

THE MONTANA CONSERVATIONIST

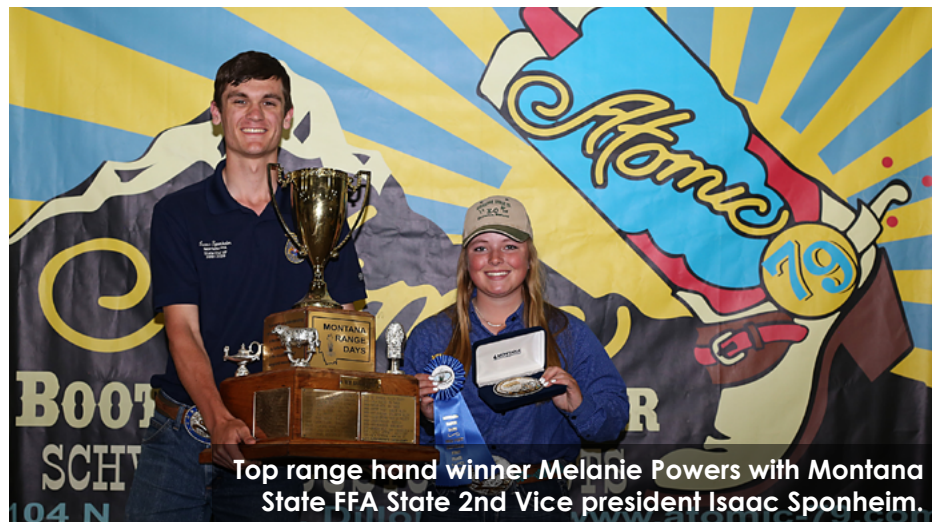
News from Montana's Conservation Districts

In This Issue

July 25, 2019

Volume 13 Issue 14

- 1 At Home on the Range
- 2 Plastic pollution: Study finds microplastics in nearly all western Montana waters
- 3 Working ranches are key to saving emperiled songbirds
- 4 MSU researchers examine benefits of sheep grazing in vegetable farming
Moving USDA research agency will have lasting consequences, say employees
- 5 Montana ranchers can now get paid to sequester carbon
MSU study: Montana has more native bumble bees than any other state
- 6 OPPORTUNITIES
- 7 Applications now open to host a Big Sky Watershed Corps Member in 2020



Top range hand winner Melanie Powers with Montana State FFA State 2nd Vice president Isaac Sponheim.

At Home on the Range

Dillon, MT- A sea of native grasses became a classroom during the 43rd Montana Range Days event, held on June 17-19th. Youth and adults, from ages 5-85, engaged in workshops and educational tours in and around Beaverhead County.

Volunteers from the United States Forest Service (USFS), Bureau of Land Management (BLM), Montana Department of Natural Resources and Conservation (DNRC), and the USDA Natural Resources Conservation Services (NRCS) came together to provide youth workshops in plant anatomy, range plant identification, soils, and rangeland inventory, monitoring, stocking rates, utilization, and management, while the adults boarded buses and toured local ranches to experience different range practices being implemented.

Adults and kids partook in range knowledge competitions and were awarded prizes at the closing ceremony. The highest ranked award given by the organization is the Top Range Hand Award.

**SOIL & WATER
CONSERVATION DISTRICTS
of MONTANA**



MONTANA ASSOCIATION of
CONSERVATION DISTRICTS
We're growing Montana's future.

1101 11th Ave • Helena, MT 59601
(406) 443-5711 • www.swcdm.org

This newsletter is made possible
by a grant from DNRC.

Continued on Page 2

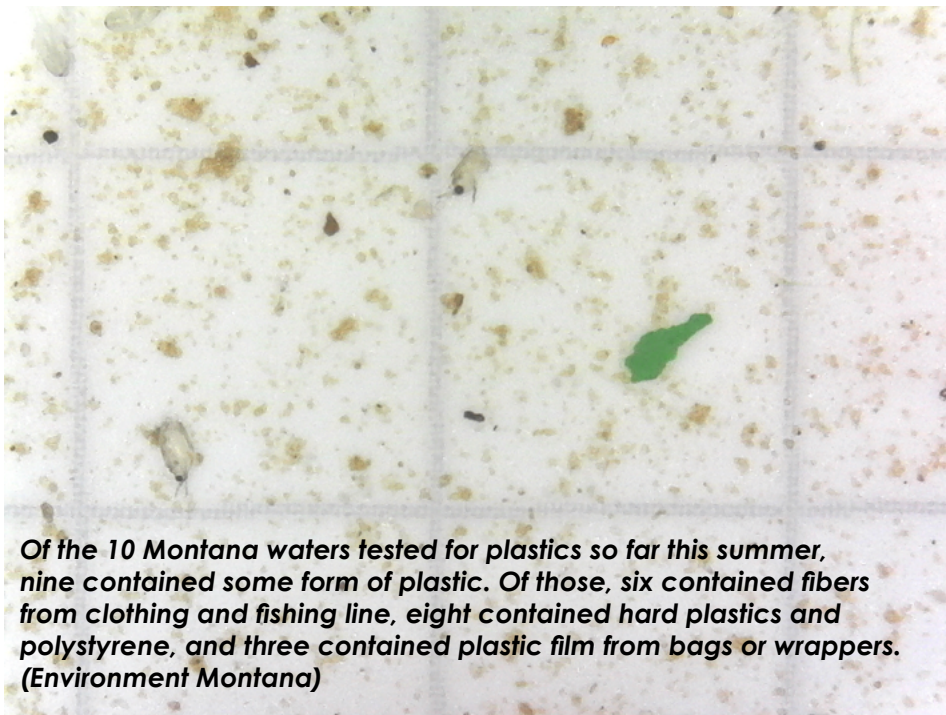
At home on the range

Continued from Page 1

This award is presented to the high school division participant who earns the highest score in the range contest, produces a pressed plant collection, educational display, and an illustrated talk pertaining to a range related topic. Melanie Powers, Harlowton, Mont., was awarded the Top Range Hand this year - she outscored her competitors by 60 points. Melanie received the coveted belt buckle, a \$1,000 scholarship, and a pair of boots, donated by local bootmaker Atomic 79.

The event is hosted by the Beaverhead Conservation District with great efforts from numerous donors to make the event possible. Local ranches donated their time and meat to feed the record-breaking crowd of 350 people. The Montana Wool Growers Association was awarded into the Range Days Hall of Fame.

Beaverhead County will be hosting the yearly event again next summer. If you would like to participate, or learn more about the event, visit the Montana Range Days website at www.montanarangadays.org.



Of the 10 Montana waters tested for plastics so far this summer, nine contained some form of plastic. Of those, six contained fibers from clothing and fishing line, eight contained hard plastics and polystyrene, and three contained plastic film from bags or wrappers. (Environment Montana)

Plastic pollution: Study finds microplastics in nearly all western Montana waters

Missoula Current: More than 90 percent of the waters tested for plastics by a team of citizen scientists this summer have turned up positive results, though the source of the pollutants remains unknown.

Skye Borden of Environment Montana and a team of university interns set out in April to test 50 waters across the state for signs of microplastics. By the end of June, samples from 10 sites had been placed under a microscope, and nine of them bore signs of plastic fibers, filaments and film.

"A pretty high percentage of our sites had some form of plastic in them, and we've found a wide variety of plastics," Borden said. "Most have had fibers or hard plastics, and then another group also had film. It's what you'd get from either plastic bags or

wrappers, like wrappers on a cigarette box."

The plastics would generally pass unnoticed to the human eye if not for the high magnification of a microscope. One sample taken at the Russell Gates Memorial on the Blackfoot River produced a broken fragment of hard plastic, as did a sample from Blackwell Flats on the Kootenai River.

A sample from Big Pine on the Clark Fork River produced 11 plastic fibers, while a sample collected from Kona Bridge produced two fibers, one fragment and one film.

"The three main sources in Montana would be from clothing, like fleece, along with monofilament fishing line," Borden said. "Bailing twine is also in that fiber category. [READ MORE](#)



Chestnut Collared Longspur. Dan Casey, Northern Great Plains Joint Venture photo.

Working ranches are key to saving imperiled songbirds

Prairie Populist: Some of the highest densities of grassland birds make the Northern Great Plains (NGP) their home.

"You all are stewards of some of the best of the best," Bob Ford, coordinator for the Partners in Flight program told a group of Winnett area ranchers during a recent Winnett ACES meeting. Ford was referring to habitat ranchers and private lands provide. Nearly 80 percent of intact rangeland in the NGP belongs to private landowners, who play a key role in conserving habitat for species.

In particular, stewards are conserving habitat for "the little four," as Partners for Fish and Wildlife (PFW) biologist Marisa Sather calls four grassland songbirds — Chestnut Collared Longspur, McCown's Longspur, Baird's Sparrow and Sprague's Pipit. These birds, whose ranges

stretch from Mexico to Canada, rely on the Northern Great Plains for their spring, summer and fall habitat. Notably, populations for these birds have declined 75-to-90 percent since the North American Breeding Bird Survey began in the 1960s.

This alarming statistic comes with hope, however. At the core of their breeding distributions, in eastern Montana and southern Saskatchewan and Alberta, these particular bird populations have been buffered from the impacts of land use change by a high-quality, intact "grazing landscape" that multi-generational family livestock ranches manage. Within the "grazing landscape," birds thrive alongside ranching communities. Outside this landscape, they are in big trouble.

Ranching plays a critical role in keeping grassland habitat healthy and intact for birds and other

native species and preventing them from being used for less-compatible uses. Our native grasslands evolved with large herbivores, such as bison. Through managed grazing, cattle can mimic the historic role that bison played on the plains. Cattle must graze on the grass for the grasses to thrive. Grazing leaves a mosaic of grass heights, which benefits multiple grassland bird because different species prefer different heights of grass. Some, like McCown's Longspur, prefer bare ground and short grass, while Baird's Sparrow prefers short grass to tall grass, plus mixed grasses and shrubs in sagebrush country. Some songbirds are sensitive to shrub cover, but others like Brewer's sparrow and sage thrasher require large amounts of sagebrush cover, which is plentiful in Petroleum County.

RANCHER GROUPS OFFER CONSERVATION SUPPORT

Ranchers are helping others understand grassland birds and their responses to habitat changes. Marisa Sather organizes a partnership of agencies, non-profit and landowners who monitor the effects of land management — including ranching — on the imperiled songbirds' habitat. Starting in 2017, ranchers on the south side of the Missouri River participated in a bird monitoring study already underway on the north side. The results confirm the benefit of the "grazing landscape" — that working ranches are key to maintaining the large, intact grasslands critical for these species' survival.

[READ MORE](#)

MSU researchers examine benefits of sheep grazing in vegetable farming

Montana.edu: Farmers and ranchers have long been in search of ways to limit the need for tillage and chemical herbicides on farmland, and two researchers in Montana State University's College of Agriculture are working on a project that may provide a solution.

With help from the Western Sustainable Agricultural Research and Education program, which is being hosted by MSU until 2023, Devon Ragen, a research associate in the Department of Animal and Range Sciences, and graduate student Trestin Benson have conducted two years of tests on local farms to see if grazing sheep on vegetable or cover crop plots can help improve soil health while reducing artificial inputs to the soil.

"We're looking at differences in microbial communities in the soil and nutrient profiles," said Ragen. "We use sheep for a pre-graze before seeding to clean up all the weeds instead of having to spray or till it up."

Tillage, she said, is one of the biggest detriments to organic farmers. While useful for turning fertilizer and plant matter into the soil, it also promotes wind erosion by making the upper layers of earth easier to blow away. If incorporating sheep into a farming system results in less need for tillage, it would be a win for farmers. Ragen and Benson have partnered with Strike Farms in Bozeman, 13 Mile Lamb and Wool in Belgrade, and Black Cat Farm in Boulder, Colorado; all three farms volunteered to test out their theory

and allow sheep to graze their vegetable fields.

Those tests have shown that when sheep were allowed on cropland to eat weeds and leave manure and urine — natural fertilizer — behind, it reduced the need for tillage 60 percent of the time. However, having animals in a vegetable field carries with it the concern of the sheep compacting the soil too much and interfering with seeding and growth. But fortunately, Ragen and Benson haven't found it to be a problem in their farm tests, which is more good news for producers.

"We looked at these grazed organic fields and compared them to filled organic and chemical fields, and we're not really seeing a big difference in terms of compaction," Ragen said. "From a farmer's perspective, it's not really a detriment to have sheep out there, and we're actually seeing higher nitrogen in the soil after the sheep have grazed, so that's less fertilizer they have to apply and less cost in actually purchasing the fertilizer."

One of the upsides to the project is that it doesn't require the producer partners to change anything in their systems — simply allow Ragen and Benson to take soil samples before and after sheep are allowed grazed on the plots. They do much of their work with a part of the MSU-owned flock of sheep that lives at Fort Ellis Research Farm.

[READ MORE](#)

Moving USDA research agency will have lasting consequences, say employees

Pacific Standard: The Economic Research Service serves as data broker to the United States Department of Agriculture, providing information on food prices and farm forecasts. Some of its other contributions are less known: The agency, slated to move to Kansas City in September, also collects information that helps inform policy decisions on programs like the Supplemental Nutrition Assistance Program, Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and school lunches. Although these programs serve more than 45 million people and claim the biggest share of the USDA budget, the ERS's research on food assistance has not always been politically popular, and, at times, the department has prioritized studies of production agriculture.

Former employees say the USDA's decision to move the headquarters will do more than sideline food assistance work: It will bury it. "[The relocation] decimates the program, and it will take years to rebuild," says Laurian Unnevehr, a former director of the ERS food economics division, which studies food nutrition programs, food prices, and food safety.

The move has prompted more than half of the staff scheduled for relocation to quit, the department announced on Tuesday, and will spread the rest of the team thin, marooning them in the Midwest.

[READ MORE](#)

Montana ranchers can now get paid to sequester carbon

Successful Farming: CO₂, or carbon, is a dirty word these days – and for good reason. Due to a number of causes including the burning of fossil fuels and widespread deforestation, there is far too much CO₂ being returned to the atmosphere, resulting in climate change. The U.S. Energy Information Administration estimates that in 2017 the United States emitted 5.1 billion metric tons of energy-related carbon dioxide, while the global emissions of energy-related carbon dioxide totaled 32.5 billion metric tons.

Despite the grim outlook, there are ways of reversing the abundance of CO₂, including sequestration, which is the process of capturing and storing atmospheric carbon dioxide. An entire marketplace has developed around CO₂ mitigation that enables CO₂-emitting industries to purchase carbon credits from businesses engaged in offsetting activities, such as the production of renewable energy through wind farms or biomass energy, as well as energy efficiency projects, the destruction of industrial pollutants or agricultural by-products, reducing landfill methane, and forestry projects.

The price that the company pays for these credits is used to support projects and businesses that help sequester carbon. In general, a carbon credit gives the purchaser the right to emit 1 ton of CO₂.

There is a voluntary carbon offset market, but some larger companies are required by law to purchase carbon credits to offset their carbon-producing activities in

the so-called compliance market.

For the Western Sustainability Exchange, there's no reason that the carefully managed, rotational grazing of livestock can't also qualify for the carbon credit market.

"We have been working with ranchers to implement rotational grazing for about 25 years since we started. That was one of our founding principles: to manage land better through grazing animals," Chris Mehus, ranching program director at WSE, told AFN. "Carbon credit broker Native Energy approached us about four years ago to discuss the concept of getting ranchers into a program that allows them to trade carbon credits and to get paid for using rotational grazing because of the carbon that it sequesters."

In partnership with international carbon credit broker NativeEnergy, Syracuse University soil science organization Soils for the Future, and the United States' largest national park concessionaire Xanterra Parks and Resorts, WSE is helping farmers figure out whether implementing rotational grazing practices make sense for their ranches through the Montana Grasslands Carbon Initiative.

WHAT'S ROTATIONAL GRAZING?

Essentially, rotational grazing mimics the way that large herds of bison would migrate through North America's grasslands centuries ago.

[READ MORE](#)

MSU study: Montana has more native bumble bees than any other state

Bozeman Daily Chronicle: Montana has more native bumble bee species than have been documented in any other state in the country, according to Montana State University scientists.

That revelation comes out of the state's first inventory of bumble bees, conducted by MSU researchers who published their work this week in the *Annals of the Entomological Society of America*, the country's flagship entomology journal.

Co-authors on the paper, titled "Bumble Bees of Montana," were MSU entomology professors Michael Ivie and Kevin O'Neill, research scientist Casey Delphia, and former entomology graduate student Amelia Dolan.

Ivie said that because of Montana's size and diverse landscapes, the state is home to a large number of bee species.

"Our research shows 28 different species of *Bombus*, with four more expected to make the list," he said. "That's the largest number of bumble bee species recorded for a state in the entire country."

[READ MORE](#)

Grants

223, Education, and District Development Grants

The deadlines for this year's 223, Education, and District Development grants from DNRC are as follows: **July 17 (extended to Aug 5); October 23; January 15, 2020, and April 22, 2020.**

Events, etc

Save the Date: Montana Range Tour

The 2019 Montana Range Tour, will be held **September 4th & 5th** in Harlowton, MT.

Women stepping forward for agriculture

Make plans now to attend the annual Women Stepping Forward for Agriculture Conference at the Gallatin County Fairgrounds in Bozeman, Mont., **Oct. 1-3, 2019.** This year's conference theme is Salute to Agriculture and is packed with speakers that will deliver information on today's most relevant agricultural topics: Ag lending, markets and trade, hemp production, ag research, and beef cattle production. [More Info](#)

Save the Date: MACD Annual Convention

MACD's annual convention will be held November 18-21 in Kalispell at the Red Lion Hotel & Convention Center. We are working to get information on hotel reservations a draft agenda up. Please visit our website, convention.macdnet.org for the latest information.

Save the Date: MWCC Symposium

The bi-annual MWCC Symposium will be held **October 14-16th, 2020** in Butte, Montana.

Jobs

MACD Executive Director

The Montana Association of Conservation Districts (MACD) is currently seeking to hire an Executive Director. The Executive Director is responsible for providing leadership and overall management of the organization. This includes communication with conservation districts and partners, legislative duties, representing conservation districts at a variety of events, and the administration and management of daily operations. **Position to remain open until filled.** [More Info](#)

SWCDM Director

SWCDM is seeking to hire a full-time Director position located in Helena, Montana. The successful applicant has a strong background in natural resources, proven experience working for or with non-profits, and is friendly, organized, hardworking, and motivated. If this is you, come join our team! **Position open until filled.** [More Info](#)

Flathead CD Resource Conservationist

The Flathead Conservation District seeks Resource Conservationist to help fulfill its mission of promoting natural resources through on-the-ground conservation projects, education, and administration of the Natural Streambed and Land

Preservation Act (310 Law). This position reports to the Flathead CD Board of Supervisors and is located in Kalispell, Montana. **Closes August 2.** [More Info](#)

MISC

Nominate Your Conservation Leaders Today

Do you have an outstanding conservation leader in your community? Take this opportunity to show your appreciation for their work and dedication by sending in a nomination for one of NACD's national conservation awards.

CD Supervisor & Employee of the Year Nominations

The time has come to nominate outstanding conservation district employees and supervisors for the MACDEO's annual Employee and Supervisor of the Year Awards. Nominations are due by September 1, and awards will be presented at the annual MACD convention in November. [More Info](#)

Coming Up

July

26 River Rendezvous, Fort Peck

August

1 Resolutions due to MACD Office

8 SWCDM Board Meeting

12 MACD Board Conference Call

26 MACD Executive Committee Conference Call



Applications now open to host a Big Sky Watershed Corps Member in 2020

Applications to host a Big Sky Watershed Corps member are available now. Please find the application attached and also on SWCDM's website swcdm.org/programs/big-sky-watershed-corps/.

The Big Sky Watershed Corps program provides host sites with a college graduate to assist organizations with local conservation efforts. If your conservation district is in need of extra assistance to work on projects, consider hosting a member. More information is available on our website swcdm.org/programs/big-sky-watershed-corps/.

Members join their host sites in early January and stay on board until mid-November. Cost share for the program is \$12,250 for the entire term and the program provides payroll, workers compensation insurance, and health benefits to the members. Host sites are able to select their member and conduct interviews to ensure they have a member that will best serve district needs.

Please contact the SWCDM office if you are interested in the program, need assistance with the application, or if you are interested, but have concerns about the cost share. Additionally, you might consider talking to one of the districts that have hosted a member in the past:

- Beaverhead CD
- Broadwater CD
- Cascade CD
- Flathead CD
- Lake County CD
- Lewis & Clark CD
- Madison CD
- Missoula CD
- Park CD
- Petroleum County CD
- Phillips CD
- Richland County CD
- Ruby Valley CD
- Sheridan County CD
- Valley County CD

Have a story, funding opportunity, or event to share?

Please email tmc@macdnet.org with details.