Lake Ontario Shoreline Management Plan Hazard Maps

Lower Trent Conservation Authority (LTRCA)

LEGEND:

Hazard Mapping:

- 100 Year Flood Level
- Flood Hazard Limit
- Erosion Hazard Limit
- Dynamic Beach Setback

Base Mapping:

- Geographical Names
- Dynamic Beach (Start Pt)
- Dynamic Beach (End Pt)
- Road Network
- LTRCA Administrative Boundary

INTERPRETATION OF THE HAZARD MAPS:

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Toe of Bluff
The Toe of Bluff is the transition from the gently sloping beach to the steep portion of the bank or bluff slope.

Stable Slope Allowance
The Stable Slope Allowance is defined as a horizontal setback equivalent to 3.0 times the height of the bank or bluff.

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 or bluff.

The Erosion Hazard Limit is not mapped in sheltered waters, however, localized shoreline/riverine erosion may occur and is subject to review by the Conservation Authority.

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0 50 100 200 m

N W E S

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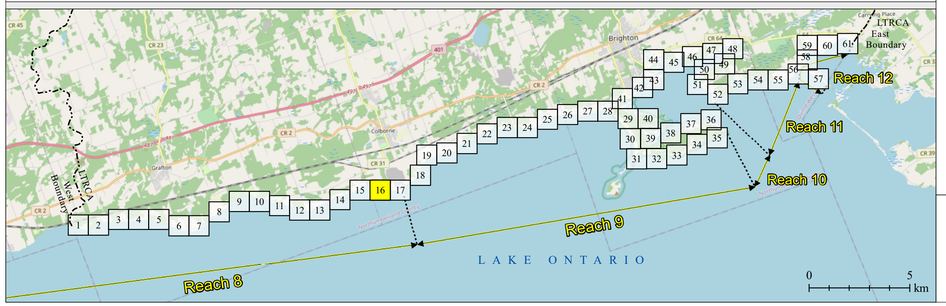
PETER J. ZUZEK PRACTISING MEMBER 1121 ONTARIO P.J. Zuzek, P.Geo. March 31, 2020

SJL ENGINEERING

LICENSED PROFESSIONAL ENGINEER S. J. LOGAN 100189144 MAR 31, 2020 PROVINCE OF ONTARIO



Mapping prepared by Zuzek Inc. for the Lower Trent Region Conservation Authority.

MAP PUBLISHED MARCH 2020

LOWER TRENT CONSERVATION

Lower Trent Region Conservation Authority
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LTRCA Map 16 of 61

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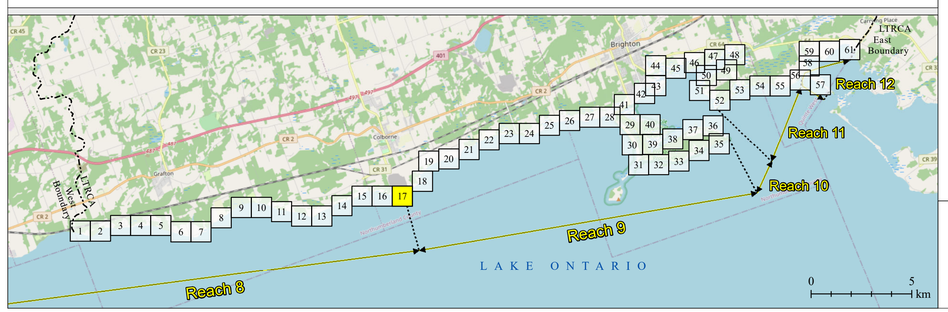

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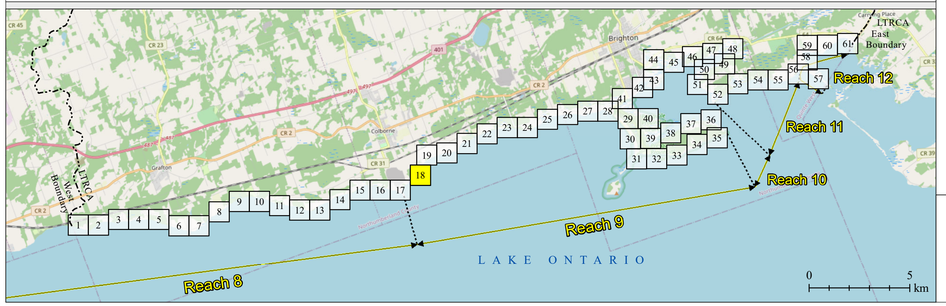

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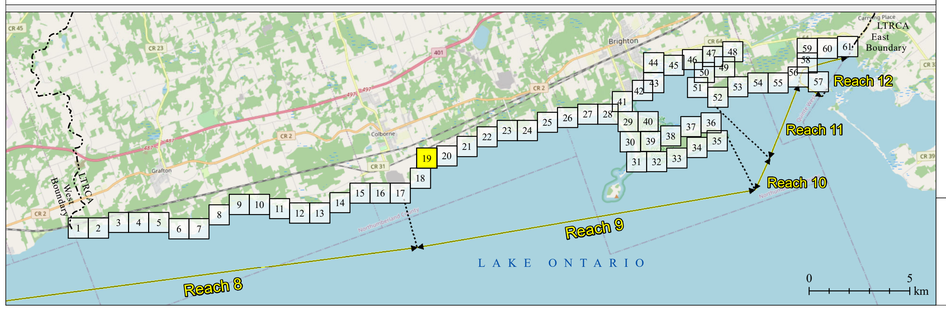

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LTRCA Map 19 of 61

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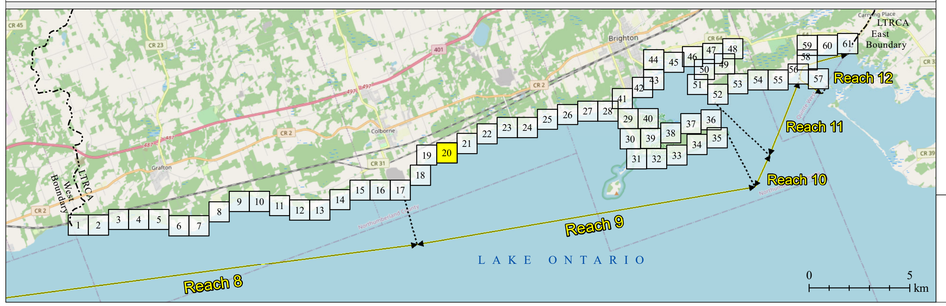

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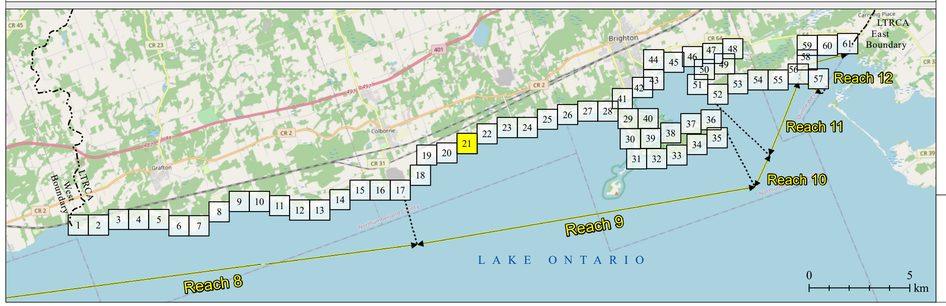

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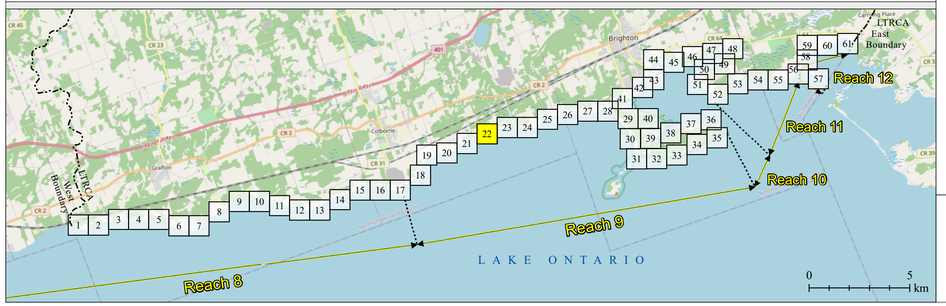

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LOWER TRENT CONSERVATION

Lower Trent Region Conservation Authority
714 Murray Street, R.R. 1
Trenton, Ontario, K8V 5P4
Phone: 613-394-4829
Web: www.ltc.on.ca

LTRCA Map 22 of 61

Lake Ontario Shoreline Management Plan Hazard Maps

Lower Trent Conservation Authority (LTRCA)

LEGEND:

Hazard Mapping:

- 100 Year Flood Level
- Flood Hazard Limit
- Erosion Hazard Limit
- Dynamic Beach Setback

Base Mapping:

- Geographical Names
- Dynamic Beach (Start Pt)
- Dynamic Beach (End Pt)
- Road Network
- LTRCA Administrative Boundary

INTERPRETATION OF THE HAZARD MAPS:

The hazard maps were prepared to support the Lake Ontario Shoreline Management Plan. 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.

DEFINITIONS:

100 Year Flood Level
The 100 Year Combined 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). The 100 Year Combined Flood Level elevation for LTRCA is +76.03 m IGLD85 (+75.62 m CGVD2013).

Flood Hazard Limit
The Flood Hazard Limit is defined as the 100-Year Flood Level plus an allowance for wave runup and uprush. For the exposed shoreline, wave effects are calculated based on localized nearshore conditions and waves. For embayments, the standardized 15 m setback is applied. Refer to the Lake Ontario Shoreline Management Plan for additional details.

Toe of Bluff
The Toe of Bluff is the transition from the gently sloping beach to the steep portion of the bank or bluff slope.

Stable Slope Allowance
The Stable Slope Allowance is defined as a horizontal setback equivalent to 3.0 times the height of the bank or bluff.

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 or bluff.

The Erosion Hazard Limit is not mapped in sheltered waters, however, localized shoreline/riverine erosion may occur and is subject to review by the Conservation Authority.

Dynamic Beach Hazard Limit
The Dynamic Beach Hazard Limit is defined as the sum of the Flood Hazard plus 30 metres measured horizontally. Local conditions may require a modified mapping approach if the beach is eroding or a barrier beach. Refer to the Lake Ontario Shoreline Management Plan report for additional details.

DATA SOURCES:

2018 Orthophotography and Digital Surface Model (DSM) provided by the Ministry of Natural Resources and Forestry

2017 LiDAR Digital Terrain Model obtained from the Ministry of Natural Resources and Forestry. Contains information licensed under the Open Government Licence – Ontario.

2009/10 Topographic data near Prince Edward Estates provided by LTRCA.

Geographical Names obtained from Natural Resources Canada Road Network File, 2016 Census. Statistics Canada Catalogue no. 92-500-X

Inset Map: © OpenStreetMap contributors

Datums:
Horizontal: UTM 18N NAD1983, metres.
Vertical: CGVD2013, metres

Datum Conversion:
IGLD1985 - CGVD2013 = 0.41 m (average)
To convert from IGLD85 to CGVD2013, subtract 0.41 m.
Note: There are local variations along the reaches within LTRCA. Refer to the Lake Ontario SMP for additional details.

0 50 100 200 m

N W E S

PREPARED BY:

Zuzek inc. ONE WORLD

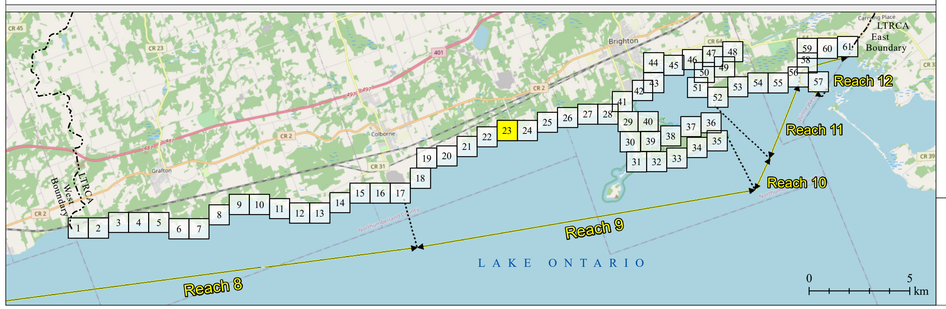
PROFESSIONAL GEOSCIENTIST PETER J. ZUZEK PRACTISING MEMBER 1121 ONTARIO P.J. Zuzek, P.Geo March 31, 2020

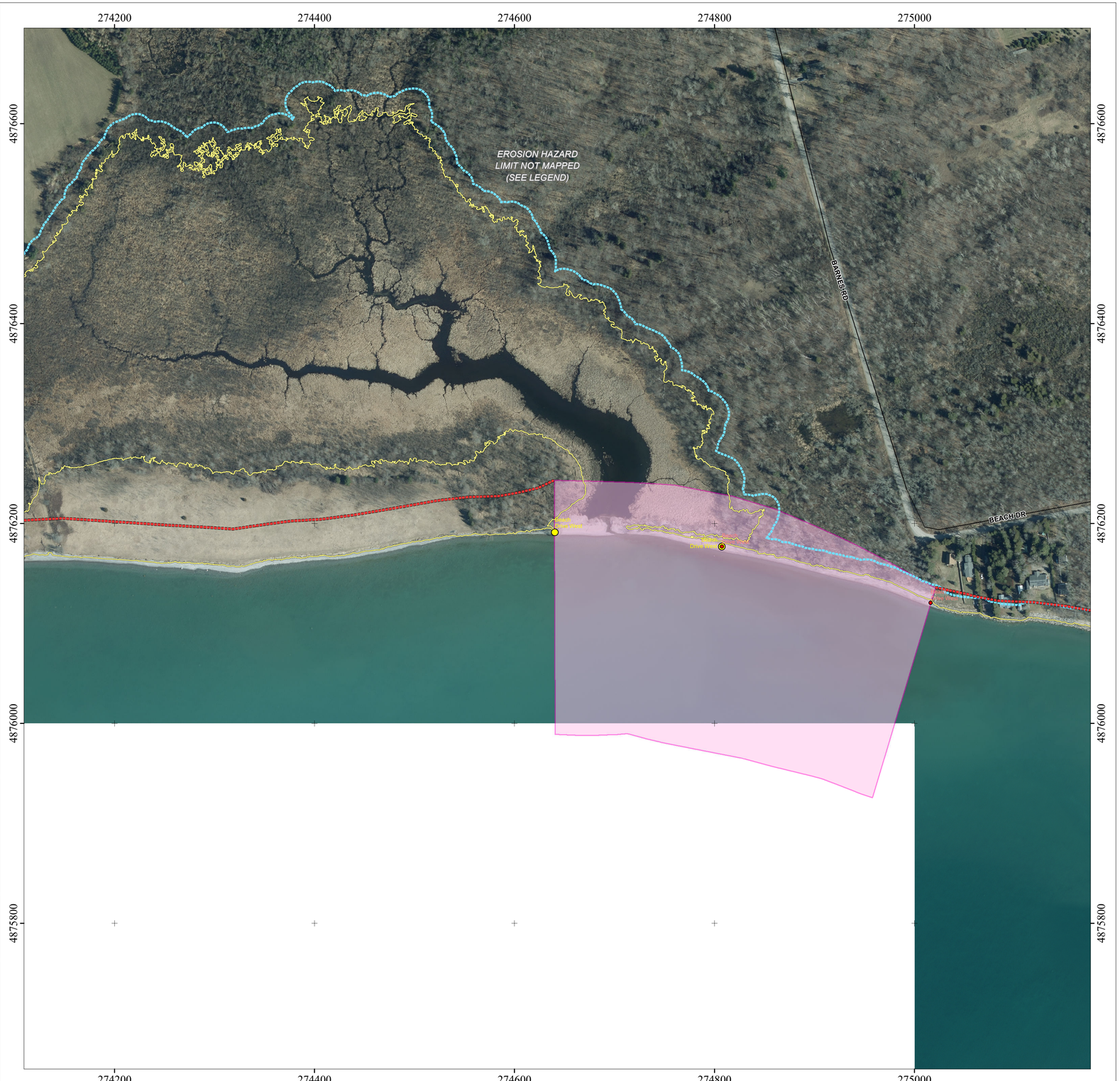
SJL ENGINEERING

LICENSED PROFESSIONAL ENGINEER S. J. LOGAN 100389944 Mar 31, 2020 PROVINCE OF ONTARIO

This map was published in March 2020 for LTRCA. 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 LTRCA to discuss permit requirements.

Every reasonable effort has been made to ensure the accuracy of this map. However, neither LTRCA, Zuzek Inc., SJL Engineering, 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.





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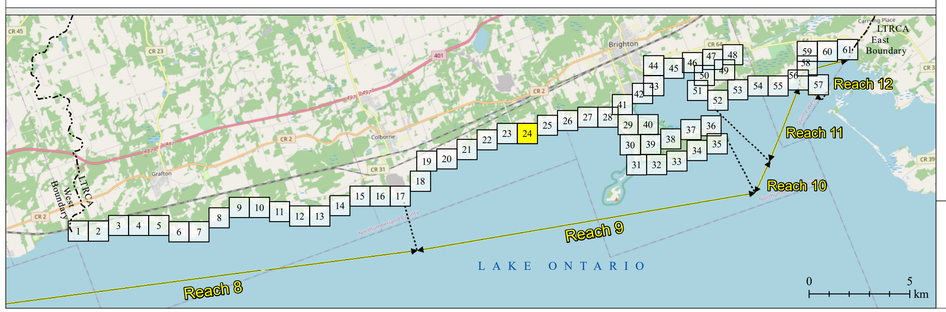

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