



**City of Kingston
Report to Council
Report Number 21-107**

To: Mayor and Members of Council

From: Peter Huigenbos, Commissioner, Business, Environment & Projects

Resource Staff: Brandon Forrest, Director Business, Real Estate & Environment
Paul MacLatchy, Environment Director

Date of Meeting: April 6, 2021

Subject: Update on Kingston Inner Harbour Contaminated Sediment Management Project

Council Strategic Plan Alignment:

Theme: 1. Demonstrate leadership on climate action

Goal: 1.2 Enhance and expand green spaces, protect wetlands, and increase the tree canopy through greening initiatives.

Executive Summary:

Federal departments (Parks Canada and Transport Canada) with custodial control over the majority of waterlots within the Kingston Inner Harbour have completed their assessment of environmental conditions and potential risks associated with contaminated river sediments and are proposing a substantial project to remediate environmental risks to the river environment and human health. Proposed remediation methods include sediment dredging, in-water capping and shoreline revetment, depending on the conditions present in fifteen zones that have been delineated within the Kingston Inner Harbour. The City welcomes this federal initiative as environmental cleanup along the Inner Harbour has been a priority for the federal government and the City for several years. The City has long been an advocate for the characterization and management of contaminated sediments in the Kingston Inner Harbour.

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The City of Kingston has ownership of waterlots within five of the zones identified as contaminated and in need of remediation, and Transport Canada is requesting that the City consider partnering in the clean-up effort by contributing funding or in-kind assistance. A partnership may allow City waterlots to be included in the federal clean-up project and improve the effectiveness of the Kingston Inner Harbour sediment remediation.

Transport Canada has created a preliminary estimate of the cost for the entire clean-up project at \$71.4 million of which work recommended on City waterlots could account for up to \$10 million of the project. The next steps for the project by Transport Canada will include additional stakeholder consultations and detailed design that will more clearly define costs for the various waterlots being targeted.

As part of the Disaster Mitigation and Adaptation Fund (DMAF) grant for shoreline resiliency, the City has significant works already planned for shoreline areas of the Kingston Inner Harbour and these works may be coincidental to some of the shoreline revetments planned by Transport Canada and may serve as an in-kind contribution from the City toward the federal project. The City also has lands and other assets adjacent or nearby to the project work area which could also present opportunities for in-kind contributions by the City.

This report provides an update to City Council on the progress of the federal Kingston Inner Harbour sediment assessment and clean-up initiative. It also recommends that the City support this potential project in principle, and for City staff to work collaboratively toward a partnership in completing the sediment clean-up project with Transport Canada and to identify options for municipal contributions so the clean-up of City-owned waterlots may be included.

Recommendation:

That Council support in principle, a proposed Kingston Inner Harbour Sediment Clean-Up Project by Transport Canada, and direct staff to work with Transport Canada to collaboratively identify opportunities and options for municipal contributions to which may allow for City-owned waterlots to be included within the scope of such a project; and

That staff report back to Council with options for potential municipal contributions to allow participation in the federal government's Kingston Inner Harbour Sediment Clean-Up Project.

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Authorizing Signatures:

ORIGINAL SIGNED BY COMMISSIONER

Peter Huigenbos, Commissioner,
Business, Environment &
Projects

ORIGINAL SIGNED BY CHIEF
ADMINISTRATIVE OFFICER

Lanie Hurdle, Chief
Administrative Officer

Consultation with the following Members of the Corporate Management Team:

Paige Agnew, Commissioner, Community Services

Brad Joyce, Commissioner, Corporate Services

Not required

Jim Keech, President & CEO, Utilities Kingston

Not required

Desirée Kennedy, Chief Financial Officer & City Treasurer

Sheila Kidd, Commissioner, Transportation & Public Works

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Options/Discussion:**Background**

For over 100 years from the early 1800's through to the late 1900's, the western shores of Kingston's Inner Harbour within the Great Cataraqui River have been the site of numerous heavy industries, railway infrastructure, shipping, dredging, landfilling, waste disposal and coal, timber and petroleum storage. While these early industries allowed Kingston to prosper economically, they left behind a legacy of contaminated soil and river sediments within the Kingston Inner Harbour area. The environmental condition of the Kingston Inner Harbour was examined by the Kingston Environmental Advisory Forum (KEAF) from 2001 through 2006. In 2006, the ad-hoc Cataraqui River Stakeholders Group (CRSG) was formed to continue a more detailed assessment of risks presented by contaminated river sediments and develop potential approaches to managing the sediments. The CRSG was led by Dr. Ken Reimer of the Royal Military College of Canada (now retired) with representation by Environment Canada, Fisheries and Oceans Canada, Transport Canada, CFB Kingston, Parks Canada, Ontario Ministry of Environment, Conservation and Parks, City of Kingston and Rideau Renewal Inc.

The work of the CRSG culminated in the Environmental Services Group of RMC completing their report, *Application of the Canada-Ontario Decision-Making Framework for Contaminated Sediments in the Kingston Inner Harbour*, in 2014. The RMC report was received for review by the federal agencies and other members of the CRSG. Most of the Kingston Inner Harbour waterlots containing contaminated river sediment are owned by Transport Canada and Parks Canada with smaller waterlots owned by the City of Kingston and private landowners (see map in Exhibit A). Transport Canada and Parks Canada undertook several years of follow up environmental assessments that built on the RMC work and have now developed a proposed approach to managing contaminated river sediment within the Kingston Inner Harbour.

Proposed Kingston Inner Harbour Sediment Management Project

Based on the assessment work performed to date, a preliminary management plan for contaminated sediments within the Kingston Inner Harbour has been proposed by Transport Canada and Parks Canada. The management plan proposes the implementation of different techniques within eleven distinct management units identified as containing contaminated river sediment (Exhibit A) in need of attention. The selection of proposed remediation techniques was based upon factors such as contaminant concentration, relative environmental risk, water depths and presence of shoreline, and include removal of sediment by dredging and disposal, in-water conventional and activated carbon capping, shoreline revetments and monitored natural remediation. The scope of the proposed remediation is large and would require more than one season to complete. The budget required to complete the project has been estimated at a preliminary level by Transport Canada to be up to \$71 million. Additional design work and procurement will need to be completed to refine cost estimates.

Prior to implementing the proposed management plan, several additional steps would need to be taken by the federal government. A detailed impact assessment is required which would involve consultation with indigenous and other stakeholders including the City of Kingston. A detailed design and construction plan will also be required, followed by procurement of qualified

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engineers and contractors. Subject to these next steps, Transport Canada has advised the City that they expect to start work as early as 2023.

Due to the nature of sediment transport within river environments like the Inner Harbour, it is preferable to remove contaminated sediments from all of the targeted management units including those owned by the City of Kingston and others.

Opportunities for City-owned Waterlots

The City of Kingston owns waterlots within targeted management units WM, TC2A, TC3A, TC4 and TC-AB (Exhibit A) adjacent to the Woolen Mill, Doug Fluhrer Park and the Kingston Marina. Transport Canada has provided a preliminary estimate for the proportion of project costs associated with the City waterlots to be up to \$10 million. Recognizing the need to undertake a comprehensive remediation of the Kingston Inner Harbour and not leave pockets of contaminated sediment remaining, Transport Canada has requested the City consider partnering in the proposed project so that City-owned waterlots may be included within the scope of the planned work. Transport Canada recognizes the budgetary challenge presented by the scale of the City's waterlots and has identified the potential for in-kind and other options for a City contribution. Opportunities such as contributory shoreline work planned as part of the City's DMAF or temporary access to lands that would support implementation of the project have been identified as potential contributions. The City currently has approximately \$1.75 million of capital budget allocated within long term capital plans to undertake shoreline revetment work that will be partially funded by the DMAF. This DMAF-related shoreline revetment work on the western shore of the Kingston Inner Harbour may satisfy some of the scope requirements of the work being proposed by Transport Canada. The City also possesses lands adjacent to the proposed work areas that may be suitable for temporary equipment laydown and staging, materials storage or other uses supportive of the planned work.

In order to support the City's participation in the proposed project, Council direction to staff will provide the following:

- An expression of the City's support in principle for a federally led project to manage contaminated sediments within the Kingston Inner Harbour; and
- Willingness to work with Transport Canada to identify options for contributions by the City to enable inclusion of City-owned waterlots into the scope of the project.

Staff are also in discussion with the Province of Ontario to determine if the Lake Ontario Lakewide Action and Management Plan (LaMP) made through the Canada Ontario Agreement may provide opportunities to assist in funding the City's participation in the federal project. Initial discussions have been positive, and a project description will be prepared to enable further consideration for supporting a component of the City participation through an annual LaMP funding assessment.

Staff will also assess the potential for other sources of contributory funding from other granting programs with mandates to support environmental restoration and ecological conservation.

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Once options for the City's participation have been explored and identified, they will be recommended as appropriate to City Council at a future meeting in 2021.

The historical industrial sources of contamination to the Inner Harbour sediments are largely gone but their impacts also remain within the soils, groundwater and sediments of lands and wetlands such as those like the former Davis Tannery and others along the western shore of the Inner Harbour. With the proposed clean-up, a focus on limiting future recontamination from new or existing sources can be expected. The City of Kingston is already engaged in several notable pollution prevention programs and projects that will support preservation of the remediated waterlots. In-situ groundwater treatment at Emma Martin Park and leachate collection systems at the former Belle Park landfill both prevent discharge of contaminants to the Inner Harbour while ongoing combined sewer separation projects are reducing discharge of untreated wastewater. Additional efforts to identify and control discharges of contaminated groundwater and sediment may be required by the owners of lands and wetlands adjacent to the Inner Harbour.

Existing Policy/By-Law:

None

Notice Provisions:

None

Accessibility Considerations:

None

Financial Considerations:

The costs estimated by Transport Canada to implement remediation measures on City-owned waterlots is up to \$10 million. The City currently has approximately \$1.75 million of capital budget within longer term plans dedicated to shoreline protection work along the west bank of the Kingston Inner Harbour that, if approved by Council, may satisfy some of the scope of the federal sediment management project and act as a municipal contribution. No other approved funding has been identified that might be suitable for contributing toward the federal project.

Additional funds or in-kind contributions may be required to enable City waterlots to be included in the federal clean-up project.

It is understood that Transport Canada will utilize the Federal Contaminated Sites Action Plan (FCSAP) to fund project work on federally owned water lots.

Contacts:

Paul MacLatchy, Environment Director 613-546-4291 extension 1226

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Other City of Kingston Staff Consulted:

Lana Foulds, Director, Financial Services

Neal Unsworth, Manager, Parks and Shoreline, Engineering Services

Sukriti Agarwal, Acting Manager, Policy Planning, Planning Services

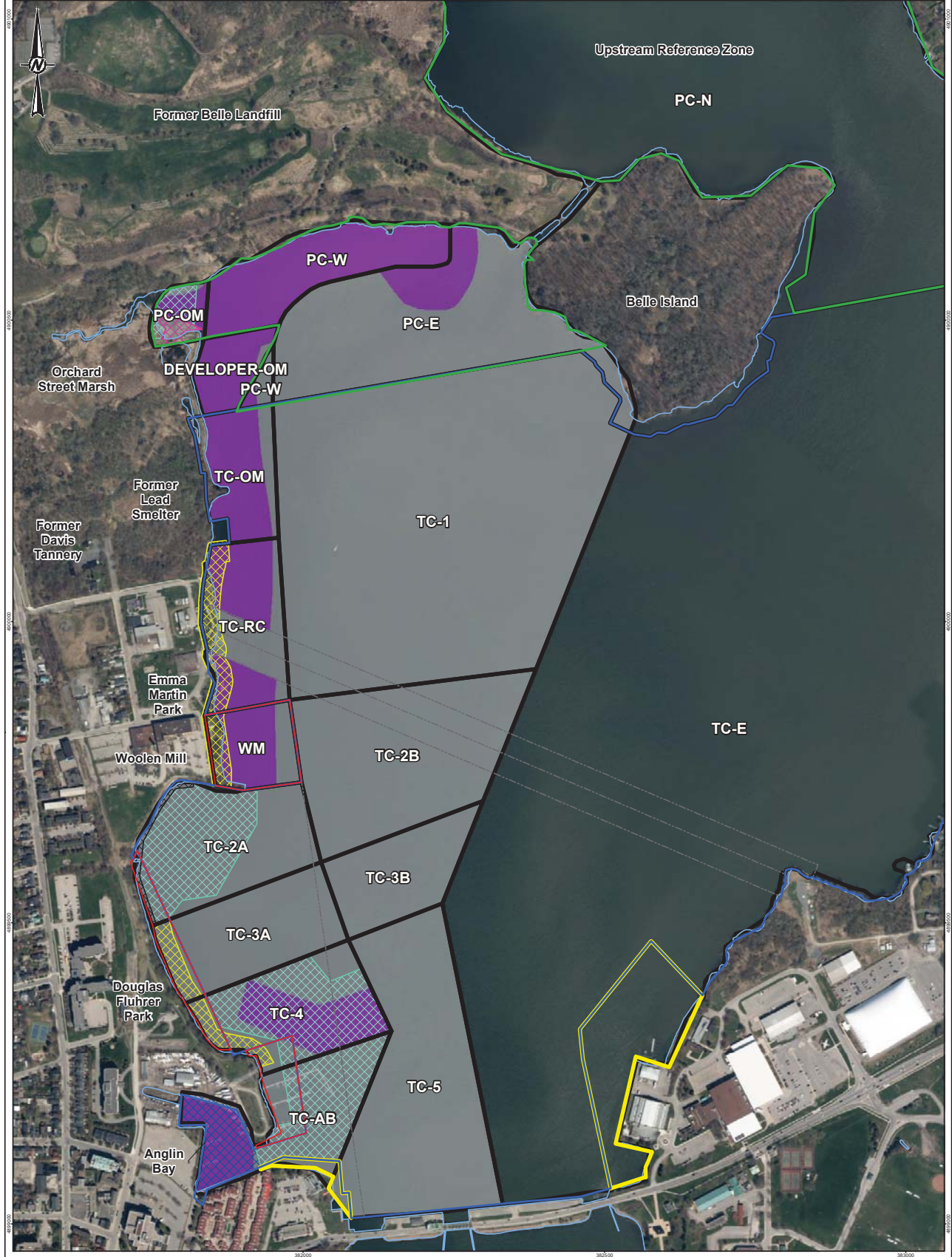
Holly Wilson, Manager Intergovernmental Relations

Troy Beharry, Partnership and Grant Development Analyst

Exhibits Attached:

Exhibit A Kingston Inner Harbour Management Units and Proposed Remediation Methods

Path: Y:\bim\city\CAD\GIS\Clerk\PWGSC\Kingston Inner Harbour\09 PROJECTS\1783886\02 PRODUCTION\MXD\Report\1783886_0205_02 Remedial Action Plan.mxd



LEGEND

MANAGEMENT UNIT	HABITAT MOSAIC (WETLAND REMEDIATION)
CITY OF KINGSTON JURISDICTION	INTERVENTION TECHNIQUE
PARKS CANADA JURISDICTION	DREDGED SURFACE SEDIMENT
DEPARTMENT OF NATIONAL DEFENCE JURISDICTION	MONITORED NATURAL RECOVERY
TRANSPORT CANADA JURISDICTION	
FEDERAL WATER LOT	
WATERBODY	
WATERCOURSE	
REMEDIATION TECHNIQUE	
CAP (CONVENTIONAL WITH ACTIVATED CARBON)	
THIN CAP WITH ACTIVATED CARBON	
ENGINEERING CONTROL (SHORELINE REVETMENT)	
ENGINEERING CONTROL (BOARDWALK)	

FOR DISCUSSION PURPOSES ONLY

0 150 300
1:6,000 METERS

REFERENCES

1. IMAGERY COPYRIGHT © 2015/04/14 ESRI AND ITS LICENSORS. SOURCE: CITY OF KINGSTON ONTARIO. USED UNDER LICENSE. ALL RIGHTS RESERVED.
2. WATERBODIES AND WATERCOURSES OBTAINED FROM THE CITY OF KINGSTON ONTARIO.
3. PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT
PWGSC

PROJECT
KINGSTON INNER HARBOUR
KINGSTON, ONTARIO

TITLE
REMEDIAL ACTION PLAN

CONSULTANT	YYYY-MM-DD	2020-09-30
DESIGNED	SS	
PREPARED	JP	
REVIEWED	SS	
APPROVED	GL	

GOLDER

PROJECT NO. 1783886	PHASE 7000	REV. 0	FIGURE 2
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