

**MEMORANDUM**

June 12, 2019

**TO:** Reclamation District No. 756

**FROM:** Nathan Hershey

**SUBJECT: June 2019 Engineer's Report**

Described below are the engineering items to be discussed at your June 12, 2019 meeting.

**Subventions 2017-18** – The District submitted an application for participation in the Program in the amount of \$900,000. \$14.5 million has been approved for Program funding for FY 2017-18. The District's final claim has been submitted in the amount of \$415,760.88.

**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.

**Subventions 2019-20** – The District submitted an application for participation in the Program in the amount of \$750,000.

**Annual Maintenance** – Attached are the current maintenance items we are tracking.

**Special Projects** – The District submitted a full application for a project under DWR's 2016 Projects Solicitation Package (PSP) for Multi-Benefit Projects. The full application proposed a project between Stations 500 and 540 that would create a habitat bench and set the levee back, while also relocating the District's Camp 5 pump station, moving it further landward. Subsequently, we requested an expansion of the project area to include rehabilitation from Stations 540-550. We have received a funding agreement for the work, and DWR has responded to our inquiry about eligibility of relocating the pump station. Removal of the existing pump station is an eligible cost (95% State share), and the new pump station will be eligible for 50% State share.

We have submitted a Full Proposal for a Directed Action project to rehabilitate the north levee. DWR is currently reviewing the proposal, and DWR has indicated that sufficient funding may not be available at this time. In response, we submitted a letter to the Delta Levees Program notifying the Program that the District believes the Directed Action project should have higher priority than the multi-benefit project.

**Five Year Plan** – We have received a fully executed funding agreement for the Five-Year Plan (FYP). We have started work on the Plan update and have requested an advance of funds.

**SB 88** – Work under Phase 2 of the measurement experiment (work plan for 2019) is progressing and coordination with the Delta Measurement Experimentation Consortium continues.

Siphon logs for calendar year 2018 have been summarized and will be used for water right reporting calculations. 2019 siphon logs have been received for the month of April and collection of May logs is in

progress. Site visits were limited during the month due to non-use of siphons and waiting for equipment. Portable meter testing is scheduled to continue during the irrigation season.

Eight of the nine existing test sites appear to be functioning properly and collecting flow data. Two of the nine sites (Bouldin Island Siphon Nos. 39 and 40) were vandalized early this year. The replacement equipment for Siphon No. 39 was installed last month and has already recorded flow data. Overall the equipment appears to be functioning and maintaining power. Replacement equipment for Siphon No. 40 is on the way to MBK's office. A security enclosure was installed to protect the equipment at these two sites from future vandalism. Another two metered sites were not functioning last month due to wiring and programming issues. Both of these sites were visited by MBK for repair; one repair was successful. The other site is still producing erroneous data and will need further investigation with the manufacturer.

In addition, water level and pressure sensor equipment at three sites require troubleshooting and/or maintenance. The internal batteries died on the land side water level sensor installed at Bouldin Island Siphon No. 2. The sensor was removed and batteries have been replaced; the sensor was reinstalled last week. The mounting of the land side water level sensor at Bouldin Island Siphon No. 40 has been corroded and therefore the sensor has been removed. This sensor does not have an internal data logger and therefore will be reinstalled when the replacement data logging equipment is installed at the vandalized site. Also at Bouldin Island Siphon No. 40, the water side water level sensor is experiencing telemetry communication issues. The manufacturer has offered to replace this sensor free of charge. Lastly, the land side water level sensor at Bouldin Island Siphon No. 14 is experiencing communication issues with the data logger. MBK is currently discussing with the manufacturers possible solutions at all sites still experiencing issues.

Gornto Ditching has been contacted to repair the solar panels at two sites that have become misaligned due to wind. New measurement equipment was ordered for use at siphons on Bouldin Island. One Sierra Instruments InnovaSonic 203 external ultrasonic flow meter was installed at Siphon No. 26 but requires programming to begin collecting data. The other Sierra Instruments InnovaSonic 203 will be installed at Siphon No. 27 during a future site visit. The last piece of new measurement equipment, a McCrometer UltraMag flange magnetic meter has not yet shipped from the manufacturer.

# Reclamation District No. 756 Bouldin Island

## Issue Tracking Summary

6/6/2019

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

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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.
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	

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86	Medium	5/7/2019	BrianJanowiak	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.
86.1		5/10/2019						Looks like seepage is drying up.