

## Revised Lake Networking Group Water Quality Monitoring Survey October 2016

At the Sept. 30, 2016 Lake Networking Group meeting it was decided to try to gather information about water quality testing currently being done on our local lakes. The lake associations present at the meeting (and others later by email) were invited to send information about the water quality monitoring work being done on their lake to Karen Hunt who would compile the information and distribute to the local lake associations.

Note 1: The following list includes all the information that was received by Karen. If other lake associations wish their information added to this table, please forward to [mkhunt@ripnet.com](mailto:mkhunt@ripnet.com)

Note 2: Cataraqui Region Conservation Authority, Mississippi Valley Conservation Authority and Rideau Valley Conservation Authority provided information about the water quality monitoring work they are doing on lakes in each of their respective areas. This information has been included in this report.

Lake Association	Participates in *Lake Partners	Lake Assoc. Samples for Phosphorous	Lake Assoc. Samples for E.coli	Lake Assoc. Samples for Nitrogen	Lake Assoc. Monitors Secchi Depth	Lab used by Lake Assoc.	Lake Assoc. Measures DO and Temp.	Watershed Watch	Additional Information
Elbow-Parnham	Yes, through RVCA							RVCA	
Eagle	Yes, through RVCA							RVCA	
Dalhousie		Yes- twice a year at 4 sites	Yes –twice a year at 4 sites					MVCA	
Bennett & Fagan	Yes – sampling done once a year, usually in June						Yes	MVCA	
Mississippi Lakes	Yes	Yes – 3x annually at 4 locations			Yes – 3X annually at 4 locations	Caduceon	Yes – 3 X annually at 4 locations	MVCA	Lake Assoc. also samples for Ca, pH & Invasive

									Species (OFHA)
Otty	Yes – sampling done 6X a year	yes – about 7 samples/year	yes – about 55 samples a year	yes – about 7 samples a year	yes – about 8 times a year	Caduceon	no	RVCA	
Loughborough	Yes – sampling done 6X a year								
Black	Yes, through RVCA							RVCA	
Chaffy's Locks & Area Lakes	Yes								
Christie Lake	Yes, through RVCA							RVCA	
Big Clear	Yes- Phosphorus sample in May and Secchi readings throughout the summer								
Canonto Lake	Yes							MVCA	
Davern	Yes, through RVCA							RVCA	
Lower Beverley	Yes			Yes			Yes		
Pike								RVCA	
McLaren	Yes, through RVCA							RVCA	
Little Silver & Rainbow	Yes, through RVCA							RVCA	
Greater Bobs and Crow	Yes, samples at 11 sites							RVCA	

## Lake Partners Program

The Lake Partners Program is offered by the Ministry of the Environment and Climate Change (MOECC). Across Ontario volunteers sample nearly 550 lakes for Total Phosphorus (TP) and Calcium using kits provided by MOECC. Shield lakes are sampled once in May and non-shield lakes are sampled six times from May to October. The volunteers measure Secchi Depths at least once per month, from May to October. Samples are analyzed by MOECC at their lab in Dorset for TP and also Calcium.

## MVCA Watershed Watch - the following information was provided by MVCA/Alyson Symon

Alyson included a list of the lakes that MVCA samples through Watershed Watch and a list of the parameters that they sample for. The lakes fall under different sampling rotation ranging from every 2 year to every 10 years. MVCA uses the Caduceon lab in Kingston

### Parameters sampled for - Total Phosphorus

Chlorophyll\_a (pre 2016)

Calcium

Secchi

pH

Dissolved Oxygen/Temperature profiles

### MVCA Watershed Watch Lakes

Lake	County	Township	Sampling Rotation (years)
Ardoch lake	Frontenac	North Frontenac	5
Bennett Lake	Lanark	Tay Valley	3
Big Gull Lake	Frontenac	North Frontenac	3
Black Lake	Frontenac	Central Frontenac	10
Blue Lake	Frontenac	North Frontenac	10

Buckshot Lake	Frontenac	North Frontenac	3
Canonto	Frontenac	North Frontenac	3
Clayton Lake	Lanark	Lanark Highlands	3
Clear Lake	Frontenac	Central Frontenac	10
Clyde Lake	Lanark	Lanark Highlands	5
Constance Lake	Ottawa		5
Crotch Lake	Frontenac	North Frontenac	2
Dalhousie Lake	Lanark	Lanark Highlands	2
Fawn Lake	Frontenac	North Frontenac	10
Flower Round Lake	Lanark	Lanark Highlands	3
Grindstone Lake	Frontenac	North Frontenac	5
Horne Lake	Lanark	Lanark Highlands	10
Joes Lake	Lanark	Lanark Highlands	3
Kashwakamak Lake	Frontenac	North Frontenac	2
Kerr Lake	Lanark	Lanark Highlands	3
Kishkebus Lake	Frontenac	North Frontenac	5
Mackavoy Lake	Lennox and Addington	Addington Highlands	5
Malcolm Lake	Frontenac	North Frontenac	5
Marble Lake	Frontenac	North Frontenac	5
Mazinaw Lake	Frontenac	North Frontenac	2
McCausland Lake	Frontenac	North Frontenac	10
Mississagagon Lake	Frontenac	North Frontenac	5
Mississippi Lake	Lanark	Beckwith	2
Mosque Lake	Frontenac	North Frontenac	3
Paddy's Lake	Lanark	Lanark Highlands	10
Palmerston Lake	Frontenac	North Frontenac	3
Patterson Lake	Lanark	Lanark Highlands	5
Pine Lake	Frontenac	North Frontenac	5
Robertson Lake	Lanark	Lanark Highlands	5
Sand Lake	Frontenac	North Frontenac	5

Shabomeka Lake	Frontenac	North Frontenac	5
Sharbot Lake	Frontenac	Central Frontenac	3
Shawenegog Lake	Frontenac	North Frontenac	5
Silver Lake	Frontenac	Central Frontenac	3
Sunday Lake	Frontenac	North Frontenac	5
Taylor Lake	Lanark	Lanark Highlands	3
Upper Park Lake	Lanark	Lanark Highlands	10
White Lake	Frontenac	Central Frontenac	5
Widow Lake	Lanark	Lanark Highlands	5

## RVCA Watershed Watch

The following information was provided by RVCA/Sarah MacLeod-Neilson

Below is the **RVCA monitoring schedule** for water quality samples.

Parameter	May	June/July	July/August	October
Total phosphorus	x	x	x	x
Total Kjeldahl Nitrogen	x	x	x	x
E. coli *		x	x	
Dissolved Organic Carbon		x		
Calcium			x	
*No E.coli samples taken on lakes RVL-40 to RVL-50				

A dissolved oxygen/temperature profile is taken during each visit to a lakes' deep point with a YSI meter.

Secchi depth, pH and conductivity are also monitored during each visit.

All samples are analyzed by Caduceon laboratories in Ottawa.

**Below is a list of all RVCA Watershed Watch monitored lakes**

RVL-01	Pike	RVL-09	Eagle
RVL-02	O'Brien	RVL-10	Otty
RVL-03	Farren	RVL-11	Black
RVL-04	Crosby	RVL-12	Burridge
RVL-05	Little Crosby	RVL-13	Long (east)
RVL-06	Davern	RVL-14	Westport Sand
RVL-07	Little Silver (2 DP)	RVL-16	Bobs Buck Bay
RVL-08	Rainbow	RVL-17	Bobs Green Bay
RVL-18	Bobs West Basin		
RVL-19	Bobs Mud Bay	RVL-34	Loon
RVL-20	Bobs Norris Bay	RVL-35	Bass
RVL-21	Bobs E. Basin, Long Bay (2 DP)	RVL-36	Hoggs Bay, Big Rideau
RVL-22	Bobs Central Narrows	RVL-37	Upper Rideau (2 DP)
RVL-23	Bobs Mill Bay	RVL-38	Lower Rideau (2 DP)
RVL-24	Crow	RVL-39	Big Rideau (3 DP)
RVL-25	Christie	RVL-40	Spectacle
RVL-26	Otter (2 DP)	RVL-41	Tommy
RVL-27	Wolfe (2 DP)	RVL-42	Butterill
RVL-28	Leggatt	RVL-44	Green
RVL-29	Long (west)	RVL-45	Rock
RVL-30	Elbow	RVL-46	Fermoy
RVL-31	Carnahan	RVL-47	Long Pond
RVL-32	Adam	RVL-50	McLaren
RVL-33	Round		

## Cataraqui Region Conservation Authority (CRCA)

The following information was provided by Holly Evans (CRCA).

This past field season, the CRCA began monitoring the following lakes where no active monitoring was taking place:

- Colonel By Lake,
- Collins Lake,
- Singleton Lake,
- Upper Rock Lake, and
- Lower Rock Lake.

Samples are collected under the Lake Partner Program, the Invading Species Watch Program and as per CRCA's own monitoring plan as follows:

- MOECC Lake Partner Program: one sample event in May (total phosphorous, total calcium, Secchi depth) and one in August (total phosphorous and Secchi depth)
- OFAH Invading Species Watch Program: one sample in August for Zebra Mussels and Spiny Water Flea (plankton tow net)
- CRCA
  - Spring water quality (nitrates, nitrite, ammonium, total kjeldahl nitrogen, chloride, alkalinity, dissolved organic carbon - lab analyzed)
  - Spring and summer water quality (pH, temperature, dissolved oxygen, conductivity, turbidity – hand-held meter)
  - Spring and summer physical measurements: dissolved oxygen temperature profiles

Holly Evans (CRCA) indicated that CRCA is in the midst of creating a regional Lake Report which will become available on their website once finalized. It will include background information on lake function, monitoring techniques to assess lake health, standards and guidelines for water quality parameters, and summarized results (e.g. total phosphorus trends) for 50 lakes within the CRCA region. As part of the report, CRCA is creating individual lake summary sheets for a total of 50 lakes. These summary reports include information such as lake characteristics, habitat, bathymetry maps, aquatic diversity, and water quality results from 2009-2015. Data for these documents were collected from a variety of sources including the MNRF, MOECC, NCC, Queen's University, and local Lake Associations such as Sydenham Lake, Loughborough Lake, Buck Lake and Charleston Lake. The hope is that this Lake Report would be updated at intervals to account for new information.

