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# State Water Resources Control Board

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**Arnold Schwarzenegger**  
Governor

**NOTICE OF OPPORTUNITY TO COMMENT:  
PROPOSED APPROVAL OF AN AMENDMENT TO THE  
WATER QUALITY CONTROL PLAN FOR THE LAHONTAN REGION (BASIN PLAN)  
ESTABLISHING A TOTAL MAXIMUM DAILY LOAD FOR  
SEDIMENT IN THE MIDDLE TRUCKEE RIVER WATERSHED**

**NOTICE IS HEREBY GIVEN THAT** the State Water Resources Control Board (State Water Board) will accept comments on the proposed approval of an amendment to the Basin Plan that would establish a Total Maximum Daily Load (TMDL) for sediment in the Truckee River Watershed. The amendment, the State Water Board agenda language, and draft resolution are available on the State Water Board's Web site at

[http://www.waterboards.ca.gov/water\\_issues/programs/tmdl/tmdl.shtml#rb6](http://www.waterboards.ca.gov/water_issues/programs/tmdl/tmdl.shtml#rb6) or can be received by mail by contacting Peter Martin Jr. at (916) 341-5557. The amendment was adopted by the Lahontan Regional Water Quality Control Board on May 14, 2008. The State Water Board will separately publish a notice of the meeting at which it will consider the proposed approval of the amendment.

Comment letters to the State Water Board must be received by 12:00 noon on February 13, 2009. After the deadline, State Water Board staff will not accept additional written comments unless the State Water Board determines that such comments should be accepted. Please send comments on the proposed State Water Board approval of the amendment to: Jeanine Townsend, Clerk to the Board, by email at [commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov) (if **15 megabytes in size or less**), by fax at (916) 341-5620 or by mail addressed to State Water Resources Control Board, 1001 I Street, Sacramento, CA 95814. Please also indicate in the subject line, "**Comment Letter – Truckee River Sediment TMDL.**"

Please direct questions about this notice to Peter Martin Jr., Division of Water Quality, at (916) 341-5557 ([pmartin@waterboards.ca.gov](mailto:pmartin@waterboards.ca.gov)) or Steven H. Blum, Senior Staff Counsel, at (916) 341-5177 ([sblum@waterboards.ca.gov](mailto:sblum@waterboards.ca.gov)).

January 21, 2009  
Date

Jeanine Townsend  
Clerk to the Board

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## STATE WATER RESOURCES CONTROL BOARD BOARD MEETING SESSION-DIVISION OF WATER QUALITY [DATE - TBD], 2009

### ITEM

#### SUBJECT

CONSIDERATION OF A RESOLUTION APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LAHONTAN REGION (BASIN PLAN) TO ESTABLISH A TOTAL MAXIMUM DAILY LOAD (TMDL) FOR SEDIMENT IN THE MIDDLE TRUCKEE RIVER WATERSHED

#### BACKGROUND

On May 14, 2008 the Lahontan Regional Water Quality Control Board (Lahontan Water Board) adopted Resolution No. R6T-2008-0019 ([Attachment 1](#)) to amend the Basin Plan to establish a TMDL for sediment in the Middle Truckee River Watershed. The Truckee River and three of its tributaries, Squaw, Bronco, and Gray creeks, were placed on the federal Clean Water Act section 303(d) list of water bodies requiring TMDLs in 1992, as a result of the impacts of excessive sedimentation. The listing was maintained on the 2006 303(d) list. A TMDL for Squaw Creek, a major tributary, was approved by the State Water Resources Control Board (State Water Board) and the United States Environmental Protection Agency (U.S. EPA) in 2007 to address upstream sediment inputs. At higher stream flows, measured suspended sediment concentrations in the Middle Truckee River exceed narrative water quality objectives to protect beneficial uses. The most sensitive beneficial uses affected by excess sediment are cold freshwater aquatic habitat (COLD) and Spawning, Reproduction and Development (SPWN).

The TMDL focuses on the Truckee River between the outlet of Lake Tahoe and the California/Nevada state line, also known as the Middle Truckee River. It flows through the eastern parts of Placer, Nevada, and Sierra Counties. There are a total of ten subwatersheds that flow into the Middle Truckee River throughout the 39 mile stretch.

The purpose of this amendment is to reduce the impact of sedimentation from anthropogenic sources on aquatic life beneficial uses in the Middle Truckee River Watershed. The primary sources of excess sediment loads are dirt roads, urban storm water runoff, legacy erosion sites, and in some subwatersheds, graded ski runs. This TMDL is intended to reduce the impact of these nonpoint sediment sources through the use of Best Management Practices (BMPs).

There are several contributing factors to the excess sedimentation throughout the watershed. Increased sedimentation to stream channels is linked to urbanization associated with high growth and population density, accompanied by development in erosion-sensitive landscapes. According to the U.S. Census Bureau, the population growth rate from 1990 to 2000 was more than 40 percent in Placer County. As more urbanization occurs in previously rural locations, the need for an established TMDL has become more pronounced. This new development exacerbates the sediment contribution due to stormwater runoff. Much of the Middle Truckee River Watershed has erosion-prone soils that are highly sensitive to land disturbance. Two major highways, Highway 89 and Interstate 80, run parallel and in close proximity to the Middle Truckee River. These roads endure long periods of snowfall and require road sanding

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for traction during winter months. There are also numerous legacy sites related to historical land use activities which included logging, sheep grazing, and mining. Recent watershed assessments have indicated that these legacy sites still have an impact on water quality today.

## TMDL TARGETS AND ALLOCATIONS

The current conditions in the Truckee River exceed the narrative water quality objectives for sediment, suspended materials, settleable materials, and turbidity as established in the Lahontan Region Basin Plan.

In the TMDL, desired conditions in the Truckee River are expressed as a numeric target for in-stream suspended sediment that is protective of aquatic life, with an emphasis on early life-stage salmonids (e.g., rainbow, cutthroat, and brown trout). Based on a review of scientific literature and analysis of 30 years of suspended sediment data in the river, suspended sediment concentrations in the Truckee River should be less than or equal to 25 milligrams per liter (mg/L) to protect aquatic life beneficial uses. This value is at the lower end (most protective) of suggested or existing sediment values to protect early aquatic life stages, providing a high level of protection for the most sensitive SPWN beneficial use. The 25 mg/L target is expressed as an annual 90<sup>th</sup> percentile value. Seasonal variations are accounted for by expressing the suspended sediment concentration target as an annual 90th percentile value to allow for fluctuations in suspended sediment concentration over the target limit, while providing a high level of protection for sensitive aquatic life stages. Sediment loading is highly variable due to various events including thunderstorms, snowmelt, and releases from various dams located in all three tributaries and within the Truckee River.

The current annual suspended sediment load estimated for the Truckee River at the Farad gauging station is approximately 50,300 tons, based on an above average water year (1996-1997). Estimations for suspended sediment load were calculated by creating regressions using United States Geological Survey gauged streamflow data at the Farad gauging station and measured suspended sediment concentration data collected by the Desert Research Institute. The Farad gauging station is located in Nevada downstream from all major tributaries. The above average water year was chosen to incorporate a margin of safety into the TMDL target sediment load. An overall reduction of 20 percent is needed to achieve water quality conditions for aquatic life protection; resulting in a target loading capacity of 40,300 tons per year. The target load reduction in tons will be achieved with a suspended sediment concentration of 25 mg/L or less.

The TMDL is the sum of wasteload allocations for point sources, load allocations for nonpoint sources, and a margin of safety. TMDL attainment will be evaluated through the TMDL targets that express desired conditions in the watershed, rather than sediment mass reductions, as measured by suspended sediment concentration. Wasteload and load allocations will be apportioned individually as targets for each of the ten subwatersheds. The TMDL target of 20 percent reduction is equivalent to a sediment load reduction of 10,000 tons per year.

## IMPLEMENTATION

The Water Board has regulatory authority to require implementation of this TMDL. This authority includes adopting waste discharge requirements (WDRs) (storm water and construction permits to control sediment discharges), and waivers of WDRs and prohibitions. Enforcement actions may be used to address water quality problems when Basin Plan provisions, WDRs, or waivers are violated. These include Notices of Violation, Cleanup and

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Abatement Orders, Cease and Desist Orders, and monetary penalties (administrative civil liability). Although the State Water Board cannot specify the design, location, type, or particular manner of compliance, it can require dischargers to implement sediment and erosion controls such as BMPs necessary to attain the water quality standards through its regulatory authority.

Implementation of the TMDL is based on continuation and improvement of existing erosion control and monitoring programs, newly issued National Pollutant Discharge Elimination System (NPDES) municipal storm water permits, and cooperative agreements with other state and federal agencies. Existing WDRs contain requirements to control sediment discharges from construction projects, highway operations and maintenance, and facilities with long-term operations such as ski resorts or industrial areas. In late 2006, the Lahontan Water Board's Executive Officer designated Placer County (within the middle Truckee River Watershed) and the Town of Truckee as regulated small municipal separate storm sewer systems (MS4s) requiring that they apply for coverage under the NPDES program. As part of obtaining permit coverage, they are required to develop and implement a Storm Water Management Program. Water quality improvement projects undertaken by entities such as the United States Forest Service-Tahoe National Forest, the Tahoe Donner Land Trust, and the Truckee River Watershed Council will compliment the Lahontan Water Board's regulatory activities to meet the TMDL.

The estimated time frame for meeting the numeric targets and achieving the TMDL is 20 years. This estimate takes into consideration time needed for dischargers to devise plans to address sediment sources and iteratively apply appropriate sediment controls. There will also be funding constraints that may affect the pace of certain implementation actions needed to address legacy sites. Further, there may be significant temporal disparities between upland erosion control actions and sediment delivery to the river. After 10 years (the halfway point estimated for TMDL attainment), staff will examine all data trends to determine the need for revision of the TMDL, numeric targets, or implementation plan. Potential outcomes of the 10-year review could include recommendations to reassess sediment sources, revise targets, or adjust the implementation plan.

## **MONITORING**

Monitoring will be required to evaluate the effectiveness of the TMDL. Suspended sediment concentration samples will be collected monthly by the Desert Research Institute at the Farad gauging station to track the conditions of the river in response to the implementation. If exceedances above the target are identified at the Farad gauging station, upstream suspended sediment concentration data can be assessed for potential exceedances and sources. Targets will also be monitored through a variety of entities as specified in discharger-specific WDRs and NPDES permits, through collaboration with other responsible resource agencies, and from voluntary efforts. Road sanding recovery and BMP's will be monitored by permittees, who are required to send annual reports to the Lahontan Water Board. Legacy site restoration will be identified and prioritized by the dischargers, with the Lahontan Water Board providing regulatory oversight and application assistance with grant funding for assessment and improvement projects.

## **ECONOMIC CONSIDERATIONS**

It is difficult to accurately estimate the cost of implementing the TMDL because the specific priorities and control measures need to be determined by each individual discharger, and may be addressed by an array of alternatives that will be determined iteratively as dischargers work

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to comply with their permit conditions. The costs associated with BMPs vary according to design, scale, and application. Storm water discharges containing sediment from other areas under the jurisdiction of Placer County and the Town of Truckee have also been identified as sediment sources and were assigned load reductions to meet the TMDL. In 2006, these entities were designated as regulated small MS4s and have started developing storm water management programs as required under the State Water Board's Phase II general municipal NPDES permit. The costs associated with the planning, development, administration, and implementation of Storm Water Management Plans and BMPs are estimated at more than \$75,000,000 over 20 years. These costs will be spread among all dischargers and permittees. This estimate is highly variable due to costs associated with construction of BMPs and their necessity based on new permits.

Erosion control at upland legacy sites will have varying costs including a one time implementation cost of \$2,500 to \$8,000 per acre and yearly maintenance costs of \$2,800 to \$3,000 depending on type of control treatment implemented. Various stream restoration measures will cost anywhere from \$700 to \$12,000 per meter. Some costs for restoration and control measures will be grant-funded, with the Lahontan Water Board providing application assistance and oversight.

Monthly monitoring of suspended sediment concentrations will occur and are expected to cost approximately \$120,000 over the 20-year implementation timeframe.

## **EXECUTIVE OFFICER CORRECTION**

During review of the Basin Plan amendment, Lahontan Water Board staff found that it was necessary to make several minor, non-substantive corrections to the language for clarity and consistency. Lahontan Water Board Resolution R6T-2008-0019, adopted on May 14, 2008, allows its Executive Officer to make such corrections to the amendment language as needed. The Executive Officer made the corrections in a memorandum dated September 15, 2008 ([Attachment 2](#)). The memorandum includes the underline/strikeout version of the Basin Plan amendment showing these non-substantive corrections.

## **POLICY ISSUE**

Should the State Water Board approve the amendment to the Basin Plan to establish a TMDL for sediment in the Middle Truckee River Watershed?

## **FISCAL IMPACT**

Lahontan Water Board and State Water Board staff work associated with or resulting from this action will be addressed with existing and future budgeted resources.

## **REGIONAL WATER BOARD IMPACT**

Yes, approval of this resolution will amend the Lahontan Water Board's Basin Plan.

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## STAFF RECOMMENDATION

That the State Water Board:

1. Approves the amendment to the Basin Plan adopted under Lahontan Water Board Resolution R6T-2008-0019
2. Authorizes the Executive Director, or designee, to transmit the amendment adopted under Lahontan Water Board Resolution R6T-2008-0019 to the Office of Administrative Law and the TMDL to U.S. EPA for approval.

State Water Board action on this item will assist the Water Boards in reaching Goal 1 of the Strategic Plan Update: 2008-2012 to implement strategies to fully support the beneficial uses for all 2006-listed water bodies by 2030. In particular, approval of this item will assist in fulfilling Action 1 to prepare, adopt, and take steps to carry out Total Maximum Daily Loads (TMDLs), designed to meet water quality standards, for all impaired water bodies on the 2006 list.

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## STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 2009-

### APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LAHONTAN REGION (BASIN PLAN) TO ESTABLISH A TOTAL MAXIMUM DAILY LOAD FOR SEDIMENT IN THE MIDDLE TRUCKEE RIVER WATERSHED

#### WHEREAS:

1. On May 14, 2008, the Lahontan Regional Water Board adopted Resolution R6T-2008-0019 ([Attachment 1](#)) amending the Basin Plan to incorporate a Total Maximum Daily Load (TMDL) for the Middle Truckee River Watershed.
2. The amendment meets the necessity standard of the Administrative Procedures Act, Government Code section 11353, subdivision (b)
3. Lahontan Water Board found that the adoption of this amendment would be consistent with the State Antidegradation Policy ([State Water Board Resolution No. 68-16](#)) and federal antidegradation requirements.
4. The Lahontan Water Board found that the analysis contained in the TMDL staff report, the substitute environmental document, the California Environmental Quality Act (CEQA) Checklist, and the responses to public review comments comply with the requirements of the State Water Board's certified regulatory CEQA process, as set forth in California Code of Regulations title 23, section 3775 et seq.
5. The State Water Board finds that the Basin Plan amendment is in conformance with Water Code section 13240 and 13242, which specifies that Regional Water Quality Control Boards may revise Basin Plans and implement programs for achieving water quality objectives. The State Water Board also finds that the TMDL is consistent with the requirements of federal Clean Water Act section 303(d).
6. The TMDL establishes a target 20 percent annual sediment load reduction through the implementation of management practices to control erosion and limit sedimentation. Attainment of the TMDL target will occur in 20 years, with a review scheduled at the half-way point (10 years) to determine need for revisions of the TMDL, including targets or implementation plan.
7. The Basin Plan amendment does not become effective until approved by the State Water Board and until the regulatory provisions are approved by the Office of Administrative Law (OAL). The TMDL must also be approved by the U.S. Environmental Protection Agency (U.S. EPA).
8. Lahontan Water Board staff determined that minor, non-substantive changes to the language of the Basin Plan amendment were necessary to correct minor clerical errors, to improve clarity, and to ensure that the amendment is consistent with the Basin Plan update adopted under Resolution R6T-2008-0019. The Lahontan Water Board's Executive Officer submitted these minor changes in a memorandum dated September 15, 2008 ([Attachment 2](#)).

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THEREFORE BE IT RESOLVED THAT:

The State Water Board:

1. Approves the amendment to the Basin Plan adopted under Lahontan Water Board Resolution R6T-2008-0019.
2. Authorizes the Executive Director, or designee, to transmit the amendment adopted under Lahontan Water Board Resolution R6T-2008-0019 to OAL and the TMDL to U.S. EPA for approval.

## **CERTIFICATION**

The undersigned Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on (TBD).

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Jeanine Townsend  
Clerk to the Board