Adopted Regulation Strategy
Lake of the Woods Control Board
January 15, 2020

The Lake of the Woods Control Board held a Regulation Consultation call on January 15, 2020 and adopted a regulation strategy for the period until end of March. The strategy was formulated considering basin conditions, hydrological and meteorological forecasts, and the input of the various interests concerned with basin management. Input was provided in written 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.

Lac Seul

A) Seasonal Considerations

Ideal or desirable regulation objectives for the remainder of the winter, based on input provided to the Board, include the following:

- Operate Lac Seul primarily as a hydropower reservoir to benefit downstream hydropower plants in Ontario and Manitoba, but with consideration of other interests, such as the fishery.
- To the extent possible, limit winter drawdown on Lac Seul to provide good spring spawning conditions and to protect eggs of fall spawning fish (i.e. to minimize whitefish egg exposure and mortality).
- Use Lac Seul storage to offset Lake of the Woods high/low outflow for the benefit of users of the Winnipeg River in Manitoba.
- Avoid closing the Lake St. Joseph diversion with resulting spill down the Albany River provided Lac Seul level targets are attainable in balance with downstream interests.

B) Adopted Strategy

The regulation of Lac Seul over the winter should continue to focus on effective drawdown as a hedge against wetter spring conditions while avoiding flows which may be damaging along the English River downstream.

i) Early March Target Level

- Regulate the level of Lac Seul so that the level on March 1 is limited to a maximum of 355.70 m / 1167.0 ft.
- The end-of-winter (April 15) target level for Lac Seul should be set during the LWCB's March Regulation Meeting, taking current conditions and forecasts into account.

ii) End-of-winter (April 15) Target Level

- Regulate the level of Lac Seul so that the level on April 15 is limited to a maximum of 355.20 m / 1165.4 ft.

iii) Winter flows to meet targets

- To meet minimum winter peak power demands in Manitoba, winter core period flows on the Winnipeg River in Manitoba should be no lower than:
  - ◊ 485 m^3/s from mid-November to end-November and mid-February to mid-March
  - ◊ 685 m^3/s from December to mid-February.
- Before reducing flow through the Root River Diversion if under LWCB authority, increase Lac Seul outflow to as high as 550 m^3/s as needed to meet above level targets.
- If 550 m^3/s is insufficient outflow to stay below 355.6 m / 1166.7 ft after March 1, aim to limit or close the diversion into Lac Seul whether or not the Lake St. Joseph diversion is under LWCB authority. (Note: The Board only has authority to restrict diversion flow when Lac Seul exceeds certain levels as defined in the Lake of the Woods Control Board Act. However, Manitoba can restrict diversion flow when Winnipeg River flows in Manitoba exceed 963 m^3/s and OPG can also be requested to restrict diversion flow voluntarily.)
- Once the diversion is closed, increase outflow to the extent necessary to ensure that the level between March 1 and April 15 is no higher than 355.8 m /1167.3 ft.

Lake of the Woods

A) Seasonal Considerations

Ideal or desirable regulation objectives for the remainder of the winter period (to March 31), based on input provided to the Board, include the following:

- Adjust lake level and outflow to achieve a balance between upstream and downstream interests, as inflow dictates. Plan winter drawdown to provide the appropriate balance between the various interests.
- For Winnipeg River shoreline protection in Ontario and Manitoba, limit the rate of change of outflow from Lake of the Woods where feasible.
- Regulate Lake of the Woods outflow to assist in providing satisfactory freeze-up conditions on the Winnipeg River to avoid frazil ice problems and a high freeze-up level.
- Limit winter drawdown on the lake to provide good spring spawning conditions, to protect the eggs of fall spawning fish and to reduce potential damage from ice.
- Within the regulation parameters for Lake of the Woods, regulate outflow to assist in meeting targets/preferences for the Winnipeg River in Manitoba.

B) Adopted Strategy

End-of-winter Levels (typically end-March)

- The Board's approach in recent years has been to aim for somewhat lower summer levels. To achieve this in the long term, the overall level range targets are moved downward. The end-of-winter level, based on factors other than winter inflow, is ideally 322.38 m/ 1057.7 ft and preferably no higher than 322.5 m / 1058.0 ft. However, the actual end-of-winter level will

vary depending on the winter inflow received. Given the exceptionally high fall flows heading into freeze-up, hedge towards a target an end-of-winter target level of 322.30 to 322.35m / 1057.4 to 1057.6 ft.

- The preferred end-of-winter level for fishery interests as defined by the OMNR is no lower than 322.5 m / 1058.0 ft, subject to consideration of potential negative impacts downstream. In addition, for fall spawning fish, the preferred maximum drawdown during the winter is no more than 30 cm / 1.0 ft. However, for south shore property owners, who would like to see lower summer levels, lower end-of-winter levels would be preferable. The Minnesota DNR supports this position and has stated that lower spring water levels do not negatively impact the fishery in their portion of the lake.
- The preferred winter flow for H2O Power LP, to maximize their hydropower production, is 400 to 470 m^3/s at the Lake of the Woods outlet. OPG would prefer flows closer to 575 m^3/s at Whitedog Falls and Manitoba Hydro's flow preference for the Winnipeg River in Manitoba is 960 m^3/s.
- Direct gradual reductions in Lake of the Woods outflow through January and February to maintain drawdown towards a re-examining the end-of-winter target level at the March Regulation Meeting. At that time, there will be more information on snowpack risk and any decisions by the IJC's Water Levels Committee concerning use of the Rainy Lake high flood risk rule curve. Should there be below-normal snowpack, an early start to freshet, or other indicators of reduced high spring inflow risk, the end-of-winter target may be revised upward to the typical 322.38 m/ 1057.7 ft.