

Field Notes

From the Hinckley Area Fisheries Office

Fisheries management news from the Chisago, Isanti, Kanabec, and Pine County area, Winter 2022

Area news

The 2021 summer field season was a busy and productive one for our staff. While most of us continued to base our work from home, our schedule of fish surveys, walleye and muskie rearing, and stocking fish was a lot closer to “normal” than it was in 2020. Highlights of our work included the following:

- Standard lake surveys (gill nets, trap nets, and electrofishing) were completed on Ann, Blue, Goose, Green (Isanti County), Lewis, Long (Isanti County), Lory, North Center, and West Rush lakes. Results from these surveys will be posted on LakeFinder on the DNR website by the fishing opener (May 14). If you are interested in preliminary results, please contact us by email at hinckley.fisheries@state.mn.us.
- Nearshore fish Index of Biotic Integrity (IBI) sampling and Score the Shore (STS) evaluation was done on Blue, Lewis, Long, and Lory lakes in Isanti County. See the article in this newsletter to learn more on what useful information these surveys provide.
- Vegetation surveys were completed on Blue Lake and Green Lakes in Isanti County, and Ann Lake in Kanabec County.
- Stream electrofishing surveys were completed on two trout streams: Little Hay Creek and Sand Creek, both located in Pine County. For more information on trout fishing opportunities in this area, see the article in this newsletter.
- We stocked seven natural rearing ponds with walleye fry. Due to low water levels we were unable to get in to all of the ponds in the fall, but we were able to meet all of our area stocking quotas for walleye fingerlings through a combination of our pond harvest and purchased fingerlings.
- We stocked our four drainable rearing ponds with muskie frylings. Despite some unforeseen technical problems and shortage of minnows for feeding, we were able to harvest thousands of muskie fingerlings to stock in lakes throughout Minnesota.
- Two temporary workers, Caleb and Ashley, completed a creel survey on Knife and Grindstone Lakes. Results will be available later this spring.

Muskie fingerling harvest: “Fish flume” increases safety and efficiency; and a historic double pond draining



This year, our staff developed a new solution. Lengths of PVC pipe were joined and strung across the river, supported by

fence posts, into a holding tank. An immersible pump provided water flow through the pipe to move fish into the tank.

This method proved to work well for moving muskies across the river, as well as reducing the potential for injury to staff and volunteers from carrying heavy tubs of fish.

“Big Day” for muskie fingerling harvest



In fish rearing work, we have learned to expect the unexpected. That happened with ponds 2 and 3 in Hinckley this year. The pond system is designed so we can drain one of those ponds at a time. Water and fish flow into a concrete holding structure, where fingerlings are netted out. Water then drains through the previously drained Pond 1 to the Grindstone River.

This year something went wrong with the control structure between ponds 2 and 3, and they both started draining at once. We had to take both ponds in one day, which had never been done before. Anticipating a potential deluge of fingerlings, we had to contact area offices in Duluth, Detroit Lakes, Fergus Falls, and Brainerd to be on standby to pick up fish. We actually ended up with fewer fingerlings than we anticipated, although netting in the concrete tank got fast and furious at times, as well as counting the fish and loading them onto trucks. At the end of the day, we had netted nearly 3200 muskie fingerlings, which ended up in lakes across northern Minnesota.

Area trout fishing opportunities beyond Grindstone Lake

The stocked waters of Grindstone Lake make for a great destination for anglers to target rainbow, brown and lake trout. Many may be surprised that other opportunities to fish stream trout exist in the Hinckley Fisheries work area, in streams in Pine County as well as one in Chisago County.

Hay and Little Hay Creek, Pine County. Much of Hay and Little Hay Creeks are accessible through St. Croix State Park, approximately 15 miles east of Hinckley. The brook trout populations of these streams are sustained by natural reproduction. Most trout in these streams run in the 6-8” inch range, with trout up to around 11” sampled in previous surveys on Hay. Fishing these streams can be challenging due to dense vegetation along the banks; anglers should obtain a park map and consider road and trail crossings for possible access points. Angler access easements also exist on Hay Creek, please contact our office for additional location information. [[StreamFinder - Stream Page | Minnesota DNR \(state.mn.us\)](#) – Hay; [StreamFinder - Stream Page | Minnesota DNR \(state.mn.us\)](#) – Little Hay]

Crooked Creek, Pine County. Crooked Creek also runs through St. Croix State Park with additional public accessibility near its crossing of State Highway 48. Crooked is annually stocked with hundreds of yearling brown and rainbow trout for anglers each spring. A St. Croix State Park road and trail map will help anglers locate other areas to access and fish the stream within the park. [[StreamFinder - Stream Page | Minnesota DNR \(state.mn.us\)](#)]

Sand River, Pine County. The Sand River in northern Pine County holds another wild brook trout population, but public access is largely limited to road crossings. An Aquatic Management Area in the stream’s upper reaches provides additional public access. Brook trout numbers have been low in recent assessments, but fish present averaged around the 9 inch mark. [[StreamFinder - Stream Page | Minnesota DNR \(state.mn.us\)](#)]

Lawrence Creek, Chisago County. Lawrence Creek is a small brook trout stream running through the village of Franconia, adjacent to the St. Croix River. Public access to the stream is possible via the Lawrence Creek Scientific and Natural Area. Anglers must keep their feet in the stream within designated ‘sanctuary’ areas within the SNA (no walking on upland). Similar to Hay and Little Hay Creeks, the naturally-reproducing brook trout of Lawrence Creek are somewhat small fish - averaging around 7 inches in length with larger fish possible. [[StreamFinder - Stream Page | Minnesota DNR \(state.mn.us\)](#)] [[Lawrence Creek SNA | Minnesota DNR \(state.mn.us\)](#)]

Please be aware of your location when fishing these streams, respect private property, and follow all trespass laws. Although fishing these streams is currently closed to protect spawning activity and nursery habitat, spring stream trout opener will be here soon enough – Saturday April 16, 2022 (5 fish combined total, not more than 1 over 16”).

Additional resources:

[StreamFinder | Minnesota DNR \(state.mn.us\)](#)

Index of biological integrity (IBI) survey coming to a lake near you

Do you ever wonder why Minnesota Department of Natural Resource (MNDNR) fishery biologists are walking close to your shore in waders, with a backpack electrofisher or seine, during the summer months? One way to measure the health of a particular lake is to examine the species diversity of fish populations within the lake. Our gill and trap nets tell part of the story, but they miss the smaller species that live near shore.

Fisheries biologists from the DNR and University of Minnesota developed a method called the Index of Biological Integrity (IBI) to combine our traditional surveys with nearshore fish sampling data. In order to do this, biologists sample the near shore area of the lake by seining and electrofishing. Depending on lake size we randomly select a representative number of survey sites around the shoreline of the lake. At each site we pull a 50 foot seine and sample 100 feet of shoreline with a backpack electrofishing unit to collect fish. We then put all fish captured into a holding tank. At each site we identify and count all species. Once completed all fish are released back into the lake.

This information helps us to assess the overall health of a lake based on measurements of these communities. Some species cannot survive without clean water and a healthy habitat while other species thrive in degraded conditions. We call these species intolerant or tolerant. Relative numbers of each type of species are considered "indicators" of the health of a lake. There is an indirect relationship between the fish communities and water quality and physical habitat characteristics. Over time the biological populations present in a lake are the result of cumulative effects of natural and human-caused influences within the watershed area. These communities change in predictable ways in response to poor water quality or loss of shoreline habitat.

Once we collect and analyze all of the data we can assign a score to a lake and determine if a lake is impaired based on nearshore fish communities. Once we determine a lake is impaired we must identify the limiting factors and try to restore the lake through good land use practices and proper stewardship. This process is mandated by the Clean Water Act and carried out through partnerships between the DNR and other state and local agencies such as the Soil and Water

Conservation Service. Lake sampling is done by watershed according to a rotating schedule set by the Minnesota Pollution Control Agency. These past few years our sampling has focused on the Rum River watershed; in the near future we will begin sampling in the Kettle River watershed.

The MPCA has developed similar IBIs to assess biological communities in streams and rivers in Minnesota. For more information on these IBIs, go to the MPCA website. www.pca.state.mn.us

We also collect score the shore (STS) data while out on MN lakes. We can assess the overall shoreline habitat conditions of developed lots by a visual examination. We know that shoreline buffers with natural ground cover are effective in removing pollutants from runoff. Native vegetation acts like a sponge to hold runoff with associated contaminants. When human disturbance alters the natural shoreline conditions of the lake, water quality can be degraded. The thicker the vegetation is along the shoreline the more it will filter runoff. While surveying lakes we see a direct correlation between highly developed shorelines and decreased number of game fish in the lake.

Did you know you can perform a STS assessment on your own shoreline? Check out the following website to learn more about STS surveys and how to implement your own assesment in your backyard.

www.dnr.state.mn.us/scoreyourshore/index.html

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're 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

Staff spotlight: Area Supervisor Leslie George



I grew up in the Twin Cities' suburbs, graduating from Armstrong High School in Plymouth in the mid-1990s. We were fortunate to have a family cabin on Bay Lake near Deerwood, MN through my early teens. I have many fond memories of evening pontoon rides, frustrating my grandfather with cast after cast snagged in the waterlilies, taking the paddleboat out around the bay with my younger brother, and the excitement of the occasional interaction with a 'big fish!'. Undoubtedly, these summer weekends were influential in the development of my professional and personal interests. Away from the cabin, I spent nearly all of my teen free time playing hockey, fastpitch softball, and participating in just about any kind of 'pick up game' taking place in the neighborhood.

After high school I attended the University of Minnesota-Duluth with no specific degree in mind (I cared more about playing hockey!). A realization of how much time one spends at work during their lives was critical for me – I knew that I did not want to sit inside or behind a desk for 40+ years! I began the coursework related to a degree in fisheries and wildlife management early in my sophomore year. Course needs required me to transfer to the U of MN, St. Paul campus to finish my bachelor's degree in fisheries management.

My first job with DNR Fisheries was an internship at the East Metro office in St. Paul, the summer before wrapping up my bachelor's degree. I was able to continue immediately into graduate school – and to work again with DNR Fisheries on my master's degree, assisting in the development of an index of biotic integrity for fish, a tool used by DNR Fisheries today. (See article earlier in this issue)

I started my full-time career with DNR Fisheries as Fisheries Specialist down in Windom, MN in 2004 tasked with attempting to improve Walleye fingerling rearing success. A little over 2 years later I took a position related to fish habitat, as the Regional Aquatic Plant Management Specialist out of the Glenwood office. While in that position for nearly a decade, I also accepted a short assignment as the Acting Area Fisheries Supervisor for the Lanesboro area. I have now been the Hinckley Area Fisheries Supervisor for over 6 years.

My free time today is quickly consumed by fishing, hunting, camping, and hiking trips – some local, others not so much. Home projects and visits from my nephews, family and friends also fill my time away from work. Relatively new (or revived) interests include fishing lake sturgeon through the ice and time back in my hockey skates. My 15 year old yellow lab Tucker and I reside in northern Pine County.

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