

Walleye and Sauger Stock Status

Update for Lake of the Woods: 2018

The primary assessment used to monitor Walleye and Sauger populations is the annual fall gill net assessment. This assessment has been conducted since 1981, a comparable assessment was conducted from 1968 through 1970. From 1968 through 2001, the fall gill net assessment sampled the near-shore waters of Lake of the Woods, from 6 to 25 feet in depth. In 2002 off-shore nets were added to the assessment. The off-shore nets sample depths from 32 to 35 feet.

Walleye

Walleye catches in the 2018 gill net sample averaged 15.1 per net, which is also just below the 2002 to 2018 average of 16.9. Walleye are less abundant than they were last year (Figure 1).

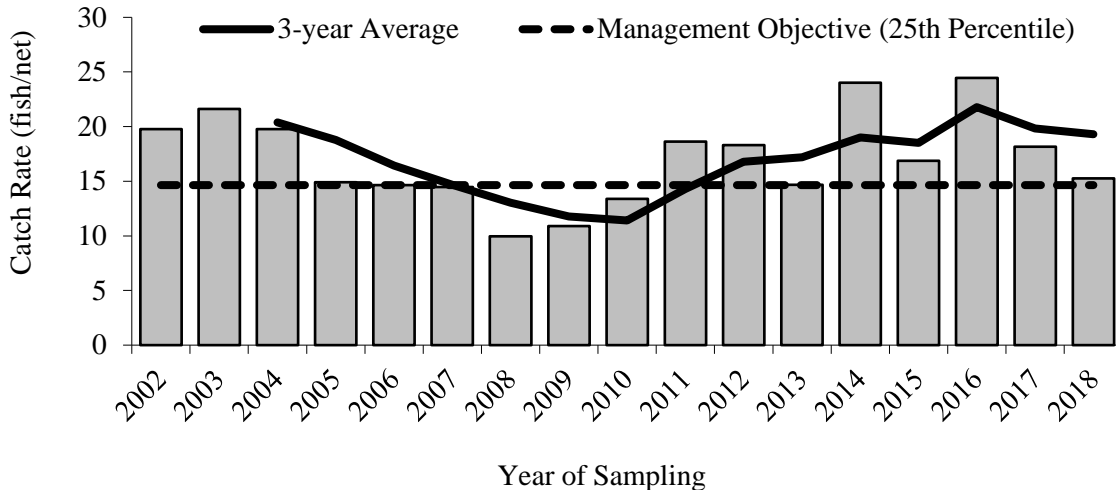


Figure 1. Average of near shore and off shore catch per unit effort of Walleye in September gill nets, 2002 through 2018.

The 2011, 2013 and 2014 year classes were strong, while 2015-2017 year classes are, or are predicted to be, of average strength (Figure 2). In 2018, above average catch rates and good growth of young of the year Walleye are a likely indication of a strong year class. Strong production and recruitment combined with only two weak year classes (2008 and 2012) in the past 10 years results in a healthy and abundant Walleye population.

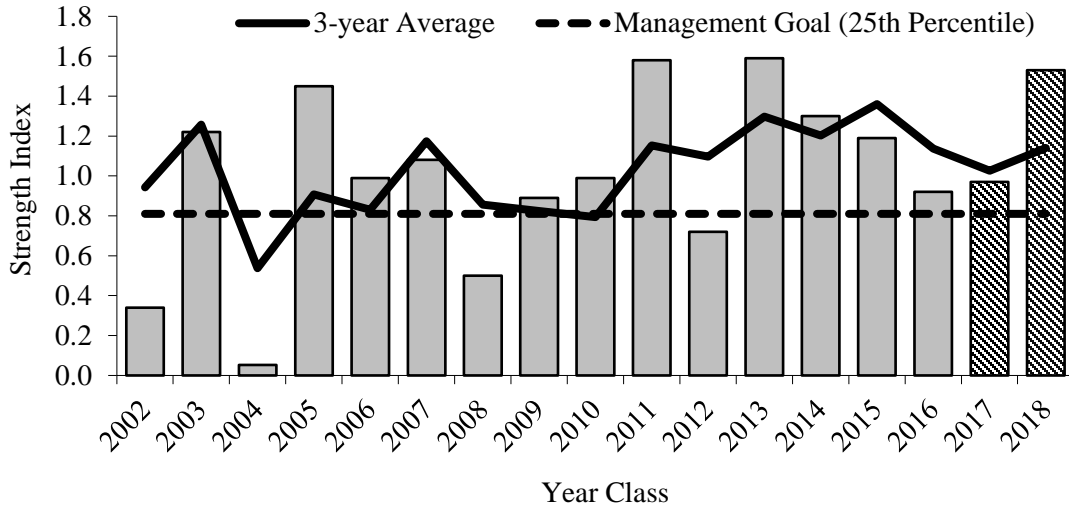


Figure 2. Year class strength of Walleye in Lake of the Woods from 2002-2018. Fishes hatched in 2017 and 2018 and not considered fully vulnerable to gill nets; therefore strength values are predicted.

Small Walleye, from 6 to 8 inches long, are abundant and represents the most recent year classes. Harvestable-sized Walleye are also abundant, with individuals from 14 to 18 inches being well represented and likely from 2011-2014 year classes (Figure 3).

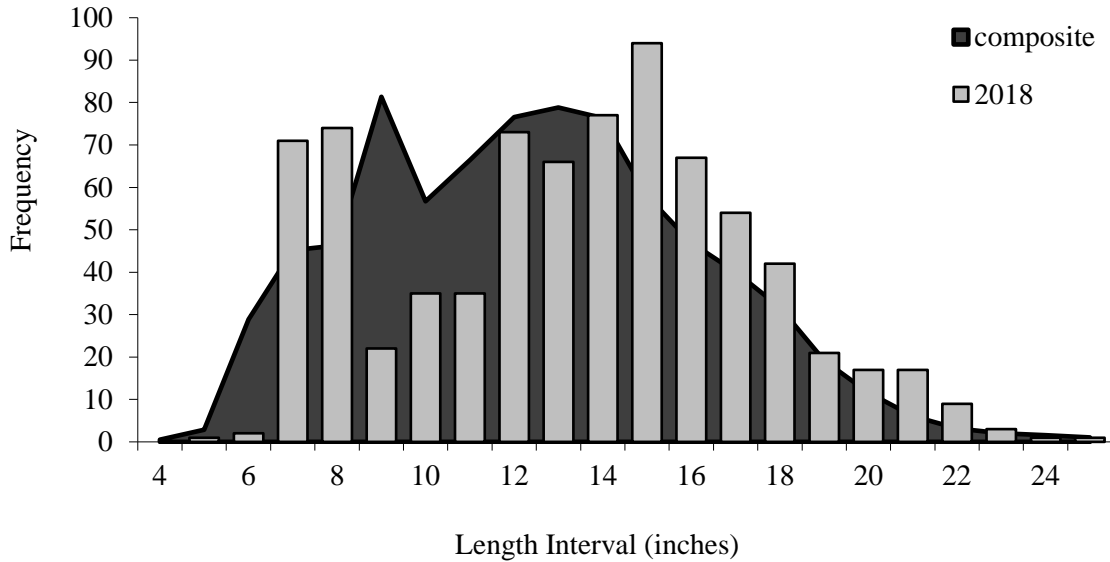


Figure 3. Walleye size distribution from 2018 fall gill net survey (gray bars). Shaded area denotes the average length frequency from 1981-2017.

Sauger

Since 2002, highest Sauger abundance measured in the fall gill net assessment was in 2008, when we caught 30.8 Sauger per lift (Figure 4). High abundance was driven by young Sauger from strong year classes produced from 2005 through 2007 (Figure 5). In recent years, strong year classes were produced in 2011 and 2015 (in addition 2014 and 2016 were near the strong threshold). Recent year classes produced are predicted to be of average (2017) to weak (2018).

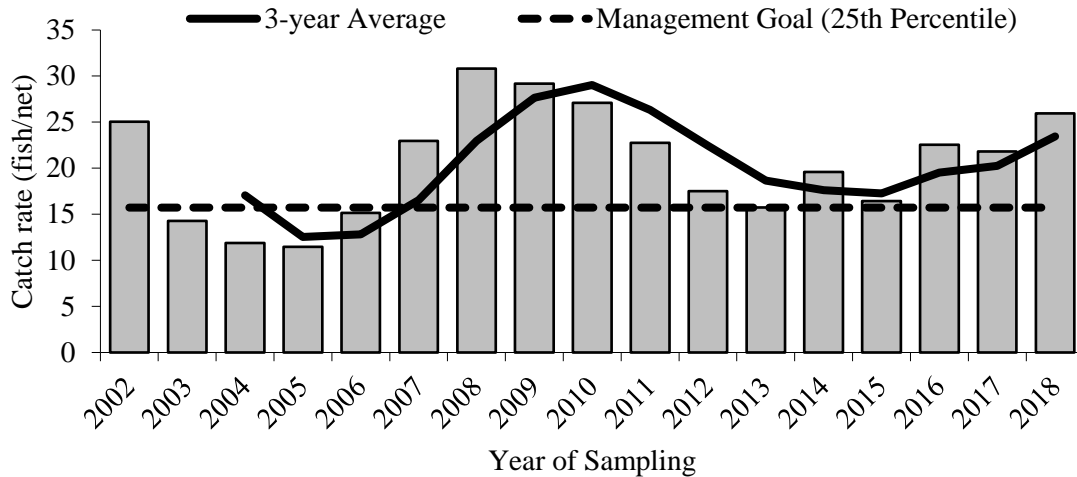


Figure 4. Average of near shore and off shore catch per unit effort of Sauger in September gill nets, 2002 through 2018.

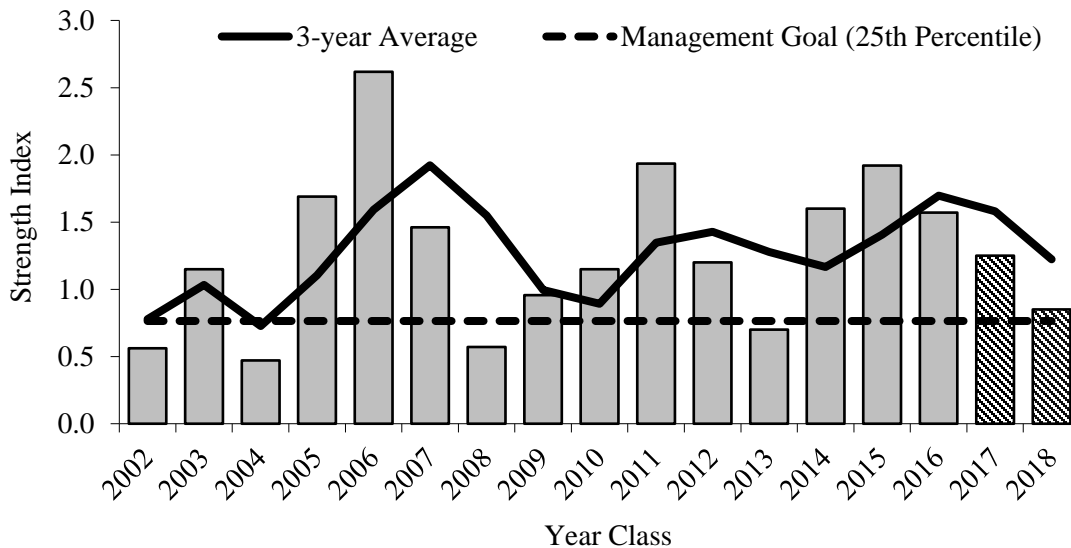


Figure 5. Year class strength of Sauger in Lake of the Woods from 2002-2018. Fishes hatched in 2017 and 2018 and not considered fully vulnerable to gill nets; therefore strength values are predicted.

Small Sauger from 8 to 9 inches long were common (Figure 6). These small Sauger predict a good future for the Sauger population. Of interest to anglers is that Sauger from 11 to 16 inches were relatively abundant, and individuals over 19 inches long were sampled.

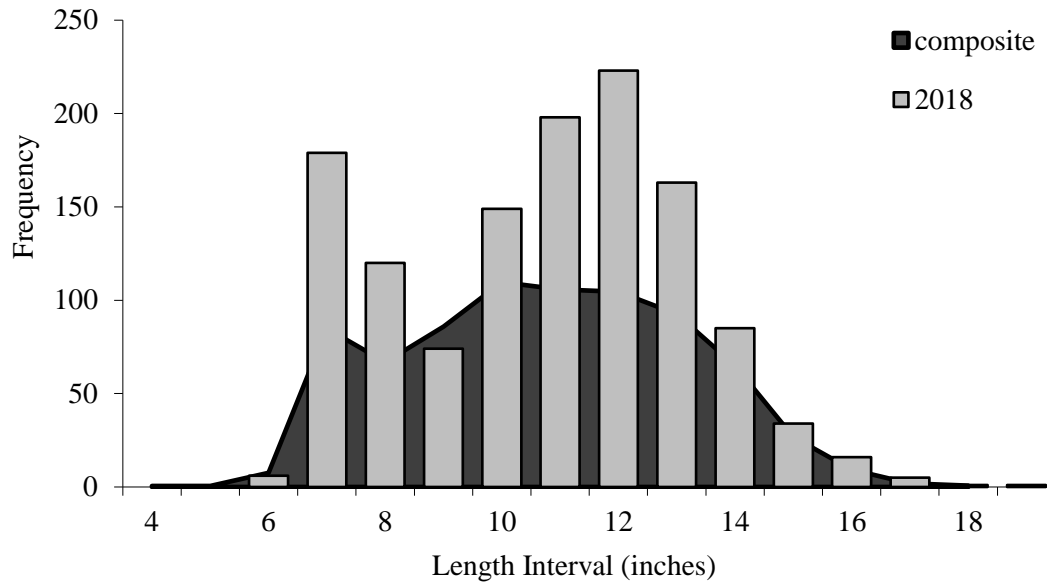


Figure 6. Sauger size distribution from 2018 fall gill net survey (gray bars). Shaded area denotes the average length frequency from 1984-2017.

Creel Survey Highlights

- Summer 2018: Fishing pressure was an estimated 645,000 angler-hours and is approximately 100,000 angler-hours below the 2012-2018 average. Walleye (220,000 pounds) and Sauger (67,000 pounds) harvest were below the 2012-2018 average. Since 2012, average summer harvest for Walleye is 277,000 pounds and 81,000 pounds for Sauger.
- Winter 2017-2018: Fishing pressure and Walleye/Sauger harvest was near the 2012-2018 average. Over the winter 1.94 million angler-hours were estimated, approximately 100,000 angler-hours above average. The 2012-2018 average winter Walleye harvest is 243,000 pounds and 314,000 pounds for Sauger. Last winter Walleye harvest was 257,000 pounds, while the Sauger harvest was 279,000 pounds.

Additional information of sampling programs conducted on Lake of the Woods are located on the Baudette Area Fisheries web page, on the MN-DNR web site, at <https://www.dnr.state.mn.us/areas/fisheries/audette/index.html>