



Pelee Coastal Resilience Action Plan

Workshop Presentation

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November 2024



Land Acknowledgement

The Pelee Coastal Resilience Committee acknowledges that this land is the traditional territory of the Three Fires Confederacy of First Nations, comprised of the Ojibway, the Odawa, and the Potawatomie Peoples and specifically, the traditional territory of the Caldwell First Nation.





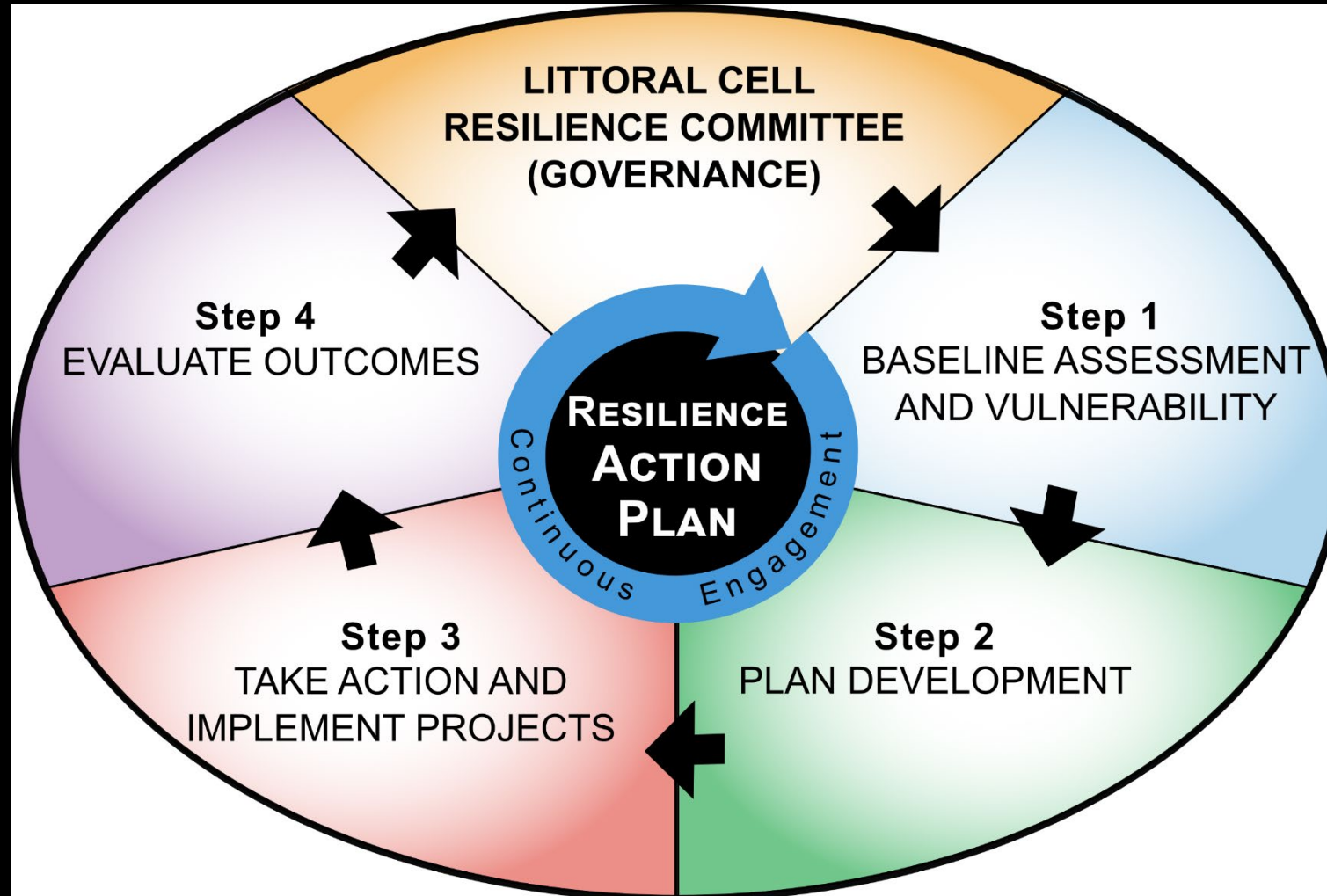
WORKSHOP GOALS



- Introduce the Pelee Coastal Resilience Project
- Engage diverse groups within the project area in conversations on coastal resilience
- Explore ideas on how to enhance coastal resilience and take action
- Provide an overview of baseline condition and vulnerability












GOVERNANCE & STEPS FOR THE ACTION PLAN





Overview of Workplan

SUMMARY PROJECT SCHEDULE	STEP 1 - FY24/25				STEP 2 - FY25/26				STEP 3 - FY26/27				STEP 4 - FY27		
	May '24 to Mar. '25				Apr. '25 to Mar. '26				Apr. '26 to Mar. '27				Ending Dec.'27		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
GOVERNANCE (COMMITTEE MEETINGS, ETC.)	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	as required		
STEP 1 - BASELINE ASSESSMENT AND VULNERABILITY															
STEP 2 - RESILIENCE PLAN DEVELOPMENT															
STEP 3 - TAKE ACTION TO IMPLEMENT SELECT PROJECTS															
STEP 4 - EVALUATE OUTCOMES AND REPORTING															

LEGEND



Workshop



Consultation

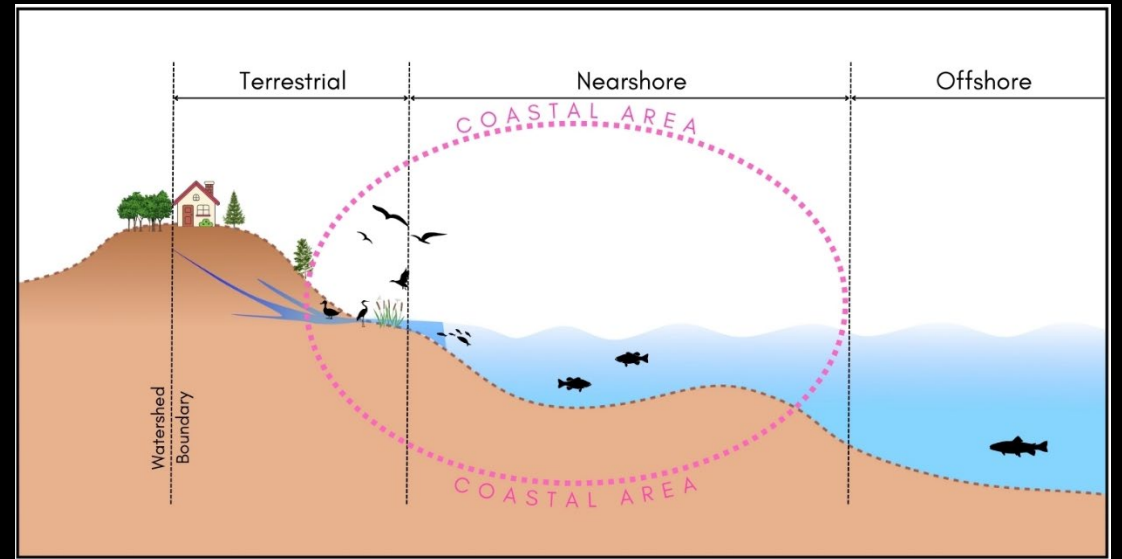
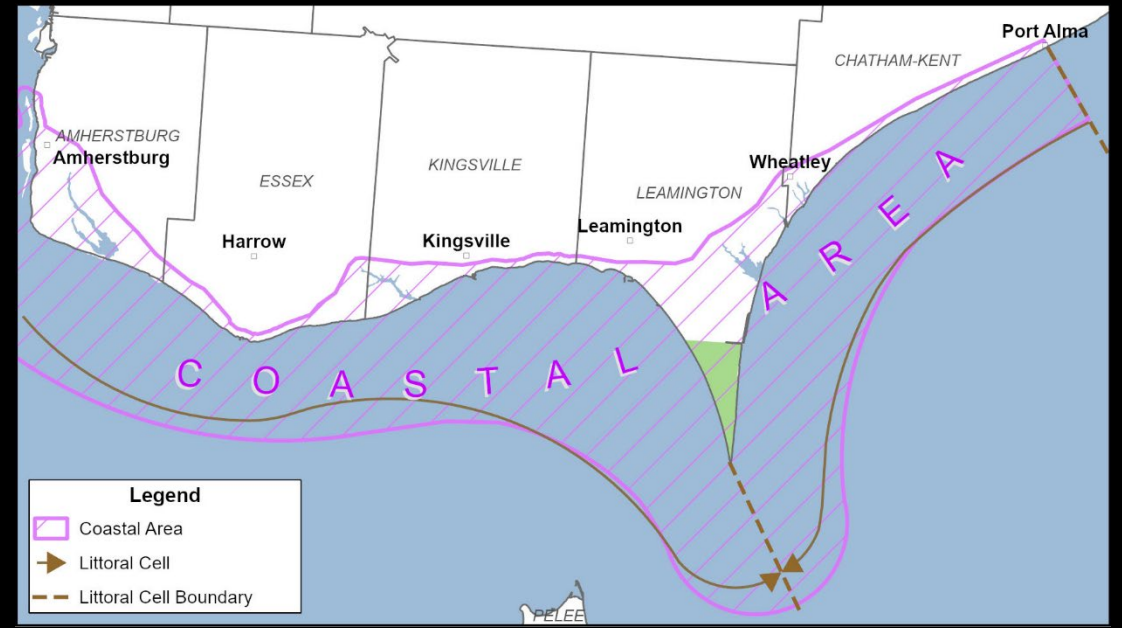
PROJECT BACKGROUND



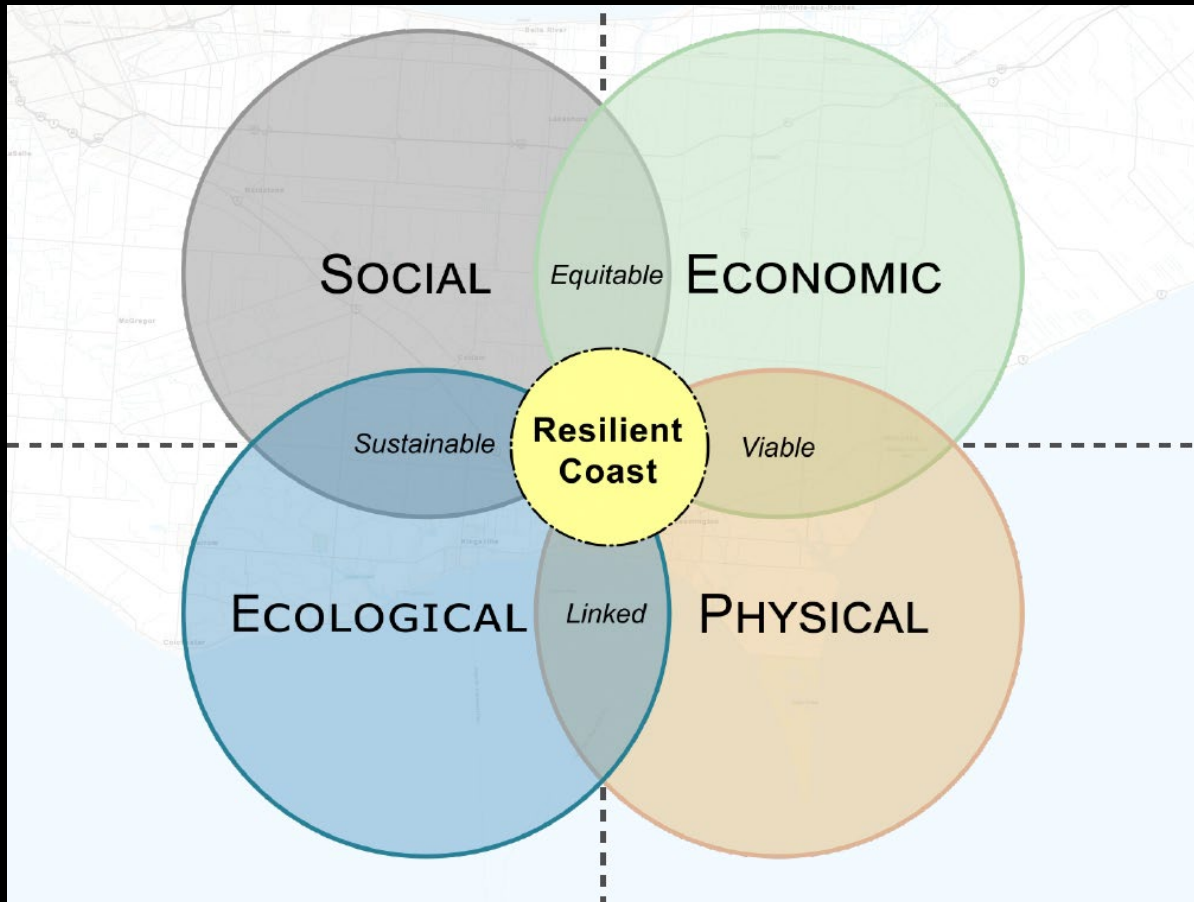


Where is the Project Area?

- Coast stretches from Amherstburg to Port Alma
- Unique approach uses boundaries set by littoral cells – Pelee West and Pelee East
- Coastal area includes the nearshore, waters edge, and inland extent of coastal flooding



WHO is Involved?

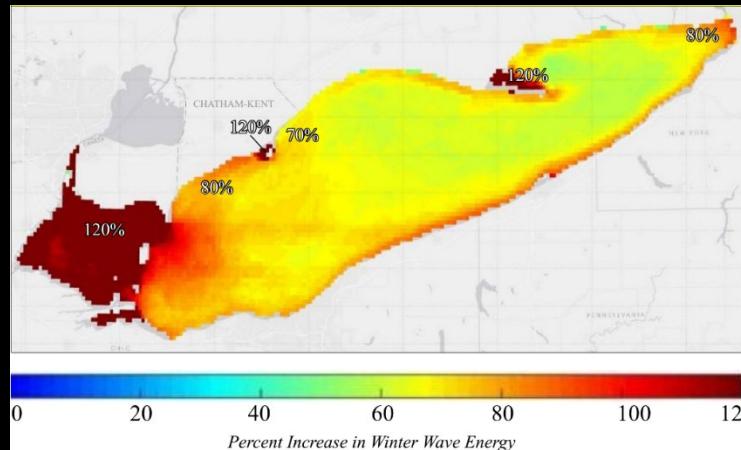


Led by Pelee Coastal Resilience Committee:

- Citizens' Committees and Associations
- First Nations
- Businesses
- Environmental groups
- Conservation Authorities
- Towns, Municipalities, County
- Provincial and federal agencies

What is the MOTIVATION?

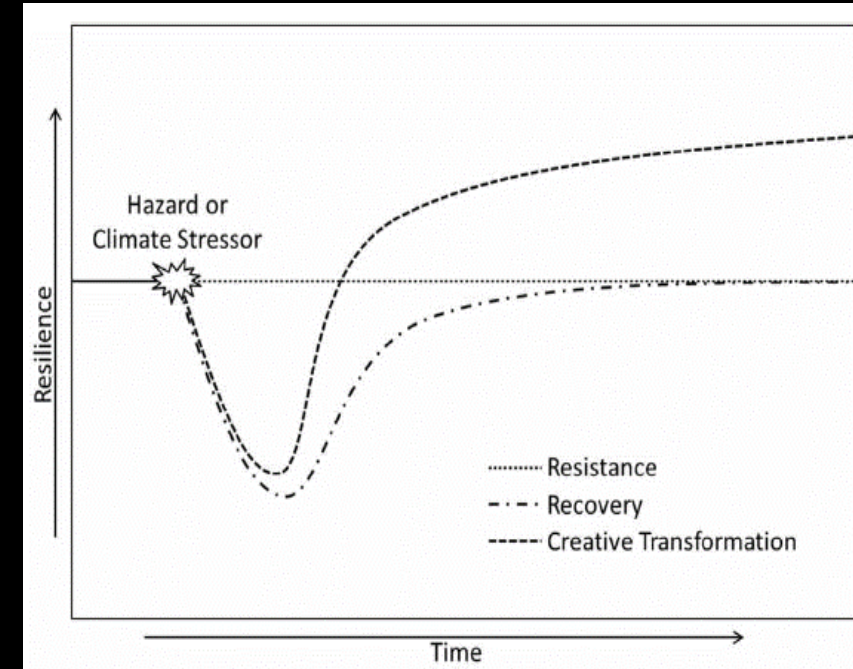
- Current coastal hazards/impacts
 - Erosion
 - Flooding
 - Water level fluctuations
- Climate change impacts
 - Air and water temperatures increasing
 - Higher and lower water levels
 - Loss of winter ice protection
- Need an approach to address coastal planning and management to create resilience





What is our Vision of Resilience?

- Simple definition: **The ability of communities and ecosystems to bounce back (better) from damaging stresses such as coastal floods, erosion, heavy rainfall, sedimentation, high and low water levels**
- Complicated but says it all: Resilience is the capacity of social, economic, ecological, and physical systems in coastal areas to cope with a hazardous event, trend, or disturbance, responding and reorganizing in ways that maintain their essential function, identity, and structure, while also building capacity for learning, innovative and equitable adaptation, and transformation.





OUTCOME: on the ground ACTION

- ADAPTATION SOLUTIONS WILL BE DELIVERED THROUGH PELEE COASTAL RESILIENCE ACTION PLAN!
- Plan guided by VISION ... Communities, economies and the natural environment in our Great Lakes coastal areas are resilient to current and emerging stresses. Through collaboration, partners and residents are empowered to take collective action that improves coastal resilience through equitable, inclusive and sustainable adaptation.





Developing Adaptation Concepts NEXT WORKSHOP

- Hierarchy of alternatives, starting with Preserve Natural Coastal Areas. Final alternative is hardening shorelines with engineering structures

PARRARH FRAMEWORK

1st Preserve Natural Coastal Areas

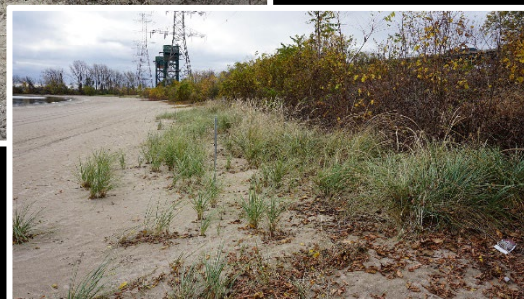
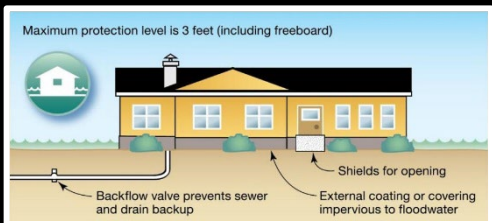
2nd Avoid Further Development on Hazardous Lands

3rd Retreat from Hazards and Re-align Land Use

4th Accommodate Coastal Hazards

5th Restore with Nature-based Coastal Solutions

6th Harden with Engineering Structures



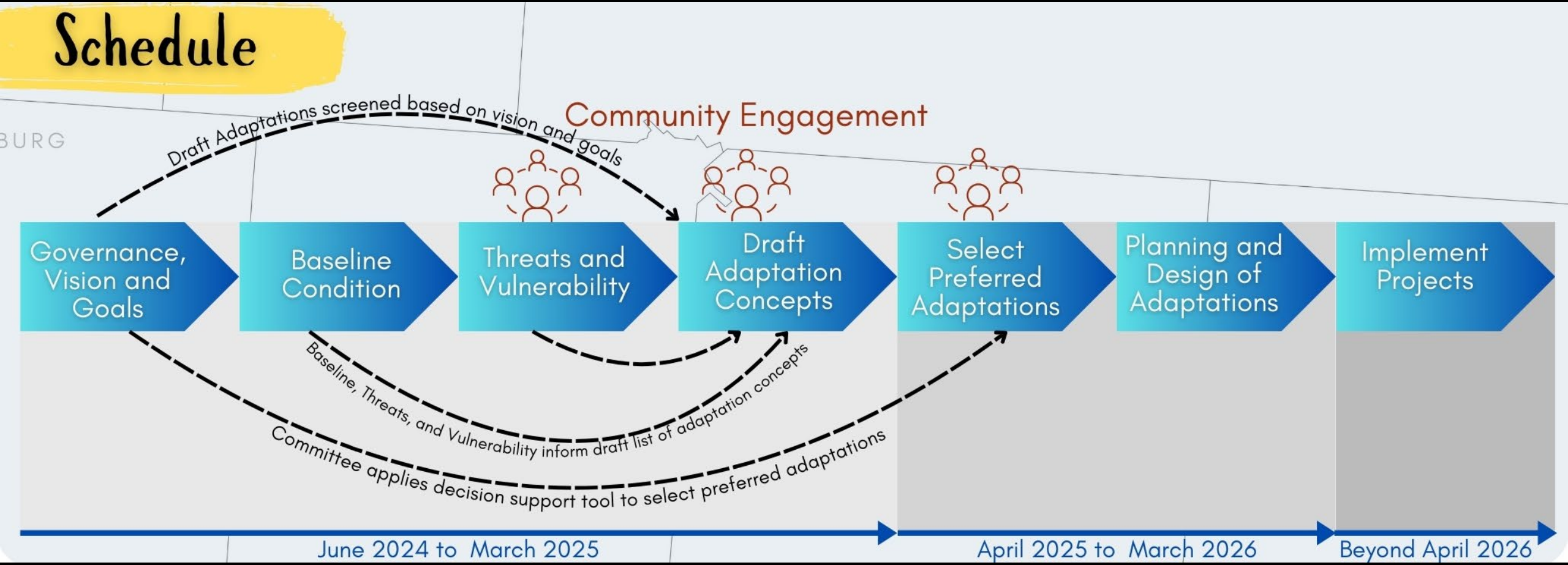


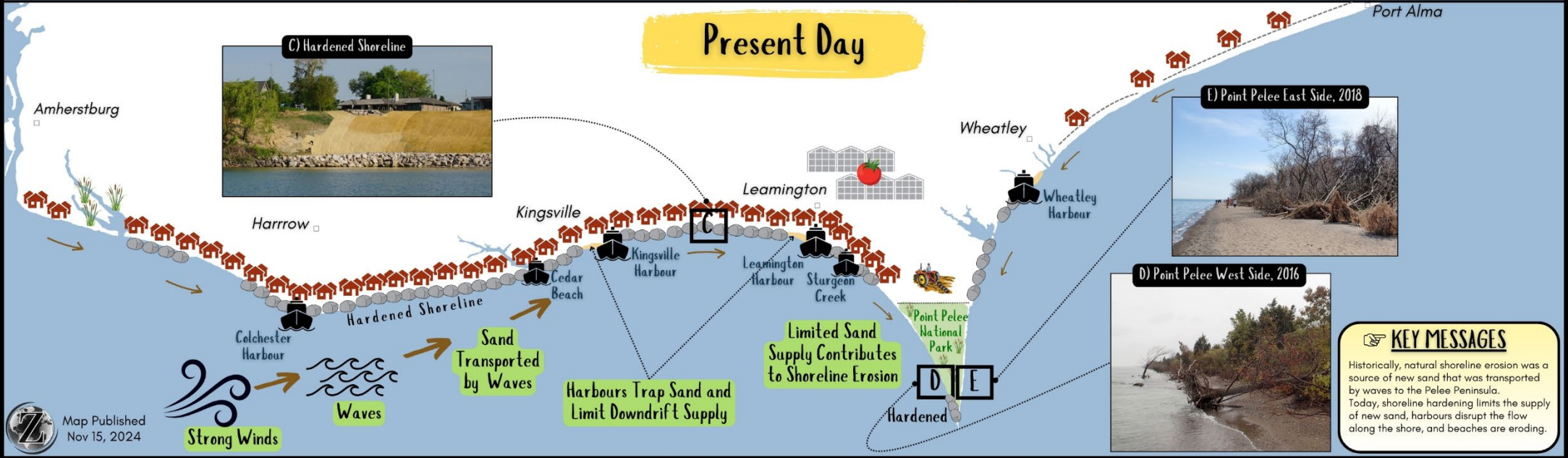
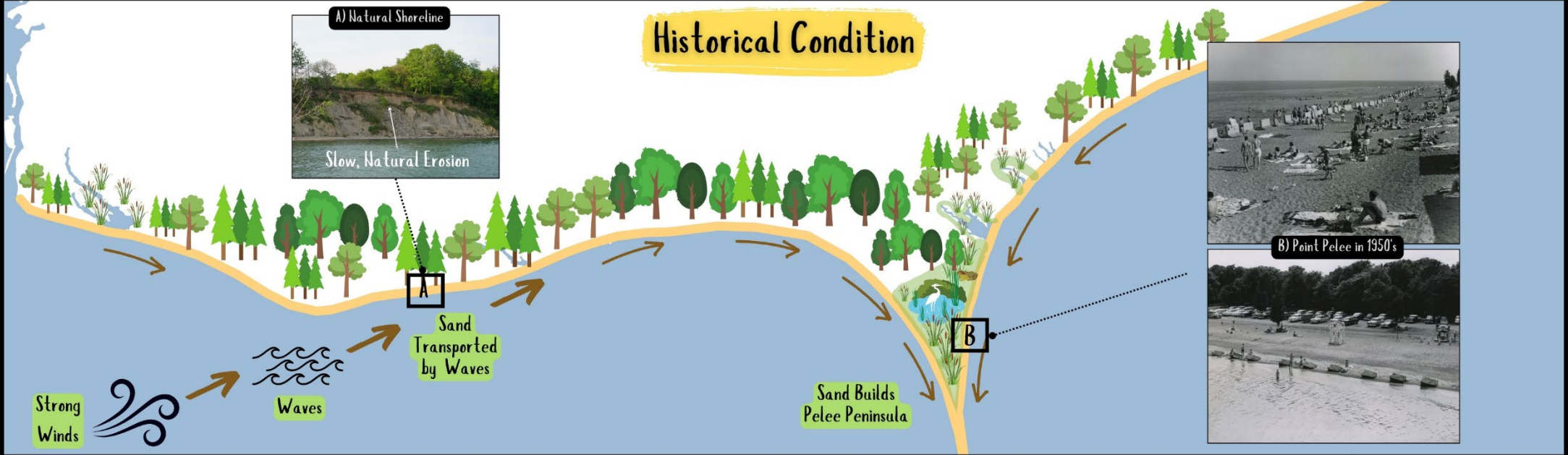
BASELINE CONDITION AND VULNERABILITY





How We Use the Baseline, Threats, and Vulnerability





KEY MESSAGES

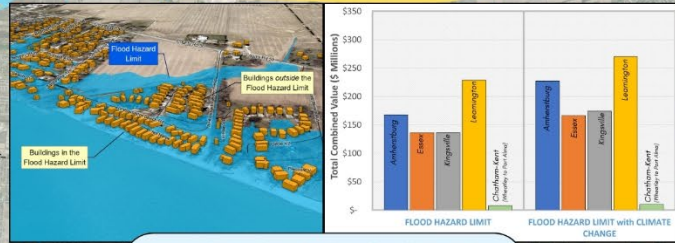
Historically, natural shoreline erosion was a source of new sand that was transported by waves to the Pelee Peninsula. Today, shoreline hardening limits the supply of new sand, harbours disrupt the flow along the shore, and beaches are eroding.



KEY MESSAGES

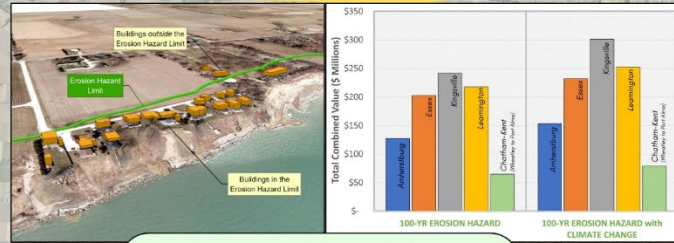
- Lake Erie's health is a high priority for the community
- Numerous social benefits are derived from the coastal area
- Erosion and flooding threaten the places and ecosystems we value

Flood Risk for Buildings and Contents



\$ The combined value of buildings and contents within the flood hazard is \$670 million, increasing to \$838 million when Climate Change is considered.

Erosion Risks for Buildings and Contents



\$ The combined value of buildings, contents and land within the erosion hazard is \$855 million, increasing to \$1 billion when Climate Change is considered.

4 Bluff Erosion Disrupts Traffic and the flow of Goods



100-year Flood Hazard

Financial Burden of Post-storm Recovery



Gross Domestic Product of Agricultural outputs is \$4.6 million annually. Source: Sustainable Management Strategy for Southeast Leamington (Baird, 2007)

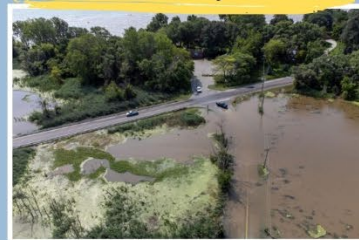


The coastal wetlands of the Pelee Peninsula generate ecosystem goods and services of \$40 million annually.

Overland Flood Insurance Difficult to Secure Due to Coastal Flood Risks



1 Disruptions in Transportation Corridors during Flood Events



Point Pelee National Park attracts 500,000 tourists to Essex County each year, generating \$87 million in economic benefits.

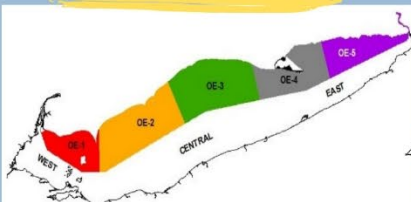
3 Wheatley is the World's Largest Freshwater Commercial Fishery



2 Southern Most Point of Mainland Canada



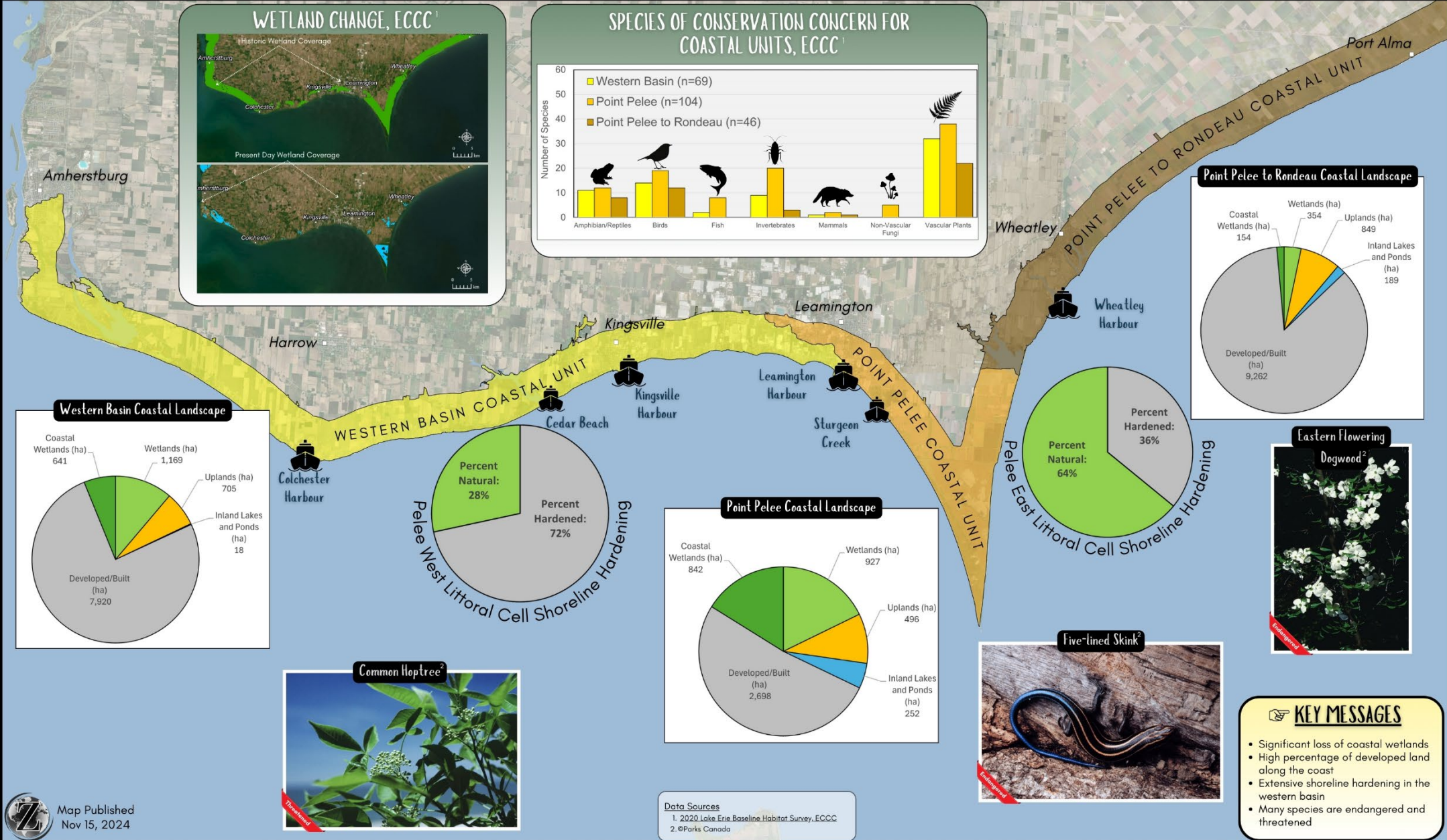
Lake Erie Fishery Districts

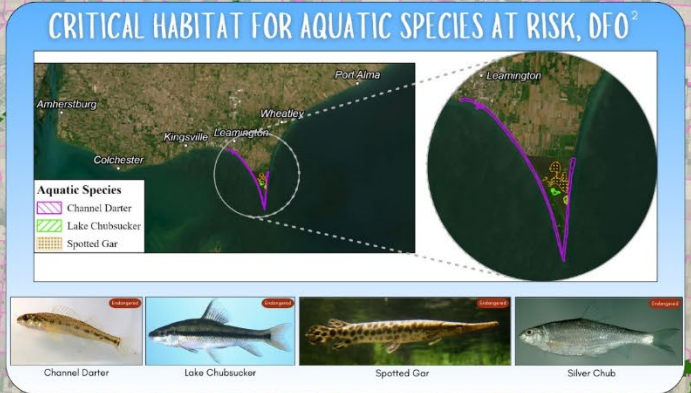
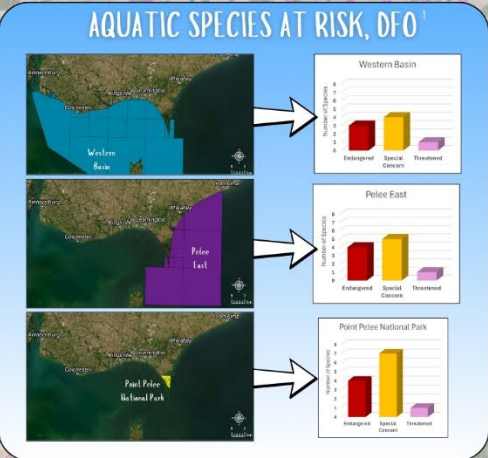
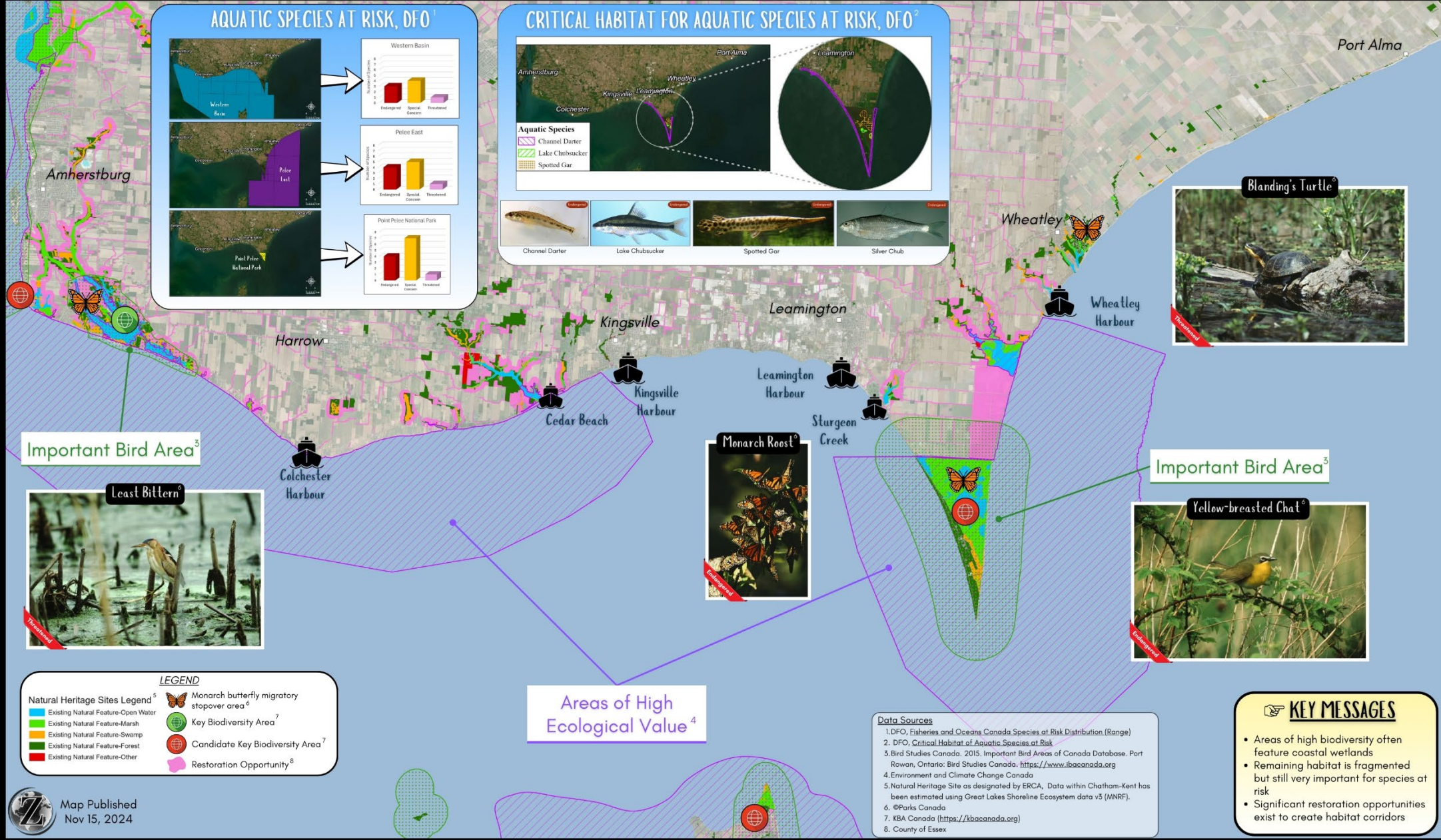


2023 COMMERCIAL FISHERY LANDINGS
OE-1: 8.6 million landed weight with a value of \$18.7 million
OE-2: 4.8 million landed weight with a value of \$9.4 million

KEY MESSAGES

- Existing development is vulnerable to flooding and erosion hazards
- Tourism, coastal ecosystems, the commercial fishery, and agriculture create significant economic benefits
- Natural hazards disrupt the local economy





LEGEND

Natural Heritage Sites Legend⁵

- Existing Natural Feature-Open Water
- Existing Natural Feature-Marsh
- Existing Natural Feature-Swamp
- Existing Natural Feature-Forest
- Existing Natural Feature-Other

Other Legend:

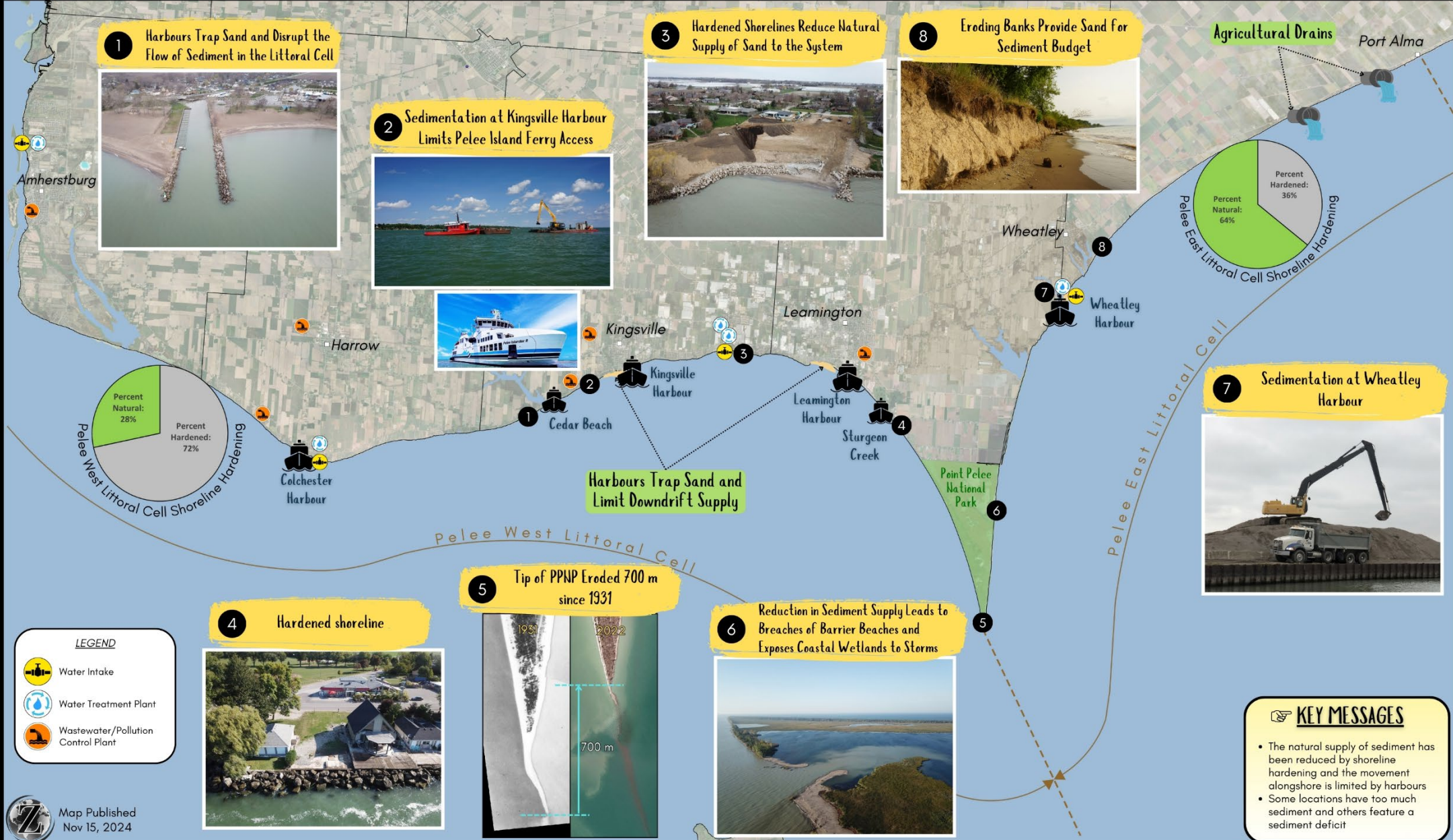
- Monarch butterfly migratory stopover area⁶
- Key Biodiversity Area⁷
- Candidate Key Biodiversity Area⁷
- Restoration Opportunity⁸

Areas of High Ecological Value⁴

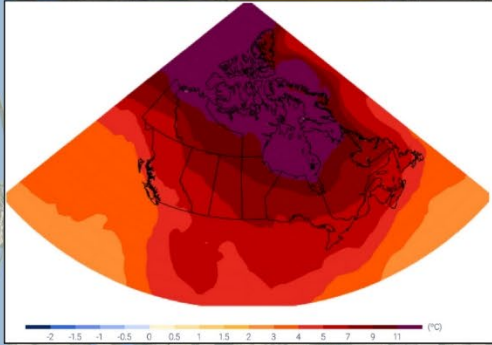
- #### Data Sources
- DFO, Fisheries and Oceans Canada Species at Risk Distribution (Range)
 - DFO, Critical Habitat of Aquatic Species at Risk
 - Bird Studies Canada, 2015. Important Bird Areas of Canada Database. Port Rowan, Ontario: Bird Studies Canada. <https://www.ibacanada.org>
 - Environment and Climate Change Canada
 - Natural Heritage Site as designated by ERCA. Data within Chatham-Kent has been estimated using Great Lakes Shoreline Ecosystem data v3 (MNR).
 - ©Parks Canada
 - KBA Canada (<https://kbaCanada.org>)
 - County of Essex

KEY MESSAGES

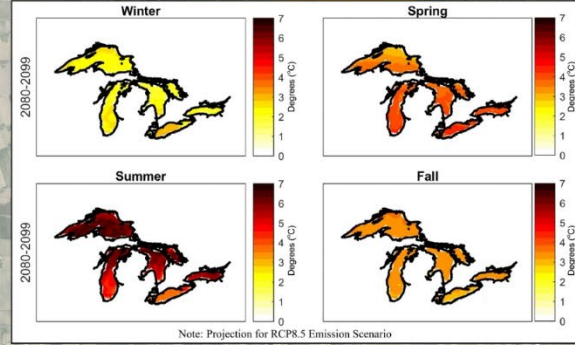
- Areas of high biodiversity often feature coastal wetlands
- Remaining habitat is fragmented but still very important for species at risk
- Significant restoration opportunities exist to create habitat corridors



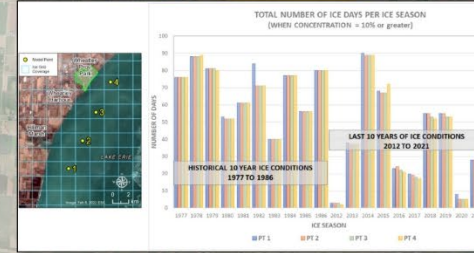
Late Century (2081-2100) Projected Winter Air Temperature Increase



Late Century Warming Projections for Lake Temperature



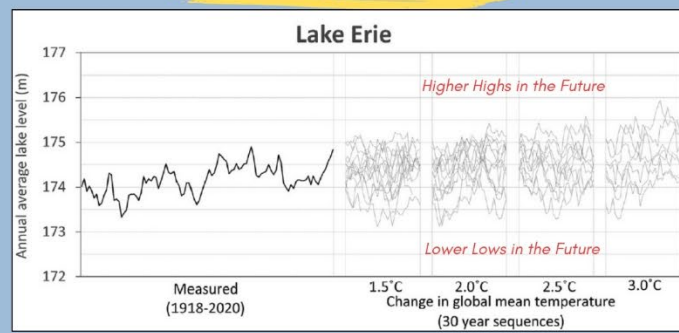
Example of Ice Loss with a Warming Winter



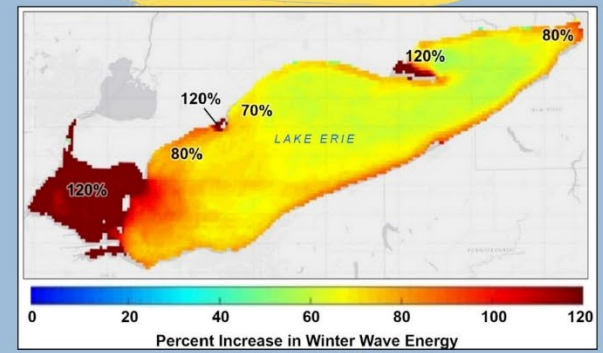
Increased Exposure to Flooding and Erosion Hazards



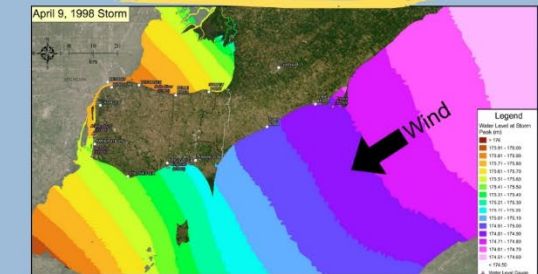
Future Climate Change Lake Level Projections



Winter Wave Energy Increase for Ice-free Conditions

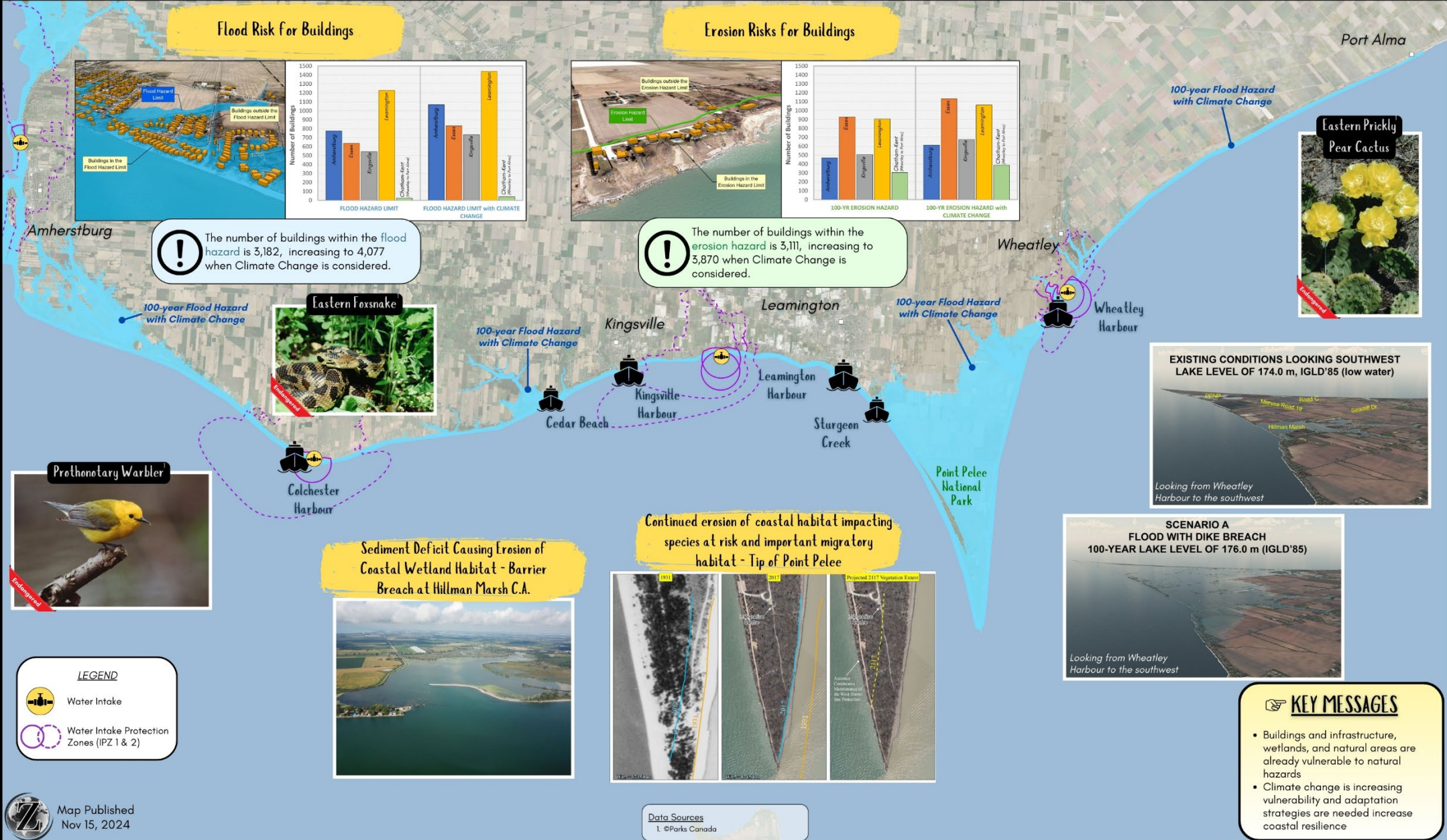


More Exposure for Storm Surge



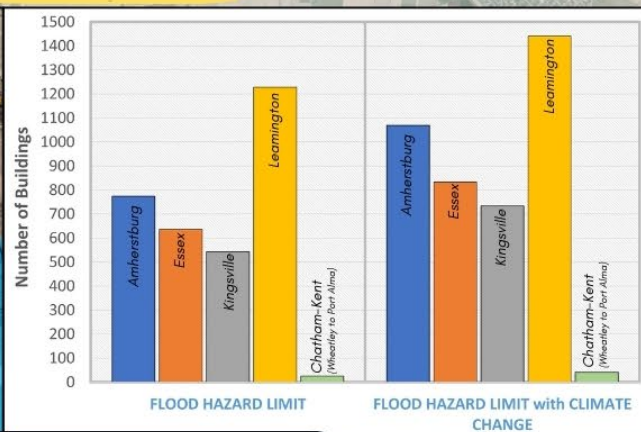
KEY MESSAGES

- Our climate is changing. Historical extremes will not be representative of the future
- A warming atmosphere is leading to less ice cover, more winter storm exposure, more frequent floods, and higher erosion rates



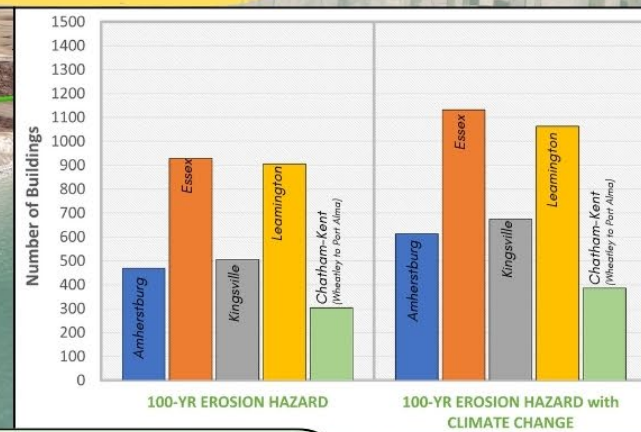
Number of Buildings Vulnerable to Flooding and Erosion

Flood Risk for Buildings



! The number of buildings within the flood hazard is 3,182, increasing to 4,077 when Climate Change is considered.

Erosion Risks for Buildings



! The number of buildings within the erosion hazard is 3,111, increasing to 3,870 when Climate Change is considered.



Your Baseline and Vulnerability

Pelee Coastal Resilience Action Plan

YOUR BASELINE

Please identify the location of property, places, ecosystems, and infrastructure that are important to you.

Map Published Nov 15, 2024

Pelee Coastal Resilience Action Plan

VULNERABILITY

Please identify the location of property, places, ecosystems, and infrastructure that you believe are vulnerable to coastal hazards and climate change.

Map Published Nov 15, 2024



QUESTION & ANSWER





Future Engagement and Information Sharing

Engagement	Focus	Timeline
Website	Information sharing and project updates	Ongoing
Focus Groups	Gain input regarding project objectives, vulnerable areas, priorities	October and November 2024
Public Workshop #1	Information sharing and education (overall project goal, baseline assessment, vulnerability assessment)	November 2024
Public Workshop #2	Co-create adaptation concepts	April-May 2025
Virtual Meeting(s)	Continue to support adaptation development	TBD
Public Workshop #3	Present final concepts and implementation plan	April 2026
Pelee Coastal Committee	Quarterly Meetings	Ongoing



Thank you!

Stay Informed and Engaged

- <https://peleecoastal.ca/>
- Check regularly. Workshop findings will be posted

The screenshot shows the website for the Pelee Coastal Resilience Committee and Action Plan. The page features a navigation menu with links for HOME, ABOUT, COMMITTEE, ENGAGEMENT, RESOURCES, and CONTACT. The main heading is "Pelee Coastal Resilience Committee and Action Plan". Below the heading is a paragraph explaining the committee's formation and purpose. A section titled "OUR VISION" describes the goal of resilient coastal communities. The page also includes a map of the Pelee Peninsula and surrounding areas, with labels for "KINGSVILLE", "Pelee Peninsula", "Littoral Cell", "Coastal Area for the Resilience Framework", and "Southern Limit of the Southeast Shoal". A compass rose and a "Legend" box are also visible.

Pelee Coastal

HOME ABOUT COMMITTEE ENGAGEMENT RESOURCES CONTACT

Pelee Coastal Resilience Committee and Action Plan

The Pelee Coastal Resilience Committee was formed in the fall of 2023 with funding from Environment and Climate Change Canada. The Committee made a successful application to Natural Resources Canada's Climate Resilience Coastal Communities Program to develop a Coastal Resilience Action Plan for the Pelee Coast. Additional details on the project, the committee, community engagement, and outputs are provided on the remaining web site pages.

OUR VISION

Communities, economies, and the natural environment in our Great Lakes coastal areas are resilient to current and emerging stresses. Through collaboration, partners and residents are empowered to take collective action that improves coastal resilience through equitable, inclusive and sustainable adaptation.

LAKE

Pelee Peninsula

Littoral Cell

Coastal Area for the Resilience Framework

Pelee Coastal

Southern Limit of the Southeast Shoal

Legend



Exit Survey Link

Please Complete the Exit Survey

Your ideas and
opinions are
important!



Scan the QR Code above
using your phone camera to
complete the survey online.

