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1993 Annual Report, Shasta River CRMP Field Projects Coordinator

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Abstract:

The Klamath River Basin Fishery Task Force has provided funding for a part time coordinator for the CRMP working on salmonid restoration on the Shasta River. This report summarizes the work in progress, work completed, and work yet to be done as of 12-31-93.

Introduction:

The Shasta River CRMP steering Committee was formed in April of 1991 by the Shasta Valley Resources Conservation District. Membership consisted of representatives from the ranching community, irrigation districts, SVRCD, Great Northern Corp., KRBFTF, Calif DF&G, US SCS, and US BLM. They began by reviewing what was known about declines in salmonid numbers in the Shasta, along with a general over-all view of what steps could be feasibly taken to reverse the downward trend. Based on that information, they concluded that steps must be taken to: 1. Reduce water temperatures in the summer; 2. Reduce silt load; 3. Increase spawning and rearing habitat. The field projects coordinator was to develop specific projects to address these problem areas.

Study area:

The Shasta Valley encompasses aproximately 800 square miles in Northern California near the city of Yreka. The Shasta River itself has one major dam (Dwinnel Dam, const. 1926) which blocks upstream migration of salmonids. There are 37 miles of river downstream of the dam, along with a number of smaller tributaries which serve as spawning and rearing habitat for Chinook and Coho Salmon, and Steelhead. Spawning counts have been maintained on chinook since 1930, and have shown a decline of from 81,000 to 530. Neither counts nor estimates are available for steelhead or coho numbers, but there is ample evidence of substantial declines in steelhead numbers also. Little is known of coho, other than that they are still found in small numbers in the Shasta.

Land uses in the Shasta Valley consist primarily of cattle ranching, along with the associated irrigated areas for pasture, and grass and alfalfa hay. Water for irrigation in the valley comes primarily from the Shasta River, with additional water available from wells. Excess water from irrigation frequently returns to the river, bringing with it heat and nutrients. Almost invariably cattle have free access to the river, which has had substantial effects on the riparian community, and river-bank stability.

Methods used:

The CRMP field projects coordinator is working towards correcting the above mentioned problem areas (water temperature, spawning and rearing habitat, siltation). Since nearly all of the land along the river is privately owned, the coordinator meets and works with each individual owner, assessing what problems exist on his or her property, prioritizing them relative to other areas along the river, then looking for mutually acceptable ways to improve or

eliminate what problems are present. Each individual owner presents unique problems and opportunities, as does each individually owned stretch of the river. Each site needs to have specific recommendations that will result in a substantial improvement in conditions for salmon, yet will not have a substantial impact on the owners ability to make a living from his property. Progress also requires that the owner have some desire to take a chance at participating in what is often viewed as a risky venture.

So far, the bulk of the coordinators efforts have been directed towards riparian exclusion fencing. Since the Shasta is a low gradient, meandering river, the costs of the fencing can be high, and the numerous turns (generally in the neighborhood of 30 bends per mile of fence) require the use of techniques not otherwise required on fences which are straighter, with 90 degree corners. Each job must be marked on the ground, approved by both the landowner (as not taking more land than he is willing to give up) and by the funding agency (as being far enough back from the water's edge to to be long-lasting and effective). Once a location is agreed upon, the type of fencing can be specified (generally 5 strand barb wire, 5 strand New Zealand, or 3 strand electric) based on the landowner's preference, and then corner details, points for water access, gates, etc., can be written up. At that point funding may be available in the form of "generic" riparian exclusion fencing grants, or a project-specific funding request can be written up and funds sought. This latter course generally means that the project will be delayed for up to 1 1/2 years until funding is actually available. Landowners frequently have difficulty understanding this aspect of the process.

Once exclusion fencing is in place, funding can also often be gotten for initial plantings of woody materials--willows, cottonwoods, alder, waterbirch, etc. to speed the stabalization of the banks, increase shading, and provide the foundation for future rearing habitat.

Besides fencing, there is an ongoing effort towards education, including a monthly newsletter, periodic publicity items in the newspaper, speaking to public groups, and meeting with and talking to landowners about issues, progress and problems.

Results & Discussion:

Major accomplishments included:

1. Started construction on 3 miles of funded fences at three locations.

2. Planned, coordinated and successfully completed 2 pulsed flow events in the Shasta River aimed at assisting smolts to migrate downstream.

3. Participated in successfully planning, developing, coordinating and implementing an alternative to the lower Fiock dam in conjunction with the DF&G, SCS, BOR, and the Fiocks.

4. Worked out details with the USFWS to provide liability insurance coverage to volunteers working on restoration projects on non-federal land, under the supervision of a USFWS cooperator.

5. Organized volunteers to assist the DF&G in performing the first-ever spawing surveys and carcass recoveries on most of the Shasta River.

Other activities included:

1. Arranged joint meeting with the Trust for Public Lands to begin process of attempting to purchase Busk Ranch (Big Springs Creek).

2. Secured funding for conversion of Huesman ditch screen to electric power, to allow its operation year-around.

3. Attended all CRMP meetings, providing updates and information on all work in progress.

4. Wrote for review and mailed CRMP comments on proposed salmon harvest levels.

5. Assisted DF&G personnel in multiple floats, seining and other data gathering efforts on the Shasta.

6. Helped install and operate DF&G outmigrant trap in conjunction with the Pulsed Flow. Secured permission for use of adjacent private property for support base.

7. Coordinated willow planting on BLM and Easton project sites.

8. Arranged for sending of samples of Iron Gate and Shasta River Smolts for genetic comparison.

9. Began developing donated remote monitoring stations at two locations.

10. Maintained and updated mailing list; sent out monthly newsletter.

11. Secured necessary DF&G permits for projects.

12. Wrote funding proposals for next years projects.

13. Wrote up fence specifications for current and future projects.

14. Investigated details of Shasta River Adjudication, gathered historical documents relative to it.

15. Photographed project sites to document change over time.

16. Arranged for cellular phone, headlamps, batteries, etc. for use during Pulaed Flow.

17. Made presentations to public groups about work on the Shasta.

18. Provided slides to be used by the USFWS in a presentation.

19. Made and staffed county fair display.

20. Provided information and imput to Kier and Associates for incorporation into prototype GIS system.

21. Fixed crushed culvert in river in preparation for future pulsed flows.

22. Provided summary of water quality problems in the Shasta to CDF for use

in evaluating projects.

23. Met with representatives of the Nature Conservancy to discuss planting problems.

24. Met with new SCS district conservationist and salmon coordinator to provide background on salmon related problems in the Shasta River.

25. Provided information to the Hoopa Tribe relative to the overharvest review.

Summary and conclusions:

Restoration of the Shasta River must be viewed as a long term process. Initiating, developing and concluding projects that will provide short term and /or long term benefits to salmonid restoration will only be possible if someone is agressively trying to accomplish them. The CRMP coordinator has assumed this role, and as long as he is able continue to show satisifactory progress, based on his own efforts, and the willingness of landowners to cooperate, funding should be continued. At some point, work can be expected to taper off, as willing landowners have all done what they are willing to do, but we do not seem to be approaching that point yet.

Much of the work and time of the coordinator has gone into responding to problems as they arise, ranging from helping DF&G personnel at data gathering, to providing logistical support, volunteers, ideas etc., to responding to public issues. This seems to be an essential component of the job, and should be expected to continue. Since it is not possible to predict what avenues for progress will present themselves, it is important that the coordinator be in a position to respond to opportunities as they arise.

Prior to the formation of the CRMP, little was being done to return the Shasta to its former role as a major producer of salmon. In many ways it is now the showcase of what is possible. Much of what has been done or is ongoing can be ascribed to the fact that a volunteer group like the CRMP could get funding for staff; staff that could dedicate the time required to implement the plans the CRMP developed. Without the funding provided by the KRBFTF, there would still be little happening on the Shasta.

Progress on defined tasks:

Task 1: Contact all landowners...: This has been completed along the main Shasta, and is also in progress on the Little Shasta, Parks Creek and Yreka Creek. It is now an ongoing effort to maintain the contacts that have been made, and develop trust.

Task 2. Survey bank condition...: This has been completed along the Shasta, and postponed on the Little Shasta, in order to maximize short term benefits by spending time on the main Shasta. Most of the information gathered was not suitable to being transfered to maps, but is instead tied to landowners by name. While the sites can be prioritized, this has not been a particularly useful tool, since most of the river is not currently available to be worked on. So far it has seemed best to respond opportunistically to willing landowners, and scale the project to the relative needs and importance of the site. The surveying, prioritizing, and project development has been done in conjunction with the advice of the DF&G.

Task 3. Develop Field Manual...: We have chosen not to initiate this portion of the project yet. Literature searches, coupled with field experience here and elsewhere have demonstrated that too little is known at present of appropriate techniques. We are continuing to work on this problem.

Task 4. Develop criteria...: This is in progress.

Task 5. Brief Shasta Valley...: The RCD is currently being briefed by the two members who are part of the CRMP. The Coordinator briefs them and other CRMP members both at the regular meetings, and through personal contact.

Task 6. Prepare project plans...: This is ongoing.

Task 7. Develop evaluation criteria...:This is in progress.

Task 8. Photograph...:this is ongoing.

Task 9. Develop work plan...:this is ongoing.

Employment of targeted groups:

One of three members of the Great Northern Fencing and planting crew is of Native American ancestry. One or more members of the CCC's, who built one fence are also of Native American ancestry.

Use of volunteers:

Volunteers were used extensively in both the Pulsed Flow, and in the Spawning Surveys. Total hours were aproximately: 802. In addition, the Calif. Dept of Fish and Game donated hundreds of additional hours on the pulsed flow, spawning surveys, fish seining, etc.

In addition, CRMP members donated aproximately 300 hours at CRMP meetings.