LAKE MANITOBA
LAKE ST. MARTIN
OUTLET CHANNELS PROJECT

Design Update for the Outlet Channels Project

The Lake Manitoba and Lake St. Martin Outlet Channels Project is being constructed to provide flood protection benefits for Lake Manitoba and Lake St. Martin. It includes two new channels, one of which increases the outflow from Lake Manitoba into Lake St. Martin, and the other which increases the outflow from Lake St. Martin to Lake Winnipeg.

Design Changes to the Lake St. Martin Outlet Channel

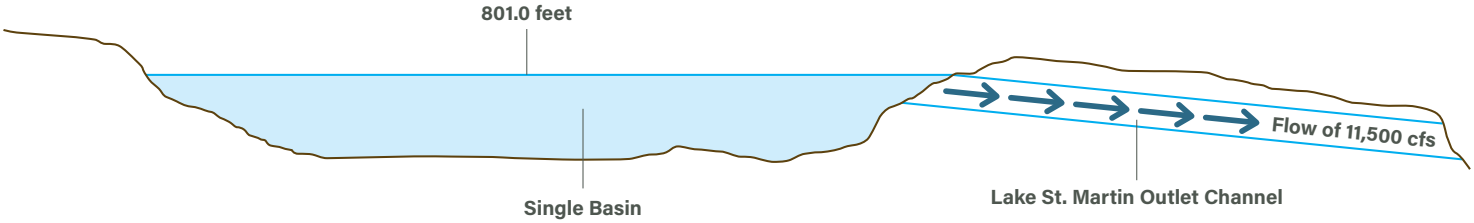
The design of the Lake St. Martin Outlet Channel was adapted to address concerns surrounding the Lake St. Martin Narrows (The Narrows) and consider Lake St. Martin as two separate basins instead of one, as originally assessed

1. Original Design of the Lake St. Martin Outlet Channel

During the initial conceptual design process, the hydraulic model to evaluate water levels and flows in Lake Manitoba and Lake St. Martin made the assumption that Lake St. Martin acted as a single basin as shown below.

Original Model & Original Channel Design

Representation of Lake St. Martin

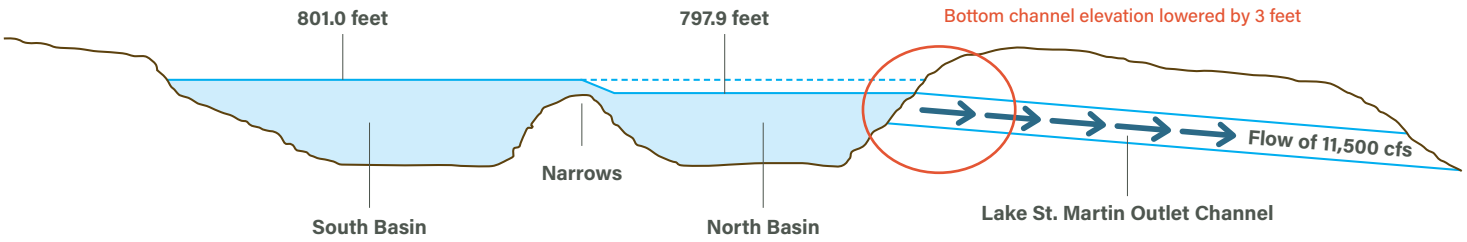


2. Refining the Model and Updating the Channel Design

As planning and design progressed, Lake St. Martin was modeled as two basins, the north and south basins. When The Narrows was included in the hydraulic model, water levels on the north basin dropped approximately 3 feet lower than the south basin due to the flow restriction. In order to meet the flood protection levels for the project, the opening of the inlet control structure was lowered by 3 feet, as shown below.

Updated Model & Updated Channel Design

Representation of Lake St. Martin



Impacts of the Design Changes to the Lake St. Martin Outlet Channels

Flood Protection

The updated model for Lake St. Martin will moderately reduce the overall flood benefit to Lake St. Martin in a repeat 2011 event. The water level reduction calculated by the updated model for the south basin of Lake St. Martin is now 2.3 feet for the 2011 peak water level, whereas the previous reduction was 2.8 feet (see Figure 1 below).

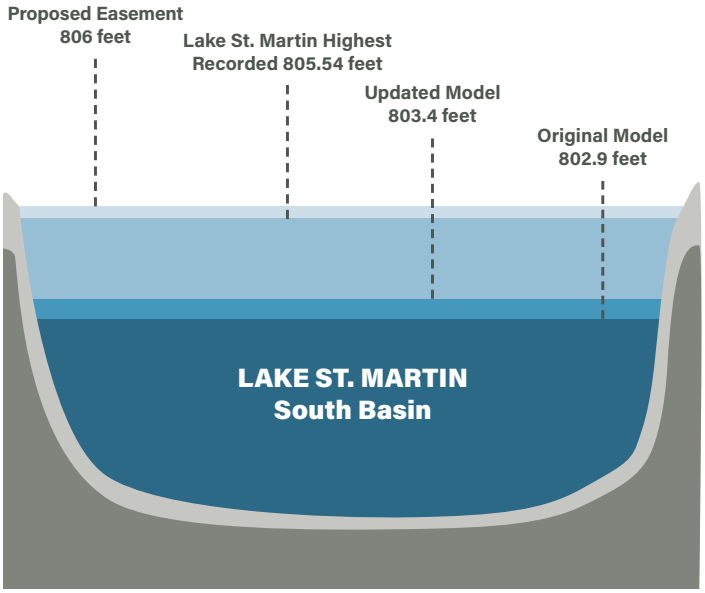


Figure 1

Flows on the Dauphin River

The Outlet Channels Project is not intended to control or remove flows from the Dauphin River. In severe drought years, Manitoba Transportation and Infrastructure (MTI) will stop baseflows through the Lake St. Martin Outlet Channel to maximize flows through the Dauphin River.

See the Operations information sheet for more details.

Ice Formation in The Narrows

TThe influence of ice formation within The Narrows was also incorporated into the updated model. Ice conditions and associated impacts to flow were estimated, and monitoring has begun to validate these assumptions. In the rare times when the Outlet Channels Project would be operated over winter, the ice-free area in The Narrows may be larger and the stability of the ice in these areas may be affected. MTI recognizes the importance of, and appreciates receiving, local knowledge on seasonal ice conditions in the area.

Design Changes to the Lake Manitoba and Lake St. Martin Outlet Channels

During the detail design phase, updates were made to the Lake Manitoba Outlet Channel and Lake St. Martin Outlet Channels. The entirety of the wetted area for both channels will be lined with rocks (known as armouring) to help reduce the effects of erosion at higher water flows.

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

To view all the information sheets, visit the **Outlet Channels Project website**.

Manitoba

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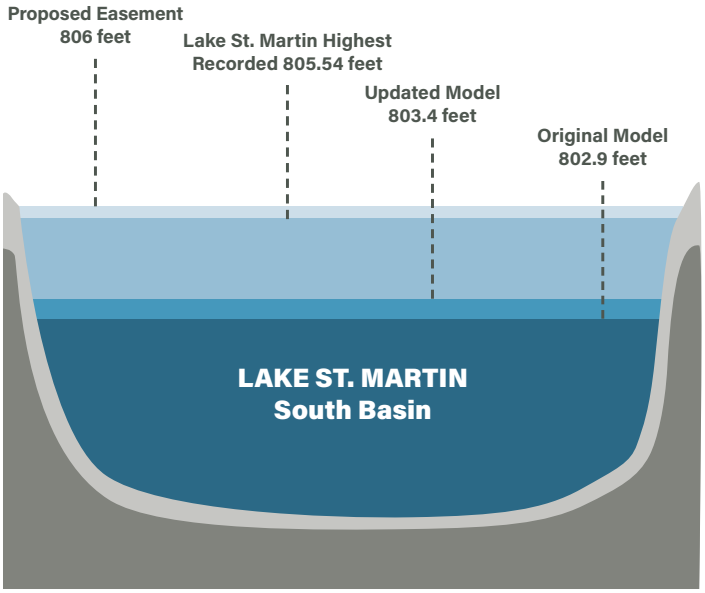

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