

**Adopted Regulation Strategy**  
**Lake of the Woods Control Board**  
**August 10, 2022**

Due to unprecedented flood conditions throughout much of the Winnipeg River basin in the spring and summer of 2022, the Lake of the Woods Control Board shifted from strategy-based to ad hoc regulation, holding emergency meetings every few days from May through July to assess and approve flow regulation for Lake of the Woods and Lac Seul, plan public information efforts, and support of emergency management officials at First Nations, municipalities and the Province of Ontario.

With Lac Seul and Lake of the Woods levels having peaked, the Lake of the Woods Control Board requested a Regulation Strategy to be drafted by the Secretariat to guide operations through to the end of October. This draft strategy, below, was formulated considering basin conditions, hydrological and meteorological forecasts, and gathered input of the various interests concerned with basin management. Input was informally provided in emails and verbal reports as well as from the Board's Regulation Guide: (<http://www.lwcb.ca/regguide/index.html>). For an update on current conditions, please refer to the Basin Data section of the Board's web site at <http://www.lwcb.ca/waterflowdata.html>. For regulation actions and directives taken under the strategy please see the Regulation Actions at <http://www.lwcb.ca/regulation/index.html>.

The strategy covers the period to the end of October 2022. It specifies key aims and how the Board intends to balance these under a range of possible flow conditions should they develop during the strategy period. The goal of balancing conditions across the entire basin is a complex task given the diverse nature of the different, and sometimes conflicting, interests and the largely unpredictable nature of the hydrology that drives the system. While the end of flood conditions will be welcomed, the dropping levels of Lake of the Woods and the Winnipeg River present additional challenges in balancing interests.

## **Lac Seul**

### ***A) Seasonal Considerations***

With the level of Lac Seul having peaked in mid-June, levels for the first part of the summer remained between upper quartile and upper decile. Going forward, regulation should prioritize a gradual decrease in the lake level towards the fall level targets.

Ideal or desirable regulation objectives for the next few months, based on input provided to the Board, include the following:

- When flow capacity exists downstream in Manitoba, Lac Seul outflow should be regulated so that the lake level remains below 356.61 m (1170.0 ft).
- Lac Seul level and outflow should be managed to reduce flood risk on the lake and downstream in Ontario and Manitoba.
- Attempt to meet the preferred Lac Seul, Pakwash Lake and English River levels for the fishery and tourist outfitter interests.
- The tourist outfitters' preferred summer maximum level for Lac Seul is 356.6 m (1170 ft).

- Supply water requested by Ontario Power Generation and Manitoba Hydro for hydroelectric energy generation; avoid spill in wet conditions and violation of low flow constraints in dry conditions.
- Maintain English River flow below 550 m<sup>3</sup>/s at Caribou Falls to avoid levels at Grassy Narrows above 319.6 m (1048.6 ft) during the tourist season (through to the weekend to after Thanksgiving).
- Use Lac Seul storage to offset Lake of the Woods high/low outflows for the benefit of users of the Winnipeg River in Manitoba.
- Lac Seul level and outflow should be managed to reduce the need to close the Lake St. Joseph diversion with resulting spill down the Albany River. However, the diversion should be closed to reduce impacts in the English and Winnipeg River basins under wet conditions.

## ***B) Adopted Strategy***

### **i) Low Inflow Conditions**

- Manage outflows as necessary to achieve and maintain the lake level above 355.9 m (1167.6 ft). If the required reductions would lead to English and/or Winnipeg River flows less than minimum requirements of the provincial power utilities, discussions would be necessary with the OMNRF in Red Lake and Sioux Lookout, as well as with Rightsholders and stakeholders, to determine an appropriate balance between upstream and downstream conditions.
- Communicate with First Nation communities on Lac Seul and the English River, and with Grand Council Treaty #3 to keep communities informed of the low water conditions and to assist in the determination of an appropriate balance of upstream and downstream interests.
- Severely restrict outflow to maintain lake levels above 355.2 m (1165.4 ft).

### **ii) Moderate Inflow Conditions**

- Due to higher inflow and water levels in recent years in the fall, strive to keep the lake level below 356.4 m (1169.3 ft), while balancing with other interests. Outflow should be at or below 450 m<sup>3</sup>/s to achieve these levels.
- Lac Seul outflow should be no lower than 100 m<sup>3</sup>/s to have the lake level stay above 355.8 m (1167.3 ft) while satisfying the overall objectives.
- Within the general outflow targets, supply water for hydropower production and for English River fishery concerns.
- If flows on the Winnipeg River in Manitoba are high, use the storage available in Lac Seul to minimize the water released downstream. However, Lac Seul levels throughout the entire regulation period should not be above 356.6 m (1169.9 ft).
- Lac Seul should be regulated to target for an end of October water level between 356.0 m (1168.0 ft) and 356.2 m (1168.3 ft) with outflow between 100 and 450 m<sup>3</sup>/s.

### iii) High Inflow Conditions

- Balance outflow with the rise in Lac Seul level to reduce flood risk both on Lac Seul and on downstream areas such as Pakwash Lake and the Winnipeg River in Ontario and Manitoba.
- Communicate with First Nation communities on Lac Seul and the English River, and with Grand Council Treaty #3 to keep communities informed of the potential for flooding and to assist in the determination of an appropriate balance of upstream and downstream interests.
- Outflow should remain at or below 450 m<sup>3</sup>/s for moderately wet conditions; at or below 500 m<sup>3</sup>/s for most conditions; and below 600 m<sup>3</sup>/s in all but extreme conditions.
- Lac Seul should be regulated to target for an end of October water level below 356.35 m (1169.1 ft) with outflow at or below 550 m<sup>3</sup>/s while the Lake St. Joseph Diversion remains open. The Lake St. Joseph diversion should be reduced to the extent feasible before Lac Seul outflow is increased above 550 m<sup>3</sup>/s. (The Lake St Joseph Diversion falls under LWCB authority when Lac Seul level is above 356.31 m (1169 ft) in June and above 356.62 m (1170 ft) in July through December.)
- Once the diversion is closed, regulate outflow to as high as 600 m<sup>3</sup>/s to prevent the lake exceeding 356.9 m (1170.9 ft), to as high as 800 m<sup>3</sup>/s to prevent the lake exceeding 357.1 m (1171.6 ft) and as high as necessary to ensure that the upper storage limit of 357.2 m (1171.9 ft) is not exceeded.

## **Lake of the Woods**

### *A) Seasonal Considerations*

Lake of the Woods level peaked in late June at the highest level since 1950 and has recently begun a steady decline. The lake is expected to return to the normal operating range of 321.87 to 323.47 m (1056.0 to 1061.25 ft) by late August or early September if weather is favourable. Regulation should strive to maintain a declining lake level with balanced outflow decreases once the lake returns to the normal operating range in consideration of water levels along the Winnipeg River.

Typical late summer and early fall water level objectives will not be achievable until the return to the normal operating range. The regulation objectives for the remainder of the high water period are as follows:

- Continue to regulate outflow from Lake of the Woods in accordance with the Lake of the Woods Convention and Protocol requirements and in coordination with the International Lake of the Woods Control Board, including maintaining the dams in Kenora fully opened while the level of Lake of the Woods remains above 323.47 m (1061.25 ft).
- Once the lake returns to the normal operating range, balance necessary outflow cuts to prevent over-drawdown of the lake with the rate of river level drop to avoid damage to river shoreline infrastructure.
- For recreational users on Lake of the Woods and the Winnipeg River, target water levels in the range of 322.75 to 323.0 m (1058.89 to 1059.71ft) with outflow between 300 and 700

m<sup>3</sup>/s. This lower-than-normal target range for the lake is to better facilitate shoreline infrastructure repairs.

- Within the regulation parameters for Lake of the Woods, regulate outflows to assist in meeting targets/preferences for the Winnipeg River in Manitoba.

### ***B) Adopted Strategy***

In coordination with the International Lake of the Woods Control Board, maintain maximum outflow from Lake of the Woods until the lake returns to the normal operating range and allowing for a gradual drop in Winnipeg River levels as the lake level-driven outflow falls.

Once the lake is within the normal operating range, adjust regulation based on prevailing basin inflow conditions as follows.

#### iv) Low Inflow Conditions

- Communicate with First Nation communities on Lake of the Woods and the Winnipeg River, and with Grand Council Treaty #3 to keep communities informed of the low water conditions and to assist in the determination of an appropriate balance of upstream and downstream interests.
- Reduce outflow to as low as 150 m<sup>3</sup>/s to prevent the lake from declining below 322.7 m (1058.7 ft) for July through September and below 322.6 m (1058.4 ft) in October.
- Maintain, or reduce, outflow to as low as 100 m<sup>3</sup>/s to prevent to lake from declining below 322.5 m (1058.1 ft) through the regulation period.
- If Lake of the Woods level is projected to drop below 322.4 m (1057.7 ft) reduce outflow to as low as 70 m<sup>3</sup>/s, following discussion with OMNDNRF and OMECP regarding fishery and water quality concerns.
- If Lake of the Woods level is projected to drop below 322.4 m (1057.7 ft) during the regulation period, notify the City of Winnipeg such that preparations can be made to ensure that seasonal water demands are met through the period.

#### ii) Moderate Inflow Conditions

- Adjust outflow to as high as 800 m<sup>3</sup>/s to fall to and maintain a lake level no higher than 323.0 m (1059.7 ft).
- Consider impacts to Winnipeg River interests when reducing outflow knowing level drops on the river will be significant.
- Lake of the Woods should be regulated to target for an end of October water level between 322.8 m (1059.0 ft) and 323.0 m (1059.7 ft). The preferred level on October 31 would be no higher than 322.9 m (1059.4 ft) with outflow between 300 m<sup>3</sup>/s and 700 m<sup>3</sup>/s.

#### v) High Inflow Conditions

- Balance higher water levels on the lake with the impact of high outflows downstream, both in Ontario and Manitoba.
- Communicate with First Nation communities on Lake of the Woods and the Winnipeg

River, and with Grand Council Treaty #3 to keep communities informed of the potential for flooding and to assist in the determination of an appropriate balance of upstream and downstream interests.

- Adjust outflow to as high as 900 m<sup>3</sup>/s to maintain the lake level (or projected level) below 323.3 m (1060.7 ft). However, under some circumstances, it may be appropriate to adjust outflows to accommodate changing inflows, to provide a storage buffer to reduce the risk of higher lake levels or outflows, or to provide relief to the lake or river.
- Regulate Lake of the Woods outflow to target an end of October water level between 322.7 m (1059.0 ft) and 323.0 m (1059.7 ft) with outflow at or below 800 m<sup>3</sup>/s.
- Regulate Lake of the Woods outflow to target an end of October water level between 323.0 and 323.20 m (1059.71 and 1060.38 ft) with outflow at or below 900 m<sup>3</sup>/s.
- Where feasible in meeting the above objectives, limit outflow increases/reductions to 100 m<sup>3</sup>/s per week.
- Adjust outflow as necessary to maintain the lake level (or projected level) below 323.47 m (1061.25 ft).