

# Ultrasonic monitors may be answer to better snow surveys

By Mark Grossi, Fresno Bee

Farmers and water officials throughout California wait anxiously each year for forecasts about snowmelt roaring down the Sierra's granite canyons – precious water for the long summer.

But the forecasts are only estimates, based on averages of past seasons, snow-sensor readings and monthly measurements from key mountain meadows above big rivers. The forecast sometimes is wrong, leaving farmers with too much or too little water later in the growing season.

One big reason: Nobody measures snow around jagged ridges, plunging ravines and deep forests in the 400-mile-long Sierra. That's a huge swath of the high country where the size of the snowpack is unknown. As the climate warms and snowfall dwindles this century, officials will need to measure more of the Sierra to improve runoff forecasts for farmers and the growing population, say scientists at the University of California at Merced.

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