Sherburne Soil and Water Conservation District

Nature Talks
October 2020

In This Issue

Sherburne SWCD

Elk River Clean Up



Sherburne Soil and Water Conservation District hosts a community river area cleanup each year to help watershed conservation efforts. The event is open to volunteers of all ages who are willing to roll up their sleeves and get dirty – church groups, schools, community organizations, businesses and more! Volunteers kept social distant and broke into small groups, meeting at locations in Becker, Palmer, and Big Lake.

Saturday, October 3rd, the morning started out a little chilly when 25 volunteers, including 6 SWCD staff, met for the 12th annual Elk River Watershed Cleanup. These volunteers picked up trash at Big Lake, Mitchell Lake and stopped along 13 bridge crossings throughout the county. These areas are chosen because they feed into the Elk River and its tributaries. During the event 30 bags of trash were collected, containing an estimated 385 pounds of trash. The SWCD would like to send out a Big Thank You to all of volunteers, your hard work makes our lakes and rivers cleaner for everyone!

The Sherburne Soil and Water Conservation District is holding its annual tree sale to encourage tree planting in Sherburne County. **The SWCD will be accepting online orders again this year, starting January 4th.**

Bare root seedlings are easy to plant, grow quickly and come in bundles of 25. Many of the species being offered provide food and shelter for birds and wildlife year round. Additionally, trees can increase the value of your property and conserve energy by shading your house in summer and sheltering it from cold winds in winter. Tree orders will be available for pick-up the first weekend in May at our new office location on Jackson Ave in Elk River. Stock is limited and orders are entered on a first-come, first-serve basis.

2020 AIS Monitoring

Golden Clam (Corbicula fluminea)

Despite some activities subsiding due to COVID-19, many aspects of the county's aquatic invasive species (AIS) prevention program continued in 2020. As in past years, the SWCD has worked with partner lake associations and cities to hire watercraft inspectors to educate the boaters that visit our lakes. Over 1,700 hours of time was spent with this important program in 2020! The inspectors were able to complete their work under COVID-19 safety guidelines. Additional continuing programs for 2020 included the zebra mussel veliger monitoring and Starry Trek programs. 16 lakes have been monitored for zebra mussel veligers (larvae) in Sherburne County since 2016 through use of equipment that the district purchased. The SWCD prepares and distributes the equipment, volunteers on each lake do the sampling, and then the samples are analyzed by a local lab for zebra mussel veliger presence. Many of these volunteers also participate in Starry Trek – a statewide day of AIS searching that occurs in mid-August. For this year's Starry Trek event, 18 volunteers turned out to look for AIS in 10 lakes and two sites on the Mississippi River. Special guidelines were followed to ensure safety for all participants during the COVID-19 pandemic.

The Sherburne SWCD and Sherburne County Coalition of Lake Associations have partnered to create a user friendly, visual-based Early Detection and Rapid Response (EDRR) plan. The district currently has an EDRR plan in place, but this new improved document will be customized for each individual lake association / district use. It will specify the steps necessary to document and communicate a new AIS infestation, as well as outline options for management.

2020 was not without challenges for the county AIS prevention program and its partners. Eurasian watermilfoil, an invasive plant that can outcompete our native aquatic plants, was found in several lakes. Additionally, during a planned late summer drawdown project that the City of Elk River is conducting on Lake Orono, residents of the lake spotted several zebra mussels and rusty crayfish. Finally, in late September several zebra mussels were found in Big and Mitchell Lakes. All of these infestations are thought to be very recent introductions and are a reminder of the importance of early detection monitoring, following AIS transport laws, and Cleaning, Draining and Drying your watercraft when moving from lake to lake.

A final new AIS infestation was found by a family during Starry Trek - Golden Clam (Corbicula fluminea) was found in Briggs Lake. This is a non-native clam for the area and its occurrence here is mysterious – it typically should not be able to survive our cold harsh winters so is not thought to be a viable threat to the local ecosystems. Sherburne SWCD is in communication with the Department of Natural Resources and University of Minnesota Extension on a plan to continue to monitor the Golden Clam in Briggs Lake. For more information on Golden Clam (also known as Asian Clam), visit this website: https://www.invasivespeciesinfo.gov/aquatic/invertebrates/asian-clam.

For more information on the Sherburne County AIS Prevention program, you can contact Sherburne SWCD Senior Water Resource Specialist Dan Cibulka at *dcibulka@sherburneswcd.org*.

Siberian Elm and Buckthorn Management

Siberian elm and buckthorn are two invasive tree species that were introduced to Minnesota in the 1900s. They both can be found across Minnesota and form dense thickets when left unmanaged. Buckthorn in commonly found in disturbed wooded areas and Siberian elm is found in open sunny areas such as roadsides and grasslands. Although they are typically found in slightly different areas, the control of each is very similar. For small infestations, where the trunk diameter is less than 1 inch, the best method of control is to mechanically pull the plants and remove as much of the roots as possible. For larger infestations, the best method is the cut-stump method. This involves cutting the trees down and then painting roundup (or a similar herbicide) on the stump. The cut-stump method is the most effective during the fall while the plant is drawing its resources down into its roots. Overall, the most important management consideration for both of these species is annual monitoring and early detection. The earlier an infection is identified, the easier it is to control.

Lawns to Legumes Grant Still Available

There is still time to apply for our Lawns to Legumes grant. This grant is aimed at replacing traditional turf grass lawns with more pollinator friendly native plants. You must live within the target area to qualify **Click here to learn more!**

Leave the Leaves

The crisp air and ripe pumpkins can only mean one thing, fall is officially here in Minnesota. With that, comes the annual chore that is usually dreaded by most landowners with trees – raking. If raking is one of those activities that strikes fear in your eyes, then do I have good news for you! "Leave the leaves" is a campaign started by the Xerces Society, which is a non-profit organization dedicated to invertebrate conservation. According to Xerces, leaving your leaves over winter is one of the most valuable things you can do for pollinators as they need the leaves for winter cover. Many pollinator species like butterflies, moths and bees rely on the leaf litter to survive through the harsh Minnesota winters. Those pollinators are essential not only to our food production system but also the food web; most songbirds raise their young exclusively on caterpillars. These little critters are vital to our ecosystem and must be protected. Leaving your leaves on your lawn or garden is just one small part we can play in their survival. Not only is it one task you can easily cross off the to-do list, but it also serves as natural mulch to gardens. Research has shown that lawns benefit from a thin covering of leaves, adding essential nutrients to the soil all while suppressing unwanted weeds.

The one exception to the "leave the leaves" rule is if your leaves fall into the street with a curb and gutter system. To help prevent excess nutrients from entering our waterways keep leaves out of the street and away from storm drains.

For more information on the "Leave the Leaves" campaign click here.

Tiger Swallowtail Chrysalis (BugGuide)

What Makes Ground Water "Vulnerable" in Minnesota?

The exert below is taken from the Minnesota Crop News publication, distributed by U of M Extension.

Image credit: Greg Klinger/U of M Extension

The Groundwater Protection Rule GPR, which is focused on keeping the nitrate form of nitrogen out of groundwater, has a technical definition of what constitutes "vulnerable" groundwater areas. This definition, based on work done by the Natural Resources Conservation Service and Minnesota Department of Natural Resources, has real-life consequences for farmers and agricultural professionals, as it restricts the application of nitrogen fertilizers in the fall and on frozen soils in these vulnerable areas. While there is a specific technical definition for "vulnerable", in general terms, one of three factors must be present for groundwater to be more susceptible to contamination from activities on the land surface: sandy or gravelly (otherwise known as coarse-textured) soil, karst geology, or shallow bedrock. In this blog post, we briefly discuss each of these geological properties and how they affect contaminant movement into groundwater.

Coarse-textured soil

Coarse-textured soils are a major factor for determining vulnerability, especially in the central region of Minnesota, although these soils can be found throughout the state. In coarse-textured soils, most of the individual particles and the pore space between those particles is large. These large pores allow water to rapidly move through them. Water moving into and through the soil is not strongly held against the pull of gravity and is easily leached deep into the soil profile. Infiltrating water in these settings can rapidly move down to the water table, which often serves as a source of drinking water.

By contrast, as soils increase in their percentage of finer-grained textures (such as silt and clay), there is a greater proportion of small pores between soil particles where water is held more strongly against the force of gravity. As a result, most of the water in fine-textured soils moves slowly down to the water table. That slower movement can be an important factor impacting groundwater quality, because some chemicals (for example, nitrate, or the herbicides atrazine or glyphosate) may break down over time in the soil. In general, the longer it takes for water to reach the water table, the less contaminants may be left when it reaches groundwater.

Implications for groundwater

When we talk about groundwater being highly vulnerable to contamination, it's important to realize that "vulnerable to contamination" does not equal "contaminated". Take the example of chloride, a chemical increasingly found in Minnesota lakes, streams, and groundwater that comes mostly from road salt. Think about areas where you can often see bedrock at the ground surface (for example, northeast Minnesota). Since most of that area is so remote and away from roads, if you were to drill a drinking well into a fracture in that shallow bedrock, in most places you would not see high levels of chloride. However, if someone built a blacktop road right next to that well, and the next winter it got salted every snowstorm, you would probably see chlorides showing up in your well. Just as importantly, you might have high levels of chloride in your well before a well that's been next to a major road for 50 years would, if that well was not in a highly vulnerable area.

Highly vulnerable groundwater areas are the proverbial "canaries in the coal mine"- they show what might (depending on how any specific contaminant is used and behaves) happen down the road in less vulnerable areas. Chemicals that break down, like nitrate or atrazine, might never show up in less vulnerable groundwater; chemicals that don't break down or disappear, like chloride, might just take a lot longer to get there.

2021 Poster Contest

Attention Sherburne County 5th grade teachers and home school groups! Save the date for the upcoming 2021 Annual Poster Contest. The theme for this years contest is Healthy Forests = Healthy Communities. Virtual presentations will be held in late January, posters will be due at the end of February. More details to come!

Install a Prairie

This peaceful image is brought to you by Schizachyrium scoparium or Little Bluestem for short. This native grass supports several species of Skippers, birds, and large mammals. Little Bluestem has beautiful red fall color and small, fluffy seed.

The District planted this prairie in the Spring of 2019 utilizing Clean Water Funds. A diverse short, dry prairie was planted into soybean stubble for water quality benefits and pollinator habitat. This year, the prairie leapt with native grasses and flowers, changing throughout the season with color and structure.

Interested in installing prairie on your property? Contact Miranda Wagner for more information *mwagner@sherburneswcd.org* or call 763-241-1170 ext 105.

Upcoming Events

Nov 1	**Sun**	**Day Light Savings Time Ends**
Nov 11	**Wed**	**Veterans Day / Office Closed**
Nov 3	**Tue**	**Election Day**
Dec 24	**Thur**	**Christmas Eve / Office Closed at 12:00**
Dec 25	**Fri**	**Christmas Day / Office Closed**
Dec 31	**Thur**	**New Year's Eve**
Jan 1	**Fri**	**New Year's Day / Office Closed**
Jan 4	**Mon**	**SWCD Tree Sale Starts**

Cover Crops from the Sky

September 23rd, a fall cover crop was flown into standing soybeans at a farm near Saint Cloud. Aerial application is a tool that can be used before the cash crop is harvested to protect yield loss from disturbance. This was accomplished through a partnership with Diamond A Farm LLC, Nutrien Ag Solutions in Big Lake, The Nature Conservancy, the Minnesota Deparment of Agriculture (MDA) and the Sherburne Soil and Water Conservation District.
The goal of the cover crop is three fold.

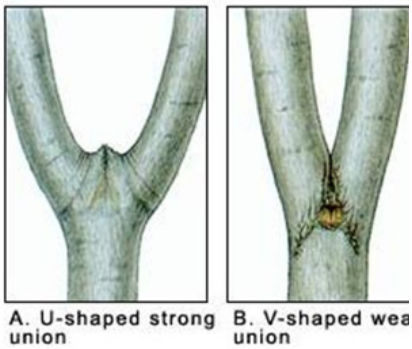
1. Increase soil health by providing living roots in the soil as long as possible. Our underground critters need food too! Speaking of food, adding a grass cover crop into soybeans also introduces different types of food and carbon into the system to help bring more diversity underneath the soil surface.

2. Decrease the amount of water leaving our soils into the groundwater. Living plants continue to utilize water, keeping water and suspended nutrients in the rooting zone where it belongs. Also, over time, soil health practices increase the amount of water our sandy soils can hold.

3. Erosion protection is important for late fall and early spring. A cereal rye cover crop will protect the soil surface from wind and water erosion when our soils are the most vulnerable. Stay tuned as we continue to show you more from this project!

Ice Damage Prevention for Trees

Living in Minnesota, it is impossible to completely prevent ice; however there are a few preventative measures that we can take to minimize the impact that ice will have on our trees. The best strategy is to properly prune out weak branches before winter. V shaped branch unions are weak and are more susceptible to breaking under ice and snow loads. Cabling branches together can be used on trees with more than one main stem or on trees with split trunks to more evenly distribute the trees weight (contact a certified arborist for assistance!). For shrubs or arborvitae type trees, consider wrapping them with burlap to prevent breakage from snow and ice loading. Remember to remove the burlap in the spring!



If your tree does become covered in ice or bent over with heavy snow, do not shake or hit the tree to try to remove the snow. This can result in falling ice, broken branches, and irreversible damage. Also, never use salt around plants/trees because it is toxic and will kill the plant tissue.

Conservation Comedy

What runs around a farm but doesn't move?

A Fence

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