



Muskrat Lake Values Survey Summary Report

2017

Submitted to the Muskrat Watershed Council

Provided by Watersheds Canada and the Canadian Wildlife Federation

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Introduction

As part of the Love Your Lake Shoreline Assessment program, a values survey was conducted to gauge the opinions of residents on Muskrat Lake about major concerns and important qualities of Muskrat Lake. This report summarizes the preliminary results of the survey which was distributed to 328 shoreline property owners or residents on Muskrat Lake, 47 of whom provided their responses. The results of each survey were compiled in an excel file which were then analyzed by Watersheds Canada and the Canadian Wildlife Federation in the form of tables and histograms. Conclusions were made based on trends among the responses, and identification of potential stewardship initiatives to help Muskrat Watershed Council focus their stewardship efforts.

Results

Property Ownership

Of the 47 respondents to the values survey, 17 (36%) identified themselves as seasonal residents, 14 (30%) identified themselves as permanent residents, and 3 (6%) identified themselves as owning vacant property.

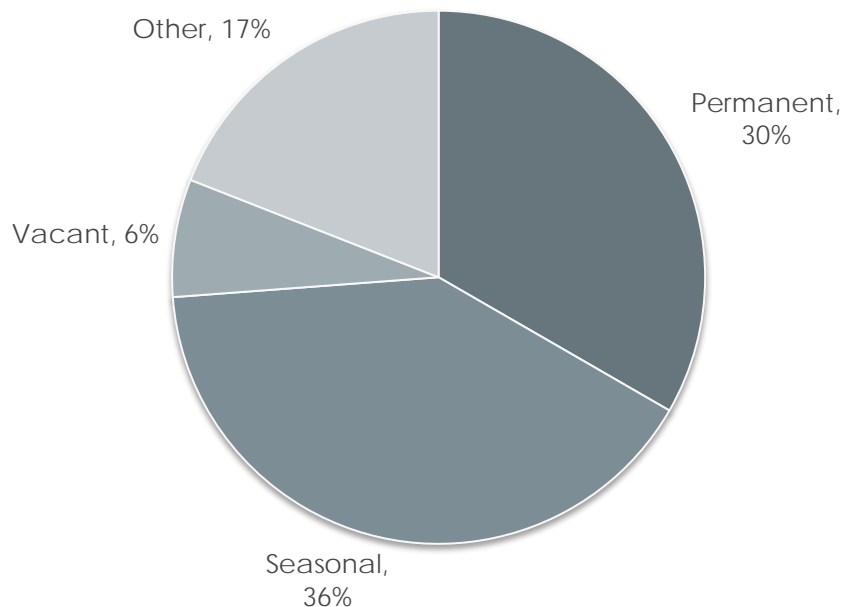
Of the 17 seasonal residents, 14 (82%) said they do not plan to become permanent residents, 1 (6%) said they do plan to become permanent residents, and 4 (24%) said they are unsure of their future plans.

Time spent on Muskrat Lake varied from 1.5 years to as many as 97 years, with 30 years as the average number of years spent on the lake.

Recreation

The top three recreational activities identified by the 47 survey respondents included Canoeing or Kayaking, Fishing, and Swimming. The least popular recreational activities included Scuba Diving, Sailing, and Wind Surfing.

Types of residents by total number of survey responses



In order of popularity from most to least popular, the number and percentage of shoreline property owners on Muskrat Lake that participate in recreational activities are summarized in Table 1.

Table 1. Top recreational activities enjoyed by residents on Muskrat Lake.

Recreational Activities:	# Respondents	% of Respondents
Canoeing or Kayaking	33	70%
Fishing	31	66%
Swimming	29	62%
Nature Appreciation	22	47%
Socializing	20	43%
Power Boating	19	40%
Ice Fishing	14	30%
Snow Shoeing	13	28%
Water Skiing/Wake Boarding	12	26%
Snowmobiling	10	21%
Cross-Country Skiing	9	19%
Hiking	9	19%
Camping	7	15%
Mountain Biking	7	15%
Other (please specify)	6	13%
Ice Skating	5	11%
ATVing	4	9%
Hunting	3	6%
Jet Skiing	3	6%
Wind Surfing	3	6%
Sailing	3	6%
Scuba Diving	0	0%

Values Associated with Personal Enjoyment

The most important elements of Muskrat Lake, valued for their impact on personal enjoyment of the lake, included Water Quality, Swimming, and Scenery/View. Figure 1 shows the distribution of ranked values for each element, in order of the most valuable to least valuable element. Surveys asked respondents to rate each activity from 1 to 5 with 5 being extremely important and 1 being not important.

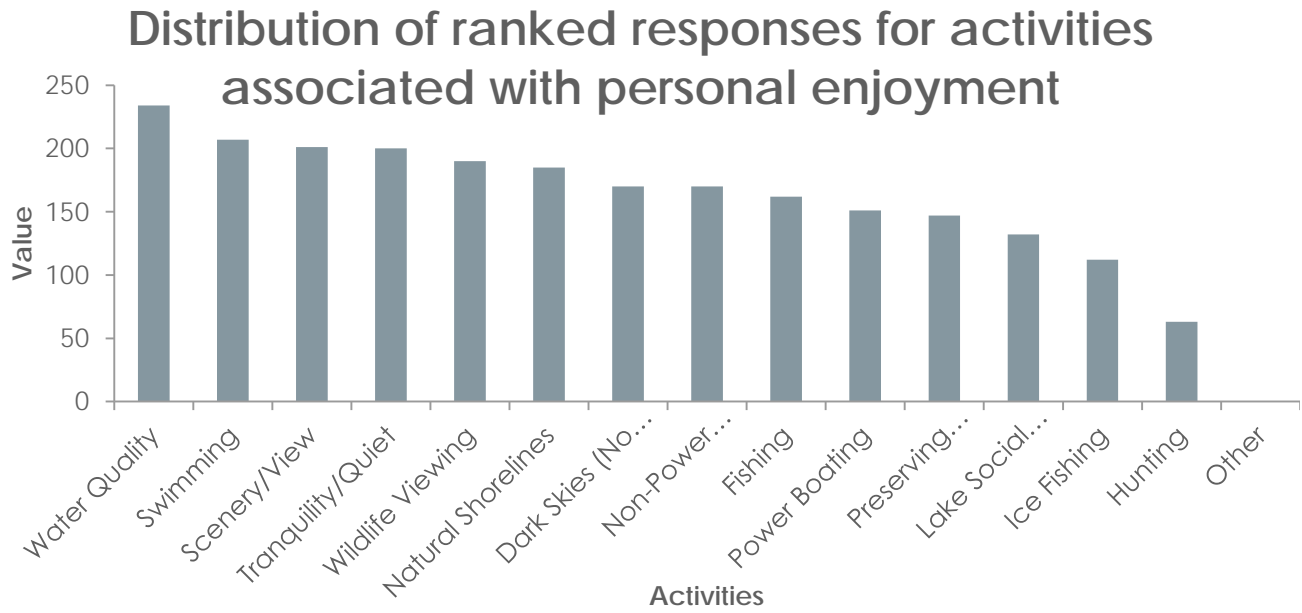


Figure 1. Distribution of Lake shoreline property owner responses regarding elements affecting enjoyment of the lake.

Top Issues Facing Muskrat Lake

The most frequently identified issue facing Lake provided by the 47 respondents was Water Quality, followed by Water Levels, and Fish Populations. Table 2 summarizes the number and percentage of respondents that identified each issue as a top concern. Figure 2 shows the distribution of shoreline property owner responses regarding the issues facing Muskrat Lake.

Table 2. Top issues facing Muskrat Lake in order of most popular to least popular.

Top Issues:	# Responses	% of Total	Rank
Water Quality	41	87%	1
Water Levels	23	49%	2
Fish Populations	13	28%	3
Faulty or Poorly Maintained Septics	10	21%	4
Shoreline Development	9	19%	5
Other (please specify)	7	15%	6
Wildlife	6	13%	7
Boating	4	9%	8
Light Pollution	3	6%	9
Cottage Conversions to Permanent Homes	3	6%	10
Noise Pollution	2	4%	11

Top issues facing lake

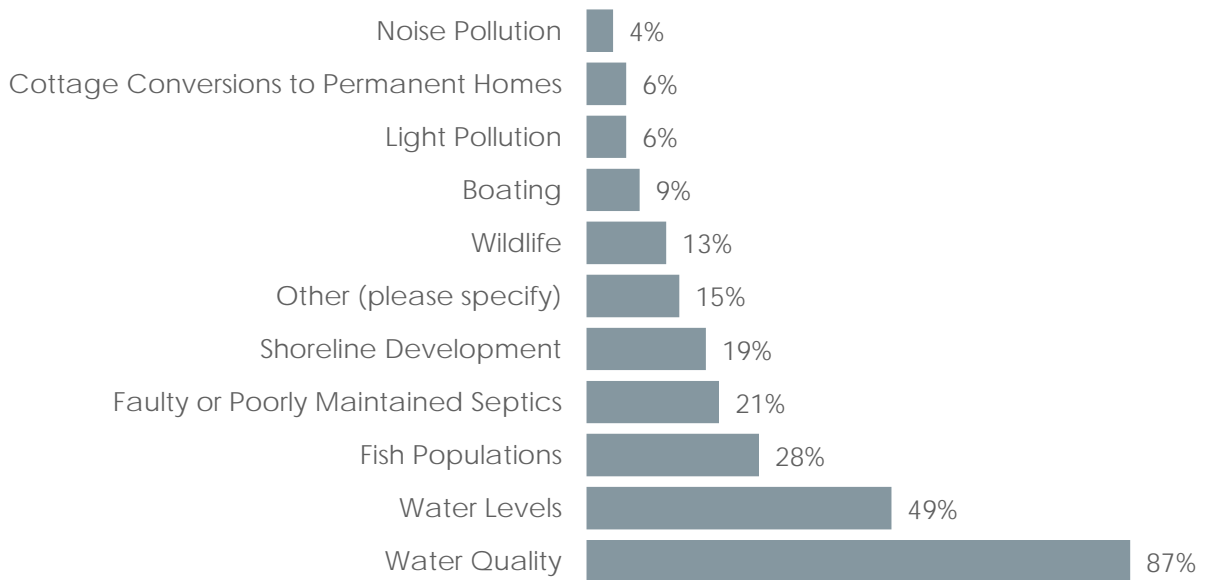


Figure 2. Distribution of shoreline property owner responses identifying the top issues faced by Muskrat Lake.

Actions to Undertake to benefit Muskrat Lake and Community

The most frequently identified actions shoreline property owners on Lake believe would benefit the lake and community include:

- Undertake a **lake management plan**,
- Undertake more **water quality testing**,
- Improve communication between **land owners and lake association**.

Table 3 summarizes the number of times and percentage of responses that each action was identified as beneficial to the lake and community.

Table 3. Actions to benefit Muskrat Lake and the community as identified by shoreline property owners.

Undertake Actions:	Responses:	% of Total:	Rank
Undertake a lake management plan	22	47%	1
Undertake more water quality testing	20	43%	2
Improve communication between land owners and lake association	11	23%	3
Provide education to property owners	11	23%	4
Engage in a septic re-inspection program	11	23%	5
Create rules new development	8	17%	6
Engage more property owners in lake activities	6	13%	7
Create rules for re-development	4	9%	8
Limit boat wakes near shore	4	9%	9
Do Nothing	1	2%	10
Other (please specify)	1	2%	
Plant trees and shrubs along shore	0	0%	12
Stop mowing grass by the shoreline	0	0%	13

Top actions to benefit lake

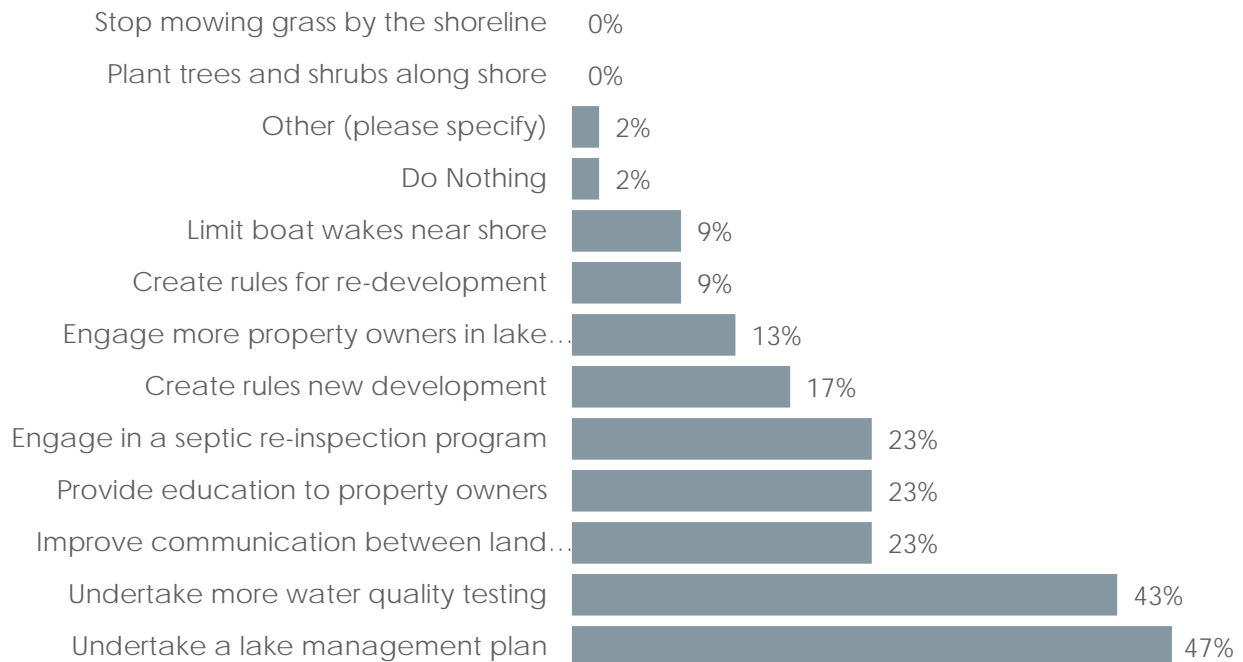


Figure 3. Ranking of top actions needed to benefit Muskrat Lake.

Perceived Water Quality Concerns

Of the 47 survey respondents, 3 (6%) perceive water quality to be good, 36 (77%) perceive water quality to be poor, 3 (6%) don't know about the water quality, and 0 (0%) perceive water quality to be excellent.

The top concerns expressed about water quality were **Algae/Aquatic vegetation**, **Bacteria**, and **Clarity**. Table 4 summarizes the number and percentage of responses identifying each water quality concern for Muskrat Lake. Figure 4 below shows the distribution of shoreline property owner responses regarding water quality concerns on Muskrat Lake.

Table 4. Top water quality concerns.

Water Quality Issues:	Responses:	Percentage	Rank
Algae/Aquatic vegetation	37	79%	1
Bacteria	24	51%	2
Clarity	18	38%	3
Smell	16	34%	4
Pollution	12	26%	5
Some Other Concerns	9	19%	6
No concerns	0	0%	7

Top water quality concerns

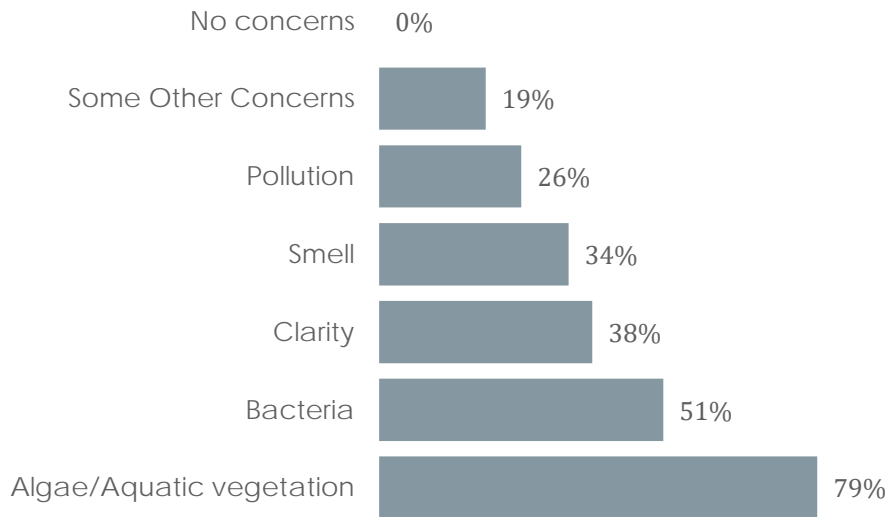


Figure 4. Ranking of top water quality concerns.

Shoreline Property Owner Interest in Stewardship Information and Activities

Of the 47 respondents, 32 (68%) said they were interested to learn more about their activities and how it affects water quality, wildlife habitat, and the overall health of the lake. When asked whether they would be interested in participating in stewardship activities around the lake, 21 respondents (45%) answered "yes".

Discussion

On the completed surveys, Water Quality was the single most important factor affecting the property owners' enjoyment of the lake with 46 respondents rating it as an "extremely important" factor. As well, 87% of respondents placed water quality as one of their top concerns regarding the health of Muskrat Lake.

When shoreline property owners were asked to identify the top actions that would benefit their lake, Undertake a **lake management plan** was the most recommended followed by Undertake more water quality testing and Improve communication between land owners and lake association. The Muskrat Watershed Council may consider gathering more information on this as well as getting opinions from more residents on Muskrat Lake.

Residents rate Canoeing or **Kayaking** as the top activity on Muskrat Lake with 70% saying they participated in this lake activity. This result provides an opportunity to the Muskrat Watershed Council for more stewardship initiatives by showing that the suitability of the environment for recreational activities could be jeopardized if current issues are not addressed.

When asked about overall water quality, residents seem to Agree that they have Poor Water Quality. The range of values could be a result of respondent's location on the lake where some areas may have perceived lower water quality than others. 0 respondents said the water quality was "excellent".

Conclusion

The main concern seems to be Water Quality among lake residents. 77% of respondents rated Muskrat Lake as having Poor Water Quality. Other main concerns were Water Levels, and Fish Populations.

On Muskrat Lake 68% of respondents are willing to learn more about how to help the health of the lake. There appears to be opportunity for planning and stewardship programs to help restore and preserve Muskrat Lake.

By working together with all interest groups and landowners in a coordinated effort, the protection of Muskrat Lake can be improved.

Appendix A: Questions Asked in Values Survey

1. Which of the following apply to you? (Check all that apply.)

- Permanent Resident
- Seasonal Resident
- Own Vacant Property
- Operate a Farm
- Operate a Business
- Other (please specify)

2. If you are a seasonal resident, do you plan on making this your permanent residence sometime in the future?

- Yes
- No
- Don't Know

3. How long have you or your family been on your lake?

- _____ Years

4. What types of recreational activity do you participate in at the lake? (Select as many as apply.)

- ATVing
- Cross-Country Skiing
- Hiking
- Jet Skiing
- Power Boating
- Snowmobiling
- Camping
- Fishing
- Ice Fishing
- Mountain Biking
- Sailing
- Snow Shoeing
- Wind Surfing
- Canoeing or Kayaking
- Hunting
- Ice Skating
- Nature Appreciation
- Scuba Diving

- Socializing
- Water Skiing/Wake Boarding

5. Please rate how the following 15 elements add to your personal enjoyment of your lake. Please circle only one number for each value.

Element	Not Important 1	2	3	4	Extremely Important 5	Don't Know 0
Water Quality	1	2	3	4	5	0
Natural Shorelines	1	2	3	4	5	0
Scenery/View	1	2	3	4	5	0
Wildlife Viewing	1	2	3	4	5	0
Dark Skies (No Light Pollution)	1	2	3	4	5	0
Tranquility/Quiet	1	2	3	4	5	0
Fishing	1	2	3	4	5	0
Ice Fishing	1	2	3	4	5	0
Preserving Vacant Land	1	2	3	4	5	0
Hunting	1	2	3	4	5	0
Swimming	1	2	3	4	5	0
Power Boating	1	2	3	4	5	0
Non-Power Boating	1	2	3	4	5	0
Lake Social Activities	1	2	3	4	5	0
Other (Please Identify)	1	2	3	4	5	0

6. What do you see as the top five issues facing your lake and your lake use?

- Water quality
- Water levels
- Declining fish populations
- Boating
- Cottage conversions to permanent homes
- Shoreline development
- Faulty or poorly maintained septics
- Noise pollution
- Light pollution
- Wildlife
- Other

7. Please identify the top three actions you believe should be undertaken to benefit your lake and lake community.

- Stop mowing grass by the shoreline
- Plant trees and shrubs along shore
- Limit boat wakes near shore
- Engage in a septic re-inspection program
- Provide education materials to property owners on a variety of subjects
- Undertake more water quality testing
- Create or enforce stricter rules for new development
- Create or enforce stricter rules for re-development (cottage conversions)
- Improve communication between land owners and lake association
- Engage more property owners in lake activities
- Undertake a lake management plan
- Nothing
- Other

8. In your opinion, describe your lake water quality.

- Excellent
- Good
- Poor
- Don't Know

9. What are your particular concerns with respect to water quality?

- Bacteria
- Smell
- Algae/Aquatic vegetation
- Clarity
- Pollution
- No Concerns
- Other

10. Are you interested in learning more about how your activities as a landowner can affect water quality, wildlife habitat, and the overall health of your lake?

- Yes
- No

11. Would you be interested in participating in stewardship projects/activities related to your lake?

- Yes
- No