

News Reel

Waterville Area Fisheries Newsletter

Fall 2019



Soup's Take

Fry or Fingerling? Part 1 of a 3 part series

This past Spring Waterville Fisheries had the opportunity to host an Open House as part of the 2019 Governors Fishing Opener. Visitors had the opportunity to come inside the hatchery and observe Walleye fry hatching in jars, which were then held in the fry capture tank. Those that visited will recall fry are very small, about the size of a mosquito. We also had a raceway of Walleye fingerlings that were about 8-inches long in the hatchery. We strategically placed these two life stages of Walleye next to each other to highlight the differences between these life stages of Walleye that are stocked by the DNR into lakes. Our goal was to use this opportunity to engage visitors and explain why and when it is appropriate to stock each life stage into a lake, and to compare the general cost of these two life stages to stocking programs. This was a hit given all the questions and conversations and certainly worthy of discussion here in NewsReel.

As I type this, staff from Waterville Fisheries are out on natural rearing ponds lifting trap nets and harvesting Walleye fingerlings to fulfill stocking quotas. The Walleye fingerlings being harvested this time of the fall have grown substantially

since spring. Typically, Walleye fingerlings grow to 4 to 7-inches (or larger) by October when they are harvested at somewhere around 20 fish/lb. These Walleye are then transported in tank trucks and stocked in lakes based on Lake Management Plans. In Waterville's nine counties, only a small handful of lakes call for fingerlings, most lakes are fry stocked.

It is a common perception by anglers that these larger fingerling Walleye are the 'best option' for stocking a lake because they 'survive better'. In some situations that very well is the case; however, in Southern Minnesota fry are still the preferred choice in most management scenarios. Why are fry preferred?

Lakes are stocked using a number of fish per acre. Stocking based on area standardizes stocking among various sized lakes. For this comparison lets assume we have a 1,000 acre lake. The fry stocking rate typically is 1,000 fish/acre, so this 1,000 acre lake would receive 1,000,000 fry on stocked years, typically every-other-year. The fingerling stocking rate is generally 1 lb/acre.

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ABOVE: The dashboard of the Waterville Area electrofishing boat. Boat electrofishing is used in the spring to sample bass and in the fall to sample Walleye.

Osprey rescue

Waterville staff performed an Osprey rescue mission this summer. A young bird, hatched this spring, was seen walking the pond roads with a broken wing. Hatchery manager Andrew Scholten tells the story:

"I found an Osprey with a broken wing near pond 4. I wasn't sure what to do, so I went back to the office and called the University of Minnesota Raptor Center. They directed me on how to capture the bird without getting either one of us injured. When I got back out to the pond I couldn't find the bird. After a bit of searching I noticed it had fallen, or jumped, into one of the ponds at the outlet structure. I had to climb down into the pond to get it. I put the bird in a stock tank and waited for the Raptor Center to arrive. The volunteer who picked up the bird said it was likely born this year."

The Osprey nest located on the hatchery grounds is very popular with bird watchers in the spring. The nest is also a bit of an oddity since Osprey feed almost exclusively on fish.



Left: Photo of a Channel Catfish fry. Note eyes, heart and blood vessels (red), gill formation, and yolk sac.

Right: Andrew Scholten with an Osprey rescued on hatchery grounds. The nest is visible atop the pole in background.



Quality Bluegill Initiative

New Program

The DNR in July announced a new program designed to improve Bluegill size and angler satisfaction. The goal of the Quality Bluegill Initiative (QBI) is to increase the number of lakes actively managed for quality Bluegill populations. The QBI was initiated by the citizen-staffed Panfish Work Group and designed by the DNR's Panfish Technical Committee (PTC).

Poor Size

Minnesota anglers often report poor Bluegill size and declines in size are well documented in scientific literature and in standard DNR surveys.

Angler harvest is often cited as a leading cause in reduced size of Bluegills. Current Bluegill regulations are ineffective at protecting large Bluegill. Research efforts in Minnesota and neighboring states have shown reduced creel limits for Bluegill can increase Bluegill size. The first phase of the QBI proposes two special regulations: a 5 fish possession limit and a 10 fish possession limit.

Fix or Maintain?

The 5 and 10 fish possession limits have two different expected outcomes. The 5 fish limit is billed as a "fixer" regulation and would be applied to lakes where large Bluegill (over 9

inches) have existed in the past but do not currently, with a goal of growing 9 inch fish. The 10 fish limit is a "maintainer" regulation and would be applied to lakes that currently have large Bluegills but also face high angling pressure. Special regulations will only be applied to specific lakes and are NOT statewide regulations. Special regulations will be applied for 10 years and re-evaluated.



A large Bluegill taken during a recent spring outing.

Local Effects

Several Waterville Area lakes are potential candidates for special regulations (see sidebar) and although most current special regulation lakes are located in northern parts of the state research has shown the regulations may actually be more effective in productive southern waters.

Input needed

The process of implementing the QBI will involve many steps. First, lakes must be nominated by area Fisheries offices. Then, lakes must be approved. After approval, public input meetings will be held for each lake nominated.

Public input is vital to the QBI process and we invite all to comment on the process whether you are for or against the regulations. Input can be provided at formal meetings, via email or phone, or by submitting a comment sheet (see sidebar).

Several lakes in the Waterville area are potential candidates for either a 5 or 10 Bluegill possession limit. Examples of lakes with decreasing Bluegill size structure includes:

- Madison Lake
- Lake Tetonka
- Shields Lake

Lakes with quality size structure worth protecting include:

- Washington Lake
- Lake Mazaska
- Cedar Lake

To comment on proposed regulations call or email the Waterville office and request a comment sheet.

Quality Sunfish Management Comment Sheet

Angler surveys tell us that sunfish, primarily bluegill and pumpkinseed, are among our most prized gamefish in our state. In fact Minnesota anglers harvest around 20 million sunfish each year, making them our most harvested fish.

Unfortunately, our love for sunfish has negatively impacted size quality. Creel surveys conducted in southern Minnesota in 2012 and 2016 found that anglers were generally satisfied with the number of sunfish they caught, but were often dissatisfied with size. Today, an increasing number of over-age anglers, professional guides, resort owners, and fishing celebrities are expressing concern about declining sunfish size quality. At the same time, sunfish numbers have increased in 20th lake surveys, suggesting an overall increase in sunfish densities, a trend often linked to size quality declines.

Reduced limits have been shown to be an effective tool to maintain or improve size quality. Our Fisheries staff remain on the lookout for populations that may benefit from increased protection from an additional regulation. This is very much a local question, however. Regulations only work if anglers support them.

Please help by answering a few questions using this comment sheet to share your thoughts with us.

1. Lake(s) name _____ (If any lake)

Please list specific lake(s) and/or area that you are submitting a general comment that applies to any size with biological potential to benefit from reduced limits by checking Any lake check box.

2. What is your name and home zip code? Name _____ Home zip _____

3. Which of the following best describes you?
 Lakeshore owner Local resident Non-local MN resident Out-of-State resident

4. Do you usually stay at a local resort? Yes No

5. Approximately how many times did you fish for sunfish in the past 12 months? _____

6. Which lake(s) did you fish for sunfish in the last 12 months? _____

7. Would you support the following:
 A 5 fish bag limit for sunfish if it is expected to improve size quality
 A 10 fish bag limit for sunfish if it is expected to maintain current size quality
 I do not support reduced limits for sunfish.

Please provide any additional comments on the back of this form! Only individually submitted comments will be considered. Please return your completed sheet to: Bluegill Quality Task Force by 10/15/19 New Fisheries, 50337 Fish Hatchery Road, Waterville, MN 56089. Or Email to bluegillquality@dnr.state.mn.us. Questions or comments can also be directed to the Area Fisheries Office by calling 507-561-3222.

PNW 12/2018/2019

Bluegill regulation comment sheet

Upcoming Creel Surveys

The DNR is making creel surveys a priority again. Creel surveys, commonly used on Minnesota's large lakes, are a tool managers use to gather information about angler habits including effort, catch, harvest, and target species.

Employees, called creel clerks, survey anglers on randomly chose dates and times. Managers expand the data collected by the clerk to all anglers at a chosen lake over a period of time.

Comparisons of creel surveys versus a creel census (where every angler at a lake is interviewed) have



A large Bluegill about to be measured.

shown that interviewing a portion of anglers gives just as accurate information as a census, at a portion of the cost.

Bluegills and Northern Pike

Waterville crews will be conducting two creel surveys in the near future. The first will take place on Washington Lake and Lake Tetonka and will focus on Bluegill and angler attitudes toward Bluegill. This survey is scheduled to begin December 1st, 2019

The second creel survey will be a repeat of a 2016 survey and will take place on Madison Lake,

Creel Survey Schedule:

- Washington and Tetonka (2019/20)
- Madison, Mazaska, and Cedar (2020/2021)

Cedar Lake, and Lake Mazaska beginning in December of 2021.

This survey will help determine if the new zone-based regulation has meant more

big fish for anglers and will ask about angler's views of the regulation.

Need Angler Help

Creel surveys provide vital information for fisheries managers. Creel surveys are the only time we get to collect scientific information about angler catch, harvest, effort, and other variables. If you are approached by a creel clerk in the future please take a couple minutes to answer the clerk's questions – it doesn't take long and the information you provide is very important.

Southern Walleye

History

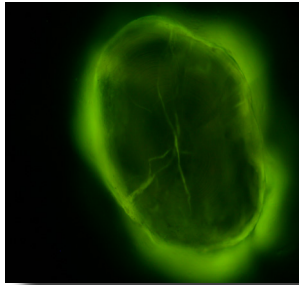
The Waterville State Fish Hatchery once operated an egg take station upstream of Lake Tetonka. The egg take station provided eggs for fish to be stocked in local lakes. Sometime around the 1970s the number of fish swimming past the station declined and the hatchery was no longer able to collect enough eggs to produce fish for local lakes. At this same time the hatchery began receiving eggs from northern waters where Walleye were more plentiful. These northern varieties of fish have been stocked in southern Minnesota for over 40 years.

Recently, managers from the Windom Fisheries office noted consistent natural reproduction of Walleye in Lake Sarah in southwest Minnesota. Genetic testing was done and revealed a unique genetic strain. The Lake Sarah Walleye were remnants of the southern fish last stocked in the 1970s. An egg take station was established on the shores of Lake Sarah in 2015 and has been providing southern strain eggs for Windom and Waterville area lakes for 4 years.

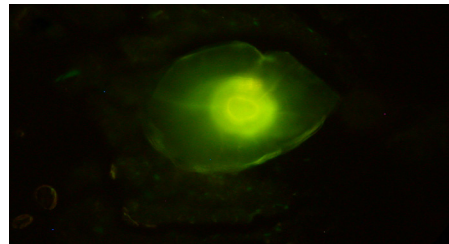
Hopes

Biologists hope these southern strain Walleye, which evolved in lakes and streams much different from northern waters, are better adapted to dealing with high tem-

peratures and low water clarity of southern lakes. The hope is these fish will survive better, grow faster (and bigger!), and reproduce more successfully than their northern cousins.



Otolith without OTC mark (top) and with (bottom). The OTC mark is in the center of the otolith, not the glow around the edge.



The end goal is to have self-sufficient Walleye populations in area lakes and reduce the dependency on stocking.

Research

A research experiment is underway at the Waterville area office to assess the hopes of better survival, growth, and spawning success. Lakes in the lower portion of the Cannon River – Lake Tetonka, Upper Sakatah Lake, Lower Sakatah Lake, and Cannon Lake are being stocked with a 50/50 mixture of northern and southern fish. Southern fish are marked with a special chemical (OTC) so they can be identified if they are captured after stocking. The experiment is in its early stages and has been hampered by unusually large natural reproduction (a good thing for the lakes, but not the folks doing the analyses) but initial reports suggest southern fish are surviving better than northern fish. Growth and natural reproduction will take longer to determine.

Future

Stocking of southern strain fish will continue as will the research into their success. The Lake Sarah egg take will continue to operate and, with some luck, hopefully an egg take can be established somewhere on the Cannon River and its associated lakes. Of course, the biggest benefit to anglers is hopefully better Walleye fishing.

Walleye stocking options

(continued from front page)

Since fingerlings generally run 20 fish/lb at the time of fall harvest this lake would receive 20 Walleye fingerlings per acre, or in our 1,000 acre example lake, about 20,000 fish total.

The question most people then have when considering Walleye fry (because they are very small) is how many survive? That is a good question, and the honest answer is usually a low percentage. But, the caveat is it doesn't take a very high survival to create a really strong year class. Even 2% survival in our example would equate to 20,000 fish. Under the right conditions survival could be much higher so the chance of having a really strong year class from fry stocking is greater than from fingerling stocking where there are limitations just based on the numbers stocked. For example, following a winterkill

in a shallow lake fry survival rate could be magnitudes higher than 2%, it may even approach 25 to 50% That is why shallow lakes that frequently winterkill provide some of the highest catch rates for anglers. Really strong year classes of Walleye are formed from fry stocking following winterkills.

Fingerlings on the other hand are stocked at larger sizes, and the survival is assumed to be much higher, but the number of fish stocked limits the chances of large or extraordinary year classes. Thus, fingerling stocking can only be expected to maintain a low to moderate abundance of Walleye in a lake.

The reality is that in most scenarios in Waterville area lakes fry stocking can provide a low to moderate abundance of Walleye just as well as fingerlings. So then cost also must factor into decision-making. The kicker is fry cost \$5 per 1,000 fry. In our example 1,000 acre lake that equates to about \$5,000

every-other-year. Conversely, fingerling cost is \$20 per lb, or around \$1.00/fish. That equates to \$20,000 every-other-year in our 1,000 acre lake example.

Bottom line, most often we can produce net catches of walleye in the 2 to 5 fish/net range with fry stocking. This is considered a low to moderate abundance in Waterville Lakes and is very similar to the better net catches we have found using fingerlings. It makes much more sense to use the less expensive fry option rather than spending 4 times as much to get the same results using fingerling stocking. Of course, there are other factors at play in making this decision, and in the next issue we will discuss this topic further and consider when fingerling stockings should be considered.

-Craig Soupir, Area Fisheries Supervisor

WATERVILLE AREA FEATURES:

LAKE MAZASKA, RICE COUNTY

Monsters?

Lake Mazaska is located in Shieldsville, just north of State Highway 99 and near other excellent fisheries such as Cedar Lake, Roberds Lake, and Shields Lake. While the other lakes in the area may be known for Crappies or Walleye, Mazaska may be best known for something else: Monsters. A 60-foot long, camel-like creature was reported residing in the lake in the 1870s. One hundred years later Shieldsville briefly held a winter celebration of "Shaska" the Lake Mazaska Monster. Recent sightings are hard to come by, but the legend lives on.

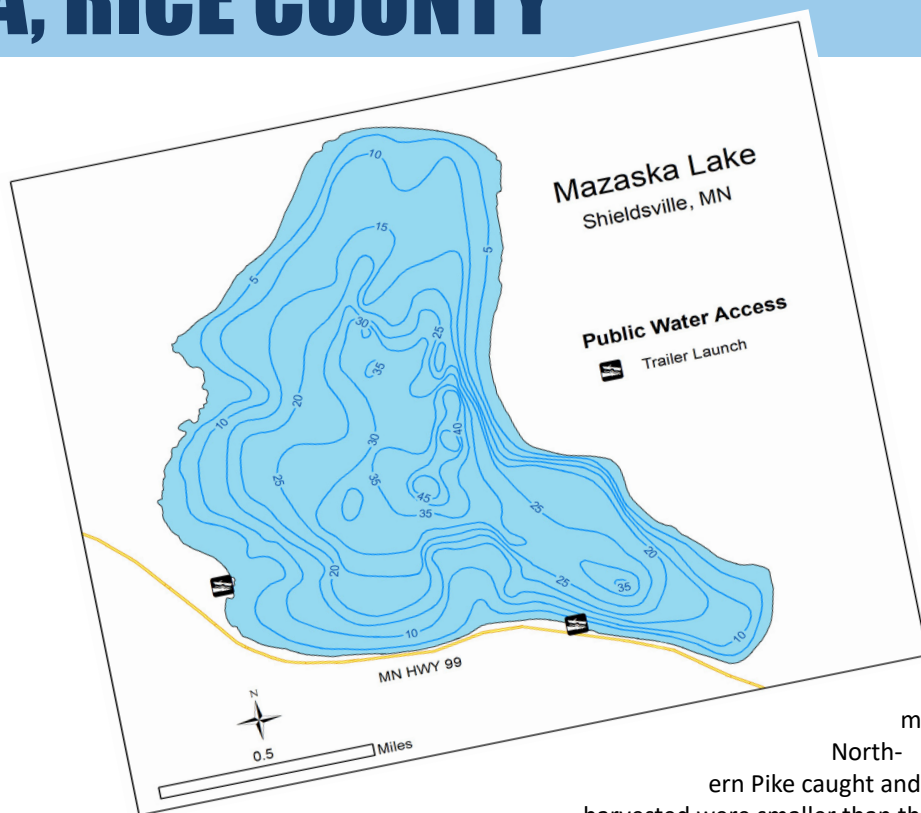
Survey Results

A standard survey was conducted on Lake Mazaska in 2019. As was the case in all previous surveys, no Monsters were caught in DNR nets. However, some monster Bluegills and Black Crappies were caught. Also sampled were Longnose Gar over 40 inches long. These large, ancient, toothy fish have drawn monster-like comparisons in the past.



Longnose Gar.

Nice sized Walleye and Largemouth Bass were also sampled in 2019. Although, Walleye were not sampled in monster numbers.



Creel Surveys

Lake Mazaska was part of a creel survey conducted in 2015 and 2016 along with Cedar Lake and Madison Lake. The goal of the survey was to gather information on angler habits, especially regarding Northern Pike, prior to the implementation of new Northern Pike regulations.

Results showed Northern Pike were only targeted by a small number of anglers and

most Northern Pike caught and harvested were smaller than the proposed 24 inch minimum length limit.

A follow-up to that survey will be conducted in 2021 and 2022. Results will be compared between surveys to measure the effects of the new regulation.

For more information on Lake Mazaska go to LakeFinder on the DNR website. For more information on Shaska try Google.

<https://www.dnr.state.mn.us/lakefind/index.html>

2019 Surveys by the Numbers

Waterville crews set 181 nets and spent 12.1 hours electrofishing at 11 lakes during our 2019 standard surveys. Here's what we saw:

101 trap nets

- 3,635 Bluegills
- 890 Black Crappies
- 816 Black Bullheads

80 gill nets

- 1,977 Black Crappies
- 1,159 Black Bullheads
- 477 Bluegills
- 341 Northern Pike
- 204 Walleye

12 hours electrofishing

- 695 Largemouth Bass

Biggest Fish	Inches	Lake
Walleye	28.5	Madison
Northern Pike	42.0	Duck
Largemouth Bass	21.5	Duck
Bluegill	10.0	Washington
Crappie	17.0	Duck
Yellow Perch	10.4	Gorman

Above: This table shows the biggest fish measured during the 2019 sampling season, the length in inches, and the lakes they were sampled in.

To submit topic ideas contact Brandon Eder at brandon.eder@state.mn.us or call 507-497-1823.

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