

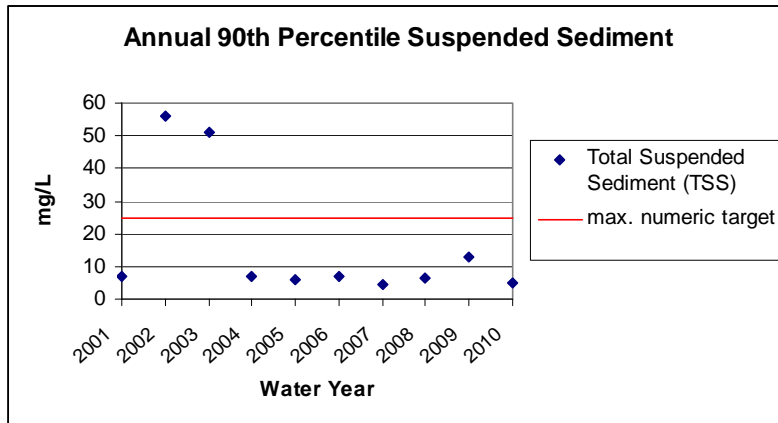
Location map: (outlet of Lake Tahoe to Nevada border)



Background Information:

- *Date of TMDL approval:* May 2008 (Lahontan Region); September 16, 2009 (USEPA)
- *Basis for TMDL:* Flow events resulting from thunderstorms, snow melt and dam releases produce turbidity spikes that exceed the water quality objective. Population growth and urbanization have also contributed in affecting the in-stream aquatic beneficial uses.
- *Responsible parties:* construction projects; highway operations and maintenance (Caltrans); facilities with long-term operations, including ski resorts (Squaw Valley, Northstar-at-Tahoe, Tahoe-Donner Ski Area and Alpine Meadows); industrial areas (Town of Truckee, Placer County and the U.S. Forest Service-Tahoe National Forest).
- *Target:* Annual 90th percentile value of less than or equal to 25 milligrams per liter (mg/L) suspended sediment as measured at the Farad monitoring station.
- *Attainment of TMDL:* The estimated time frame for meeting the numeric target and achieving the TMDL is 20 years.

Current data from 1999 to 2010:



Permits that include TMDL implementation measures:

- Placer County 6A310010006 (designated MS4)
- Town of Truckee 6A290712005 (designated MS4)
- Squaw Valley Ski Corporation 6A310118070
- Northstar-at-Tahoe 6A319306003
- Alpine Meadows 6A310003000
- Tahoe Donner Ski Area 6A290009500

Period of evaluation:

January 2010-December 2010

Additional Information: The Town of Truckee and Placer County developed the *Truckee River Water Quality Monitoring Plan (TRWMP)* (September 15, 2008) to design a strategy which will allow the County and Town to assess the effectiveness of their ongoing Storm Water Monitoring Programs (SWMPs) with respect to protecting downstream resources. Annual reports are submitted to the Lahontan Water Board on January 15th. According to the 2010 TRWMP Annual Report, the Town of Truckee conducted Rapid Assessments along 6.4 miles of the Truckee River and the furthest downstream mile of both Donner and Trout Creeks ending at the confluences with the Truckee River and collected grab samples at 3 outfall monitoring sites. In 2010, Placer County conducted Rapid Assessments in the Bear Creek, Squaw Creek and Martis Creek watersheds and performed bioassessments in Squaw Creek and Martis Creek. The Truckee River Watershed Council, a local Truckee non-profit, is also instrumental in restoring and preserving the Truckee River watershed. Some of their current projects include restoration in the Perazzo Meadows, Coldstream Canyon, and Martis Valley (learn more at <http://www.truckeeriverwc.org/projects>).

Table 1. Truckee River Sediment TMDL Indicator

Indicator	Target	Evaluation Schedule	Responsible Party (RP)	Source Reported	Compliance Comments
Suspended sediment concentration (SSC) ¹	Annual 90 th percentile value of less than or equal to 25 mg/L suspended sediment measured at the Farad (USGS gauge 10346000) monitoring station	Total suspended sediment (TSS) grab samples measured at least once per month at Farad monitoring station.	<p>1) Construction projects, highway operations and maintenance (Caltrans)</p> <p>2) facilities with long-term operations, including ski resorts (Squaw Valley, Northstar-at-Tahoe, Tahoe-Donner Ski Area, and Alpine Meadows)</p> <p>3) industrial areas (Town of Truckee, Placer County, and the USFS-Tahoe National Forest)</p>	Nevada Department of Environmental Protection (NDEP) website: http://ndep.nv.gov/bwgp/T1.html (and upon request)	Currently in compliance: Refer to Table 3 and Figure 1 .

¹According to the TMDL Staff Report (pg. 3-8), "Samples were analyzed for total suspended sediment (TSS), suspended sediment concentration (SSC), or both. Although the analytical methods differ, both methods are assumed to produce equal results for purposes of this TMDL.....These samples were analyzed using both the SSC and TSS analytical methods. No significant difference between the analysis methods was detected (y=0.9979x; R2=0.9431). Therefore, sediment concentrations are referred to as SSC hereafter in this document."

Table 2. Truckee River Sediment TMDL Implementation Measures

Implementation Measure	Evaluation Schedule	Responsible Party	Source Reported	Compliance Comments
Road sand application and recovery managed to the maximum extent practicable (MEP)	Annually. Includes sand use and recovery tracking and road sand characteristics, such as durability, abrasion loss, sieve analysis, and phosphorus content	Placer County	SWMP Annual Report (Oct '09-Sept '10)	Total applied: 581 tons / Total reclaimed: 1590 tons
		Town of Truckee	SWMP Annual Report(Oct '09-Sept '10)	Total applied: 2938 tons / Total reclaimed: 1864 tons
		Caltrans	Annual Reports	Updated permit expected summer 2011 and includes reporting of road sand application and recovery
Ski area Best Management Practices (BMPs) implementation and maintenance ²	Annually (at a minimum). Ski runs, maintenance facilities, and other features are inspected after snow melt. The RP reports their inspection results, projects proposed to correct deficiencies, and effectiveness of erosion control projects previously implemented	Squaw Valley Ski Corporation	Surface Water Quality Monitoring and Erosion Control Monitoring Quarterly Reports	Lahontan Water Board staff reviewed reports, recorded violations, and took actions when necessary
		Northstar-at-Tahoe	Water Quality Monitoring Monthly Reports and Erosion Control Quarterly Reports	Lahontan Water Board staff reviewed reports, recorded violations, and took actions when necessary
		Alpine Meadows	Water Quality Monitoring Annual Report and Erosion Control Monitoring Quarterly Report	Lahontan Water Board staff reviewed reports, recorded violations, and took actions when necessary
		Tahoe-Donner Ski Area	Monthly Monitoring Reports	Lahontan Water Board staff reviewed reports, recorded violations, and took actions when necessary

² The Lahontan Water Board staff contacts permittees when staff observes violations or deficient reporting.

Table 2 (continued). Truckee River Sediment TMDL Implementation Measures

Implementation Measure	Evaluation Schedule	Responsible Party	Source Reported	Compliance Comments
Dirt roads maintained or decommission ³	Annually monitor and report high priority dirt roads monitored to evaluate erosion features and potential corrective actions, the number of miles of roads inspected, proposed corrective actions, and effectiveness of previous implementation measures	USFS	Informal letter dated April 24, 2011	<ol style="list-style-type: none"> 1) 16 miles of road treated to improve water drainage and watershed function within the Prosser Creek watershed 2) 27 miles of road treated to improve water drainage and watershed function within the Davies Creek and Merrill Creek watersheds 3) 9 miles of off highway vehicle trails treated to improve drainage on the Ellis Peak Trail, Cold Stream Trail, Verdi OHV Route and unnamed trails in the Boca Reservoir area 4) 4) Soil and Water Roads Condition Inventory (SWRCI) applied to 158 miles of road in the Truckee River Corridor area to rate road segments as functional (85.7 miles), at-risk (56.8 miles), or impaired (14.7 miles) [see map].
		Placer County	SWMP Annual Report (Oct' 09-Sept '10)	Currently no maintained dirt roads within the Truckee Basin
		Town of Truckee	SWMP Annual Report (Oct '09-Sept '10)	Alder Creek Road Parking Improvement Project – Dirt parking area at the Equestrian Center was paved and BMPs installed (no acreage/mileage stated)
		State Parks	Personal correspondence	Road restoration work has occurred in Lakeview and Coldstream canyons at Donner Memorial State Park
Legacy site restoration and Best Management Practices (BMP) implementation	Annually, after candidate sites are identified and prioritized through watershed assessments and Water Board regulatory oversight, a list of legacy sites should be maintained and updated, and information reported	USFS	Informal letter dated April 24, 2011	<ol style="list-style-type: none"> 1) Perazzo Meadows Restoration Project Phase II was completed. Approximately 150 acres of wetland meadow was restored (130 acres restored in Phase 1 and relocated a road out of the stream buffer zone in the Upper Perazzo Restoration Project in 2009) 2) Sites 1, 7, and 8 of the Merrill Davies Watershed Restoration Project were completed, approximating 15 acres.
		Placer County	SWMP Annual Report (Oct' 09-Sept '10)	No known legacy sites under the County's jurisdiction
		Caltrans	Annual Report	<ol style="list-style-type: none"> 1) 3 water quality improvement projects on HWY 80 (Donner Pass to Nevada state line). One project completed with the other two expected this year (2011) 2) HWY 267 slope stabilization project (begin 2011) 3) Project near Boca Reservoir that includes stormwater treatment structures
		Town of Truckee	SWMP Annual Report (Oct' 09-Sept '10)	<ol style="list-style-type: none"> 1) Donner Pass Road was reconstructed in Sept/Oct 2010. One drain inlet that historically backed up was replaced with improved infrastructure 2) South Shore Drainage Project re-established a drainage path from South Shore Drive (SSD) to Donner Lake. Two new drain inlets were installed on the south side of SSD in the Fall 2009 and the drainage path improvements were completed in the summer 2010.
		State Parks	Personal correspondence	Removal of part of an old campground at Tahoe State Recreation Area

³ Monitoring intended to focus on dirt roads with high potential for sediment delivery to surface water (e.g. within 200 feet of watercourse).

Table 3. Annual 90th percentile of suspended sediment as measured at the Farad monitoring station.

Water Year	90th Percentile SSC (mg/L)	Number of samples
2000-2001	7	12
2001-2002	56	25
2002-2003	51	36
2003-2004	7	12
2004-2005	6	12
2005-2006	7	12
2006-2007	4.52	12
2007-2008	6.37	12
2008-2009	13	11
2009-2010	5.03	12

Note: Data for Water Years 2001-2005 is from the Truckee River TMDL Staff Report pg. 4-7. Data for Water Years 2006-2008 is directly from the NDEP website. Data for Water Years 2008-2010 was received from NDEP upon request.

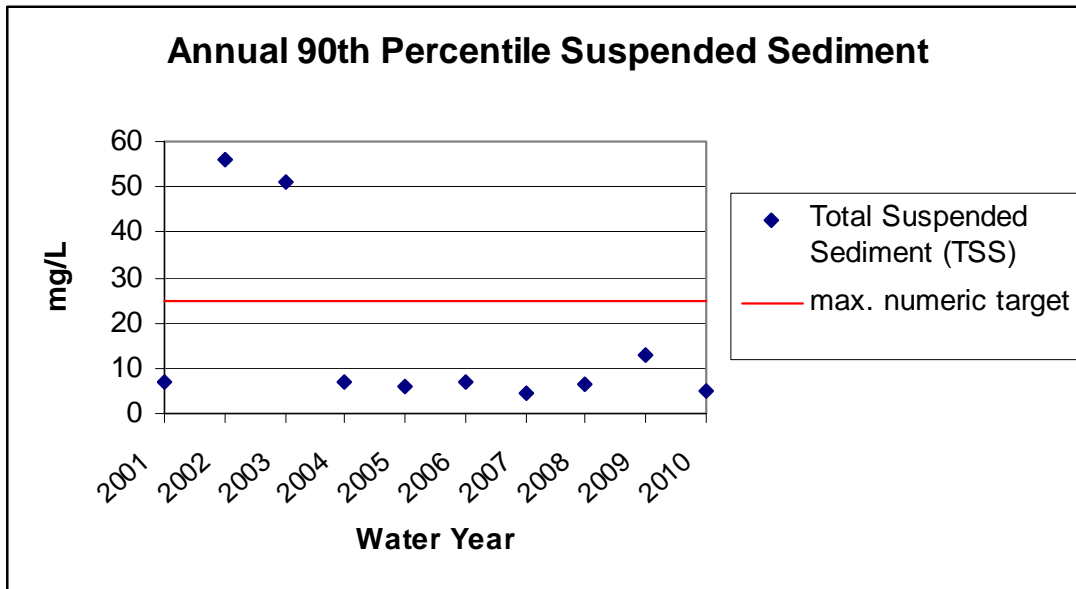


Figure 1. Annual 90th percentile of suspended sediment as measured at the Farad monitoring station.