THE MONTANA CONSERVATIONIST

News from Montana's Conservation Districts

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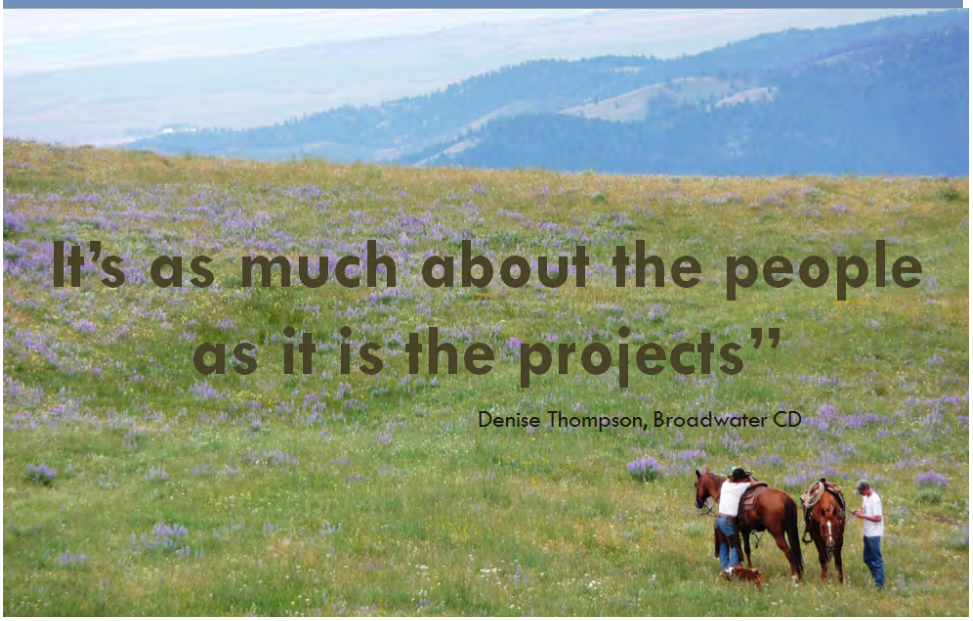

Tiberi, Broadwater CD win Watershed Stewardship Awards

MACD is proud to announce that our own Jeff Tiberi and Broadwater Conservation District were selected as recipients of the 2017 Watershed Stewardship Award recipients, presented by Montana Watershed Coordination Council.

The purpose of the award is to recognize and honor individuals and groups providing innovative, locally led approaches to conserving, protecting, restoring and enhancing watersheds in Montana. Watershed Awardees inspire others to conserve, protect, restore and enhance Montana's watersheds. This is quite an honor, and speaks to the dedication of the conservation district community in protecting watersheds.

The awards will be presented on Watershed Day at the Montana State Capitol Building in the Rotunda on March 20th at 2:00 pm. There will also be a celebratory reception at 5:30 at the Montana Historical Society.

SOIL & WATER CONSERVATION DISTRICTS of MONTANA

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

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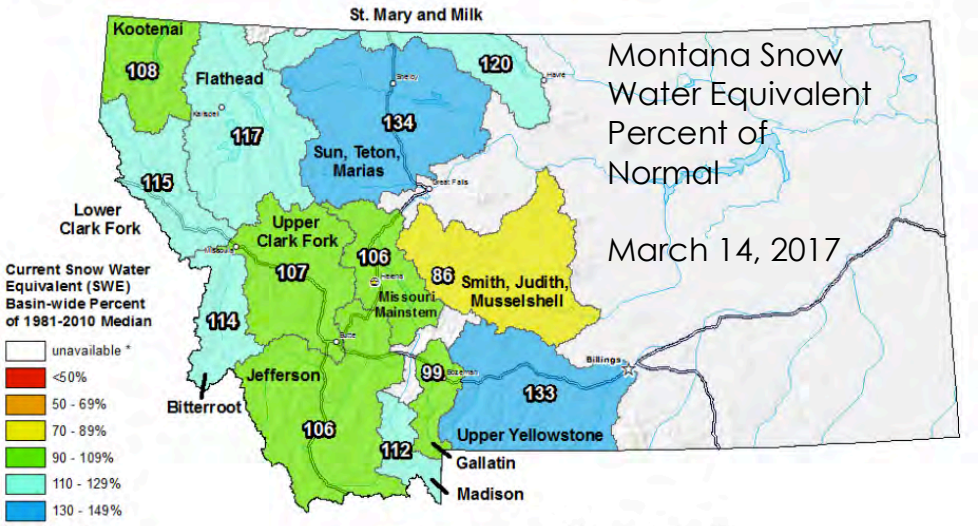
Weed Post: Suppressive Bacteria for cheatgrass now on market; research needed

By Jane Mangold: The naturally occurring soil-borne bacteria Pseudomonas fluorescens was observed several decades ago affecting growth of winter wheat in eastern Washington. Since then, Dr. Ann Kennedy, a research scientist with USDA-Agricultural Research Service in Pullman, WA, has been isolating and testing strains of P. fluorescens that target specific weedy grasses. Three strains are being developed as bio-herbicides for cheatgrass (Bromus tectorum): D7, ACK55, and MB906.

All three strains are cold-loving organisms that are applied in fall with cool temperatures, overcast skies, and rain. Strains D7 and ACK55 stunt root growth and overall vigor of cheatgrass by colonizing intercellular spaces in grass roots and producing compounds that inhibit cellular growth in seedlings. In addition to cheatgrass, the strains inhibit growth of medusahead (Taeniatherum caput-medusae) and jointed goatgrass (Aegilops cylindrica).

Both D7 and ACK55 were initially tested and evaluated in the Pacific Northwest, Nevada, Utah, and Wyoming. To date, there are no peer-reviewed publications demonstrating effectiveness nor lack thereof in field trials in the Northern Rocky Mountain region. Montana State University is part of a statewide field study testing ACK55. READ MORE



Snowy February improves MT snowpack, spring streamflow prospects

NRCS, BOZEMAN, Mont., March 7 – February brought a notable change to the weather patterns that were experienced during the month of January, according to snowpack data collected by the USDA Natural Resources Conservation Service, Montana.

Record breaking snowfall for the month of February was experienced in northern and southern river basins of the state during the first two weeks of the month. Snow blanketed the Rocky Mountain Front at the beginning of the month, with low elevations and valleys receiving more than 3 feet of snow. Flattop Mountain SNOTEL (snow telemetry) site in Glacier National Park set a new record for February snowfall and received 12.5 inches of snow water during the month, well above the 30 year normal of 5.3 inches for February. Further south, Cooke City received copious amounts of snow, prompting the first ever "Extreme" avalanche warning for the area when Fisher Creek SNOTEL received 10.9 inches of snow water between Jan. 31 and Feb. 11. Statewide, 12 SNOTEL sites set new records for February totals, and six sites were second highest.

Lucas Zukiewicz, NRCS water supply specialist for Montana, said all basins experienced substantial improvements over the month with many now at near to above normal for March 1, and most basins are also near to above last year at this time. "There are some sub-basins that remain below normal for this date due to the late onset of snowpack this year and sub-par November and January snowfall," Zukiewicz said. "One major basin is still recovering from near record low early season snow; the Smith-Judith-Musselshell will be reliant on spring precipitation to make up ground before spring and summer runoff."

February typically isn't one of the "big" snow months for Montana, he said, but this year proved otherwise. READ MORE

NACD releases nine principles for 2018 Farm Bill

To develop its policy priorities for the next farm bill, NACD created a task force. After conducting a survey – which received over 500 responses – the task force distilled the needs of NACD's member districts and state associations into nine principles.

PRINCIPLE 1: The Locally-Led, Voluntary Incentive-Based Conservation Model Works

NACD strongly believes in the locally-led, voluntary, incentive-based model for addressing natural resource concerns; not a one-size-fits-all regulatory scheme. Farm bill conservation programs should be locally-led and resource-driven with sufficient flexibility to direct funding to local priorities and concerns. Program priorities should be tailored to the natural resource needs of states and local areas. Local Conservation District Boards, Local Working Groups, and State Technical Committees should help identify local needs to maximize conservation benefits.

PRINCIPLE 2: No Further Cuts to Conservation Title Funding in the Farm Bill

Strong mandatory funding levels authorized in the farm bill are fundamental to not only putting conservation on the ground, but for dealing with, and ultimately avoiding, the need for environmental regulations. The Conservation Title (Title II) took a 10 percent funding cut in the 2014 Farm Bill, and continues to be cut annually during the appropriations process. Every dollar cut from mandatory conservation programs leads directly to less conservation on the ground and only increases the natural resources concerns and the probability of regulatory hassles. Each farm bill conservation program plays a significant role in addressing natural resource concerns. From the importance of the Environmental Quality Incentives Program (EQIP), to the Small Watershed Rehabilitation Program, robust mandatory funding is critical. NACD believes, at a minimum, no further cuts should occur in the next farm bill to the Conservation Title, and if funds are available, to increase its funding.

PRINCIPLE 3: Commitment to Working Lands

Landscapes across the nation vary in their resource concerns, and farm bill conservation programs must continue to meet the specialized needs of the agricultural producers who work these lands. Given the projected increase in the world's population, programs must provide assistance to implement or maintain conservation practices on working lands that produce much needed food, fiber, and fuel while at the same time protecting our natural resources.

PRINCIPLE 4: Technical Assistance and Conservation Planning are the Bedrock of the Conservation Model

Technical assistance and conservation planning are critical tools and the first steps in evaluating producers' resource needs. NRCS, along with conservation districts, helps agricultural producers plan and apply conservation practices on the land. They develop conservation plans; plan, design, lay out, and install conservation practices; and inspect completed practices for certification. Conservation Technical Assistance (CTA) is vital to ensuring producers know that they are putting the best conservation practices on their land to meet their individual resource needs.

PRINCIPLE 5: Agricultural Operations Need to be Economically Viable

In order for the locally led, voluntary, incentive-based model to be successful, NACD believes agricultural operations need to have a strong safety net, robust marketing opportunities, and supportive farm policy. Without viable agricultural operations, districts will not be able to help install conservation practices on the ground. The farm bill must work for each facet of the nation's diverse agriculture industry.

PRINCIPLE 6: Farm Bill Education and Outreach is Necessary

NACD believes conservation education is a necessary tool to drive more conservation adoption. If producers are not aware of the tools available to them, then the adoption of conservation practices will suffer. This is especially the case with beginning, socially disadvantaged, and limited resource farmers. READ MORE

A splash of river water now reveals the DNA of all its creatures

Quick and inexpensive DNA sampling of a river, stream, or lake can now divulge what fish or other animals live there. This rapidly growing environmental DNA, or eDNA, technology is proving to be a game-changing conservation tool.

From Yale Environment 360: A U.S. Forest Service technician heads out to the Blackfoot River in western Montana and pumps water through a small filter, five liters every time she stops. In a single day, she gathers dozens of samples, bringing back to the lab each of the fine mesh filters that the river water passed through.

The filters contain DNA for species — whether brook trout, stone flies, wood ducks, or river otters — that have swum in that stream in the last day or two, up to a kilometer above the sample site. Every insect, fish, or animal continually sloughs off bits of its DNA — in its feces or from its skin — and just a single cell of the invisible, free-floating genetic material can tell researchers which species are present in a river or other water body.

Environmental DNA, or eDNA, is at the center of a brand new kind of fish and wildlife biology, and it is such a powerful tool that it's transforming the field. eDNA was first used to detect invasive bullfrogs in France a decade ago. It was used in North America for the first time in 2009 and 2010 to detect invasive Asian carp in and around the Great Lakes. Since then, its use has grown exponentially, primarily in marine and freshwater environments.

"You can't manage a species if you don't know where it is — even 80-pound Asian carp, because you can't see them underwater," said Cornell University biologist David Lodge, who participated in the Asian carp study. "So eDNA is particularly powerful in aquatic systems."

READ MORE

Canons, lasers, radar planned to keep birds from Berkeley Pit

From the Missoulian: After thousands of snow geese died in the toxic water of a former open-pit mine in Montana last fall, the companies responsible for the pit are bringing out the big guns. Literally.

Montana Resources and BP-owned Atlantic Richfield Co. are proposing to use four propane cannons on tripods that would be triggered by long-range motion sensors as one additional measure to scare birds away from the Berkeley Pit during the spring migration.

Also in the plan are radars, air and water drones and strategically positioned lasers that would create a "net" across the pit and deter the birds from landing in the metal-laden water.

The companies want to test those and other technologies during the spring migration period that began Wednesday to prevent another mass bird death like the one that happened in November. Then, 3,000 to 4,000 snow geese died after a snowstorm drove them to seek refuge in the metal-laden water, and the deterrent technology already in place wasn't enough to keep them away.

"It gives us much greater capabilities than we previously had to affect the outcome if another unprecedented event such as this occurs in the future," said Mark Thompson, Montana Resources' environmental affairs manager, of the proposed technology.

The plan is outlined in a memo submitted last month to federal environmental and wildlife officials, which must approve it. If the measures are successful, the companies plan to incorporate some or all of the new technology into their permanent program to keep the birds out of the Berkeley Pit.

The open-pit copper mine is now filled with 50 billion gallons of toxic water drained from the thousands of miles of underground tunnels that lie beneath Butte. READ MORE

Grants

223, etc. Grant Deadlines

Deadlines for 223, mini-education, and district development grants from DNRC for FY 2017 are as follows: **July 29**, 2016; **October 14**, 2016; **January 14**, 2017; and **April 26**, 2017. Grant Info

Regional Conservation Partnership Program

NRCS is asking potential conservation partners to submit project applications for federal funding through the Regional Conservation Partnership Program (RCPP). Up to $252 million is available to locally driven, public-private partnerships that improve the nation's water quality, combat drought, enhance soil health, support wildlife habitat, and protect agricultural viability. Pre-proposals: April 21. More Info

Ranching for Rivers Project Funds

MRCDC & SWCDM are pleased to announce that another round of funding is available through the Ranching for Rivers program, which is a cost-share program to help ranchers with riparian pasture/fencing projects.

Events

DNRC hosts webinars for permissive mill levies & admin grants

Montana DNRC CARDD is hosting webinars for CD administrators to learn more about permissive mill levies and submitting administration grants.

Permissive Levy: the Basics
March 28, 1:30 – 3:00 pm.
https://global.gotomeeting.com/join/856086917
Working through the Admin Grant FY2018
March 30, 1:30 – 3:00 pm.
https://global.gotomeeting.com/join/399032925
Admin Grants: wrapping up the Application
April 20 1:30 – 3:00 pm.
https://global.gotomeeting.com/join/727292861

Please email Karl Christians for more info on these webinars.
kchristians@mt.gov

Grant Writing Workshop, Billings

MSU Billings is hosting a grant writing workshop, March 28 & 29. More Info

Grant Writing Seminar, Missoula

The University of Montana is hosting a grant writing seminar, by the Institute for Strategic Funding Development, April 4-5. More Info

Applications for Armed to Farm Training

The National Center for Appropriate Technology (NCAT) is now accepting applications from military veterans who want to attend our weeklong **Armed to Farm (ATF) Training.** ATF allows veterans and their spouses to experience *sustainable, profitable small-scale* farming enterprises and explore agriculture as a viable career. Training is June 12-16 in Arkansas. Applications due April 28. More Info

Jobs

Seasonal Jobs Open for Mussel Response Inspection & Decontamination Stations

MT FWP is recruiting additional aquatic invasive species inspection and laboratory technicians for the upcoming season. The job opportunities are part of the state's on-going effort to battle the risk of spreading invasive mussels to other areas in the state.

The seasonal jobs, which offer competitive pay and benefits, will generally run from April through October.

More Info

District Administrator, McCone Conservation District

McCone CD is hiring a part-time district administrator, based in Circle MT. Flexible hours, wages DOE.

More Info

Have something you'd like to see in TMC? Submissions are due every other Friday at 5:00 (visit our website for a calendar), and should be sent to tmc@macdnet.org.

Coming Up:

March

17 MACD Dues Committee Mtg (Call)

20 Watershed Day & Awards, MT Capitol

21 MACD District Operations Committee Mtg (Call)

National Ag Appreciation Day

23 MACD Education Committee Mtg (Call)

27 MACD Executive Committee Conference Call

April

4-5 High Divide Workshop, UM Western

10 MACD Board Conference Call

17-18 Watershed Restoration Plan Training, Missoula

Have an event to share?
Visit macdnet.org/calendar to add your event to our list!

Soil Health at any Scale: High Tunnels

From Windham County, CT NRCS: Woodstock Orchards in Windham County, Conn. is a diversified, 100-acre orchard and vegetable farm. In 2012, the farm's owner, Doug Young, attended a soil health workshop where he watched, along with his farming colleagues, a rainfall simulation demonstration.

Doug looked on with particular interest at one of the soil samples used in the demonstration—it was from his conventionally tilled vegetable fields. During the demonstration, Doug saw runoff from his soil sample fill the jar with a dark brown liquid – indicating that his soil was not as healthy as it should be. He saw his soil was failing him, right before his eyes.

Doug and his son, Eric, decided it was time for a change. Almost immediately after the workshop, Doug and Eric converted to no-till. And, with funding from NRCS' Conservation Innovation Grant program, they obtained a no-till transplanter and roller/crimper to terminate their cover crops. They even took some fields out of production and used cover crops to help improve the health and function of the soil in those areas.

Through NRCS' Environmental Quality Incentives Program, they installed a high tunnel and are using soil health practices to regenerate the soil inside it. Their high tunnel tomato-cropping scenario follows the principles of soil health and, says Doug, is producing higher-quality tomatoes than before.

Starter tomato plants are transplanted without tilling the soil by using a trowel tool and a little hand labor. The Young's use a heavy straw mulch layer for weed suppression, compaction alleviation, and to conserve soil moisture. They also use a diversified cover crop to maximize species diversity in the system and let the plants do much of the work for them. After just a couple of years, soil organic matter, friability, and compaction have improved and their water infiltration rates are higher.