Trout Lake Conservation Association P.O. Box 1462 North Bay, ON P1B 8K6 Tel: 705-494-8468 Fax: 705-494-7700 <u>tlca.northbay@gmail.com</u> http://www.troutlakeconservationassociation.org



November 22nd, 2023

Sent via E-Mail Attachment <u>beverley.hillier@northbay.ca</u>

Ms. Beverley Hillier, RPP, MCIP Manager, Planning and Building Services The Corporation of the City of North Bay 200 McIntyre Street East North Bay, ON P1B 8H8

Dear Ms. Hillier:

Re: Trout Lake Watershed Study and Management Plan JLR Directions Report (Draft) June 29, 2022 Addendum #2 (Draft)

On behalf of the TLCA Board of Directors/Executive 2023-24 and our Membership, we would like to voice the following concerns regarding J.L. Richards & Associates Ltd. Draft Addendum #2:

It is our concern that the amended reports filed with the City of North Bay continue to iterate the same position(s) from the previous reports; they do not acknowledge that phosphorous retention measurements from properties on Northshore Road are from tertiary septic systems, with advanced technologies. We are of the opinion that they do not represent typical retention rates of a standard pipe/stone/sand or conventional septic design that the majority of homes and cottages have on the lake.

We firmly believe these high attenuation assumptions skew the validity of the Lakeshore Capacity calculations and result in the Consultants drawing the inaccurate conclusion that there is considerable additional capacity remaining on the lake. I would refer you to our letter submitted July 5th, 2022 and subsequent Presentation to Council wherein we brought this issue forward; we request that you direct the consultants to formally address this issue within the study. It is our continued position that the high-tech systems on Northshore Road were mandated to achieve 90% reduction and the data shows that these advance systems are not, in reality, able to meet this criterion; and the Capacity calculations need to be adjusted with greater precision based on this fact.

Additionally, we have the following concern:

The Consultant refers to a Municipal Water Quality Objective (MWQO). The MWQO was established in the 1980's when the average measured total phosphorous levels in Trout Lake were approximately **7 ug/L**, as measured as *Spring Phosphorus or Spring "P"*. The MWQO, reflecting the objective of maintaining or improving Trout Lake's water quality, was consequently set at **7 ug/L**. (We are happy to discuss why TP data was so different at the time).

Currently the data is showing that Trout Lake is averaging closer to **5 ug/L**; however, the methodology for measurement has changed over the years to include an average or *Seasonal Phosphorous*; as Phosphorous Values are typically highest in the Spring "P", the Seasonal average would present typically lower values and we believe we see this in the data.

This would actually mean that the **7 ug/L** is now out of date and not reflective of the change in methodology and should be modified (lowered) to reflect this. For North Bay and East Ferris to continue to apply the principle of "maintaining or improving water quality" the MWQO, in our opinion needs to be reset; in light of the data collected and in comparison, we would put the new "bar" at **5 ug/L**.

To continue to respect the desire to "<u>maintain or improve</u>" our existing source drinking water quality, the evaluation of "Remaining Lake Capacity" and MWQO should be re-evaluated. We are concerned that the Consultants are perhaps steering the Municipalities away from the maintaining or improving the Water Quality "principle" and promoting a policy that allows for some deterioration. Given that changes in Water Quality and the subsequent reflection in the data happens over a long period of time, by the time you are able to recognize a deterioration, it will already be too late; therefore the Policies we adopt today are vitally important for preservation of our existing and pristine Water Quality.

In addition, we remain concerned that such very different results were obtained by the Ministry of Environment, Conservation and Parks and the HESL Consultants when using the Lakeshore Capacity Model in attempts to predict future development capacity for Trout Lake. We acknowledge HESL's knowledge and expertise in this field, however, their recommendation that, based on their modelling, 70 new lots in Trout Lake's Main Basin (42 in North Bay and 28 in East Ferris) and up to 20 lots in Four Mile Bay can be created is a significant change in how Trout Lake has been managed and protected to date. Under the circumstances, we request that the City ask for a scientific peer review of the Consultant's use of the model to assess the validity of the assumptions used to produce the results reported. Dr. Andrew Paterson, the Inland Lakes Research Scientist at the Ministry's Dorset Environmental Science Centre, is a subject-matter expert in this field. We would like to be assured that there is scientific consensus on the basis for the Consultants' recommendations in this regard.

We are also concerned that the Consultants refer to "uncertainty" regarding future impacts of climate change, and state that there could be "potential" impacts on lakes due to climate change; this may be downplaying the severity of impacts which are already being documented and will continue to occur, even if the full scale of these impacts in the future may not yet be completely understood. The Consultants refer to a 2007 publication which acknowledges, among other impacts, that climate change can be expected to affect Dissolved Oxygen concentrations (MVWHDO) and Phosphorus, but they do not reference any recent reputable research, such as Senior Research Scientist, Dr. Scott Higgins' work on Lake Trout habitat in the International Institute for Sustainable Development - Experimental Lakes Area, which clearly demonstrates measurable impacts of climate change which has already occurred [1]. A 2021 paper published in the international scientific journal, Nature, "Climate Change Drives Widespread Shifts in Lake Thermal Habitat" describes analysis of "a combined total of 45,148 dissolved oxygen and temperature profiles and calculate trends for 393 temperate lakes that span 1941 to 2017. We find that a decline in dissolved oxygen is widespread in surface and deep-water habitats". [2] To suggest that impacts of climate change on Trout Lake may need to be "acknowledged and monitored" is not sufficient. The Consultants state "Lake management should address potential stressors associated with climate change and develop management actions intended to minimize impacts, and not solely focus on the management of direct anthropogenic impacts such as septic systems from development." It should be self-evident that most harmful impacts to Trout Lake caused by climate change, such as longer ice-free periods, increased air temperatures, changes in weather patterns and increases in blooms of toxic bluegreen algae are out of the control of municipal governments. Protecting water quality by taking the precautionary approach and limiting any new development on Trout Lake is one entirely feasible, effective way for the City of North Bay and the Municipality of East Ferris to minimize additional anthropogenic impacts.

References:

- 1. Climate Change and Its Effects on Lake Ecosystems in Northwestern Ontario The Lake of the Woods Water Sustainability Foundation 2021 Ask an Expert Series
- 2. Jane, S.F., Hansen, G.J.A., Kraemer, B.M. *et al.* Widespread deoxygenation of temperate lakes. *Nature* **594**, 66–70 (2021).

We are also concerned that the future Water Quality of Trout Lake and its Watershed should not only be measured in terms of "development capacity" based largely on Phosphorous levels, as the main indicator, rather the overall Management Plan needs to incorporate and collectively consider all other measured parameters (Chemicals/Clarity/Temperature/Dissolved Oxygen etc.) and determine how this data is to be used within the Management Plan and future Water Quality Objectives as a measurement for the overall health of the Lake especially with considerations for the impacts of the environment and the current PFAS situation.

Although we were invited and did/do appreciate meeting with the Consultants, historically the TLCA has been part of the process from onset as a Stakeholder, and/or part of a Steering Committee to have Valuable/Credible input. We feel our concerns and input presented last summer have been largely ignored.

Please inform us of the Next Steps in the process how our concerns will be addressed prior to Council's decision to consider adopting this Study.

We remain hopeful that the "Public Consultation Phase," or this step identified in the Study Process remains an effective, collaborative, working opportunity, by giving the utmost regard to the concerns presented on behalf of the TLCA Board of Directors and its Membership, by sufficiently acknowledging, evaluating, and applying, these conclusions to the Study outcomes.

We look forward to working with you to address our concerns prior to the finalization of the study's recommendations currently in draft, final staff report(s), and any submission to Council for adoption of the path forward for Trout Lake and its Watershed.

Sincerely (on behalf of the TLCA Board or Directors and our Membership),

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Anthony M. Falconi, B.A.Sc. (ME), B.Ed. President

Attachments: (1) July 5th, 2022 Letter from TLCA (2) 2022 Slide Presentation to Council

c.c. Mayor and Council, City of North Bay via Karen McIsaac, AMCT City Clerk
John Severino, CAO, City of North Bay
Adam Curran, Policy & Business Development Planner, City of North Bay

Mayor and Council, Municipality of East Ferris via Kari Hanselman, Clerk Jason Trottier, CAO, Municipality of East Ferris Greg Kirton, Director of Community Service, Municipality of East Ferris

North Bay Mattawa Conservation Authority Staff via Chitra Gowda, CAO