

WELCOME

Third Depot Lake Dam Environmental Assessment



Privacy Notice and Consent:

The information collected through this form will be used solely for the purposes outlined by the organization and will be kept confidential. Personal information will not be sold, shared, or disclosed to any third parties unless required by law.

Any individuals listed as contacts will only be contacted if express consent has been provided. By initialing the consent section, you authorize us to contact the individual(s) identified for the purpose(s) described. If consent is not provided, no contact will be made.

All information will be handled in accordance with applicable privacy legislation and organizational privacy practices.

THIRD DEPOT LAKE DAM

An Introduction

The Third Depot Lake Dam consists of a main dam, a spillway, and a saddle dam. They were built in the 1970s with the goal of providing low flow augmentation to the Napanee River. At the time, the City of Napanee had the town's main water supply drawn from the river. Napanee has since installed a new water supply in Lake Ontario and the Napanee River water supply is a backup.

Quick Facts:

Main Dam Height: 16m

Main Dam Length: 91m

Main Dam Valves: 2 x 1.2m (4ft) diameter

Saddle Dam Height: 7.2m

Saddle Dam Length: 61m

*Reservoir Area: 893 hectare-metres (7,586
acre-feet)*

Current Hazard Potential Classification: HIGH

THIRD DEPOT LAKE DAM

Problem Statement

Previous Dam Safety Reviews found the Third Depot Lake Dam to have insufficient capacity to safely pass the Inflow Design Flood causing the dam to overtop. Further to that, the dam is reaching the end of it's useful lifespan. It was found that part of the sheet pile to the East of the control building has deteriorated up to 80% while the concrete cut-off wall to the West of the control building was shown to be leaking as well.

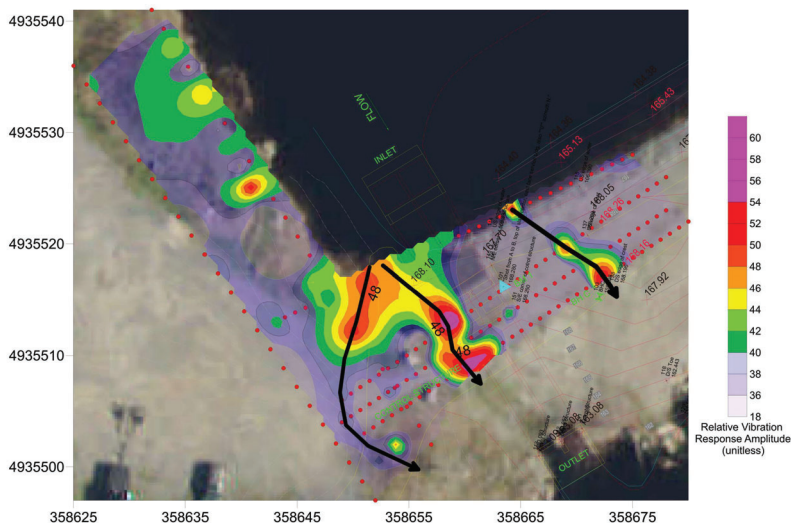


Photo 2 Test Pit 1 - Upstream Side of Sheet Piles (Facing Southeast)

THIRD DEPOT LAKE DAM

Conservation Ontario Environmental Assessment Process

The Conservation Ontario Class Environmental Assessment for Remedial Flood and Erosion Control Projects is a streamlined planning and approval framework governed by Ontario's Environmental Assessment Act. It provides a standardized roadmap for Conservation Authorities to plan, design, evaluate, and carry out works aimed at protecting communities from flooding and shoreline or riverbank erosion.

Key Goals

Public Safety & Property Protection: Mitigate risks associated with flooding, bank instability, and soil erosion.

Environmental Safeguards: Evaluate potential impacts on ecosystems, fish habitats, water quality, and surrounding communities before construction begins.

Streamlined Approvals: Establish clear, standardized evaluation rules so routine safety projects can proceed efficiently without requiring individual provincial approvals for every project.

How the Process Works

Identify the Need: Determine the root causes of local flooding or erosion issues.

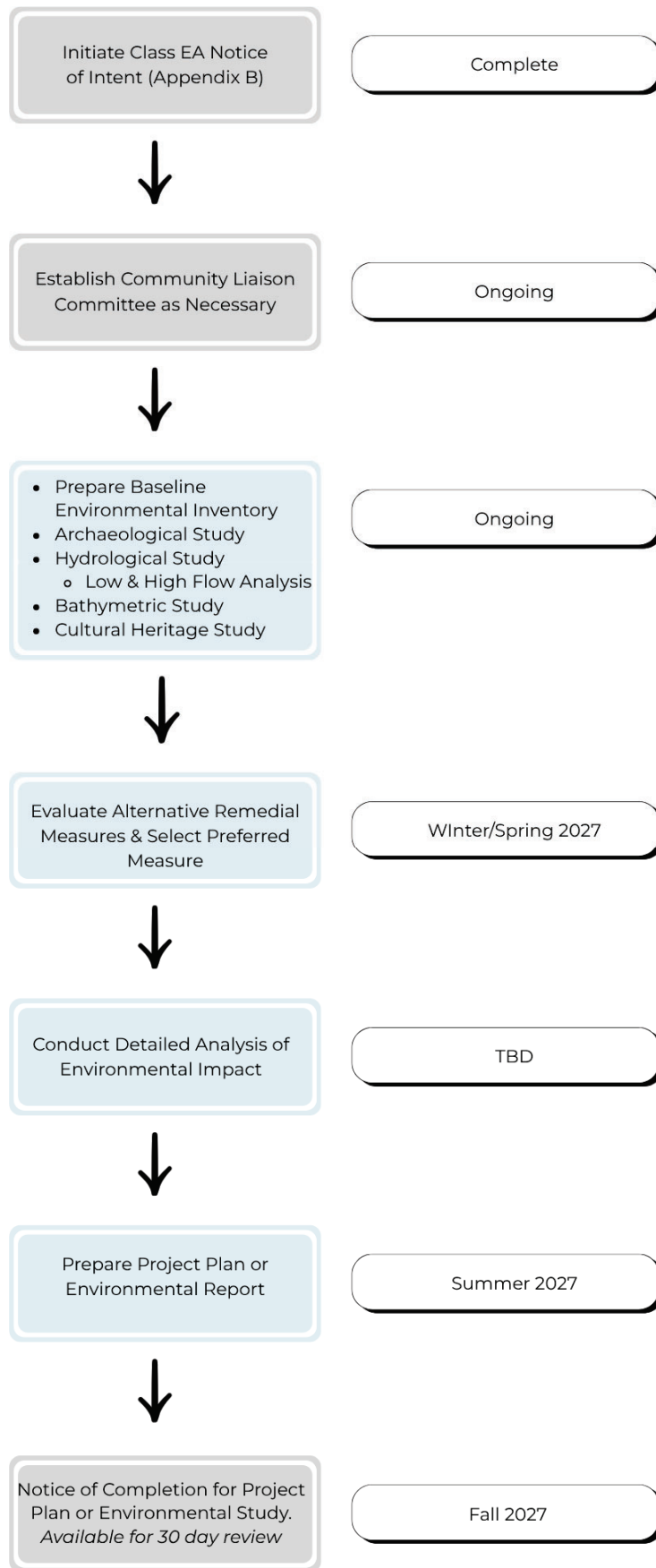
Explore Alternatives: Consider multiple solutions (including natural shoreline fixes, structural defenses, or "do-nothing" options) to find the best approach.

Assess Impacts: Study how each alternative affects the natural environment, local infrastructure, land use, and nearby residents.

Draft Mitigation Plans: Create specific strategies to reduce or avoid negative environmental impacts.

THIRD DEPOT LAKE DAM

Work Plan



THIRD DEPOT LAKE DAM

Possible Dam Configurations

Option Dam Configuration

1) Do Nothing - Leave all components of the dam as is.

2a) Complete Removal - Complete removal of the dam components.

2b) Dam Retirement - The dam components will remain in place but the valves will remain fully open at all times.

3) Replace With Concrete Weir - The main dam will be replaced with a concrete weir.

4) Lower operating plan - The operating plan will be at a lower elevation than the existing structure. Lowered by 2.5-3.5m.

5, 6) Raise and Repair (Cement Bentonite Wall, Secant Pile Wall)

A cut the depth of the dam will be made into the crest of the dam downstream of the current sheet pile. A concrete-bentonite wall will be placed in the cut to create a new waterproof wall. The dam will also have to be raised to account for wave uprush during the Inflow Design Flood.

7) Complete Dam Replacement - The dam will be rebuilt downstream to an elevation which can safely pass the Inflow Design Flood.

THIRD DEPOT LAKE DAM

How To Get Involved

- Sign up for updates on the Quinte Conservation website.
- Complete online survey at **QuinteConservation.ca**

SCAN FOR WEBSITE



- Leave a comment/complete survey at this event.
- Email Quinte Conservation staff at **msmith@quinteconservation.ca**

