



2018 NRCS Montana Annual Report

Our Purpose

The USDA Natural Resources Conservation Service provides innovative conservation solutions to restore, enhance and protect Montana's working agricultural lands. NRCS is committed to helping private landowners care for the land, use it productively and excel as stewards for the future.

NRCS is the leader in providing technical expertise in helping people make sound choices through the conservation planning process. Voluntary incentive-based programs provide technical and financial assistance to help farmers, ranchers and forestland owners address natural resource concerns such as water quality, soil erosion, wildlife habitat, and much more. NRCS leverages partnerships across the state of Montana to invest in landscape-scale conservation to support Montana's working lands. This report captures NRCS Montana's investments and successes in fiscal year 2018.

Our People

Soil conservationists, rangeland specialists, soil scientists, and other technical experts work in NRCS field offices across Montana assisting private landowners with their conservation needs. There is an NRCS field office in nearly every county and on every reservation.

That's 60 offices ready to help you!



Our Partners

Our partnerships expand the reach and depth of conservation on the land. The federal, state and nonprofit groups that comprise our conservation partnerships have a diversity of expertise in discipline, location and focus.

While our partners are diverse and many, our earliest partner was the local conservation district. Born of the Dust Bowl era like NRCS, conservation districts operate at the local level with NRCS getting conservation on the ground. Administered by the Montana Department of Natural Resources and Conservation, Conservation and Resource Development Division and represented by the Montana Association of Conservation Districts and the Soil and Water Conservation Districts of Montana, conservation districts are local units of government responsible for the soil and water conservation work within their boundaries. They work together with NRCS to increase voluntary conservation practices among farmers, ranchers and other land users.

Our Land

59.8 million acres in production ag

\$4.2 billion total ag production market value

27,100 farms/ranches

2,207 acres average size of farm or ranch

Top Commodities by Sales

1. Grains/oilseeds/dry beans/dry peas
2. Cattle and Calves
3. Other Crops and Hay

Source: 2012 National Ag Statistics Service Census

Montana

Natural
Resources
Conservation
Service

nrcs.usda.gov/

Our Planning

Montana Saline Seep Reclamation Project

Through a Regional Conservation Partnership Program agreement, NRCS will provide the Montana Salinity Control Association \$1.3 million for conservation practices to reduce saline seeps.

More than 300,000 acres in Montana are affected by high soil saline levels, negatively impacting soil health, ground and surface water, wildlife, livestock and agriculture production. Saline seeps expanded rapidly in the late 1960s due to large scale crop-fallow farming. The Montana Salinity Control Association provides efficient methods, on a farm-by-farm basis, to reclaim these saline seeps. This project will use forage and biomass plantings and salinity and sodic soil management practices to help offset income losses when recharge area acreage is converted from grain to water-use efficient perennial forage production. Perennial vegetation lowers ground water levels, eliminating saline discharge to surface waters and acres of productive cropland.



In this example, the formerly barren saline seep area (top) is, after treatment, covered in healthy vegetation (bottom). Photos: Montana Salinity Control Association.

Reducing Forest Fire Hazards on Montana's Private Lands

Recognizing the fire hazard created by dead trees left by forest pests and forest over growth, NRCS has targeted funding through its Environmental Quality Incentives Program in Lewis and Clark and surrounding counties to work with landowners to develop and implement forest management plans.

The plans create defensible or survivable space around structures, create fuel breaks in the forest, thin and prune precommercial sized trees, dispose of slash and control weeds. Fuel reduction measures will not stop a fire, but are intended to keep a fire on the ground, giving firefighters a chance to control it, instead of trying to fight a fire in the crowns of the trees.

Since 2015, NRCS has developed 90 EQIP contracts on 4,668 acres for a total of \$1.6 million.



Overgrown stand before fuel break installation.



Fuel break five years after installation.



Fuel break in need of maintenance to control new tree growth.

NRCS, Partners Repair Burned Badger Pass SNOTEL Site

The Strawberry Fire in mid-September 2017 rendered the Badger Pass SNOTEL site nonoperational. Due to snowfall shortly after the site burned, the NRCS Montana snow survey crew was unable to reinstall equipment.

Knowing that agricultural producers and water managers rely on the precipitation information from this site, the snow survey staff installed a "SNO-LITE" site at the location in February 2018. During a brief weather window, staff could get a helicopter into the site and install a satellite telemetry system, data logger, snow depth sensor, and air temperature sensor.

Water users can now monitor Badger Pass conditions daily or hourly. Snow Water Equivalent (SWE), Precipitation, Snow Depth and Air Temperature are



The Badger Pass SNOTEL site burned during the Strawberry Fire in September 2017. Badger Pass is a high elevation SNOTEL site located on the Continental

Divide about 25 miles due west of Dupuyer, Montana, in Pondera County. It lies just outside the Bob Marshall Wilderness and is one of the only sites available to gauge the high elevation snowpack within the wilderness (top). New SNOTEL-Lite equipment installed at the Badger Pass SNOTEL Site (inset).



again available for this site. Manual measurements will be made by our cooperators, the Confederated Salish and Kootenai Tribes, at the station via helicopter through the winter to verify and “ground truth” the automated data.

The Badger Pass site is used heavily to forecast water supply in the Sun, Teton, and Marias river basins east of the Continental Divide, and the Flathead River basin west of the Divide. Site data is important to managers of the Swift Reservoir, directly below the site to the east.

Partnering to Conserve a Sagebrush Landscape

The hydrological and ecological function of many riparian and meadow areas in the sagebrush landscape in southwestern Montana have been degraded by gully erosion, channel incision, and lowered water tables. These mesic areas, provide important food and cover for insects, pollinators, neotropical migratory birds, sage-grouse, mule deer, elk, and forage for livestock.

This is just one issue a newly formed partnership is focused on. The Southwest Montana Sagebrush Partnership (SMSP) was born out of a desire to advance cross-boundary conservation efforts in a landscape with a complex landownership pattern. Projects will target invading conifers, cheatgrass, fence modifications, and restoring wet meadow habitats.

Restoration techniques pioneered by riparian restoration expert Bill Zeedyk were installed to control headcuts, grade, and water dispersal in Beaverhead County.



Partners work together to restore a mesic area in Beaverhead County.

Headcut Control: Zuni Bowl, Log and Fabric



Zuni bowl structure.

These structures are designed to stabilize a headcut and prevent upstream erosion by minimizing the erosive potential of falling water and promoting vegetative growth. A headcut forms as the result of a nick point on the landscape that channelizes flow. The incised channel now drains water from the wet meadow.

Grade Control: One Rock Dam



Rock dam structure.

One Rock Dams (ORD) can be used in incised channels to raise the bed elevation over time by promoting sediment deposition. These structures work by slowing water down and allowing sediment to deposit behind them.

Flow Dispersal: Media Luna



Media Luna structure.

Media Lunas are half-moon shaped rock structures designed to spread sheet flow across a wide, flat surface.

Conservation Easement in Beaverhead County Protects Thousands of Acres



The Hansen Ranch family placed a conservation easement on more than 13,000 acres of their working ranch to protect it from development and maintain its accessibility to a variety of wildlife. Pictured from left to right: Paul, Jon, Jay Lynn, and sitting on the fence, Erik, and Stephanie, worked with (standing to the right) Jim Berkey, Nature Conservancy, and Lindsay Schmidt, former NRCS district conservationist at the Dillon field office.

A 13,535-acre easement on a ranch in the Medicine Lodge Valley in southern Beaverhead County will protect both wildlife and the land’s existing agricultural use. The Hansen Ranch, a fourth-generation family-owned ranch, used NRCS’s Agricultural Conservation Easement Program to place an easement on the northernmost portion of their 30,000-acre ranch.

Eric Hansen, one of the family owners, said this easement will keep the ranch a working ranch into the future. “I’m fourth generation and I want my daughter to run the ranch some day and her kids and even if something happens and we can no longer do it, I want this to be a working ranch and stay the way it is,” Hansen said.

It is the largest private ownership in the Medicine Lodge Valley and is home to a host of wildlife, including the greater sage grouse, pronghorns, wolves, wolverines, elk, moose and mule deer. The easement also contains two active sage grouse breeding grounds.

Funding for the easement was provided by NRCS, the Montana Sage-Grouse Habitat Conservation Program and the Nature Conservancy.



Our Progress

NRCS worked with Montana farmers and ranchers in 2018 to implement conservation practices on more than 5.7 million acres to improve:

- grazing land health **3,334,511 ac**
- water quality/quantity **849,022 ac**
- fish, wildlife, pollinator habitat **971,455 ac**
- cropland soil health **535,397 ac**
- forest land health **17,333 ac**

Our Practices

Top Ten Conservation Practices (acres)

- Prescribed grazing
- Upland wildlife habitat management
- Rotation of supplement and feeding areas
- Integrated pest management
- Monitoring livestock nutritional status using the Nutritional Balance Analyzer
- Monitoring key grazing areas to improve grazing management
- Nutrient management
- Grazing management to improve wildlife habitat
- Conservation crop rotation
- Harvest hay to allow wildlife to flush and escape

Our Programs

Conservation Technical Assistance is the core approach NRCS has used successfully for 80 years to reach out to American farmers and ranchers caring for the Nation's private lands. NRCS employees provide conservation options, recommendations, planning, and engineering assistance to individual farmers, ranchers, local governments, and urban landowners. This prepares the way for using Farm Bill and other conservation funding to implement conservation plans.

FARM BILL PROGRAM	CONTRACTS/EASEMENTS	ACRES	OBLIGATIONS
Agricultural Conservation Easement Program			
Agricultural Land Easements	20	37,458.27	\$11,973,068.00
Wetland Reserve Easements	0	0	\$0
Conservation Stewardship Program (CSP)			
Conservation Stewardship Program (new contracts)	115	450,318.5	\$2,578,488.31
Conservation Stewardship Program (renewals)	88	385,904.4	\$2,678,638.04
Environmental Quality Incentives Program (all fund codes)	344	338,545.5	\$23,230,251.59
2017 Fire Recovery	25	40,177.2	\$1,483,194.59
AFO/CAFO	2	149.0	\$275,220.61
Beginning Farmer and Rancher/Socially Disadvantaged (incl. all Tribal)	41	64,086.0	\$3,682,204.62
Capital 360 Forestry Project	17	374.7	\$341,653.00
Headwaters Drought	11	616.4	\$823,150.14
High Tunnel	34	137.6	\$264,405.80
Honey Bee Pollinators	8	190.4	\$145,466.00
Musselshell River Watershed Resiliency	5	553.5	\$411,110.00
National Water Quality Initiative (Camp and Godfrey Creeks)	9	2,867.6	\$701,514.55
On-Farm Energy	11	3,537.4	\$151,002.94
Organic Certified	4	3,993.0	\$221,565.00
Organic Transition	2	394.0	\$54,109.80
Sage Grouse Initiative	26	106,008.5	\$3,943,255.92
Tri-County Fuels Reduction	14	764.3	\$433,324.00
Regional Conservation Partnership Program			
Upper Clark Fork River Drought Resiliency Project	8	2,354.3	\$350,894.39
Yellowstone Region Agricultural Sustainability Project	2	168.0	\$160,167.0
TOTAL	577	1,214,748.97	\$40,811,340.33

Data Sources: Protracts 10/17/18. NEST: 10/25/18

