

Bass Lake – Rideau Lakes Township Statement of Requirement - Official Water Control Structure

Background History

Bass Lake is a spring fed lake from a 7.8 km² catchment area with no inflow from other lakes, rivers or creeks. Bass Lake outlets to the Lower Rideau Lake via a channel at the north end of the lake. This outlet channel is approximately 1 kilometer in length and discharges to Lower Rideau Lake at an approximate water level elevation of 125 MASL. At 280 meters downstream in this outlet wetland there is a man-made earthen berm that has served as an outflow water control structure for the past 25 years (since 1995). Effective January 2021, this earthen berm is now fully situated on township owned land and remains in a state of serious deterioration. Its low-profile dimensions are: 1 meter in height, 3 meters in width, 40-50 meters in length.

In the 1993-94 period, waterfront property owners observed a dramatic lowering of lake water levels due to the loss of natural or man-made weirs at the lake edge of the outlet and the destruction of a large beaver dam downstream in the outlet. Consultations were made with representatives of the Rideau Valley Conservation Authority (RVCA) and the Ministry of Natural Resources (MNR) to determine what options could be undertaken to restore the lake's historical water level. In May 1995, the Bass Lake Lodge owner constructed an earthen berm on an ad hoc basis without regulatory approval.

In April of 1996, following complaints of higher than normal water levels, the RVCA investigated and issued a "Notice of Violation" against the Lodge owner. After a series of site visits and exchange of letters, RVCA proposed a number of improvements/modifications to the berm structure to ensure the seasonal water levels would be acceptable to majority of waterfront property owners and certainly no higher than previous years. In August 1996, the earthen berm was tacitly allowed to remain in place. No written approval has ever been granted for the existence of this berm, nor has any legal action been taken by the regulatory authorities for its removal.

Throughout this 25-year period, the lake community has experienced many alarming episodes or challenges directly involving this earthen berm that required seeking advice or assistance from the Township, RVCA or MNRF. The situation finally came to a head in May 2018 when there was a dramatic drop in lake water level allegedly due to an intentional major breach of the berm; remedial repairs by unknown parties; ownership and access issues; it's questionable structural stability; and the potential environmental and social impacts should the berm unexpectedly fail.

The Issue for Waterfront Property Owners

Bass Lake is considered by the RVCA to be part of the Lower Rideau Lake catchment area and it has a higher elevation (134 MASL) than the Lower Rideau Lake (125 MASL). The topography of the outlet wetland in front of the man-made earthen berm is no longer restricting outflow to any significant degree. Without a reliable natural or a man-made berm in the Outlet there will be a very dramatic lowering of the historical seasonal water level.

There is now an issue of potential lower seasonal water levels that may adversely affect the 230 Bass Lake property owners, the lake's eco-systems, provincial protected wetland surrounding the lake, tourism, local businesses and property values and taxes. (refer to Appendix A attached). In order to deal with this problem on a comprehensive and consensus basis, the first ever Bass Lake Property Owners Association (BLPOA) was formed in the Fall of 2018. The vast majority of lake property owners (80%) have petitioned for the establishment of an effective lake water level management plan for Bass Lake. Over the past 2 ½ years this Association has averaged a very strong membership comprising on average of 180-member properties.

The clear and present danger is that after 25 years the long-standing man-made berm in the outlet to Bass Lake remains highly susceptible to serious breaches or repairs as well as natural decay and degradation. In July 2018, the RVCA requested that the existing berm be either rehabilitated or replaced and approved as a legal and fully permitted structure. The BLPOA’s primary mandate has been to establish an effective lake water level management plan for Bass Lake by actively pursuing a collaborative project involving the leadership of the Township, and the participation and support of the RVCA and the MNRF. This collaboration led to the Township conducting a Jp2g Consultants study and survey in the summer of 2019 followed in 2020 by a contract with Water’s Edge Engineering Consultants for the design of a new water control structure, regulatory approval and finally construction contract tendering.

Target Seasonal Water Level – 2020 Bass Lake Referendum Results

A Referendum Form with three choices for an indicated preference for the target seasonal water level was promoted and distributed to as many Bass Lake property owners as possible given the COVID -19 restrictions in July 2020. A new control structure will generally “set” the long-term water surface elevation and Water’ Edge had selected this level to the elevation desired on – 01 July (Canada Day). After July 1st, water levels would then be dependent on rain and groundwater levels. In spite of a “set” elevation, wet years would still have higher water levels and dry years may result in lower levels.

The results of this important Referendum were as follows on the Table below:

Category	Numbers	Percentages %
Total Referendum Responses	186	80.8 % of 230 Waterfront Properties
Higher Water Level experienced this year 2020 (01 Jul – 134.55 MASL)	165	88.7% Of Responses
Historical Water Levels experienced years 2010-2016 (01 Jul - 134.45 MASL)	15	8.1% of Responses
A Compromise Level of 134.50 MASL	5	2.7 %
A dramatically lower level for 01 Jul benchmark, (Specifically 134.1 MASL)	1	0.5% of Responses

Summary

Bass Lake and its waterfront community are a significant contributor to the Rideau Lakes natural environment and the local economy. The BLPOA’s objectives are in line with those of RVCA and MNRF with respect to maintaining better water quality, healthier wetlands and the protection of wildlife species and habitat. The involvement of local and provincial authorities is necessary to achieve a healthy Bass Lake and restore acceptable and manageable water levels that will result in a benefit to current and future landowners, businesses, tourists, and the regional ecosystem. Such a partnership will assist in moving forward to implement the recommendations presented in the 2014 RVCA Sub-Watershed Report.

The BLPOA is very appreciative that the Township has provided its leadership, authority and funding to establish a municipal capital project in 2020 and work with all Bass Lake property owners and ratepayers to implement a plan of action leading to a resolution of the long-standing issues we have faced at the outlet to Bass Lake.

Prepared By: BLPOA Board of Directors – January 2021

Appendix A - Major Impacts and Concerns

Provincially Protected Wetlands: In recent years, the Bass Lake wetlands have been “complexed “into the Big Rideau Wetland Complex thereby making them a Provincially Significant Wetlands (PSWs) and therefore is part of a regional system. This provincial designation requires that the PSWs and buffer zone are to be protected. This protection should include avoiding reduced water levels or any activity on the Lake that has an adverse impact on the PSWs.

Lake Eco-systems: A major and long-term drop-in lake water level will inflict adverse impacts on the lake’s ecosystems and nature’s filtration system. The habitat for small mouth bass and other fish species in the lakes five major bays and along the extensive shoreline shoals could be depleted and lost. Such a dramatic change will also eliminate various wildlife habitats and waterfowl nesting sites. The loss of these habitats would have regional impacts.

Blue-Green Algae Blooms: Major outbreaks of Blue-Green Algae blooms on Bass Lake were detected and reported for the first and only time in October/November of 2018. We do not believe that it was a coincidence that this outbreak followed record low water levels, resulting from the breach of the berm in the spring of 2018. The extremely low water levels and higher water temperatures likely increased the concentrations of those elements necessary for the growth of the blue-green algae. Blooms are a real threat to lake drinking water for those residents using the lake as a source, even with treated systems. Blooms are also toxic to fish, wildlife and swimmers. The die-off of these blooms can lead to oxygen depletion and contribute to massive fish kills. Not only will this harm the Bass Lake fishery but any release into the Lower Rideau would have a downstream impact.

Waterfront Accessibility & Recreational Activities: A significant drop in water level will severely impact most property owners who enjoy the amenities of recreational boating and swimming. A lower water level will cause shoals, logs and other hazards to appear thus endangering navigation. Dock structures will need to be relocated further out from historical shorelines and the recreational season will be dramatically reduced to ensure any boats can be safely launched and removed from the lake. Property owners in the many shallow bays and inlets of the lake would be most immediately impacted by a drop-in water elevation.

Commercial/Recreational Businesses: There are also two significant recreational businesses located in the North end of the Lake. They are the Bass Lake Lodge business with 14 Cottages and 29 RV Sites and the adjacent Bass Lake Trailer Park (65 lots). Both are located in the outlet bay at the North end of the lake. This bay is quite shallow (3- 8 ft) and a major drop in the historical water level could seriously impact the financial viability of these two businesses.

Property Values and Taxes: There are fourteen (14) private access roads around Bass Lake that service the 230 properties located on the Bass Lake waterfront. All of these properties are developed with at least 55-60% being full time primary residences. The remainder are seasonal (May-Oct) properties. Waterfront property owners on Bass Lake are a significant force in our Township. The most recent assessments by Municipal Properties Assessment Corporation (MPAC) has determined that the total value of all properties on Bass Lake is \$84,000,000 which translates to a very significant tax revenue contribution of over \$800,000 to support local governance, programs and infrastructure for our County and Township. This MPAC assessment will likely increase to over \$95,000,000 during the upcoming MPAC reappraisal. The adverse impacts created by a drastic long-term lowering of the lake water level and decline in lake water quality on waterfront conditions would force a significant number of property owners around the lake to demand that their properties be reassessed by MPAC to reflect the negative impact on their property value.