

Executive Summary

In 2014, the Lake Kashtabog Residents' Association (LKRA) entered into an agreement with the Love Your Lake program to undertake a study of the properties on the lake. The purpose of the study was to provide information and stewardship recommendations to property owners and LKRA for maintaining healthy shorelines.

The project consisted of three major components: a survey of the interests and concerns of cottage owners; a detailed assessment of each property with individualized reports to owners; and a summary of data for LKRA which will also serve as a baseline for future lake studies.

In the summer of 2014, 1160 properties totaling 1,077,541 meters of shoreline (98% of total) were assessed on Lake Kashtabog. Trained staff from the Lakeland Alliance assessed each property using the Shoreline Survey Datasheet (Appendix A), including public and Crown lands. Excluded from the study were some islands not identifiable on mapping and 23 properties whose owners requested to opt-out of the program. Detailed information was collected and summarized regarding state of shoreline, building setbacks, development including structures and docks, retaining walls, erosion, aquatic covers, substrate, slope, lawns, buffers, and other shoreline observations.

This report presents the data collected in the survey and collected per property into a lake-wide summary.

Key Findings:

The overall state of the lake's shorelines is encouraging. Fully 69% is in a natural state and a further 19% are classified as regenerative. However, more than a quarter of the natural shoreline (27%) has been disrupted through shoreline development 12%, ornamental landscaping (12%) and retaining walls (3%). Some of this natural state is attributable to vacant and crown land and properties with long shorelines.

Natural shorelines, however, are not the predominate feature of cottage properties. Only 27% of cottages had 50% or more of natural shoreline. Happily, many cottages are seeing their shorelines returning to a natural state through regenerative growth (50%). Of concern, almost a quarter of cottage owners (23%) have ornamental landscaping which contributes to poor water quality.

Natural vegetative buffer zones are a priority. Buffer zones are the ribbon of life, providing over 90% of aquatic and terrestrial wildlife with essential habitat needed to mate, rear young, find food or take shelter. More than half of the properties (59%) have a great buffer along at least a section of their shorelines; half of the properties are in need of further native vegetation along the shoreline. The findings encourage property owners to create and expand a permanent strip of trees, shrubs and groundcover at the water's edge to protect and stabilize the shoreline.

The natural buffer zones are being reduced on the lake by boat houses, boat launches and ramps, stairs, sheds, decks and other structures. More than one in five cottages (22%) had boat houses within 3 meters of the shore; 15% had boat ramps, 15% had sheds, 6% other buildings. Allowing vegetation to grow around these man-made structures can mitigate some of their negative environmental impacts.

The presence of fanwort, an invasive species that has been present in the lake for over a decade, is a major concern in some parts of the lake. The survey spotted fanwort at 92 (14%) of the properties. These observations were restricted to the shoreline only so the species may be found along more properties.

The presence of lawns on lake properties are of concern. Fortunately 83% of properties do not have lawns and a further 7% provide a buffer between the shore and the lawn. However, 10% of cottages have mowed lawns to the water's edge. Lawns contribute to nutrients, sediments and other contaminants to be carried by runoff into the lake negatively impacting water quality. Lawns also attract geese; one goose can produce up to a pound of feces a day, fouling properties and introducing E-coli into our lake.

A number of property owners who currently have ornamental landscaping have over 30 meters in which to create buffer zones. These 119 properties (18%) are identified, as the priority properties for action. A further 118 properties with ornamental landscaping but that have less than 30 meters in which to create buffer zones are the second priority grouping. Both groupings are encouraged to create and expand buffer zones. A 30 metre wide buffer is ideal; a minimum of 3 meters should be considered.

Building cottages close to the water's edge was a common practice decades ago before the environmental impacts were understood. This is a particular problem on Lake Kasshabog as only 37 properties (6%) are set back 30 or more metres from the shoreline; 85 properties (13%) are setback less than 5 metres, 241 properties (37%) are set back between 5 and 10 metres. The importance of maintaining natural shoreline vegetation is even more crucial when the building is close to the lake.

The majority of property owners (389) on Lake Kasshabog have chosen environmentally docks – non-permanent post as well as floating docks. Docks with minimal contact with the lake bottom that do not disturb aquatic life are recommended.

Erosion is a concern. However, of the 660 properties assessed only 15 (2%) had observable erosion requiring action. A further 219 (33%) had some observable erosion. Steeper shorelines can suffer more erosion problems and benefit from well-vegetated slopes; almost one-third of Kasshabog properties (31%) have steep slopes.

Flat, hard-surfaced retaining walls have a negative impact on the lake. They cause excess turbulence in the water that scours the sediments from the lake bottom. They also eliminate shoreline habitat and act as a barrier preventing local wildlife from reaching the water. Some 8% of properties currently have such walls. Loose rock sloping down at a gentle angle into the water is a better choice and to be encouraged along with vegetation.

Water runoff from cottage roofs may be a problem on some properties. Those with eaves are encouraged to install water barrels or create a water collection bed so that water filters into the soil rather than result in run off into the lake.

Aquatic plants provide an important habitat for fish and other aquatic wildlife. The surface of the lake's floor ("aquatic substrate") has a big impact on its ability to support aquatic plants. Many properties, 292 (44.2%) have exposed bedrock. Organic, muck and slit bottoms present in 19% of properties best support aquatic life. An overabundance of aquatic life may be an indicator of high nutrient levels entering the lake.

There are many long-time residents on the lake: 14% of respondents have been on the lake 60 years or longer; 37% between 40 – 59 years; 31% between 20 – 39 years; only 18% have been on the lake fewer than 20 years.

Residents find greatest personal enjoyment on the lake from the natural environment: water quality 93%; scenery/view 78%; swimming 75%; tranquility/quiet 64%; preserving vacant land 64%; wildlife viewing 59%; natural shorelines 59%; non-power boating 47%; dark skies 45%. Lower in importance were: fishing 23%; power boating 17%; lake social activities 12%; hunting 5%; ice-fishing 2%.

Greatest personal enjoyment on the lake is somewhat in contrast to the recreational activities of cottagers: swimming 93%; canoeing/kayaking 86%; fishing 68%; power-boating 66%; water-skiing/wakeboarding 45%; hiking 38%; cross-country skiing 26%; ATVing 21%; ice-skating 21%; sailing 18%; snowmobiling 16%; jet-skiing 16%; snowshoeing 12%; wind-surfing 8%; hunting 6%; camping 5%; ice-fishing 5%; scuba-diving 4%.

In the survey, the top issues facing Lake Kasshabog were identified as follows: water quality 88%; shoreline development 60%; faulty or poorly maintained septic 60%; noise pollution 58%; cottage conversions to permanent homes 48%; water levels 41%; declining fish populations 30%; boating 25%; light pollution 24%; wildlife 19%.

Top actions survey respondents believe should be taken to benefit Lake Kasshabog were: limit boat wakes near shore 45%; engage in septic reinspection program 42%; educational materials to property owners; create or enforce stricture rules for development 31%; undertake more water quality testing 29%; stop grass at shoreline 22%; undertake a lake management program 20%; plant trees and shrubs along shore 13%; engage more owners in lake activities 10%; improve communication between cottagers and LKRA.

Water quality is seen as Excellent by 11%; good by 87%; and poor by 2%. Water quality concerns include: aquatic vegetation 69%; bacteria 43%; pollution (including soap residues) 37%; clarity 25%; smell 8%.