

Scientists worried about rapid snowmelt

Researchers are using an exclusive modeling system to study the effects of slower snowmelt across various regions of the Western United States including the Cascade, Sierra Nevada, Wasatch and Rocky mountains.

All of these areas see significant seasonal snow accumulation and generate water resources for downstream communities. Sixty million people in the Western United States depend on snowmelt for their water supply.

Western communities are facing effects of a warming climate with slower and earlier snowmelt reducing stream flows and possibly the amount of water reaching reservoirs used for drinking water and agriculture, according to a study published in July.

“As the climate warms, there is actually a slower snowmelt – both in timing and rates, which makes for a less efficient stream flow,” Adrian Harpold, ecohydrologist at UNR, said in a press release. Harpold, who initiated the study two years ago at the University of Colorado, Boulder, is a co-author of the paper published in AGU publications Geophysical Research Letters.

“I know, it’s counterintuitive, but with a warming climate snowmelt starts sooner in the season, and at a slower rate because the warming occurs earlier when days are shorter and we have less sunlight,” he said. “What makes runoff less efficient is that slower snowmelt reduces the amount of moisture being pushed deep into the subsurface where it is less likely to evaporate”

Harpold, who’s Nevada Mountain Ecohydrology Lab is based in the College of Agriculture, Biotechnology and Natural

Resources, continued to work with the team from CU Boulder after coming to UNR.

– *Lake Tahoe News staff report*