Quartz Valley Indian Reservation
Environmental Protection Department
Wetland Program Plan
2011

Cathy Kindquist, EPD Director

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Sarah Schaefer, Biologist

Sarah Schaefer 3/15/2011

Quartz Valley Indian Reservation ♦ 13824 Quartz Valley Road ♦ Fort Jones, CA 96032

Study Area:

Quartz Valley Indian Reservation (QVIR) consists of approximately 694 acres in Quartz Valley, a small valley within the western portion of Scott Valley, in Northern California (see attached map). The Scott Valley Watershed, which is included in the Klamath River Basin, is 662 miles^2 and is considered a unique geographic setting due to the mountainous perimeter of the watershed that isolates this region apart from the rest of Siskiyou County (Siskiyou County General Plan Amendment). Shackleford, Mill, and Sniktaw Creeks border or are in close proximity to the Reservation and are the primary water sources of QVIR. These pristine creeks originate in the Marble Mountain Wilderness Area, draining into the Scott River and eventually into the Klamath River. The Klamath River drains into the Pacific Ocean at Klamath, California. The average seasonal runoff for these major drainages is 400,000 acre feet for the Scott River and 2,430,000 for the Klamath River which once supported the 3rd largest run of anadramous salmon on the west coast (http://www.americanrivers.org/about-us).

Project Setting:

In 1937 and 1939, over 600 acres of land on the mouth of Shackleford Creek was bought by the Federal government under the 1934 Reorganization Act for Indian People. The Termination Act of 1953, designed to give

Indian people a choice of trading their Indian status for deeded land, started proceedings that led to the termination of the Reservation in 1960. The Reservation land was divided and deeded to those Indians choosing to terminate in August 1964. Nearly 50% of the deeded property was immediately seized for debts owed by the Indian people, and more was seized the following year for unpaid taxes. Over the next few years, 90% of Reservation lands were sold out of Indian ownership. Twenty years later, in 1983, the termination was declared unlawful under the Tillie Hardwick class action suit. The Reservation was legally reinstated; however, no land was returned or replaced to the Indian people at that time. QVIR reorganized in 1988 when some of the original land was returned to Tribal status and Tribal administrative facilities were developed within Tribal boundaries.

The QVIR consists of 694 acres of which 143.37 are tribally owned with a membership totaling 221 members. There are thirty homes and a Tribal Administrative building serviced by fifteen wells and thirty septic tanks. One hundred twenty five individuals live in tribal housing on the Reservation.

During the termination period, QVIR land was settled and developed by various non-Indian individuals and agricultural enterprises. The drinking and traditional fishing water sources of the Tribe are now diverted for agricultural and ranching uses. The degradation of water quality and quantity in tribal waterways has contributed to severe declines in anadramous fish where the coho salmon (*Oncorhynchus kisutch)* is now protected under the endangered species act (Threatened Status NOAA), Steelhead are Threatened and the Pacific Lamprey is under review for special protection.. Currently, most free-flowing waters within QVIR boundaries are impaired from agricultural demands, agricultural run-off, livestock, and other pollutants, such as fertilizers and pesticides (QVIR data).

Local ground water storage is being stressed by increasing demands from agricultural users and declining ground water levels. As mandated in-stream water flows have become critical to the recovery of salmonids, agricultural users are turning to the drilling of agricultural wells to meet their demands, placing further stress on ground water basins and threatening the ecological health of tribal watersheds. In addition, the status of many septic systems and wells within QVIR boundaries is of great concern, especially the risk from contamination and health to tribal members. Moreover, because QVIR is located thirty-five miles from an authorized County Dump, runoff and seepage from unregulated dumpsites create pollution risk for both surface and ground

water. Indeed, water quality data indicates e.coli and coliform pollution of residential wells, prompting the Indian Health Services to assist QVIR in developing a community water system so safe drinking water is accessible to reservation residents.

Project History:

Because of the termination history of Reservation lands, Quartz Valley Indian Reservation has been performing Clean Water Act Activities such as Non-point Source Planning and mitigation, conducting water quality monitoring, and finalizing the Baseline Water Assessment Report begun in FY05.

Activities began in FY05 and continued in FY06 with CWA 106 funding from EPA. A Quality Assurance Project Plan (QAPP), Well-Head Protection Plan, Non-Point Source Pollution Plan was developed in FY05, FY06, FY07; sampling began in the spring of FY07. Sampling results were used to identify and prioritize CWA 319 activities beginning in FY08. During FY08, the tribe began the first stages of a Microbial Source Tracking Study and the Shackleford Creek Restoration project.. Significant funding was received in FY09 from California Department of Fish and Game that matched CWA319 funding to implement a bio-engineering project on Shackleford Creek. Implementation of the restoration did not coincide with grant fund timing, as restoration needed to be implemented during certain seasonal conditions. Restoration money was returned to California Department of Fish and Game; however QVIR plans to re-apply for these monies for project completion.

Project Goal Statement

QVIR will develop a wetland inventory, monitoring, and education program from 2011-2015 to implement preventative measures for wetlands preservation and to develop knowledge of how wetlands habitats on QVIR are contributing to water quality, fish, and wildlife populations.

Actions, Activities and Timeline:

Year One (2011):

Action: Develop procedures for identifying, quantifying, and classifying QVIR wetlands according to the five layer hierarchical classification system (USFWS, Cowardin and Golet, 1995).

Activities

- Attend training on wetland inventory and assessment.
- Collaborate with interested parties and land owners within the Quartz Valley community to identify goals.
- Develop standardized methods for inventory and monitoring to assess condition and trend of identified wetlands.

Action: Develop procedures for wildlife inventory and monitoring protocols for wetland species composition, richness, and utilization.

Activities

- Conduct initial inventories of birds and mammals
- Identify target indicator species for monitoring.
- Set up survey inventory methods and schedules.
- Implement surveys
- Develop database management protocols.
- Research wildlife assessment programs, get training to use these programs (CRAM, for example).

Year Two (2012):

Action: Develop and implement monitoring strategies of identified wetlands.

Activities

- Conduct ground surveys to classify local dominance type and modifiers to QVIR wetlands identified in the ***National Wetland Inventory (NWI)*** database.

- Prioritize wetland inventory for potential threats to adopted tribal water quality standards cite, impact to local fisheries, cultural use of sites, and quality of water in tribal wells.
- Integrate monitoring strategies with current water quality monitoring program (CWA 319, CWA 106) so as not to duplicate efforts.
- Utilize GPS systems for establishing permanent monitoring stations and standardized databases.
- Evaluate monitoring results for potential restoration and protection.

Action: Identify potential wetland restoration projects.

Activities

- Identify goals for restoration activities.
- Seek restoration funding for newly identified and prioritized wetlands.
- Seek restoration funding for previously identified wetlands, such as the Shackleford Restoration Project (project proposal available for review).
- Implement restoration projects, if funding can be acquired, and monitor restoration results.

Action: Inventory and monitor wildlife species in wetland areas, make adjustments to actions and activities where possible to improve monitoring program.

Activities

- Refine survey protocols where needed, document results.
- Continue to gather data on species richness and diversity.
- Make necessary changes to improve accuracy and efficiency of surveys.

Year Three (2013):

Action: Continue wetland inventory and monitoring protocols to evaluate overall changes in quantity and quality of wetland habitat.

Activities

- Utilize GIS software for detecting change in abundance of wetland habitats..
- Determine overall wetland habitat quality/quantity percent gain and/or loss.
- Evaluate best practices in monitoring and restoration activities

Action: Implement restoration activities/projects.

Activities

- Educate and involve local community, whenever possible, in restoration activities
- Make roadside signs to point out restoration projects.
- Evaluate restoration project success for increases in wetland habitat type quality and quantity through standardized monitoring program.
- Identify potential restoration activities, seek funding for implementation.
- Begin implementing identified restoration projects, pending funding.

Action: Evaluate monitoring program to determine how well it is meeting the needs of QVIR's monitoring objectives.

Activities

- Develop a schedule to evaluate monitoring program.
- Use adaptive management strategies to utilize information from studies, to best maximize wetland habitat quality/quantity.

Action: Perform public education/outreach about wetland protection, regulated waters and activities, and authorized processes.

Activities

- Make educational/outreach documents through brochures, website development.
- Make public opportunities to participate in wetland resource protection
- Educational tours for QVIR community and local schools.

Action: Inventory and monitor wildlife species in wetland areas, make adjustments to actions and activities where possible to improve monitoring program.

Activities

- Implement surveys and document results.
- Evaluate monitoring to determine effectiveness.
- Make changes to strategies to implement changes to improve monitoring effectiveness.
- Identify possible projects to improve wildlife habitats within wetland areas.
- Seek funding for implementation of wildlife habitat restoration projects.
- Begin implementing low-cost habitat improvement projects.

Year Four (2014):

Action: Continue wetland inventory and monitoring protocols to evaluate overall changes in quantity and quality of wetland habitat.

Activities

- Utilize GIS software for detecting change in abundance of wetland habitats..
- Determine overall wetland habitat quality/quantity percent gain and/or loss.
- Evaluate best practices in monitoring and restoration activities.
- Begin statistical analysis of wildlife trends, wetland gain/loss.

Action: Continue to provide public education/outreach about wetland protection, regulated waters and activities, and authorized processes.

Activities

- Continue educational/outreach documents through brochures, website development.
- Continue public opportunities to participate in wetland resource protection.

Action: Evaluate monitoring program to determine how well it is meeting the needs of QVIR's monitoring objectives.

Activities

- Develop a schedule to evaluate monitoring program.
- Make changes as necessary to program.
- Continue to add to data sets for statistical robustness

Action: Monitor wildlife species in wetland areas.

Activities

- Evaluate and modify surveys and methods as needed.
- Continue implementation of surveys.
- Evaluate survey results statistically to determine trends in populations.

Year Five (2015):

Action: Continue to monitor wildlife species in wetland areas.

Activities

- Evaluate and modify surveys and methods as needed.
- Continue implementation of surveys.

Action: Continue to provide public education/outreach about wetland protection, regulated waters and activities, and authorized processes.

Activities

- Continue educational/outreach documents through brochures, website development.
- Continue public opportunities to participate in wetland resource protection.

Action: Reevaluate monitoring program to determine how well it is meeting the needs of QVIR's monitoring objectives.

Activities

- Reassess monitoring program objectives and goals.
- Evaluate recommendations to improve program.
- Implement changes as deemed necessary.

Action: Quantify QVIR wetlands, to evaluate overall gain/loss in wetland habitat.

Activities

- Compare wetland maps with GIS technology from beginning inventory to year four.
- Determine overall wetland habitat quality gain and/or loss.
- Evaluate best practices in monitoring and restoration activities
- Apply statistical analysis to quantify wetland habitat since project implementation.


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41°36'10.24N, 122°58'19.84W
Image USDA Farm Service Agency
© 2011 Google
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Imagery Date: 5/24/2009
1993
41°36'10.49" N 122°58'19.74" W elev 2803 ft
Eye alt 17343 ft