Work Plans**

#### **Long-Range Plan**

The District submitted its Five Year Plan to DWR in February 2011, which includes its maintenance and rehabilitation plans, target dates, cost estimate, centerline profiles and cross-sections. The District did not include a listing of encroachments; it does have a list of locations by station and maintains a current list of elevations. The encroachment listing is on file with the District and will be updated for the District survey. Since 2012, the District has worked towards meeting their goal to improve the levees. The District exceeds the HMP minimum criteria. The District is currently updating its Five-Year Plan.

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<sup>1</sup> Sacramento San Joaquin Delta Atlas, Department of Water Resources, 1995

## **Annual Routine Maintenance Plan**

The District plans to continue its routine maintenance practices, which it has done consistently for a number of years, as evidenced by the current state of the levee system. Routine tasks include levee patrol; rodent control; all weather roadway repairs; repair of minor subsidence sloughing or slipouts; debris removal; drain and toe ditch cleaning; vegetation control; waterside slope protection; flood emergency planning and preparation; removing or modifying encroachments; surveying; engineering services; and other maintenance and permitting as needed.

The District has executed a Routine Maintenance Agreement (RMA) (#II-065-91) under Section 1600, et seq., of the California Department of Fish and Wildlife (CDFW) Code. This RMA defines the District's maintenance work on the waterside of the levee.

District staff patrols the levee daily. The District's Superintendent conducts periodic inspections when something is found during the routine patrols. If applicable, a levee maintenance inspection report for non-project levees will be prepared for reimbursement of inspection-related expenses in accordance with the reporting guidelines provided in Appendix D of the Guidelines.

The District will exterminate burrowing rodents and fill the burrows with compacted material, on an as needed basis. As designated by CDFW, no filling of burrows in burrowing owl areas shall take place during the period of March 15 through August 15, with the exception of the filling of beaver and muskrat dens near the waterline. Application of County-permitted and restricted bait materials, or any other approved method of rodent eradication, shall be done in accordance with labeled instructions and regulations.

The District will repair, grade, and shape the levee crown as needed, so that the levee crown will maintain a uniform shape, resulting in the drainage of water equally throughout the surface, and eliminating the risk of pocketing or excessive runoff locations. Levee patrol road areas require placement of all-weather road surfacing for wet weather accessibility. Work will be performed in a manner that will keep dust to a minimum and prevent siltation from impacting the adjacent waterways. The weight and speed of all vehicles using the patrol or levee access roads shall be restricted.

A seepage/irrigation ditch is located near the levee toe extending almost the entire perimeter of Bouldin Island. Typically, the seepage/irrigation ditch is 6 feet wide at the bottom, 10 feet wide at the top, and ranges from 5 to 10 feet in depth. Ditches are cleaned by removing silt deposited at their bottom. Ditch cleaning is likely to occur in the late fall, or weather permitting, during the winter. Each year, portions of the levee toe are cleaned, however the cleaning takes place over the course of a three-year period.

District vegetation control is completed through a combination of spraying, hand and mechanical clearing, grazing and burning. Spraying is performed using land-based equipment

applying herbicide to the crown, waterside slope, and landside slope where needed to control noxious vegetation. The District uses hand tools, discs, choppers, brush hogs, grazing or small-scale burning to remove noxious vegetation.

The District's RMA for controlling vegetation on the waterside slopes includes, but is not limited to the following additional conditions:

- To protect ground nesting birds and other breeding wildlife species, herbicides may not be applied between March 15 and July 1.
- Soil sterilants may only be applied to control *Arundo donax*.
- Removal of branches, stems, and shoots of weeds, brush, berry vines, and shrubs may be removed except between March 15 and June 30.
- Except between March 15 and June 30, the District may remove trees under 2 inches and over 18 inches in diameter at diameter breast height (DBH). Roots must remain in place when removing trees under 2 inches in diameter at DBH. Removal of trees over 18 inches in diameter at DBH require special permission; if permission is granted, the roots may be removed.

The District repairs waterside erosion when required.

The District has an approved Emergency Operation Plan, and in 2016, flood supplies were procured, which the District maintains on an ongoing basis.

As needed, the District may remove, raise, or modify encroachments that endanger the levee or interfere with levee maintenance; survey the levee; and replace missing station markers to ensure there are station markers at least every one-half mile or 2,500 feet.

The routine maintenance of the levee 2020–2021 will likely consist of the following items along with the estimated cost.

<b>Annual Routine Maintenance Items</b>	<b>Estimated Cost (\$)</b>
Levee Patrol	60,000
Rodent Control	5,000
All Weather Road	25,000
Subsidence, Sloughing, and Slipouts	20,000
Debris Removal	10,000
Seepage Control	10,000
Clean Drains and Toe Ditches	15,000
Vegetation Control	30,000
Waterside Slope Protection	50,000
Flood Planning and Preparation	10,000
Remove or Modify Encroachments	200,000
Surveying	5,000
Engineering	50,000
Misc. (gates, signage, etc.)	4,000
Environmental (CDFW permits, etc.)	1,000
<b>Total Routine Maintenance</b>	<b>\$495,000.00</b>

### **Rehabilitation Plan**

Multiple sites may require rehabilitation during the fiscal year. Details regarding limits of work will be finalized prior to construction.

<b>Rehabilitation Items</b>	<b>Estimated Cost (\$)</b>
Rehabilitation Work	1,000,000
Environmental Documentation (CDFW, CEQA, etc.)	100,000
<b>Total Rehabilitation</b>	<b>\$1,100,000.00</b>

### **Compliance with Applicable Laws**

The District will abide by all applicable laws including, but not limited to, labor compliance and mileage reimbursement rates.

- All work, subject to labor compliance laws, will be required to meet the Department of Industrial Relations Labor Compliance Program requirements.
- The District acknowledges that reimbursement of automobile mileage, as it relates to eligible work, will follow the prevailing Federal Standard Mileage Rate for the cost of operating an automobile.

## **Environmental Compliance**

The District has concluded that its long-range, routine maintenance practices and levee rehabilitation are Categorically Exempt under the California Environmental Quality Act (CEQA). The District will file a Notice of Exemption with San Joaquin County to that effect.

The District's work activities, for the fiscal year of the application, will be carried out in a manner consistent with the requirements set forth under California Water Code (CWC) Section 12987. The District does not anticipate habitat impacts that would result in a net long-term loss of habitat; therefore, no mitigation is planned. If habitat impacts associated with levee maintenance activities occur, the District will mitigate the impacts to meet the requirements of CWC Section 12987. The District proposes, and hereby requests, to utilize the programmatic enhancement habitat credits, if necessary. The District will comply with the net habitat improvement mandates of the CWC Section 12987.

The District's maintenance plan complies with the California Endangered Species Act, the Federal Endangered Species Act, and California Fish and Game Code § 1600 et seq., regarding Lake and Streambed Alteration Agreements.

The District's maintenance plan is consistent with the Clean Water Act, and the Rivers and Harbors Act, as administered by USACE.

Minor erosion repair may be performed under a project specific, or a RMA CDFW Streambed Alteration Agreement, and/or USACE Nationwide Permit, depending on repair requirements. All applicable parties will be informed of the activity as required.

The District will notify responsible and trustee agencies of any actions that fall within these agencies' jurisdiction as required by law.

## **Federal Disaster Assistance**

In any given year, the District's expectation is to be ready for potential emergency operations during the flood season. While the District is unable to predict the potential outcome in a given year, there is always the potential for emergency flood fighting, and subsequent levee repairs and rehabilitation. In the case that an emergency (federal, state or local) occurs, the District will properly administer the emergency and seek reimbursement for eligible expenses through all available programs including under PL 93-288. If federal assistance is unavailable, the District will coordinate with the Delta Levees Maintenance Subventions Program for possible reimbursement.



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4125.6 SUBVENTION APPLICATION 2020-2021



# Reclamation District No. 756 Bouldin Island

## Issue Tracking Summary

3/16/2020

IssueID	Priority	Report Date	Reporter	Location	Issue Type	Description	Action	Field Notes
23	Low	2/11/2017	JaimeBarajas	Station 859	Boil	Boil on lower levee slope/toe; running at high tide	Monitor	25 LF core trench along WS hinge to depth of 8'; no pipe or water encountered; backfilled with native material.
24	Low	2/11/2017	JaimeBarajas	Station 924+10	Boil	Boil on lower levee slope/toe; running at high tide	Monitor	40 LF core trench along WS hinge to depth of 8'; encountered water seeping from landside trench wall at 8' depth; backfilled with native and imported dry fill; Drainage ditch to be cut along Caltrans access roadway from Sta 926 to Sta 2 to relieve ponding. Work to be done by Sierra Cattle.
34	Low	2/20/2017	NateHershey	Station 813	Encroachment	Siphon may be low	Monitor	8/14/17 - Waterside top of pipe = 7.2; 100 yr. flood = 7.6; 12" siphon; pipe is low; Continue to Monitor
41	Medium	3/28/2017	RalphHeringer	Station 544-549	Crack	Cracking in LS Slope; seepage and cattails at toe	Monitor	Monitor and discuss repair; 10/23/17 Levee crown trenched; no encroachments located, Area to be graded and prepared for flood season; will proceed under Special Projects upon receipt of PFA. 12/4/17 - grading complete
53	Medium	8/11/2017	NateHershey	Station 324	Seepage	Seepage at toe of 3 to 1 slope	Monitor	Monitor
54	Medium	8/11/2017	NateHershey	Station 336	Seepage		Monitor	Monitor; The hole is shallow at about 1-2 inches deep.

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## Issue Tracking Summary

3/16/2020

IssueID	Priority	Report Date	Reporter	Location	Issue Type	Description	Action	Field Notes
63	Medium	3/23/2018	RussRyan	Station 72	Crack	Longitudinal crack on land side slope near toe of Levee. Crack runs several hundred feet parallel to Levee road. See photos.	Repair	Investigate and monitor; It's clear to me that there is differential settling after slope vegetation was cleared.
65	Medium	5/8/2018	RussRyan	Station 710	RodentActivity	Adjacent to Duck Club office on Levee slope water side. Appears to be possible Beaver Den discovery during low tide.	Repair	Min. Fill material;Need to investigate extent of hole and fill in with Levee backfill material/rock.
65.1	Medium	6/19/2018	AndrewReece	Station 712+00	RodentActivity	Possible beaver den by district office, west of tree on ws slope	Repair	Two levee penetrations, one on top of other. WS slope sloughing.
74	Low	1/5/2019	RussRyan	Land side within 150 foot Levee footprint. See attached photos. Low wet areas.	Other,Sinkhole	Bouldin Island - West stretch length adjacent to Mokelumne River. See attached photos for exact location.	Investigate	See notes above.
85	Low	4/1/2019	MichaelNishimura	79+00-80+00	Sloughing	sloughing on water side for about 100 feet, cracking at hinge	Monitor	
86	Medium	5/7/2019	Brian Janowiak	Sta 845+00 to 846+00 between toe road and seepage ditch	Seepage	Seepage between toe road and seepage ditch appeared last week. Does not appear to be tidally influenced and a point source was not located. Additional minor wet spots observed between Sta 841+00 and 843+00. No known history of seepage at this location.	Repair	District (Dave, Russ, Ralph) to review site on 5/10. Exploratory trenching will likely be required. Perform trenching when convenient as long as site does not change or worsen.

# Reclamation District No. 756 Bouldin Island

## Issue Tracking Summary

3/16/2020

IssueID	Priority	Report Date	Reporter	Location	Issue Type	Description	Action	Field Notes
86.1		5/10/2019						Looks like seepage is drying up.
88	Low	6/7/2019	Dave Forkel	Sta 382+00	Seepage	Seepage on side of levee.	Investigate	
93	Medium	9/26/2019	Andy Reece	693+00	Sloughing, RodentActivity	sloughing and possible rodent den	Investigate	big rock and might be eroding, possible beaver as well
94	Low	9/27/2019	Brian Janowiak	Lower toe	Other, Settlement	Area along lower toe near seepage ditch by Floeida tip appears to have settled.	Monitor	