

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION**

**MEETING OF MAY 14 AND 15, 2008  
Tahoe City**

**ITEM:** 5

**SUBJECT:** **TOTAL MAXIMUM DAILY LOAD FOR SEDIMENT, MIDDLE TRUCKEE RIVER WATERSHED, PLACER, NEVADA AND SIERRA COUNTIES**

**CHRONOLOGY:** This is a new item before the Board.

**ISSUES:** Should the Water Board adopt a TMDL to control excessive sediment in the middle Truckee River?

Are the data used to evaluate in-stream sediment conditions adequate to conclude the river is impaired due to excessive sediment?

Will the proposed monitoring program be adequate to determine if erosion control activities are reducing in-stream sediment loads over time?

**DISCUSSION:** Background

The Truckee River and three of its tributaries, Squaw, Bronco and Gray creeks, were placed on the Clean Water Act Section 303(d) list of impaired waters in 1992 for excessive sedimentation. A separate TMDL to control sediment in the Squaw Creek watershed was adopted by the Water Board in 2006, and approved by the State Water Board and US EPA in 2007.

Water Board staff has developed a TMDL for the middle Truckee River, including Gray and Bronco creeks. The middle Truckee River Watershed TMDL is a sediment control plan for the segment of river from the outlet of Lake Tahoe at Tahoe City to the California/Nevada state line. The TMDL project area covers approximately 430 square miles, and includes the Town of Truckee, Martis Valley, and parts of Placer, Nevada and Sierra counties.

Initial work on this TMDL began in 2000, and involved an extensive collaborative stakeholder approach. Public input was sought on key elements of the TMDL, and questions arose whether the available data were adequate to determine if the river was impaired due to sediment. Many stakeholders felt the data were insufficient to indicate excessive sediment was affecting water quality. To address these questions, additional studies were commissioned, including monitoring suspended sediment and turbidity (by the Desert Research Institute in 2002-2003) and bioassessment using benthic macroinvertebrates (by Herbst and Kane in 2004). The stakeholder collaborative meetings and TMDL development were suspended until the results of these studies could be evaluated.

### TMDL Development

In 2006, Water Board staff evaluated the newly available data in conjunction with the existing data, and concluded that a TMDL plan was warranted. Sediment impairment was determined through a weight-of-evidence approach, consistent with the State Water Board's 2004 303(d) Listing Policy. Staff's evaluation shows that at certain stream flows, the Truckee River exceeds protective limits for aquatic life beneficial uses, and the Basin Plan's numeric turbidity water quality objective. Bioassessment data showed decreased biologic integrity in areas of increased deposited sediment. Analysis of 30 years of suspended sediment concentrations shows that, on an annual basis, the river exceeds levels of suspended sediment to protect aquatic life in about 20 percent of the years for which data were available. Historic accounts of water quality degradation due to land use and development, as well as recent growth and development in certain areas of the watershed were also considered.

In deciding to develop the TMDL, Water Board staff viewed all available information in the context of the Truckee River's importance as a high value resource, providing water supply, recreation, and aquatic life habitat for California and Nevada. Independent scientific peer review and the US EPA support Water Board staff's conclusion that a TMDL is appropriate.

### TMDL Implementation and Monitoring

Because the Basin Plan's sediment water quality objectives are narrative statements rather than a numeric criteria, this TMDL proposes a numeric target of an annual 90<sup>th</sup> percentile of 25 milligrams per liter suspended sediment to interpret the objectives. Qualitative targets for implementation activities, such as road

abrasive management, ski area erosion control, and restoration of disturbed areas, are also included. The implementation activities focus on broad categories of land use activities identified in the TMDL as main human-caused sediment sources, including dirt roads, storm water runoff from developed areas, and remaining impacts from legacy sites.

The TMDL will be implemented through the existing and newly developed regulatory requirements in place in the watershed, with additional focus recommended for certain programs. Existing regulatory requirements include Waste Discharge Requirements issued to dischargers in the watershed that contain comprehensive requirements to control sediment discharges. These requirements specify that dischargers identify erosion control problems, propose projects to address the problems, and maintain those projects. Newly issued NPDES municipal storm water permits to the Town of Truckee and Placer County's jurisdiction in the watershed are a key new regulatory tool to supplement these existing requirements.

Progress toward meeting the TMDL will be determined through monitoring of in-stream suspended sediment concentrations, and tracking compliance with existing and newly issued regulatory actions. Additional monitoring data from Placer County's *Truckee River Water Quality Monitoring Program* (currently in development) can be considered in conjunction with the target monitoring to assess upslope and in-stream sediment conditions.

**RECOMMENDATION:**

- 1) Certify the substitute Environmental Document, and
- 2) Adopt the Truckee River Watershed TMDL for Sediment.

**ENCLOSURES:**

- [1. Resolution](#)
- [2. Truckee River Watershed TMDL Staff Report](#)
- [3. Proposed Basin Plan Amendment](#)
- [4. Substitute Environmental Document](#)
- [5. Water Board Staff Responses to Scientific Peer Review Comments](#)
- [6. Water Board Staff Responses to Public Review Comments, and copies of comment letters received](#)