




CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Hamilton Water Division

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	May 3, 2021
SUBJECT/REPORT NO:	Pier 25 Dredging - Memorandum of Understanding Between the City of Hamilton and Hamilton Oshawa Port Authority (PW21025) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Stuart Leitch (905) 546-2424 Ext. 7808 Chris Mills (905) 546-2424 Ext. 4985 Angela Doyle (905) 546-2424 Ext. 6020
SUBMITTED BY:	Mark Bainbridge Director, Water and Wastewater Planning and Capital Public Works Department
SIGNATURE:	

RECOMMENDATION

- (a) That the City of Hamilton update the Amending Agreement to the Memorandum of Understanding (set out in Report PW08055(a)), between the City of Hamilton and the Hamilton Oshawa Port Authority, to set out respective obligations of the City of Hamilton and Hamilton Oshawa Port Authority related to the dredging in the Pier 25 Hamilton Oshawa Port Authority owned lands for a ten-year period; and,
- (b) That the City of Hamilton be authorized to execute a Second Amending Agreement to the Memorandum of Understanding, and all necessary associated documents with content approval by the General Manager of Public Works and in a form satisfactory to the City Solicitor.

EXECUTIVE SUMMARY

In October 2000, the City of Hamilton (City) and Hamilton Oshawa Port Authority (HOPA) entered into a settlement agreement to transfer ownership of Windermere Basin lands to the City. The parties agreed that HOPA would no longer have responsibility for

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maintenance dredging and greenspace development in the Windermere Basin lands. In December 2009, the City and HOPA entered into an Amending Agreement and Memorandum of Understanding (MOU) to formalize the City's ability to develop the Windermere Basin to a wetland. In exchange, the City assumed responsibility for maintenance dredging of the Hamilton Harbour in the vicinity of HOPA owned Pier 25 (Report PW08055a).

The 2009 MOU expired on December 3, 2019. City staff, including the Legal Services Division, have been working with HOPA representatives to identify opportunities and details associated with amending the December 2009 MOU. This document is needed in order to proceed with the upcoming maintenance dredging to remove the build-up of sediments in the vicinity of Pier 25. For the upcoming dredging activities, design would commence in late 2021, with construction occurring in 2022. In order to facilitate the upcoming dredging, Hamilton Water is recommending that HOPA initiate professional services for consultants and contractors on all required works for the dredging, unloading, dewatering, trucking and disposal of the dredgeate at full cost to the City.

The 2020 ShorePlan Pier 25 Maintenance Dredging Dredgeate Disposal Feasibility Study, attached to Report PW21025 as Appendix "B", recommended that the preferred method is to temporarily store 30,000 m³ of dredged material within HOPA owned Pond N-2 with final disposal to an approved landfill.

City staff are seeking Council approval to amend and finalize the MOU Agreement to reflect the next ten-year period for dredging work in the vicinity of HOPA owned Pier 25. The MOU amendment is required to reflect minor administrative updates and alteration of certain terms and conditions between the City and HOPA.

Alternatives for Consideration – See Page 6

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Hamilton Water recommends the City update HOPA / City MOU to reflect current language, new ten-year timeframe and to ensure fees are in line with industry standards.

Financial: The City will be responsible to dredge the Pier 25 site on an approximate six (6) year cycle for an average volume of 30,000 m³. Based on the 2020 ShorePlan Pier 25 Maintenance Dredging Dredgeate Disposal Feasibility Study, the City should anticipate a minimum fee for the operation and HOPA services in the range of \$9,000,000 - \$12,000,000 every six (6) years to cover the professional services associated with consultants and contractors for all required works for the dredging, unloading, dewatering, trucking and

disposal of the dredgeate at full cost to the City. The Public Works Rate Supported Capital Budget currently includes forecasted funds of \$250,000 for design in 2021 and \$13M for construction in 2022 for the Pier 25 Dredging project (Project ID 5162068851).

Staffing: The implementation of the recommendations contained in this Report will require a City staff member from the Public Works Department to serve as the respective liaison representative with HOPA for each required dredging project. It is anticipated that this effort can be accommodated within the existing staffing complement.

Legal: The City has a current legal obligation to HOPA to undertake maintenance dredging of Pier 25. The amended MOU will set out requirements for the City to dredge Area A, attached to Report PW21025 as Appendix "A", to reflect the next ten-year period.

HISTORICAL BACKGROUND

Windermere Basin (Basin) is located in the east end of the Hamilton Harbour (Harbour), at the mouth of the Red Hill Creek in the City of Hamilton. Located in the Harbour and immediately downstream of the Basin are Piers 24 and 25, where significant shipping activity occurs under the control of HOPA. Located approximately one kilometre upstream of the Basin is the Woodward Avenue Wastewater Treatment Plant, which discharges treated effluent directly into the Red Hill Creek.

In 1988, a remedial program to reconfigure and rehabilitate the Basin as a sediment trap was conducted by Public Works Canada on behalf of the Hamilton Harbour Commissioners (subsequently changed to HOPA). The work, which was completed in 1990 involved the construction of a series of eight dyked containment cells situated around the perimeter of the Basin; the dredging of the Basin to remove a large quantity of contaminated sediments which were deposited into the newly constructed containment cells; and the additional dredging of a portion of the Basin which created a sediment trap to capture future sediments entering the Basin.

Following the completion of the rehabilitation project in 1990, no additional remedial activities have been conducted in the Basin, except for the capping of the dredged sediments in the containment cells which occurred over several years. Out of the eight (8) containment cells, only Cell #4 remains open. The capped disposal cells have created large areas of reclaimed lands surrounding the Basin that are presently vacant and unoccupied. Although the 1990 rehabilitation project served to remove sediment from the Basin, it did not address the upstream sources of sediment. The goal of the

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1990 rehabilitation project was to encourage sedimentation within the Basin, which would be dredged periodically.

In October 2000, HOPA transferred ownership of the Windermere Basin and surrounding lands to the City. As part of this agreement, the City assumed responsibility for maintenance dredging of the Basin, to be undertaken in a timely manner to ensure that the build-up of sediment does not impinge upon the shipping, navigation, and transportation needs of the Harbour's operations. The HOPA also acknowledged and agreed that the City will be permitted to deposit dredgeate in the prepared cell (Cell #4) on the western edge of the Basin, including encroachment on adjacent HOPA lands. As part of the transfer of ownership, the City received a sum of approximately \$10 million from HOPA, to be utilized for the maintenance of the Basin.

In 2005, the City retained C.B. Fairn and Associates (C.B. Fairn) to conduct a review of the existing conditions at the Basin, and evaluate feasible alternatives for a preliminary dredging plan to restore the sediment trap function of the Basin and ensure that the adjacent Harbour's shipping and navigation operations are not adversely affected. A total of nine (9) alternatives were examined, ranging from dredging the full quantity of accumulated sediments from the Basin and sediment trap, to providing no dredging within the Basin and conducting dredging activities only at Pier 25 within the Harbour. The costs of the various options ranged up to \$24 million. The dredging of the entire Basin with mechanical dewatering of the dredgeate was found to be most expensive alternative, while dredging the Pier 25 area and leaving the Basin "as is" was found to be the least expensive. C.B. Fairn recommended that the City consider leaving the Basin as the "status quo" and, instead, develop a dredging plan that removes the sediment deposits from the Harbour itself.

In 2007, the City initiated a Schedule "B" Municipal Class Environment Assessment (Class EA) to study enhancements to the Basin that would address sediment issues and provide for naturalization opportunities. The Class EA, conducted by Cole Engineering Group Ltd. (CEG) and AECOM Canada (AECOM), prepared an inventory of existing conditions of the terrestrial and aquatic environment, surface water quality, sediment quality, social environment, and archaeology. Four (4) alternative solutions were developed in order to address the identified problem and opportunity and were evaluated based on criteria that reflect the definition of "environment" provided in the *Ontario Environmental Assessment Act* and the specific circumstances associated with the project. As a result of a comparative evaluation that was undertaken, a preferred alternative was determined for the project. The Class EA concluded that the preferred alternative that should be considered for preliminary design is the construction of a watercourse to direct sediment to the Harbour and the creation of an aquatic habitat (wetland) within the remainder of the Basin by re-working accumulated sediment. The preferred alternative would see maintenance dredging occurring in the Harbour in the

vicinity of Pier 25, and not within the Basin. The Class EA process was documented by the 'Enhancement of Windermere Basin Project File', dated May 2008. City Council approved the filing of the Project File in May 2008, which was presented as Committee Report PW08055.

Upon filing the Notice of Completion for the Class EA, as approved by Council, the City proceeded with the preliminary and detailed design of the Enhancement of Windermere Basin. The preliminary design used the preferred alternative that was selected during the Class EA process and refined the conceptual design in more detail. The preliminary design outlined detailed design, construction, and operations and maintenance considerations/recommendations that were incorporated in the detailed design.

In 2009, CEG and AECOM prepared and completed the detailed design for the Enhancement of Windermere Basin. The detailed design used the proposed natural environment and sediment management design concepts, presented in the Preliminary Design Report, and advanced them to detailed drawings and contract documents. The Enhancement of Windermere Basin project construction was completed in May 2013.

In 2009 / 2010, the City and the HOPA developed and approved a new Amending Agreement and MOU for a ten-year period that expired on December 3, 2019. This agreement formalized the ability of the City to develop the Windermere Basin into a wetland area in exchange that the City would assume responsibility for dredging of the Hamilton Harbour in vicinity of HOPA owned Pier 25. The terms of the MOU, dated December 3, 2009, was for a ten-year timeframe with HOPA adding an addition Project Management fee of 10% for all project related costs.

In 2015, HOPA retained C.B. Fairn and Associates Ltd. to complete a Feasibility Study for Dredgeate Disposal Management Plan for Pier 25 Maintenance Dredging. Design and construction activities for the 2016 dredging work was managed by HOPA and construction activities were completed by Dean Construction. Dredgeate material was disposed of at HOPA owned Pond N-2, located in Pier 22.

The current Committee Report is to modify and define agreed upon terms of the MOU for the City and HOPA for an additional ten-year period.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

For the MOU, there are no known policy implications.

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For the dredging works that result from previous agreements, there are a number of policies, regulations, and statutes that are related to dredging activities, including:

- *Navigation Protection Act* (Transport Canada)
- *Fisheries Act*
- Development, Interference with Wetlands and Alterations to Shorelines and Watercourses: Regulation 161/06 under Ontario Regulation 97/04
- Ontario Regulation 347
- *Ontario Endangered Species Act*
- *Ontario Water Resources Act*
- Ontario On-site and Excess Soil Management Regulation 406/19

RELEVANT CONSULTATION

City staff, including Legal Services and Hamilton Water, has been working with HOPA to update the previous 2009 Amending Agreement / MOU. In addition, the following were consulted on the Feasibility Study, dated June 2020 for 2021 design work for the Pier 25 Dredging project:

- City of Hamilton
- Hamilton Oshawa Port Authority

ANALYSIS AND RATIONALE FOR RECOMMENDATION

The City is obligated to dredge Pier 25 in a timely manner to maintain shipping routes. HOPA anticipates that there will be approximately 30,000 m³ of dredgeate required to be removed every six (6) years.

ALTERNATIVES FOR CONSIDERATION

As an alternative approach the City can retain a dredging specialist firm to act as the Owners Engineer for the design and construction administration of the dredging works. The impact of this alternative is outlined below:

Financial Implications:

In this scenario, rather than pay HOPA to perform the project management role for design and construction, the City would retain a Consultant specialising in dredging to perform the project management role, which would follow the City's Request for Proposal (RFP) process. This alternative is expected to carry higher costs as related to leasing property from HOPA to complete the Works and the additional effort required to capture the knowledge that is currently intimate with HOPA.

Staffing Implications:

In this scenario, the City would need to dedicate a Project Manager to oversee the project management firm specialising in dredging to manage the design and construction administration of the dredging works.

Legal Implications:

In this scenario, the City would not have the benefit of a Federal body leading the project. The City would also need to expedite the process to ensure the dredging commitments are completed in 2022 to avoid navigational concerns at Pier 25.

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Economic Prosperity and Growth

Hamilton has a prosperous and diverse local economy where people have opportunities to grow and develop.

Healthy and Safe Communities

Hamilton is a safe and supportive City where people are active, healthy, and have a high quality of life.

Clean and Green

Hamilton is environmentally sustainable with a healthy balance of natural and urban spaces.

Our People and Performance

Hamiltonians have a high level of trust and confidence in their City government.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report PW21025 - Diagram for Pier 25 Dredging Responsibility

Appendix “B” to Report PW21025 - ShorePlan Pier 25 Maintenance Dredging
Dredgeate Disposal Feasibility Study