

Rocky Mountains Vista

Solar unit monitors remote water tanks

By T.J. BURNHAM

LOOKING to the sky for moisture takes on a new meaning in the West, where remote livestock water systems are monitored by satellites.

St. George, Utah, rancher Ed Bundy, who runs cattle in rugged Mule Canyon not far from the Arizona Grand Canyon — no longer has to drive his 4-by-4 three hours each way on rocky two-tracks to monitor for water system malfunctions or leaks that can leave high-country cattle dry.

While he once piloted a plane to scout for water problems, recent health issues have grounded him, so he had to look even

higher in the heavens for an answer.

Bundy ended up outfitting his stock water locations with remote solar-powered monitors, which generate water-level information from a pressure transducer sensor and sends the data back to a website via a satellite radio.

Reduced mileage

Now Bundy just logs into a website to check whether his watering systems far away are providing drinks for his livestock.

"It's the best system to come along I have ever seen," says Bundy. "I can't say enough good about it."

The website monitoring "saves me a lot of headaches and worry," he adds. "Not only can I assure there's water up there, but I know what time the cows are drinking and how much water they use."

Costing about \$2,000 installed, the system costs less than \$10 a month for website costs, he says, but that saves Bundy \$700 a year in travel expenses and more than a hundred hours of his time each year. "This is perhaps the best thing to come along for people with cattle in high country where it takes hours on horseback or in a 4-by-4 to get to," he notes. "It is quick to pay for itself, and it works very well."

In remote areas like Utah's high county, other ranchers find the system equally



SOLAR AND SATELLITE: This solar-powered livestock water monitor, checked by Utah State University Extension agent Kevin Heaton, sends messages from remote water stocks to the ranch headquarters on water system operations.

remarkable, says Kevin Heaton, Utah State University Extension agent in Kane, Garfield and Washington counties.

"One of the nice features of the system is that it will automatically email or call a rancher if drastic changes take place in water levels," says Heaton.

He learned about the system through the Oregon State University Extension in Prineville, and saw the need in Utah. When the Natural Resources Conservation Service offered a Conservation Innovation Grant to install the systems, Heaton quickly reacted by monitoring installation of 15 demonstration sites in 2009 that run from the Henrie Mountains in southern

Utah to the Grand Canyon area. Three Utah and two Arizona counties are involved.

Adaptation since then is "starting to take hold," he says. "This is new technology adaptation, and it hasn't been marketed well yet. I suspect it will take off in the future." In a 2009-10 survey, he discovered ranchers fork out an average of \$500 a month to check water sites.

One Kanab rancher travels about 2,000 to 3,000 miles a month. Today, the producer is using the remote technology, traveling only as far as his computer.

To learn more, Heaton will be presenting demonstrations this year. For information, contact him at 435-676-1113.



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SOLAR SYSTEM:

With more than 150 sunny days a year in southern Utah (right photo), using solar power to run remote water sensing systems works well, says Utah State University Extension agent Kevin Heaton.



RAINWATER TUB: With rain providing the water for remote country livestock, large catching systems such as this one below can be monitored via remote sensing, explains Extension agent Kevin Heaton.

