

Scientist details human impact on Lake Tahoe

By Jessie Marchesseau

INCLINE VILLAGE – Lake Tahoe is not the same as it used to be. Most of us are already aware of this, but none as much as Charles Goldman.

In 1959, Goldman, a limnologist and UC Davis professor, formed the Tahoe Research Group and began regular and extensive testing of Lake Tahoe.

On Friday evening, Goldman gave a presentation at the UC Davis Tahoe Environmental Research Center in Incline Village entitled “The impact of climactic change and global warming on inland waters of the world.” The lecture was part of the annual UC Davis volunteer docent training session.

In his introduction on June 7, Geoff Schladow, director of TERC, credited Goldman with providing “unassailable evidence that Lake Tahoe has changed. Without that,” he said, “we would all be here arguing about whether or not it’s changed.”



Charles Goldman has been studying Lake Tahoe for decades. Photo/LTN file

Event organizers continued to bring in more and more chairs as

135 people crowded into the tight room to hear Goldman speak. The docent training sessions are generally for trainees only, but this year, organizers decided to open Goldman's presentation to the public.

"He has all of the historic knowledge that really grounds the science in a historical context," Heather Segale, UC Davis education and outreach director, said. "We can tell our docents about the latest and greatest, but giving them history gives them the long view of science at the lake."

Goldman started with the long view of climate change in general by putting up a graph showing carbon dioxide levels going up faster and higher than they have in 800,000 years.

"There's probably no problem that's faced humanity the way this has since the ice age," he said.

He acknowledged the climate change skeptics and compared their argument to that of tobacco companies arguing that cigarettes are good for you.

His slide show was filled with charts, graphs and photographs depicting everything from Arctic ice melt to changes in atmospheric makeup to the fault lines under Lake Tahoe. Pictures of lakes in Asia showed one so green with algae it practically glowed and another so polluted people can hardly breathe when attempting to cross it by boat.

Stopping and preventing pollution in Lake Tahoe has been one of Goldman's main goals. In fact, he calls convincing authorities to stop putting sewage, treated or otherwise, into Lake Tahoe in the late 1960s his "single greatest contribution" and the most significant thing that could have been done for the lake.

He also remembered a time when the clean Tahoe air resembled the smog of a big city. The air quality outside the casinos, he said, was worse than inside, and virtually all the

pollution was being created inside the basin. Again, he spoke up. People were defensive at first, but eventually changes were made.

Over the years, Goldman has seen a lot of changes in Lake Tahoe. He talked about watching the Tahoe Keys be built and how it is the main culprit of the Eurasian milfoil invasion in Lake Tahoe. It is also the site of the addition of non-native species such as goldfish.

Over the course of 30 years, Goldman has also seen the overall temperature of Lake Tahoe increase by about 1 degree. His graphs showed that while the maximum and minimum temperatures of Lake Tahoe fluctuate constantly, the average maximum temperature has remained virtually the same; it is the average minimum temperature that appears to be rising at a relatively steady rate. This means the lake is not cooling off at night like it used to, the result of increased CO₂ in the atmosphere.

The long-term data collected by Goldman and his team over more than 40 years has resulted in building restrictions, erosion control, protection of wetlands and the establishment of water quality thresholds, all put in place to protect the delicate environment of Lake Tahoe.

Now retired, Goldman's legacy in Lake Tahoe continues with the Tahoe Research Group and the Tahoe Environmental Research Group.

Goldman left the audience with this: "Keep in mind that the younger generation is going to inherit a badly damaged planet. It's really up to us to inspire them with a lot of enthusiasm."