

03/21/2016

*An annual fisheries newsletter for Lake Winnibigoshish*

## In This Issue

- **2016 Population Assessment**
- **Invasive Species**
- **VHS**

## Interesting Links

**Invasive Species**

**Winnie Water  
levels**

**VHS Fact Sheet**

**Heterosporis  
Parasite**

## Contact Information

Gerry Albert  
Large Lake Specialist  
1201 Hwy. 2 E.  
Grand Rapids, MN  
55744  
(218) 328-8836

e-mail  
gerry.albert@state.mn.us

## 2016 Recap

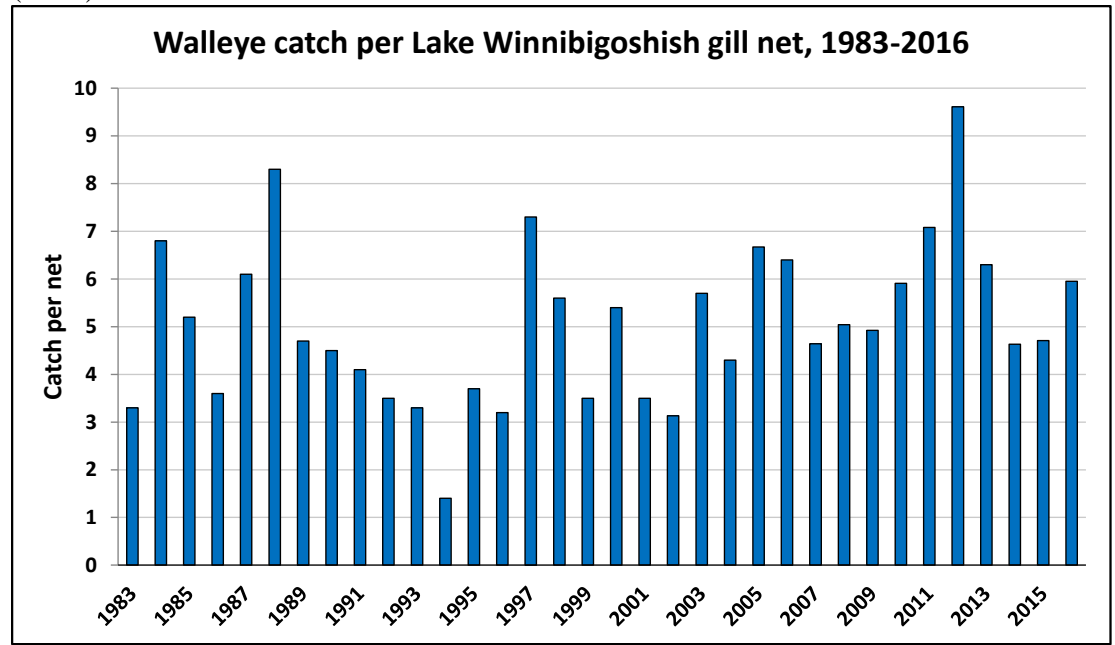
What a contrast Walleye fishing was between 2015 and 2016! From late May through late August, Walleye fishing was tough in 2015. Along comes 2016, and the dead sea turned into good fishing for most of the summer. In contrast, fall Walleye fishing was good in 2015, but less productive in 2016. It appears that clear water continues to have the biggest effect on fishing success. Water temperatures stayed above 70 degrees during much of the summer of 2016, which resulted in a plankton bloom and reduced water clarity that made Walleye easier to catch. Perch fishing was relatively consistent throughout the summer with good action much of the year. There are still plenty of small perch in the lake so bring plenty of minnows. Pike provided consistent action throughout the year. Winnie is likely to be clear again this year, so fishing early and late in the day, and on cloudy and windy days will probably be most productive for Walleye. The following outlines results from the 2016 assessment. Good luck fishing!

## 2016 Population Assessment

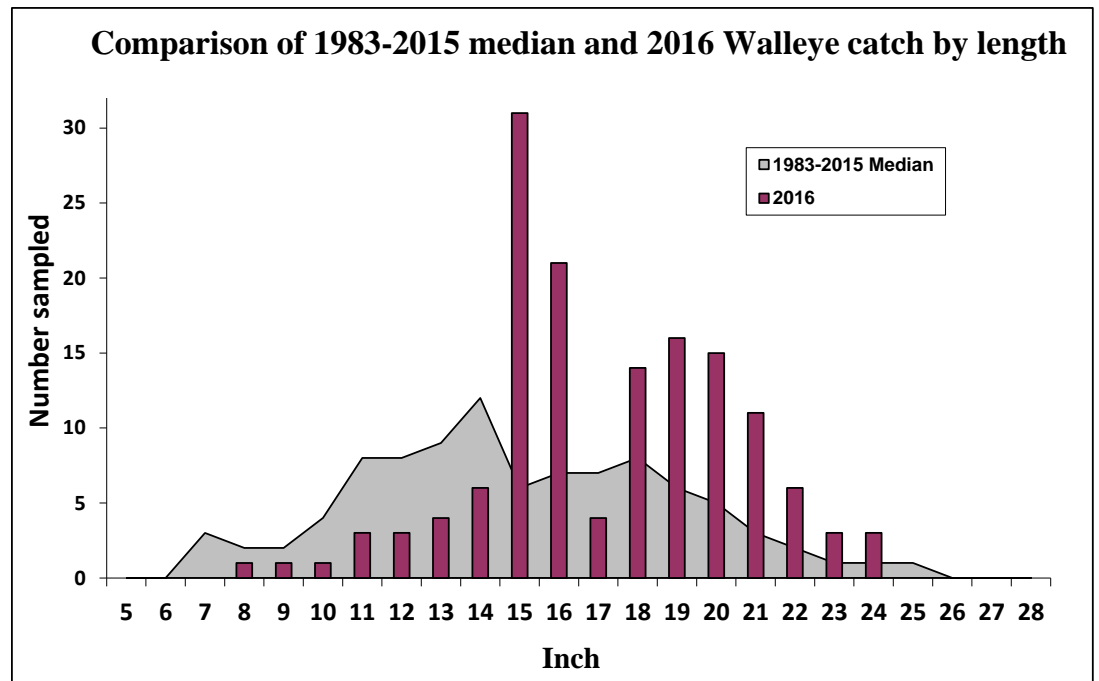


The gill net catch rate for Lake Winnibigoshish (Winnie) Walleye increased to 6.0 per net in 2016 from 4.8 in 2015. This catch rate was well above average and was heavily influenced by the strong 2013 year classes. The 2012 year class of Walleye continues to be one of the weakest year classes observed since the start of the large lake program in

(1983).



Weak Walleye year classes are expected occasionally. Historic early ice out (March 30 - 2012), followed by a cold spring, likely affected reproduction, growth, and survival of the 2012 year class. Although not as weak as the 2012 year class, the 2014 year class appears to be lower than average.

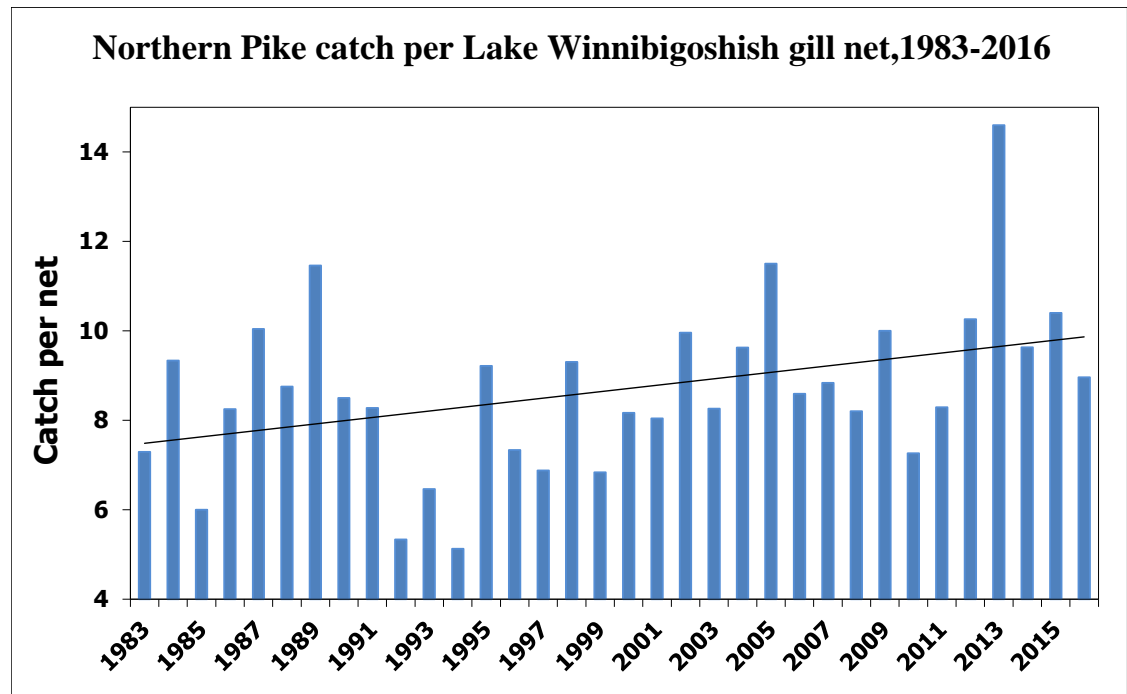


Walleye sampled varied from 8.0 to 24.3 inches with an average length of 17.7 inches. The Walleye population is benefiting from strong year classes in 2009, 2010, and 2013, and an average year class in 2011. The 2008, 2012, and possibly 2014 year classes were weak. The result is a wide variety of sizes available to anglers, however, the potentially weak 2014 year class should result in fewer 14 to 16 inch Walleye. Walleye from the 2011 and earlier year classes should contribute to high catch rates and the potential for a trophy catch. Age-0 Walleye are sampled by trawl each summer. Few Walleye were

sampled by trawl during the summer of 2016. Clear water during the summer likely affected catch rates of age-0 Walleye. Due to the clear water and resulting low trawl catch rates, night electrofishing is being evaluated. Electrofishing was completed from late August through early October. Catch rates for Age-0 Walleye were lower than average, however, conditions for electrofishing were challenging with high winds during optimum water temperatures.



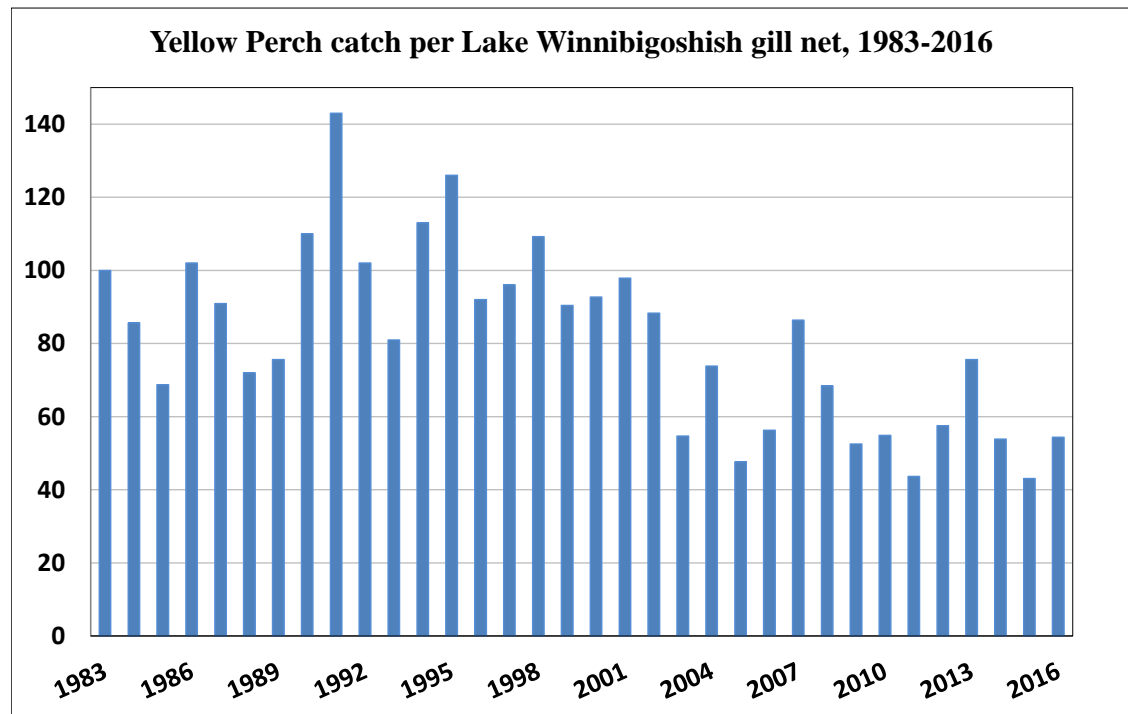
Northern Pike (pike) catch rates generally declined between 2005 and 2010. During that time the number of large pike (over 30 inches) in the system increased. Between 2010 and 2013, the catch rate of pike doubled and the number of pike sampled over 30 inches decreased by 80%. The catch of pike increased to the highest observed in the history of sampling (14.6 per net) in 2013. Pike catch rates decreased from 2014 through 2016, however, they remain higher than is healthy for the lake.



Pike populations in lakes with high catch rates are typically dominated by small pike and Lake Winnibigoshish is no different. As gill net catch rate increases, the average length of pike decreases, and less large pike (over 30 inches) are present. Pike length in 2016 varied from 12.5 to 33.9 inches with an average length of 21.7 inches. Only two pike longer than 30 inches were sampled in 2016. Large pike can act as a regulating force in a pike population by competing with smaller pike. If high numbers of small pike stay in the lake over an extended period of time, growth rates can be reduced which can make the problem worse. Fishers can help increase the number of quality size pike in the population by releasing or not harvesting most fish over 22 inches. This will allow pike time to grow closer to their potential, and increase the chance of anglers catching larger fish.



Yellow perch (perch) are an important species both for anglers and as prey for predators. Perch have experienced a general decline in abundance as seen in gill net catches since 2001. Reasons for this decline are unclear. Walleye and pike populations have increased during this time, which is likely increasing predatory pressure on the perch population. The Cisco population has also declined during this time due to increased water temperatures and resulting summer kills. Cisco provide a buffer to perch by providing larger predators alternative prey. Three species of invasive snails have become established in Winnie since 2000, however, there is no known negative relationship between perch and these snails. Although perch abundance has decreased in Winnie, the perch population is more robust than in most lakes. A higher proportion of small perch were seen in 2015 and 2016 netting. An index of year-class strength was computed for all year classes sampled from 2008 through 2013. The 2008 through 2010 year classes were average, the 2013 year class was weak and the 2012 year class was strong. Perch length varied from 4.4 to 12.5 inches with an average length of 6.8 inches.



Relative health of the perch population has been described by the percent of perch longer than nine inches in the gill net catch. The catch of large perch declined to 6% in the early 1990's, driven by high angler harvest. Changes in Winnie and other lakes prompted a statewide change in the perch bag limit to 20 daily and 40 in possession in 2001. Several strong year classes were produced during the same time period and the catch of large perch increased to 30% in 2004. In 2005, the proportion of large perch sampled in near-shore gill nets declined for the first time since 1998. The proportion

of large perch slowly declined from 2005 to 2015. A stronger year class of perch was produced in 2010. This resulted in increased catch rates of young fish and reduced the percent of large perch to 7.0% in 2014. Small perch continue to dominate the gill net catch in 2016 with 56% of the catch being less than 6.5 inches. The percent of perch longer than 9 inches was similar to 2015 at 7.5% in 2016.

## Creel Survey

Creel surveys were conducted from the summer of 2012, through the winter of 2013-2014. Results of these creel surveys are available at the Grand Rapids Fisheries Office. Lake Winnibigoshish Creel Surveys are scheduled on a 2 out of 6 year rotation. The next creel survey is scheduled to start in May of 2018, however budget constraints may delay start of the creel survey. Thanks to all of you for participating in creel surveys, and contributing information that helps keep Winnie a great fishing destination.

## Walleye Experimental Regulation


The 17 to 26 inch protected slot limit for Walleye was evaluated during the summer of 2010. Evaluation showed that the fishery had responded well to the regulation and that either the current 17 to 26 inch regulation, or a 18 to 26 inch protected slot with a bag limit of six fish would likely maintain the fishery at a healthy level. Results of the evaluation were open to public review in the fall of 2010 and public meetings were held at three locations in October. Many comments were received through the public review period and meetings. These comments came from anglers varying from Winona to Baudette in Minnesota and eight other states from Wisconsin to Texas and Arizona. More than 85% of the comments received favored either the 17 to 26 inch or 18 to 26 inch protected slots with a small advantage to the 17 to 26 inch slot. Of those favoring these two options, more than 1/3 agreed with either regulation. The final decision was to keep the 17 to 26 inch protected slot limit with a bag limit of six fish. This regulation was biologically suited to Lake Winnibigoshish and was viewed favorably by the majority of anglers.

The 17 to 26 inch slot limit was re-evaluated during the summer of 2014. An 18 to 25 inch protected slot limit was initially evaluated. After evaluation it appeared that a less restrictive regulation could be implemented and still maintain the healthy Walleye fishery. Further evaluation resulted in a protected slot limit of 18 to 23 inches with a bag limit of 6 being proposed. That regulation was viewed favorably by anglers and was implemented in March of 2015.

## Aquatic Invasive Species

Invasive species are species that are not native to Minnesota *and* cause economic or environmental harm or harm to human health.

Several invasive species have been introduced into Winnie. Three species of snail: banded mystery, Chinese mystery, and faucet have become established since 2000. Both species of mystery snail appear to have no negative effect on the fishery at this time. The faucet snail carries a trematode parasite that can kill several species of ducks if ingested. Thousands of ducks were killed by these parasites during the fall of 2007 and 2008. The Faucet Snail is a filter feeder and may be responsible for clearing water prior to the introduction of Zebra Mussel. Each of these invasive species were likely



introduced through human activities. Juvenile Zebra Mussels (veliger) were discovered while sampling zooplankton during the summer of 2012. No zebra mussel veliger were found while sampling for zooplankton in 2013. Juvenile Zebra Mussel have been sampled each year since 2013. Near-shore areas of hard substrate were inspected for adult Zebra Mussel each year since 2012, and divers have inspected likely offshore areas since 2014. No adults were discovered until 2016. Adults were found on near-shore driftwood in the early summer, then found by divers on mid-lake rock structure during August. Sampling for juvenile Zebra Mussels will continue and the spread of adults will continue to be documented.

Starry Stonewort (an algae) was discovered in Cass Lake during the summer of 2016. This discovery upstream of Lake Winnibigoshish prompted an investigation on Lake Winnibigoshish. Starry Stonewort was discovered along the south and west shores of the lake and appears to have been established for several years.

Emerald Shiners (often used as bait) are not native to Winnie, were first sampled in 2005, and have been sampled each year since. Rusty Crayfish are present in Cass Lake, and curly leaf pondweed is present in Dixon Lake. Both of these lakes are tributary to and upstream of Lake Winnibigoshish. Introduction to Lake Winnibigoshish in the near future is likely.

Each of these invasive species were likely introduced through human activities. Movement of any type of equipment (boats, boat trailers, boat lifts, docks, personal watercraft, bait containers, etc.) between lakes may transfer invasive species if precautions are not taken. To avoid being an accomplice to the spread of these unwanted species, people should make sure all equipment is thoroughly cleaned before moving it to a new body of water. For more information on invasive species, click the “Invasive Species” link at the top left corner of this newsletter.