

THE MONTANA CONSERVATIONIST

News from Montana's Conservation Districts

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Montana Youth Range
Camp boasts 21
attendees

September 28, 2017

Volume 10 Issue 19



Powder River Supervisor honored for 50 years of service

On September 21, 2017 the Area 2 Conservation Districts all met in Ekalaka, MT. Ron Talcott was presented with the President's Award and a plaque by Jeff Wivholm, President of the Montana Association of Conservation Districts (MACD).

Ronald Talcott received the President's Award because he has gone above and beyond the duties of a supervisor for 50 years. This takes a huge time commitment. He became a supervisor in 1967 and is a rock and a wealth of knowledge for Powder River Conservation District. He reads and studies all the district emails and information and makes common sense decisions based on experience and information. He goes out of his way to help the administrator with her duties or answer any questions concerning the district. Ron was instrumental in getting the district's scholarship program started. 35 scholarships have been given out in the last 10 years. Ron rarely misses a district monthly meeting or an annual Area II meeting. He has a good working relationship with the NRCS and FSA employees.

SOIL & WATER
CONSERVATION DISTRICTS
of MONTANA



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

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This newsletter is made possible by a
grant from DNRC.

Boat inspection hours changed for fall, 50,000 boats inspected this summer

From the Billings Gazette: Labor Day weekend marked the end of the height of boating season in Montana, and in response decontamination stations at Tiber and Canyon Ferry reservoirs are moving to fall hours.

Some highlights from this boating season include:

- More than 50,000 watercraft have been inspected. Fifteen vessels have been intercepted with mussels so far this season.
- More than 789 plankton samples have been collected in the state so far this season for mussel early detection analysis. No verified mussel larva or adult mussels have been detected in the waters of Montana this season. Sampling and analysis will be ongoing through the fall.
- This fall shoreline surveys for adult mussels will be conducted at Tiber, Canyon Ferry and other waterbodies around the state for AIS early detection.
- Mussel sniffing dogs from Alberta will assist again in October at Tiber and Canyon Ferry in an attempt to identify adult mussels.
- Enforcement has issued more than 80 citations this year related to invasive species violations.

[READ MORE](#)



Smith River float permit winners will be asked to help document algae on their adventures

From Helena IR: As letters go out next year to the winners of highly coveted float permits, they will come with a request to download a yet-to-be-completed cellphone app. Once downloaded, floaters may take photos of algae blooms and upload the data to state officials after takeout.

The Montana Department of Environmental Quality and Montana Fish, Wildlife and Parks will then have the data as the agencies study a recent increase in reports of algae in the river.

"This is a new one for us as we're really looking at how to retool our citizen engagement, and getting people on the ground," said Eric Urban, water quality planning bureau chief with DEQ. "It's pretty remote, so getting on the ground and seeing it ourselves poses some challenges."

The Smith, known for its picturesque canyons, is Montana's only permitted river with about 8,000 lottery applications for about 1,500 peak

season permits. The 59-mile float goes from Camp Baker near White Sulphur Springs, to Eden Bridge south of Great Falls.

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Techniques to reduce nitrate leaching

by Clain Jones, Montana State University Soil Fertility Extension Specialist

September 2017

Nitrate leaching is a health and economic concern in agricultural areas throughout Montana. There are several agronomic practices available to minimize nitrate leaching.

Nitrate comes from fertilizer or decomposition of organic matter and manure. It is highly soluble and easily lost to leaching (movement below root zone) as water moves through the soil.

Sandy or shallow soils have higher leaching potential than clay, loam or deep soils. Irrigated fields have higher leaching potential than dryland cropping. Irrigation should be managed to meet the crop need, but not exceed the soil's ability to hold water ("field capacity").

Dryland systems are susceptible to leaching when fall, winter or early spring rains exceed field capacity, since there is little water by plants during these periods.

In dryland cropping systems, reducing fallow is likely the best option to reduce downward water movement and nitrate leaching, since fallow fields have no crop in place to take up water or nitrate. Replacing fallow with annual legumes ("pulses") such as field pea can substantially reduce nitrate leaching. In addition to using soil water, annual legumes are good

scavengers of available nitrogen and need little or no nitrogen fertilizer.

Cover crops can catch nitrogen in systems with high nitrogen inputs and extended overwinter/early spring bare periods (e.g., corn, sugarbeets, home or market gardens).

Fall-planted crops are ideal following fallow to take up some nitrogen before spring rains. Perennials or deep rooted annuals use water and nitrogen that may escape shallow rooted crops.

While alfalfa is an excellent scavenger of soil nitrate, the large supply of nitrogen remaining after alfalfa is terminated can release nitrate. To avoid leaching loss of this nitrate, fields should be recropped rather than fallowed after alfalfa termination, and credit the N contribution from alfalfa in fertilizer nitrogen rate calculations to avoid over fertilization. Increasing annual crop diversity and including perennials is more important in tilled than no-till systems.

Annual soil testing and realistic yield goals help avoid over-fertilization. Ideally, conventional nitrogen fertilizer is applied from seedling to late tillering stages in cereal grains and seedling to early branching in oilseeds.

Fertilizer topdress applications should be timed based on plant demand or growth stage. By matching nitrogen rates to plant needs and using split applications, there is less risk of left-over nitrogen in the soil. Nitrogen

release from legume crop residue better matches the timing of crop growth and nitrogen uptake than conventional nitrogen fertilizer and results in less nitrogen leaching.

Often, most nitrate leaching comes from only a fraction of the total area of a field. Areas of a field that are limited by factors other than nitrogen should receive just enough nitrogen to meet that area's production potential.

A deficiency in soil water or other nutrients, such as phosphorus, potassium, or sulfur, can result in less crop growth, less water uptake and more nitrogen left in the ground, demonstrating the importance of soil testing and variable rate nitrogen application to reduce leaching.

Many agronomic management practices can be used to minimize nitrogen leaching losses and potential groundwater contamination.

The Montana State University soil fertility extension website (<http://landresources.montana.edu/soilfertility/>) has resources to help calculate fertilizer rates and a Soil Scoop with more detailed information on nitrogen leaching.

DNRC cuts interest rates on rangeland loans

Montana ranchers considering rangeland improvement projects received a boost this month, when the Montana Department of Natural Resources and Conservation (DNRC) reduced interest rates for Rangeland Improvement Loans from 3 percent to 1.5 percent.

"It's been a challenging summer for our farmers and ranchers," said Stacey Barta, Rangeland Resources Program Coordinator with the Montana Department of Natural Resources and Conservation (DNRC). "The state's Rangeland Resources Executive Committee requested the interest rate reduction to support

producers dealing with the impacts of wildfires and drought."

Started in 1979, the low-interest loan program provides added incentives for producers to undertake rangeland improvement and development projects. Water storage, fencing, and stock water tanks are a few of the more common improvements. In addition to benefits for the ranch operation, Barta said the projects often improve streams and riparian areas and rangeland health, which in turn benefit wildlife, combat invasive weeds and reduce soil erosion.

[READ MORE](#)

Biologists study selenium effects on birds

From the Free Press: Two biologists are currently studying North America's only aquatic songbird, the American Dipper, and took a class from The Fernie Academy out for a field-lesson in ecotoxicology.

The American Dipper was found nesting under a bridge in Fernie a few months ago, among many other locations on rivers and creeks throughout the Elk Valley. It is being studied and used as a bio-indicator for stream conditions because of its close relationship with the water and resident status. For these reasons, the bird would be greatly affected if the quality of water were to change.

Helmi Hess, a masters student from UBC working through

Environment and Climate Change Canada is the principal field worker for this project. Martin Pilon is Hess's field tech, and is new to the project this season.

Hess is currently studying if, and how the bird has been affected by rising selenium levels, comparing data to results of an earlier study conducted in the Elk Valley in the early 2000s.

On Friday, Hess and Pilon took the class to the place where an American Dipper resides, close to the Fairy Creek passenger bridge. There, they took the class through an in-depth study about the aquatic songbird, and how the water plays such a vital role in its existence. They also talked about the history of the surrounding waterways. [READ MORE](#)

Climate report says Montana must adapt to warmer, drier seasons

From the Bozeman Daily Chronicle: Montana's average temperatures are increasing, mountain snowpacks are declining, large wildfires are more frequent, and all that is expected to continue in the coming decades, according to a study of climate change within Montana released Wednesday.

The Montana University System's Institute on Ecosystems has released the Montana Climate Assessment, a statewide report that looked at climate trends and their impacts on Montana's water, forests and the agriculture industry. A group of scientists spent two years working on the assessment to show people what has happened and what may happen as a result of climate change.

During a news conference Wednesday, Cathy Whitlock, a Montana State University professor and one of the authors, said the assessment is meant to help Montanans "plan, make wise decisions and become more resilient" in the face of climate change.

It's the first in a planned series of these assessments, and the authors will travel the state over the next year to discuss the findings. They plan to expand their work in the future to cover other topics, like the impact of climate change on tourism and recreation.

[READ MORE](#)

Grants

223, etc. Grant Deadlines

Deadlines for 223, mini-education, and district development grants from DNRC for FY 2018 are as follows: **October 18, 2017, January 16, 2018, April 25, 2018.** [Grant Info](#)

Water Quality Mini Grants Now Open

SWCDM is seeking applications for mini-grants of up to \$3,000 to fund local education and outreach efforts addressing nonpoint source pollution and water quality issues. A total amount of approximately \$10,500 is available for grant funding this cycle. Due September 29. [More Info](#)

Noxious Weed Trust Fund Grants

The MT Department of Agriculture is now accepting applications for Noxious Weed Trust Fund grants and Emergency grants for FY18. Funding is available for noxious weed research projects, state and community education/development projects, and local cooperative - landowner cost share. Applicants may apply for funding up to \$75,000 per project. Applications for emergency grants are due Nov. 1, regular grants due Jan. 6. [More Info](#)

Environmental Education Teacher Professional Development Grants

The Cedar Tree Foundation invites organizations that provide professional development opportunities for teachers who are working in the school systems to communicate urgency and cultivate stewardship around

environmental problems to submit a proposal for funding. [More Info](#)

Ranching For Rivers

Applications are now being accepted for new *Ranching for Rivers* projects, a program that provides cost-share to landowners to better manage the riparian resources on their land through riparian fencing and other infrastructure (hardened crossings, offsite water, etc). The first round of application reviews will begin Sept 22 and continue on a rolling basis until Oct 9. More info and application available at <http://swcdm.org/programs/r4r>

Sustainable Forestry Initiative Conservation and Community Partnerships Grant

Grants are provided in the following two categories: Community Grants ranging from \$5,000 to \$10,000 support projects that connect communities to forests and educate the next generation of future forest leaders. Conservation Grants ranging from \$15,000 to \$30,000 support projects that establish methodologies to demonstrate the conservation-related values of SFI-certified forestlands. Due Oct. 10. [More Info](#)

Temper of the Times Environmental Marketing Grants

Grants of up to \$15,000 will be awarded to nonprofit organizations to underwrite the costs of advertising designed to promote the conservation and restoration of native wildlife, plants, and ecosystems in the United States. Due Dec. 15 [More Info](#)

Events, etc

Supervisor & Employee of the Year Awards

MACDEO is calling for nominations for the annual Conservation District Supervisor of the Year and Employee of the Year Awards. For forms and criteria, email Carie Hess, petroleumcd@macdnet.org.

JOIN US IN BOZEMAN!

MACD'S Annual Convention will be held in Bozeman, November 14-16 at the Holiday Inn. More info online: macdnet.org/convention



Coming Up:

October

3

Sanders County
Watershed Festival

Organic Agriculture
Webinar Series

4

Society for Range
Management Annual
Symposium, Bismark

Drought and Soil Health
Workshop, Glasgow

9

MACD Board Conference
Call

13-15

Young Ag Leadership
Conference, Helena

23

MACD Executive
Conference Call

Have an event to share?

Visit macdnet.org/calendar to
add your event to our list!

2017 Montana Youth Range Camp

From Stacey Barta: 2017 Montana Youth Range Camp was co-hosted by Cascade and Upper Musselshell Conservation Districts at the McFarland White Ranch near Two Dot July 10-14. It was a spectacular setting for the 5 day event.

Located at the base of the Crazy Mountains on the far north end, the views were awesome. The ranch also provided a diverse ecosystem, from cottonwood galleries to forest. 21 campers shared 2 barn lofts for sleeping quarters, ate under a cook tent, went for hoot owl hikes at night, and got an up close and personal tour of the Gordon Butte Hydro Wind Project. Campers received hands on classes in hydrology, soils, rangelands, weeds, and wildlife.

The beginning of camp the kids are presented with a resource problem by the hosting ranch. At the end of the week, the campers present solutions to the hosting ranch on solutions to the problem.

Awards are given for top presentation as well as top placers in the plant contest, which campers are tested on a plant line every morning. The top placers receive the all coveted buckle. In the end, Montana Youth Range Camp is about keeping the next generation engaged in keeping Montana's largest natural resource healthy and productive for the future of everyone.

Next year's Montana youth Range Camp will be at the Eastern Montana Bible Camp, co-hosted by Richland and Dawson Conservation Districts July 8-11. Check out the web site as the next April for more information <http://dnrc.mt.gov/divisions/cadd/camps>.

