

# THE MONTANA CONSERVATIONIST

News from Montana's Conservation Districts

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### Leaking septic systems are a known problem for Montana lakes; solutions remain elusive

*From the Missoulian:* For years, scientists have found signs of human waste trickling into Montana's lakes. Now, an effort to study this problem is working its way through the Legislature.

A lunch panel at this week's Montana Lakes Conference focused on septic leachate, the liquid that leaks from improperly maintained septic systems into groundwater. Underground aquifers help feed Northwest Montana's lakes and streams, all of which can be harmed by leachate's E. Coli bacteria, phosphorus and other ingredients.

Scientists have been finding this pollutant in Flathead and Whitefish Lakes for years. But getting lakeshore residents to adopt one of two remedies — fixing leaky septic systems, or replacing them altogether with sewer lines — has proven difficult.

*Continued on page 2*

1101 11th Ave • Helena, MT 59601  
(406) 443-5711 • [www.swcdm.org](http://www.swcdm.org)

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## Leaking septic systems, continued

*From page 1:* "I think a lot of people, quite frankly, are struggling with the cost of non-point source pollution," said panelist Ed Lieser. A retired forester and former state representative who lives in the Lion Mountain neighborhood near Whitefish, Lieser knows this problem firsthand.

In 2012, a Whitefish Lake Institute study confirmed the presence of septic leachate in Whitefish Lake. Four years later, an engineering report recommended connecting Lion Mountain to Whitefish's sewer system. But residents balked at the costs of paying for installation and operation costs — and the prospect of additional property taxes if sewer line extension eventually led to annexation by the city — and the Lion Mountain Homeowners' Association voted it down.

Flathead County Registered Sanitarian Kate Cassidy told the audience that currently, there are 79 permitted septic systems along the shore of Whitefish Lake. She said that 22 of those date back to the 1970s, when permits were first required, and many are serving cabins that have been expanded beyond their original size.

With the area's main method of handling sewage under strain, Lieser and others are still looking for solutions.

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## Conserving Diverse Wet Habitats Keeps Western Rangelands Resilient

*From Sage Grouse Initiative:* The western sagebrush ecosystem is governed by a semi-arid climate. Vegetation productivity is limited by periodic drought, which makes wet mesic habitats critical for sage grouse and other wildlife. Wet mesic habitats in the Rocky Mountains, Great Plains and Great Basin include riparian areas, wet meadows, irrigated alfalfa fields, and productive rangelands.

During periods of drought, many wildlife, including sage grouse, seek out these last islands of productive green areas. Collaborative whole-watershed conservation strategies that protect a diversity of mesic resources across public and private lands are key to maintaining healthy sage grouse populations.

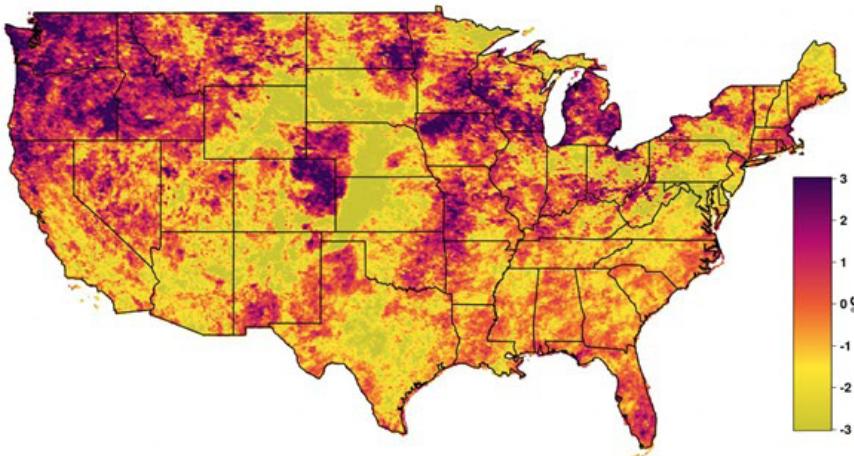
Researchers from the University of Montana and the U.S. Fish and Wildlife Service used more than 15,000 satellite images to analyze late-season (mid-July to mid-September) vegetation

productivity across western rangelands from 1984-2016. They then linked these summertime productivity patterns to annual variations in climate and categorized the results into irrigated alfalfa, rangeland, riparian areas, or wet meadows. Finally, they examined land tenure data, which allowed them to detail the proportional mesic abundance by ownership type in three western regions: the Great Basin, the Rocky Mountains, and the Great Plains.

Sage grouse populations are partially structured by drought sensitivity, that is the bird's populations generally boom during wet years when green vegetation is widely available and constrict when these resources are scarce during times of drought (which can include the hot, dry summer months).

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Thermal stress anomaly in January 2019 across the USA



## A faster, more accurate way to monitor drought

**LabManager.com:** More than two billion people worldwide are affected by water shortages, wildfires, crop losses, forest diebacks, or other environmental or economic woes brought on by drought.

A new monitoring method developed at Duke University allows scientists to identify the onset of drought sooner—meaning conservation or remediation measures might be put into place sooner to help limit the damage.

“By combining surface and air temperature measurements from thousands of weather stations and satellite images, we can monitor current conditions across an entire region in near real time and identify the specific places where drought-induced thermal stress is occurring,” said James S. Clark, Nicholas Professor of Environmental Sciences at Duke’s Nicholas School of the Environment.

“Other methods now in use are

based on data that can take a month or longer to become available,” Clark said. “That means scientists or managers may not know a region is in drought until well after the conditions actually begin.”

Clark and his colleagues have created a free public website, called Drought Eye, where they post monthly maps pinpointing locations across the continental United States where drought conditions may be occurring, based on the latest thermal stress data.

The thermal stress they’ve measured is the difference between the air temperature at a site and the surface temperature of the plant canopy there. Ordinarily, these canopies are cooled by water evaporating into the air through small pores, or stomata, in the plants’ leaves. This explains why midday temperatures in a forest in summer are cooler than in a city.

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## Smurfit environmental assessment delayed by botched samples

**Missoula Current:** The Environmental Protection Agency won’t use samples from fish collected around the Smurfit-Stone mill site last summer, so it could be at least another year before risks to human health and the environment are known.

After six months of indecision, EPA project manager Allie Archer told the Smurfit-Stone Community Advisory Group Thursday night that she will not use fish samples collected from the Clark Fork River and its tributaries last summer. Those samples, still stored in a Denver freezer, were intended to show whether chemicals – dioxins, furans and polychlorinated biphenyls or PCBs – from the mill’s holding ponds have contaminated fish.

“There were some deviations from the sampling plan, so we cannot use (the fish samples) in our risk assessments,” Archer said. “We are going to collect that same data set in the coming year, which I know can be frustrating to hear that we’re reproducing the same data.”

Last year, Montana Fish, Wildlife & Parks employees caught about 150 rainbow trout and northern pike above and below the mill site and prepared them using the protocol prescribed by the EPA. However, they deviated slightly from the established procedure.

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## As it enters its 40th year, the future of Montana's Water Court is uncertain

*Havre Herald:* The Montana Water Court could soon reach a turning point once all its old water rights cases are settled.

But experts say that won't be the end of the state's water disputes. That's why some lawmakers and lobbyists support mandating an interim study that will examine the future of the Montana Water Court and finding a place for its judges and staff, who are steeped in water rights law. House Joint Resolution 14 requests such a study, with its findings to be presented to the 67th Legislature in 2021.

"This is the first time I ever presented a water bill where I had no opponents," said Rep. Bradley Hamlett, D-Cascade, the resolution's sponsor, during a hearing in the House Natural Resources Committee on Feb. 18. "This is the right time, I believe, to discuss this issue, to parse it back and forth, and to come to some determination of what we need to do now, so we're not caught flat-footed in the future."

Hamlett attempted to pass similar bills in the 2015 and 2017 sessions, but they either didn't make it out of the drafting process or didn't meet transmittal deadlines. In the 2015-2016 interim, the Water Policy Interim Committee conducted its own study and issued a seven-page report on the water court's future. The study mostly reviewed the state's water law history, then briefly mentioned that, within the next decade, there may be little left for the water court to do.

Still, Rep. Zach Brown, D-Bozeman,

supports a water court study specifically approved by, and presented to, the entire Legislature. He serves on the Water Policy Interim Committee with Hamlett.

Lawmakers are often intimidated by the depth and nuance of the state's water law, Brown said.

"With term limits and limited expertise on water anyway, in the Legislature I bet five people out of 150 have a savvy understanding of water rights," Brown said.

That makes it all the more important to keep the water court issue in front of legislators, he said.

### The 'Look-Back Period'

When Montana citizens were drafting a new constitution in the 1970s, the state's system for tracking water rights was a morass. The state generally recognized the Western tenet of "prior appropriation," meaning whoever first put a certain amount of water to use owned claim to that water. But that "first in time, first in right" concept wasn't officially codified.

In those early days, a Montana farmer or miner might file her claim at the local courthouse. But in many other cases, a water user created no legal paper trail. He just started irrigating. District courts sorted out who could use what in times of drought.

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## Bee Science: Urban hives are precise pollution indicators

*Inverse.com:* A new study on pollution reveals that proof isn't in the pudding — it's in the honey. Research carried out in partnership between the nonprofit Hives for Humanity and the University of British Columbia showed that honey collected from urban beehives can accurately measure how polluted a city is. This means that honey isn't just a byproduct of bee regurgitation — it's also a way to closely monitor changes in the environment.

Writing in *Nature Sustainability*, the study's authors explain that this study is the first of its kind in North America. They specifically analyzed honey collected from beehives in six Metro Vancouver neighborhoods — testing for levels of lead, zinc, copper, and other elements. The good news for Vancouver was that the chemical composition of this Canadian honey demonstrated that the city is "extremely clean." But that doesn't mean that human influence didn't affect the honey at all — they found that the closer a hive was to the downtown metro, the higher the chance the hive's honey contained elevated concentrations of lead, which is toxic at high concentrations.

Honey can act as a snapshot of an environment, namely because bees forage within a one- to two-mile radius around their hive. When pollutants enter an environment, they accumulate in plants — whatever enters soil, air, and water will show up in a plant's pollen.

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## FWP reimburses landowners for conserving grassland

From Montana Outdoors, used with permission: FWP is providing financial help to qualifying landowners interested in transitioning their mediocre cropland or expiring Conservation Reserve Program (CRP) lands to rangeland. The department also offers 30-year conservation easement leases to landowners who want to conserve native grasslands and shrublands on working ranches.

"These cost-share and conservation lease opportunities help keep grass on the landscape as habitat for prairie songbirds and other wildlife, while at the same time benefiting ranchers and rural

communities," says Catherine Wightman, who coordinates the department's Working Grasslands

Initiative. In cost-share agreements, Wightman says, qualifying landowners enter into voluntary 10- to 20-year contracts. FWP pays up to 75 percent of the costs for fencing, stock tanks, water pipelines, seeding, and other practices necessary to manage the lands as productive rangeland. For their part, landowners agree not to drain wetlands or plant crops or other non-native vegetation.

## Trump budget reopens Farm Bill to slash spending

**Agri-Pulse:** Less than three months after signing the 2018 farm bill, President Donald Trump proposed a fiscal 2020 budget that would reopen the law to slash crop insurance and tighten commodity program eligibility limits while making deep cuts in the Supplemental Nutrition Assistance Program.

The Trump budget would go beyond previous proposals to toughen SNAP work rules by proposing to require nearly all able-bodied adults up to age 65 to work or be in an approved training program.

SNAP work requirements are currently limited to able-bodied adults who don't have dependents at home and are under 50 years of age, and the administration released a proposal earlier to make it harder for states to get waivers from those rules. The FY19 budget proposal sought to increase the top age to 62.

## NRCS Montana announces 2019 Organic and Sage Grouse Initiatives

March 14, 2019—The USDA Natural Resources Conservation Service (NRCS) is offering additional funding through its Environmental Quality Incentives Program (EQIP) to target specific resource concerns in Montana in 2019: organic and Sage Grouse Initiative cropland seeding.

While NRCS accepts EQIP applications on a continuous basis, NRCS has set a deadline of April 12, 2019, to apply for 2019 initiatives funding. Below is an overview of the two initiatives:

**National Organic Initiative (NOI):** NRCS will assist producers with installation of conservation practices on agricultural operations related to organic production. Producers currently certified as

organic, transitioning to organic, or National Organic Program exempt will have access to a broad set of conservation practices to assist in treating their resource concerns while fulfilling many of the requirements in an Organic System Plan.

**Sage Grouse Initiative Cropland Seeding:** Loss and fragmentation of sage-grouse habitat is the primary threat to sage-grouse. Through this initiative, landowners can work with NRCS to seed cropland in sage-grouse habitat back to perennial species to improve the connectivity for not only sage-grouse, but the many other species that depend on large, intact landscapes.

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For the second year in a row, Trump's budget proposes to slash USDA's Economic Research Service, but this time includes \$15 million to pay for moving most of the agency's staff out of the national capital region, a goal Agriculture Secretary Sonny Perdue announced after the FY19 budget was released. The ERS budget would be cut \$87 million this year to \$61 million, including the relocation allowance.

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# OPPORTUNITIES

## The Montana Conservationist

### Grants

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

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

#### Water Quality Mini-Grants

SWCDM is seeking to fund local education and outreach efforts in Montana to address water quality issues resulting from nonpoint source pollution. Mini-grants of up to \$3,000 are available and SWCDM has approximately \$14,025 to award for this cycle. The deadline to apply is **March 27, 2019** by 5 p.m. [More Info](#)

#### Aquatic Invasive Species Grants

DNRC offers state-funded grants for the prevention & control of aquatic invasive species. Activities include but are not limited to aquatic invasive species: (1) outreach and education; (2) prevention; (3) surveying and monitoring; (4) control; (5) treatment demonstration, research or design; or (6) other related actions. Applications due **March 28**, 5 pm. [More Info](#)

#### Sage Grouse Program Grants

The Montana Sage Grouse Oversight Team (MSGOT) has opened its second grant application cycle for conservation projects to benefit sage grouse and sage grouse habitat. Priority will be given to projects involving partnerships between public and private entities, as well as projects that leverage matching funds. Pre-proposals due **March 30**. [More Info](#)

#### Network for Landscape Conservation Catalyst Fund

The purpose of the Landscape Conservation Catalyst Fund is to help accelerate the pace and effective practice of place-based, collaborative landscape conservation across the United States. The Fund specifically seeks to build critical capacity and forward momentum in landscape conservation partnerships by supporting the key building block activities and collaborative processes that move partnerships forward. Informational webinars scheduled for March 22 and March 28. Pre-proposals due **April 26**. [More Info](#)

#### Water Project Grant Opportunity

Sweet Grass Conservation is now accepting applications for a new round of water project funding. Conservation districts may apply for funds to be used for irrigation related projects, stream restoration, and other activities that result in improvements to water quality and quantity and to aquatic habitat. **Applications due May 1**. Projects must be completed by November 30, 2019. Contact Guelda Halverson, Guelda.halverson@mt.nacdnet.net, for more info.

#### 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](#)

### Events, etc

#### Webinar: Understanding the permissive mill levy

DNRC has scheduled a webinar for those of you who may have questions about what the Permissive Levy is. With this webinar, you'll gain knowledge on what the Levy can be used for, estimate what it'll cost the taxpayer, the steps necessary to implement it as well as a discussion on how it can benefit your CD. **March 27**, 9:30-10:30am. Email Karl Christians, kchristians@mt.gov. [GoTo Meeting](#)

#### Webinar: Navigating the FY20 Admin Grant

DNRC has scheduled a webinar, **March 28**, at 9:30 am, for navigating the FY20 Admin Grant application that was recently sent out. Email Karl Christians, kchristians@mt.gov for more info.

# OPPORTUNITIES

## The Montana Conservationist

### Invasive Annual Grass Workshop, Columbus

Hosted by Stillwater Conservation District, Jane Mangold, MSU Rangeland Weed Extension Specialist, will present on four major invasive annual grasses, including Ventenata and Medusahead, that are threatening Montana's rangeland and pastureland. **April 3.** [More Info](#)

### Webinar: Aligning Soil & Human Health

Participants will join the Aligning Soil and Human Health webinar to learn how the four "C's" that connect soil and human health--Climate, Critters, Cuisine and Community--and identify farm-level practices that promote health for humans and the environment. **April 9.** [More Info](#)

### Judith Basin Range School

Johann Zietsman, world renowned speaker, will be presenting at a 2-day seminar on Livestock Management and Grazing. Zietsman will be sharing proven concepts for selecting the best adapted genetics with ultra-high-density grazing. **May 29 & 30,** Hobson, MT. For info call 566-2311 x107.

## Jobs

### Gallatin CD Administrator

The Gallatin CD is searching for an impeccable self-starter who would provide administrative, communications, and technical services managing the daily operations of the Gallatin Conservation District. If you have a passion for conservation work, come and join our team! Closes **March 28.** [More Info](#)

### Lower Musselshell CD Administrator

Lower Musselshell Conservation District in Roundup, MT is seeking applicants for the position of district administrator. Part time position, 24 hours/week, flexible schedule. Knowledge of multiple computer programs and accounting experience. Start at \$12/hour. Email donna.pedrazzi@mt.nacdnet.net for more info.

### Invasive Species Action Network Special Projects Coordinator

Invasive Species Action Network is seeking to make an impact in areas of business and conservation to show that every small positive behavior change is a victory in the fight against invasive species introduction and spread. This position requires a dual set of skills. The first area of work is coordination of special groups and events. The second area of work is professional management and scientific services. **Closes March 31.** [More Info](#)

### DNRC Resource Development Bureau Chief

The Resource Development Bureau Chief is responsible for the development and administration of the RRGL and RDG grant programs under direction of the Deputy Administrator, Office of Resource Finance within CARDD. Duties include developing program goals and policies; outreach and advocacy; developing and improving partnerships; and managing the budget, six staff and operations of the bureau. **Closes April 5.** [More Info](#)

## Coming Up

### March

25	<b>MACD Executive Committee Conference Call</b>
27	Water Quality Mini-Grants Application Deadline
	Permissive Mill Levy Webinar
28	FY20 Admin Grants Webinar

### April

1	Invasive Annual Grass workshop, Columbus
8	<b>MACD Board Conference Call</b>
9	Aligning soil & human health webinar
18	Bridger Plant Materials Center Board of Managers meeting
22	<b>MACD Executive Committee Conference Call</b>
25	223, Mini Education, and District Development Grants Deadline

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

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

## Scholarship opportunities for high school and college students

### Montana Range Days Scholarships

Montana Range Days, Inc. is an annual event that celebrates the importance of range and provides opportunities for learning about range and range management. To encourage young people to continue with education and careers in Range Science and related fields, three scholarships are offered through Montana Range Days. Scholarships are available to graduating seniors in high school or college students who are continuing their education. **3 Scholarships of \$1000 each are available. The application deadline is April 30.** For more information & to apply, visit [montanarangedays.org](http://montanarangedays.org)



### Montana Farm Bureau offers scholarships

**MFB Foundation CYF&R Scholarship.** One \$1,000 scholarship to a current member of the Collegiate Chapter of Young Farmers and Ranchers at MSU Bozeman, UM Western or Miles Community College.

**Bernard Greufe Honor Scholarship.** This \$1,500 scholarship assists Montana high school students in paying for higher education. The award is not limited to students seeking a degree or career in agriculture.

**Future of Agriculture Honor Scholarship.** The purpose of this \$1,500 scholarship is to assist students toward the completion of a degree in a field pertaining to agriculture.

**The Montana Farm Bureau Federation Scholarships:** Two \$1,500 scholarships are available through the sponsorship of the MFB Women's Leadership Committee. The scholarships are available to young men and women. The applicant must be an incoming college freshman and must be a paid Montana Farm Bureau member.

For more information and scholarship applications, visit [www.mfbf.org](http://www.mfbf.org) or call 406-587-3153.