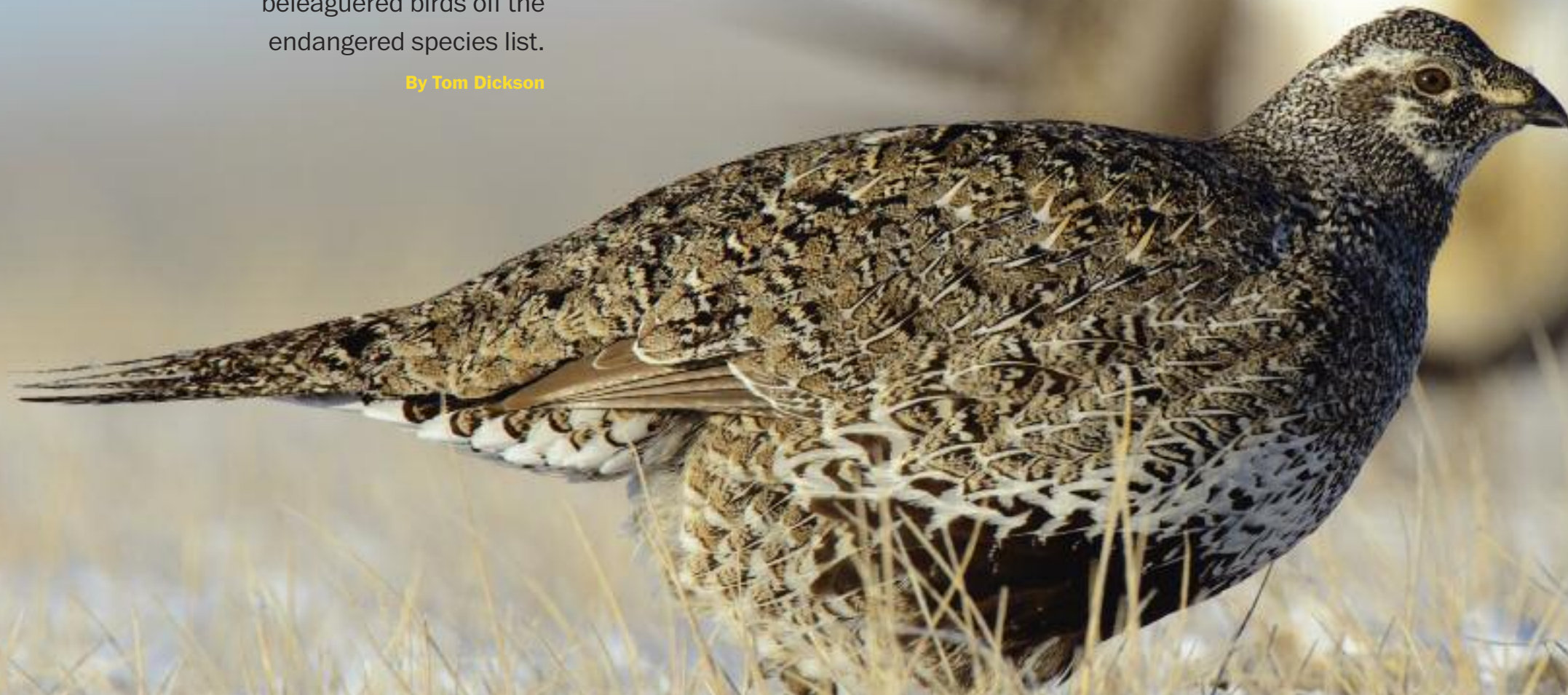


# WHERE CAN SAGE-GROUSE

Why good grazing practices and more state and federal land-use regulations are essential for keeping these beleaguered birds off the endangered species list.

By Tom Dickson

## LIVE?



GREATER SAGE-GROUSE PHOTO BY GERRIT VYN



**O**n a gravel county road 40 miles northeast of Roundup, a sea of rolling sagebrush “steppe,” or grasslands, extends to the horizon in every direction. This vast landscape I am driving through is a stronghold of Montana’s sage-grouse population, the nation’s second largest.

Lorelle Berkeley, a Montana Fish, Wildlife & Parks research biologist heading a long-term study on sage-grouse, leads me into a tract of sagebrush she says is ideal nesting habitat for the large grasslands bird. The silvery-green sagebrush plants here are densely scattered across miles of shortgrass prairie. They create what biologists sometimes call a prairie “forest,” the 3-foot sagebrush acting as trees.

Bunchgrass and needlegrass, now dry and dormant as fall approaches, stand calf high. Growing beneath the sagebrush are wild dandelion, desert parsley, phlox, vetch, yarrow, and other native forbs (broad-leaved flowering plants) that grouse chicks eat. Even more essential to the young birds, says Berkeley, are beetles and other insects. They crawl underfoot in mulch-like dead plant litter that is still moist from rain that fell six days earlier.

If more of the West still contained habitat like this, few people would be arguing over sage-grouse.

Unfortunately, too many sagebrush grasslands like the ones Berkeley shows me are fast disappearing in many western states and even parts of Montana. Now disparate interests—ranchers, oil companies, state and federal agencies, and conservation groups—are trying to reverse that trend. They aim to conserve the best remaining sage-grouse habitat and convince the federal government not to list the species as threatened or endangered—a very real possibility that could happen in less than two years.

**LUMPED IN WITH REST**

Sage-grouse populations have been declining throughout the West for decades. The species occupies just 56 percent of its historic range, and numbers are down 50 to 65 percent from as recently as the early 1970s to a rangewide total of just 200,000 breeding birds today. Before European settlement, sage-grouse across the West may have numbered in the millions.

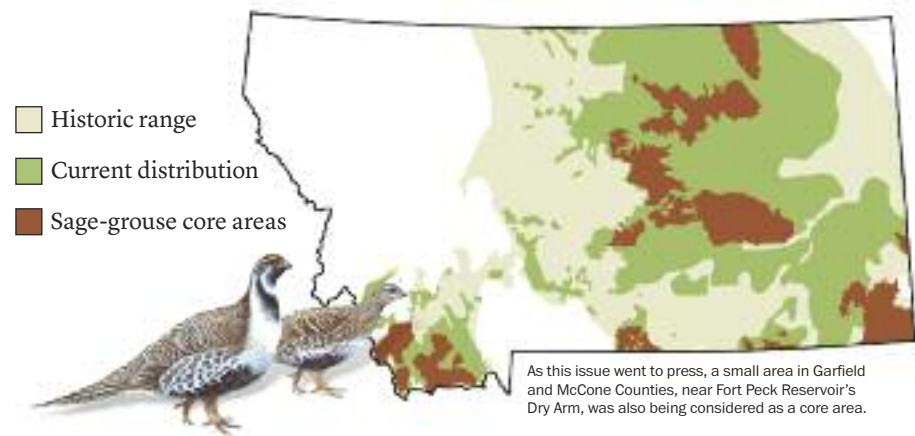
Thanks to abundant habitat, in many cases kept healthy by well-managed cattle grazing, Montana populations are healthy. The state has long been a national leader in the bird’s conservation. In the mid-2000s, FWP inventoried and mapped sage-grouse

“core areas,” or critical habitats. “This allows us to zero in on the places with lots of remaining birds and intact sagebrush, so we optimize our conservation efforts,” says Catherine Wightman, the department’s sage-grouse coordinator. Since 2006, FWP has made one-time payments to private landowners who agree not to spray, plow, or burn sagebrush grasslands for 30 years. That has protected a total of nearly 200,000 acres. The state also conserves sagebrush through the hunter-funded Habitat Montana Program, which purchases permanent conservation easements on private land.

“This is bigger than just this one bird,” says Ken McDonald, head of the FWP Wildlife Division. “The sage-grouse is considered an ‘umbrella’ species, because it requires such large areas to survive. If we conserve sage-grouse across Montana, we also help pronghorn, mule deer, songbirds, and many other sagebrush-steppe species.”

Wyoming has similarly mapped and conserved sage-grouse, and today the two states combined contain 55 percent of the West’s sage-grouse. Yet when considering a species for listing, the U.S. Fish & Wildlife Service (USFWS) lumps all western states together. Even with the birds’ strong showing in Montana and Wyoming, habitat loss elsewhere has been so pronounced that in 2010 the USFWS determined that the sage-grouse “warranted” federal protection. The bird was “precluded” from being listed as threatened

► **Sage-grouse current and historic distribution**



**BEST BANG FOR THE BUCK** In the early 2000s, FWP inventoried sage-grouse distribution across Montana and identified “core areas,” or areas of critical habitat. The department is focusing conservation efforts on these lands to get the most mileage out of limited resources.

LUKE DURAN/MONTANA OUTDOORS. SOURCE: FWP

or endangered only by the fact that other species were even worse off.

Frustrated by federal inaction, environmental groups sued. A federal judge ruled that the USFWS must reevaluate the status of sage-grouse and other “warranted but precluded” species by fall 2015.

The federal agency has since warned states and other federal agencies that its primary concerns are threefold: (1) sagebrush grassland habitat loss and “fragmentation” (caused by new roads, traffic, construction, and power lines that scare off the skittish birds); (2) new conversion of sagebrush to crops (or, in more urban states like Colorado, subdivisions); and (3) the lack of land-use regulations to safeguard the bird’s habitat in the future.

Attending to these three threats, says the USFWS, will greatly reduce the likelihood that the sage-grouse will be listed.

Few people want to see that happen. Grazing and energy development could be restricted on BLM and other federal lands. States would lose management authority, including the ability to allow hunting. Even the species itself could suffer.

“Sage-grouse need large tracts of land, and in Montana ownership is a checkerboard of public and private holdings,” says McDonald. “That requires conservation measures by all parties, and unfortunately cooperation evaporates when a species is listed. That’s why—and this may be counter-intuitive to a lot of people—we believe the sage-grouse might have a better chance of long-term survival by staying off the list than being on it.”

**HELP AND REQUIRE**

There are two ways to convince people to conserve sage-grouse habitat: (1) help them do it voluntarily, or (2) require them.

The Sage-Grouse Initiative (SGI) was created by the U.S. Department of Agriculture’s Natural Resources Conservation Service (NRCS) in 2010 in large part to help ranchers graze their cows in ways that benefit sagebrush grasslands. Because nearly 40 percent of the nation’s 186 million acres of sage-grouse habitat is on private property where ranchers often run cattle, the timing

Tom Dickson is editor of Montana Outdoors.



**IN THE THICK OF IT** “What these birds need is what you see here: good sagebrush density, diverse native grasses and forbs, and a decent amount of tall dead grass in spring for nesting cover,” says Lorelle Berkeley, who heads an FWP study on grazing and sage-grouse survival in the Roundup area.

and intensity of grazing affects the big birds’ survival.

Among the dozens of partners participating in the initiative are such unlikely bedfellows as ConocoPhillips, the National Cattlemen’s Beef Association, National Audubon Society, Rocky Mountain Elk Foundation, and World Wildlife Fund. “Never before has there been such a marshalling of diverse and influential forces to help an at-risk species,” says Tim Griffiths, national Sage-Grouse Initiative coordinator in Bozeman. So far the program has spent \$145 million to protect sage-grouse habitat on private and public land, with partners contributing another \$70 million.

Funded by the federal farm bill, the SGI shares the cost with landowners to remove encroaching conifers (mainly in Utah and

Nevada) that take over sagebrush grasslands, and it buys conservation easements—one-time payments to willing landowners who agree never to plow, burn, or otherwise damage their sagebrush grasslands. The SGI also funds the lion’s share of new fencing and water sources needed by participating

ranchers to graze more sustainably. “Many ranchers want to implement better grazing systems, but they don’t have the upfront capital to pay for the infrastructure that’s required to move cows around more,” says Griffiths.

That was the case with Ricky and Stephanie Downs, who own an 11,000-acre ranch north of Roundup where they run several hundred head of cattle. As part of their ten-year SGI contract, they agreed not to harm sagebrush grasslands and to adjust their grazing process to bolster native plant

“We’ve found that hens are choosing areas with more residual cover height, so there seems to be a connection between well-managed grazing and nesting.”





**SAGE STEWARDS** Roundup-area ranchers Ricky and Stephanie Downs, shown here with their grandson Levi, are using Sage-Grouse Initiative funding to move water and install fences so they can rotate grazing cattle. The result? Healthier sage-grouse habitat and more cattle forage. “We get a lot of satisfaction seeing happy cows and knowing we are doing the right thing for our land so hopefully we can pass this place on to our children and grandchildren,” says Ricky.

growth. In return, they received financial help to buy fencing as well as pipelines for filling additional stock tanks.

The Downs can now move their three herds among 26 separate pastures so that the cattle never stay in one place long enough to overgraze grasses and forbs. “It’s definitely working,” says Stephanie. “We monitor the grass and grazing systems with the local NRCS staff in Roundup—who have been just great to work with—and we can see how each year the grass is taller and more robust.”

Keeping ranches financially viable is a large part of the SGI strategy, says David Naugle, a wildlife professor at the University of Montana and science adviser for the SGI. “The problem for sage-grouse in eastern Montana isn’t cattle,” says Naugle. “It’s ranchers giving up on cattle because it’s no longer profitable, and then selling or converting their land to things that have almost

no value to sage-grouse. If these ranches are not profitable, they will be sold and most likely developed.”

**GROUSE AND GRAZING**

What’s best for both sage-grouse and cattle productivity might be called “just right” grazing: not too little and not too much. That’s mainly what’s being done under the SGI contracts. Depending on vegetation composition, soil types, and the number of livestock, cows are regularly moved from pasture to pasture in a “rest-rotation” regime that restricts them from some areas for as long as a year and a half.

How well that grazing helps sage-grouse is what FWP’s Berkeley and her crew are studying on 153,000 acres of land in Golden Valley and Musselshell Counties. “This project started when the SGI was just getting off the ground,” the FWP biologist says. “Lots of money was going out to

► **What about hawks and hunters?**

“People are asking about that,” says Ken McDonald, head of the FWP Wildlife Division. “We understand why Montanans want to know why, if the states and feds are so concerned about sage-grouse, they aren’t pushing to end hunting and remove predators.”

The short answer, says McDonald, is that the U.S. Fish & Wildlife Service identified habitat loss and lack of environmental regulations—not hunting and predation—as the major threats to sage-grouse. “If all we do is talk about hunting and predators, the service will see we are not taking its concerns seriously. We have no choice but to attend to the major threats they’ve identified,” he says.

Studies in Montana and elsewhere have shown that hunting takes just a small fraction of the total sage-grouse population. “And by allowing hunting, Montana can use upland hunting license dollars for sage-grouse monitoring and habitat conservation. Otherwise we couldn’t do that, and we’d also likely lose lots of sportsman support,” McDonald says.

As for predators, there’s no question that raptors, coyotes, foxes, and snakes take a toll on sage-grouse. “In a few places they definitely may suppress populations,” McDonald says. “But as a statewide strategy, we need to focus on habitat so that sage-grouse can withstand predation, as they have for thousands of years.” ■



**LOW IMPACT** Hunters harvest just a small fraction of sage-grouse.

LEFT TO RIGHT: JOHN WARNER, CHUCKWALLENBERG.COM



ranchers, but there was no objective science showing how well the work was helping sage-grouse and habitat.”

Berkeley’s study, funded in part by the SGI, examines how vegetation responds to various rotational grazing systems during different seasons. It also tracks sage-grouse survival. During the past three years, crew members captured roughly 250 adult hens and 150 chicks and fitted them with tiny radio transmitters. The scientists follow the birds to see which habitats they choose, and then track nesting success and hen and chick survival rates to see how the grouse fare in different grazed areas.

“Already we’re seeing taller grass and better ground cover in grazed areas that have had more rest,” Berkeley says. “And we’ve found that hens are choosing areas with more residual cover height, so there seems to be a connection between well-managed grazing and nesting. But we have several more years of study before we can draw conclusions.”

**TWO-PRONGED APPROACH**

If the SGI is the “help them” way of convincing people to voluntarily benefit sage-grouse, soon-to-be released state and federal plans will add the “require them” prong.

One of the USFWS’s main concerns is the lack of regulatory “mechanisms”—laws, regulations, and policies—by states and federal agencies to reduce fragmentation and other threats to sage-grouse habitat. States especially are seen as lacking adequate oversight on energy development to keep grouse numbers from dwindling further. “This is hugely important,” says McDonald. “The regulatory component is what will really move the needle on sage-grouse conservation. It has the potential to conserve millions of acres of habitat.”

Earlier this year, Montana Governor

Steve Bullock directed FWP to lead a citizens’ work group to develop a plan to help prevent the sage-grouse from being listed. The 12-person group represents agriculture, ranching, conservation, hunting, energy, mining, Indian tribes, local governments, and the Montana Legislature. By the end of 2013 it will recommend to the governor new policies and actions that address the main threats identified by the USFWS. Draft recommendations are now out for public review and comment (see note at the end of the article). “The biggest challenge facing the council is how to

allow oil and gas development while still retaining the big open spaces that sage-grouse need,” says Tim Baker, the governor’s

“The regulatory component is what will really move the needle on sage-grouse conservation.”



**LAST CHANCE?** With a September 2015 deadline fast approaching, conservationists, landowners, energy developers, and others are working to convince the U.S. Fish & Wildlife Service that the sage-grouse is not imperiled.

LEFT TO RIGHT: DON MACCARTER; CHRIS BOYER/KESTRAL; AERIAL; JEREMY ROBERTS/CONSERVATION MEDIA; TOM DICKSON/MONTANA OUTDOORS

► **What the future may hold**

Three possible scenarios for sage-grouse down the road:

**1** One is where sagebrush is plowed up and converted to wheat or corn, whose prices have risen sharply in recent years. In these worst-case scenarios—now increasing across Montana—the bird won’t survive.



**2** The second is where oil and gas development takes place in sage-grouse habitat. If regulations can reduce habitat damage caused by new roads and other disturbances, sage-grouse may hang on.



**3** The third is where sagebrush prairies remain intact and well-managed cattle grazing invigorates native vegetation. Here sage-grouse can not only survive but actually thrive.



natural resources policy advisor.

Under the new strategy, Governor Bullock could direct state agencies not to issue permits unless certain conditions are met by energy developers. Requirements might include keeping well pads and roads a certain distance from sage-grouse mating areas, restricting activities during critical times of year, such as mating season, and reducing total surface disturbance in critical habitat.

That’s Wyoming’s approach. Using a computer program developed at the University of Wyoming and available to the public online, energy developers can see, before applying for a permit, how their project will disturb sage-grouse. If the total area of proposed and existing disturbance exceeds the state’s threshold of 5 percent of the total project area, Wyoming will not issue a permit.

Industry officials in Montana have told Baker they like how the Wyoming model allows them to see potential problems in advance. “They like the certainty and the predictability,” he says.

**PLANS NEED TO MESH**

The other major regulatory component to sage-grouse conservation are the Bureau of Land Management’s resource management plans, now under revision. The plans guide grazing, energy development, and other activities on BLM holdings, which in Montana comprise 30 percent of sage-grouse range.

John Carlson, BLM conservation biologist in Billings, says his agency is waiting to see Montana’s final strategy so it can adjust its plans. “For all this to work across Montana—where state, federal, and private landownership is mixed together—the state’s strategy will need to mesh with our plans, and all of them must adequately address the threats identified by the USFWS,” he says.

As Berkeley and I drive back to Roundup, concerns such as sagebrush conversion and fragmentation seem distant and theoretical. Meadowlarks sing, and a mule deer trots off in the distance. Then six sage-grouse, likely startled by the vehicle, flush from a clump of sage. The big birds soar across the road 50 yards in front of us, their white underwings

flashing in the morning sunlight. “Wow. Would you look at that,” says Berkeley. “I never get tired of seeing them.”

Minutes later we drive over a rise and see a new field of wheat carved out from the sea of sage. It’s a reminder of how market forces—wheat prices have doubled since 2006—continue to chip away at the places where the grasslands bird lives. It’s also a major reason why the federal government has reserved a place for the sage-grouse on its list of threatened and endangered species.

Will the sage-grouse join the ranks of the federally protected black-footed ferret and grizzly bear? That depends largely on whether conservationists, developers, landowners, and others can agree on a region-wide plan that maintains enough of the big and intact habitat the species needs to survive. 🐾

*View and comment on the advisory council’s recommendations through November 2013 by visiting the FWP website (fwp.mt.gov) and searching for “Sage-Grouse Conservation Advisory Council.”*