

## Watersheds

Have you ever heard “watershed” used and wondered what it meant? The following information is from the US Geologic Survey.

Natural features, such as topography, define watersheds—land areas that receive rain or snow and drain to specific surface-water bodies, such as streams, rivers, lakes, reservoirs, bays, or oceans. Both natural and human-induced conditions within the watershed are reflected in the quality of the surface water. While many federal and state agencies focus on the larger river systems and associated watersheds, local agencies and citizens usually are concerned with the smaller watersheds where they live. A standardized watershed classification system—the Hydrologic Unit System—was developed in the mid-1970s by USGS. Hydrologic units are a topographically defined set of watershed boundaries, organized by size. The system divides the Nation into 21 regions, and progressively smaller sub-regions, accounting units, and cataloging units. Each cataloging unit is assigned an 8-digit code (HUC) having two digits for each of the four levels. Soboba is in the San Jacinto Watershed HUC 18070202. More from the USGS about water can be found at <http://water.usgs.gov/> or EPA’s watershed information can be found at <http://water.epa.gov/type/watersheds/>.

## Any Questions or Concerns?

**Contact the Tribal  
Environmental Office at  
951.654.5544  
Ext. 4129/4130**



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## Surface Water Quality



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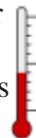
## Surface Water on the Reservation

Surface waters are waters that you can see. These waters include rivers and streams, lakes, ponds, reservoirs, wetlands, coastal waters, and estuaries (the place where a river or stream flows into the ocean). Major reservation surface waters include the San Jacinto River, Poppet Creek, and Indian Creek. EPA and the states (when EPA says “state,” it means states, territories, Indian tribes, and other jurisdictions) are directed by the Clean Water Act (CWA) to help protect the health of our nation’s waters. The CWA gives states the authority and responsibility to establish water quality standards, which set minimum requirements for fish habitat, swimming, and drinking water sources. A grant from the Clean Water Act Section 106 funds a surface water monitoring program. Samples are taken on the reservation and parameters including pH, temperature, dissolved oxygen, and conductivity are measured. EPA gathers the information from every state and prepares a report called the National Water Quality Inventory. To see the latest 305(b) report for California or other information on the quality of our nation’s waters, visit [www.epa.gov/305b](http://www.epa.gov/305b).



## What is monitored?

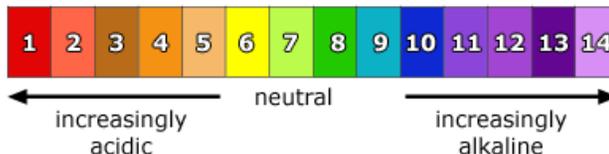
**Temperature** determines the kinds of animals that can survive in a stream. If the temperature gets too hot or too cold for some organisms, they die. Temperature also can affect the chemistry of the water. For example, warm water holds less oxygen than cold water. A healthy cluster of trees and vegetation next to a stream or river helps keep temperatures cool for fish.



**Dissolved oxygen (DO)** tells how much oxygen is available in the water for aquatic organisms to breathe. Healthy waters generally have high levels of DO (some areas, like swamps, naturally have low levels of DO). Aquatic life needs oxygen to survive. Several factors can affect how much DO is in the water. These include temperature, the amount/speed of flowing water, the plants and algae that produce and take in oxygen, pollution, and the composition of the stream bottom. (Gravelly or rocky bottoms stir up the water more than muddy ones do, creating bubbles that put more oxygen into the water.)



**pH** determines the concentration of hydrogen in the water. pH ranges from 0 (very acidic) to 14 (very basic), with 7 being neutral. Most waters range from 6.5 to 8.5. Changes in pH can affect how chemicals dissolve in the water and whether organisms are affected by them. High acidity can be deadly to aquatic organisms.



## National Water Quality Inventory

From the US EPA’s National Water Quality Inventory:

Water quality standards consist of three elements: the designated uses (such drinking, swimming, or fishing) assigned to waters; criteria (such as chemical- specific thresholds that should not be exceeded) to protect those uses; and an anti-degradation policy intended to keep waters that do meet standards deteriorating from their current condition.

In 2004, states reported that about 44% of assessed stream miles, 64% of assessed lake acres, and 30% of assessed bay and estuarine square miles were not clean enough to support uses such as fishing and swimming. Less than 30% of U.S. waters were assessed by the states for this report. Leading causes of impairment included pathogens, mercury, nutrients, and organic enrichment/low dissolved oxygen. Top sources of impairment included atmospheric deposition, agriculture, hydrologic modifications, and unknown or unspecified sources.

