

## Part 2 Conservation Plan

The importance of environmental conservation at Lake Tahoe Region is emphasized by TRPA’s guiding principles.

*“The Tahoe Region exhibits unique and irreplaceable environmental and ecological values of national significance which are threatened with deterioration or degeneration.”* TRPA shall *“maintain the significant scenic, recreational, education, scientific, natural, and public health values provided by the Region; and “ensure equilibrium between the Region’s natural endowment and its manmade environment.”* (TRPA Regional Plan, 2012)



*The West Shore Multi Use Trail*

This Conservation Plan outlines policies and programs to protect, preserve, and enhance the Area Plan’s natural and cultural resources. It implements the Regional Plan at the local level to achieve and maintain the environmental Threshold standards.

Topics addressed include water quality, soil conservation and land coverage, stream environment zone (SEZ), air quality, scenic resources, vegetation, fisheries and aquatic resources, wildlife resources, noise, cultural resources and natural hazards.

### 2.1 2011 Threshold Evaluation

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The 2011 Threshold Evaluation Report provides a snapshot of the overall environmental health at Lake Tahoe and is the fifth report since the adoption of the 1987 Regional Plan. Its findings indicate that significant environmental progress has been made and trends are increasingly positive. The Evaluation also shows that challenges remain.

Summary findings of the Threshold Evaluation Report are listed in Table 2.1. Consistent with the Regional Plan, this Area Plan is focused on addressing the Threshold areas of concern.

**Table 2.1: 2011 Threshold Evaluation Report Findings**

<i>Threshold</i>	<i>2011 Threshold Evaluation Executive Summary Findings</i>
Water Quality	The rate of Lake Tahoe annual clarity decline has slowed over the last decade. The winter clarity threshold indicator met the interim target of 78.7 feet (2011 measured 84.9 feet) and is trending toward attainment of 109.5 feet. Trends in stream water quality indicated that conditions have not declined over time. However, summer lake clarity and nearshore conditions are highlighted as major areas of concern.
Air Quality	The Tahoe Basin made air quality gains over the last five years. The majority of air quality indicators in the Lake Tahoe Basin were at or better than attainment with adopted standards. The Report shows that indicators for carbon monoxide and vehicle-miles-traveled moved from non-attainment into attainment. Federal and state tailpipe and industrial emission standards have likely contributed to this achievement along with local projects which delivered walkable, transit-friendly improvements such as the Heavenly Gondola in South Lake Tahoe.
Soil Conservation	An analysis of impervious cover (land coverage) showed that seven of nine indicators were in attainment with threshold targets, however, sensitive wetlands and very steep lands are “over-covered” which can negatively affect water quality and other resources. Stream zone restoration efforts implemented by TRPA partner agencies are making progress in achieving restoration goals with more needing to be done.
Scenic Resources	The Tahoe Basin made gains in scenic quality over the last five years. Overall, compliance with scenic quality standards is at 93 percent with an improving trend in scenic quality for the built environment. Developed areas along roadways and Lake Tahoe’s shoreline continue to be the locations where scenic improvements are needed.
Vegetation	The Regional Plan and partner agencies have successfully protected sensitive plant species, keeping those standards in attainment. However, a couple of uncommon plant communities fell short of attainment because of non-native species; beaver, aquatic invasive species and noxious weeds were identified as potential threats to the integrity of uncommon plant communities. Progress is being made on fuels reduction and forest ecosystem restoration.
Recreation	Both Recreation Threshold Standards have been implemented and are in attainment. TRPA partners have made substantial progress in upgrading recreational facilities through the Environmental Improvement Program.
Fisheries	TRPA and partner agencies have implemented a robust aquatic invasive species control and prevention program; however, aquatic invasive species continue to be a major area of concern because their threat to fisheries

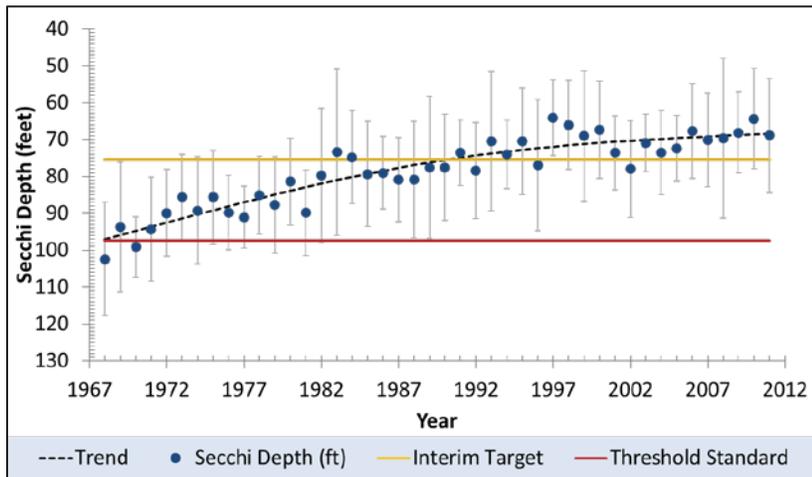
**Table 2.1: 2011 Threshold Evaluation Report Findings**

Threshold	2011 Threshold Evaluation Executive Summary Findings
	and other aquatic biota.
Wildlife	Indicators for special interest wildlife species show stable or improving conditions. TRPA’s development regulations have protected riparian wildlife habitats and partner agencies are making progress restoring these valuable habitats.
Noise	TRPA and the peer review panel recommended that noise standards and evaluation approaches be re-evaluated. The majority of standards were determined to be out of attainment as a result of a ‘no exceedance’ interpretation of the standard and that TRPA has little enforcement authority to address many noise issues – in particular, single event noise.

Source: 2011 Threshold Evaluation.

## 2.2 Water Quality

Restoring Lake Tahoe’s water quality has been a top priority for decades. Data indicates that after years of steady decline, Lake Tahoe’s average annual clarity has nearly stabilized, albeit well below the 97.4 foot threshold standard (1967-71 levels). Nearshore water quality and algae are topics of significant concern and active research.



Lake Tahoe Water Clarity (Average Annual Secchi Depth). Source: TRPA 2011 Threshold Evaluation, December 12, 2012.

To address water quality challenges, Placer County and partner organizations have made substantial investments in water quality initiatives. Completed and current water quality improvement projects are described below and depicted in the maps that follow (Figures 2-1 through 2-5).

**ENVIRONMENTAL IMPROVEMENT PROGRAM (EIP)**

The multi-agency Environmental Improvement Program (EIP) was launched in 1997 to improve the environment at Lake Tahoe. The EIP focuses on accelerating Threshold attainment with public and private investments in physical projects including erosion control measures, riparian area restoration, transportation, forest health, and others. TRPA administers the program.

Within the Plan area, water quality and erosion control EIP projects have been completed by various agencies, including Placer County, the State of California, California Tahoe Conservancy, local utility and fire protection districts and the U.S. Forest Service. Region-wide, over \$1 billion in federal, state, local and private funds have been invested in EIP Projects. Completed EIP water quality projects are mapped in Figures 2-1, 2-2 and 2-3 and described in the Implementation Plan.

This Area Plan supports continued implementation of the EIP in coordination with regional partners and the TMDL Program. As a capital program, project completion is directly related to availability of funding.

**BEST MANAGEMENT PRACTICES (BMPs)**

Best Management Practices (BMPs) are stormwater management measures that reduce runoff volume, peak flows, and pollution levels through detention, infiltration, evapotranspiration, and filtration. TRPA requires that BMPs be installed with all development permits and be designed to stabilize soil and infiltrate the volume of a 20-year, one-hour storm onsite. TRPA also requires that property owners in the Tahoe Region install BMPs on existing developed parcels – even if improvements are not being made.

As shown in Table 2.2-A, BMP compliance for developed parcels in the Plan area was 29 percent in 2013, slightly lower than the regional compliance rate. The significant cost of BMP retrofits has limited compliance. Properties with BMP certificates are mapped on Figures 2-1, 2-4 and 2-5.

For projects delegated to the County for approval under the Area Plan MOU, the County will enforce BMP compliance in consultation with TRPA. TRPA will continue to enforce the BMP retrofit program for properties not seeking development approvals. The MOU outlines the administrative details.

**Table 2.2-A: BMP Compliance in the Area Plan**

<i>Land Use</i>	<i>Parcels</i>	<i>BMP</i>	
		<i>Certificates</i>	<i>Compliance</i>
Single Family	9,983	3,078	31%
Multifamily	635	247	39%
Commercial	266	52	20%
Tourist	73	14	19%
Industrial	217	10	5%
Public Services	129	29	22%
Recreation	439	20	5%
<b>Total Parcels<sup>1</sup></b>	<b>11,742</b>	<b>3,450</b>	<b>29%</b>

1. Does not include conservation/backcountry or vacant parcels.

*Source: TRPA, 2013.*

### LAKE TAHOE TMDL (TOTAL MAXIMUM DAILY LOAD)

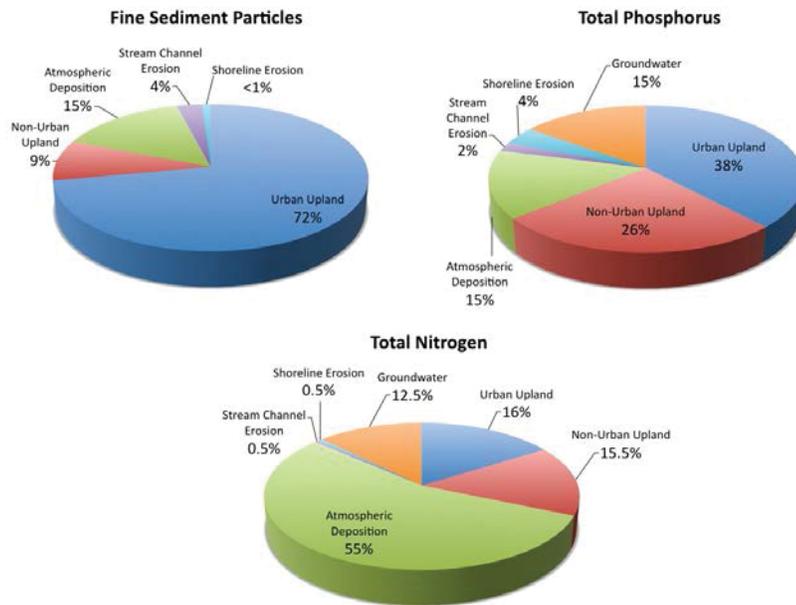
The Lake Tahoe TMDL program was developed in accordance with U.S. Clean Water Act and was approved in 2011. The TMDL is intended to complement the Regional Plan and was prepared in coordination with TRPA.

In the 2000s, extensive studies for the Lake Tahoe TMDL provided detailed information related to water quality. TMDL reports adopted by California and Nevada identified fine sediment particles, nitrogen and phosphorus as Lake Tahoe’s primary pollutants. Fine sediment particles are the most dominant pollutant contributing to the impairment of the lake’s deep water transparency and clarity, accounting for roughly two thirds of the lake’s impairment.



*Lake Tahoe's West Shore*

A pollutant source analysis identified urban uplands runoff, atmospheric deposition, forested upland runoff, and stream channel erosion as the primary sources of fine sediment particle, nitrogen, and phosphorus loads discharging to Lake Tahoe. The largest source of fine sediment particles to Lake Tahoe is urban stormwater runoff, comprising 72 percent of the total fine sediment particle load. The urban uplands also provide the largest opportunity to reduce fine sediment particle and phosphorus contributions to the lake.



*Lake Tahoe Estimated Pollutant Loading. Source: Final Lake Tahoe Total Maximum Daily Load Report, November, 2010.*