

**STATE WATER RESOURCES CONTROL BOARD  
BOARD MEETING SESSION--DIVISION OF WATER QUALITY  
FEBRUARY 20, 2007**

**ITEM 8**

**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 SQUAW CREEK

**DISCUSSION**

The Lahontan Regional Water Quality Control Board (Lahontan Water Board) adopted the proposed amendment on April 13, 2006 under [Resolution R6T-2006-0017](#), establishing a program to control sediment in Squaw Creek, Placer County.

Squaw Creek is a tributary to the Truckee River and drains a small alpine watershed located about six miles northwest of Lake Tahoe between Tahoe City and Truckee. Squaw Creek was identified in 1992 under federal Clean Water Act

§ 303(d)(1) as not fully meeting water quality standards in the Basin Plan due to excessive sedimentation. Data from bioassessment studies indicate that narrative and numeric water quality objectives for sediment, suspended materials, settleable materials, turbidity, and nondegradation are not fully met.

Accelerated sedimentation has been identified as impacting the aquatic life and recreational beneficial uses of Squaw Creek. The beneficial uses found most sensitive to excessive sedimentation are those related to cold, freshwater aquatic life habitat. Documented problems include degraded benthic invertebrate communities (bottom dwelling organisms such as insects and worms) and physical channel conditions. Suspended sediment may have sub-lethal effects on fish, including reduced feeding and growth, respiratory impairment, and physiological stress, leading to reduced tolerance to disease and toxicants. Deposited sediment can have significant impacts on the reproductive success of salmonid fish by smothering fish embryos and fry. Changes to the stream channel can limit the migration, movement, and habitat of fish and other aquatic organisms.

All of the sediment sources in the Squaw Creek watershed are nonpoint sources. Hillslope erosion from land disturbance related to development in naturally erosion-prone areas contributes to excess sediment delivery to Squaw Creek. Stream channel erosion, road sanding operations, and naturally occurring erosion also contribute to sediment loading to Squaw Creek. The sedimentation impairment is most apparent in the low gradient meadow reach of Squaw Creek, where the high gradient north and south forks deposit sediment transported from the upper watershed.

The watershed was historically used for cattle ranching, sheep herding, and logging. Ski lifts were first constructed in the south fork watershed in 1949, and facilities were later expanded to accommodate the 1960 Winter Olympic Games. The meadow reach was graded and drained to create a temporary parking lot, and ski runs, roads, and residential and commercial areas were built. Land in the south fork is largely owned by the Squaw Valley Ski Corporation (SVSC), operators of the Squaw Valley USA ski area. The Resort at Squaw Creek was constructed at the southeast portion of the meadow reach in 1989 and 1990 and includes a golf course, hotel, and resort facilities. It is surrounded by approximately 230 acres of residential development. The Village at Squaw Creek was constructed at the western end of the meadow reach in 2000 and is planned to eventually include 640 townhouses and 80 stores and restaurants. Poorly managed hillslope conditions and construction practices contributing to excess sedimentation in Squaw Creek resulted in a Cleanup and Abatement

Order issued to SVSC in 2001. Land in the north fork of Squaw Creek is primarily U.S. Forest Service land and is generally undeveloped.

Placement on the Clean Water Act § 303(d) list requires that a plan (a TMDL) be developed to control the identified pollution and ensure that standards are met. Numeric targets were selected to interpret the water quality standards and track the effectiveness of the TMDL. These targets include physical habitat measures of stream substrate quality (median particle size and percent fines and sand), and biological parameters that represent desired stream habitat conditions for fish and aquatic invertebrates. The targets were established by comparison to regional reference streams with relatively less land disturbance.

The Lahontan Water Board estimate that the overall sediment loading to Squaw Creek is 37,900 tons per year and that 21,800 tons per year of this load stems from controllable sources such as dirt roads, road sanding, ski runs, and residential and commercial development. Half of the estimated total load from alluvial channel erosion is also assumed to be controllable. The TMDL requires an overall 50 percent reduction in the controllable sediment loading to protect beneficial uses. The TMDL implementation program is based on continuation and improvement of existing erosion control and monitoring programs currently conducted by SVSC, the Resort at Squaw Creek, and the Village at Squaw Creek as part of their waste discharge requirements. Additionally, waste discharge requirements will be issued to Placer County. Other individual or general permits may be issued as warranted for construction-related or other land-disturbing activities to control sediment discharges to Squaw Creek.

Implementation monitoring will focus on tracking compliance with existing and proposed regulatory actions, including installation and maintenance of Best Management Practices to control sediment discharges, with a focus on control of fine sediment. Progress toward meeting the TMDL will be determined through monitoring of the in-stream physical and biological parameters. The estimated time frame for meeting the numeric targets and achieving the TMDL is 20 years. This estimate takes into consideration the time needed for dischargers to identify sediment sources, to devise a plan to address those sources, and to fully implement appropriate sediment controls; and for target indicators to respond to decreased sediment loading. The Lahontan Water Board has committed to reviewing the TMDL after 10 years to determine if revisions are warranted based on relevant compliance data.

#### **POLICY ISSUE**

Should the State Water Board approve the proposed amendment to the Basin Plan in accordance with the staff recommendations below?

#### **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, Lahontan Water Board.

**STAFF RECOMMENDATION**

That the State Water Board:

1. Approves the amendment to the Basin Plan adopted under Lahontan Water Board Resolution No. R6T-2006-0017.
2. Authorizes the Executive Director or designee to transmit the amendment and the administrative record for this action to the Office of Administrative Law and the TMDL to the U.S. Environmental Protection Agency for approval.

# DRAFT

January 12, 2007

## STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 2007-

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 SQUAW CREEK

### WHEREAS:

1. The Lahontan Regional Water Quality Control Board (Lahontan Water Board) adopted the revised Basin Plan under Resolution No. 6-93-98 on September 9, 1993. The revised Basin Plan was approved by the State Water Resources Control Board (State Water Board) on January 19, 1995, by the Office of Administrative Law (OAL) on March 31, 1995, and by the U.S. Environmental Protection Agency (USEPA) on May 29, 2000.
2. On April 13, 2006, the Lahontan Water Board adopted Resolution No. R6T-2006-0017 ([Attachment](#)) amending the Basin Plan to establish a program (TMDL) to control sediment in Squaw Creek, Placer County.
3. The State Water Board finds that the Basin Plan amendment is in conformance with Water Code section 13240, which specifies that Regional Water Quality Control Boards may revise Basin Plans.
4. The Lahontan Water Board found that the analysis contained in the TMDL staff report, the California Environmental Quality Act (CEQA) checklist, and the response to 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 37751, et seq.
5. The Basin Plan amendment does not become effective until approved by the State Water Board and until the regulatory provisions are approved by OAL and the TMDL approved by USEPA.

### THEREFORE BE IT RESOLVED THAT:

#### The State Water Board:

1. Approves the amendment to the Basin Plan adopted under Lahontan Water Board Resolution No. R6T-2006-0017.
2. Authorizes the Executive Director or designee to transmit the amendment and the administrative record for this action to OAL and the TMDL to USEPA 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 Board held on February 20, 2007.

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Clerk to the Board