

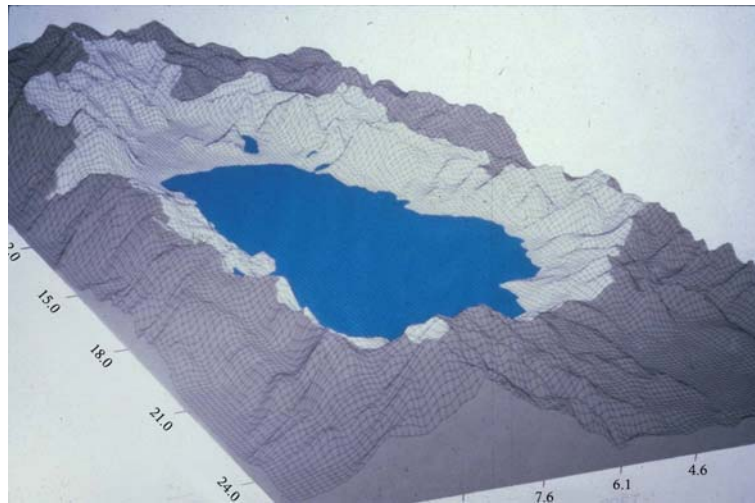
What do Watersheds Matter?

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Most Tahoe residents know what a watershed is. Our region is called the Lake Tahoe Basin because the water that fills our spectacular lake comes entirely from precipitation that falls within our watershed as rain or snow. The high peaks and ridgelines surrounding our communities form a huge bowl. They act like a local continental divide, separating Tahoe's water from the water that flows to the Carson River, the American River, Steamboat Creek, and Martis Creek, near the town of Truckee.

Our entire continent is made up of watersheds, which often contain smaller sub-watersheds. In nearly all watersheds that have not been disturbed by heavy natural resource use or urbanization, natural filtration processes tend to keep the water that is in streams, lakes and underground clean. Watersheds naturally adjust to their climate and soil characteristics over time, and collect, store and safely release clean water.



Catastrophic floods occur much less frequently in undisturbed watersheds than in those with urban development and many roads.

Understanding the watershed concept is useful because the main way to stop the decline in Tahoe's water quality is to prevent pollution from many small soil disturbances, and to repair those disturbances by restoring or mimicking natural watershed functions. Since Lake Tahoe has no factories or wastewater treatment plants that discharge polluted water inside the watershed, most of the pollution entering the lake comes from many small, seemingly insignificant disturbances to the natural watershed. We call these small disturbances – a little eroded soil here, a little spilled fertilizer there – nonpoint sources of pollution.

Even water pollution caused by poor air quality or atmospheric deposition can be reduced if the watershed's natural filtration processes are functioning properly.

Since the 63 Tahoe sub-watersheds sometimes carry dirty water to the

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The Lake Tahoe Report

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lake, all these small impacts (plus atmospheric deposition directly into the lake) add up to what we call the cumulative impacts to the lake. These can be tracked over time, and the results can be displayed with graphs, such as the UC Davis Tahoe Research Group's Secchi Depth Chart. This chart tracks the average water clarity of Lake Tahoe – the distance you can see objects below the lake's surface. It shows that Lake Tahoe's clarity has decreased from 105 feet in 1968 to about 65 feet to 70 feet today.

The cloudiness in the lake's water is caused by a combination of small soil particles, called suspended sediments, and tiny single-cell algae plants that also remain suspended in the water. They are too small to settle out, but numerous enough to block the light.

Best management practices (BMPs) are basically repairs that prevent pollution by restoring our residential lots, so they act more like a natural watershed. We want rain and snowmelt to soak into the soil, not run off. Runoff collects and carries tiny soil particles and phosphorus, the most harmful of the nutrients that feed the single-cell algae plants in the lake. Properly installed and maintained BMPs can prevent small amounts of pollution from leaving our properties throughout the watershed and entering the Lake. When our repairs outweigh our adverse cumulative impacts, our lake's water quality will slowly return.

FACTS:

- Everyone lives in a watershed. Watersheds are those land areas that catch rain or snow and drain to specific marshes, streams, rivers, lakes or groundwater.
- Watersheds are not defined by jurisdictional boundaries. Watersheds near us include the Lake Tahoe Basin, Truckee River, Carson River and Walker River watersheds.
- Within Lake Tahoe there are 64 sub-watersheds, with 63 streams draining into the Lake and only the Truckee River carrying water out.
- Tahoe does not have any polluting factories. All of the pollution comes from our daily activities and impacts. Pollution comes from our properties, recreation, transportation, and other human activity.
- All of the activities that take place within the watershed, including those that occur far from the lake, have an impact on our water clarity and water quality. What you do on your property, no matter how far from the Lake, makes a difference.