

Lower Klamath Sub-Basin Coordination & Planning
FY 2005



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Abstract

This project provided planning and coordination to the Lower Klamath River Sub-basin. This included continued participation in the Lower Klamath Restoration Partnership (LKRP), as well as continued involvement with the Klamath Task Force and the Task Force Technical Work Group. YTFP continued to coordinate the implementation of watershed restoration activities identified in the the Lower Klamath Sub-basin Watershed Restoration Plan (Gale and Randolph 2000).

The Yurok Tribal Fisheries Program (YTFP) and the Yurok Tribal Watershed Restoration Program (YTWRP) conducted three assessments during FY 2005. In particular, YTWRP completed the upslope road assessment in a portion of Hunter Creek and YTFP conducted geomorphic assessments of the lower alluvial stream reach in Terwer Creek, as well as completing the second year of investigations on the Lower Klamath Tributary Delta Study.

YTWRD spent the summer 2005 implementation season decommissioning high priority road segments in the McGarvey Creek watershed. This included the treatment of 79 potential failure sites on high and medium priority roads, with a total of 115,522 yds³ excavated and 5.7 miles of road decommissioned.

YTFP continued streambank stabilization and riparian restoration efforts in Lower Terwer Creek during FY 2005. YTFP also planted 5,000 bareroot redwood and Douglas fir trees throughout riparian areas in the Terwer Creek drainage. YTFP also worked with YTWRD to transport LWD from road decommissioning projects and stockpile it near the West Fork McGarvey Creek confluence for future instream habitat improvement work.

YTWRD submitted proposals during FY 2005 for upslope implementation funding from the Environmental Protection Agency (EPA), the Bureau of Indian Affairs (BIA), and the California Department of Fish and Game. YTFP submitted proposals during FY 2005 to the BIA, the National Marine Fisheries Service (NMFS) the Bureau of Reclamation, the U.S. Fish & Wildlife Service, and the California Department of Fish & Game (CDFG). YTWRP received an additional \$1,457,000 and YTFP received \$419,997 in grant funds during FY 2005 for implementing watershed restoration, assessment and monitoring projects throughout the lower Klamath sub-basin.

Both YTWRP and YTFP participated in approximately 30 meetings throughout FY 2005 related to watershed restoration planning, assessment, implementation and monitoring in the Lower Klamath sub-basin.

Future upslope restoration activities will include finalizing road decommissioning in the McGarvey Creek watershed and initiating these activities in the Terwer Creek watershed. In addition, future activities will be focused on continuing streambank stabilization and riparian restoration efforts in the alluvial reach of lower Terwer Creek. In addition, YTFP will begin to focus on instream habitat improvement in McGarvey Creek.

Introduction

Historically the Klamath River Basin contained bountiful anadromous fish runs, supporting indigenous peoples throughout the region. Anthropogenic activities over the last 150 years, coupled with natural events, have resulted in substantial declines in these fish populations and widespread reduction and degradation of associated habitat. Concern over diminishing runs resulted in the 1997 listing of Klamath Basin coho salmon (*Oncorhynchus kisutch*) as threatened under the Endangered Species Act (ESA), Klamath River chinook salmon (*O. tshawytscha*), steelhead (*O. mykiss*) and coastal cutthroat trout (*O. clarki clarki*) populations were also petitioned for ESA listing, and despite the listings being determined “Not Warranted”, concern continues to exist over their status and long-term trends.

The declining health and productivity of the Klamath River’s anadromous fisheries is of great economic and cultural concern to the Yurok Tribe. To proactively address this decline, the Tribe has initiated a large-scale, coordinated watershed restoration effort in the Lower Klamath sub-basin. This sub-basin, as defined in the Klamath Restoration Program's Long Range Plan (Kier and Associates 1991), includes all Klamath tributaries downstream of the confluence of the Trinity River, encompassing a drainage area of approximately 450 square miles. These tributaries have been subjected to substantial timber harvest and related road construction over the last 60 years. These activities, occurring in a region with steep, naturally erodible terrain and high annual rainfall, have contributed to widespread streambed sedimentation and associated habitat degradation and native fish run declines throughout the Sub-basin (Gale and Randolph 2000). The Long Range Plan states that “the low number of anadromous salmonids in the Lower Klamath tributaries is directly related to sediment problems. Only changes in land use management and large scale watershed stabilization efforts can effectively address these problems and begin the process of recovery of the Lower Klamath tributaries” (Kier and Associates 1991).

The Lower Klamath Restoration Partnership (LGRP), composed of representatives of the Yurok Tribe Natural Resources Department, Green Diamond Resource Company (GDRC) (formerly Simpson Resource Company), and the California State Coastal Conservancy was formed in 1995. This Project Advisory Committee was formed in order to facilitate a coordinated approach to watershed restoration planning and to find innovative solutions to resource management issues between private landowners, Tribal interests, and public agencies. The Yurok Tribal Fisheries Program (YTFP) has undertaken extensive watershed assessment efforts throughout all Lower Klamath tributaries to provide necessary physical and biological baseline data for restoration prioritization and planning, as well as preparing a long-term Watershed Restoration Plan for the Lower Klamath sub-basin. (Gale and Randolph 2000).

This project provided planning and coordination to the Lower Klamath River Sub-basin for Fiscal Year (FY) 2005, including continued participation in the Lower Klamath Restoration Partnership (LGRP), as well as continued involvement with the Klamath Task Force Technical Workgroup. YTFP continued refining the Lower Klamath Sub-

basin Watershed Restoration Plan (Gale and Randolph 2000), as well as coordinating the implementation of watershed restoration activities identified in the plan.

Accomplishments

Note: items marked with a “*” were conducted all or in part using this project’s funding.

- **Assessments**

During FY 2005, the Yurok Tribe Watershed Restoration Department (YTWRD) initiated the upslope road assessment in Hunter Creek, as well as entering all collected assessment data into the Department’s database for future restoration planning and implementation. Given the large size of the Hunter Creek drainage, only a portion of the drainage was assessed during FY 2005, with the remainder of the assessment being completed during winter 2005-2006.

The Yurok Tribal Fisheries Program (YTFP) conducted geomorphic assessments of the lower alluvial stream reach in Terwer Creek. The results of this effort were used to prioritize bank stabilization and riparian restoration plans for this stream reach, as well as provide baseline data to assess ongoing and future restoration effectiveness.

YTFP also completed the second year of the Lower Klamath Tributary Delta Study during FY 2005. This second year of investigations included intensive monitoring of fish passage feasibility throughout the year and under varying creek and river flow conditions, intensive monitoring of sub-surface flow reaches in Terwer, McGarvey, Hunter and Tectah Creeks throughout the year, monitoring of cold water refugia sites at the mouths of tributaries throughout the lower Klamath, and the installation and monitoring of groundwater wells throughout the lower reaches of three tributaries.

- **Restoration Implementation.**

YTWRD spent the summer 2005 implementation season decommissioning high priority road segments in the McGarvey Creek watershed. McGarvey Creek roads decommissioned during summer 20045 included the M10 (27 sites, 1.6 miles, and 36,749 yds³ excavated), the M500 (5 sites, 0.5 miles, and 7,837 yds³ excavated), the M930 (5 sites, 0.1 miles, and 4,187 yds³ excavated), the M1313 (9 sites, 0.3 miles, and 12,822 yds³ excavated), the M700 (6 sites, 0.7 miles, and 6,520 yds³ excavated), the M1200 (13 sites, 1.3 miles, and 21,982 yds³ excavated), and the M1400 (14 sites, 1.2 miles, and 25,425 yds³ excavated). Total number of sites treated during the season was 79, totaling 115,522 yds³ excavated.

YTFP continued streambank stabilization and riparian restoration efforts in Lower Terwer Creek during FY 2005. These efforts utilized funds secured through the Klamath Task Force, the California Department of Fish and Game, and the Bureau of Indian

Affairs. Restoration techniques included construction of willow siltation baffles and similar willow revetment techniques, as well as planting of native conifer and deciduous tree saplings and removal of invasive/exotic plant species.

YTFP planted 5,000 bareroot redwood and Douglas fir trees throughout riparian areas in the Terwer Creek watershed.

YTFP worked with YTWDRD to transport and stockpile large woody debris (LWD) pieces located during McGarvey Creek road decommissioning. The LWD was stockpiled near the confluence of West Fork McGarvey Creek for use on upcoming instream structure projects in both the lower mainstem and West Fork of McGarvey Creek.

*Note: Oversight of all above implementation projects occurred in part using this project's funding.

- **Proposals Submitted**

*YTWDRD submitted the following proposals during FY 2005 for upslope implementation and assessment funding from the Environmental Protection Agency (EPA) (Pularvasaar Creek Implementation), the Bureau of Indian Affairs (BIA) (Roaches Creek Assessment), and the California Department of Fish and Game (CDFG) (Mainstem and East Fork Terwer Creek Implementation).

*YTFP submitted proposals during FY 2005 to the BIA and to the National Marine Fisheries Service (NMFS) for Lower Terwer Creek riparian restoration implementation, restoration planning and fish population monitoring. In addition, a proposal was submitted to the Bureau of Reclamation's Native American Affairs Program for funding to implement a study of off-estuary slough habitat restoration potential, and to CDFG for Lower Terwer Creek riparian restoration implementation, salmonid life-cycle population monitoring in McGarvey Creek, restoration planning in lower alluvial reaches of Blue Creek, and instream restoration in lower West Fork McGarvey Creek. Proposals were also submitted to the USFWS/Klamath Task Force for Sub-basin Coordination and Planning, and for salmonid life-cycle population monitoring in Blue Creek.

- **Funding Secured**

YTWDRD received \$557,000 in funding from CDFG and \$600,000 from the California Coastal Conservancy to conduct road decommissioning in McGarvey Creek. In addition, YTWDRD received \$150,000 from the BIA to conduct a road assessment in Hunter Creek and \$150,000 from the EPA to conduct road decommissioning in McGarvey Creek.

YTFP received \$94,728 in funding from the BIA to implement riparian restoration and bank stabilization projects in Lower Terwer Creek. YTFP received the following funding during FY 2005 from the NMFS Tribal Pacific Salmon Funds: \$65,000 for Lower

Klamath tributary outmigrant trapping, \$40,000 for Blue Creek fall chinook spawning surveys, and \$6,500 for instream and riparian restoration needs inventories.

YTFP received \$69,907 from the Bureau of Reclamation's Native American Affairs Program to undertake year two of the Lower Klamath River tributary delta and subsurface flow study.

YTFP received \$55,868 in funding from CDFG to implement riparian restoration and bank stabilization projects in Lower Terwer Creek. YTFP also received \$48,156 to conduct geomorphic and hydrologic assessment and restoration planning in the Salt Creek watershed.

YTFP received \$39,838 in funding from USFWS/Klamath Task Force to implement riparian restoration and bank stabilization projects in Lower Terwer Creek.

- **Meetings Attended**

- *YTFP and YTWDRD held monthly meetings throughout FY 2005 to coordinate ongoing and future watershed restoration, assessment and monitoring activities throughout the Lower Klamath Sub-basin. YTFP & YTWDRD also coordinated on an approximately monthly basis with Green Diamond Resource Company (GDRC - formerly Simpson Resource Company) to discuss and coordinate these ongoing and future activities.

- *YTWDRD held ongoing meetings with the Coastal Conservancy throughout FY 2005. These meetings were held with Michael Bowen of the Coastal Conservancy in order to oversee upslope restoration in McGarvey Creek.

- *YTFP and YTWDRD held ongoing meetings with GDRC throughout FY 2005. These meetings were held to discuss ongoing and proposed watershed restoration, assessment and monitoring projects within the Lower Klamath sub-basin.

YTFP and YTWDRD met on a regular basis with the Yurok Tribal Council during FY 2005 to hold fisheries and watershed restoration-relation planning sessions, as well as discuss with and seek approval from the Council for proposed watershed restoration, assessment and monitoring projects within the Lower Klamath sub-basin.

- *YTFP and YTWDRD staff met with representatives of the CDFG on a quarterly basis throughout FY 2005 to discuss and coordinate ongoing and future watershed restoration plans.

YTFP staff attended and participated in the California Department of Fish and Game's (CDFG) Citizen's Advisory Peer Review Committee (PRC) on Salmon and Steelhead Restoration meeting in Sacramento, CA during November, 2004. This meeting is held annually for the PRC to rank project proposals submitted to CDFG's Fisheries Restoration Grants Program.

- *Dan Gale attended the Klamath Task Force Technical Work Group Meeting in December, 2004 in Arcata CA and provided a Lower Klamath sub-basin update.

*Dan Gale attended the Klamath Task Force Meeting on Feb 8-9, 2005 in Crescent City CA and provided a presentation entitled “Development and Implementation of the Lower Klamath Sub-basin Watershed Restoration Plan”.

*Dan Gale met with John Schwabe (CDFG) and Ken Farley (Terwer Creek landowner) on Feb 15, 2005 to discuss proposed bank stabilization and riparian restoration work on Mr. Farley’s property in lower Terwer Creek. An additional meeting was held with Mr. Farley on Mar 7, 2005 to review work plan for the season.

*Dan Gale attended the Klamath Task Force Technical Work Group Meeting on Mar 8-9, 2005 and provided a Lower Klamath sub-basin update.

*Dan Gale met with Scott Bauer of the California Conservation Corps to coordinate 2005 & 2006 restoration work plans for the lower Klamath.

*Dan Gale met with Rocco Fiore (Fluvial Geomorphologist) to discuss past and proposed gravel mining in Hunter Creek. This was followed up with a meeting between YTFP, GDRC, U.S. Army Corps of Engineers, Del Norte County, NOAA Fisheries, and private Hunter Creek landowners to discuss past and proposed future gravel extraction plans in Hunter Creek.

Dan Gale attended a meeting of the Californian State Coho Recovery Team (CRT) in Santa Rosa CA on Mar 22-23, 2005. This meeting was held to update CRT members on the current status of the State’s Recovery Strategy for Coho Salmon.

*Dan Gale, Rocco Fiore, and Sarah Beesley (YTFP staff) conducted a field visit to West Fork McGarvey Creek to investigate instream, riparian and fish passage restoration potential within this McGarvey Creek tributary.

*Dan Gale and David Weskamp met with John Schwabe (CDFG) on Apr 21, 2005 to review YTFP’s past riparian restoration work in lower Terwer Creek and discuss the workplan for the 2005 work season.

David Weskamp provided a presentation on YTFP’s watershed restoration and fish population monitoring efforts on May 19, 2005 to the Margaret Keeting School in Klamath, CA.

YTFP staff met with USFWS staff on Jun 6, 2005 to conduct a contaminants survey in lower Terwer Creek, for required environmental compliance for restoration work funded by USFWS.

*Dan Gale attended the Klamath Task Force Technical Work Group Meeting on Jun 8-9, 2005 and provided a Lower Klamath sub-basin update. This meeting was also held to rank proposals submitted to the USFWS for FY 2005 Task Force funding.

*Dave Hillemeier attended the Klamath Task Force Meeting on Feb 15-16, 2005 in Yreka CA and provided a sub-basin update.

*Dan Gale and David Weskamp met with John Schwabe (CDFG) on Jun 24, 2005 to review YTFP’s past riparian restoration work in lower Terwer Creek and discuss the workplan for the 2005 work season.

Five YTFP staff members and two YTWRD staff members attended a week-long “Bioengineering Field School” in Hopland CA. This training was from Jul 18-22, 2005 and was taught by Evan Engber and sponsored by the Salmonid Restoration Federation.

Dan Gale attended a meeting with NOAA Fisheries on Jul 28, 2005 in Portland OR to review reporting metrics for the Pacific Coast Salmon Restoration Funding (PCSRF).

*Dan Gale and Dave Weskamp met with CDFG representatives on Aug 10 to conduct a field review of YTFP’s proposed riparian restoration project in lower Terwer Creek.

*Dan Gale met with Scott Bauer of the California Conservation Corps on Aug 16, 2005 to discuss ongoing restoration work in the lower Klamath.

Dan Gale and Dave Hillemeier met on Aug 22, 2005 with the BIA ESA Coordinator to review past, present and future lower Klamath watershed restoration, assessment and monitoring activities.

Dan Gale attended two weeks of fluvial geomorphology training provided by Wildland Hydrology (Dave Rosgen) in Lubrecht Forest, Montana in mid-September, 2005.

Discussion

Fiscal Year 2005 proved to be a productive year for watershed restoration-related activities in the sub-basin. YTFP and YTWRD conducted three assessments during FY 2005, decommissioned several high priority road segments in the McGarvey Creek watershed, continued streambank stabilization and riparian restoration efforts in Lower Terwer Creek, stockpiled LWD recovered from road decommissioning for future use in McGarvey Creek instream restoration activities, and planted 5,000 bareroot redwood and Douglas fir trees throughout riparian areas and decommissioned roads in the sub-basin. In addition, the two departments brought in a combined total of \$1,876,997 in grant funds during FY 2005 for implementing watershed restoration, assessment and monitoring projects throughout the Lower Klamath sub-basin. Green Diamond Resource Company also donated \$100,000 to implement restoration projects on their property in the sub-basin.

Funding continues to be the primary limiting factor to implementing the Lower Klamath Sub-basin Watershed Restoration Plan. In particular, the uncertainty of available funds on an annual basis makes planning projects difficult, as well as funding fluctuations resulting in a high rate of attrition among trained employees and restoration practitioners in the sub-basin. Road decommissioning is the primary restoration activity required throughout the sub-basin. While the Tribe has had fairly good success in securing funds to implement these activities, this work is extremely expensive due to heavy equipment requirements, and the incoming funds are still only a small fraction of the annual funds necessary to treat sub-basin sediment sources on the necessary timeframe for fish habitat recovery. Additionally, funds to implement monitoring projects have become increasingly scarce due to a priority emphasis being placed on available funds for implementing restoration projects. A sound, long-term monitoring program is essential

to properly measure restoration effectiveness and fish population status and response. We have been forced to abandon several key and/or long-term monitoring projects in the sub-basin at a time when we need to be increasing the number and diversity of such projects.

Future YTWDRD restoration efforts will focus on finalizing road decommissioning throughout the McGarvey Creek watershed and initiating similar upslope treatment in the Terwer Creek watershed. Both of these drainages are ranked as top priority in the Lower Klamath Sub-basin Watershed Restoration Plan. YTFP restoration efforts in the near future will be focused on continued streambank stabilization and riparian restoration efforts in the alluvial reach of lower Terwer Creek. In addition, YTFP will begin to focus on instream habitat improvement in McGarvey Creek. As detailed in the sub-basin plan, the approach is to treat upslope sediment sources in a given high priority drainage as a precursor to instream habitat improvement projects. YTWDRD is scheduled to complete road decommissioning activities in McGarvey Creek by 2007 and GDRC is on schedule to complete road upgrading in the watershed on a similar time scale.

Budget

Project Funding:

Personnel Costs

Salaries	\$14,340
Staff Benefits @33%:	<u>\$4,732</u>
Total Personnel Costs:	\$19,072

Project Subtotal:	\$19,072
Administrative Overhead @31.08%:	<u>\$5,928</u>

Total Funds Expended: \$25,000

Yurok Tribe Cost Share:

Personnel Costs

Salaries	\$13,440
Staff Benefits @33%:	<u>\$4,435</u>
Total Personnel Costs:	\$17,875

Project Subtotal:	\$17,875
Administrative Overhead @31.08%:	<u>\$5,556</u>

Total Funds Expended: \$23,431

Cost Share is a Cash Match from the Yurok Tribe