



# New Directions for Research, Education and Public Engagement at Lake Tahoe

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# About Us

- Formerly called the “Tahoe Research Group”
- The Tahoe Environmental Research Center (TERC) is dedicated to research, education and public outreach on lakes and their surrounding watersheds and airsheds. Lake ecosystems include the physical, biogeochemical and human environments, and the interactions among them. The Center is committed to providing objective scientific information for restoration and sustainable use of the Lake Tahoe Basin.



# Facilities

- On the Water – RV John LeConte and RV Ted Frantz (plus other smaller boats)
- Tahoe City Fish Hatchery Field Lab/Prep Lab
- New Tahoe Center for Environmental Sciences (TCES) - *under construction*



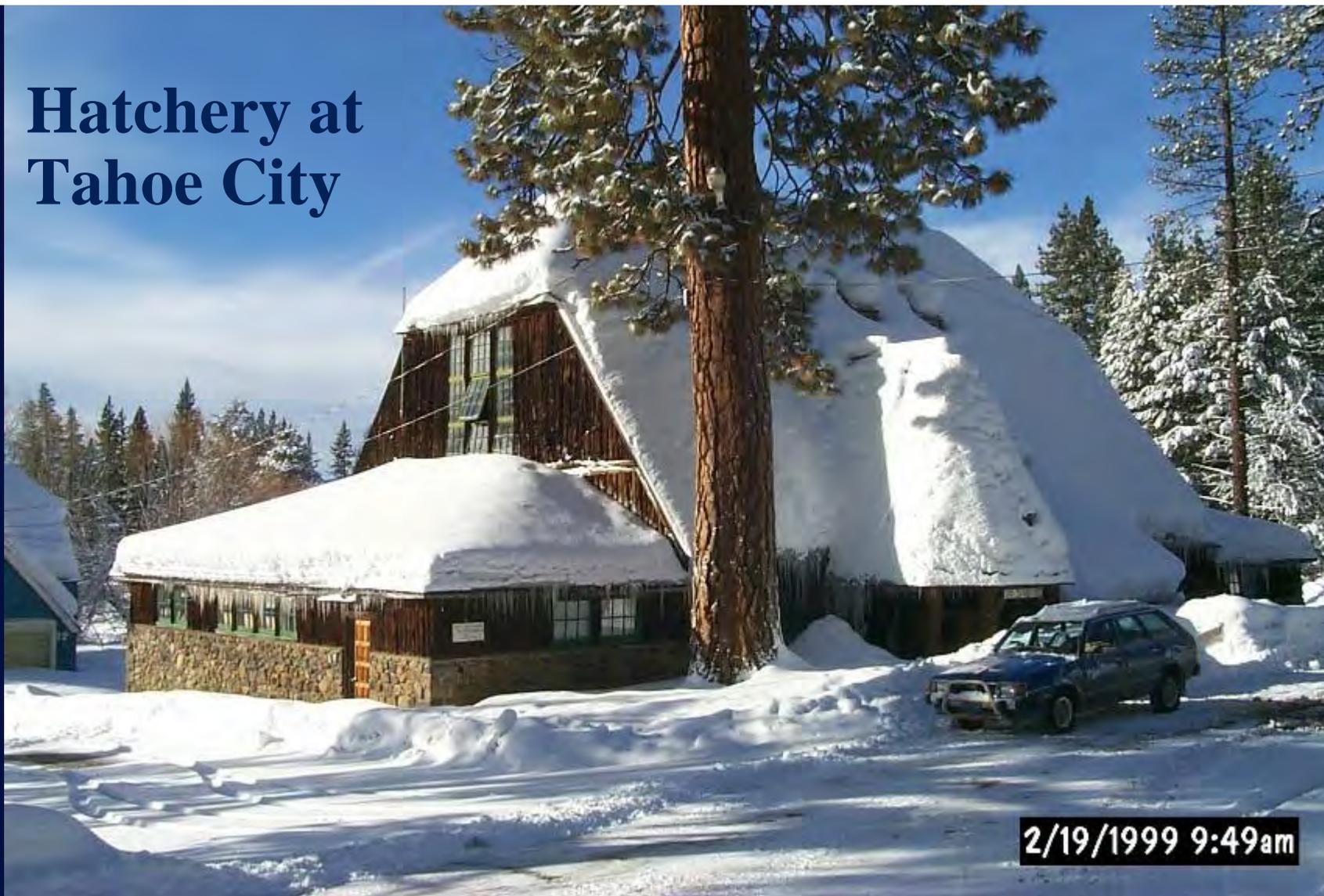
# R/V John LeConte



# R/V Ted Frantz



# Hatchery at Tahoe City



2/19/1999 9:49am

# Tahoe Center for Environmental Sciences



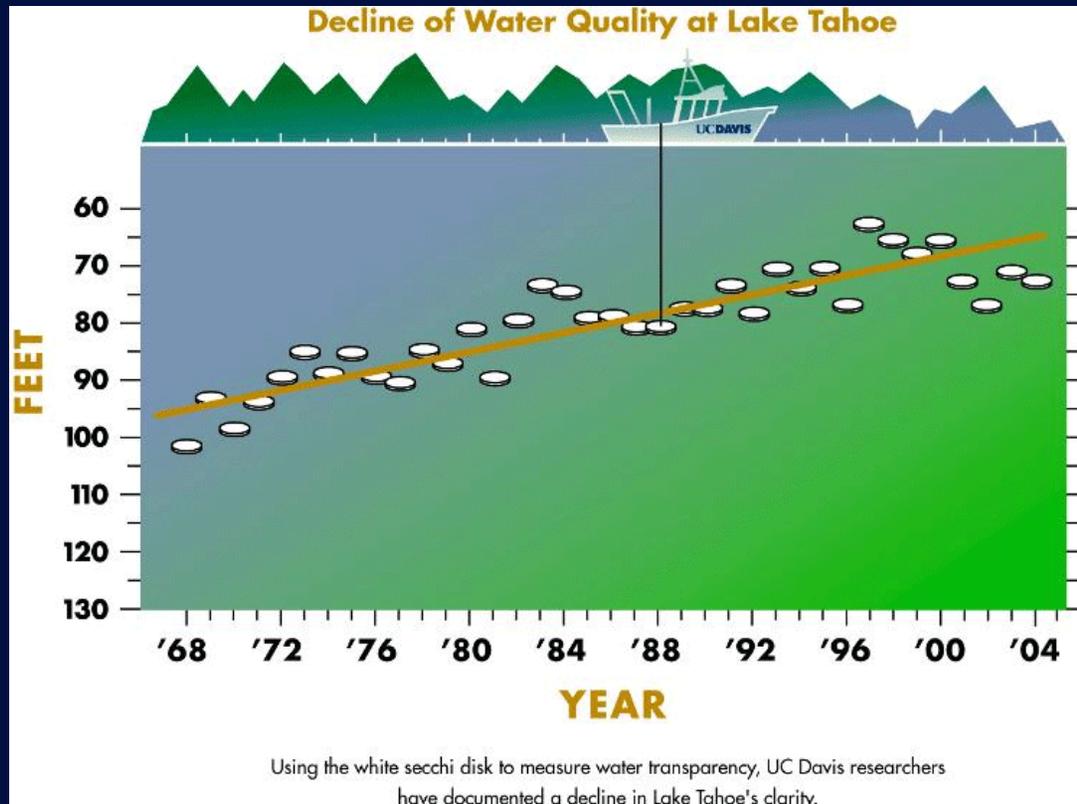
Total area 45,683 sq. ft.

TERC Lab (3<sup>rd</sup> floor) 11,330 sq. ft

Education Center 1000 sq. ft.



# Something You Probably Know: Lake Clarity Monitoring



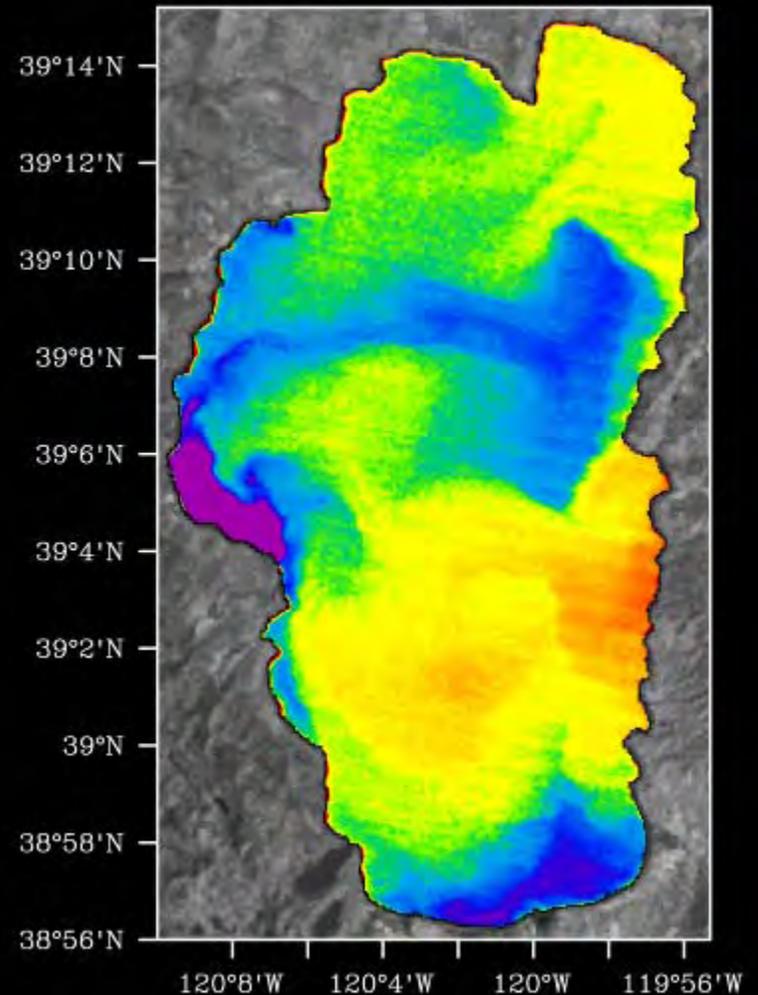
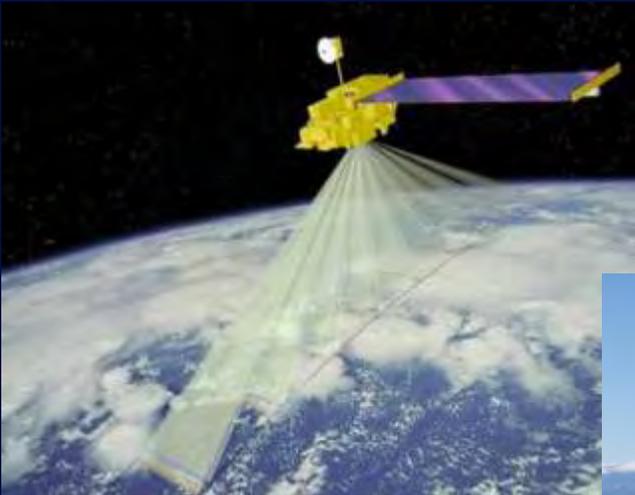
# Research Projects: Lake, Stream & Air Monitoring



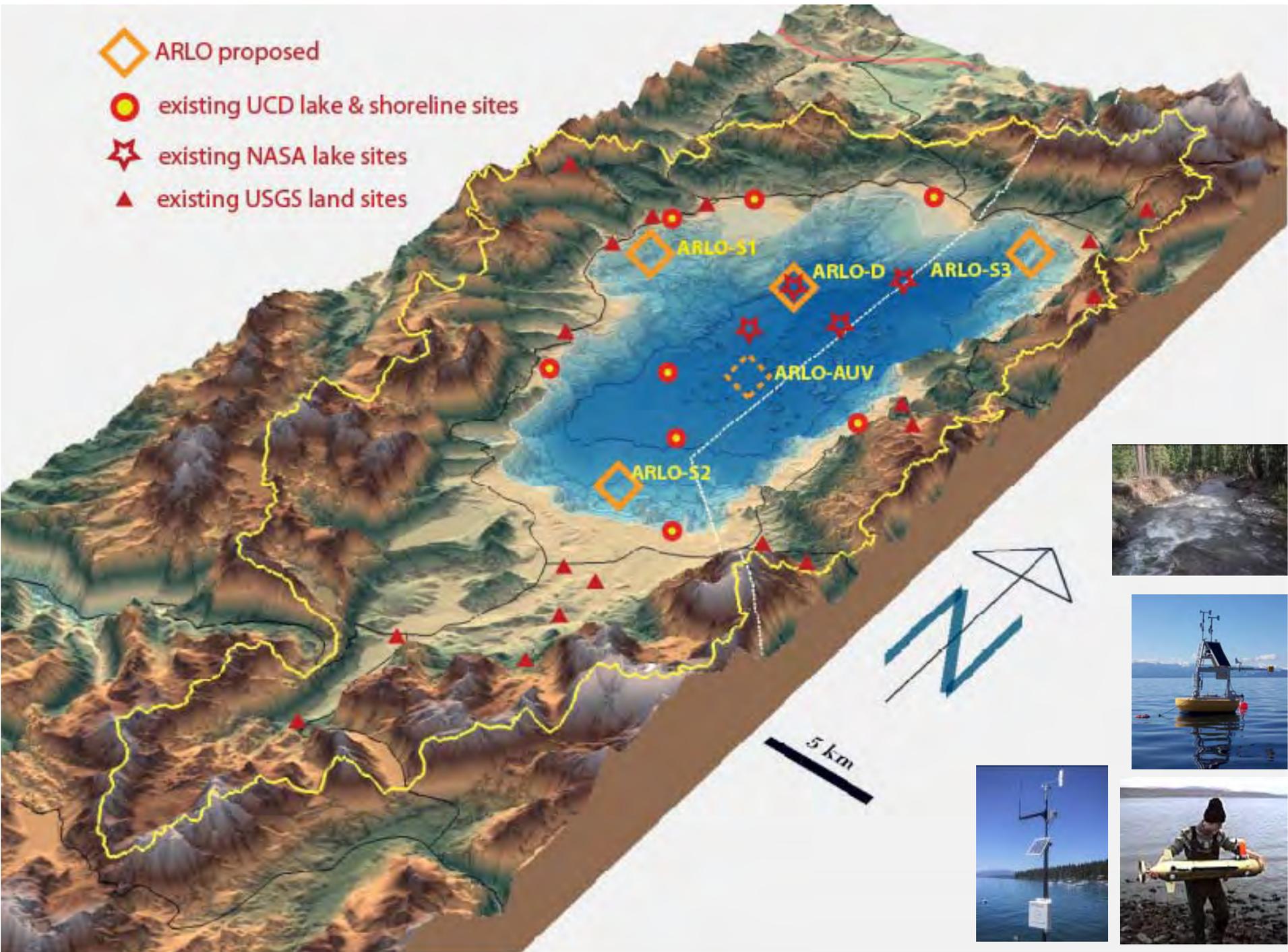
# Research Projects: Wetland Treatment Systems



# Research Projects: Remote Sensing Network



- ◇ ARLO proposed
- existing UCD lake & shoreline sites
- ☆ existing NASA lake sites
- ▲ existing USGS land sites



# Education and Engagement

Creating opportunities for visitors,  
students, teachers and the community to  
learn about Lake Tahoe



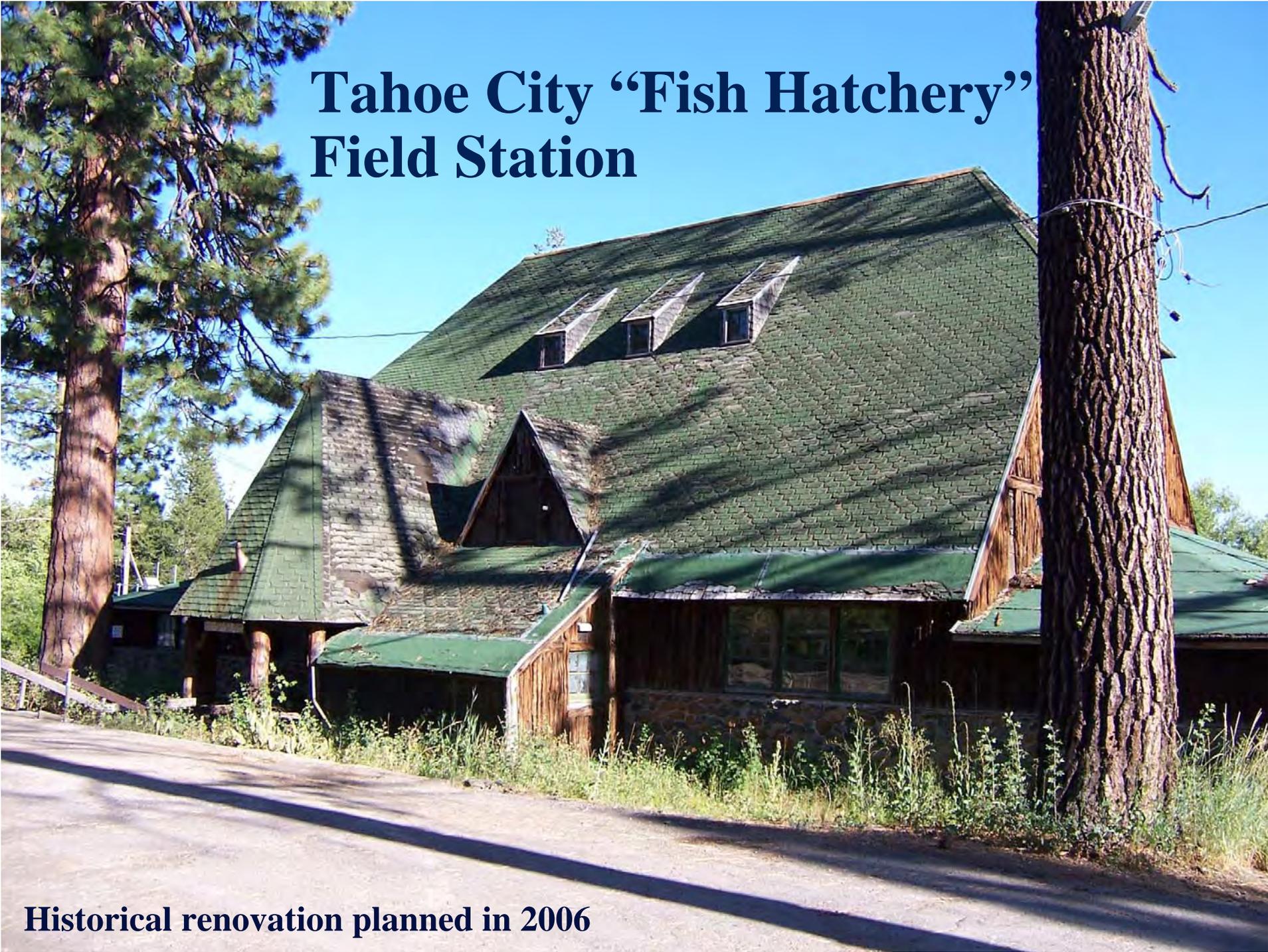
*On the lake*



*Tahoe City*



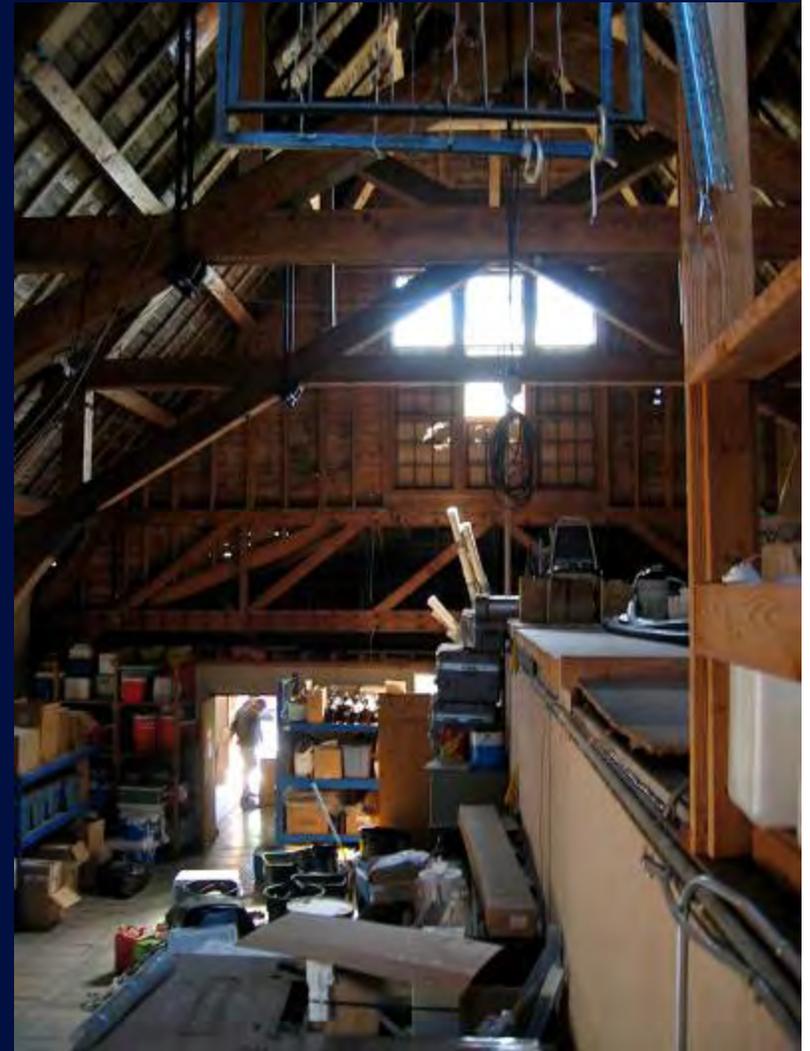
*Incline Village*



# Tahoe City “Fish Hatchery” Field Station

**Historical renovation planned in 2006**

# Inside the Fish Hatchery – Built in 1921



# Outside the Fish Hatchery



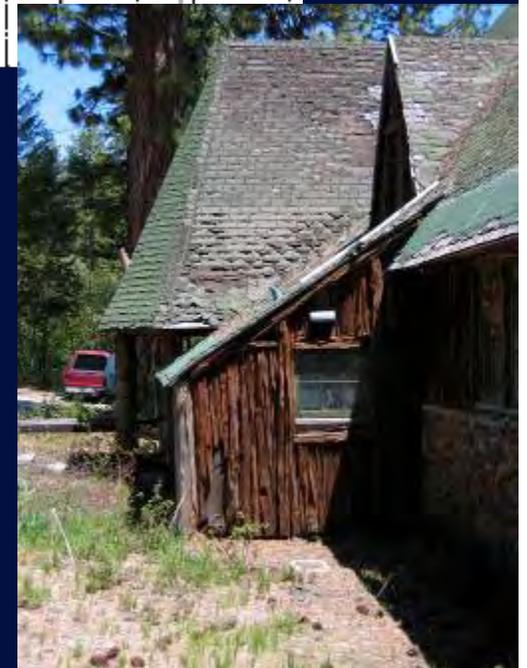
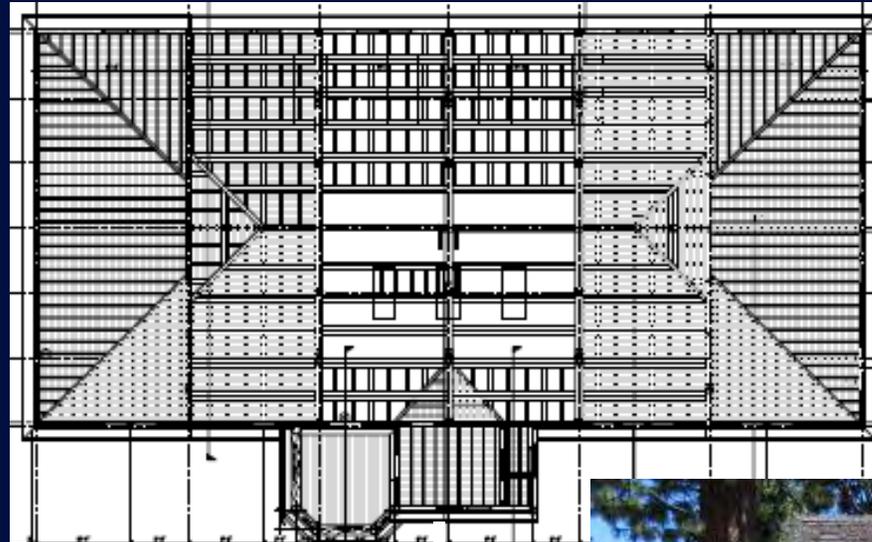
Removal of back buildings, restoration of wetland, BMPs



Photos from Siegel & Strain Architects

# Tahoe City Fish Hatchery Renovation

- **Historical renovation**
- **Public display area for front lobby**
- **Grant proposals submitted to restore wetland & create interpretive nature trail**



# Our Vision: North Shore Education Center & Interpretive Nature Trail

- Restoration of the wetland
- Interpretive displays
- Raised boardwalk
- View tower
- Activities could include educational tours, bird walks, young naturalist programs, student projects



# Tahoe Center for Environmental Sciences



Total area 45,683 sq. ft.

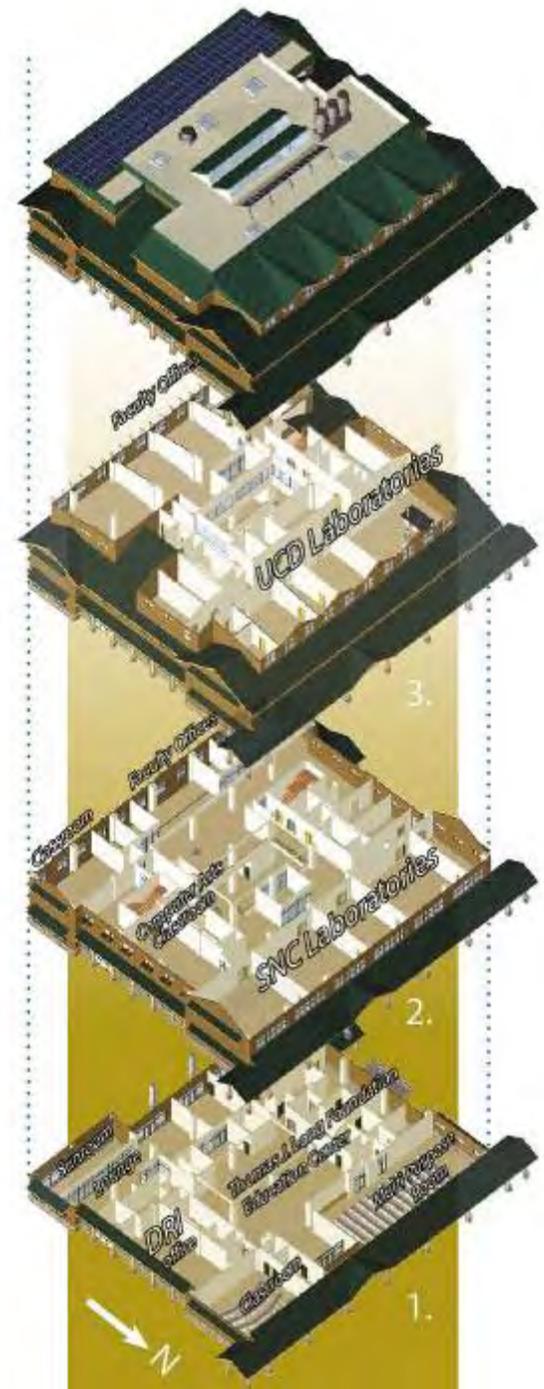
TERC Lab (3<sup>rd</sup> floor) 11,330 sq. ft

Education Center 1,000 sq. ft.



# TCES Building Will Include...

- TERC offices and laboratories
- Sierra Nevada College offices, laboratories and classrooms
- DRI & UNR offices
- Thomas J. Long Foundation Education Center
- Conference space for 150 people



# Main Purpose of Education Center

- Exhibits will provide:
  - Information about Lake Tahoe
  - How science and research have been used to restore and protect Lake Tahoe
  - How individual actions have an impact within the watershed
- Exhibits and activities should be designed to engage visitors of different ages and learning styles.





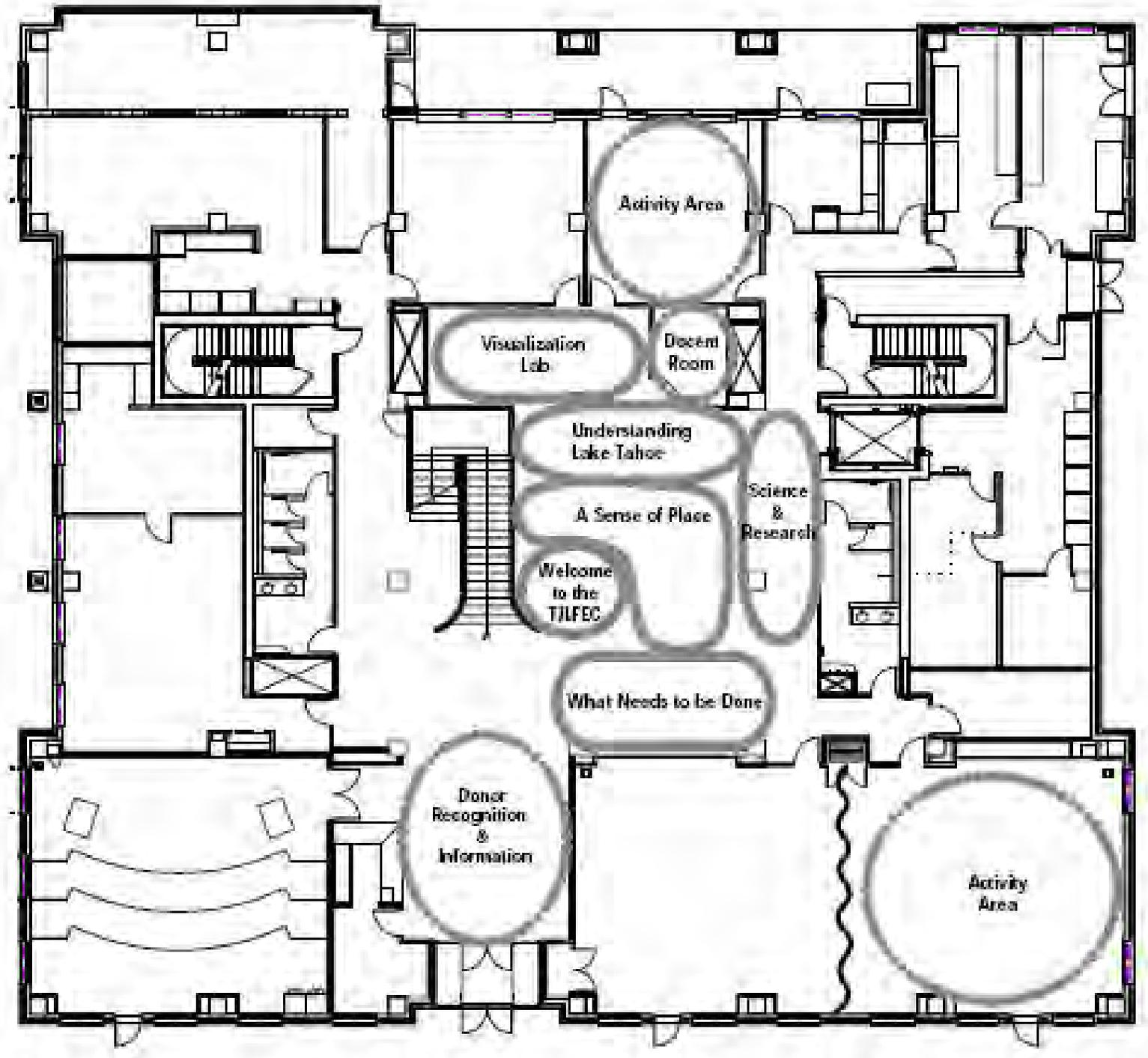
# Target Audience

- Exhibit content will be centered on **sixth grade** visitors...
- Additional information available for older students, adults and visitors to Lake Tahoe

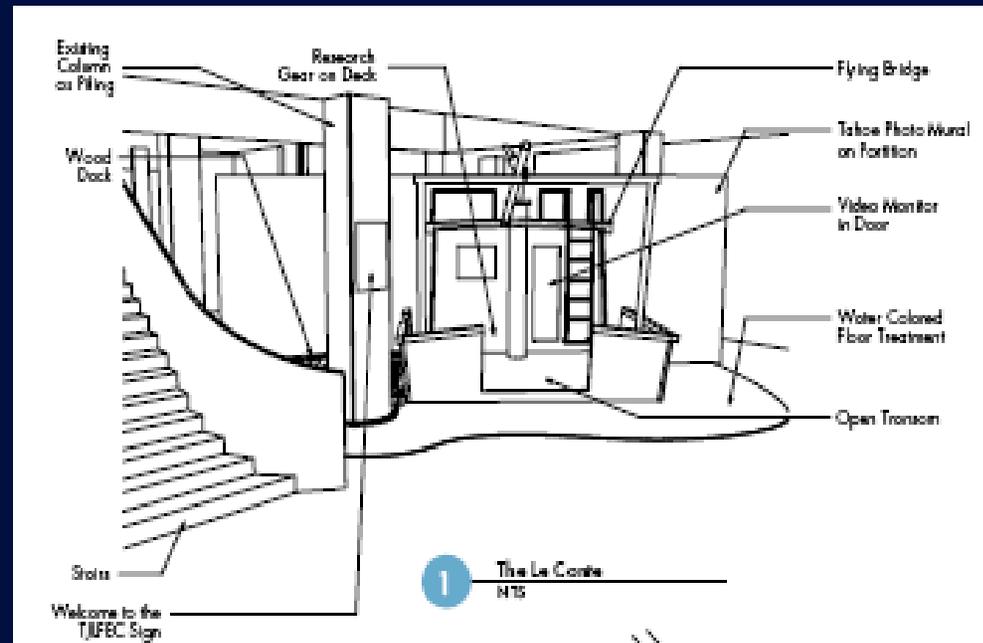
# Overarching Exhibit Themes

- A Sense of Place
- Issues at Lake Tahoe
- Science & Research
- What Needs to be Done

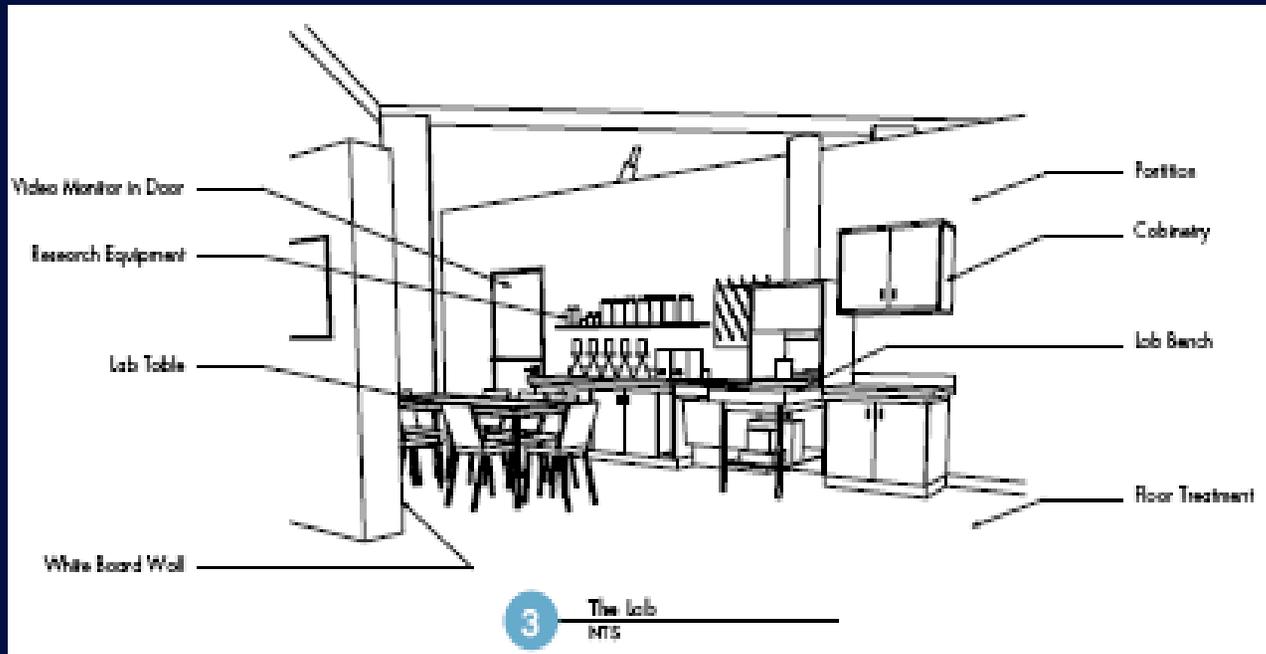




# Research Boat Exhibit

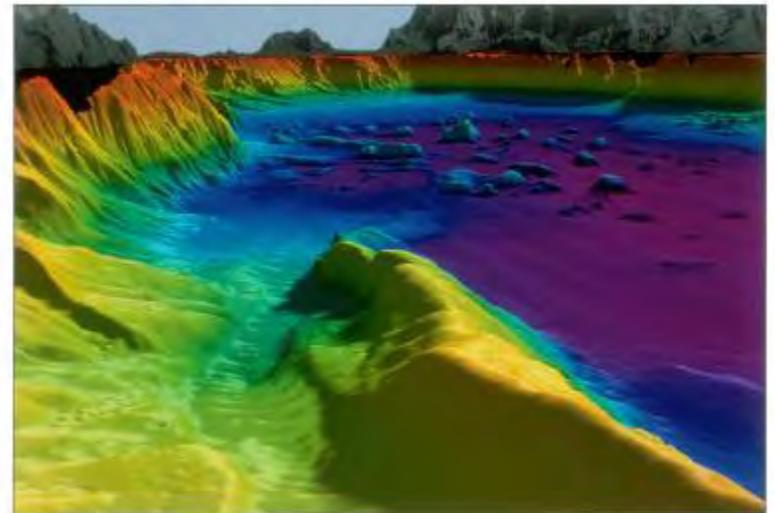


# Laboratory Exhibit



*A Sense of Place =  
Welcome To This Place Called Lake Tahoe*

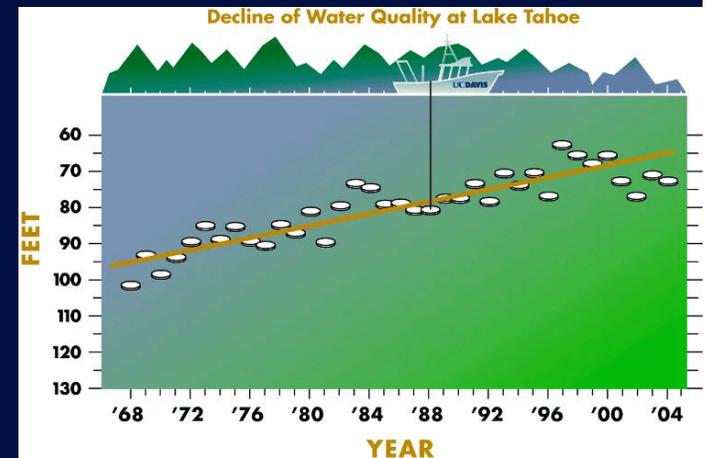
- Why is Lake Tahoe special?
- How was Lake Tahoe formed?
- What is a watershed? What is an airshed?
- Ecological history of lake





## *Issues at Lake Tahoe = Learning and Understanding*

- Causes for concern at Lake Tahoe? How is Lake Tahoe changing?
- Lake Tahoe is losing water clarity
- Erosion
- Eutrophication” (or the aging of a lake)



Using the white secchi disk to measure water transparency, UC Davis researchers have documented a decline in Lake Tahoe's clarity.

# *Science and Research = Discovery*

- **Limnology and lake systems**
- **Lake Tahoe's food web**
- **Global climate change impacts**
- **Natural hazards**



# *Science and Research = Discovery*

- **Science and research have helped to protect Lake Tahoe.**



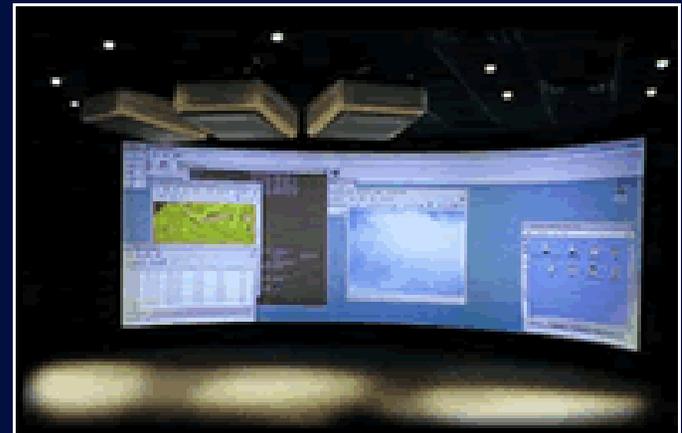
## *What Needs To Be Done = Management and Engagement*

- **Humans are part of the problem... and can be part of the solution.**
- **What can you do to help protect Lake Tahoe and other lakes, streams and watershed systems?**

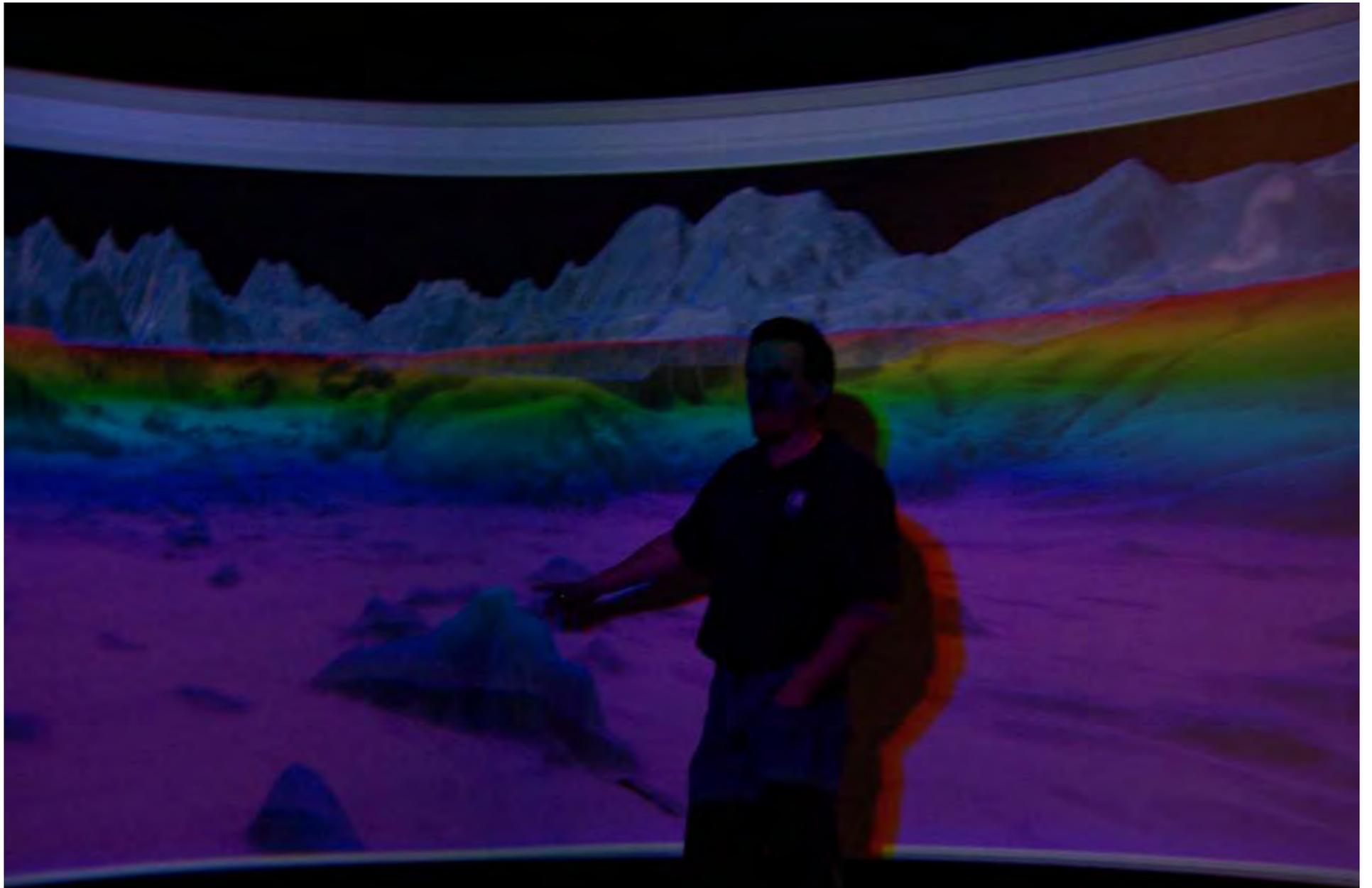


# Data Visualization and Computer Modeling

- Video
- 3-D visualization
- Computerized modeling



HIYE visualization theater



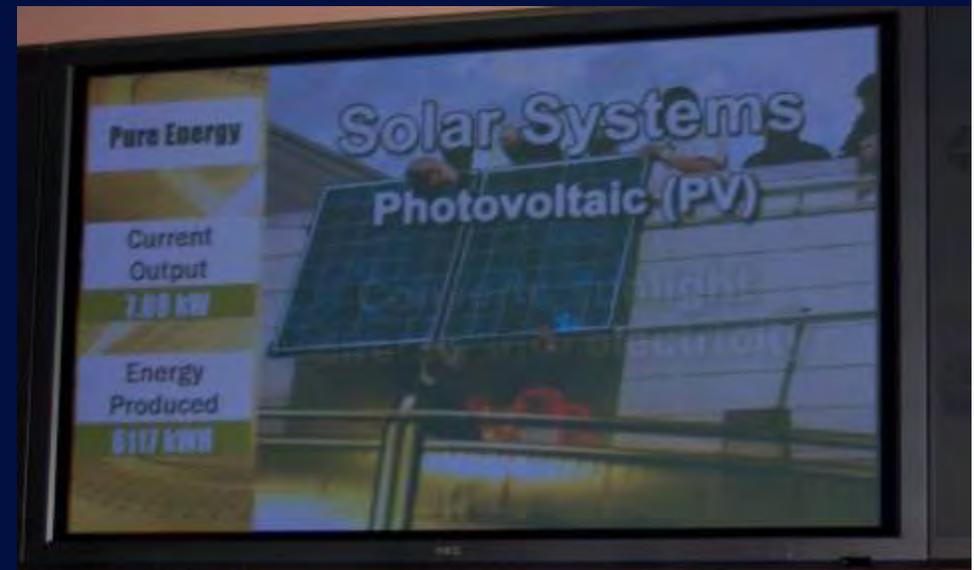
**Graham Kent**  
**Scripps Institution of Oceanography**

## UC Davis Keck CAVE: Viewing earthquake data in 3-D



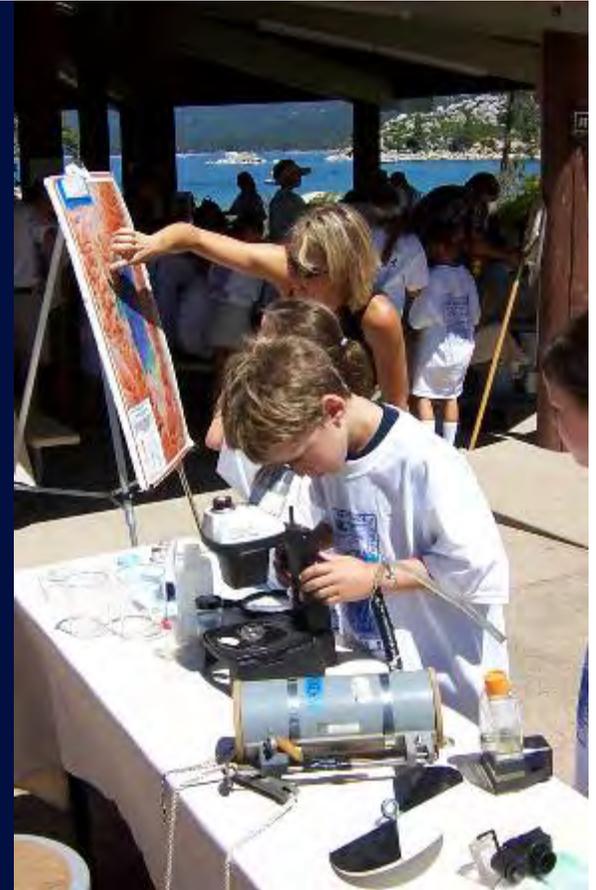
# “Green” Technology Exhibits

- “Green” Exhibits
- Building Monitoring
  - Climate controls
  - Energy monitoring
- Green Technologies
  - Energy efficiency
  - “Green Points of Interest”



# Future Activities & Programs

- Educational exhibits
  - student group tours
  - walk-in visitors
- Interpretive Signage & Nature Walk
- Docent training
- Monthly lecture series
- Teacher training workshops
- Classes & Workshops
- Tahoe Research Symposium
- Tahoe Science Institute
- Student Projects and Internships
- Fundraising Events

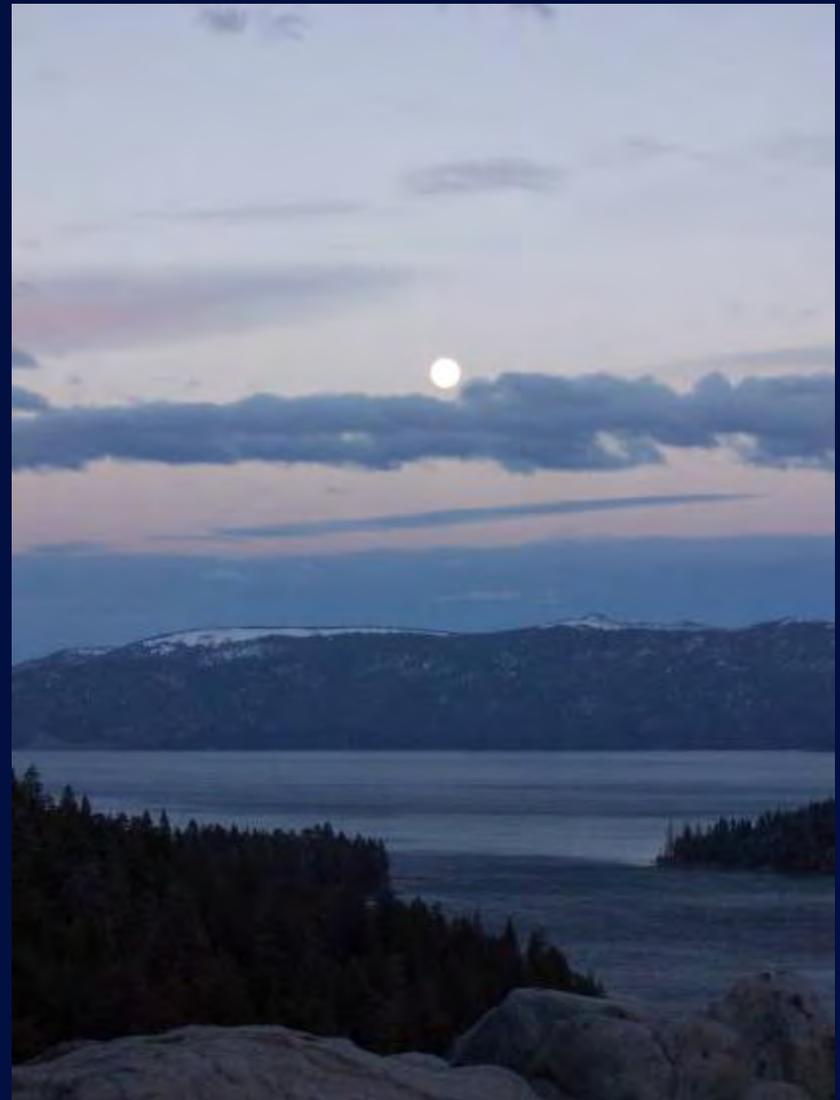


*In the end, we will  
conserve only what we  
love.*

*We love only what we  
understand.*

*We will understand only  
what we are taught.*

- Baba Dioum



**For More Information**

**Visit**

**<http://terc.ucdavis.edu>**

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