

MEMORANDUM

May 15, 2019

TO: Reclamation District No. 2028

FROM: Nathan Hershey

SUBJECT: May 2019 Engineer's Report

Described below are the engineering items to be discussed at your May 15, 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. With the RD's commitment, CDFW has agreed to approve release of Subventions funds for FY 2015-16.

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 begun trenching the levee crest and will be complete with the majority of trenching later this week. Once the island has been dewatered from seasonal inundation for farming operations, Teichert will start placing fill on the levee slope. We have been coordinating with Teichert, the District, and D&L Farms on dust control, access, and the schedule of construction activities including siphon 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 March and collection of April logs is in process. A site visit to Holland Tract was conducted to continue portable meter testing of siphon maximum capacity and flow at a typical operation level, which will be used to adjust water right reporting calculations. Additional site visits were limited due to non-use of siphons, but portable meter testing is scheduled to continue during the irrigation season.

Seven of the nine existing test sites appear to be functioning properly and collecting flow data. Two of these four sites (Bouldin Island Siphon Nos. 39 and 40) were vandalized early this year. Replacement equipment for one site has been purchased and was installed last week, which is now functioning properly. Replacement equipment for the second site has been ordered and is awaiting payment from MWD prior to being shipped for installation. A security enclosure is in the process of being 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 recently visited by MBK for repair; one repair was successful. The other site is still producing erroneous data and will need further investigation.

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 will be reinstalled at the next site visit to Bouldin Island. 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. 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.

Cost estimates have been prepared to correct damage to solar panel installations due to wind, and to purchase new equipment for testing at three additional siphons as part of Phase 2, which will be provided to MWD soon.

Reclamation District No. 2028 Bacon Island

Issue Tracking Summary

5/10/2019

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	