



Lake Tahoe TMDL Implementation Tool Box:

# Load Reduction Matrix

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# Load Reduction Matrix

- Tool which provides a basis for comparing pollutant load reduction options, strategies or alternatives to assist decision-makers in the selection of an effective implementation strategy
  - Contains critical information for the process of crediting entities to meet load reduction obligations
  - Works in conjunction with other tools in the TMDL toolbox
  - Provides agreed-upon estimates of load reduction potential and other factors needed to select implementation options
  - Flexible - can be updated as new information/data becomes available



# LRM Statement of Work

- Two separate funding sources:
  - SNPLMA 2004
  - Targeted Watershed Grant
  
- Identify control strategies for each pollutant type (phosphorous, nitrogen, fine sediment) within each major source category
  - Structural and non-structural
  - Traditional and new/innovative



# LRM Statement of Work

- Identify existing load reduction opportunities
  - Utilize GIS coverage of existing projects in concert with extensive field observations
  - Basin vs. sub-watershed scale
  
- Quantify pollutant load reduction potential for each opportunity
  - Load Reduction Estimation Methodologies
  - Modeling assessments
  - BMP effectiveness data
  - Literature review of relevant study results
  - Best professional judgment



# LRM Statement of Work

- Define other factors necessary for consideration in the evaluation and selection of pollutant load reduction options
  - uncertainty concerning measurability
  - feasibility (degree of effort)
  - land availability
  - cost
  - public acceptability
  - agency/legal constraints
  - non-water-quality environmental impacts
  - temporal considerations
  - others?

# Example Load Reduction Matrix

Sources	Effectiveness	Cost	Constraints	Etc.	Estimated Load Reduction
<b>URBAN</b>					
Infiltration	4	\$	2		xx kg/yr
Wetland Treatment	7	\$\$	7		xx kg/yr
Source Control	6	\$	1		xx kg/yr
Chemical Enhancement	9	\$\$\$	8		xx kg/yr
<b>ATMOSPHERIC</b>					
Vehicle Emission Control	4	\$\$	4		xx kg/yr
Wood Stove Management	5	\$\$	3		xx kg/yr
Out-of-Basin Source Control	2	\$\$\$	9		xx kg/yr
Dust Management	7	\$	2		xx kg/yr
<b>STREAM CHANNELS</b>					
Stream Restoration	7	\$\$\$	5		xx kg/yr
Bank Stabilization	7	\$\$	3		xx kg/yr
Hydrological Controls	5	\$	2		xx kg/yr
<b>GROUND WATER</b>					
Fertilizer Management	3	\$\$	7		xx kg/yr
Source Control	8	\$	2		xx kg/yr
<b>FORESTED AREAS</b>					
Road Management	6	\$\$\$	6		xx kg/yr
Trail Management	5	\$\$	5		xx kg/yr
Fire Restoration	7	\$\$	4		xx kg/yr
<b>Total Possible Load Reduction</b>					<b>xx kg/yr</b>

Note: Example above is for illustrative purposes only



# Load Reduction Matrix

- ❑ Stakeholder input will be integral and essential component!
  - Identification of strategies
  - Identification of opportunities & reduction potential
  - Determining other factors for consideration
  - Selecting which options to implement
  - Coordination of implementation efforts
  
- ❑ Reaffirms need for establishing Basin-wide Management System