

SCOTT RIVER REACH REHABILITATION PROGRAM 1 FINAL REPORT

Project #: 1998-PARTNERS-01

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Abstract

The Scott River is a major tributary to the Klamath River and is a significant producer of anadromous salmonids in the Klamath System.

The Scott River has been determined to be an impaired system for sedimentation and water temperature.

Historic mining severely altered the geomorphology of the Scott River downstream of Callahan. Prior to 1964, the main wetted channel course of the Scott River within the project reach flowed along the west bank and the tailing piles. The east side of the channel was agricultural land. The riparian corridor exhibited healthy vegetative cover and the channel provided good anadromous fish habitat for most of the year despite the impacts from mining.

The 1964 flood severely eroded, denuded, and cut this reach, changing the wetted channel course to downcut and flow against the east bank of the reach. A great deal of land base was eroded along the east bank, leaving vertical cut banks up to 40 feet high. This severe bank erosion continues along the entire reach and is resulting in approximately 3,000 cubic yards of sedimentation annually being deposited into the river system.

This area was reviewed in the "Scott River Flow Augmentation Study" (State of California Dept. of Water Resources, October 1991). The study determined that historic mining destroyed the river's capacity to maintain surface flows in the late summer when flows are typically below 30 cfs. However, the study suggested that surface flows could be restored in this section of river by creating low water, active, and bankfull channels with a floodplain, and re-establishing vegetation.

The current project area encompasses a reach of the Scott River approximately one mile in length and includes three land owners. This is a multi-phase program to restore the stream channel to provide anadromous fish and wildlife habitat and reduce sedimentation and subsurface migration flows. The long-term solution to these problems would be to restore the river's floodplain, which in turn would lead to far less bedload movement, evolution of a more stable channel with better fish habitat, colonization of riparian vegetation, and eventual re-establishment of year-round flows. In the interim, the most serious of the bank erosion can be stabilized and fish passage improved through the current phases of the project. This Partners agreement represents a small part of the overall project funding. The work performed with this agreement has been tied to and

integrated with an overall larger project which encompasses the two most severely eroded areas along the project reach.

Introduction

The goal of this project is to reduce erosion and sedimentation, restore damaged anadromous fish habitat, wildlife habitat, and riparian condition.

Study Area

The project is located in Scott Valley along a one mile portion of the Scott River between Etna and Callahan, California. The project is approximately 28 air miles South Southwest of Yreka, CA, and four miles north of Callahan, CA, with a legal description of T.41 N. R.9W. Section 36 MDM.

Methods and Materials

Field surveys were conducted during five separate site visits made between the months of May and August which encompassed periods of normal activity for species of concern to this project, and the variety of stream flow conditions normally expected. During the visits polarized glasses and binoculars were used to view and identify wildlife and fish, and mask and snorkel were used to further examine aquatic habitats. An additional visit was also conducted with USFS wildlife biologist Sam Cuenca, to visually inspect nesting cavities. Mr. Cuenca also helped to further identify habitats and species in the area. A botanical survey was also conducted for any species of concern. Additionally, personal interviews were conducted with several individuals who are familiar with and have background information on the project area.

Updated elevation and cross sectional measurements were made along the project area to assist in overall project design and provide a baseline for monitoring. Assessment of the implementation plan was reviewed by SHN, an engineering/geology consulting firm. All appropriate permits were obtained.

Work in the channel was conducted only when the wetted channel was sub-surface. With the use of heavy equipment two roads were constructed to provide access to both ends of the project site. The roads were 1200 feet and 700 feet in length. The tops of a 400 foot portion of the severely cut bank were pulled back and back-sloped to help establish appropriate grade and set up the re-establishment of the land form and stabilization of the floodplain. Existing point bar material was used for re-establishment of land form and to adjust the channel elevations to keep the existing severe cutting thalweg off the eastern bank. Approximately 200 cubic yards of 3-4 ft. dimensional rock material was purchased and stock piled for the purpose of bank-toe armoring. The actual armoring will be tied in with and be coordinated with the activities of the overall larger project site immediately adjacent to and upstream of this agreement's work and which has separate funding through the U.S. Fish and Wildlife Service (Jobs-in-the-Woods Project 1999-JITW-01).

Cuttings of native plant species, including willow and cottonwood, were gathered and are being propagated in the greenhouse to establish rooted stock to be planted as part of the larger project.

Pre-project photos were taken as well as photos of implementation. Additionally, monitoring photo points were established as part of future monitoring activities.

Results and Discussion

The work accomplished with this agreement and associated funding is only one small part of the supplemental work being coordinated as part of a larger project which includes additional funding and an additional two landowners. This agreement helped to serve as a catalyst to bring on the additional landowners and obtain additional funds needed to establish the overall larger project and affect a broader scope by combining project goals.

Summary and Conclusions

The cut bank work and adjustment of channel elevations to keep the existing severe cutting thalweg off the eastern bank will reduce a great deal of erosion and sedimentation. It has also served to set up the larger scope of work being coordinated with the larger project area involving additional funding and landowners. The strategic location of the two newly constructed access roads will remain permanent and will serve as long term access to the overall larger project area. This will eliminate future unnecessary land disturbance activities in order to accomplish the goals of the overall larger project area. The overall larger scope of work, of which this agreement's work has been a beginning part, will result in a well restored reach along the Scott River tailings area of approximately 4800 linear feet. When this larger scope of work is completed it will have resulted in:

- A more functional floodplain and provide a more effective river channel.
- Reduction of lateral erosion of the dredge tailing piles and eastside river terraces.
- The restoration of the eastside river terraces lost due to past erosion.
- The re-establishment of riparian vegetation and wildlife habitat.
- To the extent feasible, additional surface flows for longer durations and additional salmon and steelhead spawning and rearing habitat.
- A successful example of major cooperative restoration project between private landowners and government agencies.

