

Richland County Soil Conservation District

SUMMER 2023



~From the Desk of the District Conservationist, Jon Quast~

Saline Soils

The North Dakota Natural Resources Conservation Service (NRCS) estimates that there are at least 1 to 1.5 million acres of slightly saline soils in the state; and 225,000 to 300,000 acres of moderate to strongly saline soils. Over time, slightly saline soils are becoming moderately to strongly saline; and salinity is moving into more productive non-saline areas. The change is a subtle one, and as such, many producers do not understand the scope of the problem. Ditch-affected salinity impacts 30,000 acres caused directly by human influence and often can easily be corrected. The increase in saline acres is the result of the current wet cycle, which began in the early 1990's, and from a change in land use. Recent updates to soil surveys in Richland County, ND and Kittson County, MN indicate an increase in acres of saline soils. The increase in inventoried saline soils is due in part to the wet cycle and land use change but is also the result of better soil inventory tools and a focus on mapping saline soils.

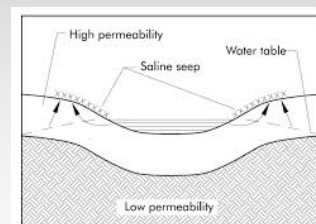


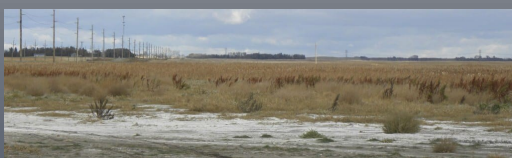
Figure 8. Slough ring salinity

The geology of eastern North Dakota also contributes to the problem. The fertile soils of the Red River Valley, known as glacial Lake Agassiz, formed when sediments filled the lake after the last ice age ended about 10,000 years ago. During the ice age, a sheet of glacial ice several thousand feet thick depressed the earth as much as 600 feet and created a huge bowl, resulting in several hundred feet of lake deposits. The Red River Valley is now a regional discharge area for the entire northern plains, with salty water moving into and through the valley.

Soils in North Dakota were formed under native prairie vegetation and subsequently converted to annual agricultural crops. Planting of annual crops along with long-term above average precipitation has caused an increase in soil salinity. Since annual crops use less moisture than native prairie vegetation, excess moisture accumulates in the soil profile. The unused moisture has caused water tables to raise, water to move laterally in the soil, and has allowed water to move to the fringes of wetlands and road ditches. Salts are soluble and move easily with the water. Evaporation or evapo-transpiration removes water from an area, allowing salts to remain at or near the surface. Since it is economically impractical to seed millions of acres back to native prairie grasses in order to use the excess water, it is important to pursue management options acceptable to the agricultural economic system to mimic native grasses and improve water use.

Examples of agronomic methods that will use excess soil moisture and prevent water from carrying salts to the soil surface include: late-maturing, deep-rooted crops in a rotation; the inclusion of perennial vegetation such as alfalfa in a crop rotation, and the use of post-harvest, deep rooted cover crops planted after small grains. The use of newer technologies such as precision agriculture has shown promise as an effective agronomic tool to manage salinity. Current mapping services and soil testing available to farmers help identify saline areas in their fields and determine the level of salinity. Soil fertility needs can be identified, and fertilizer rates adjusted to the amount needed, thus preventing the application of additional salt in the form of unused fertilizer.

If there is no remedial action taken, there will likely be billions of dollars in losses over the next few decades. Annually there will be at least 50 to 90 million dollars in the Red River Valley alone, according to Mike Ulmer, Regional Soil Scientist with NRCS. Many of the greatest value crops raised in the region are salt sensitive. These crops include edible beans, soybeans, potatoes, sugar beets (at germination), corn and wheat.



Contact your local USDA Natural Resources Conservation Service Office to discuss potential options pertaining to your saline soils.

**Make & Paint Rain Barrel Workshop
was held at Crooked Lane Farms, Colfax
on April 18th & 25th from 6-8 pm.**

A rain barrel is used to catch and store rainwater from your roof, that would otherwise runoff, until it is needed for landscaping or gardening purposes. A rain barrel can save a homeowner an average of 1,200 gallons of water during peak summer months!

The first night participants viewed a short presentation, given by Billie Jo Hinders, Richland SCD, on the benefits of a rain barrel. They were each given their barrel and fittings needed. Then the participants began the construction. They cut out the holes for the fittings, sanded and primed their barrels. The second night they painted their barrel to fit into their landscape. There were 10 people that attended and had a blast. The cost of the workshop covered the cost of the barrel, barrel kits, paint, and class supplies.

The event was sponsored by the Richland Soil Conservation District, Wilkin County SWCD, and Crooked Lane Farms.



Pollinator Night

Summer/Fall 2023

Backyard Pollinators: In the near future we are planning a pollinators night. Watch for more information to follow on our Facebook Page and Website: richlandscd.com

2023 Second Annual Photography Contest

Welcome to our second annual photo contest. Join photographers of all ages and abilities to find pollinators on native plants in Richland County. 2023 Richland County SCD Photo Contest will focus on ND prairies and native grasses (common grass species include prairie junegrass, Western wheatgrass, green needlegrass, needle-and-thread, blue grama, little bluestem, and needleleaf sedge. Other associated grasses include Canada wild-rye, spike oats, mat muhly, spikemoss, plains reedgrass, and buffalo grass).

Try to find North Dakota's state grass: The Western Wheatgrass.

Photo Contest Rules

- Feature a plant species that is native to Richland County.
- Original work that is property of the person who submits the photo.
- Labels on each entry with your name, phone number, name of the plant/tree, and what city/town/township the photo was taken in.
- One entry per species, limit of five entries per person.
- Submit photo by email in digital format, must be a minimum resolution of 300 dpi and in .jpg format.
- Trademarks, commercial names, or advertisements may not appear in the photos.
- Extra points given for North Dakota native grasses.
- Entry will imply consent to use photos for SCD educational and promotional activities.
- Credit will be placed with each photo for all photographers.

How To Participate

- Email your photos to richlandcosoil@gmail.com.
- Mail/bring digital photos to: Richland Soil Conservation District, 1687 Bypass Road,



319 Antelope Creek Watershed News



By Jennifer Klostreich

Things have been busy as usual in the watershed business. Water sampling has been going well, I continue to sample seven sites in our county, five sites on the Antelope Creek and two sites on the Wild Rice River. Once the snow left, the heat followed right behind. Richland Soil Conservation District continues to have cost share opportunities with the Antelope Creek 319 Watershed project. We also have an Outdoor Heritage Fund/319 project for marginal cropland, which pays up to \$90.30/acre for up to 10 years. If you continue to have input costs on marginal ground with little return, I would like to discuss other options with you. Give me a call, 701.642.5997 ext 3. Have a great summer season!

Notes from the District Technician Desk by Keith Kinneberg

We finally got her done!!! The 2023 spring machine planting is finally over. It was a long, strung, out time for the crew and with several overtime hours we were able to get all the trees in on time. A huge thank you to the crew for their dedication and work with putting in a large amount of trees and fabric. Thank you to the customers for your patience and getting the plant area prepped.

So what is next? That is up to you the owner as to how well you keep those trees watered and weed free. The recommendation for watering is that each tree should get between 5- 10 gallons of water a week depending on rain amount and weather conditions. Keep those weeds down to a bare minimum as weeds will take up a lot of water and space that the trees need to survive.

This fall we will do a survival rate check and then report to you the owners how well your trees are doing. You will be able to order handplants next fall to replace the ones that did not survive. You will be responsible to pay for the replacements and handplant them yourself. We will discuss with each owner after the check about issues we found and ways to improve them.

We are still waiting to hear back on the application approvals sent in earlier for the 2024 cost share program and are hoping for a 2nd round yet to open for the same plant year. NRCS also has a program for tree planting if interested. Please contact the office to see if you would qualify. The Handplant tree order form will be available to you in the next newsletter. Please get them turned in as early as possible to make sure you get on the order list. Next spring may be too late to order, and we will only order a minimum amount of extra.

Have a safe and fun summer. Keep those trees watered and please contact the office if you are looking for services provided by the district. We are happy to help out.



SUMMER 2023 PRICE LIST

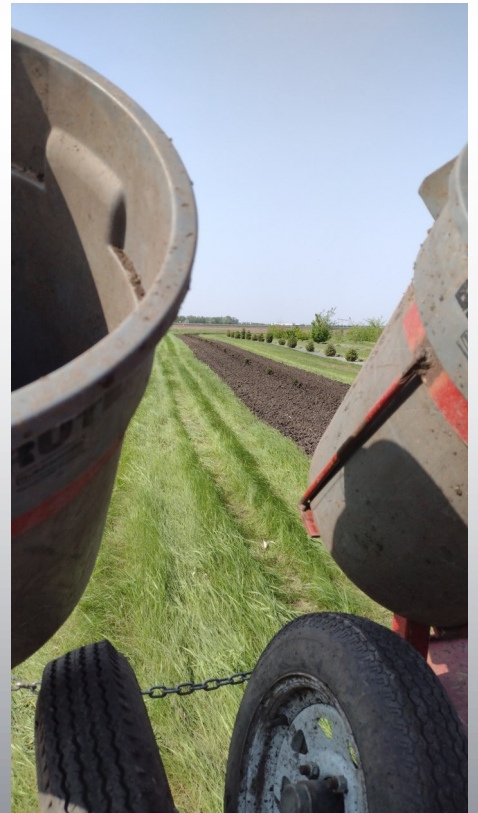
Grass Seeding:

\$25.00 an acre– with minimum charge of \$300

Rototilling:

\$75.00 per hour-with minimum charge of \$250 (Tilling will be used for tree planting contracts and grass seeding areas. Will also do large garden areas if time permits. Other uses may be available if approved by Board of Directors.)

Tubes & Stakes: 4 foot (vented style) \$4.50 each, \$6.00 w/stake, \$1.50 for stake



New Staff Introductions:

My name is ...

NRCS



Brock Pearson- NRCS Soil Conservationist

I grew up in and graduated high school at Breckenridge, MN in 2016. Went on to get an Associates degree in Fisheries and Wildlife Management, with a Wildlife Ecology Certificate, from Vermilion Community College in Ely Minnesota. I transferred and got a Bachelors degree from University of Minnesota Crookston majoring in Water Resources Management. I have work experience in park management working with the ranger staff at a 2400 acre Boy Scout camp. I spent a summer working with the Finland MN area Fisheries as an intern for the MN DNR conducting fish, lake, and stream surveys. I worked as a summer intern with Wilkin County Soil and Water Conservation District. For the last 3 years I was the Program Technician for Traverse County Soil and Water District, focusing on engineering practices related to soil erosion along with other duties such as tree planting, seeding, mowing, and spraying. As of January I have been a Soil Conservationist for the Wild Rice CDU based out of the Wahpeton Field Office.



Riley Breuer- NRCS Soil Conservationist

I grew up in Wahpeton, ND and graduated high school here in 2018. I attended North Dakota State University and graduated with a degree in Crop and Weed Science in the fall of 2021. After graduation I went and worked in Valley City, ND with an agriculture consulting group before deciding to join the NRCS, here in my hometown, as a Soil Conservationist. In my free time I enjoy relaxing at the lake, hanging out with friends, hunting deer and pheasants, and ice fishing. I enjoy watching football and college basketball.



Bryan Delaney- Soil Conservationist Student Trainee

I grew up in Fargo, ND graduating from Fargo South in 2007. I attended North Dakota State College of Science and received a construction management degree in 2010. I worked in the construction field for 13 years before pursuing a bachelor's degree at Valley City State University studying wildlife and fisheries science with a focus on wildlife management. I like to spend my free time outdoors; hunting, fishing, hiking, and camping. I have two labs, a 4 year-old silver lab named Decoy and a 2 year-old chocolate lab named Tripp.

Jason H. Nelson- Designated Conservationist for State Wetlands & HEL Compliance



I grew up in the small town of Clarissa, Minnesota. I have five sisters and one brother. I am an avid outdoorsman and I love to hunt, fish and camp. I also enjoy playing sports and spending time with family and friends.

I attended several different colleges but ultimately graduated from Valley City State University (VCSU) with a bachelor's degree in Fisheries and Wildlife Science.

After graduating from VCSU in the fall semester of 2015 I took a job in Riverdale, ND as a Natural Resource Specialist with the U.S. Army Corps. While I was with the U.S. Army Corps, I worked primarily on rotational grazing strategies and habitat management. I also worked part time as park ranger and provided assistance with monitoring aquatic nuisance species (zebra mussels) and two imperiled species on the Missouri River, the Northern Great Plains population of piping plover and the interior population of least tern. While working for the Army Corps in December of 2017 I deployed to Sacramento, CA and spent two months assisting in the debris removal missions pertaining to the 2017 California Wildfires. I maintained a database consisting of four counties (Sonoma, Mendocino, Lake and Napa). I then accepted a job as a Wetland Specialist with the Natural Resources Conservation Service in Fergus Falls, MN. I worked in Fergus Falls for two years doing wetland and HEL compliance. More recently, I accepted a job as a member of the compliance team here in North Dakota. I am proud and excited to be on board as a member of the North Dakota NRCS and the compliance team.

REDUCE INPUT COSTS
Quit fighting with unproductive acres, saline soils, or smaller hard to farm areas.

ADDRESS PROBLEM ACRES
WET AND SALINE PRONE

60% COST SHARE

UP TO \$90 AN ACRE RENTAL RATES

✓ HOW IT WORKS

Soil conservation districts in participating counties - Cass, Grand Forks, Griggs, Ransom, Richland, Sargent and Walsh are offering cost-share assistance and rental payments for establishing vegetation on those areas while maintaining your base acres. Take the first step towards a more profitable future and contact your local Soil Conservation District office today - free onsite consultations available.

SCDs will assist producers in evaluating management options on marginally productive croplands and providing cost share assistance for the implementation of eligible conservation practices.



JENNIFER KLOSTREICH
RICHLAND COUNTY SCD
1687 Bypass Road
Wahpeton, ND 58075
Phone: 701-642-5997
Email: jen.klostreich@nd.nacdn.net



YOUR LOCAL SOIL
CONSERVATION
DISTRICT
REPRESENTATIVE

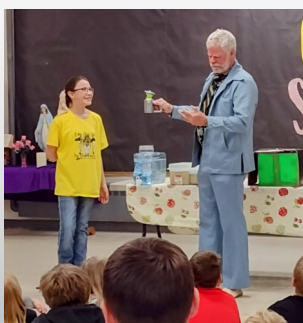
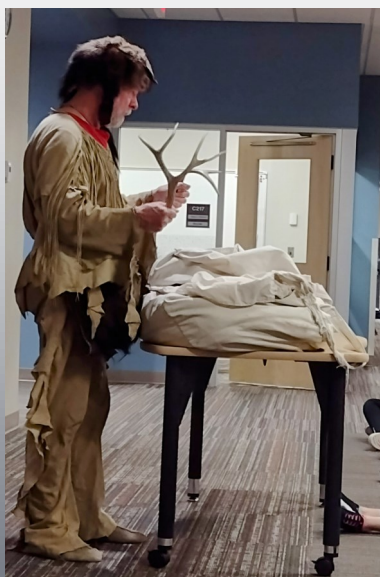
Richland County Soil Conservation District
1687 Bypass Rd.
Wahpeton, ND 58075

NON-PROFIT ORG.
U.S. POSTAGE PAID
WAHPETON, ND 58075
PERMIT NO. 146

Return Service Requested

All programs and services are offered on a non-discriminatory basis, without regard to race, color, national origin, religion, sex, age or handicap.

Stewardship Week—Tom Gibson Tree Promotion
Program visited with all Richland County Schools



OFFICE STAFF:

Jennifer Klostreich- **Watershed Coordinator/
Office Manager**

Keith Kinneberg- **District Technician**

Billie Jo Hinders- **District Clerk**

Jon Quast- **NRCS District Conservationist**

Tanner Tougas- **NRCS Biologist**

Amy Gnoinsky- **NRCS Business Tool
Specialist**

Dianne Kriz- **NRCS Contractor**

Brock Pearson- **NRCS Soil Conservationist**

Riley Breuer- **NRCS Soil Conservationist**

Bryan Delaney- **NRCS Soil Conservationist
Student Trainee**

Jason Nelson- **NRCS Wetland Specialist**

OFFICE HOURS:

8am - 4:30pm Monday- Friday
701-642-5997 Ext. 3

TENTATIVE BOARD MTG SCHEDULE

July 12th

August 8th

September 12th

November 14th