



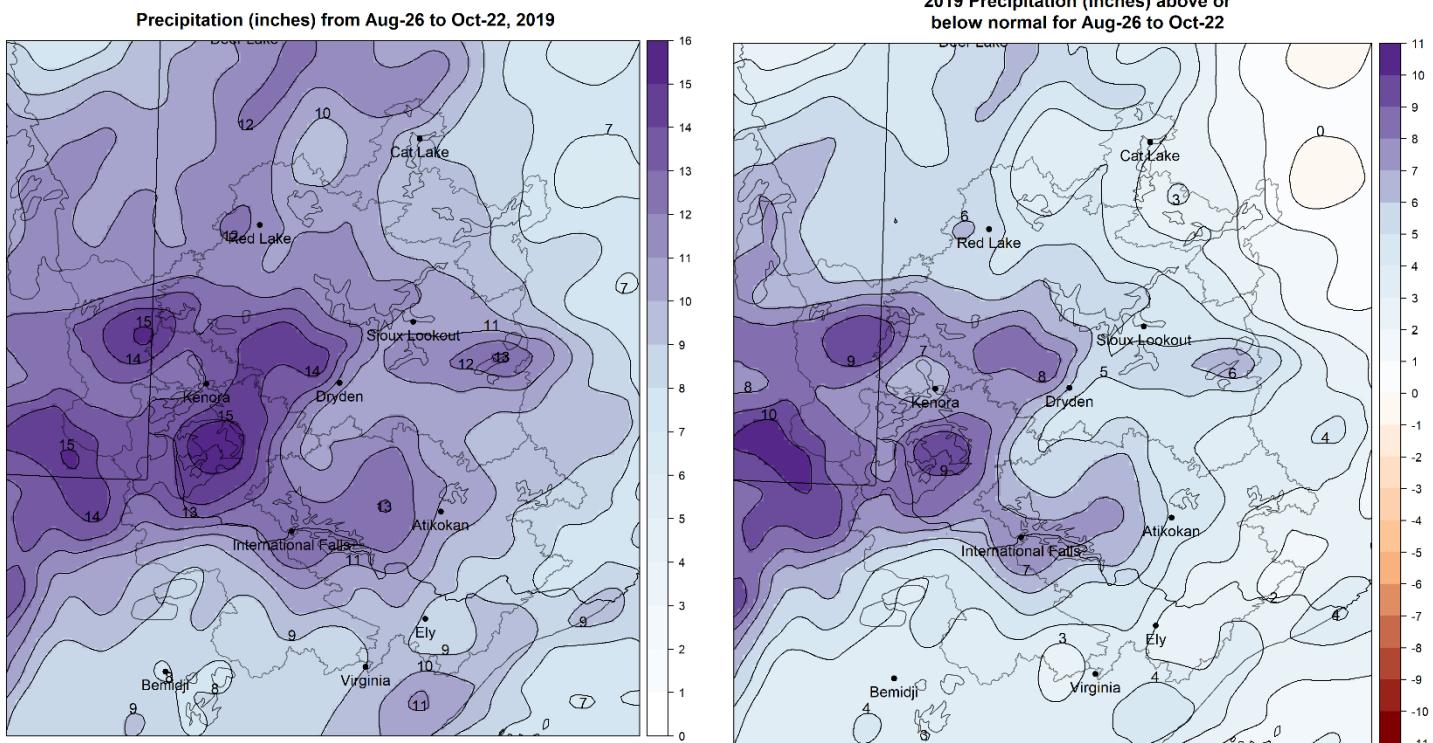
October 24, 2019

HIGH FLOWS TO CONTINUE

ACROSS ENGLISH and WINNIPEG RIVER BASINS

Highlights: Extremely high fall flows into Lake of the Woods, Lac Seul and along the Winnipeg and English Rivers have developed over the last several weeks and are expected to continue into November. High flows in late fall increase risk of damage to shorelines over winter and high water levels in early spring.

Rainfall over the past eight weeks has set seasonal records in most areas across the Winnipeg River and English River basins (see rainfall maps). This has resulted in very high lake levels and river flows across the watershed for October. In some areas, water levels are at a high spring level, which is unprecedented at this time of year.



Left: Map of total precipitation Aug 26-Oct 22 across the Winnipeg River basin. Right: Difference compared to normal rainfall for this period.
Data: Canadian Precipitation Analysis (CaPA), Environment and Climate Change Canada https://www.weather.gc.ca/analysis/index_e.html

Along the Winnipeg River, water levels are the highest on record for this time of year. The dams at Kenora have been passing maximum flow since October 10. Once the log sluices at Norman Dam are fully opened, the outflow from Lake of the Woods is set by the lake level which provides the pressure to push water through the western outlet channel to Norman Dam.

Flows are also very high in the English River system. The combination of very high flows from the English and Winnipeg Rivers in Ontario and extremely high local precipitation has resulted in exceptionally high flows along the Winnipeg River through the Whiteshell region. Ontario Power

Generation has reduced flow out of Lake St. Joseph into Lac Seul via the Root River Diversion to provide some reduction in flows in this system.

Short-term Outlook

Water level forecasts are limited by the accuracy of weather forecasts. They are provided as guidance only. Sustained winds may temporarily change water local water levels, higher or lower. High flows throughout the system, including smaller tributaries and the main rivers, pose a risk to boater safety. Additional caution when on or near waterways is advised.

Current forecasts indicate little change in the level of Lac Seul over the next week. No flow changes are currently scheduled out of Lac Seul. Water levels in the Pakwash-Chukuni system should see a gradual decline over the next week if the dry forecast holds. The English River at Grassy Narrows is forecast to level off this week with dry weather.

Lake of the Woods level is expected to rise by 1-3 cm (1 inch) over the next week. As the lake level slowly rises or falls, so will the outflow into the river. Water levels along the Winnipeg River in Ontario are expected to change little over the next week, though drier weather should allow for local tributary flows to slowly drop.

Manitoba Hydro provided the following forecasts for change in water level along the Winnipeg River in the Whiteshell. They note that Seven Sisters forebay is being held low to help manage the above normal levels upstream of the station. Winnipeg River is at its peak this week but with recent rain the tributaries are still rising and flow is expected to remain well above normal conditions for this time of year for the next few weeks.

Lake	*Difference from average level for date (+/-)	Expected drop(-)/rise(+) over next 7 days
Nutimik Lake	1.80 m (5.9 ft)	0.26 m (0.9 ft)
Dorothy Lake	1.21 m (4.0 ft)	0.08 m (0.3 ft)
Margaret/Eleanor Lake	0.67 m (2.2 ft)	0.09 m (0.3 ft)
Sylvia Lake	-0.05 m (-0.2 ft)	0.08 m (0.3 ft)

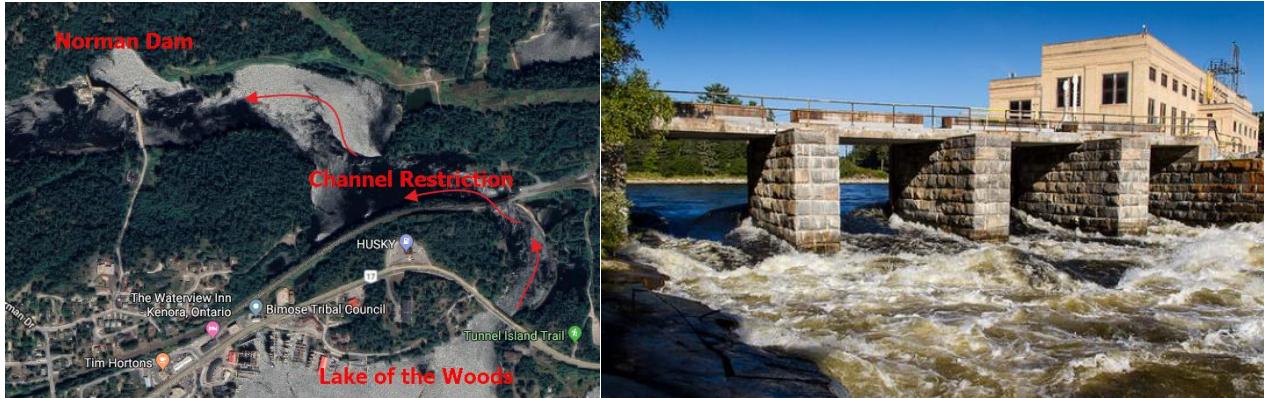
LWCB Public Meetings held in Winnipeg and Kenora, October 16, 17

The LWCB held two public meetings last week to review current conditions and forecasts, including plans for freeze-up, over the winter and what the present high flows mean for next spring. Below are the main points covered at these meetings.

The Goals of Rapid Outflow Increases Starting in Late September

The LWCB was closely monitoring the development of consecutive weeks of above-normal rainfall in September. As rainfall totals grew, it became clear that Lake of the Woods was likely to reach the top of the Operating Range set by a treaty between Canada and the United States if only moderate outflow increases were made. Near this lake level (323.47 m or 1061.25 ft), the Canadian LWCB requires the approval of the International Lake of the Woods Control Board (ILWCB) for any flow adjustments at Lake of the Woods. When continued lake level rise is expected, this means fully opening the dams in Kenora.

As this possibility became more likely with the continued wet weather, the LWCB directed rapid outflow increases from Lake of the Woods. This was done to benefit shorelines along both the lake and the river. The benefit to the river comes from the fact that the lake level determines the outflow once the dam is fully opened. With all of the twenty log sluices open at Norman Dam, the lake level itself controls the river flow by providing the pressure to push water out of the western channel that is the start of the Winnipeg River. The higher the lake level, the higher the flow and the higher the river level that results. By rapidly increasing outflow early on and moving more water out of the lake, the peak lake level was reduced. By reducing the peak lake level, the peak outflow was reduced, as was the peak river level.



The narrow western channel restricts flow. Higher lake levels provide more pressure to push water out of the lake and down through Norman Dam. A higher lake level results in higher river flows and river water levels.

Outlook to Freeze-up

The LWCB aims to balance the potential rise of Lac Seul with the effects that further outflow increases have along the English River and into the Winnipeg River in Manitoba. Above-normal outflows are expected to continue into the winter under all precipitation scenarios.

For Lake of the Woods, the amount of drawdown before freeze-up will depend on rainfall and the temperature in the coming weeks. With the small window remaining before freeze-up, however, it is unlikely that the lake level will fall much even under a dry, late freeze-up scenario. It is likely that ice will form at a high summer level, much higher than normal.

The LWCB aims to reduce outflow from Lake of the Woods shortly before freeze-up along the Winnipeg River in Ontario. Winnipeg River flow and level will fall sharply as a result of the flow reductions. The size and timing of the flow cuts will depend on the amount of rainfall over the next few weeks and the timing of freeze-up. Notification will be provided ahead of the reductions. This approach is subject to change based on conditions and projections for winter flows closer to freeze-up.

Outlook for Winter

Shorelines around Lake of the Woods may be vulnerable to ice damage during the winter as a result of freeze-up at a high lake level and the need to draw down the lake level to prepare for spring.

Flows on the Winnipeg River, while expected to be lower than current flows, will be much higher than is usual over the winter. Risk of ice damage to shorelines also exists along the river as a result. Higher than normal flows also pose a hazard to activities on the river over the winter due to swift currents and potentially weakened ice in some areas.

Outlook for Early Spring

Saturated conditions late in the fall are a risk factor for early spring high flows, as the watershed will have little room for snowmelt and rain once the thaw occurs. Based on current projections, there is a risk of a much higher than normal Lake of the Woods level at the end of March. Without reduced room to store spring melt flows in the lake, a moderately wet spring could lead to quickly rising lake levels and the need to rapidly increase outflow from the lake. Rising lake and river levels before ice out may be a risk to shorelines at that time as a result.

Normal spring conditions are possible should favourable conditions develop over the winter and in April (limited snowpack, milder winter, slow melt with limited rainfall in April). However, there is a heightened risk of high water conditions early in the spring due to the high flows and lake levels occurring now. High water conditions early in spring, should they develop, increase risk of high water in May and June, typically the wettest months of the year.

Visit www.lwcb.ca for the latest water levels and flows and refer to the LWCB's Notice Board for updates on planned flow adjustments:

LWCB Notice Board: www.lwcb.ca/noticeboard.html

Recorded message at 800-661-5922 ex. 1

Contact:

Lake of the Woods Secretariat

secretariat@lwcb.ca 800-661-5922 ex 2