Montana NRCS Conservation Update

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USDA NRCS
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Natural Resources Conservation Service

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Helping People Help the Land

Conservation Continues

Joyce Swartzendruber, State Conservationist

Greetings from Bozeman,

At this writing we are wondering what the future brings to conservation programs since the House of Representatives did not pass the farm bill that had been approved by the House Ag Committee. Could there be an extension of the 2008 bill; or might the House vote to approve the Senate bill; or will we revert to the 1940s and see how everybody fares under those old rules? I am hopeful that there will be a resolution before September 30, but there seem to be many hurdles to get over before a House bill and the already-approved Senate bill can get to conference committee, back to each house for final approval, and signed by the president.

On a much brighter side, our employees are rock stars in the conservation world; and in spite of Washington, D.C. turmoil they continue to give their best to their jobs and to our customers. They keep taking on the work and providing valuable conservation technical advice and assistance to farmers and ranchers across Montana. They help conservation districts at educational events and field days; they work long hours to get program applications ready by deadlines; they take on new student trainees to bring more conservationists into the NRCS fold; they process payments, maintain SNOTEL sites, purchase supplies and equipment, balance budgets, write conservation plans, answer phones, map soils, write bulletins, judge Envirothon, demonstrate the rainfall simulator, host tours, design practices, and process travel vouchers. Life goes on. Our employees are in their third year without a cost-of-living raise. We've had our authority to give awards to them cancelled this year, so somehow we need to thank them for everything they do. Treat them well. These people will fall on their swords for NRCS and conservation and agriculture. I am proud of them every day and I hope you are too.

Grazing for Weed Control: Vanishing Whitetop

Ben Montgomery,
District Conservationist, Ronan

Andrea Burton, NRCS Soil Conservation Technician, examines a thriving patch of the invasive weed species, whitetop, in Jake Yoder's Lake County, Montana, pasture before grazing. May 20, 2013.

Jaime Gordon, NRCS student intern, stands in the same pasture two weeks later. Cows aggressively grazed the whitetop under Yoder's new High Stock Density grazing management system and didn't ignore it as they had under a more conventional system. June 4, 2013.

Now you see it, now you don't. That's the story with the invasive and difficult-to-treat weed known as whitetop on Jake Yoder's pastures. With NRCS assistance, Jake Yoder implemented a High Stock Density grazing system this spring on his pastures. Historically, Jake has hayed or grazed his pastures more conventionally. Under the conventional system, livestock shunned the weeds and never utilized them. As a result, numerous weed species have encroached and increased in prevalence within the pastures. One weed in particular, whitetop, has increased in scale considerably and has caused Jake considerable concern. After Jake implemented his new grazing system, the livestock utilized the whitetop heavily and nearly eliminated all seed development this year! The results are jaw-dropping, to say the least.

Jake has begun dividing his larger pastures into two-acre paddocks using temporary electric fencing. He rotates his 60 cow/calf pairs through the paddocks every two days. Under the new system, the livestock no longer ignore the less-palatable species. Instead, the livestock have begun to utilize the weeds. One would expect livestock to utilize weeds if forage was limited. However, that is not the case here. An examination of the pasture shows fairly uniform utilization of all plant species, with no single species over-utilized. For example, there are numerous orchard grass and meadow brome plants with seed heads standing directly within the grazed whitetop patch! By increasing his stock density, Jake has increased the competitiveness of his livestock and decreased their grazing selectivity. The results thus far have been spectacular.

In early June, a group of local producers visited Jake's pasture during one of Lake County's bi-weekly Pasture Walks. The NRCS office in Ronan, Montana, has organized Pasture Walks in an effort to promote improved pasture management within the local agricultural community. Walks are held every other week in evenings throughout the growing season. Each Pasture Walk visits a different landowner's property and walks the pasture(s) as a group. The Pasture Walks provide an opportunity for landowners to come together in a low-stress, idea-sharing environment in order to facilitate improving pasture management and associated forage yields, quality and other issues.

During the Pasture Walk held at Jake Yoder's property, the group was astounded at the level of whitetop utilization. Nobody within the group had ever seen anything like it. Under a conventional grazing system, livestock would have completely ignored the whitetop, resulting in a heavily-grazed pasture dotted with patches of ungrazed whitetop. When the Pasture Walkers stood in the middle of the now-grazed whitetop patch and looked at pictures showing the same patch in it's "before grazing" condition, most participants couldn't believe what they were seeing. The local MSU Extension agent and other subsequent visitors to the site were just as amazed at the transformation. Successes like these continue to build confidence that improved management of tame pastures can pay significant dividends for producers, natural resources (including soil health) and communities.

Women Stepping Forward for Ag

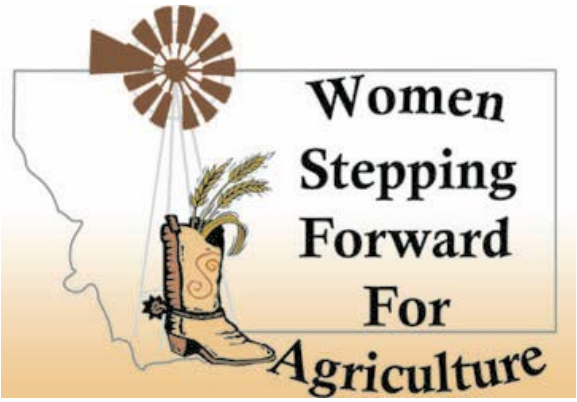
Registration has opened for the 13th annual Women Stepping Forward for Agriculture Symposium in Miles City, Montana, on September 17-19.

This symposium will give women involved in promoting Montana's agriculture the opportunity to learn about issues affecting Montana's rural agricultural communities, promote leadership development and further support women's leadership roles within those communities.

Topics for discussion include cover crops, agricultural taxation, cattle selection, oil and gas development, tour of the USDA Livestock and Range Research Lab at Fort Keogh, value added ag businesses and ag lending opportunities.

Registration cost is $60 prior to Aug. 30 (postmarked) and $75 after that date. Registration information is available at http://www.fsa.usda.gov/mt under State Events.

This year's symposium is hosted by: USDA Food and Agriculture Council, Montana Agri-Women, Montana Cattlewomen, Montana Farm Bureau Women, Montana Woolgrower Women, Women Involved in Farm Economics (WIFE), Montana Beef Council, Ag in Montana Schools, Intertribal Agriculture Council, Montana Department of Agriculture, and Montana Farmers Union.



Video Features Sage-Grouse Initiative Science

A short video produced by Montana Fish, Wildlife, and Parks highlights research being done to determine how well new grazing systems are benefiting sage grouse survival. NRCS' Sage-Grouse Initiative is using science to ensure farm bill spending on sage-grouse is making a difference. Watch the video at http://www.youtube.com/watch?v=0KkKLNY1t6w&feature=youtube.

Sage-Grouse Initiative Highlights:

- *733,872 acres of rangeland improvement will increase sage grouse hiding cover during nesting season. Additional grass cover is expected to increase sage grouse populations by 8 to 10 percent.*
- *116,954 acres of conifer removal in key nesting, brood-rearing, and wintering habitats. Removing encroaching conifers from sagebrush rangelands eliminates tall structures in otherwise suitable habitat. It is expected that birds will recolonize former habitats, increasing bird numbers.*
- *73 miles of "high risk" fence near leks have been marked or moved. Marking fences is expected to reduce sage-grouse fence collisions by 83%.*

Photo by Jeremy R. Roberts, ConservationMedia

Update on Oil Spill Prevention, Control and Countermeasure (SPCC) Regulations

Farmers and ranchers across Montana are being introduced to the Oil Spill Prevention, Control & Countermeasure (SPCC) Regulation (40 CFR 112) administered by the Environmental Protection Agency (EPA). The goal of the SPCC regulation is to prevent oil spills into waters of the United States and adjoining shorelines. A key element of this regulation calls for farmers, ranchers, and other facilities with aboveground storage greater than 1,320 gallons to have an SPCC plan.

On March 26, President Obama signed a continuing resolution (CR) that exempts all farms from the SPCC rule while the CR is effective. The implementation date for the SPCC rule had been May 10, 2013 but the CR language delays that date until October 1, 2013.

State Regulations

An owner or operator must follow the SPCC regulation to the extent that the rule changes. However, to prevent surface and groundwater contamination, the Administrative Rules of Montana (state regulations) also cover the operation and management of above-ground petroleum storage tanks. ARM 17.58.326 was founded on the International Fire Code (IFC 2009) and the National Fire Protection Association Uniform Fire Code (NFPA 2008). If petroleum tanks are not properly sited and installed, owners or operators could face insurability issues. If emergency responders are placed at risk during a farmstead fire because petroleum tanks do not follow state regulations, the owner or operator could face fines from the State Fire Marshal. If owners or operators want to qualify for a reduced deductible allowed by the statutes and rules governing the Montana Petroleum Tank Release Cleanup Fund (funded by a .75-cent tax on every gallon of fuel sold in the state), tanks must be designed and constructed in accordance with state regulations. Provisions of ARM 17.58.326 include, but are not limited to, the following:

- *Vehicle impact protection shall be provided by posts or other physical barriers (secondary containment walls) that comply with IFC Sections 312.2 and 312.3.*
- *A readily accessible disconnect switch to the fuel pumps should be located between 20 and 100 feet from the fuel dispensers/pumps.*
- *Dispensing hoses shall be equipped with an emergency breakaway device.*
- *Secondary containment shall be designed to contain a spill from the largest vessel, plus a maximum of 4.6 inches of rainfall.*
- *Tanks shall rest on concrete, masonry, piling, or steel foundations designed to minimize corrosion and differential settling. Portions of tanks or piping in contact with the soil shall be protected from corrosion in accordance with good engineering practice.*
- *Fuel tanks need to be labeled or color coded to their contents, e.g. gasoline, #2 diesel, etc.*
- *Fuel tanks must be setback from buildings at least 5 feet or 100 feet, depending on the size and fire-resistant quality of the tank.*
- *No later than Dec. 31, 2013, tanks must comply with one of the following requirements:*
    - *Overfill prevention system shall be installed with an audible or visual alarm or a tank level gauge marked at 90% capacity.*
    - *Impermeable secondary containment designed in accordance with the IFC 2704.2.2.4*

All aboveground double-walled petroleum storage tanks owned and operated by persons who want to qualify for a reduced deductible allowed by the statutes and rules governing the Montana Petroleum Tank Release Cleanup Fund must be designed and constructed

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Update on Oil Spill Prevention, Control and Countermeasure (SPCC) Regulations (cont.)

in accordance with ARM 17.57.105. Provisions of ARM 17.57.105 include, but are not limited to, the following:

- *Aboveground storage tanks shop-fabricated with steel shall meet or exceed the requirements of Underwriters Laboratory (UL) No. 142, API Standard No. 620, API Standard No. 650, API Standard No. 12D, or API Standard No. 12F.*
- *Tanks must be located and supported in accordance with the UFC, Articles 52, 79, and Appendix II-F.*
- *Bottom of metal tanks that rest on or within the soil must have cathodic protection with sacrificial anodes or an impressed current system in accordance with API RP 651 and NACE Standard Number RP-0285-95.*
- *Tanks with a capacity greater than 1,100 gallons must be have equipment which prevents the tank from being overfilled or a high-level alarm which alerts the transport operator to stop product flow.*

Farmers and ranchers should look for the manufacturer's API and UL certifications, including assurances that the new tanks and installations meet the National Fire Protection Association Fire Code 2008 and the International Fire Code 2009 as stated in ARM 17.58.326. A copy of the NFPA Uniform Fire Code can be obtained online at www.nfpa.org. A copy of the International Fire Code can be obtained online at www.iccsafe.org.

An owner or operator may register a petroleum storage tank with the Montana Petroleum Tank Release Compensation Board for the purposes of determining eligibility under the Montana Petroleum Tank Release Cleanup Fund. An owner or operator may apply for such registration by submitting a signed and completed application on a form provided by the board.

For more information, contact Steve Becker, NRCS state engineer, at 406-587-6828 or steve.becker@mt.usda.gov.

Web Links

Oil Spill Prevention, Control & Countermeasure (SPCC) Regulation (40 CFR 112)
http://www.epa.gov/oem/content/spcc/index.htm

ARM 17.58.326
http://www.mtrules.org/gateway/ruleno.asp?RN=17.58.326

ARM 17.57.105
http://www.mtrules.org/gateway/ruleno.asp?RN=17.57.105

International Fire Code (IFC 2009)
http://publicecodes.cyberregs.com/icod/ifc/2009/

National Fire Protection Association Uniform Fire Code (NFPA 2008)
http://www.nfpa.org/codes-and-standards/document-information-pages?mode=code&code=1&DocNum=1

Montana Petroleum Tank Release Cleanup Fund
http://www.mtrules.org/gateway/RuleNo.asp?RN=17%2E56%2E815

Montana Petroleum Tank Release Compensation Board
http://deq.mt.gov/pet/default.mcpx

Montana Farmers Talk About Soil Health

unlock the SECRETS IN THE SOIL

Whether you're a farmer, a researcher, a conservationist or an interested citizen, soil health is important to you. Hear what Montana farmers from Ballantine to Highwood to Fairfield say about their experiences using soil health management systems. You can watch short video clips on the NRCS Montana website at http://www.mt.nrcs.usda.gov/technical/ecs/soilhealth/MTfarmers.html.

Screens Set in Place to Save Fish on Yellowstone

In late June, a crane hoisted the huge fish screens into place at the head of the Buffalo Rapids Irrigation District's Shirley pump plant, about 20 miles east of Miles City. Each rectangular screen weighs 10 tons and is 10 feet wide by 37 feet high. The tracked screen itself is a 67-foot moving loop.

The structures were lifted by a crane into specially made concrete support forms. Once hooked up, five-horsepower electric motors will slowly move the tracked screen at 5 to 10 feet per minute, lifting fish, tree limbs, and moss out of the intake. On the back side of the screens, high-pressure jets spray water into the screen's cups and flush fish and debris into a trough. From there, the fish and debris are floated back into the river by a sluice.

The Shirley pump station, built in the 1940s, feeds water to about 100 irrigators who own about 11,300 acres of sugar beets, corn, alfalfa, and small grains. At peak operation, the pumping station feeds 135 cubic feet per second of river water into the canal system. The screens will be removed from the river each fall to avoid damage from winter ice jams.

The screens were made by New Orleans-based Hydrolox and cost about $150,000 apiece. Funding for the project came from NRCS' Wildlife Habitat Incentive Program, the U.S. Fish and Wildlife Service's National Fish Passage Program, the U.S. Bureau of Reclamation, Buffalo Rapids Irrigation District, and the state of Montana.

Ladies Day on the Range

In mid-June, the NRCS Winnett and Jordan Field Offices sponsored Ladies' Day on the Range. More than 30 women from throughout eastern Montana showed up to learn more about rangeland. Several NRCS employees taught segments about soil ecology, plant identification, and rangeland planning—to name a few.

Marni Thompson (Great Falls) talks about grazing and stocking rates.

Nakaya Rife (Winnett) instructs workshop participants in Winnett.

From left to right: Lt. Governor John Walsh; Mark Bostrom, Montana Watershed Coordination Council; James Magee, U.S. FWS Partners for Fish and Wildlife; Austin McCullough, Montana FWP; Emma Cayer, Montana FWP; Mike Roberts, Montana DNRC, Kyle Tackett, NRCS; Russ Gates, Montana DNRC; Jen Downing, Big Hole Watershed Committee; Ann Schwend, Montana DNRC.

Grayling Work Receives 2013 Watershed Stewardship Award

NRCS; the U.S. Fish and Wildlife Service; Montana Fish, Wildlife, and Parks; Montana Department of Natural Resources and Conservation; and the Big Hole Watershed Committee received the 2013 Watershed Stewardship Award from the Montana Wetland Council and the Montana Watershed Coordination Council. The Grayling CCAA (Candidate Conservation Agreement with Assurances) Management Team is a joint agency and watershed program, dedicated to developing beneficial conservation plans that help protect grayling habitat and maintain the minimum stream flows in the Big Hole River needed for the species to survive.

The awards ceremony was held at the Montana State Capital on May 30, 2013.

Pasture Tour Covers Grazing Management

The NRCS Hamilton Field Office, Bitterroot Conservation District, and the Montana State Extension hosted a Pasture Tour Workshop on June 20. Participants visited four different sites that represented four different grazing strategies on irrigated pasture. Discussions were led by Justin Morris, NRCS grazing specialist, and Jane Mangold, invasive species specialist, MSU Extension. Topics included basic grass biology, harvest efficiency with an emphasis on managing for soil health, development of rotational grazing systems, and an exercise in how to use a pasture stick in grazing management.

June Montana Snowpack Ends Season Below Average, Low Steamflows Likely to Follow

Based on NRCS SNOTEL (SNOw TELemetry) data on June 1, current basin average Snow Water Equivalents across the state range from 44 to 64 percent of this year's maximum.

The abundance of precipitation during the second half of May was a change to the first two weeks of warm and dry weather, and helped some watersheds east of the Divide improve their water year-to-date precipitation. Most basins across the state continue to be near normal for water year-to-date precipitation with the Milk basin having the highest basin average at 132 percent.

The basins in the furthest reaches of southwest Montana continue to have the lowest basin water year-to-date averages with the Jefferson and Madison River basins both at 88 percent. Low snowpack totals in the Jefferson River basin contributed to this low precipitation average, even though the month of May was 97 percent of average for mountain precipitation.

Montana saw a large range in May precipitation--from 48 percent of May average in the Bitterroot River basin to 112 percent in the Missouri Mainstem River basin south of Helena. The weather patterns experienced during the last two weeks of May favored the valleys of central, northeastern and the southern Montana, dropping substantial storm totals during the events.

For detailed snowpack information go to: http://www.wcc.nrcs.usda.gov/ftpref/data/snow/basin_reports/montana/wy2013/basnmt6.txt

Below are the averaged river basin streamflow forecasts for the period June 1 through July 31. These forecasts assume near normal moisture and runoff conditions June through July.

NOTE: The June-July Forecast % of Average column above reflects this year's forecasts as a percent of last year's observed streamflow, using only those locations which have data available for last year.

For detailed basin streamflow forecast information go to: ftp://ftp.wcc.nrcs.usda.gov/support/water/provisional_forecasts/montana/mt.txt

Snow Water Content

River Basin	% of Median	% Last Year	May % Change
Columbia	89	56	-17
Kootenai, Montana	93	44	-22
Flathead, Montana	102	66	-13
Upper Clark Fork	72	53	-21
Bitterroot	38	34	-57
Lower Clark Fork	108	53	-6
Missouri	67	63	-31
Missouri Headwaters	67	72	-28
Jefferson	67	86	-22
Madison	63	69	-31
Gallatin	80	80	-25
Missouri Mainstem	65	44	-39
Headwaters Mainstem	34	36	-63
Smith-Judith-Musselshell	61	45	-42
Sun-Teton-Marias	86	47	-24
Milk (Bearpaw Mountains)	--	--	--
St. Mary	114	80	-4
St. Mary and Milk	114	75	-4
Yellowstone	68	65	-37
Upper Yellowstone	64	58	-36
Lower Yellowstone	63	71	-44
Statewide	76	60	-29

Streamflow Forecasts

River Basin	June-July Forecast % of Average	June-July Forecast % of Last Year Observed
Columbia	89	64
Kootenai	96	53
Flathead	96	63
Upper Clark Fork	68	66
Bitterroot	68	67
Lower Clark Fork	84	64
Missouri	74	64
Jefferson	48	100
Madison	74	86
Gallatin	96	126
Missouri Mainstem	75	106
Smith-Judith-Musselshell	70	222
Sun-Teton-Marias	94	92
Milk	87	54
St. Mary	108	80
Yellowstone	80	64
Upper Yellowstone	85	93
Lower Yellowstone	75	112
Statewide	83	78

Human Resources Report

New Permanent Employees

- *Byrhonda Lyons, Public Affairs Specialist, Bozeman*
- *Zachary Verlinde, Civil Engineer, Chinook*
- *Eric Larson, Hydrologic Technician, Bozeman*

Promotions

- *Scott Brady, Rangeland Management Specialist, Miles City to District Conservationist, Havre*
- *Kelli Coleman, Soil Conservation Technician, Conrad*
- *Glen Green, District Conservationist, Deer Lodge*
- *Marvin Hansen, Soil Conservation Technician, Bozeman*
- *Amber Mason, Soil Scientist, Miles City*
- *Benjamin Moore, Soil Scientist, Dillion*
- *Valerie Riter, Soil Conservationist, Glendive*
- *Barry Southard, Soil Conservation Technician, Malta*
- *Lindsay Wilsey, Rangeland Management Specialist, Dillio*

Reassignments

- *Levi Doll, Civil Engineer, Malta to Civil Engineer, Glasgow*
- *Maureen Meagher, Soil Conservationist, Bozeman*
- *Shalaine Watson, Soil Conservationist, Chester to Soil Conservationist, Billings*

Losses

- *Cathy Williams-Rash, Rangeland Management Specialist, Sheridan*
- *Patrick Rohling, Soil Conservationist, Glendive*
- *Michelle Du, Student Trainee Soil Conservationist, Baker*
- *Gordy Hill, District Conservationist, Joliet*
- *Regan Kirchner, Soil Conservationist, Glendive*
- *Ron Krogstad, Civil Engineer, Bozeman*
- *Ella McKinney, Student Trainee Soil Conservationist, Missoula*
- *Sheena Moore, Soil Conservationist, Glasgow*
- *Ryan Murray, Hydrologic Technician, Bozeman*
- *Joel Parker, Hydrologic Technician, Bozeman*

Rainfall simulations were conducted at many events this year to demonstrate how water-holding capacity of soils varies with land use and conservation practices.

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Upcoming Events

For up-to-date conservation and agriculture-related events and activities in Montana, visit http://www.mt.nrcs.usda.gov/news/events.html.

July 2013

- Montana Youth Range Camp, July 8-12, 2013, Ekalaka
- Forage and Grazing Management, July 18, 2013, Sheridan
- Grazing Days 2013, July 22, 2013, Whitehall

August 2013

- North American Envirothon, August 4-9, 2013, Bozeman,
- Ruby Habitat Trials, August 21, 2013, Laurine

September 2013

- Women Stepping Forward for Agriculture Symposium, September 17-19, 2013, Miles City

October 2013

- Young Ag Leadership Conference, October 11-13, 2013, Fairmont Hot Springs

November 2013

- Montana Farm Bureau Federation Annual Convention, November 10-13, 2013, Billings
- Montana Soil Health Week, November 18-22, 2013
- Montana Association of Conservation Districts Annual Conference, November 19-21, 2013, Great Falls

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