



WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Fishery Survey Summary

Bass Lake near Bruce

Rusk County, Wisconsin, 2023

Introduction

The Wisconsin Department of Natural Resources' (DNR) Fisheries Management Team from Park Falls completed a late-spring electrofishing survey in 2023 to assess the abundance and size structure of largemouth bass and panfish in addition to obtaining information on the fish 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. "Keeper size" is the team's description for yellow perch 9 inches or longer and pumpkinseed at least 7 inches long, based on observed angler behavior.

HABITAT AND PUBLIC ACCESS CHARACTERISTICS

Bass Lake is a 36-acre seepage lake located 6 miles northeast of Bruce, WI. A public boat landing can be found on Bass Lake Road in the southwest corner of Bass Lake. An intermittent stream drains from Bass Lake to the Thornapple River. Bass Lake has low water clarity (historical Secchi depth readings of 4 feet), low conductivity and basic chemistry (pH of 8.8). There is a history of low dissolved oxygen concentrations during winter. Riparian habitat is mainly tamarack and spruce bogs with small areas of mixed hardwood. The bottom substrate is 70% muck, 15% sand and 15% gravel. Littoral habitat is mostly emergent or floating vegetation (white water lilies and bullhead pond lilies).

SURVEY EFFORT

On May 23, 2023, we sampled the whole shoreline by electrofishing at night. Standard volts and amperes were achieved to properly stun the fish. We collected all fish species along 0.82 miles of shoreline in 0.45 hours. The water temperature was about 71°F.

Results and Discussion

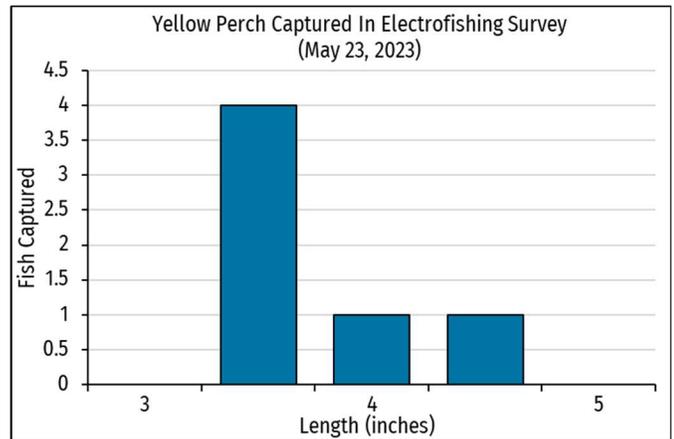
FISH COMMUNITY

Although this survey is not designed to characterize the whole fish community, information on the fish community can still be gained. In total, we sampled six species, including black bullhead, golden shiner, northern pike, pumpkinseed, white sucker and yellow perch. Although there were healthy populations of black crappie, largemouth bass and bluegill sampled in our 2012 late-spring electrofishing survey, we did not capture any of these species in our 2023 survey. It is highly likely that Bass Lake suffered a recent severe winter kill. Historically, Bass Lake has struggled with

low oxygen and winter kills. While black crappie, largemouth bass and bluegill were not detected in our survey, one northern pike was captured, demonstrating their ability to survive in low-oxygen environments.

YELLOW PERCH

Our late-spring electrofishing survey captured six yellow perch or 7.3 per mile. Yellow perch ranged from 3.5 to 4.9 inches. No fish captured reached quality size (≥ 8 inches). Larger fish require more oxygen, resulting in only small yellow perch surviving the probable winter kill.



SUNFISHES

Although our late-spring electrofishing survey captured no largemouth bass or bluegills, we captured three pumpkinseeds ranging from 4.3 to 4.6 inches at a catch rate of 3.7 fish ≥ 3 inches per mile. Bass Lake's fish community was dominated by largemouth bass and bluegills. In our 2012 late spring electrofishing survey, the catch rate of largemouth bass was 36 fish ≥ 8 inches per mile, and the catch rate of bluegills was 120 fish ≥ 3 inches per mile. With time, Bass Lake should return to a largemouth bass and bluegill lake as there are likely survivors that we did not detect in our survey.

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