

MEMORANDUM

August 27, 2025

TO: Reclamation District No. 2028

FROM: Nathan Hershey, Brian Janowiak

SUBJECT: August 2025 Engineer's Report

Described below are the engineering items to be discussed at your August 27, 2025 meeting.

Subventions 2023-24 – The District submitted an application for participation in the Program in the amount of \$541,000. A total of \$15.5 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 \$16 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. A total of \$16 million has been approved by the Central Valley Flood Protection Board for the Program for FY 2025-26.

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

FEMA – The District's claim (\$52,398.36) has been obligated. A Recovery Transition Meeting will be scheduled soon between FEMA, CalOES, and MBK where the funds will be transferred from FEMA to CalOES. At that point, MBK will provide any required closeout documentation.

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 have submitted the draft project completion report and are working on closing out the funding agreement.

Work under BN-19-1-SP is complete, with the exception of stockpiling pre-deployed riprap. We will coordinate with the District and farmer to confirm stockpile locations. Upon delivery of the stockpiled riprap, the final review will be prepared and acceptance recommended. The project completion report will be prepared and we will work on closing out the funding agreement.

SB 88 – Phase 5 flow meter installations have been completed on Bouldin Island and Webb Tract. The installation of Phase 5 Wildeye telemetry equipment has been completed on Bouldin Island and Webb Tract. Wildeye also fixed or replaced some broken units on Bouldin and Webb. Wildeye is sending invoices as they complete work on each island. Wildeye has prepared one invoice for the Bouldin and Webb Phase 5 equipment and two invoices, one for each island for the Phase 5 labor, replacement equipment, replacement labor, and labor to move the Wildeye units to the steel poles welded to the siphons.

A separate request for proposals is being prepared for Bacon Island and Holland Tract and is estimated to be released in September. Similar to last time, steel poles will need to be welded on to each siphon for the Wildeye units.

Across all four islands, 62 siphons have measurement equipment. However, 4 of those siphons need new meters and 7 of those siphons have meters with dead batteries. 2 of the 4 broken meters are old saddle meters from the experimentation that took place starting in 2016 (these are the last 2 meters of this type). The other 2 of the 4 broken meters are Seametrics AG 3000 meters that were damaged by debris. However, 1 of the broken AG3000 meters is on the land side of the siphon and the new AG3000 will need to be installed on the water side of the siphon. Gornto provided a quote for replacing the 4 broken meters and MWD has issued a purchase order; MWD is waiting for Gornto to schedule a day to conduct the work. MWD purchased 15 batteries from Technoflo, which MBK has been using to conduct replacements. MBK will continue to monitor all sites via Wildeye's website and will conduct site visits as needed to replace batteries and check on equipment. The flow meter batteries have about a 3 year life, so any flow meter installed in 2022 or earlier has either had or is going to soon need a replacement battery installed.

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

- (1) Bouldin Island Siphon 24: The data collected is not being recorded correctly in Wildeye, which we believe is due to a configuration issue. Wildeye worked on this meter during Phase 5 installations, but MBK needs to confirm that it is working.
- (2) Bacon Island Siphon 10: Wildeye was reinstalled incorrectly after levee work. Will be moved to steel pole during Phase 5 installations.
- (3) Bacon Island Siphon 31: Wildeye solar panel is missing (may have been stolen). To be fixed during Phase 5 installs.

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

- (1) Bouldin Island Siphon 2: This is a Seametrics AG 3000 meter that was damaged by debris. It can be replaced with the complimentary Seametrics AG 3000 12" meter and 14" conversion kit provided by TechnoFlo. Gornto to fix.
- (2) Bouldin Island Siphon 22: While at the site, the meter said pipe empty, but the siphon was running. Wildeye showed data on and off throughout the day. MBK to conduct further review of data.
- (3) Bouldin Island Siphon 26: This is a broken saddle meter that was installed during the experiment phase, which started in 2016. This meter can be replaced with one of the surplus Seametrics AG 3000 12" meters purchased by MWD during the Phase 5 equipment purchase. The extra 14" conversion kit no longer needed for Bouldin Island Siphon 9, can be used. Gornto to fix.
- (4) Webb Tract Siphon 6: This is a Seametrics AG 3000 meter that was damaged by debris. It can be replaced with one of the Seametrics AG 3000 surplus 12" meters purchased by MWD during the Phase 5 equipment purchase. Gornto to fix.
- (5) Bacon Island Siphon 14: Grounding cable disconnected and dead battery. MBK to fix cable and replace battery. Issues getting lid off. Have acquired new wrenches to try.
- (6) Bacon Island Siphon 24: Flow rate on meter seems high compared to Wildeye. MBK to conduct further review of data.
- (7) Bacon Island Siphon 25: This is a broken saddle meter that was installed during the experiment phase, which started in 2016. This meter can be replaced with one of the Seametrics AG 3000 surplus 12" meters purchased by MWD during the Phase 5 equipment purchase. Gornto to fix.
- (8) Bacon Island Siphon 28: Old equipment at this site. Have Gornto remove when installing new meter.

- (9) Bacon Island Siphon 31: Wildeye solar panel is missing (may have been stolen). To be fixed during phase 5 installs.
- (10) Holland Tract Siphon 1: Screen said bat low immediately after battery replacement. MBK to check on battery next time we are in the field.

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

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. The Delta Watermaster requested the spreadsheets used to prepare the 2023 and 2024 annual reports, which MBK and MWD subsequently sent.

MBK met with MWD and Tetra Tech on March 6, 2025, to discuss the Bouldin Island Water Balance. Tetra Tech requested recommendation by MBK regarding the metering of the discharge pumps. MBK worked with TechnoFlo to obtain a quote for a strap on flow meter, which Technoflo recommended for the pump stations on Bouldin. The quote is with MWD. Here are some of the key details of the recommended meter:

- Works for any size pipe
- Has a +/-2% accuracy
- Has a built-in data logger
- Much more cost effective than the mag meters
- Interference between meters should not be an issue
- Easy to install however, external power is required so an electrician will be needed

Earlier this year MWD mentioned that it would be good to purchase 5 backup meters in case of meter failures. TechnoFlo provided a quote for the meters listed below. MBK will follow up with MWD to see if there is a plan to complete this purchase.

- 14 inch meter (Seametrics) - Quantity 2
- 16 inch meter (McCrometer) - Quantity 1
- 18 inch meter (McCrometer) - Quantity 2

RD 2028 – Bacon Island

Issue Tracking Summary

August 22, 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. Adjacent 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	