



Citizen Monitoring Programs Helping to Keep Tahoe Blue

Presenter:

Jesse Patterson
Deputy Director

National
Monitoring
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Today's Presentation

- About Lake Tahoe
- Pipe Keepers
- Eyes on the Lake
- Questions

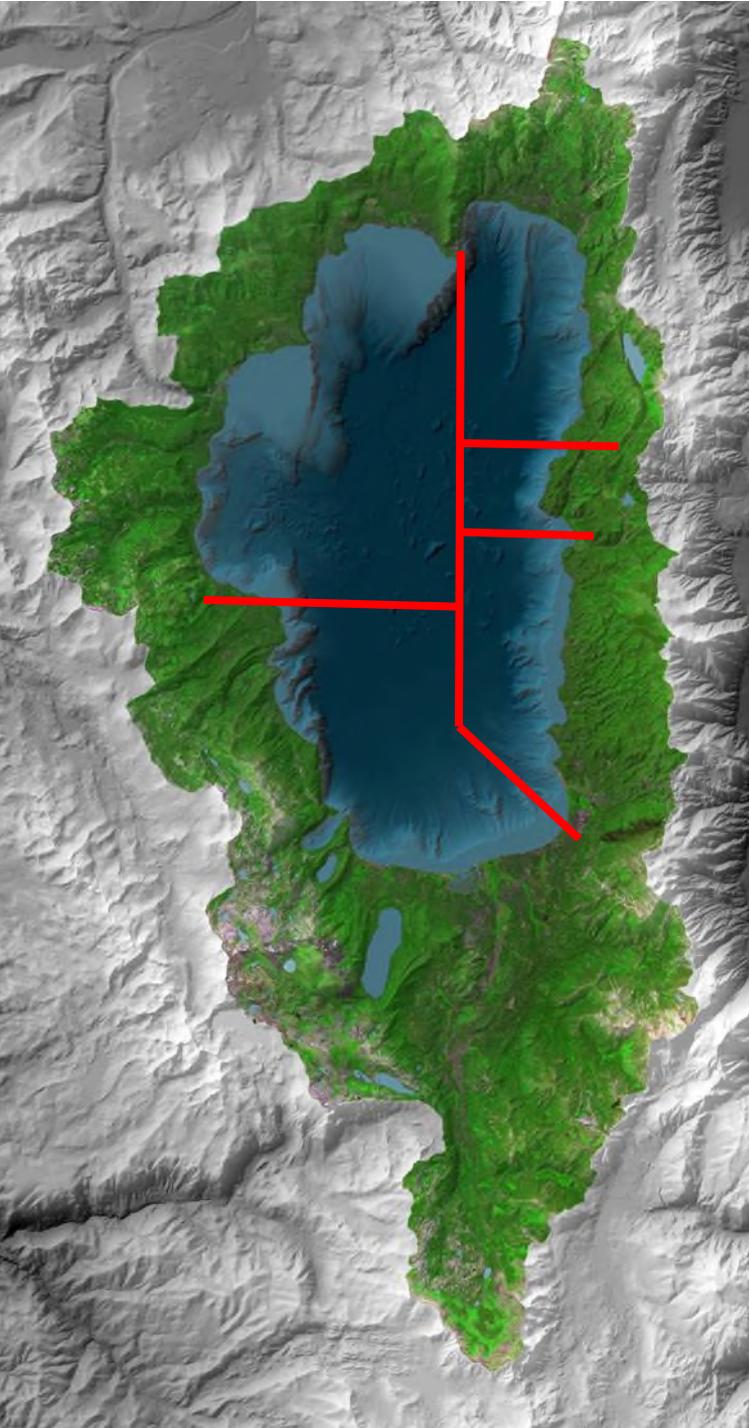


Lake Tahoe

- **Largest Alpine lake in the U.S. (elev. 6,223 ft.)**
 - 22 miles long / 12 miles wide / 72 miles of coast
 - 1,645 ft. max depth / 1,000 ft. average depth
 - 41 trillion gallons of water
 - Enough to cover CA in 15 inches of water
- **2nd clearest lake in U.S. (70.1 ft in 2013)**
 - 102.4 ft in 1968
 - 64.1 ft in 1997



The Tahoe Basin



- Small drainage relative to water body
- Not a national park BUT designated ONRW
- Very accessible
 - 8 million+ people live within 3 hour drive
 - 6 million visitors per year
 - 60,000+ fulltime residents
- Politically complex
 - 2 states / 5 counties / 1 city
- Tahoe Regional Planning Agency
 - Innovative land-use policies
- Extensively studied
 - UC Davis TERC / UNR / DRI / Stanford
- Heavily regulated
 - Lake Tahoe AIS Program (2008)
 - Boat inspections
 - Total Maximum Daily Load (2011)
 - Fine sediment / Nutrients
 - 65 yr plan = 100 ft of clarity

LAKE TAHOE TODAY



Curly-leaf Pondweed



Eurasian Water Milfoil

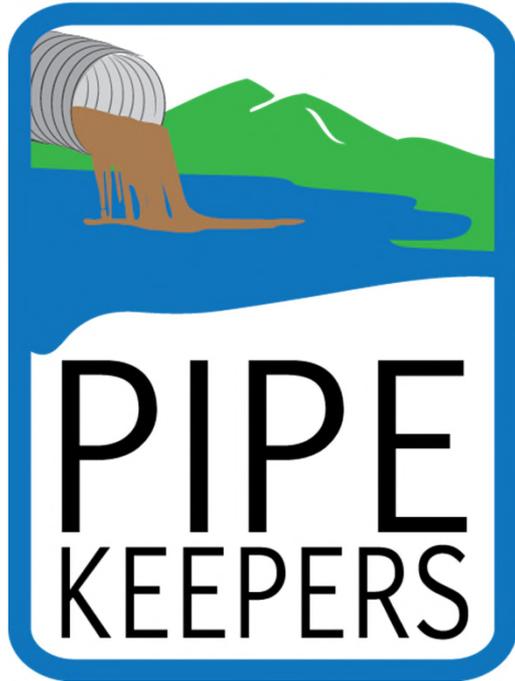
Giant Goldfish



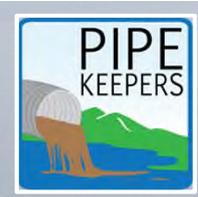
Challenges / Needs

- Public perception of a problem: *“Looks blue to me.”*
- Low regulatory compliance
- Lots of money for implementation; not much for monitoring
- Multi-jurisdictional: *“That’s your problem.”*
- Public distrust of agencies
- Transient population: *“I’m here to have fun.”*

Adopt a pipe,
protect Lake Tahoe.

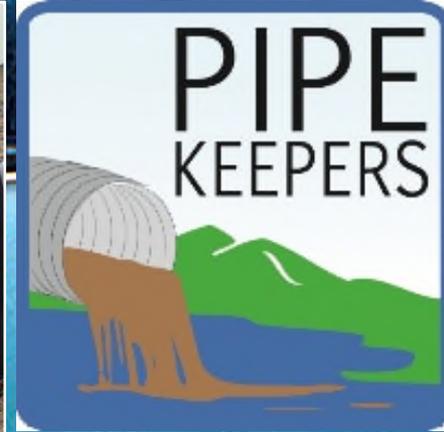


A community based volunteer
monitoring program



Goals of Pipe Keepers

- What's draining into Lake Tahoe?
- Where are the pipes?
- Are they a problem and what can be done?
- Connect people to the Lake through their neighborhood storm drains
 - Create stormwater stewards
- Prioritize problem pipes
- Verify agency monitoring efforts
- Demystify stormwater for the public
- Bridge the gap between policies and the public



Volunteers

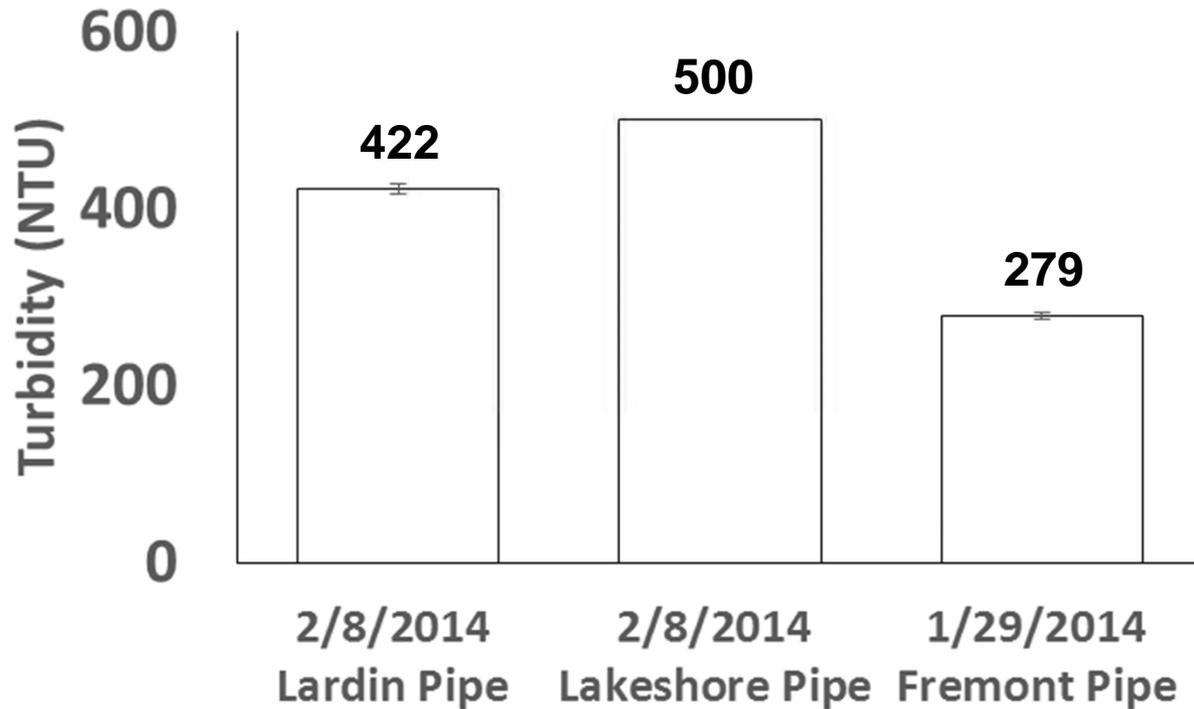
collect water samples during storm events
record observations / measurements
take photographs and video
transport samples and data to our office

Staff

analyze samples for turbidity (EPA standard method) (NTU)
report data on website / share with agencies



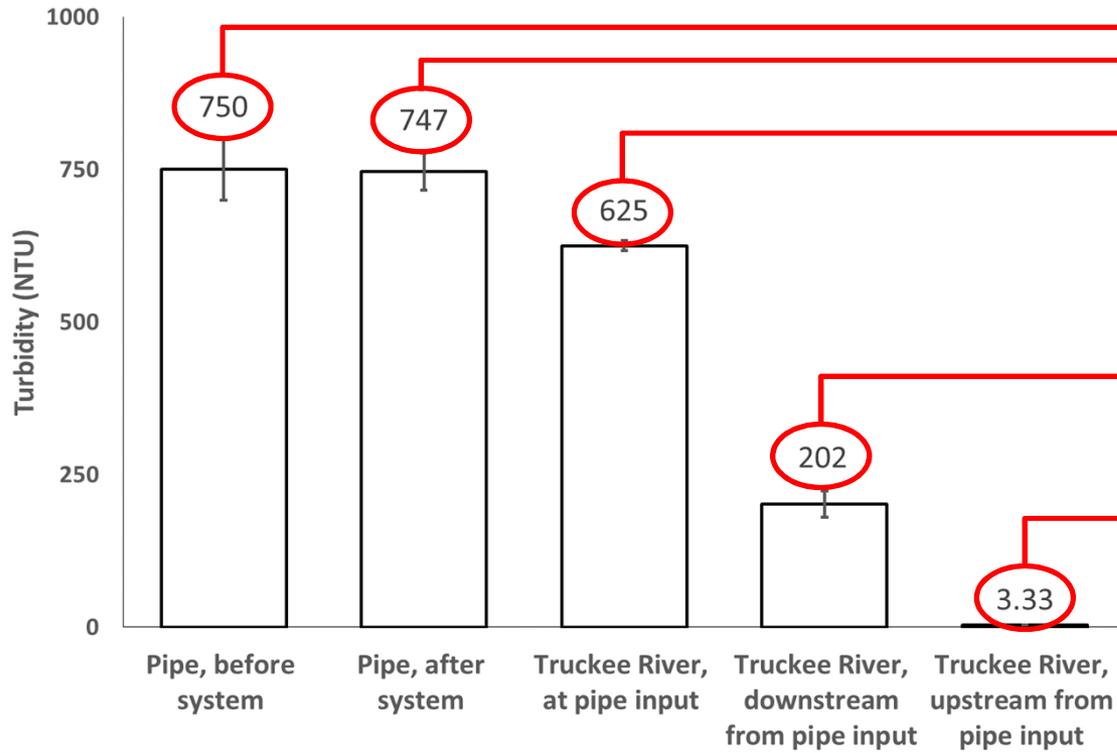
Turbidity Data



**Lake Tahoe mid-lake:
0.06 NTU**

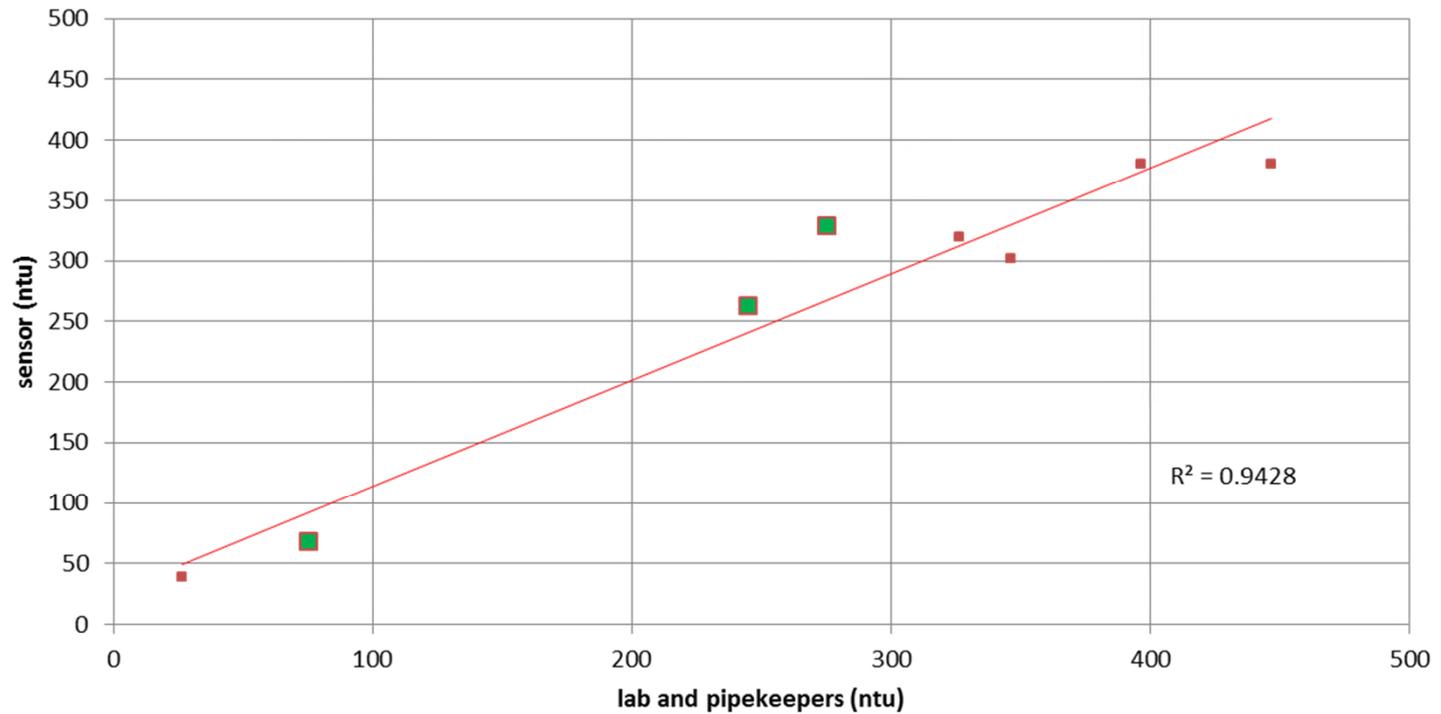
**EPA drinking water
standard: 0.5 NTU**

Turbidity Data



Turbidity Data

Individual Samples



Program Overview

- Just completed 2 years
- Identified and mapped 43 pipes
- 20 Pipe Keepers at 16 pipes
- 1,000+ samples collected
- Hundreds of photos and videos
- Hosted a public forum





Program successes

- **Creates open dialogue between agencies and the public about storm water**
- **Public knows how they can help**
- **Agency buy-in (steering committee)**
- **Standardized methods (QA/QC)**
- **Data useful for agencies**



EYES ON THE LAKE

protect while you play

Identifying, Surveying, Reporting





EYES ON THE LAKE
protect while you play

GOALS

- **INCREASE PUBLIC AWARENESS**
- **PREVENT SPREAD**
- **EARLY DETECTION**
- **EARLY RESPONSE**
- **LONG TERM PRESENCE/ABSENCE**

JOINING EYES ON THE LAKE

- League provides FREE training to groups / public
- Hands-on classroom
- Field session
- Waterproof ID guide & field notebook
- Support for reporting
- Agency response
- Online data and interactive google map





Join
EYES ON THE LAKE
and protect while you play

PROGRAM SUCCESSSES

- Part of a larger program with supporting agencies
- Participation is easy
 - Choose commitment level
- Empowers public to help
- Understand policies



QUESTIONS

Contact Info

Jesse Patterson
Deputy Director

jesse@keptahoeblue.org

2608 Lake Tahoe Blvd
South Lake Tahoe, CA 96150
530.541.5388

keptahoeblue.org