United States Environmental Protection Agency

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EPA'S TARGETED WATERSHED GRANTS 2005 ANNUAL REPORT

December 2005

Lake Tahoe

CA, NV

WHY IS THIS WATERSHED SPECIAL?

Because of its extraordinary water clarity, Lake Tahoe is designated an Outstanding National Resource, which affords it the highest level of protection under the federal Clean Water Act. At 6,223 feet above sea level in the Sierra Nevada mountains, the lake spans portions of both California and Nevada and is a national scenic and recreational treasure. The second deepest lake in North America, with a maximum depth measured at 1,645 feet, it is the tenth deepest in the world. It contains enough water to cover the entire State of California to a depth of 14.5 inches. The region's annual $1 billion economy depends heavily on the beauty of this sapphire-blue lake, which attracts millions of visitors each year to its stunning peaks and beautiful shorelines.

ENVIRONMENTAL CHALLENGES

Since 1968, scientists have measured a decline in the lake's famous water clarity at the alarming rate of one foot per year due to algae growth and suspended sediments associated with human activity. During this time, Lake Tahoe's clarity, as measured by a plate sized secchi disk, has declined from 29.5 meters (97 feet) to 22.5 meters (74 feet).

- Recent research indicates that in-basin atmospheric pollutants contribute significantly to the decline in clarity.
- Population increases, air pollution, stream channel erosion, upland erosion, loss of wetlands, and historical sewage disposal have contributed to lost water clarity.
- Nitrogen, phosphorus and fine sediment from streams, groundwater, urban runoff, and atmospheric deposition are responsible for degrading water quality.

Eagle Falls (Jon Paul)

RESTORATION ACTIVITIES

Numeric limits on urban runoff, construction controls, and stormwater treatment for existing and new development as established by the Tahoe Regional Planning Agency's Regional Plan have been in place since 1987. Although both point and nonpoint source controls are more prevalent in Tahoe than many places in the United States, work currently underway to develop a Lake Tahoe Nutrients and Sediment Total Maximum Daily Load (TMDL) will allow for more scientific, market-based approaches to restoring lake clarity to be developed and evaluated. EPA Targeted Watersheds Grant funds will be used to:

- Evaluate the potential for, and if determined to be feasible, develop a water quality trading strategy that will include cross media (air-water) opportunities and will link land use, air pollution, and best management measures to water clarity goals
- Evaluate new approaches and technologies for pollution control at Lake Tahoe, including measures to control air-borne pollutants from transportation sources
- Incorporate data on new and traditional Best Management Practices (BMP) into a matrix to determine their basin-wide potential to achieve required numeric load reductions, information that will help guide watershed management decisions and potentially enable trading

A STRONG PARTNERSHIP FOR CHANGE

To restore lake clarity, the Lahontan Regional Water Quality Board and the Nevada Division of Environmental Protection will collaborate on developing the Lake Tahoe Nutrients and Sediment Total Maximum Daily Load, a holistic watershed plan to address water quality impairments. The Lake Tahoe Basin is unique in that two states (Nevada and California) and numerous entities have been engaged in watershed protection efforts for years. The number, nature, and longevity of active stakeholder groups demonstrate the high degree of coordination already occurring. These groups include:

- Water Quality and Transportation Coalition
- Lake Tahoe Interagency Monitoring Program
- Storm Water Quality Improvement Committee
- Lake Tahoe Environmental Education Coalition
- Lake Tahoe Science Consortium
- Numerous government agencies at the federal, state and local level

Alpine Morning (Jon Paul)

"The Targeted Watershed Grant could not have happened at a better time. The grant will greatly expand on our ability to strategically plan for the protection of Lake Tahoe and improve the water clarity for which the lake is famed."

– Dave Roberts, Environmental Scientist, Lahontan Regional Water Quality Control Board, Lake Tahoe Sediment and Nutrients TMDL Project Manager