

# Salt River Ecosystem Restoration Project

## Ferndale, California

### SUMMARY of PROGRESS for 2009

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#### PROJECT GOAL

The overall goal of this multi-faceted project is to improve water quality, enhance fish passage and wildlife habitat, decrease flooding and improve drainage in the Ferndale area.

#### BACKGROUND

In the late 1800's the Salt River was large enough to accommodate small ocean steamers. At Port Kenyon, the river was approximately 200 feet wide and 15 feet deep. Now, at that same spot, one can step over the channel. Over time, fine sediments have eroded from the surrounding Wildcat Hills into the tributaries and deposited in the Salt River channel. In addition to sediment deposition from erosion, periodic flooding from the Eel River has also deposited large amounts of sediment, filling the historic channels that helped to drain the basin. Vegetation has sprouted up in the Salt River channel trapping more sediment, blocking fish passage, and increasing flooding. The Salt River has lost all normal hydraulic function and barely functions as a drainage ditch.

Work to restore the Salt River and reduce flooding in the Eel River basin has spanned many years and taken many forms. Previous individual efforts have focused on trying to address specific issues along the channel to help improve drainage and reduce flooding. The current effort, the *Salt River Ecosystem Restoration Project*, is taking an ecosystem-wide, watershed-scale approach to address the complex and inter-related issues that have led to increased flooding, reduced agricultural potential and ecological decline. The current project has attracted substantial financial support from multiple public agencies and has the support and expertise of a qualified team of landowners and professionals.

#### PROJECT DESIGN

Reducing the amount of sediment that reaches the tributaries and the Salt River is the obvious first step in creating an open and functioning channel. Several studies have characterized the sources and magnitude of sediment delivery in the Reas, Williams and Francis Creek watersheds. An assessment and prioritization of treatable erosion sites in Francis Creek watershed was completed in 2009. Erosion hazard inventories and assessments are also being conducted in Williams Creek watershed and a more limited report is being developed for the Reas Creek watershed.

The Project is designed to reduce erosion and restore natural processes throughout the watershed, thus helping the streams and main channel function in a self-sustaining way. However, the Project Team continues to underscore the importance of and need for ongoing adaptive management and maintenance to ensure the long-term success of the Project. It is anticipated that additional phases of restoration in other areas of the watershed will be necessary to control erosion and sediment delivery.

The Project design includes:

- 1) Controlling erosion of sediment into the tributaries. Sediment will be controlled by 1) stabilizing stream-banks, and 2) upgrading forest roads in the upper watershed by installing rocked rolling dips, new cross-drain ditch relief culverts, upgrading culverts, and rocked culvert inlets and outlets.

- 2) Constructing a new Salt River channel.  
The new channel will contain high storm flows in the winter, provide a low-flow channel for fish in the summer, and transport water at a high enough velocity to keep the sediments suspended and traveling through the system.
- 3) Estuary enhancement.  
Tidal action and flushing will be increased by enhancing the estuary at the mouth of the Salt River. This flushing action of the incoming and outgoing tides will move the sediment out of the Salt River.

## **PROJECT TEAM**

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.

Members of the Project Team include; Humboldt County Resource Conservation District (Lead Agency), Salt River Advisory Group, Salt River Watershed Council, City of Ferndale, County of Humboldt, California Department of Fish and Game, State Coastal Conservancy, U.S. Army Corps of Engineers, NOAA's National Marine Fisheries Service, and U.S. Department of Agriculture-Natural Resources Conservation Service.

Funding for this project is provided in full or in part by agreements with the State Water Resources Control Board.

## **Salt River Ecosystem Restoration Project**

### **2009 ACCOMPLISHMENTS**

#### **Funding**

The work to develop the Salt River Ecosystem Restoration Project is currently funded through two contracts. One contract is part of the North Coast Integrated Regional Water Management Plan (IRWMP) administered by the County of Humboldt. The other is funded directly through the State Water Resources Control Board (SWRCB). Contracts for the Project were fully executed and work began in earnest in January of 2008. Through the collaboration and cooperation of many agency partners, work to produce initial designs and complete a number of studies has been provided as match to the project, allowing the bulk of the funding to be earmarked for actual project implementation. Only 6% of the total funding under the combined contracts has been expended to date, preserving close to \$5 million in construction funds to implement the Project.

In December of last year, California's budget crisis resulted in the freezing of hundreds of contracts across the State. Not only were stop work orders issued by the State but payments for outstanding bills were frozen for more than six months. The Salt River Project owes a huge debt of gratitude to Supervisor Jimmy Smith for his advocacy with State and SWRCB staff and officials to secure an exemption from this freeze for all the IRWM-funded projects, including the Salt River Project. This exemption allowed work to proceed and payments to be made on these projects when other projects across the State were frozen in their tracks. Without this exemption, nothing would have gotten done to move the Salt River recovery effort forward this year. Supervisor Smith was also instrumental in securing an extension on this contract, allowing the project to continue to move forward over the next few years. In addition, the Humboldt County Resource Conservation District (HCRCD) was ultimately successful in negotiating with the SWRCB for a temporary notice to proceed with work and a limited release of funds so that work under both contracts could continue. With this temporary reprieve, a great deal of work was accomplished this year.

#### **Project Phasing**

The three critical phases of the project are 1) Planning and Conceptual Design; 2) Environmental Compliance, Permitting, and Engineering Design; and 3) Construction. During this past year we completed the first phase and began working through phase 2.

Why is this Project taking so long? That's a question many landowners keep asking. It would seem like what this project proposes to do is fairly straight-forward. Keep sediment out of the tributaries, dig a new channel, and restore tidal action to help "flush" the system. We wish it were that simple! What the Salt River Project team is trying to help the landowners of Ferndale accomplish is one of the largest restoration projects of its kind and the only one we know of to be done on land that is almost entirely privately-owned. The complexity of this project and the number of agencies and people involved provides both benefits and challenges. Working through the myriad details takes time and the Project Team is committed to taking the time needed to get things right.

There are many things to accomplish before we get to implementation. Such things as **project design** (upslope work, channel design, estuary design, re-vegetation design, developing maintenance activities); **environmental compliance** (EIR development and adoption); **regulatory compliance** (permits and consultations); and **landowner access agreements** all must be in place before construction can begin.

Project Design: Because of the flat topography of the area, and out of respect for the fact that this is private land with a high agricultural value, it has taken a fair amount of time and consultation with several landowners and agencies to design a channel that will have sufficient flow and velocity to suspend sediments, provide low-flow fish passage, limit the amount of agricultural lands being taken out of production, and also protect adjacent private lands. The excavation of the new channel is expected to generate close to 600,000 cubic yards of material. Soil testing has been completed and the material has been judged to be suitable for structural re-use as well as for beneficial agricultural re-use. Some of the material will be re-used to build berms and other components of the project; however, alternatives must be developed, analyzed and ultimately permitted to utilize several hundred cubic yards in the most cost-effective way possible to ensure the economic viability of the project. To this end, the project team has invested a great deal of time in 2009 exploring options for potential agronomic applications on local fields.

Environmental Impact Report: Under California law, the Project must demonstrate compliance with the California Environmental Quality Act (CEQA). HCRCD, as CEQA lead agency, is responsible for determining whether implementation of the proposed project would result in potentially significant effects to the environment, and, if so, how those impacts will be mitigated. To comply with CEQA, an Environmental Impact Report (EIR) is being developed. To begin development of the EIR, the project team completed a number of investigations and studies to clearly define and thoroughly examine all potential impacts. To complete the EIR, the team is now analyzing the different components of the project design to identify and mitigate for possible impacts to public access, recreation, open space, traffic and noise; potential impacts to air and water quality, and biological, cultural and fisheries resources; examining how the project may impact zoning, land use, aesthetics, and visual resources; and assessing the proposed project's compliance with the Coastal Act, California Department of Fish and Game Code, Water Code, County Policies, the Endangered Species Act, and other regulatory requirements.

The County of Humboldt stepped up at the beginning of the project to initiate and complete much of the analysis for the EIR. During this past year HCRCD assumed responsibility for the development of the EIR document. Project team members from the State Coastal Conservancy have been instrumental in writing sections of the EIR and professional consultants have been retained to complete the document. The EIR will be used by permitting agencies, funding agencies and the public to consider and ultimately approve proposed actions to be undertaken to implement the Project.

In addition to the EIR, the Project must also successfully secure the necessary permits to implement the various project components. Some 13 permits or consultations will be required from a variety of agencies, including; National Marine Fisheries Service, U.S Army Corps of Engineers, U.S. Fish and Wildlife Service, California Coastal Commission, California

Department of Fish and Game, the North Coast Regional Water Quality Control Board, the County of Humboldt, and the City of Ferndale. Over the past year, representatives from these agencies have continued to be engaged with project development. We believe that this early engagement will ultimately help smooth the process and allow for the timely consideration of permit applications by informed staff.

Landowner Access: At the same time as the EIR and permitting is proceeding ahead, landowners in the project footprint will be asked to formally agree to allow access to their land for the project to be constructed, for construction impacts to be mitigated, and for the impacted areas to be re-vegetated, where needed.

## **Summary**

Throughout this past year work has been focused on 1) working to secure funding and pursuing additional project funding 2) analyzing and verifying design components, 3) double-checking projected volumes of materials, 4) working with engineering firms to develop conceptual construction methods, timing, staging areas and haul routes, and 5) developing and writing the EIR document. Other integral components such as identifying priority upslope sediment treatment sites in the tributary watersheds, refining beneficial sediment reuse options, designing a re-vegetation plan, and developing an adaptive management strategy are nearing completion.

### **Some of the high points of this past year include:**

- ✓ The Upslope and In-stream Erosion Hazard Inventory, Assessment and Report for Francis Creek watershed was completed.
- ✓ Erosion reduction treatments, including shaping and surfacing 8,178 feet of road surface and upgrading 28 specific treatment sites in the Francis Creek Watershed were completed. This work was done through a cooperative cost share agreement between HCRCD and a landowner in the Francis Creek watershed. The landowner provided in excess of 50% match in the form of rock, grass seed and mulch, additional cubic yards of crushed rock installed on the roadway, the installation of two additional culverts at his own expense, and upgrades to the proposed treatments that included upgrading two rocked rolling dips to culverts, additional armoring of inlets and additional rocked rolling dips. All upgrades will serve to prevent sediment from entering the waterways.
- ✓ The Project Team collaborated with staff of the Army Corps of Engineers to complete wetlands and uplands determinations on some of the agriculture lands near the project footprint to develop a proposed beneficial material re-use plan for the project.
- ✓ Work to develop the Administrative Draft of the Environmental Impact Report for the Salt River Ecosystem Restoration Project was initiated.
- ✓ Information and assistance was provided to interested landowners near the project footprint about funding programs for floodplain easements.