

LAKE MANITOBA LAKE ST. MARTIN

OUTLET CHANNELS PROJECT

Project Components

Project Overview

In 2011, southern Manitoba experienced widespread flooding and Lake Manitoba experienced high inflows through the Waterhen River, Whitemud River, and the Portage Diversion.

Construction of the Lake Manitoba and Lake St. Martin Outlet Channels Project is a critical component of the water control network in Manitoba. The outlet channels will:

- Improve water regulation of Lake Manitoba and Lake St. Martin as part of the overall provincial flood mitigation network (Red River Floodway, Portage Diversion, Shellmouth Dam and Reservoir).
- Reduce flood peaks and the duration of flooding on both lakes.
- Lower the risk of flood related damages and disruption to residents and businesses in the area.

The Lake Manitoba and Lake St. Martin Outlet Channels Project has been designed to accommodate the largest flood on record – the 2011 flood event, which corresponds to a 1:300 year flood event. The Outlet Channels Project has also been designed to prevent critical failure during a 1:1000 year flood in accordance with the Canada Dam Association dam safety classification system.

Project Components

The project consists of the following components:

- Lake Manitoba Outlet Channel - 24.1 kilometres (km) long, connecting Watchorn Bay on Lake Manitoba to Birch Bay on Lake St. Martin; three bridges and a water control structure
- realignment of Provincial Road (PR) 239 (See Figure 2 on next page) and adjacent municipal roads
- Lake St. Martin Outlet Channel - 23.8 km long, connecting the east end of Lake St. Martin to Sturgeon Bay of Lake Winnipeg; and a water control structure
- a 24 kilovolt (kV) distribution line to allow for operation of the Lake St. Martin Outlet Channel water control structure

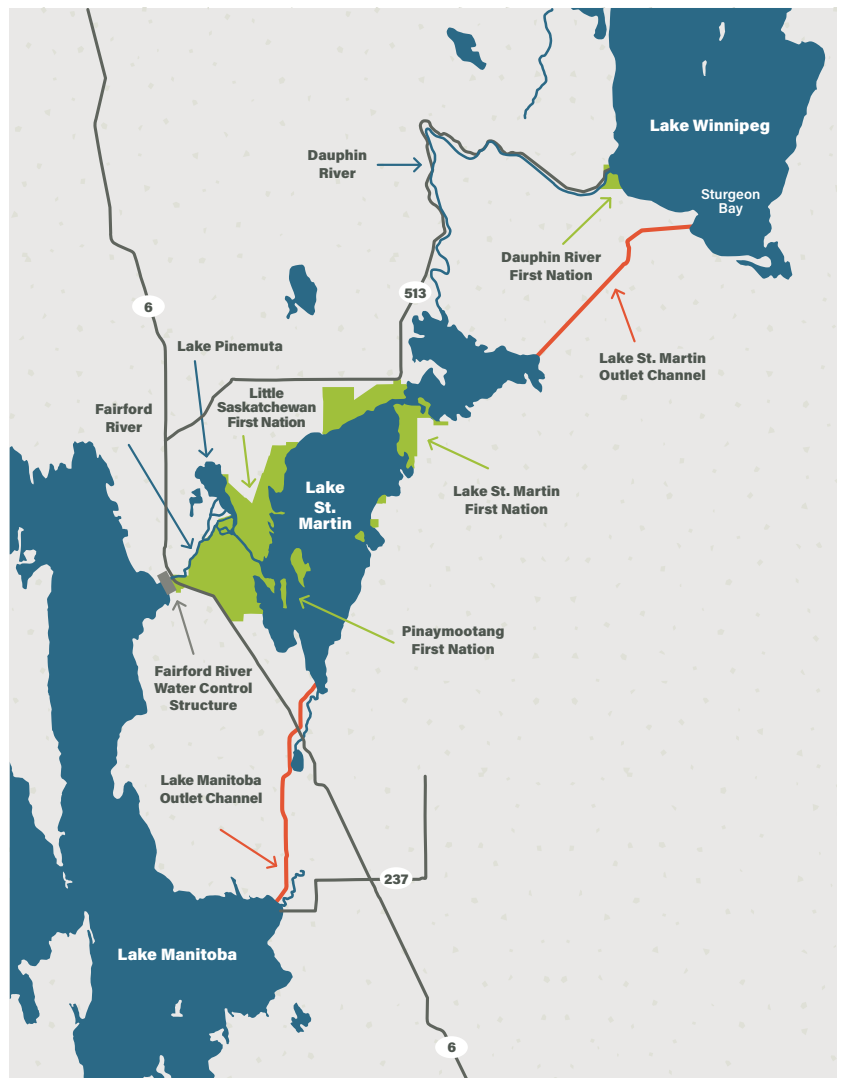


Figure 1: Map of Lake Manitoba and Lake St. Martin Outlet Channels

Lake Manitoba Outlet Channel

The Lake Manitoba Outlet Channel is designed to accommodate a repeat of the 2011 Flood of Record, without exceeding erosion thresholds. Project details include:

- designed to support flows of 7,500 cubic feet per second (cfs) or 212 cubic metres per second (m³/s), at a water level of 814.0 feet (248.1 metres) above sea level (asl), with capacity to handle larger flows up to 8,800 cfs (250 m³/s) during extreme flood events at a water level of 815.6 feet (248.6 m) asl
- a diversion channel, approximately 24.1 km long, connecting Watchorn Bay on Lake Manitoba to Birch Bay on Lake St. Martin
- combined bridge and water control structure at Iverson Road
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- new bridge locations
 - Provincial Trunk Highway (PTH) 6 Township Line Road Bridge
 - New PR 239 (Carne Ridge Road)
 - Township Line Road
- realignment of PR 239

Road Realignments

Road works include PR 239 realignment, municipal roads realignment and shoofly (temporary) detours. Realignment of PR 239 will provide opportunities to space the bridges crossing the channel to meet standards. Similarly, sections of municipal roads will be rebuilt, realigned or extended to maintain reasonable access across the channel.

Temporary and permanent sections of roads and shoofly detours will be constructed to minimize interruption to traffic during and after construction. Traffic will be managed and controlled during construction through a Traffic Management Plan and dust control will be utilised on haul roads to maintain safety for all road users.

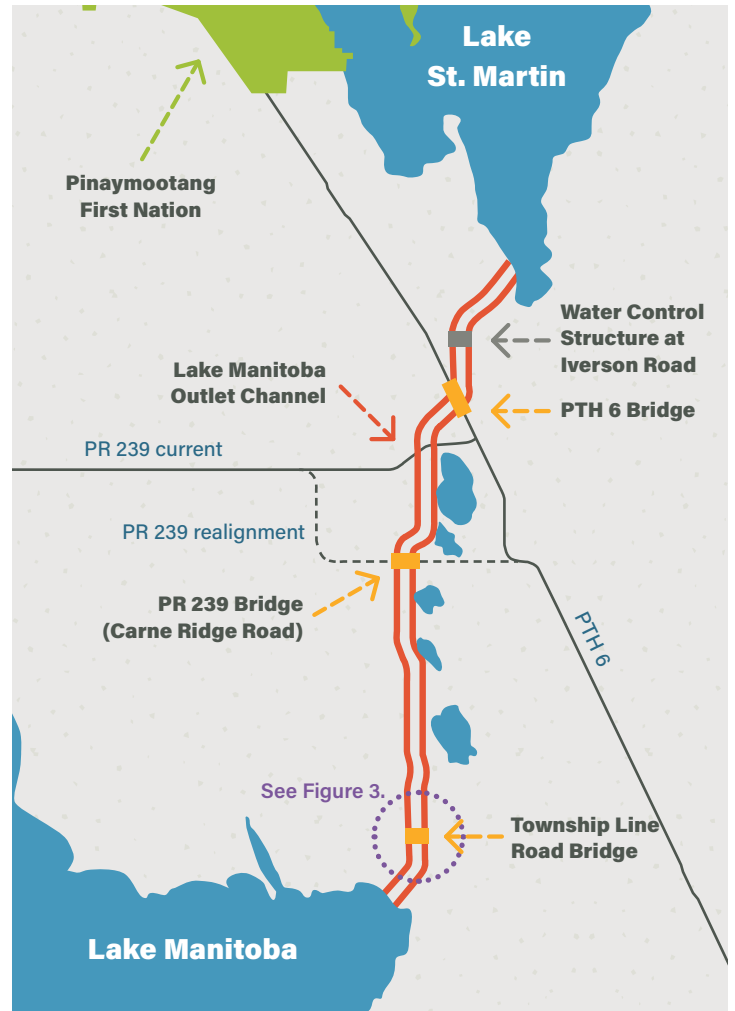


Figure 2: Map of Lake Manitoba Outlet Channel

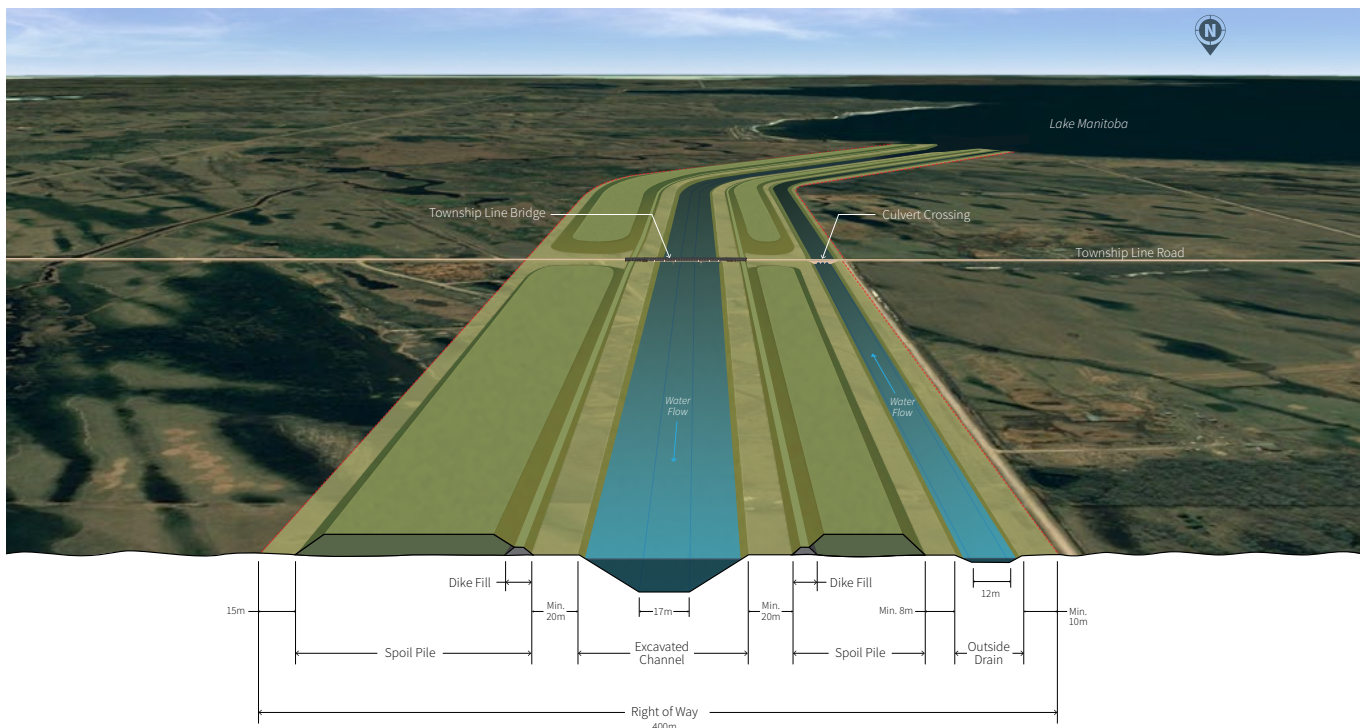


Figure 3: Design Rendering illustrating important features of the Lake Manitoba Outlet Channel

Lake St. Martin Outlet Channel

The Lake St. Martin Outlet Channel is designed to accommodate a repeat of the 2011 Flood of Record, without exceeding erosion thresholds. Project details include:

- designed to support flows of 11,500 cfs (326 m³/s), at a water level of 801.0 feet (244.1 m) asl, with capacity to handle larger flows up to 17,000 cfs (481 m³/s) during extreme flood events at a water level of 803.4 feet (244.9 m) asl. The additional capacity is because of improved sediment mitigation activities (i.e. riprap along the length of the channel)
- a diversion channel, approximately 23.8 km long connecting the east end of Lake St. Martin to Sturgeon Bay of Lake Winnipeg
- construction of a water control structure near the channel inlet
- several drop structures
- a 24 kV distribution line to power a water control structure

Manitoba Hydro Distribution Line

Given the relatively remote location of the Lake St. Martin Outlet Channel, a new distribution line to power the water control structure is required. Manitoba Hydro will undertake the design, permitting, construction and maintenance of the required distribution lines in accordance with provincial acts and regulations. All activities will be done in accordance with Manitoba Hydro's environmental management practices. Maintenance of the distribution line and associated right-of-way will follow Manitoba Hydro's standard operating procedures.

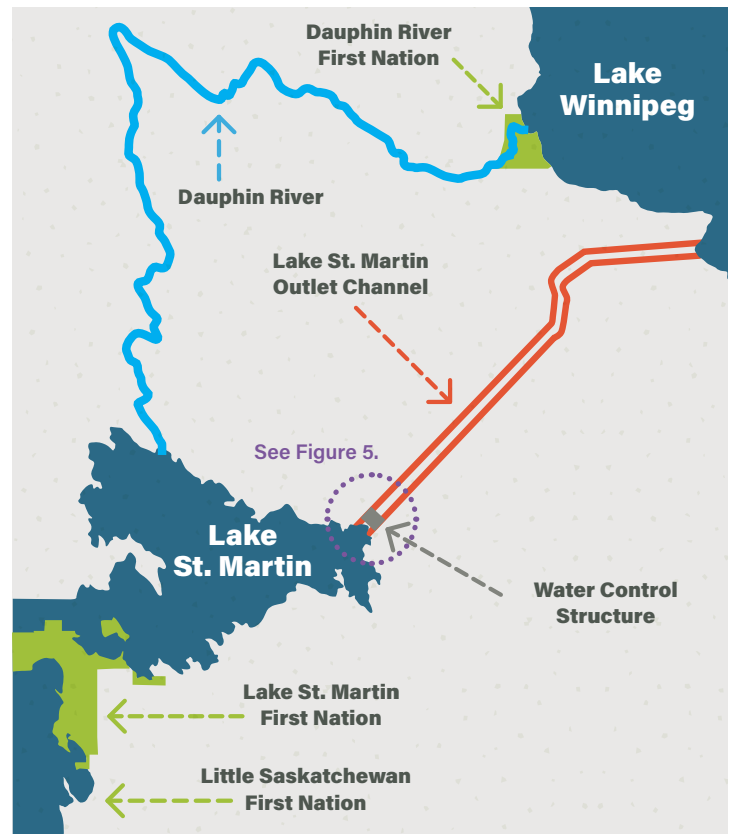


Figure 4: Map of Lake St. Martin Outlet Channel

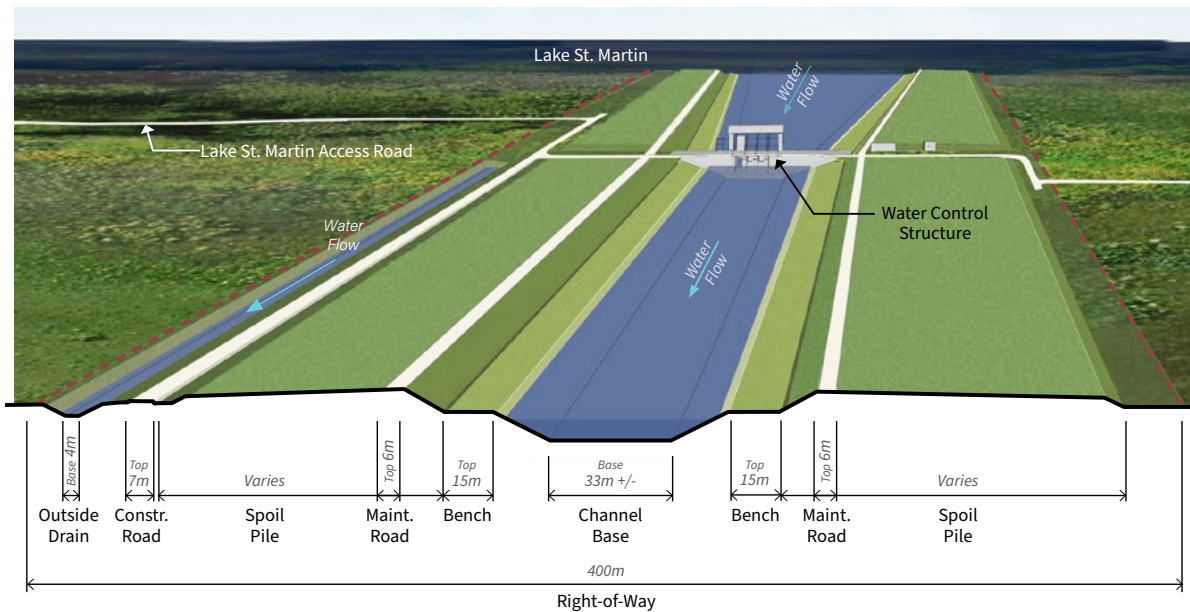


Figure 5: Design Rendering illustrating important features of the Lake St. Martin Outlet Channel

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 Alignment Options
- Water Levels and Flows
- Design Updates
- Operations

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