
North Coast Regional Water Quality Control Board

June 29, 2012

In the Matter of
Water Quality Certification

for the

**Bureau of Reclamation – Buckhorn Dam Toe Drain and Grass Valley Creek
Channel Rehabilitation
WDID No. 1A12025WNTR**

APPLICANT: Bureau of Reclamation – Northern California Area Office
RECEIVING WATER: Grass Valley Creek
HYDROLOGIC AREA: Douglas City Hydrologic Subarea No. 106.31
COUNTY: Trinity
FILE NAME: Bureau of Reclamation, Trinity River Restoration Program –
Buckhorn Dam Toe Drain and Grass Valley Creek Channel
Rehabilitation

BY THE EXECUTIVE OFFICER:

1. On March 30, 2012, the Bureau of Reclamation – Northern California Area Office (Applicant) filed an application for water quality certification (certification) under section 401 of the Clean Water Act (33 U.S.C. § 1341) with the California Regional Water Quality Control Board, North Coast Region (Regional Water Board) for activities associated with excavation of sediment and bedrock from the Buckhorn Dam outlet channel in order to lower the water surface elevation within the dam's outlet channel and toe-drain system. The Regional Water Board provided public notice of the application pursuant to title 23, California Code of Regulations, section 3858 on June 5, 2012, and posted information describing the project on the Regional Water Board's website. We did not receive any public comments on this project.
2. Buckhorn Dam is located along the eastern border of Trinity County, approximately one mile south of Highway 299 at Buckhorn Summit. The Applicant completed construction of Buckhorn Dam in November 1991 for the purpose of trapping fine

sediment, mainly decomposed granite, eroding from the upper Grass Valley Creek watershed in order to reduce fine sediment inputs into the mainstem Trinity River. The dam structure includes an uncontrolled “run of the river” concrete spillway that spills/overflows into Grass Valley Creek when the reservoir is filled to capacity during the winter-spring runoff period and storm events. The dam structure also includes a gated and controllable conduit system that operates as the main outlet works. The Applicant has managed the outlet works to constantly discharge between 6 and 10 cubic feet per second into the outlet channel. The outlet channel extends approximately 1,500 linear feet downstream from the outlet works to its confluence with Grass Valley Creek near the downstream end of the spillway plunge pool. The outlet channel has natural stream channel characteristics and functions as the upstream reach of the Grass Valley Creek stream channel.

3. Soon after construction of Buckhorn Dam was complete, sediment deposition in the outlet channel began to occur immediately downstream of the outlet works discharge pipe. Sediment deposition has resulted in approximately one to three feet of aggradation within the outlet channel for a distance of approximately 600 feet downstream from the outlet works. An exposed bedrock outcrop located approximately 600 linear feet downstream of the outlet works creates a natural hydraulic control that limits downstream sediment migration and maintains the elevated water surface elevation within the outlet channel. The increased water surface elevation within the upper 600 linear feet of outlet channel results in ongoing flooding of the dam’s toe-drain system.
4. The toe-drain system includes perforated piping buried horizontally within the base of the dam’s fill structure and includes access manholes on the downstream slope to allow for inspection and measurement of seepage through the dam. The toe-drain system is designed to remain dry for inspection and serves as an indicator of dam integrity. The toe-drain system became submerged and unusable following completion of the dam due to the elevated water surface elevation within the outlet channel. The submerged toe-drain has hindered the Applicant’s ability to assess the dam’s structural integrity and has created a “safety of dams” issue. The primary purpose of the project is to lower the water surface elevation in the outlet channel in order to drain the toe-drain piping and correct the “safety of dams” issue. Another purpose of the project is to create and enhance habitat within and adjacent to the outlet channel from the outlet works to the bedrock grade control approximately 600 linear feet downstream.
5. Grass Valley Creek is currently one of the more vital tributaries to the Trinity River for coho salmon production. Buckhorn Dam completely blocks upstream fish migration. Grass Valley Creek is being used by coho salmon throughout most its 10.8 miles of stream length between the dam and confluence with the Trinity River; however, only a few juvenile steelhead have been observed within the outlet channel upstream of the bedrock outcrop. Beaver have also taken advantage of the bedrock

outcrop feature and raised the water elevation approximately one foot above the bedrock surface, effectively blocking all coho salmon and all but a few steelhead from accessing the upper reach of the outlet channel.

6. Approximately 4,500 cubic yards of material will be excavated from the outlet channel for the purpose of lowering the water surface elevation and approximately 4,500 cubic yards of additional sediment and earthen material will be excavated to create and enhance habitat features for coho salmon including rearing ponds and side channels. Channel creation and enhancement activities are designed to alter the existing center line alignment, create more channel sinuosity, build pool/riffle habitat, lower streambed elevations, increase channel slope, widen the cross-sectional area, and develop inset floodplain benches. The project area extends approximately 800 linear feet downstream of the outlet works.
7. Two juvenile salmonid rearing ponds are included in the project's design. The rearing ponds will be constructed in upland areas adjacent to the outlet channel, connected with side channels that will allow a percentage of flow to divert into the slow water pond habitat. Each pond will have a surface area of approximately 6,000 square feet with an average depth of six feet. Woody material will be placed in and around the ponds to provide shelter for rearing salmonids. Large wood debris will also be incorporated to create cover and provide hard points for purpose of flow diversion into the side channels and rearing pond areas.
8. Dewatering of the project area will be necessary during construction. The normal base flow will be pumped from the dam's outlet works, around the disturbed project area, and back into the channel approximately 800 linear feet downstream. Prior to dewatering, fish and other aquatic life present within the area to be dewatered will be captured and relocated to an appropriate location downstream. All of the estimated 9,000 cubic yards of excavated sediment and earthen materials will be permanently placed and stabilized onsite within a strategically selected upland area located between the outlet channel and spillway channel.
9. Dewatering activities will temporarily impact 9,600 square feet and 800 linear feet of existing stream channel. Activities associated with excavation of approximately 4,500 cubic yards of sediment (decomposed granite) from the outlet channel and approximately 75 cubic yards of bedrock at the channel intrusion will result in temporary impacts to 650 linear feet and 7,800 square feet of stream channel. An additional approximately 4,500 cubic yards of earthen material will be excavated to create side channel and rearing pool habitat, and to alter the existing center line alignment of the outlet channel to increase its sinuosity, build pool/riffle habitat, widen the cross-sectional area, and develop inset floodplain benches. The project will create a slightly wider and longer outlet channel, resulting in a 13,300 square foot increase in the wetted channel area, including an additional 12,000 square feet of rearing pond habitat. Compensatory mitigation is not required for the project. Noncompensatory mitigation includes the use of Best Management Practices

(BMPs) for sediment and turbidity control and for operation of heavy equipment in a stream channel.

10. The Applicant has applied for authorization from the United States Army Corps of Engineers (File No. 2005-29663N) to perform the project under Nationwide Permit Numbers 3 and 27, pursuant to Clean Water Act, section 404. A Lake and/or Streambed Alteration Agreement from the California Department of Fish and Game is not required for this federal project. The project is scheduled to begin on August 1, 2012 and is expected to take up to 80 days to complete.
11. On November 16, 2011, a Draft Initial Study/Mitigated Negative Declaration (IS/MND) (SCH No. 2011112038) for the project was distributed by the State Clearinghouse for a 30-day public review period. The Trinity County Resource Conservation District (TCRCD) was identified as the lead agency for compliance with CEQA requirements. The TCRCD received a comment letter from the California Department of Fish and Game indicating that the IS/MND is not clear regarding the TCRCD's role as Lead Agency. The TCRCD's response to DFG indicates that the TCRCD has worked closely with the Applicant on restoration activities within the Grass Valley Creek watershed and expected to have a larger role in implementation of this project. However, as the project developed, the role of TCRCD diminished such that the TCRCD was no longer an appropriate lead agency.
12. The Regional Water Board assumed the role of lead agency for compliance with CEQA requirements. On June 5, 2012, the Regional Water Board provided public notice of the application pursuant to title 23, California Code of Regulations, section 3858 and provided notice of intent to adopt the mitigated negative declaration (SCH No. 2011112038). (Cal. Code Regs., tit. 14, § 15072.) After considering the environmental document and comments received during the public review process, the Regional Water Board hereby determines that the project, with mitigation measures, will not have a significant effect on the environment. Mitigation measures necessary to reduce or eliminate significant impacts on the environment are included in the *Mitigation Monitoring and Reporting Program for the Buckhorn Dam/GVC Toe Drain and Channel Rehabilitation Project* (Final IS/MND - Appendix A). The mitigated negative declaration is hereby adopted. The documents or other materials, which constitute the record, are located at the Regional Water Board office, 5550 Skylane Boulevard, Suite A, Santa Rosa. The Regional Water Board will file a Notice of Determination within five days from the issuance of this order.
13. The Trinity River Total Maximum Daily Load (TMDL) for sediment was established in 2001 by the United States Environmental Protection Agency (EPA) in accordance with section 303(d) of the Clean Water Act, because the State of California determined that the water quality standards for the Trinity River are exceeded due to excessive sediment. Roads and bank erosion are identified as sources contributing to the sediment impairment. The primary adverse impacts associated with

excessive sediment in the Trinity River pertain to cold freshwater habitat, primarily anadromous salmonid habitat. Proposed activities include excavation of fine sediment from the stream channel, implementation of BMPs for sediment and turbidity control, and implementation of mitigation and impact avoidance measures as described above. Accordingly, this Order is consistent with, and implements portions of the Trinity River TMDL.

14. The federal antidegradation policy requires that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. This Order is consistent with applicable federal and state antidegradation policies, as it does not authorize the discharge of increased concentrations of pollutants or increased volumes of treated wastewater, and does not otherwise authorize degradation of the waters affected by this project.

15. This discharge is also regulated under State Water Resources Control Board Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification," which requires compliance with all conditions of this water quality certification.

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0017.pdf.

Receiving Waters: Grass Valley Creek in the Douglas City Hydrologic Subarea No. 106.31

Filled or Excavated Area: Area Temporarily Impacted: 9,600 square feet of streambed
Area Permanently Impacted: None

Total Linear Impacts: Length Temporarily Impacted: 800 linear feet of stream channel
Length Permanently Impacted: None

Dredge Volume: None

Habitat Created: Area Created: 13,300 square foot of side channel habitat including 12,000 square feet of coho rearing pond habitat
Length Created: 1,228 linear feet of stream channel

Latitude/Longitude : Upstream: 40.6233 N/122.7593 W
Downstream: 40.6252 N/122.7616 W

Accordingly, based on its independent review of the record, the Regional Water Board certifies that the Bureau of Reclamation – Buckhorn Dam Toe Drain and Grass Valley Creek Channel Rehabilitation (WDID No.1A12025WNTR), as described in the application, will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law, provided that the Applicant complies with the following terms and conditions:

All conditions of this order apply to the Applicant (and all their employees) and all contractors (and their employees), sub-contractors (and their employees), and any other entity or agency that performs activities or work on the project as related to this Water Quality Certification.

1. This certification action is subject to modification or revocation upon administrative or judicial review; including review and amendment pursuant to Water Code section 13330 and title 23, California Code of Regulations, section 3867.
2. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to title 23, California Code of Regulations, section 3855, subdivision (b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
3. The validity this certification is conditioned upon total payment of any fee required under title 23, California Code of Regulations, section 3833, and owed by the Applicant.
4. The Regional Water Board staff shall be notified in writing at least five working days (working days are Monday – Friday) prior to the commencement of ground disturbing activities, with details regarding the construction schedule, in order to allow staff to be present onsite during construction, and to answer any public inquiries that may arise regarding the project.
5. The Applicant shall provide Regional Water Board staff access to the project site to document compliance with this certification.
6. The mitigation measures, and monitoring and reporting requirements detailed in the *Mitigation Monitoring and Reporting Program for the Buckhorn Dam/GVC Toe Drain and Channel Rehabilitation Project* (MMRP) are hereby incorporated by reference and are conditions of approval of this certification. Notwithstanding any more specific conditions in this certification, Reclamation shall comply with all applicable mitigation measures identified in the MMRP that are within the Regional Water Board's jurisdiction.

7. Prior to implementing any change to the project that may have a significant or material effect on the findings, conclusions, or conditions of this Order, the Applicant shall obtain the written approval of the Regional Water Board Executive Officer. If the Regional Water Board is not notified of a significant alteration to the project, it will be considered a violation of this Order, and the Applicant may be subject to Regional Water Board enforcement action(s).
8. The Applicant shall provide a copy of this Order and the application documents submitted for authorization under this certification to all contractors and subcontractors conducting the work, and shall require that a copy of this Order remain in their possession at the work site. The Applicant shall also provide a copy of State Water Resources Control Board (SWRCB) Order No. 2003-0017-DWQ to any contractor(s), subcontractor(s), and utility company(ies) conducting work on the project, and shall require that copies remain in their possession at the work site. The Applicant shall be responsible for ensuring that all work conducted by its contractor(s), subcontractor(s), and utility companies is performed in accordance with the information provided by the Applicant to the Regional Water Board.
9. BMPs for sediment and turbidity control shall be implemented and in place at commencement of, during and after any project activities that could result in sediment discharges to surface water.
10. All activities and BMPs shall be implemented according to the submitted application and the conditions in this certification.
11. The Applicant shall prioritize the use of wildlife-friendly biodegradable (not photo-degradable) erosion control products wherever feasible. The Applicant shall not use or allow the use of erosion control products that contain synthetic materials within waters of the United States or waters of the State at any time. The Applicant shall not use or allow the use of erosion control products that contain synthetic netting for permanent erosion control (i.e. erosion control materials to be left in place for two years or after the completion date of the project). If the Applicant finds that erosion control netting or products have entrapped or harmed wildlife, personnel shall remove the netting or product and replace it with wildlife-friendly biodegradable products. The Applicant shall request approval from the Regional Water Board if an exception from this requirement is needed for a specific location.
12. Disturbance or removal of existing vegetation shall not exceed the minimum necessary to complete the project.
13. This Water Quality Certification does not authorize the Applicant to draft surface waters.

14. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature, other than that authorized by this Order, shall be allowed to enter into or be placed where it may be washed by rainfall into waters of the State. When operations are completed, any excess material or debris shall be removed from the work area.
15. Fueling, lubrication, maintenance, storage and staging of vehicles and equipment shall be outside of waters of the United States. Fueling, lubrication, maintenance, storage and staging of vehicles and equipment shall not result in a discharge or a threatened discharge to waters of the United States. At no time shall Reclamation use any vehicle or equipment, which leaks any substance that may impact water quality. If, at any time, an unauthorized discharge to surface waters occurs from fueling, lubrication, maintenance, storage or staging activities, the project shall cease immediately and Regional Water Board staff shall be notified promptly.
16. If, at any time, an unauthorized discharge to surface water (including wetlands, rivers or streams) occurs, or any water quality problem arises, the associated project activities shall cease immediately until adequate BMPs are implemented including stopping work. The Regional Water Board shall be notified promptly and in no case more than 24 hours after the unauthorized discharge or water quality problem arises.
17. Spill kits are required at each fueling location and at each location where power equipment will be working within waters of the State. In the event of an unauthorized release of fuel (spill or leak) to waters of the State, the Applicant shall immediately stop work and conduct the following measures:
 - a) notify the appropriate agencies including the Regional Water Board, CDFG, and the Office of Emergency Services (OES) at 1(800) 852-7550;
 - b) utilize the appropriate spill kits for containment and cleanup of the release;
 - c) collect samples within the immediate area of release, 50 feet downstream, and downstream to the full extent of the release if the release reaches surface waters; and,
 - d) analyze required surface water samples for all appropriate constituents including but not limited to total petroleum hydrocarbons as diesel (TPH-D), total petroleum hydrocarbons as gasoline (TPH-G), and benzene, toluene, ethylbenzene, total xylenes (BTEX).
18. Any potentially hazardous waste(s) (solids, liquids, or slurries) derived or encountered during this project shall undergo the appropriate characterization to demonstrate compliance with all applicable waste disposal laws and regulations.
19. The Regional Water Board may add to or modify the conditions of this Order, as appropriate, to implement any new or revised water quality standards and

implementation plans adopted and approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.

20. In the event of any violation or threatened violation of the conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under applicable state or federal law. For the purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Order. In response to a suspected violation of any condition of this certification, the State Water Board may require the holder of any federal permit or license subject to this Order to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In response to any violation of the conditions of this Order, the Regional Water Board may add to or modify the conditions of this Order as appropriate to ensure compliance.
21. In the event of any change in control of ownership of land presently owned or controlled by the Applicant, the Applicant shall notify the successor-in-interest of the existence of this Order by letter and shall forward a copy of the letter to the Regional Water Board at the above address.

To discharge dredged or fill material under this Order, the successor-in-interest must send to the Regional Water Board Executive Officer a written request for transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, and the address and telephone number of the person(s) responsible for contact with the Regional Water Board. The request must also describe any changes to the project proposed by the successor-in-interest or confirm that the successor-in-interest intends to implement the project as described in this Order.
22. Except as may be modified by any preceding conditions, all certification actions are contingent on: a) the discharge being limited to and all proposed mitigation being completed in strict compliance with the Applicant's project description, and b) compliance with all applicable requirements of the Water Quality Control Plan for the North Coast Region (Basin Plan).
23. The authorization of this certification for any dredge and fill activities expires on June 29, 2017. Conditions and monitoring requirements outlined in this Order are not subject to the expiration date outlined above, and remain in full effect and are enforceable.

If you have any questions or comments, please call Dean Prat at (707) 576-2801.

Matthais St. John
Executive Officer

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Weblink: State Water Resources Control Board Order No. 2003-0017 -DWQ, General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification can be found at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0017.pdf

Original to: Mr. Brandt Gutermuth, Bureau of Reclamation-Trinity River Restoration Program, P.O. Box 1300, Weaverville, CA 96093

Copy to: Mr. Paul Zedonis, Northern California Area Office, NC 312, 16349 Shasta Dam Boulevard, Shasta Lake, CA 96019

Electronic

Copies to: U.S. Army Corps of Engineers, District Engineer, 601 Startare Drive, Box 14, Eureka, CA 95501
U.S. Army Corps of Engineers, Regulatory Functions, 1455 Market Street, San Francisco, CA 94103-1398