



# Soil Movement

Photos taken 3/29/2021

As many of you have seen in the past couple of days a lot of soil has been blowing around. The particles in the air that created the haze are called **suspension** and it occurs when the wind takes fine particles of soil and dust into the air and can move the soil particles over a long distance. The main type of soil movement is called **saltation** the movement of particles by a series of short bounces along the surface of the ground and dislodging additional particles with each impact. This process can account for 50 to 90% of the total movement of soil by wind.

Much of this soil will end up in waterways or waterbodies creating the chance of having pollution rise in the water bodies. Sedimentation is the single most common source of pollution in the U.S. waters. With the increase of soil particles sedimentation will increase creating a murky watercolor. Sediment pollution can have long-term impacts on aquatic insects, fish, and other wildlife in affected waterways. It clouds water so animals cannot see food sources. Suspended particles block light and affect growth of aquatic plants. (*It's Not Just Dirt: Impacts of Sediment Pollution by Jena Shaffer Mountain Watershed Association*)



Moisture will help hold the soil in place and prevent it from flying but we can't rely on a steady rain fall throughout the season. Other practices can be utilized to help protect your soil. We call these BMP's (Better Management Practices), these practices can improve soil health and stability. Practices can range from cover crop to help hold soil in place, no-till to leave residue and stubble to help soil structure, windbreak establishment to reduce wind speed across a field, filter or buffer strips, critical area and grass water way plantings and many other practices.

These practices do a great job at keeping the soil on the ground, they also play a very beneficial role in soil health. Soil health, also referred to as soil quality, is defined as the continued capacity of soil to function as a vital living ecosystem that sustains plants,



animals, and humans. This definition speaks to the importance of managing soils so they are sustainable for future generations. To do this, we need to remember that soil contains living organisms that when provided the basic necessities of life - food, shelter, and water - perform functions required to produce food and fiber.

Only "living" things can have health, so viewing soil as a living ecosystem reflects a fundamental shift in the way we care for our nation's soils. Soil isn't an inert growing medium, but rather is teeming with billions of bacteria, fungi, and other microbes that are the foundation of an elegant

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symbiotic ecosystem. Soil is an ecosystem that can be managed to provide nutrients for plant growth, absorb and hold rainwater for use during dryer periods, filter and buffer potential pollutants from leaving our fields, serve as a firm foundation for agricultural activities, and provide habitat for soil microbes to flourish and diversify to keep the ecosystem running smoothly.

## Stutsman County Soil Conservations History

April 13, 1948 a meeting was held in the County courthouse at which eighty farmers voted to proceed with the organization of the Stutsman County Soil Conservation District. The Stutsman county Extension Agent M.S. Burke held fourteen meetings throughout the county in the proposed District to explain the purpose of a Soil Conservation District and the benefits that the farmers could expect to their individual farms. At the June primary election in 1948 the farmers overwhelmingly approved the measure 1601 in favor and 261 against. As a result of this vote, the Stutsman County Soil Conservation District received a charter from the State of North Dakota on August 21, 1948. In October of 1948 the landowners and tenants of Stutsman County elected three farm owner-operators for District Supervisors and had M.S Burke as the District Secretary.

The District has been here for over 70 years helping landowners and producers in many ways throughout the years. Give us a call and let us know what you would like to do and how we can help prevent soil loss from your fields. The district has many options to help operations move forward toward better management practices. The employees will work with you to help get into any programs that may fit your operations.



North Dakota NRCS is announcing multiple funding opportunities through the Environmental Quality Incentives Program (EQIP) to assist landowners with their resource concerns. Here are the funding opportunity options:

The **Soil Erosion Project** will assist landowners in reducing soil erosion (wind and water) and increasing soil health/quality on their cropland fields. Some of the practices include grass plantings, cover crops, no-till, mulch-till, windbreak/shelterbelt establishment and renovations.

The **Nutrient Management Project** will assist landowners in improving water quality in these counties by reducing the amount of nutrients entering the wetlands, streams, and rivers adjacent to the cropland fields.

The **Irrigation Project** is a state-wide funding opportunity and will assist landowners with improvements to their existing irrigation system. North Dakota NRCS, in partnership with the North Dakota Irrigation Association, is announcing a funding opportunity through the Environmental Quality Incentives Program to assist landowners with improvements to their existing irrigation system. Examples would be improving efficiencies by converting from flood to pivot, installing VRI on an existing low-pressure system or converting a high-pressure center pivot to a low-pressure system.

**The Soil Erosion and Nutrient Management Project's funding opportunities are ONLY AVAILABLE IN STUTSMAN, LAMOURE AND DICKEY COUNTIES. The Irrigation Project's funding is available statewide.**

**The sign-up period opens April 1<sup>st</sup>, 2021 and ends April 30<sup>th</sup>, 2021.**

For more information or the full list of practices call your local NRCS Office:

Stutsman County- 701-252-1920 Ext. 3

LaMoure County- 701-883-5344 Ext. 3

Dickey County- 701-349-3534 Ext. 3

# Mitigating Drought Impacts on New Windbreaks

**Bottom Line:** The root systems of young windbreaks are less extensive compared to established windbreaks making them more susceptible to the impacts of drought, however, owners of new windbreaks can take actions to help ensure that these valuable forest resources aren't lost.

## Tips to help your new windbreak tolerate drought...

- For brand-new plantings, provide supplemental water immediately after planting, especially if planted into dry soil.
- Install an inexpensive rain gauge near the windbreak, or check weather station data in your local area weekly. In the absence of timely rains, provide supplemental water to the windbreak. For some locations drip irrigation systems can reduce the time devoted to watering.
- Control competing vegetation in a 3-foot radius around each plant or in a 3-foot wide strip along each side of each row. For windbreaks installed with fabric mulch, this includes controlling vegetation in the planting hole.



## Long-term strategies...

- Remove sod-forming grasses (especially smooth brome) from the planting area. Consider planting warm-season grasses between the rows, and keeping the grass mowed. This can be very beneficial for established windbreaks as well!
- If fabric mulch was not installed at planting, wood chip mulch can be added at any time.



[www.ndsu.edu/ndfs](http://www.ndsu.edu/ndfs)

## Keep in mind...

- No mitigation strategy can make up for unsuitable planting sites or inappropriate species selections.
- For more advice on how to help your windbreak "weather" a drought, contact North Dakota Forest Service or your local Soil Conservation District!

Partial funding made available through support from the USDA Forest Service State and Private Forestry Program.

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# Our Water

*Keeping it Clean*

North Dakota Department of Environmental Quality

## Spring Lawn Care Protecting Water Quality

*Jim Collins, Jr., Environmental Scientist,  
North Dakota Department of Environmental Quality*

Signs of spring are popping up everywhere. These signal the race for the most beautiful lawns in towns and cities across North Dakota. Activities such as raking leaves, picking up pet waste, sweeping sand off boulevards, and application of fertilizers are underway. If done improperly, they may impact water quality.



*Improper lawn care practices can increase the occurrence of Harmful Algal Blooms (HABs).*

### Storm Sewers

Storm sewers carry rainfall, snowmelt and whatever we put in the gutters directly to a stream, river or lake. It does not get treated like sanitary sewer discharges.

The following practices can cause serious water quality problems for nearby waterbodies.

- Over application of fertilizer and pesticides. The average “do-

it-yourself” applicator applies two to four times the amount of fertilizer actually needed.

- Spreading fertilizer and/or applying pesticides on or near sidewalks, driveways, storm drains, and within 10 feet of lakes and streams.
- Spreading fertilizer when heavy rain is forecast.
- Using fertilizers high in phosphorus.
- Disposing of lawn clippings on river banks or in waterways.
- Sweeping sand and salt into storm drains.

Proper lawn care practices include the following:

- Performing a soil test before fertilizing to determine nutrient levels. You can do it yourself for about \$6.



*Grass clippings dumped on the banks of the Missouri River.*

- If you must fertilize, consider using compost or slow release fertilizers.
- Sweep any fertilizer that lands on sidewalks or driveways back into the lawn.
- Do not fertilize if heavy rainfall is expected. After applying fertilizer, use about one-fourth of an inch of water to move the fertilizer down to the soil.
- Leave a 10-foot buffer of unfertilized lawn next to streams, lakes and other waterways.
- Compost your leaves and grass clippings. They can provide fertilizer and organic matter for the lawn.
- Instead of “de-thatching” your lawn, core aerate instead. This practice increases water infiltration and reduces compaction.
- Pick up pet waste and dispose of it properly.



For more information regarding lawn care, please consult a lawn care professional. Also, NDSU Extension has several helpful publications on proper lawn/turf care that are available online.

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# Trees of the Letter

## Bur Oak

- ◆ Native, 40-70 feet tall tree
- ◆ Medium growth rate, with yellow/tan fall leaves
- ◆ Drought tolerant but prefers moist well-drained soils
- ◆ Good for wildlife food and some cover
- ◆ Large long-lived tree with stout limbs forming a broad crown



## Smooth Sumac

- ◆ Native, 5-15 feet tall shrub
- ◆ Slower growing, life span 20-50 years
- ◆ Good for wildlife food and some cover
- ◆ Moderately drought tolerant with red leaves in the fall
- ◆ A large, loose, open-spreading shrub with flattish crown



## Spiritwood Lake Watershed Project Phase II

Spiritwood Lake project phase II has been moving along nicely. The project has replaced 2 septic systems, put in 56 acres of hay land/pasture grass, in the process of working with the campground in replacing some failed septic systems, and waiting to hear back about the proposed plan for the hypolimnetic draw down.

One factor contributing to the decline of water quality in the lake is the extended residence time of the water. Residence time is the amount of time water spends in a lake before flowing out. There are two main reasons for the increased residence time of Spiritwood Lake: first, the outlet of the lake is in close proximity to the inlet, allowing for no exchange of “fresher” water. Secondly, the operation of the hypolimnetic drawdown was suspended due to high water in the receiving waterbody (Shock Lake). This has resulted in nutrient-rich water remaining in the lake and available for plant growth throughout the water column when the lake turns over. During the recreational season, stratification occurs between four and eleven meters. First grant round results indicate there is less than 5 mg/L dissolved oxygen below these levels, limiting aquatic life habitat. In the past, the hypolimnetic drawdown system would have removed this nutrient rich pool of water in the fall, allowing spring snowmelt runoff to “freshen” the lake. Without the removal of the nutrient-rich water, the nutrients are constantly being recycled.

We will be working with phase II through 2023. There are many practices for landowners and operators to try. Most of the BMP's (Better Management Practices) the grant will help with have a cost share rate of 60%. There is ton of opportunity in the Spiritwood Lake Watershed.

Give us a call Today 701-252-1920 ext 3 ask for Dustin. I would feel honored to come out to your place and see what you are all doing on your operation.

# Prairie Pothole Water Quality and Wildlife Program

North Dakota

## Sign-Up Deadline - May 28, 2021

The **Prairie Pothole Water Quality and Wildlife Program** is a new funding opportunity available through the Environmental Quality Incentives Program (EQIP). When enrolled, producers are eligible for payment on cropped wetlands, two acres or less in size as identified on the National Wetland Inventory, and with intact hydrology. The payment rate will differ by region.

### How It Works

Producers within the Prairie Pothole Region of North Dakota, that have unmanipulated wetlands of 2 acres or less within working cropland, will be able to sign up for this new opportunity. NRCS will work with applicants to determine which wetlands are eligible based off the National Wetlands Inventory. Once the wetlands are deemed eligible, producers will then need to decide which level of management is appropriate for their operation.

Payment rates for North Dakota are identified with the 3 levels below. **Historically Underserved rates will be 25% higher** than the general rate listed. Contracts can be up to 5 years in length.

Level 1, Year 1 (327): \$148.85 per acre  
Level 1, Years 2-5 (644): \$167.22 per acre  
Level 2, Years 1-5 (644): \$161.10 per acre  
Level 3, Years 1-5 (644): \$118.40 per acre

**For more information on the different levels, and to get the full details on the program, please contact your local NRCS office.**



# District Services

SCD Tree Planting: \$40 per 100 feet with a \$400 minimum

Weed Barrier Fabric: \$60 per 100 feet; with a \$600 min,

500' Fabric rolls: \$150 each

Fabric Staples: 20¢ each

Box 500 Staples: \$90

Flags, short: \$8/bundle

Flags, tall: \$9/bundle

Tree Mats: \$4 each

Tree Tube with Stake: \$9 each

Clear Choice Weed Killer: \$19.99

Pure Green Insecticide/Fungicide: \$19.99

## **Plantskydd Repellant:**

1 lb. Granule Shaker \$14.95

3 lb. Granular Bag \$26.95

1 Qt. Pre-mixed \$21.95

1.3 gal. Pre-mixed \$59.95

1 lb. Box Powder \$29.95

Pump Sprayer \$12.95



## Available Equipment



John Deere 1590 15' No-Till Drill



No-Till 8 Row Interseeding Planter



Manure Composter



Aerator

## District Equipment

- No-Till 8 Row Planter: \$20 per acre + fuel  
\$10 per acre to rent
- Manure Composter: \$50 per hour + fuel
- Land Aerator: \$17 per acre + fuel
- 15ft John Deere No-Till Drill  
\$10 to rent + \$50 delivery

## Home & Garden Show

**April 10<sup>th</sup> 9-5 pm**  
**April 11<sup>th</sup> 12-4 pm**

Located at the Jamestown Civic Center, you can  
find us located at booth 79,  
see you there!

Stutsman County Soil Conservation District

1301 Business Loop East

Jamestown, ND 58401

701-252-2521 ext. 3

[www.stutsmanscd.net](http://www.stutsmanscd.net)



Stutsman County Soil Conservation District

1301 Business Loop East

Jamestown, ND 58401-5946

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## Board & Staff Members

### Stutsman SCD

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- ◆ Bernie Wanzek, Courtenay
- ◆ Cody Kreft, Streeter
- ◆ Gloria Jones, Jamestown
- ◆ Bob Martin, Jamestown

**Find us on the web at:**  
[www.stutsmanscd.net](http://www.stutsmanscd.net)

We are located in the  
USDA Service Center  
1301 Business Loop East  
Jamestown, ND 58401  
701-252-2521 ext. 3

### NRCS

**Darin Hirschhorn**

District Conservationist

**Marc Murdoff**

Soil Conservationist

**Shelby Larson**

Soil Conservationist

### Soil Conservation District

**Amber Struxness**

District Manager

**Kylee Reiser**

District Technician

**Dustin Krueger**

319 Watershed Coordinator

**Cody Hoggarth**

Farm Bill Specialist



The District was formed to assist people in Stutsman County through the District Mission:

*"To take available technical, financial, and educational resources, whatever their source, and focus or coordinate them so that they meet the needs of the local land user for conservation of soil, water, and related resources."*