Salt River Ecosystem Restoration Project
Ferndale, California

SUMMARY of PROGRESS for 2008

PROJECT GOAL
The goal of this multi-faceted project is to improve water quality, enhance fish passage, and augment wildlife habitat; all while decreasing flooding and improving drainage in the Ferndale Valley.

BACKGROUND
Work to restore the Salt River and reduce flooding in the Ferndale Valley has spanned many years and taken many forms. Previous efforts have mostly focused on trying to address specific issues along the channel to help reduce flooding. This current effort, the *Salt River Ecosystem Restoration Project*, is taking an ecosystem-wide, watershed scale approach to address a variety of complex 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.

In the late 1800's the Salt River was large enough to accommodate small ocean steamers. At Port Kenyon, the Salt was approximately 200 feet wide and 15 feet deep. 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. Invasive vegetation has sprouted up in the Salt River channel which traps more sediment which, in turn, blocks fish passage and increases flooding.

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 of priority treatable erosion sites is currently underway.

The Project would manage sediment throughout the watershed with the goal of restoring natural processes to allow the system to be as self-sustaining as possible. However, the Project Team continues to underscore the importance of ongoing adaptive management and maintenance to ensure the long-term success of the Project. The need for additional phases of restoration in other areas of the watershed is anticipated.

The Project design includes:

1) Controlling erosion of sediment into the tributaries 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 main Salt River channel that will contain a high amount of rainwater in the winter and still provide a low-flow channel for fish in the summer **and** that transports water at a high enough velocity to keep the sediments suspended and traveling through the system; and
3) Enhancing the estuary at the mouth of the Salt River so that the flushing action of the incoming and outgoing tides will move the sediment out of the Salt River.

2008 ACCOMPLISHMENTS

Much has been accomplished this year to flesh out the details of this complex project. The three critical phases of the project are 1) Planning and Conceptual Design; 2) Environmental Permitting and Engineering Design; and 3) Construction. We are in the process of completing the first phase and working through the second phase. A month-by-month summary follows, but some of the high points of this past year include:

- ✓ The formation of the Salt River Watershed Council, a community based partnership that encourages long-term cooperative watershed management practices to sustain, protect, and improve water quality, drainage, aquatic and riparian habitat, and other natural resources, while contributing to long-term economic, agricultural and community sustainability in the coastal Salt River watershed;
- ✓ The development and release of the proposed conceptual channel design and footprint;
- ✓ The completion of a pilot test to excavate sediment from three locations along the channel footprint;
- ✓ The development of a conceptual restoration plan for property adjacent to the estuary at the mouth of the Salt River;
- ✓ Additional funding was secured for estuary restoration;
- ✓ Sediment reduction work was initiated in the Francis Creek Watershed; and
- ✓ An assessment of priority erosion sources in the three tributary watersheds was initiated.

January

- Salt River Watershed Council begins to develop its bylaws.
- Presentation on Salt River Ecosystem Restoration Project to Ferndale Kiwanis.
- Overview of Salt River Watershed Assessment presented to California Conservation Corps.
- Discussions with Army Corps of Engineers (ACOE) staff on future project coordination.
- Discussions with Regional Water Board permit staff.

February

- Salt River Advisory Group Meeting to discuss that channel design has taken longer than expected due to trying to accommodate fish passage, low flows and contain a “two-year” flood.
- Salt River Watershed Council developing Articles of Incorporation and Bylaws.
- Sediment Usability evaluation completed (LACO). Sediment determined usable for agricultural application and construction.
- ACOE Ecosystem Restoration Feasibility Study completed.
- Discussions held with Coastal Commission staff.
- Discussions held with County floodplain manager on County floodway ordinance.

March

- Cultural Resources Investigations completed for EIR (Roscoe and Associates).
- Meeting at ACOE SF District Office to define current and future opportunities and timeframes for potential project coordination.
- Continued communications with Cal Trans about potentially utilizing project sediments in the Alton interchange or other projects.
- Vegetation/wetlands assessment completed by the ACOE Cold Regions Research and Engineering Laboratory (CRREL) program.
- Meeting with Coastal Commission staff and indication from Coastal Commission staff that the work done by CRREL could partially satisfy Commission’s compliance requirements.
- Begin to explore potential for upslope sediment reduction project with landowner in Francis Creek watershed.

April

- Salt River Watershed Council begins to explore how to develop long-term maintenance permits with regulatory agencies.
- NMFS completes the initial conceptual model for channel excavation. Model provided to the County to begin construction design and provided to local landowners through the SRAG. Discussions with key landowners and analysis of flooding impacts leads to minor adjustments to the channel design to maximize containment of the flow, thereby maintaining necessary velocity for transporting sediment.
- Meetings with Landowners adjacent to channel restoration (April – December 2008).
- Meeting with DFG Land Management staff to discuss Riverside Ranch design.
- Chemical and geotechnical sediment characterization completed (Freshwater Environmental Services).
- Meeting with DFG staff about developing long-term maintenance permits.
- Developing sediment re-use and management strategy.

May

- SRAG meeting discusses continued interest from Cal Trans and that Cal Trans had collected more samples for analysis.
- Conceptual restoration plan for Riverside Ranch in development.
- Discussions about future channel maintenance.
- Provided project overview and tour for General McMahon and Colonel Kiley of ACOE.
- Vegetation and wetland assessment report by CRREL completed.

June

- County heads up efforts to develop a conceptual restoration plan for the Riverside Ranch area with help from environmental planning firm, H.T. Harvey and Associates. Proposed alternatives discussed and reviewed by the adjacent landowners and Project Team. Several meetings and field visits with various project partners held, looking for consensus on a final conceptual design that will lead to engineering design.
- Salt River Watershed Council meets with DFG staff to explore how to develop long-term maintenance permits.
- SRAG provides input on proposed levee design for Riverside Ranch.
- Meeting with Landowners adjacent to Riverside Ranch to discuss proposed conceptual restoration plan.
- Application to fund restoration activities on Riverside Ranch submitted to NRCS Wetlands Reserve Program.
- Plans to remove 40 cubic yards of sediment at each of 3 locations on the channel footprint takes shape.

July

- Sediment management and reuse strategy continues to be refined.
- Request sent to California Certified Organic Farmers (CCOF) for determination on potential application of removed sediments on agricultural lands.
- The Army Corps of Engineers assists with the identification of upland areas near the project footprint to support the use of excavated sediments as an agricultural top-dressing.
- SRAG meeting discusses revisions to conceptual restoration plan for Riverside Ranch.
- Meeting with DFG permit staff about developing long-term maintenance permits.
- Outreach to Ferndale schools begins.

August

- Approximately $1.7 million is granted by NRCS through its Wetlands Reserve Program to fund activities on Riverside Ranch related to levee construction, grading, fencing and water control structures.
- Preliminary wetlands screening to identify potential sites for sediment reuse on different properties throughout the project footprint is completed.

- CCOF reports that use of the sediment to be excavated from the channel on agricultural lands that are certified organic would be permissible. Advised that landowners will need to make individual requests to CCOF for approval to utilize the sediment for agricultural purposes.
- NOAA and the County partner to write and submit a grant to address the plugged culvert that blocks fish passage at Francis Creek at Port Kenyon road.

September

- Work begins on upslope ranch roads sediment reduction project in Francis Creek Watershed.
- Moving forward to secure all needed permits for Pilot Project to remove a total of 120 cubic yards of sediment along channel footprint.

October

- Project Team receives required permits and approval for a De Minimis waiver from the Coastal Commission and successfully completes pilot test; excavating 120 cubic yards from three locations along the proposed Salt River channel footprint.
- Team continues to refine channel design to maintain conveyance and velocity.
- Work continues on investigations and assessments for EIR.
- Discussions with landowners adjacent to Riverside Ranch.
- Coordination meeting with City of Ferndale and State Water Board on Waste Water Treatment Plant project and Salt River project.
- Turbidity Threshold Monitoring station on Francis Creek is set up for the 2008-2009 season.

November

- Assessment to identify priority erosion sources and treatment sites in the three watersheds begins.
- Meetings with landowners adjacent to channel footprint continue.
- Meeting with landowners adjacent to Riverside Ranch to further refine Conceptual Restoration Plan.
- Transfer of ownership of Riverside Ranch from Western Rivers Conservancy to Department of Fish and Game moves forward.
- Coordination with NRCS on conceptual restoration plan and project design continues.
- Work on wetlands delineations and uplands verifications for land application of sediment continues.

December

- Work on CEQA process and permitting for future upslope work begins.
- Conceptual Restoration Plan for Riverside Ranch revised for review.
- Strategy for sediment management and re-use is further refined.
- Meeting with Coastal Commission staff regarding proposed sediment management strategy.
- Preparing for engineering design work on Riverside Ranch.

As illustrated by this summary, much has been accomplished in 2008 to move this extremely complex project forward. Integral components such as identifying priority upslope sediment treatment sites, refining sediment reuse options, and designing a conceptual restoration plan for Riverside Ranch are nearing completion. Enough project design work has been completed to continue work on the Environmental Impact Report (EIR); however, completion of the EIR document will depend on the finalization of all these important project components during 2009. Priorities for early next year include planning and design for re-vegetation along the channel footprint and designing plans for adaptive management to sustain the goals of the project into the future.

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, County of Humboldt, City of Ferndale, California Department of Fish and Game, State Coastal Conservancy, U.S. Army Corps of Engineers, NOAA's National Marine Fisheries Service, U.S. Department of Agriculture-Natural Resources Conservation Service.