

Field Notes

From the Hinckley Area Fisheries Office

Fisheries management news from the Chisago, Isanti, Kanabec, and Pine County area, Winter 2023

2023 brings changes to Hinckley Fisheries leadership

Leslie George, Area Fisheries Supervisor, has been promoted to the position of Regional Fisheries Manager for DNR Region 2. She officially began in that role on Wednesday, December 21st. She will oversee fisheries operations in the northeastern part of the state, in an area that stretches from Brainerd to the Boundary Waters to Grand Marais.

Leslie had been area supervisor at Hinckley since September 2015. She showed strong leadership in the role while facing challenges including the Grindstone Dam removal environmental review, aquatic management area administration, and working through the COVID pandemic. She was skilled at developing working relationships with lake associations and other stakeholders. We at the office will miss her enthusiasm and sense of humor, and we wish her well in her new position.

Jim Levitt will be filling the area supervisor role on a temporary basis. Jim is the assistant area fisheries supervisor at the East Metro fisheries office in St. Paul. We at Hinckley have worked with Jim numerous times over the years, mainly during the stocking season when we often coordinate with East Metro. Jim plans to be in the Hinckley office at least one day a week, teleworking from the metro area the rest of the time.

No target date has been set to permanently fill the area supervisor position; we hope to see a new supervisor by late summer or early fall. Until then, as always, if you have any questions about local fisheries management you can call the office at 320-384-7721, or email hinckley.fisheries@state.mn.us.

2022 walleye and muskie stocking: Challenges met with success



Fingerling muskies are netted as they come out of a rearing pond. From there they get a ride across the Grindstone River on the "fish flume" into a holding tank.

Every year, Hinckley Fisheries staff stock walleye and muskellunge into selected lakes. Sometimes walleye are stocked as fry, when they are mosquito-sized newly hatched larvae. This works for some lakes but not others. For most of the lakes we stock, fall fingerling stocking (walleyes 6-8" in length) works the best. The fingerlings are reared in natural ponds where we have permission from landowners.

The low water levels in 2022 provided a challenge to Hinckley and a lot of other area offices. Ponds that were stocked with walleye fry in the spring were difficult or impossible to access in the fall. That is, if they had any successful production of walleye fingerlings.

Fortunately, DNR Fisheries offices cooperate with each other. If one office has ponds that produce excess fingerlings, the word goes out and walleye are transported across the state to be stocked. In 2022 we were able to meet our walleye stocking quotas through a combination of fingerlings we produced, fingerlings from other areas, and contract purchases from fish farms.

Hinckley is one of several area fisheries offices in the state that raises muskie fingerlings in drainable ponds. The ponds date back to the 1930s when area sportsmen's clubs were looking for ways to raise bass for stocking. Since the 1970s these ponds have been filled and drained annually to provide muskie fingerlings for waters across the state. This year we managed to produce muskie fingerlings for several areas plus our own muskie lakes: Cross, East and West Rush, and Island.

2022 lake survey highlights

The Hinckley area fisheries office completed lake surveys on 12 lakes throughout the 4-county area in 2022. Lake surveys are done on lakes with public access on a 4, 8, or 12 year rotation depending on factors such as angler use and management activities (stocking, regulations). Lake surveys consist of gill netting, trap netting, electrofishing, and in some cases, nearshore fish sampling. Results of lake surveys are published on LakeFinder on the DNR website by fishing opener the following year. Here are some preliminary observations:

Stanton Lake: This was one of the most interesting surveys in 2022. Stanton, formed by a dam in Willow River, was actually not a lake for years after the dam washed out in the 2016 floods. Stanton became a lake again in 2021 after a rock arch rapids was constructed to replace the dam. This dam alternative allowed for the refilling of the lake while allowing fish passage. We wanted to see what fish naturally repopulated the restored reservoir from its connection with the nearby Kettle River before making any stocking plans.

The results are promising. We found ten species of fish in gill and trap nets. Game fish such as walleye, northern pike, sunfish, and crappie were all present in fishable numbers and sizes, along with perch, redhorse, and suckers. This fishery will continue to develop and change as fish move in and out, and we will consider additional stocking if needed.

Chisago and South Lindstrom lakes: Although these lakes are broadly connected, their different characteristics require separate surveys. Both lakes have good numbers of panfish although sizes tend to be small due to heavy angling pressure. Walleye fingerlings are stocked every other year; numbers in 2022 appeared to show the success of fingerling stocking. South Lindstrom had more walleyes per gill net than Chisago, as is usually the case. We stock both lakes from the same public access, so maybe more fish swim into South Lindstrom.

These lakes have a 12" maximum length limit for largemouth bass. The regulation was intended to increase the average and maximum sizes of bass. However, electrofishing results did not show exceptional sizes of bass in either lake.

Knife Lake: Walleye numbers were the highest we have seen since 1999. This lake's walleye population is self-sufficient, with no additional stocking necessary unless fall electrofishing finds weak year classes for more than two years. Crappies and sunfish are present with some good-sized individuals.

Spectacle: While gamefish numbers appear to be good, the most notable finding in this survey was the large numbers of yellow bullhead (30/gill net). This led to considerable frustration among the crew members, as bullheads are notoriously difficult to pick out of gill nets, and cause damage to the nets. Sizes ranged up to almost 15 inches; while this might be good news for bullhead anglers, the bullheads themselves might be difficult to catch by angling. They were found in nets set in heavy vegetation, which is present throughout the waters of the lake less than 20 feet deep. On a positive note, yellow bullheads are the bullhead species most likely to be associated with good water quality.

Big Pine and Pine Lakes: These lakes continued to show good, balanced populations of northern pike, sunfish, largemouth bass, and crappie. Walleye numbers were up somewhat in Big Pine from the previous survey. Of interest was the ages of walleye, determined from counting annual rings in otoliths (bony structures in a fish's head). Four of the 11 walleye examined from Big Pine were determined to be from 2019, a non-stocked year class. We don't know if these fish came from the Pine River or a spawning run in Strawberry Creek, but the numbers are encouraging.

New DNR tool provides health information for thousands of lakes

Source: DNR news releases

The Minnesota Department of Natural Resources has created a new online tool, called the Watershed Health Assessment Framework for Lakes (WHAF for Lakes), providing easy access to water quality and health information for thousands of Minnesota lakes.

WHAF for Lakes is part of the DNR's [Watershed Health Assessment Framework](#) and is funded by the Clean Water, Land and Legacy Amendment.

"Our staff did very innovative work over the past year to create this valuable new tool," Ecological and Water Resources Division Director Katie Smith said. "WHAF for Lakes will benefit anyone who wants to know more about a particular lake's water quality and the health of the aquatic habitat and community in that lake. It will also help guide decisions about lake protection and restoration."

Users can compare a lake's health measures to other nearby lakes. Along with graphics showing lakes' relative water quality, biology, and hydrology, WHAF for Lakes includes information about basic lake characteristics and lake stewardship. Quick access to this information will help Minnesotans, local government, and water resource agencies work together on comprehensive watershed management efforts.

A lake's watershed includes all land and surface water upstream of a lake outlet that contribute water to that lake. Land uses within a watershed influence lake health. Alterations of the land, the shoreline, and nearshore vegetation affect the quality of the water and the health of the aquatic community in a particular lake.

"A healthy lake is one that is nearest to its natural state — free from pollution and with a natural shoreline that protects the bank and filters runoff — which allows it to withstand changing conditions and seasonal fluctuations," Smith said. "Healthy lakes depend on people who value these resources and invest in the protection and restoration of the water, watershed, and biology."

WHAF for Lakes can be accessed by searching for a [particular watershed](#), exploring watershed health with the [WHAF Map](#), or using the DNR's popular [LakeFinder](#) page.



Healthy shorelines, healthy lakes

What causes ice ridges, and what can I do about them?

It is almost that time of year. People return to the lake eager to open the cabin for the season, only to find a ridge of soil has been pushed up on shore, perhaps causing damage to retaining walls, docks, and boat lifts, and maybe even the cabin itself. News stations show dramatic videos of ice moving on to the shore of large lakes like Mille Lacs. But most ice ridges are formed by longer acting, less visible forces.

How do ice ridges form? Ice ridges are caused by the expansion and contraction of ice sheets. Cracks form in the ice because of different expansion rates at the top and bottom of the ice sheet. This is especially true in years when the ice sheet lacks an insulating snow cover. Ice cracks also develop when the edges of the ice sheet are firmly attached to the shore. When water rises in the cracks and freezes, the ice sheet expands. Rising air temperatures also lead to expansion, which creates a powerful thrust against the shore. Alternate warming and cooling of the ice leads to additional movement of ice towards shore, which can scrape, gouge, and push soil and rock into mounds. Ice ridge formation can vary from lake to lake and year to year depending on water levels.

Are ice ridges any good for lakes? In many cases, ice ridges are natural berms that have formed over thousands of years. These

berms provide a barrier to nutrient runoff into a lake. Nutrients collect on the landward side and create fertile soil where trees and other plants thrive. The root systems of this near shore plant community help to protect the shore from erosion. Shade and habitat offered by these plants help to support a diverse community of insects, amphibians, birds, and fish. Ice ridges can also protect the shore from further wave and ice action and erosion by building up a naturally engineered barrier.

What can be done about ice ridges after they form? If the ice ridge is in a place and of a size where it does not impede reasonable recreational use of a shoreline, the best thing would be to leave it alone for the benefits described above. But this is often impractical. The DNR allows for removal or modification of ice ridges to allow lake access and recreational use. These actions may or may not require a Public Waters work permit, depending on the nature of the project, water level, and shoreline features. Additionally, disturbance of emergent aquatic vegetation due to ice ridge removal is not allowed unless authorized by an aquatic plant management permit from the DNR Section of Fisheries.

What can be done to protect shoreline property from damage from ice ridges before they form? The simplest way to avoid damage from ice movement is to ensure that buildings and personal property are out of wrath's path. State and local shoreland regulations requiring setbacks help to minimize property damage from ice and wave action, as well as maintaining the aesthetic properties of the lake. Retaining walls and boat houses built before setback regulations usually show damage from waves and ice and often must eventually be removed. If you are considering a retaining wall, riprap, or other projects near the shore, consult your local SWCD for best design alternatives. Some technical support and even cost share programs may be available for projects that help to utilize best shoreline management projects to create or restore healthy shoreline.

How can I learn more? The DNR website has information on various shoreline projects including ice ridge modification, including whether or not a permit may be needed. Please contact your local DNR area hydrologist before starting any shoreline work to confirm if any permits may be necessary.

Fish stocking in the Hinckley area

Most fish species in lakes and rivers in this area maintain their populations without stocking. Crappies, sunfish, bass, perch, and northern pike all tend to be self-sustaining except in rare instances such as winterkill. Other species such as walleye and muskellunge are less suited to spawning in area lakes. These species are stocked mainly to increase fishing opportunities.

Fish stocking is expensive; it takes labor and equipment to take spawn from fish, rear fish in hatcheries, operate rearing ponds, and collect fish for stocking, as well as transporting fish to lakes to be stocked. DNR fisheries managers must make sure that stocking dollars are spent effectively. Stocking efforts are evaluated mainly by lake surveys (gill and trap netting). Netting results, along with conversations with anglers and other interested parties, guide decisions about fish stocking.

These Hinckley area lakes are stocked:

Walleye

- Ann (fry, biennial)
- Big Pine/South Pine (fingerlings, biennial)
- Blue (fingerlings, biennial)
- Chisago/South Lindstrom (fingerlings, biennial)
- Cross (fingerlings, biennial)
- East/West Rush (fingerlings, biennial)
- Eleven (fingerlings, biennial)
- Fish (Chisago Co) (fry, biennial)
- Fish (Kanabec Co) (fry, biennial)
- Green (Chisago Co) (fingerlings, biennial)
- Green (Isanti Co) (fingerlings, biennial)
- Island (fingerlings, annual)
- North Center (fry, biennial)
- Oak (fry, biennial)
- Pokegama (fingerlings, biennial)
- Quamba (fry, annual)
- South Center (fingerlings, biennial)
- Sturgeon (fingerlings, biennial)

Thirteen other lakes are stocked with surplus walleye fry or fingerlings when available.

Muskellunge: East and West Rush, Cross, Island (annual fingerling stocking)

Trout: Grindstone Lake is stocked biennially with lake trout, and annually with rainbow and brown trout. Rainbow trout are stocked in the spring and the fall. Occasionally surplus brood stock adult trout from hatcheries are stocked. Rainbow trout and brown trout are also stocked in Crooked Creek east of Hinckley.



Got questions? The DNR Information Center can help you:

- Get in touch with a Conservation Officer
- Learn what to do about injured or nuisance wildlife
- Learn to manage your shoreline for water quality

And more! If you are not sure who in the DNR you need to contact, they can help. Call **888-646-6367** (888-MINNDNR) or email info.dnr@state.mn.us

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