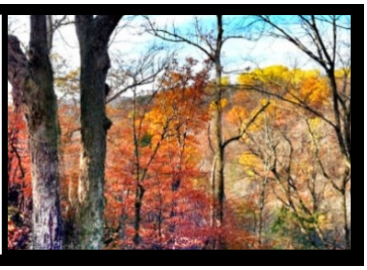
CONSERVATION TODAY

Sibley Soil and Water Conservation District & USDA

Winter 2022



2021 Conservationist of the Year

Every year the District gets a chance to recognize someone for their outstanding efforts towards conservation. This year Dieball Dairy, located in Jessenland Township near Green Isle, has been selected as the Sibley SWCD Conservationist of the Year. This dairy is managed by Karl and Rosemary Dieball, their son Jim and his wife Wendy along with their two daughters. They operate 1,200+ acres of cropland and 450 head of dairy cattle. Recently, their family farm was transformed with the addition of a new dairy barn that contains three robotic milking stations that service around 235 cows. In conjunction with the new barn, a pollution abatement system was installed to help manage manure and allow the dairy to utilize a nutrient management plan as part of their cropping operation. The Dieballs rotate their cropland between corn, soybeans and alfalfa and plant around 40 acres of cover crops each year. They have been utilizing nutrient management and integrated pest management techniques as part of the USDA-NRCS CSP program. In addition, they have also installed grassed waterways on some of their cropped acres. Currently the Dieballs, are experimenting with no-till soybeans and are considering adding additional erosion control practices for other areas of their cropland. Not only are they busy with the dairy, but they are also very active in the community as members of the American Dairy Association, MidCounty COOP Board, Jessenland Township Planning and Zoning, as well as FFA and 4H. The Dieballs are stewards of the land and Sibley SWCD would like to thank them for their conservation efforts!

Sibley Soil & Water Conservation District

Sibley SWCD

Joel Wurscher,
District Manager

Jeremy Buckentin,
District Technician

Jack Bushman,
Conservation Technician

Eric Miller,
Farm Bill Technician

SWCD Board

Kathleen Thies - District 1

Paul Wiemann - District 2

Loren Evenson - District 3

Wayne Grams - District 4

Robert Nielsen - District 5

Board Meetings

Second Tuesday of
Each Month
4 p.m., SWCD Office

USDA

USDA - NRCS

Jacob Stich,
Team Lead

Joel Alecia-Hernandez
District Conservationist

Jim Cecconi,
Agronomist

Office Hours

By Appointment
Monday - Friday
8 a.m. - 4:30 p.m.

Rush River County Park CPL Grant

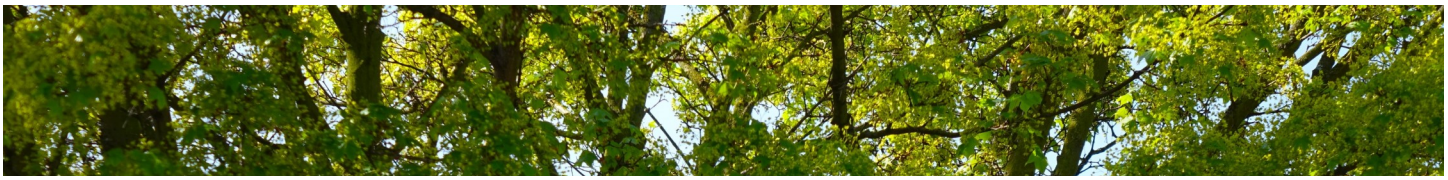
With previous successful Conservation Partners Legacy (CPL) grants, the District sought out other possibilities towards conservation work within Sibley County. Upon a meandered survey of the County parks, it was determined that there was a small scale isolated population of buckthorn discovered at Rush River County Park that is both easily accessible and manageable. Managed by Sibley County, Rush River County Park is a stronghold of biodiversity residing on the Eastern side of Sibley County, southwest of Henderson. This 285 acre park has some of the most intact forest ecosystem within the Minnesota River Valley.

To preserve and protect this precious resource, in 2018, the District partnered with Sibley County to submit a CPL grant to manage that small population of buckthorn and replant native tree and shrub species. Common (European) buckthorn and glossy buckthorn are non-native, deciduous, woody shrubs/small trees introduced to North America during the 1800's as ornamentals, hedgerow plantings, shelterbelts, and wildlife habitat. They escaped cultivation and have aggressively invaded natural areas and forestland throughout much of the United States and Canada. Common and glossy buckthorn are listed as restricted noxious weeds in Minnesota. Meaning it is illegal to import, sell, or transport buckthorn in this state. Non-native buckthorn usually spreads through intentional plantings and through wildlife seed distribution, especially from birds.

The final outcome of the project included the eradication of an 11 acre patch of buckthorn located in the northeast corner of the park. The District hired local contractor H&W Land Management to cut, pile, and treat the remaining stumps with chemical to deter regrowth. Sibley County Public works were responsible for the removal and burning of the piles of cuttings when conditions allowed. The total cost came out to $24,900 with a 10% match component. In the Spring of 2021, the District staff re-planted nearly 400 native bareroot trees and shrubs ranging from 12-24" in replacement of the once buckthorn infested area in hopes of reforestation. If you are in the area, check out this successful project! None of this great work could have been completed without the Clean Water Land and Legacy Amendment!

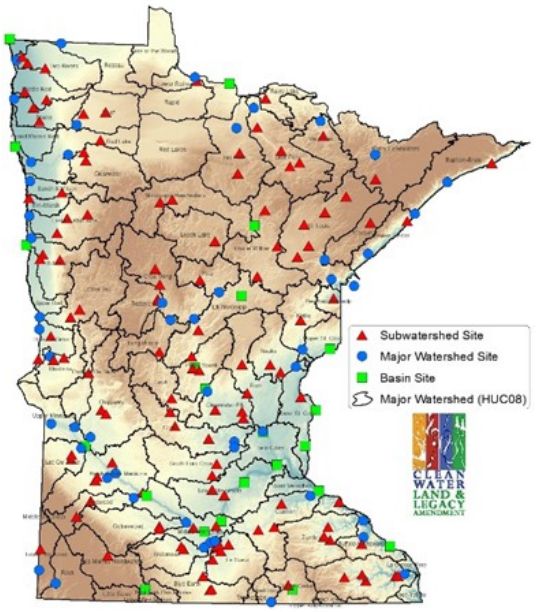
Before

After



Water Monitoring – Pollutant Loading on High Island Creek

Every Spring, staff at Sibley SWCD begin preparing for another season of water monitoring on High Island Creek. The process, part of the Minnesota Pollutant Control Agency's (MPCA) Watershed Pollutant Load Monitoring Network (WPLMN), is the same every year. The monitoring season begins soon after ice out, all major rain events are sampled on the rising and falling limbs of the hydrograph, timely baseline samples are taken when flows stabilize, and the season wraps up in early November. While the process remains the same, the one thing that can't be controlled is also the most important factor, the weather.



Statewide WPLMN Sites—MPCA

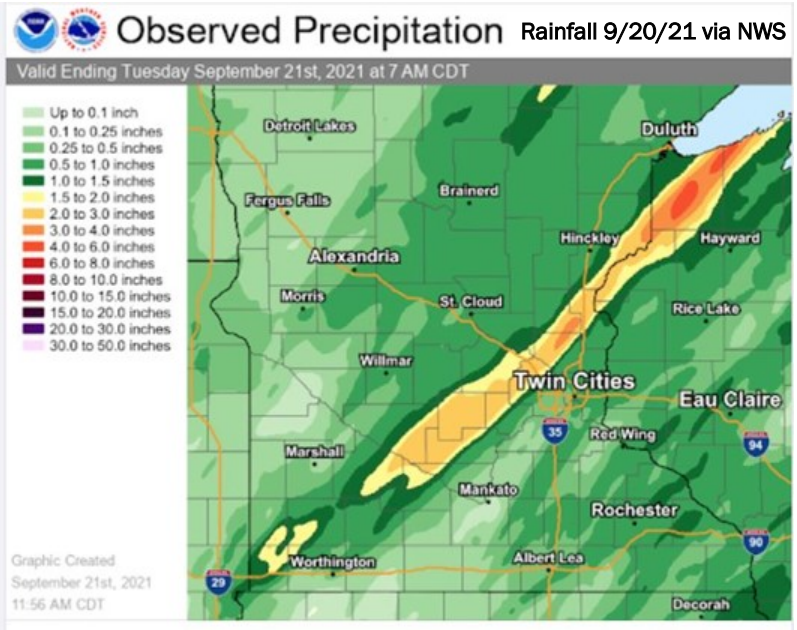
The Process:

A successful monitoring trip starts at the office. Before taking to the field, sampling staff review site specific hydrographs available via the Minnesota Department of Natural Resources (MNDNR) and United States Geological Survey (USGS). Rainfall data, available via a variety of sources such as the National Weather Service (NWS), is also reviewed. These steps assure that samples are taken at the right time and that resources won't be wasted.

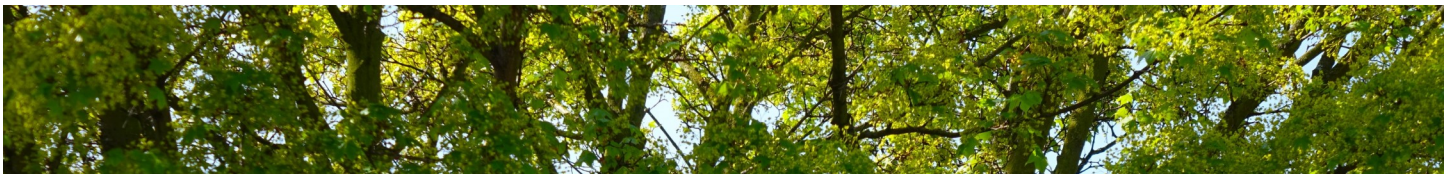
Once the decision is made to take to the field, staff head off to two sites on High Island Creek: HIC-5P, just north of Arlington, and HIC-10P, near the confluence with the Minnesota River. These sites have permanently fixed equipment that allow local, state and federal staff, along with the general public, to view flow data. Using a wire weight gage, a stream stage measurement is taken. Next, field meter is lowered into the water. This takes field measurements of temperature, Specific Conductance, pH, and Dissolved Oxygen. Finally, a special piece of equipment called a Van Dorn sampler, is used to collect water from the stream. This water is put into sterile bottles to be delivered to the lab and analyzed for Total Suspended Solids, Total Phosphorus, Nitrate plus Nitrite Nitrogen, and Total Kjeldahl Nitrogen. A Secchi Tube is also used to measure water clarity. Field notes and pictures are taken before staff head off to the next site.

The Weather:

2021, unlike the previous years, was unique because of the drought conditions that prevailed throughout most of the year. Below average snowfall made for a gradual ice out and low flow conditions to start the year. While rainfall events happened throughout the growing season, the persistent drought kept water levels on High Island Creek lower than normal, rarely reaching bank full. Several large rainfall events where isolated to the western portion of the High Island Creek watershed. This made it more important than ever for project staff to pay close attention to the hydrographs. Peak flows, usually reserved for ice out or mega rainfalls events during the growing season, occurred in early November, just after the close of the monitoring season.



Rainfall 9/20/21 via NWS



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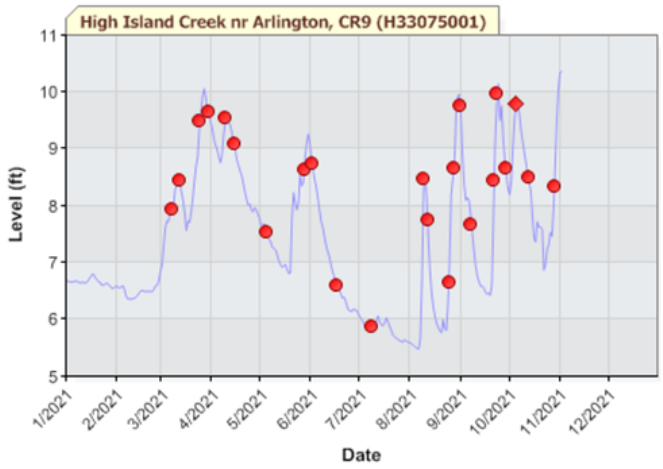
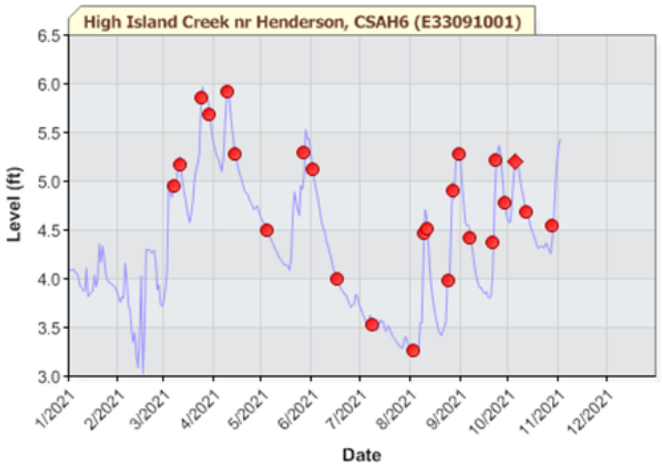
The Results:

Results from a monitoring trip come in several phases. Some data, like the parameters taken from the field meter, are available immediately. Lab results are usually available for project staff to review within a week. Ultimately, the goal of the WPLMN program is to calculate yearly pollutant loads. A pollutant load is the amount of a pollutant that passes through a monitoring station over a period of time. This data is used to track the health of a river or stream. These results take a bit longer, as flow data needs to be finalized, and a special computer program, called Flux32, needs to be run and verified by specialists at MPCA. Once complete, this data is available to the public via the MPCA's WPLMN data viewer webpage (https://www.pca.state.mn.us/wplmn/data-viewer).





Minnesota Volunteer Precipitation Observing Program

MNgage also known as the Minnesota volunteer precipitation observing program, is a volunteer-driven program dating back to the late 1960's in the Twin Cities and gradually expanded across the Minnesota in the 1970's. The number of warm-season volunteer observers has remained steady at around 1,500 across the state for the past four decades. Sibley SWCD continues to maintain this rain gauge monitoring network throughout various locations in Sibley County. Currently, 32 locations in total are monitored covering every township. Rainfall amounts are recorded daily and reported to the District at the end of each month from April – October, with 7 residents recording year round. The SWCD then submits the reports to the Minnesota Climatology office. You can visit their website at http://climate.umn.edu/ for all historical records and information about Minnesota's climate. Sibley SWCD would like to thank all of the current readers for their efforts this past year! With that said, the District is always looking for more volunteers, especially in Bismarck, Faxon, Moltke, and Faxon Townships. The District provides each reader with a rain gauge and forms for recording. If you are interested in monitoring, please give the office a call at 507-702-7077.

Sibley Soil & Water Conservation District

2022 TREE PROGRAM - ORDER FORM

Mail with payment to: Sibley SWCD, 112 5th St., PO BOX 161 Gaylord, MN 55334

ORDER # (office use only)

Name:		
Address:	**City:**	**Zip:**
Phone:		

TREE ORDER DEADLINE: MARCH 31ST, 2022 ~ PLANT KIT ORDER DEADLINE APRIL 22ND, 2022

Conifer / Evergreen - Individually Potted

Type	Species	Size	Type	Price	Quantity	Total ($)
1 QUART CONIFERS	Black Hills Spruce	1 Quart - 8" to 12"	Single Pot	$5.00		$
	White Spruce	1 Quart - 8" to 18"	Single Pot	$5.00		$
	Norway Spruce	1 Quart - 8" to 18"	Single Pot	$5.00		$
	American Arborvitae	1 Quart - 6" to 12"	Single Pot	$5.00		$
	White Pine	1 Quart - 5" to 8"	Single Pot	$5.00		$
2 GALLON CONIFERS	Black Hills Spruce	2 Gal. - 18" to 24"	Single Pot	$15.00		$
	Colorado Spruce	2 Gal. - 18" to 24"	Single Pot	$15.00		$
	American Arborvitae	2 Gal. - 18" to 24"	Single Pot	$15.00		$

Deciduous / Broad Leaf - Bundles of 25 Bareroot Seedlings

LARGE TREES	Black Walnut	12" to 18"	Bundle of 25	$35.00		$
	Sugar Maple	18" to 24"	Bundle of 25	$35.00		$
	Red Maple	18" to 24"	Bundle of 25	$35.00		$
	Swamp White Oak	18" to 24"	Bundle of 25	$35.00		$
	Red Oak	18" to 24"	Bundle of 25	$35.00		$
SMALL TREES & SHRUBS	American Hazelnut	12" to 18"	Bundle of 25	$35.00		$
	Nanking Cherry	12" to 18"	Bundle of 25	$35.00		$
	Common Lilac	18" to 24"	Bundle of 25	$35.00		$
	Red Osier Dogwood	18" to 24"	Bundle of 25	$35.00		$
	Flame Willow	12" to 18"	Bundle of 25	$35.00		$
	Red Splendor Crabapple	12" to 18"	Bundle of 25	$35.00		$

Native Plant Kits - Tray of 36 Live Plants—6 Species / Kit

Tall Prairie	A mix of tall statured prairie species. Heights ranging 36" and up.	$60.00		$
Shade Mix	Designed for areas with limited direct sunlight.	$60.00		$
Rain Garden	Mesic to moist soil species, perfect for frequently saturated areas.	$60.00		$
Pollinator	A mix of "superfood" species for threatened/endangered pollinators.	$60.00		$

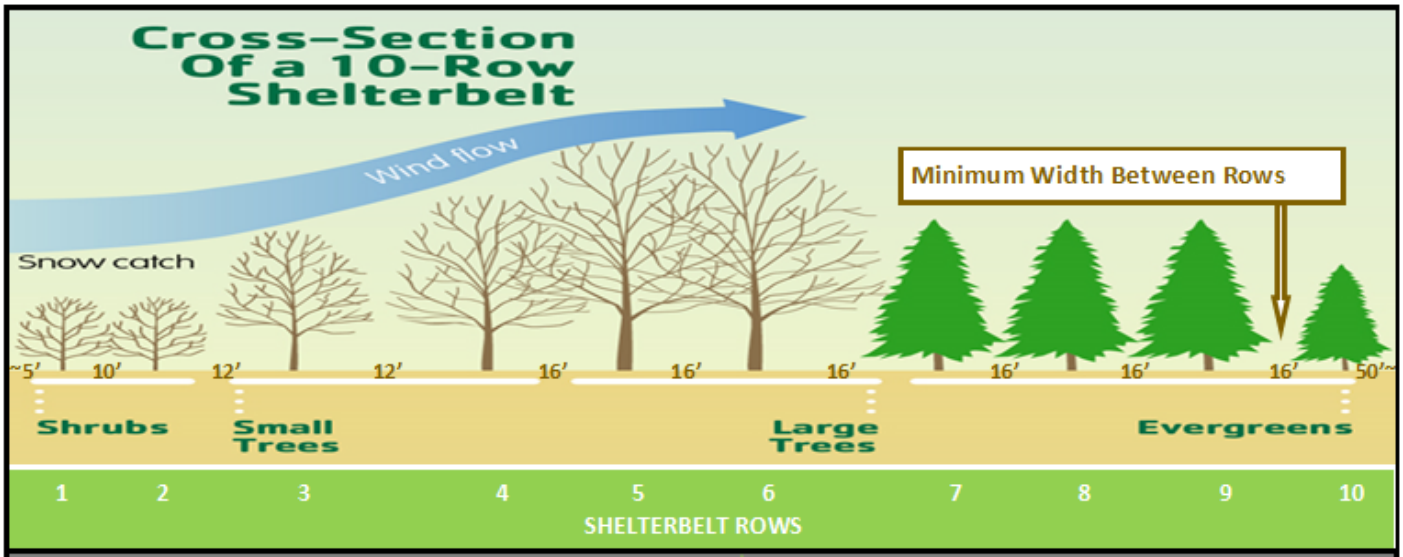
Order Totals

SUB TOTAL	$
SALES TAX (Sub total x 0.06875)	$
TOTAL DUE (Sub total + sales tax)	$

Notice **Payment is due in full at time of order, no refunds for orders cancelled after February 24th, 2022. Plant availability and sizes are subject to change. Tree's will be available near the end of April 2022. Plant Kits will be available in mid-May 2022; You will be notified of your pickup day and time for your order by mail. Please send payment to Sibley SWCD 112 5th Street, PO Box 161, Gaylord, MN 55334**

Terms and Agreement:
I acknowledge that the Sibley SWCD cannot be responsible for the condition in which the nursery stock arrives, the stock's condition beyond my scheduled pickup date(s) and that the SWCD reserves the rights to substitute different stock for damaged, unsuitable or lack of sufficient quantities received from the nursery.

Signature_____ Date:_____/_____/_____



Shelterbelt Layout Strategy

Rows 1-2—Shrubs: Plants in these first rows are planted 3 to 6 feet apart within the row and 10 to 15 feet between the rows. (Lilac, Dogwood, Flame Willow)

Rows 3-4—Tall Shrub/Small Tree: Seedlings are planted 5-16 feet apart (Tall Shrubs)/8-16 feet apart (Small Trees) in the row and 12 to 16 feet from the shrub row. Row four should be 12 to 16 feet from row three. (Flame Willow, Cherry, Hazelnut, Poplar)

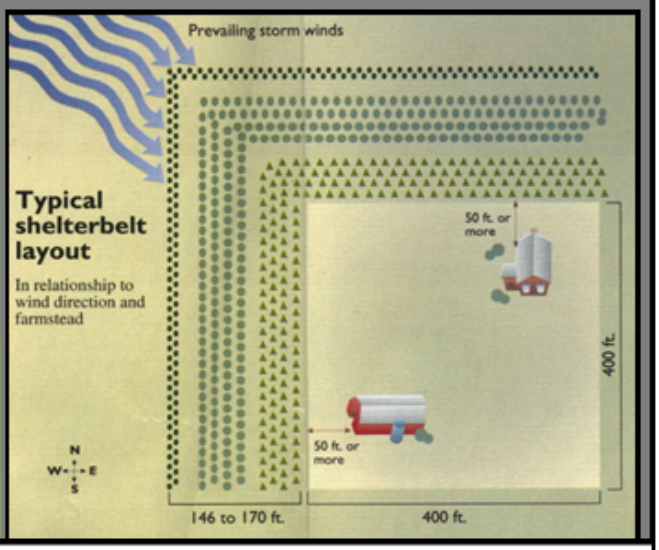
Rows 5-6—Tall Deciduous Tree: Row five should be spaced 16-20 feet behind row four. Row six should be spaced 16 to 20 feet behind row five. Trees should be planted 10 to 20 feet apart within the row. (Walnut, Maple, Oak)

Rows 7-8—Tall Conifer: Row seven should be spaced 16 to 20 feet behind row six, and row eight, 16 to 20 feet from row seven. Trees should be planted 10 to 20 feet apart within the row (Norway Spruce, White Pine)

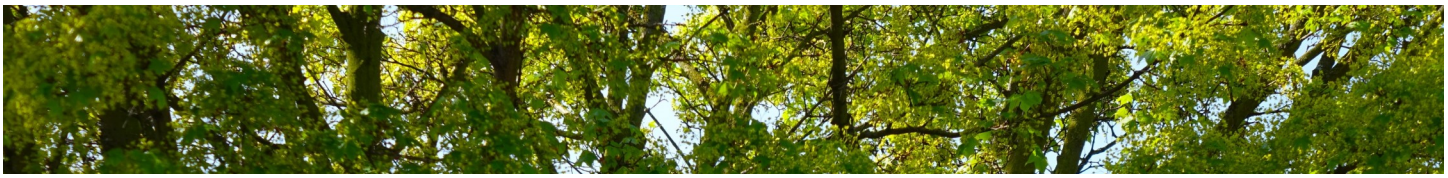
Rows 9-10—Medium Conifer: These last rows are both located 16 to 20 feet from the previous row and trees are planted 10 to 20 feet apart within the row.
(Black Hills/Colorado Spruce, Scotch Pine, Arborvitae)

Recommended Windbreak Designs by Width:

# of Rows	Min. Width	Rec'd Combination:
10 Rows	185 feet	1,2,3,4,5,6,7,8,9,10
9 Rows	169 feet	1,2,3,4,5,6,7,8,10
8 Rows	153 feet	1,2,3,4,5,7,9,10
7 Rows	137 feet	1,2,3,4,7,8,9 or 1,2,3,5,7,8,9
6 Rows	121 feet	1,2,3,7,8,9 or 1,3,5,7,8,9
5 Rows	109-111 feet	1,2,4,7,8 or 1,3,7,8,9
4 Rows	93-99 feet	1,2,7,8 or 1,4,7,8
3 Rows	83-90 feet	1,7,8 or 7,8,9



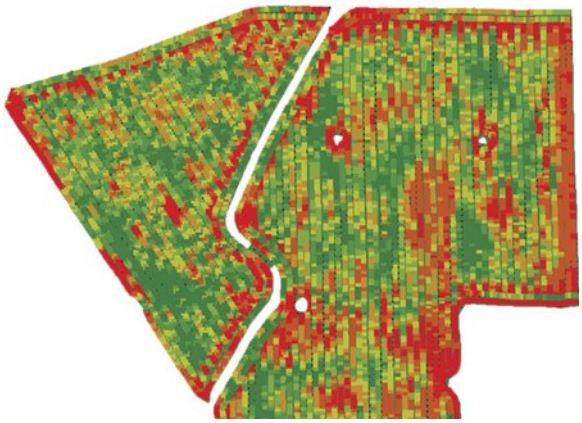
Species	Type	Height	Width	Preferences	Species	Type	Height	Width	Preferences
Black Hills Spruce	Conifer	30-60′	15-25′	Variety of soils	Red Maple	Broadleaf	40-60′	30-40′	Variety of soils
White Spruce	Conifer	40-60′	10-20′	Well drained soils	Sugar Maple	Broadleaf	60-75′	40-50′	Loamy soils
Colorado Spruce	Conifer	50-75′	10-20′	Well drained soils	Sw. White Oak	Broadleaf	50-80′	50-80′	Variety of soils
Norway Spruce	Conifer	60-90′	20-30′	Variety of soils	Red Oak	Broadleaf	60-75′	35-45′	Variety of soils
White Pine	Conifer	80-130′	20-40′	Well drained soils	Am. Hazelnut	Broadleaf	15-18′	10-12′	Loamy soils
Scotch Pine	Conifer	30-60′	30-40′	Loamy soils	Common Lilac	Broadleaf	8-15′	6-12′	Variety of soils
Arborvitae	Conifer	15-35′	6-20′	Variety of soils	Nanking Cherry	Broadleaf	6-10′	12-15′	Loamy soils
Black Walnut	Broadleaf	50-75′	50-70′	Variety of soils	Redosier Dogwood	Broadleaf	7-9′	8-12′	Variety of soils
Norway Poplar	Broadleaf	40-60′	20-35′	Variety of soils	Flame Willow	Broadleaf	15-20′	5-15′	Variety of soils



Turning Red Acres To Green

Yield monitoring and mapping has become a great resource for farmers and agricultural professionals throughout the Midwest. This type of precision ag. system can help farmers distinguish between low to high yielding areas of their field over numerous years and can identify areas in need of additional management. In general, red colored areas identify low yielding crops, whereas green colored areas identify high yielding crops. Producers can compare this yield information with their nutrient management strategies to develop and target more cost-effective management decisions. Having this tool can assist in amplifying crop production while mitigating operation costs through data driven targeting of nutrient application and other management strategies.

Any farmer that utilizes these systems can tell you where their best producing acres are year after year. Those same farmers can also describe where their worst acres are every year. Consistent, low yielding acres can really impact operating costs as they generally don't return much value or profit for what was spent on them. Some farmers will find that there are some areas of a field that just won't respond to varying management strategies due to poor soils, tree canopy cover, and/or general landscape position. The good news is there can be conservation alternatives to help offset these areas, to help reduce those overall operation costs, and turn those red areas to green.



Many times, these red areas will be along field edges where soil compaction from harvest activities and/or tree cover doesn't provide ideal conditions for yield production. Utilizing a field border that can be hayed, or enrolling these edge areas into conservation programs like CRP, can help reduce operation costs and increase profit. CRP is especially great as these programs provide a rental payment on those acres, without all the added costs of producing crops. The same concept can be applied for larger mid-field areas that are consistently low yielding by squaring off the area, if feasible, to help remove these non-profitable areas while still maintaining straight lines and even planter passes. The reduction of inputs in these areas could yield an increase in overall profit, helping farmers see more green each fall not to mention more wildlife year round.

AIS Spotlight: *Starry Stonewort*

Starry Stonewort is a grass like form of macro-algae that is non-native to Minnesota. The first infestation was found in late August of 2015 in Lake Koronis. Starry Stonewort can cause dense mats at the water's surface impeding recreational use. When forming, Starry Stonewort will crowd and outcompete native vegetation. Management of this plant is not well documented, however, it does appear that some herbicides may suppress it. Mechanical harvest is not recommended since tiny fragments may spread to other parts of the waterbody.

Starry Stonewort can be spread from one body of water to another by unintentional transfer of bulbils, the star like structure the plant gets its name from. These fragments can be attached to watercraft, docks/lifts, anchors, etc.

The most important thing to do to prevent the spread of Starry Stonewort is to make sure to remove all aquatic vegetation from your watercraft and equipment before entering another waterbody.

Photo Credit: MNDNR

Sibley SWCD
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