

CONSERVATION NEWS

MORTON COUNTY SOIL CONSERVATION DISTRICT

Volume 22, no 3

2017 Planting Summary



The 2017 tree season is now in the books, and overall it was a productive season. The Tree Crew was able to plant 95,000 feet of tree rows and laid fabric on 67,000 feet of those. That comes out to over 11,000 trees! There was a little bit of everything this year, from wildlife plantings to windbreak renovations, for private landowners, EQIP contracts, and mitigation projects.

Things looked like they were going to go very well this year. We got a later start than we would like to have, but we had to wait for our tree stock until the snow to melt off all of our nurseries before we could get started. Once that happened we hit the plantings hard, but noticed that things were quickly drying up. While the tree crew appreciated being able to work without getting shut down by weather, it didn't take too long and they were willing to welcome a rainy day to get some more moisture in the ground. As you are all too aware of, we are STILL waiting for that rain. This is resulting in a lot of stress and some losses of trees, and if watering your trees isn't something you are able to do you could be looking at some significant losses. If it is possible, try to get your trees at

least a gallon of water every few days during this hot, dry summer weather. But remember, even if you can't do that much, every little bit helps!

With the drought we are currently experiencing it is hard to look ahead to next year and think about planting trees. That is being said, it is important to remember that a properly planned windbreak can actually help conserve natural resources and stretch your water, whether that be for your crops or livestock. In addition, there are cost share options available for a variety of project types, meaning that you may not have to bear the entire financial burden. Come on in or give us a call to find out more and get your plan for 2018 started!



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Tree of the Quarter—Crabapples

Crabapples- *Malus* varieties

Crabapples are a small tree that are valued for their value in a windbreak, as well as their wildlife value and their visual appeal. There are many varieties available, many of which are related to or cultivars of the Siberian Crabapple (*Malus baccata*). This is because the Siberian Crabapple is the hardiest of the *Malus* genus.

Crabapples usually grow to between 15 and 25 feet tall with a similar spread, although the tallest found in North Dakota is 32 feet tall with a 40 foot spread. They have a dark or olive green leaf that usually turns yellow in the fall, although some cultivars may also have purplish leaves. The Siberian Crabapple produces a lot of small, white flowers, although other colors can be found on different cultivars and related species. They produce a small fruit that is generally less than 2 inches in diameter. They are adapted to a variety of soils, although they prefer those that are well drained and moist, as well as preferring slightly acidic soils. They have shown success in a number of windbreak suitability groups, ranging from 1 through the 6 series, meaning they can be used in a decent number of situations and locations.

There are a lot of uses for crabapples. They are very desirable as a landscaping and specimen tree due to their abundance of showy flowers. Their growth habit also makes them a very functional tree in a windbreak. And their flowers make them a very good species to attract pollinators, while their fruit is very beneficial to a wide variety of wildlife. The fruit can also be processed and used by humans, and the wood from the trees is very desirable for firewood as well as smokehouse kindling.



Conservation Reserve Enhancement Program

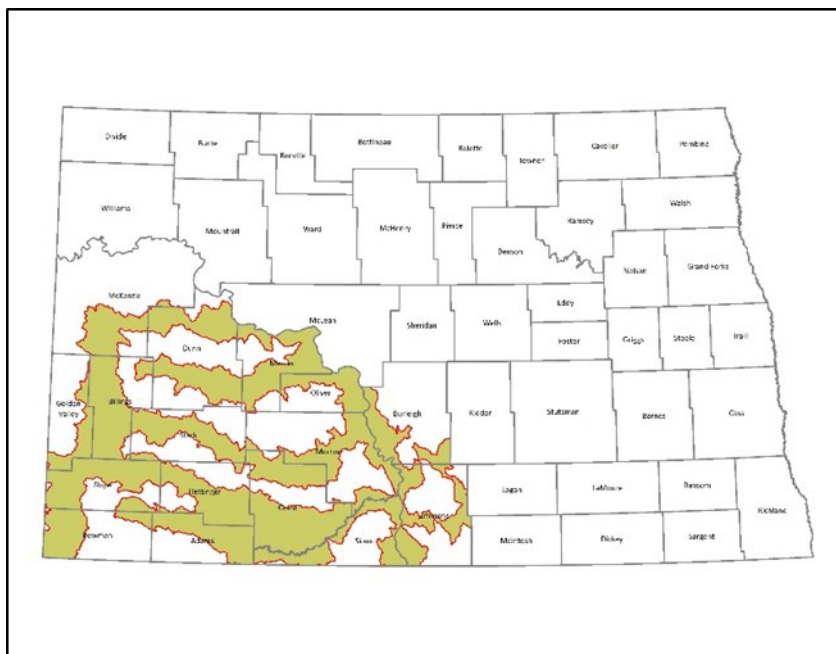
By: Sarah Hamilton – Farm Bill Specialist

The U.S. Department of Agriculture (USDA) and the State of North Dakota are partnering to implement an exciting program, Conservation Reserve Enhancement Program (CREP), in portions of Adams, Billings, Bowman, Burleigh, Dunn, Emmons, Golden Valley, Grant, Hettinger, McKenzie, Mercer, Morton, Oliver, Sioux, Slope, and Stark counties. For land to be eligible for enrollment in CREP, the land must be cropland and located in the project area (see map below).

The objective of this program is to improve water quality, reduce soil erosion, create and improve habitat for pollinators and other wildlife, and reduce the amount of sediment, phosphorous, and other pollutants entering waterbodies. Producers can receive cost share assistance up to 50% of the eligible reimbursable cost for installing conservation practices, a one-time signing incentive payment of a minimum of \$75 per acre, and a rental payment. In addition to these payments, the State of North Dakota will also provide a one-time incentive payment of \$100 per acre, a cost share payment of up to 50% of the eligible reimbursable cost for installing conservation practices, and an annual payment for land enrolled in the North Dakota Private Land Open to Sportsman (PLOTS) program. The conservation practices that are available for installment under CREP are: Filter Strips, Riparian Buffers, Pollinator Habitat, and Pollinator Habitat for Honey Bees. At least 50% of the enrolled acres must be put in to Filter Strips or Riparian Buffers, while the remaining portion of the enrolled acres may be dedicated to Pollinator Habitat and/or Pollinator Habitat for Honey Bees. CREP is available for 10-15 year contracts.

All land enrolled in a CREP contract must also be enrolled in the ND PLOTS program. A minimum of 40 acres of land must be enrolled in the PLOTS program; therefore, if the acreage enrolled in CREP is less than 40 acres, additional acreage must be enrolled in PLOTS to meet the 40 acre minimum.

Enrollment for CREP is open on a continuous basis, so stop by your local NRCS Service Center to sign up today! If you have any questions, please call Sarah Hamilton at the Mandan NRCS Service Center: 701-667-1163 Ext 3.



Colored Areas Represent CREP Project Area

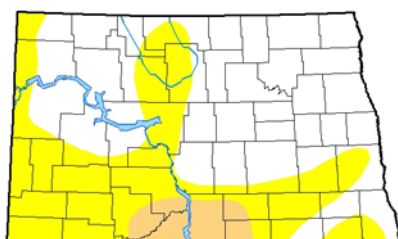
Drought Monitor



<http://droughtmonitor.unl.edu/>

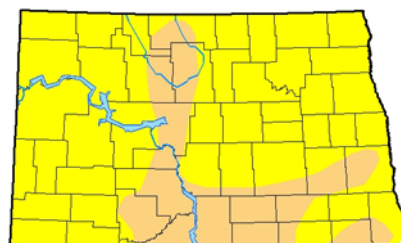
The U.S. Drought Monitor is produced through a partnership between the National Drought Mitigation Center at the University of Nebraska-Lincoln, The United States Department of Agriculture, and the National Oceanic and Atmospheric Administration. The Drought Monitor maps are released each Thursday at 8:30 a.m. Eastern Time. For up to date Drought Monitor Maps and for more information please visit <http://droughtmonitor.unl.edu/>.

Below are maps from the U.S. Drought Monitor since May 23rd, 2017.



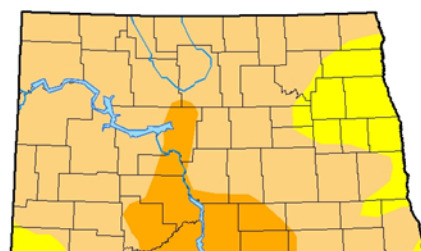
May 23, 2017
(Released Thursday, May 25, 2017)
Valid 8 a.m. EDT

Author:
Brad Rippey
U.S. Department of Agriculture



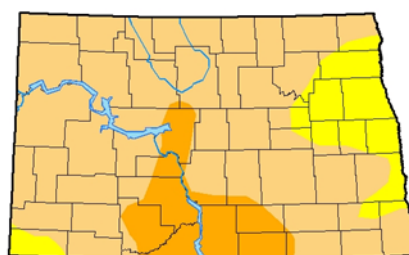
May 30, 2017
(Released Thursday, Jun. 1, 2017)
Valid 8 a.m. EDT

Author:
Chris Fenimore
NCEI/NESDIS/NOAA



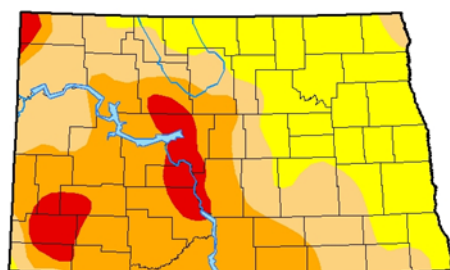
June 6, 2017
(Released Thursday, Jun. 8, 2017)
Valid 8 a.m. EDT

Author:
Deborah Bathke
National Drought Mitigation Center



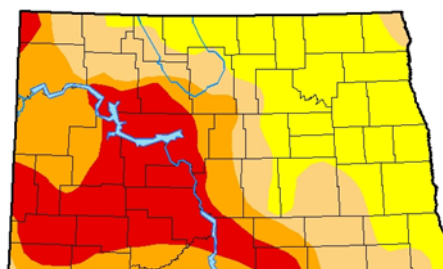
June 6, 2017
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Valid 8 a.m. EDT

Author:
Deborah Bathke
National Drought Mitigation Center



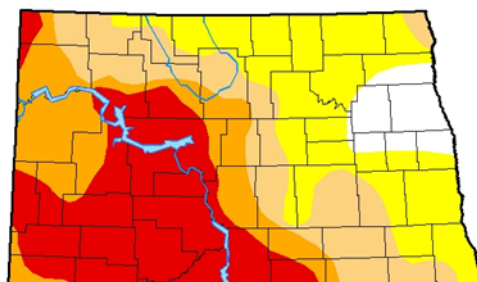
June 20, 2017
(Released Thursday, Jun. 22, 2017)
Valid 8 a.m. EDT

Author:
David Miskus
NOAA/NWS/NCEP/CPC



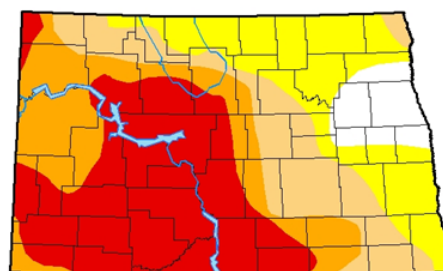
June 27, 2017
(Released Thursday, Jun. 29, 2017)
Valid 8 a.m. EDT

Author:
Jessica Blunden
NCEI/NOAA



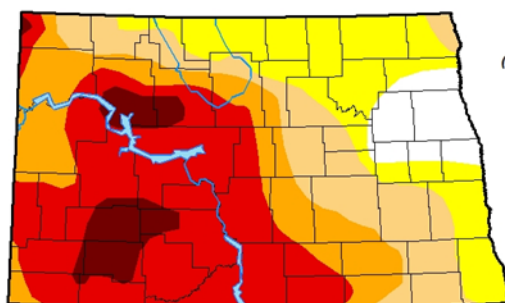
July 4, 2017
(Released Thursday, Jul. 6, 2017)
Valid 8 a.m. EDT

Author:
David Simeral
Western Regional Climate Center



July 11, 2017
(Released Thursday, Jul. 13, 2017)
Valid 8 a.m. EDT

Author:
David Simeral
Western Regional Climate Center



July 18, 2017
(Released Thursday, Jul. 20, 2017)
Valid 8 a.m. EDT

Author:
Richard Heim
NCEI/NOAA

Intensity:

D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought
D2 Severe Drought	

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Miranda Meehan, NDSU Extension Service
Livestock Environmental Stewardship

Specialist

Mike Ell, North Dakota Department of Health
Surface Water Program Manager

Michelle Mostrom, NDSU Veterinary
Toxicologist

Livestock Water Testing Guidelines



Sample Protocol

1. Collect sample in clean 1-quart or larger plastic (preferred) or glass container
 - A. Sample containers can be obtained from your county office of the NDSU Extension Service or the watershed coordinator with your local Soil Conservation District.
 - B. Astro Chem Lab prefers you contact to get a sample kit/container
2. Collect sample from area where livestock are drinking. If collecting cyanobacteria (blue green algae), take a sample in the bloom and wear gloves because it can be toxic to humans.
3. Rinse container several times using water to be sampled
4. Fill container completely. Being sure to collect water from deeper in the water and the surface.
5. Label the container with following information:
 - A. name of waterbody
 - B. name of sampler
 - C. date collected
 - D. time collected
6. Seal the container tightly and wrap the top with tape to prevent leaking. Place the water in a sealed plastic bag.
7. Complete laboratory sample custody form required to be submitted with the sample; contact the laboratory if needed.
8. If submitting a cyanobacteria sample, **ship immediately** on an ice pack (**no wet ice please**) by next-day delivery. Do not freeze the sample or leave it on the dashboard of your vehicle (**avoid temperature extremes**).

***We recommend collecting and shipping samples before Friday to avoid shipping delays.**

Testing Labs

NDSU Veterinary Diagnostic Laboratory

701-231-7527 or 701-231-8307

www.vdl.ndsu.edu

- | Water screen: nitrates, pH, total dissolved solids (TDS), sulfates
 - +Cost: \$25 for test and \$10 submission fee (submission paid once when submitting multiple samples)
- | Cyanobacteria (blue-green algae)
 - +Cost: \$20 for test and \$10 submission fee (submission paid once when submitting multiple samples)
- | Turnaround: within one day of samples arriving at lab
- | Shipping:

U.S. Postal Service

Veterinary Diagnostic Laboratory
NDSU Dept. 7691
PO Box 6050
Fargo, ND 58108-6050

FedEx/UPS

Veterinary Diagnostic Laboratory
NDSU Van Es Hall
1523 Centennial
Fargo, ND 58102

Minnesota Valley Testing Laboratories Inc.

701-258-9720 www.mvtl.com

- | Water screen: nitrates, conductivity, total dissolved solids (TDS), Sulfates
- | Cost: \$49
- | Turnaround: seven days
- | Shipping: Minnesota Valley Testing Laboratories
2616 East Broadway Ave.
Bismarck, ND 58501

Astro Chem Lab Inc.

701-572-7355 <http://astrochemlab.com>

- | Water screen: pH, conductivity, residual sodium carbonate, hardness, sodium adsorption ratio, total dissolved solids, sodium chloride, calcium, magnesium, sodium, iron, potassium, chloride, carbonate, bicarbonate, sulfate and nitrate-N
- | Cost: \$60
- | Turnaround: seven days
- | Shipping: Astro Chem Lab
4102 2nd Ave. W.
PO Box 972
Williston, ND 58802

JUNE 2017

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Solar Pump Sizing

The Mandan NRCS office is now using a new program to size the pumps for solar systems it is North Dakota Solar Pump Sizing Tool. This tool is used in making calculations for the design of stock water solar pumps and solar array based on local solar insolation values. The tool can also be used to evaluate installed solar systems. This tool uses many worksheets and the information you enter to get output information you need for the design.

There is a worksheet for the watering system demands and to size the necessary watering facilities. It can compute the storage volumes of, perimeter distances, and number of drinking spaces for a given watering facility type.

The Solar Resource worksheet is used to determine the insolation value at a NDAWN Station nearest to the project site. Given the insolation value of the site, a flow rate is calculated that will fully satisfy the daily animal watering requirements. Solar insolation is the measure of solar radiation hitting a surface at any given time. It's a way to measure how much sunlight is shining down at the project site.

The TDH worksheet is for the calculation of the required Total Dynamic Head for the solar system. It is capable of analyzing both pumps within well and surface pumps along with any connecting pipeline from the pumping unit to a storage tank.

The Pump Array worksheet evaluates a selected solar pump for the determined system requirements. A recommended solar array is calculated to supply the solar pump system. A total system delivery is calculated and a system setup summary is produced.

The Solar Data worksheet contains the downloaded solar insolation values for the selected NDAWN Station. Solar insolation is an important consideration in these designs.

With the information you have supplied we can tell you if the pump you have chosen will be sufficient and if you have enough panels to supply the watering system demands.

Midwest Bugfest with Jonathan Lundgren Recap

On July 12th and 13th the Morton SCD, Burleigh SCD and Dakota Prairies RC&D Council worked together to bring Dr. Jonathan Lundgren up for a visit from eastern South Dakota. Dr. Lundgren is an agroecologist, Director ECDYSIS Foundation, and CEO for Blue Dasher Farm. Lundgren's research and education programs focus on assessing the risk and developing long-term pest management solutions for regenerative food systems.

In the evening of July 13th, the Burleigh SCD hosted a Garden Tour at Menoken Farm. There was over 70 guests that attended the enjoyable tour. The garden tour consisted of a four stop rotation around the farm. The stops included:

1) Entomology with Dr. Jonathan Lundgren; 2) Pollinators with Darrell Oswald and Chad Thorson, Burleigh County SCD technicians; 3) Hugelkultur with Derek Lowstuter, North Dakota Forest Service; and 4) Soils with Jay Fuhrer.

Dr. Lundgren was also involved in a few other events. He gave a fantastic presentation on the research he is conducting at Blue Dasher Farm on the evening of the 12th. In the afternoon on the 13th he conducted a "pasture walk" out at the Menoken Farm where he used his trusty sweep net to catch and teach us about some of the different bugs we were finding. Dr. Lundgren also made Cricket Cookies for everyone to try...if they wanted to!

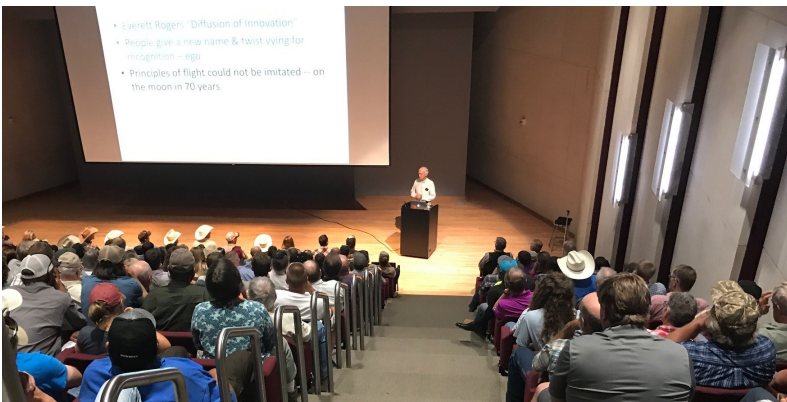


Allan Savory Recap

During the winter of 2017, four partners (*Burleigh SCD, Morton SCD, ND Grazing Lands Coalition, Dakota Prairies RC&D*) started to work together and bring a world renowned ecologist, Allan Savory, to North Dakota. He was accompanied by his right-hand man, Byron Shelton, who is a rancher, world-wide consultant and senior program director for the Savory Institute. Mr. Savory has won many awards, but the one that best illustrates the impact he has had on the world may be Australia's International Banksia Award. It is given to "the person or organization doing the most for the environment on a global scale."

On July 19th and 20th this visit took place at 2 ranches (*Black Leg Ranch in McKenzie, ND and the Miller Ranch in Ft. Rice, ND*) a special evening session was also held at the ND Heritage Center. Over 200 people attended each ranch tour and 350+ attended the evening session.

Allan and Byron's message, throughout the event, was that by using the tool of livestock we can regenerate the landscape while producing a valuable food source for our growing population. This quick synopsis does not do the whole message justice and I encourage you to watch his TED talk online or visit www.menokenfarm.com where the videos from our event will be posted, in the near future, under the "Learn" tab.



Savory speaking at the ND Heritage Center



Doan Ranch Presentation—Byron Shelton & Allan Savory

Allan Savory & Byron Shelton at Ken & Bonnie Miller

Ken and Bonnie Miller received an award from Jill Howard, ND Assistant State Conservationist.



MORTON COUNTY SOIL CONSERVATION DISTRICT

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UPCOMING EVENTS

August

17th—SCD Board Meeting @ USDA Service Center, Mandan

September

4th—Labor Day Holiday—Office Closed

14th—Cover Crop Tour @ Menoken Farm

14th—SCD Board Meeting @ USDA Service Center, Mandan

October

9th—Columbus Day Holiday—Office Closed

12th—SCD Board Meeting @ USDA Service Center, Mandan

Our next Newsletter will contain our 2018 Tree Order Form!