LAKE MANITOBA
LAKE ST. MARTIN
OUTLET CHANNELS PROJECT

Project Purpose

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 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.

Project Need and Rationale

Because of Manitoba's geographic location and topography, many areas of the province are susceptible to flooding. Water flows into Manitoba from the south, east and west before heading north and emptying into Hudson Bay (see Figure 1). Manitoba's landscape was largely shaped by glacial processes, and as a result, large portions of the province are relatively flat and subject to flooding during high run-off events. While much of Manitoba is vulnerable, Manitobans are generally well protected because of investments in flood protection infrastructure from previous generations.

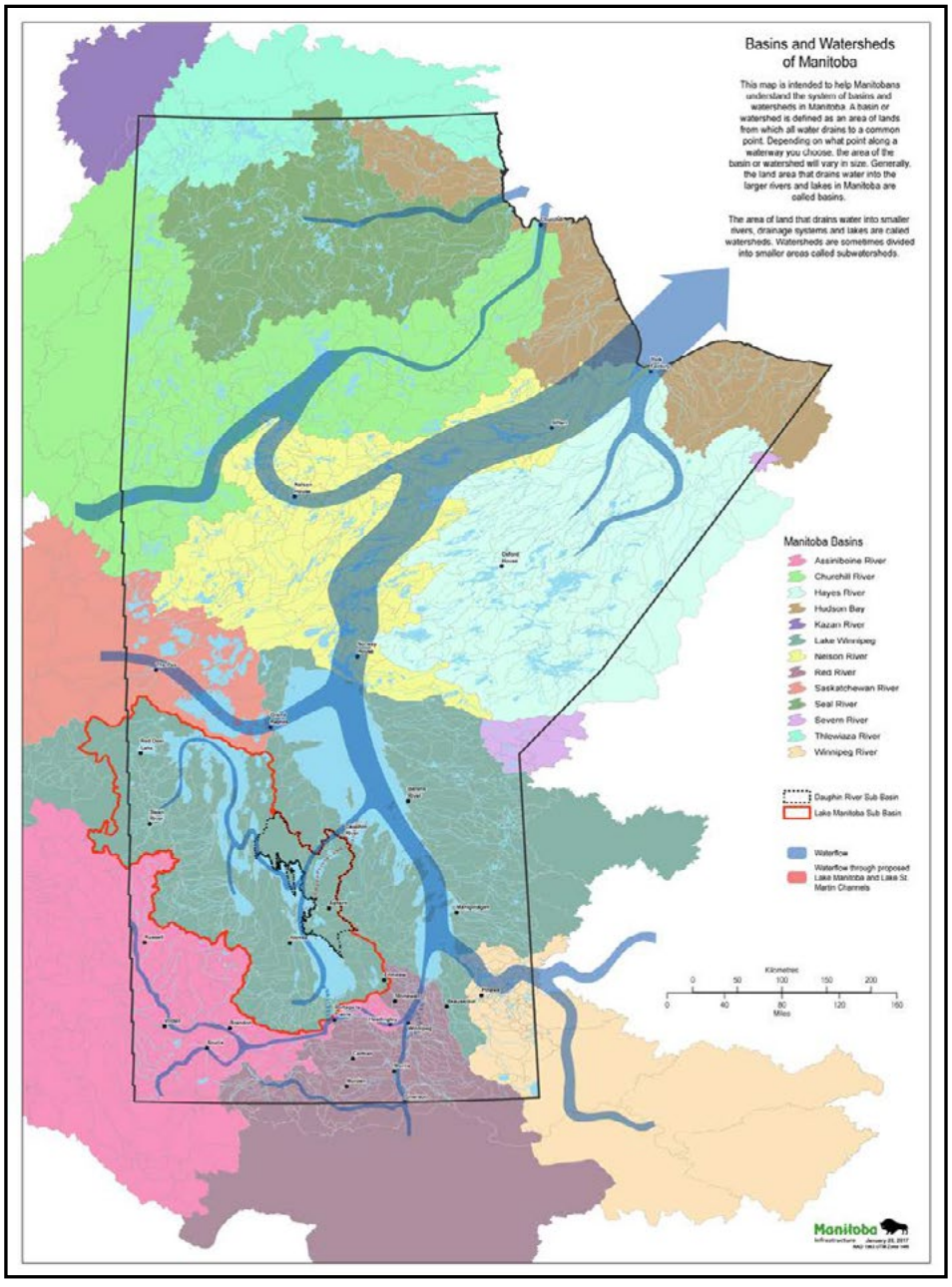

Figure 1: Water flow through the Lake Winnipeg Basin

Flood Control in the Province

After experiencing several major floods over the last century, an extensive network of flood control works was built across the province to protect against these risks. Key structures include the Shellmouth Dam, the Portage Diversion, Red River Floodway and the Fairford River Water Control Structure. Additional information can be found on the Flood Control Infrastructure and Historic Floods webpage.

Vulnerabilities to Existing Flood Control Network

Among the several major flood events over the last 100 years, the 2011 flood was unique. High flows were recorded on almost all streams and rivers in the Assiniboine River and Lake Manitoba watersheds:

- Following the spring runoff and melting of the snow pack, significant rainfall through parts of the province in spring and early summer contributed to extended flooding with the peak flow on the Assiniboine River near Portage la Prairie reaching 53,100 cubic feet per second (cfs), the highest flow on record.
- Water levels on Lake Manitoba peaked at 817.05 feet* in late July 2011, also the highest on record.
- Water levels on Lake St. Martin peaked at 805.6 feet in July of 2011, again the highest water level on record.

The estimated impact of the 2011 spring flood for both the provincial and the federal governments exceeds $2.1 billion. The flood of 2011 highlighted several existing vulnerabilities in the flood control network. In 2012, the Assiniboine River and Lake Manitoba Basins Flood Mitigation Study commissioned by the Manitoba government identified these vulnerabilities that could lead to flood damage, assessed potential options to reduce flood risk and made recommendations.

**817.05 feet is the peak water level when wind is not included. Higher water levels have been reached when wind is factored in.*

The study concluded that the shorelines of Lake Pineimuta and Lake St. Martin are vulnerable to flooding and identified this as a chronic problem for decades (see Figure 2). The concern for flooding in this area was noted as very high, requiring urgent attention. The study identified uncontrolled inflows from the Waterhen River as an outstanding vulnerability that can worsen flooding on Lake Manitoba and subsequently on Lake St. Martin. Due to low lands surrounding Lake St. Martin and limited outflow capacity of the Dauphin River, the lake is particularly vulnerable to flooding. Lake St. Martin has much less storage capacity than Lake Manitoba and therefore is more sensitive to inflow volumes through the Fairford River Water Control Structure.

Lake Manitoba and Lake St. Martin Outlet Channels

The Assiniboine River and Lake Manitoba Basins Flood Mitigation Study 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. These recommendations led to further study of the current project, which includes the Lake Manitoba Outlet Channel and the Lake St. Martin Outlet Channel.

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).

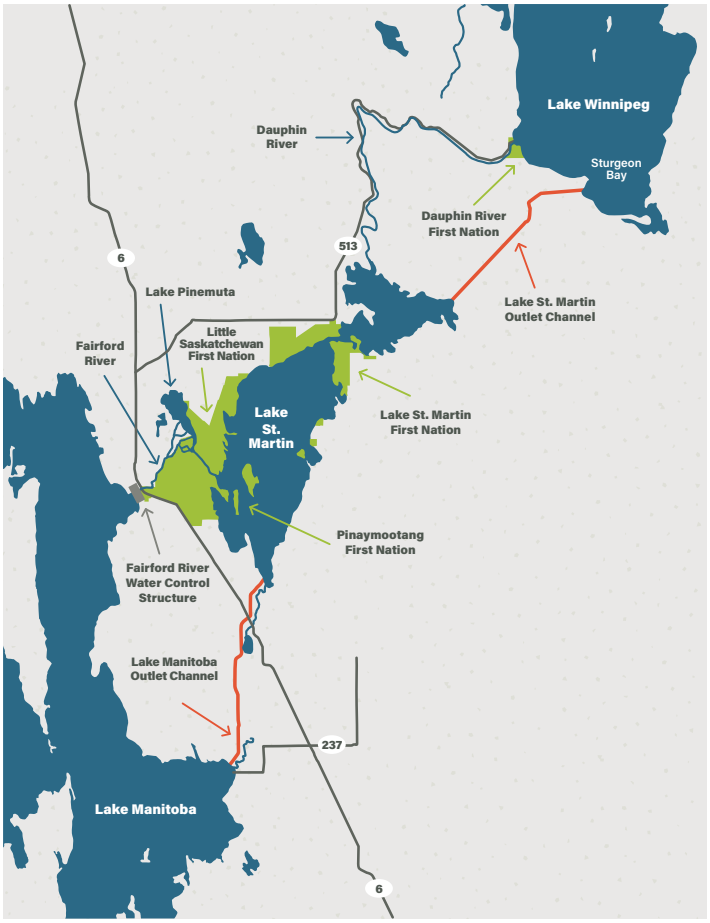

Figure 2: Areas around Lake Pineimuta and Lake St. Martin are vulnerable to flooding

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