Species Highlight: Lake Sturgeon (*Acipenser fulvescens*)

Lake Sturgeon are a remnant of an ancient and primitive group of fish that have been around since the dinosaurs (136 million years ago). Lake Sturgeon are one of the three species of sturgeon that live exclusively in freshwater. Lake Sturgeon can be identified by their flattened, spade shaped head, four barbels, a bottom facing mouth with lips and no teeth, a grayish to brown color with a white belly, and large bony plates that cover the head and five rows of shield like plates along the body.

Life Cycle

Starting in mid-May, once water temperatures reach 50 degrees F, Lake Sturgeon begin migrating to their spawning habitat. They spawn in shallow areas with clear water and gravel bottoms free of silt and sand once temperatures reach 55 degrees F. The females lay thousands of eggs, usually over the course of one or two days, with several males fertilizing the eggs.

After 5-8 days, the eggs hatch. At this point they have a large yolk-sac and are called sac larva. 10 days after hatching, the yolk-sac is consumed and the larva are now able to search out areas with sandy bottoms to feed on small burrowing organisms. 5 months into their lifespan Lake Sturgeon are 5 to 7 inches long and are called fingerlings.

After 5 years, Lake Sturgeon have grown to about 20 inches in length and migrate into larger river and lake systems. They are considered juveniles until 15 years for males and 25 years for females, at which they reach lengths of 45 to 50 inches.

Once Lake Sturgeon reach sexual maturity, they return to the spawning grounds where they were born. Females spawn once every 4 to 8 years and the males 1 to 2 years. Lake Sturgeon are long lived fish, with the males living 65-90 years. Females can live over 150 years. At this age, some can reach 9ft in length and weigh more than 300 pounds.

Range and Habitat

Lake Sturgeon prefer moderately clear, large rivers and lakes, and need shallow clean gravel for spawning. Historically, Lake Sturgeon were found throughout the Mississippi River and its tributaries, all of the Great Lakes, most of the St. Lawrence Seaway, the Red River, and many other tributaries to Hudson Bay. 19 of the 20 states where Lake Sturgeon are found have them listed as threatened, endangered, or species of special concern.

Food

Lake Sturgeon forage in areas with sandy, gravelly, and muddy bottoms. They use their snouts to stir up the lake/river bottom and use their powerful mouths to draw in the water and floating debris. They expel small particles of sand and muck through their gills and the larger food items are consumed. Their preferred food items are aquatic macroinvertebrates, freshwater mussels, snails, crustaceans, and small fish.

Management

Significant over fishing and habitat access being limited by dams has resulted in low populations of Lake Sturgeon in Minnesota, prompting their listing as a Species of Special Concern. Because of this, Lake Sturgeon harvest is extremely limited, with nearly every water body in, and bordering, Minnesota being catch and release only during specific time frames. In an effort to preserve our Lake Sturgeon populations, habitat restoration and stocking are happening across the state.

Check Us Out Online

Pineswcd.com

And Follow Us on Facebook!

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The Pine SWCD Newsletter

Pine County Soil & Water Conservation District

Volume 31 Issue 1 Spring 2022

Clean Water Funds Coming to Island Lake

Pine SWCD applied for and received a Clean Waters Fund (CWF) grant of $128,000 to fund conservation work around Island Lake over the next two years. Island Lake was identified as a priority lake because of its status as a "nearly/barely" impaired lake. The lake is not currently listed as an impaired water body, however, it does exceed the threshold for impairment for total phosphorous and chlorophyll. Island Lake was also identified as extremely sensitive to phosphorous in a 2021 study. Combined, these two factors are what drove our application for this grant. With this grant our goal to prevent Island Lake from being listed as impaired for phosphorous and chlorophyll and hopefully improve its water quality. We plan on supporting the installation of approximately 15 best management practices (BMPs) around the lake. Some of these practices include shoreline stabilizations, shoreline buffers, and rain barrel installations among other site-appropriate structural or vegetative BMPs. Many of the BMPs will involve planting deep rooted native plants around the lake and these plants do double duty in terms of erosion and phosphorous management. Their deep roots (10+ ft!) anchor sediment to the shore while also soaking up phosphorous that is flowing over land into the lake.

Beyond water quality, the native plants used in these BMPs have the added benefit of providing wildlife and pollinator habitat. We encourage residents around Island Lake to contact us this winter/spring to schedule site visits for this summer so we can complete the necessary preparations to install practices in 2023.

Inside this issue:

Protecting Your Trees From Winter Damage-Jake Dale

Wrapping your trees in Fall can help prevent small rodents from girdling your tree in Winter.

"THE MOST IMPORTANT THING YOU CAN DO TO ENSURE YOUR TREES MAKE IT THROUGH THE WINTER IS TO CARE FOR THEM IN THE SPRING, SUMMER, AND FALL. "

When winter comes around, tree care isn't always the first thing that comes to mind. Pruning is a common practice that could come to mind, but even then, the late fall and early spring tend to be more popular times to prune because it isn't as cold or snowy outside. Other than that, winter tree care might appear like it could be nonexistent. The truth is that trees in Pine County and the Midwest face many challenges in the winter due to low temperatures, high winds, ice damage, animal pressure, and salt in urban areas. There are some things landowners can do to ensure desirable trees make it through the long, harsh winter.

It may seem odd to be writing about winter tree care in the spring edition of our newsletter. We're on the tail end of winter now I am sure most people are trying to put the cold weather into the rear-view mirror as soon as possible. However, the most important thing you can do to ensure your trees make it through the winter is to care for them in the spring, summer, and fall. Make sure to regularly water your trees and to use fertilizers when needed.

In the dead of winter, sometimes animals are forced to browse on twigs and stems of trees and shrubs, even when it wouldn't be the most desirable choice when more options are available. Tree protection is a way to prevent this. On singular trees, you can wrap cloth or white drain pipe around the trunk of the tree. Small mammals like mice and rabbits will nibble at the base of trees, potentially girdling (killing) them. For protection against larger wildlife like deer, a cage or a tree tube could be helpful to discourage deer browse. For larger areas with multiple trees, spraying an animal repellent may be a better option.

Wrapping the trunks of trees also protects them against sunscald. Sunscald is when the bark freezes in the winter after being exposed to a high temperature. Usually the affected bark is dried, cracked, or elongated and on the south-facing portion of the trunk. When there is a warm day, the temperature can drop quickly when the sun is covered by a cloud, tree, or building. This drop will kill the tissue of the bark causing a scar. Young trees are most at-risk. Common trees in Pine County that would be susceptible to sunscald are maple, basswood, plum, and chokecherry. These trees have a thinner bark.

Frost damage is another common occurrence in Pine County. When spring comes around, new growth will start emerging as temperatures above freezing become more frequent. When spring temperatures dip below freezing it can damage new growth. New leaves can turn brown, and branches can appear dead. The good news with frost damage is that trees are likely to recover from it just fine. New growth will emerge and a healthy watering schedule during the rest of the growing season will aid the younger trees in their recovery.

For more information, or any questions you may have, please feel free to contact me!

Jake Dale
District Forester
(320)216-4245
jake.dale@co.pine.mn.us

18th ANNUAL PINE COUNTY MASTER GARDENER HORTICULTURE DAY– UMN Extension

Let's Get Growing

Saturday, March 19th, 8 a.m. to 2 p.m.

Pine City High School
1400 Main St. S.
Pine City, MN. 55063

Keynote Speaker: "What Everyone Should Know About Lyme Disease" – Dr. Elizabeth Maloney, President of Partnership for Tick-Borne Diseases Education

Breakout Sessions: – Cool-Weather Crops from the Kitchen Garden - JoAnn Weaver, Crow Wing County Master Gardener;

Trees for a Changing Climate - Paul Swanson, Pine County SWCD District Manager

Flowers for Pollinators – Be Pollinator Friendly – Kathy Rahkola, Carlton County Master Gardener

Fall Planting Spring Blooming Bulbs - Sonya Burke, Hennepin County Master Gardener

Cost: $25 by March 14th; $29 thereafter;Includes: classes, handouts, lunch, exhibitors, and door prizes.

To make it a COVID safe event, masks will be required, and we will socially distance.

Registrants will be notified in case it has to be canceled due to COVID and fees will be refunded.

For a Registration brochure contact the Pine County Extension Office at **1-800-657-3813 Ext. #1** or download a brochure online from: **http://extension.umn.edu/local/pine** and click onto the "**Gardening tab"** and then **"Events".**

Conservation in Action: Livestock Exclusion on Rock Lake-Zach Van Orsdel

Pine County SWCD has completed the second project funded through the Lower St. Croix (LSC) Comprehensive Watershed Management Plan! The project excluded livestock from hundreds of feet of shoreline along a lake impaired by excess nutrients. Pine SWCD secured cost share covering a majority of the fencing needed to keep the cattle out of the lake. Removing livestock access to the lake will reduce shoreline erosion, sediment disturbance, phosphorous inputs, and bacteria inputs. The landowner chose to implement another conservation practice and planted a 50ft buffer of native vegetation, again with Pine SWCD covering a majority of the cost. This buffer will further benefit water quality by stabilizing the shoreline to prevent erosion and filtering runoff before it enters the lake while also providing wildlife and pollinator habitat. There is currently funding available for conservation work in the Lower Saint Croix Watershed. Some examples of best management practices that would be eligible for funding are wetland restorations, groundwater protection, forest management, shoreline plantings and stabilizations, cover crops, sediment control structures, and more. Do you have any resource concerns or conservation projects in mind? Call Zach at 320-372-0855 to schedule a site visit.

This fencing will keep livestock out of Rock Lake. Come Spring, native seed will sprout to life and create a vegetative buffer that will further protect the lake.

Volunteer to Monitor Water Quality-Zach Van Orsdel

Photo Credit: Minnesota Pollution Control Agency

Are you curious about the water quality of your favorite water body? One way you can learn more about it while helping collect vital information is through the MN Pollution Control Agency's Citizen Water Monitoring program. The program coordinates volunteers across the state in collecting water quality data on our lakes, rivers, and streams. The program sends you everything you need to do the monitoring for free! They provide training videos online, or our District Technician Zach, who is a volunteer for the program, can help with any questions you may have.

More information can be found here:
https:/www.pca.state.mn.us/water/citizen-water-monitoring
or by calling Zach at (320)372-0855.

Pine County Memorial Forests— Greg Beck

Pine County is among Minnesota's fifteen northern forested counties that manage tax-forfeit lands through County Land Departments. State Statute allows counties to set aside tax-forfeited lands which are suitable for forest purposes and dedicate those lands as memorial forest. Prior to 2010, Pine County tax-forfeited properties total some 48,000 acres. Since then, public land sales have decreased that acreage, however, 34,318 have been classified by the Pine County Board of Commissioners as Memorial Forest lands and retained for forest management and public use. In determining the Memorial Forest classification, consideration of long-term retention and consolidated management efficiency of these lands was considered with at least three of these five criteria having been met: large acreage, timber/resource potential, management access, environmental uniqueness, and public recreation value.

Pine County Memorial Forest lands are public lands and open to public recreation including hunting, fishing, and camping, along with snowmobile and ATV trail riding opportunities. Rules and regulations follow Minnesota State game, fish, snowmobile, and ATV laws, as well as rules and regulations recently established through the Pine County Memorial Ordinance which include:

-Motorized Forest Road and Trail Use.
-Restrictions of Permanent Structures.
-Restrictions of Permanent Deer Stands.
-Rules for Camping.
-Rules for misc. activities including agriculture, trail construction, and cutting of trees.

Pine County Memorial Forest lands are identified in the Ordinance and in the 2020 Plat Book which is available at the Pine County Recorder's Office.

These lands are public lands… they are your lands. Enjoy and use responsibly.

The Pine County Memorial Forest Ordinance is available online at:
co.pine.mn.us/government/ordinances
OR contact the Pine County Land Department at:
Phone (320) 216-4225
1610 Highway 23 North; Sandstone, MN 55072

Meet Pine County's New Pheasants Forever Biologist!

Hello! My name is Kristopher Oja, and I am the Farm Bill Biologist for Pheasants Forever in Pine County, MN. I graduated from University of Minnesota – Crookston with a Bachelor of Science in Natural Resources Management. Prior to my employment with Pheasants Forever, I have spent my time gaining as much experience in the natural resources/wildlife field as I possibly could through seasonal employment and volunteering. I have held seasonal positions with USDA-NRCS (Onalaska, WI), USFWS (Winona, MN), USFS (John Day, OR) and MNDNR (Center City, MN). Through these experiences I have gained knowledge of working on private lands, working on the refuge system, evaluating Salmon and Trout habitat in the mountains of the West, and so much more. It was through all these experiences that I determined that working with private lands was my calling, making Pheasants Forever the perfect fit! In my free time I am an avid outdoorsman who does not miss the opportunity to go hunting or fishing. I am extremely excited to be pursuing my career in conservation with the bird club in Pine County, close to where I grew up in my hometown of Lindstrom, MN.

The Minnesota Ag Water Quality Program

Are you a farmer in Pine County? Looking for a way to help maximize your output, while reducing costs? Do you want to find new and innovative ways to help move your farm forward while making sure you protect your lands resources? Then the Minnesota Ag Water Quality Program might be for you!

The Minnesota Agricultural Water Quality Certification Program (MAWQCP) is a voluntary opportunity for farmers and agricultural landowners to take the lead in implementing conservation practices that protect our water. Those who implement and maintain approved farm management practices will be certified and in turn obtain regulatory certainty for a period of ten years. Through this program, certified producers receive:

- Regulatory certainty: certified producers are deemed to be in compliance with any new water quality rules or laws during the period of certification
- Recognition: certified producers may use their status to promote their business as protective of water quality
- Priority for technical assistance: producers seeking certification can obtain specially designated technical and financial assistance to implement practices that promote water quality

Through this program, the public receives:

Assurance that certified producers are using conservation practices to protect Minnesota's lakes, rivers and streams

Many of the conservation practices can result in higher crop yields, more reliable water sources for your livestock, reduced erosion on your property, and lower annual investments to ensure crop success.

If you are interested in learning more about this program, and if it is a right fit for your farm you can reach out to your local SWCD! We can get you in contact with the Northeast regions Ag Water Quality Certification Specialist, Ryan Clark.

And even more excitingly, Pine SWCD has partnered with MAWQP and the Minnesota Department of Agriculture to create a new Ag Technician position! This individual will assist the regional certification specialist to help certify farms through the MAWQP in Pine County. The individual will also be able to assist in all of your conservation needs on your farm! We look forward to having this position filled by early Spring, and our partnership with MAWQP!

"CERTIFIED PRODUCERS ARE DEEMED TO BE IN COMPLIANCE WITH ANY NEW WATER QUALITY RULES OR LAWS DURING THE PERIOD OF CERTIFICATION"

Equipment Rental

Our no-till drill and wildlife plot equipment is available to rent for your spring planting needs!

The no-till drill

Working Width 12 feet
Travel Width 16 feet
Rental Rate is $14 per acre

3/4 ton truck for transportation, and at least a 75 horsepower tractor for use.

A 50% deposit of estimated acres is needed to hold your place.

Wildlife plot equipment

Can be used behind an ATV or small utility tractor.Includes:
small field disc
broadcast seeder
drag harrow

Rental Rate is
$80 per weekday
$225 for the weekend

Contact
Zach Van Orsdel,
District Technician
office (320)216-4242
cell (320)372-0855
zach.vanorsdel@co.pine.mn.us

Woodland Stewardship Plans

Woodland Stewardship Plans are roadmaps that help guide landowners (with 20 acres or more of forested cover) through their land management. A Pine SWCD forester will visit your property and prescribe different land management practices that help meet your management goals while also promoting sustainability. Healthy forests attract more wildlife, protect our water resources, store more carbon, and can produce higher quality timber products.

Receiving a woodland stewardship plan also qualifies you to enroll in one of two different tax incentive programs that can benefit you monetarily.

Visit our website at www.pineswcd.com/forestry and scroll to the bottom of the page for more information about the process. You can also call the Pine SWCD Forester, Jake Dale, with any questions (320)216-4245.

Orchids, Orchids Everywhere!

Lesser Purple Fringed Orchid

(*Plantanthera psycodes*)

Although many of us associate orchids with the delicate looking houseplants we often see, this family of plants can be found just about everywhere on Earth. In fact they are considered the largest family of plants in the world with about 25,000 species!

You can even find orchids growing in the wilds of Minnesota. With 46 species growing in the state, we have a good variety of orchids you can find in the North Star State. Our state flower, the showy lady slipper, is even an orchid!

Starting in late Spring and going through late Summer, our native orchids put on a great show of color. Looking in and around wetlands is a great place to find orchids in Minnesota. Many of our native species are found in wetlands and areas with wet soils. Orchids are also quite sensitive to environmental changes. So if you spot one, it is a good sign that the area is in good ecological health!

What orchids will you find this Summer?

Foraging in Pine County— Jake Dale

This year we introduced a forager bundle to our tree sale. We did this because Pine County has a host of native trees and shrubs that produce fruits that we can eat. We have sold our of the bundles this year, but they will be back next year. A lot of the species are not as popular as blackberry brambles or blueberry bushes, but they still produce a tasty fruit or nut fit for human consumption. In this article, I am going to highlight some of the fruits and nuts you can find here so next time you're out in the woods maybe you can also stop for a tasty treat along the way or bring some home with you.

One of my personal favorites is the American plum. The plum grows at a medium pace and can eventually end up ranging 10-25 feet in height. Its fruit is about 1 inch in diameter and can be eaten fresh or also turned into jams or jellies. Juneberries are another species that produces a berry that you can eat fresh. Some say it tastes like a combination between apples and blueberries. Elderberries are a thirdberry species you can find out in the woods. These berries are too tart to be eaten raw and need to be made into jellies or jams to be consumed. Elderberries have been used throughout history for various medicinal purposes like pain relief and reduce inflammation.

In addition to berries, some species produce a nut that can be consumed by humans as well. Black walnut trees and two species of hazelnut shrubs are found in Pine County. Black Walnut prefers warmer temperatures and is more common in the southern portion of the county. It produces a large nut, like a walnut you would buy at the grocery store. Walnuts right off the tree need to undergo a thorough preparation process to be fit for consumption. Hazelnut bushes are extremely common in Pine County. Hazelnuts can either be eaten raw (after they've been shelled) or roasted. There are many ways to prepare them.

When out foraging, it is extremely important to be confident in your identification. Do not consume a berry or nut unless you are absolutely sure of what it is. Juneberries become ripe in June. Elderberries and American plum are ready to be picked in August and September. Hazelnuts are ready about the same time and black walnuts can be harvested starting in early September.

Ripe juneberries can make a delicious treat!

"A LOT OF THE SPECIES ARE NOT AS POPULAR AS BLACKBERRY BRAMBLES OR BLUEBERRY BUSHES, BUT THEY STILL PRODUCE A TASTY FRUIT "

The 2022 Annual Tree Sale

Our 2022 Annual Tree Sale is here! We are happy to offer you a range of tree and shrub species.

Planting trees is a great way to add diversity to your forest, a natural fence on a property line, and an opportunity to sequester and store carbon for decades to come.

Our 2022 order form can be found on our website. Or you can come in to our office and pick one up!

Those of you who have ordered from us the last two years will have received an order form in the mail.

Selections are limited, and some items may be sold out.

To get an update on our current stock and availability check online, or give us a call.

We hope you consider buying a bundle! Small trees today create big trees for tomorrow!

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