

West Lake Superior Management Unit



ISSUE I

DATE

Staff:

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Due to staffing constraints, the West Lake Superior Management Unit works as a combined staffing unit with the Northern Lake Michigan management unit with shared field technician staff who work out of the Crystal Falls DNR office.



2012-13 Western Lake Superior Management Unit Newsletter

The following is a summary of the field work that has occurred during the last year, along with a synopsis of the 2011 fisheries survey of Deer Lake Basin in Marquette County.

Unit Fisheries Surveys

King Lake, Baraga County: May 21-24 and July 12, 2012

Methods and Materials: Survey gear deployed for this effort included; fyke nets, minnow seine (25ft x 5 ft) gill nets, and DC electrofishing boat.

Results: This survey effort collected northern pike, largemouth bass, smallmouth bass, rock bass, black crappie, bluegill, pumpkinseed sunfish, yellow perch, golden shiner, and white sucker. One small snapping turtle (11-inch carapace) was also collected. As consistent with surveys from 1970 till present, black crappie are a dominant fish species (N=426) of which 84% were 7"-inches or larger in size. A small number but nice representation of largemouth bass (N=32, 13= 40% legal) smallmouth bass (N=13, 3= 23% legal) and northern pike (N=18, 10=56% legal) indicates that this lake supports a moderately attractive sport fishery. It is fortunate to see that bullheads (N=137) and white suckers (N=98) are not over-abundant in comparison to the rest of the lake's fish assemblage. No walleye were collected in this survey effort.

Growth rates of sunfishes (Centrarchidae) are slower than State average; with mean growth of black crappie being -2.7 inches behind, largemouth bass -1.9 inches behind, and pumpkinseed sunfish -0.9 inches behind, and yellow perch (percidae) were similar being -1.6 inches behind. Smallmouth bass were growing even with State average. Northern pike (esocidae) were growing well, with a mean growth rate being +2.4 inches above State average. Despite the overall slow growth rate of King Lake fishes, some black crappie, largemouth bass, and smallmouth bass were reaching keeper size at age-3 (6"-inch, 14"-inch, and 24"-inch respectively).

Discussion: This lake provides a very aesthetic and quiet place to enjoy panfish and northern pike sportfishing opportunities. Past management attempts to develop a walleye fishery here have not been very successful. Quite simply, this lake has always been a panfish/pike lake and it will probably always remain as such. The crappie fishing here is very enjoyable and the lake is always quiet with very few other anglers present.



Unit Fisheries Surveys



Did you know?

Fish have been around for about 500 million years, which is longer than dinosaurs. There are an estimated 25,000 different species identified today, with an estimated 15,000 more yet to be discovered.



Sundstrom (Hoist) Basin: April 4-5, 2012 Electrofishing Notes

Methods and Materials: DC pulsed electrofishing boat with electrofishing starting at 8:00 p.m. and concluded at 10:00 p.m, targeting various areas of the lake and consisting of two hours of electrofishing effort. 30 pulses per second were used with an amp reading of 2.0.

Results: Walleye (N=228) were the primary fish found in this survey effort; with a few smallmouth bass (N=22), northern pike (N=4) and yellow perch (N=7) also collected. Walleye sizes ranged from 4"-inches to 18"-inches with 49 of the 228 walleye being 15"-inches or larger (21% of the catch were legal).

Discussion: It is difficult to draw large conclusions about the fish assemblage of Hoist Basin, from reviewing data from two (30 minute and 90 minute) electrofishing efforts. The data does indicate that there is a presence of legal size walleye and walleye that are in the spawning size category. Age structures (dorsal spines) collected from these 2012 sampled walleye show fish ranging from age-1 through age-14. The last stocking of walleye in Hoist Basin occurred in the summer of 2004 with 20,000 pond-reared fingerlings and in 2006 with 19,576 fingerlings. Age-6 walleye (N=7) from the 2006 stocking event, and age-8 walleye (N=10) from the 2004 stocking event were not represented in higher proportions than walleye yearclasses from non-stocked years. The presence of age-5 and younger walleye from non-stocked years shows that natural recruitment is sustaining the walleye composition within this lake's fishery.

Crews also collected 60 smallmouth bass for VHSV health examination before adult fish transfer to Tourist Park Impoundment.

Lake Independence: April 9, 2012 Electrofishing Effort

Methods and Materials: DC pulsed electrofishing boat with electrofishing starting at 8:00 p.m. and concluded at 10:00 p.m, targeting various areas of the lake and consisting of 60 minutes of electrofishing time.

Results: Walleye (N=115) were the primary fish found in this survey effort; with a few smallmouth bass (N=4), and one yellow perch and one freshwater burbot were also collected. Walleye sizes ranged from 8"-inches to 20"-inches with 42 of the 115 walleye being 15"-inches or larger (36% of the catch were legal).

Discussion: It is difficult to draw large conclusions about the fish assemblage of Lake Independence, from reviewing data from a one-hour electrofishing effort. The data does indicate that there is a presence of legal size walleye and walleye that are in the spawning size category. Age structures (dorsal spines) collected from these 2012 sampled walleye show fish ranging from age-1 through age-14. The last stocking of walleye in Lake Independence occurred in the summer of 2004 with 15,000 pond-reared fingerlings (1.72" length), so the presence of walleye 7 years and younger within this lake represents wild recruited fish. Age-8 walleye (N=13) from the 2004 stocking event were represented in higher proportions than walleye yearclasses from non-stocked years, however the presence of age-7 and younger walleye from non-stocked years shows that natural recruitment is sustaining the walleye composition within this lake's fishery.

Elm River, Houghton County (North Road Site): July 30, 2012 – August 7, 2012

A fisheries survey was conducted on the Elm River (T.53N., R36W., Sec 10. The beginning of station was 70 feet downstream of culvert at North Road and continued downstream for 1,000 feet) using the State's Status and Trend fixed site survey protocol. This year's survey was year-1 of a three year sampling protocol at this site. The goal of this survey was to use this stream's character and fishery to compare to other similar Upper Peninsula and state-wide watersheds, as well as to assess the Coho and steelhead reproduction aspects of this stream. With respect to the Michigan DNR site designation database for the Status and Trend program, this site is a representation of a non-stocked small sized trout stream.

Methods and Materials: DC current battery powered backpack electrofishing unit, 3-person crew, and one 1000-ft survey station (marked run) shocked on 8/6/2013 and this station repeated (recapture run) for a population estimate on 8/7/2013

Results: Brook trout and rainbow trout (juvenile parr) are present in moderate numbers within this 1000 foot station (see below). Most of the rainbow collected here were age-1 (N=21, 96%) while fewer were age-2 (N=4, 4%). Age-0 to Age-3 brook trout were collected here, with the predominance of these being age-1 (N=19, 68%). Only 11.4% (N=4) of the 44 brook trout collected were of legal size (7"-inches). Two of the 49 caught rainbow were of legal size (8"-inches).

Population estimates generated for this survey station calculate (in fish/mile) 565 brook trout and 718 rainbow. Comparing brook trout population estimates against the 2004-2007 survey series shows an improved abundance as population estimates were 374 in 2006, 538 in 2005, and 283 in 2004. Comparing rainbow trout population estimates against the 2004-2007 survey series shows significantly lower data from the 2004-2007 surveys which for that period showed juvenile steelhead population estimates (in fish/mile) were 5,342 in 2006, 3,611 in 2005, and 4,781 in 2004. The size distribution of captured brook trout and steelhead was similar to past years.

The following statement was made in 2006, when evaluating the 2004-2007 survey period, and this statement remains factual following this survey analysis;

"As expected, brook trout were much less abundant than steelhead. Brook trout CPE has not changed appreciably during the three status and trends surveys. The 95% confidence intervals for the three estimates overlap considerably, so the year-to-year differences in brook trout abundance estimates probably are not statistically significant. As in the past, less than 10% of the brook trout collected were of legal size." B. Gunderman

Discussion: The small size of the fish collected in this survey is more indicative of the reproductive potential of this Lake Superior coastal stream, than it is of the sport fishing capability of this water. The survey station here is of a nursery water size, and is more suited for small (< 8"-inch) size fish than larger downstream portions of this river would host.

Visit Fisheries Division's 2013-2017 Fisheries Division Strategic Plan

"Charting the Course: Fisheries Division's Framework for Managing Aquatic Resources,"

This plan provides a vision and relevant broad activities for managing the various components of Michigan's fisheries; including its fish, their habitat, and engaging angler participation.

<http://www.michigandnr.com/PUBLICATIONS/PDFS/Fishing/2013-17-FD-StrategicPlan-April22-WEB.pdf>

Schlatter Lake: Summer 2012 Survey Notes

History: Schlatter Lake has a long history of possessing abundant numbers of northern pike. Because of the past historical abundance of small northern pike, the sport fishing regulation for this fish is a daily possession limit of 5-fish of no minimum size requirement.

This lake receives considerable fishing pressure and is regularly written about in outdoor sport fishing magazines. Camping is popular from May through October, and at times there is heavy fishing the lake during summer weekends. This heavy fishing pressure has diminished the northern pike population within the last 26 years.

Methods and Materials: Status and Trend protocol was used; deploying inland gill nets, fyke nets, and minnow seine during the June 25-28 period, followed with three 10-minute boomshocker electrofishing stations on the evening of August 21st. Lake temperature data was collected through the summer period using an Onset data recorder.

Results: Northern pike remain small with a collection of 18 fish between 8"-23" inches and averaging 12.6 inches in length. White suckers are common with 55 individuals collected between 2"-20" inches, averaging 15.2 inches in length. A total of 859 perch were collected ranging between 1"-12", averaging 5.2" inches.

Discussion: As with similar surveys conducted in 1987, and 1999; northern pike remain small. The average size of pike has decreased from 20.2" inches in 1987 and 21.6" inches in 1999, to 12.6 inches in 2012. Abundance of pike has also declined, with catch-per-effort of pike in 1987, 1999, and 2013 surveys being 2.9, 1.8, and 1.0 respectively. Comparing with past surveys, this is the first survey where not even one pike larger than 23"-inches was captured in the survey effort. Growth rates for northern pike are about 5"-inches below State average.

Yellow perch provide a reasonable attraction to anglers with 859 perch collected ranging between 1"-12", averaging 5.2" inches, with 44% of the perch (N=379) being 6" inches and larger in size. Currently yellow perch are reaching 6"-inch size at age-2.

The existing northern pike no-minimum-size and 5-fish possession regulation is very popular for the young anglers during the father/son fishing outings; however the abundance of anglers utilizing this regulation has resulted in a great decrease in numbers of northern pike. Further declines in northern pike numbers, combined with a low density of other predators (smallmouth bass) will likely contribute to the expansion of yellow perch in coming years, and subsequent stunting. Additionally, the expansive shallow lake bed gravel substrates (which provides ideal white sucker spawning habitat), combined with the low density of northern pike, will allow white sucker numbers to increase and further disrupt the predator-prey ratio within the lake.

Recommendations: This lake is a good candidate for the protected slot limit northern pike sport fishing regulations of no-minimum-size limit, possession limit of two (2) fish with no retention of fish between n 24"-34" inches in size. This regulation will allow anglers to still catch and keep northern pike less than 24 inches, however the bag limit will change from five fish to two fish. This regulation will also allow for the retention of larger spawning size northern pike within the lake, which is critical for keeping the yellow perch and white sucker fishery from taking over the lake's fish assemblage.

Welcome to E-License

<http://www.mdnr-elicense.com/Welcome/Default.aspx>

The Michigan Department of Natural Resources (DNR) E-License system is designed to allow customers to purchase hunting and fishing licenses, special hunt applications and permits 24 hours a day, 7 days a week within applicable sales dates. You will also be able to print most small game and fishing licenses using your own printer. Our goal is to make the license-buying process easier for our customers who enjoy the great State of Michigan.

Deer Lake Basin, Marquette County: Data from netting and electrofishing during May 2-14, 2011

This impoundment was surveyed in the spring of 2011 to evaluate the population status of the northern pike and walleye within this lake.

Walleye:

- 7002 walleye netted of which 90% (N=6297 or 89.93%) were 15" inches or larger.
- Estimated total population = 9,351
- Walleye represent 87.03% of the total fish assemblage of Deer Lake Basin
- 100% of the total walleye fishery is from wild recruits
- Average size = 17.3" inches
- Many 15" inch walleye are 5-8 years old.
- Overall, walleye are growing about 2.5" inches below State average.
- Largest walleye = 25" inches

Northern Pike:

- 1044 northern pike collected of which 38% (N=399) were 24" inches or larger
- Estimated total population = 2,077
- Northern pike represent 12.31% of the total fish assemblage of Deer Lake Basin
- 100% of the northern pike fishery is from wild recruits
- Average size = 23.6" inches
- 24" inch northern pike are age III – IV
- Overall, northern pike are growing about 0.5 inches above State average
- Largest northern pike = 41" inches.

Yellow perch:

- Less than 50 (N=44) fish were collected in the May 2011 survey, and 14 collected during the June 2011 netting effort.
- Average size = 11.1" inches with individuals from 4" – 13" being collected.

New species, not found in previous surveys:

- Black crappie, 8" -13" size, less than 10 (N=8) collected
- Smallmouth bass, one 13" specimen was collected.
- Pumpkinseed sunfish, 145 individuals were collected, average size 2.1"
- Bluntnose minnow (N=640)
- Fathead minnow (N=1)
- Golden shiner (N=60)

Discussion:

This lake has a fishery unique to any other lake in the Midwest with the high abundance of walleye and northern pike. The sportfishing regulation here is catch-and-release which has resulted in producing this quality high catch-rate walleye and northern pike fishing lake. Current data indicates that mercury levels in some game fish in the Deer Lake Basin have declined. As a result, the 2012-2013 Eat Safe Fish Guide (formerly the Michigan Fish Advisory) will be updated to reflect these improving conditions.



Unit Fisheries Surveys

Waters planned for surveys in 2013:

Status and Trend Surveys:

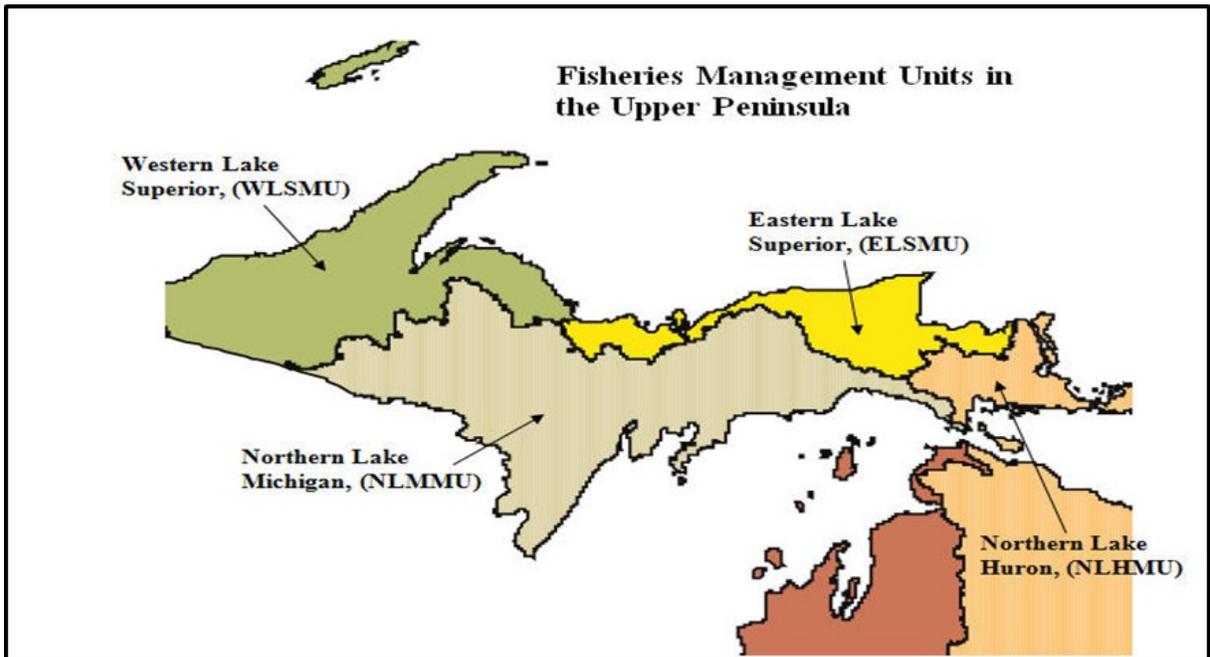
Estes Lake:	Houghton County
Elm River (year 2 of 3):	Houghton County
Two Mile Creek (year 2 of 3):	Gogebic County

Prescription renewal surveys:

Castle Lake:	Gogebic County
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Brook trout regulation evaluation

Dead River/Mulligan Creek:	Marquette County
Yellow Dog River:	Marquette County



Unit Walleye Program

Unit walleye rearing

Walleye production

Summary of fingerling walleye stocking in Western Lake Superior Management Unit in 2012.

We have two walleye rearing ponds located in southern Ontonagon County, known as the Amber One Pond and the Amber Two Pond. Amber One pond was stocked this year with 100,000 walleye fry on 4/30, the pond produced 65,993 walleye. Amber Two pond was stocked with 100,000 fry 4/30 and produced 33,728 walleye.

All fish stockings are allocated to waters that have approved management prescriptions that summarize the rationale for the stocking action and the expected results. The following is a summary of the WLSMU 2012 walleye fingerling stocking locations.

<u>Prescription</u>	<u>Lake</u>	<u>Quantity</u>
2474	Duck Lake	10,077
2322	Otter Lake	10,097
1634	Teal Lake	10,035
2219	Portage Lake	450,000 fry
		50,192
2545	Ontonagon River	2,052

Volunteer Assistance...Thank You

A special thank you goes to recognize all of the sport groups and dedicated lake/stream/river/fish enthusiasts of protecting and enhancing your area fisheries. It would be difficult to name all of the volunteers and helpers without missing someone, so we thank everybody who as assisted the DNR with local programs. Some examples of projects where these volunteers have helped us include; walleye rearing, fish stocking, Chinook salmon net penning, macroinvertebrate sampling, trout sport fishing regulation reviews, lake and stream surveys, minnow surveys, youth fishing events, streamside tree planting, beaver dam removals, temperature logger deployments, salmon in the classroom programs, youth mentoring events, Upper Peninsula Pocket Park staffing, Ask-the-DNR WMNU-TV-13 sponsoring, VHS fish sample collection, fish kill investigations, ...and sometimes a cup of hot coffee on a cold day.

Thank You!

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