

**MEMORANDUM**

May 17, 2023

**TO:** Reclamation District No. 2028

**FROM:** Nathan Hershey

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

Described below are the engineering items to be discussed at your May 17, 2023 meeting.

**Subventions 2021-22** – The District submitted an application for participation in the Program in the amount of \$541,000. 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 \$275,410.71.

**Subventions 2022-23** – The District submitted an application for participation in the Program in the amount of \$541,000. \$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 \$541,000.

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

**FEMA** – The Recovery Scoping Meeting (RSM) with FEMA and CalOES took place at MBK's office on 4/20. MBK has continued to coordinate with FEMA and is in the process of compiling documentation supporting the claim. Once all documentation has been provided, FEMA will submit the project to their management for review.

**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.

A pre-construction meeting for the north and south levee rehabilitation project (BN-19-1-SP) was held on May 12, 2023. During the biological survey, two Swainson's Hawk nests were located in areas that will impact the project. We plan to work around them as much as possible with guidance from CDFW. Teichert Construction plans to begin work on May 22, 2023.

A concept proposal was submitted to DWR for the Projects Solicitation Package (PSP) for multi-benefit projects. DWR has invited select applicants to submit a full application. The RD's concept proposal was not selected for further consideration.

**SB 88** – MBK has obtained the quotes for the equipment required at the 51 remaining metering sites. It is currently estimated that the purchase orders for this equipment will be placed sometime in June or July. 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 the flow meters, Bovee Environmental identified 3 sites on Bacon Island and 1 site on Bouldin Island that tested positive for hazardous materials on the exterior coating on the pipes. The hazardous materials in the pipe coating at these 4 sites were abated by W.C. Maloney on April 26th. A report documenting the abatement, including photos of the sites before and after the work was completed, was provided to MWD and MBK shortly after the work was completed.

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.

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 2028 - Bacon Island

## Issue Tracking Summary

May 15, 2023

| Issue ID | Priority | Report Date                | Reporter       | Location                   | Issue Type       | Description  | Action      | Field Notes   |
|----------|----------|----------------------------|----------------|----------------------------|------------------|--|-------------|---|
| 006      | Medium   | October 20, 2016 5:00 PM   | Ralph Heringer | 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   | Ralph Heringer | Station 465 @ Pump Station | Broken Equipment | Trash racks in need of maintenance/repair  | Investigate | TBD   |
| 084      | Medium   | April 4, 2019 12:00 AM     | Russ Ryan      | 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      |   |
| 095      | Medium   | December 12, 2019 2:23 PM  | Andy Reece     | siphon north of Mel's      | Rodent Activity  | possible beaver den under tree south of siphon   | Investigate |   |
| 100      | Medium   | September 17, 2020 4:32 PM | Nate Hershey   | Station 102                | Sloughing        | Waterside slope is sloughing. Starting to encroach into the county road.   | Repair      |   |
| 101      | Medium   | September 17, 2020 4:25 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 1:00 AM    | Nate Hershey   |                            |                  |  |             | Site is in future Special Projects work area. Recommend monitoring and repairing during levee rehabilitation project. |
| 102      | Medium   | May 5, 2021 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   |
| 104      | Low      | May 5, 2021 11:23 AM       | Dave Forkel    | Junior's House             | Sloughing        | Rock placed at waterside of new fill settling.   | Monitor     |   |
| 105      | Medium   | August 20, 2021 3:23 PM    | Nate Hershey   | Station 694                | Sinkhole         | Three voids discovered near utilities and in the existing toe berm. Recommend  | Repair      |   |

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|-----|--------|---------------------------|-------------------|----------------------------------|----------------------------|--|---------|----------------------------|
|     |        |                           |                   |                                  |                            | collapsing and compacting when feasible.   |         |                            |
| 106 | Medium | November 4, 2021 4:43 PM  | Dave Forkel       | Sta 170+00                       | Seepage                    | Seepage at toe of levee.   | Monitor |                            |
| 107 | Medium | December 15, 2022 4:44 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 10:33 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 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 | Michael Nishimura | 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 |                            |
| 110 | Medium | January 10, 2023 11:24 AM | Michael Nishimura | 43+50 to 43+00                   | Rodent Activity, Sloughing | Sloughing on waterside slope. Top of slough is at the waterside hinge. Signs of rodent activity is observed on waterside slope. Length of slough is approximately 50'.   | Monitor |                            |
| 111 | Medium | January 10, 2023 11:42 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 |                            |
| 112 | Medium | January 10, 2023 11:48 AM | Michael Nishimura | 102+80 to 103+25 waterside slope | Erosion                    | 45' of erosion on waterside slope. Appears that erosion is caused from surface runoff.   | Monitor |                            |

|     |        |                            |                   |                                  |                    |   |         |  |
|-----|--------|----------------------------|-------------------|----------------------------------|--------------------|---|---------|--|
|     |        |                            |                   |                                  |                    | Erosion is starting to Undercut road.   |         |  |
| 113 | Medium | January 10, 2023 12:10 PM  | 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 12:57 PM  | 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 1:15 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 1:33 PM   | Michael Nishimura | 681+80 to 685+10                 | Erosion, Sloughing | Vertical erosion, sloughing and waterside hinge cracking. The majority of this 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.  | Monitor |  |
| 117 | Medium | January 10, 2023 1:49 PM   | Michael Nishimura | 692+40                           | Erosion            | Erosion washing out around eucalyptus tree. Top of erosion is a foot below waterside hinge. Scour are length is about 20'. Another erosion similar exist near the next tree about 40' up station.   | Monitor |  |
| 118 | Medium | February 20, 2023 11:46 AM | Dave Forkel       | Sta 695+00                       | Seepage            | Seepage at toe of levee   | Monitor |  |