How SKYWAVE and Ranchbot are delivering time, cost savings and peace of mind for progressive ranchers

Together, Ranchbot and SKYWAVE are helping provide remote water management solutions for a more sustainable future in ranching through 24/7 satellite connectivity.

The challenge

Water is often the most overlooked resource, and yet the most critical to a rancher's operation. Whether they manage hundreds of acres or hundreds of thousands of acres, ranchers are facing rising social and economic pressures and environmental extremes that threaten the health of their livestock and the long-term sustainability of their ranch. According to the United States Department of Agriculture (USDA,) there are over 700,000 cattle ranches across the United States, and it's estimated that around 40% of those are in arid or semi-arid environments where water related risks like reduced water availability and decreased groundwater replenishment rates continue to pose a growing threat.

Traditionally, these water sources for livestock are checked manually, often taking ranchers hours to drive hundreds of miles on rough roads just to access them. Not to mention the significant costs associated with manually checking water: fuel consumption, vehicle wear and tear, infrastructure repair, labor,

and the ultimate cost of losing valuable livestock if a water source fails without a prompt solution. Water management is a critical concern and cost for ranchers, according to Andrew Coppin, Founder and CEO of Ranchbot, and Co-Founder and Managing Director of Farmbot. Things like delayed inspections, water leaks, equipment failure and poor water flow and pressure can all lead to wasted water or a lack of availability of water for livestock.

"With a single head of cattle valued at approximately $1,500 USD, losing even one animal represents a significant avoidable cost for ranchers," says Coppin. "Perhaps more importantly, we found that over 500,000 ranchers and farmers across North America drive to check water sources every day that 95% of the time don't need checking for the 5% of times that they do, such is the criticality of water supply. That's a lot of time, money and effort that could be used to have a more positive impact on their operations."

The solution

Through SKYWAVE satellite IoT technology, Ranchbot enables ranchers to check their water anytime, anywhere, regardless of their property's cellular coverage. "Not only can ranchers see their water availability and check for issues in near real-time," Coppin says, "they can now actuate or shut off water supplies, open or close valves and start or stop generators and pumps—all remotely.

"They can rest assured the water supply for their livestock is operating properly and know if they have an issue, when they have an issue."

The integration of SKYWAVE satellite IoT modems into Ranchbot products ensures reliable 24/7/365 communications regardless of how remote or dispersed a rancher's water resources may be.

It also allows Ranchbot to act as a hub for other connected agricultural applications and solutions, particularly in areas with limited or non-existent cellular coverage.

"Ranchbot leverages SKYWAVE's satellite modems for the low latency and excellent data transmission performance they provide. Two-way communication means water assets can be monitored, managed, and controlled remotely, which is a huge relief for ranchers who have water sources in faraway, hard-to-reach places," Coppin says. "Integrating SKYWAVE's technology into our own has been easy since it auto-provisions and connects to the satellite network. It isn't necessary to send technicians into the field to help deploy our solutions. This all makes Ranchbot a preferred solution for ranchers around the globe."

Results

Ranchbot customers are responsible for managing over 10 million cattle and 15 million sheep. There are over 20,000 sensors in the field on more than 4,000 ranches with over 8,000 users around the world.

Some of the ranches supported by Ranchbot span millions of acres. Deploying the satellite-enabled solutions provides a better quality of life for the ranchers and livestock alike. It's not only the cost and operational benefits, but the confidence that the ranchers' livelihoods are looked after as well.

Water management peace of mind
Access to 24/7/365 water data via satellite connected modems from SKYWAVE helps remove the guesswork from a rancher's operation with 24/7/365 insights into their water availability and equipment functionality right from their device.

A better quality of life
Based on a survey by USDA's National Agricultural Statistics Service (NASS) and Economic Research Service (ERS), 97% of U.S. farms and ranches are family owned and operated. Between 52% and 79% of ranches have an operating profit margin (OPM) in the high-risk zone, making them more vulnerable to financial and operational risks.

CUSTOMER SUCCESS STORY:
Roaring Springs Ranch manages water remotely using Ranchbot

Roaring Spring Ranch was founded in 1872, and still uses largely the same ranching practices that were used over 150 years ago with one major difference: Today, they use satellite-connected IoT solutions to monitor and manage water supplies across the 1.7 million acres of public and private land that make up the ranch.

Eric Davies, Farm Manager, Roaring Spring Ranch, says, "Ranchbot saved us 30 trips just this spring alone. I bet we've saved close to $150,000."

"It's the first thing I check in the morning. When I wake up, I check the weather, and I check the Ranchbot. Right now, we're running a diesel generator that could shut off any time, from an air bubble in the fuel line for example. I can see right on my phone at any moment whether it's running or not. With the trough monitor there, if it ever reaches full capacity, I can just shut the generator off and save fuel," says Davies.

"On a drought year, just knowing there's water there and that the cattle aren't coming to an empty trough and having to wait until the next day to get a drink—knowing that there's constant water there is very important. But, also, you can start to get an idea of how many cattle are coming to the troughs.
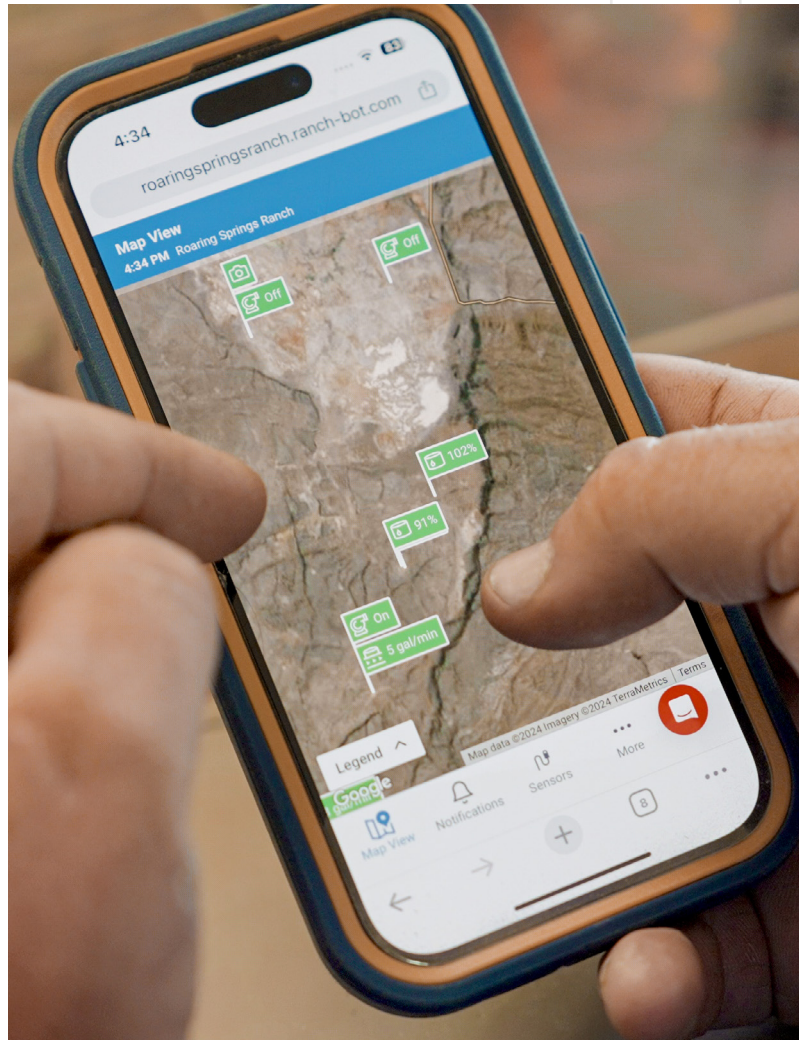
"I get more text messages from Ranchbot than anyone else. But that's a good thing. I can't ever make the excuse that I didn't know there was a problem. I always know if there's a problem," he says.

Being that livestock, water and time are three crucial components to the success of a ranch operation, Ranchbot and SKYWAVE's combined technological solutions help alleviate their water worries. With the hours previously spent checking water, ranchers can now spend their time on more valuable things on and off the ranch.

What's good for the wallet is good for the environment

While saving on fuel, water and equipment wear and tear, ranchers using Ranchbot are simultaneously developing a more sustainable future in beef production. Less time on the road helps reduce carbon emissions. Near real-time alerts on water issues help decrease water waste. Switching pumps and generators off remotely means less run-time, leading to a decrease in electricity costs and carbon footprint for the ranch.

"SKYWAVE allows Ranchbot to make our solutions even more broadly applicable for ranch operations. Even where there is poor or non-existent cellular connectivity, we can provide an always-connected solution. With SKYWAVE, Ranchbot was able to seamlessly integrate satellite modems into our solutions, supporting our ranchers more reliably and immediately, so they always know the exact status of every water supply on ranches that can span hundreds of thousands or even a million plus acres. This has completely redefined how ranchers monitor and manage their water supplies," says Coppin.

Learn more about our partnership opportunities:
Email: **sales@skywave.com** | Call: **1-800-672-2666**

Visit our website **www.skywave.com**

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