

**A Summary of 2017  
Environmental Initiatives  
in the Jack Lake Area**

Summary prepared for the Jack Lake Association by:

Steven J. Kerr  
Director – Environment  
Jack Lake Association  
October 4, 2017

## Introduction

This document has been prepared to summarize environmental-related projects on Jack Lake which were either undertaken by Jack Lake Association (JLA) volunteers or other projects in which JLA volunteers participated during 2017. This report has been prepared for a year-end meeting of the JLA but will also be posted on the JLA website.

## 2017 Projects (listed approximately as they occurred during the year)

### Lake Partner Program

The Lake Partner Program is Ontario's volunteer-based, water-quality monitoring program. The program began in 1996 in partnership with the Federation of Ontario Cottagers Associations (FOCA). The goal of the program is to monitor changes in nutrient status of a waterbody over time. Under this program, volunteers collect lake water samples and return them to MOECC's laboratory in Dorset for analysis. The resulting data are used by members of the public, partner agencies, government and academic researchers and private consultants to assess and report on water quality in lakes across Ontario.

JLA volunteers have participated in this program since 1996. In 2017 water samples were collected from both Brooks Bay and Sharpe's Bay. Traditionally, Sharpe's Bay displays oligotrophic conditions (low levels of nutrients i.e., < 10µ/l of total phosphorus) while Brooks Bay is mildly mesotrophic (moderate level of nutrients i.e., 10-15 µ/l of total phosphorus). Results from 2017 sampling should be available shortly.

Contact – Sheelagh Hysenaj, JLA

### Canada Lakes Loon Survey

The Canada Lakes Loon Survey (CLLS) collates information on loon nesting success and survival of hatchlings. This is important information for loon conservation. The survey is coordinated by Bird Studies Canada. Volunteers with the JLA have participated in this survey since 1982 (Kerr et al. 2016)

Over the past few years, efforts have been directed to conducting organized lakewide surveys during the nesting period, post-hatching period and end of summer periods. In 2017, lakewide surveys were conducted on June 18, July 23 and August 20 (see below)

<u>June 18</u>			<u>July 23</u>			<u>Aug 20</u>		
Single Adults	Adult Pairs	No. Nests	Single Adults	Adult Pairs	No. Chicks	Single Adults	Adult Pairs	No. Juveniles
9	3	1	12	5	4	18	6	7

Despite high water levels during the nesting season, several pairs of loons were successful nesters. At least seven juvenile birds have survived until the end of summer.

By late August loons have started to congregate, a process known as rafting, in preparation for their flight south. Several groups of loons, ranging in size from 8-12 individual birds, have been reported in recent days. The final lakewide survey was conducted on September 17. A total of 13 singles, four pairs (8) and 8 juveniles were recorded. Over the course of the season, a total of 37 individuals participated in this survey.

Contact – Dawn Tower-DuBois, JLA

### **Ontario Turtle Tally**

Ontario is home to eight different species of turtles – 7 of these species are formally considered as species at risk. Four different species of turtles are found in the Jack Lake area.

The Ontario Turtle Tally is sponsored by Ontario Nature and the Metro Zoo. 2017 represents the fourth consecutive year that JLA volunteers have participated in this program (Kerr 2016a). To date (end of September), 31 volunteers have participated in the survey and provided observations of 89 turtles. The four species of turtle reported included 6 Blandings, 2 Northern Map, 21 Snapping and 60 Midland Painted. This is, by far, the most involvement in this program and the greatest number of turtle observations ever recorded in a single year.

A complete report (Kerr 2017) was prepared and posted on the JLA website at the end of the season. Information was also forwarded to Ontario Nature, Metro Toronto Zoo and the Ontario Ministry of Natural Resources and Forestry.

Contact – Steven Kerr, JLA

### **Petroglyphs Butterfly Survey**

The annual Petroglyphs Butterfly Survey is organized and coordinated by the Peterborough Field Naturalists. The 2017 survey was conducted on June 15, 2017. At least three JLA volunteers participated in the survey. The overall results of the one-day survey may be summarized as follows:

Number of Participants	17
Number of Survey Routes	7
Total Number of Butterflies Observed	3,401
Number Butterfly Species Observed	68
Number of Monarch Butterflies Observed	65

One interesting observation was the increased number of Monarch butterflies which were cited in 2017 (65 observed) compared with 2016 (4 observed).

Contact – Jerry Ball, Peterborough Field Naturalists

## Trent University Water Quality Study

The JLA has been involved in a water quality study of the Kawartha Highlands. This project is a collaborative undertaking at Dr. Paul Frost's Freshwater Ecology Laboratory at Trent University and Kawartha Highlands Provincial Park. Several additional lakes, outside of the original study area (including Jack) asked to be involved and were accepted. Representatives from NORKLA and Trent University were taken out on the lake by Steven Kerr on July 26, 2017. Water samples were taken from Sharpe's Bay and taken back to the laboratory for analysis for a wide variety of parameters (see below):

Conductivity ( $\mu\text{S/m}$ )	142.2 – 142.9
Dissolved organic carbon ( $\text{mgC/l}$ )	4.76 – 4.96
Dissolved oxygen ( $\text{mg/l}$ )	4.31 – 9.08
Dissolved oxygen (% saturation)	31.6 – 103.0
Particulate phosphorus ( $\mu\text{P/l}$ )	1.75 – 3.39
pH (acidity)	7.59 – 8.23
Soluble reactive phosphorus ( $\mu\text{gP/l}$ )	2.904 – 2.41
Suspended chlorophyll ( $\mu\text{g/l}$ )	1.59 – 3.48
Total phosphorus ( $\mu\text{gP/l}$ )	6.58 – 7.37
Total dissolved solids ( $\text{m/l}$ )	1.31 – 3.30
Water clarity (m)	3.0
Water temperatures ( $^{\circ}\text{C}$ )	3.8 – 24.3

This information will provide important baseline information from which to monitor future changes to water chemistry in lakes of North Kawartha. Results for Jack Lake should be available in September, 2017.

Contacts – Steven Kerr (JLA) and Doug Wellman (NORKLA)

## Invasive Species Monitoring

JLA participated in two invasive species initiatives in 2017. The first project, coordinated by the Federation of Ontario Cottagers (FOCA) and the Ontario Ministry of Natural Resources and Forestry (MNRF), was directed at increasing general awareness of invasive species. Displays were set up at the Annual General Meeting (July 16), the JLA Regatta (August 6) and the Jack Lake International Film Festival (August 11-12). A total of 200 invasive species t-shirts (funded by FOCA) were also distributed free of charge to attendees at these events.

The second part of the program involved participation in the Ontario Federation of Anglers and Hunters (OFAH) Invasive Species Monitoring Program. JLA volunteers have participated in this program since 2014. Using equipment provided by OFAH, sampling involves the collection of screened water samples which are examined to determine if the juvenile life stages of invasive organisms, such as Zebra Mussel and Spiny Water Flea, are present. Sampling took place on August 26, 2017 at three separate locations on the lake (Brooks Bay, Robbins Bay and Sharpe's Bay). Results are expected by early in 2018.

Contact – Steven Kerr, JLA

## **Input to Logging Proposal**

The JLA has been actively involved over the past few years with the proposal to log around the east and south end of Jack Lake (Work is scheduled to commence this (2017-2018) winter). The Ministry of Environment and Climate Change has recently denied our request for an Individual Environmental Assessment but has increased the shoreline/wetland setback from 3 meters to 90 meters. On October 2, 2017 a letter was sent to MNRF in Bancroft to confirm timing restrictions, setbacks, liabilities and other conditions which had been developed over the past three years off negotiation.

Contact – Neil Lanz, JLA

## **Petroglyphs 2017 Christmas Bird Count**

Between mid December, 2016, and early January, 2017, birders participate in Christmas Bird Counts. This is the largest organized birding event in the world. The Peterborough Field Naturalists organize two different bird counts in the area: Peterborough and Petroglyphs (which includes Jack Lake). Last year (2016), a total of 1,937 birds, comprised of 28 different species, were recorded. The annual event is open to all who wish to participate. Volunteers are more than welcome to participate in this event. Results of the 2017 bird count are expected early in 2018.

Contact – Martin Parker, Peterborough Field Naturalists

## **Fisheries Management Zone 15 Advisory Council**

Over the past several years the Ontario Ministry of Natural Resources and Forestry (MNRF) have revised their approach to fisheries management in the province under the new Ecological Framework for Fisheries Management. This has involved the creation of new Fisheries Management Zones (FMZ), managing fisheries at the landscape level, conducting broad scale fisheries assessment netting, and seeking increased public involvement in fisheries management. Jack Lake is situated in FMZ 15 which extends from Georgian Bay in the west to the Ottawa River in the east.

The need for increased public involvement resulted in the formation of Advisory Councils in each zone. The ultimate goal is to develop a long term fisheries management plan for each zone. Steven Kerr was selected to participate in the FMZ 15 Advisory Council representing the interests of cottagers. To date, meetings have been held on March 22, May 10, June 19 and September 13. Meetings will be held on a monthly basis throughout the fall and winter. The next meeting is scheduled for October 18. It is hoped that a FMZ 15 fisheries management plan can be developed within the next 1-2 years.

Contact – Steven Kerr, JLA

## Atlas of Jack Lake Fauna

In 2013, efforts were initiated to assemble information on the fauna of the Jack Lake watershed. Initially, this involved collation of baseline data from historic publications and records. The program was subsequently expanded by soliciting the input of local cottagers and lake resident to report their observations throughout the year (Kerr 2016b). Information collected to date (August 31, 2017) is summarized below:

	pre 2017	2017 (to date)	Total Records
Amphibians	129	13	142
Birds	1,660	188	1,848
Crustaceans	9	0	9
Fish	118	1	119
Insects – Terrestrial	411	73	484
Aquatic	68	0	68
Mammals	174	17	191
Molluscs	26	0	26
Plankton	17	0	17
Reptiles	179	64	243
Misc. Invertebrates	10	1	11
<b>Total</b>	<b>2,801</b>	<b>347</b>	<b>3,158</b>

The Jack Lake area is unique in that it provides habitat for 26 species which are formally designated as “species at risk”.

It is hoped that this atlas can be used to monitor the health of the Jack Lake ecosystem and identify sites where sensitive species are known to occur. The atlas is updated annually and the most current version is posted on the JLA website:

[https://www.jackslakeassociation.ca/assets/conservation/Atlas%20of%20Jack%20Lake%20Fauna%20\(most%20recent\).pdf](https://www.jackslakeassociation.ca/assets/conservation/Atlas%20of%20Jack%20Lake%20Fauna%20(most%20recent).pdf)

Contact – Steven Kerr, JLA

## References

- Kerr, S. J. 2016a. Turtle observations from the Jack Lake watershed, 2014-2016. Jack Lake Association. Apsley, Ontario. 2 p. + appendices.
- Kerr, S. J. 2016b. Fauna of the Jack Lake watershed. Jack Lake Association. Apsley, Ontario.
- Kerr, S. J. 2017. 2017 turtle observations in the Jack Lake watershed. Jack Lake Association. Apsley, Ontario. 4 p. + appendices.
- Kerr, S. J., D. T-DuBois and S. Hysenaj. 2016. A review of observations of Common Loons (*Gavia immer*) on Jack Lake, 1982-2016.

**Appendix 1. Volunteers (listed alphabetically) who participated in 2017  
Environmental Projects on Jack Lake.**

ALLISON, Doug  
ALVES, Tash  
ALVES, Val  
ANTHONY, Debra  
ARNOTT, Kelly  
BANNOCK, Tammy  
BARBOZA, Sergio  
BROOKS-KIMBLE, Janice  
BURLEIGH-KERR, Karen  
CIRINNA, Frank  
CORK, Suzi  
CORK, Tim  
COURT, Alice  
DAVENPORT, Dennis  
DAVENPORT, Ruth  
DAVIS, Kim  
DERKS, Mary  
DODDS, Nicole  
DUBOIS, Bill  
DUBOIS, Bob  
DUBOIS, Marcine  
FACEY, Kim  
FULMER, Sheri  
HARTMAN, Irit  
HAYWOOD, Kathleen  
HEWITT, Courtney  
HEYD, Lori  
HILL, Scott  
HILL, Todd  
HUTCHINSON, Wendy  
HYSENAJ, Sheelagh  
IRWIN, Caiden  
IRWIN Karleena  
JOHNSTON, Ashleigh  
KERR, Allan  
KERR, Andrew  
KERR, Steven  
KLAUKE, Ryan  
LANZ, Neill  
LEAN, David  
LEAN, Jackie

LEAN, Owen  
MARCUSON, Jen  
MARIE, Janine  
MARTIN, Melissa  
McQUILLAN, Marni  
McQUIRE, Brian  
MILLER, Russell  
MOULTON, Doug  
MOULTON, Eileen  
MOULTON-BECKER, Martha  
NEWTON, Tom  
PALMDALE, Amanda  
PARKER, Martin  
PERUN, Jean  
PERUN, Jim  
PHILLIPS, Pat  
QUARRY, Alan  
QUARRY, Susan  
REID, Kim  
ROBERTSON, Sarah  
SAUNDERS-BUENTING, Kim  
SCHNURR, Paula  
SJOLIN, Karen  
SMITH, Nanci  
SPEED, Eunice  
SPEED, Guy  
SPENCE, Chris  
SPENCE, Hugh  
TABONE, Dave  
TOBEY, Matthew  
TOWER-DUBOIS, Dawn  
TRIPP, Arnold  
TRIPP, Linda  
VAN VELZEN, Jan  
WAGAR-KIFFER, Judy  
WARD, Cathy  
WARD, Pat  
WARD, Victor  
WOODWARD, Ray



## **Appendix 2. Environmental Projects on Jack Lake, 2014-2017.**

<b>Program</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
Atlas of Jack Lake Fauna	X	X	X	X
Benthic Biomonitoring	X	X	-	-
Canada Lakes Loon Survey	X	X	X	X
Dragonfly-Damselfly Count	-	X	-	-
Fisheries Management Zone 15 Advisory Council	-	-	-	X
Fish Habitat Assessment at Outlet Dam (Parks Canada)	-	-	X	-
Invasive Species Monitoring	X	X	X	X
Invasive Species Awareness Initiative	-	X	-	X
Lake Partner Program (Water Sampling for MOECC)	X	X	X	X
Logging Proposal Input and Involvement	X	X	X	X
Ontario Turtle Tally	X	X	X	X
Petroglyphs Butterfly Count (PFN)	X	X	X	X
Petroglyphs Christmas Bird Count (PFN)	X	X	X	X
Trent University Water Quality Study	-	-	-	X
Turtle Nesting Habitat Improvement	-	X	-	-
Wetlands Inventory and Evaluation	-	-	X	-

### **Additional Ongoing Projects**

Broadscale Fisheries Monitoring Index Netting conducted by MNR every 5 years (2008, 2013, next scheduled for 2018).

Ontario Breeding Bird Atlas Surveys collectively conducted by a number of interest groups over a five year period at designated intervals.

Consolidation and Summary of Historic Fisheries Information for Jack Lake (2013) in report format (posted on JLA website)