Photo by Mike Vollmer

Environmental Improvement Program

August 2014

Partnerships make the EIP possible. From the federal government to the states of California and Nevada, to local governments, the Washoe Tribe, and the private sector, it takes all of us to conserve Lake Tahoe.

Strong partnerships and cooperation between public agencies and the private sector continue to drive the EIP forward despite challenging fiscal conditions. While most programs within the EIP receive funding from multiple sectors, the largest source for several years has been federal funding from the Southern Nevada Public Land Management Act (SNPLMA). Replacing this sunsetting source of federal funding is a priority for all EIP programs.

Between 1997 and December 2013, all sectors collectively invested $1.74 billion which includes $576.3 million by the federal government, $654.6 million by California, $112.5 million by Nevada, $74.9 million by local governments, and $323.7 million by the private sector.

Funding Priorities

Federal:

- Reauthorize Lake Tahoe Restoration Act
- Advocate for a new federal transportation bill
- Seek continued funding from the SNPLMA White Pine fuels reduction program

Nevada:

- Access $100 million in authorized bond funding (in phases)

California:

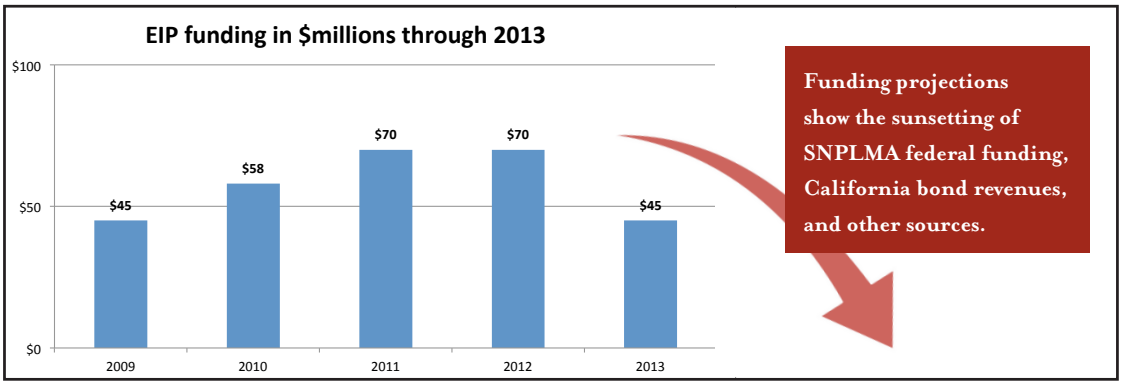
- Support Water Bond measures
- Secure Cap and Trade Revenue
- Seek change to transportation funding formulas

Local:

- Maintain and increase O&M commitments and local assessments

Private:

- Attract new investments, donations, and partnerships



LAKE TAHOE
ENVIRONMENTAL IMPROVEMENT PROGRAM

Accomplishments & Highlighted Projects: 1997-2013

Nearly 445 projects have been completed, and 234 are in progress or currently underway, including:

- Improving water quality measures on 674 miles of roadways
- Treating 55,690 acres of hazardous fuels
- Restoring 15,945 acres of wildlife habitat, including 1,509 acres* of stream environment zones
- Adding 2,579 linear feet of shoreline for public access
- Creating 137 miles of bike and pedestrian routes
- Since 2009 the Aquatic Invasive Species Program has:
  - Conducted approximately 37,000 watercraft inspections
  - Performed over 18,000 watercraft decontaminations for all aquatic invasive species
  - Treated 35.75 acres of weeds and Asian clams.

** This includes the 592 acres of the Upper Truckee River Marsh Restoration Project which is currently in the planning phase. This will be one of the larger SEZ projects undertaken in Lake Tahoe and the watershed is the largest contributor of fine sediment to the Lake.*

BLACKWOOD CREEK RESTORATION

Project Leads: U.S. Forest Service, California Tahoe Conservancy

Blackwood historically deposited more fine sediment into Lake Tahoe per unit of area than any other watershed in the Tahoe Basin. A comprehensive restoration program has improved water quality, fish and wildlife habitat, soil and forest health, and recreational access.

LAKEVIEW COMMONS

Project Leads: City of South Lake Tahoe, with California Tahoe Conservancy, El Dorado County

Transforming an eroding beach into a spectacular lakefront community gathering place took years of investment and perseverance. Lakeview Commons in South Lake Tahoe is one of the Tahoe's newest recreational assets.

NEVADA WATER QUALITY IMPROVEMENTS

Project Leads: Nevada Department of Transportation, Tahoe Transportation District, Washoe County, Incline Village General Improvement District

Tahoe's roadways convey fine sediments into Lake Tahoe. Nevada's State Routes 431 and 28 have been treated with stormwater quality improvements on over 6 miles of roadway. A new roundabout at the Mt. Rose intersection of 431 and 28 improves safety for motorists and pedestrians and also enhances traffic flow which improves air quality.

HIGH EFFICIENCY SWEEPER PROGRAM

Project Leads: Placer County, Washoe County, Douglas County, City of South Lake Tahoe, El Dorado County, Nevada Department of Transportation, California Department of Transportation, U.S. Forest Service

Advanced air-filtration systems in high-efficiency sweepers recover substantially more fine sediment particles from roadways than traditional sweepers, which improves water quality and supports achievement of the Total Maximum Daily Load (TMDL).

WATER QUALITY BEST MANAGEMENT PRACTICES ON PRIVATE PARCELS

Project Leads: Private Property Owners, Tahoe Resource Conservation District, Nevada Tahoe Conservation District, Tahoe Regional Planning Agency, Local Fire Districts

The largest percentage of the private sector's contribution to the EIP is in the form of property owners installing stormwater erosion control measures and fire defensible space. These measures support Lake clarity and forest health environmental thresholds.

Published by the Tahoe Regional Planning Agency

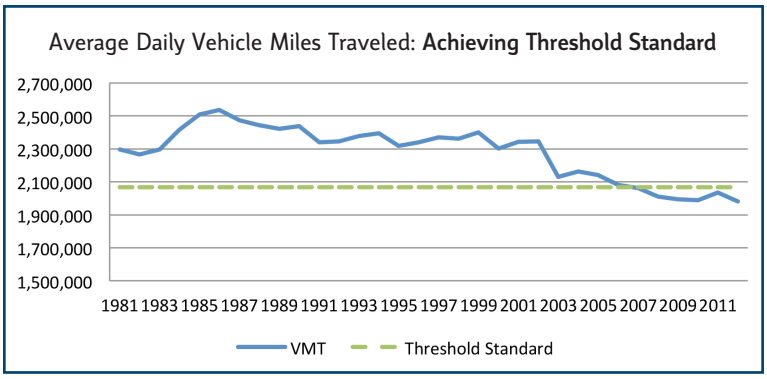
Air Quality and Transportation

Background

The millions of people who visit and enjoy Lake Tahoe every year cause impacts to the ecosystem. Mobile sources of air pollution, mainly motor vehicles, are among the most significant sources of pollution in the Tahoe Basin. Since 1997, Basin partners have created 137 miles of bike trails and pedestrian facilities and invested in coordinated transit systems to help get residents and visitors out of their cars. Redevelopment projects such as the Heavenly Gondola, substantially contributed to a decrease in peak traffic counts by 20 percent from 2002 recorded values. Providing incentives to develop pedestrian-friendly streetscapes that are within walking distance to retail, commercial, and lodging opportunities is a focus of the updated 2012 TRPA Regional Plan.

Vision

The goal of the Air Quality and Transportation Program is to reduce harmful emissions from wood heaters, to reduce residents' and visitors' dependency on the private automobile, and to remove fine sediment particles from the roadway surfaces before they enter Lake Tahoe. Additionally, the program aims to provide high levels of mobility to visitors and residents, and to develop a well-connected, well-functioning multimodal transportation system to reduce vehicle miles traveled.



Priorities

- Creating a coordinated regional highway, transit, and parking system
- Investing in walkable, mixed-use town centers served by reliable and convenient public transit, with complete streets that encourage biking and walking
- Increasing the use of alternative fuels in vehicles and the public transportation fleet
- Developing Basin-wide bike trail and waterborne transit systems.

Guiding Policy

Regional Transportation Plan Update, Mobility 2035

LAKE TAHOE ENVIRONMENTAL IMPROVEMENT PROGRAM

August 2014 | Photo by Corey Rich

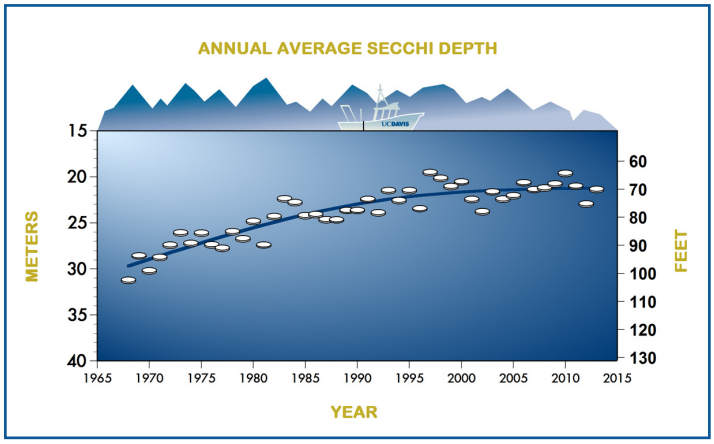
Water Quality and Clarity

Background

The rate of the Lake's annual clarity decline has slowed over the last decade. Research indicates that reduced precipitation levels and investments in stormwater treatment facilities through the Environmental Improvement Program are likely driving this positive progress. Average Lake clarity in 2013 was 70 feet and continued the trend of stabilization. Stormwater management projects on roadways, retrofitting parking areas on recreational facilities adjacent to the Lake, and retrofitting private properties with Best Management Practices have all contributed to reversing the negative trend.

Vision

The Lake Tahoe Total Maximum Daily Load (TMDL) plan reflects a $10 million investment in the work of more than 200 professionals and scientists who analyzed 40 years of data on the Lake and its tributaries. This scientific analysis demonstrates that restoring Lake clarity is possible if pollutant load reductions can be achieved in each of the four primary sources of these pollutants: urban stormwater runoff, forest runoff, stream channel erosion, and atmospheric deposition. The Lake Tahoe TMDL outlines measures to reduce each of these sources, with a focus on the urban stormwater runoff source, as it is both the greatest source and the best opportunity to control the pollutants. The TMDL calls for advanced and innovative controls to achieve the needed pollution reductions.



Priorities

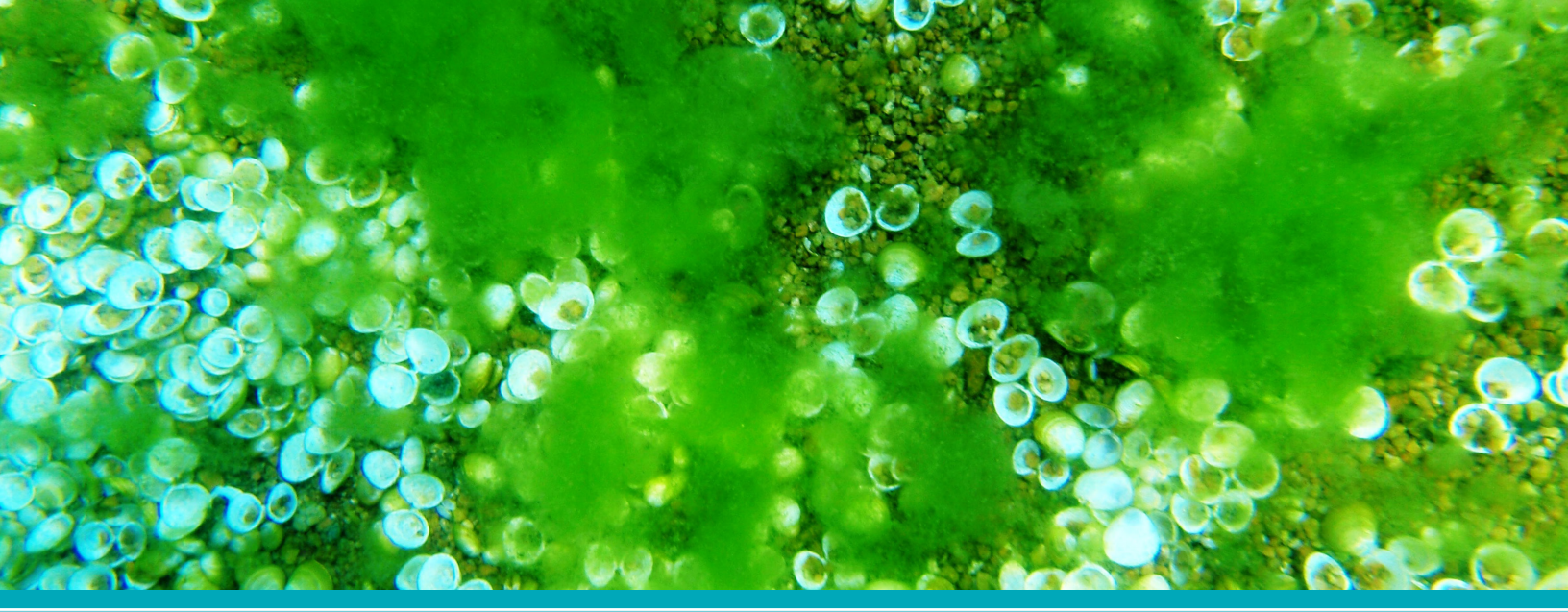
- Improving nearshore and summer clarity
- Developing and implementing stormwater load reduction plans
- Continuing stormwater and tributary monitoring
- Building resiliency in the face of drought and climate change
- Continuing stream restoration work

Guiding Policy

- Lake Tahoe Water Quality Management Plan
- Lake Tahoe Total Maximum Daily Load (TMDL)

LAKE TAHOE ENVIRONMENTAL IMPROVEMENT PROGRAM

August 2014 | Photo by David Safanda



Invasive Species

Background

All boats and other watercraft are required to be inspected before entering Lake Tahoe. While boaters pay a fee for this service, the federal government has invested more than $3 million each year for the last three years to support the entire Aquatic Invasive Species program. These funds are sunsetting in 2014. Additional funds for control of invasive weeds and other non-native species have been provided by a network of partner agencies, the scientific community, and the private sector. These funds are also declining. As documented in TRPA's 2011 Threshold Evaluation Report, Lake Tahoe's environment is responding to significant investments in ecosystem restoration and sound regulatory policy. This progress, along with the Region's economy, is directly threatened by the imminent decline of public funding for the invasive species program.

Vision

The primary focus of the Invasive Species Program is to improve the biological integrity of ecosystems in the Basin, and in doing so ensure the existence of a full range of native species, seral stages, habitats, and ecological processes. Achieving these goals requires a coordinated effort between multiple entities to reduce impacts from non-native species, reduce direct human impacts on wildlife, and increase species richness and diversity. Warming Lake waters and ambient air temperatures are presenting new challenges to managing terrestrial and aquatic invasive species. Climate change may increase growth rates of species in the Region, as well as increasing the number of potential invaders.

Priorities

- Preventing new introductions of aquatic invasive species, such as quagga mussels, into Lake Tahoe with an aggressive watercraft inspection and enforcement program
- Limiting the spread of existing invasive species such as the Asian clam while reducing impacts to native species
- Minimizing harmful ecological, economic, social, and public health impacts resulting from aquatic invasive species.
- Continuing the Tahoe Keepers non-motorized watercraft program.

Guiding Policy

Lake Tahoe Region Aquatic Invasive Species Management Plan

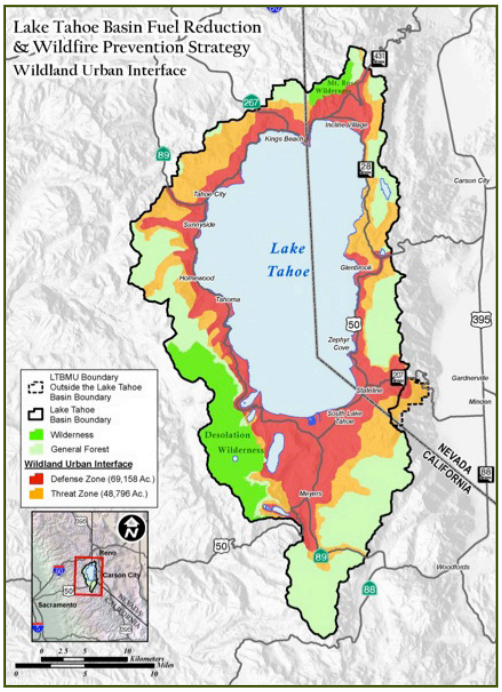
Forest Health and Fuels Reduction

Background

Logging and wildfire suppression have left Lake Tahoe forests four to ten times more dense than they were historically. Trees are smaller and the balance of species has shifted—forests are less tolerant of drought, insects and disease. The result has been an increased risk of severe wildfire throughout much of the Lake Tahoe Basin. Public land managers, fire protection districts, and regulatory agencies have addressed this threat by developing and implementing the Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy. Fuels reduction projects benefit forest health by reducing competition for water, sunlight, and nutrients and are carefully designed to protect water quality and wildlife habitat. Treatments create more fire-adapted forests near communities, keeping wildfire on the ground rather than allowing it to spread rapidly through the treetops.

Vision

Forests will continue to be managed for ecosystem health and to reduce the threat of wildfire for public safety. Fuels reduction in the wildland-urban interface (shown in orange and red on the adjacent map) continues to be the top priority. Forest health and fuels reduction treatments address climate change by creating resilience to rising temperatures, changing hydrology, and insect outbreaks, as well as wildfire. Thinning projects may also help forests resist drought by decreasing competition for limited water.



Treatments will continue to be designed to protect or improve scenic quality, soil and watershed function, water quality, and wildlife habitat. Disposing of forest fuels in a way that reduces greenhouse gas emissions from pile burning will also be a future focus. Treated areas will be revisited periodically to ensure that they remain effective in reducing wildfire severity.

Guiding Policy

Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy

LAKE TAHOE ENVIRONMENTAL IMPROVEMENT PROGRAM

August 2014 | Photo by David Safanda

Sustainability and Regional Plan

Background

The Lake Tahoe Region has a long history of balancing the natural and human systems to protect the landscape for future generations. To that end, the Region has been building a framework for sustainability since before it became a common catchphrase. Now TRPA and its partners are taking sustainability to the next level. Specifically, the adoption of the updated Regional Plan as the Region's Sustainable Communities Strategy has set Tahoe on a course to exceed California's greenhouse gas reduction targets. Throughout 2013, TRPA's focus has been to move full steam in partnership with the states and communities. The U.S. Forest Service and local governments are integrating sustainability principles into their plans.

Vision

The 2013 Regional Greenhouse Gas Inventory for the Lake Tahoe Basin identified mobile sources and energy consumption as accounting for approximately 90 percent of the Region's emissions. While the 2012 Regional Plan and Sustainable Communities Strategy tackle emissions reductions through implementation of land use and transportation policies, the Sustainability Action Plan goes a step further to address other sustainability issues such as energy consumption and climate change adaptation.

Priorities

- Implementing the framework for Area Plans.
- Implementing the Sustainability Action Plan—a toolkit that regional agencies, local jurisdictions, residents, businesses, and visitors can use to develop their own sustainability actions under a consistent regional sustainability framework. This plan recently was the winner of the 2014 Innovation in Green Community Planning Award from the American Planning Association, California Chapter.
- Launching a Sustainability dashboard of 28 indicators that measure the economic, environmental, and community health of the Region (laketahoeinfo.org).
- Continuing the Lake Tahoe Sustainability Collaborative, a citizen-led entity that implements sustainability projects in the Tahoe-Truckee Region.
- Restoring environmentally sensitive lots with the Transfer of Development Rights Exchange and Tracking System.

Guiding Policy

Regional Plan and
Sustainability Action Plan

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