Bridgeport Dike Rehabilitation and Capacity Improvement Class Environmental Assessment

Public Information Centre #1
July 27, 2022

KGS GROUP

Grand River Conservation Authority

Purpose of this Public Information Centre

The Purpose of this Public Information Centre (PIC) is to:

- Provide information on the study purpose and background.
- Provide information on the study objectives and process.
- Provide an opportunity for your input.

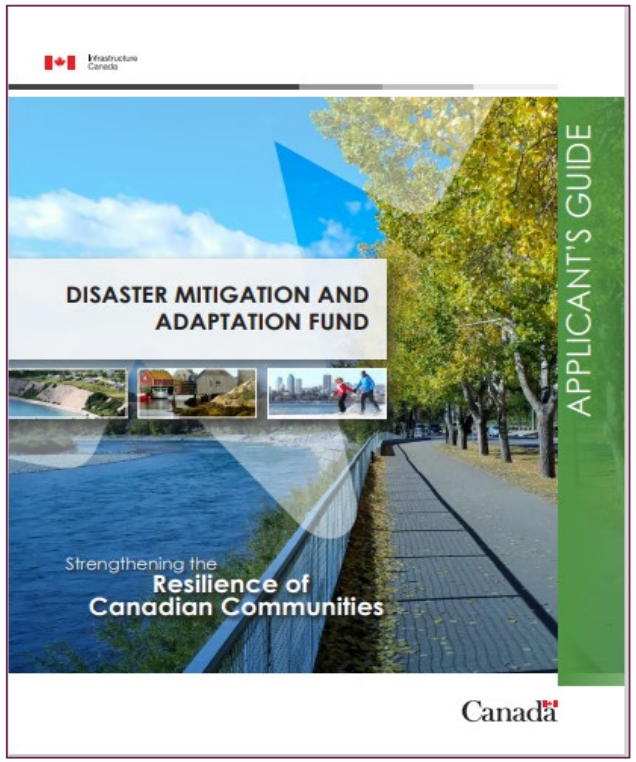
Study Purpose

The purpose of the study is to explore options to rehabilitate the existing Bridgeport Dike to meet the current and applicable standards, considering:

- public safety
- the environment
- cost
- construction considerations
- functionality; and
- potential impacts to neighbouring properties.

Study Overview

- This study is funded in part by the Government of Canada as part of the Disaster Mitigation and Adaptation Fund (DMAF) and is being undertaken by the Grand River Conservation Authority (GRCA) in partnership with the City of Kitchener.
- The study was initiated in late 2021 and Environmental Assessment, consultation and preliminary design will be completed over the course of two years.



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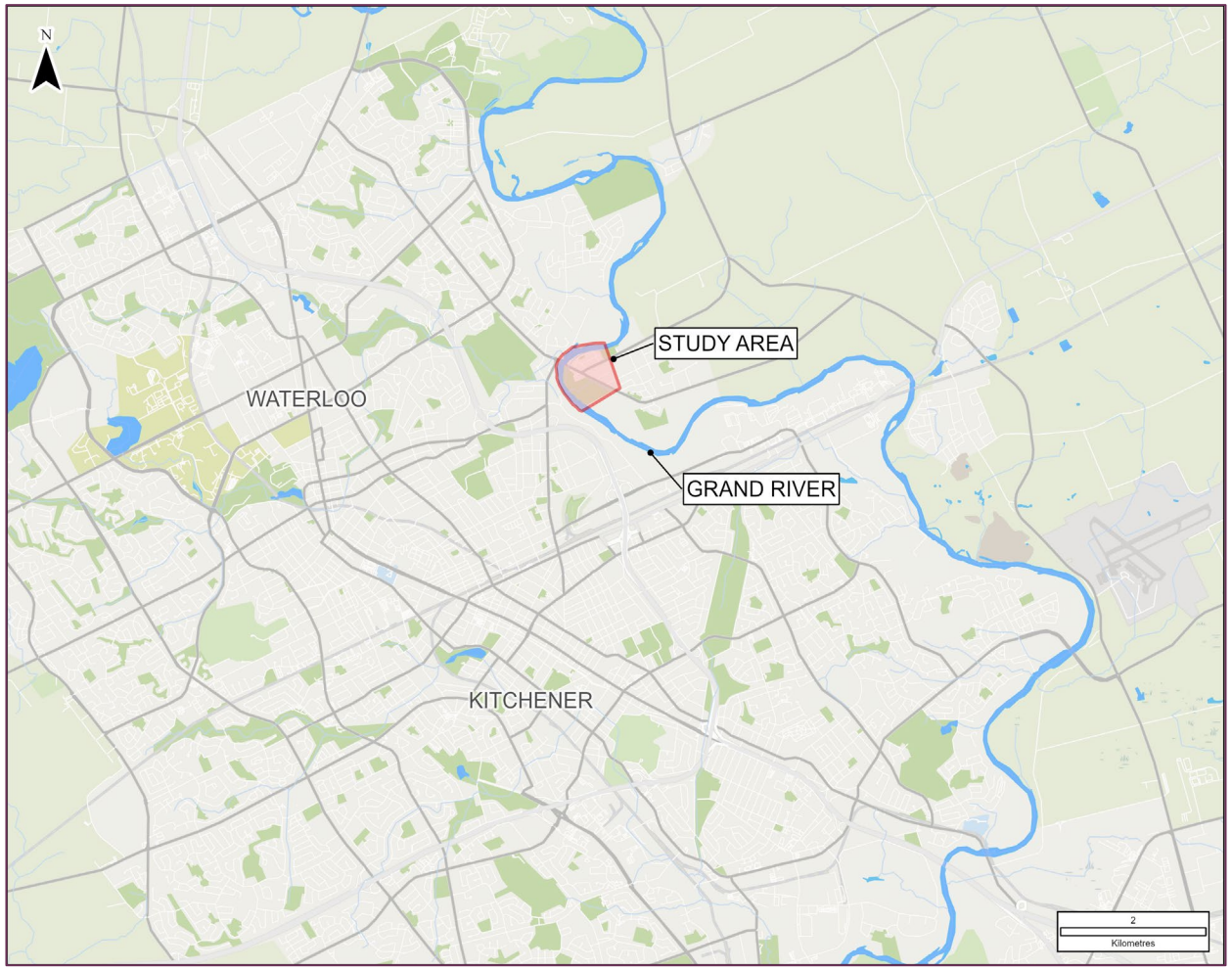
Subsequent Work

- Final design and construction would be carried out as future projects within the timelines of the DMAF grant application.
- Consultation and engagement for final design and construction of the preferred alternative or alternatives would be completed as part of those projects.
- Two main components, dike repairs and capacity improvements, may be carried out as separate projects.

Where is the Bridgeport Dike?

- The Bridgeport Dike is located within the City of Kitchener.
- The Dike runs along the east bank of the Grand River for 1.5 kilometers.
- It follows the river bend from upstream to downstream of Bridge Street., turning inland at Schweitzer Street., to terminate along Bridge Street.



What does the Dike do?

The Dike protects the community of Bridgeport, with a mix of residential, commercial, industrial, and recreational lands:

- municipal parks and sports fields;
- trail running along the top of the dike;
- approximately 100 residential, 24 industrial, and 3 institutional buildings.

Study Area

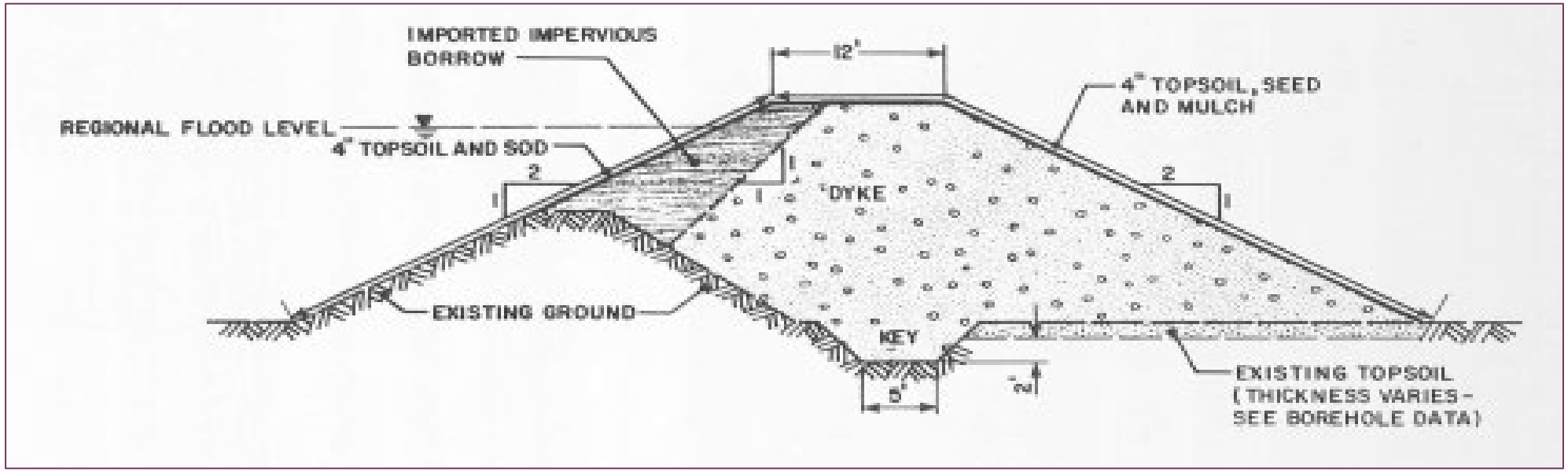
- The Study Area (shaded area in adjacent photo) includes the Dike, the Grand River and properties within the protection area of the Dike.
- Represents the area of potential impacts related to Dike capacity and operational improvements.

Flooding History

- Bridgeport has experienced frequent flooding prior to and after dike construction, with notable events in 1948, 1954 and 1974.
- During the May 1974 flood the 1950s era earth fill dike was overtopped.

Dike History

- The Dike was originally constructed in the 1950s, and reconstructed and raised in the 1980s to protect against the Regulatory Flood.
- The Regulatory Flood defines the floodplain as per provincial policy. In this area it corresponds to an event of the magnitude of Hurricane Hazel (1954).



Recent Flood Events

- Recent flood events have occurred in 2014 and 2017, with the following images showing flooding that occurred in April 2014.

Additional Information

- The sport fields on dry side of the dike were designed for temporary stormwater detention.
- The Bridgeport Bridge is a designated heritage bridge.

What is the Problem (why is this Study required)?

- Recent studies have identified that the water levels in the Grand River would overtop parts of the dike if we were to experience flood flows that would be caused by a storm event of the same magnitude as Hurricane Hazel, which is the Regulatory Flood Event in this location.
- These studies also determined that the current dike condition does not meet the design standards that are required to ensure that the dike will remain stable during the Regulatory Flood Event.

What is the Opportunity?

- Complete Class Environmental Assessment to determine the best-suited remediation strategy for the Bridgeport Dike.
- Consider public safety, environment, cost, constructability, functionality, adjacent properties.
- Protect against floods up to the Regulatory Flood.

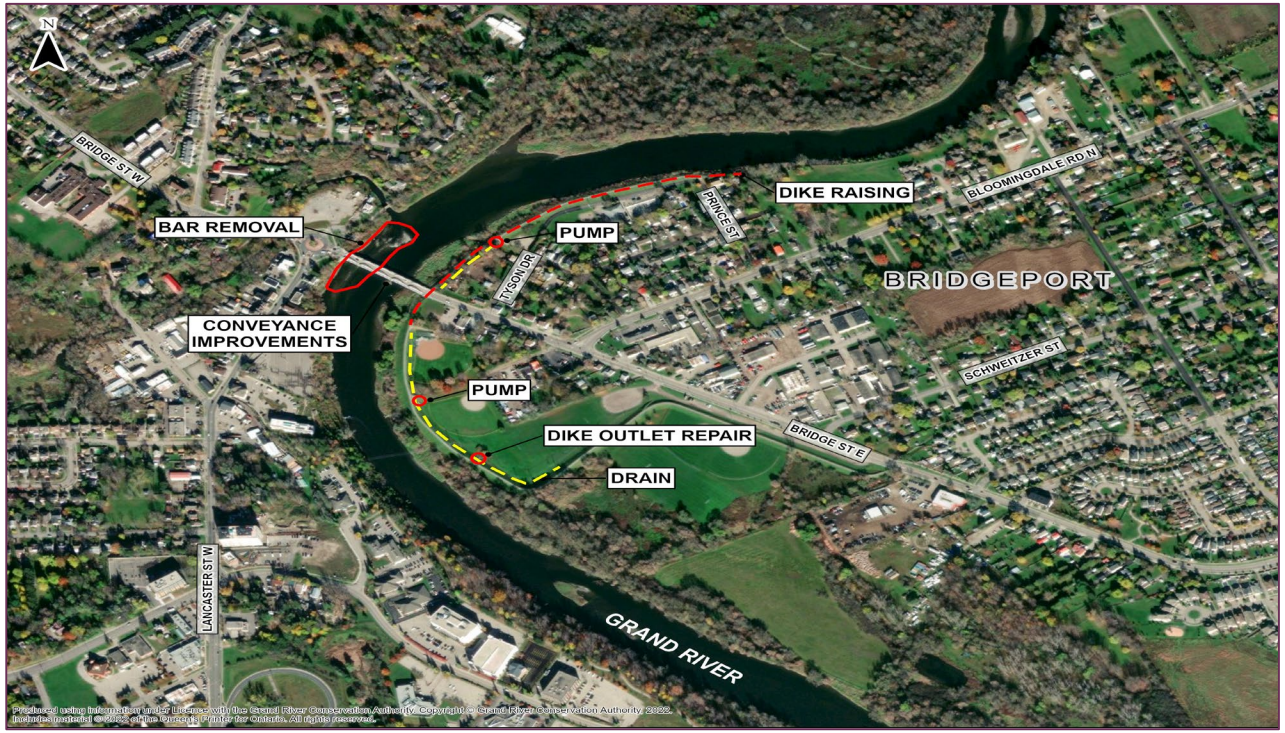
Study Objectives

- Assess the current conditions of the Dike.
- Determine preferred approaches for Dike maintenance, which could include:
  - Improving Dike stability by reducing seepage through and under the Dike
  - Replacing stormwater and drainage outlets through the Dike
  - Improving gauge stations
- Develop alternatives for improvements to provide flood protection up to the Regulatory Flood Event (Hurricane Hazel).
- Select preferred alternative/s based on environmental, social, technical, economic and operational considerations.
- Consult with the public and First Nations to receive and incorporate input for decision-making.

Possible Improvements

Improvements could include:

- bar removal (sandbar at Bridgeport bridge)
- conveyance improvements
- outlet repair
- raising the dike, and
- pumps



Class Environmental Assessment (EA) Process

The Bridgeport Dike Rehabilitation Study is following the Class EA Process for Remedial Flood and Erosion Control Projects outlined by Conservation Ontario.

- ☑ Step 1 – Define Problem / Opportunity (completed)
- → ☐ Step 2 – Develop Alternative Solutions and Select Preferred Alternative/s (next step)
- ☐ Step 3 – Develop Design Concepts for the Preferred Alternative/s
- ☐ Step 4 – Complete the Environmental Study Report
- ☐ Step 5 – EA Approval

Public and First Nations Consultation

As part of the Class EA process, consultation with the public and First Nations will occur at key decision making points to receive and incorporate input.

- PIC #1 – After Step 1, July 2022 (where we are at now)
- PIC #2 – After Step 2, Late Fall 2022
- PIC #3 – After Step 3, Winter 2023

In addition, an opportunity to review and comment on the Environmental Study Report (Step 4) when completed (Spring 2023) will be provided to all interested agencies, groups and persons.

How to Stay Connected

- Next PIC: Fall 2022
- Join our mailing list – provide us your email or mailing address if you would like to be kept up-to-date as the study progresses
- Send your comments or questions to: BridgeportDikeStudy@GrandRiver.ca.

Contact the Project Team

- E-mail: BridgeportDikeStudy@GrandRiver.ca
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- Mail :
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Thank You

We appreciate the time you have taken to learn more about the Bridgeport Dike Rehabilitation and Capacity Improvement Class EA.

Your input is important for the success of the EA process.

Please provide your input.