

1 Port Street East Proposed Marina Environmental Assessment

Final Summary Report



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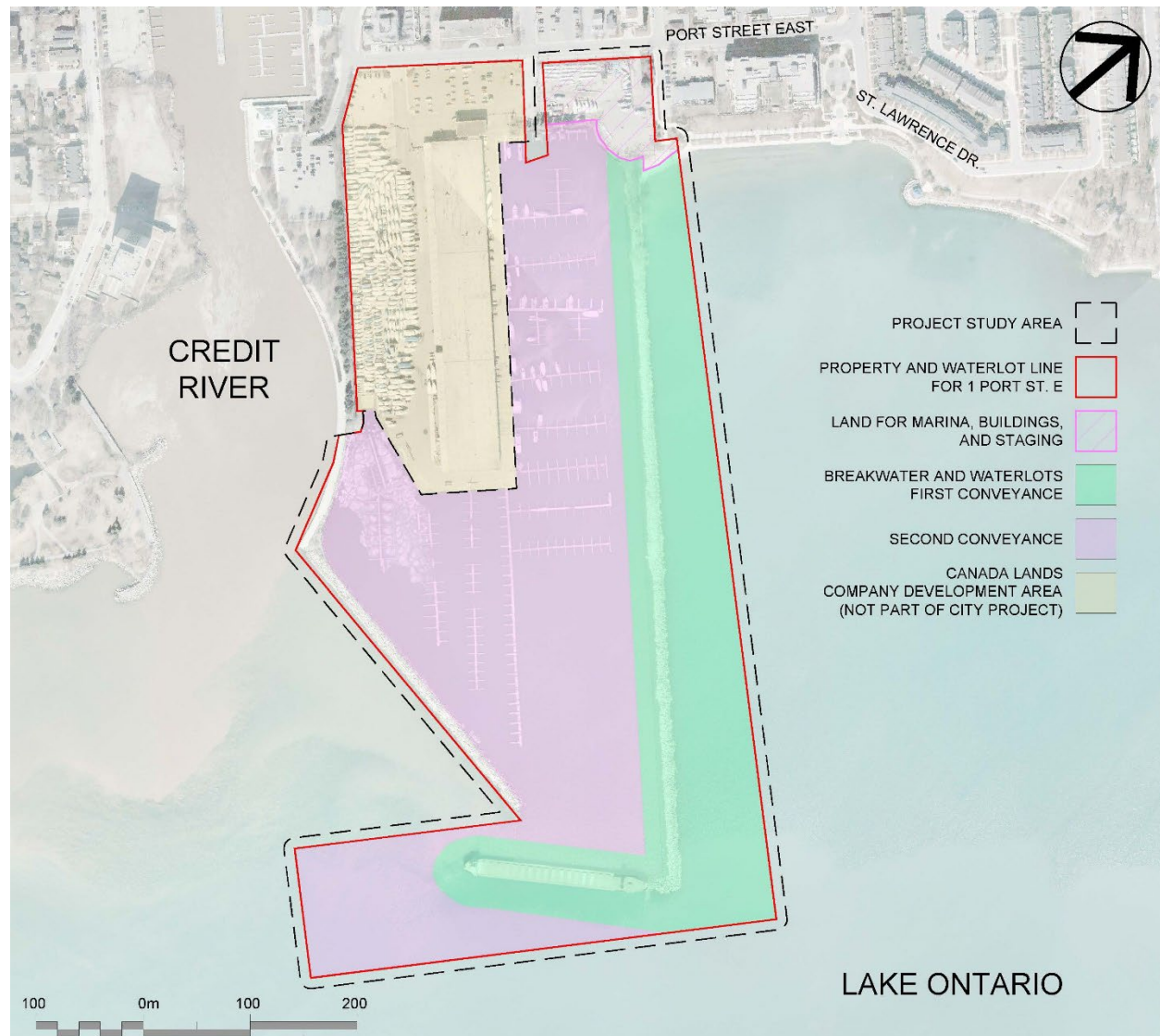
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1. INTRODUCTION

The City of Mississauga (the City) has undertaken an Individual Environmental Assessment (EA) for the 1 Port Street East Proposed Marina Project (1PSEPM Project). An existing private marina, Port Credit Harbour Marina (PCHM), is currently located on the west portion of the site (the wharf) and is privately operated by Centre City Capital Limited. The wharf is owned by Canada Lands Company (Canada Lands or CLC). Centre City Capital Limited leases the space required for PCHM from Canada Lands. Canada Lands and Centre City Capital Limited have reached an agreement to extend the PCHM lease, which was set to expire in 2023. A future mixed-use neighbourhood is proposed to be developed on the wharf which will displace the existing private marina (i.e., the PCHM). The future mixed-use development proposed for the wharf is not a City-led initiative and is not part of this EA. The timing of the development of the wharf is dependent on the landowner (i.e., Canada Lands) and related required approvals.

The City is undertaking the 1PSEPM Project with the objective of expanding the land base around the eastern breakwater to provide continued marina function and services at this site, create public access to the waterfront, new parkland, and enhance the site's ecological functions. This part of the Mississauga waterfront has been the subject of many studies. The 1PSEPM Project was identified by the "Inspiration Port Credit" initiative as a key opportunity to "Keep the Port in Port Credit". Figure 1.1 provides a map showing the lands and water lots at 1 Port Street East and the 1PSEPM Project Study Area. Pending EA approval from the Province of Ontario, Council approval of the 1PSEPM Project, including funding from external sources, the City will develop and implement the 1PSEPM Project.

Figure 1.1: Wharf, Lands and Water Lots and the 1PSEPM Project Study Area



The 1PSEPM Project is subject to the requirements of the Ontario *Environmental Assessment Act* (EA Act) as an Individual EA. To meet the requirements of the *Ontario EA Act*, the 1PSEPM Project Individual EA was conducted in two stages. Stage one involved collecting public input and understanding concerns to develop the Terms of Reference (ToR). The submission and approval of the ToR completed stage one. The ToR was approved by the Minister of the Environment, Conservation and Parks (MECP) on September 16th, 2021. Stage two involves the preparation and submission for approval of the Individual EA in accordance with the approved ToR. The EA has been prepared in accordance with the requirements of the approved ToR and follows the “Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario” (MECP, 2014. Revision 2).

Federal and provincial permits under the following legislation are anticipated to be required as part of the 1PSEPM Project. Municipal approvals may also be required.

Potential Federal Permits and Authorizations:

- *Federal Fisheries Act*
- *Canadian Navigation Act*
- *Migratory Birds Convention Act (MBCA)*
- *Species at Risk Act*

Potential Provincial Permits and Authorizations:

- *Lakes and Rivers Improvement Act*
- *Conservation Authorities Act* and its regulations and recent amendments.
- *Clean Water Act*
- *Endangered Species Act*

This EA report is organized into 11 chapters that are summarized in this document:

Chapter 1 – Introduction

- Briefly describes the background, goal and objectives of the 1PSEPM Project; introduces the proponent; and provides a summary of the regulatory framework of the EA process and other approvals.

Chapter 2 – Purpose of the Undertaking

- Presents the Problem/Opportunity Assessment and describes the 1PSEPM Project Study Areas and timeline.

Chapter 3 – Description of the Potentially Affected Environment

- Describes baseline environmental and socio-economic conditions in the Regional, Local and Project Study Areas.

Chapter 4 – Evaluation and Rationale for ‘Alternatives To’ the Undertaking

- Describes the process through which functionally different ways of addressing the identified problem/opportunity (‘Alternatives to’) were developed and assessed.

Chapter 5 – Development, Evaluation, and Rationale for ‘Alternatives Methods’ of Carrying Out the Undertaking

- Describes the process through which alternative ways of carrying out the 1PSEPM Project (different sizes of lakefill) were identified and evaluated to choose a preferred alternative.

Chapter 6 – Description of the Preferred Alternative

- Provides a description of the conceptual design for the 1PSEPM Project, including its design, phasing and construction techniques.

Chapter 7 – Detailed Assessment of the Preferred Alternative

- Presents the criteria, indicators, and results of the detailed assessment of environmental effects, including an outline of mitigation measures, net effects, and a summary of effects.

Chapter 8 – Monitoring and Adaptive Management

- Outlines the framework, strategy and activities of the monitoring and adaptive environmental management that will be conducted throughout the 1PSEPM Project’s lifespan.

Chapter 9 – Record of Consultation

- Describes the public, agency and Indigenous community consultation programs including input from various interested parties and the proponent’s responses. Details are provided regarding engagement with MCFN and the specific commitments made by the City during the preparation of the EA.

Chapter 10 – EA Amendment Process

- Provides a framework to deal with modifications to the 1PSEPM Project after the completion of the EA.

Chapter 11 – Advantages and Disadvantages

- Summarizes the advantages and disadvantages of the 1PSEPM Project from an environmental and socio-economic standpoint.

1.1. REVIEW OF THE DRAFT EA

On July 20, 2023, the City provided MCFN with an advanced copy of the Draft EA report and a summary to MCFN for their review and comment. The City offered MCFN capacity funding to assist MCFN in this review. The City received MCFN’s comments on September 7, 2023, with a presentation by MCFN to the City regarding MCFN comments on the draft EA and MCFN’s priority issues. The City dispositioned each comment and shared this information with MCFN on October 16, 2023. Items that required further discussion were addressed in an in-person meeting held on March 13, 2024, with MCFN, the City and its consultants. The City updated its original Comment Disposition table and the Draft EA was revised and updated accordingly. On August 8, 2024, a final Comment Disposition table addressing MCFN comments and a revised EA in tracked changes was sent to the MCFN. The MCFN requested a letter from the City outlining the benefits of the Project to the MCFN. This letter was also provided on August 8, 2024. The final Comment Disposition table is provided as an Appendix to the EA and is also included in the Record of Consultation Supporting Materials (under separate cover).

The Draft EA was made available for regulatory agency review on September 14, 2023. The review of the Draft EA was coordinated by the MECP. MECP provided memos and comment tables from the Ministry’s technical reviewers on October 31, 2023, and November 10, 2023, via email, from the following program areas: Air Quality, Source Protection, Noise, Climate Change, Indigenous Consultation, Species at Risk and Surface Water. The City dispositioned each comment and the Draft EA was revised and updated accordingly. The MECP was provided with the revised EA in tracked changes for a final review. Agency comments on the Draft EA are provided in a Comment Disposition table in an Appendix to the EA and is also included in the Record of Consultation Supporting Materials (under separate cover).

The Draft EA was made available for public review between September 14, 2023, and October 31, 2023, via the Project website. The City held EA PIC #3 virtually from September 14 to October 31, 2023. Creating a 24/7 community meeting, the public had access to the PIC materials, including the Draft EA document and the Record of Consultation on the project website. The City also provided a recorded presentation to present the preferred large lakefill alternative and provide an overview of the Draft EA findings.

The public provided feedback through an online survey focusing on the results of the EA. The City received 238 completed surveys and over 1,200 views to the online presentation. Public comments on the Draft EA are provided in the EA PIC#3 Summary report in an Appendix to the EA and also in the Record of Consultation Supporting Materials (under separate cover).

Overall, the City is satisfied that a robust review of the Draft EA was undertaken, and that the final EA has adequately taken into account all comments and feedback provided.

2. PURPOSE OF THE UNDERTAKING

There is a long history of planning, public engagement, scientific and economic studies with respect to the Port Credit waterfront, specifically the 1 Port Street East site. The key background documents and initiatives that determined the nature and purpose of the undertaking are:

- Inspiration Port Credit;
- Port Credit Local Area Plan (2016);
- Mississauga Recreational Boating Demand and Capacity Study (2015);
- Mississauga Marina Business Case (2015);
- 1 Port Street East Comprehensive Master Plan (2016);
- 1 Port Street East Official Plan Amendment 65 (2017); and
- Waterfront Parks Strategy Refresh (2019).

In October 2017, City Council authorized staff to execute an agreement of purchase and sale with Canada Lands for the eastern portion of the property at 1 Port Street East, including the basin water lot; the eastern breakwater water lot; and 2 acres of land between Elizabeth Street and Helene Street south of Port Street. The initial conveyance was completed on January 24, 2018, transferring the breakwater and a portion of the water lot into City ownership. The second conveyance will take place once the City obtains approvals (including the EA and Council approval), engages a contractor to undertake the marina construction, and issues a “Ready to Commence Construction” notice to Canada Lands. City Council has also authorized staff to pursue external funding opportunities and undertake the Environmental Assessment.

In addition, several studies have been undertaken that describe issues, opportunities, goals and objectives along the Lake Ontario shoreline and nearshore areas for Mississauga, Toronto, and Lake Ontario, and are applicable to the 1PSEPM Project. These are:

- Credit River Estuary: Species at Risk Research Project
- Fish Community Objectives for Lake Ontario
- Credit Valley Conservation Authority’s Integrated Watershed Monitoring Program
- Living by the Lake: 2019-2039 - An Action Plan to Restore the Mississauga Shoreline
- City of Mississauga’s Climate Change Action Plan (2019)

Overall, the purpose of the 1PSEPM Project is to provide an expanded land base for additional waterfront parkland and marina alternatives at the 1 Port Street East site. The 1PSEPM Project is a key element of Inspiration Port Credit’s 1 Port Street East Comprehensive Master Plan (2016). The 1PSEPM Project is intended to help fulfill the vision:

“to ensure that an iconic and vibrant mixed-use waterfront neighbourhood and destination with a full-service marina is developed at the 1 Port Street East Site”

3. DESCRIPTION OF THE ENVIRONMENT POTENTIALLY AFFECTED BY THE UNDERTAKING

The 1PSEPM Project EA considers three study areas (i.e., the Project Study Area, Local Study Area and Regional Study Area) and two Project phases:

- **Construction Phase:** The time during which the land base is being constructed, including lakefilling, on-site infrastructure development, habitat creation and site restoration.
- **Establishment Phase:** The time after the parkland and marina is constructed and officially open to the public for use and during which monitoring and adaptive management of the 1PSEPM Project would be undertaken.

The EA contains a description of the environment potential affected by the undertaking according to five major environmental components:

Physical Environment: describes the shoreline characteristics; bathymetry; Lake Ontario water levels; wave conditions; ice and debris; littoral and sediment transport; Lake Ontario and Credit River water quality; soils and geology; and the influences of climate change on the physical environment. Key findings include:

- Much of the shoreline within the 1PSEPM Project Regional and Local Study Areas has been protected with either formal or informal shoreline protection structures. Within the Project Study Area, 100% of the shoreline is man-made and can be characterized as artificial. The east breakwater consists of large armour stones with a stone core. The west shoreline of the marina basin is formed by a steel sheet pile wharf. The north shore is formed by a conglomerate of structures and informal structures. The land within the Project Study Area is all fill material.
- Water levels on Lake Ontario fluctuate on short-term, seasonal, and long-term basis. Seasonal water levels on Lake Ontario generally peak in the summer (typically in June) with the lowest water levels generally occurring in the winter (typically in December). Short-term fluctuations last from less than an hour up to several days and are caused by local and regional meteorological conditions.
- The area along the Lake Ontario shoreline is highly dynamic by the action of waves, and wind. Ice accumulation was greatest in protected areas (with complete coverage in the Credit River upstream of Lakeshore Road and in Lakefront Promenade Park embayment and marina) and areas of shallower depth (e.g., Rattray Marsh beach). Debris is typically made up of urban refuse such as plastic bags, water bottles, and take-out containers, as well as woody debris such as sticks and logs.
- The Credit River yields the greatest amount of sediment supply to Lake Ontario near the Project Study Area.

- The Credit River contributes 86% of the suspended solids, 66% of the nitrates, and 80% of the heavy metals entering Lake Ontario. Within the existing marina basin and immediately east of the eastern breakwater, surface water quality generally met Provincial Water Quality Objectives.
- The Local Study Area is underlain by shale bedrock. The 1PSEPM Project Study Area consists of asphalt overlying non-cohesive fill material comprised of varying amounts of silt, sand, clay, and gravel.
- The Project and Local Study Areas are located within the Credit Valley Source Protection Area, a surface water Intake Protection Zone (IPZ-2) with a vulnerability score of 4.5; and a Highly Vulnerable Aquifer (HVA), scoring 6. Parts of these Local and Project Study Areas is located in an Event-based Modelling Area (EBA) for pipeline fuel/oil spills.
- Climate change is expected to impact both water levels and storm conditions. Storm frequency and intensity are both expected to increase, while mean water levels may fall. Climate change impacts on Lake Ontario water levels are expected to be less than on the other Great Lakes because its water levels are regulated.

Atmospheric Environment: describes general climatic conditions; air quality; and noise.

Key findings include:

- The climate for the City of Mississauga is like that of the City of Toronto and the broader GTA.
- Existing air contaminant levels for the majority of the contaminants are less than their relevant Ambient Air Quality Criteria (AAQC).
- The study areas can be classified a "Class 1 area" where the background sound level is dominated by the activities of people, usually road traffic, often referred to as "urban hum". There are no noise receptors in the Project Study Area.

Biological Environment: describes the fish and aquatic habitat; forests, vegetation, wetlands, and wildlife in the study areas. Field studies were undertaken to support the description of the aquatic habitat in the Project Study Area and vicinity. Key findings include:

- Historically, the Lake Ontario shoreline in Mississauga was composed of a mix of natural habitats: deciduous and mixed forests, open savannahs and coastal wetlands. Aquatic habitats have undergone a substantial change from their historic conditions. Land use change, filling, dredging, and disturbance are the most notable historic and current threats to aquatic habitats along the shore of Lake Ontario. The Credit River and Lake Ontario are home to at least 65 cold, cool, and warm-water fish species.
- Studies suggest that potential suitable habitat for American Eel is present at the Project Study Area. The American Eel, a unique species, has been characterized as a habitat generalist, yet only limited research has been undertaken into American Eel habitat relationships, particularly for lakes.

- Habitat alteration, periodic dredging and the presence of Carp in the Project Study Area have contributed to the absence of aquatic vegetation. Algae and Zebra Mussels were documented in places along the shoreline, the existing eastern breakwater, and hardpan area.
- Substrates in the Project Study Area are generally finer sands and silts that have been carried as bedload by the river and deposited into the river mouth. No areas of critical habitat for potential aquatic Species at Risk were documented during the field investigation.
- The Project Study Area largely paved. Ornamental deciduous and coniferous trees and shrubs exist along most of the perimeter of the 1PSEPM Project Study Area with clusters of trees growing on the breakwater near the shoreline. Trees growing along the breakwater include Willow species (*Salix spp.*), Manitoba Maple (*Acer negundo*), Silver Maple (*Acer saccharinum*), and dead and dying Ash species (*Fraxinus spp.*) with evidence of Emerald Ash Borer (*Agilus planipennis*). There are no wetlands located within the Project Study Area.
- Based on a field survey, the potential for bat maternity roosting habitat within the trees on the breakwater and along the perimeter of the 1PSEPM Project site is low due to its exposed location and hedgerow configuration. However, some of these trees may be used as temporary day roosts for any bat species.
- A total of 84 bird species were recorded in the vicinity of the Project Study Area. The proximity of the 1PSEPM Project Study Area to the shoreline and key migratory corridors allowed many species of birds to use Project Study Area as a stopover to rest and wait out inclement conditions. Given how much of Mississauga's shoreline is developed, there is not a lot of high-quality habitat for migrating birds to choose from, thus they will use what is available. Storms and severe weather also can force migrating birds to take new migration routes or settle down in place (even if it is not ideal habitat).
- There is no suitable breeding habitat for forest and wetland breeding amphibian in the Project Study Area.
- Few mammal species are known to use the Project Study Area for all or some of their life cycle. These species are typical of urban areas and include the Eastern Gray Squirrel, Eastern Chipmunk, Raccoon, and Muskrat.

Socio-economic Environment: describes existing and future land uses; recreational, visual and aesthetic conditions, traffic and transportation; business activity and commercial fishing in the study areas. Key findings include:

- Existing and future land uses in the study areas reflect Mississauga’s Official Plan (2011) and the Port Credit Local Area Plan. Port Credit is generally a stable area with a distinct community identity, with a focus on the Lake Ontario waterfront, the harbour and its heritage. Future development of Port Credit is to make the community an “urban waterfront village”, based on the principles of a mixture of land uses, a variety of densities, pedestrian and cycling friendly infrastructure, transit and supportive urban forms, a significant public realm, and public access to the waterfront.
- The nearshore areas of Lake Ontario and the Credit River in the City of Mississauga are prime locations for recreational boating, canoeing, and kayaking. Currently there are three marinas along the waterfront in Mississauga – Lakefront Promenade Marina, Credit Village Marina, and the Port Credit Harbour Marina. Marine uses within and in the vicinity of the marinas include motor boating, boat launching, shoreline and boat-based fishing, canoeing, and kayaking.
- Several waterfront parks are also located within the Local Study Area, with the nearest park to the 1PSEPM Project Study Area being St. Lawrence Park. There are no official recreational areas within the Project Study Area. The Waterfront Trail runs along the south side of Port Street adjacent to the 1PSEPM Project Study Area.
- The most prominent and direct views of the Project Study Area are from two multilevel hotels, and condominium residences along Port Street and St. Lawrence Drive. Direct and prominent views of the site exist from the east side to the wharf at the PCHM. Land-based “open lake views” (or vistas) from the Project Study Area to Lake Ontario are partially screening by perimeter vegetation. Direct and prominent views of the 1PSEPM Project Study Area also exist from Lake Ontario.
- Lakeshore Road is an east-west major arterial roadway that extends through the entirety of the City of Mississauga, Lakeshore Road East has signalized intersections at Stavebank Road, Elizabeth Street, Helene Street and Hurontario Street. Access to the 1PSEPM Project Study Area is via Port Street. Traffic conditions along the Lakeshore Road corridor can become congested during the weekday peak. Truck volumes range between 50 – 175 vehicles during peak hours.
- Port Credit is a unique hub for shopping, events, music and activities on the waterfront. It has a wide array of restaurants, retail stores, business offices all within walking distance from the Credit River or from Lake Ontario.
- The PCHM is one of the largest privately-operated full-service marinas on the GTA’s lakefront and includes marina-related businesses.

Cultural Environment (including Interests of Indigenous Communities): describes the Indigenous Communities known to have an interest in the Project and Local Study Areas and the results of a screening for cultural heritage features, a marine archeological assessment and an archaeological assessment on land undertaken for the Project. Key findings include:

- The City has completed a screening level assessment regarding Built Heritage Resources (BHR) and Cultural Heritage Resources (CHR) for the Project site. This was done using the checklist for non-specialists and the Ministry of Citizenship and Multiculturalism (formerly the Ministry of Tourism, Culture and Sport) criteria for evaluating potential for build heritage resources and cultural landscapes. The Project Study Area is or does not:
 - form part of the Old Port Credit Village Heritage Conservation District which is located on the west side of the Credit River;
 - identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value. There are 13 registered archaeological sites within a 1 km radius of the Project Study Area. (Scarlet Janusas Archaeology Limited, 2024);
 - a National Historic Site;
 - designated under the Heritage Railway Stations Protection Act or the Heritage Lighthouse Protection Act. There is no railway station or lighthouse on the Project site;
 - identified as a Federal Heritage Building. There are no buildings or structures on the Project site;
 - located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage site;
 - subject to a municipal, provincial or federal commemorative plaque (Scarlet Janusas Archaeology Limited, 2024);
 - adjacent to a known burial site and/or cemetery;
 - located in a Canadian Heritage River watershed. The Credit River is not designated as a Canadian Heritage River;
 - contain any unique landscape features such as waterfalls, rock faces, caverns or mounds that may have a connection with a particular event, group or belief. The site is flat in topography and contains fill materials; and
 - contain an Indigenous sacred sites or trails or a historic road or railway. No such features were identified during consultation with the MCFN.

- The Project Study Area does not contain any buildings or structures that are 40 or more years old. In fact, there are no buildings or structures on the Project site. The only feature of community interest from a historical perspective is the Ridgetown. As noted previously, the Ridgetown was a steel-hulled propeller-driven Great Lakes freighter launched in 1905. It is one of the oldest surviving great lakes freighters (or “laker” as they are known). In 1974, the Ridgetown was loaded with stone and cement and sunk to become a permanent breakwater off the Port Credit shoreline and part of the Project Study Area.
- While there are no documented Indigenous knowledge studies available for the Project site, portions of this Local and Regional Study Areas would originally have had a very high potential for Indigenous community sites of the pre-contact and post-contact periods, including MCFN’s cultural and historic connections to the site. The on-land portion of the Project Study Area would have exhibited cultural heritage potential based on its proximity to the Credit River and Lake Ontario, however, the deep and extensive disturbance of the soils and in-filling across the entire site obviates any cultural heritage potential for the on-land portion of the Project Study Area. Therefore, there is no possibility of cultural heritage potential and no further archaeological assessment is required.
- Nevertheless, out of respect for the Indigenous communities with an interest in the study areas, the City proceeded with a marine archaeological assessment and a Stage 1 Archaeological Assessment for the on-land portion of the Project Study Area.
 - In 2019, a marine archaeological in-water assessment and background research were undertaken at the 1PSEPM Project Study Area. Background research indicated that the Project Study Area had been heavily modified via development, dredging, redevelopment and additional periodic dredging. Only one target was found during the marine archaeological survey. This target consisted of at least two very large metal frames immediately adjacent to the Ridgetown. No additional cultural targets were located, and the remaining area of the marine archaeological survey is considered clear of cultural/archaeological concerns.
 - In 2024, a Stage 1 archaeological assessment was conducted for the on-land portion of the Project Study Area (i.e., 1 Port Street East, Block A, and part of Block B) for an area approximately 1.1 hectare in size. There are no commemorative plaques or monuments located on the site or relating directly to the site in the vicinity. There are no designated properties located in the Project Study Area. The on-land portion of the Project Study Area would have exhibited archaeological potential based on its proximity to Lake Ontario, however, the deep and extensive disturbance of the soils and in-filling across the entire site obviates any archaeological potential for the on-land portion of the Project Study Area. Therefore, there is no possibility of archaeological potential and no further archaeological assessment is required.

The Project Study Area is located in the unceded territory of the Mississaugas of the Credit First Nation (MCFN) and is currently under an Aboriginal title claim under active negotiations with the Government of Canada. Lands within the Local Study Area are within the traditional territory of MCFN. There are no current First Nation reserve lands within the Regional, Local or Project Study Areas. As an Indigenous community, MCFN holds Aboriginal and treaty rights that are protected under Section 35 of the *Constitution Act, 1982*. MCFN assert that they hold unextinguished Aboriginal rights and title over the waters, beds of water, and lakebeds throughout MCFN's territory, including the Credit River. Throughout the historic treaty negotiations, MCFN's ancestors always stressed the importance of the rivers, lakes, and waters to MCFN. Water is vital to MCFN's survival and all other forms of life. Water is the foundation of MCFN's interconnectedness to their traditional territory, and as such, MCFN's ancestors never surrendered Aboriginal title to the water, beds of water, or lakebeds across MCFN's territory. MCFN continues to hold Aboriginal title to these lands and waters today. In 2016, MCFN submitted claims to Canada and Ontario to find a negotiated resolution reconciling their Aboriginal title to these lands and waters with the Crown and the public's continued use of them. The courts have found that Aboriginal title includes rights such as to participate in decision making about development and uses of the area, benefit from it, continue an ongoing relationship with the area, etc. Negotiations are currently ongoing between MCFN and Crown-Indigenous Relations and Northern Affairs Canada.

MCFN's treaty rights fundamentally entitle them to sustain themselves through the lands, waters, and resources of their territory, now and into the future. It is these fundamental rights and MCFN's responsibility to future generations to ensure MCFN's rights and interests are respected during any proposed developments or strategies planned for their territory.

4. 'ALTERNATIVES TO' THE UNDERTAKING

The Ontario EA Act requires the identification and evaluation of 'Alternatives To' the undertaking, including the consideration of the "Do Nothing" alternative. The 'Alternatives To' that were subject to evaluation were:

1. **Do nothing.** This alternative will not create additional parkland or preserve a future public marina function at the site. The second conveyance of land and water lot from Canada Lands to the City would not take place, leaving the development of the entire property at the discretion of the Canada Lands.
2. **Create a new land base.** This alternative involves creating a new land base around the eastern breakwater that would allow for the establishment of a new marina and additional parkland in accordance with the City's approved 1 Port Street East Comprehensive Master Plan. To a large extent, the location and extent of filling will determine what can be created or constructed on this new land base.

These 'Alternatives To' were evaluated in a qualitative manner in terms of their environmental effects and their main advantages and disadvantages and concluded that the 'do nothing' alternative does not create a new land base that would allow for continued operation of a marina at this location. Therefore, this alternative does not meet the purpose of the 1PSEPM Project. There are no clear advantages to this alternative other than the avoidance of new construction costs and adverse environmental effects on various environmental components during construction.

New land can be created through lakefilling to allow for the establishment of a marina and supporting facilities and infrastructure; provide public access to the waterfront, improvements to the waterfront trail system and new parkland at the Project Study Area. The disadvantages of this alternative relate to its potential for adverse environmental effects on various environmental components during construction. Measures are available (e.g., traffic controls, dust management, noise abatement, spill management) to mitigate these adverse environmental impacts.

5. DESCRIPTION, EVALUATION AND RATIONALE FOR 'ALTERNATIVE METHODS' OF CARRYING OUT THE UNDERTAKING

This chapter describes the iterative steps that were used in developing alternative 1PSEPM Project configurations ('Alternative Methods'). For this Project, 'alternative methods' are different configurations of lakefill around the eastern breakwater. The evaluation considered three lakefill footprint alternatives (small, medium and large) and the "do nothing" alternative. Criteria and indicators were used to assess the alternatives for their potential negative and positive environmental effects and reflected all components of the environment.

The overall conclusions of evaluation of lakefill footprint alternatives, and their advantages and disadvantages are:

- The **Do-Nothing** alternative is most preferred for cost, and effects to the physical environment while least preferred for the biological and socio-economic environment as there is no potential to enhance aquatic and terrestrial ecology and no new marina nor parkland. Overall, the Do-Nothing alternative was the fourth ranked alternative.
- **Alternative 1 - Small Lakefill Footprint** provides the lowest number of slips and smallest area of new parkland. It has few opportunities to create terrestrial or aquatic habitat enhancements. However, construction and the nuisance effects from construction activities will be for the shortest duration. Nonetheless, construction associated nuisance effects are mitigable. Overall, the Small Lakefill Footprint alternative was the third ranked alternative.
- **Alternative 2 - Medium Lakefill Footprint** provides the lowest number of slips (equal to the Small Lakefill Footprint alternative) and moderate opportunity for the creation of new parkland. It also provides a moderate opportunity to create terrestrial and aquatic habitat enhancements. Nuisance effects from construction activities will be for a moderate duration and are mitigable. Overall, the Medium Lakefill Footprint alternative was the second ranked alternative.

- **Alternative 3 - Large Lakefill Footprint** provides the opportunity to create the largest area of parkland relative to the marina space required for parking, boat storage and marina facilities. It also protects and allows the use of the entire marina basin (greatest number of slips). With a larger footprint, perimeter, and location jetting into deeper waters in Lake Ontario this alternative has the greatest potential to enhance aquatic habitat, however, represents the largest area of existing aquatic habitat removed/alterer and off-site compensation may be required. Baseline studies indicate that existing fish habitat that would be lost is not limiting in Lake Ontario, and new habitat created has the potential to be greater quality than what would be lost. With a large land base, this alternative offers the most potential to enhance terrestrial habitat over what exists now. Conversely, as the largest footprint alternative, it also has the highest cost and will take the longest to construct resulting in construction nuisance effects for the longest period. However, the effects from construction are short-term and mitigable while the lakefill area and its benefits will exist for the long-term. Overall, the Large Lakefill Footprint alternative was the **first ranked** alternative, and therefore the preferred alternative.

The evaluation and the selection of the **large lakefill footprint** as the 1PSEPM Project's preferred alternative was presented to the public and stakeholders at two Public Information Centers (PICs) to gain their feedback. Feedback received was generally supportive of this selection and focused largely on marina design and operational issues.

6. DESCRIPTION OF THE PREFERRED ALTERNATIVE

This chapter describes the conceptual design of the 1PSEPM Project preferred alternative, construction techniques to build the preferred alternative, and the proposed phasing plan for construction.

The 1PSEPM Project preferred alternative requires approximately 240,000 m³ of fill material. The shoreline protection is an armour stone revetment. The south end includes an island breakwater structure, also protected with an armour stone revetment, which will shelter an aquatic habitat area. This habitat embayment includes approximately 2,400 sq. meter of high-quality aquatic habitat. Further discussion of the aquatic habitat improvements is provided in Section 7.0.

The island breakwater structure will have a lower crest elevation than the main breakwater and has the main function of reducing the effect of open lake waves on the aquatic habitat area. The island breakwater will be separated from the main lakefill structure over the full range of water levels and will not allow for public access.

Figure 6.1: 1PSEPM Project Preferred Alternative



The crest of the revetment on the breakwater will vary between approximately 78.0 m and 79.0 m. The cap stone crest is set approximately 0.5 m above the top of the fill and core material behind the protection structure. The structure was conceptually designed to minimize wave overtopping, though some overtopping will occur under 1:100-year design conditions.

The 1PSEPM Project preferred alternative will remove some existing aquatic habitat on the lake bottom and will provide enhanced fish habitat areas at the south part of the preferred alternative. The south end of the preferred alternative includes an embayment area protected with an island breakwater to provide improved semi-sheltered aquatic habitat. A floating main dock is proposed to be installed on the marina side of the existing breakwater. This dock will run along the length of the breakwater and will have floating docks extending out perpendicular to the main dock which will provide access to approximately 450 proposed boat berthing slips.

The construction of the 1PSEPM Project preferred alternative will occur in two distinct stages. Stage one is the land creation and protection by placing the breakwater fill material and armour stone revetment shoreline protection. Followed by Stage two, which includes the construction of site, the marina and park construction.

All in-water work will be completed during an appropriate in-water work timing window, as set out by Fisheries and Oceans Canada, to comply with fisheries regulations. The in-water work timing window will be established prior to construction during the approvals phase.

It is assumed that approximately 2,000 tonnes of clean fill material per day can be supplied by barge and that trucking will supply material at a rate of six trucks per hour for an eight-hour day. This rate of supply is expected to allow for controlled movement of trucks on the site, dumping and grading of the fill material in a controlled fashion. The elements of Stage one will be subject to further refinement during the detailed design phase.

Stage two of the 1PSEPM Project will include the construction of the parking lot, park features, trails, landscaping, signage, aquatic habitat features, etc. Construction of the new marina buildings and associated structures, as determined during detailed design, will also occur at this stage. The elements of Stage two will be subject to further refinement and approvals during detailed design.

Stage two construction, exclusive of servicing and landscaping is anticipated to take approximately 14 months of construction, depending on fill availability, approvals, weather, and in-water working periods. Erosion and sediment control measures (ESC) established in Stage one could either remain or be adjusted to accommodate the initial works of Stage two work.

In stage two construction, once hardscape and paving are completed, attention can move to soft landscape works. Vegetation to be planted will be native, non-invasive species resilient to the coastal conditions associated with the north shore of Lake Ontario. All staging areas would be incorporated into the construction works as required to achieve the full build-out of the project.

7. DETAILED ASSESSMENT OF THE PREFERRED ALTERNATIVE

This chapter examines how the 1PSEPM Project preferred alternative meets the purpose of the undertaking by identifying and assessing potential effects; describing the net environmental effects; and how the preferred alternative minimizes adverse effects and/or maximizes positive effects according to the following components, namely:

- Physical Environment;
- Atmospheric Environment;
- Biological Environment;
- Socio-economic Environment;
- Cultural Environment (including Interests of Indigenous Communities); and
- Costs.

Chapter 7 of the EA provides the detailed assessment. Where net effects were predicted (i.e., effects remaining after mitigation is applied), they were classified as positive, negative, or negligible. Positive effects (e.g., improved habitat) are generally associated with establishment/post-establishment and were quantified where possible. A wide range of mitigation measures have been identified for each potential effects (if warranted). These mitigation measures are reflected in the City's commitments resulting from the effects assessments.

Effects that were either negative or negligible tended to be associated with construction activities. Negligible effects are generally short-term, localized, do not occur frequently, and can be minimized primarily through mitigation; these are often typical of construction projects. Examples of these include air and noise emissions from construction equipment. Negative effects are those that mitigation could not minimize the effect to the extent that it became negligible, thus, the effect was considered a net negative effect of the 1PSEPM Project.

Table 7.1: Effects on the Physical Environment

Phase	Potential Effect	Net Effect
Construction	Reduced water quality from runoff due to onshore earthworks and vehicle movements and the potential use of unsuitable materials within the lakefill.	Negligible
Construction	Increased turbidity and reduced water quality from disturbance of sediments from the lakebed, from placed material and from vessel movement during construction.	Negligible
Construction	Reduced soil, groundwater, and surface water quality from operation, refueling and routine maintenance of vehicles, vessels, and machinery	Negligible
Establishment	The lakefill may result in changes in the water levels and circulation patterns along the Lake Ontario shoreline that may result in local flooding, changes to sediment movement and deposition patterns in Lake Ontario.	No Net Effect
Establishment	Reduced surface water quality from runoff and stormwater discharges	Negligible

Table 7.2: Effects on the Atmospheric Environment

Phase	Potential Effect	Net Effect
Construction	Increased dust levels from, heavy equipment use/vehicle movement, soil/fill storage and fill placement. Increased greenhouse gas (GHG) emissions for operating vehicles, vessels and equipment.	Negligible
Construction	Increased ambient noise levels nearest construction activities and along haul roads and rock and fill placement. Increased underwater noise levels from vessel operations.	Negligible

Table 7.3: Effects on the Biological Environment

Phase	Potential Effect	Net Effect
Construction	Terrestrial habitat, particularly mature trees may be removed and/or disturbed by construction activities.	Minor Adverse Effect
Construction	Loss or disruption to Species at Risk (SAR) and Significant Wildlife Habitat (SWH)	No Net Effect
Construction	Increased potential for the transport of nuisance and invasive plant species to the site via construction equipment	Negligible
Construction	Potential loss or disturbance of aquatic Species at Risk (SAR) and/or habitat	Negligible with appropriate offsetting of remaining aquatic habitat losses
Construction	Aquatic habitat will be lost or disrupted as lakefill construction occurs. This includes the east side of the expanded lakefill, and the underwater portion of the aquatic habitat feature at the south end. Construction activities are expected to disturb and resuspend sediment into the water column when new materials are placed on the lake bottom. This could result in increased turbidity and potentially reduce surface water quality.	Negligible with appropriate offsetting of remaining aquatic habitat losses
Establishment	Increased potential for the establishment of nuisance and invasive species at the site	Negligible
Establishment	On a portion of the 18,000 m ² of parkland created, native species will be planted to create the potential for terrestrial habitat to compliment other Lake Ontario shoreline and inland migratory bird habitat and increased habitat connectivity	Minor Adverse Effect
Establishment	Potential creation of 2,400 m ² of aquatic habitat associated with the lakefill and aquatic habitat features included in the design.	No Net Effect

Table 7.4: Effects on the Socio-economic Environment

Phase	Potential Effect	Net Effect
Construction	Recreational users may be disrupted by construction noise, dust, and traffic.	Minor Adverse Effect
Construction	Loss of a small beach to the east of the breakwater along St. Lawrence Park.	No Net Effect
Construction	Disruption to the use and enjoyment of residential properties, community facilities and institutions and business operations in vicinity of Project site and along haul routes.	Minor Adverse Effect
Construction	Increased business activity due to presence of workforce and City spending on goods and services during construction (and establishment)	Minor Positive Effect
Establishment	Creation of 18,000 m ² of parkland for community use and enjoyment	Major Positive Effect
Establishment	Local residents living in dwellings facing Lake Ontario may experience a change to their use and enjoyment of their properties due to the visibility of the new lakefill and marina facilities, including parkland, parking areas and winter boat storage.	Minor Adverse Effect
Establishment	Marina and park operations are similar to existing conditions. There is potential for increased activity by park users by virtue of the larger park space thus, some community members may experience altered enjoyment of their private properties and community features as a result of this increased use.	Negligible
Establishment	“Keeping the Port in Port Credit” and the establishment of additional waterfront parkland will enhance the unique character of Port Credit Village	Major Positive Effect
Establishment	With the larger community space enabled by the lakefill, there is potential for increased activity that may increase noise, air emissions and traffic in the area. At the same time this will draw additional potential customers to local businesses.	Minor Positive Effect

Table 7.5: Effects on the Cultural Environment (including effects on Indigenous Communities)

Phase	Potential Effect	Net Effect
Construction	Potential for the displacement, disruption or disturbance of built heritage resources and cultural heritage landscapes within the footprint of the project and adjacent to the Project Study Area.	No Net Effect
Construction	Potential disturbance or destruction of marine and land-based archaeological resources	No Net Effect
Construction and Establishment	Construction activities and establishment (i.e., the presence of the lakefill) can potentially limit the ability for Indigenous communities to use the land and water for traditional uses.	<p>The City acknowledges the potential infringement of rights and interests with respect to the lands, waters, and resources claimed by MCFN. MCFN are the Aboriginal and treaty rights holders and host First Nation government within the Regional and Local Study Areas.</p> <p>The results of this EA demonstrate that net adverse effects on the environment from the 1PSEPM Project are either minor or negligible in nature.</p> <p>The City has made commitments to mitigate impacts to MCFN rights.</p>

8. MONITORING AND ADAPTIVE MANAGEMENT

The City and MCFN have noted that certain data regarding existing conditions in the study areas may be dated or become dated before the 1PSEPM Project begins construction or is ultimately established. The City, MCFN and others share a desire to undertake monitoring prior to and during construction, and in the establishment phase of the 1PSEPM Project to ensure the effectiveness of the Project design and mitigation measures, particularly with respect to aquatic and terrestrial habitats. MCFN has expressed their expectations for robust monitoring programs that can accurately assess residual impacts and identify the need for additional mitigation or remedial actions as adaptive management measures.

The development of a monitoring plan is an important part of the detailed design phase of the Project. A monitoring program serves several functions throughout the life of the 1PSEPM Project:

- **EA compliance monitoring** will ensure compliance with EA commitments and ensure that the 1PSEPM Project is constructed according to the conceptual design requirements assessed in the EA and final design elements.
- **Environmental performance monitoring** will determine if the 1PSEPM Project functions as intended during the establishment and post establishment phases. Monitoring information will be used to determine if the aquatic habitat is functioning as anticipated or if modifications are required.

During the detailed design stage and as part of the *Fisheries Act* Authorization process, the City will consult with MCFN and others to develop and implement these monitoring programs. The regulators, MCFN, and members of the public will be able to come for site visits, ask questions, provide input and discuss applicable mitigation and monitoring measures that may be required.

Table 8.1 lists the general commitments made during the EA. The City will adhere to these commitments if the project proceeds. The EA also presents a table that provides the specific commitments made by the City to MCFN resulting from the City's engagement efforts and the MCFN's review of the Draft EA.

Table 8.1: Summary of General Commitments Resulting from the 1PSEPM Project EA

Project Phase	Commitment	EA Report Section Title	EA Report Chapter or Section
Detailed Design	The conceptual design detailed in Chapter 6 will be refined during detailed design. The park design will include a public engagement process.	Description of the Preferred Undertaking	Chapter 6
	The City will ensure that an “Erosion and Sediment Control Plan” is developed that will apply for the duration of construction activities.	Physical Environment, Effects of Construction	Section 7.2.1
	The City will ensure that contractor(s) develop a construction phase “Spills Management Plan”.	Physical Environment, Effects of Construction	Section 7.2.1
	The City will develop a fish and fish habitat offset plan as part of the <i>Fisheries Act</i> Authorization.	Biological Environment, Effects of Construction	Section 7.4.1
	The City will develop a “Stormwater Management Plan” for the established lakefill.	Physical Environment, Effects of Establishment	Section 7.2.1
	The City will ensure that contractor(s) develop a construction phase “Fugitive Dust Management Plan”.	Physical Environment, Effects of Construction	Section 7.3.1
	The City will ensure that contractor(s) develop a construction phase “Noise Management Plan”.	Physical Environment, Effects of Construction	Section 7.3.1
	The City will develop a monitoring plan consisting of EA compliance monitoring and environmental performance monitoring.	Monitoring and Adaptive Management	Chapter 8
Construction	All in-water work will be completed during an appropriate in-water work timing window, as set out by Fisheries and Oceans Canada, to comply with fisheries regulations.	Biological Environment, Effects of Construction	Section 7.4.1
	The City will implement the mitigation measures identified for effects of Construction on all environmental components	Detailed Assessment of the Preferred Alternative	Chapter 7

Project Phase	Commitment	EA Report Section Title	EA Report Chapter or Section
	The material being used as lakefill shall meet the definition of “inert fill” in O.Reg. 347, having regard to relevant MECP lakefilling guidance, including the MECP document entitled “Fill Quality Guide and Good Management Practices for Shore Infilling in Ontario” (2011). The City shall ensure that an appropriate testing process is undertaken during construction.	Physical Environment, Effects of Construction	Section 7.2.1
	The City will ensure that vegetation removals will be offset by compensatory planting as part of the proposed park (wildlife friendly native, non-invasive trees and shrubs within the landscaping plan)	Biological Environment, Effects of Construction	Section 7.4.1
	The City will ensure that notice and details of the Project construction has been provided to PCHM to be distributed to users. In addition, construction information will be posted to the project website	Socio-economic Environment, Effects of Construction	Section 7.5.1
	The City will implement the construction phase monitoring plan developed during detailed design consisting of EA compliance monitoring and environmental performance monitoring.	Monitoring and Adaptive Management	Chapter 8
Establishment	The City will undertake visual inspections of the breakwater revetments	Breakwaters	Section 6.3.1
	The City will maintain the marina, park space, multi-use trails and parking lot in accordance with current maintenance practices.	Facilities	Section 6.3.2
	The City will implement the mitigation measures identified for effects of Establishment on all environmental components.	Detailed Assessment of the Preferred Alternative	Chapter 7
	The City will implement the existing Goose Management program on the 1PSEPM Project site (as required).	Biological Environment, Effects of Establishment	Section 7.4.2
	The City will implement the establishment phase monitoring plan developed during detailed design consisting of EA compliance monitoring and environmental performance monitoring.	Monitoring and Adaptive Management	Chapter 8

For the 1PSEPM Project, the purpose of environmental performance monitoring is to determine whether the Project design is achieving its desired outcomes during and after the establishment phase, in terms of:

- Resiliency of the lakefill to changing lake levels and coastal processes.
- Amount and quality aquatic habitat created or enhanced.
- The success of the vegetation plantings, the use of the site by birds and other wildlife, and the influence of park users and City operations on birds and other wildlife.
- The presence or absence of non-native invasive species, pests and nuisance wildlife.
- Other matters as determined during detailed design.

Results of Environmental Performance Monitoring may trigger adaptive management measures where necessary and/or form the refinement of the as-built features of the lakefill and/or requirements of additional aquatic habitat compensation. Monitoring would commence at the completion of the 1PSEPM Project construction, following final grading and cover stabilization and when as-built documentation is complete.

The specific details and measures to be included in the environmental performance monitoring program for the 1PSEPM Project will be developed through the detailed design and into the construction phase.

9. CONSULTATION

The consultation process was designed to directly inform decision-making at key points in the EA. At each of these points, the public and agencies had the opportunity to provide their feedback and advice through the consultation mechanisms discussed above. The key points in the EA process are:

- Development and evaluation of ‘Alternative Methods’.
- Selection of preliminary Preferred Alternative; and
- Confirmation and refinement of Preferred Alternative;
- Assessment of impacts and mitigation measures
- Recommendations regarding monitoring and adaptive management plans.

Targeted consultation was undertaken on an as required basis with key stakeholders including representatives from:

- The local and surrounding neighbourhoods (including the general public, representatives of resident associations, and organizations with recreational, environmental, cultural, heritage, business, and other interests); and
- The City of Mississauga, the Province of Ontario, and the Government of Canada.
- Agencies (i.e., Credit Valley Conservation)

Consultation with the agencies, interested parties, stakeholders and public were ongoing throughout the EA Stage of the 1PSEPM Project. Consultation began with the publication and distribution of the Notice of Commencement for the EA and updates to the City’s 1PSEPM Project webpage. Notifications of virtual PICs were emailed to those on the project mailing list and mailed to surrounding area residents and businesses. Emails were also sent to regulatory agencies and Indigenous communities to provide notification and request meetings to continue to discuss the 1PSEPM Project at the EA Stage.

9.1. PUBLIC INFORMATION CENTRE #1

A virtual Public Information Centre (PIC) #1 took place online from February 17 to March 17, 2022. A recorded presentation was provided to explain the lakefill alternatives assessed and the preliminary preferred lakefill alternative. The public had access to the PIC materials online and hard copies were mailed upon request. This allowed residents to participate when it was convenient for them.

The City notified interested stakeholders of the PIC through an email to those on the mailing list, mailing to area residents and businesses, a notice in Mississauga News, eBlasts to the Project email list, social media advertising and posts, roadway signage, and posters at Port Credit Harbour Marina.

The public provided feedback through an online survey on the alternatives considered, the evaluation criteria and the results of the evaluation.

The City prepared a summary document with an overview of EA PIC #1, and responses to questions submitted through the survey. The City received 130 completed surveys and over 550 views to the online presentation. Topics of discussion and questions centered around the following:

- Marina continuity
- Environmental components
- Fishing boats
- Costs
- Marina services
- Wharf re-development by the Canada Lands Company
- Parkland
- Status of the Ridgetown
- Traffic and parking

Responses to questions posed and a summary of the EA PIC#1 were posted on the Project website. The feedback gathered informed the evaluation of the alternatives and the preferred lakefill alternative. In general, those providing feedback were supportive of the evaluation of alternatives and the preferred alternative.

To be notified of future engagement opportunities, including the next EA PIC, participants were asked to subscribe to news alerts to be kept up to date on the Project by email.

9.2. PUBLIC INFORMATION CENTRE #2

A virtual EA PIC#2 was held for a month starting on August 25, 2022. A recorded presentation was provided on the Project website and available through YouTube to present the preferred lakefill alternative, the preliminary design of the parkland space and marina along with an overview of key environmental effects. The public provided feedback through an online survey focusing on the Preferred Large Lakefill Alternative and the key features of the marina and parkland.

The City received 130 completed surveys and approximately 500 views of the online presentation. Topics of discussion and questions centered around the following:

- Amount of parking and the configuration of parkland and parking
- Impact of the Project on aquatic life, birds, and waterfowl
- Providing opportunities for recreation (e.g., a beach area for swimming and access for kayaks, canoes and paddle boards, a boat launch for personal watercraft)
- The resilience of the lakefill
- Noise from construction and noise from operation of the marina
- Construction duration

- Traffic impacts on Lakeshore Road
- Site visibility and landscaping

A 1PSEPM Project EA “Pop-up Event” took place on Saturday, August 27, 2022, at Credit Village Marina. Staff were onsite to answer questions and discuss the EA PIC#2 materials that were available at the event.

Participants of the pop-up event were asked to complete an online survey. The City prepared a summary document available on the Project website with an overview of EA PIC #2 and responses to questions submitted through the survey.

To be notified of future engagement opportunities, including the next EA PIC, participants were asked to subscribe to news alerts to be kept up to date on the Project by email.

9.3. PUBLIC INFORMATION CENTRE #3

Following EA PIC#1 and EA PIC #2, the City held EA PIC #3 virtually from September 14 to October 31, 2023. Creating a 24/7 community meeting, the public had access to the PIC materials, including the Draft EA document and the Record of Consultation on the project website. The City also provided a recorded presentation to provide an overview of the Draft EA and present the preferred large lakefill alternative.

Hard copies were available at Port Credit Library and for mailing upon request. This allowed residents to participate when it was convenient for them. The City notified the public of the PIC through a mailing to area residents and businesses, a notice in Mississauga News, eBlasts to the project email list, social media advertising and posts, roadway signage, and posters at Port Credit Harbour Marina.

In addition to the virtual engagement, the City also held a second “Pop-up Event” on Saturday, September 30, 2023, at Credit Village Marina, attended by over 150 people. City staff were onsite to answer questions and discuss the EA PIC #3 materials, including the Draft EA.

The public provided feedback through a survey. The City received 238 completed surveys and over 1,200 views to the online presentation. The City prepared a summary document that includes responses to feedback submitted through the survey.

To be notified of future updates, including the final EA submission, people were asked to subscribe to news alerts to be kept up to date on the project by email.

The 1PSEPM Project Team has been and continues to be engaged with Indigenous communities as per the Crown’s Duty to Consult as delegated by MECP. Indigenous communities that have a documented history of occupying territory that includes the 1PSEPM Project or Regional Study Areas and have potential or established treaty rights in the area of the Project or its vicinity will continue to be sent the information for the Project as it progresses. This information includes regular updates and information with respect to potential environmental impacts. As well, an open invitation extended to Indigenous communities to meet with the Project Team to discuss the proposal in greater detail and discuss issues of interest. Letters and emails were sent prior to each PIC to inform the Indigenous communities of the PICs as well as to invite the communities to meet with the City.

The following Indigenous communities were contacted during the EA process:

- Mississaugas of the Credit First Nation
- Six Nations of the Grand River
- The Haudenosaunee Confederacy Chiefs Council as represented by HDI; and
- Huron Wendat Nation

The 1PSEPM Project is being developed on the traditional territory of the Mississaugas of the Credit First Nation who are the Aboriginal and treaty rights holders and host First Nation government within the Regional and Local Study Areas. The 1PSEPM Project Site is an area of historical and cultural significance to MCFN. In addition, MCFN holds unextinguished Aboriginal rights and title over the waters, beds of water, and lakebeds throughout MCFN's territory, including the Credit River. In 2016, MCFN submitted claims to Canada and Ontario to find a negotiated resolution reconciling their Aboriginal title to these lands and waters with the Crown and the public's continued use of them.

The City first corresponded with MCFN in June 2019 at the commencement of the Terms of Reference stage of the EA process. Regular communications continued throughout the ToR stage. In February 2022, following the approval of the ToR and at the commencement of the EA stage, the City continued with its notifications and correspondence. MCFN were constrained in their ability to meet due to the ongoing COVID pandemic during most of this time period.

A formal introductory meeting was held in November 2022. Since then, a meaningful dialogue took place regarding MCFN's rights and interests, issues and concerns regarding the 1PSEPM Project.

On July 20, 2023, the City provided MCFN with an advanced copy of the Draft EA report and an EA summary to MCFN for their review and comment. The City funded a peer reviewer to assist MCFN in this review. The City received MCFN's comments on September 7, 2023, with a presentation by MCFN was made to the City regarding the peer review findings and MCFN's priority issues. The City dispositioned each comment and shared this information with MCFN on October 16, 2023. Items that required further discussion were addressed in an in-person meeting held on March 13, 2024, with MCFN, the City and its consultants. The City has updated its original dispositioned comment table and the Draft EA was revised and updated accordingly and shared with MCFN.

On August 8, 2024, as requested at the March 13, 2024, in-person meeting, the City prepared a letter to MCFN outlining the benefits of the EA and the Project. The City also sent the tracked changes or "red-line" version of the draft EA to demonstrate how MCFN comments and direct input was used. The City also attached the updated Comment and Disposition table with City responses to MCFN comments to date, and Stage 1 Archaeological Assessment for the land-based portion of the Project.

Out of respect for the input provided by MCFN, the EA Report consolidates the key commitments made by the City to MCFN regarding its involvement in moving forward with the 1PSEPM Project.

Key correspondences, meetings and other events held with MCFN and other Indigenous communities are provided in the Record of Consultation report (under separate cover).

10. ENVIRONMENTAL ASSESSMENT AMENDMENT PROCESS

The 1PSEPM Project is estimated to take approximately 14 months of construction to complete, depending on fill availability, approvals, weather and in-water working periods, and will exist in perpetuity as part of the Mississauga waterfront. The dynamism inherent with construction Projects suggest that there might be a need for some Project modifications (i.e., adaptive measures) between the time of EA approval and the time that full establishment of the marina, parkland features, created terrestrial and aquatic habitat features are achieved.

This chapter of the EA outlines the existing regulatory tools through which post-approval EA modifications can be made and describes the Project specific approach that will be used for post approval review of modifications proposed for the 1PSEPM Project.

When Project modifications are identified, the City will prepare a technical memorandum to document the proposed modifications and their potential effects. The technical memo will draw upon the appropriate expertise to determine the effects of proposed modifications in relation to the predicted effects outlined in the EA.

Proposed Project modifications will be screened against a set of criteria to determine the magnitude (minor or major) of modifications on the environmental effects predicted in the EA.

The City is committed to consulting with MCFN about the development of the 1PSEPM Project, including discussing any potential changes or amendments that may be required, particularly with respect to any modifications to the Fisheries Act Authorization. For greater certainty, the City will promptly inform MCFN of any Project modifications and provide an opportunity for direct discussions with MCFN, in addition to any public or other processes that may be established.

11. ADVANTAGES AND DISADVANTAGES

In concluding the EA, the overall advantages and disadvantages of the 1PSEPM Project are assessed. Advantages are positive net effects to the natural and human environment, and disadvantages are negative net effects. Table 11.1 summarizes the key advantages and disadvantages of the 1PSEPM Project.

Table 11.1: Advantages and Disadvantages of the 1PSEPM Project

Advantages	Disadvantages
<ul style="list-style-type: none"> • Creation of 2400 m² of higher quality aquatic habitat. Additional habitat will be created off-site to compensate for habitat loss. • Planting of native vegetation within a park setting providing new rest area for migratory birds. • Addition of 18,000 m² of parkland along the waterfront including the waterfront site trail would enhance tourism potential and local business activity. • New views from the created landform to Lake Ontario and back towards Port Credit. • Relocation rather than loss of marina operations and services, including approximately 450 boat slips, winter boat storage, and potential for a marina service building. • Consistent with several City of Mississauga Waterfront Parks Strategy goals including improving trail connections and providing more natural, sustainable ecological features. • Consistent with the Visioning for Inspiration Port Credit and Master Plan. • Consistent with the Lake Ontario Integrated Shoreline Study priorities including the creation of fish habitat along existing shoreline erosion structures and incorporate fish habitat features in repair and replacement of structures. 	<ul style="list-style-type: none"> • Lakefilling will result in the loss or alteration of 29,000 m² of common aquatic habitat. • Minor vegetation removal along 1 Port Street site perimeter and on existing breakwater. • Nuisance effects from construction (dust, noise, vehicle emissions) for approximately 14 months for local residents, businesses and recreational users. • Increased truck and vehicle traffic from construction for approximately 14 months affecting residents, businesses, recreational users and road users along the haul / access route. • Some residents may experience a change in views from their residences.

A review of Table 11.1 clearly illustrates that the outcomes of the 1PSEPM Project are strongly beneficial for all aspects of the environment, resulting in a rejuvenated waterfront that will allow improved public access to the water’s edge, keep the marina at a size similar to the existing, and be a destination for residents and visitors alike. The 1PSEPM Project will achieve the purpose of the project set out in the ToR and reaffirmed in the EA by providing an expanded land base for additional waterfront parkland and marina at the 1 Port Street East site.

The disadvantages of the 1PSEPM Project will primarily occur during construction. Temporary negative effects include minimal nuisance effects (i.e., air, noise and traffic) to residents, recreational users and businesses, all of which will be minimized by best management practices. The permanent loss or alteration of aquatic habitat will be offset by creation of a new higher quality aquatic habitat feature, the replacement of like for like habitat along the eastern edge of the new landform, and, where possible, the incorporation of structural aquatic habitat features along the toe of the revetment. Additional habitat will be created off-site in compensation for the habitat removal and alternation. In general, the new habitat features will result in higher quality and higher functioning habitat.

The negative net effects of the 1PSEPM Project, most of which occur during construction and are temporary or negligible, are more than offset by the much greater positive contributions of the 1PSEPM Project, particularly related to on-going marina operations and the provision of new parkland and access to the waterfront.

