WLTF Report to MLA Members Issue 2017-5

Mar 31, 2017

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Entering April, the recent rain and melt has reduced the snow pack to near normal levels, so drawdown requirements and risk of flooding from snow melt are reduced from last week. Lake levels are now approximately 10 to 15 cm [4 to 6”] higher than the target low water level but significantly below normal summer water levels. Slightly warmer temperatures will contribute to gradual melting of the remaining snow, and could pave the way for a normal Spring freshet. However, precipitation amounts remain the major risk factor over the next week with significant rainfalls predicted.

How we got here:

Snow stared early in winter and has produced above normal snow levels in the watershed. MNRF initiated more aggressive lake lowering starting Jan 7th and had achieved a drawdown level comparable to last year by Feb 23rd, some two weeks earlier than last year.

Unprecedented warmth in February and two rainfall events – Feb 24/25 and March 1 – led to a dramatic water level increase. The water levels were then at an all-time high, compared to all records from 2002 to 2016, from March 1 to March 15. Colder, drier weather in mid-March had allowed MNRF to lower Muskoka [at about 2cm/day] and Rosseau [at near 1 cm/day] to levels approaching this year’s previous low. Late last week rainfall of near 25 mm [1 inch] halted the drawdown but also reduced the snow levels in the bush.

Lake Muskoka Update:

The graph below shows Lake Muskoka water levels peaked about March 12th. Since then the water level had dropped to replicate the previous low water level, before rainfall of about 30mm [1.6”] on March 24 to 26 caused a 10mm rise. The current level of 9.1m is 10 cm [4”] above the Watershed Plan level for this time of year. Note that this level is below normal summer levels. The rain and warm temperatures have reduced the snow pack to only 14% above normal. Prospects for a normal Spring freshet are now improving as the snow is melting gradually and significant rainfall holds off. The watershed remains vulnerable to significant rainfall events, such as was experienced in 2016.

Property owners are advised keep aware of changing weather conditions and to be prepared for high spring water should heavy rain events occur.

For reference, Normal Summer levels: 9.35m to 9.65m; Normal Drawdown level 8.95m; Flood Level 10.05m on following figure.

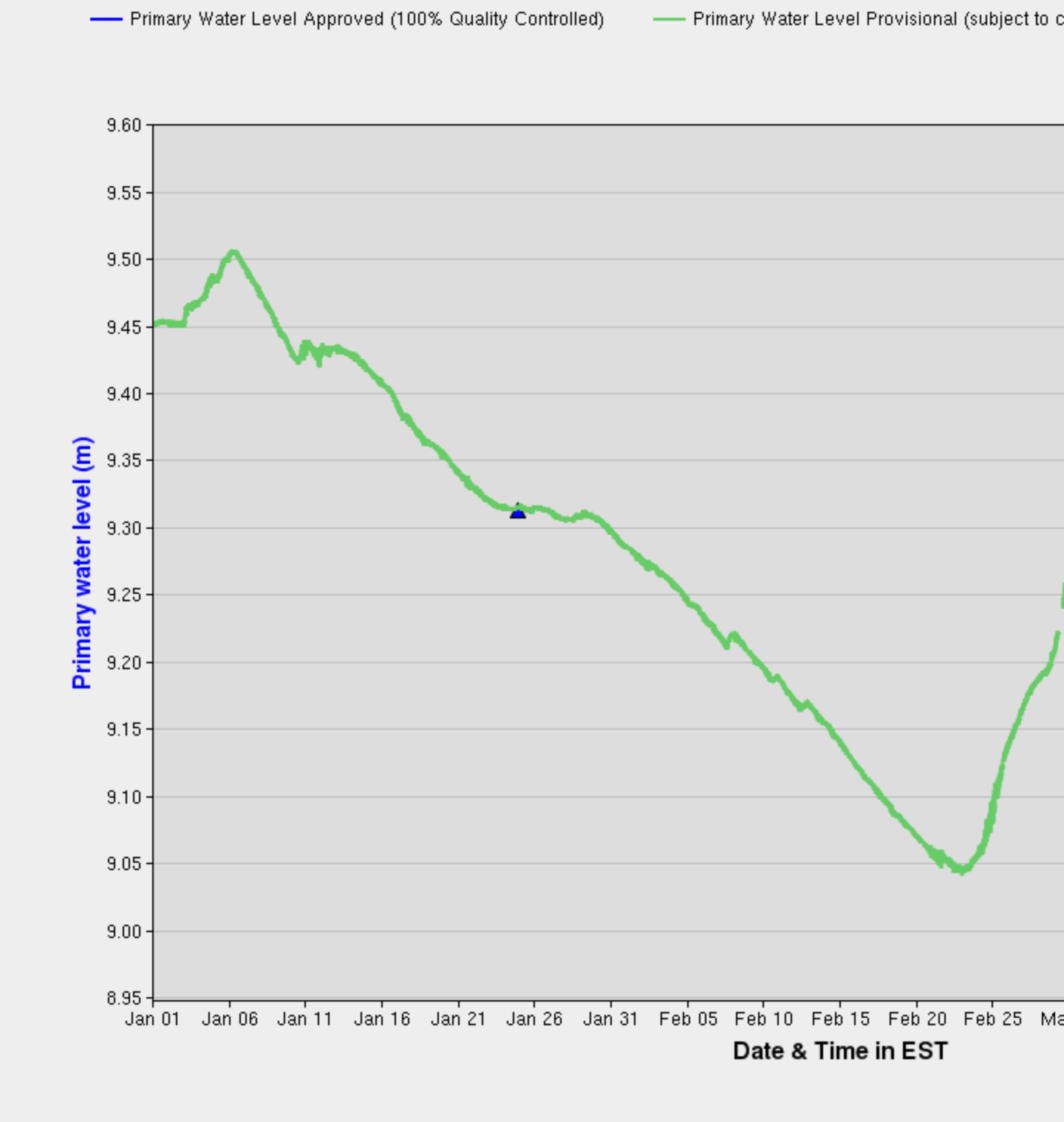

Figure 1: LAKE MUSKOKA – 2017 WATER LEVELS [meters above gauge 02EB018]

Lakes Rosseau and Joseph Update:

The graph below shows water levels for Lakes Rosseau and Joseph peaked about March 11th and

have dropped about 10 cm [3.9”] since then. Rainfall of some 30 mm March 24 to 26 has halted the drawdown and raised these lakes about 22mm. The warm temperatures and rain also reduced the snowpack to only 14% above normal. Water levels are now at 8.70 m or about 15 cm [6”] above Watershed Plan for this time of year. Note that this is below normal summer water level. The water level difference at Port Carling appears to be preserved so drainage into Lake Muskoka is still taking place. Prospects for an uneventful Spring freshet are improving as gradual melt and no significant rain occurs. These lakes are still at risk of flooding should a significant rainfall event, such as was experienced in 2016, occur.

Members still are advised to be aware of any significant rainfall event and to be prepared for flooding should this occur.

Several instances of boathouse/dock damage have been reported this year, following days when rapid temperature rise has caused the clear, uninsulated ice to expand and shove. The forces involved [on the order of 5 tons per lineal foot] far exceed the strength of normal shoreline structures. Ice expansion is dependent on the unusual coincidence of rapid temperature rise, clear ice without insulating snow cover and ice adhesion to the shoreline. Frequent thaws and rains have made these conditions more common this year. The damage has occurred at structures which did not have bubblers in place to provide a protective gap of open water beside the cribbing. Alternatively, cutting a trench in the ice beside the structure can also relieve forces from ice expansion. *Members are advised to be aware of this damaging phenomenon which is unrelated to any wind or water level changes at the reported locations.*

For reference, Normal Summer levels 8.88m to 9.03m; Normal Drawdown level 8.58m; Flood Level 9.28m on following figure.

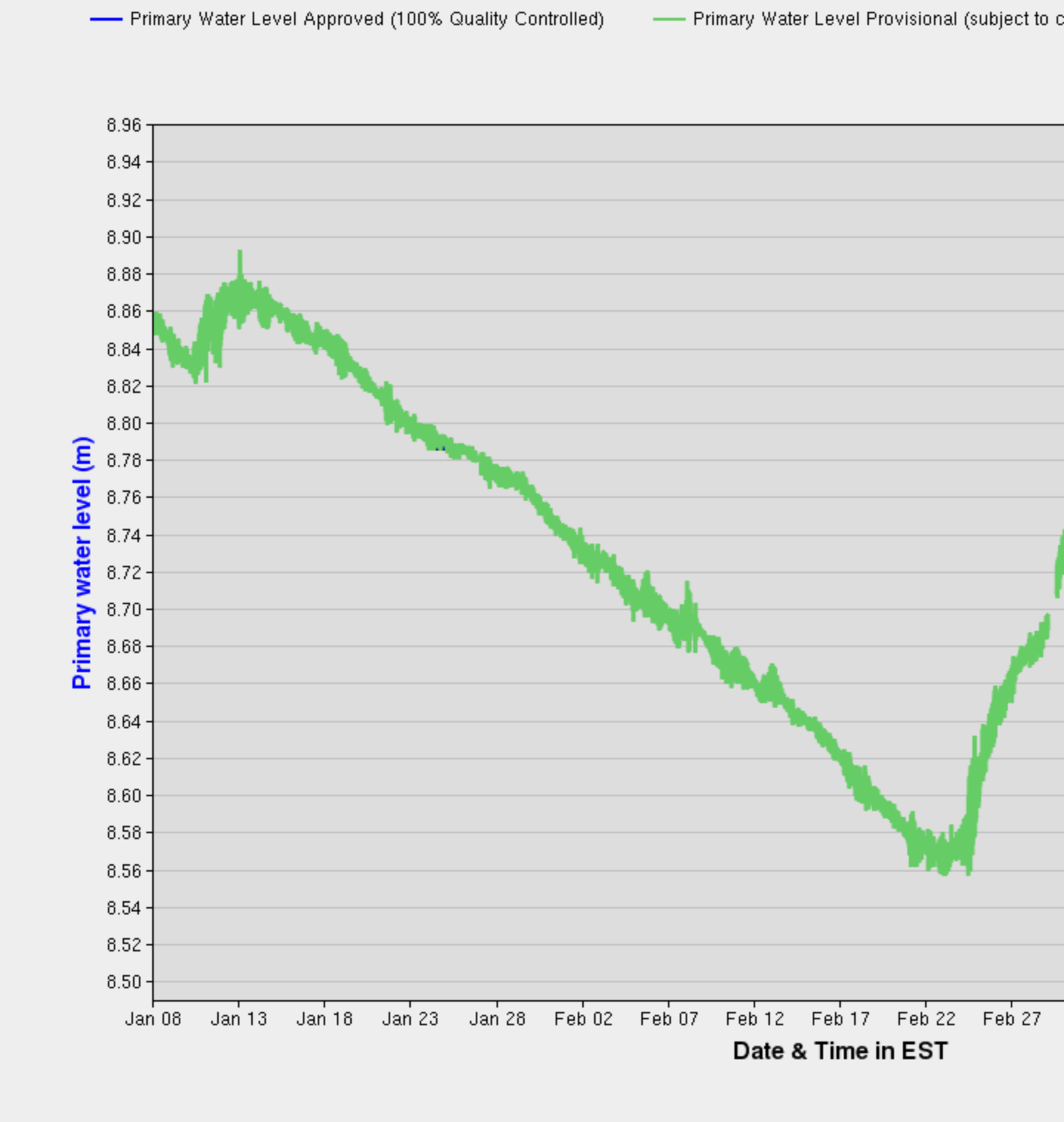

Figure 2: LAKE ROSSEAU/JOSEPH WATER LEVELS 2017 [above gauge 02EB020]

Bala Reach/ Moon River Update:

Since aggressive drawdown of Lake Muskoka was started in early March, flow through the Bala

spillways has decreased from 240 m^3/sec to under 200 m^3/sec. This reduced flow is a direct result of lower water levels upstream of the dams and less head of water above the stoplogs. Natural flow restrictions between the main part of Lake Muskoka and Bala Bay [at Wallis Cut, Jannocks narrows and Coulter Narrows] continue to cause a level difference of 27 cm [10.6 “]. Increased flows though the spillways will occur as the backup at the narrows dissipates, unless logs are added in the interim. Prospects are now good for an uneventful Spring freshet as long as normal melting and no major rains occur upstream. Members are advised to keep aware of weather conditions and to be prepared for flooding if a major rainfall, comparable to 2016, occurs.

Snow Core information

Snow core data received from MNRF for March 23rd shows average snow water content was 14% above normal. This amount of snow water content indicates that normal drawdown levels are likely sufficient to absorb the melting ice and snow.

Weather Information

The current weather forecast calls for daytime highs over the next week ranging between 2°C to 8°C and overnight lows between -3°C to 4°C. At this time rainfall events are forecast for several days including: 5 to 10mm Friday, 5 to 10mm Monday and about 20mm next Wednesday/Thursday.

MNRF Statements

On Monday, March 27th MNRF issued a “Water Conditions Statement – Water Safety” for the Muskoka River Watershed which applies until April 3rd. In part this statement says “A Flood Outlook remains in effect for the Muskoka River Watershed west of Lake of Bays including the South Branch of the Muskoka River and the Moon River/ Bala Reach.” “Although flooding is not expected at this time, residents may wish to consider taking action to secure or protect any property in flood-prone or vulnerable areas.”

Summary

The Muskoka Lakes and Bala Reach remain vulnerable to significant rainfalls over the next week, should these occur. While conditions have improved and there is reduced snow in the bush, the predictions for rainfall make water level increases likely.

Shoreline property owners continue to be advised to take precautions to protect their shoreline structures and personal property.