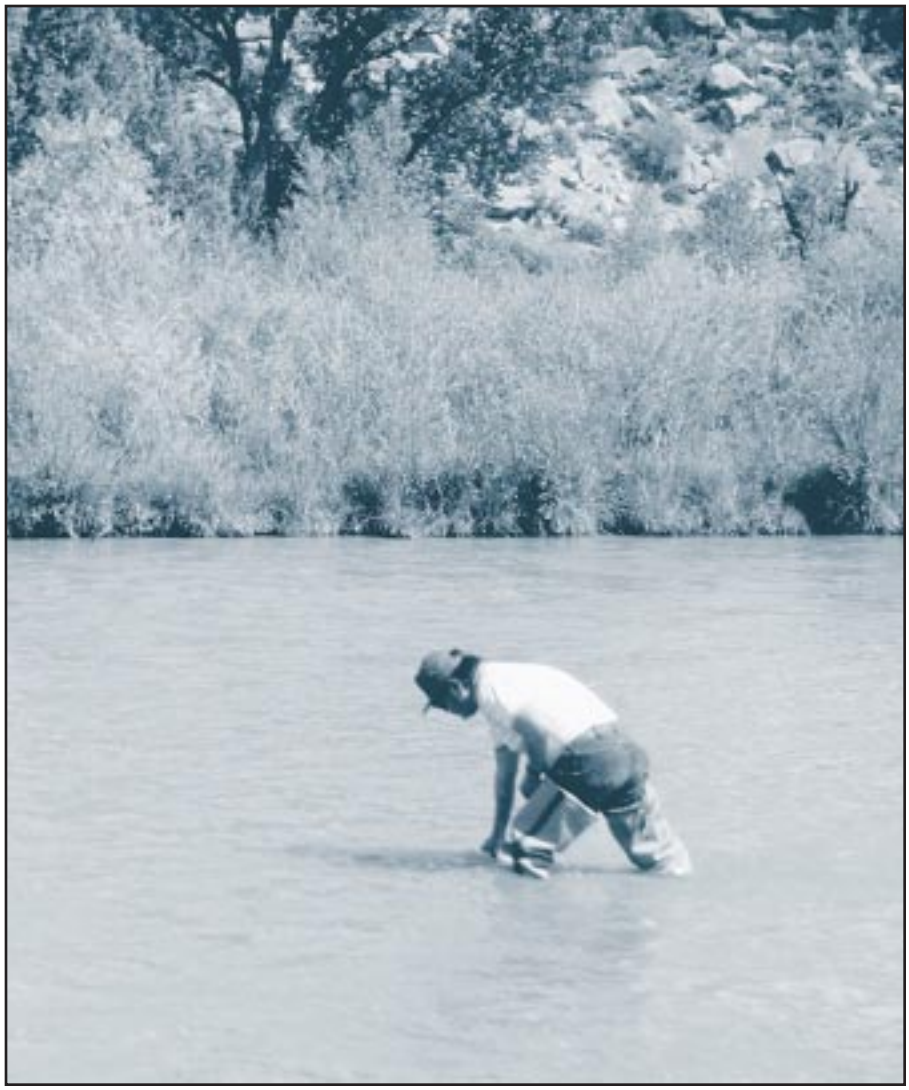
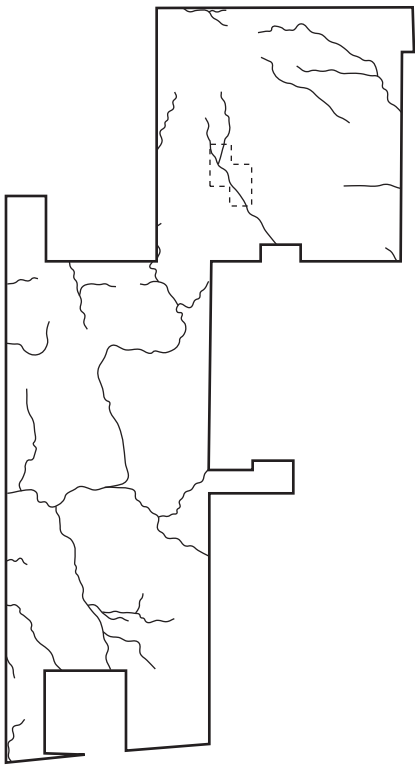
Tribal Summaries

This section provides individual summaries of the water quality survey data reported by six American Indian Tribes in their 1996 Section 305(b) reports. Tribal participation in the Section 305(b) process grew from two Tribes in 1992 to six Tribes during the 1996 reporting cycle, but Tribal water quality remains unrepresented in this report for the hundreds of other Tribes established throughout the country. Many of the other Tribes are in the process of developing water quality programs and standards but have not yet submitted a Section 305(b) report. As Tribal water quality programs become established, EPA expects Tribal participation in the Section 305(b) process to increase rapidly. To encourage Tribal participation, EPA has sponsored water quality monitoring and assessment training sessions at Tribal locations, prepared streamlined 305(b) reporting guidelines for Tribes that wish to participate in the process, and published a brochure, *Knowing Our Waters: Tribal Reporting Under Section 305(b)*. EPA hopes that subsequent reports to Congress will contain more information about water quality on Tribal lands.



Phil Johnson, U.S. EPA Region 8

Campo Indian Reservation



Location of Reservation

For information about water quality on the Campo Indian Reservation, contact:

Stephen W. Johnson or
Michael L. Connolly
Campo Environmental Protection Agency
36190 Church Road, Suite #4
Campo, CA 91906
(619) 478-9369
Surface Water Quality

The Campo Indian Reservation covers 24.2 square miles in southeastern San Diego County, California. The Campo Indian Reservation has 31 miles of intermittent streams, 80 acres of freshwater wetlands, and 10 lakes with a combined surface area of 3.5 acres.

The natural water quality of Tribal streams, lakes, and wetlands ranges from good to excellent. There are no point source discharges within or upstream of the Reservation, but grazing livestock have degraded streams, lakes, and wetlands with manure containing fecal coliform bacteria, nutrients, and organic wastes. Livestock also trample streambeds and riparian habitats. Septic tanks and construction also threaten water quality.

Ground Water Quality

Ground water supplies 100% of the domestic water consumed on the Campo Indian Reservation. Nitrate and bacteria from nonpoint sources occasionally exceed drinking water standards in some domestic wells. The proximity of individual septic systems to drinking water wells poses a human health risk because Reservation soils do not have good purification properties. Elevated iron and manganese levels may be due to natural weathering of geologic materials.

Programs to Restore Water Quality

The Campo Environmental Protection Agency (CEPA) has authority to administer three Clean Water Act programs. The Section 106 Water Pollution Control Program supports infrastructure, the 305(b) assessment process, and development of a Water Quality Management Plan. The Tribe is inventorying its wetlands with funding from the Section 104(b)(3) State Wetlands Protection Program. The Tribe has used funding from the Section 319 Nonpoint Source Program to stabilize stream banks,

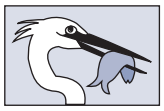
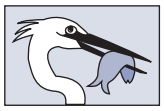
construct sediment retention structures, and fence streams and riparian zones to exclude livestock. CEPA promulgated water quality standards in 1995 to establish beneficial uses, water quality criteria, and antidegradation provisions for all Tribal waters.

In 1994, the General Council passed a resolution to suspend cattle grazing on the Reservation for at least 2 years and to concurrently restore degraded recreational water resources by creating fishing and swimming ponds for Tribal use.

Programs to Assess Water Quality

Streams, wetlands, and lakes on Tribal lands were not monitored until CEPA initiated its Water Pollution Control Program in 1992. Following EPA approval of CEPA's Quality Assurance Project Plan in May 1993, CEPA conducted short-term intensive surveys to meet the information needs of the 305(b) assessment process. Based on the results of the 1994 305(b) assessment, CEPA developed a long-term surface water monitoring program in 1995. CEPA will consider including biological monitoring, physical and chemical monitoring, monthly bacterial monitoring in lakes, toxicity testing, and fish tissue monitoring in its monitoring program.

Individual Use Support in Campo Indian Reservation

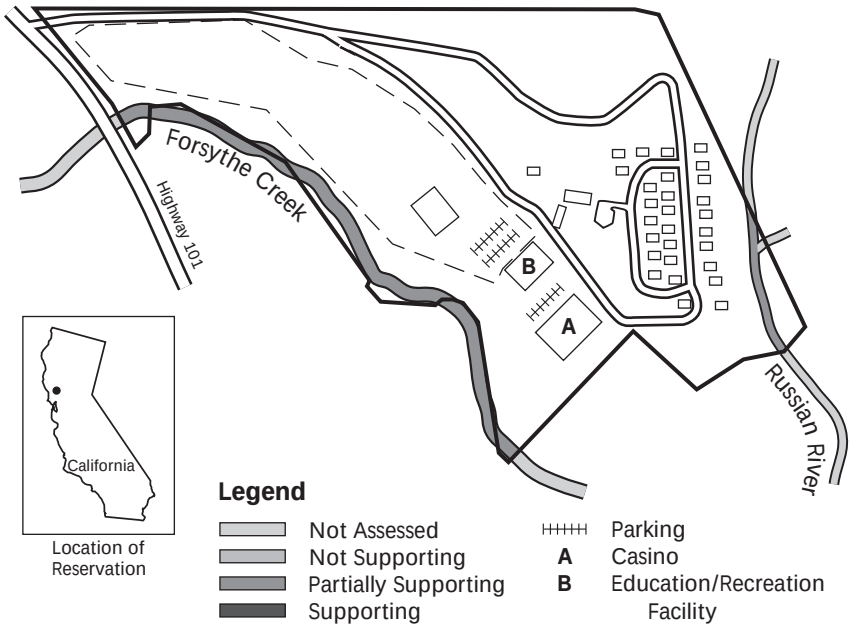
Designated Use[a]	Percent				
	Good (Fully Supporting)	Good (Threatened)	Fair (Partially Supporting)	Poor (Not Supporting)	Poor (Not Attainable)
Rivers and Streams (Total Miles = 31)[b]					
 Total Miles Assessed	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Lakes (Total Acres = 3.5)					
 Total Acres Assessed	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-

– Not reported in a quantifiable format or unknown.

[a] A subset of Campo Indian Reservation's designated uses appear in this figure. Refer to the Tribe's 305(b) report for a full description of the Tribe's uses.

[b] Includes nonperennial streams that dry up and do not flow all year.

Coyote Valley Reservation



For information about water quality on the Coyote Valley Reservation, contact:

Jean Hunt or **Sharon Ibarra**
The Coyote Valley Reservation
P.O. Box 39
Redwood Valley, CA 95470
(704) 485-8723

Surface Water Quality

The Coyote Valley Band of the Pomo Indians is a federally recognized Indian Tribe, living on a 57-acre parcel of land in Mendocino County, California. Segments of the Russian River and Forsythe Creek flow past the Reservation, although flow diminishes in the summer and fall. Fishing, recreation, and religion are important uses for surface waters within the Reservation.

Currently, the Tribe is concerned about bacteria contamination in the Russian River, potential contamination of Forsythe Creek from a malfunctioning septic system leachfield, and habitat modifications in both streams that impact aquatic life. Past gravel mining operations removed gravel spawning beds, altered flow, and created very steep banks. In the past, upstream mining also elevated turbidity in Forsythe Creek. The Tribe is also concerned about a potential trend of increasing pH values and high water temperatures in Forsythe Creek during the summer.

Ground Water Quality

The Coyote Valley Reservation contains three known wells, but only two wells are operable, and only one well is in use. The old shallow irrigation well (Well A) was abandoned because it went dry after the gravel mining operation on Forsythe Creek lowered the water table. Well B, located adjacent to Forsythe Creek, is used as a water supply for an education/recreation facility on the Reservation. Well C, located on a ridge next to the Reservation's housing units, is not in use due to severe iron and taste problems. Sampling also detected high levels of barium, total dissolved solids, manganese, and conductivity in Wells B and C. However, samples from Well B did not contain organic chemicals, pesticides, or nitrate in detectable amounts. Human waste contamination from septic systems may pose the greatest threat to ground water quality.

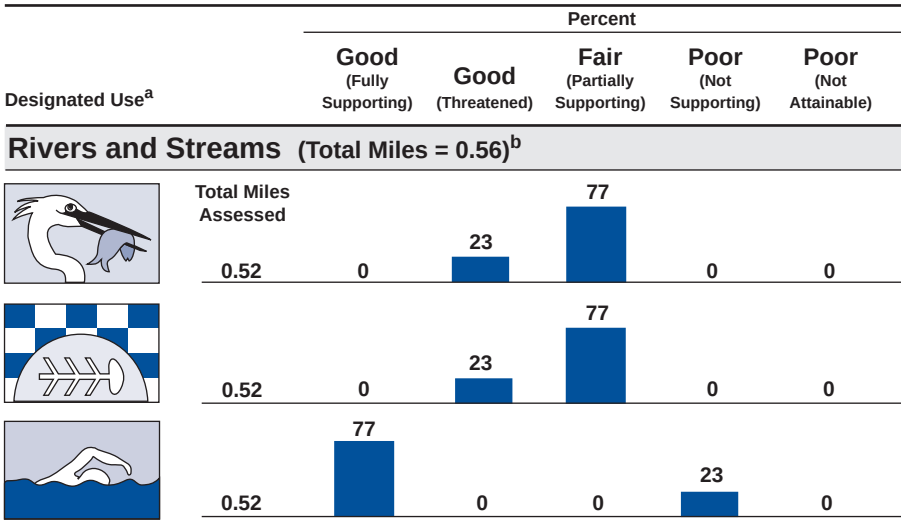
Programs to Restore Water Quality

Codes and ordinances for the Reservation will be established to create a Water Quality and Management Program for the Reservation. With codes in place, the Coyote Valley Tribal Council will gain the authority to restrain the discharge of pollutants that could endanger the Reservation water supply and affect the health and welfare of its people, as well as people in the adjacent communities.

Programs to Assess Water Quality

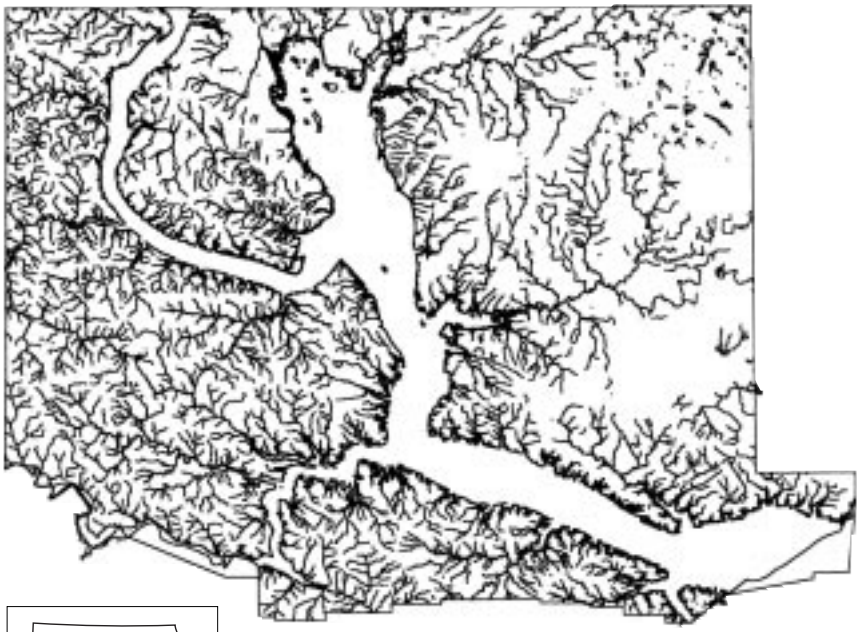
The Tribal Water Quality Manager will design a monitoring system with assistance from environmental consultants. The Water Quality Manager will sample a temporary monitoring station on Forsythe Creek and a proposed sampling station on the Russian River every month. A fisheries biologist will survey habitat on the rivers every other year, as funding permits. These activities will be funded through an EPA General Assistance Program (GAP) grant. GAP grants assist Tribes in increasing their capacity to administer environmental programs.

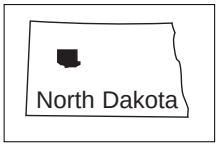
Individual Use Support in Coyote Valley Reservation



[a] A subset of Coyote Valley Reservation's designated uses appear in this figure. Refer to the Tribe's 305(b) report for a full description of the Tribe's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Fort Berthold Reservation





Location of Reservation

For information about water quality at the Fort Berthold Reservation, contact:

Jim Heckman
Three Affiliated Tribes
Environmental Division, HC3 Box 2
New Town, ND 58763
(701) 627-4569

Surface Water Quality

The Fort Berthold Indian Reservation, located in northwestern North Dakota, was originally established by the Fort Laramie Treaty of 1851. The current boundaries, as determined by an Act of Congress in 1891, encompass approximately 1,540 square miles of which about half is held in trusts by the United States for either the Three Affiliated Tribes or individual Native Americans.

The large manmade lake, Lake Sakakawea, occupies 242 square miles of land in the center of the Reservation. Created by the construction of the Garrison Dam on the Missouri River, the lake stretches 178 miles in length between Williston and Riverdale, North Dakota, with a drainage area of 181,400 square miles. The dam created a lake with a surface area at full pool of 575 square miles surrounded by 1,300 miles of shoreline, six hundred of which lie within the Reservation boundaries.

Lake Sakakawea provides municipal water for three of the six Reservation communities. Two additional communities are in the construction phase. The lake is also a major source of recreational opportunities including fishing, boating, and water skiing. Industrial use of the lake resources is minimal due to the lack of industrial development on the Reservation.

Aside from Lake Sakakawea, surface water resources include the Little Missouri River on the southern border of the Reservation, numerous small tributaries and ephemeral streams, seasonal wetlands areas and small manmade impoundments, all of which are used to some extent by livestock and/or wildlife.

A major concern of water quality impairment on the Reservation is that very few of the farmers and ranchers are currently implementing best management practices (BMPs). The majority of the livestock located within the Reservation boundaries are allowed to drink directly from the surface waters. This has caused the riparian habitat of the surface waters to become denuded of vegetation accelerating erosion of the banks. The water quality is being degraded through increased sedimentation, turbidity and fecal coliform, and fecal streptococci bacteria.

Ground Water Quality

The Three Affiliated Tribes Division of Environmental Quality's primary focus is currently on the Reservation's surface waters.

Programs to Restore Water Quality

The draft water quality standards for the Fort Berthold Indian Reservation have been submitted to the EPA Region 8 for review and comment. Once the standards are in place, the Three Affiliated Tribes will be able to write and enforce ordinances and codes to protect the surface and ground waters on the Reservation.

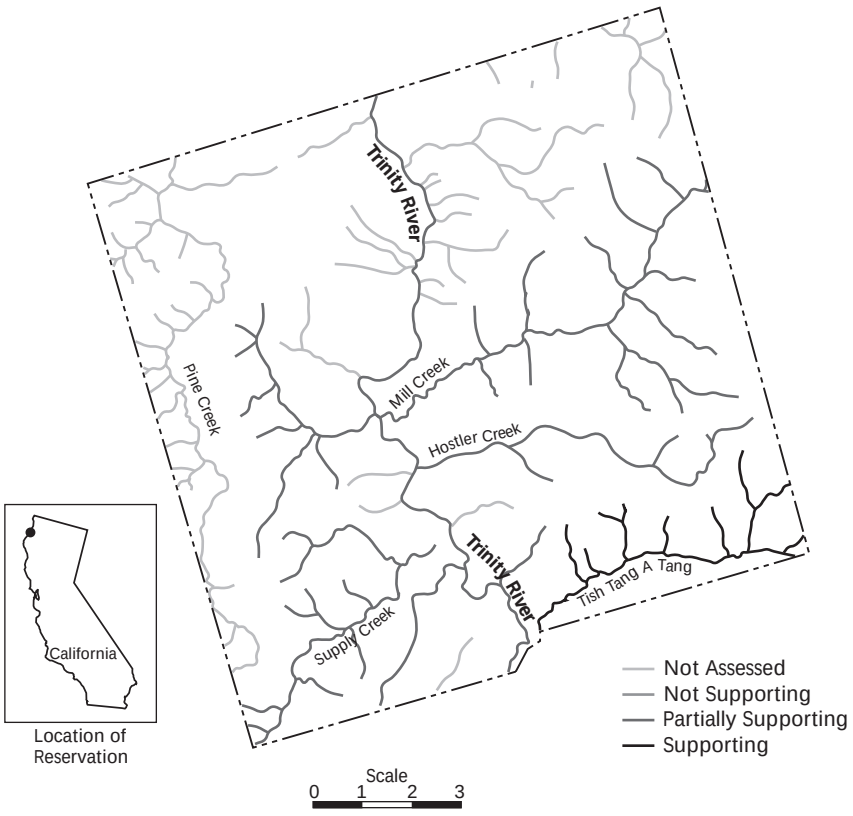
An ecosystem protection initiative project is currently being implemented on the Reservation.

Programs to Assess Water Quality

The surface water monitoring program established by the Three Affiliated Tribes Division of Environmental Quality is in the second year of collecting monitoring data at six monitoring sites. Three additional sites are in their first year of being monitored.

The U.S. Geological Survey has three continuous recording gaging stations and two miscellaneous discharge measurement sites on and adjacent to the Fort Berthold Indian Reservation. The USGS report *Variations in Land Use and Non-point Source Contamination on the Fort Berthold Indian Reservation, West Central North Dakota, 1990-93*, assesses water quality based on data from these sites.

Hoopa Valley Indian Reservation



For a copy of the Hoopa Valley Indian Reservation 1996 305(b) report, contact:

Ken Norton
P.O. Box 1348
Hoopa, CA 95546
(916) 625-5515

Surface Water Quality

The Hoopa Valley Indian Reservation covers almost 139 square miles in Humboldt County in northern California. The Reservation contains 133 miles of rivers and streams, including a section of the Trinity River, and 3,200 acres of wetlands. The Reservation does not contain any lakes.

Surface waters on the Reservation appear to be free of toxic organic chemicals, but poor forest management practices and mining operations, both on and off the Reservation, have caused significant siltation that has destroyed gravel spawning beds. Water diversions, including the damming of the Trinity River above the Reservation, have also stressed the fishery by lowering stream volume and flow velocity. Low flows raise water temperatures and reduce flushing of accumulated silt in the gravel beds. Upstream dams also stop gravel from moving downstream to replace excavated gravel. Elevated fecal coliform concentrations also impair drinking water use on the Reservation.

Ground Water Quality

Ground water sampling revealed elevated concentrations of lead, cadmium, manganese, iron, and fecal coliforms in some wells. The Tribe is concerned about potential contamination of ground water from leaking underground storage tanks, septic system leachfields, and abandoned hazardous waste sites with documented soil contamination. These sites contain dioxins, herbicides, nitrates, PCBs, metals, and other toxic organic chemicals. The Tribe's environmental consultants are designing a ground water sampling program to monitor potential threats to ground water.

Programs to Restore Water Quality

In 1990, EPA approved the Hoopa Valley Tribe's application for treatment as a State under Section 106 of the Clean Water Act. In May of 1995 the Hoopa Valley Tribal Council approved Reservation-wide water quality standards and beneficial uses for all waters within the Reservation. EPA approved the Tribe's application for Treatment as a State

with respect to Sections 303 and 401 of the Clean Water Act. The Tribe currently issues dredge and fill permits through the Tribe's Riparian Protection and Surface Mining Ordinance and Section 401 of the Clean Water Act. In July 1996 the Tribe completed a Non-Point Source Assessment and Non-Point Source Management Plan and applied for Treatment as a State under Sections 404 and 319 of the Clean Water Act. This application is currently pending approval.

Programs to Assess Water Quality

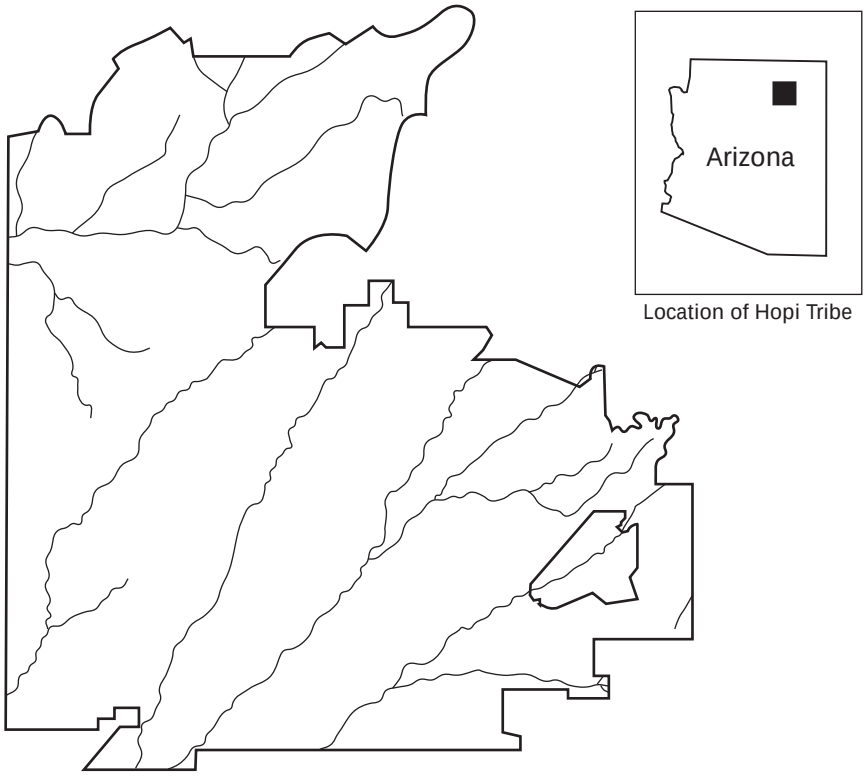
The Tribe is currently developing permanent monitoring stations to collect primary water quality data and determine water quality trends. Currently, the Tribal Fisheries, Forestry, and EPA have been working closely together to coordinate the purchase and installation of five water quality monitoring stations and enhance the two existing stations in upper and lower Mill Creek. The overall purpose of collecting water quality information is to monitor forest management practices and determine if these practices impact fishery habitat. Substantial data from throughout northern California indicate that existing unmaintained roads, new road construction, and road reconstruction have the largest impacts on fisheries habitat compared to other forest management practices. The three departments have been working closely with the U.S. Forest Service, Pacific Southwest Forest and Range Experiment Station in Arcata, which has installed many similar water quality monitoring stations throughout northern California.

Individual Use Support in Hoopa Valley Indian Reservation

Designated Use[a]	Total Miles Assessed	Percent: Good (Fully Supporting)	Good (Threatened)	Fair (Partially Supporting)	Poor (Not Supporting)	Poor (Not Attainable)
Rivers and Streams (Total Miles = 133)[b]						
	90	0	12	88	0	0
	78	100	0	0	0	0
	-	-	-	-	-	-
	85	0	0	100	0	0
Wetlands (Total Acres = 3,200)						
	Total Acres Assessed					
	3,200	0	0	100	0	0
	-	-	-	-	-	-
	-	-	-	-	-	-
	3,200	0	0	100	0	0

– Not reported in a quantifiable format or unknown.
[a] A subset of Hoopa Valley Indian Reservation's designated uses appear in this figure. Refer to the Tribe's 305(b) report for a full description of the Tribe's uses.
[b] Includes nonperennial streams that dry up and do not flow all year.

Hopi Tribe



Location of Hopi Tribe

For a copy of the Hopi Tribe's 1996 305(b) report, contact:

Phillip Tuwaletstiwa
The Hopi Tribe
Water Resources Program
Box 123
Kykotsmovi, AZ 86039
(520) 734-9307

Surface Water Quality

The 2,439-square-mile Hopi Reservation, located in northeastern Arizona, is bounded on all sides by the Navajo Reservation. Surface water on the Hopi Reservation consists primarily of intermittent or ephemeral streams. Only limited data regarding stream quality are available. The limited data indicate that some stream reaches may be deficient in oxygen, although this conclusion has not been verified by repeat monitoring.

In addition to the intermittent and ephemeral washes and streams, surface water on the Hopi Reservation occurs as springs where ground water discharges as seeps along washes or through fractures and joints within sandstone formations. The Hopi Tribe assessed 18 springs in 1992 and 1993. The assessment revealed that several springs had one or more exceedances of nitrate, selenium, total coliform, or fecal coliform. The primary potential sources of surface water contamination on the Hopi Reservation include mining activities outside of the Reservation, livestock grazing, domestic refuse, and wastewater lagoons.

Ground Water Quality

In general, ground water quality on the Hopi Reservation is variable. Ground water from the N-aquifer provides drinking water of excellent quality to most of the Hopi villages. The D-aquifer, sandstones of the Mesaverde Group, and alluvium also provide ground water to shallow stock and domestic wells, but the quality of the water from these sources is generally of poorer quality than the water supplied by the N-aquifer.

Mining activities outside of the Reservation are the most significant threat to the N-aquifer. Extensive pumping at the Peabody Coal Company Black Mesa mine may induce leakage of poorer quality D-aquifer water into the N-aquifer. This potential problem is being investigated under an ongoing monitoring program conducted by the U.S. Geological Survey. In addition, the U.S. Department of Energy

is investigating ground water impacts from abandoned uranium tailings at Tuba City. Other potential sources of contamination in shallow wells include domestic refuse, underground storage tanks, livestock grazing, wastewater lagoons, and septic tanks.

Programs to Restore Water Quality

Draft water quality standards (including an antidegradation policy) were prepared for the Tribe in 1993. The Tribe is also reviewing a proposed general maintenance program to control sewage lagoons. The Tribe has repeatedly applied for EPA grants to investigate nonpoint source pollution on the Reservation, but the applications were denied.

Programs to Assess Water Quality

Several surface and ground water assessment activities have occurred since the 1994 report was submitted. These include collections of water samples from shallow alluvial wells, surface water samples along the main stem of the Little Colorado River, and surface water samples from wetlands areas. Additionally, the USGS completed a well and spring inventory, and the U.S. Bureau of Reclamation (USBR) conducted water quality assessment activities at selected wells and surface water locations.

Individual Use Support in Hopi Reservation

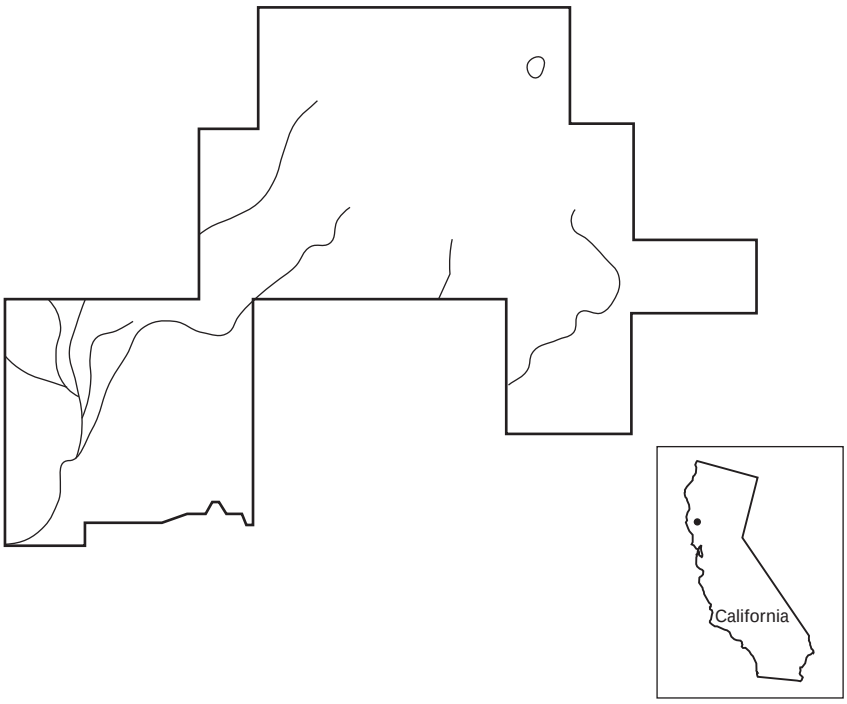
Designated Use[a]		Percent				
		Good (Fully Supporting)	Good (Threatened)	Fair (Partially Supporting)	Poor (Not Supporting)	Poor (Not Attainable)
Rivers and Streams (Total Miles = 280)[b]						
	Total Miles Assessed					
	51	28	0	29	0	43
	22	0	0	0	0	100
	-	-	-	-	-	0
	-	-	-	-	-	-
Springs (Total Number = 175)						
	Total Number Assessed					
	19	11	0	0	89	0
	-	-	-	-	-	-
	-	-	-	-	-	-
	19	32	0	0	68	0

– Not reported in a quantifiable format or unknown.

[a] A subset of the Hopi Tribe's designated uses appear in this figure. Refer to the Tribe's 305(b) report for a full description of the Tribe's uses.

[b] Includes nonperennial streams that dry up and do not flow all year.

Hopland Band of Pomo Indians



Location of Reservation

For a copy of the Hopland Reservation 1996 305(b) report, contact:

R. Jake Decker
Hopland Band of Pomo Indians
P.O. Box 610
Hopland, CA 95449
(707) 744-1647

Surface Water Quality

The jurisdictional boundary of the Hopland Reservation includes 2,070 acres in the Mayacmas Mountains of southeastern Mendocino County about 90 miles north of San Francisco. Surface water on the reservation is scarce. Streams are intermittent rather than perennial, rendering them unreliable as water supply sources or for recreation, fishing, shellfishing, agriculture, or aquatic life use support.

Ground Water Quality

Ground water at the Hopland Reservation, and the larger McDowell Valley area, is contained in two aquifers — fractured basement rocks of the Franciscan Assemblage and younger sedimentary deposits. This water is the sole source of supply for about 200 tribal members and non-Indian residents living in the developed area of the reservation at the north end of McDowell Valley.

Ground water contamination from manmade sources is not a major concern for water resources management at the reservation. Water quality concerns at the Hopland Reservation and elsewhere in McDowell Valley are predominantly related to natural chemical reactions between ground water and the rocks and sediments that compose the aquifers. Potential sources of contamination from human activities include agricultural activities at vineyards, leachate from septic drain fields, and infiltration of contaminants from dumping sites. To date, no pesticides or herbicides have been detected in samples from three wells near the reservation vineyards and no pathogen indicators have been detected in public supply wells. Maximum contaminant levels for

secondary drinking water standards, which are designed to regulate the taste, odor, or appearance of drinking water, were exceeded at three wells.

Programs to Restore Water Quality

No ground water protection programs have been formalized on the Hopland reservation other than the adoption of a no-dumping ordinance. The Tribe views their 1996 305(b) report as an initial step in a ground water protection program in that it provides the hydrogeologic framework of aquifers at the reservation and describes the ambient ground water quality.

Programs to Assess Water Quality

Ground water quality was determined by analyzing samples of ground water from wells and springs in the reservation area during the summers of 1993 and 1994. Samples were collected for analysis of common inorganic constituents (major ions), trace elements, radionuclides, common pesticides and herbicides, and pathogen indicators. The Tribe reports on whether tested waters meet Federal primary and secondary drinking water standards.