



Item 10

**Lake Tahoe
Total Maximum Daily Load
Program Status Update**

12 March 2015

**California Regional Water Quality Control Board
Lahontan Region**

Robert Larsen
Senior Environmental Scientist

Lake Tahoe TMDL Program Status

What pollutants are causing clarity loss?

How much of each pollutant is reaching the lake?

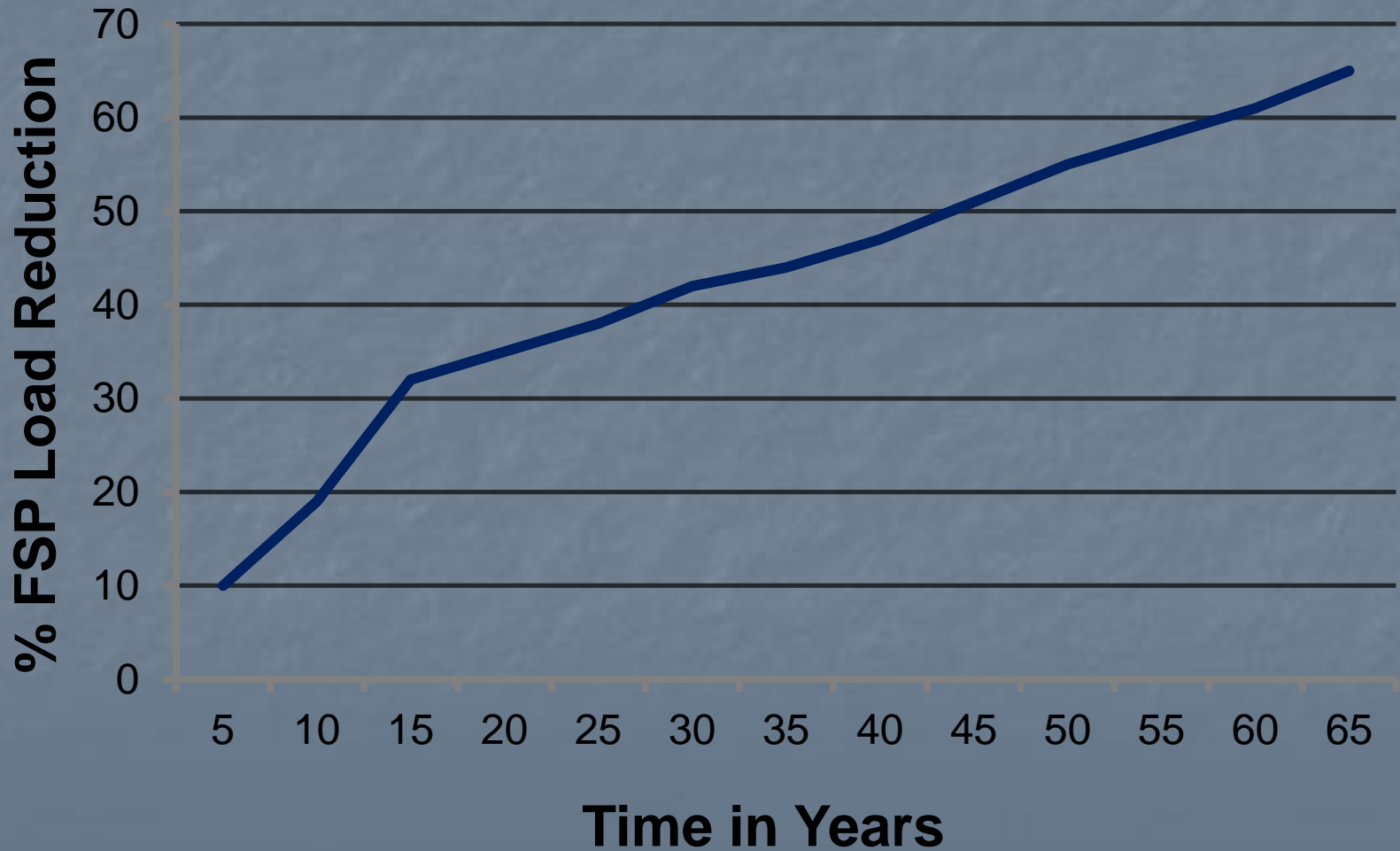
What are the options for reducing pollutant loading?



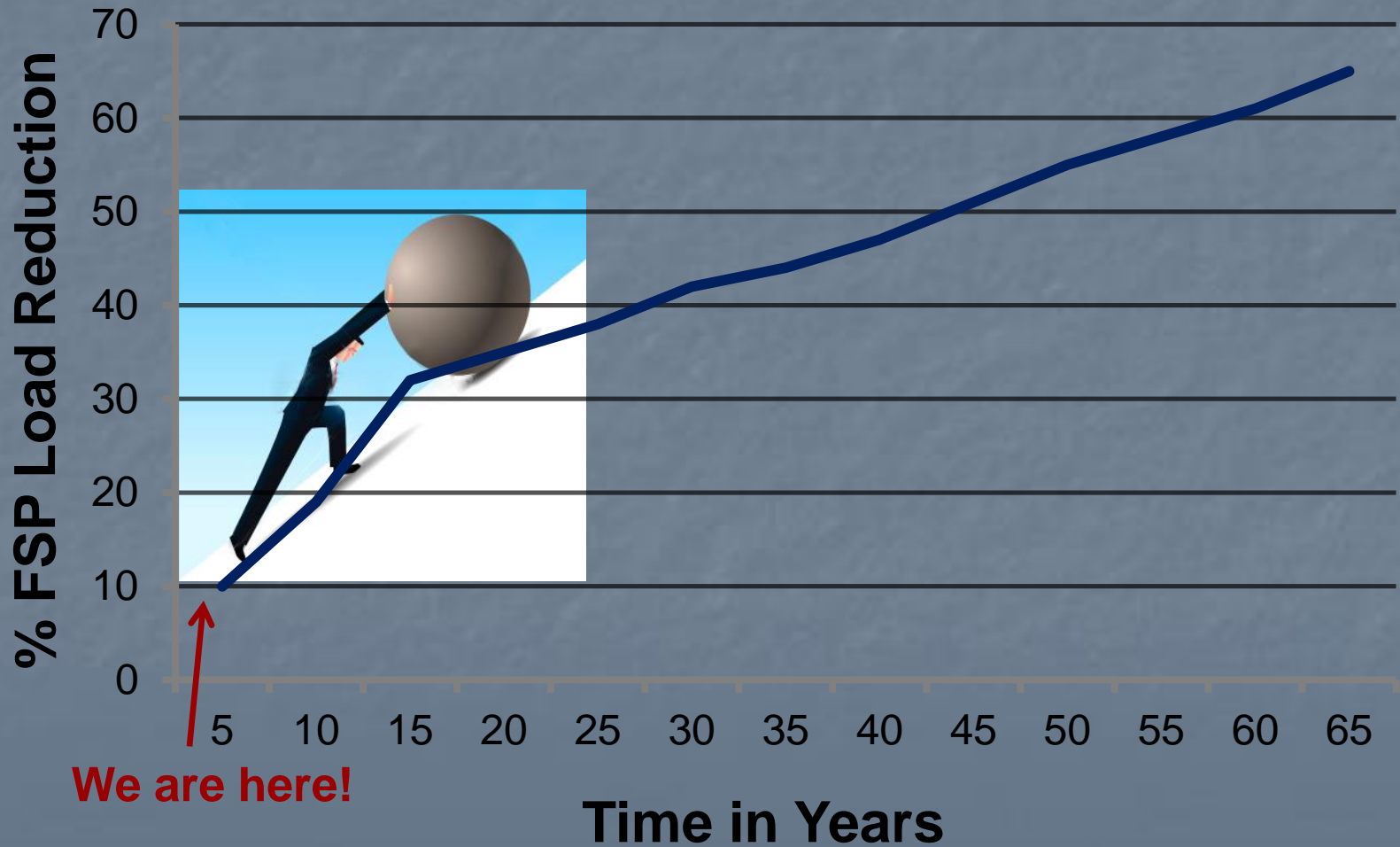
Lake Tahoe TMDL Background

- **Water Board approved in 2010**
- **U.S. EPA approved in 2011**
- **Implementation plan emphasis on urban runoff discharges**
- **20-year target to halt clarity decline**
- **65-year plan for full restoration**

TMDL Implementation Schedule



TMDL Implementation Schedule

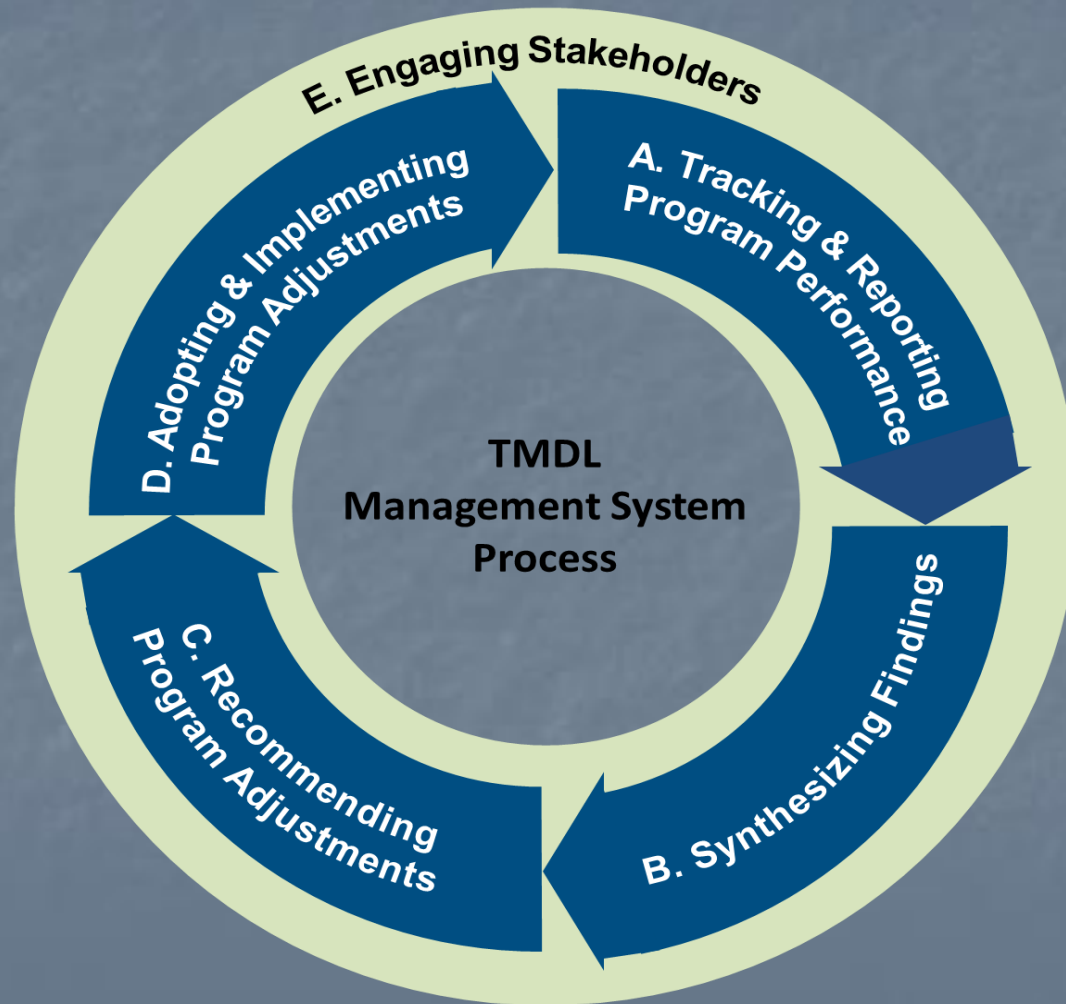


Lake Tahoe TMDL Program Status

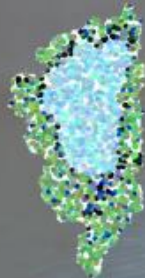
**Are pollutant load
reductions being
achieved?**



Adaptive Management Cycle



Performance Report



LAKE TAHOE TMDL PROGRAM:
2014 PERFORMANCE REPORT

Guiding Efforts to Restore Lake Tahoe's Historic Clarity

Performance Report Objectives

- **Summarize annual implementation accomplishments using consistent metrics**
- **Document overall program progress**
- **Increase transparency and demonstrate accountability**
- **To be released annually in April**

Urban Upland Accomplishments

- **Ongoing actions are expected to achieve 2016 milestones**
- **Crediting Program tools improvement project nearly complete**
- **Catchment registration to begin Spring 2015**
- **2016 Performance Report will include Lake Clarity Credit awards and load estimates**

Urban Upland Featured Projects





Non-Urban Performance

Forest Uplands

Miles of Roads Treated

Miles of Roads Inspected & Maintained

Miles of Roads Created

Acres of Disturbed Area Restored, Enhanced or Created

Parcels With Stormwater Retrofits

Stream Channel Erosion

Linear Feet of Stream Channel Restored or Enhanced

Non-Urban Performance Featured Projects



Findings and Recommendations

- **Summarize relevant scientific and technical findings**
- **Recommend adjustments to improve the TMDL Program or Policy**

Lake Tahoe TMDL Program

2014 Synthesis of Findings & Program Adjustment Recommendation Memo

October 2014



Key Findings – Urban Stormwater

- **Traction abrasive are the primary source of FSP and PM10**
- **Treatment BMP maintenance is lacking across basin**
- **Enhanced operation and maintenance practices can improve the efficacy of treatment BMPs and reduce maintenance needs**

Key Findings – Non-Urban

- **Active unpaved roads yield much greater sediment than inactive unpaved roads**
- **Pollutant inputs did not significantly increase as a result of the Angora Fire**
- **Appropriate forest management mitigation techniques minimizes sediment generation**
- **Substantial FSP load reductions may result from restoring floodplain connectivity and geomorphic function in riverine systems**

Key Findings – Overall TMDL

- **Average annual lake clarity levels have stabilized**
- **Long-term funding to support monitoring is lacking**
- **Strong correlations exist between field turbidity and FSP**
- **Nearshore conditions are expected to improve**



Program Adjustment Recommendations

- **Advocate for funding for road operations and maintenance**
- **Update the Lake Clarity Crediting Program Handbook**
- **Track and report floodplain restoration as a new TMDL Performance Measure**
- **Support nearshore status & trend monitoring**



Decision Record Memo

- **Annual product released in November**
- **Capture program adjustment decisions made by TMDL Executives**
- **Timed to ensure stakeholder feedback is considered**
- **Circulated to stakeholders and posted to the TMDL Online Interface**



Stakeholder Engagement Process and Products

- **Stakeholder Feedback Form**
 - Ongoing solicitation (electronic submission)
- **Stakeholder Feedback Capture Sheet**
 - Compiled feedback (spreadsheet) - May
 - Includes TMDL Program Manager's response
- **Annual Stakeholder Meeting**
 - Share and solicit feedback on Findings and Recommendations and Performance Report - October

TMDL Online Interface



Lake Tahoe TMDL Program: The TMDL Online Interface

The Lake Tahoe Total Maximum Daily Load (TMDL) is a science-based plan to restore Lake Tahoe's famous clarity. One of the most robust efforts of its kind, the Lake Tahoe TMDL was initiated to better understand the causes of clarity loss, determine how much pollution needs to be reduced and develop a sensible implementation approach that is capable of reinstating historic clarity within the lake. The Lake Tahoe TMDL Program seeks to guide the effective implementation of the TMDL so that people

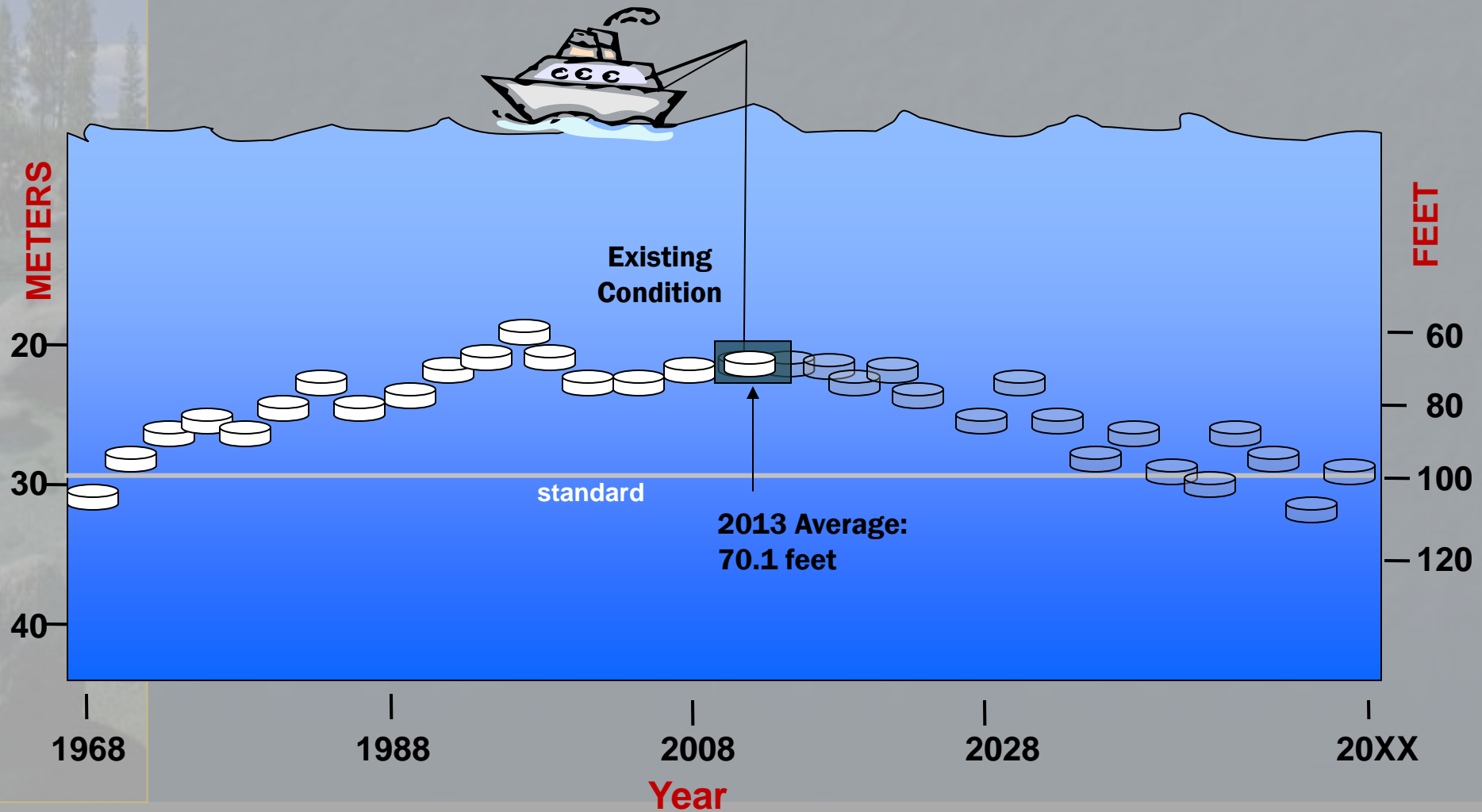
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News & Announcements

- OCT 22** 2014 Synthesis of Findings and Program Adjustment Recommendation Memo now available
- 2014** The annual Synthesis of Findings & Program

<https://www.enviroaccounting.com/TahoeTMDL/Program/Home>

Clarity Status





Questions?