PELEE COASTAL RESILIENCE

NEWSLETTER

Volume 1 - Update on Adaptation Planning

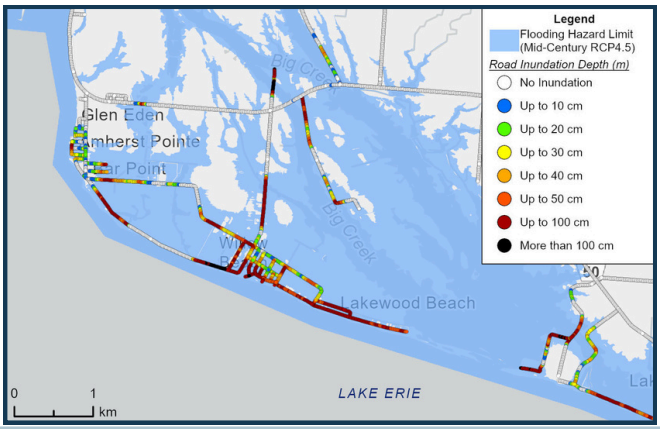
Fall 2025

ADAPTATION B

Screening Assessment of Municipal Infrastructure and Natural Capital

The vulnerability assessment completed for the project to date identified 4,000 buildings valued at over 800 million dollars located in the coastal floodplain when climate change impacts were considered. The value of buildings vulnerable to erosion over the next 100 years is over $1 Billion.

Adaptation B expands the vulnerability assessment to include flood risk for municipal infrastructure such as roads, drinking water intakes and plants, waste-water treatment plants, buildings for first responders, and natural assets. The initial screening identified 92 km of roads that are vulnerable to flooding from a Lake Erie 100-year climate-change event.



Coastal Floodplain for the Lake Erie 100-year Climate Change Event in Amherstburg

Cedar Beach Flooding on August 24, 2023 Following Record Setting Rainfall During High Lake Levels (Photo credit: Windsor Star)

Road Flooding at Creek Outlet, Town of Essex (Photo credit: Windsor Star)

Meetings are continuing with the local Town, Municipal, and County Engineering Staff to refine the assessment and identify potential projects for an engineering scoping investigation into alternatives to make the infrastructure more resilient to natural hazards and changing climate.

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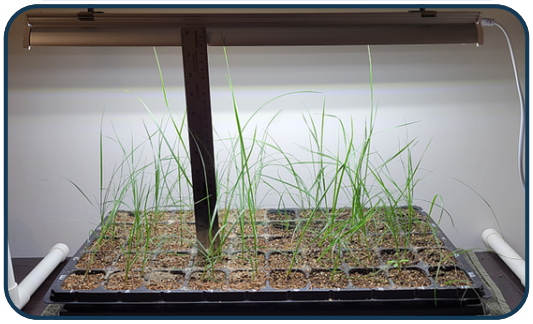
ADAPTATION D — Develop In-situ and Greenhouse Nurseries to Grow Native Dune Plants for Restoration

The Caldwell First Nation and Point Pelee National Park are leading Adaptation D with support from the Consulting Team. After several months of planning over the summer, the Task Team met at Point Pelee National Park on October 7, 2025 to collect seeds from native dune plants. Seeds from beachgrass plants were separated and counted at the Visitors Centre inside the National Park. Over the winter, members of the Caldwell First Nation and staff from the National Park will grow the beachgrass seeds in indoor grow-light micro nurseries.

Grow-light Micro Nursery



Dune Grass Seed Collection at Point Pelee

Processing and Separating Dune Grass Seeds by Volunteers

In the spring of 2026, the beachgrass will be planted into dune environments to strengthen resilience to coastal hazards and climate change. The experience gained from growing the native plants from seeds will be used to generate plant material for future restoration projects in the two littoral cells.

> *"Yesterday was just amazing to be involved and witness people of all ages and cultures come together towards a greater cause. The unity and collaboration was astounding and formed instant bonds. I am grateful to have been part of this unique assembly."* Shelley Birch, Junior Water Guardian, Caldwell First Nation

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Harbour Bypassing and Dredged Material Placement Optimization

Over the summer, we have been building a Task Team of harbour and marine owners and operators to participate in Adaptation H+I, which is focused on improving sediment bypassing at the harbours in the two littoral cells and optimizing the placement of dredged material to benefit beaches and coastal habitat. A tour of the local harbours was recently completed with members of the Task Team and Committee, along with the owners/ operators.

Aggregate Business at Kingsville Harbour

Overview of Navigation Challenges with Pelee Island Ferry Captain

Discussion of Sedimentation at Wheatley Harbour

Navigation Channel at Cedar Beach

Conversations will continue with the Task Team members on strategies and approaches to bypass more sediment at the harbours to the downdrift shoreline. Computer modeling tools will be used to support the technical analysis in the coming months. Regulatory agencies are also being engaged to discuss permitting requirements for alternative dredge placement locations.