

Conservation Tree Plantings

Long Pine Creek Watershed

Voluntary Integrated Mgt. Plan

Water Resources

Woody Biomass Utilization

Drowned Out Windbreaks

Husker Harvest Day Trees



Middle Niobrara NRD



Grants:

Long Pine Creek Watershed Phase III

\$485,000.00 (Beginning)

Expansion of Water Quality & Quantity Monitoring Sites

\$111,250

SINREC

\$288,015.00 (Year one of three)

319: Long Pine Creek Watershed Phase II

\$221,000.00 (Beginning)

Nonpoint Source Water Quality Grant Waste Reduction - Composting

\$41,300

USFS Woody Innovations Applications – Boiler System

\$122,000.00

USDA-Watershed Flood Protection Operations Grant(s) – Long Pine Creek and 3 Cherry Co. Watersheds

\$2,400,500.00



MNNRD

303 East Highway 20
Valentine, NE 69201

Contact us at **402-376-3241**

www.mnnrd.org

NSWCP Cost Share

- Sign-up for 2021-2022 practices will be May 2021
- Trees 50% up to \$4,000
- Planned Grazing 60% up to \$5,000
- Miscellaneous practices, including; grassed waterway, pasture seeding, critical area planting 60% up to \$5,000

No-Till Drill

The Middle Niobrara NRD has no-till drills available for rent.

- 4 ft no-till drill (Four-wheeler)
- 7.5 ft Haybuster no-till drill (Tractor)

Both drills are capable of planting food plots or seeding native grasses. We also have food plot seed, alfalfa and can also obtain grass seed varies for your planting needs. Call the MNNRD office for prices and details.



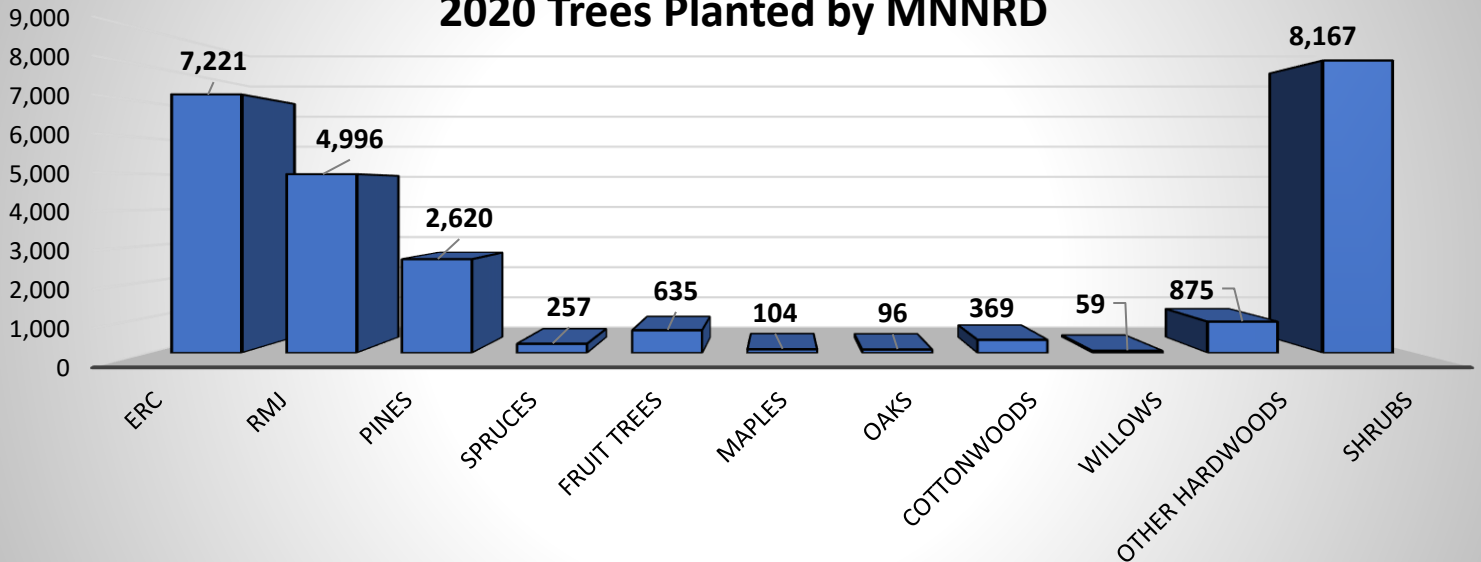
Tree Program

It is time to start planning for next year's tree plantings. The MNNRD is now taking tree orders for spring 2021. The district has a listing of various species available and can also take special orders. Order by November 6th to guarantee your species request. Cost share assistance, project design, weed barrier, drip irrigation, and planting services are all available. Check out our new website, call, or stop by the office to make your order.

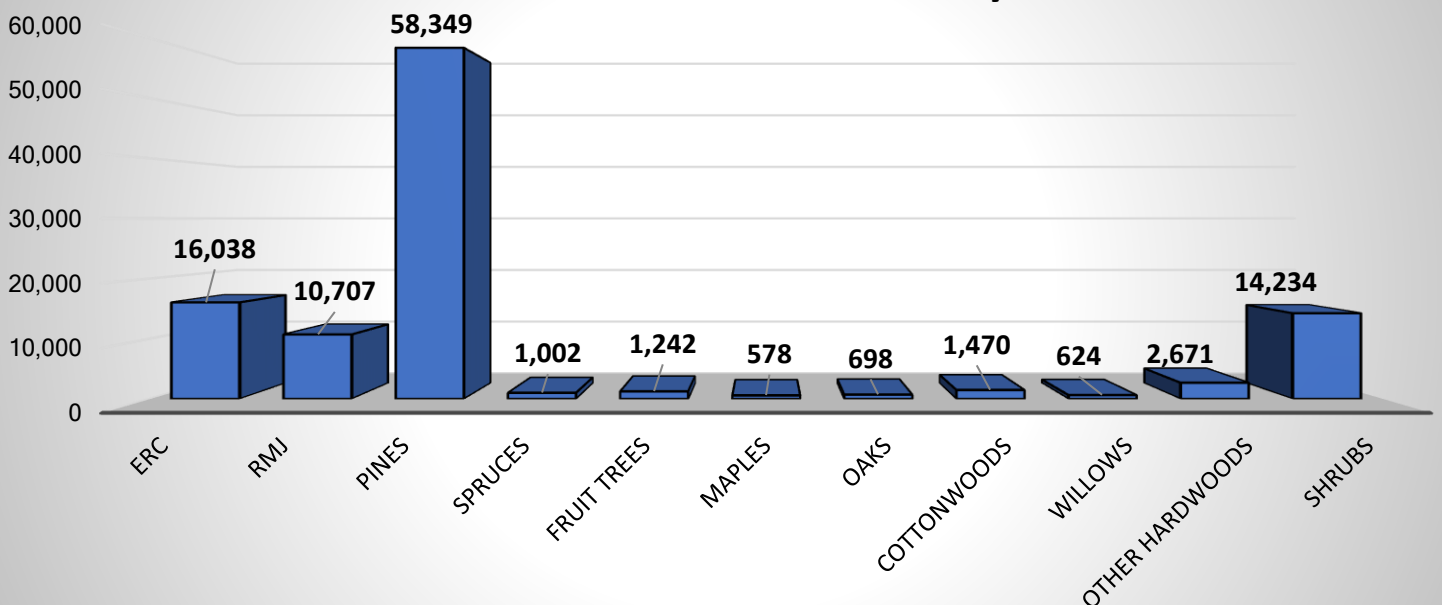


In 2020, a total of 54 windbreaks were installed by the MNNRD crew with 25,399 trees and 101,413 feet of fabric weed barrier. A total of 107,613 trees were sold including the 25,399 planted by the MNNRD crew, 28,214 hand plants, and 54,000 pines that were planted by a contractor for landowners having areas burned in recent fires.

2020 Trees Planted by MNNRD



2020 Total Number Trees Sold by MNNRD



Long Pine Creek Watershed

The MNNRD with the help of JEO Consulting Group are addressing threats to water quality, streambed channelization, aquatic habitat and infrastructure within the Long Pine Creek Watershed (LPCW) by implementing Best Management Practices (BMP) within the LPCW and an In-Stream Structure (SD-14) on Sand Draw Creek (SDC). The SD-14 project was completed the beginning of June 2020 by Buer Bulldozing Inc. Efforts continue in the LPCW with another in-stream structure project (SD-4), that will build upon the success of the SD-14 project that is in process with final design, permitting, construction engineering, and implementation.



Photo: SD-14 Project on SDC

The NRCS Watershed Work Plan (EA) in the LPCW – Long Pine Creek Watershed Improvement Project, through the Watershed and Flood Preventions Operations (WFPO) Program is in progress with a final completion date set for April 2021. This planning focuses on 9 resource management concerns. Once the planning effort has been completed and approved, MNNRD will apply for USDA funding to address priority resource concern areas throughout the watershed. There have been two WFPO meetings held with a planned meeting for November 2020.

Priority efforts to address headcuts on SDC and to work with the Brown County Commissioners to address the loss of the Old Highway 7 Box Culvert are current funding needs.



Voluntary Integrated Management Plan

The Middle Niobrara NRD (District) and the Department of Natural Resources (Department) have been working on a Voluntary Integrated Management Plan (VIMP) since 2015. Stakeholder meetings were held to take input on the VIMP. On August 13, 2020, the District and the Department came to an agreement on the draft version of the VIMP. On September 14, 2020, a Public Hearing was held to take input from the public on the VIMP. After the Public hearing, the District and the Department have 60 days to approve the VIMP with or without changes. You can contact the District with any questions at 402-376-3241.



Water Resources

Nitrates

<i>Nitrate Changes 2019-2020</i>			
County	2019 Avg PPM	2020 Avg PPM	Avg PPM Change
Cherry	3.06	2.82	-0.24
Brown	7.37	6.44	-0.93
Keya Paha	5.22	4.46	-0.76
Rock (Western Edge)	6.88	6.06	-0.82

A total of 335 wells were sampled in 2020 for nitrate contamination by MNNRD staff. These are a mix of Irrigation, Livestock, and Domestic wells across the 4 counties covered by the MNNRD. CDC/EPA guidance states that nitrate levels above 10 Parts per Million (PPM) are unsafe for humans to consume. High levels of nitrate in well water often result from improper well construction, well location, overuse of chemical fertilizers, or improper disposal of human and animal waste. Sources of nitrate that can enter your well include fertilizers, septic systems, animal feedlots, industrial waste, and food processing waste. Wells may be more vulnerable to such contamination after flooding, particularly if the wells are shallow, have been dug or bored, or have been submerged by floodwater for long periods of time. If you would like to have your well tested for nitrate or bacteria contamination stop into the office to get sample bottles and instructions.

Static Water Levels

Spring 2020 Static Measurements					
	Cherry	Brown	Keya Paha	Rock	MNNRD District
Lowest Change Since Spring 2019	-3.15	-1.72	-1.06	2.19	
Highest Change Since Spring 2019	5.87	11.55	7.91	8.82	
Average Change Since Spring 2019	0.25	3.07	2.53	6.46	3.08
Lowest Change Since Fall 2019	-1.67	0.32	-1.82	1.07	
Highest Change Since Fall 2019	7.69	10.45	3.85	3.26	
Average Change Since Fall 2019	1.69	3.54	1.08	2.27	2.15
Lowest Change Since Spring 2015	-4.48	0.33	-1.03	1.22	
Highest Change Since Spring 2015	14.42	14.5	9.78	11.38	
Average Change Since Spring 2015	2.53	6.17	5.52	8.68	5.73
Lowest Change Since 2010	-2.4	-0.62	-1.55	2.15	
Highest Change Since 2010	16.89	12.76	6.22	6.6	
Average Change Since 2010	4.1	3.96	2.68	5.3	4.01
	Red numbers indicate an decrease			Numbers are in feet	
	Green numbers indicate an increase				

The MNNRD samples right around 200 irrigation wells twice a year(Spring/Fall) for static water levels. Numbers in each county for 2020 are as follows, Brown: 45, Cherry: 106, Keya Paha: 33, Rock: 10. The above graph includes data up until Spring of 2020, as fall static water level data collection is just starting. If you have any questions about levels in a more specific area, or would like more data please call 402-376-3241 or stop into the office!

Woody Biomass Utilization

The MNNRD is continuing to utilize woody biomass products throughout the district. From its inception in 2014, the MNNRD has created approximately 2,200 tons of wood chips. Taking unwanted trees and turning them into a profitable and desirable resource benefiting Nebraska's environment and economy, is a better alternative to piling and burning unwanted trees that releases carbon back into the atmosphere. Creating chips and applying them to the soil has been shown to increase soil moisture retention, infiltration rates, aggregate stability, and general soil biology.

A Waste Reduction Grant from the Nebraska Department of Environment and Energy (NDEE) has allowed the MNNRD to expand its woody biomass program further by cooperating with local producers on several composting projects. Compost is the product manufactured through controlled aerobic, biological decomposition of biodegradable materials. The product has undergone mesophilic and thermophilic temperatures, which significantly reduces the viability of pathogens and weed seeds. The composting process stabilizes the carbon that it is beneficial to plant growth. Compost is typically used as a soil amendment but may also contribute to plant nutrients. In 2020, the MNNRD's composting program turned 400 tons of waste manure and wood products into high quality compost to be used as a soil amendment. One of the newer projects with a cooperating producer is composting 140 tons of sheep manure, old grass hay, and wood chips. Utilizing the compost product, the producer hopes to substantially reduce his commercial fertilizer use, build organic matter and nutrients in the soil, and expand on his No-Till program. This operation has a goal of eliminating commercial fertilizer application in the next few years. The MNNRD is striving to help producers achieve their goals of production while conserving our natural resources.



DROWNED OUT WINDBREAKS

Since 2015, the MNNRD has seen upwards of 7-10" above average yearly precipitation resulting in ground water levels rising on an average of 5.7 feet district wide. Individual monitoring wells have increased as much as 14.5 feet over this 5-year time frame. Due to these increases, windbreaks within the MNNRD are drowning because of standing water and saturated soils. Dead windbreaks are easy to find as one drives through the MNNRD. Estimates range from 20-30% of established windbreaks being impacted by high water tables.

The MNNRD has applied for a grant to receive cost share funding to assist landowners who have lost windbreaks from excess water, which if awarded, will be available for spring 2021 planting. If you are a landowner who has lost all or portions of windbreaks due to high water, you are encouraged to call the MNNRD office to get placed on a list for potential cost share assistance in replacing these drowned windbreaks and receive more information on the program at 402-376-3241.



HUSKER HARVEST DAY TREES

On September 17th, the MNNRD received 1,750 Colorado blue spruce seedlings from Bessey Nursery that were produced for the 2020 Husker Harvest Days which was cancelled due to Covid-19. A planting day was coordinated and scheduled with the Valentine Middle School on September 29th to plant the seedlings in and around areas of Valentine. About 150 middle school students grades 5-8 brought shovels, bags, water bottles and eager spirits to learn about trees and their benefits, Nebraska's Arbor Day, and most importantly about tree planting. Braving windy, warm weather the students were able to plant approximately 1,200 trees in 90 minutes. Smiles on some of the faces soon turned to frustration as the students experienced hard, dry soil conditions making digging and planting difficult. With help from the adults, most of the 1,750 trees were planted and MNNRD staff was able to water the trees with their tanker truck after they were planted.



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