August 23, 2011

**Public Notice for Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill Projects)**

Humboldt County Resource Conservation District – Salt River Ecosystem Restoration Project
WDID No. 1B10106WNHU

Humboldt County

On September 27, 2010, the North Coast Regional Water Quality Control Board (Regional Water Board) received an application from the Humboldt County Resource Conservation District (applicant), requesting Federal Clean Water Act, section 401, Water Quality Certification (certification) for proposed activities associated with implementation of the Salt River Ecosystem Restoration Project, a large scale project that entails creation of an expanded Salt River channel, restoration of wetlands, and upland restoration and erosion control activities. The proposed project will cause disturbances to waters of the United States associated with wetlands, the Salt River, and tributaries to the Salt River in the Ferndale Hydrologic Subarea No. 111.11.

The Salt River watershed is tributary to the Eel River delta. The Salt River watershed's ecosystem and hydrology have been significantly altered as a result of land use changes. Only a small fraction of the original Salt River estuary complex is currently subject to tidal influence, due to historical land reclamation activities, levee and tide gate construction, and channel aggradation. Steep topography, relatively high rainfall, unstable geology, and high rates of tectonic activity combine with highly erodible soils to contribute to high potential for upslope landslides and high rates of sediment delivery to tributary watercourses and the Salt River. The upper portion of the Salt River channel has been diverted by excess sediment accumulation. The main channel of the Salt River and the lower reaches of its tributaries have become choked with fine sediment and willows, and have lost nearly all natural hydraulic function. The hydraulic dysfunction of the Salt River causes significant problems related to frequent flooding, discharge of wastewater treatment plant effluent, and overall water quality.

Historically, the Salt River functioned as a migration corridor for adult salmonids reaching spawning habitat in tributaries within the Wildcat Mountains and also provided rearing habitat for juveniles migrating downstream to the Eel River estuary. However, poor fish passage conditions have resulted in drastic population declines of all species of salmonids that formerly used the Salt River and its tributaries. In addition, there has been a substantial loss of wetlands and habitat diversity. The proposed project was developed to respond to these problems with the anticipated benefits of reduced flood impacts, improved fish passage, improved water quality, improved and expanded habitat for riparian and wetland species, improved dilution of sewage treatment plant discharge, and improved sediment transport. The proposed project has several components including: 1) restoration of the Salt River channel and riparian corridor; 2) restoration of the Riverside Ranch tidal marsh; 3) upslope sediment reduction; 4) adaptive management; 5) mitigation activities to minimize and avoid impacts; 6)

measures to establish and preserve tidewater goby habitat; 7) conversion and restoration of agricultural lands; and, 8) protection of archaeological resources.

Restoration of the Salt River's fluvial reach between Perry Slough and Reas Creek has been designed such that the channel corridor will be connected to passive and active sediment management areas, and the existing floodplain. The objective of the channel design is to minimize sediment deposition in the active channel by promoting higher water velocities while allowing the active bench and floodplain areas to function as a sediment deposition zone where channel maintenance activities can occur in the future. The active bench and floodplain areas will be re-established as riverine wetland populated by sedges, grasses, and forbs. Spruce, cottonwood, and other species will be planted at the edge of the active bench. Riparian willow stands and this outer canopy of trees that will be planted along the active channel are anticipated to provide shading for the main Salt River channel and inhibit colonization by invasive species.

The proposed Salt River channel design is based on prospective flow conditions from Williams Creek and Coffee Creek. Williams Creek, between Grizzly Bluff Road and the confluence with the Salt River, is extremely aggraded. This aggraded reach and adjoining floodplain attenuate high flows and limits sediment transport into the Salt River channel. Even though the proposed Salt River channel restoration will connect Williams Creek at the confluence, attenuation of higher flows and sediment transport into the restored channel will persist until additional improvements are made within the Williams Creek watershed. The channel restoration design attempts to accommodate flows from Coffee Creek that appear to be separated by a natural topographic divide between the confluence of Williams Creek and Perry Slough that currently conveys flows from Coffee Creek into Perry Slough. Proposed channel restoration will extend upstream to the confluence of Perry Slough, capturing the flows from the Coffee Creek watershed. It is assumed that Williams Creek and Coffee Creek will continue to overflow their banks although they are expected to drain more quickly towards the Salt River as floods recede.

Sediment inputs to the Salt River are expected to be reduced over time by implementation of additional erosion control practices and projects in the upper watershed. However, active and passive sediment management activities will be required to maintain optimal flows and sediment conveyance. Sediment management areas are intended to be integrated along the mainstem Salt River in coordination with floodplain and riparian vegetation enhancements. The proposed floodplain design will include active and passive sediment management areas. Active sediment management areas will be constructed to emulate natural floodplains in designated areas along the mainstem Salt River in order to reduce flow velocity and create conditions that promote settling of fine sediment. Active sediment management areas will be subject to periodic sediment removal activities to maintain topography, function and sediment trapping efficiency. Passive sediment management areas are intended to function as floodplain and riparian areas that promote sediment deposition without long-term sediment removal and maintenance. If excessive sediment deposition occurs within passive sediment management areas, sediment removal may occur through implementation of the Adaptive Management Plan.

The tidal reach of the Salt River channel will be expanded to restore hydraulic connection to the upstream fluvial reach and between the Riverside Ranch tidal marsh and Eel River estuary. The proposed channel is designed to optimize tidal exchange to restore wetlands and provide flood conveyance for the fluvial reach. The expanded channel will be sized to accommodate unrestricted tidal exchange of the restored wetland tidal prism. The proposed channel is also designed to maintain naturally high flow velocities during tides to maintain channel equilibrium morphology. The designed channel will experience regular wetting and drying through tidal cycles. Scour velocities and salinity exchange will control the establishment of salt marsh and brackish marsh vegetation types within the mainstem channel. The channel has also been designed to maintain water depths that promote eelgrass colonization.

The project is also designed to improve connectivity of the Salt River with Francis Creek, Westside Drainage, and Eastside Drainage. Proposed activities include restoration of approximately 2,900 linear feet of lower Francis Creek. The Francis Creek channel was previously realigned to maximize grazing land and to accommodate the Ferndale wastewater treatment plant. However, winter flows frequently exceed the channel capacity, overtop the banks, and flood adjacent pasture. The proposed Francis Creek channel restoration has been designed to function like the upstream reach through Van Ness Street and will connect to an active sediment management area at the confluence with the Salt River channel.

Proposed channel restoration activities include reconnecting the Eastside Drainage Ditch to Francis Creek with approximately 500 linear feet of reconfigured drainage channel. The existing drainage channel was excavated and realigned during a County of Humboldt emergency excavation project to provide flood relief. The emergency channel alignment will be backfilled with stockpiled native soil and restored to pasture. The project also includes the removal of an existing failed bridge crossing over Francis Creek and replacement with a free-span, pre-fabricated bridge that will span the top width of the restored Francis Creek channel.

Riverside Ranch tidal marsh restoration is another large component of the project. Existing habitats include tidal salt marsh, willow riparian scrub forest, aquatic/mudflat, agricultural grassland, seasonal wetlands, and freshwater marsh. The primary purposes of the proposed Riverside Ranch tidal marsh restoration activities are to: 1) restore tidal connectivity to historical wetlands; 2) restore a marsh to include high salt marsh and broad wetland upland transition zones; 3) sequester carbon in restored tidal marshes; 4) promote development of a complex tidal drainage network; 5) retain agricultural areas where management can techniques can be used to provide Aleutian goose habitat specifically; and, 6) provide wintering habitat for other migratory waterfowl and shorebirds.

The Riverside Ranch tidal marsh restoration activities include excavation of the tidally influenced reach of the Salt River channel to expand its tidal prism. A new approximately 11,360-foot long and 12-foot wide (top width) berm will be constructed along the eastern property boundary to protect adjacent parcels from tidal flooding. The new berm will be constructed with approximately 185,000 cubic yards of fine sediment excavated from the Salt River channel. Approximately 3,500 linear feet of an existing berm along the northern side of Riverside Ranch will also be refurbished. The project

design includes culverts, future transport of livestock, maintenance access, and potential floodways for Eel River flooding.

Excavation through the perimeter levees at the Riverside Ranch will open the area to tidal inundation from the adjacent Salt River. In the northern half of the ranch a tidal connection will occur at a historical slough location to reconnect with remnant slough networks. In the southern half of the ranch the connection will be located upstream as far as possible to maximize the length of Salt River channel exposed to tidal exchange to maximize the tidal exchange energy for maintaining a larger channel. Portions of the outboard Riverside Ranch levee adjacent to Salt River will be lowered to create high marsh habitat and restore the high-tide hydraulic connection between the river and the ranch property; however, the majority of the flows will be directed to the designed levee breach locations to maximize the tidal prism in the Salt River. Areas of the existing ranch levee will be retained to preserve existing willow riparian habitat.

The proposed Riverside Ranch Tidal Marsh Restoration (Phase 1) activities are expected to result in temporary impacts to 12,900 linear feet and 22.2 acres of the Salt River channel, 19,700 linear feet and 8.7 acres of internal slough channel, 10,500 linear feet and 13 acres of berm outboard ditches, and 5,000 linear feet and 3 acres of agricultural ditches. Proposed Phase 1 activities are also expected to result in permanent impacts to 81.2 acres of wetlands and creation of 81.2 acres of wetlands. The proposed Salt River Channel and Riparian Corridor Restoration (Phase 2) activities are expected to result in temporary impacts to 27,750 linear feet and 70 acres of the Salt River stream channel (fluvial reach), 2,900 linear feet and 3 acres of the Francis Creek stream channel, 1,000 linear feet and 0.3 acres of the Eastside Drainage channel, and 150 linear feet and 0.1 acres of the Williams Creek stream channel. Proposed Phase 2 activities are also expected to result in permanent impacts to 0.5 acres of wetlands and creation of 1.6 acres of wetlands. In total (inclusive of Phase 1 and 2), the proposed project will result in a net gain of 1.1 acres of wetlands, and conversion/enhancement of 290 acres of existing pasture wetlands to tidal wetlands.

The applicant has applied (File No. 2010-00282) for authorization from the U.S. Army Corps of Engineers to perform the project under Individual Permit 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. On February 25, 2011, the Humboldt County Resource Conservation District certified an Environmental Impact Report (SCH No. 2007062030) for the project in order to comply with CEQA. The Regional Water Board has considered the environmental document and any proposed changes incorporated into the project or required as a condition of approval to avoid significant effects to the environment.

The project has been designed to avoid and minimize adverse impacts to waters of the United States. Some of the project's components will require significant earthwork which could temporarily degrade water quality by increasing sediment and turbidity. Numerous project designs and mitigation measures are proposed to avoid and minimize impacts to water quality. Mitigation measures will be incorporated into the certification. Noncompensatory mitigation for this project includes revegetation of disturbed areas and the use of Best Management Practices (BMPs) for heavy equipment use near waterways. The applicant is required to implement a Storm Water Pollution Prevention

Plan, Habitat Mitigation and Monitoring Plan, Rare Plant Mitigation and Monitoring Plan, and Adaptive Management Plan.

The Lower Eel River Total Maximum Daily Loads (TMDL) for temperature and sediment was established in 2007 by the United States Environmental Protection Agency in accordance with section 303(d) of the Clean Water Act, because the State of California determined that the water quality standards for the Lower Eel River are exceeded due to excessive temperature and sediment. Roads and bank erosion are identified as sources contributing to the sediment impairment. In addition, activities that impact the riparian zone and reduce riparian vegetation are identified as sources contributing to increased stream temperatures. The primary adverse impacts associated with excessive temperature and sediment in the Lower Eel River pertain to cold freshwater habitat, primarily anadromous salmonid habitat. Actions authorized by this Order are intended to enhance habitat for salmonids and other aquatic species. Actions authorized by this Order will also require implementation of Best Management Practices (BMPs) for sediment and erosion control and implementation of impact avoidance measures as described above. Accordingly, the proposed project is consistent with and implements portions of the Lower Eel River TMDL.

The information contained in this public notice is only a summary of the applicant's proposed activities. The application for Water Quality Certification in the Regional Water Board's file contains additional details about the proposed activities including maps and design drawings. The application and Regional Water Board file are available for public review.

Regional Water Board staff are proposing to regulate this project pursuant to Section 401 of the Clean Water Act (33 USC 1341) and/or Porter-Cologne Water Quality Control Act authority. In addition, staff will consider all comments submitted in writing and received at this office by mail during a 21-day comment period that begins on the first date of issuance of this letter and ends at 5:00 p.m. on the last day of the comment period. If you have any questions, please contact staff member Dean Prat at (707) 576-2801 within 21 days of the posting of this notice.

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