



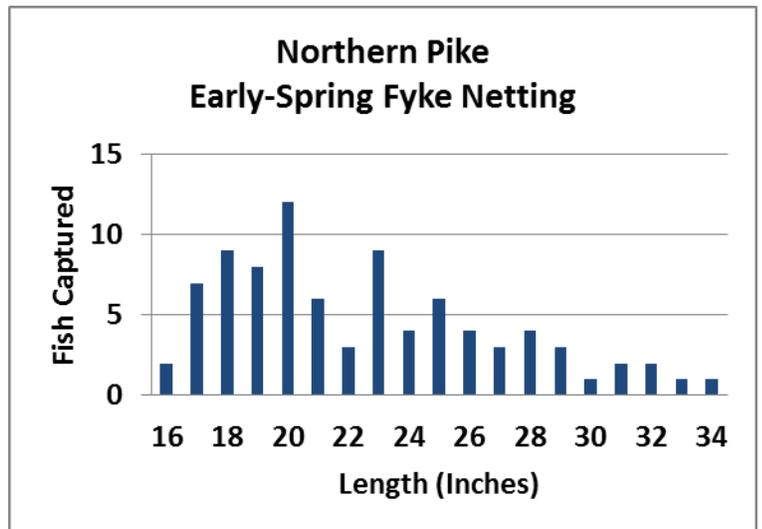
Summary of Fishery Surveys Caroline Lake, Ashland County, 2012

The Mercer DNR Fisheries Management Team conducted the following fishery surveys on Caroline Lake in 2012: an early-spring fyke netting survey (March 21-24) to assess the adult northern pike population, and a late-spring electrofishing survey (May 29) to assess the largemouth bass population and panfish community. Quality, preferred, and memorable sizes referenced in this summary are based on standard proportions of world record lengths developed for each species by the American Fisheries Society.

Northern Pike



Captured 8 per net-night $\geq 14''$	
Quality Size $\geq 21''$	56%
Preferred Size $\geq 28''$	16%
Memorable Size $\geq 34''$	1%

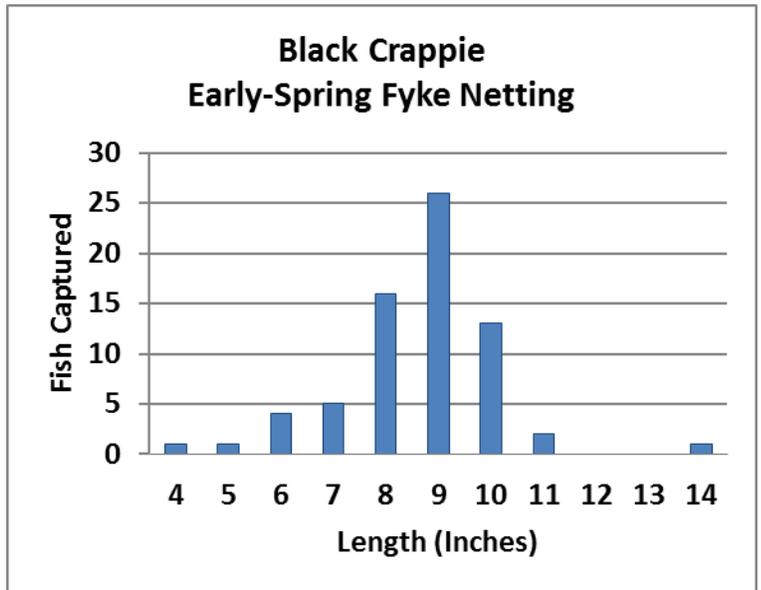


Northern pike ≥ 14 inches were captured at a moderate rate of 8 per net-night during the early-spring fyke netting survey. The size structure of the population sample was good, with all size classes represented. These survey statistics are indicative of a healthy pike population—one that appears to be at a near optimal density with respect to available resources (i.e., forage and habitat). Although age analyses need to be performed in order to validate the following assumption, growth rate of pike in Caroline is probably satisfactory or better, and sufficient to allow survival of fish to preferred size.

Black Crappie



Captured 6 per net-night $\geq 5''$	
Quality Size $\geq 8''$	85%
Preferred Size $\geq 10''$	24%

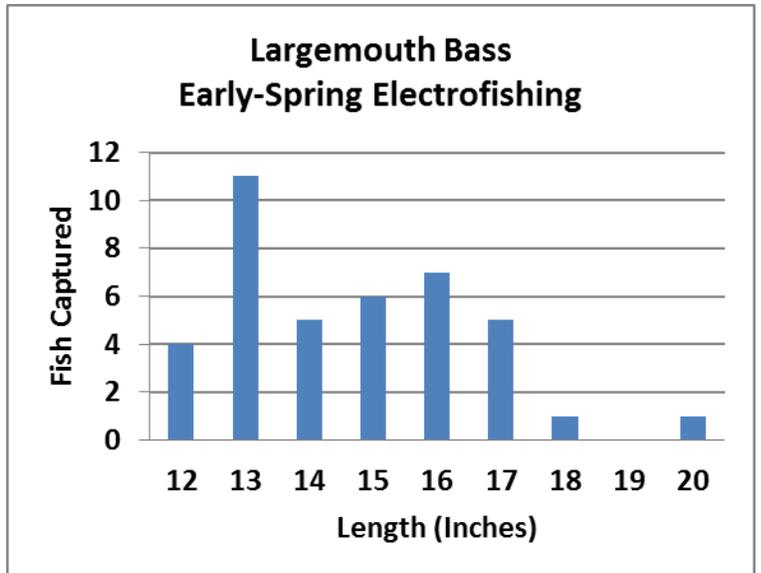


Black crappies ≥ 5 inches were captured at a moderate rate of 6 per net-night during the early-spring fyke netting survey. Size structure of this adult population sample is considered good, with a respectable proportion of the mature fish sampled being of a preferred size to anglers.

Largemouth Bass



Captured 18 per mile $\geq 8''$	
Quality Size $\geq 12''$	100%
Preferred Size $\geq 15''$	50%

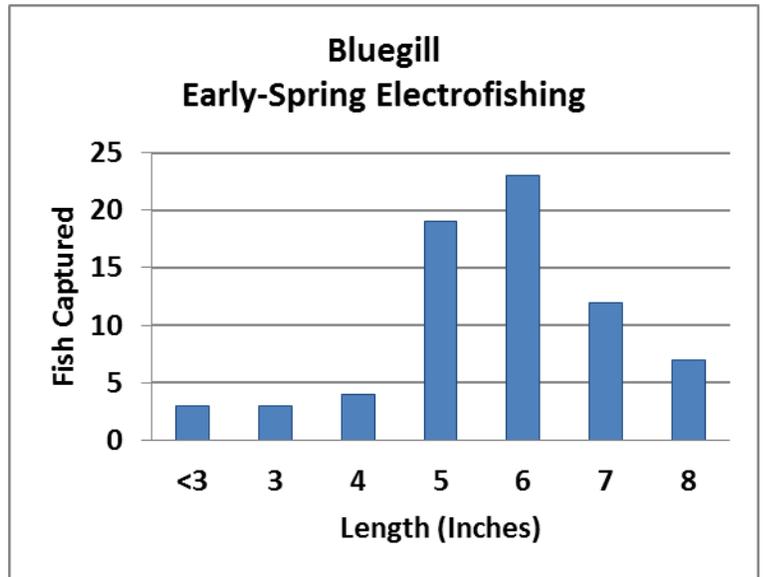


Largemouth bass ≥ 8 inches were captured at a moderate rate of 18 per mile during the late-spring electrofishing survey. The size structure of the population is considered very good, with 50% of the fish sampled being 15 inches or longer. No smallmouth bass were captured or seen during either survey.

Bluegill



Captured 68 per mile $\geq 3''$	
Quality Size $\geq 6''$	62%
Preferred Size $\geq 8''$	10%

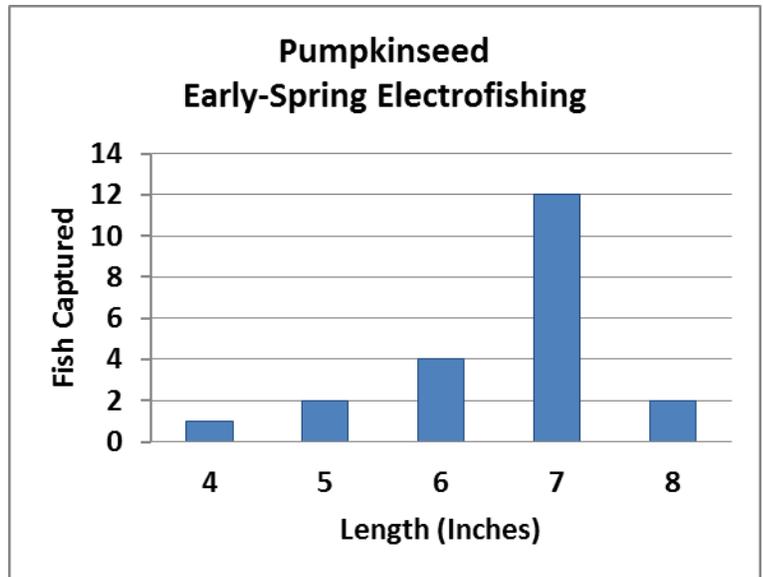


Bluegill ≥ 3 inches were captured at a moderate rate of 68 per mile during the late-spring electrofishing survey. The size structure of the population was good, with a moderate to high proportion of fish being of an acceptable size to anglers.

Pumpkinseed



Captured 21 per mile $\geq 3''$	
Quality Size $\geq 6''$	86%
Preferred Size $\geq 8''$	10%



Pumpkinseed ≥ 3 inches were captured at a moderate rate of 21 per mile during the late-spring electrofishing survey. As with bluegill, the size structure of the population was good, with the majority of fish being of an acceptable size to anglers.

Conclusions

The Caroline Lake fish community currently exhibits characteristics of a very healthy fishery—one in which apex predator populations (e.g., northern pike and largemouth bass) are in balance with potential prey (e.g., bluegill and pumpkinseed) populations. As a result, moderate abundance levels and good size structures are evident amongst the dominant fish species present in the fishery. Anglers interested in harvesting fish in Caroline Lake are encouraged to practice selective harvest strategies (i.e., releasing some larger fish and instead keeping some medium-sized fish) to sustain the quality fishery present.

Other species captured during these surveys, but not reported here due to low abundance and/or sampling bias, included yellow perch and white sucker.

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