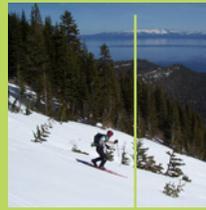




U.S. Environmental Protection Agency
Pacific Southwest / Region 9



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Water Division
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20 Years of Investing in a Clear, Healthy Lake Tahoe

Lake Tahoe is an EPA Priority Watershed, in part because of its iconic clarity and beauty. But climate change and human disturbance of the watershed threaten this national treasure. Lake clarity recovered from the impacts of extensive logging in the 19th century, but rapid, unregulated development following the 1960 Winter Olympics again increased fine sediment and nutrients flowing into the lake. Between 1968 and 1997, annual average clarity fell dramatically from around 100 feet to 64 feet (Figure 1).

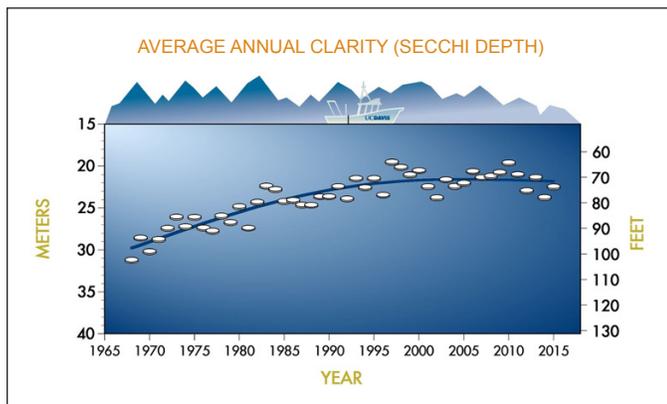


Figure 1. Source: UC Davis TERC (terc.ucdavis.edu)

A new era of ecosystem and watershed restoration began in 1997 with the visit of President Clinton to Lake Tahoe, where he helped launch the [Environmental Improvement Program](#). This \$2 billion effort has helped achieve Tahoe Basin improvements for air and water quality, soil conservation, forest health, wildlife and fisheries, and scenic and recreational resources. The decline in annual average lake clarity appears to have halted in recent years, with 2015 clarity measurements averaging 73 feet. Improvements may be traced in part to local management of urban runoff guided by innovative decision-making tools, as well as to prolonged drought conditions. Continued progress as we face

growing challenges of climate change, like increasing tree mortality, forest fires, and proliferation of invasive species, will require constant vigilance and dedicated resources.

What Is EPA Doing to Protect Lake Tahoe?

EPA has been charged with protection of the Tahoe Basin ever since Section 114 of the 1972 Clean Water Act required implementation of a study to "...preserve the fragile ecology of Lake Tahoe." EPA's involvement accelerated sharply after the 1997 Presidential Forum, where President Clinton announced a number of air- and water-quality goals, as well as a full-time, on-site EPA Lake Tahoe Basin Coordinator. Since then, EPA has invested over \$47 million, including \$9 million for a lake clarity restoration plan, known as a Total Maximum Daily Load (TMDL). EPA also oversees implementation of the Clean Water Act, Safe Drinking Water Act, Clean Air Act and other statutory requirements by our partner agencies in California and Nevada, and by local partners.

What Is the Lake Tahoe Total Maximum Daily Load (TMDL) and What Does It Do?

The Lake Tahoe TMDL is the centerpiece of EPA's efforts to reverse the decline in the lake's deep-water clarity and restore it to historic levels. The TMDL and its Implementation Plan were adopted by California and Nevada, and approved by EPA in 2011 following a 10-year, \$10 million development effort funded by state and federal agencies. Both the scientific research and stakeholder input that underpin the final restoration plan are among the most advanced ever applied to a TMDL in the Clean Water Act's 44-year history. Key elements include:

- **Understanding Pollutant Sources:** Relative amounts of fine sediment, phosphorus and

nitrogen inputs to Lake Tahoe were quantified from major pollutant sources including urban and forest stormwater runoff, stream channel erosion, and atmospheric deposition.

- **Targeting Load Reductions:** Load reductions for the largest pollutant sources were quantified in order to achieve the interim “Clarity Challenge” target of 78 feet by 2026 and the long-term TMDL numeric clarity goal of 97 feet by 2076 (Figure 2).

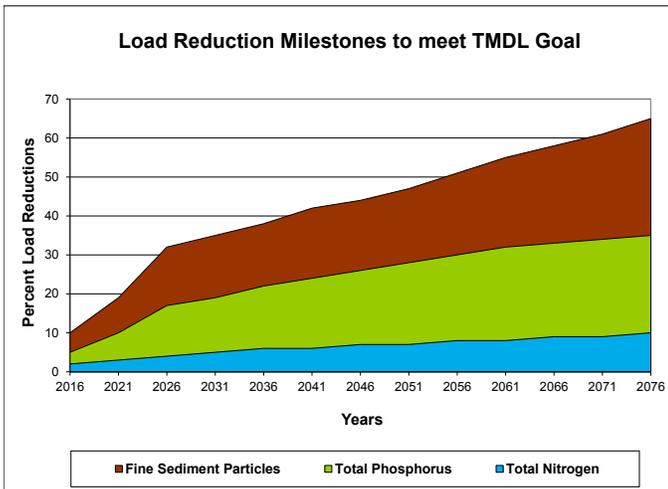


Figure 2. Source: U.S. EPA

- **Creating and Implementing a Strategy:** A strategy was developed to achieve pollutant load reductions through many possible actions, including improved roadway operations and maintenance, targeted street sweeping programs, infiltration basins to capture and treat urban stormwater, stabilization and revegetation of eroding slopes, removal of impervious cover and restoration of soil infiltration, and numerous non-urban source control and reduction measures, including reconnecting streams with their floodplains.
- **Tracking and Reporting Results:** The TMDL included development of the [Lake Clarity Crediting Program](#) an innovative, comprehensive accounting system that measures the amount of key urban stormwater pollutants entering the lake and sets load reduction targets, or “Lake Clarity Credits,” that city, county and highway agencies must achieve. The program enables greater transparency and accountability for expenditures on water quality improvement projects and is a model for other urban stormwater programs confronting similar issues. Adaptive [TMDL Management System](#) procedures enable TMDL program man-

agers to report on accomplishments, better identify and respond to challenges, and make adjustments to ensure that the TMDL is working.

What Are EPA’s Priorities for Lake Tahoe for the Next 20 Years?

EPA will continue to work with our federal, state and local partners, and the Washoe Tribe to support the TMDL planning and implementation needed to restore deep water clarity, improve nearshore water quality, and protect Lake Tahoe as a drinking water source. Our priority will be to support projects with multiple and sustainable benefits, especially to improve watershed resilience to the effects of climate change. We will also continue to invest in applying and improving scientific tools to predict and measure project benefits.

What Can YOU Do to Protect Lake Tahoe?

Visit the Tahoe Regional Planning Agency website and find out “[10 WAYS TO SAVE LAKE TAHOE](#)” for both homeowners and visitors.

Choose native plants: to reduce water, fertilizer and pesticides.

Use phosphorus-free fertilizer: to reduce algae growth.

Adopt a storm drain: to keep sediment and other pollutants out.

Bike, walk, or catch the bus: to reduce air pollution.

Don't litter, pick up trash: to keep trash out.

Replace old woodstoves: to reduce air pollution.

Install and maintain Best Management Practices: to keep sediment and other pollutants from flowing off your property.

Volunteer: to help clean up and get involved.

Clean, drain, & dry: to prevent invasive aquatic species.

Become a Tahoe Keeper: learn to spot invasive species on your paddle crafts.

Pick up after your pet: to keep bacteria and nutrients out.

Get defensive!: defensible space reduces wildfire risk.

Support restoration efforts: to improve Lake Tahoe's ecosystem and water quality.

For more information:

Jacques Landy, U.S. EPA
 Lake Tahoe Basin Coordinator
 Tel: (775) 589-5248
 Email: landy.jacques@epa.gov

Learn more about the activities of EPA and partner agencies at EPA’s Lake Tahoe website at

www.epa.gov/lake-tahoe