

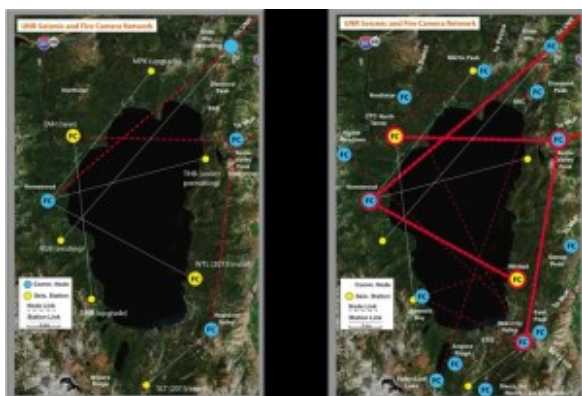
Cameras designed to be fire containment tool

By Ann Harmon

Drought? Never mind, the Tahoe basin hasn't a problem. People who live here, people who visit, they'll have plenty of water with Lake Tahoe nearby. But doesn't a drought mean its forests are drying out, that many trees will die? Well, sure, but fire fighters and equipment are great these days. Tahoe will be fine.

Have we forgotten the 2007 Angora Fire? Dismissed the \$160 million it cost, the 254 homes burned? Do we remember last year's 97,000-acre King Fire fought for more than a month, costing \$5 million per day? That came close to Tahoe, too close.

If Tahoe burns, a national treasure will be gone. Maybe we should pay attention after all. We have not been this dry for 1,200 years.



Left: Pilot program cameras; right: build out. Images/UNR

The UNR Seismological Laboratory, under Director Graham Kent, recognizes exactly what the drought means: possible basin fires. When the Lab learned of Forest Guard, an international

2009 award winning project of young students in Meadow Vista, it worked with them and with Sony Europe to develop a Tahoe plan. The ALERT Tahoe project is now under way to place 15 cameras around Tahoe to film any basin fire within seconds of its start using on-demand time lapse imagery. Four units are now in place.

The first *aha* was last August when Mac Heller with the U.S. Forest Service on a fire near Fresno logged onto the camera at Snow Valley Peak. He spotted a small lightning strike fire north of Spooner Summit. Firefighters put it out at less than half an acre.

The USFS-CalFire interagency joint command center in Camino now watches cameras 24/7. Pictures also go to the USFS, CalFire, BLM and local fire districts around the basin.

Axis HD cameras with 32x pan-tilt-zoom capability provide panoramic views from towers built on solid rock, also carrying early warning earthquake detectors. Notably, the BLM has funded these same cameras for Central and Northeast Nevada to catch sagebrush and forest fires. At \$3,500 each, cameras have a three-year guarantee. Each station's complete system of independent microwave communications, power systems, and other expenses is a \$15,000 to \$30,000 investment.

Towers withstand snow, high winds and earthquakes, so durable that inspections can be limited to two visits a year. This is a good thing. Access can be very difficult. Cameras, when funded, will ultimately provide coverage from Peavine to McClellan Peaks and possibly from Sierra-at-Tahoe and the western slope of the Sierra.

The ALERT Tahoe program is being funded by public grants and private donations. New donations are critical to roll the system out as rapidly as possible. Tahoe can't wait. This summer, if \$50,000 is raised quickly through private donations, installations will be placed above Zephyr Cove and,

hopefully, on Martis Peak. If additional donations and site approvals are secured early this summer, possibly two other stations would be built, one on Diamond Peak, one above Cal Neva.

Two million dollars would provide the system and operating funds for a decade. Remarkably, that is only 1.25 percent of the cost of the Angora Fire. Kent notes that, were \$2 million immediately available, camera eyes could be placed within two years on 15 towers. Delayed funding would take three to four years more.

System maps, cameras and donation information are on ALERT Tahoe's website.

Also under way, with financing by the National Science Foundation and the Nevada Governor's Knowledge Fund, is UNR lab's research into using drones for quickly communicating real-time imagery during fires. Plans are to team with UC San Diego to share ideas and save possible costs, including crowd sourcing fire watching.

Ann Harmon is a retired research chemist who lives in Stateline.