



## **The Regional Municipality of Durham**

### **Committee of the Whole Agenda**

Council Chambers  
Regional Headquarters Building  
605 Rossland Road East, Whitby

**Wednesday, March 10, 2021**

**9:30 AM**

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Please note: In an effort to help mitigate the spread of COVID-19, and to generally comply with the directions from the Government of Ontario, it is requested in the strongest terms that Members participate in the meeting electronically. Regional Headquarters is closed to the public, all members of the public may [view the Committee meeting](#) via live streaming, instead of attending the meeting in person. If you wish to register as a delegate regarding an agenda item, you may register in advance of the meeting by noon on the day prior to the meeting by emailing [delegations@durham.ca](mailto:delegations@durham.ca) and will be provided with the details to delegate electronically.

**1. Roll Call**

**2. Declarations of Interest**

**3. Statutory Public Meetings**

There are no statutory public meetings

**4. Delegations**

- 4.1 Claire Malcolmson, Rescue Lake Simcoe Coalition, re: Review of the Lake Simcoe Protection Plan (2021-COW-3) [Item 7. A)]

**5. Presentations**

- 5.1 Tim Krsul, Senior Program Advisor, Waterways Protection Office, Ministry of Environment, Conservation and Parks (MECP), re: Lake Simcoe Protection Plan 10-Year Review (2021-COW-3) [Item 7. A)]

## 6. Correspondence

- A) **Rescue Lake Simcoe Coalition**, re: Correspondence dated February 9, 2021 regarding recommendations for policy improvements and better implementation of the Lake Simcoe Protection Plan in its 10 year review (2021-COW-3) [Item 7. A] 3 - 17

Recommendation: Refer to consideration of Report #2021-COW-3

## 7. Reports

- A) Regional Submission to the Ministry of the Environment, Conservation and Parks for the Lake Simcoe Protection Plan 10-Year Review  
  
Environmental Registry of Ontario Posting #019-2833  
Launching the Minister's 10-Year Review of the Lake Simcoe Protection Plan (2021-COW-3) 18 - 32
- B) Enterprise Maintenance Management System Project Update (2021-COW-5) 33 - 43

## 8. Confidential Matters

There are no confidential matters to be considered

## 9. Other Business

## 10. Adjournment

Notice regarding collection, use and disclosure of personal information:

Written information (either paper or electronic) that you send to Durham Regional Council or Committees, including home address, phone numbers and email addresses, will become part of the public record. This also includes oral submissions at meetings. If you have any questions about the collection of information, please contact the Regional Clerk/Director of Legislative Services.

# **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”<sup>1</sup>. 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.”*<sup>2</sup> We will hold the province to this promise.

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

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<sup>1</sup> Lake Simcoe Protection Act, S. 12.(2) <https://www.ontario.ca/laws/statute/08I23>

<sup>2</sup> Made in Ontario Environment Plan. P. 13. <https://www.ontario.ca/page/made-in-ontario-environment-plan>

## **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](http://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.*



Packed house at Campaign Lake Simcoe and the Ladies of the Lake's Lake Simcoe Summit at Barrie Southshore Center in 2007.



Standing ovation as Premier McGuinty promises to introduce the *Lake Simcoe Protection Act* at the Southshore Centre.

## 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](#).

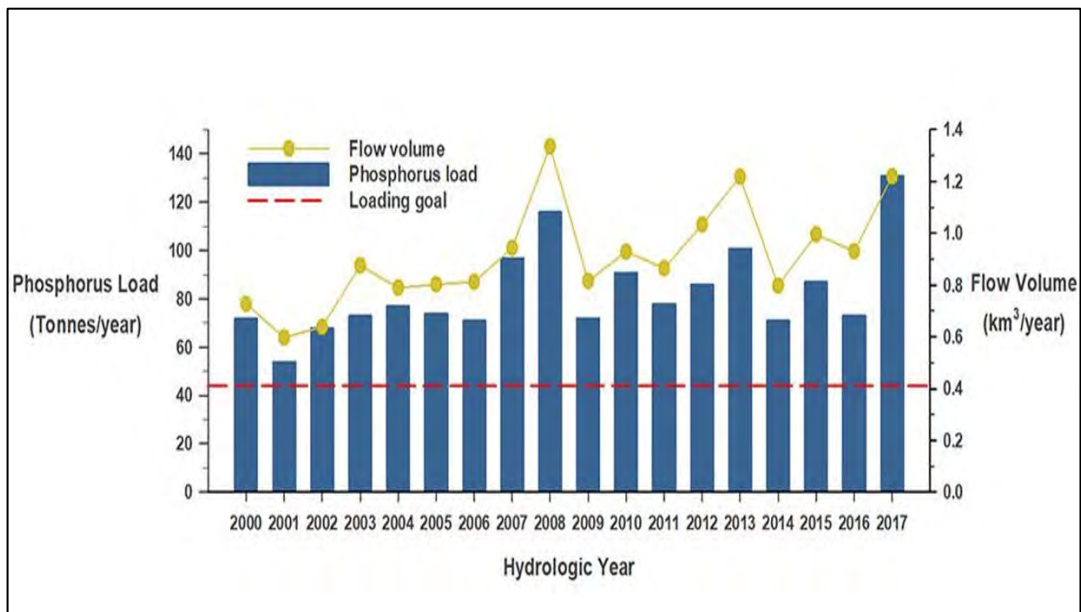
Further, responding to a pre-election survey in 2018 conducted by Lake Simcoe Watch, the Mayors of Aurora, Barrie, Bradford-West Gwillimbury, Brock, Georgina and Oro-Medonte called for the development and implementation of a plan to achieve the LSPP's phosphorus reduction target by 2026. The LSPP's phosphorus 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.

### Phosphorus Loads to Lake Simcoe and Flow Volume, 2000 - 2017



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](https://ontario.ca/page/ministers-10-year-report-lake-simcoe#section-3)

- 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



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 Simcoe<sup>3</sup>, 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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<sup>3</sup> Minister's 5-year report on Lake Simcoe, P 21. <https://www.ontario.ca/page/ministers-five-year-report-lake-simcoe-protect-and-restore-ecological-health-lake-simcoe-watershed>



- 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.<sup>4</sup>
- f. Monitor and communicate additive and synergistic effects of pharmaceuticals and personal care products on aquatic life and water quality.

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<sup>4</sup> Lake Simcoe Watch has estimated the cost of what is required to achieve the P reduction target of the LSPP by 2026 and suggests that increasing Development Cost Charges by 4.5% would cover the cost of achieving the P reduction target. Lake Simcoe Watch: Cleaning Up lake Simcoe, a Discussion Paper, 2020. p. 11.  
<https://lakesimcoewatch.ca/wp-content/uploads/2020/02/Simcoe-Book-final.pdf>

## 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 <sup>5</sup>. 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.<sup>6</sup>

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<sup>5</sup> LSRCA's Watershed Report Card 2018. <https://www.lsrca.on.ca/watershed-health/reportcard>

<sup>6</sup> Lake Simcoe Protection Plan, P. 46. <https://www.ontario.ca/document/lake-simcoe-protection-plan>

## 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;
  - vi) 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;
  - vii) Provide \$30 million in support for non-policy initiatives such as land acquisition or conservation easements by land trusts, prioritizing properties that are within the 25 hectare patches that do not meet the criteria for strong policy protection.
- b. The Province needs to work with municipalities to ensure they map the Growth Plan Natural Heritage System and incorporate the associated policies<sup>7</sup> 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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<sup>7</sup> Growth Plan for the Greater Golden Horseshoe. S 4.2.2.3 <https://www.ontario.ca/document/place-grow-growth-plan-greater-golden-horseshoe>

- 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~~ Ensure 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~~ [must] 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.”<sup>8</sup>

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<sup>8</sup> 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." <sup>9</sup>



A flooded section of road in Innisfil in February 2018.

<sup>9</sup> Lake Simcoe Climate Change Strategy. <https://www.ontario.ca/page/lake-simcoe-climate-change-adaptation-strategy>



## 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.<sup>10</sup> 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.<sup>11</sup>

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.<sup>12</sup>

- 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.

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<sup>10</sup> Minister's 10 year report on Lake Simcoe, July 2020. [ontario.ca/page/ministers-10-year-report-lake-simcoe#section-3](https://ontario.ca/page/ministers-10-year-report-lake-simcoe#section-3)

<sup>11</sup> A Local Perspective on Climate Change. <https://www.lsrca.on.ca/Pages/Local-Perspective-on-Climate-Change.aspx>

<sup>12</sup> 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.

*SIGNATORIES*  
*YOUR GROUP HERE*

AWARE Simcoe  
Barrillia Park Ratepayers Association  
Concerned Citizens of Ramara  
Lake Simcoe Association  
Lake Simcoe Watch  
Ontario Headwaters Institute  
Ontario Nature  
North Mara Beach Residents Association  
Simcoe County Greenbelt Coalition  
Snake Island Cottagers Association  
Sustainable Orillia  
The Wilderness Committee  
Wellington Water Watchers



# The Regional Municipality of Durham Report

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To: Committee of the Whole  
From: Commissioner of Planning and Economic Development and  
Commissioner of Works  
Report: [#2021-COW-3](#)  
Date: March 10, 2021

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**Subject:**

Regional Submission to the Ministry of the Environment, Conservation and Parks for the Lake Simcoe Protection Plan 10-Year Review, File #D07-000633

Environmental Registry of Ontario Posting [#019-2833](#) Launching the Minister's 10-Year Review of the Lake Simcoe Protection Plan

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**Recommendation:**

It is recommended that the Committee of the Whole recommend to Regional Council:

- A) That Report #2021-COW-3 be endorsed and submitted to the Minister of Environment, Conservation and Parks as Durham Region's response to the Lake Simcoe Protection Plan 10-Year Review;
- B) That the province, affirm, revise and update the Lake Simcoe Protection Plan as necessary to:
  - i) Continue to employ an ecosystems approach and subwatershed approach to the LSPP because these principles remain important to understand cumulative impacts on the watershed while focusing specific actions to the unique needs and priorities of different areas of the watershed;
  - ii) Complete systematic tracking and progress reporting of each of the targets of the LSPP and identify whether changes have been observed on a watershed/subwatershed level;

- iii) Consider assigning timelines and performance measures to the targets in the LSPP;
- iv) Produce a supplemental report that provides an update on the implementation of the Strategic Actions of the LSPP;
- v) Update the LSPP to reflect the changing health of the watershed based on the changing context of the watershed and ongoing advances in watershed science, particularly as they relate to the impacts of climate change;
- vi) Update the stormwater management policies of the LSPP to reflect the considerable research and advancements in industry knowledge of Low Impact Development;
- vii) Update the LSPP to consider and be consistent with the 2017 updates to Greenbelt Plan and Oak Ridges Moraine Conservation Plan, the 2019 update to the Growth Plan and the South Georgian Bay Lake Simcoe Source Protection Plan;
- viii) Provide support to the Lake Simcoe Region Conservation Authority to analyze the results of the Phosphorus Offsetting Policy to determine how well the remediation actions are working and how long the offset lasts.
- ix) Consider the following specific to private sewage systems:
  - a. Oversee the implementation, monitoring and completion of all mandatory maintenance inspections;
  - b. Define program parameters, develop an inspection template and extend cost covering and supplements to municipalities to ensure each municipality is acting consistently;
  - c. Fully fund or subsidize the cost of mandatory maintenance inspections to ensure timely completion and increased public support for the program, especially among those with properties not only on Lake Simcoe, but on its tributaries;
  - d. Facilitate grants, subsidies or loans for private homeowners to remediate sewage systems proactively; and
  - e. Improve messaging and outreach to homeowners to increase understanding of the program;

- x) Focus the next phase of LSPP implementation on more significant sources of phosphorus such as, stormwater and agricultural/rural runoff and invasive species, and that the existing phosphorous loading caps for water pollution control plants be maintained;
- xi) Implement any new initiatives and measures in a phased approach, allowing for flexibility given the broad range of local partners and available resources;
- xii) Establish a LSPP implementation committee that would serve to increase collaboration and communication among the various stakeholders;
- xiii) Produce supplemental material to the Minister's 10-Year Report that is directed at property owners, including the development of a dedicated website to report on the health of Lake Simcoe that uses plain language and is accessible to residents;
- xiv) Develop an education and outreach campaign for individuals and businesses within the Lake Simcoe watershed to foster a broader understanding of Lake health, key areas of concern and the impacts of LSPP policies and programs;
- xv) Provide presentations to stakeholders to facilitate a more collaborative approach toward implementing the LSPP;
- xvi) Support enforcement efforts related to the activities of private residents, agriculture/businesses and recreational enthusiasts;
- xvii) Contribute financially to the development and coordination of local/Regional climate change data to ensure consistency in data, objectives and performance measures;
- xviii) Develop a comprehensive financing strategy for the next decade of implementation of the LSPP that is consistent with the principles of the existing financing strategy;
- xix) Re-institute funding for land stewardship programs and retrofits to stormwater management systems;
- xx) Recognize that the current economic challenges related to COVID-19 bring some risk that future progress in achieving LSPP targets and objectives may be set back; and

- C) That a copy of this report be forwarded to the: Townships of Brock, Scugog and Uxbridge; Lake Simcoe watershed municipalities; Lake Simcoe Region Conservation Authority; Durham Environmental Advisory Committee; Durham Agricultural Advisory Committee; and Durham Region Roundtable on Climate Change.
- 

**Report:****1. Purpose**

- 1.1 The [Lake Simcoe Protection Plan, 2009](#) (LSPP) is a comprehensive watershed-based Plan to protect and restore the ecological health of Lake Simcoe and its watershed. The LSPP came into effect on June 2, 2009.
- 1.2 The [Lake Simcoe Protection Act, 2008](#) requires the Minister of Environment, Conservation and Parks (MECP) to review the LSPP at least every 10 years from the date the Plan takes effect. During the review, the province must consult with the council of each municipality that has jurisdiction in the Lake Simcoe watershed.
- 1.3 To meet this requirement, the province initiated a 10-year review of the LSPP on December 18, 2020. The [Minister's 10-Year Report on Lake Simcoe](#) was released in July 2020.
- 1.4 Regional staff participated in a virtual science forum on January 28, 2021 and a virtual town hall session on February 11, 2021.
- 1.5 The province invited stakeholders to submit comments by March 3, 2021. Regional staff advised the province that Durham would be unable to meet the deadline, and that comments would be submitted following the March 24, 2021 Regional Council meeting.
- 1.6 To inform the Region's comments on the 10-year review, provincial staff were invited to meet with Regional staff to discuss the review and were also requested to provide a presentation to this Committee, as was offered in the stakeholder invitation.

**2. Previous Reports and Decisions**

- 2.1 The following Regional staff reports related to the LSPP and Lake Simcoe watershed have been provided to Regional Council:
- a. Report #2009-J-11, Proposed Lake Simcoe Protection Plan;

- b. Report #2010-J-8, Lake Simcoe Phosphorus Reduction Strategy (EBR #010-8986) and Feasibility Study for Water Quality Trading in the Lake Simcoe Watershed (EBR #010-8989);
- c. Report #2010-J-9, Proposed Lake Simcoe Shoreline Protection Regulation Discussion Paper (EBR #010-9107);
- d. Report #2010-J-26, Proposed amendments to the Ontario Building Code (OBC) (O. Reg. 350/06) respecting on-site sewage maintenance inspection programs (EBR #010-9557);
- e. Report #2010-J-41, Update on Implementation of the Lake Simcoe Protection Plan;
- f. Report [#2011-P-56](#), Lake Simcoe Protection Plan;
- g. Report [#2011-P-76](#), Lake Simcoe Protection Plan Review – Recommended Policy Directions, File: D07-01; and
- h. Report [#2020-W-50](#), Pending Provincial Decision on Upper York Sewage Solutions Environmental Assessment.

### 3. Background

3.1 Approximately one third of the Region's geographic area (parts of Brock, Uxbridge and Scugog) lies within the Lake Simcoe watershed, including the Urban Areas of Uxbridge, Sunderland, Cannington and Beaverton. The Region also operates four water pollution control plants (WPCPs) in the watershed:

- a. Sunderland WPCP (Lagoons);
- b. Cannington WPCP (Lagoons);
- c. Lake Simcoe WPCP (Beaverton); and
- d. Uxbridge Brook WPCP.

3.2 The Lake Simcoe watershed contains significant natural, urban and agricultural systems, including portions of the Oak Ridges Moraine and Greenbelt Plan Area. Attachment #1 details the boundaries of the Lake Simcoe Protection Plan and locations of the WPCPs.

### 4. Overview of the Lake Simcoe Protection Plan

- 4.1 The *Lake Simcoe Protection Act, 2008* provides the authority for the development of the LSPP which supports the restoration and protection of the watershed.
- 4.2 The LSPP is part of the province's overall strategy to protect and restore the ecological health and environmental sustainability of the watershed. It builds on policies of the Provincial Policy Statement and the Greenbelt Plan but unlike these



other provincial planning instruments, the LSPP is watershed based. It is intended to provide additional policy direction to improve water quality, protect the watershed's natural heritage resources and manage the effects of climate change and invasive species.

#### 4.3 Policies in the LSPP are organized as follows:

- a. **Aquatic life** policies are intended to improve and restore the health of aquatic life within the watershed. Several policies seek to improve habitats and help protect and restore aquatic communities by improving overall management and stewardship of these resources;
- b. **Water quality** policies are intended to identify and address the causes of water quality degradation and actions needed to enhance water quality. Targets are also established for reduced phosphorus loadings, pathogens and contaminants;
- c. **Water quantity** policies are intended to help increase the capacity of the watershed to adapt to the impacts of climate change. Policies support water supply protection and water conservation and efficiency programs.
- d. **Shorelines and natural heritage** policies are intended to foster a resilient, adaptable and sustainable watershed by promoting and protecting the ecological health of the Lake Simcoe shoreline and the watershed's natural heritage.
- e. **Other threats and activities** policies focus on invasive species management, climate change and recreational activities that impact the watershed.

## 5. Regional Implementation of the Lake Simcoe Protection Plan

5.1 The Region has demonstrated a commitment to improving the health of the Lake Simcoe watershed through Regional infrastructure investments, research, operations, promotion, long range capital planning and other implementation measures:

- a. Investments in wastewater systems that flow into Lake Simcoe through rehabilitation, upgrades and optimization;

- b. Inspection of sewage treatment facilities regularly and reporting effluent concentrations monthly;
- c. Assisting municipalities in conducting inspections of private residential septic systems;
- d. Funding research and programs of the Lake Simcoe Region Conservation Authority;
- e. Implementing the provincial Phosphorus Reduction Strategy;
- f. Promoting water management and conservation;
- g. Implementing road salt management programs;
- h. Water testing/monitoring (including private water systems inspections, testing, monitoring and education campaigns);
- i. Employing and promoting best practices in stormwater management along Regional roadways and through official plan policies;
- j. Administering environmental health programs (e.g. beach and water quality monitoring and advisories, blue green algae monitoring, and the Well Aware Program);
- k. Updating and upgrading infrastructure through the Region's Asset Management Program, including a new asset management policy committed to environmental and climate change goals and objectives;
- l. Implementing the Durham Community Climate Adaptation Plan and Durham Community Energy Plan, corporate climate adaptation planning and development of a Durham Region Climate Change Master Plan (underway);
- m. Development of a Durham Region Long-Term Solid Waste Management Strategic Plan 2021-2040;
- n. Continuous monitoring and care of two legacy landfills within the watershed to ensure leachate prevention and the reduction or elimination of related waste contaminants and GHG emissions;
- o. Implementing erosion control programs including tree planting, stream bank erosion control inspections and projects, and roadside shoulder run-off erosion controls;
- p. Requiring studies such as water budgets and phosphorus budgets through the development approvals process; and
- q. Incorporating applicable LSPP policies into the Regional Official Plan (ROP) through the municipal comprehensive review, Envision Durham.

## **6. Minister's 10-Year Report on Lake Simcoe**

- 6.1 To inform the 10-year review and associated consultations, the MECP released the [Minister's 10-Year Report on Lake Simcoe](#) to outline the progress made under the LSPP in July 2020.

- 6.2 The Minister's Report describes the provincial and various stakeholder efforts taken to implement the LSPP, as well as results of monitoring programs and progress towards achieving the Plan's objectives. It highlights that Lake Simcoe is experiencing improvements through reduced phosphorus loads from sewage treatment, decreased algae, and successful reproductions in the cold-water fish community.
- 6.3 While these improvements are noteworthy, the Minister's Report also indicates that much has changed in the watershed over the last ten years. For example:
- a. Rapid urbanization, increased impervious surface cover and a population increase of over 100,000 across the entire watershed (mostly outside of Durham) has meant that surface runoff continues to be a key issue;
  - b. Improving high-quality natural cover remains difficult because much of the land in the watershed is privately owned;
  - c. Chloride contamination from road salt is an emerging threat to water quality; and
  - d. Climate change has resulted in more direct local impacts to the watershed.
- 6.4 This changing context, along with the unknown impacts of complex and compounding stressors to Lake Simcoe requires additional research and monitoring. Renewed efforts from all stakeholders to continue to implement the LSPP, and an assessment to determine new policies and/or programs, should be put in place.

## **7. Comments on the Lake Simcoe Protection Plan 10-Year Review**

- 7.1 The Region offers the following comments and recommendations on the 10-year review of the LSPP:
- a. The policies of the LSPP continue to be relevant, and are complemented by other policies and action plans, key provincial plans, standards and Acts. The LSPP applies an ecosystem approach and subwatershed approach in recognition that Lake Simcoe and its watershed is an interconnected system, and multi-scale actions will better protect and restore the ecological health of the Lake and watershed. It is recommended that the province continue to employ these principles to understand cumulative impacts on the watershed, while focusing specific actions to the unique needs and priorities of different areas of the watershed.

- b. While current LSPP policies are leading to some improvements, it is difficult to determine policy effectiveness because not all targets outlined in the LSPP are discussed in the Minister's 10-Year Report, nor are the scale of the improvements clear. For example, there are targets that no further loss of natural shoreline on Lake Simcoe occur, and that new invasive species be prevented, but an assessment of whether these targets have been achieved is not discussed. In order to assess the success of the LSPP, a comprehensive evidence-based monitoring plan should be included. It is recommended that the province undertake systematic tracking and progress reporting of each of the targets of the LSPP and identify whether changes have been observed on a watershed/subwatershed level.
- c. To assess effectiveness of the LSPP, it is recommended that the province consider assigning timelines and performance measures to the targets in the LSPP.
- d. The LSPP contains policies that set out strategic actions (SAs) that public bodies should take in order to meet the Plan's objectives including, stewardship and pilot programs, research, education and outreach. An assessment of which of these SA policies were achieved, and if the timelines identified in the LSPP were met, is absent from the Minister's 10-Year Report. It is recommended that the province produce a supplemental report that provides an update on the implementation of the strategic actions.
- e. As the Minister's 10-Year Report identifies, the context of the Lake Simcoe watershed is changing. It is recommended that the proposed updates to the LSPP also reflect the changing health of the watershed based on this changing context and ongoing advances in watershed science, particularly as they relate to the impacts of climate change.
- f. There has been considerable research and advancements in industry knowledge of Low Impact Development (LID) over the last ten years that can help to address both stormwater quality and quantity from new development. It is recommended that the stormwater management policies of the LSPP be updated to reflect these best practices.
- g. Since the release of the LSPP, the Greenbelt Plan, Oak Ridges Moraine Conservation Plan and Growth Plan have been updated. A Source Protection Plan under the Clean Water Act that covers the watershed was also released

in 2015 and was amended in 2019. It is recommended that the proposed updates to the LSPP consider and be consistent with the 2017 updates to the Greenbelt Plan and Oak Ridges Moraine Conservation Plan, the 2019 update to the Growth Plan and the South Georgian Bay Lake Simcoe Source Protection Plan. For example, considerations for excess soil management have been added to the above noted plans that may have implications specific to the Lake Simcoe watershed.

- h. In 2017, the Lake Simcoe Region Conservation Authority released the [Phosphorus Offsetting Policy](#), which requires that as of January 1, 2018 any new development in the watershed control 100 percent of the phosphorus leaving the property. If this is not possible, developers must pay a fee at a 2.5:1 ratio so that projects to “offset” the phosphorus can be completed elsewhere in the watershed. It is recommended that the province provide support to the Lake Simcoe Region Conservation Authority to analyze the results of the Phosphorus Offsetting Policy to determine how well remediation actions are working and how long the offset lasts.
- i. Specific to private sewage systems, many homeowners have concerns about the costs associated with the mandatory maintenance inspection program, which may lead to delays in inspections and lack of support for implementing the LSPP. Additionally, municipalities may not be in a position to cover the costs to implement the program. To address this issue, it is recommended that the province:
  - Oversee the implementation, monitoring and completion of all mandatory maintenance inspections;
  - Define program parameters, develop an inspection template and extend cost covering and supplements to municipalities to ensure each municipality is acting consistently;
  - Fully fund or subsidize the cost of mandatory maintenance inspections to ensure timely completion and increased public support for the program, especially among those with properties not on Lake Simcoe, but on its tributaries;
  - Facilitate grants, subsidies or loans for private homeowners to remediate sewage systems proactively. This would encourage homeowners to complete the work and decrease the amount of time a system would be malfunctioning; and

- Improve messaging and outreach to homeowners to increase understanding of the program.
- j. While a key initial focus of implementing the LSPP was to reduce phosphorus levels from wastewater plants, it is recommended that the next phase of implementation focus on more significant sources of phosphorus such as, stormwater and agricultural/rural runoff and invasive species, as identified within the provincial [Lake Simcoe Phosphorus Reduction Strategy](#). A more effective and larger decrease in phosphorus levels may be realized with lower costs by focussing resources on non-point sources rather than on WPCPs. The existing phosphorous loading caps should be maintained as the total contributions of phosphorous from all the WPCPs are minor in comparison to the non-point sources.
- k. As per the existing LSPP, it is recommended that any new initiatives and measures be implemented in a phased approach, allowing for flexibility given the broad range of local partners and available resources.
- l. To maximize project efficiencies and avoid duplication of effort, there is a need for coordination of actions among provincial ministries, LSRCA, municipalities and other partners. It is recommended that the province establish a LSPP implementation committee that would serve to increase collaboration and communication among the various stakeholders.
- m. In order to help property owners within the watershed, and in particular, along the Lake Simcoe shoreline understand the importance of the benefits of LSPP programs, it is recommended that supplemental material to the Minister's 10-Year Report be produced that is directed at property owners and is supported by a dedicated website that reports on the health of Lake Simcoe, using plain language that is accessible to residents. The Toronto and Region Conservation Authority's [Watershed Report Cards](#) provide an example of such a website.
- n. It is further recommended that a related education and outreach campaign for individuals and businesses within the Lake Simcoe watershed be developed that would foster a broader understanding of Lake health, key areas of concern and the impacts of LSPP policies and programs. This education and outreach campaign would contribute to greater buy-in and informed local action. Suggested topics include:

- Results and positive impacts of the Mandatory On-site Sewage System Maintenance Inspection Program;
  - Impacts to the Lake from various sectors including agriculture and recreation;
  - Actions that can lead to phosphorus reduction (e.g. using phosphate-free detergents/cleaners and eliminating cosmetic use of fertilizers containing phosphorus);
  - Responsible winter road salt application;
  - Proper disposal of pharmaceuticals and other hazardous wastes;
  - Reduction of single-use disposable plastics and greater awareness of the impacts of microplastics in the environment; and
  - Invasive species and the threats associated with them.
- o. In addition to regular information releases and ERO postings, it is recommended that the province provide presentations to stakeholders to facilitate a more collaborative approach toward implementing the LSPP.
- p. While education and outreach are key to future success, it is recommended that the province support enforcement efforts related to the activities of private residents, agriculture/businesses and recreational enthusiasts.
- q. Climate change impacts including increased prevalence of invasive species and severe weather events should be factored into research, modelling and innovation. It is recommended that the province contribute financially to the development and coordination of local/Regional climate change data to ensure consistency in data, objectives and performance measures.
- r. Consistent with the original financing strategy of the LSPP, sustained funding and partnerships will continue to be required. Plan priorities should be developed and timed with consideration of financing needs and constraints across partners. It is recommended that the province develop a financing strategy for the next decade of implementation of the LSPP. Existing principles should continue to be reflected including:
- Recognizing municipal roles and responsibilities for water and wastewater services;
  - Flexibility to deal with emerging commitments and priorities over time;
  - Diverse sources of financing to reduce overdependence on a single source;



- Financial as well as environmental, economic and social sustainability;
  - Options evaluations that consider technical and financial feasibility, sustainability as well as risk assessments; and
  - Financing strategies that are clearly understood by all stakeholders and the general public.
- s. To support the ecological health of the watershed it is recommended that the province re-institute funding for land stewardship programs and retrofits to stormwater management systems.
- t. It is recommended that the province recognize that current economic challenges related to COVID-19 bring some risk that future progress in achieving LSPP targets and objectives may be set back, particularly the collaborative work needed to address key areas of concern as identified through monitoring, studies and data collection and consolidation processes led by the province.

## **8. Relationship to Strategic Plan**

- 8.1 This report aligns with/addresses the following strategic goals in the Durham Region Strategic Plan:
- a. Under the goal of Environmental Sustainability, Priority 1.3 is to protect, preserve and restore the natural environment, including greenspaces, waterways, parks, trails and farmlands.

## **9. Conclusion**

- 9.1 Regional departments and various partner agencies including area municipalities and the LSRCA, are working to implement the policies and programs of the existing LSPP, with the collective objective to increase the health of the watershed. While the Minister's 10-Year Report notes positive gains in this respect, it also identifies emerging issues for the watershed and areas for improvement. Ultimately, a sustained effort is required from all stakeholders to continue implementing the policies and programs of the LSPP.
- 9.2 This report was prepared in collaboration with staff from Planning and Economic Development, Works, Health, Finance and the CAO's Office, and was reviewed by Corporate Services – Legal Services.

- 9.3 Regional staff will continue to monitor and report on the 10-year review and any proposed updates to the LSPP as the process continues.

## **10. Attachments**

Attachment #1: Lake Simcoe Protection Plan Boundaries and Water Pollution  
Control Plan Locations

Respectfully submitted,

Original signed by

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Brian Bridgeman, MCIP, RPP  
Commissioner of Planning and  
Economic Development

Original signed by

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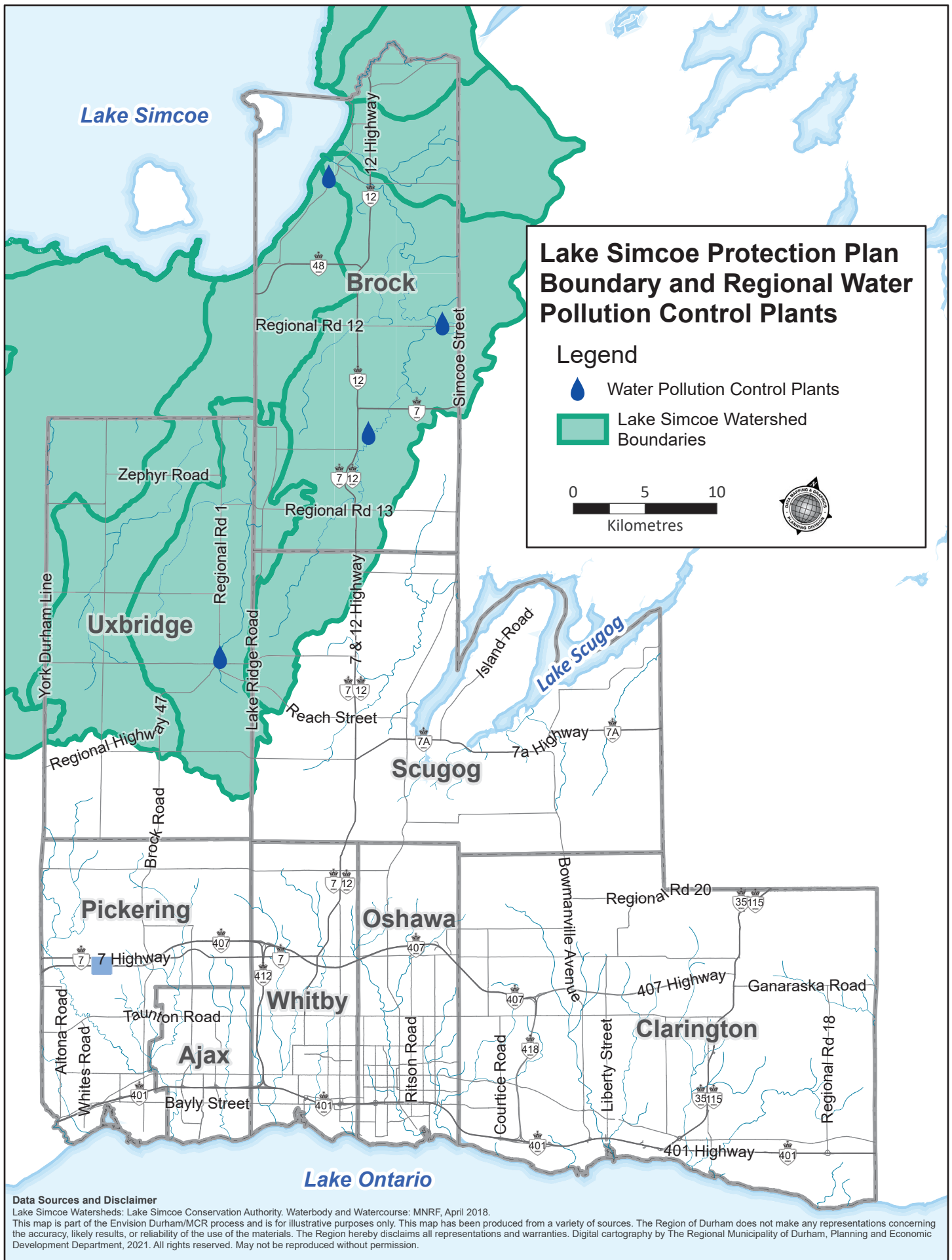
Susan Siopis, P.Eng.  
Commissioner of Works

Recommended for Presentation to Committee

Original signed by

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Elaine C. Baxter-Trahair  
Chief Administrative Officer





# The Regional Municipality of Durham Report

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To: Committee of the Whole  
From: Commissioner of Finance, Commissioner of Works and  
Commissioner of Corporate Services  
Report: #2021-COW-5  
Date: March 10, 2021

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**Subject:**

Enterprise Maintenance Management System Project Update

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**Recommendation:**

That the Committee of the Whole recommends to Regional Council:

- A) That this update on the Enterprise Maintenance Management project be received;
  - B) That an amendment to the contract with 6362222 CANADA INC., the system integrator for the implementation of the Enterprise Maintenance Management System, to an overall contract upset limit of \$5,785,000\* be approved; and
  - C) That the Commissioner of Finance be authorized to execute any amendments to the agreement in a form acceptable to the Corporate Services Department – Legal Services.
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**Report:**

**1. Purpose**

- 1.1 The purpose of this report is to provide Regional Council with a status update for the design, integration and implementation of the Enterprise Maintenance Management System and to obtain authorization for additional efforts by 6362222 CANADA INC (Createch) to complete the system integration, implementation and post implementation support work required.
- 1.2 Amounts followed by an asterisk (\*) includes all fees and are before applicable taxes.

## **2. Background**

- 2.1 Recognizing that there was a need for improvements in business intelligence related to the Regional Municipality of Durham's (Region) asset maintenance activities and life cycle costs, the implementation of a comprehensive and enterprise-wide maintenance management solution was initiated and is currently in progress. The objective of the project is to replace several aging, stand alone work management systems, some in use since 1974, with a modern, scalable system and to renew business process and approaches.
- 2.2 In 2013, the project for the replacement of the independent maintenance management software applications utilized throughout Regional operations with an enterprise-wide solution was established. The project was led by the Financial Information Management section of the Finance Department and directed through a Steering Committee with representation from various divisions in Finance, along with a representative from Works.
- 2.3 A project team with representation from all stakeholder areas was established and commenced an extensive needs analysis exercise that involved the identification of business processes, development of use cases for technology and the translation of the results into a comprehensive scope of work and technical specification for the system and related implementation/integration services.
- 2.4 In 2016, a Request for Proposals (RFP) was issued to select an enterprise maintenance management system and a system integrator service provider based on the scope of work and needs identified in the needs analysis exercise. The RFP was awarded to Createch in early 2017. The project steering committee was expanded at this time to include representation from Durham Region Transit.
- 2.5 In fall 2019, organizational changes resulted in a review of the project status. This point-in-time and fact-based assessment of the project provided recommendations on the project resourcing, governance, project scope alignment, schedule re-planning, the identification of any high-risk areas and recommendations for appropriate next steps. As a result, the project steering committee was restructured as a cross-departmental team including one representative from the Finance Department, Works Department, Durham Region Transit and the addition of a representative of the Corporate Services-Information Technology Division.
- 2.6 Financing for the implementation of the Enterprise Maintenance Management system has been included within the Non-Departmental Programs of the annual

Business Plans and Budgets on an annual basis since 2013. To date, financing has been approved totaling \$17.112 million, reflective of the breadth, complexity and magnitude of this transformational project. Highlights of the system benefits noted within the Business Plans documents and in updates discussing the Region's ongoing modernization efforts.

### **3. Previous Reports and Decisions**

- 3.1 In September 2013, Regional Council approved Report #2013-F-83, awarding Request for Proposals (RFP) #660-2013 to GHD Inc. for information gathering related to current systems, business processes and requirements for the development of a detailed RFP for the design, development, data migration, testing, training and implementation of an enterprise maintenance management system.
- 3.2 In June 2015, Regional Council approved Report #2015-F-83, authorizing the Commissioner of Finance to award an RFP for the acquisition of an enterprise-wide Maintenance Management System (EMMS) with an upset limit corresponding to the budgeted amount of \$5.2 million.
- 3.3 In June 2016, Regional Council approved Report #2016-A-11, adopting a 'cloud-first' strategy for all new and replacement information technology initiatives.
- 3.4 In February 2017, the contract for the Enterprise Maintenance Management System and system integrator services was awarded to Createch through RFP #600-2016.
- 3.5 In December 2018, Regional Council received Report #2018-INFO-162 regarding the sole source agreement with IBM Canada to migrate the IBM Maximo on premise solution to be hosted in the IBM SoftLayer Cloud for the Enterprise Maintenance Management system in accordance with the cloud-first strategy.
- 3.6 In June 2019, Regional Council received Report #2019-INFO-42, listing contract amendments requiring reporting in accordance with the Region's Budget Management Policy. This report included contract amendments negotiated with Createch for additional efforts identified related to system configuration activities and interface development outside of the original scope of work.

#### **4. Enterprise Maintenance Management System Project Update**

- 4.1 The implementation of an enterprise maintenance management system (EMMS) is an enormous and complicated undertaking. The Region's implementation is very complex due to the breadth of services, tasks and requirements of the diverse stakeholder group. The result will be a system of technology and business processes that will transform and modernize the way the Region handles work orders for the maintenance of its tangible capital assets.
- 4.2 The EMMS project's objective is to replace the many disparate maintenance systems currently in place across the organization with a modern, scalable solution that provides real time reporting of work being undertaken. There has been an ongoing and tremendous staff effort supported by external technical expertise to achieve this goal.
- 4.3 Benefits of this system implementation to Regional staff and residents include:
- a. Full work planning and management solution that promotes optimized equipment performance and reliability through more effective maintenance planning, performance and tracking;
  - b. Reduce and/or eliminate duplicate entry of information in disconnected systems and databases and eliminate cumbersome manual processes;
  - c. Standardize, modernize and streamline business processes and data collection, eliminating batch data processing with real time transactions;
  - d. Provide a centralized repository of service requests and work orders initiated both internally and externally;
  - e. Provide concise and accurate information to respond to insurance matters and other claims against the Region;
  - f. Improve the timeliness and quality of information for analysis and customer interaction purposes;
  - g. Reduce the complexity and effort of managing and analyzing data from multiple Region information systems;
  - h. Improved information flow to provide quicker and more complete responses to customers and stakeholders, increasing staff efficiencies and performance;
  - i. Optimized equipment performance and reliability through more effective maintenance planning, performance and tracking;
  - j. Informed decision making with access to timely and more accurate operational and maintenance activity data;



- k. Reduction of paper with a shift to electronic records and elimination of manual processes; and
  - l. Ability to leverage technology that the Region is currently utilizing with increased efficiency and effectiveness.
- 4.4 Further innovation is possible using this technology as the leverage once implemented, including interfacing to the new myDurham311 to advise clients of status of work orders, ability to submit work requests, and connection to GIS Mapping allowing residents to see where work is progressing.
- 4.5 Dedicated departmental resources from all stakeholder departments have been working on the completion of this phase, assessing functionality, recommending configurations and ensuring business processes are reflected and supported by the system overall. In addition, specialized and technical contracted staff have been working full time on the completion of this phase, providing the following expertise:
- Technical project management;
  - Organizational transition planning;
  - System and business process training;
  - GIS integration;
  - Data migration support;
  - Transition and training;
  - Functional input; and
  - Business analyst support.
- 4.6 Departmental staff, under the guidance of Createch, are currently completing the configuration of the selected system, IBM Maximo, to align with the modernized business processes. This stage of the project, which commenced in mid 2017, involves the design, implementation and testing of system functionality and complex interfaces to peripheral systems including various PeopleSoft Financials and Human Capital Management modules, Regional fueling systems and GIS data, along with external systems and processes such as ON1Call's locate services.
- 4.7 This phase of the project also involves the development and delivery of training materials and sessions to prepare the close to 1,000 users for extensive training on the use of the system and updated business processes, along with an assessment of the organizational impacts resulting from the implementation for transition work, resource planning and task alignment. Configuration of data

capture parameters and the migration of data from legacy systems to the new solution is also a large body of work for this phase of the project.

- 4.8 The configured system is entering the final stages of functional testing. Validation of the integrations and functionality has commenced and expected to be complete by April 2021. Final user acceptance testing, which will test and validate the complete and end to end processes for the business processes and workflows will follow, with completion anticipated in August 2021.
- 4.9 Go-live will occur in three phases, with end user training and go-live for the first phase to be completed by November 2021. Final roll out of the system to be complete by July 2022.

### **Complexity of Interfaces and System Integration**

- 4.10 The selected system, IBM Maximo, is complex with several modules that require integration with other equally complex Regional systems. These systems include:
- Various modules with PeopleSoft financials, including the general ledger, inventory, procurement, billing and project costing to efficiently capture labour and financial aspects of various activities related to maintenance work, reducing duplication and providing more real-time costs;
  - Human Capital Management (HR) module for maintenance personnel information linkages to IBM Maximo;
  - Winfuel, Profuel and Phoenix fuel management systems to capture fueling and vehicle/equipment utilization information for preventative maintenance planning and asset management reviews;
  - SCADA system for monitoring information and issues related to the operation of water supply and sanitary sewage infrastructure;
  - ESRI-GIS data for mapping functionality and asset identification;
  - Integration with ON1Call's locate notification system to automatically generate service requests for locate requirements submitted through their centralized requisition process, reducing duplication of work related to approximately 40,000 service requests;
  - Lightweight Directory Access Protocol (LDAP) integrations to maintain network and device security and integrity; and
  - INIT to capture deficiencies from vehicle circle-checking activities.
- 4.11 Integration work has been progressing and the development of the identified interfaces is nearing completion. This work has required additional effort from

Createch. There have been complications with some interfaces which identified system related deficiencies that required action and fixes from IBM, which have taken time and negotiation to resolve, delaying subsequent project tasks that impacted the proposed schedule. Additional interfaces were identified as the project progressed and staff knowledge of the system capabilities increased. Createch has been instrumental in working with IBM to address configuration issues that have arisen during the system implementation work.

### **Maximo Version Upgrade**

- 4.12 As noted in the previous section of this report, the interface between ON1Call's notification system and IBM Maximo provide significant efficiencies related to this legislated operational activity. Implementing a customization interface to accept locate requests generated through ON1Call and covert these into service requests was an unknown requirement during the needs analysis phase as the Region's experience with ON1Call at that time was limited.
- 4.13 An interface with IBM Maximo and the Region's GIS data provides operational staff with a "Locates Solution" that will significantly improve the current process of receiving locates requests manually, executing them through a separate system and reconciling for payments from a monthly statement. The "Locates Solution" was added to the project after investigation into its use and efficiencies in the municipal setting.
- 4.14 The decision to move the IBM Maximo system from an on premise solution to a cloud environment required different email security and authentication protocols, meaning that the "Locates Solution" implemented by other municipalities which used the on-premise Maximo solution could not be replicated for the cloud based solution implemented by the Region. A change order was approved for Createch to develop a solution to meet the requirements of the Region's implementation. During the development of this interface, Createch determined that the security and authentication protocols necessary for the "Locates Solution" in the cloud solution will no longer be supported by Microsoft, the Region's operating system. Microsoft's new protocol, however, is not compatible with the version of Maximo currently being implemented. IBM has not offered an interim fix for this solution, and instead incorporated the necessary functionality for cloud hosted implementations as part of a system upgrade.
- 4.15 One of the key benefits of the implementation of a modern enterprise maintenance management system is the establishment of a mobile environment where staff can receive and log work activities and hours in the field while on the

work site. This creates efficiencies in timing which is critical when a legislated time period to respond to work orders exists. Dispatching of work that arises through the day can be done remotely, creating operational efficiencies.

- 4.16 Mobile functionality is a key deliverable of this project. The configuration requirements of the Region identified issues with Maximo's Anywhere module that requires multiple patches and fixes to achieve the desired functionality, mainly related to the GIS integration and mobile mapping requirements. Upgrading to the latest version of Maximo reduces the amount of effort necessary to maintain the fixes and patches required and improves the overall functionality of the mobility features.

### **Data Collection, Categorization and Migration**

- 4.17 There is a significant amount of data contained within the legacy systems that must be migrated to IBM Maximo. Transferring historical information related to active assets requires the restructuring and mapping of data hierarchy from several maintenance management systems to the revised data structure in the new solution. The magnitude of the effort necessary to complete this work could not be estimated accurately during the RFP process, as data design activities could not be undertaken until a solution was implemented and the legacy data was assessed. Ensuring the quality of data migrated to IBM Maximo is critical to ensure the reliability of information to be used for costing and decision making.
- 4.18 In addition to the migration of data, the structure and standardization of data in the new system is nearing completion. There are several components to this work, including the establishment of "job plans" to structure preventative maintenance service work orders to include all necessary tasks and to standardize the structure of unscheduled maintenance work, and the incorporation of standing agreement items for services provided through external vendors.
- 4.19 These project activities are significant in terms of volume of work which has grown as staffs' knowledge of the system has evolved. Completion of this work has extended beyond the time frame originally envisioned, and are precedent tasks for some of the integration, testing and go-live support efforts to be delivered by Createch.

### **COVID-19**

- 4.20 The COVID-19 pandemic has required a rework of the change management and training plans associated with a staged roll-out of the software, resulting in

additional efforts for Createch beyond the original scope of work. Staff availability for workshops and information sessions has been limited due to remote working and efforts to deal with the pandemic.

- 4.21 In several areas, data collection and configuration activities have been delayed as staff are not available to provide input to the project due to operational priorities.
- 4.22 The project team has also been forced to work remotely. Prior to the pandemic, project staff and external support resources were co-located at Regional Headquarters, which allowed for organic issue identification and resolution, efficient coordination of work activities and expedient workflow. Although the team has adapted to the changes in place during the pandemic, there has been some impact to the efficiency of the project as a result.

## **5. Financial Implications**

- 5.1 In recognition of the importance of this enterprise system implementation and based on negotiations, staff recommend that a contract extension with Createch Inc. as the System Integrator for the implementation of the Enterprise Maintenance Management System be approved, resulting in an increase of \$3,037,729\* from the current upset limit of \$2,747,271\* to an overall upset limit not to exceed \$5,785,000\*.
- 5.2 The contract increase negotiated will provide for the continuation of support from Createch's resources on a time and materials basis to complete the integration and implementation beyond the hours estimated in the initial, fixed price contract value. The original contract value and effort estimated by Createch was based on the initial scope of work and completion of the roll out of the system by December 2020. As a result of the factors noted earlier in this report, along with additional effort necessary to implement the upgrade to Maximo, staff recommend the contract increase. The hours reflected in this contract amendment reflect the additional hours necessary to complete the project.
- 5.3 Financing for the system implementation has been included in annual budgets and will continue to be incorporated until the system implementation is complete. The implementation cost of Maximo is in the order of magnitude of \$16.213 million due to the size and scope of the project and the significant transformational change it will bring, providing financing for the following project elements (including all fees and applicable taxes):

a.	System Integration Services (Createch)	\$5,884,500
b.	Contracted Technical Personnel:	
	• Technical Project Management	1,750,000
	• Technical Analyst (interfaces)	1,189,000
	• Transition Lead (training, business processes, organizational analysis and transition)	1,351,000
	• Data Lead (analysis, validation, scrubbing)	1,373,000
	• Training Lead (development and delivery)	768,000
	• Business Analysts (functional review, testing, script preparation, solution review and validation)	2,254,000
c.	Licenses for testing equipment and internal costs	268,000
d.	Initial license and soft layer (cloud) fees	<u>1,375,000</u>

**Total Implementation Costs****\$16,212,500**

- 5.4 Recognizing the broad impact and transformation this system will bring to Regional operations, transition planning and organizational impact analysis work has been undertaken.
- 5.5 Post implementation, the Region will continue to be responsible for the annual licensing and cloud hosting costs of approximately \$750,000\* per year.

**6. Relationship to Strategic Plan**

- 6.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:
- a. Goal #5 – Service Excellence:
- Optimize resources and partnerships to deliver exceptional quality services and value.
  - Collaborate for a seamless service experience.
  - Drive organizational success through innovation, and skilled workforce, and modernized services.

**7. Conclusion**

- 7.1 Regional staff recommend that an amendment to the contract with 6362222 CANADA INC. (Createch), the system integrator for the implementation of the

Enterprise Maintenance Management System be approved, increasing the contract to an overall upset limit of \$5,785,000\*.

- 7.2 The implementation of IBM Maximo will provide the Regional Municipality of Durham with a highly innovative, modern, current industry standard system that will enable improved asset and resource management and provide greater customer satisfaction related to the broad scope of service mandates impacted by this solution.

Respectfully submitted,

**Original signed by:**

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Nancy Taylor, BBA, CPA, CA  
Commissioner of Finance

**Original signed by:**

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Don Beaton, BCom, M.P.A.  
Commissioner of Corporate Services

**Original signed by:**

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Susan Siopis, P. Eng.  
Commissioner of Works

Recommended for Presentation to  
Committee

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Elaine C. Baxter-Trahair  
Chief Administrative Officer