

LAKE MANITOBA LAKE ST. MARTIN

OUTLET CHANNELS PROJECT

Project Alignment Options

Flooding in 2011 highlighted the need for permanent flood control infrastructure that would better regulate water levels on both Lake Manitoba and Lake St. Martin. [The Assiniboine River and Lake Manitoba Basins Flood Mitigation Study](#), commissioned in 2012 by the Manitoba government, recommended a number of flood protection projects, including construction of a new Lake Manitoba Outlet Channel, and making the Lake St. Martin Emergency Outlet Channel, constructed in 2011, permanent.

The need for these permanent outlet channels was also identified in the recommendations from the [2011 Flood Review Task Force](#), and [Lake Manitoba and Lake St. Martin Regulation Review Committee \(2013\)](#).

Alignments Considered

Selection for the alignment of the outlet channels was done through a multi-phase approach:

PHASE ONE: initial options – conceptual options reviewed

PHASE TWO: further evaluation – options eliminated, refined and proposed, based on public open house feedback and preliminary design

PHASE THREE: final selection – options evaluated based on technical considerations, cost, schedule, operation and maintenance, socio-economic impacts and environmental impacts

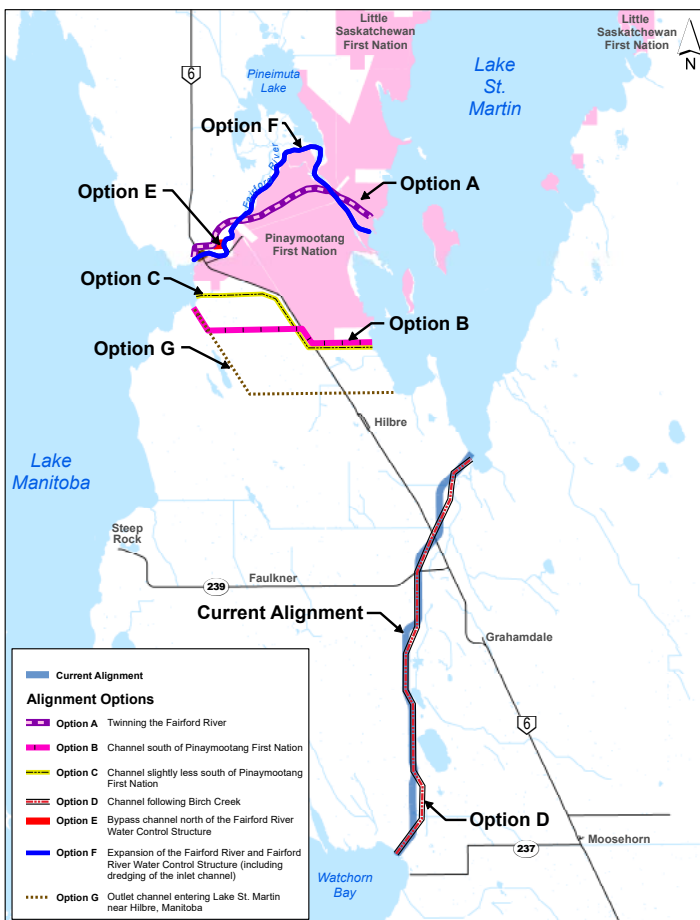


Figure 1: Lake Manitoba Outlet Channel Options

Lake Manitoba Outlet Channel

Seven options for the Lake Manitoba outlet channel were identified in the conceptual study completed in Phase One (Figure 1).

Based on feedback from public open house events and preliminary engineering work, Option C (close to Pinaymootang First Nation) and Option D (Parallels Birch Creek) were selected to undergo further evaluation.

Option C was ruled out because of potential effects to groundwater and public safety, leaving Option D to be selected as the preferred option.

A detailed review of Lake Manitoba Outlet Channel routing is provided in [Chapter 2 of the Environmental Impact Statement](#).



Lake St. Martin Outlet Channel

Phase One

When considering options for a permanent Lake St. Martin Outlet Channel, Manitoba Transportation and Infrastructure first (MTI) assumed use of the existing and planned reaches of the Emergency Outlet Channel because these sections were already constructed in response to severe flooding in 2011 (Reach 1 and the first part of Reach 3 as shown in Figure 2). The Stage 1 study of potential Lake St. Martin Outlet Channel routes therefore assumed use of Reach 1, Reach 2 and the following Reach 3 variations:

- Option JB (Johnson Beach) – Reach 1, Reach 2 and Reach 3 to Johnson Beach
- Option WP (Willow Point) - Reach 1, Reach 2 and Reach 3 east of Willow Point

The Willow Point option was selected because of concerns from Dauphin River First Nation that the Johnson Beach option would have an adverse effect on the Lake Winnipeg fishery and the beach itself, resulting in negative socio-economic impacts to the community. Details of the Willow Point option were further assessed during a second study (Stage 2 Conceptual Design) along with options to move water between Reach 1 and 3 through the Buffalo Bog Complex.

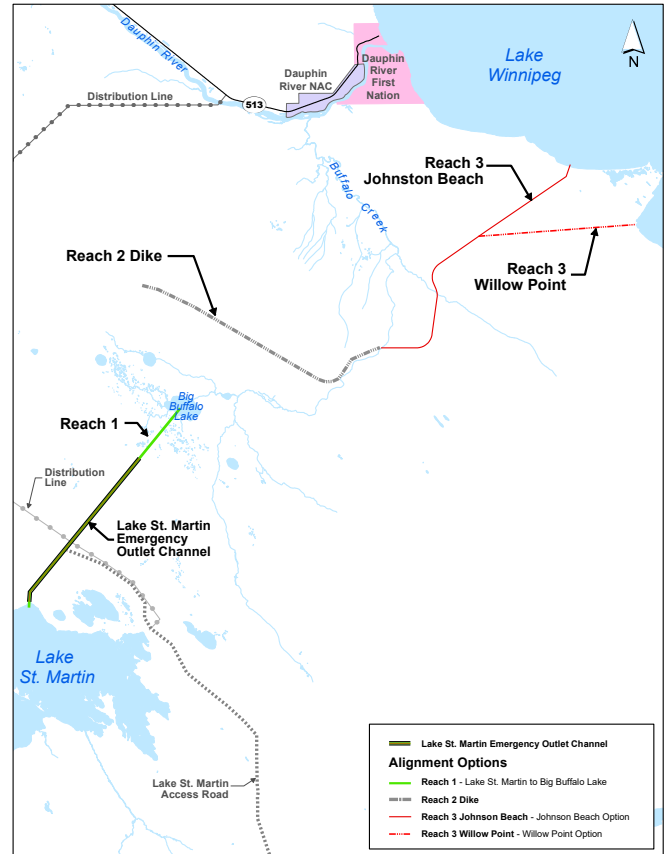


Figure 2: Phase One - Lake St. Martin Outlet Channel Alignment Options

Phase Two

After completing the Stage 2 Conceptual Design, MTI undertook further evaluation of four options (shown in Figure 3):

- Option 1 - based on the original concept developed during the previous Stage 1 and 2 studies (Reach 1, Reach 2 and Reach 3 east of Willow Point)
- Option 2 – similar to Option 1, but involved excavation of a 200 metre wide channel through the peatland along Buffalo Creek to ensure the discharge capability of Reach 2 was not compromised by floating peat
- Option 3 - expansion of Reach 1 with a proposed channel skirting the edge of the bog complex connecting Reach 3, thereby creating a continuous channel from Lake St. Martin to Lake Winnipeg; dikes would be constructed on both sides of the channel to avoid flooding of adjacent land
- Option 4 – an alternative to Option 3 to reduce the combined Reach 1 and Reach 2 channel length and overall excavation quantities; involved relocation of the channel inlet with a proposed new channel from Lake St. Martin to Reach 3, creating a continuous yet shorter channel

After evaluation, Option 4 was chosen as the preferred option. Options 1, 2 and 3 were ruled out because further study had concluded that there would be significant construction and environmental issues. These issues included building a channel through the Buffalo Lakes wetland complex and expanding the Emergency Outlet Channel, which was constructed with minimal engineering information and was completed in a very short construction window to quickly lower 2011 flood levels.

A detailed review of Lake St. Martin Outlet Channel routing is provided in [Chapter 2 of the Environmental Impact Statement](#).

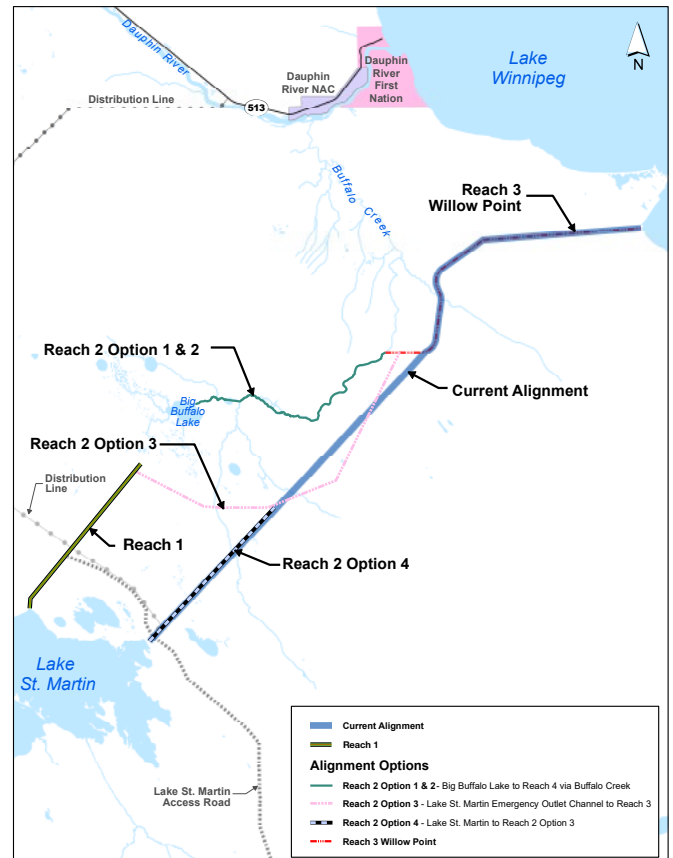


Figure 3: Phase Two - Lake St. Martin Outlet Channel Alignment Options



Decommissioning of Lake St. Martin Emergency Outlet Channel

Reach 1 of the Lake St. Martin Emergency Outlet Channel and portions of Reach 3, not incorporated into the permanent channel, will be decommissioned after the permanent Outlet Channels Project is in operation.

We Want To Hear From You

Please share your comments on the potential effects of the project by participating in meetings, or by contacting your local project Community Coordinator, band office, government office, or association or email outletchannels@gov.mb.ca. For updates on the Outlet Channels Project please visit the [Outlet Channels Project website](#).

For More Information

A series of information sheets have been developed to provide more detail on different aspects of the Outlet Channels Project, including:

- Project Purpose
- Project Components
- Water Levels and Flows
- Design Updates
- Operations

To view all the information sheets, visit the [Outlet Channels Project website](#).