

A photograph of three men in hats looking over a vast, open landscape under a clear blue sky. The man on the left is wearing a grey cap and a blue and white plaid shirt. The man in the middle is wearing a white cowboy hat and a light blue striped shirt. The man on the right is wearing a tan cap and a light blue striped shirt. The landscape is a mix of green and brown grasses with rolling hills in the distance.

Conservation SHOWCASE



Natural Resources Conservation Service
protect your way of life.

NRCS

Natural Resources
Conservation Service

Rancher Gary Bedortha takes a group for a bumpy ride to the top of the grassy mountains behind his ranch house near Paulina, Oregon. His 4WD pickup climbs through a pocket of aspen and pine to an open ridgeline that overlooks thousands of acres of prime sage grouse habitat in Central Oregon. Purple lupine is beginning to bloom in between native grasses and sagebrush.

"We might just see some birds up here," Bedortha says, noting that the whole area inside and around his ranch has healthy sage grouse populations.

None of the secretive sage grouse appeared, but we saw the fine handiwork of Bedortha's work crews, who have cut down all of the invading juniper trees on his private ranch lands and limbed the trees so the woody material lays flat on the ground, blends into the landscape and provides nutrients for the soil. Work crews have been removing junipers on Bedortha's property in every year since 2010 through cost-share contracts with the USDA Natural Resources Conservation Service as part of the Sage Grouse Initiative (SGI). They've treated about 12,000 acres so far.



There are a few juniper trees visible on Bedortha's property but they are mostly gone. The landscape is wide open, with healthy sagebrush-steppe habitat, forbs and wildflowers blooming.

On Bedortha's property, the results are impressive. Bedortha looks out from the mountaintop and says, "If you see any juniper trees out there, they're on somebody else's land."

Chris Mundy, NRCS district conservationist for Crook County, laughs as he reflects on how fast things have changed in such a short time, "Before SGI, we used to be able to look across the landscape and recognize who cut what juniper stands but now we can only see who hasn't." Mundy serves as a trusted resource expert for Bedortha and other ranchers in Crook County, Oregon.

There are a few juniper trees visible here and there, but on Bedortha's property they are mostly gone. The landscape is wide open, with healthy sagebrush-steppe habitat, forbs and wildflowers blooming, and that's the way sage grouse like it.

Bedortha's land reflects a new strategy that is guiding juniper-removal projects in Oregon and



NRCS district conservationist Chris Mundy stand next to a young juniper tree.

sweeping across the West -- focus on removing the juniper trees and other conifers that are invading the most productive sage grouse habitat.

Over the last five years, conserving sage grouse has been a high priority to prevent the species from being listed as an endangered species. Across the 11 western states where sage grouse remain, a massive effort is underway across private and public lands to proactively conserve sage grouse by addressing threats that vary by region. Juniper encroachment, wildfire and invasive species are the top three factors threatening sage grouse populations in Central Oregon.

NRCS officials collaborated with sage grouse experts at the Oregon Department of Fish and Wildlife to develop the strategy of removing trees in the first stages of encroachment in places that matter most to grouse. Once juniper trees have become a solid forest with little understory of sagebrush and bunchgrasses

remaining, it's much tougher to return that land to historic sagebrush-steppe.

"Saving good habitat is more effective than trying to bring back what's already gone," Mundy says.

"Most of our work today prioritizes prevention," adds Jeremy Maestas, who serves as the NRCS technical lead for the SGI, based out of Redmond, Oregon. "We're intervening early to prevent future degradation instead of waiting and trying to put humpty dumpty back together again. Gary is doing everything right."

Bedortha was the first rancher in the Paulina and Crook County area to enroll in SGI. By doing so, he's led the way for other ranchers to get involved. In the ranching community, neighbors watch what other neighbors do. Gary's lead-by-doing approach helped Mundy to sign up more ranchers in the program, resulting in more than 60,000 acres of juniper removal in this sage grouse stronghold in eastern Crook County in four years.



Bedortha and Mundy crouch amidst a healthy sagebrush-steppe habitat

Junipers and pinyon pines have expanded their range some 600 percent in western states since the 1800s, affecting Oregon, northern California, Idaho, Utah and parts of Colorado. When the conifers converge on sagebrush rangelands, they crowd out other native plant and animal species, consume untold amounts of water and convert wet meadows to dry landscapes devoid of diversity.

The experts categorize juniper density by the different phases of woodland succession:

- **Phase I** - Early juniper encroachment; low density.
- **Phase II** - Mid-succession; medium density.
- **Phase III** - Late succession; high density.

A recent study by The Nature Conservancy, SGI, and the University of Idaho lends support to the strategy of focusing on the early phases of invasion. The study found that sage grouse abandoned breeding sites, known as “leks,” with as little as four percent conifer cover on the land nearby.

So now, they are focusing on areas with Phase I and Phase II juniper density that are closest to active sage grouse leks and robust populations.



Mundy examines a downed juniper.

Most of the trees that are removed are younger, 90 years old or less, as opposed to the old-growth junipers that grow around rocky rims, which are often several hundred years old.

“We’re staying away from the old growth and focusing on the younger trees growing in places that they never were historically,” Maestas says. “It’s drilled down to a science now that’s ecologically sound.”

Maestas notes that NRCS has created a photo guide for juniper-cutting crews so they understand the nuances. Cutting crews also have to follow restrictions during sage grouse lekking season. There’s no cutting allowed in the mornings until after 9 a.m. so as not to disturb the birds on mating grounds. Guidelines also call for keeping ground disturbance to a minimum to maintain sagebrush plant communities and reduce weeds.

Removing junipers has multiple benefits for the sage-steppe ecosystem, Bedortha says. It increases forage for livestock and wildlife, conserves water for other plants, increases plant diversity, and reduces perches for ravens and other predators. “Sage grouse concerns provided the reason to get the job done, but there’s a tremendous amount of other benefits,” he says.

Through SGI, ranchers enter into contracts with NRCS to remove junipers over a short period of time, usually two or three years, and they receive cost-share funds ranging from \$25-\$30 per acre for low tree densities to \$120-\$140/acre for high densities. NRCS conservationists plot strategy with participating landowners using aerial photographs to identify the most important areas for juniper removal where



Juniper at various stages of growth

sage grouse populations are strong. Then they do field visits to ground-truth the plan of attack and tweak as necessary.

The first year that Bedortha participated, he contracted with his sons who had recently graduated from high school along with several of their friends. All of the boys had grown up on ranches, so they knew how to run chainsaws and were hard workers. Bedortha had a half-dozen young men staying at his house, all summer long, and they treated about 5,000 acres of land. He rolled his eyes thinking about how much he spent on food that summer, but things got quiet on weekends.

“By the time Friday afternoon rolled around, those kids would get cleaned up and head into town, and we wouldn’t see them again until Sunday night,” he said with a laugh.

With multiple ranchers engaged in the juniper-control effort in Central Oregon, there is no problem finding contractors to do the work, Bedortha says. “It’s easy,” he says. “Usually, we’re able to hire people we know.”

Bedortha likes the new approach of “lopping and scattering” juniper trees so they blend into the landscape and disappear over time, as opposed to the traditional methods prior to the sage grouse conservation focus that left trunks and tall branches sticking up. “It’s better to get them on the ground so they can degrade and get rid of the perches for the ravens,” he says.

Bedortha runs a cow-calf operation with Angus cattle. The animals spend most of the year grazing on private pasture. He feeds them hay during the winter on the home ranch. Bedortha and his family have long followed a

deferred-rotation grazing plan. They craft five-year grazing plans with a number of goals to improve the range, knowing that some years might be wet and some dry. “We’ve tried to be a little progressive all the while along,” he says.

“Gary really cares about his grass,” Mundy says. “His land is in phenomenal shape. I’ll go look at a field with him and say, “When are you going to bring the cows in?” And he’ll say, we just moved them out of here.”

“We’re blessed in this area to have some great rangelands -- good soils, good rain, good snow and good grass,” Bedortha says. “It’s why it was homesteaded in the first place. My father always said that we’re here for a very short time, and it’s important to improve the resource you have for future generations. We feel our cattle numbers are sustainable over the long haul. The end result is the pounds of beef that we put on our cows, and the income we get from that provides for everything else we do to care for the land.”

Crook County’s sage grouse populations should respond to the juniper removal projects on Bedortha’s property and other ranchers’ property over time, according to Maestas.

“The monitoring is in place, and if we sustain our focused juniper-removal efforts at the current scale, we should see wholesale population changes within 10 years,” he says.

So far in Central and Eastern Oregon, SGI has helped ranchers treat over 146,000 acres of land. About 40,000 new acres are enrolled in the program each year.

Oregon Fish and Wildlife biologists flew the eastern Crook County area earlier this year and found what might be 15 new sage grouse leks.

“We don’t know yet if they were indeed new leks, but they weren’t previously known to us,” said Dave Budeau, Upland Game Coordinator for ODFW. “It will take a few more years to see the results of all of that juniper work, but at that kind of scale, it should benefit the birds.”

Bedortha, meanwhile, is happy to help try to help rebuild sage grouse populations because he knows what’s good for the bird is good for the land and his livestock.

“The bird numbers have been getting better over the last five to six years,” he says, based on his own observations. “We are seeing more birds. We’ve even got one that’s taken up residence around the house. We’re going in the right direction for the bird, the land, and future generations”

Oregon sage grouse

