

South Dakota rancher adds value to his operation and improves sage grouse habitat

Rancher Ron Steineke makes water delivery and grazing improvements that benefit his cattle along with sage grouse and other wildlife.

By Steve Stuebner

Drought can be tough on wildlife and cattle in the northwest corner of South Dakota and on the fringe of sage grouse range. When a period of little rain hit the region in 2012, creeks and small reservoirs dried up. Today, with new funds from the [Sage Grouse Initiative](#) that help improve grazing systems, rancher Ron Steineke will at last have a reliable water source for livestock and great habitat too.

Dollars and cents

Steineke is an avid upland bird and pheasant hunter, and he enjoys seeing quite a few white-tailed deer and antelope on the ranch. "I'm kind of a nature guy," he says. "I don't mind giving a little, but everything still comes down to dollars and cents."

Today, Steineke runs about 1,000 head of cattle on a mix of 11,500 acres of private, state and Bureau of Land Management property on the rolling prairie in western South Dakota. His ranch shelters sage grouse and is important for nesting birds, especially on the western edge, close to a lek, where male grouse display and mate with hens each spring.

In a dry year, Steineke might have enough grass to get by, but without a water source near the feed, it's difficult. "There are times when we have grass that we can use, but without water, we can't use it," Steineke says.

Under the Sage Grouse Initiative program, Steineke made a bold move to drill a 3,500-foot-deep water well with cost-share assistance to improve livestock and wildlife management on the large ranch. He's also building 19 miles of pipeline to deliver water to multiple cattle pastures on the ranch.

Launched in 2010 by the [Natural Resources Conservation Service](#), the Sage Grouse Initiative works to improve habitat on private ranchlands in 11 western states. Many of the SGI contracts with ranchers include provisions to improve the management of livestock grazing so that it's sustainable over the long-term. The SGI motto is "Wildlife Conservation Through Sustainable Ranching."

Water is what makes it all work

The water improvements add value to Steineke's ranch and allow his cattle to move through a new prescribed grazing system that keeps the cows spread out throughout the year. The water developments also will benefit sage grouse, songbirds and other wildlife species that frequent the ranch.

"Water is what makes the grazing rotation work," says Mitch Faulkner, NRCS rangeland specialist in Belle Fourche, S.D. "Prior to drilling the well, the landowner relied on surface water sources such as ponds, reservoirs and riparian areas that can go dry during a drought period."

Steineke had an existing well prior to drilling the new one, but it wasn't very reliable. The big expense of drilling a deep well and pipeline system—about \$500,000—was tough to swallow, Steineke says, but the cost-share funds made it doable.

"It's hard to spend that kind of money to put in the well and the pipeline, but that's going to improve the ranch," Steineke says. "In dry years, the water can get very stagnant and the calves won't drink it. Now they'll do so much better on clean water, and it'll add to their growth."

Grazing rotation is a good thing

The grazing plan calls for cross-fencing, to create an 11-pasture deferred grazing system, along with the new water pipelines delivering water to cattle troughs in all of the pastures.

Via the new grazing system, Steineke will reduce stocking levels from 1,000 cattle to about 750 head.

"The grazing rotation is a good thing—I've never done that before," Steineke says. "I won't be able to run as many cattle as I used to, but the grass will be better and thicker. We'll know a lot more in three to four years, but I think there will be all kinds of extra grass out there for sage grouse and other wildlife."

To make the deferred-rotation grazing system work, Steineke is installing approximately 3.5 miles of fencing to create the new pastures. Many of the new fences split old pastures in two. The mix of state and BLM land is managed as a whole with the private land, so the prescribed grazing system extends to management on state and BLM lands as well. To meet federal guidelines, the BLM completed an environmental assessment on the fencing and water improvements and approved them.

On the western boundary of Steineke's property, special fence-markers will be placed on the top wire of 5,300 feet of fencing to prevent sage grouse collisions. The fence-markers show up in SGI projects across the West to make the top wire of fencing more visible. University of Idaho graduate student Bryan Stevens discovered two years ago that sage grouse collisions with barbed-wire fences were a significant source of mortality. Marking high-risk fences can reduce deaths by 83 percent.

The west side of Steineke's property "is close to a lek," Faulkner says. So the fence-markers will make the fencing more visible when sage grouse move in and out of the rancher's private lands. "That's a threat we had to address," he said.

Monitoring helps document range conditions

The grazing plan also includes range-monitoring requirements using photos and special techniques to document range conditions. In grazing pastures near sage grouse leks on the western side of the ranch, the prescribed grazing plan requires Steineke to leave about seven inches of grass height next to Wyoming big sagebrush plants for nesting and hiding cover.

The plan also limits grazing each pasture to no more than 60 days each, and it builds in recovery periods for each pasture on a rotating basis to ensure the range remains healthy and sustainable, Faulkner says.

"We help the ranchers get the monitoring systems set up," he says.

One of the range-monitoring techniques to be used is called the "line-point intercept" technique. To do that, a 100-foot measuring tape is rolled out on the ground. Range monitors write down the plant species they observe every two feet along the length of the tape. Western wheatgrass is the predominant species on Steineke's ranch, but he also has forbs, Wyoming big sagebrush and other plant species, Faulkner says.

Beyond identifying the plants, ranchers are asked to record the grass height every four feet along the tape. "That way, they'll measure the tallest grasses, and if they hit a sagebrush plant, they can measure the height of that as well," Faulkner says. "This is how we get an idea for the vegetative cover in each pasture and measure any changes to soil cover and vegetation that occur due to grazing management."

The Steineke Ranch is about 12 miles north of Belle Fourche, on the extreme eastern edge of sage grouse range in North America. South Dakota Game, Fish and Parks officials say that sage grouse populations have been struggling in this area since 2006-2007 because of West Nile Disease. But the bird populations haven't been robust in the region for quite some time. This is because the landscape is more dominated by western wheatgrass than Wyoming big sagebrush, the birds' favored habitat for nesting and hiding cover, officials say.

Grass is good for grouse

"We don't have the negative impacts of oil and gas development in this area, but we suffer from poor sage-steppe habitat," says Travis Runia, senior upland game biologist for South Dakota Game, Fish and Parks. "We're right on that transition from sage-steppe to grasslands, and the grasslands are more dominant. It's pretty amazing that they can make a living here."

However, it's good news that Steineke will be managing his private land to leave plenty of grass height around the Wyoming big sagebrush for nesting cover, Runia says. "It's extremely important to manage livestock to maintain that cover," he says. "The Sage Grouse Initiative can come in and really help the birds and give them the food they need."

The core sage grouse habitat area consists of about one million acres in western South Dakota, Runia says, and about three-quarters of those acres fall on private land. "That shows how important these projects are for sage grouse," he says.

SGI enrolls landowners in programs that improve habitat

From an overall standpoint in this corner of Northwest South Dakota, the SGI program has enrolled landowners overseeing more than 300,000 acres of private lands to improve sage grouse habitat on those lands on a voluntary basis.

Much of the credit for sign-ups goes to Gillian Bee, the SGI rangelands conservationist who arrived in 2011 and reached out effectively to help landowners in the core area for sage grouse habitat. Sign-ups for SGI increased from five to 22 landowners within that first year. Bee herself gives credit to all the partners working together in South Dakota for a flourishing SGI program. Recently Bee moved on to a new position as stewardship director of the Rocky Mountain Bird Observatory. Pheasants Forever will fill the job soon, a shared partnership position with the NRCS, and one of 26 SGI field staff in 11 western states.

Enrolled ranchers like Steineke are now carrying out plans that will benefit sage grouse and other wildlife for the same reasons they'll benefit cattle. Steineke's new well will provide a source of water that didn't exist before. "We know the sage grouse like those wet meadow areas associated with private lands," biologist Runia says.

Steineke, meanwhile, keeps an eye out for sage grouse and hopes to see more of them. "We often see them when we're gathering our cattle," he says. "We saw some hens last spring, but we didn't see any little ones with them."

Faulkner sees the many improvements that Steineke is making to his ranch as being good for the land, livestock, wildlife and sage grouse. The prescribed grazing plan, and the monitoring follow-up work, will ensure that rangelands are healthy for livestock and wildlife over the long term.

"The monitoring work really transforms how a person might look at their rangelands," Faulkner says. "It helps them see things in a whole new light."

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