

**Council Meeting Number 10-2021  
Addendum Number 3  
Tuesday, April 6, 2021**

**Delegations**

The consent of Council is requested for the **addition** of Delegation Numbers 1, 2, 3, 4, 5 and 6.

1. Bob Clark will appear before Council to speak to Clause 4 of Report Number 40: Received from the Chief Administrative Officer (Recommend) with respect to Update on Kingston Inner Harbour Contaminated Sediment Management Project.
2. Alan Giacomini will appear before Council to speak to Clause 4 of Report Number 40: Received from the Chief Administrative Officer (Recommend) with respect to Update on Kingston Inner Harbour Contaminated Sediment Management Project.
3. Lesley Rudy will appear before Council to speak to Clause 4 of Report Number 40: Received from the Chief Administrative Officer (Recommend) with respect to Update on Kingston Inner Harbour Contaminated Sediment Management Project.

4. Moved by Councillor Doherty

Seconded by Councillor Hill

**That** Clauses 12.9 and 12.11 of the City of Kingston Procedural By-Law 2021-41 be waived in order to allow Elvira Hufschmid to speak to Clause 4 of Report Number 40: Received from the Chief Administrative Officer (Recommend) with respect to Update on Kingston Inner Harbour Contaminated Sediment Management Project.

5. Moved by Councillor Doherty

Seconded by Councillor Hill

**That** Clauses 12.9 and 12.11 of the City of Kingston Procedural By-Law 2021-41 be waived in order to allow Mabyn Armstrong to speak to Clause 4 of Report Number 40: Received from the Chief Administrative Officer (Recommend) with respect to Update on Kingston Inner Harbour Contaminated Sediment Management Project.

6. Moved by Councillor Hutchison

Seconded by Councillor McLaren

**That** Clauses 12.9 and 12.11 of the City of Kingston Procedural By-Law 2021-41 be waived in order to allow Mary Farrar to speak to Clause 4 of Report Number 40: Received from the Chief Administrative Officer (Recommend) with respect to Update on Kingston Inner Harbour Contaminated Sediment Management Project.

**Council Meeting Number 10-2021  
Addendum Number 3  
Tuesday, April 6, 2021**

**Communications**

The consent of Council is requested for the **addition** of Communication Numbers 10-435, 10-436, 10-437, 10-438, 10-439, 10-440, 10-441 and 10-442.

10-435 Correspondence received from Joan Bowie and Sue Bazley, Co-Chairs, Williamsville Community Association, with respect to Planning Report Number PC-21-026 – File Number D35-001-2021, dated April 5, 2021.

(Distributed to all members of Council on April 6, 2021)

(Attached to Addendum Number 3 as schedule page 1)

10-436 Correspondence received from Helen Finley with respect to Proposal re Heritage Application Fee, dated April 5, 2021.

(Distributed to all members of Council on April 6, 2021)

(Attached to Addendum Number 3 as schedule pages 2-3)

10-437 Correspondence received from Donna Lounsbury with respect to Planning Report Number PC-21-026, dated April 5, 2021.

(Distributed to all members of Council on April 6, 2021)

(Attached to Addendum Number 3 as schedule page 4)

10-438 Correspondence received from Bob Clark, Metalcraft Marine with respect to Kingston Inner Harbour, dated April 6, 2021.

(Distributed to all members of Council on April 6, 2021)

(Attached to Addendum Number 3 as schedule pages 5-19)

10-439 Correspondence received from Christine Sypnowich, President, Barriefield Village Association with respect to Heritage Application Fees, dated April 6, 2021.

(Distributed to all members of Council on April 6, 2021)

(Attached to Addendum Number 3 as schedule page 20)

10-440 Correspondence received from Laura Murray with respect to concerns about dredging and capping the Cataraqui River, dated April 6, 2021.

(Distributed to all members of Council on April 6, 2021)

(Attached to Addendum Number 3 as schedule pages 21-22)

**Council Meeting Number 10-2021  
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10-441 Correspondence received from Matthew Keevil with respect to Kingston Inner Harbour, dated April 6, 2021.

(Distributed to all members of Council on April 6, 2021)

(Attached to Addendum Number 3 as schedule pages 23-24)

10-442 Correspondence received from Axel and Elisabeth Roose with respect to 2<sup>nd</sup> Dwelling on property of 915 Alnwick Lane.

(Distributed to all members of Council on April 6, 2021)

(Attached to Addendum Number 3 as schedule page 25)

**From:** Joan Bowie

**Sent:** April 5, 2021 9:13 PM

**To:** Paterson,Bryan <[bpaterson@cityofkingston.ca](mailto:bpaterson@cityofkingston.ca)>; Doherty,Bridget <[bdoherty@cityofkingston.ca](mailto:bdoherty@cityofkingston.ca)>; Oosterhof,Gary <[goosterhof@cityofkingston.ca](mailto:goosterhof@cityofkingston.ca)>; McLaren,Jeff <[jmclaren@cityofkingston.ca](mailto:jmclaren@cityofkingston.ca)>; Neill,Jim <[jneill@cityofkingston.ca](mailto:jneill@cityofkingston.ca)>; Osanic,Lisa <[losanic@cityofkingston.ca](mailto:losanic@cityofkingston.ca)>; Holland,Mary Rita <[mrholland@cityofkingston.ca](mailto:mrholland@cityofkingston.ca)>; Stroud,Peter <[pstroud@cityofkingston.ca](mailto:pstroud@cityofkingston.ca)>; Hutchison,Rob <[rhutchison@cityofkingston.ca](mailto:rhutchison@cityofkingston.ca)>; Kiley,Robert <[rkiley@cityofkingston.ca](mailto:rkiley@cityofkingston.ca)>; Boehme, Ryan N. <[rboehme@cityofkingston.ca](mailto:rboehme@cityofkingston.ca)>; Chapelle,Simon <[schapelle@cityofkingston.ca](mailto:schapelle@cityofkingston.ca)>; Hill,Wayne <[whill@cityofkingston.ca](mailto:whill@cityofkingston.ca)>

**Cc:** Agnew,Paige <[pagnew@cityofkingston.ca](mailto:pagnew@cityofkingston.ca)>; Agarwal,Sukriti <[sagarwal@cityofkingston.ca](mailto:sagarwal@cityofkingston.ca)>; Robidoux,Meghan <[mrobidoux@cityofkingston.ca](mailto:mrobidoux@cityofkingston.ca)>; Sue Bazely ; City Clerk <[CityClerk@cityofkingston.ca](mailto:CityClerk@cityofkingston.ca)>

**Subject:** Planning Report Number PC-21-026. File Number D35-001-2021

**CAUTION:** This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

To the Mayor and Council,

The working group of the Williamsville Community Association requests that council approve the proposed new ZBL as described in Report Number PC-21-026 File Number D35-001-2021.

Limiting the number of bedrooms to eight per lot will encourage construction of housing that is more affordable and accessible to a wider population than the inappropriate large infill developments recently approved and built in our near campus neighbourhoods. This proposed new ZBL is supported by the Official Plan Section 3.3.D.3. " Any new or redeveloped residential uses intended as off-campus housing must be designed and built to be viable for a wider housing market. The City may therefore restrict density by limiting the number of bedrooms or habitable rooms per residential unit through the zoning by-law. Sections 2.6, 2.7 and 8 of this Plan must be addressed in the review of off-campus housing proposals."

We thank planning staff for their consultations with our neighbourhood association.

Joan Bowie and Sue Bazely  
Co-Chairs  
Williamsville Community Association

**CITY COUNCIL  
MEETING OF:**

April 6, 2021

**COMMUNICATION  
No: 10-435**

April 05, 2021

Mayor and Members of Council  
City of Kingston,  
City Hall  
Kingston, Ontario

Re: Proposal re Heritage Application Fee

Dear Mayor Paterson and Members of Council,

I have been involved with the preservation and restoration of Kingston's heritage buildings in a number of ways since the proclamation of the Kingston Heritage Act, which pre-dates the Ontario Heritage Act.

I have been an applicant on numerous occasions, served on a number of heritage committees/working groups, volunteered countless hours of researching and writing for the designation programme, attended endless LACAC, Heritage Committee and Heritage Kingston meetings and promoted Kingston as potentially the prime heritage city in Canada as well as explaining to owners of heritage properties, the value of quality restoration to them and to the City.

My husband and I have also restored 5 heritage residences and one apartment building in the Sydenham Heritage District. We are familiar with the costs involved in undertaking quality restoration work and the process which the City requires.

I would ask you think about the considerable contribution which owners/restorers of heritage properties make to the

City's economy. In the early 1960s when we restored our first house on Wellington Street, people could not understand why we would move to a "slum". The financial investment to restore Sydenham Heritage District and Barriefield Heritage Conservation District, as well as heritage properties located in other parts of Kingston which the City views as part of its tourism economy has been made almost exclusively by private citizens. The exceptions come from Ontario Heritage Foundation and the City's small grants programme.

Owners of heritage properties who undertake major or minor restoration projects are already faced with fees for building permits, encroachment permits, utility costs before they even begin. Some also face the cost of a heritage consultant as well as an architect and structural engineer. Then there is the cost of the actual work itself – masonry, millwork, upgrading of electricity and plumbing, sometimes demolition and replacement.

This permit fee will, I predict, become a further disincentive and work on heritage properties will be done without City involvement. The City needs to do all it can to encourage involvement of heritage property owners in the City's heritage programme. This proposal will have the opposite effect and I encourage Council to reject it.

Sincerely,

Helen Finley

**CITY COUNCIL  
MEETING OF:**

April 6, 2021

**COMMUNICATION**

**No:** 10-436

3

**From:** Donna Lounsbury  
**Sent:** April 5, 2021 5:47 PM  
**To:** City Clerk <[CityClerk@cityofkingston.ca](mailto:CityClerk@cityofkingston.ca)>  
**Subject:**

**CAUTION:** This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Good afternoon,

As a resident of Sydenham District, living close to Queen's, I have been closely following the City's activities of late related to the new Zoning by-law. In particular, I strongly support the Zoning By-law amendment limiting the number of bedrooms per lot to eight as described in the Report to Council Number PC-21-026.

I believe that these changes are urgently needed to control the large out of scale developments which seem to be springing up recently in the neighbourhoods close to Queen's.

Many thanks for passing on this message.

Sincerely,  
Donna Lounsbury

Sent from [Mail](#) for Windows 10

**CITY COUNCIL  
MEETING OF:**  
April 6, 2021

<b>COMMUNICATION No: 10-437</b>
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# MetalCraft Marine

INCORPORATED

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## Potential Kingston Inner Harbour Sediment Remediation Project

**-Please Note: attached maps from two studies on KIH contaminated sediment, only partially match the City Council Report Remedial Action Plan Map.**

**-Please Note: Neither of the previous studies indicated proposed remedial action by way of our Businesses, Kingston Marina and MetalCraft Marine.**

**-Please Note: The Queen's University Report from 2010's Conclusion, where they clearly question if excavation can possibly lead to additional damage to the environment and expose higher concentrations of PCBs and HG.**

**-Please Note: The COA WOE Toxicity Tests do not clearly match the potential management area.**

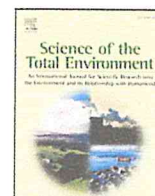
**-Please Note: The Ecological Risk Assessment chart shows Total PCBs Risk to Mink species only. I am here to tell you that we were being overrun at MetalCraft by Mink during the 2019-flooding.**

**-Please Note: I have included a report and chart of fish PCB concentrations both reports indicate that Lake Erie is a major source of PCBs but that levels continue to decline.**

**-Please Note: Transport Canada have sent us notice that they will not renew our waterlot lease past 2023 due to the upcoming (Pre-determined ???) Dredging Remediation project that includes our site, even though our site was identified by two studies that it had minor contamination and was not under consideration that it should be dredged.**

**-Please Note: MetalCraft employs 95 people and more in the summer months for the Marina, our business requires water to launch, test and dock our boats.**





# Historic brownfields and industrial activity in Kingston, Ontario: Assessing potential contributions to mercury contamination in sediment of the Cataraqui River

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## ABSTRACT

The waterfront of historic Kingston, Ontario (pop: 113,000) has been used for industrial activities for over a century. More than 40 industries have existed within the inner harbour, and while many of these industries are no longer present, the properties that they operated on remain as potential sources of persistent contamination to the present day, including mercury. To assess the extent and distribution of total mercury (THg) contamination, 21 sediment cores as well as pore water samples were collected within the inner harbour of Kingston. The spatial distribution of THg in the surface sediment is not homogenous; with concentrations in the surface sediment along the southwestern shoreline, adjacent to the former industrial properties, are significantly greater ( $p < 0.01$ ) than the rest of the inner harbour, and were above the Federal severe effect limit ( $> 2000$  ug/kg;) guideline for sediment. MeHg was detected in some sediment cores, and was found to have a significant, positive correlation with [THg] in the surface sediment (0–5 cm). THg was not found in storm sewer discharges, but was detected in terrestrial soil near the Kingston Rowing Club at a concentration of more than 4000 ug/kg. Significant [THg] was detected in runoff draining from contaminated shoreline soils, indicating that erosion from terrestrial sources may be an ongoing source of Hg to the sediment. It can be concluded that there is an increased risk over time to surrounding ecosystems where properties with historical contamination are not remediated until they are developed.

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## 1. Introduction

Concerns about the potential impact that contamination originating from abandoned industrial sites (brownfields) has been raised; particularly as it is estimated that there are between 400,000 and 500,000 brownfields in the US (Litt and Burke, 2002), 300,000 to 1.5 million sites in Europe (van Calster, 2004) and over 30,000 in Canada (National Round Table on the Environment and the Economy, NRTEE, 2003). The City of Kingston (Ontario, Canada) has several key historical brownfields along its waterfront, which are sources of long-standing controversy, and have provided a challenge for remediation approaches. In particular, the Kingston Inner Harbour on the Cataraqui River (Fig. 1), whose gradually sloping western shoreline has been utilized by industries for more than a century, has experienced repeated contamination events. Former industries include

a coal gasification plant, a former tannery and lead smelter, manufacturing and fabrication companies, a municipal dump, a woollen (textile) mill, a gristmill, shipyards, a fuel depot, and a railway corridor (Malroz Engineering Inc., 2003).

While many of the industries along Kingston's southwestern shoreline are no longer present, the properties that they operated on remain as potential contamination sources to the Cataraqui River and Lake Ontario. Previous analysis of sediment quality in the inner harbour has found elevated levels of several contaminants including PCBs, PAHs and metals such as chromium, copper and lead, in the sediment spatially closer to the former industries along the southwestern shoreline (Bennett, 2003; Stokes, 1977). While no studies have examined the distribution of mercury (Hg) in the sediment of the inner harbour in detail, THg concentrations (THg) were measured in the surface sediment taken by the Ministry of the Environment in 2002 during Project Trackdown, following the removal of PCB-contaminated surface sediment. THg concentrations were found to be more than twice the severe effect limit (SEL), which defines sediment greater than 2000 ug/kg as being heavily polluted and potentially toxic to biota (International Joint Commission, 2006).

The contamination issues associated with mercury have many implications for the socioeconomic and ecosystem health of the region. Presently, the shorelines of the inner harbour are used for

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The spatial distribution of Hg in surface sediment (0–5 cm) from core data estimated using kriging (Fig. 7a) suggests that the surface sediments with the higher concentrations of Hg (>2000 ug/kg) are immediately adjacent to the shoreline near the Rowing Club and the Woollen Mill. The THg contamination plume points southeast, following the river flow pattern, and decreases with distance from the shoreline (Fig. 7), which is consistent with known spatial trends of other metals such as copper and lead (Bennett, 2003). THg concentrations in sediments both at the surface and at the depth (Fig. 7b, c) decrease with distance from the western shoreline between the LaSalle Causeway and Belle Park. The distribution of THg is isolated primarily to the west of the navigation channel, south of Belle Park. Sedimentation is high in this area as water from Lake Ontario mixes with water from upstream, creating an estuary-like environment (Crysler and Latham Ltd., 1977). The area of the Hg plume increases with depth (Fig. 7b, c), suggesting that Hg loading to sediments may have been higher in the past. Furthermore, the Hg plume is consistently associated with the southwestern shoreline by the Rowing Club and the Woollen Mill rather than from upstream sources or the eastern shoreline.

While it is possible that Hg may be migrating at depth, analysis of pore water from sediment cores indicated that the mobility of Hg between sediments is limited, because only the 20–22 cm interval from C3 near the Davis Tannery Creek had detectable THg in pore water (0.01 ug/L; det. limit = 0.01 ug/L). The large-volume surface pore water samples from drive-point piezometers also had low concentrations of THg (0.0035 to 0.014 ug/L). None of the pore waters measured were above the Canadian Water Quality Guideline (CWQG) for inorganic Hg (0.026 ug/L) and THg in surface waters of the inner harbour and upstream along the river have been all below detection limits (0.4 ug/L). The high pH measured in both surface and depth waters of this study (8.54–9.55 pH) and in previous studies (7.58–9.8;

Bennett, 2003) of the inner harbour may be partially responsible for the low pore water THg concentrations, despite the high THg concentrations observed in surface sediment. The affinity of Hg for acid-binding sites on organic matter in sediment is known to increase under more basic conditions (Ravichandran, 2004). The high pH of the inner harbour is likely influenced by the limestone bedrock geology, as well as an abundance of dissolved nutrients from wave action, particularly along the western shoreline where plant productivity is high.

### 3.2. Organic matter

The only significant correlation between organic matter, as indicated by % LOI and THg concentration in sediment cores, was found in the C3 core ( $r^2 = 0.95$ ;  $p < 0.0001$ ) at the mouth of the Tannery Creek (Table 2). Strong correlations between DOM and Hg are frequently observed in waterways draining wetlands (Ravichandran, 2004). Since the Tannery Creek drains the marsh once used as a discharge site for effluent from the Davis Tannery, it is possible that the Hg observed in sediment from C3 was transported via organic matter during times of high hydrologic flow from the marsh. However, the lack of significant correlations for organic matter and THg in all of the other cores from the Inner Harbour region suggests that other hydrological characteristics may be more dominant than organic carbon in the Hg biogeochemical cycle, which is similar to other studies that have examined organic content and THg in organic-rich sediments (He et al., 2007; Mason et al., 2006).

### 3.3. Methylmercury in sediment

In all cores, MeHg concentrations consistently decreased with depth, and there was a positive but insignificant correlation between

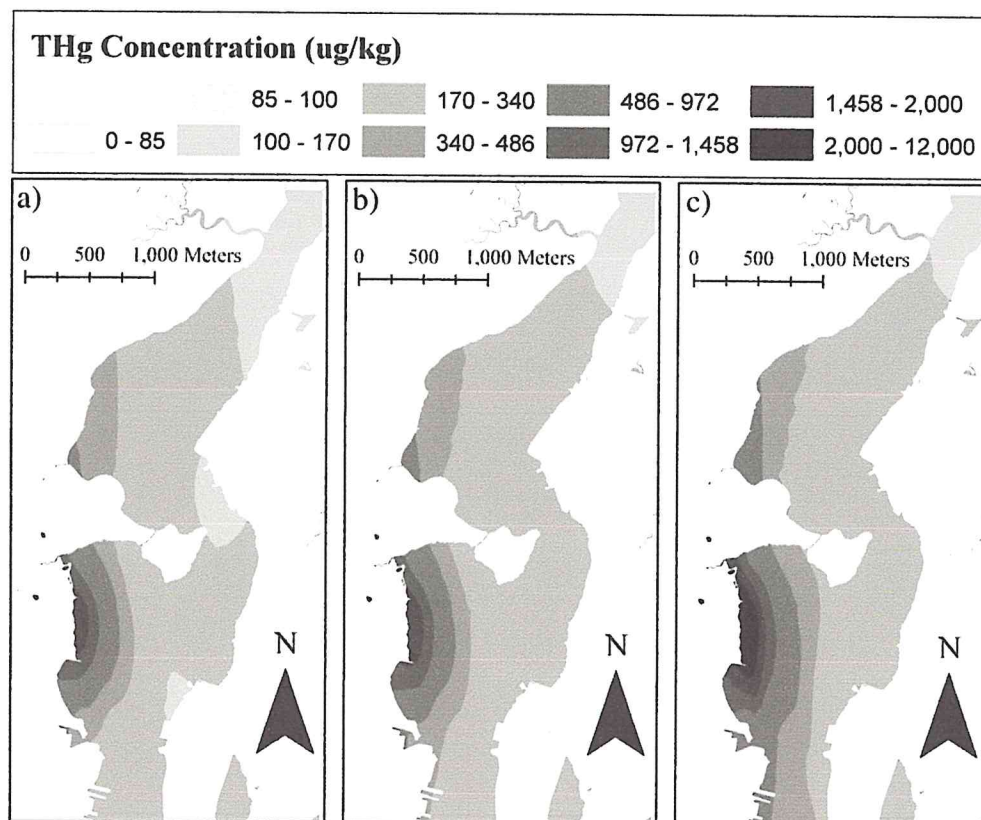


Fig. 7. Kriging estimation maps for core data sets from left to right: 0–5 cm (a), 5–10 cm (b) and 10–15 cm (c). Contour intervals were chosen based on the sediment quality guidelines (ISQG > 170 ug/kg; PEL > 486 ug/kg; SEL > 1000 ug/kg).



the soil and around the buildings, as it can act as an impermeable barrier to leaching wastes. Of the eight test pits though, three did not reach the 120 cm depth where clay was found and no test pits were sampled beyond the extent of the proposed addition. Since the extent of the test pits did not cover the entire property, it is possible that there are discontinuities in the clay layers believed to entomb wastes beneath the building, or there may be wastes that exist beyond the boundaries of the Rowing Club building. Since no reports are available that indicate what wastes are buried around the property, and hydrologic flow is unknown, it is unclear what barriers, if any, are preventing those wastes from migrating to the river. There is also potential for wastes to be transported to the surface soils, particularly during disturbance of soils during development.

#### 4. Conclusions

The area of the inner harbour with surface sediment concentrations of THg above the probable effect level (PEL; >486 ug/kg), is predominantly along the southwestern shoreline, south of Belle Park. If sediment and water are constantly being directed towards the southwestern shoreline, it likely contributes to the isolation and concentration of contaminants in this area. The increasing THg concentration in surface sediments near the Rowing Club and Tannery property is of concern, but depth profiles of sediment in the more contaminated zones also indicate that buried concentrations of THg are higher, representing a classic management dilemma. By removing small portions of surface sediments for 'hot-spot' contaminant remediation (e.g. elevated PCBs or Hg in surface sediments), it may be possible to expose historically deposited Hg of greater concentrations. Since, preliminary analysis of THg in pore water suggests that movement of THg between sediment particles may be minimal, further analysis of the affinity of THg for sediments of the inner harbour is a potential first step in assessing the immediate threat and course of action for THg in sediment.

THg concentrations in soil adjacent to the Kingston Rowing Club are currently above the standards for soils located along a shoreline. Pre-existing wastes beneath the Rowing Club property are known to contain high concentrations of Hg, and are a likely source of the higher concentrations measured around its structure. The excavation and installation of a combined sewer overflow tank at Emma Martin park from 2004–2006 by the City, immediately to the West of the property, may have also contributed to the re-distribution of buried Hg wastes in the area to surface soils. Since the limits of buried wastes beneath the property are unknown, further work should be done to evaluate the full extent of Hg and other wastes, in order to establish whether removal or remediation of these soils are warranted to prevent further Hg loading to the river and ultimately Lake Ontario. Otherwise, removal and replacement of clean sediment will be in place to be contaminated by historical waste. The evidence that historically contaminated terrestrial soil may be contributing to ongoing Hg loading to river sediments though provides an impetus for urban brownfield development. If contaminated sites are left undeveloped due to contamination concerns, the failure to remediate the property until a development strategy is agreed upon, is done at the risk of allowing the property to continue to degrade environmental quality to its surroundings.

#### Acknowledgements

Funding for this study was provided by NSERC Discovery grant to Linda Campbell in addition to funding and equipment use from the Analytical Services Unit (ASU) at Queen's University. Core dating and coring equipment were graciously provided by the PEARL laboratory at Queen's University. Fieldwork was assisted by Victor Castro of the Ministry of the Environment (MOE), as well as many students including Eric Delong, Rebecca Lehman, Jacquelyn Norris, Julia Badih,

and Patrick Mislan. Special thanks to Astrid Michaels, Mark Tinney and other individuals at RMC who assisted in providing access to samples and sediments collected from their studies of the inner harbour. Historical records and consulting reports were provided by the City of Kingston and fieldwork would not have been possible without the cooperation of John Armitage and the Kingston Rowing Club. Finally, to all individuals who assisted in some way to the success of the study, Peter Hodson, Barbara Zeeb, Brian Cumming, Chris Grooms, John Glew, Pamela Welbourn and Dan Selbie, whom without your support this would not have been possible.

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## ***2012 RPIC Federal Contaminated Sites Workshop***

# ***The Development of Site Specific Sediment Remediation Objectives for Managing Human and Ecological Risks in the Kingston Inner Harbour***

Dr. Ken J. Reimer, Director  
Viviane Paquin, Program Facilitator  
Dr. Tamsin Laing , Project Leader  
Megan Lord Hoyle, Risk Assessor

Environmental Sciences Group, Royal Military College of Canada,  
Kingston, Ontario



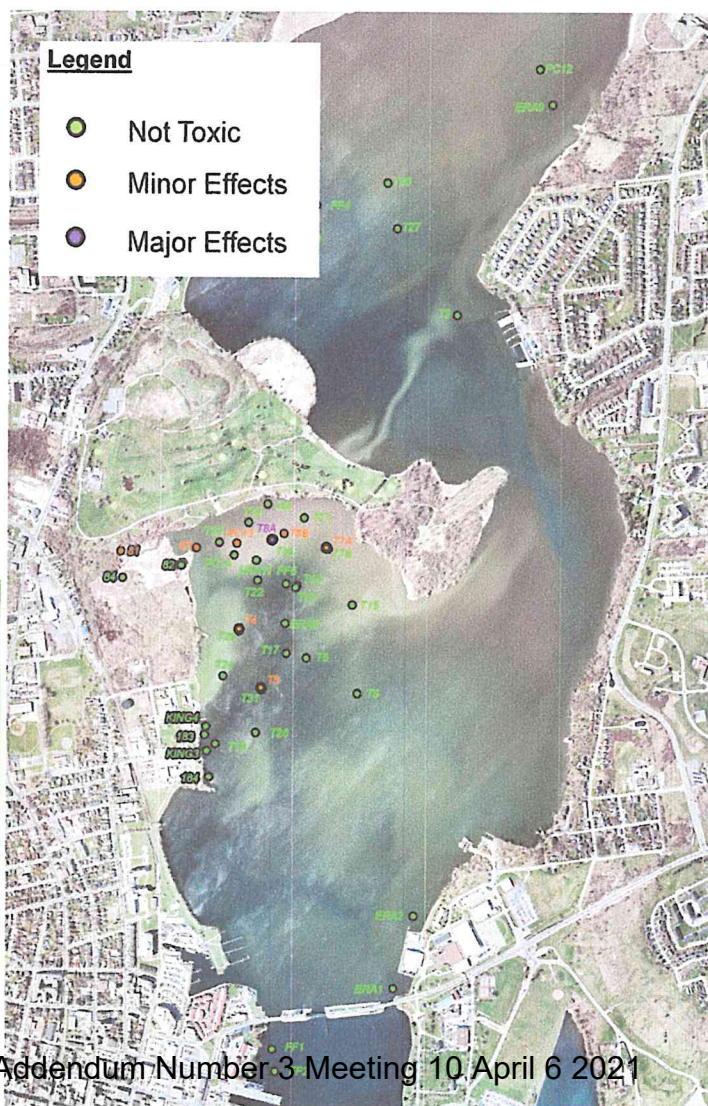
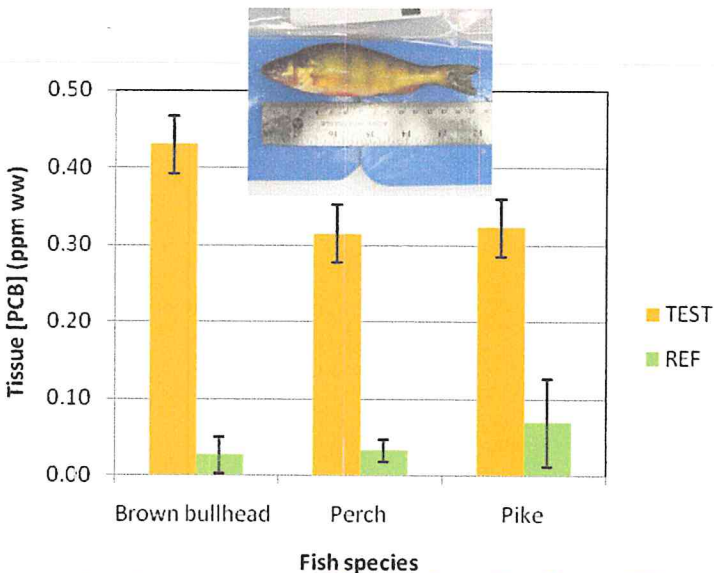


# COA WOE for biological effects

## Bioaccumulation

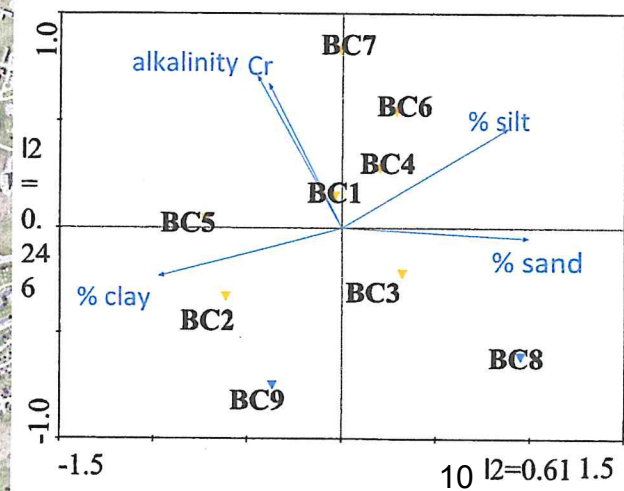
## Sediment toxicity Tests

## Benthic Community Impairment



Eurasian milfoil

Cattails



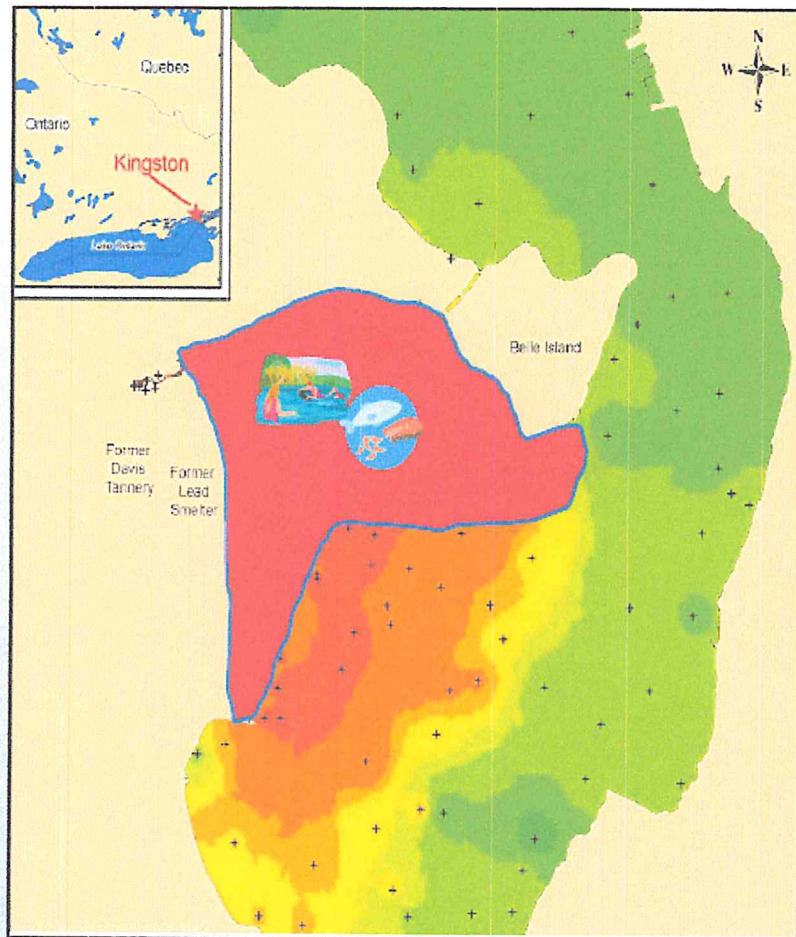






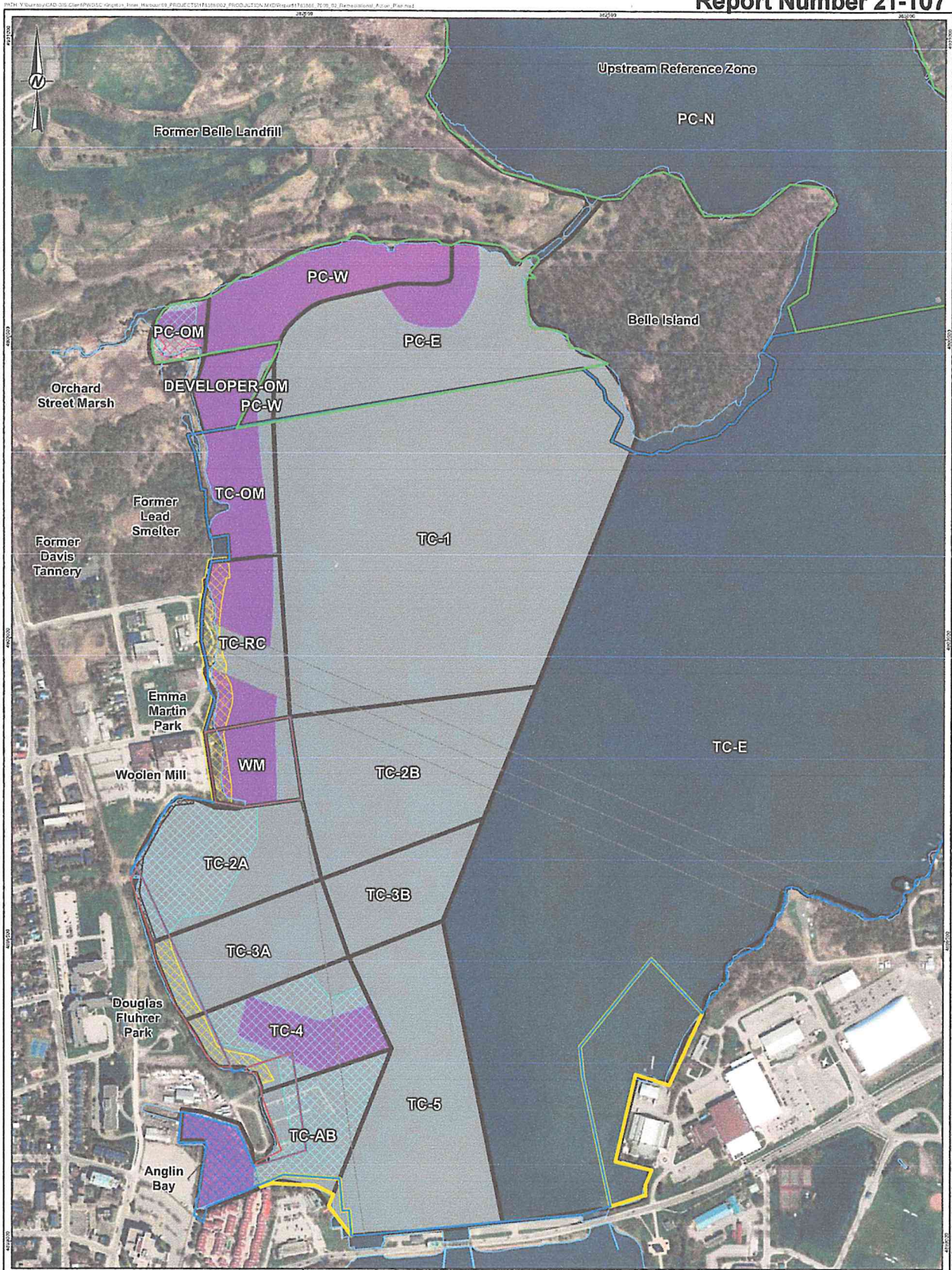


# Next Steps

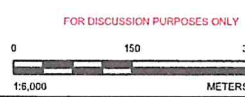


1. Complete chapter V and finalize the Kingston Inner Harbour report
2. Initiate the public consultation process
3. Custodial departments to arrive at a remediation/risk management decision for the Kingston Inner Harbour sediments





LEGEND	
[Red outline]	MANAGEMENT UNIT
[Black outline]	CITY OF KINGSTON JURISDICTION
[Green outline]	PARKS CANADA JURISDICTION
[Yellow outline]	DEPARTMENT OF NATIONAL DEFENCE JURISDICTION
[Blue outline]	TRANSPORT CANADA JURISDICTION
[Dashed line]	FEDERAL WATER LOT
[Blue line]	WATERBODY
[Light blue line]	WATERCOURSE
REMEDIAL ACTION TECHNIQUE	
[Blue hatched]	CAP (CONVENTIONAL WITH ACTIVATED CARBON)
[Light blue hatched]	THIN CAP WITH ACTIVATED CARBON
[Yellow hatched]	ENGINEERING CONTROL (SHORELINE REVERSMENT)
[Black hatched]	ENGINEERING CONTROL (BOARDWALK)
[Purple hatched]	HABITAT MOSAIC (WETLAND REMEDIATION)
[Pink hatched]	INTERVENTION TECHNIQUE
[Light purple hatched]	DREDGED SURFACE SEDIMENT
[Grey hatched]	MONITORED NATURAL RECOVERY



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 DERIVED FROM THE CITY OF KINGSTON  
3. PROJECTION: UTM ZONE 18 DATUM: NAD 83

CLIENT	PWGSC
PROJECT	KINGSTON INNER HARBOUR KINGSTON, ONTARIO
TITLE	REMEDIAL ACTION PLAN
CONSULTANT	GOLDER
DATE	2020-09-30
DESIGNED	SS
PREPARED	JP
REVIEWED	SS
APPROVED	GL
REV	0
FIGURE	13





# Ecological risk assessment

**Cr(III), Pb and PCBs pose risks for ecological receptors in the KIH**

Receptor	As	Cr(III)	Cu	MeHg	Pb	Zn	Total PCBs
Muskrat	No risk	Risk	No risk	N/A	No risk	No risk	No risk
Mink	No risk	No risk	No risk	No risk	No risk	No risk	Risk
Red-winged blackbird	No risk	Risk	No risk	N/A	Risk	No risk	N/A
Mallard duck	No risk	Risk	No risk	N/A	Risk	No risk	No risk
Great blue heron	No risk	No risk	No risk	No risk	No risk	No risk	No risk
Osprey	No risk	No risk	No risk	No risk	No risk	No risk	No risk

**Sediment ingestion is the main source of CoCs for the blackbird and muskrat. Consumption of contaminated foods is the main source of CoCs for the mallard and mink.**

**The KIH ERA is consistent with current recommended standard practice**



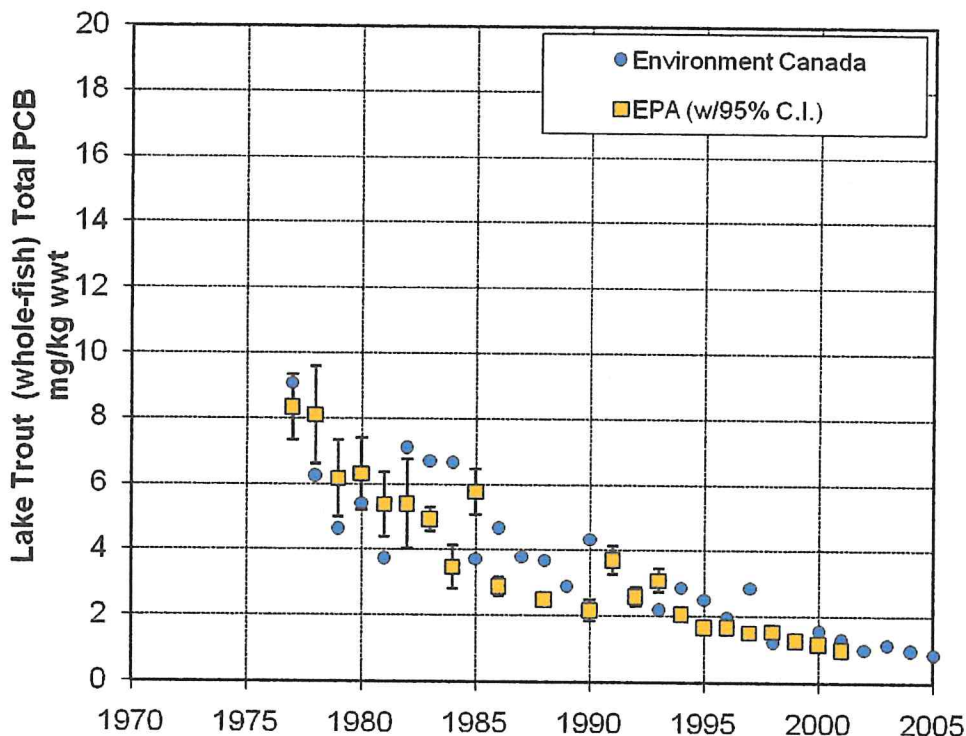
# **DRAFT TMDL Support Document for PCBs in Lake Ontario**

**Prepared for:  
USEPA Region 2**

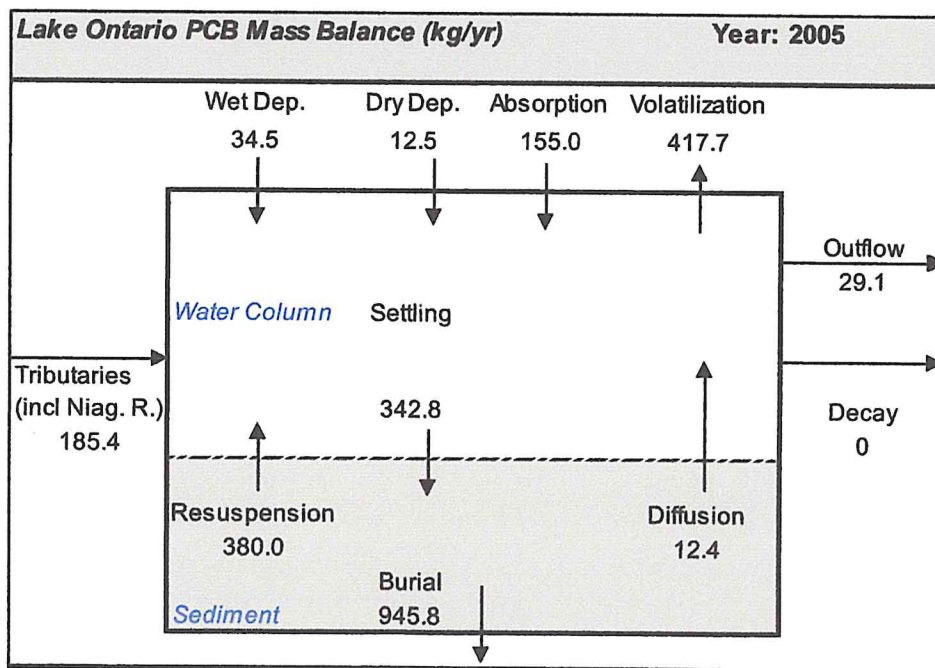
**by:  
LimnoTech  
Ann Arbor, MI**

***Under Subcontract to:*  
Battelle  
Duxbury, MA  
USEPA Contract No. EP-C-08-001**

**July 2011**



**Figure 4-3. Average annual lake trout whole-fish total PCB concentration from 1977 to 2005 from USEPA (Elizabeth Murphy, USEPA, personal communication, November 7, 2006) and Environment Canada (Sean Backus, Environment Canada, personal communication, January 17, 2007)**



**Figure 4-4. Lake Ontario PCB Mass Balance for 2005 (LOTOX2 model output)**





Journal of Great Lakes Research

Volume 33, Issue 3, 2007, Pages 592-605

# Are PCB Levels in Fish from the Canadian Great Lakes Still Declining?

Satyendra P. Bhavsar<sup>1,2</sup> , Donald A. Jackson<sup>1</sup>, Alan Hayton<sup>2</sup>, Eric J. Reiner<sup>3</sup>, Tony Chen<sup>3</sup>, John Bodnar<sup>3</sup>[Show more](#) [Outline](#) | [Share](#) [Cite](#)[https://doi.org/10.3394/0380-1330\(2007\)33\[592:APLIFF\]2.0.CO;2](https://doi.org/10.3394/0380-1330(2007)33[592:APLIFF]2.0.CO;2)[Get rights and content](#)

## Abstract

Long- and short-term levels and trends of polychlorinated biphenyls (PCBs) in lake trout (*Salvelinus namaycush*) and walleye (*Sander vitreus*) from the Canadian waters of the Great Lakes are examined using the bootstrap resampling method in light of the Great Lakes Strategy 2002 (GLS-2002) objective of decrease in concentrations by 25% during 2000–2007. This objective has been set as an indicator of progress toward the long-term goal of all Great Lakes fish being safe to eat without restriction. Lake Superior lake trout and walleye PCB concentrations were almost unchanged between 1990–2006, and the bootstrap analysis suggests that the probability of achieving the GLS-2002 objective is negligible (< 2%). The PCB levels in Lake Huron lake trout and walleye are decreasing; the declines between 2000–2007 are estimated to be 25–35% and 5–30%, respectively. In contrast, Lake Erie walleye concentrations will likely increase by 25–50% between 2000–2007. For Lake Ontario lake trout, achieving the 25% reduction target seems highly probable with a likely decrease of 45–55%; for Lake Ontario walleye, the probability of achieving such a reduction is only 8% with an expected change of –13 to +15%. Although the targeted

Addendum Number 3 Meeting 10 April 6 2021

FEEDBACK

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consumption restrictions. Lake Superior lake trout concentrations may remain unchanged at the current elevated level of 160 ng/g ww. For Lake Erie fish, the projected 2007 concentrations and the increasing trends are both worrisome. Additional measurements beyond 2007 are necessary to confirm these estimates because of the observed periodic oscillations in the concentrations.

[< Previous](#)[Next >](#)

### Index words

Polychlorinated biphenyls; PCB; chlorinated organic contaminant; Laurentian Great Lakes; long-term trend; fish

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**CITY COUNCIL  
MEETING OF:**

April 6, 2021

**COMMUNICATION**

**No:** 10-438



Christine Sypnowich  
President, Barriefield Village Association

6 April 2021

Dear Mayor Paterson and Kingston City Councillors,

I am writing to support the motion from Heritage Kingston to reconsider the recent imposition of a \$300 fee on applications for heritage permits.

There is no question that the new fee risks several negative consequences, as follows:

1. The imposition of this fee will generate ill will and resentment towards the City and its efforts to conserve heritage. Heritage property owners already face significant additional costs in maintenance and restoration.
2. The fee will provide a disincentive to owners of heritage properties to apply for heritage permits.
3. The City will find that its heritage assets are slowly but surely undermined and destroyed.

I understand that one of the arguments for fees is to raise revenue to support heritage planning at the City. However, it would be better to levy fines against those who make alterations to heritage properties without permits, or who make alterations that are inconsistent with the permits they've obtained. At present there's no system in place for monitoring compliance, let alone exacting penalties. Charging fees punishes those who seek to follow heritage guidelines, whilst allowing 'bad heritage citizens' to undermine the heritage assets of the City with impunity.

The following example vividly illustrates the importance of encouraging residents to apply for permits: there was some upset in Barriefield a couple of years ago when a resident made an alteration which was out of keeping with the Heritage Conservation District guidelines. It turned out the property owner had not applied for a permit. Residents pursued this with the City, and the upshot was approval after the fact, when it was clearly an improper alteration. There was no fine. The combination of heritage permit fees and no follow-up or monitoring of alterations means this problem will only get worse.

It is worth pointing out, in addition, that the decision to impose this fee was undertaken without proper engagement with the Heritage Kingston committee, owners of heritage properties, or the public. In a December report updating fees, the City buried the new imposition of the heritage permit fee, no matter how minor the project (note also that heritage work often involves rethinking original plans), without any consultation with the Heritage Kingston committee or any other stakeholders. (See the recent Coalition of Kingston Communities report card).

I urge you to reconsider and reject the new policy of imposing a fee for heritage applications in order more adequately to protect the unique heritage assets of our wonderful city. Many thanks for your consideration.

Yours sincerely,

Christine Sypnowich  
President, Barriefield Village Association, on behalf of the BVA Board

**CITY COUNCIL  
MEETING OF:**

April 6, 2021

**COMMUNICATION**  
No: 10-439

**From:** Laura Murray  
**Sent:** April 6, 2021 1:23 PM  
**To:** Hutchison,Rob <[rhutchison@cityofkingston.ca](mailto:rhutchison@cityofkingston.ca)>; Doherty,Bridget <[bdoherty@cityofkingston.ca](mailto:bdoherty@cityofkingston.ca)>;  
Osanic,Lisa <[losanic@cityofkingston.ca](mailto:losanic@cityofkingston.ca)>; Stroud,Peter <[pstroud@cityofkingston.ca](mailto:pstroud@cityofkingston.ca)>; Jim Neill  
; Holland,Mary Rita <[mrholland@cityofkingston.ca](mailto:mrholland@cityofkingston.ca)>; McLaren,Jeff  
<[jmclaren@cityofkingston.ca](mailto:jmclaren@cityofkingston.ca)>  
**Cc:** City Clerk <[CityClerk@cityofkingston.ca](mailto:CityClerk@cityofkingston.ca)>  
**Subject:** concerns about dredging and capping the Cataraqui River

**CAUTION:** This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Dear Councillors –

Let me add my voice to say I'm alarmed at the idea of dredging the river. I'm no scientist. Maybe it's the only thing to do. But I will not be convinced unless I hear and digest a sustained discussion and debate between scientists with different views — and I hope you won't be convinced in haste either.

Like so many residents of downtown Kingston, I spent more time than usual by the river this winter, watching the beavers, muskrats, birds, ice, skaters, etc. etc. — we all noticed so much life there. I'm not as sure as some others that “the earth is healing itself” — I'm not naïve about the persistence of toxins — but on the other hand I'm not at all sure that the destruction involved in dredging will produce a better outcome. It sounds to me like mid-20<sup>th</sup> century solutions for inner cities: raze the thing, and start from scratch. We all know how that turned out. An unlivable habitat.

I also wonder who has been lobbying for this. I can't see the Federal government putting out such a huge amount of money without pressure from somewhere. They have lots of other toxic sites to clean up. Not to mention a lot of other important things to spend money on in these days.

I should also mention that I'm part of a multi-year Social Sciences and Humanities Research Council of Canada research project to study Belle Park as a microcosm of approaches to waste, recreation, wetlands, and Indigenous spaces. As part of the preparation for this project I read the history of the City of Kingston's big spending to defend itself against the lawsuit about the landfill leachate that was damaging the river. It behooves the city to act responsibly this time round — not to avoid dealing with the consequences of toxins — but to make sure the cure is not worse than the disease.

I hope you will vote to get the information you need, and we all need.



All very best, Laura.

Laura J. Murray, Queen's University (she/her)

Professor, Department of English

Co-Director, Graduate Program in Cultural Studies

Coinvestigator, "A Totem Pole on a Pile of Garbage: Contending with Colonial and Environmental Violence in Kingston, Ontario" (SSHRC Insight Grant)

Director, Swamp Ward and Inner Harbour History Project (SWIHHP): <http://www.swampwardhistory.com>

Queen's University is located in Ka'tarohkwi on traditional Anishinaabe and Haudenosaunee territory.

**CITY COUNCIL  
MEETING OF:**

April 6, 2021

**COMMUNICATION  
No: 10-440**

2019-04-06

Statement of concern regarding proposed contaminant remediation by dredging and capping in Kingston Inner Harbour:

I am a Boreal Ecology PhD candidate at Laurentian University with expertise focusing on the population ecology of freshwater turtles and I have familiarity with Kingston Inner Harbour, which is the site of the proposed remediation project. In 2019 I assisted with field research focusing on turtles— including nesting surveys and VHF radio telemetry of Northern Map Turtles (*Graptemys geographica*)—with the Friends of Kingston Inner Harbour in partnership with the Dr. Steve Lougheed’s lab at Queen’s University. Dredging poses a substantial direct mortality threat to turtles and other vertebrates (e.g., Aresco and Gunzberger; 2004). Eastern Musk Turtles, *Sternotherus odoratus*; Northern Map Turtles; Snapping Turtles, *Chelydra serpentina*; and Painted Turtles, *Chrysemys picta* have been observed in are closely adjacent to the proposed surface sediment dredging areas. I am concerned that the proposed dredging and capping procedures are targeting habitat areas that are used intensively by turtle species-at-risk without any documented assessment of the risks or benefits to these populations and seemingly without consideration for how to mitigate potential direct mortality. Given the slow life-history of these species, most with generation times approaching or exceeding 30 years (COSEWIC 2002; 2009; 2018), there is a high potential for long-lasting harm to these populations (e.g. Keevil et al. 2018). The proposed dredging procedure should not proceed without serious and careful consideration of potential harms to sensitive populations and ways to mitigate these risks.

Sincerely,

Matthew G. Keevil, PhD Candidate,  
Dept. of Biology, Laurentian University, Sudbury, ON, Canada

## References

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Keevil, M.G., Brooks, R.J., Litzgus, J.D., 2018. Post-catastrophe patterns of abundance and survival reveal no evidence of population recovery in a long-lived animal. *Ecosphere* 9, e02396.  
<https://doi.org/10.1002/ecs2.2396>

**CITY COUNCIL  
MEETING OF:**

April 6, 2021

**COMMUNICATION**

**No:** 10-441

To: City Council

Re: 2<sup>nd</sup> Dwelling on the Property of 915 Alnwick Lane

We are reaching out to get allowance for the possible construction of a 2<sup>nd</sup> dwelling on this property big enough to accommodate a family with children in a 4 bedroom house.

Reasons:

1.The 915 Alnwick Lane Property covers about 7 acres. This is a lot of room for 2 houses, especially compared to newly developed subdivisions, e.g. HWY 15 holding family homes.

2.All other homes in our neighborhood are big enough to accomodate 4-5 persons, a family cannot dwell in the existing little house.

3.To our understanding formerly there had been the Mc Amey Residence at this property which was even smaller in property size at the given time **plus** the now existing dwelling which had “ cottage status” and has always been named “ the Cottage”. The main house was larger than the cottage. **We are just applying to re-establish the former status, a main house and the cottage.**

4.All required tests and studies like Septic Design and Hydrogeological Assessment were conducted by companies of high reputation ( Groundwork Engineering, Malroz) with more than satisfying results:

There is a design and lots of room for a new septic system big enough to serve 5 potential persons

The existing well provides 4.3 times of the daily demand of water calculated on a 4 bedroom home for a total of 5 people should it be fully occupied.

Based on all these facts we apply for the allowance of a 2<sup>nd</sup> dwelling on 915 Alnwick Lane with 4 bedrooms

Sincerely,

Axel and Elisabeth Roose,

**CITY COUNCIL  
MEETING OF:**

April 6, 2021

<p><b>COMMUNICATION No: 10-442</b></p>
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