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# The Regional Municipality of Durham Report

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To: Works Committee  
From: Commissioner of Works  
Report: #2023-W-3  
Date: January 11, 2023

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**Subject:**

Approval for the Regional Municipality of Durham's Ongoing Participation in the Toronto and Region Conservation Authority's Western Durham Nearshore Water Quality Monitoring Program

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**Recommendation:**

That the Works Committee recommends to Regional Council:

- A) That the Regional Municipality of Durham continue participation as a municipal partner with Toronto and Region Conservation Authority's Western Durham Nearshore Water Quality Monitoring Program until the program ceases or the Regional staff of Durham and York determine that participation is no longer required; and
  - B) That financing for the annual contribution to the program, currently set at \$135,000 and shared with York Region at the applicable cost-sharing ratio (currently shared at approximately 18 per cent Durham Region, 82 per cent York Region) be provided in the annual Business Plans and Budgets for the York Durham Sanitary Sewerage System.
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**Report:**

**1. Purpose**

- 1.1 The purpose of this report is to seek approval for the Regional Municipality of Durham (Region) to continue participation in the Toronto and Region Conservation Authority's (TRCA) Western Durham Nearshore Water Quality Monitoring Program as a municipal partner with financing for this program to be

provided from within the annual York Durham Sanitary Sewerage System Business Plans and Budget.

## **2. Background**

- 2.1 The Western Durham Nearshore Water Quality Monitoring program has been collecting water quality data from the nearshore of Lake Ontario between the Rouge River and Carruthers Creek since 2006. The design of the water quality program has progressed through multiple iterations over this period to meet the evolving needs of the research scientists. The study design used from 2015 to 2018 integrates the original survey designs in place up to 2014, with further refinements to the location of sampling sites, concentrating efforts on areas closer to the shoreline.
- 2.2 Sample collection for this program has been coordinated with the Ontario Ministry of the Environment, Conservation and Parks (MECP) nearshore surveys and Environment and Climate Change Canada's (ECCC) offshore surveys across the Western Durham waterfront, including maintaining one 5 kilometre (km) sampling site to bridge the gap between TRCA's nearshore sampling locations and ECCC's offshore water quality surveys.
- 2.3 TRCA publishes plain language reporting of water quality patterns through a series of technical reports. The content of these reports is based on existing data presented at conferences (available on the project [website](#)) with additional analysis being completed where applicable. The intended audience for these reports is the public, non-government organizations, regional staff and local stakeholders who have shown a great interest in water quality conditions in the nearshore of Lake Ontario within western Durham.
- 2.4 In addition to the plain language reporting, TRCA will explore the feasibility of communicating water quality results from this program to the public and key stakeholders through a virtual platform.

## **3. 2023 Workplan**

- 3.1 In partnership with TRCA, the Western Durham Nearshore Monitoring program will build upon the results attained in previous years' spatial and temporal trend analysis to further understand the importance of natural versus anthropogenic influences on nearshore water quality. Areas of focus are:

- Advancing integration of nearshore data and scientific knowledge attained with available watershed science to identify management recommendations;
- Undertaking a new project to align with the 2023 Cooperative Monitoring and Science Initiative (CSMI) for Lake Ontario;
- Completing a monitoring program that will inform long-term trends in water quality within the nearshore of Lake Ontario in Western Durham;
- Advancing research analysis and publication of the data collected in collaboration with academic and other partner organizations to help inform management decisions for Lake Ontario and its tributaries; and
- Continuing to provide technical and logistical support to partner organizations working on initiatives along the western Durham waterfront of Lake Ontario, including providing subject matter expertise to communities and task teams.

3.2 In 2023, TRCA proposes to focus on conducting a project for the 2023 Lake Ontario CSMI, building upon and leveraging other programs, and the results and knowledge attained in the 2021-2022 work. This project will allow TRCA to further the scientific understanding of influences on the nearshore, influence the design of new projects and how watersheds are managed to improve water quality.

3.3 Every five years, there is a bi-national effort to focus research in Lake Ontario as part of the CSMI for the lake. The CSMI, instituted under the Science Annex of the 2012 Great Lakes Water Quality Agreement, is an effort to coordinate science and monitoring activities in the Great Lakes to provide detailed information to environmental managers.

3.4 The CSMI is an opportunity to share the nearshore expertise gained through the Western Durham Nearshore Monitoring program with those involved in studying Lake Ontario.

#### **4. Justification for Ongoing Participation**

4.1 Durham has been a municipal partner in TRCA's Western Durham Nearshore Monitoring program since 2006. TRCA are experts in nearshore water quality and have established a network of water quality monitoring locations across western Durham.

4.2 Currently, there is no other water quality monitoring program established in Durham that focuses on the nearshore area of Lake Ontario. Participating in this

program will not require the purchase of additional equipment or extra staff to establish a new program.

- 4.3 Durham benefits from the continued support of this program by utilizing the monitoring results and reporting to further our understanding of the nearshore area of Lake Ontario, specifically algae growth, nutrient transportation and loading and water quality.

## 5. Financial Implications

- 5.1 The total estimated cost for this program is \$135,000\* in 2023. The level of financial contribution varies annually based on the annual workplan. The cost of this water quality monitoring program is shared with the Region of York through the operation of the Duffin Creek Water Pollution Control Plant based on the actual annual plant flow for each Region. Durham's portion of this cost allocation is approximately 18 per cent annually.
- 5.2 Financing for the 2023 workplan is available within the 2023 Business Plans and Budgets for the York Durham Sanitary Sewerage System as follows:

	Durham Region Share (18%)	York Region Share (82%)	Total Agreement Value
2023 Amount*	\$24,300	\$110,700	\$135,000

- 5.3 Financing for future workplans will be included in the Business Plans and Budgets for the York Durham Sanitary Sewerage System until the initiative winds down or Regional staff determine that participation as municipal partners is no longer required.

## 6. Relationship to Strategic Plan

- 6.1 Participation in the Western Durham Nearshore Monitoring program aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:
- a. Goal 2: Community Vitality
    - 2.2 Enhance community safety and well-being
  - b. Goal 5: Service Excellence

- 5.1 Optimize resources and partnerships to deliver exceptional quality services and value
- 5.2 Collaborate for a seamless service experience
- 5.3 Demonstrate commitment to continuous quality improvement and communicating results

## **7. Conclusion**

- 7.1 It is recommended that Regional Council approve the ongoing participation in the Western Durham Nearshore Monitoring program until the initiative ceases or the Regions of Durham and York determine that participation as municipal partners is no longer required.
- 7.2 This report has been reviewed by the Finance Department.
- 7.3 For additional information, contact: Tavis Nimmo, Acting Manager, Technical Support at 905-668-7711, extension 3737.

Respectfully submitted,

Original signed by:

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John Presta, P.Eng. MPA  
Commissioner of Works

Recommended for Presentation to Committee

Original signed by:

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Elaine C. Baxter-Trahair  
Chief Administrative Officer