



LANDOWNERS

Water

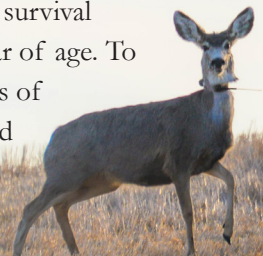
MONITORING DEER SURVIVAL IN SOUTH DAKOTA

In South Dakota we are blessed to have an abundance of two deer species, both white-tailed deer and mule deer. White-tailed deer are presently the most abundant species of deer in South Dakota with over 400,000 currently found in all habitats across the state. Mule deer are less abundant with approximately 100,000 that are restricted primarily to habitats adjacent to and west of the Missouri river.

There is no question that deer are clearly the species of choice for the majority of hunters in the United States. In 2011, the U.S. Fish and Wildlife Service reported that 10.9 million or 80 percent of the 13.7 million hunters in the county hunted deer. In South Dakota, deer hunting is very important as well, with over 111,000 deer tags sold in 2015 to resident and nonresident deer hunters.

The South Dakota Game, Fish and Parks (GFP) monitors deer populations using techniques which include hunter harvest surveys, road-kill and winter-capture reproduction assessments, herd composition counts, aerial surveys, road transects and survival monitoring. Deer surveys provide data for population models that allow GFP to monitor herd condition and estimate deer population trends, both are critical in assessing appropriate hunter license numbers and allocation across the state.

Annual growth rates (positive or negative) within a deer population are influenced primarily by adult survival and the number of fawns that reach one year of age. To annually estimate survival and mortality rates of adult, juvenile and fawn white-tailed deer and



mule deer, GFP captures and attaches radio collars on deer in designated study areas across the state. Study areas are called Data Analysis Units (DAUs), and all survey data collected within a DAU are combined for an overall estimate. Eleven DAUs were developed by clustering deer management units with similar biological potential based on variables such as weather patterns and habitat, deer within each DAU are believed to have similar vital rates. Deer captures are randomly distributed throughout each DAU to best represent overall survival for deer in the entire area.

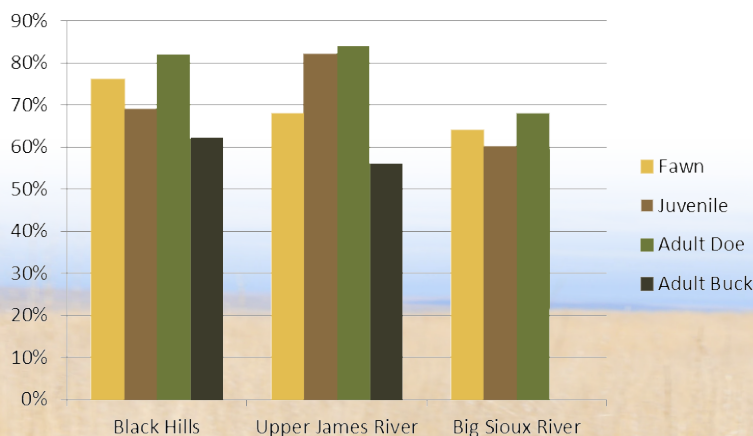
Currently GFP is monitoring white-tailed deer and mule deer survival in five different study areas. Within the first year of each study area, approximately 105 female (16+ months of age) deer are captured via helicopter and fitted with a very high frequency (VHF) radio collar, evaluated for pregnancy/fetal counts using ultrasonography, and blood sampled to evaluate body condition and to confirm pregnancy status. In addition, 55 juvenile deer (5-16 months) are captured, radio collared and blood sampled. In two study areas, GFP has radio collared or attached ear-tag transmitters to approximately 50 white-tailed adult bucks. Opportunistically, about 55 fawns (0-4 months) are captured within each study

area. Once a fawn is captured, an expandable breakaway VHF radio-collar is attached and the fawn is sexed, aged and weighed.

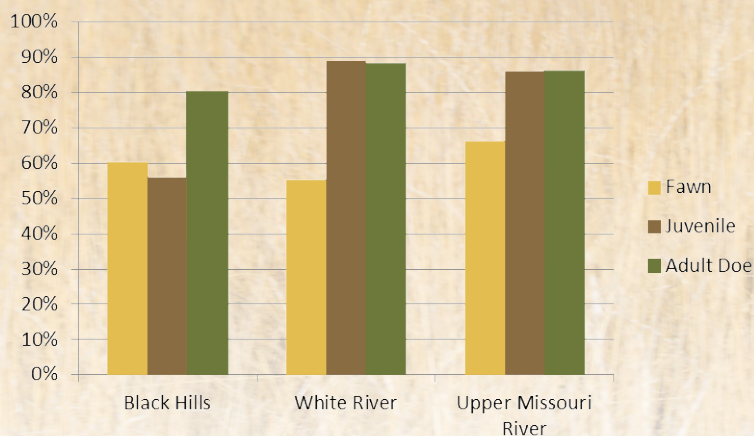
All radio collared animals are monitored once a month. All mortalities are investigated to verify death of the animal via physical evidence. In most cases, cause-specific mortality is not identifiable with the exception of vehicle collisions and hunter harvest. It is legal to harvest a collared animal, and hunter harvest is a very important metric used in the population modeling process. GFP requires all hunters to report any collared animal harvested in order obtain the most accurate and precise data possible.

The 2015/16 results obtained from monitoring radio collared deer have revealed some interesting facts of deer herds across the state. White-tailed adult doe survival ranged from a low of 68% to a high of 84%, while juvenile survival ranged from 60 - 82%. Four-month fawn survival for white-tailed deer ranged from 64 - 76%. This was the first year of large sample survival studies and conclusions are not appropriate; however, the 2015/16 results suggest that survival rates are lower for all ages of white-tailed deer in the Big Sioux River study area. If this trend holds true, different harvest strategies may be necessary to meet management objectives in this part of state. Over the next five years, GFP will collect and analyze data in these study areas and determine if there are survival differences between study areas and years, from a biological and statistical standpoint. Adult survival for mule deer does in 2015/16 ranged from a low 80% in the Black Hills to a high of 88% in the White

2016 White-tailed Deer Survival



2016 Mule Deer Survival



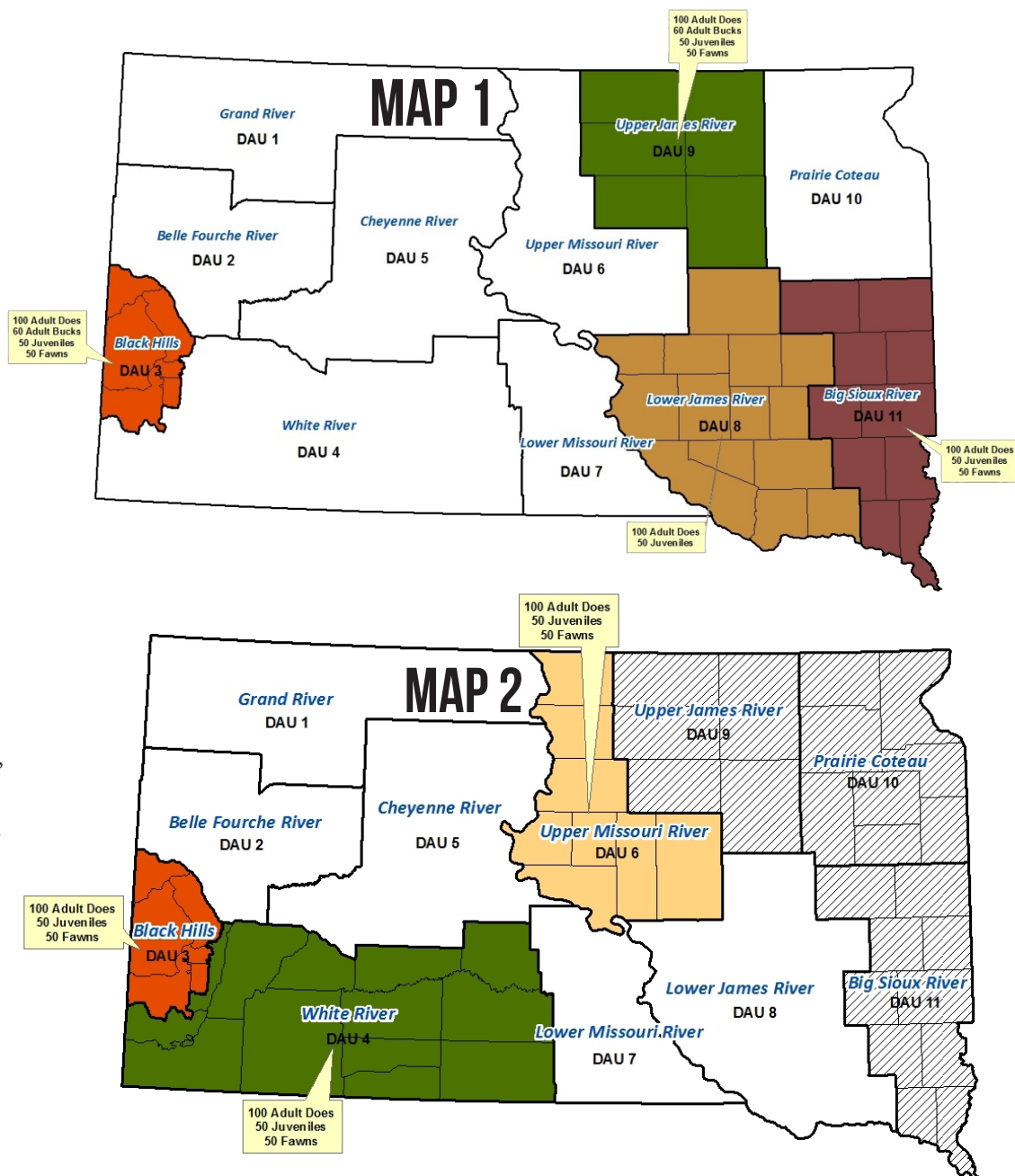
River study area. Juvenile survival rates were lowest again in the Black Hills at 56% and highest again in the White River area at 89%. Mule deer fawn survival rates were highest at 66% in Upper Missouri River study area.

Future capture and monitoring efforts of mule deer and white-tailed deer will occur annually. Within the current three white-tailed deer study areas (Map 1), 55 additional fawns and 55 additional juveniles will be radio-collared in 2017 and 2018 to supplement current sample sizes and monitoring will continue in these study areas until about 2020. In addition, a new white-tailed deer monitoring area will be added (Lower James River study area) and will include the collaring of 105 adult females and 55 juveniles in 2017. Within the three mule deer study areas (Map 2), 55 additional fawns and 55 additional juveniles will be radio-collared in 2017 and 2018 and monitoring will continue until about 2020.

It's apparent from the study area maps (Map 1 and 2) that there are many areas of the state where very little information exists on deer survival. It is important to bridge this gap in data as quickly as possible, as knowledge of deer survival is critical in estimating deer population growth rates and determining appropriate hunting license numbers. GFP will increase survival monitoring areas in the future as allowed by time and budget constraints, with the goal of obtaining complete survival data sets for both species by approximately 2029. All new study areas will consist of adult and juvenile captures the first year, juvenile captures the next two years, and monitoring efforts for a total of five years.

Monitoring deer survival would not be possible without the help of many important cooperators. Several federal and state land management agencies have allowed GFP access for deer

captures, such as the U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service and South Dakota School and Public Lands. In addition, local chapters of sportsmen and women groups, like the Mule Deer Foundation and Whitetails Unlimited, provide supplemental funding to help purchase radio collars. The cooperation received from private landowners has been tremendous and must be acknowledged. With most of South Dakota lands in private ownership, GFP could not successfully study deer survival without private landowner cooperation. Last year, over 670 private landowners granted GFP permission to access private properties in order to study deer survival. This is a testament to the quality relationships between private landowners and local GFP staff, and also signifies what a valued resource deer are to South Dakotans. ●





WILDLIFE DAMAGE MANAGEMENT PROGRAMS

Landowners are critical partners in wildlife management in South Dakota. With over 85 percent of the state held in private ownership, private lands not only produce the majority of wildlife, but also provide places for sportsmen and women to enjoy hunting opportunities every year. In an effort to continue these partnerships, the South Dakota Game, Fish and Parks (GFP) operates a comprehensive wildlife damage management program. From elk damaging hay to coyotes killing livestock, GFP offers programs and services to assist landowners with issues that may arise. “Every year we work with several thousand landowners across South Dakota regarding wildlife damage issues,” said Keith Fisk, GFP’s wildlife damage program administrator. “If a landowner has concerns regarding wildlife damage, I encourage them to contact their local wildlife damage specialist.” *See back page map for contact information.*

With winter weather just around the corner, GFP reminds landowners that protective panels are available to protect stored-feed supplies such as hay, silage, or corn from deer damage. Early detection helps minimize the potential of damage and also aides to the success other wildlife damage techniques. “Once a large number of deer start coming into a farmyard for feed, it can be difficult to stop the damage,” said Fisk. With some areas of South Dakota experiencing higher deer populations, harsh weather

could cause deer to congregate into large herds and move into farmyards.

New in the spring of 2016 was the addition of a second aircraft for enhanced aerial predator control services. GFP provided funding to USDA-Wildlife Services to cover the operating costs of the aircraft and pilot, while also providing the staff that serves as gunners. “We started later than anticipated this past spring, but the second aircraft has already flown more than 300 hours,” said Fisk. “Next year we fully anticipate this aircraft to fly 400 to 500 hours annually, with the majority of time focused in eastern South Dakota.” This aircraft is stationed in Huron most of the year and is in addition to another full-time plane and pilot located in Spearfish. Cooperatively working with USDA-Wildlife Services, GFP removed nearly 8,600 coyotes this past year.

Look for the complete report on GFP’s Wildlife Damage Management program at gfp.sd.gov/wildlife/wildlifedamage. ●



HABITAT PAYS: KNOWING YOUR OPTIONS

Joint Column By: Secretary of Agriculture Mike Jaspers and Secretary of Game, Fish and Parks Kelly Hepler

Our natural resources, the soil we grow our food in, the water we drink and the air we breathe are some of our most valuable resources. As South Dakota's producers finish harvest and begin planning for next year, we encourage producers to consider the many conservation programs available to them that can increase soil health, protect water quality and provide habitat for wildlife, all while helping to improve their financial bottom line.

Over the past few years, there's been a steady decrease in the prices producers receive for the products they grow and raise. At the same time, there has been little to no decrease in the cost of production. To maintain a positive bottom line, it is important that South Dakota's farmers and ranchers use every tool available to get the most value from their operations.

In some cases, where landowners are spending more to farm certain acres than what they can earn from the crop, looking at alternative uses for those acres may be the next step. Turning land into habitat can improve soil health and increase land values. Plus, a wide variety of financial incentives are available to landowners.

The landscape across the state is as diverse as South Dakota's farms and ranches. No one approach or program will fit every operation nor will it achieve all of an individual producer's goals. Just like the landscape, diverse programs are available to producers from state and federal governments and private entities that can provide financial resources and

technical assistance to implement conservation practices. Additionally, there are habitat advisors across the state who work one-on-one with producers to connect them with programs that fit their operational goals.

To make it easier to learn about which programs would work best for an operation, the South Dakota departments of Agriculture and Game, Fish and Parks have partnered over the past year to develop and maintain the Habitat Pays website at habitat.sd.gov. This website serves as a one-stop-shop for finding state, federal and non-governmental programs that provide cost-share or technical assistance to producers. The website includes contact information for a variety of habitat advisors who meet with landowners, learn the goals they have for their operation and advise them about options available to meet those goals. It also features landowner video testimonials of how they are working in concert with their local advisor to enhance habitat on their property. We are proud to showcase a handful of these producers and the work they are doing. These farm and ranch families share their stories and offer insight into how these programs and advisors have been beneficial for their operations.

We know that the new year is an important time for producers to make decisions about what their operation will look like for the next year. As you look ahead to 2017, we encourage you to utilize habitat.sd.gov and consider how the available programs may fit into your plan. ●



THE HABITAT PAYS PROCESS

Late fall and early winter is a great time to start thinking about your land management goals for next year. Is there a portion of a field that is lowering your yield average, or washes out every time you get a decent rain? Do you want to add a livestock watering source to a pasture to better distribute grazing pressure or cross fence a large pasture so you can better control when livestock are grazing a warm or cool season dominated area of it? These examples come to mind when considering how to create more profitable land while improving soil health, water quality and wildlife habitat.

Once you determine your goal, contact one of the habitat advisors found on habitat.sd.gov to explore the options available to assist you. The habitat advisors are experts in connecting you with the best program, technical advice, or the correct resource professional to help you successfully achieve your land management goals. Many of the advisors work in USDA Service Centers and have close working relationships with state and federal agencies as well as many other landowners who share the same concerns and goals that you may have.

HABITAT PRACTICE HIGHLIGHT: GRASS WATERWAYS

Grass waterways are used to reduce water erosion in cropland, but can also add wildlife habitat to the landscape. Grass is seeded in areas of the field where water flows off and creates gullies or washouts. The seed mix planted must establish quickly to stand up to flowing water, but can include a diverse mix of grass and forbs to provide enhanced wildlife habitat as well as erosion benefits. If completed through a USDA conservation program, a grass waterway

can be up to 100 feet wide and is designed to handle runoff from a 10-year, 24-hour storm event. Incidental grazing is allowed for up to 60 days outside the primary nesting season. Financial assistance to install grass waterways is provided through the Conservation Reserve Program (CRP). It will pay an annual rental rate for a 10-year contract on the acres in the grass waterway. It will also pay a \$100/acre upfront signing bonus and cover 90% of the installation costs. Grass waterways may also be completed through the Environmental Quality Incentive Program (EQIP) or they can be done without a program, but with technical assistance provided by the Natural Resource Conservation Service (NRCS). To learn more about how you might use grass waterways on your operation contact a local NRCS office or a habitat advisor. You can also visit habitat.sd.gov.

HABITAT PROGRAM HIGHLIGHT: FOOD PLOT PROGRAM

The GFP food plot program was developed nearly 50 years ago to assist landowners in providing winter cover for wildlife. Landowners receive free corn or sorghum seed to plant each spring, plus a payment to help offset planting costs. The program now offers landowners a third seed option, called brood mix. The brood mix is an annual mixture of cover crop species, designed to flower from spring through fall and produce seed for wildlife to forage on during winter months. By flowering, the brood mix provides pollinator habitat that traditional corn/sorghum food plots lack. Insects comprise nearly 100% of a pheasant chick's diet, therefore making habitats for pheasant chicks to forage a key component of pheasant production. Pollinating insects thrive in areas with flowering, broadleaf plants.



CONSERVATION OFFICERS

*DENOTES DISTRICT CONSERVATION OFFICER SUPERVISOR

The brood mix can be planted anytime during the month of May, it can be drill seeded or broadcasted and drug in. In 2016 the brood mix was comprised of buckwheat, canola, clover, flax, millet, milo, mustard, phacelia, radish, sorghum and sunflower. The different species grow at various times throughout the year, thus providing an ever-changing buffet to pollinating insects. Before planting this seed mix it is important the site is prepared properly. You will not be able to spray this mix with any chemicals once it starts growing, so it is recommended that you plant this mix in an area that does not have a current weed problem. If planted in the right area, at the right time, these cover crop plants will outcompete weeds naturally, thus negating the need to spray with chemicals at all. A long-term management plan by alternating your food plots between corn/sorghum and the brood mix over the years will help to achieve clean, weed-free pollinator habitat year-in and year-out.

GFP seed sites are located throughout the state, and landowners can enroll in the food plot program at any time. If you have any questions about GFP's food plot program please contact Brian Pauly (605.353.7185), Matt Grunig (605.353.6699), or the Huron GFP office (605.353.7145). ●

Martin	Tom Beck	605.381.6433
Hill City	Jeff Edwards	605.381.9995
Hot Springs	D.J. Schroeder	605.381.6438
Custer	Ron Tietsort	605.431.7048
Spearfish	Brian Meiers*	605.391.6023

Rapid City	Chris Dekker	605.381.7243
Rapid City	Adam Geigle	605.390.1230
Wall	Jacob Hasz	605.415.6462
Philip	Zach Thomsen	605.391.6042
Rapid City	Josh Brainard*	605.391.2132

Belle Fourche	Bill Eastman	605.391.1575
Faith	Ross Fees	605.381.3734
Lemmon	Keith Mutschler	605.391.7364
Sturgis	Ryan Pearson	605.391.0836
Spearfish	Josh Thompson	605.381.4704
Spearfish	Mike Apland*	605.391.1574

Mobridge	Trevor Laine	605.845.6286
Gettysburg	Brad Saltsman	605.730.1568
Onida	Michael Undlin	605.730.1384
Ft. Pierre	Vacant	
Mobridge	Vacant	
Ft. Pierre	Josh Carr*	605.730.1574

Chamberlain	Diana Landegent	605.730.1578
Platte	Jeff Martin	605.730.1575
Ft. Pierre	John Murphy	605.730.1571
Miller	Vacant	
Miller	Cory Flor*	605.730.1570

Winner	Vacant	
Presho	Spencer Downey	605.730.0774
Chamberlain	Brian Ridgway	605.730.1573
Burke	Hans Walleser	605.222.6133
Chamberlain	Steve Rossow*	605.730.1383

Aberdeen	Nick Cochran	605.881.7594
Ipswich	Joe Galbraith	605.380.4563
Redfield	Josh Vanden Bosch	605.460.0450
Aberdeen	Eric Voigt	605.380.4376
Aberdeen	Tim McCurdy*	605.380.4572

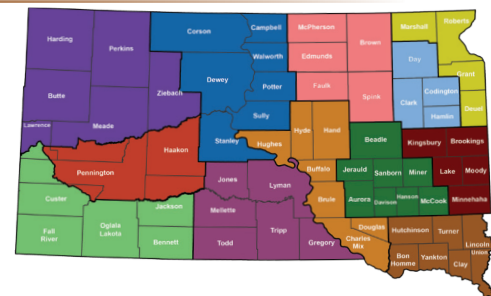
Clear Lake	Adam Behnke	605.881.3780
Britton	Casey Dowler	605.881.3775
Sisseton	Dean Shultz	605.881.3773
Milbank	Jamie Pekelder*	605.881.3778

Clark	Kyle Lenzner	605.881.3777
Watertown	Bryce McVicker	605.881.2260
Webster	Austin Norton	605.881.2177
Webster	Blake Swanson	605.881.3779
Watertown	Kraig Haase*	605.881.3774

Plankinton	Lynn Geuke	605.220.6943
Huron	Chris Kuntz	605.350.1669
Howard	Evan Meyer	605.553.4299
Mitchell	Andy Petersen	605.770.0340
Salem	Matt Talbert	605.360.0491
Sioux Falls	Jeremy Roe*	605.940.6519

Brookings	Jeff Grendler	605.360.0509
Sioux Falls	Jared Hill	605.941.0181
Madison	Cody Symens	605.480.3364
Lake Preston	Shane VanBockern	605.360.0514
Flandreau	Chad Williams	605.530.7085
Sioux Falls	Jeremy Rakowicz*	605.941.0074

Yankton	Dan Altman	605.941.4549
Tyndall	Todd Crownover	605.360.0497
Olivet	Brian Humphrey	605.941.4735
Vermillion	Tony Stokely	605.677.7814
Canton	Nate Stukel	605.940.0222
Yankton	Sam Schelhaas*	605.941.4540



THANK YOU

South Dakota landowners play a large role in the health of wildlife and habitat. Outdoor opportunities like hunting and fishing rely a lot on landowners and I want to take this opportunity to say thank you for what you do. With the majority of South Dakota in the hands of private landowners, sportsmen and women rely heavily on these lands for hunting access and opportunities. With several major hunting seasons still underway, I again want to state my appreciation for the hunting access granted during these times.

Last October, our department along with the South Dakota Department of Agriculture partnered on Habitat Pays – which you read about earlier in this publication. Habitat Pays is a program designed to provide more information and education to assist landowners in designing, developing and funding habitat on their land. Working directly with advisors who possess the knowledge of federal, state and local programs, landowners can find the right programs to meet their habitat and land use goals.

We have had a great response with Habitat Pays, but we are just getting started. Stay tuned to habitat.sd.gov for more updates and information.

Thank you for your work on habitat, your willingness to allow access and your cooperative work with our staff on managing wildlife resources in this state. Without your cooperation, outdoor recreational opportunities would not be where they are today in South Dakota.

Thank you again,
KELLY HEPLER
 Department Secretary
 South Dakota Game, Fish and Parks

LANDOWNERS MATTER

Game, Fish and Parks | 523 East Capitol Ave | Pierre, SD 57501



The Game, Fish and Parks' mission is to provide sustainable outdoor recreational opportunities through responsible management of our state's parks, fisheries and wildlife by fostering partnerships, cultivating stewardships and safely connecting people with the outdoors.

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SOUTH DAKOTA GAME, FISH AND PARKS WILDLIFE DAMAGE MANAGEMENT PROGRAM

