

KINGSTON INNER HARBOUR SEDIMENT MANAGEMENT PROJECT

QUESTIONS & ANSWERS – AUGUST 2021

SITE CONDITIONS AND ENVIRONMENTAL RISKS

Q: *Why is this sediment management project required?*

A: A complex history of industrial activity in areas surrounding Kingston Inner Harbour resulted in contamination of sediments (material lining the lake bottom) in Transport Canada, Parks Canada, and City of Kingston water lots. The chemicals of concern include metals, polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). The chemicals are mostly from historical land uses, including a former rail yard, landfill, coal gasification plant, tannery, lead smelter, shipyards, fuel and oil docks, scrap/demolition yards, and other industrial activities. Scientific studies have concluded that the contamination in the Kingston Inner Harbour is causing risk to humans, fish, birds, mammals, and other aquatic life. Despite several decades of being left to recover, several areas have not recovered enough to be safe, and continued recovery will be very slow if nothing is done.

Q: *What do you mean by risk and what is an environmental risk assessment?*

A: The term “risk” means there could be harm to people and/or the environment exposed to the chemicals. It is called a risk because poor health is possible, but it may not always happen, or may occur only to a small group of individuals. The amount of risk depends on the amount of exposure, pre-existing health, and other factors. An environmental risk assessment is a scientific process used to describe and estimate the chance of negative health effects (i.e., potential risks).

Q: *How urgently do these risks to public health have to be addressed?*

A: There is no health emergency or need for urgent action. Risks to human health are considered moderate, but not severe, and would persist for decades if not managed. There is time to carefully develop a sediment management plan for Kingston Inner Harbour to reduce the risks to an acceptable level. Water quality remains acceptable and does not require management separate from the sediment management plan. If people do not eat a lot of local fish and do not have regular contact with the contaminated sediments, the risk is low. A fish consumption advisory is in place (<https://www.ontario.ca/page/eating-ontario-fish>). Most recreational activities in and around the harbour, like boating, kayaking, rowing, and hiking, are safe if skin contact with sediment is minimized or avoided. People should avoid touching the sediments (including contact through swimming). If sediment does contact your skin, it is recommended that you rinse it off and wash your hands before eating.

Q: *I have seen wildlife using the harbour—is that a sign that they are not impacted by the contamination?*

A: Although the presence of turtles and other wildlife in the harbour is a good sign that the sediment is not causing severe or acute toxicity to wildlife, it may be causing underlying health conditions or community-level impacts that may not be easily seen or observed in all of the population. Effects of wildlife exposure to metals, PAHs and PCBs can include poor development, decreased reproduction rates, deformities or tumors, and mortality. For example, physical abnormalities, such as skin tumors, have been seen in some brown bullhead in the harbour that are likely caused by contact with the sediment.

Q: *What studies were completed to support the conceptual plan?*

A: Several scientific studies were completed, including studies evaluating sediment chemistry (how much contamination is in the sediment bed), potential biological/toxicological effects (measurements or estimates of how aquatic animals respond to chemical exposure), tissue accumulation (how much chemical enters the food web), and sediment transport and stability (how the sediments move around and mix in the harbour). An environmental risk assessment was completed to combine all this scientific information and determine if exposure to the contamination could be causing adverse effects to human health or the environment. Based on results of these studies, it was concluded that management action was required in select areas, and a conceptual sediment management plan was developed.

Studies were completed following standard federal and provincial guidance. Federal Expert Support Departments (including Public Services and Procurement Canada, Health Canada, Fisheries and Oceans Canada and Environment and Climate Change Canada) reviewed the studies and provided technical support. Additional archaeological and biological studies are being completed to provide additional confidence that potential impacts associated with the project can be effectively addressed.

MANAGEMENT PLAN

Q: *What is the strategy for dealing with the contaminants? Why is the harbour not being left to recover naturally?*

A: A priority for this project is to not do more harm than good. The strategy was designed to balance the least amount of environmental disturbance with the greatest degree of contaminant risk removed. With this in mind, the conceptual plan includes leaving sediments alone for most of the harbour, because the risks in most areas are low. Physical management (including areas of dredging, capping or shoreline engineering) was selected only in areas where risks are greatest to people, fish, or wildlife. Although sometimes nature can heal itself by either breaking down contaminants or slowly burying them with cleaner deposits, these processes may not be fully effective and can take a very long time. In Kingston Inner Harbour, the burial of contaminated sediment is very slow, as sediments are frequently stirred up by waves, ice, fish, and human activities.

Q: *Is the Sediment Management Plan final?*

A: No, the plan is currently at the concept stage, and will be refined based on feedback from Indigenous communities, local stakeholders and the public.

Q: *Will dredging spread contaminants throughout the harbour and beyond?*

A: No, there are many standard and acceptable environmental controls available to prevent this from happening. Dredging is a safe and common practice for removing contaminated sediment, and has been effectively done in harbours throughout North America. As part of the detailed design process, technologies best suited to each area will be selected, and an environmental management plan will be prepared to prevent contaminants from spreading. Environmental monitoring, including water and sediment quality outside of the dredging areas will be conducted to confirm that chemicals are not spread into other areas of the harbour or beyond.

Q: *Will all contaminants be removed? If not, why is the harbour not being completely remediated?*

A: It is neither possible nor necessary to remove 100% of the contaminants. Low levels of chemical are safe and common in working harbours. The goal is to remove the sediments with the highest amounts of chemicals to reduce the risks to an acceptable level. The level deemed safe is based on science and the protection goals for the harbour. Reaching safe levels will be monitored during and after the project to verify that the methods chosen work as intended.

Q: *Are there ongoing sources of contamination, and if so, how will those be managed to prevent recontamination?*

A: Understanding and addressing the potential for recontamination is essential for contaminated sites projects. Most of the contamination in the harbour resulted from previous activities in surrounding areas. Residual contamination in most of those surrounding areas is being managed, or planned for management, which will help prevent future contamination of the harbour. For example, a groundwater system was installed at Emma Martin Park to prevent metals from moving into the harbour, and a leachate management system was installed at the former landfill to prevent movement of PCBs.

The conceptual plan recognizes that Kingston Inner Harbour is a working harbour and therefore may continue to receive new inputs from active uses (e.g., storm water, boat traffic, fuel spills). For that reason, the objective of the plan is to manage the contamination to low levels, not to remediate to pristine conditions. Ongoing sources are not expected to worsen conditions beyond the managed level. Regardless, Transport Canada and Parks Canada will encourage the City and other harbour users to comply with all current environmental regulations and to apply responsible practices that will reduce the likelihood of recontamination. The site will be monitored over the long term to provide confidence that remaining concentrations remain stable or decrease over time.

Q: *Why are the federal departments asking to partner with the City of Kingston?*

A: A harbour-wide sediment management plan has been recommended, including actions recommended for federal and city-owned water lots. As such, Transport Canada and Parks Canada are seeking feedback from the City of Kingston regarding their interest in joining the project. Regardless of whether or not a partnership agreement is pursued, the City will be consulted as part of Transport Canada and Parks Canada's stakeholder engagement plans for the federal lots.

IMPACT ASSESSMENT

Q: *Will an impact assessment be completed and how will sensitive areas be protected?*

A: A Detailed Impact Assessment (DIA) will be completed, consistent with Parks Canada's *Impact Assessment Directive* and the requirements of the Canadian *Impact Assessment Act*, to determine whether any aspects of the recommended plan would be likely to cause significant adverse environmental effects. The DIA will consider potential changes to the environment that are likely to be caused by the project, technically and economically feasible mitigation measures that would prevent or minimize adverse effects, and the impact that the project may have on the rights of Indigenous peoples. The DIA will include formal consultation with Indigenous communities and a public comment period. The Detailed Impact Assessment may result in further design changes if it is found that there is the potential for significant negative results on the environment from the current proposed design.

The need for removing and/or containing chemicals will be balanced with respect for the environment, especially areas of sensitive or valued habitats. It is recognized that some of the shoreline areas contain features or habitats of greater sensitivity, such as shipwrecks of archaeological value, wetland and marsh areas, or shoreline areas used by turtles, birds, and other wildlife for nesting, feeding, and basking. The conceptual plan recognizes these sensitive areas and proposes different, and less intrusive, methods for sediment management. In some areas, dredging will be excluded entirely to avoid unacceptable alteration of habitat.

Q: *Will businesses be impacted by the proposed works?*

A: As part of the project planning and stakeholder engagement process, businesses operating in the harbour will be contacted to ensure the project team has a good understanding of their operational needs, so that potential impacts to operations associated with the project can be identified and managed.

Q: *Who completed the supporting studies and prepared the conceptual plan? What are their qualifications?*

A: The supporting studies and conceptual sediment management plan were prepared by a team of registered professional biologists, engineers, and toxicologists with decades of experience practising in risk assessment, remediation design and implementation, biological assessments, sediment transport, and geomorphology. Several rounds of technical reviews were completed, including input from federal Expert Support departments.

NEXT STEPS AND HOW TO GET INVOLVED

Q: *What are the next steps and timelines for the project?*

A: The project is currently in the initial planning stages. Currently, we are undertaking Indigenous and stakeholder consultation on the conceptual plan, and working on baseline studies to support the environmental impact assessment. It is estimated that detailed design for the project could begin in 2023, and physical works could begin in 2025; however, timing is subject to change as planning progresses. Physical works are anticipated to take two to three years to complete. Once the physical works are complete, long term monitoring of the site will take place to provide confidence that risks continue to be managed to an acceptable level.

Q: *How can I provide my input on this project?*

A: The project team is committed to providing Indigenous communities, stakeholders, and the public with information regarding the proposed work, and creating meaningful opportunities to share knowledge and provide input on project plans, potential impacts, and suggested improvements/mitigation measures. Opportunities to learn about the project and provide input will be provided throughout the planning stage, including through a website (www.KIHproject-projetPIK.ca) that will host project updates, and virtual information sessions (tentatively planned for spring 2022 and summer/fall 2023). Contact information to provide questions and feedback is provided below.

Contact Us!

We welcome your questions, comments and feedback.



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