

MN DNR Fisheries Management Actions and Surveys on Leech Lake: 2017

Young-of-Year Walleye Growth and Abundance

- July Seining: The average length (2.7 in) was below the long-term average of 3.3 inches and the number sampled per acre (74) was above the long-term average of 70.
- August Trawling: The average length (4.4 in) was below the long-term average of 5.3 inches and the number sampled per hour (773), a historical high, was above the long-term average of 182.
- September Electrofishing: The average length (5.8 in) was below the long-term average of 6.0 inches. Walleye recruitment is generally higher when mean September length exceeds 6.0 inches. The number sampled per hour (132) was similar to the long-term average of 103.

Walleye Recruitment

- Year class strength index values are determined from gill net catch of ages 1-3 and predicted for age-0 from gill net and trawl catch data (Figure 1). Incomplete values for 2015 (1.23) and 2016 (1.63) cohorts exceed the management plan objective threshold (0.66) as does the 2017 predicted year class (2.06).

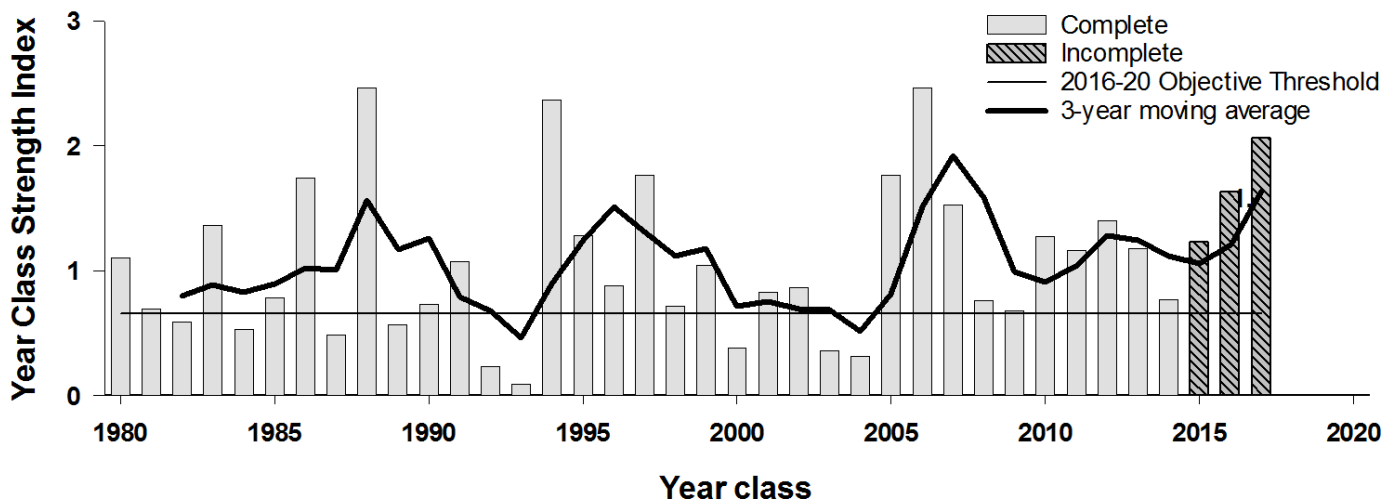


Figure 1. Year class strength index of Walleye in Leech Lake, 1980-2017. Year class fully recruited to the fishery and incomplete years included. The horizontal line represents the 2016-20 proposed management plan threshold based on the 25th quartile.

Adult Gamefish Abundance

Walleye gill net catch rate of 10.1 fish/net is up from the previous year and just above the management objectives (Figure 2). Lengths of Walleye sampled ranged from 6 to 27 inches, and demonstrated a balanced size distribution with a strong 2016 year class in the lake. Seventy-eight percent of the sampled Walleye were outside of the 20-26" Protected Slot Limit and available for harvest (Figure 3).

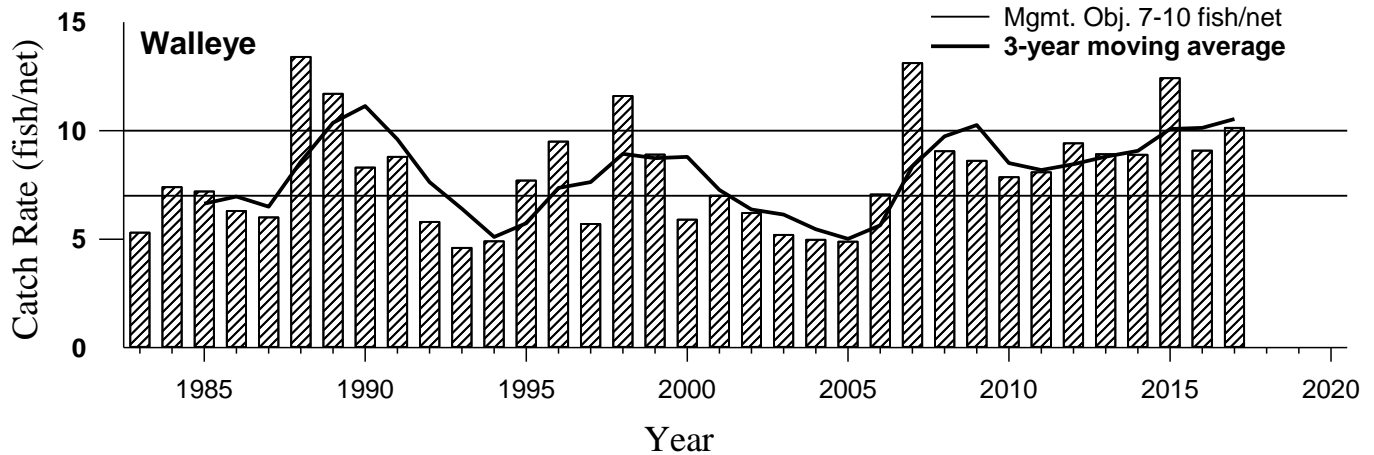


Figure 2. Gill net catch rates (fish/net) of Walleye in Leech Lake, 1983-2017. Horizontal lines represent the 2016-2020 Management Plan Objective Range. The darker line represents the 3-year moving average.

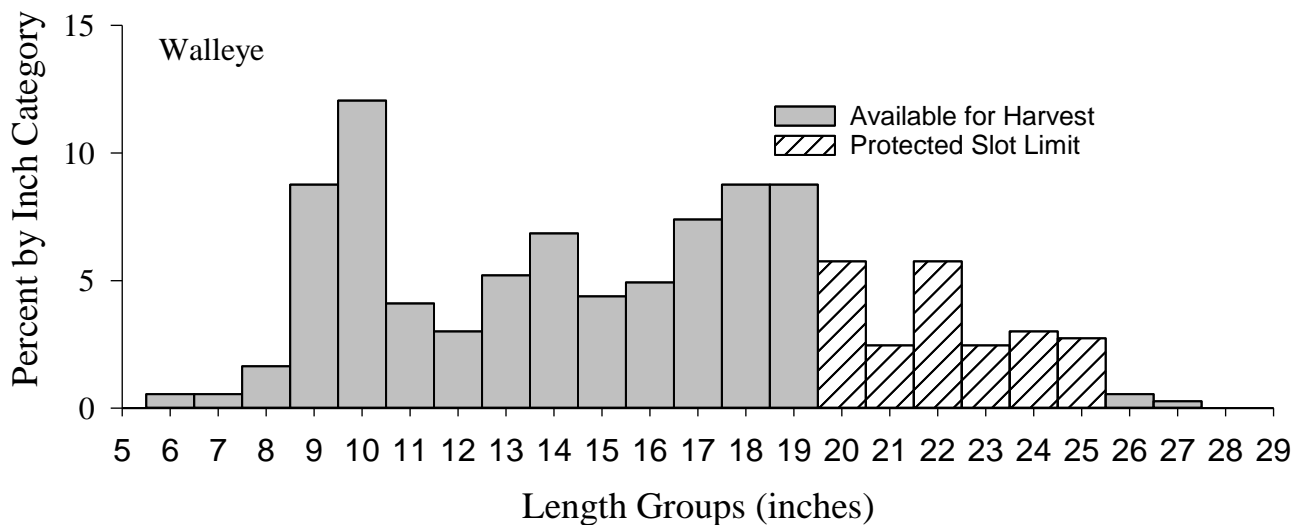
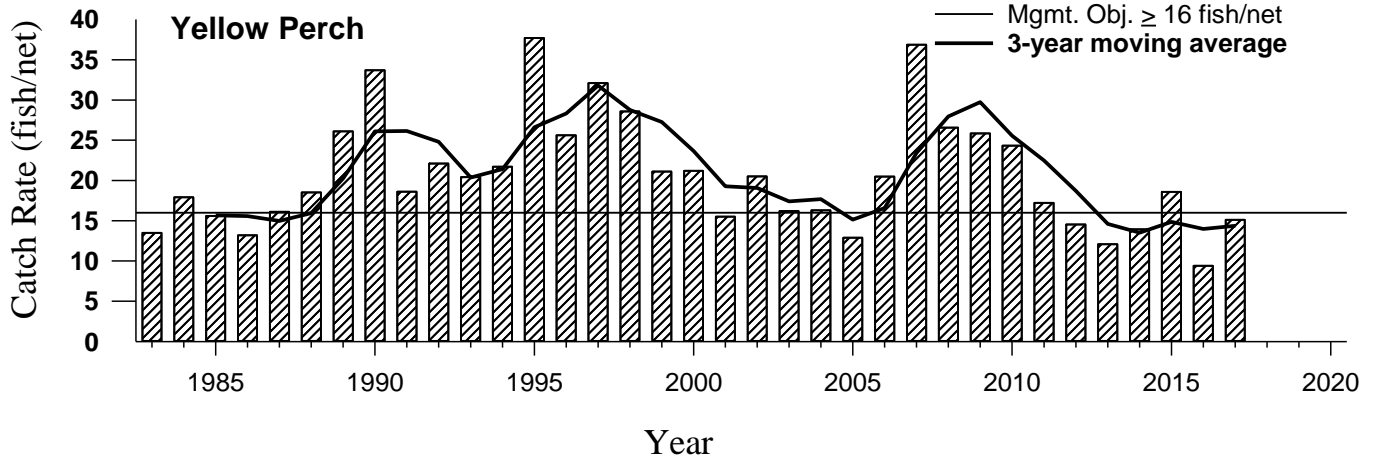
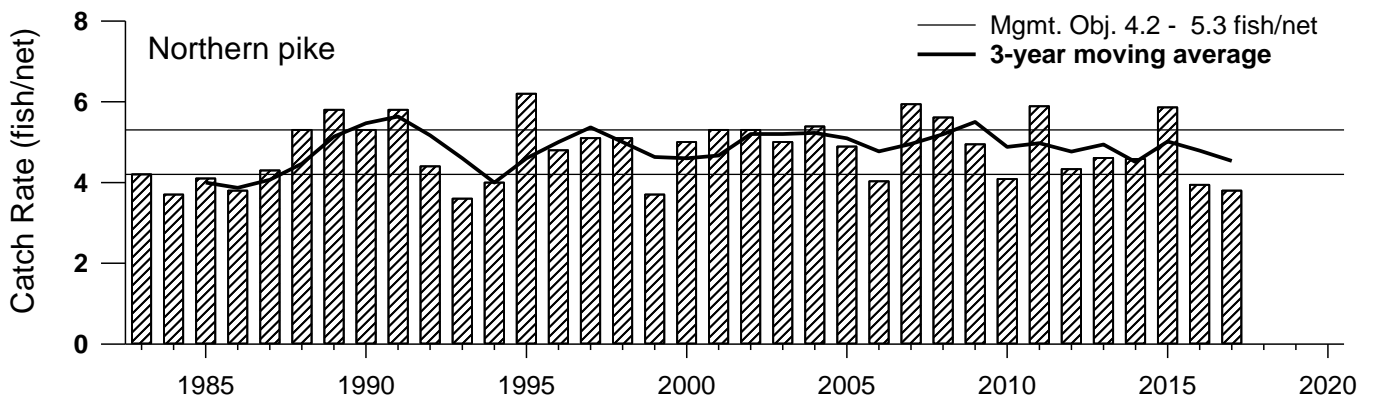


Figure 3. Length-frequency distribution of Walleye sampled with gillnets in Leech Lake, 2017.

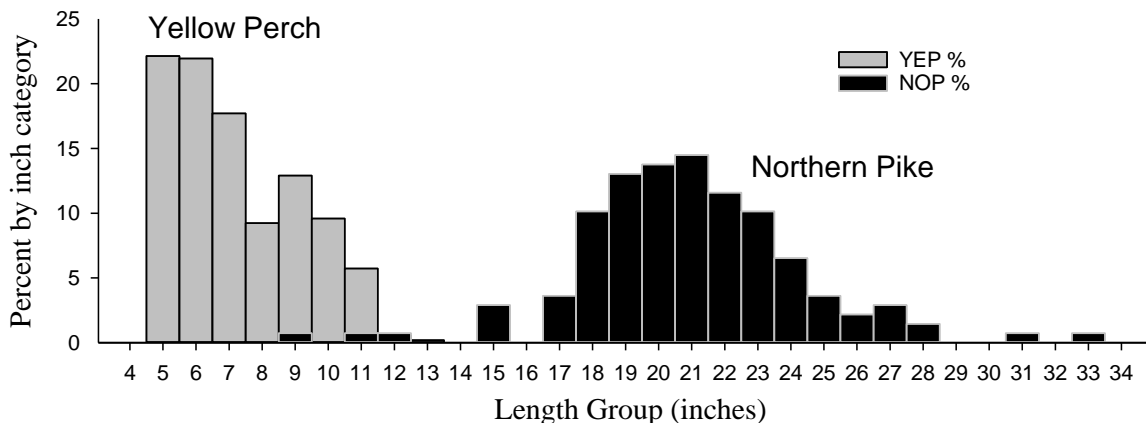
- **Yellow Perch** abundance (15.1 fish/net) remains below the management plan objective of at least 16 perch per net but showed an increase from 2016. Perch up to 13" long were sampled.



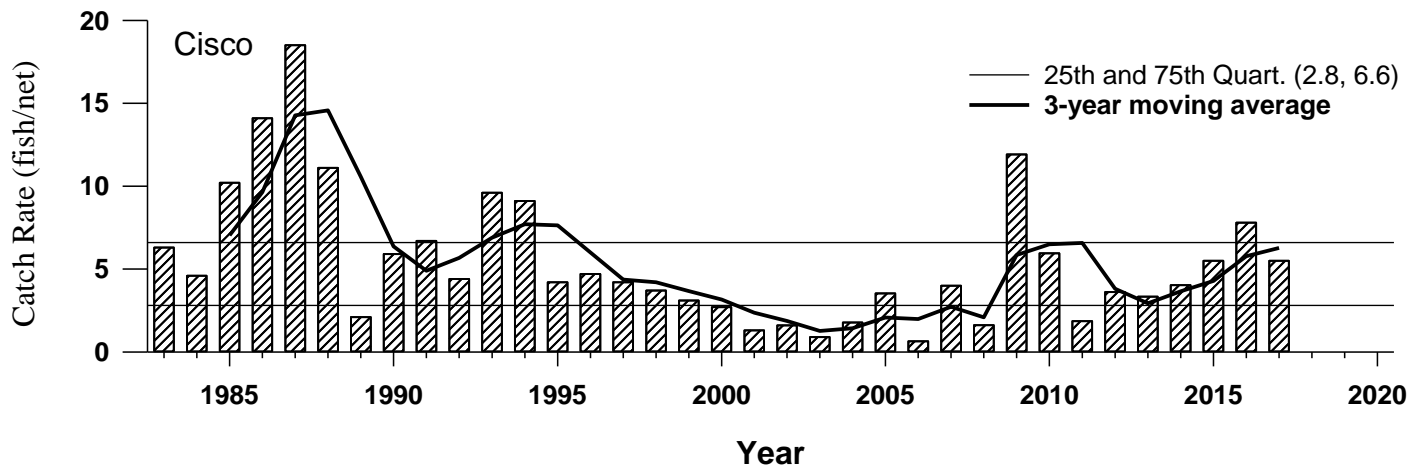
- **Northern Pike** catch rate (3.8 fish/net) was below average (4.8 fish/net), pike up to 33 inches were sampled.



- **Yellow Perch and Northern Pike** length frequency distribution with the percent of fish captured in each one inch length group. Total number of Yellow Perch captured was 543 and total number of Northern Pike captured was 138.



- **Cisco (Tullibee)** catch rate (5.5 fish/net) was just above the long term average of 5.4 fish/net, this should continue to provide predation relief to the Yellow Perch population.



Zooplankton

- In 2016, Zebra mussel veligers (larval stage) were found in two separate zooplankton samples on two different sampling days. No veligers were found in 2017 samples. In early October 2017 a boat that had been moored in Walker Bay during the summer of 2017 and 2016 was found with juvenile zebra mussels.
- Lakeshore owners are asked to inspect their docks and lifts for adult zebra mussels when removed during fall and to contact the Walker Area Fisheries office if they suspect they have found one.

Creel Survey

- The winter 2016-17 and summer 2017 creel surveys were postponed due to budget issues.
- Winter: 2015-16 fishing pressure was slightly lower than the 2014-15 winter season (647,802 angler-hours) at 568,340 angler-hours due to ice conditions. Harvest of primary species was similarly reduced.
- Summer: 2016 fishing pressure was approximately 700,000 angler-hours and is similar to the two previous creel surveys (2011, 2014).
- The next anticipated creel survey is scheduled for the summer of 2020 and winter of 2020-2021.

Please refer questions or comments to:

Carl Pedersen, Large Lake Specialist, Walker Area Fisheries, Carl.Pedersen@state.mn.us (218) 547-1683
 Doug Schultz, Area Supervisor, Walker Area Fisheries, Doug.W.Schultz@state.mn.us (218) 547-1683

