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**California Regional Water Quality Control Board
North Coast Region
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Arnold
Schwarzenegger
Governor

September 22, 2010

In the Matter of

Water Quality Certification

for the

**California Department of Transportation
Highway 128 –Bank Stabilization at Russian River Bridge, Geyserville
WDID No. 1B10101WNSO**

APPLICANT: California Department of Transportation
RECEIVING WATER: Russian River
HYDROLOGIC AREA: Geyserville Hydrologic Subarea No.114.25
COUNTY: Sonoma
FILE NAME: CDOT - Hwy 128, Bank Stabilization at Russian River Bridge

BY THE EXECUTIVE OFFICER:

1. On September 9, 2010, the North Coast Regional Water Quality Control Board (Regional Water Board) received an application from the California Department of Transportation District 4 (Caltrans/Applicant), requesting Federal Clean Water Act (CWA), section 401, Water Quality Certification (certification) for activities associated with streambank stabilization along the west side of the Russian River directly upstream of the Highway 128 Bridge east of Geyserville. The Regional Water Board provided public notice of the project pursuant to title 23, California Code of Regulations, section 3858 on September 9, 2010, and posted information describing the project on the Regional Water Board's website.
2. Caltrans replaced the Highway 128 Bridge over the Russian River in 2006 after one of the bridge piers failed during a storm. The bridge was closed from January 2006 through August 2006 during emergency bridge replacement. For several reasons associated with the emergency nature of the bridge reconstruction, the replacement bridge was not lengthened or extended westerly to center the bridge over the low flow channel and protect the highway and western bridge approach from westerly

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channel migration and scour events that could result in catastrophic failure and additional closures of Highway 128.

3. In January 2010, Caltrans completed an emergency bank stabilization project along the western bridge approach that consisted of placing approximately 500 cubic yards of rock slope protection (RSP) in the river and on the west bank during high flows. An additional 2,000 cubic yards of RSP was placed on the top of the bank and against the bridge approach fill as an erodible buttress in the event that the 500 cubic yards that were placed in the river channel was insufficient to prevent further erosion. The project area for the emergency RSP placement was limited and a bare upstream section of the streambank was not protected
4. The emergency RSP project provided some level of erosion protection for the bridge approach during winter and spring 2010. However, a portion of the emergency RSP created a back eddy that caused additional bank erosion and additional westward migration of the eroding streambank. Stabilization of the eroding streambank prior to the upcoming 2010-2011 high flow season is a high priority, as the existing streambank is comprised of highly erodible unconsolidated river deposits and it appears that the west end of the previously installed emergency RSP will be flanked if the erosion is allowed continue through the upcoming winter.
5. The primary purpose of this bank stabilization project is to prevent additional westward migration of the eroding streambank in order to protect the highway and bridge approach. The bank stabilization project has also been designed to provide a repair to resist erosion and redirect flows away from the streambank. Willow and cottonwood plantings and large woody debris are incorporated into the project design to restore native riparian vegetation and improve fish habitat along the eroded streambank.
6. The bank stabilization structure incorporates the following design features:

Longitudinal Peaked Stone Toe Protection (LPSTP): LPSTP is a longitudinal rock riprap berm that is placed roughly parallel to the base of the eroded streambank. The top of the LPSTP will be 12-feet wide and sacrificial rock is incorporated into the top width and outer face of the berm. The sacrificial rock on the top and face of the LPSTP is designed to be "self-launching" such that they will shift and move down the face of the LPSTP and refill voids and scour holes that form along the toe of the berm. The LPSTP feature provides a resistive structure to protect the streambank from further erosion. The top of the LPSTP will be set at approximate elevation of Ordinary High Water (OHW).

Rock Vanes: Rock vanes are rock riprap berms that will extend approximately 25 to 35 feet from the LPSTP and into the low flow river channel. Rock vanes are designed to redirect the higher velocity and more erosive stream flows to the tips of the vanes and away from the eroding streambank. The rock vanes are designed to

create zones of 'calm water' between the vanes that promotes deposition of fine-grained material and recruitment of vegetation. The vanes are angled approximately 30 degrees upstream from the LPSTP and taper downward in height from the LPSTP such that the tips are slightly below water level.

Live Siltation Willow Plantings: Live siltation is a revegetation technique used to secure the toe of a streambank, trap sediments, and create riparian and fish habitat. Live siltation planting of willows poles will be continuous along the face of the LPSTP. The willow poles ranging from ¾ inch to 1.5-inches diameter will be harvested from nearby areas. Willow poles will be laid in a continuous 2-foot wide by 4-foot deep trench along outer face of the LPSTP where the bottom ends of the willows will be in a moist environment. The live siltation will be backfilled with river-run (sand /rock mixture) from a local supplier of Russian River aggregate materials. Approximately 80 percent of the willow pole length will be buried following backfilling.

In-Stream Locked Logs: Locked logs will be installed behind the rock vanes in the area of calm water to provide habitat, shading and refugia for fish.

Floodplain: A narrow floodplain will be created behind the LPSTP slightly above the elevation of OHW. River-run material from a local supplier will be used as the backfill. The floodplain will be planted with willow poles and cottonwood poles. The top surface will also be seeded with appropriate native grasses.

7. The bank stabilization structure will be installed by starting construction and fill placement at the upstream end and progressing in the downstream direction. Construction will begin with creation the upstream portion of the LPSTP that will also serve as a working platform for a large excavator. A 12-foot opening will be maintained between the structure and flowing water to allow any fish that may be present to leave the wetted area between the LPSTP and the streambank. The area between the LPSTP and the streambank will be carefully backfilled from the upstream to downstream direction in order to move the water out of the opening at the end of the LPSTP and avoid trapping fish. Once the backfilling is completed to the downstream end of the LPSTP, the opening will be filled with rock to conform to the existing bank to keep flowing water and fish out of the work area. Live siltation, rock vanes, and locked logs will then be installed in conjunction with completion of the LPSTP prism. After the LPSTP prism is complete, the narrow floodplain area will be backfilled with river-run to the face of the eroding streambank. The floodplain will be planted with additional willow and cottonwood, and seeded with native grasses.
8. Equipment used for this project may include loaders, excavators, dump trucks, backhoes, cranes, bobcats, and augers. Equipment and materials will be staged on the vineyard terrace above the eroded streambank. Access from the staging area to the work area will be at the upstream end of the rock structure where it will be keyed into existing streambank.

9. Caltrans has applied for authorization from the U.S. Army Corps of Engineers (USACE) to perform the project under Nationwide Permit No. 13 (Bank Stabilization) pursuant to Clean Water Act, section 404. Caltrans has also applied to the California Department of Fish and Game (CDFG) for a Lake or Streambed Alteration Agreement.
10. 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.
11. Water bodies in the Russian River watershed are identified as impaired for excess sediment and elevated temperature on the Clean Water Act Section 303(d) list. Roads are a significant source of sediment in the watershed (directly, from surface erosion, and, indirectly, by triggering landslides). In addition, activities that impact the riparian zone and reduce riparian vegetation are identified as sources contributing to increased stream temperatures. A focus on measures to reduce sediment discharges to surface waters from roads in the watershed, and measures to avoid, minimize, and mitigate impacts on riparian zones is essential for achieving TMDL compliance.
12. Pursuant to Regional Water Board Resolution R1-2004-0087, *Total Maximum Daily Load Implementation Policy Statement for Sediment-Impaired Receiving Waters within the North Coast Region* (Sediment TMDL Implementation Policy), the Executive Officer is directed to “rely on the use of all available authorities, including existing regulatory standards, and permitting and enforcement tools to more effectively and efficaciously pursue compliance with sediment-related standards by all dischargers of sediment waste.”
13. 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.
14. 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 certification.

Receiving Water: Russian River. Geyserville Hydrologic Subarea No.114.25

Filled or Excavated Area: Area Temporarily Impacted: None
Area Permanently Impacted: 8,390 square feet of
streambank and 11,716 square feet of stream channel

Total Linear Impacts: Length Temporarily Impacted: None
Length Permanently Impacted: 404 linear feet of
streambank

Dredge Volume : None

Latitude/Longitude: 38.71236 N/122.89707 W

Accordingly, based on its independent review of the record, the Regional Water Board certifies that the Caltrans Hwy 128, Bank Stabilization at Russian River Bridge Project (WDID No. 1B10101WNSO), 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 Caltrans and all its employees, all contractors and their employees, all 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. This certification is conditioned upon total payment of any fee required under title 23, California Code of Regulations, section 2200, and owed by the Applicant.
4. Except as may be modified by any preceding conditions, all certification actions are contingent on: a) the discharge being limited, and all proposed revegetation and mitigation being completed, in strict compliance with the Applicant's project description, as approved herein, and b) compliance with all applicable water quality

requirements and water quality control plans including the requirements of the Basin Plan, and amendments thereto.

5. Monitoring and reporting activities shall be implemented in accordance with the Applicant's Mitigation and Monitoring Plan – Geyserville Bridge Stabilization Project dated September 2010. Monitoring reports, containing observations and photos taken throughout a three-year monitoring period, shall be submitted to this office annually. If monitoring indicates that the willow planting and floodplain revegetation efforts were unsuccessful, a revised revegetation plan shall be submitted with the monitoring report.
6. Caltrans shall monitor the LPSTP and rock vein structure during the winter and spring high flow seasons through the end of the 2012/2013 wet season to ensure the structure continues to function as designed during and after flows that inundate the structure. Monitoring reports shall including the following information and observations, including but not limited to: structure stabilization; thalweg position; and upstream, project area, and downstream stream channel and stream bank conditions. The observations shall be correlated to the various flows stages of the river, associated rainfall events, and changes in flow releases from Coyote Dam. Monitoring reports shall be submitted to this office annually.
7. All conditions required by this Order shall be included in the Plans and Specifications prepared by Caltrans for the Contractor. In addition, Caltrans shall require compliance with all conditions included in this Order in the bid contract for this project.
8. Caltrans shall construct the project in accordance with the project described in the application and the findings above, and shall comply with all applicable water quality requirements and Water Quality Standards as detailed in the Basin Plan.
9. Any change in the design or implementation of the project that would have a significant or material effect on the findings, conclusions, or conditions of this Order must be submitted to the Executive Officer of the Regional Water Board for prior review, consideration, and concurrence.
10. Caltrans shall provide a copy of this Order, associated attachments, and State Water Resources Control Board (SWRCB) Order No. 2003-0017-DWQ to the contractor, all subcontractors, and all utility companies conducting the work, and require that copies remain in their possession at the work site. Caltrans shall be responsible for work conducted by its employees, contractors, subcontractors, and utility companies.
11. The Resident Engineer (or appropriately authorized agent) shall hold on-site water quality permit compliance meetings (similar to tailgate safety meetings) to discuss permit compliance, including instructions on how to avoid violations and

procedures for reporting violations. The meetings shall be held at least every other week, before forecasted storm events, and when a new contractor or subcontractor arrives to begin work at the site. The contractors, subcontractors and their employees, as well as any inspectors or monitors assigned to the project, shall be present at the meetings. Caltrans shall maintain dated sign-in sheets for attendees at these meetings, and shall make them available to the Regional Water Board on request.

12. All activities and best management practices (BMPs) shall be implemented according to the submitted application and the conditions in this Order. BMPs for erosion, sediment, turbidity and pollutant control shall be implemented and in place at commencement of, during, and after any ground clearing activities, construction activities, or any other project activities that could result in erosion, sediment, or other pollutant discharges to waters of the State. All BMPs shall be installed properly and in accordance with the manufacturer's specifications.
13. Caltrans shall prioritize the use of wildlife-friendly biodegradable (not photo-degradable) erosion control products wherever feasible. Caltrans 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 Caltrans 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. Caltrans 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. Caltrans shall request approval from the Regional Water Board if an exception from this requirement is needed for a specific location.
14. Work in flowing or standing surface waters, unless otherwise proposed in the project description and approved by the Regional Water Board, is prohibited. If construction dewatering of groundwater is found to be necessary, Caltrans shall use a method of water disposal other than disposal to surface waters (such as land disposal) or Caltrans shall apply for coverage under the Low Threat Discharge Permit or an individual National Pollutant Discharge Elimination System (NPDES) Permit and receive notification of coverage to discharge to surface waters, prior to the discharge.
15. Caltrans is prohibited from discharging waste to waters of the State, unless explicitly authorized by this Order. For example, no debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or concrete washings, welding slag, 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 waters of the State. In addition, none of the materials listed above shall be placed within 150 linear feet of waters of the State or where the materials may be washed by rainfall into waters of the State.

16. Herbicides and pesticides shall not be used on the project. If Caltrans has a compelling case as to why herbicides and pesticides should be used, they may submit a request along with a BMP plan to the Executive Officer of the Regional Water Board for review, consideration, and concurrence.
17. Fueling, lubrication, maintenance, storage and staging of vehicles and equipment shall be outside of waters of the United States and the State. Fueling, lubrication, maintenance, storage and staging of vehicles and equipment shall not result in a discharge or a threatened discharge to any waters of the State or the United States. At no time shall the Applicant use any vehicle or equipment which leaks any substance that may impact water quality.
18. 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.
19. Caltrans shall implement appropriate BMPs to prevent the discharge of equipment fluids to the stream channel. The minimum requirements will include: storing hazardous materials at least 150 linear feet outside of the stream banks; checking equipment for leaks; and preventing the use of equipment with leaks in a manner that does not result in a discharge to Waters of the State.
20. Caltrans and their contractor are not authorized to discharge wastewater (e.g., water that has contacted uncured concrete or cement, or asphalt) to surface waters, ground waters, or land. Wastewater may only be disposed of to a sanitary waste water collection system/facility (with authorization from the facility's owner or operator) or a properly-licensed disposal or reuse facility. If Caltrans or their contractor proposes an alternate disposal method, Caltrans or their contractor shall apply for a permit from the Regional Water Board. Plans to reuse or recycle wastewater require written approval from Regional Water Board staff.
21. Any potentially hazardous waste(s) (solids, liquids, or slurries) derived or encountered in this project shall undergo the appropriate characterization to demonstrate compliance will all applicable waste disposal laws and regulations. If unanticipated or anticipated waste are encountered or created during the project, Caltrans shall notify the Regional Water Board immediately and at least within 24 hours. Caltrans or their contractor shall prepare applicable work plans for handling, treating, transporting, and disposing of waste. The work plans shall be prepared and signed by an engineer or geologist with the appropriate and valid California licenses.

22. All imported fill material shall be clean and free of pollutants. All fill material shall be imported from a source that has the appropriate environmental clearances and permits.
23. If it is necessary to conduct work within or adjacent to the stream channel subsequent to October 15th, Caltrans shall notify the Regional Water Board on a daily basis in regards to the schedule and proposed work necessary to complete the project. Work within or adjacent to the stream channel after October 15th shall not be conducted without obtaining authorization from the Regional Water Board, CDFG, USACE and National Marine Fisheries Service.
24. 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.
25. The Regional Water Board may add to or modify the conditions of this Order, as appropriate, and to implement any new or revised Water Quality Standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.
26. This Order is not transferable. In the event of any change in control of ownership of land presently owned or controlled by Caltrans, Caltrans 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. The successor-in-interest must send to the Regional Water Board Executive Officer a written request for transfer of this Order to discharge dredged or fill material under this Order. The request must contain the following:
 - a. requesting entity's full legal name
 - b. the state of incorporation, if a corporation
 - c. address and phone number of contact person
 - d. description of any changes to the project or confirmation that the successor-in-interest intends to implement the project as described in this Order.

27. The authorization of this certification for any dredge and fill activities expires on November 30, 2010. 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.
28. Please contact our staff Environmental Specialist/Caltrans Liaison Jeremiah Puget at (707) 576-2835 or jpuget@waterboards.ca.gov if you have any questions.

Catherine Kuhlman
Executive Officer

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Web link: 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. Eric Schen, California Department of Transportation, 111 Grand Avenue, Oakland, CA 94623

Electronic
Copies to: Ms. Jane Hicks, U.S. Army Corps of Engineers, Regulatory Functions, 1455 Market Street, San Francisco, CA 94103-1398