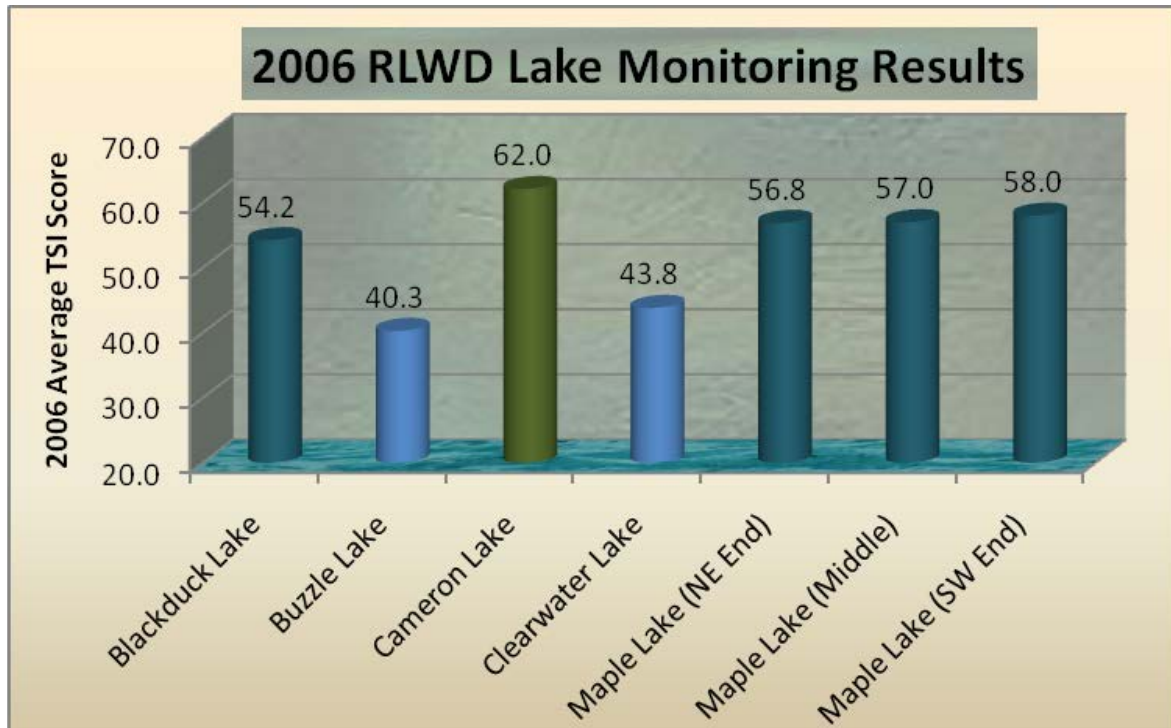


Red Lake Watershed District Maple Lake Monitoring

The RLWD collects total phosphorus, chlorophyll-a, and Secchi disk transparency data in order to calculate a Trophic State Index (TSI) value for each sampling site visit. A higher TSI value means a higher concentration of nutrients, lower transparency, and a higher probability of nuisance algae blooms. Desirable TSI values for a good balance of productivity and water quality (fishing and swimming) range from 40 to 50. Lakes in this range are referred to as mesotrophic. Lakes with excess phosphorus and poor transparency are considered eutrophic (50 – 70) or even hyper-eutrophic (>70).



For three years, 2004 through 2006, monthly samples were collected from the inlet(s), outlet of the lake, and from within the lake itself. The RLWD continues to monitor the main inlet and outlet of the lake for its long-term stream water quality monitoring program (1984-Present). In-lake monitoring will be resumed when time and resources allow for it. There also are opportunities for volunteer monitoring by lake residents and/or others that make use of the lake.

- Decreases in water quality seem to correspond with increases in lake use.
- Powerful outboard motors can disturb sediment in shallow lakes like Maple Lake and increase the amount of phosphorus available for algae growth.
- Spawning carp are having a negative impact upon water quality at the inlet of the lake.
- 2007 volunteer Secchi disk transparency monitoring shows that, over four measurements from May through October, the lake had an average TSI of 58.8, and increase from 2006.