

# THE MONTANA CONSERVATIONIST

News from Montana's Conservation Districts

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## December 5, 2018

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## Celebrating World Soil Day

World Soil Day (WSD) is held annually on 5 December as a means to focus attention on the importance of healthy soil and advocating for the sustainable management of soil resources.

### Soil Pollution, a Hidden Reality

The theme of this year's Soil Day events and outreach is #StopSoilPollution. Soil is a complex growing habitat that remains productive only if it is cared for and nurtured. Combating and addressing soil pollution is the only way to minimize the risks for food security, human health and the environment.

### Soil Education Resources available

The World Soil Day website has a number of cool infographics, posters, videos, and more to share in celebration of World Soil Day. Visit the site to download one for your Soil Day campaign! <http://www.fao.org/world-soil-day/campaign-materials/en/>

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CONSERVATION DISTRICTS  
of MONTANA



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## Secretary Perdue names new NRCS Chief

*AgNet West:* U.S. Secretary of Agriculture Sonny Perdue announced the appointment of Matthew J. “Matt” Lohr to serve as Chief of the U.S. Department of Agriculture’s (USDA) Natural Resources Conservation Service (NRCS). In his role, Lohr will provide leadership for NRCS and its mission to support America’s farmers, ranchers, and forest landowners in their voluntary conservation efforts through a network of over 3,000 offices in communities nationwide.

## Negotiators reach tentative Farm Bill agreement

*AgriPulse:* Farm bill negotiators say they have reached a tentative agreement on the legislation pending getting final cost estimates.

“We’re pleased to announce that we’ve reached an agreement in principle on the 2018 Farm Bill. We are working to finalize legal and report language as well as (Congressional Budget Office) scores, but we still have more work to do. We are committed to delivering a new farm bill to America as quickly as possible,” leaders of the House and Senate Agriculture committees said in a joint statement Thursday morning.

Senate Agriculture Chairman Pat Roberts said early Thursday afternoon that no problems had cropped up to that point with the CBO cost estimates. But he said it could be early next week before negotiators are ready to brief colleagues on the bill.

Rep. Jim McGovern, D-Mass., said he was told that he would be happy with the bill’s nutrition title. Sources say the negotiators rejected provisions in the House-passed bill that would tighten work requirements for Supplemental Nutrition Assistance Program recipients.

Zippy Duvall, president of the American Farm Bureau Federation, urged lawmakers to pass the bill. The legislation “emerging from the conference committee is good news for farmers amid a prolonged downturn in the agricultural economy. ... Continued access to risk management tools, assistance in foreign market development, and conservation and environmental stewardship programs within the legislation are especially important for farmers and ranchers.

[READ MORE](#)

“Matt has committed his entire life to the betterment of agriculture,” Perdue said. “The knowledge and experience he brings to the table will help ensure our locally-led, science-based approach continues to offer farmers the conservation solutions needed to enhance their environment and commercial viability.”

Lohr, raised on a century farm in Virginia’s Shenandoah Valley, now owns and operates Valley Pike Farm, Inc., with his wife Beth and their six children. Prior to his appointment by the Trump Administration, Lohr held public office, serving in the Virginia House of Delegates from 2006-2010. In 2008, Lohr was awarded Legislator of the Year in honor of his work as an ambassador for economic and community development in Virginia. He then served as Virginia’s Commissioner of Agriculture and Consumer Services from 2010 to 2013.

[READ MORE](#)



Sage grouse chicks are dependent on protein-rich arthropods during their first month of life, especially beetles, ants, and caterpillars.

## Study: Grazing Lands grow more bugs for birds to eat

USDA: Most ranchers have heard the saying, “what’s good for the bird is good for the herd.” New research reinforces this by showing that well-managed grazing provides more than just better habitat for sage grouse – it also produces more of the bugs that growing young birds need to eat.

A study comparing insect communities in grazed, rested, and idled pastures in Montana found that the types of insects that provide a critical food source for sage grouse chicks and other shrub- and grassland-dependent birds were 13 percent more prevalent on managed versus idled rangelands.

### Grazing Lands and Insects

Land use such as livestock grazing — the most common use of rangelands — influence the abundance and composition of insects, which may have far-reaching effects on rangeland ecosystems. Grazing impacts arthropods through direct habitat disturbance as well as by changing the composition and physical

structure of plant communities they rely upon.

Studies show that grazing strategies that incorporate variation in grazing intensity, such as rest-rotation grazing that defers grazing certain pastures for a year or so, may be an effective tool for maintaining arthropod biodiversity on managed rangelands.

Research shows that 50 to 60 percent of the diet of one- to four-week-old sage grouse chicks is composed of insects such as beetles, ants, and caterpillars. Predatory spiders — which researchers found in abundance in idle, ungrazed pastures — eat the bugs that sage grouse need to survive and thrive.

### About the Research

Researchers from Montana State University investigated relative abundance and diversity of ground-dwelling arthropods in sagebrush habitats in central Montana from 2012–2015.

[MORE INFO](#)

## Dirt rich: Healthy soil movement gains ground in farm country

Minnesota Public Radio: Arlington, SD—Jesse Hall is sold on regenerative agriculture.

“It crumbles, and it looks like chocolate cake,” Hall said. “Once it’s got the consistency of chocolate cake, and it’s spongy, that’s what you want.”

And it’s got more life in it, too, from invisible bacteria to earthworms.

“I can’t even dig up an inch without digging up an earthworm,” Hall said. “I feel bad, because I don’t want to hurt the poor guys. I always try to pack ‘em back in the ground, try to cover them up — you know, like I’m tucking them in.”

Hall has embraced regenerative agriculture, the approach to farming built around four basic rules: Never till the soil; use cover crops so soil is never bare; grow a more diverse mix of plants and graze livestock on fields after harvest or before planting.

The movement developed amid concerns that traditional farming is mining the soil, which leads to poor soil health, reduced biodiversity and overuse of insecticides on crops. It’s an expansion of sustainable practices like reduced tilling of fields which many farmers have used for decades.

[READ MORE](#)



New channel upstream

## Lincoln Conservation District begins Mud Creek restoration project

*Submitted by Lincoln CD:*

On October 1st, the Lincoln Conservation District (LCD) and landowner Barry Roose began construction on a restoration project along Mud Creek near Eureka. Through the efforts of Barry, a supporter of good stewardship of our natural resources, the restoration project will return Mud Creek to near its original channel, improve riparian habitat and reestablish a functional floodplain and off-channel wetlands.

In 2014, Barry contacted LCD for assistance restoring his reach of Mud Creek back to a healthy stream. The Mud Creek Restoration Project site has a long history of land use changes including early agricultural development and operation of a timber mill (1954-1973). Over years of use, the floodplain was extensively degraded and a large milling pond was constructed during operation of the sawmill. The stream was repeatedly altered and channelized along Mud

Creek Road and U.S. Highway 93. After the mill closed, the pond was backfilled with timber, waste material and general fill. As of October 26th over 500 cubic yards of debris has been removed.

Mud Creek is part of the Tobacco River Watershed and listed as high priority in the Kootenai River Basin Watershed Restoration Plan for meeting EPA-mandated sediment reduction targets established in the 2011 Tobacco Planning Area Sediment TMDL and Framework Water Quality Improvement Plan. Non-native northern pike have invaded Mud Creek from a downstream lake and impacted native westslope cutthroat trout populations.

The restoration project covers 4.5 acres of wetlands and natural floodplain that will increase the capacity to retain ground and surface water for slow release back to Mud Creek over the course of the water year and long-term climate cycles. A variety of riparian

and floodplain plants will be established along nearly a half mile of stream channel to create a self-sustaining plant community that will stabilize banks and filter nutrients and sediment.

LCD developed and installed an interpretive sign placed on site to provide the public information about the project including location of the project within the watershed, the history of land use at the site, the issues affecting this reach of Mud Creek and the goals of the restoration project. The sign includes text, photos, and an opportunity for readers to take a photo and participate in monitoring the project over time. Development of the interpretive sign was funded through a grant from the Clark Fork and Kootenai River Basins Council.

Construction and revegetation is on track to be completed by the end of the year. [Visit the LCD website](#) to learn more and check out photos of progress at the site.

## Study: More, smaller wildfires may increase water resources in the West

*Utah Public Radio:* The land of the western United States is shaped by wildfire and water availability. According to new research from Utah State University, increasing the number of smaller wildfires could increase water resources in the West.

"It is important to let lands periodically burn for a number of reasons, but the one that we highlight and that I think is unusual is water resources and the protection of water resources," said Brendan Murphy, a postdoctoral fellow in the Department of Watershed Sciences at Utah State University. "Increasing burned area on the landscape is actually critical

for helping to protect and prolong the water resources we have here in the West."

In the western United States, most of the watersheds are dominated by forest ecosystems.

"Catastrophic fires so these big, high severity, uncontrollable fires they produce excessive amounts of sediment," Murphy said. "Effectively catastrophic fires produce catastrophic erosion, and all of that sediment makes its way into the rivers and gets carried downstream into our reservoirs, and can actually backfill our dams. [READ MORE](#)

## Part of the answer to climate change may be America's trees and dirt

*NY Times:* When people think of potential solutions to global warming, they tend to visualize technologies like solar panels or electric cars. A new study published in November, however, found that better management of forests, grasslands and soils in the United States could offset as much as 21 percent of the country's annual greenhouse gas emissions.

At the high end of the projections, that would be roughly equivalent to taking every single car and truck in the country off the road.

The paper, published in the journal *Science Advances*, identified a number of promising strategies, like replanting trees on degraded lands, changing logging practices to better protect existing forests

and sequestering more carbon in farmland soils through new agricultural techniques.

"We're not saying these strategies are a substitute for getting to zero-carbon energy; we still need to do that too," said Joseph E. Fargione, a scientist at the Nature Conservancy and lead author of the study. "But we think that natural climate solutions generally get overlooked. And we found a lot of opportunities here to help mitigate climate change."

Other scientists agreed that storing more carbon in forests and soils could be a potent tool, though some were more cautious about how much was feasible in practice. [READ MORE](#)

## Sidney farmer diversifies with hops and leadership

*Northern Ag:* Montana is known for growing some of the best barley in the world, and a lot of that commodity is used to make beer. Hops are also an essential component of the brewing process.

For Sidney farmer Sarah Rachor, growing hops has turned a few heads in the countryside. That doesn't keep her from expanding her cropping portfolio while stepping up as a leader in agriculture along the way.

"I lived in Bend, Oregon, for five years, and my office was right by Deschutes Brewery, and I spent a lot of time serving tables on Friday nights," said Rachor. "My husband and I got really into craft brewing in Oregon, and he started home brewing. So naturally, when I went back to the farm, I picked out a corner where we could plant some hops."

That corner in a farm field has turned into an acre where Rachor is growing five different hop varieties.

Across the Big Sky State, craft breweries are playing a vital role of local economies while making a great product. Rachor's Fresh Hopped Farm is playing a critical role in providing Montana-sourced hops for the brewing process.

"I just worked with Gallys Brewing in Harlowton to do the first all Montana made beer," said Rachor. [READ MORE](#)

## Grants

### 223, Mini Education, and District Development Grants

The Fiscal Year 2019 deadlines for the 223, Mini-Education, and District Development grants are: **January 17, 2019, April 25, 2019** [Grant Application](#)

### Urban Agriculture Conservation Initiative

The program is designed to enhance conservation districts' urban agriculture conservation technical assistance activities in developed and developing areas of both urban and rural communities. NACD is accepting project proposals through **December 31**. [More Info](#)

### Noxious Weed Trust Fund Grants

Grants up to \$75,000 are available for innovative noxious weed research projects, educational projects, and local cooperative cost-share projects. Funding is available for private landowners, local governments, researchers, and educators who are solving noxious weed problems in Montana. Application deadline is **January 6th, 2019**. [More Info](#)

### BoR Cooperative Watershed Management Grants

Qualified watershed groups may apply for up to \$300,000 for collaborative, on-the-ground watershed management projects related to ecological resilience, water quality, and water supply. Deadline **January 30, 2019**. [More Info](#)

### Montana Native Plant Society Small Grants Program

The purpose of the MNPS Small Grants Program is to stimulate research, conservation, and educational activities that help foster an appreciation for Montana's native plants and plant communities. These grants are intended to promote native plant conservation through better understanding of our native flora and the factors affecting their survival. Deadline **January 31**. [More Info](#)

### Five Star & Urban Waters Restoration Grant Program

This program seeks to develop community capacity to sustain local natural resources for future generations by providing modest financial assistance to diverse local partnerships focused on improving water quality, watersheds and the species and habitats they support. Full Proposal due **January 31**. [More Info](#)

### Conservation Planning Boot Camp

NRCS Conservation Planning Boot Camp is a three-week, intensive training course for technical employees that covers current conservation planning policy, procedures and guidelines as outlined in the National Planning Procedures Handbook. Each year for the next five years, 75 conservation district employees will have the opportunity to participate in this Lincoln, Nebraska-based program. District participants are trained in and out of the classroom – right alongside NRCS field staff – in the skills necessary for developing and implementing

comprehensive conservation plans. District participation in the course ensures conservation technical assistance is provided to local landowners and operators in a consistent manner nationwide. [More Info](#)

## Events, etc

### Cheatgrass management workshop

Join the Beaverhead County Weed District & Extension Office Monday, December 10th for dinner and a presentation on Cheatgrass Management in Southwest Montana. Dillon, **December 10**. More info: [aburch@beaverheadcounty.org](mailto:aburch@beaverheadcounty.org)

### Crop and Pest Management School

Register now for the 2019 CROP AND PEST MANAGEMENT SCHOOL, which will be held on Monday, **January 14th through Wednesday, January 16th** at Montana State University in Bozeman. [More Info](#)

### Plan, Prepare, Pass it on: Ag Business strategies for the future

Presented by SWCS, this two day workshop will feature professionals in taxes, estate planning, law, and business. **February 5 & 6**, Northern Hotel Billings. [More Info](#)

## Coming Up

### December

10 **MACD Board Conference Call**

Cheatgrass Management Workshop, Dillon

### January

14-16 Crop & Pest Management Workshop

14 Soil Health Workshop, Great Falls

15 Soil Health Workshop, Three Forks

16 Soil Health Workshop, Billings

**MACD Board Conference Call**

17 Soil Health Workshop, Forsyth

223, Mini Education, & District Development Grant Deadline

18 Soil Health Workshop, Sidney

**Have an event to share?**

Please email [tmc@macdnet.org](mailto:tmc@macdnet.org) with details.

### Montana Lakes Conference

The Montana Lakes Conference will gather diverse resource professionals to exchange information, scientific advancements, and management strategies that promote clean and healthy lake and reservoir ecosystems. Whitefish, **March 13-15 2019**. Hosted by the Whitefish Lake Institute, sponsored by DNRC, Flathead CD. [More Info](#)

### Jobs

#### Sagebrush Collaborative Conservation Specialist

The IWJV is seeking a Sagebrush Collaborative Conservation Specialist to support the Partnering to Conserve Sagebrush Rangelands initiative. Full time, based in Missoula, anticipated start date March 2019. Deadline **December 28**. [More Info](#)

#### 2019 New Agrarian Apprenticeships

The New Agrarian Program seeks applicants committed to lives in regenerative agriculture, enough experience to know what it takes to work on the land, and an excellent work ethic. Applicants must be motivated self-starters, have the ability to work independently, be prepared to work long days outside in variable conditions; be solid problem solvers; and embrace diversity and teamwork. The selected applicants will be mature individuals, excited to engage in their own learning process. [Apprenticeships](#) **Deadline December 31**

### DNRC Rangelands Program Working Lands Internships

This internship is designed to offer beginning agriculturalists, natural resource and range specialists the real-world and hands-on experience implementing the educational tools already gained to a ranching operation. This paid internship will last for three months during the 2019 summer where interns will work and learn from mentoring ranchers from across the state of Montana. A stipend of \$1,600 will be given at the end of each month with room and board supplied by the mentoring ranch. Students majoring in any natural resource related field are recommended to apply for this opportunity. Application Deadline **February 1**. [More Info](#)