

Calumet Conservator

Protecting, Promoting & Enhancing the Natural Resources of Calumet County

CALUMET PRODUCERS, LANDOWNERS ADVANCE CONSERVATION TO REDUCE IMPACT ON WATER QUALITY

Much of the Calumet County Land and Water Conservation Department's (LWCD) workload is driven by the goal to reduce nutrient and sediment loss from the landscape to protect lakes, streams and groundwater.

In order to accomplish these goals, the LWCD provides technical and financial assistance to producers and landowners to reduce phosphorus, nitrogen, and sediment from leaving cropland, farmsteads, yards, and shorelines.

Practices are selected to meet the needs of the producer, landowner and reduction goals. At times, multiple practices are needed to meet those goals. Every practice helps, and the cumulative impacts will be noticed in our waterways and wetlands.

Overall, practices installed or first implemented in 2020 and 2021 are estimated to reduce Phosphorus (P) loadings into local lakes and streams by 1,811 pounds annually. To put that in perspective, every 1,000 pound reduction in P is equivalent to a reduction of 350,000 - 500,000 pounds of algae in our local waters annually.

And that's not all. 2020 - 2021 practices are estimated to reduce soil loss by 1,322 tons of sediment annually. That is the equivalent to 94 large dump trucks of soil that will remain in the fields and not run in our local waterways.

This newsletter highlights some of those projects, as well as a wide variety of programs and partnerships that help Calumet County landowners and producers lessen their impacts on water quality.

LWCD continues to line up projects over the winter, and several new funding opportunities are available. If you have a project in mind, contact the LWCD at 920.849.1442.

Conservation Numbers

2020 - 2021



Shorelines

- 10,000 Linear Feet Protected
- 5 Stream Crossings

Cropland Practices

- 9354 Linear Feet of Waterways and Diversion
- 20 acres treated with sediment basins
- 1596 acres in nutrient management



Waste Management

- 4 Storage Systems
- 3 Transfer Systems
- 1 Storage Closure
- 5720 sq ft Heavy Use Protection

Other Practices

- 1 Barnyard System
- 3 Well Closures



Pollutant Load Reductions

- 1811 lbs/yr Phosphorus Loss
- 1322 tons/yr Sediment Loss
- 6110 lbs/yr Nitrogen Loss

CONSERVATION SPOTLIGHT: SEDIMENT BASIN AND SHORELINE RESTORATION BENEFIT BECKER AND LONG LAKES

Like many impaired waters in northeast Wisconsin, Becker and Long Lakes could use less sediment and nutrients from running into the lakes. A 2019 lake study identified excessive Phosphorus (P) as the main pollutant causing water quality problems in all 4 lakes of the CalMan watershed (Becker, Long, Boot and Round). Excessive nutrients cause algae blooms in both lakes, and caused the fish kills in Becker a decade ago. Cropland and shoreline erosion are sources of nutrients, as the rain water and wave action carry sediment and the phosphorus attached to it into the lakes.



LONG LAKE WASCOB

The 2019 study identified critical areas that were delivering P and sediment to the lakes. One such site was a field on the west side of Long Lake. The landowners attempted to address a large gully on their property by converting some of the cropland to trees to create a buffer. However, the buffer wasn't enough to prevent another gully from forming due to the steep slope and the large acreage that drained to the lake.

This past summer, a water and sediment control basin (WASCOB) was built just upstream of the treed buffer and gully. A WASCOB is a conservation practice that consists of building a berm with an inlet across a gully or concentrated flow path. The berm holds water behind the embankment for less than 24 hours, allowing the sediment to settle behind the berm. This prevents sediment from the upland sections from reaching the water bodies down slope and



Upper Left: Gullies eroding through cropland (brown) and conservation buffer (green). Middle Left: 2021 aerial photo showing the berm (circled) with relatively small footprint of field. Upper Right: Construction of berm and inlet adjacent to conservation buffer. Bottom: Berm and inlet with established vegetation.

Photo Credits: Google Earth, LWCD



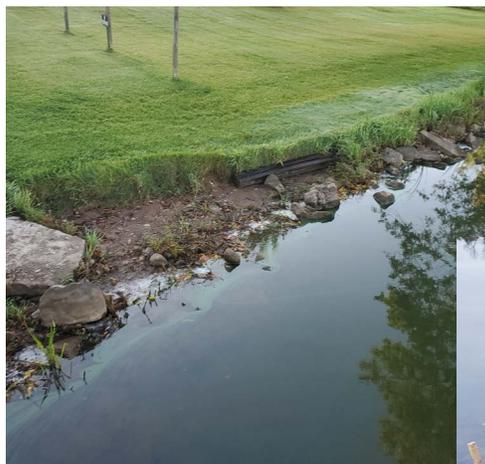
reduces the chance for gully erosion to continue to develop or expand. This practice blends into the cropland very well. It changes your cropping pattern very little, and takes up less space than a grassed waterway.

This WASCOB was designed to hold back rainwater from 1.1 acres of land. The WASCOB will reduce the annual phosphorus delivery by 9.7 lbs/year to Long Lake, with Becker Lake benefiting as well downstream. It will also keep 13.7 tons of sediment and 25.2 lbs of nitrogen from Long Lake every year. A practice like this will need to be maintained and cleaned out every so often to maintain the annual reductions of the practice.

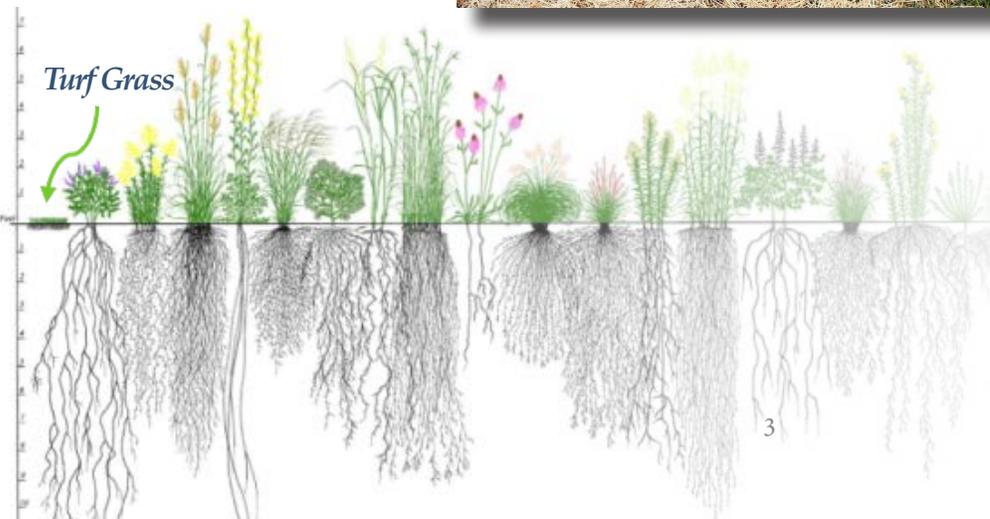
BECKER LAKE SHORELINE RESTORATION

Over on Becker Lake, the Brillion Conservation Club worked with County staff to restore the shoreline along the Becker Lake Boat Launch. The restoration was designed with two goals: 1) to establish deep rooted vegetation to stabilize the shoreline and 2) to maintain shoreline fishing access in strategic locations to help reduce erosion caused by foot traffic. Fiber logs were installed to aid in the stabilization while plants mature. Members of the Brillion Conservation Club donated their time to install the fiber logs and plants. The project will reduce 0.08 tons/year of sediment into the lake, and 0.07 lbs of P per year from shoreline erosion and runoff from the mowed upland.

Both projects were funded by a DNR Lake Protection Grant awarded to Calumet County. The grant is also funding grass waterways and cover crops in the watershed. Additional financial assistance for the CalMan Watershed and the Spring Creek Watershed is available. Call the Calumet LWCD for more information at 920.849.1442.



*Left Photo: Shoreline at Becker Lake Boat Launch eroding away pre-restoration.
Right Photo: Members of Brillion Conservation Club installing fiber logs.
Bottom Photo: Installed fiber logs, shoreline seeded and mulched.
Photo Credits: LWCD*



Turf Grass Roots (far left) typically are as long as the grass blade length maintained on your lawn.

Deeper Roots of native plants help keep soil in place and prevent shoreline erosion.

BETWEEN THE LAKES DEMO FARMS SHARE STRATEGIES TO MAINTAIN SOIL HEALTH



BETWEEN THE LAKES

Demonstration Farms Network

In 2021 the Between the Lakes Demo Farm network had its most successful year to date. With the effects of the COVID pandemic in 2020, it was refreshing to get back to in person field days to provide a platform for farmer networking.

The demonstration farm network's primary goal is to share knowledge from a wide range of farm types about each farm's innovative techniques and how they improve soil health with other local farmers and the general public.

In 2021, in conjunction with the other County partners of Manitowoc, Sheboygan and Fond du Lac, the network hosted 3 large field days and 3 smaller pop-up field days. Pop-up field days consisted of frost seeding winter rye and spreading of fertilizer into corn stalks on March 5th; frost seeding clover into winter wheat on March 15th; and planting corn green into a winter rye cover crop on May 1st.

Overall, 2021 was a great year for the network with some field days seeing over 100 attendees. We look forward to another successful year in 2022 and for years to come.

To learn about upcoming events please visit the Between The Lakes Demo Farm Website at <https://btldemofarms.org/>

Field Day Highlights

2021

Nick Kleiber Grain Farm - Sheboygan County

- Showcased corn planted green including planter settings and attachments used
- Soybeans planted green into winter rye
- Herbicide plots that were applied over cover crops where participants could inspect the plots and check back throughout the year to see progress
- NRCS Rainfall simulator showing the importance of soil health to decrease runoff and increase infiltration

Libertyland Farm Manitowoc County

- Discussions on the benefits of frost seeding
- Establishing an alfalfa crop with corn as a companion crop
- Innovative feed storage pad with runoff controls which diverts clean water away from feed to reduce amount of runoff collected
- 3 low disturbance manure application tool bars
- Tour of newly constructed barn to see robotic milkers in action

Greendale Farm Fond du Lac County

- Discussions on no-till and cover crop systems and lessons learned over 30+years
- A photo tour of planted no-till green including planting timing and stage of crop growth
- A discussion on prairie strips and how they benefit soil health and pollinators including a prairie strip planting demonstration
- Discussion on soil health analysis and how to interpret results
- A soil pit demonstration showing healthy soil and discussion on how to build it

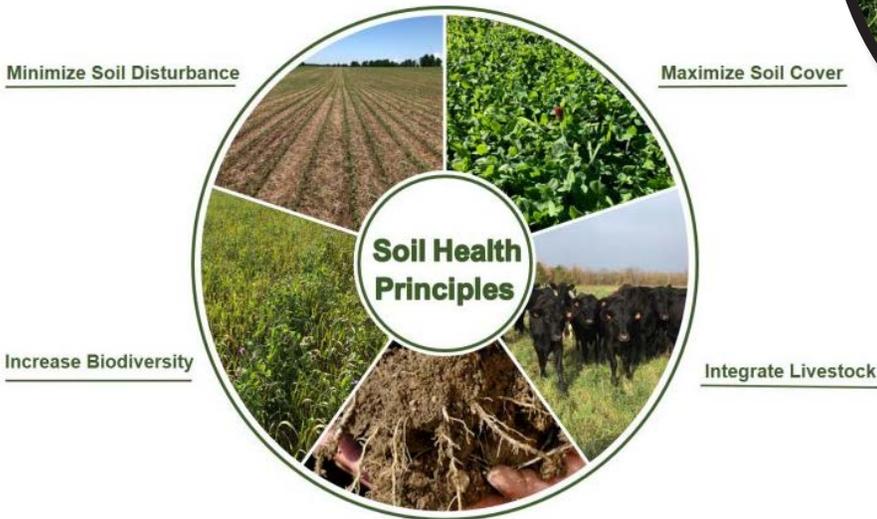


Photo Credits: Maranda Miller, UW-Extension

Planting corn using no-till into green winter rye. This combination of practices helps protect soil health by keeping living roots in the soil and eliminating tillage that can harm soil structure.



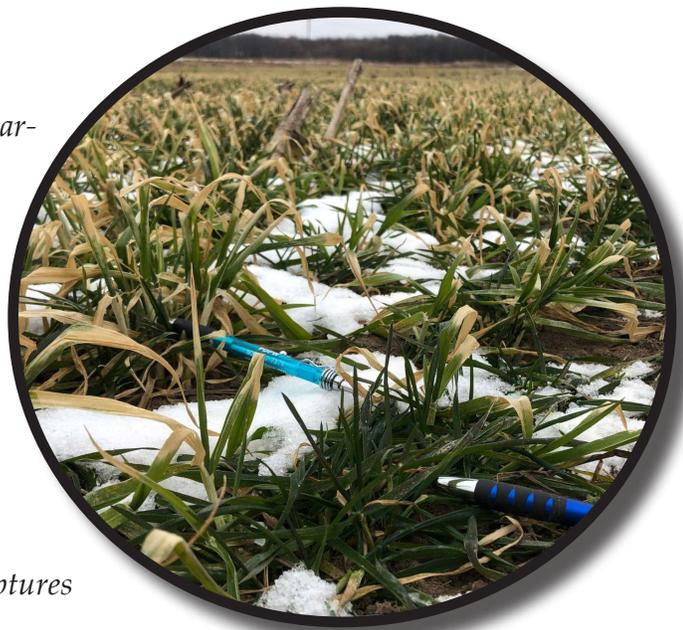
Above Photo Credit: Ted Hoffman
 Left Diagram Credit: BTLDemoFarm.org
 Below Photo Credit: Steve Hoffman



This cover was achieved by no-till drilling a mix of 50 lbs of year-off barley and 50 lbs of year-off winter wheat after corn silage harvest on September 20th. Winter wheat is shown to the left of the dark blue pen. Spring Barley is shown to the left of the light blue pen. Note that fall planted barley grows taller and has a wider leaf than the winter wheat. This results in 3 times the above ground cover as winter wheat planted alone. Barley was still alive on December 28. A mixture of year-off spring barley and year-off winter wheat can maximize cover after corn silage while minimizing seed cost.

The aggressive growth of spring barley helps to capture nutrients and converts it to residue that will break down in spring. The winter wheat provides cover in spring and also captures nutrients that will be later released to the cash crop.

-Steve Hoffman, InDepth Agronomy





CALUMET COUNTY AG STEWARDSHIP ALLIANCE CONTINUES TO GROW CONSERVATION PRACTICES

Calumet County Ag Stewardship Alliance (CCASA), a farmer-led conservation group, successfully launched its first cost-share program in 2021.

The program, which included cover crops and no-till practices, was designed to be inclusive to help every member meet their soil and water conservation goals. These practices have shown benefits, such as reducing soil erosion by wind and water, limiting nutrient losses via leaching, runoff or other loss pathways, and improving soil health. CCASA had 50 percent of membership apply for this cost-share program.

In addition to a traditional cost-share program, CCASA was fortunate to partner with The Nature Conservancy (TNC) to offer an additional incentive program that was specific to cover crop trials. The trials included plant cover crops that over winter for two consecutive years (who have not planted in the past five years), plant a multispecies cover crop mix (at least one species surviving the winter), and plant green into a winter cover crop in the spring of 2022.

This past year was the second that CCASA completed the member conservation practice survey to better assess what each member is doing in the field. Final numbers are still being compiled, but thus far CCASA represents 12,120 total livestock and 12,100 total acres, 8,000 of which are cover crop acres.

In mid-October, CCASA member Jim Casper hosted a field day on no-till and cover crops

planted in clay. Casper has been 100 percent no-till for the past five or six years. Some of his fields have been no-till for over 30 years. Like many other farmers in Calumet County, quite a bit of Casper's land is clay ground and he has battled erosion. Therefore, he started practicing conservation, including no-till and planting cover crops.

John Vandenboom, treasurer for CCASA, spoke to how these cover crop practices have been helping hold the soil in place and are likely reducing runoff.

"Whether it's rye, wheat or any winter crop, ... for years we've tried to reduce tillage and getting manure out there, but until last year when we started to put in the rye it really showed the difference," Vandenboom said. "When you had a big rain or snow on a little bit of a slope... any of the loose ground with no cover crop you would see the brown snow. But with the rye field last year the water looked clean coming off of it, meaning the soil was being held better."



Jim Casper (center) talking with participants at the CCASA field day. Photo Credit: Anne Moore, CCASA

The winter wheat field was planted with a rye and turnip cover crop. The group wanted to see the growth received and the benefits farmers can get from these crops. The crop was a bit shorter and could use more nitrogen. The turnips have increased the aeration of the clay soil.

CCASA will host its annual meeting on February 28, 2022. This event is open to the public. For more information on events in 2022, follow CCASA on Facebook at facebook.com/CalumetCountyAgStewardshipAlliance.



FRIENDS OF STONY BROOK SHOWCASE RESTORATION EFFORTS OF LOCAL TROUT STREAM

The Friends of Stony Brook held its first field event in August, showcasing some of the restoration work on the Tim Sohrweide property. Since 2016, students from the Chilton Area School District have been rearing trout in the classroom and releasing them into the section of Stony Brook Creek adjacent to the Sohrweide farm. To date, over 1000s fingerlings have been released by local students, many of whom live in the Stony Brook Watershed.

Fisheries and habitat staff with the WDNR were on hand to demonstrate the 500-foot restored section of stream. The WDNR Habitat Crew re-meandered the channel, adding riffles, pools, and lunger structures last year in hopes to provide the stocked fish a healthy habitat. The fish crew provided an electrofishing demonstration at the event, where large brown trout were pulled from the “lunkers” and later measured for length and tags.



Field Day attendants watch as WDNR fish crew works up trout captured during survey. Photo Credit: LNRP



*Above: Drone shot of restored section, with channelized section off in the distance.
Below: Captured “young-of-year” brown trout.
Photo Credits: LNRP*

The largest fish, recorded at over 17”, was a brown trout. But more surprisingly, the little trout were the stars of the show. The “young of year” trout that were caught indicate that Stony Brook is now naturally reproducing. This is the first time in decades that the WDNR has documented natural reproduction in Stony Brook, Calumet County’s only trout stream.

Funding for the project was provided by the Fund for Lake Michigan, and awarded to the Lakeshore Natural Resources Partnership (LNRP).

Project partners formed the Friends of Stony Brook Creek to help organize the continued efforts through a Wisconsin DNR Surface Water Grant awarded in Spring of 2021. The August event was a kick-off celebration of that group.



The Trout in the Classroom program will continue to stock brown and brook trout in 2022. Planning is also under way to relocate a 600-foot section back into its natural stream corridor where it was moved over 80 years ago to make room for cropland. Partners are hoping to secure funding and permits for this project to start in 2022.

Follow the Friends of Stony Brook efforts through our website and Facebook pages.
<https://www.friendsofstonbrook.org/>
<https://www.facebook.com/FriendsofStonyBrook/>





WINNEBAGO WATERWAYS KICKSTART GRANT PROVIDES ASSISTANCE TO SHORELINE OWNERS

Emily Henrigillis, Winnebago Waterways Program and Fox-Wolf Watershed Alliance

Healthy shorelines can provide protection from eroding forces, attract desirable wildlife, and prevent local runoff sources from reaching waterbodies. But where does a property owner start?

The Winnebago Waterways Program developed a Shoreland Restoration Program to assist property owners. The program offers site visits, one-on-one consultations, plant suggestions, and assistance in finding cost share.

Staff work with lakeshore property owners to get more best management practices on the landscapes at home. We do this by sharing information regarding the Healthy Lakes & Rivers grant program through the Wisconsin DNR as well as by sharing county cost sharing programs. For 2021, we completed 30 site visits which has resulted in two Healthy Lakes & Rivers Grants secured to fund the 20 planned projects for 2022. We offer a myriad of resources on our website and are happy to come check out your shoreline!



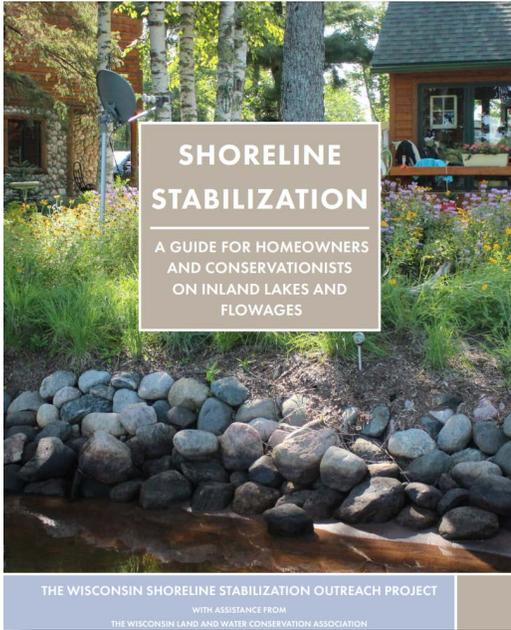
Native plants along Lake Butte de Morts. Photo Credit: FWWA

Our shoreline program also offers workshops on how to winter sow native plants for use at home. These plants are grown in mini greenhouses over the winter. We plan to hold a plant sale over the summer of 2022 with plants grown by volunteers. In addition, we are working with the counties and WDNR to establish a shoreline survey protocol to ensure we are properly tracking improvements to the landscapes as well as erosion. We all need to work together to improve our lakes.

Please reach out to Korin Doering, Winnebago Waterways Program Director, if you are interested in learning more about the opportunities available through the Shoreline Restoration Program. Korin can be reached at korin@fwwa.org or 920.851.0948.



Milk jugs were used as planters for the Seed Sowing Workshop. Photo Credit: FWWA



Cover of Shoreline Stabilization Guide developed by the partners of the Wisconsin Shoreline Stabilization Outreach Project.

NEW SHORELINE STABILIZATION GUIDE FOR HOMEOWNERS AVAILABLE

Developed exclusively for Wisconsin lakes, this guide helps shoreline property owners plan and design practices to reduce shoreline loss, improve habitat and improve property values. The guide was developed by the Wisconsin Shoreline Stabilization Outreach Project.

Find it online at:

<https://www.calumetcounty.org/190/Shoreline-Restoration>

Limited number of hard copies are available. If interested, fill out the order form at

<https://tinyurl.com/shorelineguidecalumet>

COUNTY TO INVENTORY PRIVATE STORMWATER PONDS, BMPs IN 2022.

Since 2008, large developments are required to have stormwater ponds and/or other best management practices (BMPs) to address polluted runoff from sites and potentially damaging high flows caused by large rain events. A stormwater pond's typical lifecycle is about 20 years, however that depends on how much sediment settles out in the pond and how well the pond is maintained. Sometimes, muskrats or other rodents can burrow into the banks of the pond or the outlet structure may have cracks in the pipe. These problems can reduce the effective life cycle of a stormwater pond and may be expensive to repair if not addressed.

Stormwater pond owners should be inspecting and maintaining ponds to ensure they last as long as possible before they need to be dredged.

Calumet County requires BMP owners to sign a maintenance agreements in an effort to encourage good maintenance practices and allow for enforcement of needed maintenance if catastrophic problems occur. In addition to existing maintenance agreements, Calumet County is now required to inventory and track the maintenance practices and inspections of the stormwater ponds permitted by the County. Staff will be contacting pond and other BMP owners to perform onsite visits and help BMP owners prepare for any largescale maintenance that will be needed at the end of the practice's lifecycle.



Private Stormwater Pond. Proper maintenance extends the life of stormwater BMPs. Photo Credit: LWCD

PRIVATE WELL TESTING PROGRAM 2022 DATES

Calumet County LWCD will host the annual Private Well Testing Program in May. The program is open to all Calumet County Private well owners. Registration is REQUIRED to ensure you get a kit.



Tests Available

HOMEOWNER'S PACKAGE - \$60

includes Coliform Bacteria, Nitrate, pH, Alkalinity, Hardness, Chloride, Conductivity, Corrosivity Index

METALS PACKAGE - \$57

includes Arsenic (Screen), Calcium, Copper, Iron, Lead (Screen), Magnesium, Manganese, Potassium, Sodium, Sulfur, Zinc

DACT SCREEN - \$35

tests for Atrazine and its byproducts

ALL THREE - \$146

FREE SHIPPING!

REGISTER BY APRIL 22.

Online registration is easy and preferred!

www. <https://calumetcounty.org/316/County-Private-Well-Testing-Day>

OR

Phone: 920.849.1493 x2402

Email: danielle.santry@calumetcounty.org

KIT PICK UP BEGINS MAY 3

Choose a tentative time/location when you register.

DAYTIME LOCATION: Wednesday, May 4 - Calumet Co. Courthouse Lobby 10:00am - 2:00pm

EVENING LOCATIONS:

Tuesday, May 3 – New Holstein Town Hall, 5:00pm - 7:00pm

Wednesday, May 4 – Chilton Town Hall, 5:00pm - 7:00pm

Thursday, May 5 – Potter Village Hall, 5:00pm - 7:00pm

SAMPLE YOUR WELL ON MONDAY, MAY 9

Return full bottles to one of the following locations.

DAYTIME: 10:00am - 2:00pm at the Calumet County Courthouse Lobby

EVENING – 5:00pm - 7:00pm at one of three locations

- New Holstein Town Hall – W1465 Tecumseh Rd

- Potter Village Hall – 309 Central St, Potter

- Chilton Town Hall - N4569 County BB

Full lab reports will be mailed to you in 5-7 weeks after the sample day. An education program will be held at the end of June. Information will be provided to help you understand your results and ask questions. Please email Dani Santry as danielle.santry@calumetcounty.org or call 920.849.1442 if you have any questions.

PROGRAM AIMS AT ERADICATING PHRAGMITES FROM COUNTY & NORTHEAST WISCONSIN

Invasive Phragmites is a tall, colony-forming grass, that is invading both urban and rural areas. This European plant can form dense, impenetrable stands that choke our wetlands, streams, beaches, and shores. It can be seen throughout Calumet County and Northeast Wisconsin. Calumet County partnered with the Lakeshore Natural Resources Partnership (LNRP) and Glacierland RC&D to manage a multi-year, phased project aimed at treating all Phragmites (pronounced <frag - mites>) stands in the County. In 2020, a county-wide mapping effort documented 761 parcels with visible Phragmites stands, which can be viewed online at <https://tinyurl.com/CalumetPhragMap>.



*Treatment of a small phragmites stand in Calumet Co.
Photo Credit: Stantec*

In 2021, the partnership was awarded a Wisconsin DNR 3- year grant to pay for the treatment of Phragmites stands in parts of Calumet County (Brillion, Rantoul, Charlestown and surrounding communities). Last year, 57 total acres of phragmites were treated on over 195 parcels scattered throughout NE Calumet County. Treated parcels will be monitored over the next 2 years to ensure any remaining phragmites is spot treated, effectively eradicating the established colony. Similar projects in Manitowoc and Sheboygan Counties have been very successful. Any new stands that pop up are quickly treated with the help of with local resources from towns and local municipalities.

The Partnership secured Phase II funding to continue treatment for 2022. The funding will support another 40 acres of treatment targeting landowners in New Holstein, Brothertown, Chilton and Stockbridge areas. Both grants (Phase I and Phase II) also aim at targeting Japanese Knotweed, an Asian forb that can form dense thickets of bamboo-like vegetation that aggressively outcompete native plants, and negatively impact wetland and riparian areas. While not as wide spread, the invasive plant can cause considerable damage to roads, walkways and foundations.

If you are aware of, or suspect stands of phragmites are on your property, please reach out the LWCD office. Permission is needed from landowners prior to treatment. If you have any questions or have populations on your land, please contact Melissa Curran with Stantec at 920-841-1072 or melissa.curran@stantec.com; or Danielle Santry from Calumet County at (920) 849-1442 or Danielle.Santry@calumetcounty.org.

Treatment of a larger phragmites stand. Photo Credit: Stantec



LAND & WATER CONSERVATION COMMITTEE:

Mike Hofberger - Chair
Judith Hartl - Vice Chair
Merlin Gentz
Scott Handschke
Nick Kesler
Eugene Hansen

DEPARTMENT STAFF:

Tony Reali - County Conservationist
Jared Grunewald - Conservation Project Technician
Jonathon Lisowe - Conservation Project Technician
Brent Jalonen - Erosion Control / Stormwater Specialist
Amanda Kleiber - Land Resource Specialist
Danielle Santry - Water Resource Specialist
Paula Piper - Secretary

INSIDE THE CONSERVATOR:

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