Opinion: Why TMDL is good policy for Lake Tahoe

By Harold Singer

Recent news articles and guest opinions have raised questions about the science behind the Lake Tahoe Total Maximum Daily Load (TMDL) and the decision to implement it in a recently adopted stormwater discharge permit. While some may take exception to how science is used in policy and regulatory decisions, it is important for those of us who enjoy this wonderful place to evaluate the TMDL based on the facts.

In the late 1960s, the average depth of clarity at Lake Tahoe was measured at over 100 feet. For many years, the lake's clarity has declined at a troubling rate of one foot per year. In 2010, it was 65 feet.

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As disturbing as those numbers are, there is little doubt that without the efforts of all levels of government, as well as the private sector, the rate of clarity loss would have continued at that alarming rate. Fortunately, the rate of loss is slowing, although it has not yet stabilized or started to recover. In addition, over the last decade, algae growth has increased along the lake's shoreline, causing unsightly conditions.

To stop the decline and begin the restoration of clarity, the

California Lahontan Regional Water Quality Control Board (Water Board) and the Nevada Division of Environmental Protection have developed a plan – The Lake Tahoe Total Maximum Daily Load. The research supporting the development of the plan found that very fine sediment particles have a more significant role in the loss of clarity than algae.

Stormwater, which drains into the lake from the developed areas around the lake, contributes more than 70 percent of these fine sediment particles, which are also a source of harmful phosphorus. Since many storm water pipes discharge near shore, reductions in the amount of sediment flowing into the lake will have the added benefit of reducing the amount of phosphorus in the near-shore areas, which, along with other factors, contribute to algae growth.

This scientific peer reviewed TMDL was adopted by both states and was ultimately approved by the U.S. Environmental Protection Agency in August 2011. The TMDL is the adopted regulatory framework for controlling pollutants from various sources, including both the urban and forested areas in the Lake Tahoe basin.

The loss of clarity did not happen overnight and will not be reversed overnight. The TMDL sets a goal to reverse the decline in clarity and achieve an average clarity in the mid-to-high 70-foot range between 2026 and 2031. This goal is technically feasible, but it will take an amount of money similar to that put forth in the last decade to achieve it.

Nationwide, cities, counties, other local jurisdictions, along with state highway departments have responsibility for ensuring that storm water runoff does not pollute our lakes, rivers and oceans. The TMDL, based on its supporting science, concluded that efforts must focus on reducing fine sediment and nutrients from urban storm water if there is any chance of stabilizing or improving the lake’s clarity.

The TMDL includes many tools that will aid in focusing and refining the next steps in addressing lake clarity. Governmental and private entities can use these tools to quantify the benefit of their actions, allowing them to focus limited funds on those management practices, including stormwater infiltration or treatment, or road maintenance activities, such as street sweeping, that remove the most pollutants from stormwater. Local government understands its roads and watersheds and is best suited to decide how to use available funding to implement the most beneficial management practices. The recently adopted stormwater discharge permit provided local government with broad flexibility in this area, and the Water Board is committed to working with our partners to make effective and efficient use of those limited funds.

The Water Board and the Nevada Division of Environmental Protection are also working with the Tahoe Regional Planning Agency to ensure consistency between the approved bi-state TMDL and the upcoming Regional Plan update. Ongoing monitoring and further scientific efforts will be considered when the TMDL is reviewed at five year intervals or more frequently, if warranted. The Water Board is committed to adjustments in the TMDL, based on science and fiscal considerations.

The Lake Tahoe TMDL is not a “new” program. Rather, the science behind the TMDL provides significant insights about how to adjust current programs to control pollutants affecting the clarity of the lake. Because of its national and international significance, decisions concerning Lake Tahoe’s environment have always had the benefit of cutting edge science.

It is in the best interest of the long-term health of the lake that we embrace the opportunity to apply the most current science to make optimal use of available funding. Ongoing monitoring at both the federal, state and local levels will allow us to adaptively and continually fine-tune our efforts to improve lake clarity. The TMDL provides the science-based

tools to hold government accountable at all levels.

For more information about the Lake Tahoe TMDL, or the science supporting the TMDL, please visit the Lahontan Water Board website, which contains a recently released film on the plan along with supporting science.

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