

**MEMORANDUM**

April 19, 2023

**TO:** Reclamation District No. 756

**FROM:** Nathan Hershey

**SUBJECT:** April 2023 Engineer's Report

Described below are the engineering items to be discussed at your April 19, 2023 meeting.

**Subventions 2021-22** – The District submitted an application for participation in the Program in the amount of \$631,000. An additional \$2 million was approved by the Central Valley Flood Protection Board, for a total of \$12 million approved for the Program for FY 2021-22. A final claim was submitted in the amount of \$292,577.83.

**Subventions 2022-23** – The District submitted an application for participation in the Program in the amount of \$631,000. \$12 million was approved by the Central Valley Flood Protection Board for the Program for FY 2022-23.

**Subventions 2023-24** – The District submitted an application for participation in the Program in the amount of \$631,000.

**Annual Maintenance** – Attached are the current maintenance items we are tracking. We have recently completed an updated survey of the levee system. Areas have been identified that have appeared to have settled, suggesting maintenance should be considered after the flood season. The sites where boils occurred on the west levee have been explored. One encroachment, a deteriorated riveted steel pipe, was located and removed.

**FEMA** – A Request for Public Assistance has been submitted for damages sustained during the January 2023 emergency. MBK had a preliminary Exploratory Call with FEMA on 3/30 to discuss the damages listed in the claim. A Recovery Scoping Meeting (RSM) has been scheduled with FEMA and CalOES at MBK's office on 4/20 at 2:00pm (Microsoft Teams option available). Prior to the meeting, MBK will complete a Damage Inventory (DI) and compile documentation supporting the claim. At the RSM, we will discuss the details of the DI and determine the next steps in the recovery process.

**Special Projects** – Construction of the Directed Action project to rehabilitate the north levee (BO-19-1-SP) is in progress. We are working with the Contractor to begin construction on May 1. A preliminary construction schedule for the remainder of the project has been developed and provided to the District. We are in the process of reviewing various submittals, requests for information, and supporting Sukut and the consultant team preparing for the start of construction.

Work on the levee setback project (BO-17-1-SP) near the Camp 5 pump station (west levee) has been accelerated due to the recent instability observed on the landside slope. DWR and CDFW are allowing us to move forward with work on the landside on an emergency basis to stabilize the area. A streamlined Scope of Work will be submitted for approval and work will likely commence in June or sooner if possible.

A concept proposal was submitted to DWR for the Projects Solicitation Package (PSP) for multi-benefit projects. DWR acknowledged receipt and is currently evaluating the proposals.

**Five Year Plan** – Work on the Five-Year Plan is complete. We have addressed DWR's comments and have submitted the final version of the Plan. We have also uploaded the final document to the RD's website.

**SB 88** – MBK has obtained the quotes for the equipment required at the 51 remaining sites to be metered. These flow meters will be installed over the next two years due to the number of sites and levee projects that begin in 2023. Prior to installation of flow meters, MBK identified 12 sites that need to be tested for asbestos or tar coating by Bovee Environmental Management. One of these sites, siphon 12 on Webb Tract, could not be accessed due to high tide. However, upon further review, MBK and Bovee Environmental concluded that the potentially hazardous materials would not be disturbed during the installation process. Of the remaining 11 sites, 3 on Bacon Island and 1 on Bouldin Island tested positive for hazardous materials. These 4 sites will be abated by W.C. Maloney prior to any flow meter installation.

MWD and the RDs are in compliance for calendar year 2023 under an approved extension of time. The extension was approved by the Delta Watermaster on January 13th, 2022 and will expire on January 1st, 2024. The extension of time included a Plan for Compliance which provides details regarding the methods to estimate diversions on siphons without flow meters and provides a measurement equipment installation schedule. MWD currently anticipates that installing all the flow meters will take five years. Therefore, MBK has provided cost estimates for flange magnetic meters with telemetry equipment installed on the water side of all active siphons.

Development of the Delta-wide ACP by the Delta Measurement Experiment Consortium to utilize Open ET for measuring and reporting diversions continues. Place of use polygons for each island have been completed and will be used in conjunction with Open ET to report on diversions. MBK and MWD continue to participate in the Consortium.

## RD 756 - Bouldin Island

Issue Tracking Summary

April 17, 2023

Issue ID	Priority	Report Date	Reporter	Location	Issue Type	Description	Action	Field Notes
		March 31, 2023 8:59 AM	Michael Nishimura	29+00 to 29+60	Other	5-6" ruts concentrated in two locations. Half a load (10 tons) recommended. Could potentially just be regraded.	Repair	
		March 31, 2023 9:05 AM	Michael Nishimura	32+80 to 33+50	Other	Regrade small potholes. Material not Needed.	Repair	
		March 31, 2023 9:10 AM	Michael Nishimura	40+50 to 41+50	Other	Half a load 5-6" ruts on crown.	Repair	
		March 31, 2023 9:15 AM	Michael Nishimura	43+90 to 45+50	Other	3"-5" deep rutts along a consistent 160 foot length. Rutts about 2 feet wide.	Repair	
		March 31, 2023 9:31 AM	Michael Nishimura	286+20	Other	15 foot by 3 foot by 4-5" deep pothole . Potential regrade site.	Repair	
		March 31, 2023 9:46 AM	Michael Nishimura	378+40	Other	X4 1.5foot diameter pot holes 2-3" inches deep. Regrade site only	Repair	
		March 31, 2023 9:49 AM	Michael Nishimura	To 423+20	Other	4 1 foot diameter potholes by 4"-5" deep. Half a load or so To fill.	Repair	
		March 31, 2023 9:49 AM	Michael Nishimura	422+20 to 423+20	Other	Multiple 1 foot diameter potholes by 4"-5" deep. Half a load to full load or so To fill.	Repair	
		March 31, 2023 9:59 AM	Michael Nishimura	427+20	Other	Multiple potholes 1 foot diameter 2-5" deep. Could be regrade site	Repair	
		March 31, 2023 10:02 AM	Michael Nishimura	430+40	Other	2.5 diameter pothole about 2-5" deep needs ab not too much.	Repair	
		March 31, 2023 10:04 AM	Michael Nishimura	433+90	Other	Multiple potholes. Regrade site.	Repair	
		March 31, 2023 10:07 AM	Michael Nishimura	442+00	Other	Pothole. Regrade site.	Repair	
		March 31, 2023 10:08 AM	Michael Nishimura	444+40	Other	Pothole some ab needed.	Repair	
023	Low	February 11, 2017 5:00 PM	Jaime Barajas	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.
024	Low	February 11, 2017 5:00 PM	Jaime Barajas	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.
034	Low	February 20, 2017 5:00 PM	Nate Hershey	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
041	Medium	March 28, 2017 5:00 PM	Ralph Heringer	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
41.1		April 24, 2020 12:00 AM	Nate Hershey					Reviewed the site area. Area appears to be moving again - not as dramatic as in 2017, but it appears to be along the same fault lines. Seepage observed exiting the surface. Recommend performing an updated survey and developing an action plan.
41.2		March 10, 2023 1:00 AM	Andrew Petrini					Visual observation suggests recent movement may have occurred. AECOM reports no significant movement detected by instrumentation at this time.
053	Medium	August 11, 2017 12:00 AM	Nate Hershey	Station 324	Seepage	Seepage at toe of 3 to 1 slope	Monitor	Monitor
054	Medium	August 11, 2017 12:00 AM	Nate Hershey	Station 336	Seepage		Monitor	Monitor; The hole is shallow at about 1-2 inches deep.
074	Low	January 5, 2019 5:54 PM	Russ Ryan	Land side within 150 foot Levee footprint. See attached photos. Low wet areas.	Sinkhole, Other	Bouldin Island - West stretch length adjacent to Mokelumne River. See attached photos for exact location.	Investigate	See notes above.
088	Low	June 7, 2019 1:55 PM	Dave Forkel	Sta 382+00	Seepage	Seepage on side of levee.	Investigate	
094	Low	September 27, 2019 6:02 PM	Brian Janowiak	Lower toe	Other	Area along lower toe near seepage ditch by Florida tip appears to have settled.	Monitor	

096	Medium	April 22, 2020 12:00 AM	Russ Ryan	Between 630 and 640	Seepage	Appears to be seepage	Investigate	
107	Medium	December 17, 2020 2:05 PM	Russ Ryan	Station 630	Seepage	Just inside levee footprint on land side of toe drain there water ponding. Was there prior to any rain this season during dry period.	Monitor	See photos taken on site.
108	Medium	July 8, 2021 12:00 AM	Russ Ryan	Station 90	Crack	Cracking observed on landside slope. Unclear if this is a result of the earthquake event.	Monitor	
109	Medium	July 8, 2021 12:00 AM	Russ Ryan	Station 226	Sloughing	Potential landside settlement on toe berm. Unclear if this is earthquake related.	Monitor	
110	Medium	July 8, 2021 12:00 AM	Russ Ryan	Station 503	Sloughing	Landside disturbance. Unclear if earthquake related or due to sheep activity.	Monitor	
116	Medium	February 21, 2022 3:23 PM	Russ Ryan	West levee north of camp 5 at pilot project instrumentation area.	Seepage	Noticeable standing water at toe of levee at the same 2017 slippage event.	Investigate	Need Geotech investigation and assessments.
117	Low	February 23, 2022 12:10 PM	Russ Ryan	Location is landside off west levee (Bouldin Island) and south of Hwy 12	Seepage	Landside water ponding presenting at toe of levee.	Investigate	Roughly an estimated 30 feet by 10 feet. Dimensions need to be verified in field investigation.
120	Medium	May 19, 2022 10:15 AM	Nate Hershey	Station 856	Seepage	Seepage and ponding water reported at location of old toe ditch near Station 856. Confirmed in field (see photos).	Monitor	Recommend monitoring and repairing as part of Special Projects work on north levee. Continue to monitor and adjust if necessary.
121	Medium	October 14, 2022 12:00 AM	Nate Hershey	Station 33	Seepage	Seepage observed periodically on toe of levee. Seems to come and go, sometimes difficult to tell if it is seepage or ponding water. Observations suggest it is likely seepage that periodically appears during times of high water.	Investigate	
123	High	January 4, 2023 1:00 AM	AndrewReece	Station 498	Erosion	Waterside slope eroding in several locations.	Repair	
124	Medium	January 4, 2023 1:00 AM	AndrewReece	Station 555	Erosion	Eroded slope	Repair	
125	Medium	February 13, 2023 1:56 PM	Michael Nishimura	836+00 west of siphon	Erosion	25-40' of erosion within upcoming special project area. Erosion top of scarp is approximately 3 feet (slope distance) away from WS hinge.	Monitor	
126	Medium	February 17, 2023 12:12 PM	Dave Forkel	Camp 29 Pump Station	Erosion	Washout behind sump sheet piling	Repair	