

# THE MONTANA CONSERVATIONIST

News from Montana's Conservation Districts

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## May 30, 2019

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## Rolling Rivers Trailers Keep Rolling

In 2001, MACD, in partnership with districts, DNRC and DEQ, received funding for four Rolling River Education Trailers. Since their construction, these trailers have grown in popularity and are used statewide by conservation districts and other conservation organizations.

Trailers are currently sponsored by three conservation districts across the state (Flathead, Cascade, and Richland) with the final trailer located at DNRC in Helena. Over the past 3 years alone, these trailers have reached an estimated 23,000 youth and adults in Montana, and covered over 23,000 miles statewide. A 223 grant sponsored by Lewis and Clark Conservation District helps keep the trailers maintained and in working order. People love to gather around the trailer and watch how water moves through a watershed, learning lessons about erosion, vegetation, and the importance of floodplains.

If you're interested in leasing a trailer to use for an educational event, contact one of the sponsoring districts or MACD for details. Users must have participated in a training on how to use and properly shut down the trailer before using a trailer for the first time.



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## Soil erosion washes away \$8 billion annually

*Forbes:* Soil isn't the only thing that we are losing from erosion. A new study estimates \$8 billion in global economic losses caused by soil erosion reducing crop yields and increasing water usage.

Climate change is making soil erosion worse. And certain countries are paying the price.

## Panel formed to assess, plan management of state forests

*Steve Hedstrom, Judith Basin Conservation District Supervisor, MACD Director, and NACD representative for Montana, will be serving on this council on behalf of conservation districts. Steve can be reached at 406-738-4332 if you would like to learn more about this Council and provide your district's perspective on forest management.*

*Bozeman Daily Chronicle:* Montana's governor has formed a council to examine the state's forested lands and plan for the future of those lands, including identifying places that need work to deal with wildfire risk.

In an executive order signed Monday, Gov. Steve Bullock outlined a number of priorities for the 21-person Montana Forest Action Advisory Council.

The panel is charged with assessing the condition of the state's forested land and crafting a plan by fall 2020 that identifies areas in need of restoration or management through activities like logging. It's also meant to develop

ways to accomplish "landscape-style forest restoration" that was included in the governor's Forests in Focus 2.0 Initiative, which was released in September. The order said the state's fire seasons are growing longer and more severe and that almost half of the state's forests have been hit by insect and disease outbreaks.

"We can and we must work together for the well being of our forests and to reduce wildfire risk," Bullock said in a news release.

The council includes an eight-person leadership council and 13 general members. It includes people from the timber industry, conservation groups, local governments, a tribal timber group and a University of Montana professor.

Bullock's executive order listed 14 duties for the panel, most of them focused on crafting a broad long-term strategy for managing the forested land in the state and building on collaborative partnerships. [READ MORE](#)

Under climate change, there are many more dry days interspersed by heavy rains. This leads to conditions where soil is more easily washed away during the strong rains. Land use change by humans exacerbates soil erosion by water, often by clearing out vegetation that help hold soil together. Steep surfaces (think hills) can also contribute to the problem.

Researchers from the European Union Joint Research Centre coupled two models, RUSLE and MAGNET, to estimate economic losses from soil erosion by water. They found that \$8 billion is lost annually from global GDP. Worldwide, food production is reduced by 33.7 million tons of food. The study is unique in that the researchers were able to capture losses from structural economic change as a result of shifts in primary resources, like land quality. Previous studies simply calculated crop loss and multiplied it by market values. Moreover, this study was the first to apply this method on a global scale.

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### Carbon credits by 2020 for no-till, cover crops? It could happen this time

*Cover Crop Strategies:* Many years ago, no-tillers saw a glimmer of hope for making extra money on their conservation efforts when a national carbon-trading exchange was operating through the Chicago Climate Exchange. Inactivity in the U.S. carbon markets killed those hopes and CCE was shuttered.

But last March, a coalition of environmental organizations and food companies — the Ecosystem Services Market Consortium — announced efforts to build a market that would pay farmers for carbon sequestration and cleaner water. The program would give farmers credits for their efforts to sequester carbon or protect water quality, and then companies could buy those credits to reach their own sustainability goals. They plan to build the market by 2022.

Ag media are reporting this week that Secretary of Agriculture Sonny Perdue is open to the concept, and an upcoming agriculture appropriations bill will likely include language urging the USDA to research the possibility of such markets. A central theme here is sequestering carbon through no-tilling and planting cover crops to help reduce the effects of climate change, for which agriculture is 10% responsible, Fern's Ag Insider claims.

One wicked problem here is agreeing on how soil carbon should be measured so farmers can be compensated. Fern's says Perdue feels the USDA should be the organizational body to set the metrics for such a program.

ESMC says it will, "drive the coordinated development of advanced analytical tools and technologies to cost-effectively measure and monitor changes in sustainability outcomes and contribute income to farmers and ranchers through insetting and offsetting supply-chain strategies and the sale of ecosystem services credits."

ESMC says its "science- and standards-based focus on measured outcomes will provide the necessary transparency and rigor to track improvements in soil health and GHG, water quality and water use, as well as additional attributes to be added in the future, such as biodiversity."

ESMC is conducting a pilot test of its integrated ecosystem credit protocol on 50,000 acres of rangeland and farmland in Texas and Oklahoma. This initial test is part of a land-stewardship pilot focused on development of cause-and-effect assessment from production management practices, led by Noble Research Institute.

ESMC says its future plans include additional pilots and later implementation across the U.S. in 2019 and later. "By 2022, the program intends to encompass all major agricultural production systems and geographies in the U.S."

[READ MORE](#)

### Montana Range Days to offer two days of tours

The Beaverhead Conservation District is excited to announce two days of range tours offered in conjunction with Montana Range Days. On June 18 and 19, participants will visit some of the most advanced ranching operations in Beaverhead and Madison counties, explore divergent management techniques, and learn from the experts. Anyone interested in rangeland health and stewardship will benefit from attending.

The tour on Tuesday, June 18, is an all-day event. It kicks off with a visit to the 345,00-acre ranch owned by Matador Cattle Company. Attendees will learn how Matador has used pasture rotations, winter hay grounds, and cross-fencing to promote biodiversity and healthy rangelands. Matador has earned a number of awards for its range stewardship and wildlife-friendly management practices, including the National Environmental Stewardship Award.

The next stop will visit the Helle Ranch where participants will see how the family has used fire and sheep grazing to manage for greater biodiversity, increased productivity, and improved wildlife habitat on the sagebrush steppe biome.

Tuesday's tour will conclude at the Maloney Ranch near the Ruby Reservoir.

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## Study: short-interval fire hampers Yellowstone forest recovery

*Bozeman Daily Chronicle:* Young forest went up in smoke in Yellowstone in 2016, disrupting scientists' understanding of the region as a place where fires barrel through an area maybe once a century.

The lodgepole pine trees that burned in the 2016 Maple fire were not yet 30 years old, having been the offspring of the park's famous 1988 fires.

A new study found that such a short break between fires makes it tough for trees to regrow, and the region's forests could change significantly if recovering forests burn more often — something the study's author said may happen in a warming world.

"It really is possible that we can see frequent short interval fires in the system," said Monica Turner, a University of Wisconsin scientist who led the study.

The paper, published in the Proceedings of the National Academy of Sciences this week, looked at 27 study plots at three sites in Yellowstone National Park and Grand Teton National Park. Of those, researchers examined 18 plots that burned in 2016, when wildfire moved through parts of the ecosystem that had burned in the previous 30 years. The plots burned during the Maple and Berry fires.

The Berry fire burned in Grand Teton National Park, partially over a burn scar from 1988 and a scar from 2000. It also burned some old growth forest. The 45,000-acre Maple fire was in the northwestern part of Yellowstone National Park, inside the scar of the North Fork fire of 1988.

### [READ MORE](#)

*Below: The charred remains of lodgepole pines checker the area that burned in the 2016 Maple fire in Yellowstone National Park. The Maple fire began and burned in its entirety in the 1988 fire scar.*

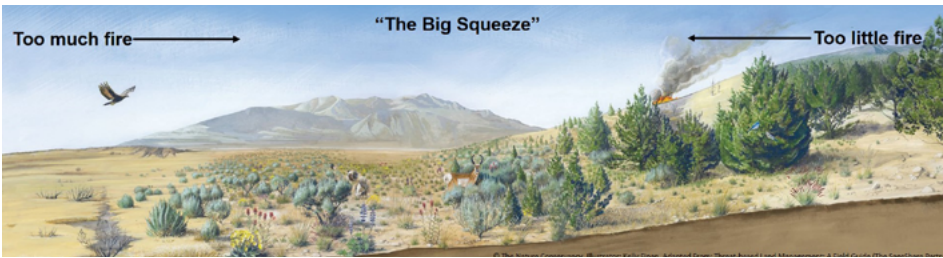


## Farm Bureau applauds state land water bill becoming law

The Montana Farm Bureau is pleased to learn that HB 286, the state land water bill, has become law. This is good news for Montana's farmers and ranchers who use water on state lands. HB 286 clarifies that the state of Montana may only obtain an ownership interest in a water right or ground water development works (diverted from private land) if a court determines the state is an owner of that particular water right or if the state is in possession of a deed transferring ownership of the water right to the state. This is the same requirement that other water users have to meet.

"We especially want to thank Representative Alan Redfield for sponsoring this bill and working hard to ensure its passage," said MFBF State Affairs Director Liv Stavick. "HB 286 was introduced in response to the Department of Natural Resources & Conservation (DNRC) Trust Land Management Division claiming partial ownership of private water rights if water was used on state land – even if the well was on private land. This practice was done without any due process. Lessees simply received a notification in the mail from DNRC that the state was now a co-owner of their water right without any opportunity to comment or object to the change. HB 286 will halt this extreme violation of private property rights by providing due process and protection to the water rights of Montana's farmers and ranchers.

### [READ MORE](#)



This illustration shows how sage grouse are being squeezed by conifer encroachment and establishment of annual invasive grasses. Image courtesy of The Nature Conservancy.

## New research shows sage grouse populations grow 12% when conifers are removed

**Sage Grouse Initiative:** In the last two centuries, woody plants have been expanding into the world's vast grasslands and shrub-steppe rangelands. In the U.S., the expansion of conifers into the Great Plains and sagebrush-steppe has created a cascade of effects that include altered water regimes, habitat loss, increased fire severity, and more. In the last two decades, land managers, both public and private, have begun to understand the scope of this problem, pinpoint effective management solutions, and implement those solutions. These efforts have given scientists the chance to study how wildlife like sage grouse respond to conifer reduction efforts.

Andrew Olsen is one of these scientists; he has spent the last several years studying how sage grouse populations responded to sustained conifer removal efforts near the Warner Mountains in south central Oregon. Olsen's research offers fresh insights into the outcomes produced by conifer removal.

**Why is this phenomenon happening now? What is allowing conifer trees to move into open grasslands and shrub-steppe**

### **rangelands and how is this impacting sage grouse?**

Changes in land use patterns and subsequent alterations to historic fire regimes are the primary drivers of conifer expansion. Historically, fire limited the spread of conifers and periodically pushed them back to areas that don't burn as well like higher elevation zones and rocky areas with limited grass cover. Humans impacted natural fire cycles beginning in the mid 1800s. At upper elevations, fires have become less frequent allowing conifer woodlands to become denser and expand into previously treeless shrublands. At lower elevations, invasive annual grasses like cheatgrass have established, resulting in fires that are now too frequent. These altered fire regimes in prime sagebrush country are squeezing sage grouse into smaller areas of suitable habitat – trees are pushing sage grouse out of previously healthy mid- and high-elevation sagebrush and cheatgrass is pushing sage grouse out of lower-elevation sagebrush.

[READ MORE](#)

## Compensating farmers, ranchers, conservationists

**Prairie Populist:** Ask any producer what their No. 1 job is, and most will tell you that it's taking care of the land. Ranchers don't only raise cattle; they farm grass. Farmers don't just grow crops; they sustain the soil. They provide our food and fiber while they steward our air, water and open working landscapes.

Our producers — the folks out there on the ground every day — deeply understand how our actions impact the health of the land — and in turn, how the health of the land impacts our way of life. They do what's right by the land, knowing that it could make their operations more resilient, both financially and ecologically.

Our farmers and ranchers know what a lot of us often forget: we do not have to be apart from the land to conserve it. Rather, we can be a part of it.

### **The Conservation Stewardship Program**

Farmers and Ranchers who already implement conservation practices may be eligible for financial and technical assistance through the Conservation Stewardship Program (CSP). This national program, run through the Natural Resources Conservation Service (NRCS), began in 2002 as a way to address issues, such as soil erosion or degrading soil quality, poor water or air quality, and insufficient fish and wildlife habitat.

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## Grants

### Future Fisheries Improvement Program

For almost two decades, FWP's Future Fisheries Improvement Program has worked to restore rivers, streams, and lakes to improve and restore Montana's wild fish habitats. Between \$350,000 and \$650,000 are available each year for projects that revitalize wild fish populations. Any entity proposing a project that would benefit wild fish will be considered for funding. Due **May 31**. [More Info](#)

### Western States WUI Grants

The Department of Natural Resources and Conservation's (DNRC) Forest Stewardship Program is requesting project information relating to application development for the fiscal year 2020 Western States Wildland Urban Interface (WUI) Grant program. Qualifying projects should fall into one or more categories: reduce hazardous fuels in the WUI; WUI-based prevention and education; CWPP development. Project proposals are due by Friday, **May 31**. Application development of selected projects will occur collaboratively over the summer and will be submitted in September to the competitive WUI Grant program.

### Western Native Trout Initiative Small Grants

Projects considered for funding under the Small Grants Program include those with a strong element of or primary focus on community outreach, education and/or volunteer engagement; or design/planning/monitoring work.

Approximately \$21,000 in funding is available for projects in the 12 western states that are WNTI's focus. Individual projects can be funded at a maximum of \$5,000. Due **June 18**. [More Info](#)

### Northern Grassland Restoration Incentives Program

The Northern Great Plains Joint Venture is making up to \$145,000 available for habitat projects in priority counties of the NGPJV geography, with a maximum grant of \$30,000 per project. Successful applicants will deliver habitat projects that contribute measurably to the protection, restoration or enhancement of grassland and/or shrub-steppe habitats. Proposals due **June 28**. [More Info](#)

## Events, etc

### Montana Youth Range Camp

The Montana Youth Range Camp (MYRC) is a 4-day program for youth ages 11–17. This year's camp will be held June 25–28 at Hyalite Reservoir south of Bozeman. Registration deadline is **June 11**. [More Info](#)

### Workshop: Under the hood of your soil

NCAT, One MT, Carbon 180, and MSU extension are putting on a workshop on **June 11** in Whitehall. It will include a classroom session on the five principles of soil health, NRCS programs, and a visit to Montana Highland Lamb to show our transition from 160 units of N to 0 over a four year period. [More Info](#)

### Montana Range Days

The annual Montana Range Days will be hosted by Beaverhead Conservation District, **June 17–19**. [More Info](#)

### Composting Workshop

The Fallon County field office will be hosting Gerry Gillespie to teach us how to make a compost that is easy, low-odor and appropriate on a large or small scale. Plan on joining us for a hands-on workshop where you can take away the skills and inoculant needed for the process. **June 21**, Baker. Email [ann.fischer@usda.gov](mailto:ann.fischer@usda.gov) for more info.

### AIS Workshop for Natural Resource Educators

Natural resource professionals and conservation organizations are invited to a one-day workshop about teaching aquatic invasive species to youth. Montana Fish, Wildlife & Parks and Montana Department of Natural Resources are co-hosting three workshops in June. Workshops will be held in Kalispell on **June 21**, Billings on **June 25** and Butte on **June 27**. The workshops are free, but registration is required. To register contact Sarah Ganter at 518-727-8275 or email [uppercolumbia3@gmail.com](mailto:uppercolumbia3@gmail.com).

### Increasing Profit on Your Farm with Healthy Soil

A workshop with Nicole Masters of Integrity Soils, Inc. New Zealand. Sponsored by Valley County Conservation District **June 26**. For more information, call (406) 228-4321 ext.101 or email [vccdm20@gmail.com](mailto:vccdm20@gmail.com)



## Coming Up

### June

- 3-6 Statewide Administrator's Training, Arrowpeak Lodge
- 10 Don MacIntyre retirement party, Helena (at the Montana Club)
- 10-13 MACD Spring Board Meeting**
- 11 Under The Hood of Your Soil Workshop
- 17-19 Montana Range Days
- 21 Composting Workshop, Baker
- AIS Workshop for Natural Resource Educators, Kalispell
- 25-28 Montana youth Range Camp
- 25 AIS Workshop for Natural Resource Educators, Billings
- 26 Increasing Profit on Your Farm with Healthy Soil
- 27 AIS Workshop for Natural Resource Educators, Butte

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

Please email  
tmc@macdnet.org with  
details.

### Save the Date: River Rendezvous

Please Plan to Spend **July 26th** on the Missouri River. You are invited to the 2019 River Rendezvous hosted by Valley County Conservation District, MT Fish Wildlife and Parks, the US Army Corps of Engineers, and the Missouri River Conservation Districts Council. All activities will take place on July 26th, and the tour will leave from the Fort Peck Interpretive Center. This year's Rendezvous will highlight key features of the Missouri / Milk River confluence including: Pallid sturgeon habitat, irrigation, proposed crossing sites for the Keystone XL pipeline, management efforts for aquatic and terrestrial invasive species, and more!

### Save the Date: Montana Range Tour

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

## Jobs

### DEQ Environmental Water Quality Specialist

The Specialist develops water quality plans that include total maximum daily loads (TMDLs) and related water quality protection recommendations. The Specialist responsibilities include: 1) Characterizing pollutant loading sources; 2) Organizing, analyzing, and summarizing water quality data and 3) Writing TMDL documents that meet all Department and EPA requirements. Strong analytical and critical thinking skill are essential along with outstanding communication skills. Closes **June 3**. [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.

## *Join us for the Annual* **MACD Spring Board Meeting**

**June 10, 11, & 12 at the DoubleTree Inn, Helena**  
[macdnet.org/programsevents/spring-board-mtg/](http://macdnet.org/programsevents/spring-board-mtg/)