

Salt River Ecosystem Restoration Project

HUMBOLDT COUNTY RESOURCE CONSERVATION DISTRICT



STATEMENT OF THE PROBLEM

Hydrologic function in the Salt River watershed has been lost due to a combination of factors. Historic land reclamation, levee and tide gate construction, channel aggradation and invasive vegetation have led to a loss of hydraulic conveyance and ecological processes both in the Salt River channel and its tributaries.

PROJECT GOALS

Restore and enhance hydrologic, sediment transport, wetland, and floodplain function in the Salt River watershed by restoring geomorphic features and tidal influence and reducing sedimentation from upper tributary watersheds.

THE SOLUTION

The four primary components of the project include:

- River Restoration**— Restoration of hydraulic capacity, in-stream fish habitat, and water quality for approximately 7 miles of the Salt River, and lower Francis creek.
- Estuary Restoration** — Restore Riverside Ranch, an approximately 400-acre property, to tidal marsh while retaining some 75 acres of short grass habitat.
- Upslope Sediment Reduction** — Ongoing work with private landowners in the Williams, Francis, and Reas Creek sub-watersheds to implement projects to control erosion and decrease sediment and restore riparian habitat.
- Adaptive Management Plan** — Initiate a long-term process of monitoring and management to assure continued project performance within a working landscape.

PROJECT IMPLEMENTATION AND ACCOMPLISHMENTS

Project activities include: excavation and rehabilitation of 7 miles of river channel, construction of different types of sediment management areas, restoration of floodplain function, vegetation removal, re-vegetation with livestock fencing, tide gate modification/removal, channel realignment, wetland restoration, levee set-backs and regrading, spoils transport and placement, and channel maintenance.

The main Salt River channel is designed to maximize sediment transport capacity while restoring more functional channel morphology. The channel is designed with a low-flow channel to allow fish passage and an inset floodplain to accommodate flows with a recurrence interval of one to two years and allow for sediment deposition in key areas. The two-year floodplain is re-established as riverine wetland habitat. Disturbed areas above the two-year floodplain are to be planted with native species. The project will minimize sediment deposition in the channel by promoting higher water velocities while allowing the floodplain to function as a sediment deposition zone. Expansion of tidal exchange in the restored tidal marsh area and the increase in tidal flows and salt water effects in the lower Salt River channel are expected to help maintain desired plant communities and channel configuration by increasing scour and inhibiting willow growth.

COMPLETION DATE

The project is being implemented in several

phases. Phase 1 will restore tidal marsh and enhance tidal prism in the area known as Riverside Ranch. Phase 1 will be completed by December, 2013. Phase 2 will restore the lower Salt River channel up to and including the lower reach of Francis Creek. Construction on Phase 2 is expected to be completed in 2014.

PROJECT BUDGET

IRWM funds:	\$ 1,169,502
Leveraged funds:	\$ 12,469,794
TOTAL	\$ 13,639,296

BENEFITS

Economic

- Estimated savings of \$5,420,335 for avoided projects over the life of this project
- Estimated savings of \$60,000/year for avoided wastewater violations fines
- Improved agricultural production in the Eel River delta

Water Quality

- Enhancement of MIGR, RARE, WET, WQE, FLD, and COLD beneficial uses

Watershed Rehabilitation

- Improved fish and wildlife habitat
 - » 15 miles of migration routes and rearing habitat restored
 - » Restoration of wetland habitat and floodplain function
- Reduced flooding risk for the City of Ferndale

Cultural

- Improved opportunities for fishing and tourism industries
- Increased agricultural viability by minimizing losses due to chronic flooding and sediment accretion

Jobs and Local Economy

- Almost \$3.5 million was spent locally using local labor and supplies when possible, thus contributing to State goals for environmental justice and social equity
- Approximately 100 jobs created/maintained
- Other local economic benefits: by reducing the impacts of annual flooding in this area agricultural producers will realize significant economic benefits. Currently, the annual loss of forage and pasture results in producers incurring additional expenses for feed, pumping out flood waters, farming, and re-seeding flooded areas. This can cost over \$160,000 annually. Additionally, by reducing the annual flooding the County of Humboldt and the City of Ferndale will be saved from having to expend funds to protect and repair roads and other infrastructure.

NEXT STEPS & RECOMMENDATIONS

We're looking ahead to continuing to work with our partner agencies and the community to restore and maintain hydrologic function in the watershed and monitor the ecological and agricultural benefits of the project. Efforts to restore instream, riparian, and estuarine habitat along the Salt River and its tributaries will continue as funding permits.

CONTACT

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NORTH COAST RESOURCE PARTNERSHIP