MBK ENGINEERS

Water Resources • Flood Control • Water Rights

MEMORANDUM

April 23, 2025

TO: Reclamation District No. 2028

FROM: Nathan Hershey, Brian Janowiak

SUBJECT: **April 2025 Engineer's Report**

Described below are the engineering items to be discussed at your April 23, 2025 meeting.

Subventions 2023-24 – The District submitted an application for participation in the Program in the amount of $541,000. A total of $14 million has been approved by the Central Valley Flood Protection Board for the Program for FY 2023-24. A final claim was submitted in the amount of $317,590.36.

Subventions 2024-25 – The District submitted an application for participation in the Program in the amount of $541,000. A total of $14 million has been approved by the Central Valley Flood Protection Board for the Program for FY 2024-25.

Subventions 2025-26 – The District submitted an application for participation in the Program in the amount of $600,000.

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

Emergency Response Grant (Round 3) – The District's emergency operations plan and flood contingency map has been updated and finalized. The final version has been accepted by the county and the invoice is being processed for reimbursement.

FEMA – The District's claim is currently under review at FEMA. MBK will continue to check in with FEMA personnel regarding status updates. The total claim amount is $52,398.36.

Special Projects – The enhancement component of the Old River multi-benefit levee rehabilitation project (BN-15-1-SP) is complete. The maintenance period has expired and the final inspection with CDFW and DWR has been performed. We are preparing the project completion report and closing out the funding agreement.

Work under BN-19-1-SP is scheduled to resume on May 5, 2025. This final phase of the project will focus on the county road area. Construction is scheduled to be complete by the end of June 2025.

SB 88 – All equipment through Phase 4 has been installed and certified by MBK Engineers. Data is currently being collected at 37 sites across all four islands. MBK will continue to monitor all sites weekly via Wildeye's website and monthly via site visits. In early March, three flow meter batteries were replaced. In April, two flow meter batteries have been replaced so far.

All Wildeye units are currently working, with the exception of:

(1) Bouldin Island Siphon 30: Damaged by driftwood (equipment will be reinstalled when Phase 5 installations occur at nearby siphons).
(2) Bouldin Island Siphon 24: The data collected is not being recorded correctly in Wildeye, which we believe is due to a configuration issue. MBK will coordinate with Wildeye to try to resolve the issue during Phase 5 installations.
(3) Bouldin Island Siphon 10: The Wildeye unit is not receiving inputs from the connected flowmeter. Upon visual inspection by MBK, no issues seemed to be present. Wildeye will evaluate and repair during nearby Phase 5 installations.

All flow meters are currently working, with the exception of:

(1) Bouldin Island Siphon 2: This meter can be replaced with the complimentary 12" meter and 14" conversion kit provided by TechnoFlo. A change order or new contract is needed with Gornto to have the equipment installed.
(2) Bouldin Island Siphon 26: This meter can be replaced with one of the surplus 12" meters purchased by MWD during the Phase 5 equipment purchase. The extra 14" conversion kit is no longer needed for Bouldin Island Siphon 9 and can be used. A change order or new contract is needed with Gornto to have the equipment installed.
(3) Bacon Island Siphon 25: This meter can be replaced with one of the surplus 12" meters purchased by MWD during the Phase 5 equipment purchase. A change order or new contract is needed with Gornto to have the equipment installed.
(4) Webb Tract Siphon 6: This meter can be replaced with one of the surplus 12" meters purchased by MWD during the Phase 5 equipment purchase. A change order or new contract is needed with Gornto to have the equipment installed.
(5) Bacon Island Siphon 14: Grounding cable disconnected and dead battery. MBK to fix cable and replace battery.
(6) Holland Tract Siphon 1: Dead battery. MBK to replace.
(7) Holland Tract Siphon 2: Low battery. MBK to replace.

Phase 5 flow meter installations have been completed on Bouldin Island and Webb Tract. A separate request for proposals will be created at a later date for Bacon Island and Holland Tract. The installation of Phase 5 Wildeye telemetry equipment has been completed on Bouldin Island, but we are waiting on confirmation that all Wildeye units have been moved to the steel posts welded on to the siphons by RD staff. MBK is coordinating with Wildeye staff to begin installations on Webb Tract.

MBK has provided MWD staff with a draft summary technical report on the 2023 OpenET and measured diversion comparison for review and is developing a similar comparison for 2024.

MBK prepared Water Year 2024 annual reports, and MWD staff submitted the reports prior to the February 1, 2025 deadline. Subsequent to those submissions, MWD staff prepared and submitted a second set of annual reports using the Delta ACP reporting platform.

MBK met with MWD and Tetra Tech on March 6, 2025, to discuss the Bouldin Island Water Balance. Tetra Tech requested recommendations by MBK regarding the metering of the discharge pumps. MBK shared that MWD has an excess 24" flange mag meter from the Phase 5 equipment purchase that could be utilized. Other meters would be required to measure flows in the larger pipes. MBK is currently working with TechnoFlo to obtain a quote for a 30" flange mag meter and will reach out to MWD staff once it is received.

RD 2028 – Bacon Island

Issue Tracking Summary

April 18, 2025

Issue ID	Priority	Report Date	Reporter	Location	Issue Type	Description	Action	Field Notes
006	Medium	October 20, 2016 5:00 PM	RalphHeringer	Station 275 @ Pump Station	Broken Equipment	Trash racks in need of maintenance/repair	Investigate	TBD
036	Low	February 23, 2017 5:00 PM	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
043	Medium	April 3, 2017 5:00 PM	Brian Janowiak	Station 92-93	Seepage	Seepage existing at toe of slope, running across county road		
073	Medium	October 20, 2016 5:00 PM	RalphHeringer	Station 465 @ Pump Station	Broken Equipment	Trash racks in need of maintenance/repair	Investigate	TBD
102	Medium	May 5, 2021 11:13 AM	Dave Forkel	Sta 107+19	Erosion	Erosion at toe of levee at siphon discharge.	Repair	Dino and Son to fill erosion site
103	Medium	May 5, 2021 11:22 AM	Dave Forkel	Sta 175+15	Erosion	Erosion at toe of levee at siphon discharge.	Repair	Dino and Son to fill erosion site
106	Medium	November 4, 2021 4:43 PM	Dave Forkel	Sta 170+00	Seepage	Seepage at toe of levee.	Monitor	
108	Medium	January 10, 2023 10:33 AM	MichaelNishimura	13+50 waterside hinge on road	Sinkhole, Other	6" diameter sink hole on ws road hinge. Probed for 5' deep going towards the water. Identical size hole on landside road hinge just across crown, probed about 2.5' into levee crest. The landside has multiple animal burrows 7" to 1' diameter in size. Probed 5' feet into levee towards levee center. Ground is very soft on landside slope and steep. Approximately 1.5:1 to 2:1 slope. There is a bulge at the lower landside toe. It appears either a low spot is ponding or potential seepage is occurring on the landside toe for approximately 150' adjacent to rodent activity and sinkholes.	Repair	
109	Medium	January 10, 2023 11:02 AM	MichaelNishimura	13+50 landside toe	Seepage	Potential sheet flow Seepage at landside toe. Adjective to levee with several large rodent holes. Approximately 150-200' total site length.	Monitor	

111	Medium	January 10, 2023 11:42 AM	MichaelNishimura	98+90 to	Erosion, Sloughing	Sloughing of ws slope. In the adjacent areas the slope is steep as well and it starts right at the water side hinge. This sloughing is occurring in a thick patch of ws slope and is still approximately in the same condition as it's adjacent slopes. Grading could help further damage from surface runoff.	Monitor	
113	Medium	January 10, 2023 12:10 PM	MichaelNishimura	203+50 to 204+25 waterside slope	Erosion, Sloughing	Erosion and sloughing 75' on waterside slope. Scarping mid slope. Likely caused by oversteepened slope and surface run off.	Monitor	
119	Low	May 31, 2023 6:38 PM	Dave Forkel	Sta 756+00	Crack	Mel reported crack and sloughing of riprap just south of bridge.	Monitor	Not much obvious sloughing.
120	High	February 15, 2024 12:00 PM	Dave Forkel	Sta 733+00	Boil	Boil in toe ditch	Investigate	
120.1		February 22, 2024 1:00 AM	Nate Hershey					Investigations indicate the water is coming from the field side. A trench was excavated in the field, and the direction of flow was coming from the field (flowing west to east). Recommend sandbagging around the boil to manage the pressure. When conditions permit, next steps are to excavate an exploratory trench east of the toe ditch to see if there is flow is coming through the levee. If so, an exploratory trench in the levee crown is recommended.
121	Medium	January 2, 2025 2:25 PM	Meaghan Radican	Between bridge and Hollywood area	Crack, Erosion	Cracking along levee slope	Repair	
122	Low	January 2, 2025 1:58 PM	Meaghan Radican	Hollywood area	Erosion	Erosion on WS slope just before Hollywood area	Repair	