

Lower Klamath Sub-Basin Coordination & Planning - FY 2010

Final Report



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Project Accomplishments to Date

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 widespread degradation of native fish habitats and substantial declines in anadromous fish populations. The declining health and productivity of the Klamath River's anadromous fisheries is of great cultural and economic concern to the Yurok Tribe. To help address this decline, the Yurok Tribal Fisheries Program (YTFP) and Yurok Tribe Watershed Restoration Department (YTWRD) initiated a large-scale, coordinated watershed restoration effort in the Lower Klamath Sub-basin in the late 1990s. Restoration activities conducted have focused on decommissioning roads and removing stream crossings, planting native conifers in riparian habitats, installing constructed wood jams in fluvial habitats, and constructing complex off-channel habitats (e.g. alcoves, wetlands) in priority watersheds.

This report documents watershed assessment, planning, coordination, and restoration efforts conducted by YTFP and YTWRD in the Lower Klamath River Sub-basin during the period June 1, 2010 – July 31, 2011.

- **Assessments**

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

Instream Restoration Planning

YTFP continued working with Rocco Fiori (Licensed Geologist - Fiori GeoSciences (FGS)), several resource agencies, and stakeholders to develop stream and floodplain enhancement strategies to increase juvenile salmonid rearing capacity in the Salt Creek and Waukell Creek watersheds. Fisheries research conducted in these off-estuary watersheds over the last several years have revealed significant use of these tributaries by both natal and non-natal juvenile coho salmon (Soto et al. 2008; Hillemeier et al. 2009; Silloway 2010). Priority restoration objectives include improving hydrologic and geomorphic function to ensure protection of valuable downstream habitats, and increasing juvenile salmonid rearing capacity and productivity.

YTFP conducted the following tasks in Salt Creek:

- Conducted juvenile salmonid fish population estimates and assessed water quality in the Salt Creek marsh complex to assess seasonal fish use of off-estuary wetlands.
- Repeated topographic surveys of lower High Prairie Creek to further characterize site conditions and facilitate development of potential restoration designs.

- Worked with FGS and the Yurok Tribe Environmental Program (YTEP) to collect and analyze soil samples from the defunct wastewater treatment facility.

YTFP conducted the following tasks in Waukell Creek:

- 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.
- YTFP and FGS developed conceptual restoration designs for two sites within Waukell Creek and continued coordinating with Aldaron Laird (Environmental Planner) to develop the required environmental documents and obtain project permits.
- YTFP worked with our Environmental Planner to complete the phase II vegetation surveys of lower Waukell Creek and lower Saugep Creek.
- FGS continued to assess hydrologic conditions at the Klamath Beach Road stream crossing at Waukell Creek to further our understanding of how the proposed road upgrade project may affect our restoration designs for the watershed.

YTFP and FGS continued analyzing the topographic data collected in lower Blue Creek (2006 – 2010) to further develop comprehensive restoration strategies for this priority Lower Klamath River tributary. Priority restoration objectives include improving hydrologic and geomorphic function in the lower reaches, increasing floodplain connectivity and riparian forest productivity and resiliency, and using constructed and/or engineered log jams to promote the formation and maintenance of fish habitats (e.g. complex pools and rearing areas, productive spawning beds) (Beesley and Fiori 2008).

YTFP worked with FGS to begin revising the Lower Klamath River Sub-basin Restoration Plan (Gale and Randolph 2000). Revisions were based on current fisheries research conducted by YTFP and other basin partners (e.g. Karuk Tribe & Mid-Klamath Watershed Council) and more up to date physical habitat data. To date, the revised plan focuses on four major restoration program strategies: planning, monitoring, wood loading, and off-channel habitat enhancement. A sub-set of the revised sub-basin plan is presented in Table 1. We are also seeking funding to develop a riparian habitat enhancement plan to incorporate into the revised sub-basin plan. Therefore, the revision is currently a work in progress that will continue to be refined over the next few years.

Table 1. High priority Lower Klamath River Sub-basin fisheries habitat enhancement actions for FY 2012 – FY 2016.

FY 2012 Action Plans									
Watershed	Site_Name	Reach_Name	Project_ID	Action Code	Action Priority	Funding Status	Funding Partners	Project Compliance	Action Objectives
McGarvey Creek	Alcove III	Lower McGarvey	McG_06	Off-Chnl	Very High	Partial	USFWS, BOR	Complete	Winter - Summer Rearing
Blue Creek	Lower Blue Creek	Lower Blue Creek	BC_PL_01	Plan	Very High	Partial	BOR	Complete	Enhancement and Protection
Klamath River	Lower Klamath	Lower Klamath	LKR_MO_01	MO	Very High	Partial	BOR	Complete	Restoration Effectiveness Monitoring
Hunter Creek	4-Mile Site	North Trib to Kurwitz	HC_02	Off-Chnl	Very High	Funded	USFWS, CDFG	In Progress	Winter - Summer Rearing
Hunter Creek	East Fork to North Trib	East Fork to North Trib	HC_03	LWD	Very High	Funded	USFWS	In Progress	Spawning, Rearing
FY 2013 Action Plans									
Waukell Creek	CDFG Wildlife Area	Upper Waukell	WC_01	Off-Chnl	Very High	Partial	USEPA	In Progress	Winter - Summer Rearing
Hunter Creek	North Trib to Kurwitz	North Trib to Kurwitz	HC_04	LWD	Very High	Partial	CDFG	In Progress	Spawning, Rearing
Terwer Creek	Upper Arrow Mills	Upper Arrow Mills	TC_02	Off-Chnl	Very High	Partial	USFWS	In Progress	Spawning, Rearing
Klamath River	Lower Klamath	Lower Klamath	LKR_MO_01	MO	Very High	Partial	BOR	Complete	Restoration Effectiveness Monitoring
Ah Pah Creek	Ah Pah Watershed	Ah Pah Watershed	AP_PL_01	Plan	Very High	Not Funded	UNK	In Progress	Enhancement and Protection
Hoppaw Creek	Hoppaw Watershed	Hoppaw Watershed	Hop_PL_01	Plan	Very High	Not Funded	UNK	In Progress	Enhancement and Protection
McGarvey Creek	Den Creek	Lower McGarvey	McG_PL_01	Plan	Very High	Not Funded	UNK	In Progress	Enhancement and Protection
FY 2014 Action Plans									
Waukell Creek	Saugep to Hwy 101	Lower Waukell	WC_02	Off-Chnl	Very High	Partial	USEPA	In Progress	Spawning, Rearing
McGarvey Creek	Den Creek	Lower McGarvey	McG_07	Off-Chnl	Very High	Not Funded	UNK	In Progress	Spawning, Rearing
Terwer Creek	Arrow Mills to Gage	Arrow Mills to Gage	TC_03	LWD	Very High	Not Funded	UNK	In Progress	Spawning, Rearing
Klamath River	Lower Klamath	Lower Klamath	LKR_MO_01	MO	Very High	Not Funded	UNK	Complete	Restoration Effectiveness Monitoring
Blue Creek	Pularvasar to One Mile	Lower Blue Creek	Blue_01	Off-Chnl	Very High	Not Funded	UNK	In Progress	Spawning, Rearing
Johnsons Creek	Lower Johnsons	Lower Johnsons	JC_PL_01	Plan	Very High	Not Funded	UNK	In Progress	Enhancement and Protection
FY 2015 Action Plans									
Ah Pah Creek	Lower Ah Pah	Lower Ah Pah	AP_01	Off-Chnl	Very High	Not Funded	UNK	In Progress	Spawning, Rearing
Blue Creek	Lower Pularvasar	Lower Blue Creek	Blue_03	Off-Chnl	Very High	Not Funded	UNK	In Progress	Winter - Summer Rearing
Hoppaw Creek	Lower Hoppaw	Lower Hoppaw	Hop_01	Off-Chnl	Very High	Not Funded	UNK	In Progress	Spawning, Rearing
Hunter Creek	Panther Creek	Lower Hunter	HC_07	Off-Chnl	Very High	Not Funded	UNK	In Progress	Winter - Summer Rearing
Klamath River	Lower Klamath	Lower Klamath	LKR_MO_01	MO	Very High	Not Funded	UNK	Complete	Restoration Effectiveness Monitoring
FY 2016 Action Plans									
Blue Creek	One Mile to Campground	Lower Blue Creek	Blue_02	Off-Chnl	Very High	Not Funded	UNK	In Progress	Spawning, Rearing
Hoppaw Creek	Upper Hoppaw	Upper Hoppaw	Hop_02	Off-Chnl	Very High	Not Funded	UNK	In Progress	Spawning, Rearing
Johnsons Creek	Lower Johnsons	Lower Johnsons	JC_01	Off-Chnl	Very High	Not Funded	UNK	In Progress	Spawning, Rearing
Klamath River	Lower Klamath	Lower Klamath	LKR_MO_01	MO	Very High	Not Funded	UNK	Complete	Restoration Effectiveness Monitoring

Instream Restoration Effectiveness Monitoring

Crews continued conducting topographic surveys of fluvial habitats within the Lower Klamath Sub-basin to document baseline conditions and to assess habitat changes associated with implementation of instream enhancement efforts. The topographic data allows us to quantitatively assess changes associated with implemented restoration activities, to adapt ongoing implementation efforts, and to guide future restoration efforts.

In this report period, YTFP survey crews completed the following topographic surveys:

- Post-project survey of the 2009 wood loading reach in McGarvey Creek.
- Baseline and post-project surveys of the 2010 enhancement site in McGarvey Creek.
- Baseline and post-project surveys of the 2010 enhancement sites in Terwer Creek. Post-winter surveys of the project reach prior to 2011 enhancement activities.
- Baseline survey of Panther Creek pond to help characterize fish habitat.
- Baseline survey of the 2011 wood loading reach in East Fork Hunter Creek. Post-winter surveys of the project reach prior to 2011 wood loading activities.

YTFP also worked with YTEP to assess water quality parameters in several priority Lower Klamath restoration areas. These areas were monitored to allow for further characterization of baseline fluvial habitat conditions, to document post-restoration conditions, and to apply lessons learned to future designs (Fiori et al. 2011a & 2011b).

In this report period, YTFP/YTEP conducted the following water quality assessments:

- Intensive water quality assessment of Panther Creek pond to further characterize fish habitat conditions during the summer low flow period; and
- Intensive water quality assessments in McGarvey and Terwer creeks to characterize water quality conditions in constructed off-channel habitats (Figures 1-9).

Water quality assessments were coupled with fisheries investigations to increase our understanding of how fish use existing and constructed off-channel habitat features (Figures 7-10). Preliminary results from surveys of the off-channel features constructed during 2010-2011 revealed substantial winter – spring use of these habitats by both natal and non-natal coho salmon (Fiori et al. 2011a and 2011b; Pagliuco et al. 2011) (Figures 8 & 10). Terwer Creek ponds dried up in late June, while the McGarvey alcove continues to provide summer rearing habitat for juvenile fish. Surveys conducted in the alcove during June resulted in the capture of 51 young of the year (YOY) coho, a YOY chinook, and other native fish and amphibians. Summer rearing habitat for juvenile salmonids is extremely limited in the sub-basin; therefore, these results are very encouraging.

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, 2008b; Hiner 2006 and 2008; Hiner and Brown 2004). During this report period, YTFP and FGS continued coordinating with YTEP to obtain the necessary physical and biological data to develop a large-scale, process-based restoration plan for the Klamath River estuary and associated off-estuary tributaries. YTFP coordinated with the U.S. Environmental Protection Agency (USEPA) and U.S. Bureau of Reclamation (BOR) to purchase vitally important water quality and quantity monitoring equipment to increase our ability to plan, permit, and implement estuary and off-estuary habitat restoration.

• Fisheries Restoration Implementation

Stream and Floodplain Enhancement

In summer 2010, YTFP and FGS constructed a complex, off-channel habitat feature (Alcove I) (~500 ft long by ~25 ft wide), and installed three constructed wood jams in lower McGarvey Creek (Figures 1-4). The objective of these efforts was to immediately improve rearing habitat for natal and non-natal salmonid populations; and promote the development and maintenance of complex and resilient stream and riparian habitats. These efforts were part of a larger-scale stream and floodplain enhancement plan for lower McGarvey Creek developed by YTFP and FGS (Figure 1). Phase I activities were funded by the U.S. Fish and Wildlife Service (USFWS) and BOR (Native American Affairs Program - NAAP). YTFP and FGS plan to construct the second off-channel habitat feature in lower McGarvey Creek during late summer 2011 with funding from the USFWS and BOR (Klamath River Restoration Program) (Figure 1).

In summer 2010, YTFP and FGS also enhanced two off-channel wetland features in lower Terwer Creek (Terwer Creek Ponds A & B) (Figures 5-6). As part of these efforts, YTFP crews implemented willow revetment techniques along the Terwer Creek Pond B outlet channel and planted the area with native trees. The USFWS and the National Oceanic and Atmospheric Administration's (NOAA) America Recovery and Reinvestment Act Program funded these critically important enhancement efforts.

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 Yurok Tribal Native Tree Nursery currently provides hundreds of native conifer and deciduous saplings each year for Lower Klamath watershed restoration projects (Figure 11). In winter 2010-2011, YTFP planted over 4,488 native conifers in Hunter Creek and 2,710 in East Fork Hunter Creek; 73 conifers and 80 deciduous trees in lower Terwer Creek (5-gal. container size) and 7,748 conifers in upper Terwer Creek; and 225 conifers (5-gal. container size) in the lower McGarvey Creek restoration site. YTFP is also planted several hundred native conifers in the 2010 YTWDRD road decommissioning project areas in Terwer Creek.

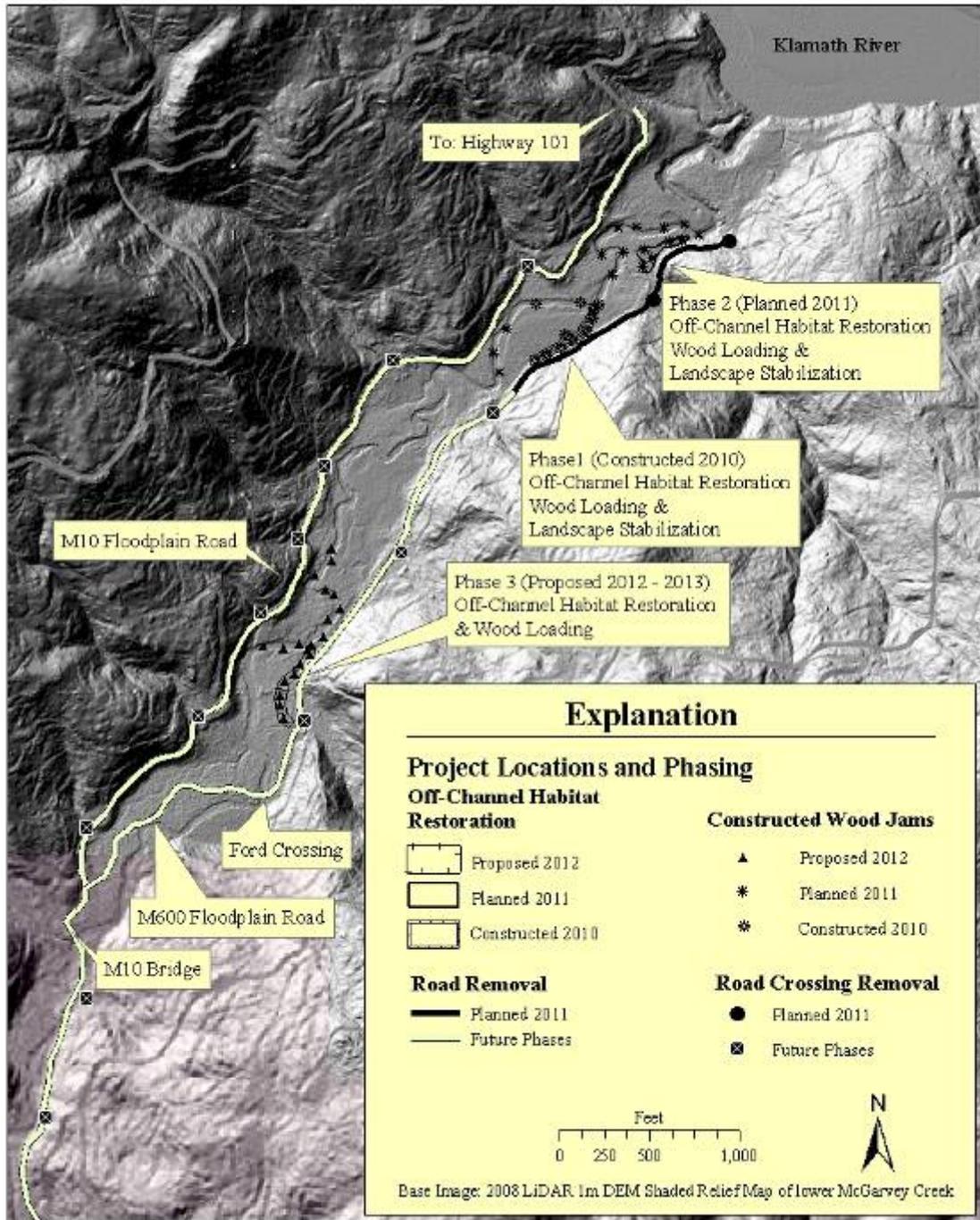


Figure 1. Map depicting a multi-phased approach to rehabilitating stream and floodplain habitats in lower McGarvey Creek, Lower Klamath River Sub-basin, California.



Figure 2. Photographs of an off-channel wetland (Alcove I) prior to construction (Top – fall 2010) and following construction (Middle 2010 - Bottom 2011), McGarvey Creek.



Figure 3. Photographs of McGarvey Creek Alcove I during construction (fall 2010).



Figure 4. Photographs of McGarvey Creek Alcove I prior to construction (Top – fall 2010) and following construction (Bottom – winter 2011), McGarvey Creek.

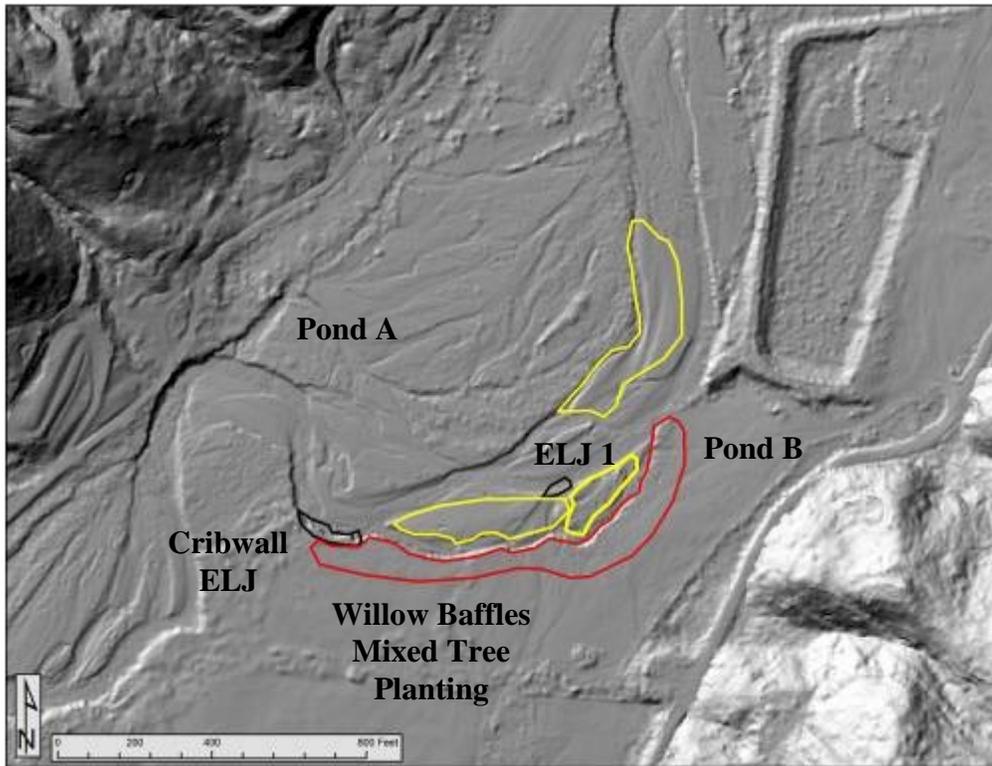


Figure 5. Maps depicting lower Terwer Creek and current restoration treatment areas.



Figure 6. Time series photographs of Terwer Pond B during 2010. Dates: a) July 15th, b) July 28th, and c) October 31st. The volume excavated to form Pond B was approximately 5,200 cubic yards providing an inundated area of ~ 1.0 acre on October 31, 2010 (c).

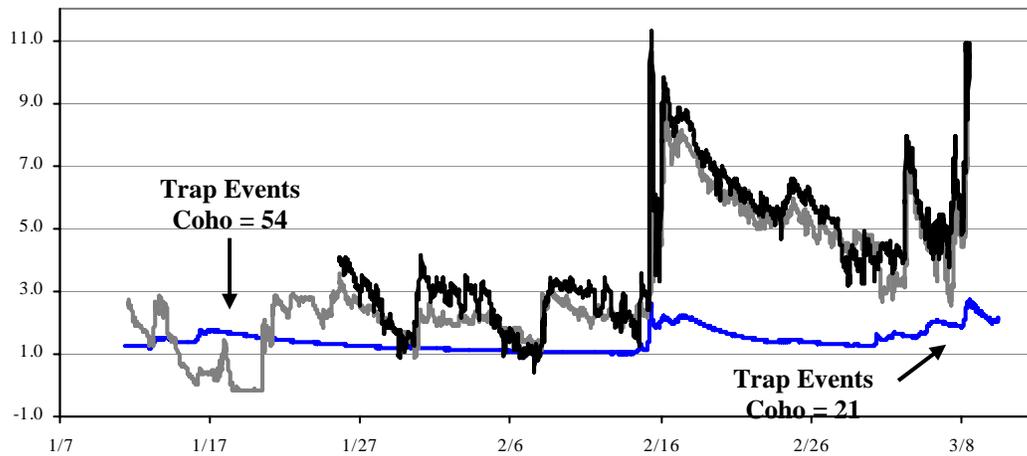


Figure 7. McGarvey Creek stage (feet - blue) and dissolved oxygen (mg/L - black, grey) in a newly constructed off-channel habitat in lower McGarvey Creek (2011).

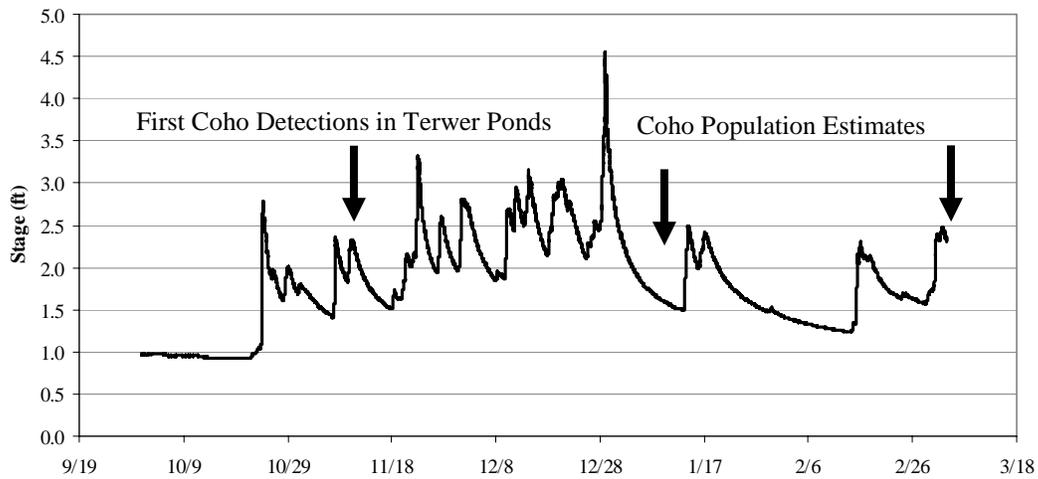
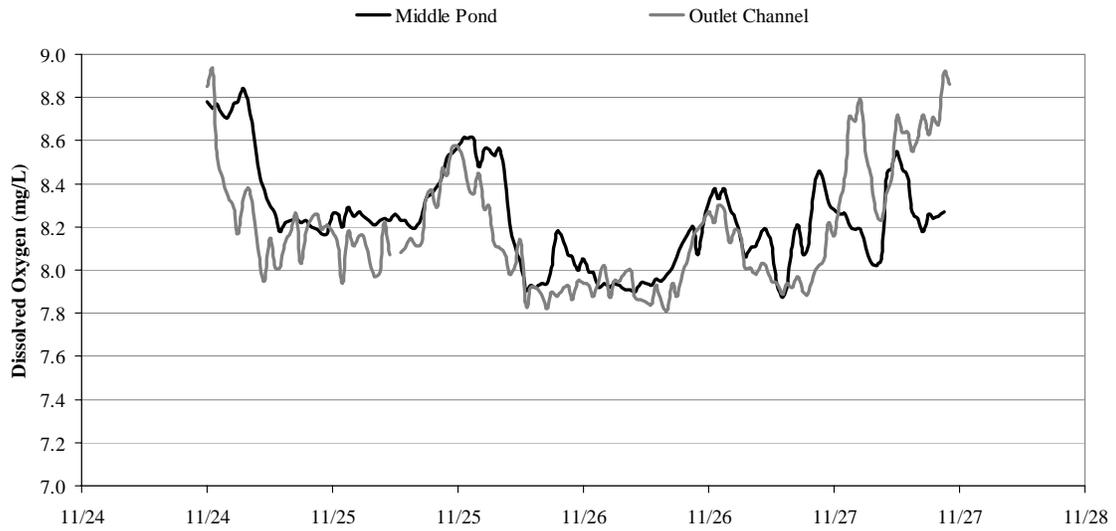


Figure 8. Terwer Creek stage and timing of the initial juvenile coho detections and trapping events in newly constructed off-channel habitat features (2010-2011).

Terwer Creek - Pond A



Terwer Creek - Pond B

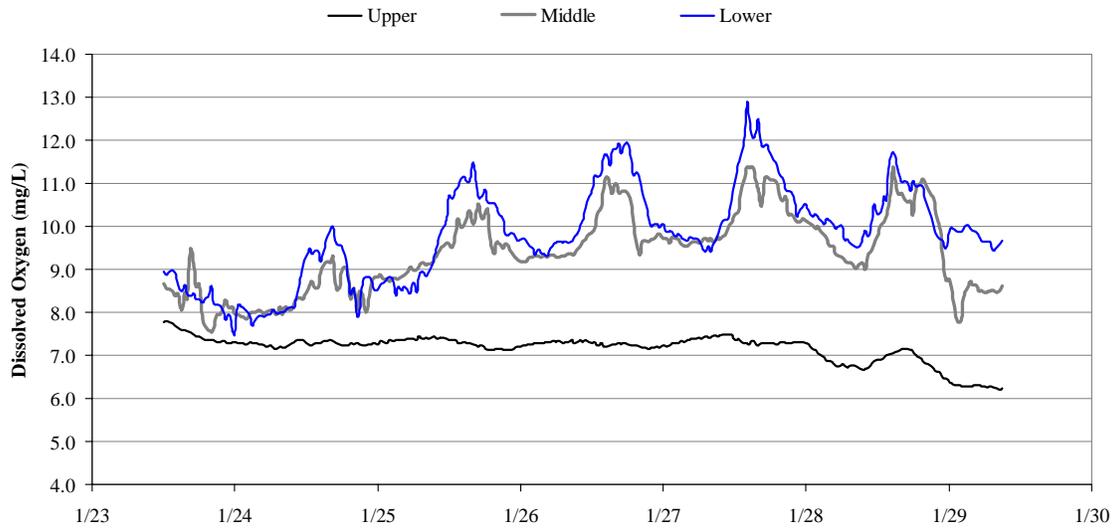


Figure 9. Dissolved oxygen measured in newly constructed off-channel habitat features of lower Terwer Creek (Pond A – Top; Pond B – Bottom) (2010-2011).

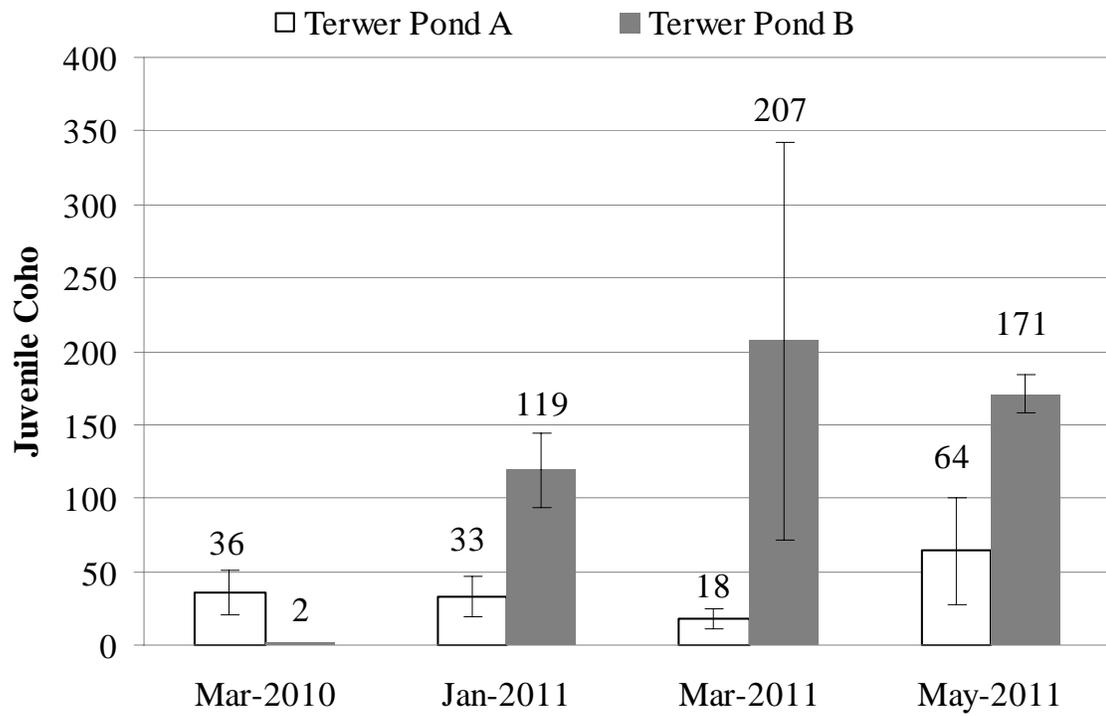


Figure 10. Mark-recapture population estimates for juvenile coho salmon in newly constructed off-channel habitats in Terwer Creek, Lower Klamath River, California.



Figure 11. Photographs of the recently constructed nursery greenhouse (Top) and native deciduous and conifer saplings at the Yurok Tribal Native Plant Nursery (spring 2010).

- **Yurok Tribe Watershed Restoration Department**

During the project period YTWRD accomplished the following tasks:

- Coordinated with the Yurok Forestry Department regarding development of two rock quarries in the sub-basin and for the removal of invasive plant species on Tribal land. YTWRD also coordinated with the Yurok Tribe Environmental Program regarding naturally occurring asbestos (NOA) at Two Snakes and Mahwah rock quarries.
- Continued implementing a Knotweed Eradication Project in and around the town of Klamath. Eradication efforts will continue throughout 2011-2012 at a minimum since it is expected to take 3-4 years to completely eradicate.
- Coordinated with several partners to conduct environmental clean-up and slope stabilization activities at the Tsuru Village located in Trinidad, California.
- Coordinated with the Trinity River Restoration Project regarding upcoming restoration projects occurring below the Lewiston Dam.
- Completed the K5 Upslope Rehabilitation Project (Figure 6) and initiated the U900 Upslope Rehabilitation Project in Terwer Creek.



Figure 6. Pre-project (Top) and post-project photographs of a former Humboldt stream crossing located in upper Terwer Creek (Site 19 – K5 Upslope Rehabilitation Project).

- **Proposals Submitted**

YTFP Lower Klamath Division submitted the following proposals:

NOAA Climate and Atmospheric Research (Climate Program Office) (Declined)

- Klamath River Estuary and Coastal Wetland Climate Change Study - \$299,284

California Department of Fish and Game (Fisheries Restoration Grant Program):

Submitted in spring 2010

- Stream and Floodplain Enhancement of Hunter - \$92,260 (**Secured Spring 2011**)

Submitted in spring 2011

- Enhancement of Lower Terwer Creek - \$5,000 (**Secured Spring 2011**)
- Stream and Floodplain Enhancement of Lower McGarvey (Phase III) - \$89,308
- Terwer Creek Off-channel Habitat Restoration Feasibility Study - \$90,421
- Monitoring Natal and Non-natal Salmonids in McGarvey Creek - \$173,021

U.S. Bureau of Reclamation Native American Affairs Funding (NAAP):

- Klamath River Estuary Restoration Planning - \$75,000 (**Secured Fall 2010**)
- Restoration of Water Quality in Terwer Creek - \$37,178 (**Secured Spring 2011**)

USFWS Partners for Fish and Wildlife Funding:

- East Fork Terwer Creek Riparian Revegetation Project - \$41,211 (Declined)
- Enhancement of Winter Rearing Habitat in Arrow Mills Creek (Phase I) - \$94,484 (**Secured Spring 2011**)
- Enhancement of Winter Rearing Habitat in Lower McGarvey (Phase III) - \$94,484 (**Secured Spring 2011**)

National Fish and Wildlife Foundation Funding:

- Lower Klamath Coho Enhancement Implementation and Planning - \$121,723

YTWRD submitted four proposals in Spring 2010 to conduct upslope road decommissioning activities in priority areas identified in the Hunter Creek watershed. All of these projects were funded and will be initiated in summer 2011-2012. The funding awarded for these projects totaled approximately \$960,000.

- **Meetings Attended**

YTFP and YTWRD held regular meetings throughout the project period to coordinate ongoing and future sub-basin assessment, monitoring, and restoration activities.

YTFP and YTWRD held regular meetings with Green Diamond Resource Company (GDRC) (Primary Lower Klamath landowner) during the project period. These meetings were held to discuss ongoing and future watershed assessment, monitoring, and restoration activities within the Lower Klamath River Sub-basin. Currently YTFP and FGS are coordinating with GDRC to conduct an innovative timber harvest that will

produce high quality, whole tree materials (e.g. stems with rootwads attached and stems with complex limb structures) and “slash” for YTFP’s instream restoration projects. Obtaining quality sources of wood is currently a huge limitation to sub-basin restoration.

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 – California 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 the California Department of Fish and Game (CDFG), BOR, NOAA, and USFWS during the project period to coordinate ongoing and future restoration projects; and to conduct pre- and post-project field reviews.

YTFP and FGS led a field tour of lower Terwer Creek for staff from NOAA and CDFG. The objectives were to present an overview of off-channel enhancement and to discuss project design, effectiveness monitoring, and use of the ponds by juvenile coho salmon.

YTFP and FGS led a field tour of Terwer and McGarvey creeks for staff from USFWS Partners for Fish and Wildlife Program – Klamath River. The objectives were to present an overview of recent wood loading and off-channel enhancement efforts and to discuss project design, effectiveness monitoring, and use of constructed habitats by salmonids.

YTFP led a field tour of lower Terwer Creek for staff from BOR, NOAA, Cramer Fish Sciences, and other stakeholders. The objectives were to present an overview of the enhancement efforts implemented in the watershed and to discuss use of the constructed off-channel wetlands by juvenile coho salmon. The group then received a guided jet boat ride up the Klamath River to the mouth of Blue Creek.

YTFP and YTEP led USEPA staff on a field tour of the estuary and discussed the ongoing off-estuary restoration planning and implementation project in Waukell Creek.

YTFP worked with YTEP to host the AmeriCorps Watershed Stewards Project interns during their spring training. YTFP staff and FGS led tours of priority off-estuary and coastal tributaries to present an overview of the fisheries monitoring, research, and enhancement efforts currently being implemented in the sub-basin by the Yurok Tribe.

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 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, Larry Lestelle, U.S. Geologic Survey, and CDFG over the project period to plan and implement the Coho Salmon Ecology Study and other related salmonid monitoring projects.

YTFP restoration staff continued participating in professional committees and programs such as the Peer Review Committee for CDFG's FRGP, the Pacific Marine and Estuary Partnership, and the North Coast Integrated Resource Regional Water Management Plan.

YTFP recently provided NOAA with extensive comments on their most current draft recovery plan for Southern Oregon Northern California Coast coho salmon.

YTFP and FGS continued participating in the Klamath Basin Restoration Act process.

YTFP continued coordinating with YTEP as part of their Lower Klamath Wetland Program and to further develop restoration strategies for the Salt Creek watershed.

YTFP worked with NOAA, the Yurok Council, and other stakeholders to observe and study a mother grey whale and her calf that migrated into the Klamath River during summer 2011. The pair of whales have been residing in the lower river for over a month.

YTFP met with CDFG, BOR, USFWS, Kate Sloan (YTEP), and Bob McConnell (THPO) on several occasions to discuss environmental and cultural compliance requirements for 2011-2012 instream restoration projects in several Lower Klamath tributaries.

YTFP worked with CDFG to conduct amphibian surveys in newly constructed off-channel wetlands in Terwer and McGarvey creeks and in an existing off-channel habitat proposed for enhancement in the Hunter Creek watershed. Preliminary results indicate extensive use of the McGarvey Creek alcove by multiple native amphibian species. YTFP hopes to continue these monitoring efforts with CDFG to document both short- and long-term use of these habitats by native amphibians.

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.

Lead YTFP staff attended a wetland construction workshop in Weaverville, California. The workshop focused on construction techniques that benefit native fish, birds, reptiles, and amphibians as well as restoration and management strategies for wetland habitats.

The workshop consisted of various presentations by wetland experts, tours of constructed wetlands in the Trinity River, and construction of two small wetland habitats.

Lead YTFP staff attended a NEPA/CEQA training in Pasadena, California. This training will greatly improve our understanding of environmental law and improve our ability to get federal permits to continue implementing restoration in the Klamath.

Sarah Beesley (YTFP) attended the River Restoration and Natural Channel Design (Level IV) training provided by Dave Rosgen (PhD/PH) of Wildland Hydrology. The course focused on natural channel design principles using a "hands on" approach that provided intensive training in river restoration, stabilization, and fish habitat enhancement.

YTFP staff attended the 29th annual Salmonid Restoration Federation conference held in San Luis Obispo in March 2011. YTFP coordinated with Rocco Fiori (FGS) on two presentations regarding off-channel habitat construction and preliminary water quality assessments and fisheries investigations of the sites located in McGarvey Creek and Terwer Creek. YTFP and FGS also coordinated with NOAA staff to present a poster at SRF that highlighted the off-channel fisheries data collected during winter 2010-2011.

YTWRD met regularly throughout the project period with representatives of RNPS to discuss ongoing and future projects on RNP property and at the Requa Facility Project.

- **YTFP Project Reports Completed**

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Yurok Tribal Fisheries Program. 2011. Terwer Creek Riparian Conifer Restoration Project – Middle Reach. Yurok Tribal Fisheries Program, Klamath, California.

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