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These secci disk readings are July/August averages.

**Upper Turtle Lake - Deep Hole** was sampled **12** different days during the 2020 season. Parameters sampled included water clarity, temperature, total phosphorus, and chlorophyll.

The average summer (July-Aug) secchi disk reading for Upper Turtle Lake - Deep Hole (Barron County, WBIC: 2079800) was 2.5 feet. The average for the Northwest Georegion was 8.6 feet. Typically the summer (July-Aug) water was reported as **MURKY** and **GREEN**. This suggests that the secchi depth may be mostly impacted by algae. Algal blooms are generally considered to decrease the aesthetic appeal of a lake because people prefer clearer water to swim in and look at. Algae are always present in a balanced lake ecosystem. They are the photosynthetic basis of the food web. Algae are eaten by zooplankton, which are in turn eaten by fish. You will know algae are causing reduced Secchi depth if the water generally appears green when you assess the color against the white background of the secchi disc.

Chemistry data was collected on Upper Turtle Lake - Deep Hole. The average summer Chlorophyll was 52.3 µg/l (compared to a Northwest Georegion summer average of 15.5 µg/l). The summer Total Phosphorus average was 56.2 µg/l. Lakes that have more than 20 µg/l and impoundments that have more than 30 µg/l of total phosphorus may experience noticable algae blooms.

The overall Trophic State Index (based on chlorophyll) for Upper Turtle Lake - Deep Hole was 65. The TSI suggests that Upper Turtle Lake - Deep Hole was **eutrophic**. This TSI usually suggests blue-green algae become dominant and algal scums are possible, extensive plant overgrowth problems possible.

If we want to minimize algal blooms in our lakes and streams, we need to do some work that isn’t in our waters—it’s on our land. Human activities on land deliver the nutrients phosphorus and nitrogen to lakes and rivers and thus are the primary drivers of algal blooms. Invasive species and climate change can also play a role in their expansion.

Landowners and interested citizens can help minimize the problems associated with algal blooms by working together with conservation partners in their watershed to reduce the amount of nutrients that reach nearby lakes, streams, and ponds. You can help reduce nutrient concentrations by promoting the following practices in your community:

* Use lawn fertilizers only where truly needed
* Prevent yard debris (*e.g.*, leaves, grass clippings, etc.) from washing into storm drains
* Support local ordinances that require silt curtains for residential and commercial construction sites
* Plant and maintain vegetative buffer strips along shorelines of lakes, ponds, and streams. Keep in mind that native plants are much more effective at filtering runoff than the grass species typically found on residential lawns.