

## HUGHES LAKE

	Transparency (metres)	Phosphorus (micrograms/litre)	Chlorophyll (micrograms/litre)	Dissolved Organic Carbon (milligrams/litre)
2010	5.0	3.5	1.9	2.9
2011	4.7	3.5	2.1	3.1
2012	5.2	2.2	1.4	3.2
2013	6.7			
2014	3.4			
2015	4.8			
2016	4.9			
2017	3.7			
2018	4.6			
2019	4.7	4.4	1.4	4.0
2020	4.9	4.4	1.3	2.7
2021	4.7	6.0	1.1	3.0

### Brief Summary of 2021 Results:

- Transparency of 4.7 metres characterizes clear water (oligo-mesotrophic state);
- Phosphorus level indicates that the lake is slightly enriched by phosphorus (oligotrophic);
- Chlorophyll level shows a low biomass of microscopic algae in suspension (oligotrophic);
- Dissolved organic carbon level indicates that the water is slightly coloured (from organic deposits) but this colour would likely have little effect on the transparency of the water;
- Overall, Hughes Lake is placed in the **oligotrophic** state with little or no signs of eutrophication. This is the second best out of the seven classifications of trophic levels.

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The Government of Quebec uses a scale of 7 different classes along a spectrum from "ultra-oligotrophic", which indicates a lake of exceptional quality, to "hyper-eutrophic", which indicates a lake in serious trouble.

### Seven Classifications of Trophic Level of Lakes:

- 1 = Ultra-oligotrophic (exceptionally good state)
- 2 = Oligotrophic
- 3 = Oligo-mesotrophic
- 4 = Mesotrophic
- 5 = Meso-eutrophic
- 6 = Eutrophic
- 7 = Hypereutrophic (extremely poor state)