

MEMORANDUM

June 12, 2019

TO: Reclamation District No. 2028

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 2015-16 – The District submitted a commitment letter to CDFW to provide 1,310 lineal feet of SRA habitat. The habitat will be planted on-island in areas where the levee has sufficient width to accommodate the planting. Two areas have been identified as potential candidates. CDFW has approved release of Subventions funds for FY 2015-16, and the District received reimbursement in the amount of \$148,329.

Subventions 2016-17 – The District submitted an application for participation in the Program in the amount of \$396,000. \$12 million has been approved for Program funding for FY 2016-17. The District submitted a final claim in the amount of \$320,706.82.

Subventions 2017-18 – The District submitted an application for participation in the Program in the amount of \$565,000. \$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 \$315,922.67.

Subventions 2018-19 – The District submitted an application for participation in the Program in the amount of \$500,000. \$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 \$615,000.

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

Special Projects – Construction of the Old River multi-benefit levee rehabilitation project has restarted with Teichert mobilizing to the site of May 1, 2019. Teichert has completed trenching the levee crest and several minor anomalies within the upper few feet of the levee were encountered. These mostly consisted of abandoned conduits. The island has been mostly dewatered and the borrow site is almost dewatered as well. Teichert is planning to begin stripping peat within the next few days and will begin placing on-island borrow and importing fill from off-site. We have been coordinating with Teichert, the District, and D&L Farms on dust control, access, and the schedule of construction activities including siphon/pipe replacement. The project is on schedule and the levee rehabilitation component will be complete by the end of 2019.

We have submitted a Full Proposal for a Directed Action project to rehabilitate the north and south levees. DWR is currently reviewing the proposal and has indicated that sufficient funding for the project may not be available at this time.

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. 2028 Bacon Island

Issue Tracking Summary

6/6/2019

IssueID	Priority	Report Date	Reporter	Location	Issue Type	Description	Action	Field Notes
6	Medium	10/21/2016	Ralph Heringer	Station 275 @ Pump Station	Broken Equipment	Trash racks in need of maintenance/repair	Investigate	TBD
73	Medium	10/21/2016	Ralph Heringer	Station 465 @ Pump Station	Broken Equipment	Trash racks in need of maintenance/repair	Investigate	TBD
8	Low	11/2/2016	Dave Forkel	Station 668-702	Encroachment	Eucalyptus trees present a hazard	Investigate	Review, explore removal
72	Medium	1/17/2017	Junior	West and North levees	Boil	Numerous locations along west and north levees	Monitor all boil sites; containment berms built on two most severe boils	Continue to monitor; flows seem to have receded or stopped with lower tides
36	Low	2/24/2017	Nate Hershey	Station 712	Seepage	Seepage exiting at toe of slope near retaining wall structure.	Monitor	12/4/17 - Area dried up after winter; continue to monitor
43	Medium	4/4/2017	Brian Janowiak	Station 92-93	Seepage	Seepage existing at toe of slope, running across county road		
48	Low	6/14/2017	Dave Forkel	Station 190+00	Vegetation control	CDFW mitigation site shows evidence of arundo mowing.	Investigate	Discuss mitigation requirements.
67	Medium	6/21/2018	Andrew Reece	Station 596+50	Sloughing	Rip rap sliding down slope causing exposure to waterside slope	Monitor	Monitor for right now, repair in the near future.
70	Medium	8/2/2018	Andrew Reece	Station 336	Rodent Activity	Few sinkholes on ws slope approximately 200ft north of siphon.	Monitor	
71	Medium	8/30/2018	Michael Nishimura	Around Station 700 near South east corner of island	Rodent Activity	2 large size burrow dens	Investigate	Just down station of Juniors place, mix of rodent burrow and erosion
75	Medium	2/15/2019	Mike Kynett	Old River Levee @ 473+00	Erosion	W/s sloughing into crest, 1.5-foot tall head scarp, existing rock slipped	Monitor	
76	Medium	2/15/2019	Mike Kynett	Old River Levee @ ~524+00	Erosion	W/s sloughing into crest, 3-foot tall head scarp	Repair	

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77	Medium	2/15/2019	Mike Kynett	Old River Levee @ ~530+00	Erosion	W/s sloughing, 3-foot tall vert head scarp, not yet into crest	Monitor	
78	Medium	2/15/2019	Mike Kynett	Sante Fe Cut @ ~678+00	Erosion	W/s sloughing and cracking into crest	Monitor	
79	Medium	2/15/2019	Mike Kynett	Connection Slough Levee @ ~204+00	Erosion	W/s sloughing into crest, 2-foot tall head scarp, existing rock slipped	Repair	
80	Medium	2/15/2019	Mike Kynett	Connection Slough Levee @ ~ 262+00	Erosion	W/s sloughing	Monitor	
81	Medium	2/15/2019	Mike Kynett	Old River Levee @ ~332+00	Seepage	Report of water exiting levee during high tide	Investigate	
82	Medium	2/15/2019	Mike Kynett	Old River Levee @ ~364+00	Erosion	W/s sloughing into levee crest, 1.5-foot tall scarp	Repair	
84	Medium	4/4/2019	RussRyan	95+00	Boil	Lower tide now and I think the roadway pothole (boil ??) needs repair at some point. I know it's a county road. We'll have to figure since once the (what I'm assuming) is a leak of repaired then the road will need to also be repaired.	Repair	