Water Levels Focus: KISS – Keeping It Simply Spring
Full Article *TIA Water Levels Committee (3/22/22) & (updated 4/1/22)*

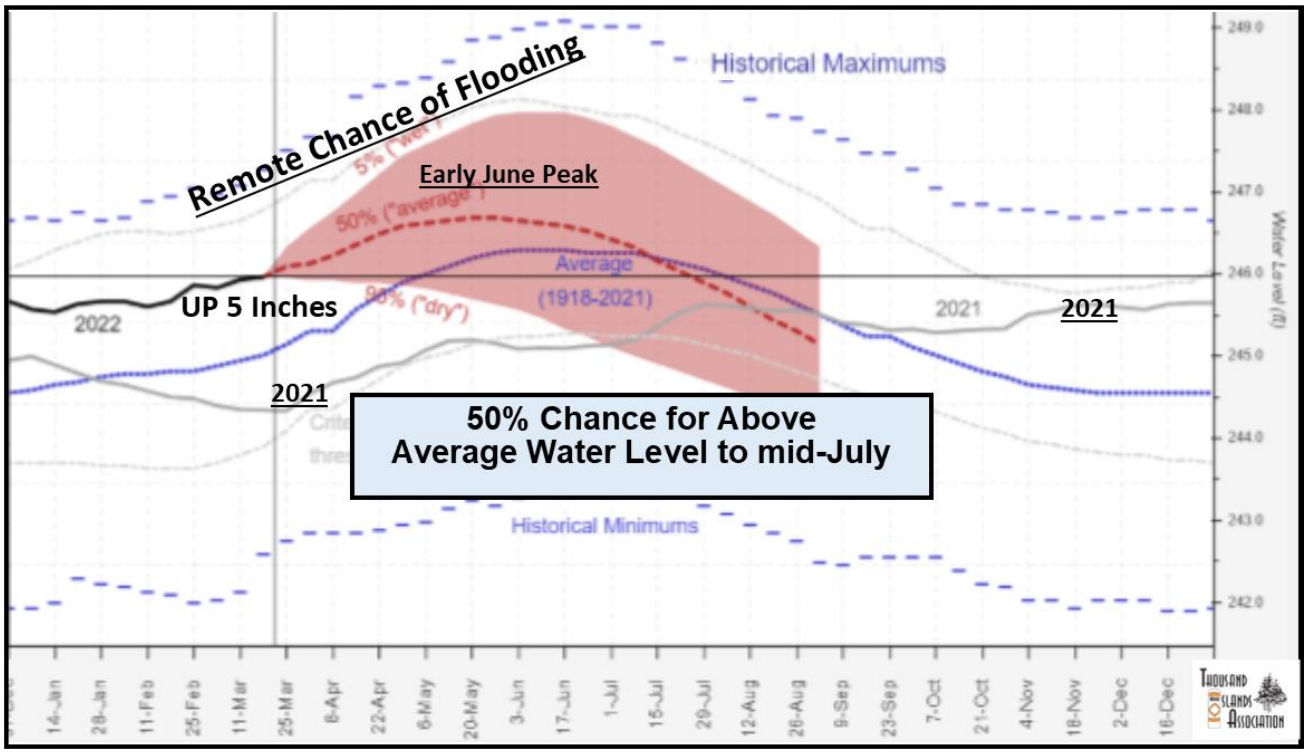
The IJC & ILOSLR Board have adopted a new policy to **make water levels PERFECT** at your dock in 2022! ***(April Fools!)***

From the latest forecast chart, we foresee (at 50% chance):

- No flooding, water levels remain above average until at least mid-July
- 2022 is a mirror image of 2021 – water levels higher in the spring & lower in the fall
- The Seaway Opening was Tuesday, March 22nd. Spring is right on schedule!
- Channels are open, while bays, docks, & shoreline are still frozen – perch are biting!

Lake Ontario Water Level Forecast

25 March through 2 September 2022 — (issued on 17 February)



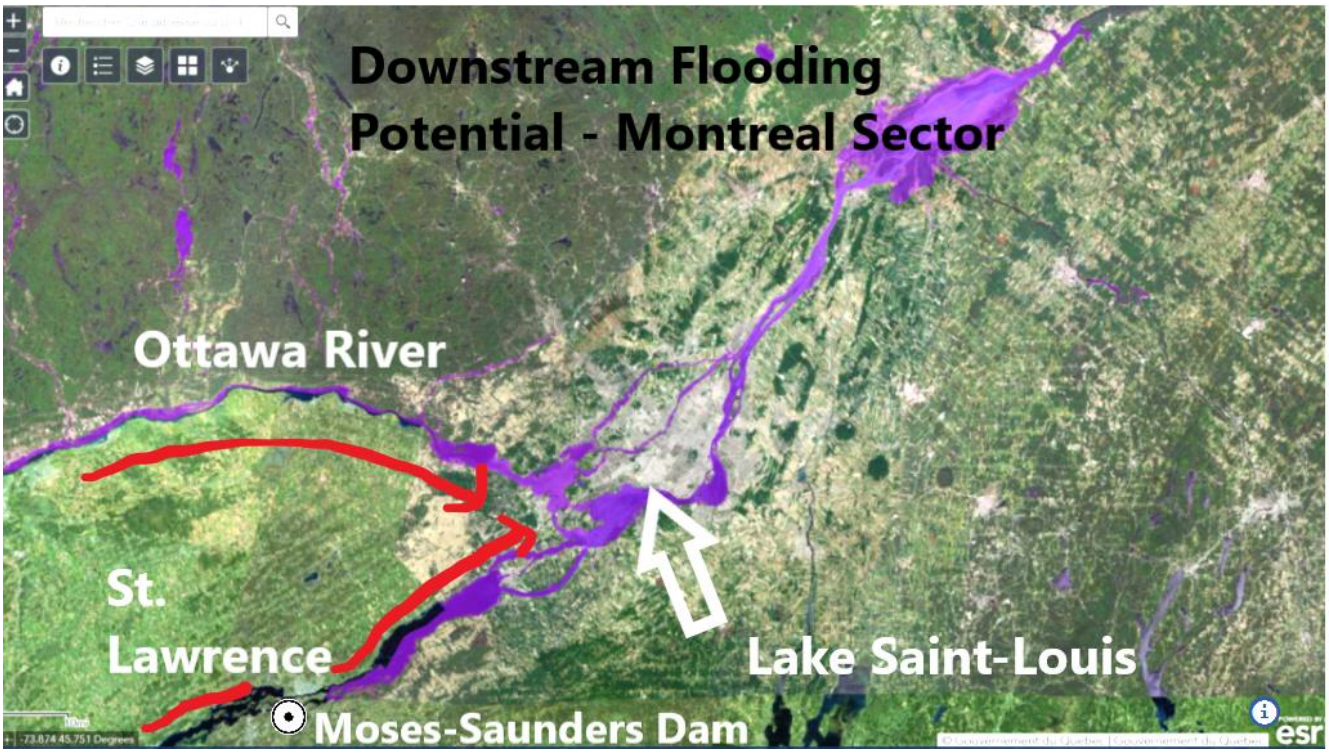
https://ijc.org/en/loslrb/watershed/forecasts Edits by TIA

- **Ottawa River freshet** main flows have increased, due to snowmelt/recent rainfall, but vary according to seasonal temperatures and associated snow melt
- Ottawa River flows are currently above average, and signs point to an early freshet
- Higher early flows and moderate snowpack are good indicators for an unremarkable freshet affecting Montreal and further downriver
- The Good News: A moderate and early freshet means less chance for Lake Ontario/St. Lawrence River outflows to be significantly reduced later in spring, meaning less chance for flooding in our Lake Ontario/St. Lawrence River Basin

Why do we Upper St. Lawrence folks care about the Ottawa River Basin?

The following map image illustrates a few key concepts:

1) Red arrows indicate the flow of the Ottawa and St. Lawrence Rivers, and how the two major basin outflows **converge at Montreal** (Lake St. Louis)
2) Purple represents areas of potential flooding during the spring freshet… (image from previous flood mapping in 2017/19)
3) Lake St. Louis/Pointe Claire is the primary site where the ILOSTR Board monitors for water levels, and uses this to determine F-limit *(see section below for details on the F-Limit)*
4) Moses-Saunders dam is the **ONLY** control structure used to regulate Lake Ontario/St. Lawrence River outflows according to the F-Limit – outflows are slowed at the dam in an attempt to balance flooding upstream and downstream



Learn more about the Ottawa River Basin – useful Links:

- March TIA Water Levels FULL ARTICLE with details, maps and images about how the Ottawa River & Basin affects Lake Ontario levels
- Ottawa River Regulation Planning Board (this is an excellent website): https://ottawariver.ca/

Spring can be a very active time of year for balancing outflow changes!

Check out this March 24th update from the ILOSLR Board's Regulation Summary:

> **March 24, 2022 – *Updated March 31st***
>
> Water levels in the lower St. Lawrence River have risen in response to recent rainfall. The outflow of Lake Ontario will be adjusted in accordance with **F Limit** of Plan 2014. Since the level of Lake Ontario is below 75.3 m (247 ft), the first F-limit tier applies and the outflow will be adjusted to maintain a maximum level of 22.10 m at Lake St. Louis (measured at Pointe Claire).
>
> The **F Limit** is designed to balance flooding and erosion impacts in the lower St. Lawrence River in consideration of the water levels of Lake Ontario and the upper St. Lawrence River. Conditions in the Ottawa River basin are being monitored closely.
>
> When conditions allow, the Lake Ontario outflow will be increased to the applicable Plan 2014 maximum **L limit** flow of 8,690 m^3/s (306,900 cfs).
>
> The **L Limit** flow is based on the current level of Lake Ontario and is the maximum flow that can be released while maintaining adequate levels and safe velocities for navigation in the International Section (upper portion) of the St. Lawrence River.
>
> *Update: For the week of April 2 through April 8, Lake Ontario's outflow is expected to be set to the applicable Plan 2014 maximum **L Limit** flow of 8,730 m^3/s (308,300 cfs).*
>
> For more information:
>
> - What is the **F Limit**? (See FAQ 4.8.2)
> - Early spring conditions in the Ottawa River basin: https://ottawariver.ca/early-spring-conditions-overview-in-the-ottawa-river-basin/
> - How does regulation of Lake Ontario outflows mitigate spring flooding conditions in the Montreal area? (See FAQ 2.9)
> - What is the **L Limit**? (See FAQ 4.8.5)
> - How can the regulation of Lake Ontario outflows impact commercial navigation? (See FAQ 5.3.1)

So what's happening to cause the F Limit to kick in?

We mentioned that Ottawa River freshet flows have increased. Starting a bit early this year, the flows through the Carillon dam rose above 3,000 m3/s on March 21st and 22nd, reached 4,162 m3/s on March 27th, and are still above 3,000 m3/s as of March 30th.

Combined with the high outflows through the St. Lawrence River, all that water raised Lake St. Louis up to the first tier of the F Limit, putting their water levels at the 22.1 meter mark.

The ILOSLR Board, therefore, is managing the outflow to keep Lake St. Louis from going above that first tier 22.1 meter mark. That level of the F limit would apply until Lake Ontario rose to a level of 75.3 meters (247 ft.) – then the 2nd tier of the F limit would be applicable (allowing Lake St. Louis to go to 22.2 meters until Lake Ontario went to 75.37 meters). Tier levels keep stepping up from there as seen in this table (taken directly from the Plan 2014 document):

Table B4.
Lake St. Louis (Pointe Claire) levels corresponding to Lake Ontario levels for limiting lower St. Lawrence River flooding damages (F limits).

Lake Ontario level (m, IGLD 1985)	Pte. Claire level (m, IGLD 1985)
< 75.3	22.10
≥ 75.3 and < 75.37	22.20
≥ 75.37 and < 75.5	22.33
≥ 75.5 and < 75.6	22.40
≥ 75.6	22.48

Is it likely that we will progress further up the tiers of the F limit? No, it's not – the outflow reductions being made right now are small, and there's still quite a bit of room before Lake Ontario would reach that first tier limit cutoff.

The most likely outcome is that Lake Ontario won't even get as high as that first tier (as can be seen in the forecast graph on the first page). If it does, hopefully that will be *after* the Ottawa River's spring freshet flows abate and Lake St. Louis levels fall so that the F Limit isn't a factor any longer.

Improving Plan 2014

- The **GLAM Committee** (Great Lakes Adaptive Management) completed Phase 1 of the expedited review of Plan 2014
- Videos explain this work and a copy of the report are available **here** – *public comments can be submitted until April 18th, 2022*
- The GLAM is working with the PAG (Public Advisory Group) to hold small informational sessions with key stakeholders in different stakeholder locations
- For our Thousand Islands region, TIA will be represented by Board member Vince Barton in the GLAM/PAG meeting
- ***Stay tuned for an update in next month's issue of River Talk!***

Seaway Update

The St. Lawrence Seaway opened on March 22nd for its 64th navigation season. The ***CSL Welland***, a Canada Steamship Lines Trillium Class bulk carrier, was the first ship to transit through the Welland Canal. *The commissioned artwork is titled "The Runners".*

(photo: St. Lawrence Seaway Management Corporation)

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