Lower Klamath Sub-Basin Coordination & Planning
FY 2008

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Abstract

This project provided planning and coordination to the Lower Klamath River Sub-basin during the project period: June 1, 2008 – July 31, 2009. This included continued participation in the Lower Klamath Restoration Partnership, and continued coordination and implementation of watershed restoration activities identified in the Lower Klamath Sub-basin Watershed Restoration Plan (LKWRP) (Gale and Randolph 2000) and other Yurok Tribal Fisheries Program (YTFP) restoration plans (Beesley and Fiori 2004, 2007, 2007b, 2008, and 2008b). YTFP also continued conducting assessments and restoration planning activities in several high priority off-estuary and coastal tributaries during the project period. A priority objective of these activities is to develop a large-scale, process-based restoration plan for the Klamath River estuary and associated off-estuary tributary, wetland, and slough habitats; and to expand and update the LKWRP.

YTFP worked closely with Rocco Fiori (Licensed Geologist - Fiori GeoSciences) to design and implement wood loading activities in the McGarvey Creek watershed. In summer 2008, YTFP and Fiori built ~20 complex wood jams in McGarvey Creek upstream of the West Fork confluence (Gale 2009). In winter 2008-2009, YTFP planted ~ 4,000 conifers in riparian habitats in the 2008 McGarvey Creek wood loading reach. YTFP and Fiori also planned for upcoming wood loading activities scheduled for late summer 2009, and developed a multi-phased restoration plan for lower McGarvey Creek. This plan will focus on increasing the quantity and quality of off-channel habitats (e.g. side channels, ponds, alcoves) to immediately improve overwinter rearing conditions for natal and non-natal salmonids, especially ESA listed Klamath Basin coho (YTFP 2009).

YTFP also worked with the Yurok Tribe Watershed Restoration Department (YTWRD) to transport large wood and logs generated from Lower Klamath road decommissioning projects to use in 2008 and 2009 YTFP wood loading projects. In late summer 2008, YTFP and Fiori completed a helicopter assisted wood loading project in the lower seven miles of Tectah Creek (Beesley and Fiori 2009). To complete this project, the Yurok Tribe Forestry Department donated over 200 whole trees and old growth Douglas fir cull logs from Tribal forestry lands located in upper Bear Creek. The primary objectives included increasing sediment storage capacity in this priority tributary; facilitating improved retention of salmonid spawning gravels; and reducing sediment delivery rates.

YTFP also continued working with landowners and resource agency staff to plan and implement stream and riparian restoration tasks in lower Terwer Creek during the project period. YTFP planted thousands of conifer and deciduous trees throughout project reaches located in Terwer Creek to help promote robust, diverse riparian forests. YTFP was also successful at obtaining over $600,000 in funding from the National Oceanic and Atmospheric Administration's America Recovery and Reinvestment Act Program; and the U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program to complete a multi-phased restoration plan in lower Terwer Creek in 2009-2010.

During the project period, YTFP submitted over ten proposals to various resource agencies to conduct fisheries restoration and monitoring projects in the Lower Klamath

Sub-basin. For the next several years, YTFP will continue focusing restoration efforts in McGarvey Creek, Terwer Creek, Hunter Creek, and Waukell Creek. To meet these objectives, YTFP received nearly one million dollars in resource restoration and monitoring funding during the project period and are currently conducting funded tasks.

During the project period, YTWRD planned and obtained the necessary permits for multiple upslope projects in the sub-basin. They also continued decommissioning high priority road segments in the Terwer Creek watershed. In addition to implementing upslope rehabilitation activities, YTWRD conducted sediment removal from Hamilton Ponds and submitted several proposals and received funding to continue conducting these activities in the sub-basin and on the north coast. YTWRP and YTFP participated in over 50 meetings during the project period related to restoration planning, assessment, implementation, and monitoring in the Lower Klamath Sub-basin.

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.

The declining health and productivity of the Klamath River's anadromous fisheries is of great cultural and economic concern to the Yurok Tribe. To address this decline, the Tribe has initiated a large-scale, coordinated watershed restoration effort in the Lower Klamath Sub-basin. The sub-basin 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, erodable terrain and high annual rainfall, have contributed to excessive sedimentation and degradation of tributary and river habitats and led to substantial declines in salmonid populations (Gale and Randolph 2000; Beesley and Fiori 2007b).

The Lower Klamath Restoration Partnership (LKRP), 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 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. In the 1990s, Yurok Tribal Fisheries Program (YTFP) conducted extensive watershed and fisheries assessments throughout all the Lower Klamath tributaries to provide the necessary physical and biological baseline data to prepare the Lower Klamath River Sub-basin Watershed Restoration Plan (Gale and Randolph 2000).

This project provided planning and coordination to the Lower Klamath River Sub-basin for the period 01-Jun-2008 through 31-July-2009 (hereafter referred to as the project period), including continued participation in the Lower Klamath Restoration Partnership (LKRP). YTFP continued coordinating the implementation of watershed assessment, planning, and restoration activities identified in the Lower Klamath Sub-basin Watershed Restoration Plan (Gale and Randolph 2000); and other Yurok Tribal Fisheries Program (YTFP) restoration plans (Beesley and Fiori 2004, 2007, 2007b, 2008, and 2008b).

Accomplishments

- **Assessments**

During the project period, YTFP conducted several geomorphic assessments and restoration planning efforts throughout the Lower Klamath Sub-Basin. The results of these efforts are being used to plan and prioritize restoration throughout the sub-basin, as well as provide baseline data to assess ongoing and future restoration effectiveness.

Restoration Planning in Waukell Creek

YTFP continued working with Rocco Fiori (Licensed Geologist - Fiori GeoSciences (FGS)), several resource agencies, and stakeholders to develop stream and wetland enhancement strategies to increase juvenile salmonid rearing capacity in the Waukell Creek watershed. Fisheries research conducted in this watershed over the last several years have revealed significant use of this tributary by both natal and non-natal juvenile coho salmon (Soto et al. 2008; Hillemeier et al. 2010). Priority restoration objectives for the watershed include 1) improving hydrologic and geomorphic function to ensure protection of critical downstream habitats; 2) increasing juvenile salmonid rearing capacity and productivity; and 3) enhancing adult salmonid staging and spawning.

The following tasks were conducted to help meet restoration objectives in the watershed:

- YTFP and FGS continued operating stream gages in Waukell Creek to monitor stage, temperature, and salinity every 15 minutes to document water quality/quantity; investigate stream flow, wetland storage and outflow relations; and assess sediment transport dynamics in the watershed to inform restoration designs;

- Conducted baseline topographic surveys of the channel, floodplain, and wetland habitats throughout the watershed to document pre-restoration conditions, to inform restoration design, and allow for future effectiveness monitoring;

- Worked with local consulting firms to complete 1) Sensitive and Rare Plant Surveys; and 2) Wildlife and Sensitive Habitat Surveys in the future project site to help meet regulatory compliance requirements and further refine restoration designs;

- Secured additional funding from the U.S. Bureau of Reclamation's Native American Affairs Program to supplement restoration planning and design in Waukell Creek;

- YTFP and FGS began developing a feasibility study and sediment budget analysis to allow for the development of wetland designs that address current land management constraints (i.e. increased rates of sedimentation throughout the watershed); and

- YTFP and FGS worked with U.S. Fish and Wildlife Service staff and other stakeholders to plan for upcoming wood loading activities in upper Waukell Creek and began sorting and hauling wood sources to the project site.

Restoration Effectiveness Monitoring in McGarvey Creek

Crews continued conducting 3-D topographic surveys of the channel, floodplain, and large wood in the McGarvey Creek watershed to document baseline conditions prior to conducting wood loading activities; and collect post-project and post-winter flow data. YTFP and FGS constructed several large wood structures in West Fork McGarvey Creek in summer 2007; and in McGarvey Creek (upstream of West Fork) in summer 2008 (Gale 2008 and 2009). Wood loading activities were also scheduled for late summer 2009 in McGarvey Creek downstream of West Fork. The topographic data allows YTFP and FGS to quantitatively assess changes associated with implemented restoration activities. Crews have also established several permanent photo-monitoring sites in the watershed.

Geomorphic Assessment and Restoration Planning in Blue Creek

YTFP and FGS completed an initial watershed restoration assessment and planning report for lower Blue Creek (Beesley and Fiori 2008b). The report documented historic and current channel and floodplain conditions; identified the primary factors currently limiting fish and riparian production; and presented site-specific restoration strategies to address identified limiting factors. Based on the data and information collected during this project, the loss of large wood in the fluvial corridor of Blue Creek resulting from land management activities in combination with large flood events occurring over the last 150 years has resulted in substantial channel and riparian dysfunction in the watershed.

Estuary and Off-Estuary Habitat Study

Since 2002, YTFP has been working with FGS to conduct watershed assessments and plan restoration in off-estuary habitats of the Klamath River (Beesley and Fiori 2004, 2007, and 2008). As part of these efforts, YTFP has been coordinating with the Yurok Tribe Environmental Program (YTEP) to monitor seasonal water quality conditions in the South Slough of the estuary and in off-estuary tributaries (Beesley 2007; Beesley and Fiori 2010; Silloway 2010). YTEP has been deploying datasonde probes in priority off-estuary tributaries and in the South Slough of the estuary to document diurnal water quality conditions present during critical salmonid migration periods to help inform restoration designs and document baseline conditions prior to initiating restoration.

YTFP and FGS continued conducting detailed, 3-dimensional topographic surveys of stream, floodplain, and wetland features in the Klamath River estuary and associated off-estuary tributaries; and recently acquired LiDAR for the Yurok Reservation. FGS used the ground-based survey and the estuary LiDAR data to refine existing digital elevation models (DEMs) for the project area. This DEM has been a critically valuable restoration planning tool and YTFP and FGS continue to improve and expand the estuary DEM (Figure 1). As part of these efforts; YTFP, FGS, and YTEP have been developing bathymetric survey protocols for monitoring bed topography in the estuary and seeking funding to purchase the necessary equipment. We have also been operating stream gages in the estuary, the South Slough, and in a few priority off-estuary tributaries to develop hydrologic DEMs to: 1) assess and document habitat conditions at various flows; and 2) develop large-scale, process-based restoration and management strategies for the estuary.

YTFP and FGS continued obtaining the necessary physical and biological data to develop a large-scale, process-based restoration plan for the Klamath River estuary; and developing conceptual designs and permitting strategies for the area. As part of these efforts, YTFP and FGS completed a watershed planning report during the project period that included the historical data recently collected in the estuary and conceptual designs for off-estuary habitats located on the north side of the river (Beesley and Fiori 2008).

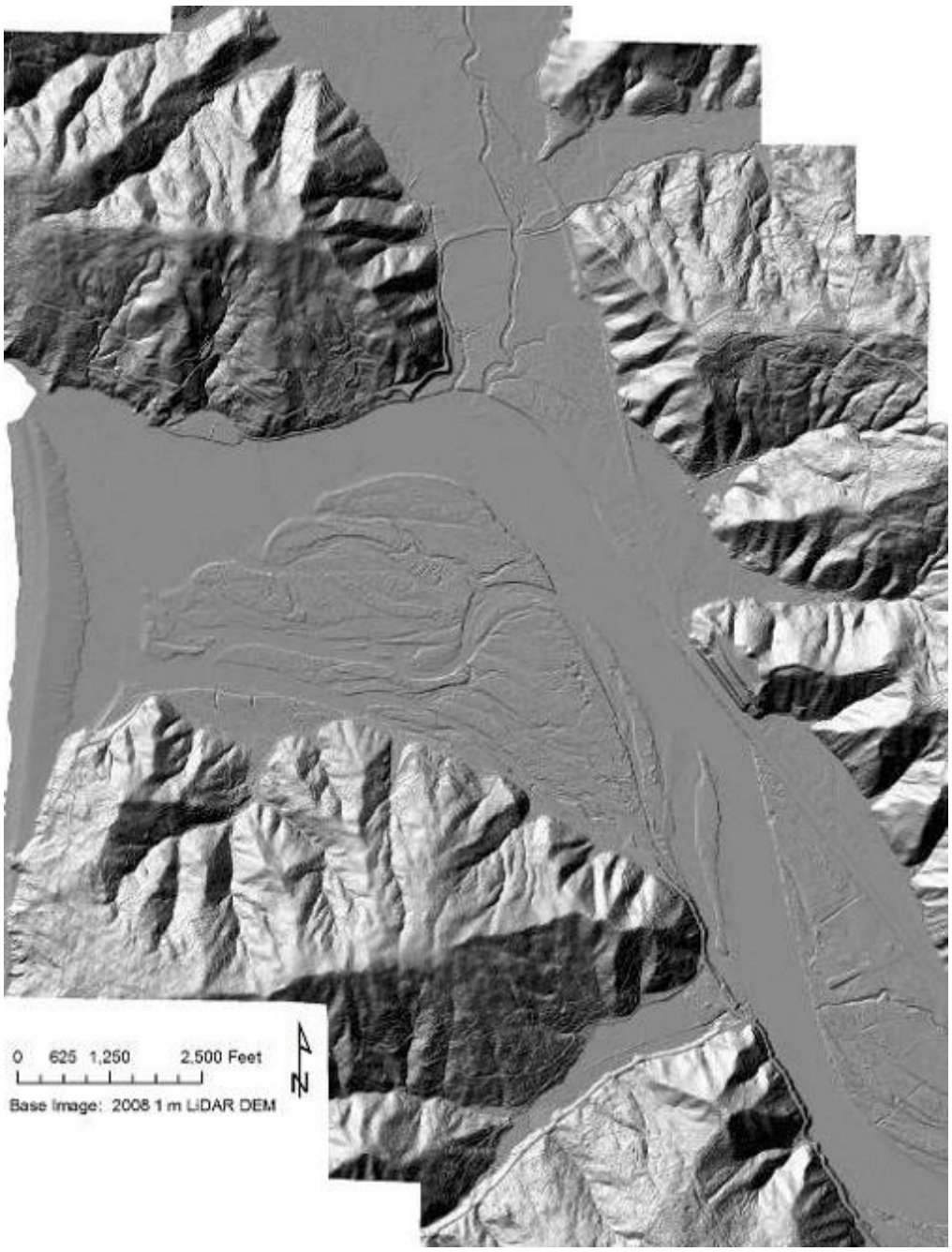

Figure 1. Map of the Klamath River estuary and the lower-most off-estuary tributaries, California (Base Image: 2008 1 m LiDAR DEM).

- **Restoration Implementation**.

McGarvey Creek Wood Loading

YTFP and FGS completed a wood loading and riparian enhancement project in McGarvey Creek upstream of the West Fork; and began sorting and hauling wood for the 2009 wood loading project scheduled for McGarvey Creek downstream of West Fork McGarvey Creek. The objective of these efforts was to immediately improve spawning and rearing habitat for natal and non-natal salmonid populations; and promote the development and maintenance of complex and resilient stream and riparian habitats (Figures 2-4) (Gale 2008 and 2009). YTFP, YTWRD, and FGS also developed a comprehensive restoration plan for lower McGarvey Creek that focused on creation and enhancement of floodplain and off-channel habitats to increase the quality and quantity of rearing habitat available for natal and non-natal salmonid populations, especially ESA listed Klamath Basin coho populations. Recent investigations documented significant overwinter use of lower McGarvey Creek by non-natal juvenile salmonids (YTFP 2009).

Tectah Creek Wood Loading

YTFP and FGS coordinated with YTWRD, Yurok Tribe Forestry, California Department of Fish and Game (CDFG), Green Diamond Resource Company (GDRC), and Columbia Helicopters, Inc. (Col. Heli.) to plan for and implement a wood loading project in Tectah Creek (Beesley and Fiori 2009). YTFP and FGS guided Col. Heli. chinook helicopter pilots to place over 200 pieces of wood (note: a majority of the pieces were whole trees with either rootwads or complex limb structures intact) throughout lower Tectah Creek (Figures 5-7). The wood had been sorted and stockpiled by YTFP and YTWRD on Yurok Tribe Forestry lands in upper Bear Creek located ~directly across the river from Tectah Creek (Figure 7). The primary objectives of this project included increasing sediment storage capacity in this critically important tributary; facilitating improved retention of salmonid spawning gravels; and reducing sediment delivery rates.

YTFP crews also worked with GDRC to coordinate baseline topographic surveys in the wood loading reach. GDRC has nearly ten years of topographic data for the project reach. In summer 2008, crews conducted pre-project surveys and detailed surveys of the lower-most 26 sites to document construction activities. In summer 2009, crews conducted repeat topographic and large wood surveys to document post-project channel, floodplain, and wood conditions following the first winter. YTFP is currently working with FGS to summarize restoration effectiveness monitoring activities and results.

Riparian Forest Restoration

YTFP continued operation of our native tree nursery at the Yurok Fisheries office in Klamath. The nursery provides quality employment opportunities with staff receiving training in native seed collection and germination; cutting, collection and propagation of several species; and tree transplanting and growing skills. The nursery currently provides hundreds of native conifer and deciduous saplings each year for Lower Klamath River watershed restoration projects (Figure 8). Species cultivated and grown to date include

coastal redwood, Douglas fir, Sitka spruce, western red cedar, Port Orford cedar, big-leaf maple, red alder, black cottonwood, tanoak, white oak, red alder, and bay laurel.

In winter 2008-2009, crews planted 2,200 bareroot coastal redwood and 1,700 bareoot Sitka spruce in riparian habitats within the 2008 wood loading reach of McGarvey Creek (Figure 9). Crews also planted 356 five-gallon potted coastal redwood trees, 141 five-gallon potted western red cedar trees, 322 two-gallon Sitka spruce, and 247 five-gallon Port Orford cedar in the project area. The potted trees were provided by YTFP's nursery. During winter 2008-2009, crews also conducted extensive planting of bareroot Douglas firs in riparian habitats in the "middle" reach of Terwer Creek. In addition, crews planted several thousand native bareroot conifers and hundreds of larger, potted conifer and deciduous tree saplings in the lower Terwer Creek project area during winter 2008-2009.

Lower Terwer Creek Restoration

In summer 2008, YTFP continued implementing riparian and stream restoration project tasks in lower Terwer Creek. Funding to complete these efforts was secured through grants from CDFG, the U.S. Bureau of Indian Affairs (BIA), and the U.S. Fish and Wildlife Service (USFWS). Restoration techniques implemented included construction of willow siltation baffles/mattresses (Figure 10) and log-boulder structures to reduce bank erosion rates and protect sensitive riparian habitats; and planting native conifer and deciduous saplings and removing invasive plants to help rehabilitate riparian areas.

In spring 2009, YTFP worked with FGS, GDRC, USFWS, and CDFG to develop a multi-phased restoration plan to continue and expand ongoing riparian and fish habitat restoration activities in lower Terwer Creek. YTFP was successful at obtaining funding from both the National Oceanic and Atmospheric Administration's America Recovery and Reinvestment Act (ARRA) Program; and the USFWS's Partners for Fish and Wildlife Program to complete the proposed plan during 2009-2010. YTFP and FGS began implementing phase I activities in lower Terwer Creek during summer 2009.

Top - Looking upstream Bottom - Looking at left bank (Flow ⟶)

Figure 2. Photographs depicting channel conditions prior to wood loading activities (Left Photos - 2007) and following enhancement activities (Right Photos – Nov. 2008).

Figure 3. Yurok Tribal Fisheries Program and Fiori GeoSciences transforming slash piles and whole tree materials into fish habitat in the McGarvey Creek watershed (2009).

Figure 4. Photographs of wood loading and associated restoration effectiveness monitoring activities in the McGarvey Creek watershed (2008-2009).

Figure 5. Photographs of Columbia Helicopter, Inc.'s chinook helicopter conducting Tectah Creek wood loading activities in late summer 2008.

Figure 6. Photographs of wood loading sites constructed in the lower seven miles of Tectah Creek, Lower Klamath River Sub-basin, California (September 2008).

Figure 7. Photographs of wood staging and transport activities on Yurok Tribal Timberlands in upper Bear Creek, Lower Klamath River Sub-basin (Summer 2008).

Figure 8. Photographs of the Yurok Tribal Native Plant Nursery, and crews loading up native conifer saplings that were grown out at the nursery, Klamath, California.

Figure 9. Yurok Tribal Fisheries Program staff planting native conifers in riparian habitats of McGarvey Creek, Lower Klamath River Sub-basin (January 2009).

Figure 10. Yurok Tribal Fisheries Program staff working with a local landowner to construct a willow mattress in lower Terwer Creek (Top and Middle - October 2008); and the constructed willow mattress and baffles during winter flows (Bottom - January 2009).

- **Proposals Submitted**

YTFP Lower Klamath Division submitted the following proposals:

California Department of Fish and Game (Fisheries Restoration Grant Program):
- Stream and Floodplain Restoration in McGarvey Creek, Lower Klamath River - $220,390 (FY09 funds)
- Monitoring natal and non-natal salmonids in McGarvey Creek, Lower Klamath River - $145,908 (FY09 funds)

U.S. Bureau of Reclamation (Klamath River Watershed Restoration Program):
- Installation of a Stream-width PIT tag Interrogation System to track habitat use and non-natal rearing patterns of juvenile coho in McGarvey Creek - $88,938
- Monitoring natal and non-natal salmonids in McGarvey Creek - $145,909
- Monitoring juvenile salmonid emigration through the Klamath River Estuary - $55,806 (FY09 funds)

U.S. Bureau of Reclamation Native American Affairs Funding (NAAP):
- Restoration of Off-Estuary Wetland and Stream Habitats of Waukell Creek - $57,257 (FY09 funds)

USFWS Partners for Fish and Wildlife Funding:
- Stream and Floodplain Enhancement of EF Hunter Creek - $60,000 (FY08 funds)
- Hunter Creek Riparian Conifer Revegetation Project - $36,000 (FY08 funds)
- Lower Terwer Bioengineering and Large Wood Project - $30,000 (FY09 funds)
- Lower Terwer Off-Channel Pond (Farley) Project - $25,000 (FY09 funds)

National Oceanic and Atmospheric Administration's ARRA Restoration Program:
- Lower Klamath Riparian Restoration and Yurok Tribal Native Plant Nursery - $527,000 (FY09 funds)

- **Funding Secured**

YTFP Lower Klamath Division received funding for the following projects:

U.S. Bureau of Reclamation (Klamath River Watershed Restoration Program):
- Stream and floodplain enhancement of East Fork Hunter Creek: Phase I - $147,255 (FY08 funds)
- Installation of Stream-width PIT tag Interrogation Systems (SPI's) to Track Habitat Use and Non-Natal Rearing Patterns of Juvenile Coho in Tributaries to the Lower Klamath River - $151,169 (FY08 funds)

U.S. Bureau of Reclamation Native American Affairs Funding (NAAP):
- Restoration of Off-Estuary Wetland and Stream Habitats of Waukell Creek - $57,257 (FY09 funds)

USFWS Partners for Fish and Wildlife Funding:

- McGarvey Creek Stream & Riparian Restoration Project - $140,000 (FY07 funds)
- Waukell Creek Instream & Riparian Restoration Project - $60,000 (FY07 funds)
- Terwer Creek Riparian Restoration Project - $36,964 (FY08 funds)
- Lower Terwer Creek Cattle Exclusion Fencing Projects - $50,521 (FY08 funds)
- Stream and Floodplain Enhancement of EF Hunter Creek - $60,000 (FY08 funds)
- Hunter Creek Riparian Conifer Revegetation Project - $36,000 (FY08 funds)
- Lower Terwer Off-Channel Pond (Farley) Project - $25,000 (FY09 funds)
- Lower Terwer Bioengineering and Large Wood Project - $30,000 (FY09 funds)

National Oceanic and Atmospheric Administration's ARRA Restoration Program:

- Lower Klamath Riparian Restoration and Yurok Tribal Native Plant Nursery - $527,000 (FY09 funds)

IFC International (Formerly IFC Jones and Stokes) Contract:

- Fish Surveys Related to the Proposed Klamath Grade Raise Project - $80,000

NMFS Tribal Pacific Salmon Funds:

- Lower Klamath tributary outmigrant trapping and juvenile salmonid monitoring in the Klamath River estuary - $63,125 (FY08 funds)

U.S. Bureau of Reclamation – Klamath Falls Office

- YTFP received $170,000 in FY08 from the USBOR to conduct a juvenile coho salmon ecology study that focused on documenting life stage specific habitat use throughout the Klamath Basin. YTFP received an additional $180,000 in FY09

USFWS – Yreka Office

- Fall chinook Escapement Surveys and Age Composition - $96,400 (FY08 funds)

YTWRD received funding for the following projects:

Effective Date	Projects Code	Granting Agency	YTWRD Projects Title	Awarded
FY 2009				
10/1/2008	316	EPA	FY 2007-2010 EPA PARTNERSHIP GRANT	$150,000.00
10/1/2008	316	EPA	FY 2007-2010 EPA PARTNERSHIP GRANT	$150,000.00
10/1/2008	445	BIA	BIA 2009 Roads Maintenance Model Contract	$9,793.00
10/1/2008	445	BIA	BIA 2009 Roads Maintenance Model Contract	$89,275.00
10/1/2008	520	USFWS	2008 USFWS - Lower Klamath Sub-basin Coordination and Planning - 813338G014	$5,000.00
10/1/2008	626	BOR	BOR 2009 - Klamath River Sub-basin Erosion Control - 08FG200147	$102,308.00
10/1/2008	630	USFWS	USFWS Invasive Knotweed Assessment 813318J268	$15,000.00
10/1/2008	877	BOR	Sediment Removal at Hamilton Ponds	$50,179.00
10/1/2008	877	BOR	Sediment Removal at Hamilton Ponds	$85,041.00
10/1/2008	877	BOR	Sediment Removal at Hamilton Ponds	$31,027.00
10/1/2008	877	BOR	Sediment Removal at Hamilton Ponds	$26,181.00
10/1/2008	877	BOR	Sediment Removal at Hamilton Ponds	$50,000.00
1/1/2009	633	Humboldt County	Humboldt County Knotweed Eradication within and Adjacent to Reservation	$12,423.00
1/1/2009	633	Humboldt County	Humboldt County Knotweed Eradication within and Adjacent to Reservation	$11,172.00
6/1/2009	608	USDA	USDA Forest Service 2009 Bluff Creek Watershed Restoration	$131,740.85
6/1/2009	632	CDFG	CDFG 2009 Lower Klamath River Sub Basin Erosion Control P0810304	$448,962.00
9/1/2009	637	USFWS	USFWS 2009 Terwer Creek Upslope Sediment Reduction on U1102	$150,000.00
9/14/2009	613	RNSP	WATERSHED MISC. INCOME	$148,757.00
			Total FY 2009	**$1,666,858.85**

- **Meetings Attended**

YTFP and YTWRD held monthly meetings throughout the project period to coordinate ongoing and future watershed restoration, assessment, and monitoring activities throughout the Lower Klamath Sub-basin.

YTFP and YTWRD held regular meetings with GDRC during the project period. These meetings were held to discuss ongoing and future watershed restoration, assessment, and monitoring projects within the Lower Klamath Sub-basin.

YTFP and YTWRD met on a regular basis with the Yurok Tribal Council during the project period to hold fisheries and watershed restoration related planning sessions; and to discuss and seek approval from the Council for proposed watershed restoration, assessment, and monitoring projects within the Lower Klamath sub-basin.

YTFP and YTWRD held regular meetings with Rocco Fiori (FGS - Licensed Geologist) during the project period to discuss ongoing and future watershed restoration, assessment, and monitoring projects in the Lower Klamath Sub-basin.

YTFP and YTWRD staff met regularly with staff from CDFG and USFWS during the project period to discuss and coordinate ongoing and future watershed restoration plans; and conduct pre- and post-project field review of Tribal projects in the Lower Klamath.

YTWRD participated in GDRC Habitat Conservation Plan (HCP) training during spring 2009. This training is mandatory for all individuals conducting road decommissioning activities on GDRC property to review the terms and conditions of GDRC's HCP.

YTWRD met on several occasions throughout the project period with representatives of Redwood National Park (RNP) to discuss ongoing and future projects on RNP property.

YTFP and FGS held several meetings with YTWRD, Yurok Tribal Forestry Department and staff from CDFG, GDRC, and Col. Heli. to plan and implement wood loading activities and effectiveness monitoring in Tectah Creek 2008-2009.

YTFP and FGS met with Ken Farley (Terwer Creek landowner) and resource agency staff on several occasions during the project period to discuss ongoing and future restoration work on Mr. Farley's property in lower Terwer Creek.

YTFP and FGS held regular meetings with GDRC during the project period to coordinate the 2008-2009 Lower Klamath River LiDAR project.

YTFP and FGS held regular meetings with the Yurok Land Management survey crew to establish a spatially accurate survey network in Waukell Creek in spring 2009.

YTFP met several times with the Resighini Rancheria Tribal Council and Rob Cozens (Resighini EPA Director) to discuss the Coho Salmon Ecology Study and to discuss potential road rehabilitation and restoration projects in the Waukell Creek watershed.

YTFP worked closely with staff from the BOR, Karuk Tribe, CDFG, and Larry Lestelle over the project period to plan and implement the Coho Salmon Ecology Study.

YTFP met with CDFG, BOR, USFWS, Kate Sloan (YTEP), and Bob McConnell (THPO) on several occasions to discuss environmental and cultural compliance requirements for the upcoming wood loading and riparian restoration project in East Fork Hunter Creek.

YTFP continued coordinating with multiple Yurok Tribal Departments and California Department of Transportation (Caltrans) staff regarding their Klamath Grade Raise (KGR) Project proposed to be implemented in the lower portion of the Yurok Reservation. Participation in this process has included attending 1) bi-weekly KGR planning meetings; 2) meetings with multiple resource agencies regarding potential impacts to wetland and fisheries resources and to discuss potential minimization actions and project mitigation; and 3) internal meetings to discuss potential benefits and impacts.

YTFP provided fisheries monitoring and watershed restoration related training and curriculum to Klamath Early College students during the project period.

YTFP staff (Monica Hiner and Sarah Beesley) attended the annual Salmonid Restoration Federation meeting in Santa Cruz in March 2009. Monica Hiner presented data collected in the Lower Klamath as part of the ongoing Coho Salmon Ecology Study.

YTFP staff (Robert Ray, Delmer Jordan, Nemecha Lopez-Bates, Carl Anderson, and Arnold Nova attended Swiftwater Rescue in Weitchpec on March 25 – 27th, 2009.

YTFP staff (Scott Silloway and Robert Grubbs) attended backpack electrofishing training in Santa Cruz during March 23 – 25th, 2009.

YTFP staff (Monica Hiner, Sarah Beesley, and Gilberto Calleja) attended the annual California-Nevada Chapter of the American Fisheries Society meeting in Santa Rosa during April 2009. Monica Hiner presented data collected in the Lower Klamath as part of the ongoing Coho Salmon Ecology Study. Sarah Beesley coordinated with Rocco Fiori (FGS) on a presentation regarding wood loading techniques and the importance of these projects to the survival of California salmonids, especially coho. FGS presented several case studies including the projects in McGarvey Creek and Tectah Creek.

YTFP met with the Planning Department, Information Services, and consultants to discuss fisheries GIS and to identify future GIS data and training needs in spring 2009.

YTFP held regular coordination meetings with staff from the USFWS CA-NV Fish Health Center and other involved stakeholders to conduct sampling activities associated with the Klamath Basin Juvenile Pathology Monitoring Project in 2008-2009.

Sarah Beesley (YTFP) attended the following geomorphology trainings provided by Dr. Dave Rosgen of Wildland Hydrology: River Morphology and Applications (Level II - Bend, Oregon - July 2008); and River Assessment and Monitoring (Level III - Lubrecht Experimental Forest, Montana - July - August 2008).

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Budget

Project Funding:

Personnel Costs	
Salaries	$8,795.33
Staff Benefits:	$2,763.59
Total Personnel Costs:	$11,558.92
Administrative Costs	
Administrative Overhead:	$3,441.08
Total Funds Expended:	**$15,000.00**