



CONSERVATION PRO
A PROUD DIVISION OF DUCKS UNLIMITED CANADA

Coldspring Lead Support Document

Submitted By:

Ducks Unlimited Canada
752 Union Street, Fredericton, NB

Submitted For:

Andrew Kennedy, Protected Areas Coordinator
Environment and Climate Change Canada

1.0 The Proponent:

Name of Proponent:

Ducks Unlimited Canada
752 Union Street
Fredericton, NB
E3A 3P2

Primary Contact:

Joel Thomas
Conservation Program Specialist
506-478-0268

Secondary Contact:

Kassandra Paillard
Head of ConservationPRO in Atlantic Canada
506-471-9222

Frank Merrill
NB Habitat Assessment Management
506-442-1994

Property Ownership:

This project will take place on land that is owned by both Natural Resources & Energy and the Federal Government.

2.0 The Undertaking

Name: Coldspring Lead Naturalization

Project Overview:

We plan to naturalize the freshwater Ducks Unlimited impoundment (PID: 60182144) that was constructed in 1992. By naturalizing this impoundment, we will be restoring the original hydrology connecting it to the Coldspring Lead Brook which flows into the Portobello stream. To return this project site to its natural historical state, which consisted of small peatlands and sedge meadows, we will be removing the water control structure that is present and breach the berm in 2 locations depending on accessibility for machinery. These breach's will be strategically placed where preexisting tributaries were present in historical imagery. To reach project location with machinery, small road improvements will have to be made, along with beaver removal as they have flooded out the access road with dams. There are two main factors considered in planning of breaches, accessibility, and the reconnection of historical channels (Coldspring Brook that flows into Portobello Stream). The breaches will be designed to minimize excessive erosion. Dyke material removed to excavate the breaches will be placed back into its original location along the toe of the dyke into the borrow pit.

Rational for the Undertaking:

The total area of this project is roughly 70 acres. This project is apart of a complex of wetlands residing in the Portobello Creek National Wildlife Area. In its current state, management of water levels is impossible. The degraded water control structure and beaver debris has impeded the water's ability to escape the wetland, causing the water levels to be above intended normal operation levels (Figure 1).

Figure 1. Drone image of degrading and plugged control structure, November 2023.



Physical Components:

Using a 20-ton excavator we will be breaching the existing dyke in 2 locations removing the material and placing it in the burrow pit it was originally taken from on site. The excavator will remove the degrading concrete water control structure while a tandem truck will haul this structure off site.

Construction Details:

All earthworks will occur outside biological sensitive times (August 15 – March 30). All successful earthworks contractors are required to work under Environmental Protection Guidelines outlined in the contract. This includes, but not limited to, site set-up and decommissioning, a sediment and erosion

control plan, hazardous materials management, work adjacent to watercourses, site drainage. All federal and provincial environmental permits will be attained, and all stipulations adhered to. Duration of work is expected to be approximately 6 days, weather dependant. Once the job is commenced, work will be continuous until the project is complete. A 20-ton excavator will be employed to remove dyke material to form the breaches. The excavator will be using a long reach arm and bucket to remove the water control structure as well. A tandem truck may also be used to transport debris offsite as required. All machinery will work on the existing dyke footprint only.

Description of Existing Environment:

The existing area is currently an Alder and Sedge dominated freshwater impoundment. The water has been controlled by a prefabricated concrete water control structure that has degraded over time, impeding water passage and causing high water levels and flooding. By breaching the dyke and removing the water control structure, DUC will re-establish what this marsh once was, an area filled with peatlands and sedge meadows, all while reconnecting historical tributaries.

Operation and Maintenance:

Ducks Unlimited Canada will conduct annual site visits for two years once the site has been naturalized to inspect the projects initial progress post construction. With the project being naturalized and the removal of all structures, this site will require no annual maintenance. Water levels and vegetation will take on the natural form it once did. This project will have an indefinite life span.

Proposed Mitigation:

1. When machinery is in use, an appropriate emergency spill kit will be kept on-site and be readily deployable.
2. Equipment/machinery used will be in good working order, must not be leaking any fuel, lubricants, or hydraulic fluid and shall be cleaned/degreased to prevent any deleterious substance from contaminating a watercourse or wetland to minimize the spread of any invasive plant species.
3. Locally sourced hay will be applied to the disturbed soils to mitigate sediment run off in case of a rain event and assist with irrigation and erosion control.

The following permits and approvals are required for this project:

1. NB Watercourse and Wetland Alteration permit
2. National Wildlife Area Permit

Signed:

Joel Thomas

Conservation Program Specialist
Joel Thomas

May 7, 2024

Date