Welcome!

Thank you for attending Manitoba Infrastructure (MI) and Manitoba Sustainable Development's (SD) Falcon Lake Water Levels Open House. The purpose of today's meeting is to present options for target lake level ranges, and solicit public feedback on the options. The information gathered will be used to make an informed decision on potential changes to the target lake level ranges. Please fill out the feedback form and speak with MI and SD representatives if you have any questions or comments.



Falcon Lake Dam

Manitoba Infrastructure owns and maintains the Falcon Lake Dam, locally known as the causeway which provides access to the south shore across the Falcon River. The structure consists of two culverts, a timber stoplog controlled culvert built in the early 1960s and a steel bridge plate culvert installed in 2006, as well as an earthen embankment. The dam provides a level of control to the Falcon Lake during periods when the Falcon River is low. The timber culvert, which is currently operated to control lake levels is in poor condition and is in need of repair.



Historical Regulation

The Historical Range of regulation has varied since the first structure was built to replace corrugated steel culverts in the early 1960s. These ranges include:



Public Docks at Falcon Lake circa 2006 - Water Level: 1065.5

Today's Water Level:



structures at Falcon Lake Dam in July 2017 - Water Level: 1066.1

• 1064.69' – 1065.19' normal summer range (pre 1983) • 1064.69' – 1065.69' normal summer range (1983 - 2006) • 1065.75' – 1066.25' normal summer range (2014 - Present)





Why now?

Manitoba Infrastructure hopes to rebuild the timber structure at the Falcon Lake Dam to convey higher flows at lower lake levels, maximizing the capacity of the river downstream over the largest range of flows.

At high lake levels and heavy inflows the Falcon River becomes overwhelmed and the river will back up, slowing outflows from the lake. This can lead to scenarios like 2016 where the Lake remains high for an extended period. Decreasing the target water levels, combined with a new structure, allows for improved drawdown and has the ability to create storage for high inflows.

In recent years, insufficient water depth has been identified in the south shore boathouse channels, causing concerns for many watercraft operators. Sustainable Development has allocated resources to improve these channels through dredging. These channel improvements will help to alleviate concerns with the condition of the channels and the respective water level decisions that will prevail.



Photo of Falcon Lake Marina and Falcon River downstream during high water event in June 2016- Water Level: 1068.04

Options being Considered

Manitoba Infrastructure Hydrologic Forecasting and Water Management has proposed three potential ranges of regulation based on feasibility and historical precedence, these ranges are as follows:

- the control structure.
- provide more consistent levels.
- 3. similar to option #2 should provide more consistent levels.

The figure below shows the effect a lower range of regulation could have had on the 2016 flood event and the next story board provides a look at what the different ranges of regulation look like in relation to the historical levels recorded at the Dam.



1. $1065.75' - 1066.25' \rightarrow$ This is the existing target summer range, it is the highest and narrowest range of the proposed options. It presents a challenge for the operators of

2. 1065' - 1066' \rightarrow A middle ground range that provides lower target levels and an expanded range, this range will be more achievable with a new structure and could

 $1064.69' - 1065.69' \rightarrow$ This proposed range is the range used between 1983 and 2006 prior to the steel culvert being installed. It is the lowest of the ranges and





October 2, 2012 – WL = 1064.93'



July 21, 2015– WL = 1066.11'

Water Level Comparison at Control Structure





September 23, 2013 – WL = 1065.73'

July 7, 2016 – WL = 1067.61'





**Feet Above Sea Level – References elevations to a historical mean sea level

