



**California Regional Water Quality Control Board
North Coast Region
Bob Anderson, Chairman**



Linda S. Adams
Secretary for
Environmental Protection

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**Arnold
Schwarzenegger**
Governor

August 29, 2008

In the Matter of

Water Quality Certification

for the

**HUMBOLDT COUNTY DPW – MAD RIVER BLUFF, STREAMBANK PROTECTION
PROJECT
WDID NO. 1B08119WNHU**

APPLICANT: Humboldt County Public Works Department
RECEIVING WATER: Mad River
HYDROLOGIC UNIT: Blue Lake Hydrologic Area No. 109.10
COUNTY: Humboldt
FILE NAME: Humboldt County DPW – Mad River Bluff, Streambank
Protection Project

BY THE EXECUTIVE OFFICER:

1. On July 21, 2008, the Humboldt County Public Works Department (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 related to an emergency streambank stabilization project along the north bank of Mad River in McKinleyville. The Regional Water Board provided public notice of the application pursuant to title 23, California Code of Regulations, section 3858 on August 6, 2008, and posted information describing the project on the Regional Water Board's website. We did receive any public comments on this project.
2. The project is located along the steep bluffs near the intersection of School Road and Verwer Court in western McKinleyville. The project area is approximately 1.5 miles upstream from the mouth of the Mad River in 2008. The streambank in the project area was damaged by high flows during the December 2005 and January 2006 storm event. The severe storm event was declared a disaster by federal and state governments. Substantial streambank erosion and retreat of the adjacent bluff face occurred during the storm. The top of the bluff is currently within 15 feet of a single family residence and is also very close to several other residences and public

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infrastructure. At the project site, the steep bluff ranges in height from approximately 5 feet to 50 feet above the mean tide level.

3. A heavily vegetated gravel bar, located immediately upstream and on the opposite bank, is directing the channel's thalweg toward the steep bluff. The channel is also narrowing adjacent to the gravel bar which results in higher stream flow velocities through the bluff area of the streambank. These existing channel conditions are expected to continue into the foreseeable future. The Applicant has conducted a geologic investigation and flow study. Investigation and modeling results indicate that without intervention the bluff area can be expected to experience substantial erosion during future high flow events. According to the investigation and study, it is not certain that every peak discharge event above the identified threshold will result in bluff erosion, but the experts that studied the area estimate that there is a greater than 50 percent probability that a peak discharge event will occur during the next winter with a reasonable likelihood of causing 10 feet of bluff erosion, a 10 to 33 percent probability that a peak discharge event will occur during the next winter that could cause up to 50 feet of bluff erosion, and a 5 percent probability that a peak discharge event will occur that could cause up to 90 feet of bluff erosion. The study concluded that there is substantial evidence that potentially significant bluff erosion may occur in the next 12 months that will threaten property, essential services, and life and health.
4. The project has been designed to improve the erosion resistance and streambank stability without causing adverse downstream impacts and to provide aquatic habitat, riparian habitat, and water quality benefits. The project involves installation of a 1,300-foot long streambank stabilization structure consisting of a combination of rock slope protection (RSP/revetment) and bioengineering components. Approximately 10 to 15 vertical feet of the upper bluff face will also be graded to a lower angle and revegetated to create a more stable slope along the top of the bluff. Construction of the stabilization structure involves excavating a 1,300-foot long and 8-foot deep toe trench along the streambank at the base of the bluff. The toe trench will be filled with large rocks (4 ton to 6 ton each). The upper and lower ends of the stabilization structure will be keyed into the streambank to prevent flows from back cutting and flanking behind the structure. The toe trench has been designed to protect the lower streambank area and subsurface from scour and undercutting, and to provide a stable foundation for placement of the upper layers of the streambank stabilization structure.
5. The upper layers of the structure will consist of an alternating series of rock groins (hard points) and sections of RSP/revetment covered with willow mattresses. The hard points will be constructed with mounds of rock and large woody debris, such as logs with attached root wads, which will be secured together with cable anchors. The hard points will be spaced at approximately 60-foot intervals, and they will extend approximately 20 feet out from the streambank, approximately 20 feet along the streambank, and approximately 14 feet up the streambank from the top of the rock filled toe trench. The willow mattress and RSP/revetment sections will consist

of layers of rock, soil and integrated willow mattresses. Soil removed from the upper bluff face will be incorporated into the RSP/revetment to provide a growth matrix for the willows and other riparian vegetation. Willow mattresses will be made from approximately 4 to 6-inch thick bundles of salt-tolerant willow branches or cuttings that are tied together with twine. RSP/revetment materials will be placed in lifts and the willow mattresses will be secured with 4-inch diameter willow stakes.

6. The primary best management practice (BMP) that will be implemented at the project to avoid significant adverse impacts to fish, marine mammals, and water quality, will be a temporary fish exclusion and sediment management barrier. The barrier will be placed in approximately 150 to 300-foot long sections. The barrier will consist of parallel walls of silt fencing attached to steel fence posts that are mounted in the channel bottom. Depending on site specific conditions, the silt fencing will be draped over floating baffles that will raise and lower with the tides, or the fencing will be secured to posts with wire. Each section of barrier is built segment by segment until only the downstream end is open. Two small-meshed seines will be used to herd fish out of the containment area by starting at the upstream end and working the seines to the downstream end where they will remain to prevent fish from re-entering the containment area. Two passes will be made and the containment area will be visually inspected for fish. The seining procedure will be repeated until no fish are herded out or observed in the containment area.
7. Compensatory mitigation is not required for the proposed project. Noncompensatory mitigation for this project includes the use of Best Management Practices for sediment and erosion control and for the operation of heavy equipment in a waterway.
8. The Applicant has applied for authorization from the United States Army Corps of Engineers to perform the project under Nationwide Permit Number 37, pursuant to Clean Water Act, section 404. The applicant has also applied for a Lake or Streambed Alteration Agreement from the California Department of Fish and Game.
9. The Regional Water Board, as the lead California Environmental Quality Act (CEQA) agency, has determined that this project qualifies for a Statutory Exemption, section 15269 – emergency projects, pursuant to CEQA.
10. 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.

Receiving Water: Mad River in the Blue Lake Hydrologic Area No. 109.10

Filled or Excavated Area: Area Temporarily Impacted: 250 square feet of streambed
Area Permanently Impacted: 26,000 square feet of streambank

7. All activities and BMPs shall be implemented according to the submitted application and the conditions in this certification.
8. The Applicant shall implement the August 2008 Monitoring and Reporting Plan (Plan). The Plan requires periodic visual monitoring the project area for bank erosion protection, plant survival, and aquatic habitat benefits. Monitoring shall be conducted in response to various flow events as specified in the Plan. Monitoring reports shall be submitted to this agency in accordance with the schedule specified in the Plan.
9. A copy of this Order and the application documents submitted by the Applicant for this certification shall be provided to all contractors and subcontractors conducting the work, and shall be in their possession at the work site.
10. 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. 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.
11. Disturbance or removal of vegetation shall not exceed the minimum necessary to complete the project.
12. 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.
13. All project work shall be conducted as described in this Order and in the application submitted by the Applicant. 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 actions.
14. 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.
15. The Applicant shall provide Regional Water Board staff access to the project site to document compliance with this certification.
16. In the event of any violation or threatened violation of the conditions of this certification, 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 constitutes a

limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification. In response to a suspected violation of any condition of this certification, the Regional Water Board may require the holder of any federal permit or license subject to this certification to furnish, under penalty of perjury, any technical or monitoring reports the Regional 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 certification, the Regional Water Board may add to or modify the conditions of this certification as appropriate to ensure compliance.

17. 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.

18. 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).

19. The authorization of this certification for any dredge and fill activities expires on August 29, 2013. Conditions and monitoring requirements outlined in this certification 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.

Catherine Kuhlman
Executive Officer

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