Salt River Ecosystem Restoration Project

Humboldt County, California

Summary of Progress 2010

BACKGROUND

In the late 1800's the Salt River that winds through the Eel River basin near Ferndale was a functioning river and large enough to accommodate small ocean steamers. At Port Kenyon, the Salt was approximately 200 feet wide and 15 feet deep. Now you can almost jump over it. Over time fine sediments have eroded from the surrounding Wildcat Hills into the tributaries and deposited in the Salt River channel. Vegetation has sprouted up in the channel; trapping more sediment, blocking fish passage and increasing flooding on the surrounding agricultural lands, roads, and residences.

The *Salt River Ecosystem Restoration Project* proposes an ecosystem-wide, watershed scale approach to address the range of complex land management and ecological issues that have led to reduced agricultural productivity and ecological decline. The project represents a large public-private partnership as most of the restoration activities will occur on privately owned and actively managed agricultural land. Multiple public and private agencies have committed substantial financial and professional support to achieve the vision of restoring hydrologic processes and functions to the Salt River watershed.

The project is comprised of four main components: 1) restoration of the Salt River channel and riparian floodplain, 2) tidal marsh restoration at Riverside Ranch, 3) sediment management in the channel and riparian floodplain, and 4) upslope sediment reduction actions.

PURPOSE

Developing a comprehensive approach and design to control and manage sediment throughout this highly depositional area is the key to long-term project success. Reducing the amount of sediment that reaches the tributaries and the Salt River is one step in creating an open and functioning channel. Monitoring and managing aggradation and erosion in the channel is also an important part of the project. Several studies have characterized the sources and magnitude of sediment delivery in the three main Salt River tributaries: Williams, Francis and Reas creeks. To offer some insight on the level of sedimentation involved, consider the following: the Francis Creek watershed is the second largest tributary to the Salt River watershed at 3.2 miles (Buffleben, 2007). Turbidity Threshold Sampling has been conducted on Francis Creek since January of 2007. **In hydrologic year 2010 the annual suspended sediment yield from the Francis Creek watershed was 38 million pounds** (November 5, 2009 to June 7, 2010, Clark Fenton). **This equates to an annual suspended sediment yield of 6091 tons/sq. mile.** By comparison, the sediment impaired Freshwater Creek and Elk River watersheds in Humboldt County have yields of 300-600 tons/sq. mile/year, and the Eel River carries 4,330 tons of sediment/sq. mile/year.

FUNDING AND PHASING

Issues in this watershed have been the subject of numerous studies over the years. Work to implement the project began in earnest in 2008 funded by two large grants; one from the County of Humboldt's North Coast Integrated Regional Water Management Plan Implementation grant and one from the State Water Resources Control Board. Two other large contracts, one through Natural Resources Conservation Service and one through US Fish and Wildlife Service National Coastal Wetlands Conservation Program will fund tidal marsh restoration work. In 2009 work was largely stalled due to the State's budget crisis, but once funding was restored, the project was able to continue. Funding in 2010 was stable and additional funding proposals continue to be developed and submitted for the range of project activities.

The project is proposed for two phases. Work on Phase 1 is slated to begin in 2011 and will focus on re-establishing tidal marsh and estuarine habitat on the area known as Riverside Ranch. Phase 1 work will also include channel excavation up to the vicinity of Reas Creek. Phase 2 will focus on excavating approximately seven miles of Salt River channel to re-establish a functioning channel and floodplain corridor that integrates long-term sediment management and regional drainage needs while restoring significant habitat value and ecological function to the project area. Other components of the project include work in the upper watersheds to treat erosion sources and the implementation of an Adaptive Management Plan to guide monitoring and management of sediment and vegetation into the future.

A large collaborative of landowners and public and private agencies continue to invest time, effort and funding to bring this restoration vision to reality. Humboldt County Resource Conservation District is serving as project lead and landowner liaison. We appreciate this opportunity to let you know what the Project Team accomplished this past year.

January

- ✓ A conceptual Construction Management Plan is developed for the project that discusses potential earthwork needed, cut and fill volumes, soil characteristics and reuse limitations, construction sequencing, construction impacts and associated mitigation measures. Also provides first opinion of probable costs and a preliminary long-term management plan.
- ✓ Work on the Draft Administrative Environmental Impact Report (DEIR) for the project is well underway.
- ✓ Work begins on developing an Adaptive Management Plan for long-term project maintenance.
- ✓ Work on the re-vegetation and land use plan for the project is initiated.
- ✓ A Special Study Session is held between the Humboldt County Resource Conservation District (HCRCD) Board of Directors and the Board of the Salt River Watershed Council to build collaboration and affirm the long-term role of the Watershed Council.
- ✓ Conversations with landowners adjacent to the project footprint continue. Specific landowners with identified uplands on their properties are approached by HCRCD to discuss opportunities for potential staging areas, temporary haul roads and beneficial reuse of excavated material as an agricultural amendment.
- ✓ Work on an upslope erosion hazard inventory and assessment for Williams Creek watershed continues.
- ✓ Staff of NOAA's National Marine Fisheries Service works to finalize the proposed channel surface.
- ✓ HCRCD coordinates with the County of Humboldt to conduct measurements of flow and turbidity on Francis Creek (year-long monitoring).

February

- ✓ HCRCD staff meets with the Salt River Watershed Council to review and discuss the proposed Landowner Agreement for project permitting, construction and monitoring for the project.

March

- ✓ Work on the project Draft Environmental Impact Report (DEIR) continues.
- ✓ Consultants work to finalize the re-vegetation and land use report and the paleontological report for future upslope work in the Francis Creek watershed.
- ✓ Development of engineered design plans and permit applications is initiated.
- ✓ Initial meeting with regulatory staff of Department of Fish and Game held to review the proposed project in advance of the permit process.
- ✓ Tours of project area provided to potential funders and other interested stakeholders.

April

- ✓ Draft Environmental Impact Report (DEIR) completed and filed with the County Clerk and the State Clearinghouse.
- ✓ Presentations on the project provided to the Department of Fish and Game Commission and to the Rotary of Fortuna Noon Club.
- ✓ Landowners agree to provide access to consultants working on the Adaptive Management Plan, the Mitigation and Monitoring Plan and the project Biological Assessment.
- ✓ Landowners sign agreements for project permitting, construction and monitoring.

May

- ✓ Public scoping meeting held to discuss the project and solicit public comment on the project's draft Environmental Impact Report (DEIR).
- ✓ Pre-application technical assistance meetings initiated with agencies with regulatory jurisdiction over proposed project activities.
- ✓ Surveys to determine presence or absence of sensitive or rare birds and native plant species begin.

June

- ✓ Meetings and other coordination activities held with regulatory agencies to help move through the permitting process.
- ✓ Feedback from agencies, landowners and consultants continues to be incorporated into the project design.
- ✓ Project Team continues to pursue additional funding opportunities to cover project costs.

July

- ✓ Inventory of culverts, drainages, confluences and infrastructure completed.
- ✓ Preliminary wetland and habitat impact analyses completed.
- ✓ 30% engineered design plans are compiled from all work done to date by the many project partners with expectation to go straight from 30% to 75% level.
- ✓ 404 permit application submitted to the Army Corps of Engineers.
- ✓ Work begins on responding to comments received to Draft Environmental Impact Report (EIR).
- ✓ Work begins on application to the State Lands Commission, application for Coastal Development Permit, and 401 Water Quality Certification Permit Application.
- ✓ Initial surveys conducted by the US Fish and Wildlife Service confirm the presence of Tidewater Goby on Riverside Ranch. The project team collaborates with Fish and Wildlife and Department of Fish and Game to conduct subsequent, required protocol level surveys for the goby.

August

- ✓ Feasibility level assessment of bridge scour completed.
- ✓ Biological Assessment completed.
- ✓ Project design team works to translate conceptual channel as designed by National Marine Fisheries Service into a constructible set of plans that also incorporate riparian areas, habitat features, and sediment management areas. Meetings with landowners are ongoing. Project design team incorporates local knowledge of drainage and hydrology and land management constraints.

September

- ✓ Army Corps of Engineers staff provides assistance in completing wetland delineation for project footprint.
- ✓ Protocol surveys for Willow Flycatcher and Yellow-billed Cuckoo completed.
- ✓ Surveys for sensitive plant and animal species completed.
- ✓ The first of two protocol-level surveys for the presence of tidewater gobies is completed with no findings of goby reported.
- ✓ Additional surveying and geotechnical work completed.
- ✓ Salt River Watershed Council continues to meet and work on building capacity to eventually take on responsibility and oversight for long-term maintenance and management activities of project.
- ✓ Ducks Unlimited provides additional funding to complete project design and permitting.

October

- ✓ County of Humboldt outlines plans for emergency project this year aimed at alleviating winter flooding from Francis Creek at Port Kenyon road.
- ✓ Final protocol level survey for tidewater goby completed with no findings of goby reported. Project design for Riverside Ranch can move toward finalization.
- ✓ California Coastal Commission staff requests additional language for Landowner Agreements and agrees to using addendum for those agreements already signed.
- ✓ Information from 3 years of turbidity monitoring data on Francis Creek analyzed and sediment loads quantified.
- ✓ Work to optimize opportunities in project design for sediment transport and management redoubles.

November

- ✓ Request submitted to consolidate Coastal Development Permit between County of Humboldt and California Coastal Commission.
- ✓ Upland and wetlands delineations and reports completed.
- ✓ One-on-one meetings between landowners and Design Team held.
- ✓ Collaborative design meeting with staff of regulatory and resource agencies held.
- ✓ Landowner Agreement modified to include language specific to the Coastal Development Permit.
- ✓ Meetings with Landowners to identify potential areas and interest in sediment management features begin.
- ✓ Options and designs for sediment management areas explored.
- ✓ Work continues on finalizing the Environmental Impact Report, the Adaptive Management Plan and the Habitat Monitoring and Mitigation Plan.
- ✓ State Coastal Conservancy pledges funding to assist with final engineering design and permits.

December

- ✓ Work to finalize responses to comments on the EIR is almost complete, final EIR in process of being updated and finalized.
- ✓ State Coastal Conservancy is awarded a $1 million grant from the National Coastal Wetland Conservation Grant program. This grant will go toward Phase 1 of the project; tidal marsh restoration on Riverside Ranch.
- ✓ Coordination between the project team and regulatory agencies continues through the permit process.
- ✓ Coordination with Landowners continues and more Landowners have signed agreements.
- ✓ Work to develop 75% engineered design plans continues.
- ✓ Assessments and reports of priority erosion sources in the two largest tributary watersheds completed.

THANK YOU!

This Project would not be possible without the dedication and perseverance of all of those involved, most importantly the landowners and residents of the Ferndale area.

PROJECT PARTNERS

Contributed Funds or Services: California State Water Resources Control Board; County of Humboldt; City of Ferndale; State Coastal Conservancy; California Department of Fish and Game; U.S. Army Corps of Engineers; NOAA's National Marine Fisheries Service; U.S. Department of Agriculture-Natural Resources Conservation Service; U.S. Fish and Wildlife Service; Ducks Unlimited; Wildlife Conservation Board; Western Rivers Conservancy; Humboldt County Resource Conservation District.

Community Volunteers: Salt River Watershed Council, Salt River Advisory Group

Consultants: Winzler and Kelly; Kamman Hydrology and Engineering; H.T. Harvey and Associates, Northern Hydrology and Engineering; Timberland Resource Consultants; Grassetti Environmental Consulting; LACO & Associates; Freshwater Environmental Services; Roscoe & Associates, Pacific Watershed Associates.

Funding for the project in 2010 was provided in full or in part by agreements with the State Water Resources Control Board and Ducks Unlimited.