

MEMORANDUM

February 28, 2024

TO: Reclamation District No. 2028

FROM: Nathan Hershey, Brian Janowiak

SUBJECT: February 2024 Engineer's Report

Described below are the engineering items to be discussed at your February 28, 2024 meeting.

Subventions 2022-23 – The District submitted an application for participation in the Program in the amount of \$541,000. A total of \$12.5 million has been approved by the Central Valley Flood Protection Board for the Program for FY 2022-23. A final claim was submitted in the amount of \$325,967.61.

Subventions 2023-24 – The District submitted an application for participation in the Program in the amount of \$541,000. A total of \$13 million has been approved by the Central Valley Flood Protection Board for the Program for FY 2023-24.

Subventions 2024-25 – Applications for the Program are due April 1. Subject to Board approval, our intent is to submit an application similar to the submittal for the prior fiscal year.

Future Subventions Funding – DWR has indicated that funding has not been secured yet for fiscal years 2025-26 and beyond. Delta advocates, including the California Central Valley Flood Control Association and others, are considering ways to increase awareness and gain support for securing funding for this highly successful and vital program. We have prepared a draft funding request letter for the RD to consider and possibly submit to state legislators.

Annual Maintenance – Attached are the current maintenance items we are tracking. Updated drone footage of the levees is available on the RD's YouTube channel and a link was distributed via email.

FEMA – The District 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 in-progress. Maintenance activities will be on-going to promote plant health and longevity.

Year two construction for Teichert may begin as early as May 1, 2024. However, dewatering pumping in the borrow sites may begin prior to that date, pending environmental restrictions. PG&E has indicated that the overhead utility line relocation construction drawings are complete and being reviewed. MBK has requested a copy of the plans as soon as they are available.

SB 88 – All Phase 4 meters have 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 monthly during the winter season and weekly during the irrigation season via Wildeye's website. All Wildeye units are currently working with the exception of Bouldin Island Siphon No. 30, which was damaged by driftwood (equipment

will be reinstalled when Phase 5 installations occur at nearby siphons). All meters are currently working, with the exception of Bouldin Island Siphon No. 2, which stopped functioning due to water damage (a new complimentary meter was provided by Technoflo and will be replaced during the Phase 5 installation). MBK was made aware that strong winds have displaced some Wildeye unit solar panels across the islands. A review of battery levels on Wildeye's website did not give indication of solar panel state, therefore MBK has coordinated with MWD, who will execute a visual inspection of the sites.

All Phase 5 flow meters were delivered and inventoried January 4th on Bacon Island. MWD is preparing a bid package and will be requesting bids in March for meter installations. The Phase 5 telemetry equipment has been purchased, and will be delivered at the time of installation, following flow meter installations at each site.

MBK prepared and submitted an updated Request for extensions of time for each island for measurement compliance through December 31, 2025, and received approval from the Delta Watermaster on November 9th, 2023. Therefore, MWD's and the RDs' water rights are in measurement compliance under an approved extension of time until the equipment installations and certifications are completed.

MBK prepared Water Year 2023 annual water right reports consistent with prior years, using a hybrid approach that included flow meter data when it was available and OpenET data when it was not. MWD reviewed and submitted the reports by the February 1, 2024 deadline.

MBK and MWD continue to participate in the Delta Consortium. The February 8th Consortium meeting focused on preliminary design of diversion and related consumptive use correlation research projects, including a presentation by MWD and MBK on their preliminary OpenET vs Siphon Diversion analysis. MBK will continue to support these efforts by preparing a summary technical report, and providing data and analysis as needed.

RD 2028 - Bacon Island

Issue Tracking Summary

February 23, 2024

| Issue ID | Priority | Report Date | Reporter | Location | Issue Type | Description | Action | Field Notes |
|----------|----------|----------------------------|-------------------|-------------------------------|------------------|--|-------------|---|
| 006 | Medium | October 20, 2016 4:00 PM | RalphHeringer | Station 275 @ Pump Station | Broken Equipment | Trash racks in need of maintenance/repair | Investigate | TBD |
| 036 | Low | February 23, 2017 4:00 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 4:00 PM | Brian Janowiak | Station 92-93 | Seepage | Seepage existing at toe of slope, running across county road | | |
| 073 | Medium | October 20, 2016 4:00 PM | RalphHeringer | Station 465 @ Pump Station | Broken Equipment | Trash racks in need of maintenance/repair | Investigate | TBD |
| 101 | Medium | September 17, 2020 3:25 PM | Nate Hershey | Station 704 | Erosion | Field verified erosion site detected by drone footage. Site is approximately 100 feet long, adjacent to willows and vegetation is covering steep slopes. | Repair | |
| 101.1 | | January 8, 2021 12:00 AM | Nate Hershey | | | | | Site is in future Special Projects work area. Recommend monitoring and repairing during levee rehabilitation project. |
| 102 | Medium | May 5, 2021 10:13 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 10:22 AM | Dave Forkel | Sta 175+15 | Erosion | Erosion at toe of levee at siphon discharge. | Repair | Dino and Son to fill erosion site |
| 104 | Low | May 5, 2021 10:23 AM | Dave Forkel | Junior's House | Sloughing | Rock placed at waterside of new fill settling. | Monitor | |
| 106 | Medium | November 4, 2021 3:43 PM | Dave Forkel | Sta 170+00 | Seepage | Seepage at toe of levee. | Monitor | |
| 107 | Medium | December 15, 2022 3:44 PM | Dave Forkel | Sta 704+00 | Erosion | Levee experienced minor waterside erosion during last weeks storm. | Repair | District forces to repair. |
| 108 | Medium | January 10, 2023 9:33 AM | Michael Nishimura | 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 | Repair | |

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| | | | | | | 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. | | |
| 109 | Medium | January 10, 2023 10:02 AM | Michael Nishimura | 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 10:42 AM | Michael Nishimura | 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 11:10 AM | Michael Nishimura | 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 | |
| 114 | Medium | January 10, 2023 11:57 AM | Michael Nishimura | 666+15 to 666+90 waterside slope | Erosion, Sloughing | Erosion on waterside slope. Top of erosion is at mid slope. Water side slope is approximately 8' slope distance from waterside hinge to waters edge. 75' length. Rodent holes observed on waterside hinge/slope | Monitor | |
| 115 | Medium | January 10, 2023 12:15 PM | Michael Nishimura | 671+10 to 674+50 | Erosion, Sloughing | Erosion and sloughing broken up sites within stations listed above. Gaps are approximately 10-20' before erosion picks up again. Cracks and rodent holes observed on waterside hinge. Water side slope is very soft. (Approximately 275 feet total erosion is estimated to be within stationing provided above) | Monitor | |
| 116 | Medium | January 10, 2023 12:33 PM | Michael Nishimura | 681+80 to 685+10 | Erosion, Sloughing | Vertical erosion, sloughing and waterside hinge cracking. The majority of this | Monitor | |

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| | | | | | | section has a steepened waterside slope. Cracking is on the waterside hinge and the slope is sloughing into the water. Rodent holes observed on the ws hinge. | | |
| 119 | Low | May 31, 2023 5:38 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 11:00 AM | Dave Forkel | Sta 733+00 | Boil | Boil in toe ditch | Investigate | |
| 120.1 | | February 22, 2024 12:00 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. |