

# TAHOE: STATE OF THE LAKE REPORT 2015

## EDUCATION AND OUTREACH

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### TERC education and outreach

In 2014

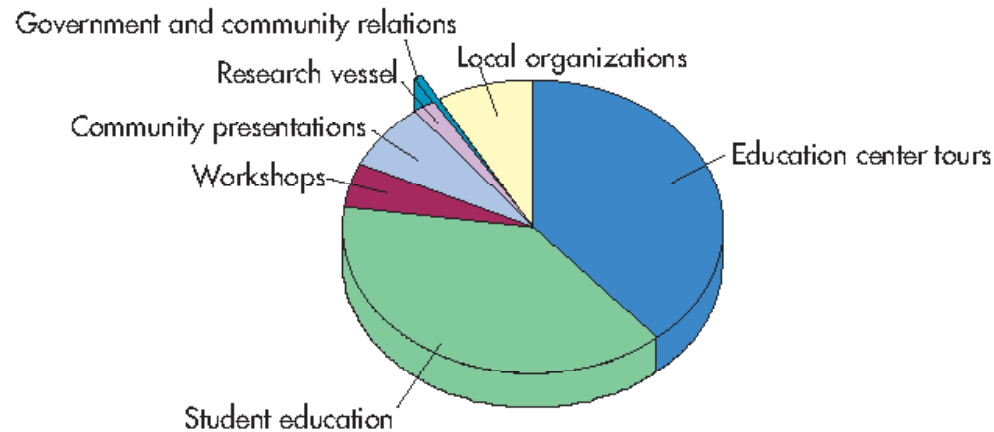
Part of TERC's mission is education and outreach. Our public, K-12, teacher professional development, and volunteer programs are designed to spark the imagination and curiosity of our visitors and participants and to sow the seeds of stewardship for our vital, yet fragile, freshwater ecosystems.

During 2014, TERC recorded 12,701 individual visitor contacts. The majority represented student field trips and visitors to the Tahoe Science Center (Thomas J. Long

Foundation Education Center) at Incline Village. In addition, TERC hosts monthly public lectures and workshops, makes presentations to local organizations, and takes a limited number of visitors out on our research vessels. TERC organizes and hosts annual events and programs including Children's Environmental Science Day, Science Expo, Youth Science Institute, Trout in the Classroom teacher training program, Project WET workshops, Summer Tahoe Teacher Institute, and a volunteer docent

training program.

TERC also partners with numerous groups to deliver environmental science education in the Tahoe basin. In 2014, these included AmeriCorps, Lake Tahoe Outreach Committee, North Tahoe Environmental Education Coalition, Sierra Nevada College, Sierra Watershed Education Partnerships (SWEP), South Tahoe Environmental Education Coalition, UC Davis Young Scholars, and many others.



TOTAL NUMBER OF CONTACTS: 12,701

## EDUCATION AND OUTREACH

### TERC educational exhibits

In 2014

Each year, TERC works to improve our available exhibits and increase the offerings available. During 2014, we planned an “extreme makeover” for the Tahoe Science Center together with the UC Davis Office of Strategic Communications. Graphic designers worked to develop a new look for the science center, which was implemented and

installed in 2015.

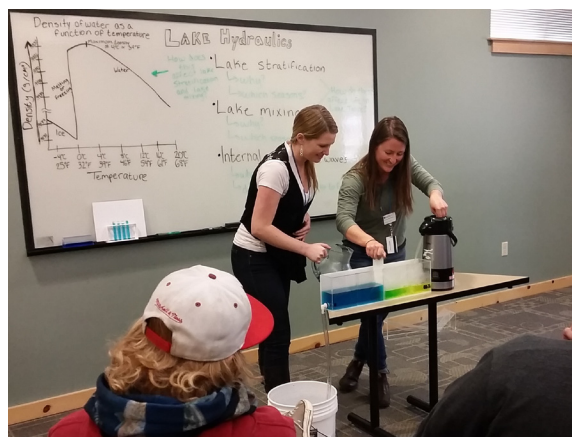
During 2014, we also worked with the UC Berkeley Lawrence Hall of Science to develop two new interactive iPad applications: “Healthy and Unhealthy Lakes” and “DIY Lake Science.” Additionally, we developed curriculum for the Seiche Wave and Density Flow Model which is

available on [3dh2o.org](http://3dh2o.org).

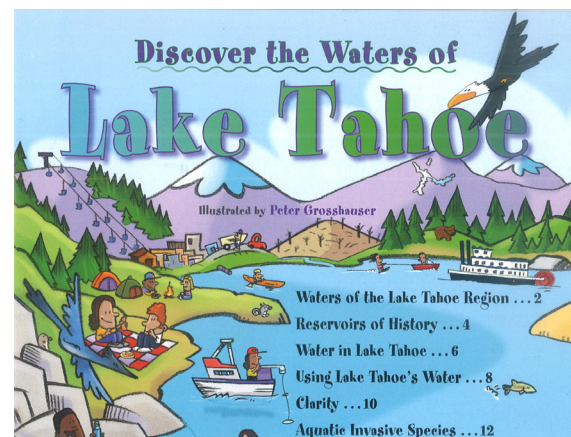
“Discover the Waters of Lake Tahoe” is a student- and teacher-tested activity booklet created with the Project WET Foundation to teach children about the fascinating water science of Lake Tahoe.



“Healthy and Unhealthy Lakes” and “DIY Lake Science” apps were developed with the UC Berkeley Lawrence Hall of Science. Photo: A. Toy



Education and outreach team members Carley O'Connell and Diana Hitchen use cold blue water and hot yellow water to explain how changes in temperature and density lead to seasonal lake stratification and lake mixing. Photo: A. Toy



Together with Project WET and Nevada Division of Environmental Protection, TERC helped create and distribute “Discover the Waters of Lake Tahoe” an activity booklet for children ages eight to twelve.



## EDUCATION AND OUTREACH

### TERC educational programs

In 2014

In addition to providing education center tours for the general public, the TERC Education Team provides high quality informal science education to more than 4,700 third- through eleventh-grade students by hosting over 100 field trips each year.

Other K-12 educational programs include Trout in the Classroom, coordinated in partnership

with Sierra Watershed Education Partnerships, which is designed to teach students about the ecology, biology, and history of trout and other aquatic life. This year, we raised Lahontan cutthroat trout in an aquarium in the science center. Students from schools around the region also raised trout for release into local waterways.

A small group of select high school students participated in the annual Youth Science Institute from January through May. Through this after school program participants work with scientists, conduct experiments, and share science activities with other students.



School groups visit for informal science education programs on water, geology, ecology, and biology. Pictured here, students are collecting and analyzing water samples from nearby Incline Creek. Photo: A. Toy



Students excitedly release their Lahontan cutthroat trout and wish them well as they swim off into the lake as the final lesson of the Trout in the Classroom program. Photo: A. Toy



Youth Science Institute participants from high schools around the region conduct multiple science activities over the 16-week after school program. Photo: A. Toy

## EDUCATION AND OUTREACH

### TERC educational programs, continued

In 2014

Each year we train new volunteer docents at our annual June Docent Training. Volunteer docents become local experts and lead tours at our two science centers. Volunteers also participate in garden work each year to make the Tahoe City Field Station's native plant demonstration garden a beautiful community resource.

Visitors that come to our science centers can view exhibits, watch 3-D movies, and participate in citizen science by conducting water quality monitoring and investigating plant phenology. Public participation in scientific research is educational for adults and children and provides useful data for scientists.

Additionally, for the past several years, TERC has hosted a summer Tahoe Teacher Institute for educators from both California and Nevada aimed at enhancing science, technology, engineering, and mathematics (STEM) education.



At the Tahoe Science Center volunteer docent Alan Castator teaches visitors about lake sediment coring and how these sediment cores provide insight into the environmental history of the lake. Photo: A. Toy



Volunteer docents attend multiple training workshops to build a foundation for providing lively and educational science tours for visitors of all ages at our two science centers. Photo: A. Toy



As part of the Nevada Tahoe Teacher STEM Institute, teachers from all over Nevada learn fun, new, hands-on science activities. Photo: A. Toy



## EDUCATION AND OUTREACH

### TERC special events

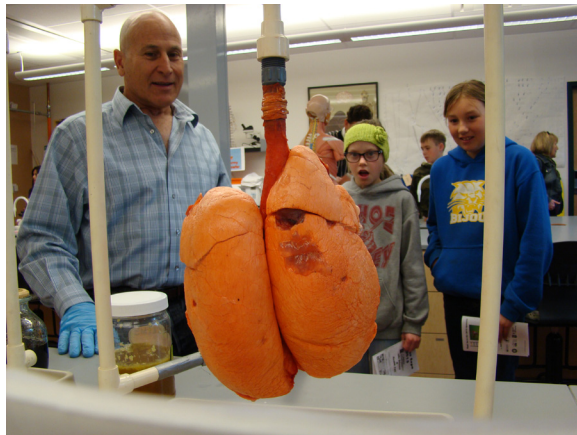
In 2014

TERC hosts monthly lectures throughout the year on various environmental issues, new scientific research, and related regional topics of interest. Recent topics have included, "Your Ideal Canine Companion", "Stem Cell

Treatments for Inflammatory and Traumatic Diseases", "Mountain Weather and Climate", and "AlertTahoe: A 21st Century Approach to Firefighting in the Tahoe Basin."

Special events hosted annually include

Project WET training workshops (February), Science Expo (March), Garden workshops (June - August), Summer Teacher Institute (July), and Children's Environmental Science Day (August).



The annual Science Expo held each March brings in more than 1,000 third-, fourth- and fifth-grade students for hands-on science activities that cover a different theme every year. In 2015, the theme was "Life Science and Health". Next year the theme will be Physical Science. Photo: A. Toy



Public lectures are held monthly at our Incline Village location. Sponsors and private donations help make these events free to the community. Photo: A. Toy



Children's Environmental Science Day is held annually each August with hands-on science activities designed for kids ages four and up. Scientists and management agencies from the Tahoe basin participate to make this a community event that builds knowledge and develops partnerships. Photo: A. Toy