TAHOE REGIONAL PLANNING AGENCY

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STAFF REPORT

Date: August 19, 2026

To: TRPA Governing Board

From: TRPA Staff

Subject: Update on the Tahoe Science Advisory Council Clarity Work

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Summary:
TRPA is pleased to welcome Robert Larsen, Tahoe Science Advisory Council Program Officer, to provide an update on the Council's work on Lake Tahoe's clarity. Additional information on the work of the Tahoe Science Advisory Council can be found on its website: www.tahoesciencecouncil.org

Required Motion:
None. This item is informational only.

Background:
The Tahoe Science Advisory Council (Science Council) was established by the States of California and Nevada through a memorandum of understanding (MOU) in 2015. The Science Council is an independent group of 12 scientists who work collaboratively to provide science-based guidance to inform policy and management decisions across the Lake Tahoe Basin. The Science Council includes representatives from the Desert Research Institute, U.S. Forest Service Pacific Southwest Research Station, U.S. Geological Survey, University of California Cooperative Extension, University of California-Davis, University of California-Santa Barbara, and the University of Nevada-Reno.

Reflecting the collaborative science-to-policy model that has long guided basin management, the Council brings research institutions together with land managers, residents, and other stakeholders to ensure that key policies and management decisions on both sides of the lake are grounded in the best available science, under a "science-action" partnership approach.

Since its formation, the Science Council has played a lead role in the scientific conversation on Tahoe's clarity. It has completed multiple reviews of evidence and data, provided recommendations for modifications to the monitoring program to address information gaps, and secured funding for priority science activities at Lake Tahoe.

The Science Council's contributions to the region have extended beyond clarity, providing critical scientific guidance on the region's response to the discovery of New Zealand mudsnails, addressing microplastic policy, the effectiveness of fuel treatments within the Caldor Fire perimeter, and supporting the ongoing update of the Threshold Standards.

Contact Information:
For questions regarding this item, please contact Dan Segan, Chief Science and Policy Officer at (775) 589-5233 or dsegan@trpa.gov.

Submitting Public Comment:

- Please submit written comments by 3 p.m. the day before the meeting.
- You may email comments to publiccomment@trpa.gov. Include meeting details and agenda item in the subject line or write "General Comment" for non-agenda items.
- You may also send by mail, fax to (775) 588-4527, or drop off in person at 128 Market Street.

Attachment:

A. Tahoe Science Advisory Council Memo on Clarity Science

Attachment A

Tahoe Science Advisory Council Memo on Clarity Science

Lake Tahoe Clarity Science

The Tahoe Science Advisory Council has long focused on Lake Tahoe's clarity, working closely with resource management agencies to respond as conditions evolve.

Lake Tahoe's clarity is not responding in the way the TMDL framework originally anticipated. While water quality improvement efforts such as stormwater management and watershed restoration have undoubtedly made important progress, their exact impact on lake clarity is not well understood.

In recent years the Council and its partners have converged on a coordinated approach to Lake Tahoe clarity science, organized around two focus areas: in-lake processes and watershed loading.

In-Lake Clarity Processes

The lake's biological, chemical, and physical systems are complex, and our understanding of the systems and their interactions has improved since TMDL science was first conducted. Recent in-lake process work has identified several key findings:

- Summer clarity continues to decline while winter clarity improves, pointing to different seasonal drivers
- Biological conditions, including phytoplankton community structure, nutrient limitation, and seasonal productivity, need further characterization
- Particle size distribution, aggregation processes, and temporal variability require additional data
- Shifting physical conditions, including temperature, stratification, and mixing, highlight the need for three-dimensional modeling

To better understand current conditions and explore predictive modeling alternatives, the Council held a two-day workshop in May 2025. The Council also led an independent review of the pelagic monitoring program to identify specific information needs and propose improvements.

Based on the workshop and monitoring review findings, the Council successfully advocated for and secured funding for both in-lake monitoring and modeling tasks. Enhancements to the pelagic monitoring program are underway now to support better system understanding and the next round of clarity model development.

Watershed Loading

The TMDL program's primary focus is reducing the amount of fine sediment and nutrients reaching the lake. Understanding current loading values and the efficacy of implementation investments informs future clarity modeling and guides policy and funding decisions. This topic is less developed than the Council's in-lake work and is now the focus of new investment.

The Council and its partners are building on two recent efforts:

- The Lahontan Water Board is leading a review of the Lake Clarity Crediting Program, including the Pollutant Load Reduction Model (PLRM), considering evolving climate conditions and new scientific and program understanding
- The Council is exploring options for updating loading estimates for Tahoe.

Together, these efforts provide a foundation for targeted watershed model investment to address management loading questions and inform clarity understanding.

Next Steps

Looking forward, the Council partnership is continuing to advance the clarity discussion. While new data are being collected to inform in-lake processes, the Council will direct available funding towards updating load estimates to more accurately assess restoration progress, sharpen adaptive management actions, and support the next generation of clarity modeling.