

Yurok Tribe Environmental Program

Wetlands Program Plan

Goal /Objective:

The Yurok Tribe Environmental Program's (YTEP) Wetlands Program is dedicated to the inventory, monitoring, assessment and protection of wetlands within the Yurok Reservation. YTEP's Wetland Program also works in coordination with and support of the Yurok Tribe's efforts in wetlands restoration as implemented by the Yurok Tribe Fisheries Program (YTFP) and Yurok Tribe Watershed Restoration Department (YTWRD). The Tribe's wetlands restoration efforts are driven by the desire to protect salmonids and other native fish that rely on Klamath River wetlands for critical habitat. This plan outlines the goals and objectives of YTEP's Wetlands Program and makes linkages to efforts undertaken and implemented by YTFP and YTWRD. It is not YTEP's intent to identify goals or priorities of those tribal programs involved in implementing the Tribe's fisheries protection and restoration efforts, but rather to define the goals and objectives of YTEP's Wetlands Program for the next six years.

The Yurok Reservation, specifically areas adjacent to the Klamath River Estuary (KRE), contain several wetland complexes in various ecological conditions that serve as critical habitat for anadromous salmonids, especially for ESA listed coho salmon. Understanding and improving the functional role of KRE wetlands (i.e.: critical fish habitat) is a unifying goal for all three tribal programs that work with wetlands resources. YTEP's Wetlands Program intends to support tribal wetlands protection and restoration efforts by collecting a range of baseline environmental data on wetland complexes within the Yurok Reservation and developing a tribal regulatory framework for wetlands protection. YTEP plans to continue seeking funding and support from USEPA and other agencies to refine its Wetlands Program through continued data gathering and analysis, and promulgation of tribal codes and ordinances in support of the larger goal of wetlands protection.

This Wetlands Program Plan (hereinafter referred to as the Plan) should be considered an Adaptive Management Plan, one that will be updated, as needed, based on emerging data and analysis. An adaptive, science-based approach is necessary to facilitate a dynamic structure on which the wetland program can be developed and administrated. Plan development will use traditional ecological knowledge; fisheries and watershed programs experience and expertise; and our own departmental expertise in water quality, environmental monitoring, bioassessments, and environmental regulation to contribute to restoration of the Klamath River and its fisheries. Continued staff development and program capacity through technical and regulatory trainings for YTEP staff will enable the Tribe to continue to develop Tribal capacity necessary to manage and protect wetlands in the Lower Klamath River, and better assist YTFP and YTWRD restoration and implementation efforts.

The following actions are related to the Core Elements Framework which outlines successful wetland program development. Each previous action contains a reference to the Core element, objective, and action as outlined by EPA. For a more detailed explanation of previous actions undertaken by YTEP please refer to the following narrative sections

YTEP Wetlands Program – Previous Program Development:

2007:

- Develop quality assurance documents for wetland CRAM data collection
(*Monitoring and Assessment objective 1, action B,C, and D*)

<http://www.yuroktribe.org/departments/ytep/documents/YTEPWetlandCRAMQAPP.pdf>

2008:

- Inventory depressionnal and estuarine wetlands of the Klamath River Estuary
(*Monitoring and Assessment objective B and D*)

2009:

- Assess wetlands using the California Rapid Assessment Method (CRAM)
(*Monitoring and Assessment objective 2, action B and D*)
- Identify priority wetland restoration sites based on CRAM results
(*Monitoring and Assessment objective 2, action E; Regulatory objective 2, action F*)

http://www.yuroktribe.org/departments/ytep/documents/FinalKREWetlandRestorationPrioritizationPlan102009_000.pdf

- Develop a wetlands mitigation tracking component
(*Regulatory, objective 2, action G*)

2010:

- Develop a Water Quality Monitoring Quality Assurance Program Plan
(*Monitoring and Assessment objective 1, action B, C and D*)

<http://www.yuroktribe.org/departments/ytep/documents/YTEPQAPPforKREWWaterQuality.pdf>

- Assess water quality in wetlands previously scored with CRAM
(*Monitoring and Assessment objective 2, action B*)

2011:

- Integrate monitoring data to evaluate wetland condition/function to inform decision making.
(*Monitoring and Assessment objective 2, action E*)

- Establish reference wetlands
(Monitoring and Assessment objective 2, action C)
- Develop the Yurok Tribe Environmental Program Wetlands Program Plan
(Monitoring and Assessment- objective 1, action A)

YTEP received its first Wetlands Program Development grant from USEPA in 2008. This two-year grant funded the initiation of YTEP's Wetlands Program and the recruitment and training of a Wetlands Program Specialist. A second 2-year grant was received from USEPA to continue program development in 2009. YTEP intends to pursue additional funding from USEPA's Wetlands Development Program to continue to build program capacity in wetlands monitoring, collection and analysis of baseline data, and developing wetlands regulations through the tribal codes, ordinance and a Wetlands Protection Plan and Wetlands Water Quality Standards.

In 2008, YTEP began developing an inventory of wetlands and documenting ambient conditions of these areas using the California Rapid Assessment Method (CRAM) for wetlands. The goal of this work was to use CRAM to document baseline conditions of depressional wetlands. Information gained from these efforts is intended to assist with assessing wetland restoration potential and the prioritization and identification of impaired wetlands suitable for compensatory mitigation by outside agencies.

In 2009, YTEP and YTFP were the recipients of a grant from BOR to continue working with Fiori GeoSciences to develop conceptual restoration designs for an impaired KRE wetland complex. Priority project Treatment as a States included development and implementation of a soil sampling protocol for this site and collection of CRAM data. Soil sampling and CRAM information, along with topographic and hydrologic data, is currently being used to further characterize site conditions, help determine wetland enhancement feasibility, and further develop conceptual restoration designs for this priority KRE wetland.

In 2010, YTEP initiated a water quality monitoring program in the KRE wetlands previously assessed in 2008-2009. Priority goals of this ongoing study include assessing relationships between water quality and certain wetland functions and attributes, using collected data to update the wetland restoration priorities list, and begin developing water quality standards for KRE wetlands.

YTEP's Wetlands Program continues to expand its capacity and coordination with YTFP and YTWDRD as the Tribe strives to protect critical fisheries habitat and resources through wetlands protection efforts.

Future Work -Proposed Schedule:

This Plan outlines YTEP goals and objectives to be accomplished over the next six years (2012 – 2017). All efforts identified in the proposed schedule are intended to collect baseline data for the purposes of protection, particularly in response to Climate Change. Year 1-4 will focus on the collection and assessment of environmental conditions and baseline data to inform Climate Change adaptation planning efforts identified in years 5 and 6. While it is understood that Treatment as a State (TAS) from USEPA for CWA does not confer regulatory authority under CWA 404, TAS activities are included as an example of how the Tribe is working towards increased regulatory authority on the reservation. Tribal ordinance and the development of a Yurok Tribe Wetlands Protection Plan are additional efforts to be undertaken for the purpose of enhancing Tribal regulatory and jurisdictional authority within the reservation. This Plan is intended to outline YTEP's program development needs and objectives and better plan for future funding and coordination opportunities. As per USEPA Program Plan guidelines, YTEP presents the following proposed general schedule for wetland program objectives:

Note: Each action references the core element, objective, and action as outlined by US EPA, http://water.epa.gov/grants_funding/wetlands/cefintro.cfm. For a further explanation of actions refer to the narrative section on the following pages of this plan. Actions will be described under the narrative for each core element.

Year 1 - 2012:

- Continued data collection and analysis of wetlands water quality
(Water Quality Standards -objective 2, action A)
- Initiate macroinvertebrate bioassessments for KRE wetlands complexes
(Monitoring and Assessment- objective 1, action C; objective 2, action A and B)
- Inventory and map wetlands in the Upper Yurok reservation.
(Monitoring and Assessment- objective 2, action B and D)
- Participate in Treatment as a State (TAS) application process to USEPA Region 9 for CWA authority *(Regulatory -objective 1, action A)*

Year 2 - 2013:

- Continued data collection and analysis of wetlands water quality
(Water Quality Standards- objective 2, action 1)
- Continue and complete macroinvertebrate bioassessments for KRE wetland complexes
(Monitoring and Assessment- objective 2, action B)
- Continue to inventory and map wetlands in the Upper Yurok reservation.
(Monitoring and Assessment- objective 2, action B and D)

- Review and revise YTEP's Wetlands Program Plan (adaptive management)
(Monitoring and Assessment- objective 1, action A, B and C; Regulatory- objective 1, action D; Voluntary Restoration- objective 4, action C; Water Quality Standards- objective, action 1)

Year 3 – 2014:

- Continued data collection and analysis of wetlands water quality
(Water Quality Standards- objective 2, Action 1)
- Conduct wetlands plant surveys as part of continued bioassessment data collection
(Monitoring and Assessment- objective 1, action C, objective 2, action A and B)
- Assess wetlands identified in the Upper Yurok Reservation
(Monitoring and Assessment- objective 2, action B and D)
- Begin development of Wetlands Protection Plan and draft ordinances
(Regulatory- objective 2, action A)
- Begin tribal process (community scoping, OTA review, Council review) for Yurok Tribe Wetland Protection Plan and ordinance
(Regulatory- objective 2, action A)
- Update and revise Yurok Water Quality Control Plan and permitting process to include wetlands
(Water Quality Standards- objective 3, action A)

Year 4 - 2015:

- Continued data collection and analysis of wetlands water quality
(Water Quality Standards- objective 2, Action 1)
- Conduct wildlife surveys as part of continued bioassessment data collection
(Monitoring and Assessment- objective 1, action ;, objective 2, action A and B)
- Continue to assess wetlands identified in the Upper Yurok Reservation
(Monitoring and Assessment- objective 2, action B and D)
- Begin Climate Change assessments and impact modeling for KRE wetlands complexes
(Monitoring and Assessment- objective 2, action B)
- Begin drafting Tribal Water Quality Standards specific to wetlands
(Water Quality Standards- objective 2, action 4)
- Review and revise YTEP's Wetlands Program Plan (adaptive management)
(Monitoring and Assessment- objective 1, action A, B and C; Regulatory- objective 1, action D; Voluntary Restoration- objective 4, action C; Water Quality Standards- objective, action 1)

Year 5 - 2016:

- Continued data collection and analysis of wetlands water quality
(Water Quality Standards- objective 2, Action 1, 2, and 3)
- Compile bioassessment results in summary report for all KRE wetlands complexes
(Monitoring and Assessment- objective 2, action E)
- Complete Water Quality Standards for wetlands
(Water Quality Standards objective 2, action 4)
- Continue Climate Change assessments for KRE wetlands complexes
(Monitoring and Assessment objective 2, action B)

Year 6 - 2017:

- Analyze baseline water quality and bioassessment data
(Monitoring and Assessment- objective 2, action E)
- Compile comprehensive report on baseline monitoring and assessments conducted since beginning of YTEP Wetlands Program
(Monitoring and Assessment- objective 2, action E)
- Complete a KRE Wetlands Climate Change Adaptation Plan with YTFP and YTWRD
(Monitoring and Assessment- objective 2, action B)
- Review and revise YTEP's Wetlands Program Plan (adaptive management)
(Monitoring and Assessment- objective 1, action A, B and C; Regulatory- objective 1, action D; Voluntary Restoration- objective 4, action C; Water Quality Standards- objective, action 1)

Monitoring and Assessment:

YTEP will work with YTFP and YTWDRD to develop a Yurok Reservation Wetlands Monitoring Plan. This plan will define new water quality and quantity monitoring projects and describe new and previously established methods to develop a comprehensive understanding of the dynamic conditions in these wetlands. This monitoring plan will guide wetland monitoring and assessment activities that YTFP and YTEP conduct to help build collaboration between departments, eliminate redundancy of efforts, and expand overall tribal capacity.

YTEP's Wetlands Program currently conducts water quality monitoring of wetlands complexes through the use of data sondes and will continue to do so in future years. This monitoring provides critical baseline data on current conditions. YTEP will continue this monitoring in future years with the purpose of collecting a comprehensive data set on water quality conditions over time to allow for analysis with the intent of informing how these parameters relate to use by anadromous salmonids. Water quality data will be analyzed as it is collected but also undergo a comprehensive analysis after several years to gain confidence and establish any trends. Baseline data of water quality in Klamath River Estuary wetlands will also be used in creating water Quality Standards for wetlands, which will also have a regulatory role in the Tribal water quality permit that

Bioassessments of wetland complexes will be proposed and conducted in future years in an effort to gain a more comprehensive understanding of wetlands function. Bioassessments can provide insights and data regarding ecosystem function that standard water quality/quantity monitoring by itself cannot. These efforts will expand our scientific and biological understanding of these complex and dynamic ecosystems and may provide insights into habitat suitability and inform restoration priorities. YTEP plans to focus on macro-invertebrate studies, plant surveys, and wildlife studies. It is anticipated the macro-invertebrate studies will take 1-2 years and plant surveys and wildlife studies consisting of 1 season. The data will be analyzed as it is completed, but will also be used again in the future to assess Climate Change and sea level rise impacts.

Climate Change impacts have the potential to significantly affect wetlands complexes in the Lower Klamath River and the estuary. Sea level rise and changes in hydrology may alter the distribution, location and extent of wetlands complexes in the Yurok Reservation. It is logical to assume these changes may have significant impacts on Klamath River fisheries, fisheries and restoration priorities for the Tribe. YTEP will conduct baseline assessments for plants, macro-invertebrates and water quality monitoring to later assist in climate change planning efforts to inform responses and identify needs for protecting these critical habitats and ecosystems. Modeling and mapping efforts will be undertaken in collaboration with YTFP and YTWDRD to assist in predicting and planning for Climate Change impacts on these critically valuable wetlands complexes. A final outcome of this Plan would be the development of a KRE Wetlands Climate Change Adaptation Plan developed in coordination with YTFP and YTWDRD.

YTEP will continue building monitoring and assessment capacity through training, workshops, conferences, inter-department and inter-agency networking. YTEP's participation in the California Wetlands Monitoring Workgroup and the National Wetland Monitoring and Assessment Workgroup will continue to help facilitate representation in state and federal standardized method development.

YTEP will continue to develop its monitoring and assessment program capacity through attending and/or participating in trainings, workshops, conferences, inter-department and inter-agency networking. A goal of this participation is to help facilitate thorough regional representation in state and federal standardized method development. To meet this goal, YTEP will attend the National Wetland Condition

Assessment Training, and participate in quarterly meetings as a part of the National Wetlands Monitoring and Assessment workgroup. YTEP will also participate in the California Wetlands Monitoring Workgroup, and submit abstracts to present studies at regional and national conferences.

Regulatory:

The Yurok Tribe continues to expand and enhance its regulatory and jurisdictional framework for a range of resources within the Yurok Reservation. Re-organized in 1988 under the Hoopa-Yurok Settlement Act and the adoption of the Yurok Constitution in 1993, these efforts are fairly recent and ongoing as the Tribe reestablishes its sovereignty over its reservation and resources.

YTEP continues to develop and promulgate tribal codes, ordinance and regulations in support of these efforts, through the assumption of USEPA regulatory authority. YTEP is currently working on Treatment as a State (TAS) applications for both Air and Water as part of these efforts. YTEP has already promulgated some regulations and ordinances such as the Tribe's Water Quality Control Plan and tribal permitting process, Smoke Management Plan and tribal permitting process and a range of solid and hazardous waste ordinances.

Developing a Wetlands Protection Ordinance and Wetlands Protection Plan, in coordination with other tribal departments and the tribal membership, are goals of YTEP's Wetlands Program for future years. The ordinance and plan will define the jurisdiction of YTEP regulatory authority, establish a scope of regulated activities, define criteria for responding to and reviewing project applications, establish criteria for effective mitigation, and develop integration with the existing water quality control program. YTEP will upgrade and revise the existing Water Quality Control Plan to include wetlands protections to expand and enhance these tribal regulatory efforts. Due to complex jurisdictional issues and the need to obtain TREATMENT AS A STATE for Clean Water Act authority, these efforts need to be worked through carefully with input from tribal members, legal counsel and approval by Tribal Council. These efforts will take time to develop through the Tribe's internal ordinance process. YTEP Wetlands Program staff will need continued training to build this technical capacity and legal consultants may be needed to successfully navigate through complex issues for the Tribe. These efforts will take a number of years to fully complete. YTEP's Wetlands Program will take the lead in these efforts and will continue seeking funding to assist in building tribal regulatory and jurisdictional capacity.

Voluntary Restoration and Protection:

As previously noted, restoration design and implementation are undertaken by the Tribe's Fisheries and Watershed Restoration Programs, not YTEP. These departments coordinate with landowners and resource agencies to develop and implement watershed and fisheries restoration projects throughout the Klamath Basin. Restoration efforts are funded through various, competitive state and federal grant programs. YTEP works in support of these efforts specific to water quality/quantity monitoring data gathering and analysis but does not engage in restoration projects or the negotiation of these types of voluntary agreements with private landowners within the Yurok Reservation. YTEP participates in meetings with outside agencies in wetlands mitigation planning and development with YTFP. YTFP and YTEP will continue to coordinate monitoring, data collection and data analysis efforts in these wetland complexes to ensure restoration activities continue to be driven by the most up-to-date science.

YTEP presents examples of the restoration efforts currently led by YTFP to demonstrate how the Tribe implements wetlands restoration in the Lower Klamath River:

YTFP has been restoring critical salmonid habitat in the Lower Klamath for nearly 15 years. Restoration efforts focus on rehabilitating riparian forests and increasing stream habitat complexity and resiliency. YTFP has always worked closely with YTWDRD to coordinate upslope and instream restoration efforts in the Lower Klamath River Sub-basin.

YTFP is currently working with YTEP and other restoration partners to develop and implement a restoration plan for KRE and its surrounding habitats. YTEP will assist in the development of this restoration plan by providing existing data and collecting additional data needed to help inform this process. YTEP can also assist YTFP in conducting restoration effectiveness monitoring.

YTFP will initiate a large-scale stream and wetland restoration effort in Waukell Creek, a priority off-estuary tributary to the Klamath River in 2012. Restoration planning and implementation in this watershed is currently funded by the USEPA, U.S. Bureau of Reclamation (BOR) and U.S. Fish and Wildlife Service (USFWS). YTFP will also enhance existing off-channel wetlands in Hunter Creek, Terwer Creek, and McGarvey Creek. These efforts will be funded through the USFWS.

YTFP will construct a second off-channel wetland feature in McGarvey Creek as part of their Salmonid Rearing Habitat Improvement Project funded by the BOR and USFWS. YTFP will also continue enhancing one of the newly constructed off-channel wetlands in Terwer Creek currently funded by grants from the National Oceanic and Atmospheric Administration and USFWS.

Water Quality Standards for Wetlands:

As part of YTEP's Wetlands Program development, YTEP will continue the ongoing wetlands water quality study. Establishing water quality standards requires a thorough understanding and confidence of the conditions existing in wetlands and requires a comprehensive multi-year monitoring effort. Existing baseline data will be used to further characterize and assess wetland conditions and function. Information gained through these efforts will be used to facilitate refinement of data collection methods, site location planning, and data management and reporting. Information gained through these efforts will be used to develop Tribal Water Quality Standards for wetlands complexes within the Yurok Reservation. As noted previously, YTEP has an existing Water Quality Control Plan and permitting process. These documents will be revised and expanded to include standards specific to wetlands. YTEP will continue working towards development of regulations and water quality standards specific to wetlands within a Tribal Wetlands Protection Ordinance and plan. Pursuit of TAS for CWA authority from USEPA will enhance the Tribe's regulatory authority to protect waters within the Yurok Reservation.

Approval:

This plan has been reviewed and approved by the Yurok Tribal Council.

Thomas O'Rourke x  Date x 4-12-11

Yurok Tribe Chairman