Recommendations for policy improvements and better implementation of the Lake Simcoe Protection Plan in its 10-year review

February 9, 2021

Lake Simcoe has the best watershed-based legislation in Canada, and yet, we are not making sufficient progress towards the science-based targets of the Lake Simcoe Protection Plan (LSPP). The priorities below represent what is urgently needed for the LSPP to achieve its objectives. Over the years our member groups have expressed the most concern about phosphorus reduction and natural heritage protection; they are our top priorities for protecting the long-term health of the Lake Simcoe watershed.

There is no compelling scientific argument for weakening the targets and objectives of the LSPP, nor its policies. The Lake Simcoe Protection Act lays out reporting requirements for the Minister, including “prepare a report that describes the extent to which the objectives of the LSPP are being achieved”\(^1\). This has not been done. Therefore the Rescue Lake Simcoe Coalition and its 26 member groups want the province of Ontario to uphold or strengthen the LSPP’s targets and objectives (Protect Our Plan) and during this review, focus on its implementation. While today’s targets and objectives should remain strong, some additional targets and policy amendments would assist improved implementation of the LSPP.

Further, the Made in Ontario Environment Plan commits the province to: “Build on previous successes and continue to implement the Lake Simcoe Protection Plan to protect and restore important natural areas and features of the lake.”\(^2\) We will hold the province to this promise.

The recommendations below include improvement to implementation and policy. Our expectations follow.

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1 Lake Simcoe Protection Act, S. 12.(2) https://www.ontario.ca/laws/statute/08l23
Protect Our Plan Priorities in brief:

1. Improve water quality by reducing Phosphorus loads to the lake to 44 tonnes per year, as soon as possible, from urban and agricultural areas, and from aggregate and construction sites;
2. Support a healthy environment around the lake and reduce flooding impacts by protecting 40% of the watershed area’s forests and wetlands;
3. Enable First Nations and the Lake Simcoe Region Conservation Authority to participate meaningfully in LSPP governance;
4. Respect the LSPP by stopping the use of Minister’s Zoning Orders (MZOs) in the watershed;
5. Increase public engagement in restoration and invasive species control. Get the public and businesses involved in locally-driven stewardship activities;
6. Incorporate and implement the Lake Simcoe Climate Change Adaptation Strategy policies into the LSPP to reduce phosphorus loads, mitigate the impacts of climate change, and increase natural cover.

Protect Our Plan Expectations Are:

1. The Province of Ontario does not weaken targets, objectives, or timelines associated with phosphorus reduction;
2. That any changes made to LSPP policies will strengthen those policies, or will assist in the implementation of a policy related to achieving one of the LSPP’s objectives;
3. The Province of Ontario revises the Phosphorus Reduction Strategy and identifies cost and funding sources for its implementation;
4. The Province of Ontario does not weaken phosphorus reduction and stormwater management requirements for development and aggregate industries;
5. New Sewage Treatment Plants are not permitted in the Lake Simcoe watershed;
6. Research, investment, and provincial direction for local implementation of the 40% high quality natural cover target of the LSPP result in a clear, time bound plan and regulation for achieving 40% high quality natural cover target of the LSPP;
7. Investment is made in land trusts’ acquisition of lands that contribute to achieving 40% high quality natural cover in the watershed;
8. Fulfil the Lake Simcoe Protection Plan’s commitments to involving First Nations in Plan implementation and policy development moving forward.
About us:

The Rescue Lake Simcoe Coalition is a lake-wide member-based organization, representing 26 groups in the Lake Simcoe watershed, that provides leadership and inspires people to take action to protect Lake Simcoe. www.rescuelakesimcoe.org

Our Story: We spearheaded the campaign to get the Lake Simcoe Protection Plan (LSPP) in 2008, with the support of 38 local groups, Environmental Defence and Ontario Nature. Our Executive Director sat on the provincially-appointed Lake Simcoe Advisory Committee, the Lake Simcoe Science Committee, and ultimately chaired the Lake Simcoe Coordinating Committee until stepping down in 2018. Today we work with our member groups and other Ontario environmental organizations to educate the public about the lake’s health and the importance of the LSPP.
Detailed recommendations
Priority #1

Improve Water Quality
Chapter 4

**Preamble:** Lake Simcoe’s biggest challenge is lowering phosphorus (P) loads from many sources. The Lake Simcoe Science Committee developed water quality targets for dissolved oxygen (necessary for healthy cold water fish) and the phosphorus loads that drive oxygen levels. Although some dissolved oxygen measures have improved, P loads have not. The Precautionary Principle should be respected in the absence of a robust scientific explanation for this unexpected outcome, and we should not use the improvement in dissolved oxygen to justify weakening the science-based P load target.

Reducing P loads is not something municipalities can do alone. Indeed, the shoreline communities of Brock, Georgina, Georgina Island First Nation, Barrie, and Orillia supported our call “on the Ontario Government to demonstrate its commitment to clean water and protecting what matters most in the provincial statutory review of the Lake Simcoe Protection Plan, by ensuring that provisions in the Lake Simcoe Protection Plan that protect water quality are not weakened” in Council resolutions.

Further, responding to a pre-election survey in 2018 conducted by Lake Simcoe Watch, the Mayors of Aurora, Barrie, Bradford-West Gwillimbury, Brock, Georgina and Oro-Medonte called for the development and implementation of a plan to achieve the LSPP’s phosphorus reduction target by 2026. The LSPP’s phosphorus reduction target is getting P loads down to 44 tonnes per year from a current 10 year average load in the neighbourhood of 90 tonnes per year.

1. **Reach the Phosphorus reduction target of 44 tonnes a year as soon as possible.**
   
   a. Maintain the prohibition on new Sewage Treatment Plants discharging to Lake Simcoe.

   Between 2010 and 2015 phosphorus loads from STPs were cut nearly in half - the only measurable reduction in phosphorus inputs to the lake in that time. Hard caps on effluent discharges are an effective way of driving innovation in the management of wastewater, and promote water management conservation best practices. And while it may be appealing to weaken the STP P load cap, one must be fully cognisant that overland stormwater loads of new development are a major factor in the lake’s pollution: the STP does not erase the impact of development. Further, there are cases where sewage sludge is simply applied to fields upstream from the lake, and still pollutes the lake.
i) Maintain the Lake Simcoe Protection Plan regulation that “no new municipal sewage treatment plant shall be established in the Lake Simcoe watershed” unless they are replacing an existing one, or where subsurface sewage works or on-site sewage systems are failing” as per LSPP regulation 4.3-4.4;

ii) In order to avoid additional P loading from STPs in the watershed, a clearer, narrower definition of “replacement” is needed in 4.3.a.;

iii) Do not add any sewage works or sewage ponds to the list of those that can be replaced with a larger facility, and remember that the goal is a net reduction in P from serviced properties, not just the STP’s P load;

iv) Until the Phosphorus Reduction Strategy is revised at least, maintain today’s nutrient load caps on sewage treatment plants.

b. Contribute financially if needed to complete the building the Stormwater Treatment facility on the Holland River by 2021, to which the Federal government and York Region have committed funding.

c. In line with the Precautionary Principle (which is in the LSPP as a “Principle to guide our efforts”) do not include the anticipated P reductions from the Holland River facility in growth planning, STP allocation planning, or the Phosphorus Reduction

Phosphorus loads vastly exceed the P load target and are being driven by high water flows.
Source: Minister’s 10 year report on Lake Simcoe, July 2020. ontario.ca/page/ministers-10-year-report-lake-simcoe#section-3
Strategy until the facility has been built, and its effectiveness in the real world has been measured for a minimum of 5 years.

d. Consult widely then revise the Lake Simcoe Phosphorus Reduction Strategy (a separate document enabled through LSPP policy 4.24 SA) in 2021 to make it actionable, with sector-specific interim targets and funding solutions for each sector. Identify oversight and enforcement roles.

i) Prioritize phosphorus reduction actions following criteria that ensure:

i. The work will have beneficial, long-term impacts on phosphorus load reductions. (For example, if we choose to focus on streambank stabilization and restoration and planting, is there evidence that these actions reduce P loads year after year the way STP caps do? Are they measurable? Is the science solid?)

ii. That multiple benefits are achieved with each project, in particular:
   ● reducing flooding risk,
   ● climate change adaptation and mitigation,
   ● natural heritage protection,
   ● engaging the public and the business community.

ii) Complete the Phosphorus Reduction Strategy work outlined in the LSPP, policy 4.26-SA, including:

i. developing subwatershed phosphorus loading targets;

ii. the identification of practical and effective actions that should be undertaken to address each source or sector...;

iii. the examination of how effluent re-use opportunities in the Lake Simcoe watershed may contribute to reducing phosphorus loadings to achieve the dissolved oxygen target of 7mg/L.

iii) Better implement the Phosphorus Reduction Strategy, as recommended in the Minister’s 5-year report on Lake Simcoe3, including:

- Improve the tracking of actions taken by various partners to reduce phosphorus loads to watershed streams and tributaries from agricultural and urban areas;
- Ensure effective tools are in place to manage the impacts of growth on the lake (e.g. low impact development);
- Promote the optimization of new and existing stormwater management facilities;
- Continue to promote and support site-level stewardship and best management practices;

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● Support the development of innovative new technology for the treatment of wastewater, stormwater and agricultural runoff; and
● Promote the development and implementation of strategies to mitigate the effects of extreme weather events and associated phosphorus loading.

e. Increase development cost charges to support municipal infrastructure and maintenance costs associated with reducing phosphorus loading to the lake.⁴

f. Monitor and communicate additive and synergistic effects of pharmaceuticals and personal care products on aquatic life and water quality.

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Priority #2

Protect Forests, Wetlands, and Shorelines & Adapt to and Mitigate Climate Change
Chapter 6 & 7

Preamble: Green space is vital to people’s health and quality of life through outdoor recreation and enjoyment, and it provides habitats for the flora and fauna in the watershed, including species at risk. It also helps buffer us from the impacts of climate change, like flooding, rising air and water temperatures, and is a carbon sink. Many of the recommendations in the Lake Simcoe Climate Change Strategy underline the importance of achieving the targets of the Natural heritage chapter of the LSPP.

But we’re going the wrong way! Losses of forest and wetland cover have occurred since the introduction of the LSPP. The LSPP identifies that 40% of the watershed should be in large patches of “high quality natural cover”. High quality natural cover has been defined and mapped, and the Province’s research has identified that 28% of the watershed is in high quality natural cover. Rescue Lake Simcoe Coalition research into the strength of environmental policy protections across the watershed found that only half of that is well-protected by restrictive provincial policies. There are no policies set to achieve the 40% cover target.

Some shoreline naturalization improvements have been made and documented since 2009, but no analysis of overall shoreline trends have been provided. Anecdotally, our members observe an increase in boathouse building, shoreline alteration, hardening, and loss of vegetation. We may well be going the wrong way on this target too.

2. Reach the Natural heritage targets of the Lake Simcoe Protection Plan:
   - No further loss of natural shorelines on Lake Simcoe;
   - Achieve a greater proportion of natural vegetative cover in large high quality patches;
   - Achieve a minimum 40% high quality natural vegetative cover in the watershed;
   - Achieve protection of wetlands;
   - Achieve naturalized riparian areas on Lake Simcoe and along streams;
   - Restore natural areas or features;
   - Achieve increased ecological health based on the status of indicator species and maintenance of natural biodiversity.

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Natural Heritage Recommendations

a. Due to the significance of patch size, it is of utmost importance to protect and maintain the 25 hectare plus patches of natural cover mapped by the province as “High Quality Natural Cover” using the following steps:

i) Identify and ground truth the quality of the natural features. The Province should continue to fund scientific research that examines the structure and composition of the High Quality Natural Cover parcels, and the presence of rare or endangered species, and their habitats, by the end of 2022;
ii) The Ministry of Natural Resources and the Lake Simcoe Region Conservation Authority, along with municipalities, need to map all known forest patches, then categorize by the 4 hectare (south) and 10 hectare (north) thresholds of the province’s “Technical Definitions and Criteria for Identifying Key Natural heritage Features and Key Hydrologic Features for the Lake Simcoe Protection Plan”. Any woodlands below these thresholds should then be recommended for evaluation to see if they meet the density/crown cover metrics of the technical guide;
iii) All levels of government should cooperate on mapping and evaluation of any unevaluated natural cover, including wetlands;
iv) Municipalities and Upper tier Region or County need to put the natural features in Official Plans (maps, policies, definitions, and supportive lower-tier zoning);

v) The Province must review Official Plans to confirm whether the natural features mapped by the Province, and shoreline areas, are in fact protected in Official Plans;
vii) The Province should encourage municipalities to enact an interim control bylaw to protect the mapped High Quality Natural Cover parcels of 25 hectare plus from rezoning or land use changes until the research is complete;

b. The Province needs to work with municipalities to ensure they map the Growth Plan Natural Heritage System and incorporate the associated policies\(^7\) into their Official Plans within the identified time-frame. Once implemented, they will offer the best protection yet for natural heritage features and in particular for the linkage features between the features.

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c. To support climate resilient urban canopy cover, ensure that all Lake Simcoe municipalities have strong tree cutting bylaws. Amend policy 6.46-SA as follows, and make it a Designated Policy, one having legal effect:

6.46-SA Within two years of the date the Plan comes into effect, the MNR and MOE, in consultation with other ministries, municipalities and the LSRCA will lead the development of a template for the following development will encourage implementation of the model municipal site alteration and tree cutting bylaw within the watershed as related to natural heritage features including wetlands and woodlands, developed by MNR, MoE etc.

d. Amend the LSPP to require the establishment of natural cover and restoration targets in each subwatershed by 2022. Subwatershed targets should be set for forest cover, wetland cover, and high quality natural cover, and based on the LSRCA’s Natural heritage System and Restoration Strategy, 2018.

f. Make progress on naturalizing shorelines:

i) Require municipalities to re-naturalize public areas adjacent to shorelines and streams, or provide financial incentives for municipalities to do this work. Make policy 6.14-SA a Designated Policy, one having legal effect and amend as follows:

6.14-SA Public bodies are encouraged to actively re-naturalize public areas adjacent to shorelines and streams to a minimum of 30 metres where practical and feasible.

ii) Enable better naturalization of privately owned shoreline areas by supporting outreach and funding incentives, to achieve the following policy of the LSPP:

6.15-SA Through the implementation of the stewardship, education and outreach policies (8.5-8.11) owners of existing cottages and residences will be encouraged to re-naturalize shorelines and areas adjacent to streams up to 30 metres where practical and feasible.

iii) Develop, fund and implement a shoreline version of the Managed Forest Tax Incentive Plan (MFTIP) in order to provide moderate tax incentives for shoreline landowners to improve the health of their shoreline.

g. The Province must move past lip service to First Nations by providing meaningful opportunities for First Nations’ to identify priority lands for protection through a Traditional Ecological Knowledge assessment of the Lake Simcoe watershed.

i) In partnership with the public, land trusts and Conservation Authorities, purchase environmentally significant lands and linkage lands. Ensure that Indigenous communities are engaged and that the process considers co-management with Indigenous communities;
ii) Arrange for the transfer of Crownlands under the protection of the province to Land Conservancies or create Indigenous Protected and Conserved Areas with supporting stewardship funding.

Governance
Chapter 8

3. Enable First Nations and the Lake Simcoe Region Conservation Authority to participate meaningfully in LSPP governance.

First Nations

For clarity, in this submission we are referring to First Nations with traditional territories and Treaty rights in the Lake Simcoe Watershed.

As recommended by the Lake Simcoe Coordinating Committee in 2018, “Although the Lake Simcoe Protection Plan states that First Nations will be involved in the development and implementation of LSPP policies, there has not been an adequate effort made to do so in a meaningful and substantially helpful way. We want to support the ability of First Nations communities at Lake Simcoe to engage in the development and implementation of LSPP policies, ensuring their involvement at the idea stage of a policy, and throughout. A thorough review will assist in identifying and prioritizing the policies for which there should be better FN consultation, including meaningful involvement and input. This action will also help to build capacity among Lake Simcoe’s First Nations.

a. Promote partnership with First Nations in implementing the LSPP by funding a position under the direction of Lake Simcoe’s First Nations, to identify LSPP policies that require more thorough First Nations involvement, input, and/or Traditional Ecological Knowledge.

b. Consultation itself should be supported by providing advance notice of timelines, and by providing adequate compensation to the FN experts who are asked for their knowledge and participation, as well as travel reimbursements.

c. In partnership with the relevant agencies identified by the relevant LSPP policies, additional time and review should be given to how Traditional Ecological Knowledge and/or First Nations priorities and perspectives will be incorporated in the implementation of the LSPP policies.”

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8 Advice from the Minister’s Advisory Committees: https://www.ontario.ca/page/ministers-annual-report-lake-simcoe-2017#section-11
Lake Simcoe Region Conservation Authority

d. Give the Lake Simcoe Region Conservation Authority (LSRCA) the full powers they had before changes to the Conservation Authorities Act were made under Schedule 6 of Ontario’s budget omnibus bill, December 2020. In particular, the LSRCA’s participation in: site plan approval, providing direction for developers on the application of the LSPPs stormwater and Low Impact Development policies, and the Lake Simcoe Phosphorus Offset Program (LSPOP), is essential for managing and reducing the severe impacts of development. These changes should be specified in the LSPP and an amendment made to the Conservation Authorities Act to enable these powers, as promised in the Ministry of the Environment, Conservation and Parks’ (MECP), “Modernising conservation authorities operations – Conservation Authorities Act” ERO Number: 013-5018.

e. Put the Stewardship Network in the hands of the LSRCA so stewardship activities can be well coordinated and effectiveness tracked using a consistent methodology. Amend LSPP policy 6.5-SA by clarifying that, now that the Stewardship Network has been established, the lead agency responsible for coordinating the Stewardship Network should be the LSRCA.

f. Respect the LSPP by stopping the use of Minister’s Zoning Orders (MZOs) in the watershed for development planning approvals unrelated to emergencies. There is no requirement for zoning made through Ministers Zoning Orders to conform to Lake Simcoe Protection Act’s designated policies (those with legal effect), S. 6 (2). Thus the use of MZOs in the Lake Simcoe watershed risks undermining the implementation of LSPP policies for specific developments. This is concerning in Innisfil in particular, where the Orbit Mobility Hub development, housing up to 150,000 on greenfields, is proposed, using an MZO.

Increase Stewardship Effectiveness and Engagement

Chapter 8

4. Increase public engagement in restoration and invasive species control. Get the public and businesses involved in locally-driven stewardship activities.

   a. A dedicated provincial funding program run through the Lake Simcoe Stewardship Network should be established to support the completion of restoration projects advanced at the local level.

   b. Put the Stewardship Network in the hands of the LSRCA (as above, 3.e.)

   c. A renewed Lake Simcoe Stewardship Network should focus on beach water quality, and track sources of contamination. Address those sources through focused local
action, using the subwatershed approach, in partnership with municipalities, the LSRCA and interested local groups.

d. Increase the capacity of local stewardship groups and municipalities (with financial investments and staff support) to understand their subwatershed plan and address problems in their subwatershed plan.

e. Communicate with the public around lake health about what individuals can do.

f. Address stewardship priorities as recommended in the Province’s Lake Simcoe Climate Adaptation Strategy:
   “All partners, in collaboration with the Province, should adopt practices in the watershed to minimize the flow of nutrients and other pollutants into tributaries, groundwater and/or the lake at all times.
   2.4. Implement Best Management Practices (BMPs) on land use to manage urban, rural and agricultural runoff and nutrient loading.
   2.5. Develop joint programs through public/private partnerships that may include cost-sharing for innovative initiatives, such as rainwater harvesting, green roofs and greywater reuse.
   2.6. Integrate climate change adaptation considerations and BMPs into manuals and guidelines available to people working in agriculture, land use development and other sectors.”  


A flooded section of road in Innisfil in February 2018.
Address Climate Change impacts
Chapters 6, 7 & 8

5. Address Climate Change impacts

Preamble: Climate change impacts on Lake Simcoe are documented and real. We now know that high levels of precipitation drive peaks in phosphorus loads, as heavy rain scours fields, roads, then riverbanks, and conveys sediment and nutrients into rivers and the lake. Indeed, the peak load of 131 tonnes of P in 2017 was attributed to extreme precipitation events.\(^\text{10}\) Remember, the target P load is 44 tonnes / year, and the current ten year average is around 90 tonnes / year.

Climate change has also contributed to fewer days of ice cover, more beach closures due to high bacteria levels, more blue green algae events, and a decline in coldwater fish survival and abundance.\(^\text{11}\)

We are extremely concerned that the severe reduction in Conservation Authorities powers, and the increased use of MZOs and the Minister’s ability to override CA decisions on the development of natural features will result in poorer ecological outcomes for the lake and put downstream homeowners at risk.

Keeping wetlands on the landscape is a cost-effective way to mitigate climate change’s heavy precipitation impacts. According to a 2017 study, leaving wetlands intact on the landscape can reduce the financial costs of floods by up to 38 per cent.\(^\text{12}\)

a. As stated in the Lake Simcoe Climate Change Strategy, the Province must prioritize and increase the protection of natural heritage features, in urban and non-urban settings, and focus on achieving the riparian (shoreline and riverbed) restoration and natural cover targets of the LSPP.

\(^{10}\) Minister’s 10 year report on Lake Simcoe, July 2020. ontario.ca/page/ministers-10-year-report-lake-simcoe#section-3
\(^{11}\) A Local Perspective on Climate Change. https://www.lsrca.on.ca/Pages/Local-Perspective-on-Climate-Change.aspx
\(^{12}\) Moudrak, N., Hutter, A.M.; Feltmate, B. 2017. When the Big Storms Hit: The Role of Wetlands to Limit Urban and Rural Flood Damage. Prepared for Ontario’s Ministry of Natural Resources and Forestry. Intact Centre on Climate Adaptation, University of Waterloo.
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Ontario Nature
North Mara Beach Residents Association
Lake Simcoe Watch