Field Notes

From the Hinckley Area Fisheries Office

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

New area supervisor appointed to Hinckley office

Matt Ward is the new Hinckley Area Fisheries Supervisor. Ward has extensive education and experience in fisheries management. He received a bachelor's degree from UW-Stevens Point and a master's degree from South Dakota State University in Fisheries. Over the past 20 years, Matt has worked for area fisheries offices in Duluth, Lake Superior, Walker, and Grand Rapids in various roles, most recently as the assistant area fisheries supervisor in Grand Rapids. Matt's first day at the office was August 2. We are excited to have him join our team!

Matt, his wife Angela (who works for DNR Wildlife), and daughters Emma (12) and Lily (7), enjoy camping at state parks, visiting National Parks, hiking, riding bikes, and fishing. In his free time, Matt takes turns driving his two daughters in circles between dance, figure skating, 4-H, theater, swimming, basketball, soccer, and church youth group activities. He is also a basketball and soccer coach and one of the church youth group leaders. Matt enjoys fishing, looking for shed antlers, and bow hunting.

Photo: Matt Ward, center, coaching youth soccer

Hinckley staff spawn walleye for the first time in 30 years

In late April, Hinckley area fisheries staff collected spawning walleye from the Knife River north of Mora. These fish, caught by trap nets and electrofishing, were then stripped of eggs and milt to create fertilized eggs for rearing in the hatchery at St. Paul. The hatched walleye fry were stocked in several lakes in the Hinckley area.

Walleye spawning is not a new activity for the Hinckley area. In the late 1980s and early 1990s eggs were taken from the Knife River and the Ann River; these fish helped to repopulate Knife Lake with walleye after reclamation in 1989 and created a self-sustaining walleye population. These spawning operations ended due to the ability of other areas across the state to provide walleye egg needs more efficiently.

Recent genetic research suggests that stocked walleye do better in lakes when the egg source is from a similar watershed or genetic strain. DNR stocking guidelines now specify the strains that may be stocked in certain areas of the state. Most of the Hinckley management area is currently classified as "any strain",

meaning that walleye fry or fingerlings can come from any watershed source. In many lakes that have limited or no natural reproduction of walleye, this is not a big issue. But for lakes that had historical spawning runs, the genetic mix may have been detrimental to the vitality of walleye populations.

In the past few years research has identified a strain of walleye unique to the Lower Mississippi watershed, which includes the St. Croix watershed. The walleye in Ann Lake and Knife Lake are closely associated with this strain. Even in lakes like Cross and Pokegama, which are stocked with walleye fingerlings from various sources, about half of the walleye genetic samples taken recently were associated with the Lower Mississippi strain. That means a lot of the fish that thrive aren't a result of fingerling stocking but are from natural reproduction of the native genetic strain of walleye in these waterbodies.

What does that mean for walleye management in the Hinckley area? By transitioning to local egg takes for part of our stocking needs, we may be able to provide walleye fry or fingerlings that will be better adapted to local watershed conditions, at a lower cost. Of course, we will still rely on other sources for some of our stocking, but we hope this experimental run will provide some insight for the future.

Lakes stocked with Lower Mississippi strain walleye fry in 2023:

- Cross
- Pokegama
- Eleven (Kanabec County)
- Ann
- Knife (stocked to return a portion of the egg take to the lake)
- Big Pine
- South Pine
- Fish (Kanabec County)
- Oak
- Fish (Chisago County)
- Quamba

WALLEYE FACTS

On average, a 3 year old walleye is 13-15 inches. The females grow faster than the males. Males seldom grow larger than 24 inches. A 25 inch female is about 10 years old.

Walleye are named for their opaque, reflective eyes. This adaptation helps them to find prey at night or in turbid water.

Roughly 900 lakes in Minnesota are stocked with walleyes; however only about 15 percent of walleyes harvested in the state are stocked fish. Stocking provides walleye fishing in lakes where they would otherwise not exist.

The state record walleye was 17 pounds 8 ounces and 35 ½ inches, caught in Saganaga Lake by the Gunflint Trail.

The Ojibwe word for walleye is ogaa.

Photo: Acting area fisheries supervisor Jim Levitt tends to walleye eggs in the DNR's St. Paul fish hatchery. Jim has worked as the assistant area fisheries supervisor at the East Metro office and hatchery for years, and his knowledge of hatchery work helped greatly in getting the Hinckley egg take up and running.

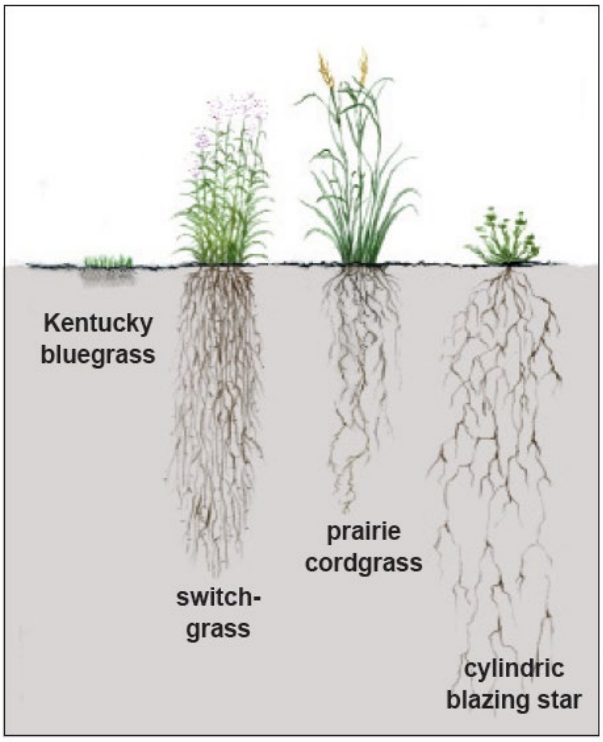
Healthy shorelines, healthy lakes

The benefits of natural shorelines

A natural shoreline is a complex ecosystem that sustains fish and wildlife and helps to protect the lake. Native vegetation along the shore acts as a buffer zone, intercepting nutrients and reducing runoff, erosion, and sedimentation. Aquatic plants provide food and shelter for ducks, songbirds, and other animals while reducing problems caused by Canada geese and burrowing muskrats. Plants growing in and near the water are critical for wildlife and fish habitat and a healthy lakeshore. Tall plants like bulrush, lake sedge, and cattail can reduce the energy of wave action to minimize erosion and help maintain water quality.

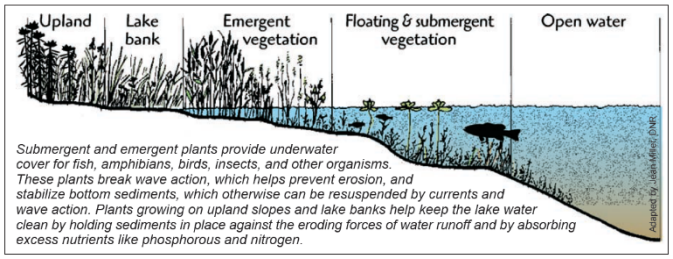
A buffer zone is an unmowed strip of native vegetation that extends both lakeward and landward from the water's edge. A buffer zone with a width of 25-50 feet is ideal, but even 10-15 feet provides benefits. Installing a buffer zone can restore many functions critical to the health of the lake in areas that were previously mowed or covered by hard structures.

Tall native plants typically have deep root systems compared with turf grasses. These root systems anchor the soil and help to prevent erosion, decrease ice damage, and increase rain infiltration.



(drawing credit: Steve Adams)

Creating and maintaining natural buffer zones along the shore does not mean your property has to look unkempt. Buffers and upland islands of trees, shrubs, and flowers can bring natural beauty to your lakeshore yard.



In cases where shoreline is eroding, the DNR recommends a natural approach to shoreline stabilization through the establishment and maintenance of natural vegetation whenever possible. Riprap and retaining walls can reduce erosion, but they can be expensive, and they negatively affect lakes by creating a hard barrier between the shoreline environment and upland areas. Retaining walls are especially damaging to the nearshore environment. Wave action against the wall washes back and scours the lake bed, moving sediment and creating a sterile environment, reducing critical habitat for fish and wildlife and much of the food chain they depend on. Both riprap and retaining walls should be considered as a last option. A DNR hydrologist should be consulted to determine whether there is an actual need for a project.

If there is a demonstrated need for riprap, such as in cases of steep slopes or high water levels, native vegetation can be planted among and above the rocks for stabilization and aesthetic value. Even for retaining walls, new projects will often require integration of riprap lakeward from the wall as well as vegetation planting to minimize the ecological and visual effects.

Existing riprap can also benefit from native plantings. Live stakes of shrubs such as willow and dogwood can be placed between rocks, or in some cases soil can be filled between the rocks and planted with seedlings or seeded with a native plant mixture. It is beneficial to extend a native plant buffer above the riprap as far as feasible.

Restoring a functional natural shoreline requires more planning than simply putting the mower away. Plants need to be selected based on their compatibility with the site. Sometimes invasive plant species must be controlled. And if work is done below the ordinary high water level of a lake, a permit may be required. The local Soil and Water Conservation District is a good resource for information on shoreline restoration. The DNR website has a wealth of information; search for "Natural Shorelines" in the search box. There is also a book available from the Minnesota Bookstore called "Lakescaping for Wildlife and Water Quality".

Area news roundup

2023 lake surveys

Crews from the Hinckley fisheries office have been busy on area lakes this summer sampling fish populations with gill nets, trap nets, and nearshore seining and electrofishing. Lakes are sampled on a 4, 8, or 12 year rotation based on size, angler use, and management objectives. The following lakes are on the schedule for 2023:

- Lake Five (Kanabec County)
- Long Lake (Pine County)
- Lake Eleven (Kanabec County)
- Island Lake (Pine County)
- Green Lake (Chisago County)
- Sturgeon Lake (Pine County)
- South Center Lake (Chisago County)
- Oak Lake (Pine County)
- East Rush Lake (Chisago County)

Preliminary results will be available as we complete each lake; to obtain a copy please contact us at the email address listed below.

Summer intern learning about fisheries work

This summer we have been fortunate to have Nick Stetzel assist us with field work. Nick started in May and has been working various tasks including hauling and stocking walleye fry, tagging walleye on Mille Lacs Lake for a population estimate, doing nearshore fish sampling, and lake surveys. Nick is an avid angler who hopes to pursue a career in fisheries. He will begin his second year at St. Cloud State University in August.

Grindstone dam removal project update

The public comment period for the draft Environmental Impact Statement (EIS) for the dam removal project ended on July 26th. The DNR will now review comments received on the draft EIS and a final EIS will be prepared. Another 10-day review and comment period will occur for the Final EIS adequacy. After this, the DNR will review adequacy comments and prepare the EIS adequacy determination. If the EIS is determined to be adequate, the DNR can move forward with the dam removal process. The actual timing of the dam removal will depend on factors identified in the EIS such as seasonal water flow levels and requirements of protected species in the area.

Repairs completed at muskie rearing pond

The outlet control structure of a pond at St. Croix State Park was refurbished in 2022, with final work completed this spring. The old concrete structure, built in the Civilian Conservation Corps days, was crumbling and lacked safety rails and steps. The structure has removable boards that control the water level and allow for draining the pond in the fall to harvest fish. Muskie frylings (small hatchery-grown fish) were stocked in mid July, along with minnows to feed them. These fish will continue to grow until late October, when they will be netted out as the pond drains and loaded onto trucks for stocking. This pond produces hundreds of muskie fingerlings annually.

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

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