San Francisco Bay Regional Water Quality Control Board

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December 30, 2021

California Department of Water Resources
ATTN: Sara Paiva-Lowry, Senior Environmental Scientist
(Sara.Paiva-Lowry@water.ca.gov)
P.O. Box 942836
Sacramento, CA 94236

Subject: **San Francisco Bay Regional Water Quality Control Board Comments on the *Mitigated Negative Declaration, Delta Dams Rodent Burrow Remediation Project***
SCH No. 2021120060

Dear Ms. Paiva-Lowry:

San Francisco Bay Regional Water Quality Control Board (Water Board) staff appreciates the opportunity to review the *Mitigated Negative Declaration, Delta Dams Rodent Burrow Remediation Project* (MND). The MND evaluates the potential environmental impacts associated with implementing the Delta Dams Rodent Burrow Remediation Project (Project).

Project Summary. The earthen embankment dams at Clifton Court Forebay, Dyer Reservoir, and Patterson Reservoir have been subject to ongoing rodent burrowing throughout their service life. Rodent burrows are a recognized hazard to dams and levees because they can promote piping and internal erosion that can ultimately lead to dam failure. The California Department of Water Resources (DWR) proposes to undertake the Project to remediate these conditions and implement other maintenance and repair activities for the project facilities to improve the stability and safety of each dam. Specifically, the Project involves collapsing and/or excavating burrows, backfilling the dam surface, and compacting the soil. In some locations, wire and/or rock would be placed to provide permanent armoring to deter future rodent burrowing. Additional maintenance and repair measures include intake channel repair and removal of trees around a sump at Clifton Court Forebay; drainage ditch repair and remediation of erosion along the entrance road at Dyer Reservoir; and outlet drainage channel improvements at Patterson Reservoir. Work at the Clifton Court Forebay will occur within the jurisdiction of the Central Valley

Regional Water Quality Control Board. Therefore, this comment letter only addresses the work at Dyer Reservoir and Patterson Reservoir.

Summary. As discussed further below, the MND does not yet include the information necessary to fully evaluate the Project's reasonably foreseeable impacts to waters of the State, nor does it propose specific mitigation to address those impacts, sufficient to reduce them to less than significant levels. The Project will impact several channels that are waters of the State. These impacts will be associated with measures to stabilize eroding banks and to support channel crossings for access roads. However, the MND does not include designs for these channel modifications. Without this information, Water Board staff are not able to assess the magnitude of the Project's impacts to water quality and habitat value in the jurisdictional channels. In addition, the MND lacks a reviewable mitigation proposal. The MND states that mitigation will either be provided by purchasing credits at a mitigation bank or an in-lieu fee program or by constructing a permittee-responsible mitigation project. Dyer and Patterson reservoirs are not located within the service areas of existing mitigation banks and in-lieu fee programs and the MND does not include a description of a permittee-responsible mitigation project. Without a mitigation proposal to review, we cannot assess if the Project's reasonably foreseeable impacts to waters of the State will be mitigated to less than significant levels. The MND should be revised to include this information and recirculated for comment. Also, the MND indicates that DWR may have performed unauthorized work in waters of the State; this issue must be resolved.

Comment 1. The text of the MND indicates that the DWR may have placed unauthorized fill in waters of the State.

Text in Section 3A.4-4, *North Access Road Drainage Ditch*, describes ongoing erosion in a water of the State at Dyer Dam and proposes measures to stabilize this eroding channel:

> Surface runoff is collected by a V-shaped ditch and stormwater control feature that runs parallel to the north access road west of Dyer Dam and Reservoir. This runoff is conveyed downstream of Dyer Dam. The V-shaped ditch has an unlined segment that runs along the western dam toe road adjacent to Dyer Canal. The embankment between the unlined V-shaped ditch and aqueduct has been breached in recent storm events. These stormwater control features have been subject to ongoing failure that can be attributed to high drainage velocities focused on the unlined segments of the V-shaped ditch, poor foundation/embankment material, and rodent burrowing along the reach. There are two areas near existing Pacific Gas and Electric Company (PG&E) power poles that have failed and required temporary repair measures to contain the drainage ditch flows. Emergency repairs were performed using corrugated metal pipes and backfill material to stabilize the V-shaped ditch and reduce internal erosion/instability of the adjacent embankment slope. The failures allowed eroded material to flow into Dyer Canal, which severely degraded water quality.

> Approximately 1,300 linear feet of the existing V-shaped ditch and stormwater control features are proposed for improvements that include regrading and concrete lining to improve drainage and structural integrity and to reduceerosion, as shown in Figure 13. Remediation of the existing embankment slope includes limited excavation, backfilling, compaction, and concrete lining. Backfill, grouting, and/or soil-cement slurry would be imported and used to backfill cavities, cracks, or holes. The embankment slope would be restored where it shows signs of instability and where recent internal erosion occurred during the V-shaped ditch failures and stormwater control feature failures. The improvement area is estimated at 0.62 acres and the adjacent access road provides sufficient construction access to perform improvements.

The V-shaped ditch is a jurisdictional water of the State. Based on the MND text quoted above, the repairs performed in the ditch consisted of activities subject to Water Board jurisdiction, and probably subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps) and the California Department of Fish and Wildlife (CDFW). Resolving the regulatory status of these repairs may increase the amount of mitigation required for the Project.

The proposed work in the channel includes placing concrete lining along 1,300 linear feet of the channel. Water Board staff have participated in monthly interagency meetings with the DWR's Project team since January 2021 and provided comments on draft application materials in our July 1, 2021, email to DWR (See attachment). In the monthly meetings and in the email, we explained that lining an earthen channel with concrete is regulated as fill of a water of the State. To obtain authorization for the work, DWR will need to demonstrate that the design is the least-impacting alternative sufficient to accomplish the Project purpose and provide mitigation for its impacts.

We also noted that lining a channel with concrete does not dissipate hydraulic energy, but only moves it further down the channel to locations in the bank that will remain vulnerable to erosion. We requested that DWR consult with an experienced fluvial geomorphologist to develop a channel stabilization plan with less significant impacts on the channel. In July 2021, we were informed that DWR was working with a fluvial geomorphologist to revise the channel stabilization design, but we have not yet seen a proposed design revision. The MND was issued with a channel armoring design that we have indicated is not likely to obtain authorization. The MND should have been circulated with the revised design so that a design that is likely to be permittable could be reviewed during the CEQA review process.

We have noted that the Project's impacts will require mitigation. In general, mitigation should be in-kind (e.g., mitigation for channel impacts should be comprised of improvements to other channels, creeks, etc.), and on-site, or as close to on-site as possible. Because it can be challenging to identify channel mitigation projects, and particularly of the length impacted here, 1,300 linear feet, it is important to identify likely mitigation early in the project process. While mitigation amounts may vary depending on the Project's final impacts and proposed mitigation, the MND should identify as a point of departure the restoration or enhancement of at least 1,300 linear feet of channel to mitigate the proposed concrete lining impact.

DWR has suggested that the concrete lining may be considered a “worst case” scenario that may be used to assess the adequacy of proposed mitigation. Because the MND does not yet evaluate alternative designs, it is premature to determine that the proposed concrete lining encompasses the range of potential impacts for other designs. Also, since the MND does not yet propose mitigation for identified impacts (See Comment 5), it is not yet possible to assess if the Project’s impacts to channels, either actual impacts or “worst case” impacts, can be mitigated to less than significant levels.

Please revise the MND to include: the length of channel that will be stabilized, designs for the channel modifications that are likely to be acceptable to the Water Board, and a detailed mitigation proposal for impacts to waters of the State at Dyer Reservoir and Patterson Reservoir. The revised MND should then be recirculated for review by all stakeholders.

Comment 2. Project impacts to waters of the State are not quantified at the Patterson Reservoir site.

Text in Section 3A.5-5, *Surface Drainage Improvements*, of the MND describes proposed work in channels near Patterson Reservoir:

> The proposed Project includes minor modifications and improvements to drainage features in upland areas northwest of Patterson Dam that currently experience sheet flow, as shown on Figure 18. This work is expected to occur between May and October in the years 2022 through 2026. A damaged 18-inch-diameter corrugated metal pipe culvert crossing near the toe access road and a second 12-inch-diameter corrugated metal pipe culvert crossing near the maintenance building would both be replaced with improved high-density polyethylene culverts. Existing drainage features upstream and downstream of the culverts would be modified to convey water more efficiently to the main western drainage channel. The improvements may include excavating, regrading, and/or lining of the drainage features and culverts.

Replacement of existing culverts may not require mitigation if the replacement culverts have the same length as the existing culverts. But potential modifications to channels to convey water more efficiently will require mitigation if they result in the placement of new hardscape (e.g., rock riprap or concrete lining) into the channel. Since the MND does not provide the length of channel to be modified or a design for the modifications, the MND does not yet include information sufficient to assess the significance of proposed impacts to waters of the State at Patterson Reservoir.

Please revise the MND to include: the length of channel that will be modified, designs for the channel modifications, and a detailed mitigation proposal for impacts to waters of the State at Patterson Reservoir. The revised MND should then be recirculated for review by all stakeholders.

Comment 3. In the discussion of impacts to biological resources in Section 3.4 of the MND, waters of the State are not quantified in linear feet at Dyer Reservoir and Patterson Reservoir.

The discussion of waters of the State in Section 3.4, *Biological Resources*, in the MND includes Table 11, *Acres of USACE Potential Waters of the United States by Project Facility*. This table summarizes waters of the State at Dyer and Patterson Reservoirs in acres. For linear features, impacts and mitigation must also be quantified in linear feet. Please revise Section 3.4 and Table 11 to include linear feet. We previously pointed this out in our July 1, 2021, email on the draft application materials.

Comment 4. Subsection c of Section 3.4, Biological Resources, should be revised to quantify impacts to waters of the State in linear feet as well as in acres.

Text on pages 77 and 78 presents the acres of temporary and permanent impacts to wetlands and non-wetland waters at Dyer and Patterson Reservoirs. Please revise the MND to include the linear feet of wetlands and non-wetland waters that will be permanently impacted by Project implementation.

Comment 5. Mitigation Measure BIO-11 in Section 3.4, Biological Resources, should be revised to provide a proposed mitigation project.

Mitigation Measure BIO-11 proposes the following mitigation for permanent impacts to waters of the State.

> Compensatory mitigation for permanent impacts shall occur either at a mitigation bank, within an in-lieu fee program, or through on-site or off-site permittee-responsible mitigation, and shall occurat a ratio no less than 1:1 for the impacts to jurisdictional waters or at a ratio determined in the jurisdictional waters permits. If a mitigation bank or in-lieu fee program is not utilized and DWR proceeds with permittee-responsible mitigation, a waters mitigation and monitoring plan shall be prepared that outlines the compensatory mitigation in compliance with requirements from applicable regulatory agencies (i.e., U.S. Army Corps of Engineers [USACE], Regional Water QualityControl Board [RWQCB], and California Department of Fish and Wildlife [CDFW]). Suitable mitigation lands provided for species and vegetation communities may be used for jurisdictional waters of the United States/state mitigation.
>
> If required, the wetland mitigation and monitoring plan shall be developed in coordination with CDFW, USACE, and RWQCB and shall detail mitigation and monitoring obligations for impacts to wetlands and other waters as a result of construction activities. The plan shall quantify the total acreage affected; annual success criteria; mitigation sites; monitoring and reporting requirements;and site-specific plans to compensate for wetland or other waters losses resulting from the Project

Mitigation Measure BIO-11 lacks sufficient detail to be adequate for compliance with the requirements of the California Environmental Quality Act (CEQA). As we have pointed out in the monthly meetings with DWR staff and resource agency staff, as well as our July 1, 2021, emailed comments on the draft application materials, there are no mitigation banks or In-Lieu Fee programs for impacts to wetlands or non-wetland channels that have service areas that include Dyer and Patterson Reservoirs. Therefore, impacts to waters of the State at these reservoirs will require permittee-responsible mitigation. The MND does not provide a permittee-responsible mitigation project(s) that can be reviewed in compliance with the requirements of CEQA.

Under CEQA, proposed mitigation measures should be presented in sufficient detail for readers of the CEQA document to evaluate the likelihood that the proposed remedy will reduce impacts to a less than significant level. CEQA requires that mitigation measures for each significant environmental effect be adequate, timely, and resolved by the lead agency. In an adequate CEQA document, mitigation measures must be feasible and fully enforceable through permit conditions, agreements, or other legally binding instruments (CEQA Guidelines Section 15126.4). Mitigation measures to be identified at some future time are not acceptable. It has been determined by court ruling that such mitigation measures would be improperly exempted from the process of public and governmental scrutiny which is required under the California Environmental Quality Act

Comment 6. Subsection a of Section 3.10, Hydrology and Water Quality, should be revised to acknowledge that placing riprap or concrete lining in a channel is an impact to a water of the State that requires mitigation.

The discussion of impacts in Section 3.10(a) does not acknowledge that placing rock riprap or concrete lining in a channel impacts beneficial uses of waters of the State. Please revise the MND to identify this impact and to provide specific mitigation projects to address the identified impact.

Comment 7. Subsection c of Section 3.10, Hydrology and Water Quality, should be revised to acknowledge that placing riprap or concrete lining in a channel is likely to result in erosion in other, unarmored reaches of the channels.

As we noted in our July 1, 2021, email to DWR, armoring a portion of a channel does not mitigate erosive hydraulic energy, but transfers that energy to other portions of the channel bank. Please revise the MND to address the transfer of energy that will be associated with armoring portions of channel banks.

Summary of Comments.

In its present form, the MND lacks an adequate discussion of impacts and proposed mitigation measures to support the issuance of Section 401 Water Quality Certification or Waste Discharge Requirements. Impacts to channels that are jurisdictional waters of the State are not yet fully described or quantified in the MND and the development of mitigation measures has been inappropriately deferred to after the completion of the

CEQA review process. The MND should be revised and re-circulated. Re-circulation is necessary to allow for full review and comment by the public and government agencies on the Project's impacts to waters of the State and proposed mitigation measures for those impacts. The following areas require further evaluation in the revised MND:

- Quantification of impacts to jurisdictional channels at Dyer and Patterson Reservoirs in acres and linear feet.
- Designs for the proposed channel armoring at Dyer and Patterson Reservoirs and designs for the proposed channel modifications to improve water conveyance at Patterson Reservoir. These designs should minimize the placement of hardscape in jurisdictional channels.
- A specific mitigation proposal(s) for impacts to jurisdictional channels at Dyer and Patterson Reservoirs; this mitigation proposal must provide adequate mitigation in terms of acres and linear feet.

Since an MND should provide both proposed impacts and proposed mitigation measures for public and government agency review, provision of this information in a Final MND is inappropriate, since this information would not have been subject to public and government agency review before the Final MND was adopted.

If you have any questions, please contact me via e-mail to brian.wines@waterboards.ca.gov.

Sincerely,

Brian K. Wines

Brian Wines
Water Resource Control Engineer
South and East Bay Watershed Section

Attachment: July 1, 2021, email from Water Board staff providing comments on draft application materials for the Project

cc: State Clearinghouse (state.clearinghouse@opr.ca.gov)
CDFW, Marcia Grefsrud (marcia.grefsrud@wildlife.ca.gov)
Corps, Gregory Brown (Gregory.g.brown@usace.army.mil).
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Ryan Olah (ryan_olah@fws.gov)
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From:	Wines, Brian@Waterboards
To:	Laurie Monarres
Cc:	Snow, Gerald@DWR; Paiva-Lowry, Sara@DWR; Grefsrud, Marcia@Wildlife; Payne, Elizabeth@Waterboards; Farinha, Melissa@Wildlife; chandra.l.jenkins@usace.army.mil
Subject:	Re: 1 of 5 - DRAFT Delta Dams Rodent Burrow Remediation Project 401 Application - The application needs considerable revisions.
Date:	Thursday, July 1, 2021 9:37:43 AM

Hi Laurie

You should not mail the application fee to our office until a final application is ready for submission. I have reviewed the draft application materials, and it appears that the Project is months away from having a final application that would result in an issued Certification.

Here are my notes on the draft application materials.

Draft Application Form

The type of mitigation (bank, permittee responsible) is not yet identified in the application.

It is probably a good idea to not sign draft applications (and don't mail in fees for draft applications).

Supplemental Application Materials

Section 2, Project Information, page 1. The directions to Dyer Reservoir have been pasted into the section that should contain the directions to Patterson Reservoir.

Section 2, Project Description, page 3. The discussion of adding concrete lining to v-ditches and rock riprap to channels lacks sufficient detail. Similarly, the 35% designs for work at both reservoirs lack necessary detail with respect to concrete lining and rock riprap installation. Based on the information that has been provided so far, the current project will not mitigate erosive flows, but will only move erosive forces downstream of the current project footprint.

Concrete lining of channels increases the velocity of flowing water, resulting in water with higher energy. This often results in erosion at the transition from concrete v-ditches to earthen channels. Similarly, while rock riprap bank armoring provides local stabilization, it also transfers erosive energy to the opposite bank, to the channel invert, or downstream.

The proposed channel stabilization measures should be reviewed by an experienced fluvial geomorphologist to ensure that stabilization measures contribute to establishing dynamic equilibrium between the watershed and the channels, rather than transferring erosive forces to other locations in the watershed. To the maximum extent feasible, channels should be stabilized with vegetation. Where erosive forces cannot be sufficiently controlled by vegetation, new hardscape should be limited to minimum amount necessary to stabilize the channel. In channel reaches with higher gradients, the use of cascades or step pools to dissipate energy should be considered. In areas that lack stabilizing vegetation, the project design should include measures to promote improved cover by vegetation.

Section 7, Cumulative Impacts, page 10. The discussion of cumulative impacts should address the ways in which adding hardscape to the on-site channels is likely to increase erosion of channels downstream of the Project sites.

Section 8, Avoidance and Minimization Measures, page 10. The discussion of avoidance and minimization measures must be revised to consider alternatives to new concrete channel lining and new rock riprap channel lining.

Section 11, Compensatory Mitigation, page 13. Impacts to channels and mitigation for those impacts must be quantified in linear feet, as well as acres. The application is incomplete, because it lacks even a draft mitigation plan. The discussion of impacts appears to inappropriately conflate waters of the U.S. and waters of the State. Federal jurisdiction extends up to the ordinary high water mark (OHWM). State jurisdiction extends up to the top of bank.

At this time, there are no mitigation banks with credits available for impacts to creek channels with service areas that include the project sites. Therefore, permittee responsible mitigation must be developed. Mitigation channels must be designed by a fluvial geomorphologist with experience in channel restoration and stabilization.

Aquatic Resources Delineation Report

Appendix D, page D-2. The discussion of jurisdiction in channels inappropriately conflates waters of the U.S. and waters of the State. Federal jurisdiction extends up to the OHWM. State jurisdiction extends up to the top of bank. I have pointed this out to Dudek staff in the past and this inaccuracy should not continue to be present in Dudek documents.

Brian Wines
Water Resource Control Engineer
Watershed Management Division
San Francisco Bay Regional Water Quality Control Board

From: Laurie Monarres <lmonarres@dudek.com>
Sent: Friday, June 25, 2021 10:33 AM
To: Wines, Brian@Waterboards <Brian.Wines@waterboards.ca.gov>
Cc: Snow, Gerald@DWR <Gerald.Snow@water.ca.gov>; Paiva-Lowry, Sara@DWR <Sara.Paiva-Lowry@water.ca.gov>
Subject: 1 of 5 - DRAFT Delta Dams Rodent Burrow Remediation Project 401 Application

EXTERNAL:

Hi Brian,

I hope all is well! On behalf of DWR, I am submitting a draft application package for the Delta Dams Rodent Burrow Remediation Project at Dyer and Patterson Dams. We are also mailing the application fee check to your office and additional draft application materials will be submitted in the coming weeks. Please don't hesitate to contact me if you have any questions as you begin your review.

Note that this is the first of five emails containing application documents.

Thank you!
Laurie

Laurie Monarres
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