

## Intermediate Lake 2023 Water Quality

Our association has an ongoing program of assessing our lake's water quality, in partnership with the Tip of the Mitt Watershed Council. ILA volunteers collect data and water samples following procedures outlined in the Watershed Council's Volunteer Lake Monitoring Quality Assurance Project Plan. Sampling is done in the big part of the lake where it is 80 feet deep. Here are some of the results for 2023. More will be reported as the data comes in.

Water transparency is measured by lowering a black and white Secchi disk into the water and recording the depth at which it is no longer visible. Figure 1 shows how water clarity decreases during the summer months as summer boating activity increases and the lake is churned up. Figure 2 indicates that this year's results are typical when compared to results from 1995 through 2021.

Figure 3 displays lake water temperature with depth. While the temperature of the water at the surface gradually increases during the summer months (anybody who swims in the lake knows that!), the water temperature in the deepest parts of the lake – at 55 feet and deeper – stays pretty constant at about 45°F.

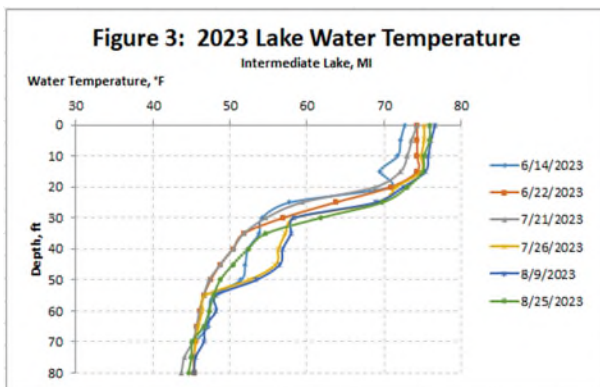
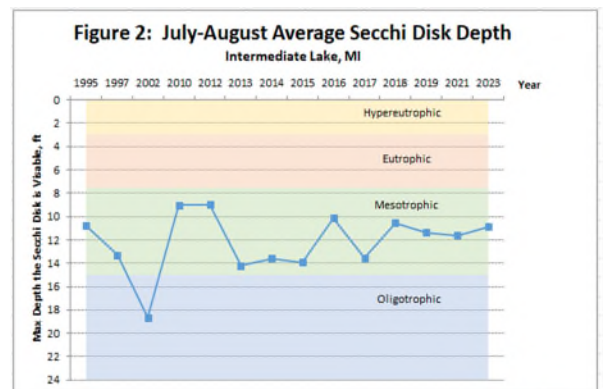
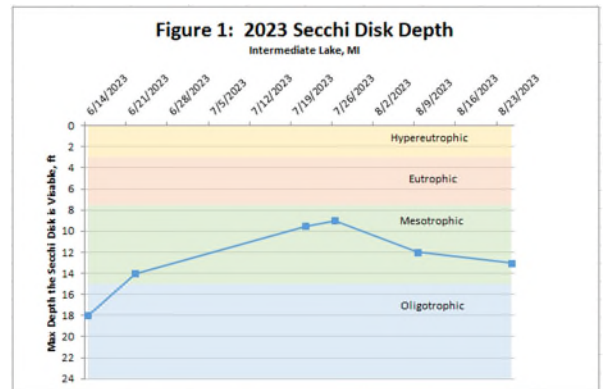


Figure 4 reports dissolved oxygen content in the water with depth. Dissolved oxygen steadily decreased as the summer progressed, which is normal as warmer water holds less oxygen than cold water. Warm water fish like 5 mg/L of dissolved oxygen or more (like bass) while cold water fish like 7 mg/L or more (walleye is a cool water species, trout is cold water). Low dissolved oxygen levels can stress fish.

We thank ILA Director Matt Gabris and his volunteer team for handling our water quality program in 2023. For 2024, ILA members Christina and Greg Bellopatrick will be coordinating our water quality effort. Please consider lending a hand to help us continue obtaining this important and interesting information! Volunteer now to help in the 2024 program.

