



# Conservation CONNECTION

Rosebud and Big Horn Conservation Districts

ROSEBUD CONSERVATION DISTRICT: 270 S. Prospect • P.O. Box 1200 • Forsyth, MT 59327

BIG HORN CONSERVATION DISTRICT: 724 West 3rd Street • Hardin, MT 59034

ROSEBUD CD: Meetings: 1st Thursday • 406-346-7333 ext. 101 • Fax/Phone: 406-346-7479 | BIG HORN CD: Meetings: 1st Thursday • 406-665-3442

NRCS FORSYTH FIELD OFFICE: 406-346-7333 | HARDIN FIELD OFFICE: 406-665-3442 | LAME DEER FIELD OFFICE: 406-477-6494 | CROW AGENCY FIELD OFFICE: 406-638-9102

## Treasure County Conservation District Joins Conservation Connection

Rosebud and Big Horn Conservation Districts are excited to announce Treasure County Conservation District will be joining in on the Conservation Connection Newsletter! Treasure County Conservation District is located in the quaint Montana town of Hysham. The Board of Supervisors holds their regular scheduled **meeting the second Tuesday of each month. The district's hard working** administrator, Angela Stahl, has worked for TCCD for five years. Treasure County Conservation District, while small, has a lot to offer, just contact them to learn more!

TCCD currently rents out a Great Plains 15 foot No-Till Drill. The cost to use this innovative piece of equipment is \$7.00 per acre with a maximum of 200 acres.

Treasure County Conservation District also offers low interest loans to local producers to help with the implementation of conservation practices on their land.

They even have a few things for sale:

- \* Marking Flags \$10.00/bundle
- \* Wildlife Ramps \$15.00
- \* Treasure County Land Ownership Map Books
  - ~Large \$20.00
  - ~Small \$16.00

To contact Treasure County Conservation District: P.O. Box 288

211 Elliot Avenue

Hysham, MT 59038

406-342-5510 ext. 102

Angela.stahl@mt.nacdnet.net



TREASURE COUNTY  
CONSERVATION DISTRICT  
Hysham, MT



# Big Horn Conservation District's Award Winners

Brothers Caleb and Toby Mark were awarded 1st and 2nd place prizes in the conservation category at the 2017 Big Horn County 4-H and Youth Fair recently. The brothers are both members of the Community Hustlers 4-H Club.

Caleb's first place winning poster was titled It's Hot In Here. The poster was developed as part of an experiment to evaluate the thermal units of various types of wood in Big Horn County. His project earned him a \$200 cash award from the Big Horn Conservation District.



Toby's second place winning poster was titled Hydro-Battery, Using water to store solar energy. The poster was developed as part of an experiment to determine effective use of solar energy to pump water. His project earned him a \$100 cash award from the Big Horn Conservation District.



Big Horn Conservation District promotes conservation innovation and annually provides conservation awards at the fair.

## *~No-Interest Loan Program~*

The Rosebud Conservation District's no-interest loan program was created in 1982 to encourage producers to implement conservation practices and also utilize money which was available to the district. The Districts' no-interest loans are available to area producers for the development of conservation practices and systems, as part of a conservation plan to benefit agricultural land within the Rosebud Conservation District. Conservation program loans can be applied for a number of different practices including: storage tanks, stream bank stabilization, pumps, irrigation pipelines, grass seeding, water-spreading, fencing, reservoirs, dams, stock tanks, pipelines, pivots and sagebrush clearing.

The Rosebud Conservation District loan program is an excellent tool to help achieve individual conservation goals. Loans are available up to \$50,000 with a zero percent interest rate. There is an administrative fee of three percent. Applicants apply through the Rosebud Conservation District Board of Supervisors, applications are accepted and then reviewed at the regular board meeting. Loan Payments will begin on December 15, not less than six months after the loan date. Applicant are encouraged to become cooperators of the District. Loans will NOT be allowed for reseeding Capability Class 6, 7, & 8 lands that have been converted after January 1, 1983.

For more information or an application, for the No-Interest Loan Program, contact Bobbi Vannattan at the Rosebud Conservation District office at 406-346-7333 ext. 101 or email: [bobbi.vannattan@mt.usda.gov](mailto:bobbi.vannattan@mt.usda.gov) or check out our website at [www.rosebudcd.com](http://www.rosebudcd.com).

# When do you need a 310 permit?

A 310 permit is REQUIRED if you are planning ANY project that physically alters or modifies the bed or banks of a stream. The purpose of the permit is to minimize soil erosion and sedimentation, protect and preserve streams and rivers in their natural or existing state, and to prevent damage to the lands and property immediately adjacent to streams and rivers.

The application process is simple, pick one up at the local conservation district office. Upon completion return it to the conservation district. An inspection of the proposed project is necessary, after the inspection, the Board of Supervisors make their decision about the permit. Keep in mind that sometimes additional permits are required and it is up to the producer to make sure that all the permits have been secured before beginning the project.

## Rosebud County

- ◆ Yellowstone River
- ◆ Tongue River
- ◆ Rosebud Creek
- ◆ Reservation Creek
- ◆ Otter Creek
- ◆ Armells Creek
- ◆ Numerous Other Creeks

## Treasure County

- ◆ Yellowstone River
- ◆ Big Horn River
- ◆ Sarpy Creek

## Big Horn County

- ◆ Big Horn River
- ◆ Tongue River
- ◆ Little Big Horn River
- ◆ Rosebud Creek
- ◆ Numerous Other Creeks

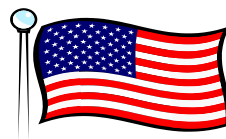
*All Perennial Streams in  
Big Horn, Treasure, and  
Rosebud Counties*

***Require a 310 Permit!***

*If you are not sure please  
contact your local  
conservation district!*



*Views expressed by individual columnists in this newsletter do not necessarily reflect the official policies of the Rosebud, Big Horn, and Treasure County Conservation Districts.*



The Rosebud, Big Horn, and Treasure County Conservation Districts proudly salute and thank our Service men and women at home and overseas.

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## Soil Health: Principle 1 of 5 – Soil Armor

By: Jay Fuhrer, NRCS Soil Health Specialist

The Soil Health foundation consists of five principles which are: soil armor, minimizing soil disturbance, plant diversity, continual live plant/root, and livestock integration. This article will discuss the first principle; soil armor.

In this first of five articles on soil health, Jay explains the concept of “soil armor” and why it is important for building soil health.

Soil armor or cover, provides numerous benefits for cropland, rangeland, hayland, gardens, orchards, road ditches, and more. Let’s take a closer look at some of the soil armor benefits:

- Controlling Wind and Water Erosion – armor protects soil from wind and/or water as it moves across the soil surface. It holds the soil in place along with valuable soil organic matter and nutrients.
- Evaporation Rates – armor reduces the soil evaporation rates, keeping more moisture available for plant use.
- Soil Temperatures – armor helps soils maintain a more moderate range of soil temperatures, keeping soil warmer in cold weather, and cooler in hot weather. Like us, the soil food web functions best when soil temperatures are moderate.
- Compaction – rainfall on bare soils is one cause of soil compaction. When rainfall hits the armor instead of bare soil, much of the raindrop energy is dissipated.
- Suppresses Weed Growth – limits the amount of sunlight available to weed seedlings.
- Habitat – provides a protective habitat for the soil food web’s surface dwellers.



This picture shows the residual armor after corn planting was completed at the Menoken Farm, located just east of Bismarck, ND. At a minimum, the armor should last until the new crop is fully canopied. How quickly this residue decomposes depends on the carbon/nitrogen ratio of the residue. High carbon residue (eg: wheat at 80:1) decomposes much slower than low carbon residue (eg: pea at 29:1). When we supply the soil surface with a diversity of residues from one year to the next, we can achieve the benefits of soil armor and still maintain a fully functioning nutrient cycle.

Find Jay Fuhrer’s Soil Health Principles 3-5 in upcoming editions of Conservation Connection!

## Soil Health: Principle 2 of 5 – Minimizing Soil Disturbance

By: Jay Fuhrer, NRCS Soil Health Specialist

The Soil Health foundation consists of five principles which are: soil armor, minimizing soil disturbance, plant diversity, continual live plant/root, and livestock integration. This article will discuss the second principle; minimizing soil disturbance.

In this second of five articles on soil health, Jay explains the concept of “soil disturbance” and why minimizing soil disturbance is important for building soil health.

Soil disturbance can generally occur in different forms:

- Biological disturbance, such as overgrazing, which limits the plants ability to harvest CO<sub>2</sub> and sunlight.
- Chemical disturbance, such as over application of nutrient and pesticide, can disrupt the soil food web functions.
- Physical disturbance, such as tillage, which we will focus on in this article.

A typical soil is approximately 45% mineral (sand, silt, and clay), 5% soil organic matter, 25% water, and 25% air. The water and air portions exist in the pore spaces between the soil aggregates. Over time, tillage implements reduce and remove the pore spaces from our soils; restricting infiltration and destroying the biological glues which hold our soils together.

Ultimately tillage results in one or more of the following:

- water erosion; transporting soil, nutrient, and water to offsite locations, which negatively impacts water quality and quantity.
- wind erosion; transporting soil, and nutrient to offsite locations, which negatively impacts air quality, human health, and animal health.
- ponding water; which stays saturated on the surface for long periods of time, a result of reduced infiltration and increased runoff.
- crusting easily, which restricts plant emergence.
- soil organic matter depletion.

Can we reverse the impacts from tillage and improve soil function? Yes, we can. Minimizing soil disturbance is a good start to rebuilding soil aggregates, pore spaces, soil glue, and soil organic matter. This is an essential step for long term soil productivity.

The results of 20+ years of no tillage and crop diversity is a healthy, well aggregated soil.



# Electric Fencing Workshop

Wednesday, September 13<sup>th</sup>, 2017

1:30 – 3:30pm

MSU Extension Office

316 N Custer Ave

Hardin, MT 59034

Come share and gain tips and tricks from someone who puts up more than 50 miles of electric fence *every year* and who has fenced in all kinds of circumstances and all kinds of terrain for 35 years. Mickey Steward has made all the mistakes, felt all the frustration, and seen all the benefits that electric fencing can offer.

Here's what to expect at this mini-workshop:

- 1 The reasons for fencing
- 2 The response of your livestock to electric fence
- 3 The challenge of cowboys and electric fence
- 4 The benefits to your range and what kind of improvement to expect
- 5 The economic benefits to you
- 6 Tried and true methods for efficiency and economy
- 7 The **UNBREAKABLE RULES**

You can't learn all about electric fencing in two hours, but you can learn a lot – and it might change for the better how you operate your place and your livestock.

No RSVP is required, and light refreshments will be provided.

If you have any questions regarding this workshop or need special accommodations, please contact Seanna Torske, USDA-NRCS at: (406) 629-3220.



*USDA-NRCS provides reasonable accommodations for all persons with disabilities to participate in NRCS programs and activities. If you require special accommodations, please contact the Hardin NRCS Field Office at: (406) 665-3442, ext. 3, by September 1<sup>st</sup>, 2017.*

*USDA is an equal opportunity employer and provider.*

“Life on a farm is a school of patience; you can't hurry the crops or make an ox in two days.”  
~Henri Alain~

“Always take a good look at what you're about to eat. It's not so important to know what it is, but it's critical to know what it was.” ~Unknown~

## Big Horn Conservation District Cover Crop Cost Share Available

**It's time to think about utilizing a cover crop in no-till cropping systems.** In order to encourage producers to learn the benefits of cover crops, the Big Horn Conservation District has initiated a program to pay the actual cover crop seed costs up to \$20 per acre on a maximum of 40 acres per producer.

Producer responsibilities to participate in this program are to prepare a weed-free seedbed, use a minimum of three varieties of seed in the cover crop mixture, and agree to tours and news-letter articles, if applicable, concerning the experience.

Contact the Big Horn Conservation District for an application form at 406-665-3442, ext. 112.

visit us at [www.rosebudcd.com](http://www.rosebudcd.com)

## Sign up now for the Rosebud Conservation District Cover Crop Cost Share 2017

Rosebud Conservation District is looking for producers who are seeking diversity in no-till cropping systems.

***Incentive- \$20 per acre with a maximum of 20 acres***

The purpose of the soil health incentive is to encourage the utilization of cover crops in no-till cropping systems. The proper cover crop can economically control erosion, reduce runoff, increase organic matter, break up crop disease patterns, cycle deep nutrients, and be used for haying and/or grazing. The Rosebud Conservation District will pay the actual seed and seeding cost up to \$20 per acre up to 20 acres or \$400 per producer in the conservation district boundaries. Responsibilities of the producer are to prepare a weed free seed bed, note all important observations, agree to tours and news article, if applicable, and provide information regarding fertilizer techniques. A requirement of the cost share agreement is that seed mixtures consist of at least three varieties of seed in the cover crop planting.

Contact Bobbi Vannattan at the Conservation District Office to sign up and for more information. Phone: 406.346.7333 ext. 101 or email [bobbi.vannattan@mt.usda.gov](mailto:bobbi.vannattan@mt.usda.gov), or stop by the office located at 270 South Prospect in Forsyth.

# Rosebud Conservation District Reserved Water

Montana's water reservation law provides an opportunity to legally allocate water for future consumptive uses as well as to maintain in-stream flows to protect water rights, aquatic life, and water quality.

The conservation district water reservations are for agricultural irrigation and in some districts for stock watering. Districts rely on land users within the basin to develop the water resource and put the reserved water to use. Districts encourage land users and resource managers to apply for reserved water for new or supplemental irrigation projects.

A reservation is subject to protection under the Montana Water Use Act and is an appropriate water right protected by law. In the case of the conservation district, the right is held by the district on behalf of the individual users. Individuals will apply to the district once they have plans to put the water to use. A water user receives an authorization or permit from the district for the right to use a portion of the district's reserved water. Legally, this is the same as when an individual obtains a permit from the Department of Natural Resources & Conservation (DNRC) to use water.



The Rosebud Conservation District, as a water reservation holder, is responsible for apportioning the reservation in an equitable manner. The district is also responsible for administering the use of its reserved water and in accordance with the "Board of Natural Resources Board Order Establishing Water Reservations".

Rosebud Conservation District holds a water reservation of 87,003 acre-feet per year with a maximum flow rate of 540.7 cubic feet per second from the main stem of the Yellowstone River which has a priority date of December 15, 1978 (4:18 P.M.)

Currently the Rosebud Conservation District has 83,249.40 acre-feet and a flow rate of 466.07 cubic feet per second available.

If you are in need of reserved water and would like more information or an application, contact Bobbi Vannattan at the Rosebud Conservation District Office or contact her via phone or email at: 406.346.7333 ext. 101 [bobbi.vannattan@mt.usda.gov](mailto:bobbi.vannattan@mt.usda.gov) or visit our website: [www.rosebudcd.com](http://www.rosebudcd.com) for forms.

"Few cowboys ever owned much. The primary reward of being a cowboy was the pleasure of living a cowboy's life." ~Unknown~

"Here is your country. Cherish these natural wonders, cherish the natural resources, cherish the history and romance as a sacred heritage, for your children and your children's children. Do not let selfish men or greedy interests skin your country of its riches or its romance." ~Theodore Roosevelt~



# *~Interesting Information about the Western Meadowlark~*

## *The Western Meadowlark...*

*-Lives in open prairies, meadows, and some agriculture fields while generally avoiding areas with forested edges of heavy shrubs.*

*-Despite the name, the meadowlark is not actually a lark, but in fact more closely related to blackbirds*

*-Males usually have two mates at the same time*

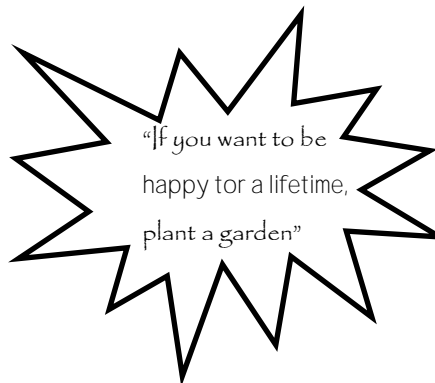
*-Can fly up to 40 miles per hour*

*-The state bird of Montana, Kansas, Nebraska, North Dakota, Oregon, and Wyoming. Only the Northern Cardinal is the official bird for more states!*



Photo by Rick Bohn

**\*\*Read upcoming editions of the Conservation Connection for more intriguing facts about Montana's native wildlife, presented by Heather Nenninger, Sage Grouse Initiative (SGI) Partner Biologist!**



Rosebud Conservation District has been hard at work in their Community Garden plots. The produce will be donated once harvested from the no-till garden beds, which feature plant fabric as a weed barrier.



**\*\*BHCD\*\***

**~ For Sale or Rent ~**

**\*\*RCD\*\***

**\*\*TCCD\*\***

**Big Horn Conservation District**

724 W 3rd Street Hardin, MT 59034  
406-665-3442 ext. 112

**For Sale:**

- \*Moisture Probe~ \$65.00
- \*Wildlife Ramp~ \$25.00
- \*Hydrosource Plant Gel~ \$7.00/pint

**For Rent:**

- \*Tree Planter~ \$.10/tree (\$30.00 min)
- \*Fabric Layer~ \$.10/tree (\$30.00 min w/o fabric purchase) or \$.05/tree + fabric cost (w/ fabric purchase)

**Treasure County Conservation District**

211 Elliot Avenue Hysham, MT 59038  
406-342-5510 ext. 102

**For Sale:**

- \*Marking Flags (5"x8")~ \$10.00/bundle
- \*Wildlife Ramp~ \$15.00
- \*Treasure County Land Ownership Map Books~ \$16.00/small or \$20.00/large

**For Rent:**

- \*No Till Drill~ \$7.00/acre (200 acre max)

**Rosebud Conservation District**

270 Prospect Forsyth, MT 59327  
406-346-7333 ext. 101

**For Sale:**

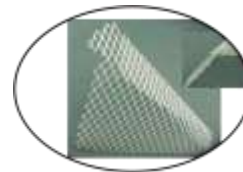
- \*Wildlife Ramp~ \$20.00
- \*Gate Latch~ \$20.00
- \*Marking Flags (5"x8")~ \$10.00/bundle

**For Rent:**

- \*Track Filler~ \$100.00/day or \$200.00/week
- \*No Till Drill~ \$7.00/acre (\$200.00 min. and 200 acre max)

**Books For Sale:**

- \*Weeds of the West~ \$40.00
- \*Range Plants of Montana~ \$20.00
- \*Rosebud County Land Ownership Map Books~ \$28.00/small or \$40.00/large  
\$38.00/small aerial view or \$50.00/large aerial view



## **\*\*Fascinating Facts\*\***



- \* Over 200,000 animal species serve as pollinators
- \* The honey bee is the only insect that produces food eaten by man
- \* Pollination services to U.S. agricultural crops is valued at \$10 billion annually
- \* Bees can collect up to 4-5 pounds of nectar each day, 4 pounds of nectar = 1 pound of honey
- \* Nectar-eating bats are attracted to pale or white flowers that blossom at night

## **~Upcoming Area Events~**

### **Montana Range Tour**

Lewistown, Montana September 6-7, 2017

For more information: Fergus and Petroleum Conservation Districts or [dnrc.mt.gov/divisions/cadd/conservation-districts/rangeland-resource-program](http://dnrc.mt.gov/divisions/cadd/conservation-districts/rangeland-resource-program)

### **Get on the Bus...The Soil Health Bus**

Dakota Lakes Research Station Pierre, South Dakota

September 12-14, 2017

For more information: Mark Henning 406-853-5452 or Marni Thompson 406-596-1195

### **Regenerative Farming and Ranching**

Brown's Ranch Bismarck, North Dakota

September 12-14, 2017

For more information: Ken Hardie 417-933-2249 or [learn@soilhealthacademy.org](mailto:learn@soilhealthacademy.org)

### **Electric Fencing Workshop**

MSU Extension Office Hardin, Montana

September 13, 2017

For more information: Seanna Torske 406-629-3220

### **Sustainable Ranching Workshop with Jim Gerrish**

The Matador Ranch Dodson, Montana

September 19, 2017

For more information: 406-673-3164 or [info@ranchstewards.org](mailto:info@ranchstewards.org)

### **Montana Association of Conservation Districts Annual Convention**

Bozeman, Montana November 14, 2017

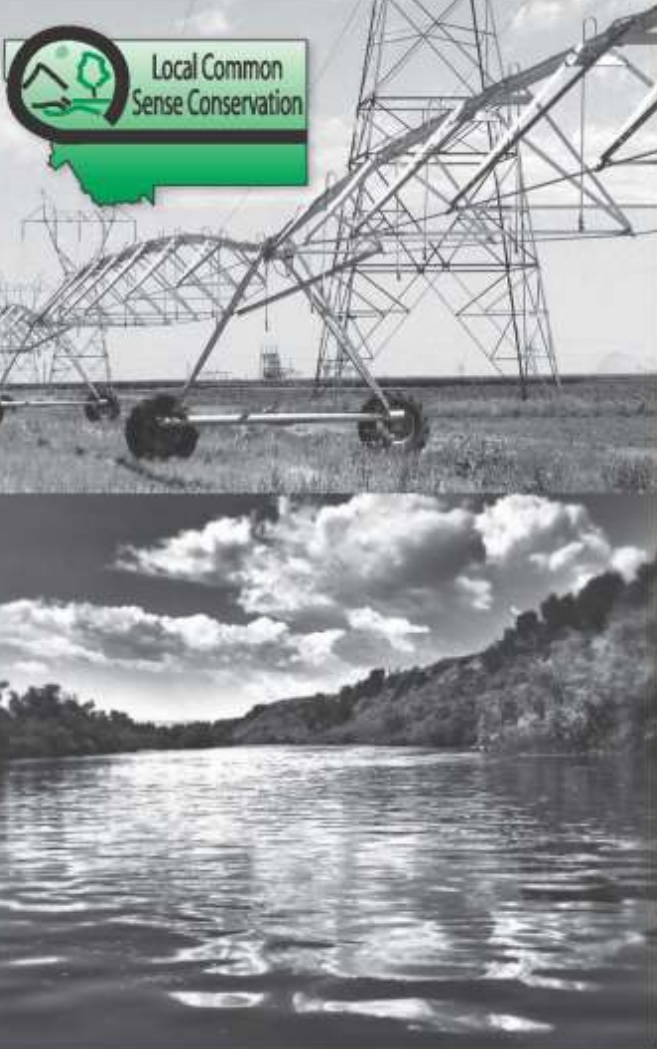
For more information: Montana Association of Conservation Districts 406-443-5711

### **Soil Health Workshop Series**

Various Locations in Montana January 16-19, 2018

For more information: Ann McCauley 406-443-5711 or [ann@macdnet.org](mailto:ann@macdnet.org) or <http://swcdm.org/programs/soil-health>

*Expand your  
knowledge, attend an  
upcoming event!*



NONPROFIT ORG  
US POSTAGE  
**PAID**  
BILLINGS MT  
PERMIT 294  
ECRWSS

Postal Customer

Please Join  
Big Horn Conservation District  
for their Electric Fencing Workshop  
September 13th 1:30-3:30 p.m.  
MSU Extension Office  
Hardin, MT