

MEMORANDUM

March 17, 2021

TO: Reclamation District No. 2028

FROM: Nathan Hershey

SUBJECT: **March 2021 Engineer's Report**

Described below are the engineering items to be discussed at your March 17, 2021 meeting.

Subventions 2019-20 – The District submitted an application for participation in the Program in the amount of \$615,000. DWR has lowered the Program funding amount to \$10 million for FY 2019-20. The District submitted a claim in the amount of \$245,136.13 for the fiscal year.

Subventions 2020-21 – The District submitted an application for participation in the Program in the amount of \$615,000. \$12 million has been approved for Program funding for FY 2020-21.

Subventions 2021-22 – Applications are due April 1. Attached is a draft application for the upcoming fiscal year. If acceptable, we will submit the application on behalf of the District. DWR has informed us they will be seeking \$10 million for the Program for FY 2021-22.

Annual Maintenance – Attached are the current maintenance items we are tracking. The levee maintenance in the vicinity of the residences near Station 717 is complete.

Flood Fight Supplies – The District has an opportunity to acquire flood fight supplies through a DWR grant with San Joaquin County. Details were distributed via email on February 25. Eligible items will be fully reimbursed up to \$15,000 for each participating district. The County has asked districts to submit the reimbursement documentation prior to June 1.

Special Projects – The enhancement component of the Old River multi-benefit levee rehabilitation project is in-progress. Maintenance activities will be on-going to promote plant health and longevity.

The installation of the sheet pile wall to intercept an old sluice box discovered deep within the levee near Station 525 is complete. A crack in the levee crown near Station 365 was also excavated and repaired.

The District received an advance of funds for design of the Directed Action project to rehabilitate the north and south levees. We have started work on the design and are moving forward in anticipation of construction. We are working through various design related issues and are developing the plans and specifications. We have requested the construction funding from DWR for the project. DWR has indicated their preference is to amend the existing funding agreement to allow for construction rather than issue a new funding agreement.

Five Year Plan – Work on the Five-Year Plan is currently in progress. A draft of the plan has been distributed via email and we have incorporated many of the comments received to date. We have also sent a

draft to DWR staff for review and comment. DWR has extended the expiration date of the funding agreements to December 31, 2021.

SB 88 – Work under Phase 3 of the measurement experiment (Feb. 2020 through Feb. 2021, and currently being extended) is underway. Phase 3 efforts primarily involve installing 8 additional flange magnetic meters on the water side of the highest use siphons, with at least one flow meter on each island. MWD has received the new equipment which is currently stored on Bacon Island. A pre-bid walk through on Bouldin Island with representatives from MWD, MBK Engineers, Asta Construction, Eaton Pumps, and Gornto Ditching occurred on March 3rd, 2021. MWD is accepting bids until March 16th from the contractors and then will select a contractor and proceed with scheduling installation of the Phase 3 equipment.

MWD and the RDs are in compliance for calendar year 2021 under an approved extension of time. Current direction by MWD is to proceed with strict compliance. Therefore, MBK is currently developing a draft plan for compliance, which will include a combination of flange magnetic meters installed on the water side for the largest and highest use siphons and alternative measurement methods at the smaller, less frequently used siphons.

Development of the Delta-wide ACP by the Delta Measurement Experiment Consortium to utilize Open ET for measuring and reporting diversions continues. MBK and MWD continue to participate in the Consortium and will provide feedback on the future development of this ACP as needed. The next Consortium meeting is scheduled for April 29, 2021.

RECLAMATION DISTRICT NO. 2028 – BACON ISLAND
DELTA LEVEES MAINTENANCE SUBVENTIONS PROGRAM APPLICATION

MARCH 2021

TOTAL AMOUNT REQUESTED 2021–2022: \$541,000

District Summary

The levee system surrounding Bacon Island is under the jurisdiction of Reclamation District No. 2028 (District). The 14.39 miles of non-project levee include 1.38 miles along Railroad Cut, 5.27 miles along Old River, 2.77 miles along Connection Slough, and 4.98 miles along Middle River (Sheet 1).

The District was formed in 1918 to maintain the levee system that protects approximately 5,625 acres of agricultural land, approximately 20 residents¹, local infrastructure, and on-island assets.

Financial Information and Method of Assessment

The District obtains revenues primarily through property assessment. The District has the ability to assess landowners up to \$455,957.94 each year. The District uses the assessment to pay for District operations, levee maintenance and levee rehabilitation. Assessment rates are determined by dividing the total benefit by the number of Benefit Units (BUs) in order to determine an assessment rate per BU. The base rate for the benchmark Vacant/Open Range parcel is set at \$69.89 per year per acre. Rates for other types of parcels are based upon relative replacement costs. As of June 30, 2020, the District's liabilities total \$2,900,196, see the attached Financial Statements with Independent Auditor's Report for the year ending June 30, 2020 for additional information. The District does not receive any ad valorem property tax.

Work Plans

Long-Range Plan

The District submitted its Five Year Plan to DWR in June 2012, which includes its maintenance and rehabilitation plans, target dates, cost estimate, centerline profiles and cross-sections. The District did not include a listing of encroachments. The encroachment listing is on file with the District and will be updated during the District survey. The District's goal has been, and will continue to be, to improve and maintain the levees. The District is currently updating their Five-Year Plan.

¹ Delta Wetlands Project Place of Use, Draft Environmental Impact Report, April 2010

Annual Routine Maintenance Plan

The District plans to continue its routine maintenance practices, which it has done consistently for a number of years, as evidenced by the current state of the levee system. Routine tasks include levee patrol; rodent control; all weather roadway repairs; repair of minor subsidence sloughing or slipouts; debris removal; toe ditch cleaning; vegetation control; waterside slope protection; flood emergency planning and preparation; surveying; engineering services; and other maintenance and permitting as needed.

The District has executed a Routine Maintenance Agreement (RMA) (#II-049-94) under Section 1600, et seq., of the California Department of Fish and Wildlife (CDFW) Code. This Agreement defines the District's maintenance work on the waterside of the levee.

District staff patrols the levee daily. The District's Superintendent conducts periodic inspections when something is found during the routine patrols. If applicable, a levee maintenance inspection report for non-project levees will be prepared for reimbursement of inspection-related expenses in accordance with the reporting guidelines provided in Appendix D of the Guidelines.

The District will exterminate burrowing rodents and fill the burrows with compacted material, on an as needed basis. As designated by CDFW, no filling of burrows in burrowing owl areas shall take place during the period of March 15 through August 15, with the exception of the filling of beaver and muskrat dens near the waterline. Application of County-permitted and restricted bait materials, or any other approved method of rodent eradication, shall be done in accordance with labeled instructions and regulations.

The District will repair, grade, and shape the levee crown as needed, so that the levee crown will maintain a uniform shape, resulting in the drainage of water equally throughout the surface, and eliminating the risk of pocketing or excessive runoff locations. Levee patrol road areas require placement of all-weather road surfacing for wet weather accessibility. Work will be performed in a manner that will keep dust to a minimum and prevent siltation from impacting the adjacent waterways. The weight and speed of all vehicles using the patrol or levee access roads shall be restricted.

A seepage/irrigation ditch is located near the levee toe extending almost the entire perimeter of Bacon Island. Typically, the seepage/irrigation ditch is 4 feet wide at the bottom, 8 feet wide at the top and ranges from 4 to 5 feet in depth. For years, this ditch has been annually cleaned by removal of silt deposited at its bottom. Ditch cleaning is likely to occur in the late fall, or weather permitting, during the winter. On average, any particular portion of the ditch system is cleaned every three years. Vegetation loss from cleaning is insignificant since the process only removes silt from the bottom of the ditch.

District vegetation control consists of three features: spraying, hand clearing, and mechanical clearing. Spraying is performed using land-based equipment, applying herbicide to the crown, waterside slope, and landside slope where needed to control noxious vegetation. Noxious

vegetation not controlled by spraying is typically controlled by District forces using hand tools, discs, choppers and brush hogs. The District's vegetation control practices have been routine for a number of years.

The District's RMA for controlling vegetation on the waterside slopes includes, but is not limited to the following additional conditions:

- To protect ground nesting birds and other breeding wildlife species, herbicides may not be applied between March 15 and July 1.
- A soil sterilant may only be applied to control *Arundo donax*.
- Removal of branches, stems, and shoots of weeds, brush, berry vines, and shrubs may be removed except between March 15 and June 30.
- Except between March 15 and June 30, the District may remove trees under 2 inches and over 18 inches in diameter at diameter breast height (DBH). Roots must remain in place when removing trees under 2 inches in diameter at DBH. Removal of trees over 18 inches in diameter at DBH require special permission; if permission is granted, the roots may be removed.

The District repairs waterside erosion when required. The District has an approved Emergency Operation Plan. The District procured flood supplies in 2016 and maintains those supplies on an ongoing basis. As needed, the District may remove, raise, or modify encroachments that endanger the levee or interfere with levee maintenance; survey the levee; and replace missing station markers to ensure there are station markers at least every one-half mile or 2,500 feet.

The routine maintenance of the levee under the jurisdiction of the District for 2021–2022 will likely consist of the following items along with the estimated cost.

| Annual Routine Maintenance Items | Estimated Cost \$ |
|---|--------------------------|
| Levee Patrol | 60,000 |
| Rodent Control | 5,000 |
| All Weather Road | 25,000 |
| Subsidence, Sloughing, and Slipouts | 50,000 |
| Debris Removal | 10,000 |
| Seepage Control | 10,000 |
| Clean Drains and Toe Ditches | 50,000 |
| Vegetation Control | 40,000 |
| Waterside Slope Protection | 50,000 |
| Flood Planning and Preparation | 10,000 |
| Remove or Modify Encroachments | 50,000 |
| Surveying | 5,000 |
| Engineering | 50,000 |
| Misc. (gates, signage, etc.) | 20,000 |
| Environmental (CDFW permits, mitigation etc.) | 1,000 |
| Total Routine Maintenance | \$436,000 |

Rehabilitation Plan

Multiple sites may require rehabilitation during the fiscal year. Details regarding limits of work will be finalized prior to construction.

| Rehabilitation Items | Estimated Cost \$ |
|---|-------------------|
| Rehabilitation Work | 100,000 |
| Environmental Documentation (CDFW, CEQA etc.) | 5,000 |
| Total Rehabilitation | \$105,000 |

Compliance with Applicable Laws

The District will abide by all applicable laws including, but not limited to, labor compliance and mileage reimbursement rates.

- All work, subject to labor compliance laws, will be required to meet the Department of Industrial Relations Labor Compliance Program requirements.
- The District acknowledges that reimbursement of automobile mileage, as it relates to eligible work, will follow the prevailing Federal Standard Mileage Rate for the cost of operating an automobile.

Environmental Compliance

The District has concluded that its long-range, routine maintenance practices and levee rehabilitation are Categorical Exempt under the California Environmental Quality Act (CEQA). The District will file a Notice of Exemption with San Joaquin County to that effect.

The District's work activities, for the fiscal year of the application, will be carried out in a manner consistent with the requirements set forth under California Water Code (CWC) Section 12987. The District does not anticipate habitat impacts that would result in a net long-term loss of habitat; therefore, no mitigation is planned. If habitat impacts associated with levee maintenance activities occur, the District will mitigate the impacts to meet the requirements of CWC Section 12987. The District proposes, and hereby requests, to utilize the programmatic enhancement habitat credits, if necessary. The District will comply with the net habitat improvement mandates of the CWC Section 12987.

The District's maintenance plan complies with the California Endangered Species Act, the Federal Endangered Species Act, and California Fish and Game Code § 1600 et seq., regarding Lake and Streambed Alteration Agreements.

The District's maintenance plan is consistent with the Clean Water Act, and the Rivers and Harbors Act, as administered by USACE.

Minor erosion repair may be performed under a project specific, or a RMA CDFW Streambed Alteration Agreement, and/or USACE Nationwide Permit, depending on repair requirements. All applicable parties will be informed of the activity as required.

The District will notify responsible and trustee agencies of any actions that fall within these agencies' jurisdiction as required by law.

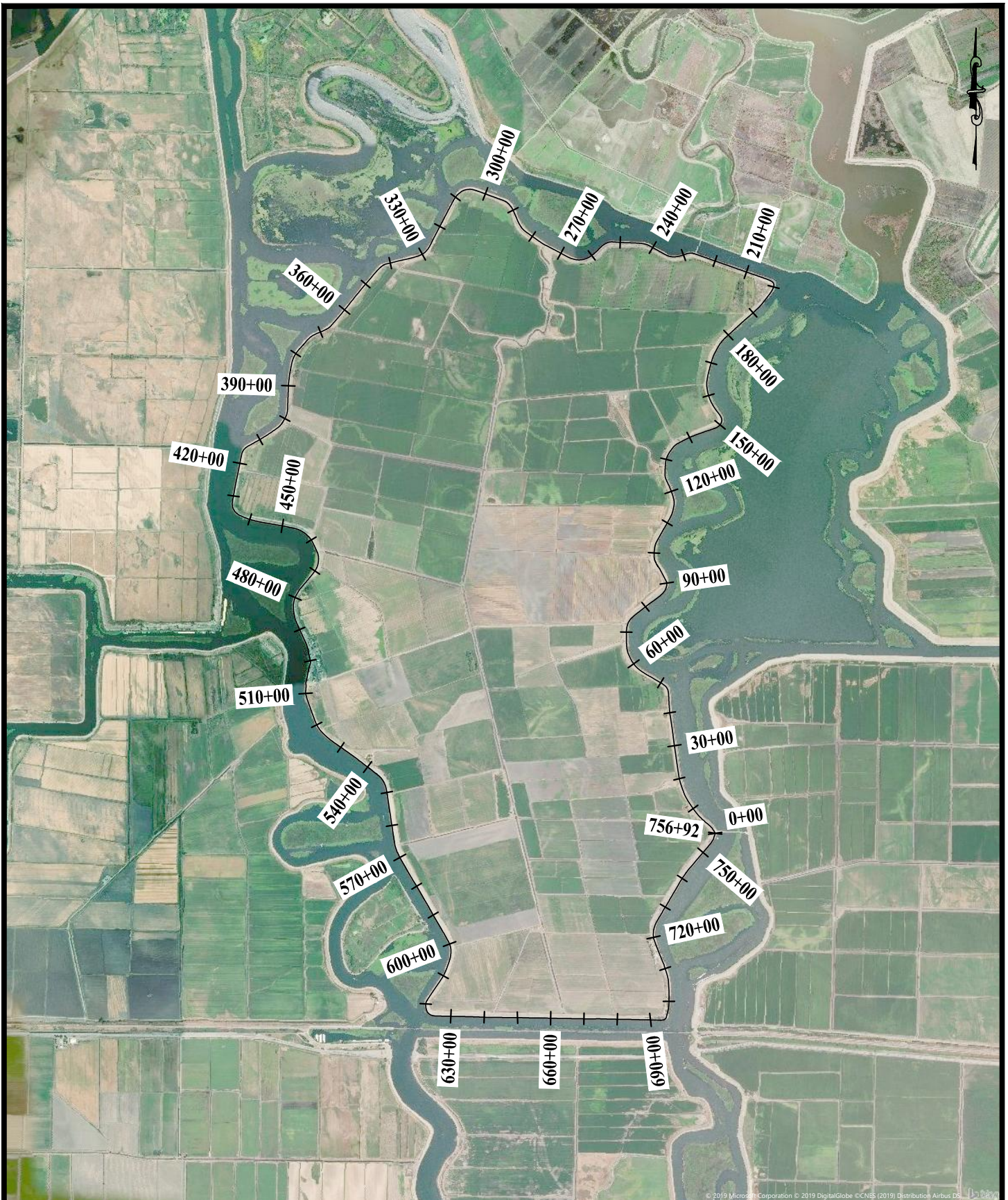
Federal Disaster Assistance

In any given year, the District's expectation is to be ready for potential emergency operations during the flood season. While the District is unable to predict the potential outcome in a given year, there is always the potential for emergency flood fighting, and subsequent levee repairs and rehabilitation. In the case that an emergency (federal, state or local) occurs, the District will properly administer the emergency and seek reimbursement for eligible expenses through all available programs including under PL 93-288. If federal assistance is unavailable, the District will coordinate with the Delta Levees Maintenance Subventions Program for possible reimbursement.



NL/nh

4290.1 SUBVENTIONS APPLICATION 2021-2022



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RECLAMATION DISTRICT NO. 2028 BACON ISLAND

SUBVENTIONS 2021-2022

| | |
|-------------|------------|
| SCALE: | 1" = 4000' |
| JOB NUMBER: | 4290.1 |
| DRAWN BY: | MN |
| DATE: | 02/24/2021 |
| SHEET: | 1 OF 1 |

Reclamation District No. 2028 Bacon Island

Issue Tracking Summary

3/12/2021

| IssueID | Priority | Report Date | Reporter | Location | Issue Type | Description | Action | Field Notes |
|---------|----------|-------------|----------------|----------------------------|--------------------|--|-------------|--|
| 6 | Medium | 10/21/2016 | Ralph Heringer | Station 275 @ Pump Station | Broken Equipment | Trash racks in need of maintenance/repair | Investigate | TBD |
| 36 | Low | 2/24/2017 | 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 |
| 43 | Medium | 4/4/2017 | Brian Janowiak | Station 92-93 | Seepage | Seepage existing at toe of slope, running across county road | | |
| 48 | Low | 6/14/2017 | Dave Forkel | Station 190+00 | Vegetation control | CDFW mitigation site shows evidence of arundo mowing. | Investigate | Discuss mitigation requirements. |
| 73 | Medium | 10/21/2016 | Ralph Heringer | Station 465 @ Pump Station | Broken Equipment | Trash racks in need of maintenance/repair | Investigate | TBD |
| 84 | Medium | 4/4/2019 | RussRyan | 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 | |
| 92 | High | 9/19/2019 | AndyReece | Sta 688+00 - 689+00 | Crack | deep cracks at LS hinge and LS slope | Investigate | 5 ft plus feet deep approx 3 inches wide along LS hinge and landside slope. In summer 2019, cracking area was excavated and re-compacted, AB was placed on the crown. On the waterside of the cracking site a beaver den was collapsed and back filled with AB in summer 2019. |

Reclamation District No. 2028 Bacon Island

Issue Tracking Summary

3/12/2021

| IssueID | Priority | Report Date | Reporter | Location | Issue Type | Description | Action | Field Notes |
|---------|----------|-------------|-------------------|-----------------------|----------------|---|-------------|-------------|
| 92.1 | High | 6/29/2020 | Michael Nishimura | Sta 688+00 - 689+00 | Crack | The cracking site, repaired by Dino and Sons in Summer 2019, has reopened and is approximately 100 feet in length. The number of cracks and the depth of cracks are unknown at this time. | Repair | |
| 92.2 | High | 8/7/2020 | Nate Hershey | Sta 688+00 - 689+01 | Crack | Repaired by Dino and Sons again this week. Continue to monitor the area. | Monitor | |
| 95 | Medium | 12/12/2019 | AndyReece | siphon north of Mel's | RodentActivity | possible beaver den under tree south of siphon | Investigate | |
| 100 | Medium | 9/17/2020 | NateHershey | Station 102 | Sloughing | Waterside slope is sloughing. Starting to encroach into the county road. | Repair | |
| 101 | Medium | 9/17/2020 | NateHershey | 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 | Medium | 1/8/2021 | NateHershey | Station 704 | Erosion | Site is in future Special Projects work area. Recommend monitoring and repairing during levee rehabilitation project. | | |