



Development of a Coastal Resilience Framework & Pelee Coastal Resilience Committee

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November 24, 2023

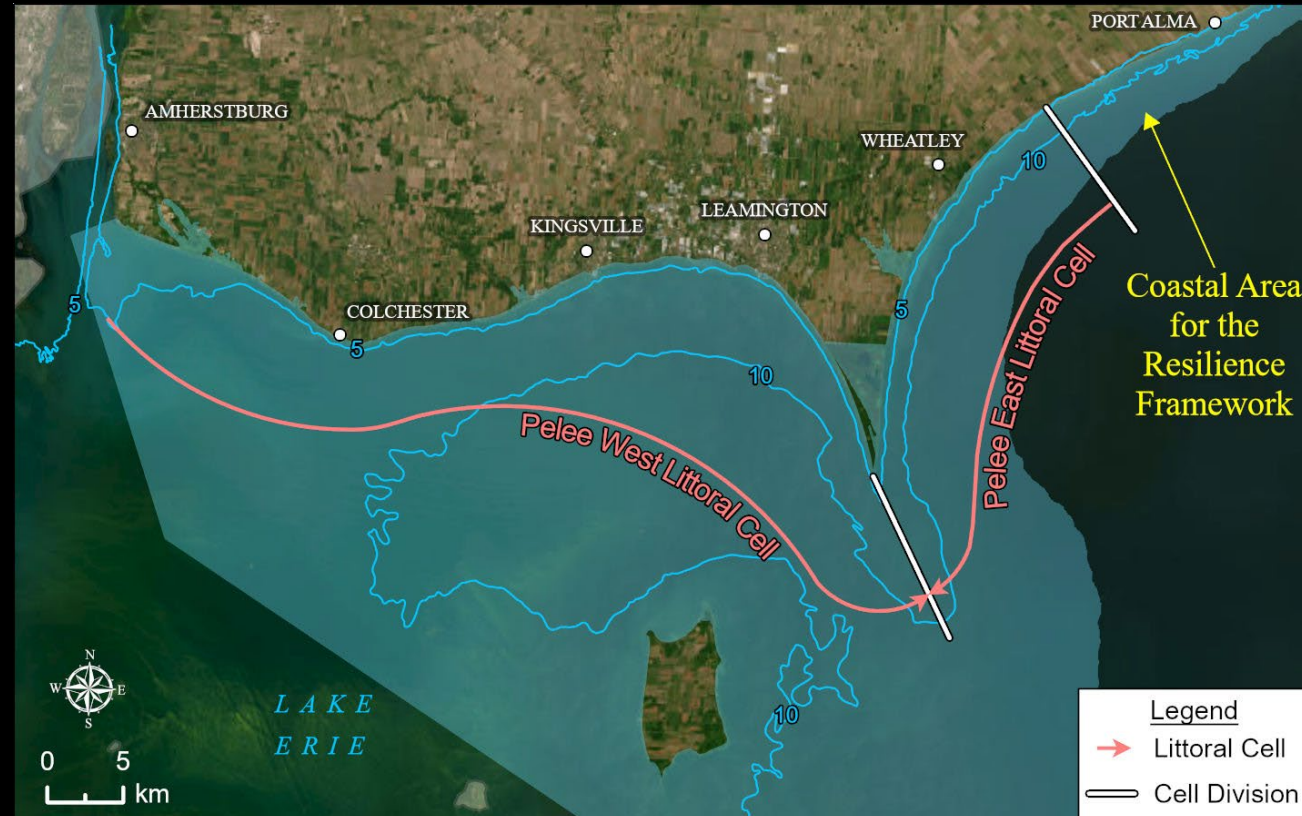


Agenda

- I. Words of Welcome and Introductions for New Members
- II. Review of minutes from October 27, 2023
- III. Updated Vision and Goals for Committee
- IV. Draft Terms of Reference
- V. NRCan RFP Update and Committee Contributions
- VI. Next Steps

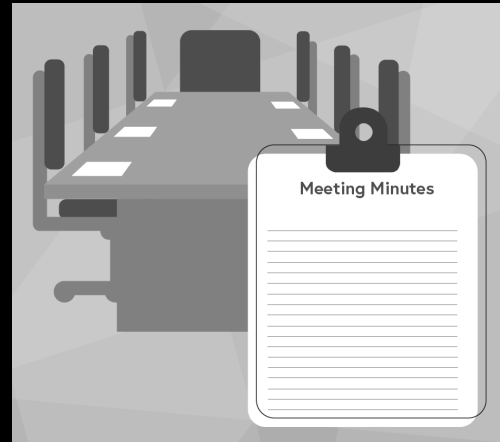


I – WELCOME AND INTRODUCTIONS





II – REVIEW OF MINUTES FROM OCTOBER 27, 2023





**III – REVIEW OF VISION AND GOALS
FOR POINT PELEE LITTORAL CELL COMMITTEE
(OCT. 27, 2023)
ORIGINAL **AND REVISED CONTENT****





Vision from Resilience Framework document - Revised for Pelee

- In Great Lakes coastal areas, communities, economic prosperity and the [natural] environment are resilient to current and emerging stresses [and climate change]. In an inclusive, all of society approach, partners collaborate to undertake integrated coastal planning at varying spatial scales and timeframes that respect the complex and interconnected nature of the coastal system. The process of co-creation empowers partners to take coordinated, collective action that improves quality of life through equitable, sustainable adaptation
- Original: Promote resilient coastal areas through collaborative development of strategic plans at varying spatial scales and timeframes that respect the complex and interconnected nature of the coastal system, and in ways that empower partners



Goals from Resilience Framework document – Revised for Pelee 1 of 2

- Promote integrated coastal governance where the locally-focused Pelee Coastal Resilience Committee is linked with a broader, lake-wide support and coordination network (e.g., Lake Resilience Council)
 - Original: Promote integrated coastal governance through the development of Lake Resilience Councils for each lake. [Whole lake scale and initiatives]
- Co-develop integrated coastal resilience plans with an “all-of-society approach” which leverages new ways of working together to establish coordinated priorities and take collective action to increase the resilience of communities and ecosystems to coastal stresses and climate change.
 - Original: Develop integrated resilience plans for littoral cells, or another appropriate management unit, with an all-of-society approach to increase resilience of communities and ecosystems to coastal hazards and climate change.
 - Transformational objectives and targets are developed by the Pelee Coastal Resilience Committee



Goals from Resilience Framework document – Revised for Pelee 2 of 2

- Provide opportunities for learning and knowledge mobilization including western science and Indigenous Traditional Knowledge to educate the broader community, assess the state of the coastal system, further resilience planning and priority setting, and implement adaptation projects to achieve desired resilience outcomes.
 - Original: Provide opportunities for knowledge transfer including western science and Indigenous Traditional Knowledge (with their free and prior and informed consent), to further resilience planning and prioritize knowledge gaps to provide direction for future research.
 - Transformational objectives and targets are developed by the Pelee Coastal Resilience Committee
- Promote, encourage and support implementation of adaptation projects at varying time frames (short- and long-term) and spatial scales (community to regional scale) including those that create equitable, sustainable and transformative changes
 - Original: Promote and encourage implementation of adaptation projects at varying scales, including lot or parcel level, community to regional scale, and transformative projects
 - Transformational objectives and targets are developed by the Pelee Coastal Resilience Committee



IV – DRAFT TERMS OF REFERENCE





1.0 TERMS OF REFERENCE

This Terms of Reference (ToR) was prepared for the Pelee Coastal Resilience Committee, which is advancing the development and implementation of the Pelee Coastal Resilience Action Plan. The plan covers two littoral cells that converge on the Pelee Peninsula, which separates the shallow western basin on Lake Erie from the central basin. Refer to the map in Figure 1.



Figure 1 Pelee West and Pelee East Littoral Cells and Coastal Area

The coastal area is shaded in Figure 1 and includes the nearshore (to a depth of 15 m), the land-water interface, and the extent of lake processes (e.g., storm surge) up tributaries and in embayments. It does not include the upper reaches of watersheds.

1.1 Purpose of the Terms of Reference

This document outlines the role of the Committee for the Pelee Coastal Resilience Action Plan, including guidelines for membership, mandate, and decision making. This document may be amended as the work of the Committee progresses. Any amendments to the Terms of Reference (TOR) will require a consensus of the Committee or a vote by the majority.

1.2 Mandate of Committee

The Pelee Coastal Resilience Committee will guide the development and implementation of a Coastal Resilience Action Plan for the Pelee East and Pelee West Littoral Cells. It is anticipated that the technical work will be led by representatives from the Committee organizations and hired consultants as required. The work of the Committee will be completed in a collaborative and respectful manner at all times.

1.3 Membership

The Committee membership will represent the broad cross-section of social, economic, ecological, and physical dimensions in the coastal area of the Pelee East and Pelee West littoral cells. These interests will be represented by stakeholders, rights holders, landowners, all levels of government, environmental non-government organizations, etc.

The term of membership is flexible but organizations will strive to nominate individuals that can serve for multiple years. The initial mandate of the Committee extends to March 2024. If additional funding is secured, the mandate will be extended to 2027. Ideally, the Committee will



remain in-place indefinitely to advance collaborative coastal management in the littoral cells, implement a range of adaptation actions, and increase resilience of the coastal area.

Membership will be periodically reviewed, and additional contributors may be added to address gaps in expertise or address emerging issues.

The size of the Committee will be capped at XXXX?

1.4 Terms of Membership

The Committee members agree to the following terms:

1. Membership is voluntary and uncompensated.
2. Members understand, accept, and agree to abide by the Terms of Reference at all times.
3. Members will actively participate in Committee meetings and assignments, including sub-committees for special actions and activities, such as advancing an adaptation concept. An alternate can participate in meetings if the member is not available.
4. Review meeting minutes to verify accuracy of record keeping.
5. Promote opportunities for wider community engagement and information sharing across their networks.

1.5 Responsibilities and Decision Making

A Chair or Co-Chairs will be selected from the members and if desired Consultants supporting the Committee. The Chair, in collaboration with Committee members, are responsible for establishing the Governance structure, preparing a vision and goals, developing a work plan, and managing the forward agenda of the Committee. A Coastal Resilience Action Plan will be developed, and adaptation actions will be implemented to increase coastal resilience.

The Committee will operate using a consensus-based approach to make decisions, where members seek general agreement on future work plans and actions. This approach will allow participants to openly discuss ideas, perspectives and viewpoints, and work together to develop common ground and minimize areas of disagreement to the best of their ability.

If consensus is not reached on a decision, a vote will be coordinated by the Chair, who does not vote. A tie will be decided by the Chair.

1.6 Meeting Management, Agendas and Minutes

Meetings will be scheduled at least two weeks in advance and consist of both in-person events and online communications. A draft agenda will be circulated in advance of the meeting for feedback and additions. Minutes will be recorded and tabled at subsequent meetings for review and approval.

1.7 Data Sharing

The Committee will establish an efficient digital procedure for data sharing, such as minutes, presentations, and reports.



V – NRCAN RFP UPDATE AND COMMITTEE CONTRIBUTIONS



Overview

Climate-Resilient Coastal Communities (CRCC) Program

- Call for Proposals

September 2023

Version française à suivre



Ressources naturelles
Canada

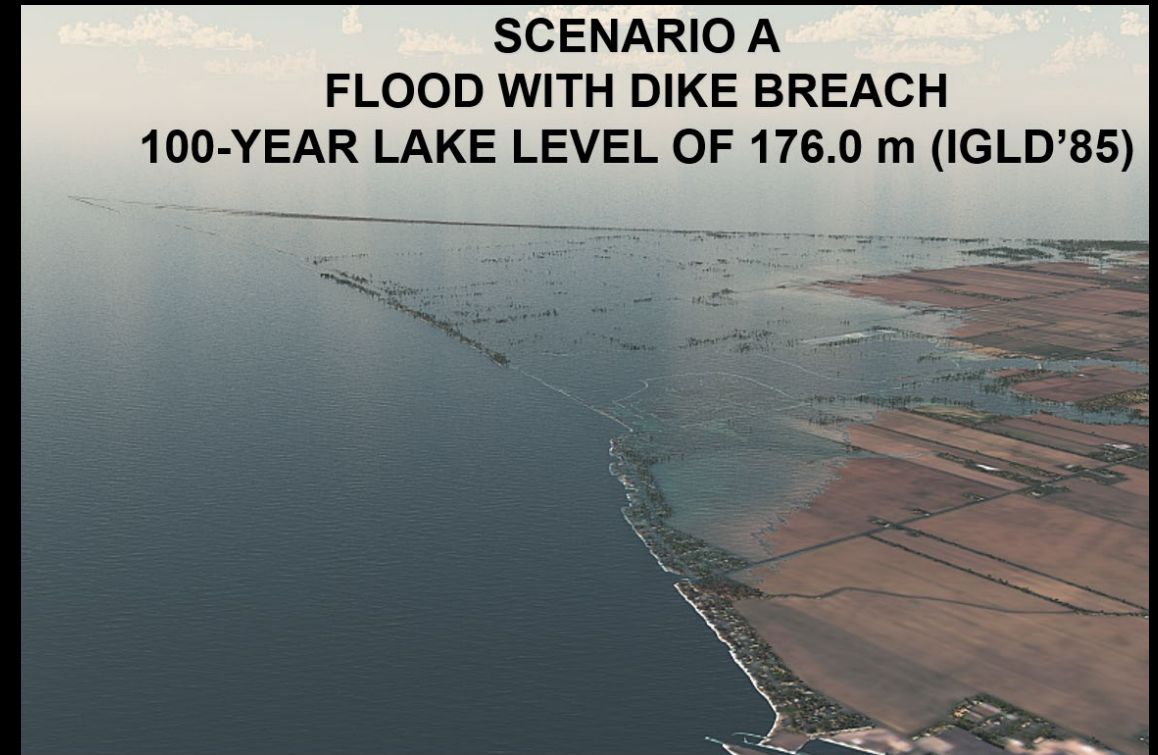
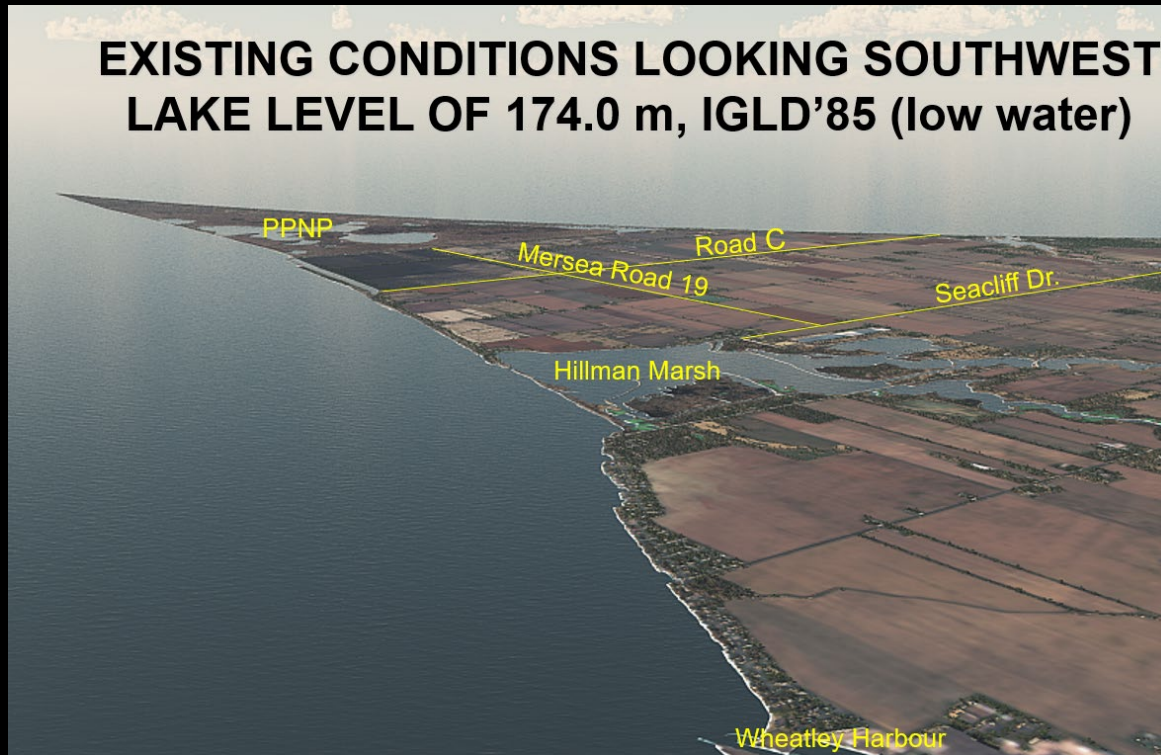
Natural Resources
Canada

Canada



Infrastructure and Ecosystem Vulnerability Assessment

- Example of flood risk for SE Leamington with a dike breach



- Will expand the assessment to the remaining coastal areas



Review of Land Use Zoning, Bylaws, and Regulations

SHORELINE HAZARD MAP

County of Essex and Essex Region Conservation Authority

LEGEND:

Hazard Mapping:

- 100-year Flood Level
- 100-year Late Century Climate Change Flood Level

DEFINITIONS:

100-Year Flood Level
The 100-Year Flood Level considers both static lake level and storm surge, having a combined probability of being equalled or exceeded during any year of 1% (i.e., probability, P=0.01).

Flood Hazard Limit
The Flood Hazard Limit is defined as the 100-Year Flood Level plus an allowance for wave runup and uprush. Refer to the FHIMP Report for additional details.

Stable Slope Allowance
The Stable Slope Allowance is defined as a horizontal setback equivalent to 3 times the height of the bank or bluff. Local studies may be required by the Conservation Authority to verify site specific conditions.

Erosion Hazard Limit
The landward extent of the Erosion Hazard is the sum of the 100-year erosion rate plus the Stable Slope Allowance, measured horizontally from the toe of the bank, bluff, or shore protection.

Dynamic Beach Hazard Limit
The Dynamic Beach Hazard Limit is defined as the sum of the Flood Hazard plus 30 metres measured horizontally. The offshore limit accounts for the movement of sand in the shallow nearshore zone. Local conditions may require a modified mapping approach if the beach is eroding or a barrier beach. Refer to the FHIMP Report for additional details.

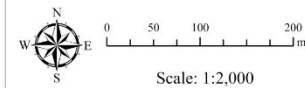
INTERPRETATION OF THE HAZARD MAPS:

The hazard maps were prepared to support the Flood Hazard Identification and Mapping Program. The hazard limits are not the official regulatory limits of the Conservation Authority. Please contact the Conservation Authority for additional details on the regulatory limit and implications for new development.

Datums:
Horizontal: UTM 17N NAD1983, metres.
Vertical: IGLD85, metres

Datum Conversion:
IGLD85 - CGVD28 = -6 cm (average)
IGLD85 and CGVD28 can be considered equal for the project study area.
IGLD85 - CGVD03 = -0.17 m (average)
To convert from IGLD85 to CGVD03, subtract 0.17 m.

Note: There may be local variations along the reaches within the County of Essex. Refer to the FHIMP Report for additional details.



DATA SOURCES:

2022 Orthophotography provided by ERCA (from County of Essex).
2021 Orthophotography at Windsor obtained from County of Essex Web Services.
2017 LIDAR Digital Terrain Model provided by ERCA and referenced to CGVD2878 vertical datum.
Road network obtained from County of Essex Open Data (opendata.countyofessex.ca).
Geographical Names data obtained from Natural Resources Canada. Contains information licensed under the Open Government Licence - Canada.
Inset Map: © OpenStreetMap contributors

Every reasonable effort has been made to ensure the accuracy of this map. However, neither the County of Essex, Essex Conservation, Zuske Inc., SJI Engineering Inc., or any other affiliated party assume any liability arising from its use. This map is provided without warranty of any kind, either expressed or implied.



PREPARED BY:



Stamp



Stamp

This map was prepared by Zuske Inc. and SJI Engineering Inc. and was published November 2023. The mapping of hazardous lands, including erosion, flooding, and dynamic beach areas, is subject to change. The proponent of a proposed development on or adjacent to the hazardous lands should contact Essex Region Conservation Authority to discuss permit requirements.



Map
50 of 143



Wild Rice Restoration Pilot Project with Caldwell FN

- Shallow water, minimal currents, and limited wave exposure





BMPs and Nature-based Solutions to Enhance Tributary Water Quality





Sediment Backpassing from the Southeast Shoal

- 120M to 150 million m³ of sand in the Southeast Shoal
- Enough to fill the Rogers Centre 75 to 90 times



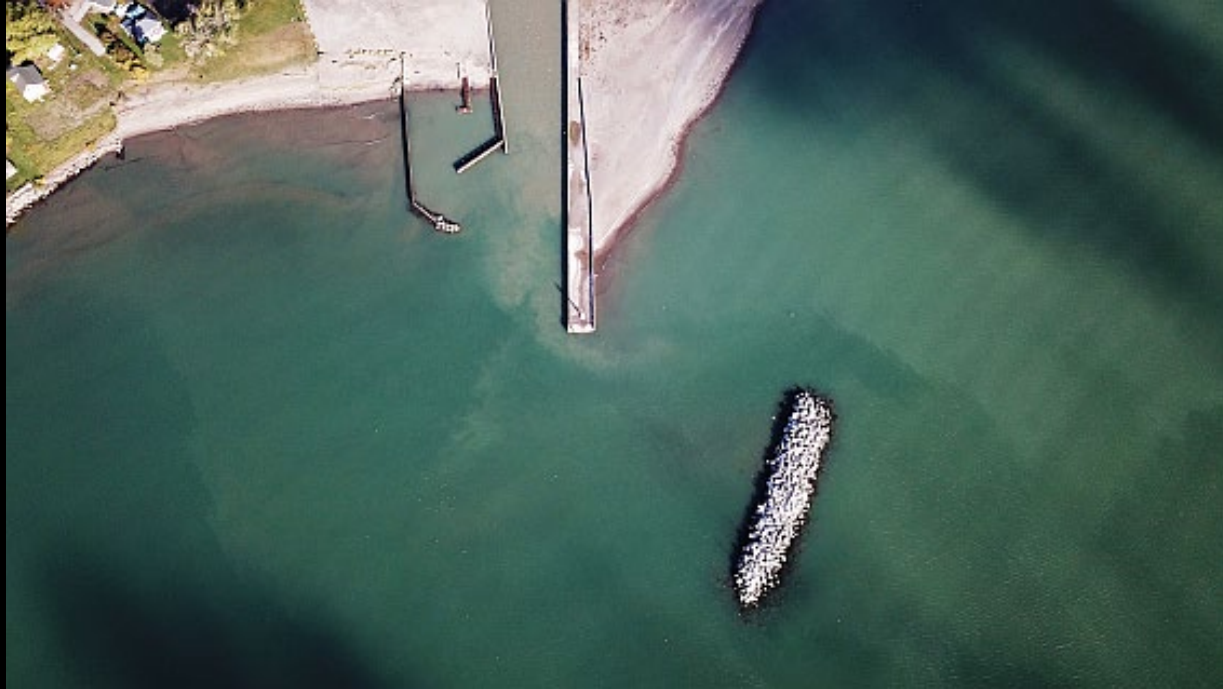


Explore Options for Dredging Technology

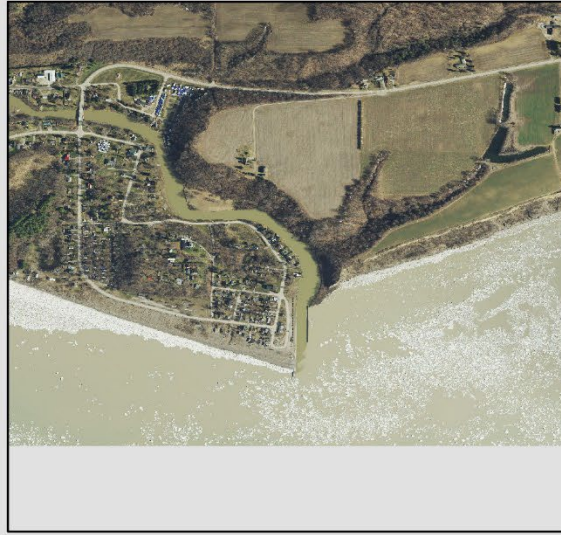
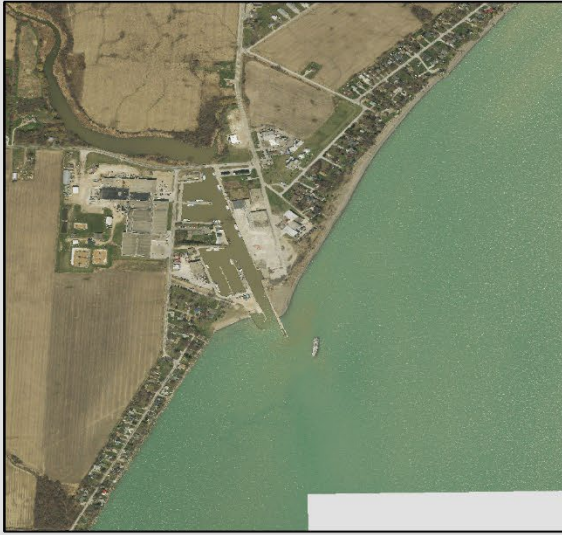




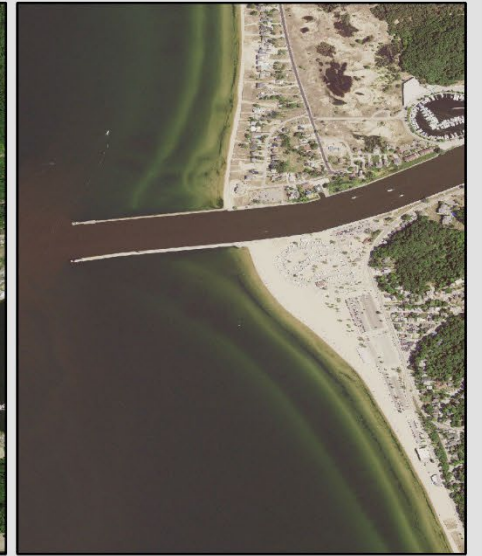
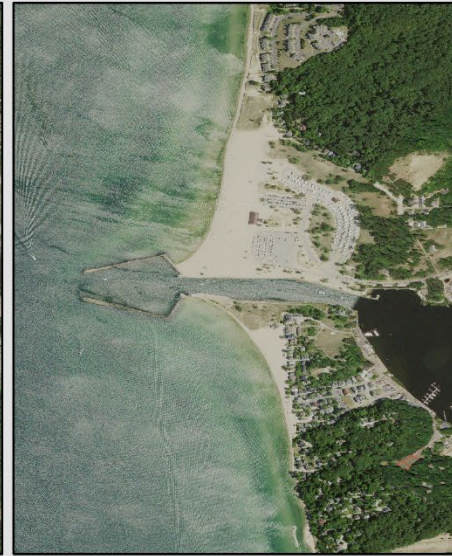
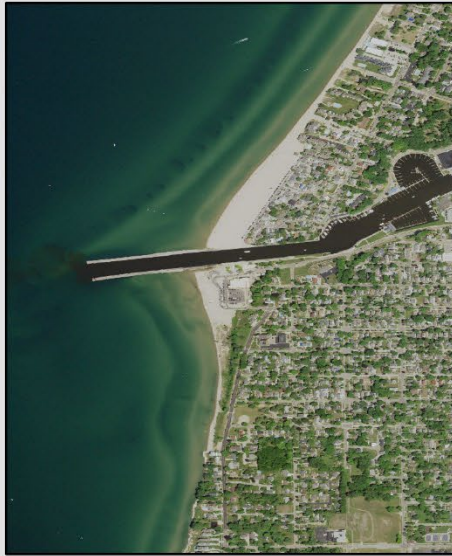
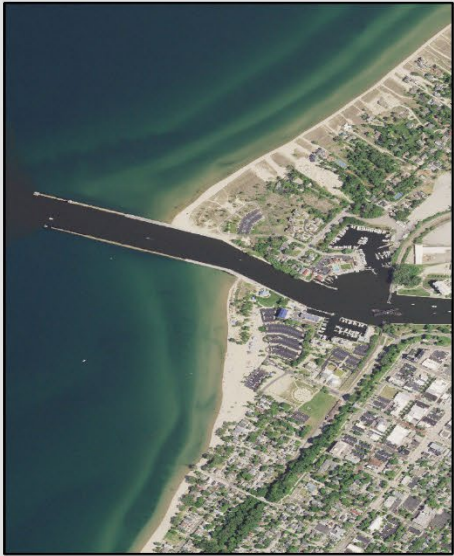
Wheatley Harbour Jetty Assessment and Optimization Design for a Changing Climate



LAKE ERIE HARBOURS



LAKE MICHIGAN HARBOURS



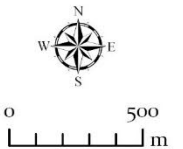
Comparison of Lake Erie and Lake Michigan Harbours

Top: Wheatley, Erieau, Port Bruce, Port Burwell
 Bottom: St. Joseph, South Haven, Saugatuck, Holland, Grand Haven



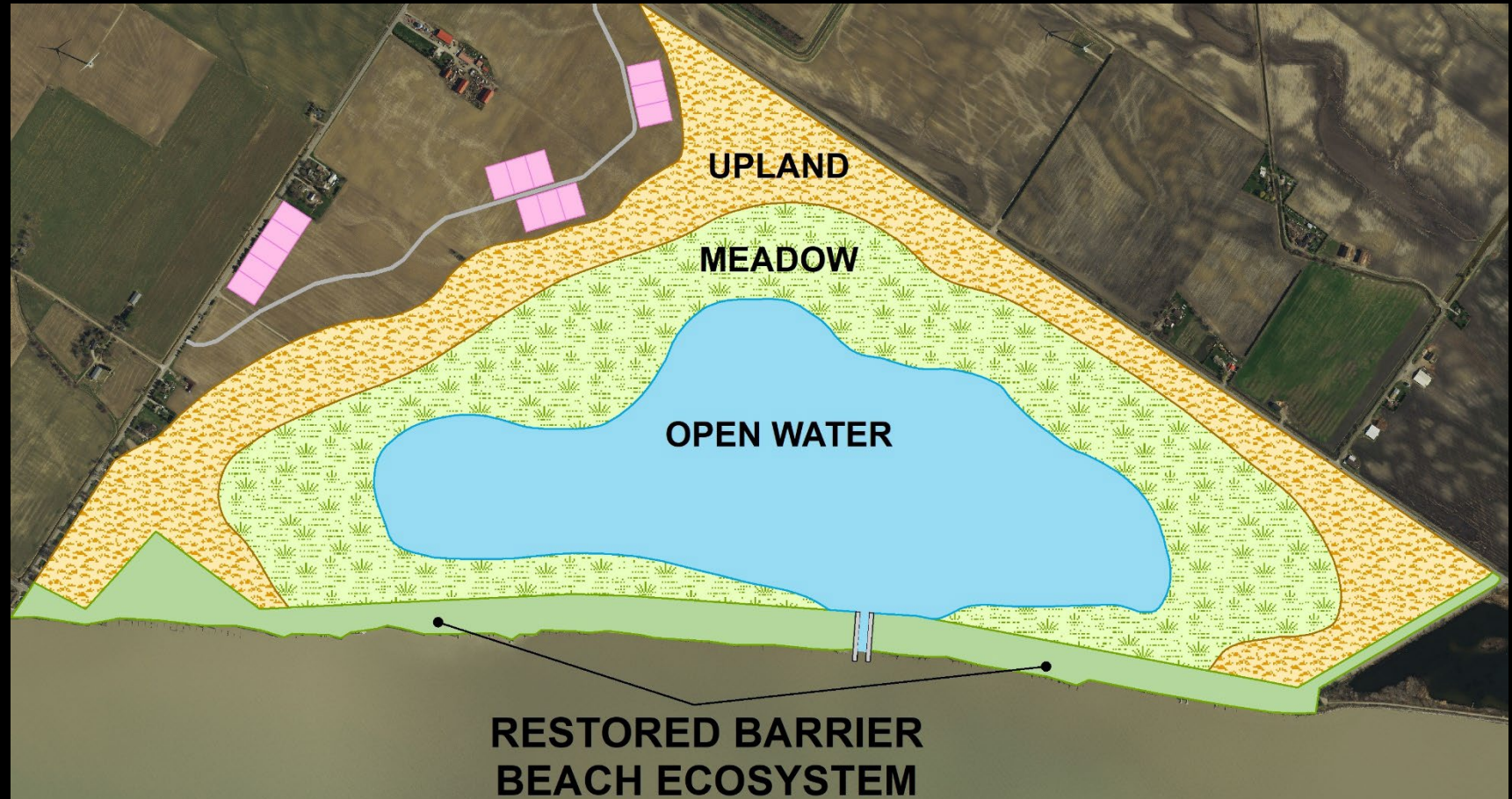
Notes:
 Lake Michigan imagery: 2020 July NAIP, obtained from USGS Earth Explorer.
 Lake Erie imagery: 2015 SWOOP, obtained from Environment and Climate Change Canada (ECCC).

Scale: 1:25,000





Long-term Planned Retreat Strategy for Existing Development on Hazardous Lands





Upgrades to Critical Infrastructure Exposed to Coastal Hazards





Letters of Support and Financial Contributions

- Identify staff that will participate
- Select appropriate role(s):
 - 96 hours for Committee Member
 - 24 hours for Alternative Member
 - Three levels of technical support (40, 80, 160 hours)
- Identify any cash contribution for the duration of the plan development (2024 to 2027)
- Need completed letters by December 1

[LETTERHEAD OF SUPPORTING ORGANIZATION]

Month Day, 2023

Climate Change Impacts and Adaptation Division
Natural Resources Canada
Climate-Resilient Coastal Communities Program

To whom it may concern:

Re: Letter of Support for the Zuzek Inc. Submission: Pelee Coastal Resilience Plan

On behalf of its partners, Zuzek Inc. is submitting a proposal to NRCan's Climate Resilient Coastal Communities Program entitled Pelee Coastal Resilience Plan. [Company Name/Organization] has participated in the development of this submission and is supportive of the approach and project outputs.

[Company Name/Organization] will be represented by [name of individual representing Company] and [list multiple people if applicable] on the Pelee Coastal Resilience Committee and technical teams, which will be responsible for governance, completion of the technical work, and support the implementation of the climate change adaptations to increase coastal resilience.

If funded, [Company Name/Organization] will provide the following support to the project as noted in the table:

- [One/Two/Three] staff members to support the execution of the study.
- In-kind staff support totaling \$xx.xx from April 1, 2024 to December 31, 2027.
- Meeting space or other contributions with a value of \$xx.xx.
- [Anticipated] Cash support of \$xx.xx in the 2024 to 2027 calendar years (this will require Council approval in the near future [keep statement if needed]).

Role	Staff	Hours	Financial Contribution	Total In-kind Staff
Committee Member (12 meetings)	name	96		
Alternate Committee Member	name	28		
Technical-1 (40 hours)	name	40		
Technical-2 (80 hours)	name	80		
Technical-3 (160 hours)	name	160		

The total financial contribution from [Company Name/Organization], including cash and in-kind is \$xx.xx. If you have any questions about our contributions to the Pelee Coastal Resilience Plan, please do not hesitate to contact me directly.

Thank you,

sig.



VII – NEXT STEPS





MEETING ADJOURNED

