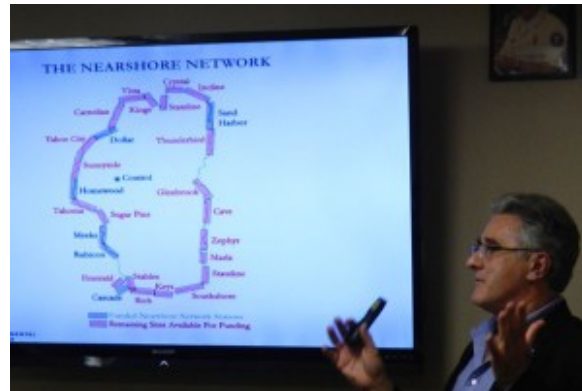


Scientists studying life below Tahoe's surface



Geoff Schladow talks Nov. 6 about what is happening below the surface of Lake Tahoe. Photo/Kathryn Reed

By Kathryn Reed

ROUND HILL – What is going on beneath the surface of Lake Tahoe?

Scientists don't really know. Geoff Schladow, director of the Tahoe Environmental Research Center, said everything that is known could be told in a 45-minute presentation.

He gave two talks this week – one in Kings Beach, the other Round Hill – about what affects the water actions of Lake Tahoe. Tahoe's circulation patterns are detailed in the NDEP-Tahoe Water Suppliers Association 2014 Risk Assessment Report.

Wind is the No. 1 driver.

"We all think wind is from the southwest," Schladow told the packed room at the Tahoe Douglas fire station in Round Hill on Nov. 6. "And it is when it is measured at the airport."

He showed a model depicting the wind movement on the lake and

it is anything but the same across the whole water body. Farther north it swirls counterclockwise, while near the south it moves clockwise. And sometimes it is blowing straight across the water.

Thermal stratification and velocity are other factors.

“You may look at the lake and it is calm and placid, but it is always moving,” Schladow said.

Researchers are using a variety of tools to calculate that movement. Drogues are instruments that act like a big sail with a GPS device that measure where the wind current is carrying it.

Scientists did studies involving the intakes for Kingsbury General Improvement District and Edgewood Water Company. Part of this was to analyze how pathogens move from beaches on the Nevada side to the pipes taking water out for consumption by the South Shore districts.

While Schladow’s research showed the contaminants were well below the federal levels for concern, he said if the intakes were deeper, the threat of pathogens would be reduced.

One of the tests scientists did was to release particles at the Tahoe Keys to see where they would move. This was done over a 10-day period.

Some went west, others traveled deeper into the lake, and others hugged the shoreline going north.

The purpose of this study was to get a glimpse of where an herbicide might spread if it were to be used to rid the Keys of milfoil.

But Schladow stressed this experiment did not take into account several factors such as dilution of the chemical.

The least amount of knowledge is known about the near shore

movement. This in large part has to do with the middle of the lake getting most of the attention in regards to any studies, but especially with water clarity.

A near shore network has been created to gather data. However, only five locations are in the study area, with a sixth expected to come on board in the next couple weeks.

An instrument about 3-feet-long is placed in the water. Every 30 seconds data such as temperature, turbidity and dissolved organic material are being sent back to TERC.

Turbidity, or the cloudiness of the lake, is not always associated with storms. Schladow said that is something that needs to be investigated more.

With little data available regarding what is going on beneath the surface of Lake Tahoe, the whys of those occurrences are even more elusive. But more research is in the works.