



Lake Tahoe TMDL Phase Two

Fall 2007 Public Participation Series

Source Category Group
Focus Team Meetings

TMDL Program Overview

A science-based
plan to restore
Lake Tahoe's
clarity





Central TMDL Questions

Questions Addressed

1. What pollutants are causing Lake Tahoe's clarity loss?
2. How much of each pollutant is reaching Lake Tahoe?
3. How much of each pollutant can Lake Tahoe accept and still achieve the clarity goal?

Current Questions

1. What are the options for reducing pollutant inputs to Lake Tahoe?
2. What strategy should we implement to reduce pollutant inputs to Lake Tahoe?



Source Category Group Analysis Opportunities

- Basin-Wide load reduction estimates
- Relative load reduction opportunity among source categories
- Consistent methods to evaluate future pollutant control options



Source Category Group Analysis Boundaries

- Not suited to project scale
- Evaluated pollutant control options chosen for data availability
- Limited time, resources, and effectiveness data



Continuous Improvement

- Adaptive management process
- SNPLMA science funding opportunities
- Each group identified “next steps” and data needs



Focus Team Role

- Gain technical understanding of SCG approach
- Act as a liaison to your agency
- Provide input on preferred pollutant control options
- Suggestions for future work



Questions?

Questions Addressed

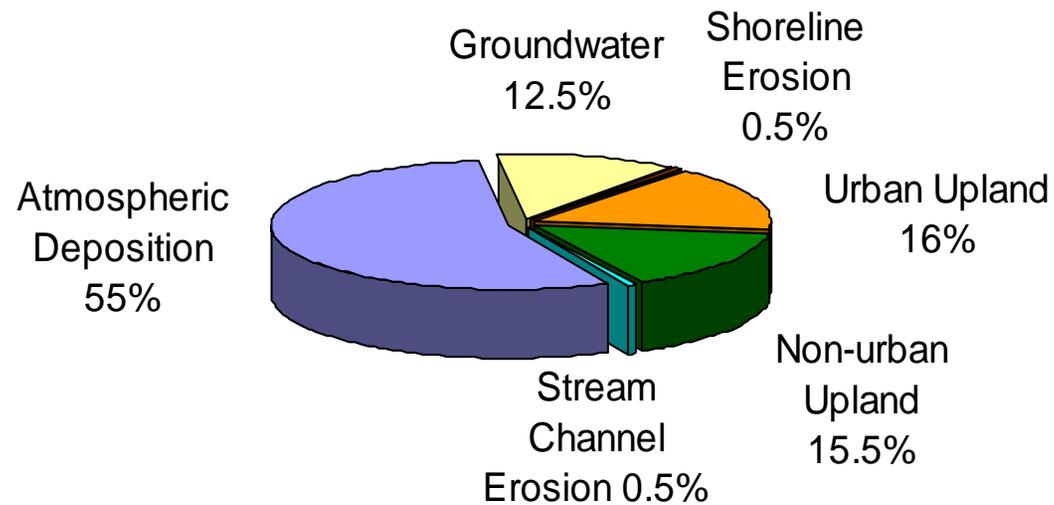
What is causing Lake Tahoe's clarity loss?

- Suspended fine sediment
- Floating algae – fed by nutrients
- Very fine sediment (<20 microns) accounts for ~2/3 of the clarity conditions



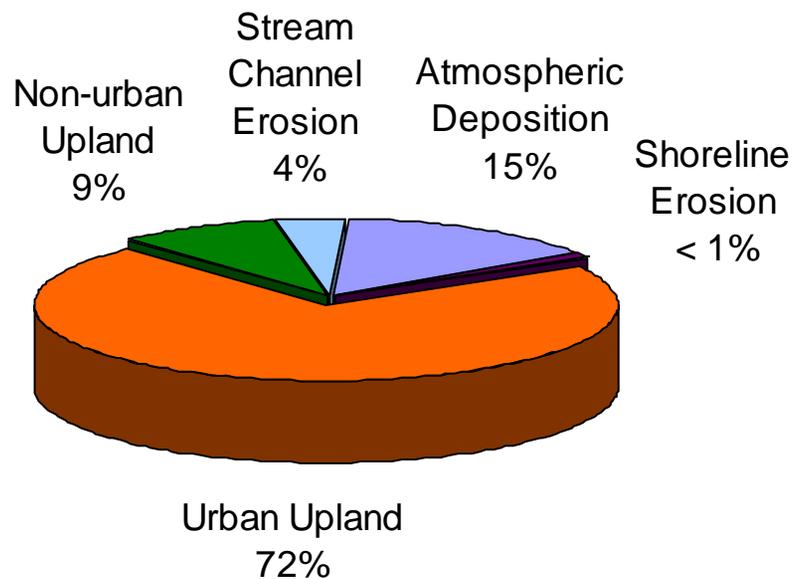
How much of each pollutant is reaching Lake Tahoe?

Total Nitrogen Estimates: Percent Contribution per Source Category



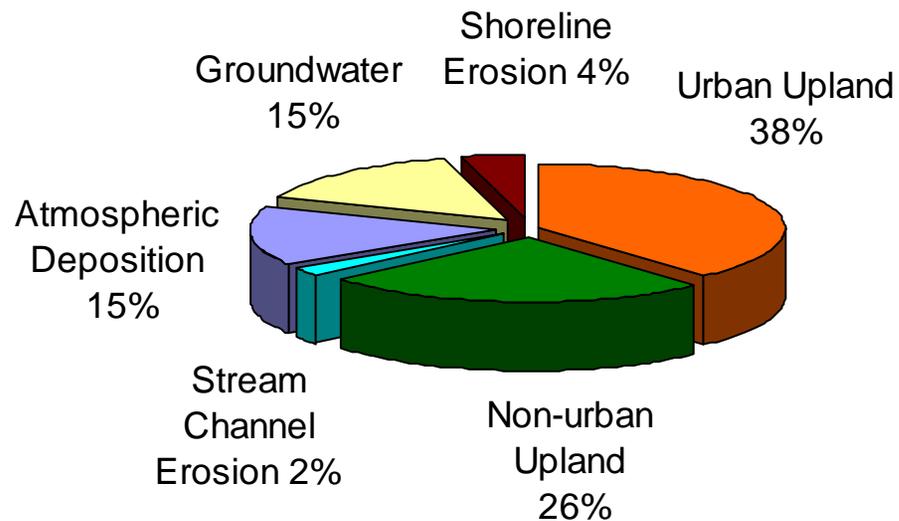
How much of each pollutant is reaching Lake Tahoe?

Fine Sediment Particle Number Estimates (particles less than 20 micrometers): Percent Contribution per Source Category



How much of each pollutant is reaching Lake Tahoe?

Total Phosphorus Estimates: Percent Contribution per Source Category





How much of each pollutant can Lake Tahoe accept and still achieve the clarity goal?

- The Lake Clarity Model provides estimates of clarity response to load reductions
- Reducing fines has a greater potential to improve clarity
- Model output indicates significant reductions will be needed



What are the options for reducing
pollutant inputs to Lake Tahoe?

Good Question!



Approach to Answering Current Questions

- Identify load reduction options
- Quantify load reduction options
- Prepare Integrated Strategies
- Gather stakeholder input

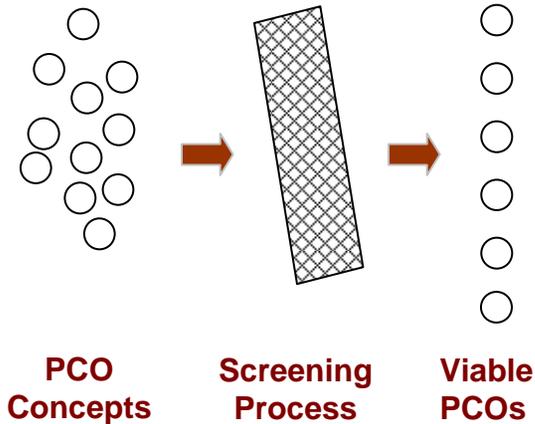


Pollutant Load Reduction Opportunity Project - People

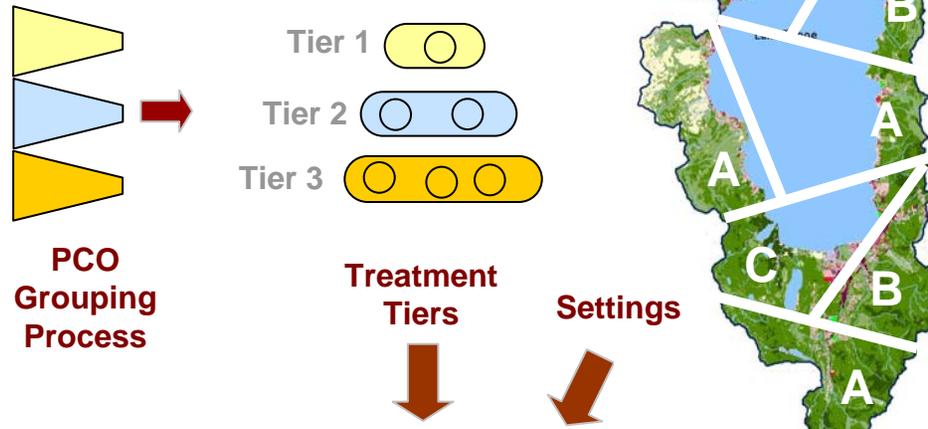
- Source Category Groups
- Technical Reviewers
- Source Category Integration Committee
- Project Team
- Focus Teams

Pollutant Reduction Opportunity Development Process

Step 1: PCO Evaluation



Step 2: Site-Scale Analysis



Step 3: Basin-Wide Analysis

Extrapolation Process

- GIS
- Models

Combined Results Tables

Load Tables

Sediment Reduction Table

Phosphorus Reduction Table

Nitrogen Reduction Table

Cost Tables

Total 20 Year Cost Table

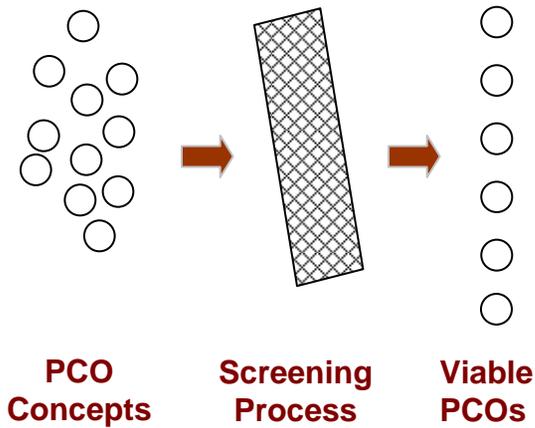
Capital Cost Table

O & M Cost Table

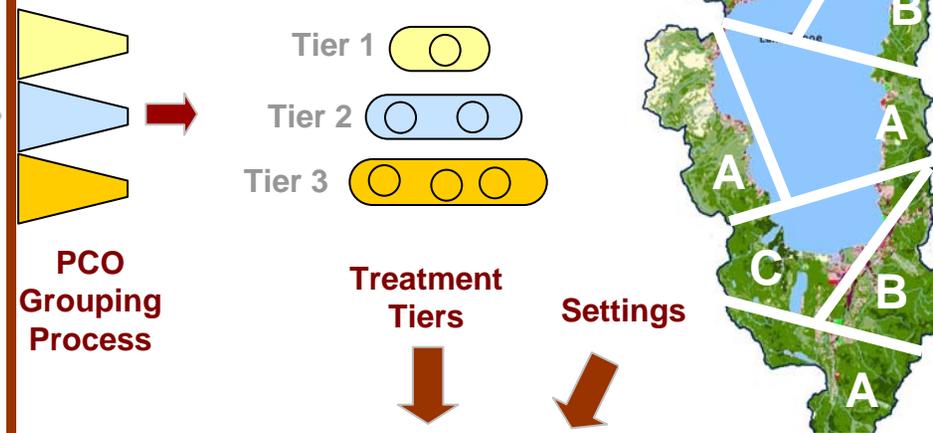
Cost-Effectiveness Table

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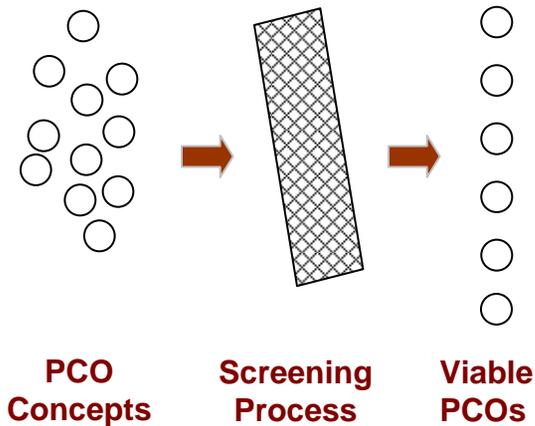
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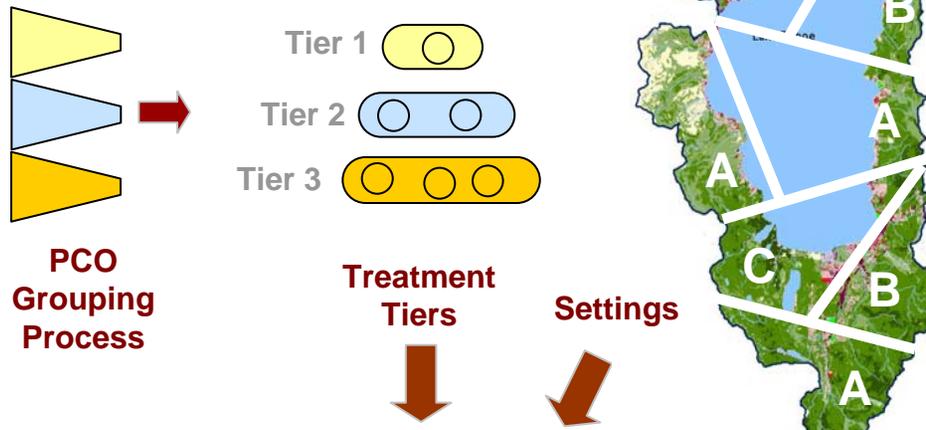
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Cost-Effectiveness Table



Development Summary

- PCO Selection and Evaluation
- Site Scale Analysis
 - Settings
 - Tiers
- Basin-wide extrapolation