

**Adopted Regulation Strategy
Lake of the Woods Control Board
March 19, 2025**

The Lake of the Woods Control Board held a Regulation Meeting in Kenora on March 19, 2025, when it adopted a Regulation Strategy to guide operations through the end of June 2025. 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>.

At the Regulation Meeting, winter conditions were reviewed with a focus on differences in snowpack and winter severity between the southern and northern portions of the basin. Snowpack was below average around Lake of the Woods and along the Rainy River. Underlying drought conditions in the Rainy-Namakan basin, further point towards the potential for average to below normal spring inflow to Lake of the Woods, driven by baseflow and snow melt. In the English River basin, snowpack was close to normal and tributary baseflows were also in the normal range. These factors point towards spring inflows supporting refill of Lac Seul if normal spring precipitation develops. Lake levels at the start of spring are low normal allowing for sufficient storage to absorb spring inflows. There is some uncertainty in longterm precipitation forecasts, which indicate equal chances of above or below normal precipitation for April, May and June. For these reasons, the adopted strategy recommends managing outflows to maintain increasing lake levels on Lake of the Woods, and achieve gradual refill on Lac Seul, while considering the impacts of low or high flows on downstream river interests.

The strategy aims are focused on two periods including regulation until the end of winter (nominally March 31 for Lake of the Woods and April 15 for Lac Seul) and the refill period for the major lakes from the end of winter to June 30. The strategy includes 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.

Lac Seul

A) Seasonal Considerations

At the October 2024 Regulation Meeting, the Board set a target level range for March 1st of a maximum of 355.5 m (1166.3 ft), and preferably no higher than 355.15 m (1165.2 ft). Under moderate inflow conditions, an additional target of an elevation no lower than 354.87 m (1164.4 ft) was also considered. These targets were met, with Lac Seul level at 354.97 m (1164.6 ft) on March 1st. Outflow was held, as per the strategy, in the range of 300 to 400 m³/s, providing preferred core winter flows on the Winnipeg River in Manitoba. Outflow was reduced to 300 m³/s

at the end of February to slow level drawdown heading into March and prepare for the next set of level targets at the end-of-winter.

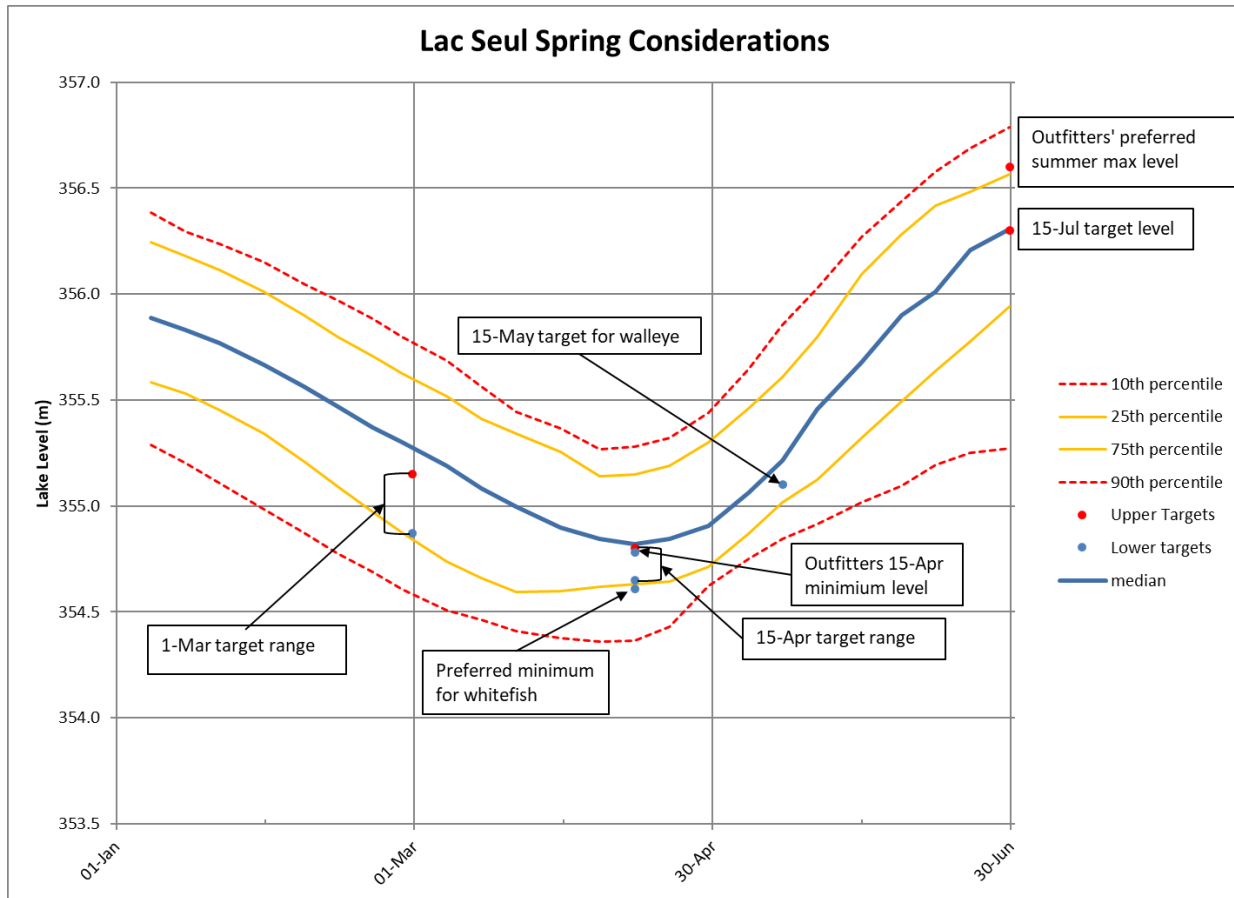
Based on snowpack and tributary baseflows, the Secretariat expects spring inflows will be sufficient to support refill if normal rainfall conditions develop. As presented in the scenarios below, the Secretariat recommends an end-of-winter (April 15) level between 354.65 and 354.80 m (1163.6 and 1163.9 ft), Depending on precipitation over the next six weeks, adjustments to outflow should be made in March and April to target a level within this range that is suitable for the start of the refill period.

To support spawning conditions and navigation in early spring, it is desirable to have the lake level rising after mid-April. However, rising lake levels must be balanced against a future risk of high water. The points below reflect ideal or desirable regulation objectives over the next few months, based on input provided to the Board.

- Regulation of Lac Seul level and outflow should consider the preferred Lac Seul, Pakwash Lake and English River levels for the fishery and tourist outfitter interests, to provide good spring spawning conditions and adequate navigation levels at the start of the walleye fishing season.
- Lac Seul level should be constant or rising after April 15 for spring spawning fish.
- The minimum spring lake level should be no more than 1.5 m (4.9 ft) below the November 1st level, which was 356.08 m (1168.2 ft) for whitefish. For 2025, an April 15 level within the target range would result in an overwinter drawdown between 1.28 and 1.43 m (4.2 and 4.7 ft).
- The desirable lake level on May 15 is no less than 355.1 m (1165.0 ft) for the walleye fishery.
- The Lac Seul tourist outfitters' preferred minimum spring level is 354.78 m (1163.98 ft) and preferred summer maximum level is 356.6 m (1170.0 ft).
- Lac Seul level and outflow should be managed to supply water requested by Ontario Power Generation and Manitoba Hydro for hydroelectric energy generation, to avoid spill in wet conditions and violation of low flow constraints in dry conditions. Ontario Power Generation specifically prefers to operate Lac Seul between elevation 354.2 m (1162.07 ft) and 356.8 m (1170.60 m) under normal conditions.
- A minimum flow of 180 m³/s below Manitou Falls is desirable to support spring spawning. If there is not sufficient water to meet this criterion, Lac Seul discharge should be set to maintain a uniform flow through the spawning period.
- Maintain English River flows that lead to an inflow at Caribou Falls below 550 m³/s to avoid levels at Grassy Narrows above 319.6 m (1048.6 ft) during the tourist season (May long weekend to after Thanksgiving).
- Lac Seul storage should be used to offset Lake of the Woods high/low outflow for the benefit of users of the Winnipeg River in Manitoba.
- Maintain Nutimik Lake levels in the preferred range of 274.78 to 275.23 m (901.5 to 903.0 ft), to the extent possible, by managing outflow from both Lake of the Woods and Lac Seul.
- 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 nevertheless be closed to reduce impacts in the English and Winnipeg River basins under wet conditions.

- If inflow is above normal by May 15 and Lac Seul level meets the preference for that date, adjust outflow in May and June to target a July 15 elevation of 356.3 m (1169.0 ft), thereby reducing the risk of higher outflows in late summer due to severe storms that have become typical for that time of year.



B) Adopted Strategy

To April 15 (Drawdown Period)

Gradual Lac Seul outflow adjustments should be made through March and early April to target an end-of-winter (April 15th) level range between 354.65 and 354.80 m (1163.6 and 1163.9 ft). If freshet has not begun by this date, adjust outflow to hold the level constant to the extent practical. Should freshet begin before this date and the target has not been reached, allow refill to begin, adjusting outflow in consideration of the following:

- the inflow rate and volume;
- the potential for ice damage due to level rise on both the lake and the river;
- the potential for less-than-normal spring rainfall leading to less-than-normal refill, and;
- the need to maintain storage room in the lake to handle higher inflow during refill.

After April 15 (Refill Period)

The risk of high water must be balanced against the risk of not meeting refill goals if spring runoff and rainfall are below normal. As such the Board should set outflow to be responsive to spring conditions as they develop. This will allow outflow to be increased or decreased relatively quickly in response to rainfall. Since spring rainfall is highly variable and precipitation forecasts are unreliable beyond horizons of more than a few days, regulation must be continually updated, and outflow adjusted in response to changing conditions and forecasts.

i) Low Inflow Conditions

- Outflow should be managed to ensure that Lac Seul level does not decline, and preferably rises, while providing sufficient outflow to meet downstream hydropower generation and fishery requirements.
- 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.
- The end-of-June level for Lac Seul should be:
 - No lower than 355.46 m (1166.2 ft)
 - with an outflow no lower than 100 m³/s
 - and combined Winnipeg River flows no lower than 600 m³/s.
 - No lower than 355.1 m (1165.0 ft)
 - with an outflow no lower than 25 m³/s
 - and combined Winnipeg River flows no lower than 300 m³/s.
- Consultation with interests, including Ontario Ministry of Natural Resources and Forestry (OMNRF) staff, tourist outfitters and the provincial hydro power operators, may be necessary to arrive at the appropriate balance between lake levels and outflows.
- If inflow remains low throughout the refill period, outflow should be adjusted to maintain a balance between upstream and downstream interests. Note that a lower decile outflow for May is approximately 50 m³/s.

ii) Moderate Inflow Conditions

- Due to concerns of high water, regulate through the refill period to hedge against wetter conditions, so that the risk of outflow above 500 m³/s is reduced.
- Target for a lake level between 355.45 and 355.75 m (1166.2 and 1167.2 ft) on June 1, while supplying water for hydropower production and for English River fishery concerns.
- Maintain desired fishery flows in the English River below Manitou Falls, provided this does not cause high flow conditions on the Winnipeg River in Manitoba.
- Target for combined flows in the Winnipeg River in Manitoba between 675 and 960 m³/s.

iii) High Inflow Conditions

- As above, regulate through the refill period to hedge against wetter conditions, so that the risk of outflow above 500 m³/s is reduced.
- 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.

- Balance Ear Falls outflow with the rise in Lac Seul level to reduce flood risk both on Lac Seul and on downstream areas such as Pakwash Lake.
- Avoid high Lac Seul levels through the refill period by adjusting outflow to a maximum of 450 m³/s at lake levels below 356.0 m, 500 m³/s at lake levels below 356.25 m, and 600 m³/s at lake levels below 356.6 m.
- Increase outflow to as much as 800 m³/s to keep the level below 357.1 m (1171.6 ft).
- When Lac Seul is above the level at which the Lake St. Joseph diversion comes under Board jurisdiction [356.01 m (1168.0 ft) until the end of May; 356.31 m (1169.0 ft) for June], the diversion flow should be reduced before increasing Lac Seul outflow to more than 550 m³/s.

Lake of the Woods

A) Seasonal Considerations

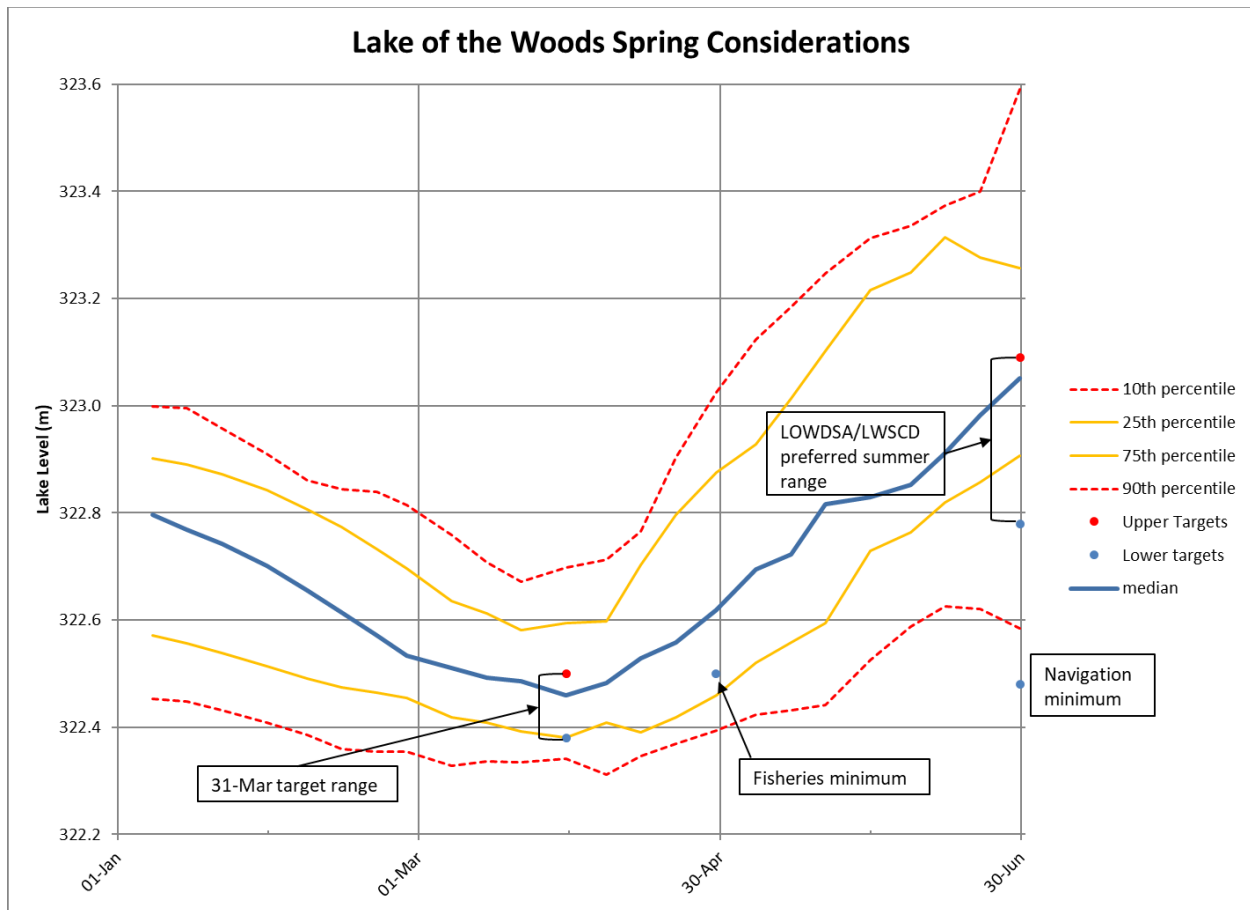
The Lake of the Woods end-of-winter (March 31) target level range set in October was 322.38 m to 322.50 m (1057.7 to 1058.1 ft). The level of Lake of the Woods was 322.43 m (1057.8 ft) on March 7th, a 20th percentile level for early March. This level is within the end-of-winter (March 31) target level range. The Secretariat recommends continuing the gradual drawdown of the lake through to the end of March to target a level that is close to 322.40 m (1057.7 ft), positioning the lake level closer to the bottom of the target range set in October.

The Secretariat recommends that regulation hedge against the risk for lower-than-normal spring inflow, while balancing the potential for above normal spring rainfall. Current conditions indicate that runoff from snowpack may be slightly below normal, and with low inflow to the lakes in the Rainy-Namakan basin, outflow from Rainy Lake may also be on the low end this spring if normal or below-normal precipitation develops. The presence of deeply frozen ground could however increase the risk of high runoff to Lake of the Woods, should an early spring rainfall occur. The Secretariat therefore recommends adjusting outflows to ensure gradual refill of the lake once temperatures rise and there is evidence of runoff from the snowpack. The Secretariat also recommends monitoring conditions and adapting outflow to any changes in inflow that may develop due to local rainfall, or operations at Rainy Lake.

The points below reflect ideal or desirable regulation objectives over the next few months, based on input provided to the Board.

- Adjust lake level and outflow to achieve a balance between upstream and downstream interests, as inflow dictates.
- Minimize ice damage due to rising water levels when possible. Ice damage is greater in the spring if there are rapid changes in water level (on either the lake or the river) and especially if the level rises while there is still a solid ice cover.
- The preferable end-of-April level for Lake of the Woods fishery is no lower than 322.5 m (1058.0 ft). Higher levels would be beneficial to northern pike.

- Regulate to avoid, to the extent possible, any reductions in outflow or any large increases in outflow during the spring spawning season on the Winnipeg River (late April to early June).
- For loons on the Winnipeg River, flow changes during the incubation period (approximately mid-May to the end of June) should be minimized.
- Property owners of the Lake of the Woods District Stewardship Association and the Lake of the Woods Soil and Water Conservation District prefer to avoid high levels and, to benefit recreation, prefer a summer level in the range of 322.78 to 323.09 m (1059 to 1060 ft).
- For navigation, summer water levels below 322.48 m (1058 ft) can cause navigation difficulties for larger boats trying to access the Rainy River, Warroad and the Northwest Angle.
- For wild rice on Lake of the Woods and the Winnipeg River, maintain lower lake and river levels and minimize level and flow increases during the floating leaf stage in June and early July.
- Property owners of the Lake of the Woods District Stewardship Association on the Winnipeg River at Minaki prefer Lake of the Woods outflows to remain below 700 m³/s to avoid rising river levels and impacts to docks and other infrastructure.
- Within the regulation parameters for Lake of the Woods, regulate outflow to assist in meeting targets/preferences for the Winnipeg River in Manitoba.
- The Whiteshell Cottages Association prefers Nutimik Lake levels in the range of 274.78 to 275.23 m (901.5 to 903.0 ft), by managing outflow from both Lake of the Woods and Lac Seul.



B) Adopted Strategy

Until March 31st (Drawdown Period)

Manage outflow to reach a March 31st level between 322.38 m to 322.50 m (1057.7 to 1058.1 ft) provided freshet does not begin before April 1. If freshet has not begun by this date, outflow should be adjusted to hold the level within the above range to the extent practicable. Should freshet begin before this date, the Secretariat recommends beginning the refill period, and adjusting outflow in consideration of the following:

- the inflow rate and volume;
- the potential for ice damage due to level rise on both the lake and the river;
- the potential for less-than-normal spring rainfall leading to less-than-normal refill, and;
- the need to maintain storage room in the lake to handle higher inflow during refill.

After March 31st (Refill Period)

Historically, the refill rate of Lake of the Woods is a factor more of the timing and magnitude of spring rainfall than of snowpack at end of winter. Since spring rainfall is highly variable and precipitation forecasts are unreliable beyond horizons of more than a few days, regulation must be continually updated, and outflow adjusted in response to changing conditions and forecasts.

i) Low Inflow Conditions

- Adjust outflow as necessary (subject to minimum flow requirements) to keep the lake from declining.
- If feasible, reduce outflow no lower than 100 m³/s to allow for lake level rise through the spring.
- 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.
- Seek advice from OMNRF on the status of Winnipeg River spawning throughout the spring. Avoid Lake of the Woods outflow reductions during the spawning season (late April to early June), while ensuring the lake level does not decline. Where insufficient inflow to Lake of the Woods does not allow this, balance outflow reductions with the rate of decline of Lake of the Woods.
- Target a lake level above 322.78 m (1059.0 ft) at the end of June, if possible, with outflow no lower than 200 m³/s, for the benefit of recreational users of the lake.
- If inflow remains low throughout the refill period, outflow should be adjusted to maintain a balance between upstream and downstream interests.

ii) Moderate Inflow Conditions

- Assess conditions immediately before spawning, as described under “Low Inflow Conditions” above.
- Seek advice from OMNRF on the status of Winnipeg River spawning throughout the spring. Outflow increases should be kept moderate during the spawning period and reductions should be minimized.
- Set outflow as high as 700 m³/s to prevent the peak lake level from exceeding 323.0 m (1059.7 ft) for the benefit of property owners on the Winnipeg River.
- Set outflow as high as 800 m³/s to prevent the peak lake level from exceeding 323.09 m (1060.0 ft) for the benefit of property owners on Lake of the Woods.
- Target a lake level of 322.7 m (1058.7 ft) at the end of May and 322.9 m (1059.4 ft) at the end of June. Balance this by attempting to avoid outflow above the generation capability at Kenora and by optimizing hydroelectric generation downstream.
- If conditions permit through late May and June, limit Lake of the Woods outflow changes that would adversely affect nesting loons on the Winnipeg River.
- Balance the rate of lake level rise with river level fluctuations for the benefit of wild rice growth on both lake and river. Seek advice from First Nations and Grand Council Treaty #3 on the status of wild rice crops to better inform regulation decision-making.

iii) High Inflow Conditions

- Balance higher water levels on the lake with the impact of increased outflow 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.
- Avoid outflow above 800 to 900 m³/s if the lake level (or projected level) will remain below 323.20 m (1060.4 ft) in June. A flow of 900 m³/s on the Winnipeg River would

cause the level below the Norman Dam to rise 1.4 m (4.6 ft) above normal, whereas a lake level of 323.2 m (1060.4 ft) is only 15 cm (6 in) above median at the end of June.

- Increase outflow as necessary to prevent the lake level (or the projected level) from rising above 323.47 m (1061.25 ft), which is the legislated top of the normal operating range.
- Where feasible, limit outflow increases to a maximum of 100 m³/s per week, except during the spawning season when it would be desirable to not exceed 50 m³/s per week. Persistent higher inflow could, however, necessitate outflow increases of 200 m³/s per week or more.
- Seek advice from OMNRF on the status of spawning throughout the spring to better inform regulation decisions.