

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON SEPTEMBER 26, 2017
FROM:	KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER
SUBJECT:	DOMESTIC ACTION PLAN (DAP): LONDON – PROPOSAL UPDATE

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services & City Engineer, the following action **BE TAKEN**:

- a) The draft Canada-Ontario Lake Erie Domestic Action Plan municipal actions **BE ENDORSED** attached hereto as Appendix 'A'; it being noted that senior level government funding is required for full implementation of the actions.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

“Partnering in Phosphorus Control: Achieving Phosphorus Reductions in Lake Erie from Canadian Sources (EBR Registry Number: 012-9971)”, Civic Works Committee, April 24, 2017.

“Lake Erie Bi-National Phosphorus Reduction Target and Comments on Reducing Phosphorus to Minimize Algal Blooms in Lake Erie – EBR Registry Number: 012-8760”, Civic Works Committee, November 29, 2016.

2015-2019 STRATEGIC PLAN

The 2015 – 2019 Strategic Plan identifies these objectives under Building a Sustainable City: 1B – Managing our infrastructure; 3E – Strong and healthy environment through protection of the natural environment.

BACKGROUND

Purpose

The purpose of this report is to seek Council endorsement of a series of proposed municipal actions to be included in the Canada-Ontario Lake Erie Domestic Action Plan. These actions were developed in collaboration with the Ministry of Environment and Climate Change (MOECC) with the goal of reducing phosphorous in the Thames River and Lake Erie.

Context

The City of London is the largest municipality within the Thames River Watershed. The Thames River, which runs through the City, is one of the largest tributaries that feeds into Lake St. Clair, and ultimately, into Lake Erie. Approximately 15 % of the phosphorus loads are thought to originate from urban sources along this major tributary. Point sources, such as treated wastewater effluent, have a higher soluble reactive phosphorus content than non-point sources (i.e., agriculture) which are the primary driver for algae growth.

The Canada-Ontario Action Plan has set important targets, including a 40 % reduction in spring loads of total phosphorus and soluble phosphorus for priority tributaries by 2025, in hopes of improving the health of Lake Erie. The City of London has taken initial steps towards reducing phosphorus loadings into the Thames River through several initiatives. The MOECC has identified London as being a leader in active planning to meet the reductions for phosphorus as set by the Domestic Action Plan and had requested staff collaboration on developing a series of municipal actions.

DISCUSSION

In June of 2017, the administration met with MOECC officials to develop municipal actions that could be included in the Canada-Ontario Lake Erie Domestic Action Plan. As part of these discussion the Appendix 'B' "Domestic Action Plan (DAP): London – A Proposal for Phosphorus Reduction", prepared by EES staff, was presented. The document highlights projects completed by the City that have reduced the discharge of phosphorous into the Thames River. It also highlights works currently identified with the 20-year plan to further reduce that phosphorous in the Thames River. Finally, the document highlights opportunities for City of London to go beyond its current strategy to become a leader in phosphorous reduction subject to subject to upper level government funding.

Municipal Actions

The City of London is dedicated to meeting and exceeding the objectives for phosphorus reduction as set by the Domestic Action Plan. The following municipal actions have been developed for inclusion in the Canada-Ontario Lake Erie Domestic Action Plan:

- **Leader in Watershed Monitoring:** The City of London will coordinate its water quality monitoring with the Upper Thames River Conservation Authority to aid river improvement efforts and studies.
- **Enhanced Wastewater Treatment:** The City of London will undertake a pilot project using new technologies as an alternative to conventional tertiary treatment, with the objective of achieving effluent quality of 0.1 mg/L and will, upon successful completion of the pilot project, develop a plan to roll-out phosphorus reduction technologies to the five major treatment plants.ⁱ
- **Combined Sewer Replacement:** The City of London will accelerate plans for separation of combined sewers, including the design and construction of necessary stormwater outlets with the target of separating 80 percent (17 km) of the City's combined sewer system by 2025.ⁱ
- **Sewer System Overflow Reduction:** The City of London will circulate for agency and public review an implementation plan that provides the scope and timing for managing the highest priority sanitary sewer overflows as identified in the City's Pollution Prevention and Control Plan by the end of Q2 2018. To support the implementation, the City of London will facilitate a proof of concept in-field pilot project of high-rate treatment technologies with the support of industry (Trojan Technologies) and academic (Western University) partners, and will continue its private property weeping tile disconnection program.
- **Low Impact Development Rollout:** The City of London will incorporate low impact development (LID) and adaptive environmental management principles into MOECC's Dingman Creek subwatershed area-wide ECA pilot project, and will implement a program to maximize the treatment and infiltration of stormwater

using LID technologies in built-out areas in coordination with the City’s linear infrastructure renewal program.ⁱ

- **Stormwater Retrofits:** The City of London will expand its current monitoring program to prioritize the retrofitting of stormwater ponds, and will develop a stormwater pond retrofit program to improve operational performance and legacy phosphorus removal. To support this program, the City of London will evaluate the need to develop a stormwater sediment handling facility with the goal of repurposing stormwater pond sediment and appropriately managing the legacy phosphorus contained within it.ⁱ

ⁱ Subject to upper level government funding partnerships.

Financial Implications

The current wastewater 20-year financial plan includes many of the projects referenced in the municipal actions; however, several of the actions would require additional funding to implement. The need for upper level government funding has been brought to the forefront during the discussion with the MOECC and the Government and External Relations Division has been engaged to communicate our funding requirements to senior levels of government. It is anticipated that these works will be eligible for funding under the Canadian Water and Wastewater Fund (CWWF) program.

CONCLUSIONS

Canada-Ontario Lake Erie Domestic Action Plan requirement to reduce phosphorous loading by 40 % by the year 2025 is a bold and ambitious goal set by the Domestic Action Plan. The City of London is dedicated to meeting and exceeding the objectives for phosphorus reduction as set by the Domestic Action Plan to ensure both the health of the Thames River and the Great Lakes basin. Council endorsement of the proposed municipal actions would solidify the City of London’s commitment to the reduction of phosphorous in the Thames River.

Acknowledgements

This report was prepared within the Wastewater and Drainage Engineering Division by Monica McVicar, E.I.T.

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Appendix 'A' – Domestic Action Plan (DAP): London – A Proposal for Phosphorus Reduction