

2023 Walleye Population Assessment - Trout (Carp) Lake

In April, Bay Mills Indian Community performed a walleye population estimate on Trout Lake, also known as Carp Lake, in Chippewa County. This estimate was completed as part of the requirements in the 2007 Inland Consent Decree for regularly updated population estimates on walleye lake systems listed in Table 1 of the Decree. An empirical estimate of the walleye population in Trout Lake had never been completed prior to this survey.

The marking phase of the estimate occurred on April 21-24 and followed the 1836 Ceded Territory Walleye Population Estimate Protocol written by the Inland Fisheries Committee. Trap nets were set as soon after ice-out on Trout Lake as weather would allow. During the marking phase, 196 walleye were captured (183 unique individuals). Captured walleye ranged in length from 12.4-24.4 inches (315-620 mm) with 72% of walleye measuring between 15 and 19 inches (381-482 mm). All walleye over 15 inches (380 mm) were marked by removing the first 2-3 dorsal spines. In addition to walleye, over 300 white sucker, 58 pumpkinseed, and 36 northern pike were captured during the marking phase. Other species captured with ten or fewer individuals included rock bass, yellow perch, bluegill, brown bullhead, and largemouth bass.

The recapture phase occurred on the night of April 26 (over 24 hours after the last net was removed). During the recapture phase, the entire shoreline of the lake was sampled using the BMIC electrofishing boat (3 hours, 40 minutes total sample time). A total of 110 walleye were captured, including 26 previously marked fish (recaptures). Other species observed during the recapture phase include smallmouth bass, northern pike, white sucker, and yellow perch.

The population estimate was calculated using the Lincoln-Peterson method with the Chapman modification, as required by the 1836 Protocol. To account for the underrepresentation of female walleye that is common in spring walleye estimates, a correction factor was applied to this estimate. **The calculated estimate of adult walleye in Trout Lake is 840 (CV: 16.4%, Density = 1.5 fish/acre). This density of walleye is slightly above average for most Upper Peninsula walleye lakes.**

Age data can be used to determine the growth rate of walleye in Trout Lake and be compared with statewide or regional growth rates. Age will be determined from dorsal spines collected from walleye during this assessment. This information will be processed and made available at a later date.

Walleye appear to be using the spawning reef at the north end of the lake, based on much higher catch rates in nets surrounding this area. During the recapture phase, we also found many walleye near residential breakwalls (rock substrate) which were submerged due to high water levels. The prevalence of lymphocystis and other external wounding or deformities was low for all captured walleye. Overall, the adult walleye population in Trout Lake is healthy and at densities slightly above most lakes in the UP.