

Update the 2004 Port Darlington (West Shore) Shoreline and Flood Damage Centre Draft Report

Public Information Meeting Presentation

March 3, 2018

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Outline

- * Introduction
- * Previous 2004 Draft Document
- * Purpose of Current Study: New Issues to be included in the Updated document
- * Lake Hazard Issues & Study Considerations
- * Next Steps

Introduction

- * The study area is 1.8 Km along Lake Ontario shoreline, west of the Mouth of Bowmanville Creek and east of St. Mary's Lands.



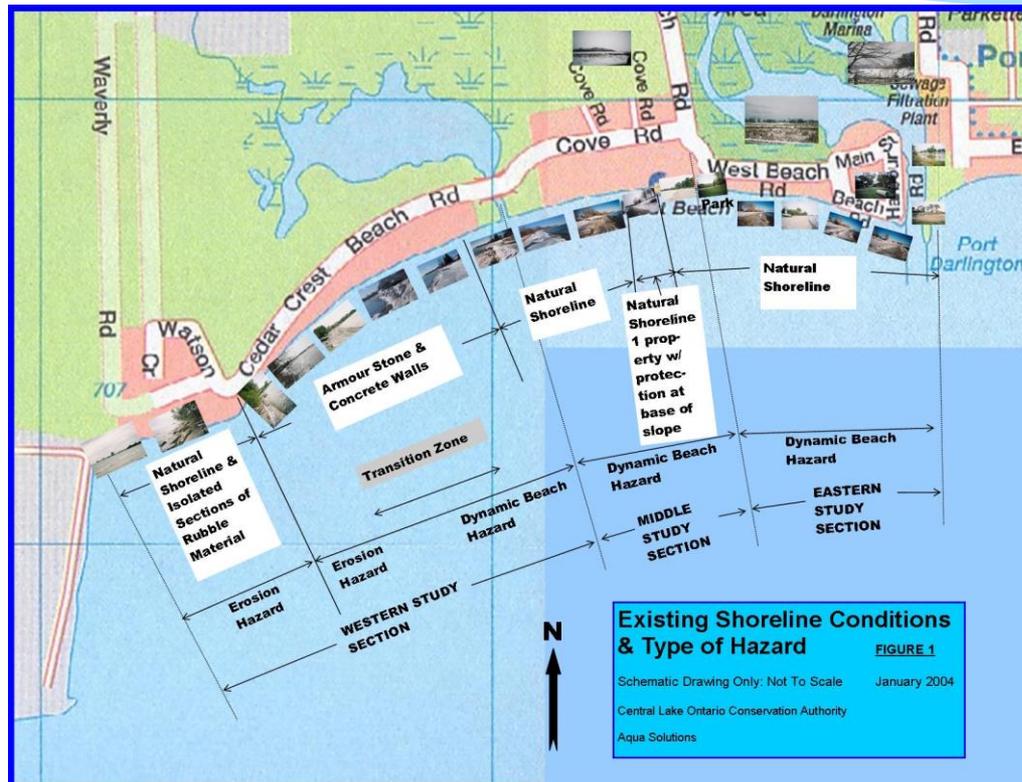
Introduction

- * Port Darlington Erosion and Flood Damage Study was a result of recommendations that were made by the Sandwell Report (1990).
- * The Port Darlington Beach area was identified as an area of high risk due to flooding or erosion potential.
- * Report recognized, "The Port Darlington Beach Damage Centre C4 (Reach #17)... This area is at risk from flooding of the river as well as from flooding due to wave activity on Lake Ontario"

Purpose of Draft Study

- * The purpose of the original 2004 study was to review the hazard issues and identify the hazardous areas (flooding, erosion, and dynamic beach), develop policies in order to assist CLOCA and The Municipality of Clarington in addressing future applications within the specific hazardous areas along the western side of Port Darlington's Shoreline.

Draft Study: Identified Shoreline Types & the Natural Hazards



Draft Study:

- * The draft study was presented to the Authority Board on April 20, 2004 and was received for information.
- * The report was not finalized and never brought to the Board for adoption and subsequent implementation.



After 2004

- * May of 2006 “Ontario Regulation 42/06 Regulation of Development, Interference with Wetlands and Alteration to Shorelines and Watercourses” was enacted.
- * The regulation was updated to coordinate with the Provincial Policy Statement and Planning Act.
- * April 2013 the Policy and Procedural Document for Regulation and Plan Review (PPD) was approved by the Board, which provides policy direction under the 42/06 Regulation.
- * The updating of the Port Darlington Damage Centre report will take these important changes into consideration along with additional considerations.

Purpose of Current Study

The study will

- * Update the Draft Report, and planning/policy guidance for future development within the damage center
- * Review concept protection works options & Opinion of Probable Costs (Baird & Associates)

Incorporate the most recent information available;

- Sediment transport processes,
- Recent historic water levels,
- Flooding, Erosion & Dynamic Beach Hazards from the Lake,
- Current provincial policy direction,
- Climate change and
- Updated Mapping provided by CLOCA.

Key Hazard Issues

Key Hazard Issues occurring along the study area:

- * Flooding from Lake Ontario
- * Erosion from Lake Ontario
- * Dynamic Beach Hazards from Lake Ontario
- * Flooding from Westside Creek Wetland/West side Creek, and
- * Flooding from Bowmanville Marsh & Creek

This study is focused on **Lake Ontario Erosion and Flooding**

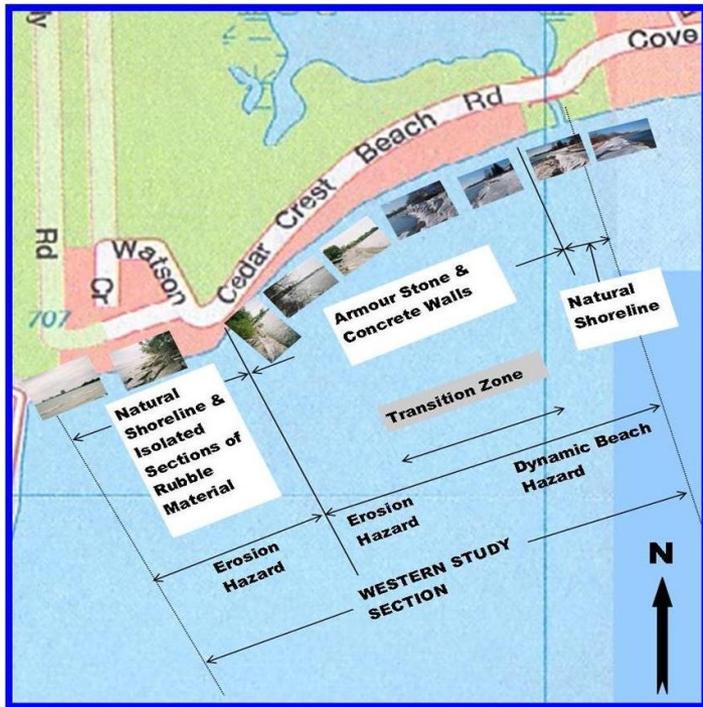
Lake Erosion, Flooding & Dynamic Beach Hazards



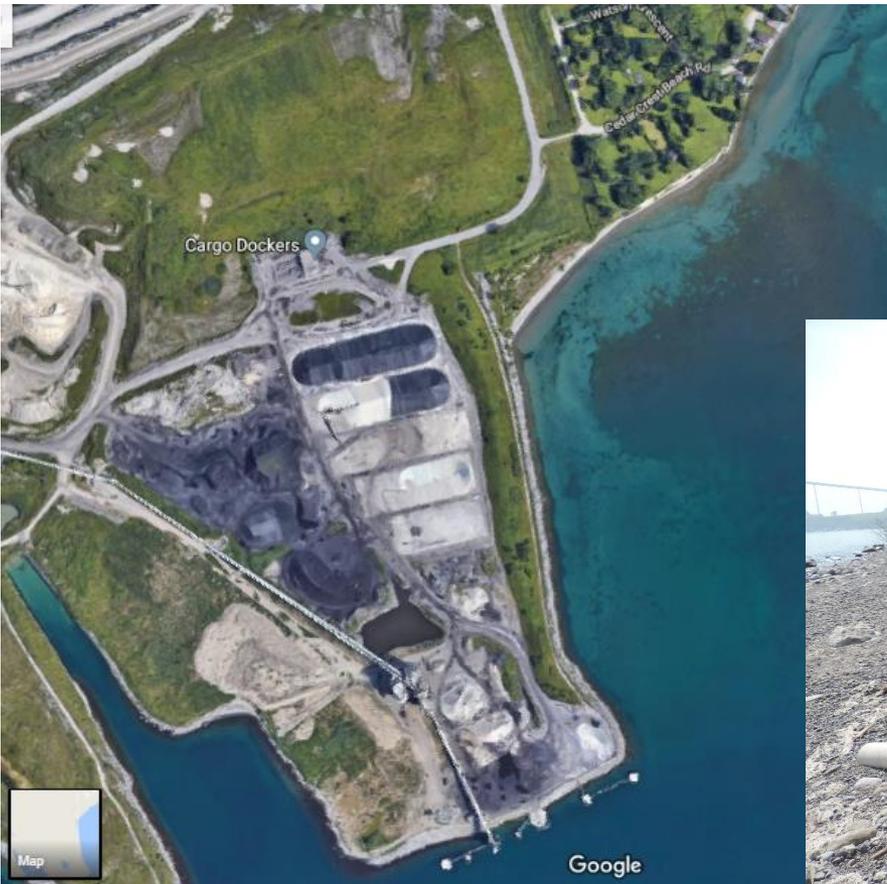
Review Hazards combined with Natural Process occurring: Sediment Transport Considerations



Western End of Study Area: East Side of St. Mary's Cement to Watson Crescent - Erosion Hazard

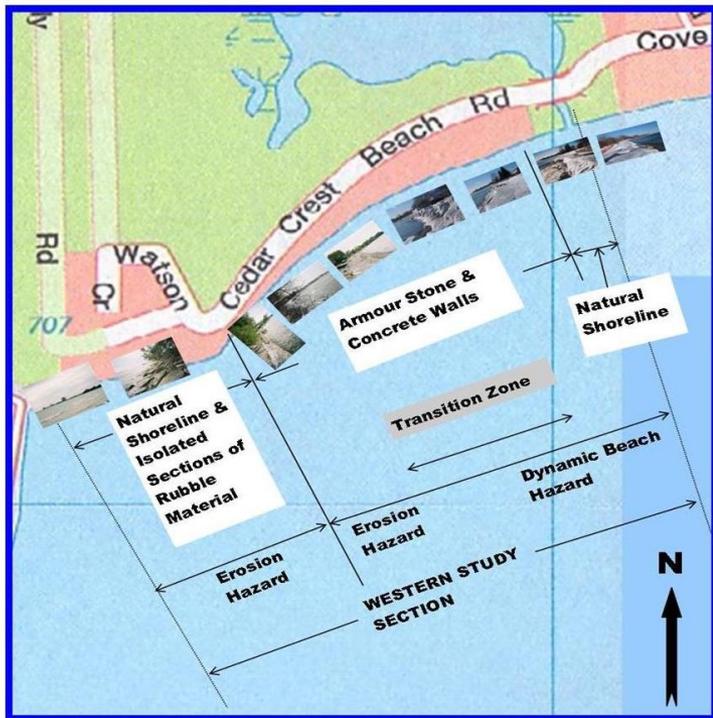


Western End of Study Area: East Side of St. Mary's Cement to Watson Crescent - Erosion Hazard

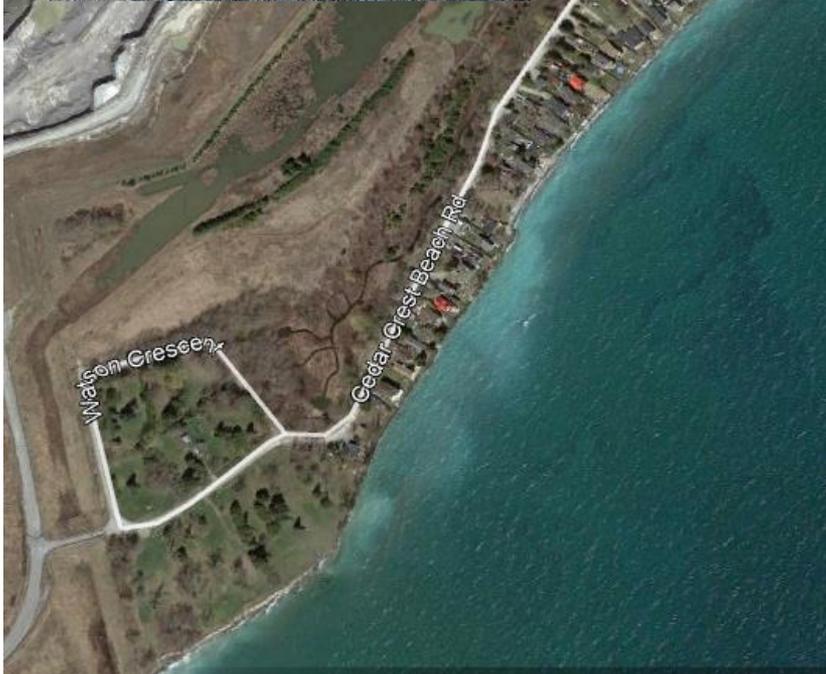


Mouth of West Side Creek to West End of Cedar Crest Beach Road

- * Transition Zone between Erosion Hazard & Dynamic Beach Hazard
- * Erosion Hazard



Mouth of West Side Creek (Dynamic Beach Hazard) to West End of Cedar Crest Beach Road (Erosion Hazard)



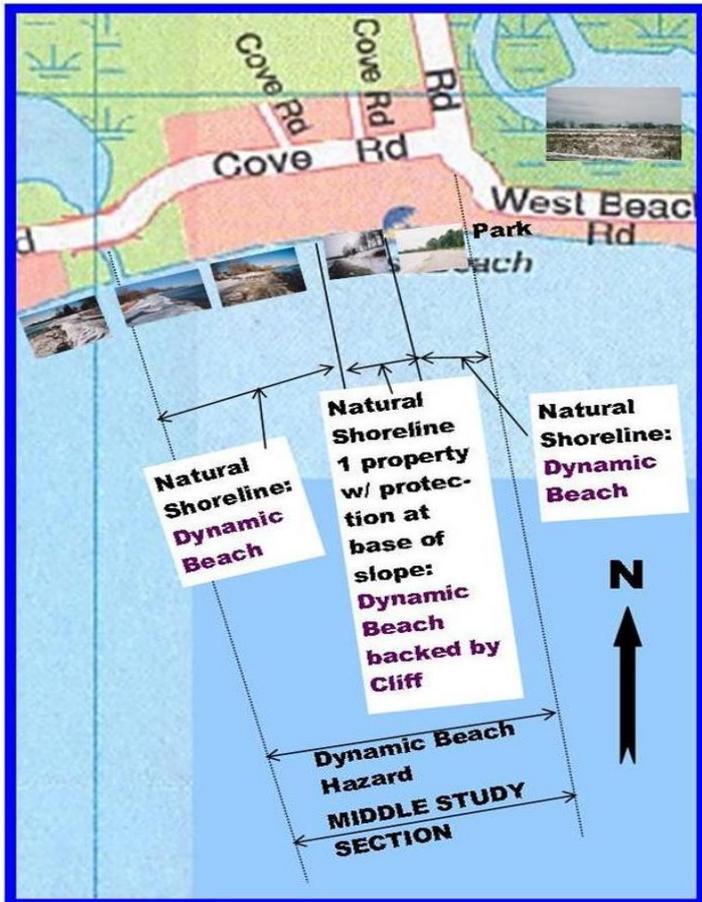
Mouth of West Side Creek (Dynamic Beach Hazard) to West End of Cedar Crest Beach Road (Erosion Hazard)



Mouth of West Side Creek (Dynamic Beach Hazard) to West End of Cedar Crest Beach Road (Erosion Hazard)



Middle Section: Mouth of West Side Creek (Dynamic Beach) along Cove Road (Dynamic Beach Backed By a Bluff)



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Eastern End: West Beach Road to the West End of Mouth of Bowmanville Creek – Dynamic Beach



Eastern End: West Beach Road to the West End of Mouth of Bowmanville Creek – Dynamic Beach



Policy and Management Considerations

Policy and Shoreline Management Considerations:

- * Planning and/or policy approaches to manage Flooding, Erosion & Dynamic Beach Hazards
- * Restricting new development in shoreline areas that are susceptible to Flooding, Erosion & Dynamic Beach Hazards
- * Restricting the expansion of existing development in shoreline areas that are susceptible to Flooding, Erosion & Dynamic Beach Hazards
- * Acquisition of hazardous lands

Study Considerations:

Different Natural Processes & Hazards allow for a Range of Options



Overview of Sediment Process that are occurring along the study area (Baird & Associates)

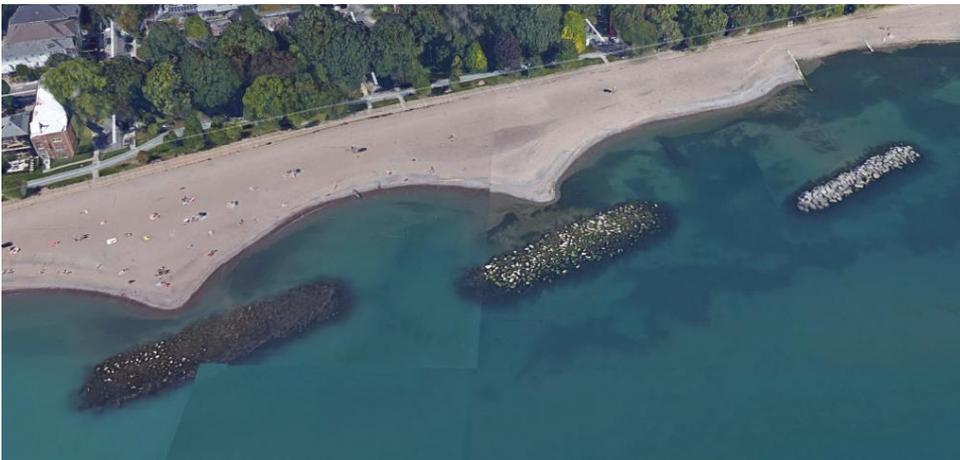
Structural Protection Considerations

Scope of Work:

- * Provide possible Structural Protection work options: general concepts will be developed with Opinion of Probable Costs for considerations that would provide Erosion Protection (Baird & Associates)
- * Design Options considered will depend on the Specific Hazards along the shoreline section & appropriate protection works
 - Offshore Breakwaters/Increase beach
 - Hardpoints/Groyne type structures/ Increase Beach
 - Revetments or Walls

Shoreline Protection

Protection Works Options will depend on Specific Erosive Bluff or Dynamic Beach Hazards at the site



Shoreline Protection

- * The shoreline protection works would address the Erosion Hazard and provide assistance with the Lake Shoreline Flooding but would not be able to fully address the Shoreline Flooding issues for Significant Events
- * The natural land features along Cedar Crest Beach and West Beach are simply too low, to not be affected by a significant Flooding event.
- * The technical assessment by Baird & Associates will do a preliminary review of the level of protection for Flooding & Erosion that can be provided by the proposed structures

Other Considerations

- * Increased public access to the shoreline
- * Enhanced recreational use of the shoreline
- * Input from Public and Stakeholder's with other options to consider
- * Funding is being looked at by the Municipality of Clarington Task Force



Next Steps

- * Input considerations from this 1st Public Meeting
- * Technical Assessment & Analysis:
 - * Planning & Policy (Aqua Solutions)
 - * Overview of Shoreline Process, Erosion and Shoreline Protection Works Concepts, Climate Change overview (Baird & Associates)
 - * Results of Analysis & Development of Recommended Shoreline Management Plan Directions, Mapping & Concepts (Consulting Team, CLOCA, Municipality of Clarington)

Next Steps

- * Go back to Public & Stakeholders with the Results from the analysis with a 2nd Meeting
- * Additional Input Considerations from Public Meeting & throughout the process
- * Finalization of Recommendations and Document

Thank You!

