

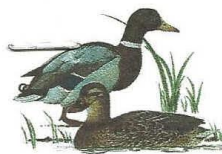
Otter Lake Sustainable Lake Plan



*Our vision for the future of Otter Lake
is....*

*A place where water quality, fish and
wildlife habitat, natural beauty,
recreational opportunities and peace
and tranquility is maintained and
improved for present and future
generations to enjoy.*

Sun. June 7, 2015



***THE OTTER LAKE
LAND OWNERS' ASSOCIATION Inc.***

Sustainable Lake Plan

Aim



1. Identify the qualities that make Otter Lake a desirable place for people to live or visit and the challenges that put those qualities at risk
2. Identify a series of actions that will help to ensure the sustainability of the lake, the lands, the natural ecosystem and the way of life that we value
3. Serve as a reference and guide to support continued activity for the stewardship of the lake



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Sources Drawn From

- 2006 and 2015 community surveys
- Otter Lake State of the Lake Report
 - Started in 2008 & significantly updated in 2015
- Lake Plans of other lakes in Eastern Ontario
- FOCA “Lake Planning Handbook for Community Groups”
- Discussions with Rideau Valley Conservation Authority (RVCA)

State of the Lake Report:

- A snapshot of the existing conditions that characterize the Otter Lake environment
- Contains historical and factual data gathered from government agencies, commercial operators and residents



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Status & Timelines

RVCA Feedback: *Overall, staff felt this is a very well developed lake plan - excellent work! A lot of time, effort and thought has clearly gone into pulling this plan together - congratulations to the Lake Planning Committee for the work completed to date!*



Committee Meetings

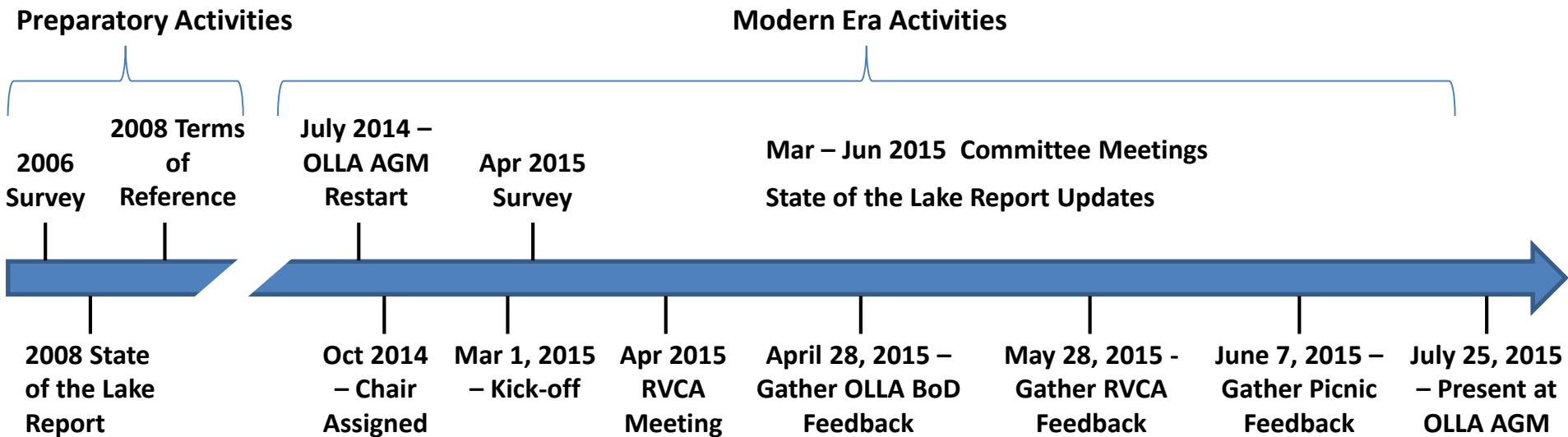


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- Draft Version #4

- 8 Focus areas
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- 19 Objectives
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1.0 Introduction

- Format selected provides a concise yet comprehensive document, easily updated
- First phase is to:
 - Develop strategy to maintain and improve the health of the Otter Lake Watershed
 - Develop strategic plan in cooperation with landowners, users and visitors, government and non-government organizations
 - Motivate, educate and engage residents to become involved in the health of the Otter Lake Watershed
 - Make recommendations to the municipalities concerning official plans, zoning by-law policies and environmental concerns
 - Adopt an ecosystem (watershed) approach to managing the health of the Otter Lake Watershed



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2.0 Vision & Values – Community Values

- “Very Important” values identified in 2015 survey
- Used to develop the vision statement and focus of first phase of the Sustainable Lake Plan

– Water Quality	94.39%
– Swimming	70.09%
– Peace and Quiet	60.75%
– Wild Life and Bird Viewing	40.19%
– Natural Shorelines	39.25%
– Sailing, Paddling	39.25%
– Fishing	16.82%
– Power Boating	13.08%

- 295 surveys mailed out
- 107 replies received
 - 37 Principal Residents
 - 68 Seasonal Residents
 - 2 Business Owners.



3.1 Water Quality – 14 Actions

Water Quality Test Results - 2013 (OLLA + RVCA)																			
RVCA ID	OLLA ID	Total Coliform (cfu/100 ml)		E. Coli (cfu/100 ml)		Total Kjeldahl nitrogen (µg/l)				Total Phosphorous (µg/l)				Secchi Disk (meters)					
		May	Jun	Jun	Jul	Aug	May	Jul	Aug	Oct	May	Jul	Aug	Oct	May	Jul	Aug	Oct	
	OLLA 02																		
RVL-26C	OLLA 03				0	2		730	350			20	14						
RVL-26D	OLLA 04	3	0	0	2			440	550			9	25						
RVL-26DP1	OLLA 05A							380	390	450	380	6	8	8	7	4.50	5.75	5.75	12.50
	OLLA 05B																		
RVL-26DP2	OLLA 06							370	380	400	9	9	9	8	3.75	5.50		12.50	
	OLLA 07	37	2	0	0			430	590			12	17						
	OLLA 08							0	730				25						
RVL-26B	OLLA 09				0	2		330	380			11	12						
	OLLA 10	1	0																
	OLLA 11																		
RVL-26E	OLLA 12				0	0		340	440										
	OLLA 13				0	0		310	500			15	14						
	OLLA 14	12	0																
	OLLA 15																		
RVL-26A	OLLA 16				0	0		330	400			7	12						
	OLLA 17	1	0	0	0			420	530			10	21						
RVL-26F	OLLA 18	3	0	0	4			530	520			11	22						
Average		3.63			0.48			446.15				12.84					7.18		
Std. Error		5.75			0.20			42.28				2.16					1.40		

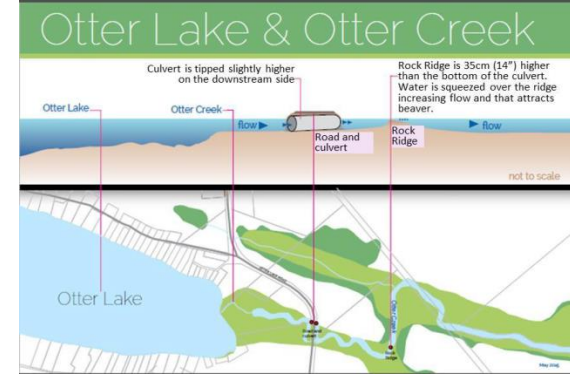
Goal – Water quality in Otter Lake and its watershed will be protected and enhanced.

- **Monitor water quality** – Continue current monitoring of Otter Lake (consider expanding to inflow & outflow creeks):
 - E. coli
 - Nitrogen
 - Phosphorous
- **Educate Otter Lake community & visitors about the lake’s water quality and how to maintain and improve it.**
 - Report regularly to the community in watershed (newsletters, website, OLLA AGM).
 - Develop and deliver awareness program on: the impacts of fertilizers, pesticides, gasoline, and other matters on water quality.
- **Reduce the input of nutrients to the lake.**
 - Recommend that all new commercial and residential development and redevelopment uses sewage treatment systems that reduce or eliminate phosphorous to the greatest extent possible.
 - Continue to promote voluntary sewage system re-inspections
 - Work to establish mandatory sewage system inspection program



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3.2 Water Levels – 7 Actions



Goal – Water levels will be allowed to fluctuate naturally as impacted by climate except in the case of extremes (high or low).

- **Monitor water levels.**
 - Establish a standard measuring location on the lake, the “benchmark” water level (derived from the RVCA 124.85 MASL measurement), and the measuring authority (OLLA, RVCA or either).
 - Continue to leave to the forces of nature the natural flow of water into and out of Otter Lake, except in the case of extremes (high or low).
 - Investigate and consider the value of bringing the Otter Creek Beaver Management Group under the umbrella of OLLA as a standing committee and amend the OLLA policy on water levels to reflect this.
- **Educate the community about water levels.**
 - Continue to report findings of the monitoring program to the community on a regular basis (using OLLA website and newsletters).
 - Communicate to the community (using OLLA website and newsletters) when and why actions were taken with regards to water levels (flood avoidance) through the beaver management program.



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3.3 Shoreline Health & Protection

– 3 Actions



Goal – Encourage the re-naturalization and retention of natural shorelines.

- **Re-naturalize altered shorelines and encourage the retention of natural shorelines.**
 - Establish a shoreline assessment program, as offered by Watersheds Canada “Love Your Lake”, to provide property owners with an assessment of the condition of their shoreline, and recommendations for improvement.
 - Develop an education program to inform landowners about the value and importance of natural shorelines, utilizing available RVCA pamphlets and leveraging tools such as Watersheds Canada’s: Shoreline Self-Assessment, and Action Checklist
 - Seek funding and establish a program to assist property owners in the re-naturalization of their shorelines through liaison with RVCA.



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3.4 Aquatic Plants – 9 Actions



Goal – Identify, monitor and, control (where possible) aquatic plant species.

- **Recognize the value of indigenous aquatic plants.**
 - Establish a volunteer-based committee to begin a formal species inventory listing.
 - Promote good stewardship practices and provide education and awareness about importance of phosphate-free detergents, regular septic maintenance and fertilizer-free properties via newsletters, website, presentations and workshops.
 - Provide information on targeted, effective and approved aquatic plant removal when required.
 - Encourage research into factors contributing to growth of aquatic plants by working with universities, RVCA and other partners.
- **Protect against introduction of aquatic invasive species (AIS).**
 - Establish a volunteer-based AIS identification and monitoring program.
 - Participate in the EDDMaps AIS Monitoring System provided by MNR and OFAH for early detection, management and possible eradication.
 - Work with scientific communities/universities to understand how to control aquatic invasive species.
 - Ensure signs about responsibility to eliminate spread of AIS continue to be posted at boat launch area off Hwy 15.
 - Provide educational information about aquatic invasive species and the pathways for introduction via OLLA newsletters, website, public workshops, meetings and pamphlets.



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3.5 Fish & Wildlife – 5 Actions



Goal – Maintain healthy habitat and populations of fish and wild life in and around Otter Lake.

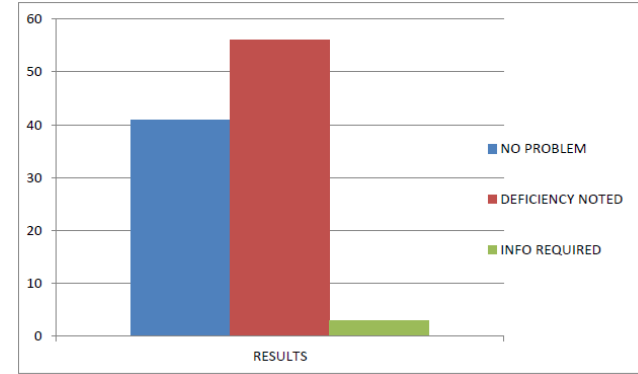
- **Protect fish and wildlife through education and partnerships.**
 - Request the Ministry of Natural Resources to conduct a fish population assessment for Otter Lake.
 - Identify fish spawning areas in Otter Lake and Otter Creek.
 - Educate shoreline owners and visitors about fish habitat requirements, spawning schedules and near-shore and in-water activities that can disturb or destroy fish habitat and spawning sites, as well as importance of re-naturalization of shorelines.
 - Educate shoreline residents about best management practices to deal with species such as Canada Geese (e.g. replace grass areas with native ground cover and shrubs).
 - Work with Rideau Township to ensure that developments to the official plan and zoning by-laws protect the natural areas and healthy habitats for fish and wildlife in the Otter Lake watershed.



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3.6 Sewage Systems, Water Quality & Re-Inspection – 16 Actions



Goal – To Minimize Impact Through Education and Monitoring

- **Quantify the Systems on Otter Lake and Determine the Various Classifications.**
 - Review Building Code Part 8 (On-site Sewage Systems) details and summarize in a pamphlet for public consumption.
 - Perform a field survey of lake residents, and/or obtain information from township, to determine type, age and numbers of systems and distribute pamphlet.
- **Lobby Principal Authorities for the Creation of a Mandatory Re- inspection Program.**
 - Prepare an information package to include survey results, lake nutrient levels, and shoreline assessment results.
 - Seek endorsement from Ottawa Septic Office section of RVCA.
 - Present information to Development Services Department at Township of Rideau Lakes with the goal of establishing a mandatory septic inspection program.
- **Maintain and Expand OLLA Testing Program and Community Education.**
 - Perform random testing for coliform bacteria at near-shore sites.
 - Perform periodic tests in inflow creeks to monitor upstream water quality.
 - Report annually or immediately if coliform tests are above 20.
 - Educate community by providing information on when to pump out septic systems and holding tanks.



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3.7 Development Control – 13 Actions



Goal – Sustainable Development

- **Quantify Residential Units, Farmland and Logging Operations in the Otter Lake Catchment Basin.**
 - Determine numbers for each resident category, including commercial, within 300 meters of the high water mark.
 - Determine extent of logging operations within the Otter Lake Catchment Basin.
 - To encourage the identification, classification and zoning of significant natural areas in the Otter Lake Catchment Area.
- **Evaluate Existing Models and Systems of Lake Classification.**
 - Investigate and evaluate the use and success of capacity models that have been implemented in Ontario.
 - Investigate and evaluate lake classification systems that have been used in Ontario.
 - Investigate and evaluate recreational capacity models.
 - Assess how the RVCA site assessment program is used to approve development applications in the Township.
- **Develop Appropriate Plan or Classification System for Otter Lake.**
 - Advise Development Services of objectives.
 - Invite stakeholder to participate in the process.
 - Possible inclusion in Official Plan.



3.8 Social & Recreational – 12 Actions



Goal – A sense of community, active lake stewardship and respective behavior will be encouraged.

- **Encourage responsible and respectful boating behaviour.**
 - Develop a Boating Code of Conduct to minimize negative impacts on the lake, shoreline, wildlife, safety of swimmers and peace and quiet.
- **Quantify recreational boat and seadoo use.**
 - Monitor recreational use and conduct a survey of boat launch use by non-residents.
- **Retain and enhance dark skies.**
 - Encourage all shoreline property owners to use “dark sky friendly” lighting.
 - Work with Township of Rideau Lakes on better process for notifying community when new cell phone towers are being planned for the area and allowing for input.
- **Promote a sense of community among Otter Lake landowners.**
 - OLLA to create a Social Committee.
 - Continue to hold the OLLA Annual Family Day as a social event as well as an opportunity to educate and promote lake stewardship.
 - OLLA to watch for and monitor developments that may impact the community (mail delivery, road names, etc.)



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4.0 Implementing the Sustainable Lake Plan

- The preparation of this plan is just the first step. The important work of implementation has yet to be undertaken, and we encourage everyone to engage in its recommended activities both as individual stewards of the lake as well as participation in OLLA activities.
- Volunteers are needed to carry out new and ongoing initiatives identified in the Lake Plan. Please contact OLLA at postmaster@otterlake.org to lend your support.
- For more information and updates on the Lake Plan please go to <http://www.otterlake.org>

Otter Lake Sustainable Lake Plan: Summary of Action Items		
Note: This document is continually being updated.		
1.1 Water Quality		
Objective	Actions	Status/Comments
#1 Monitor water quality.	1. Continue monitoring E. coli levels and seek no net increase in levels over time, with target being less than 5 cfu/100ml at all sites tested.	o 2014 average results were 1.5 cfu/100ml.
	2. Continue monitoring Nitrogen levels and seek no net increase in levels over time, with target being in the acceptable range of between 200 – 500 µg/L at all sites tested.	o 2014 average results were 475.95 micrograms/L.
	3. Continue monitoring Phosphorous levels and seek no net increase in levels over time. Target is to achieve a Phosphorous Concentration, averaged across all test sites, of less than 10 micrograms based on a 5-year rolling average.	o 2014 average results were 10.11 micrograms/L.
	4. Continue to monitor water quality, for E. coli, Nitrogen, and Phosphorous, 3 to 5 times per year at the test sites in conjunction with Rideau Valley Conservation Authority (RVCA).	o OLLA in conjunction with the Rideau Valley Conservation Authority (RVCA) monitors water quality, at least 3 to 5 times during the year at a number of test sites.
	5. Seek expert advice and take appropriate actions should there be any consistently high water quality results.	
	6. Consider expansion of testing to include periodic testing of inflow and outflow creeks.	
#2 Educate Otter Lake community & visitors about the lake's water quality and how to maintain and improve it.	1. Report water quality results back to the community in the watershed (newsletters, website, OLLA AGM).	o OLLA reported on the 2014 results in the Winter 2015 newsletter. OLLA reported on 2013 results at the 2014 AGM and posted the results on the OLLA website.
	2. Develop and deliver an awareness program on: the impacts of fertilizers, pesticides, gasoline, and other matters on water quality.	
	3. Continue to promote the voluntary septic system re-inspection program that the Township of Rideau Lakes introduced in 2007.	
#3 Reduce the input of nutrients to the lake.	1. Ensure that all new commercial and residential development and redevelopment uses sewage treatment systems that reduce or eliminate phosphorous to the greatest extent possible.	
	2. Work with the Township of Rideau Lakes to establish a mandatory septic inspection program, with an associated educational program, and seek funding to provide financial assistance to landowners for repair or upgrades to their systems.	

- 8 Focus areas
- 19 Objectives
- 79 Actions



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5.0 List of Documents Relevant to Sustainable Lake Plan

Note: The following documents are available on the OLLA website, www.otterlake.org

- ✓ Summary of Action Items – Otter Lake Sustainable Lake Plan
 - This document is updated frequently so check it often.
- ✓ State-of-the-Lake Report for Otter Lake
- ✓ 2006 Survey Results of all Landowners
- ✓ 2015 Survey Results of all Landowners



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What is Next?

- Present Sustainable Lake Plan at 2015 AGM for approval
- Structure timelines for action items – create teams July 2015 to July 2016
- Report/Update community through newsletters, next year's picnic and 2016 AGM



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Thank You



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