

Nature Talks

Sherburne Soil and Water Conservation District

Nature Talks
July 2022

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SWCD Celebrates Pollinator Week

Pollinator Week is an annual celebration in support of pollinator health. It is a time to raise awareness for pollinators and spread the word about what we can do to protect them. During the week of June 20th - 26th, Sherburne SWCD held an online photo contest, coloring contest and pollinator paint night to celebrate. The coloring contest was focused towards Sherburne County's budding artists. The SWCD is happy to announce Paige H. of Zimmerman as the winner of our 4-6 year old division and Sophia L. also of Zimmerman as the winner in our 7-11 year old division. Both girls received prizes and certificates. The pollinator photo contest was open to the general public. The SWCD received many fantastic submissions. Lauren Y. from Elk River was selected as our winner. Lauren's photo captured a tiny sweat bee flying towards a big bee balm flower. Lauren received a \$25 gift card to a local native nursery.

The SWCD was also proud to host it's first pollinator paint night. The event was held at the Oak Savanna Center in the beautiful Sherburne National Wildlife Refuge. Andie provided instruction on painting while Franny and Miranda gave presentations on pollinators and plants native to our area as well as how we can support them. Below are photos highlighting the night.



Starry Trek 2022

Lake-loving volunteers are needed across the state of Minnesota on Saturday, August 20, 2022 to participate in a search for starry stonewort—an aggressive, aquatic invasive algae that can spread easily and grows into dense mats at and below the lake’s surface.

Starry Trek is an annual event where members of the public first gather at training sites to learn how to identify starry stonewort and other aquatic invasive species. The newly trained participants then branch out to local water accesses to search for signs of the invasive species.

Starry stonewort was first found in Minnesota at Lake Koronis in 2015 and has since spread to nineteen Minnesota lakes. Early detection of this species is critical for control. Starry Trek volunteers have found starry stonewort in four lakes – Grand Lake in Stearns County, Wolf Lake at the Hubbard/Beltrami County border, Lake Beltrami in Beltrami County, and Carnelian Lake in Stearns County – as well as other aquatic invasive species like Eurasian watermilfoil and zebra mussels during this event.

The 2017 discovery of starry stonewort in Grand Lake led to the lake association and Minnesota Department of Natural Resources rapidly mobilizing to hand-pull the infestation. This early intervention has widely been considered a success, with starry stonewort continuing to be limited to the small area near the public access where it was initially discovered.

“This event is a terrific way for people to get outdoors, get educated about

aquatic invasive species, and help protect their area lakes,” said Megan Weber, Extension Educator with the University of Minnesota and Minnesota Aquatic Invasive Species Research Center. “The information we gain at this event helps researchers and managers understand its current distribution and potentially take action if new infestations are found.”

No experience or equipment is necessary to participate in Starry Trek. Expert training on monitoring protocols and starry stonewort identification will be provided on-site. This event is free, but registration is required. Children under 18 must be accompanied by a parent or legal guardian.

Sherburne SWCD will be hosting a local Starry Trek site at Big Lake Township Park. To learn more about Starry Trek or to sign up, please visit:

<https://maisrc.umn.edu/starrytrek>.

**For local information on Starry Trek , contact:
Dan Cibulka, Sr. Water Resource Specialist
dcibulka@sherburneswcd.org or 763-220-3434 ext 103**



Saturday, August 20 8:30AM - 1:30PM



Help search for starry stonewort



Locations throughout Minnesota



Free and family friendly!



No experience necessary

Meeting Location:

Big Lake (Lions Park)

Register At:

z.umn.edu/StarryTrekRegistration



Upcoming Events

Aug 20

Starry Trek

Sept 5

Labor Day (Office Closed)

Sept 17

Nitrate Clinic at Big Lake Township Pet Clinic

Oct 8

Elk River Clean Up



The Beetles In Your Backyard

There are many beetles that can be found in your backyard, this article will focus on pine bark beetle and emerald ash borer. These beetles can be detrimental to trees but there are steps you can take to deter them.

Pine Bark Beetle:

Pine bark beetles are a group of engraver beetles that attack 2-needled pines such as red, scots/scotch, and jack pines over the age of 20. They are especially damaging during droughts and the years immediately following. In the spring, the beetles emerge from the layer of fallen needles on the ground and lay eggs underneath the bark of stressed pines. The eggs hatch and larvae begin feeding on the tissue under the bark that moves water and nutrients throughout the tree. This feeding is what causes damage and in some cases mortality. When the beetles reach maturity, they emerge from the bark leaving small BB-sized exit holes. The best way to prevent bark beetle infestation is to maintain a healthy stand of trees. In addition to watering, tree stand thinning is a great way to reduce competition and thus reduce stress to individual trees. Thinning should be avoided following a drought and optimally should happen during the late fall and winter. All wood greater than 3 inches in diameter should be burned, buried, or chipped before June 1st of the following year. If that is not possible, cover all the wood with a tarp and burry the edges. This will prevent the beetles from emerging from the wood and infecting other trees.



Emerald Ash Borer (EAB):

Emerald ash borer is an invasive beetle that was accidentally brought to the United States in the early 1990's in infected wood pallets. They are native to China and the Russian far east and have natural predators in these areas. In the U.S. there are no natural predators which is why they have such devastating effects. EAB was first identified in the Twin Cities in 2009. In 2011 the Department of Agriculture released 127,000 parasitoid wasps (native to China/Russia) that eat/attack EAB. These non-stinging wasps are less than a centimeter and are not harmful to humans. The parasitoid wasps can feel the vibrations of feeding larvae underneath the bark of infected ash trees. The wasps penetrate the bark and lay eggs inside of the feeding EAB larvae. Over time the wasp larvae eat the EAB larvae and hatch into new wasps to continue the cycle. The parasitoid wasps are unable to completely neutralize the threat of EAB however, the impact that they have at slowing the spread is currently being studied and shows promise.



EAB has not yet been positively identified in Sherburne County, however it has been identified as close as Anoka, Otsego, Clearwater, and St. Cloud. Pesticide treatments are extremely effective at protecting trees and killing current infestations. Treatment will only kill the insects; any dead branches will remain dead. It is recommended to proactively treat to maintain a healthy and beautiful tree.

Treatment gives a tree protection for 2-3 years depending on the chemical and must be reapplied to remain protected. Treatment costs typically range from \$10-\$15 dollars per diameter inch. Meaning a 10-inch diameter tree would cost roughly \$100-\$150 plus additional fees. In contrast, removing an ash tree can cost anywhere from \$500-\$2000 dollars. If removal is necessary, it is recommended that the tree is cut down before it dies completely. When ash trees die, the wood becomes very brittle making it more challenging to remove the tree and increases costs.

Maintaining a variety of trees on your landscape will help reduce the impact of pests and disease. Contact David for species advise and other tree related questions:

David Wick at (763) 220-3434 ext. 102 or dwick@sherburneswcd.org.

Migratory Monarch Listed as Endangered

There isn't a more recognizable butterfly species quite like the monarch, their iconic orange and black pattern is a well-loved sight during the summer months. Their species is a true testament to resilience and endurance as this butterfly has the longest migration pattern of any other insect in the world! Unfortunately, with threats like habitat loss and changing weather patterns, their populations have been in steady decline for several decades. Recent population surveys have led the International Union for Conservation of Nature (IUCN) to add the migratory monarch butterfly to the Endangered species list.

What can you do to help the monarch butterfly?

- Incorporated habitat for all life cycles, milkweeds for caterpillars and a diverse mix of native flowers for the adult butterflies
- Reduce the use of pesticides, while they kill unwanted pests, they also target beneficial insects like butterflies
- Participate in citizen science projects to help track the monarch population and their movements



USDA accepting applications for EQIP

The USDA Natural Resources Conservation Service (NRCS) is accepting applications for the Environmental Quality Incentives Program (EQIP), a voluntary conservation program that provides financial and technical assistance to address natural resource concerns. By working with the local NRCS office you can apply for NRCS programs that work best for your land, eligible conservation practices include prescribed grazing systems, seasonal high tunnels, cover crops, no-till or strip-till systems, irrigation water management, pollinator habitat, and many more. Applications for EQIP are accepted on a continuous basis, however, the NRCS encourages interested landowners and agricultural producers to apply now for potential funding in 2023. To learn more about EQIP, your local Elk River NRCS staff are here to help answer questions and meet with you to discuss your conservation goals. Please contact us, we look forward to helping you meet your conservation goals.



For more questions about this or other NRCS services contact:

Katie Evans – District Conservationist
763-567-5373 / katie.evans@usda.gov

Kelly Bistodeau – Soil Conservation Technician,
763-367-0347 / kelly.bistodeau@usda.gov

Logan Berg – Soil Conservationist,
763- 290-3458 or logan.j.berg@usda.gov

Grams County Park Prairie Restoration

Grams County Park was acquired in 2002. The land was a gift from the Grams family. Covering well more than 100 acres, this property offers nearly 2 miles of trails and boardwalk that take visitors through open natural space, various wetland types, tamarack bog and lush oak forest.

Sherburne SWCD in partnership with the Sherburne County Parks Dept. received the Habitat Enhancement Landscape Pilot (HELP) grant in 2022. This new grant program is focused on restoring and enhancing diverse native habitat on conservation lands and natural areas strategically located across Minnesota

to address declining pollinators and other beneficial insects. This program fills a need for a state grant program focused on establishing targeted, high diversity pollinator and beneficial habitat on conservation lands and natural areas.



Photo Credit: MNL

How will the HELP grant be use?

Long-term management methods for the Grams Park prairie restorations including burning, grazing, planting; all are used to maintain floral diversity, remove woody or invasive species and reduce weed growth.

Follow along with Grams County Park restoration:

(This is an estimated timeline dependent on the ever changing conditions of the restoration area.)

Photo Credit: MNL



July - Prescribed Fire Burn of the Area

Prescribed fire is a carefully planned and controlled fire conducted to manage natural area. It is conducted only under safe conditions. Fire prevents brush and trees from overtaking the prairie, prevents build-up of dead vegetation that encourages weeds and retards new growth, and improves habitat for prairie birds, mammals and butterflies, many of them endangered.



August and September - Conservation Grazing

The HELP grant allocated to Grams County Park will be implementing a Conservation Grazing Program in order to manage the over-grown understories of the park in an ecological friendly way. Utilizing sheep and goats will eliminate the need for herbicide usage, provide targeted vegetation management, reduce unwanted thickets of plants, recycle nutrients, and provide trample seed planting opportunities. Conservation grazing also helps to reduce the quantity of invasive or exotic species,



Why is Grams County Park is using Sheep for conservation grazing?

Sheep

- Effective on large to small scale properties
- Conducive to prairies, savannas and lowland properties
- Ideal for low impact pollinator habitat management

Grams County Park Prairie Restoration (continued)

How do sheep help restore the prairie?

The grazing goats and sheep are introduced to over-grown understories that need invasive species removal. They eat the leaves they can reach off bushes and reduce the ability of the plant to grow and reproduce. When introduced to browse repeatedly, the grazers deplete nutrient stores in the plant roots to the point that the plant can no longer thrive. We then introduce native seed to create competition for nutrients and water making the invasive species less likely to re-establish in unwanted places.

Spring 2023 - Planting

The key to establishing a successful prairie is to maximize seed-to-soil contact during planting. A average of 40 seeds/ per square foot will be sown to reduce risk of weed invasion. Some of the native plants being restored to this area include: Leadplant, Butterflyweed, Wild Lupine, Asters and Goldenrods. The native flowers selected will create a blooming landscape from spring until fall.



This grant was made possible through a partnership with the following:



New Financial Assistance Opportunity for Irrigators in the County

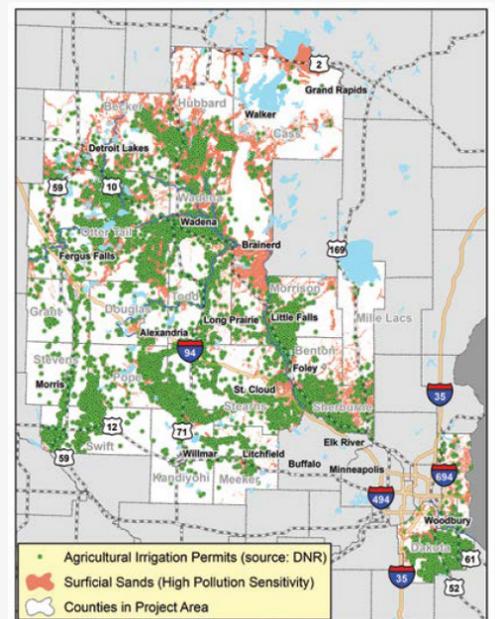
The Sherburne SWCD is part of a large groups of SWCDs, Universities, Businesses, State Agencies, and the Mille Lacs Band of Ojibwe who are committed to providing technical and financial assistance to agricultural irrigators. The Implementing Innovative Irrigation Practices to Protect Groundwater Quality and Quantity was awarded funds through the RCPP – Regional Conservation Partnership Program and will start offering assistance in 2022.

The goals of the project are:

- Apply conservation practices that protect groundwater quality and quantity
- Promote expanded precision irrigation practices
- Build technical expertise among NRCS and SWCD staff to guide farmers in applying conservation practices
- Promote and organize farmer to farmer learning opportunities,
- Utilize partners' expertise to design innovative approaches to expand conservation efforts
- Quantify the environmental, economic, and social impacts of the implemented practices

For more info on this program, please contact Miranda Wagner at (763) 220-3434 ext. 105 or mwagner@sherburneswcd.org.

Project Area



Ponds vs Lakes: The Great Debate!

Lake. Great Lake. Pond. Reservoir. Lagoon. Puddle. Swamp. Wetland. Slough. Oxbow. We have many names in the English language to describe the water-filled holes that dot our landscape. Two of the most common terms include “lake” and “pond”. Lakes are typically thought of as large and deep while ponds are generally described as small and shallow. But how large or how deep does a waterbody need to be for us to call it a lake instead of a pond? What about very large waterbodies that are also shallow, or small waterbodies that are deep?



The threshold for defining lakes and ponds varies from one country to the next, but also within the United States. For example, Wisconsin claims to host 15,074 lakes, including those as small as one or two acres, and the Minnesota DNR

identifies 11,842 lakes in the state using a definition of at least 10 acres in size. Does this mean Wisconsin holds more lakes? Who is right and who is wrong? With bragging rights and so much more at stake the matter must be fairly settled. Having a universally common definition of a lake vs pond is important because it would settle differences in how states and countries classify these waters for legal protection, management, and regional or global reporting.

Thankfully, a team of researchers sought to end the madness recently through an article published in the scientific journal Nature. They propose definition thresholds for lakes and ponds that are based upon size, depth, but also emergent plant coverage. Emergent plants “emerge” from the water and include cattails, bullrushes, sedges, etc. The presence of emergent plants greatly impacts the biology and chemistry of the lake water, the sediments, and the interactions between organisms. So they are an important factor in determining “pond ecology” versus “lake ecology”. The proposed definition does not define a pond or lake by any one of these single factors alone, it is the interaction of all these variables combined that is important.

To conclude the study, the researchers determined descriptions of each as follows:

- Ponds: maximum size of 5 hectares (~12.3 acres), maximum depth of 5 meters (~16.4 ft), and greater than 30% coverage of emergent vegetation.
- Lakes: greater than 5 hectares in size, may include shallow lakes (less than 5 meters or deep lakes / greater than 5 meters), and less than 30% coverage of emergent vegetation.

We have now properly defined ponds and lakes so can finally put the debates to rest. But now, the question remains “where do we draw the line between a pond and a wetland”? There are many different wetland types recognized in the United States and each are unique. That is too much to cover today, so look for an article about wetlands in a future edition of Nature Talks!

Information for this article has been collected from the resource below:

Richardson, D.C., Holgerson, M.A., Farragher, M.J. et al. A functional definition to distinguish ponds from lakes and wetlands. Sci Rep 12, 10472 (2022). <https://www.nature.com/articles/s41598-022-14569-0>

Conservation Comedy



What did the fish say when it swam into the wall?

Pollinator Photos

The SWCD would like to highlight some of the beautiful images captured for our pollinator photo contest. Enjoy!



Christina Z.



Pam S.



Nancy L.



Thomas W.



Lynn A.



Jody M.



Lawrence W.



Mary G.



Ryder V.