

ULTRA-OLIGOTROPHIC

OLIGOTROPHIC

OLIGO-MESOTROPHIC

MESOTROPHIC

MESO-EUTROPHIC

EUTROPHIC

GORE & MILLE-ISLES LAKES – RSVL WATER QUALITY MONITORING RESULTS 2021**LACS DE GORE ET DE MILLE-ISLES – RÉSULTATS DE LA SURVEILLANCE DE LA QUALITÉ DE L'EAU RSVL 2021**

LAKE	RSVL #	DEEPEST SPOT SAMPLING STATION	Phosphorus Total trace (µg/l)	Chlorophyll <i>a</i> (µg/l)	Dissolved Organic Carbon (mg/l)	Transparency (meters) No. measurements	COMBINED RESULTS TROPIC LEVEL OF THE LAKE	Résultats
HUGHES	#571	26,6m	6,4	2,4	4,7 (colored)	(10) 4,6m	OLIGOTROPHIC	<i>Little or no signs of eutrophication-Peu ou pas de signes d'eutrophisation</i>
BARRON	#188 A	33,8m	5,8	2,7	4 (colored)	(7) 5,1m	OLIGO-MESOTROPHIC	<i>Some signs of eutrophication</i>
	#188 B		5,1	3,1	5 (colored)	(7) 5m	OLIGO-MESOTROPHIC	<i>Some signs of eutrophication</i>
	#188 C		6,2	3	4,3 (colored)	(7) 4,7m	OLIGO-MESOTROPHIC	<i>Some signs of eutrophication</i>
SOLAR	#784	6,0m	11	2,3	4,1 (colored)	(5) 4,3m	OLIGO-MESOTROPHIC	<i>Some signs of eutrophication</i>
CAROLINE	#786	5,5m	7,5	2,1	4,5 (colored)	(3) 4m	OLIGO-MESOTROPHIC	<i>Some signs of eutrophication</i>
EVANS	#785	4,1m	14	8,7	4,7 (colored)	(3) 2,2m	MESO-EUTROPHIC	<i>Advanced intermediate stage of eutrophication</i>
RAY	#672	4,0m	17	5,8	5,9 (colored)	(8) 2m	MESOTROPHIC	<i>Intermediate stage of eutrophication</i>
CHEVREUIL	#395	3,8 m	-	-	-	(12) 2,2m	-	
CLARK	#397	-----	-	-	-	-	-	
KENNEY	#557	10,4m	-	-	-	(7) 5m	-	
ECHO	#556	14,4m	-	-	-	-	-	
FREDERIC	#863	-----	17	14	8 (highly colored)	No measurements	MESO-EUTROPHIC	<i>Advanced intermediate stage of eutrophication</i>
CLAIR	#146	24,6m	4,1	0,95	3,9 (slightly colored)	(10) 6,1m	OLIGOTROPHIC	<i>Little or no signs of eutrophication</i>
SIR-JOHN	#273	21,0m	-	-	-	-	-	
DAINAVA	#514	2,3m	14	3	4,7 (colored)	(7) 1,6m	OLIGO-MESOTROPHIC	<i>Some signs of eutrophication</i>
BECS-SCIE	#620	16,6m	-	-	-	(10) 5,9m	-	
PAUL	#61	4,4m	12	3,6	4,2 (colored)	(6) 3m	MESOTROPHIC	<i>Intermediate stage of eutrophication</i>

WATER QUALITY MONITORING - LAKE HUGHES RSVL RESULTS 2010-2021

▶ RSVL PHOSPHORUS TEST RESULTS BEFORE 2018 ARE UNDER REVISION

LAKE HUGHES SAMPLING STATION: RSVL #571: at the deepest area of the lake (26,6 m)

	Phosphorus Total trace (µg/l) <small>STIMULATES GROWTH OF PLANTS & ALGAE</small>	Chlorophyll <i>a</i> (µg/l) <small>ALGAE MEASUREMENT</small>	Dissolved Organic Carbon (mg/l) <small>WATER COLOR HAVING AN IMPACT ON TRANSPARENCY</small>	Transparency (meters) <small>No. measurements WATER CLARITY</small>	COMBINED RESULTS TROPIC LEVEL OF LAKE HUGHES
2010	6,2	3,2	5,9 (colored)	(11) 4,7m	OLIGO-MESOTROPHIC
2011	6	3,2	5,2 (colored)	(12) 4,6m	OLIGO-MESOTROPHIC
2012	3,4	3,8	5,3 (colored)	(12) 3,9m	OLIGO-MESOTROPHIC
2013				(4) 5m	
2014				(4) 4,8m	
2015				(5) 4,3m	
2016	3,4	2,7	5 (colored)	(12) 4,7m	OLIGO-MESOTROPHIC
2017					
2018	4,7	2,6	4,7 (colored)	(13) 4,9m	OLIGO-MESOTROPHIC
2019	6,7	2,9	5,6 (colored)	(11) 4,5m	OLIGO-MESOTROPHIC
2020	4,8	3,0	4,8 (colored)	(11) 4,4m	OLIGO-MESOTROPHIC
2021	6,4	2,4	4,7 (colored)	(10) 4,6m	OLIGOTROPIC



The trophic status of a lake must be interpreted with caution – the monitoring must be done over time to establish a trend.

RSVL recommends sampling for 2 or 3 consecutive years (3 samples per summer in June, July & Aug.); pause for 4 years, and resume for 2-3 years.
A participant can choose to carry out the follow-up more often than the RSVL recommends, but it must be accepted by RSVL.
INFO & COMPLETE REPORTS ARE AVAILABLE ON THE RSVL & CRE LAURENTIDES (Atlas des lacs) WEBSITES

EUTROPHICATION/LAKE AGING

Lakes age naturally over hundreds or thousands of years. This phenomenon is called EUTROPHICATION. Natural eutrophication can be accelerated by shoreline development and human activities; not only at the lake, but also in the watershed. Premature aging is one of the main problems affecting our lakes. Lake aging (trophic level) assessment is carried out by measuring the parameters shown in the table.

LAKE TROPHIC CLASSIFICATION

ULTRA-OLIGOTROPIC	No signs of eutrophication/lake aging
OLIGOTROPIC	Little or no signs of eutrophication
OLIGO-MESOTROPIC	Some signs of eutrophication
MESOTROPIC	Intermediate stage of eutrophication
MESO-EUTROPIC	Advanced intermediate stage of eutrophication
EUTROPIC	Significantly advanced stage of eutrophication

SOME SIGNS OF ADVANCING EUTROPHICATION:

- Increased algae & aquatic plants
- Reduction in dissolved oxygen
- Greater accumulation of sediments
(Some activities increase shoreline erosion → increased sediments entering the lake)

LAKE EUTROPHICATION ASSESSMENT

ALSO INCLUDES MONITORING:

- The abundance of aquatic plants in the shallow waters
- The abundance of algae (periphyton) attached to submerged rocks/objects (Refer to RSVL Protocol)
- Shoreline erosion → Sediments
- Dissolved Oxygen Levels in the deep waters (Refer to CRE Laurentides Protocol)