

UC Merced gets \$2m to track Sierra snowpack

By Mark Grossi / The Fresno Bee

Sunday, Oct. 02, 2011 | 05:41 PM

Researchers from the University of California at Merced were awarded a \$2 million federal grant to develop a revolutionary network for tracking the Sierra snowpack as the climate warms.

The National Science Foundation money will support a four-year project to install a massive web of wireless sensors in the 2,000-square-mile American River Basin in the Sierra northeast of Sacramento.

The network will give water managers precise information to predict snowmelt, a main source of water for millions of residents and the \$35 billion farming industry. The data will become more important as the snowpack retreats to higher ground in a warming climate.

The research team is led by UC Merced professor Roger Bales, director of the Sierra Nevada Research Institute, and UC Berkeley professor Steven Glaser. For several years, the team has been experimenting with the technology around Shaver Lake in Fresno County and the American River.

Scientists use many sensors in each square mile of the watershed. Traditional snow measurement relies on samples from just a few flat meadows to represent huge sections of the mountain range.

The sensor network will be able to account for the slope of the mountain, water consumed by plants and evaporation.

The new project at the American River is considered a big step toward the ultimate goal -- spreading a sensor network over the entire 400-mile Sierra Nevada.

Said Bales: "We believe this type of wireless sensor network could ultimately revolutionize the way we understand our most important sources of water, both in California and elsewhere."