



United States  
Environmental Protection  
Agency

## Case Studies in Tribal Water Quality Standards Programs

### The Hoopa Valley Tribe

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#### Introduction

The Hoopa Valley Tribe has lived in its valley for over 10,000 years and has always depended on the migration and spawning runs of steelhead trout, and chinook and coho salmon in the Trinity River for a large portion of its diet. The Trinity River is also where the Hoopa hold their ceremonial Boat Dance and immerse themselves after using sweat houses built next to the river. In 2001, the Hoopa adopted Environmental Protection Agency (EPA) water quality standards to protect these and other uses of their waters.



#### Tribal Background

The Hoopa Valley Reservation, located in Northern California, covers 144 square miles of montane forest ranging in elevation from 320 to 5,000 feet. The Trinity River flows north through the center of the reservation to the Klamath River, which flows northwesterly near the northern border of the Hoopa Valley Reservation. Almost 3,000 people live within the reservation boundary, including approximately 2,500 tribal members. Selective cutting and selling of timber, primarily Douglas Fir, is the Tribe's primary source of revenue. Unfortunately, timber harvesting often results in soil runoff and is one of the main causes of stream impairment within the reservation.

The Tribal Environmental Protection Agency (TEPA) is the Hoopa Valley Tribe's governmental unit that administers environmental protection programs on the reservation. TEPA is responsible for monitoring and managing the reservation's surface waters and air quality. EPA approved the Hoopa's application to administer the water quality standards program in 1990. TEPA developed the Tribe's water quality standards, which provide the foundation for the Tribe's management of its surface waters. These standards are contained in the Hoopa Valley Indian Reservation Water Quality Control Plan and were approved by EPA in 2002.



#### Water Quality Standards

The Hoopa's water quality standards establish 16 different designated uses for their water bodies including ceremonial and cultural water use, fish spawning, and water contact recreation. The Tribes's designations for the Trinity River include ceremonial and cultural use. Every other year, the Hoopa hold a 10-day ceremony that includes a Boat Dance on the Trinity River. The Boat Dance usually occurs in late August, a time when the river typically experiences low flow. To ensure that there is enough water for the Boat Dance, the Hoopa contact the U.S. Bureau of Reclamation to release water from an upstream reservoir a few days before the ceremony.

The Hoopa's water quality standards also contain water quality criteria to protect the designated uses of the reservation's surface waters. Two of these criteria, temperature and turbidity, are key to the Tribe's efforts to maintain and restore the natural populations of migratory salmon and steelhead. The Trinity and Klamath Rivers experienced an extensive fish kill in September 2002. The fish kill was caused by bacterial and protozoic pathogens, which overtake salmon and other coldwater fish when low flows result in fish overcrowding and high water temperatures. Increased water temperatures are closely associated with low flow conditions and flow conditions are directly related to the release of water from upstream dams. Consequently, the Tribe's temperature criteria are based on temperature-flow relationships and are designed to protect the holding and spawning of adult salmon in the Trinity River and its tributaries.

The Tribe's turbidity criteria are intended to protect its waters from the adverse effects of logging, the main industry on the reservation. Logging can result in soil runoff, which increases the water's turbidity, a measure of the solid material suspended in water. High turbidity can affect the reproduction, growth and health of salmon and other aquatic life. TEPA maintains good communication with the loggers to ensure appropriate environmental controls are in place to protect fish populations in all stages of life.

## Successful Application

The Hoopa engage in a variety of activities to implement their water quality standards and ensure their waters are protected. These activities include water quality monitoring, partnerships, and regular reviews of their water quality standards.

TEPA staff routinely monitor the Trinity River and its tributaries for chemical (e.g., dissolved oxygen), physical (e.g., temperature) and biological (e.g., aquatic invertebrates) parameters. The monitoring program is designed to ensure compliance with the Tribe's water quality standards, assess trends in conditions over time, and evaluate the effectiveness of pollution control efforts. TEPA's monitoring efforts include 50 temperature probes throughout the watershed and 13 locations where Continuous Data Recorders continually monitor up to 20 parameters including temperature and turbidity.



The Hoopa maintain cooperative relationships with the State of California, EPA, and their neighboring tribes - the Yurok Tribe of the Yurok Reservation, the Karuk Tribe of California, the Resighini Rancheria, and the Quartz Valley Indian Community of the Quartz Reservation. All these groups have vested interests in the use and protection of shared water resources and frequently communicate regarding water quality management issues.

EPA's water quality standards regulation requires states and authorized tribes to review their water quality standards at least once every three years and revise them, if necessary. TEPA is beginning the triennial review of the Hoopa's water quality standards and plans to refine aspects of the current water quality criteria. In an effort to protect young salmon, the Tribe plans to adopt specific turbidity criteria for the seven major tributaries to the Trinity River during its triennial review. The Trinity River is a very important resource for the Hoopa and they are committed to protecting it. As one tribal member stated, "The Trinity is the lifeblood of the Hoopa."

**Tribal water quality standards approved by EPA, including the Hoopa, can be viewed at:**  
<http://www.epa.gov/waterscience/standards/wqslibrary/tribes.html>



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