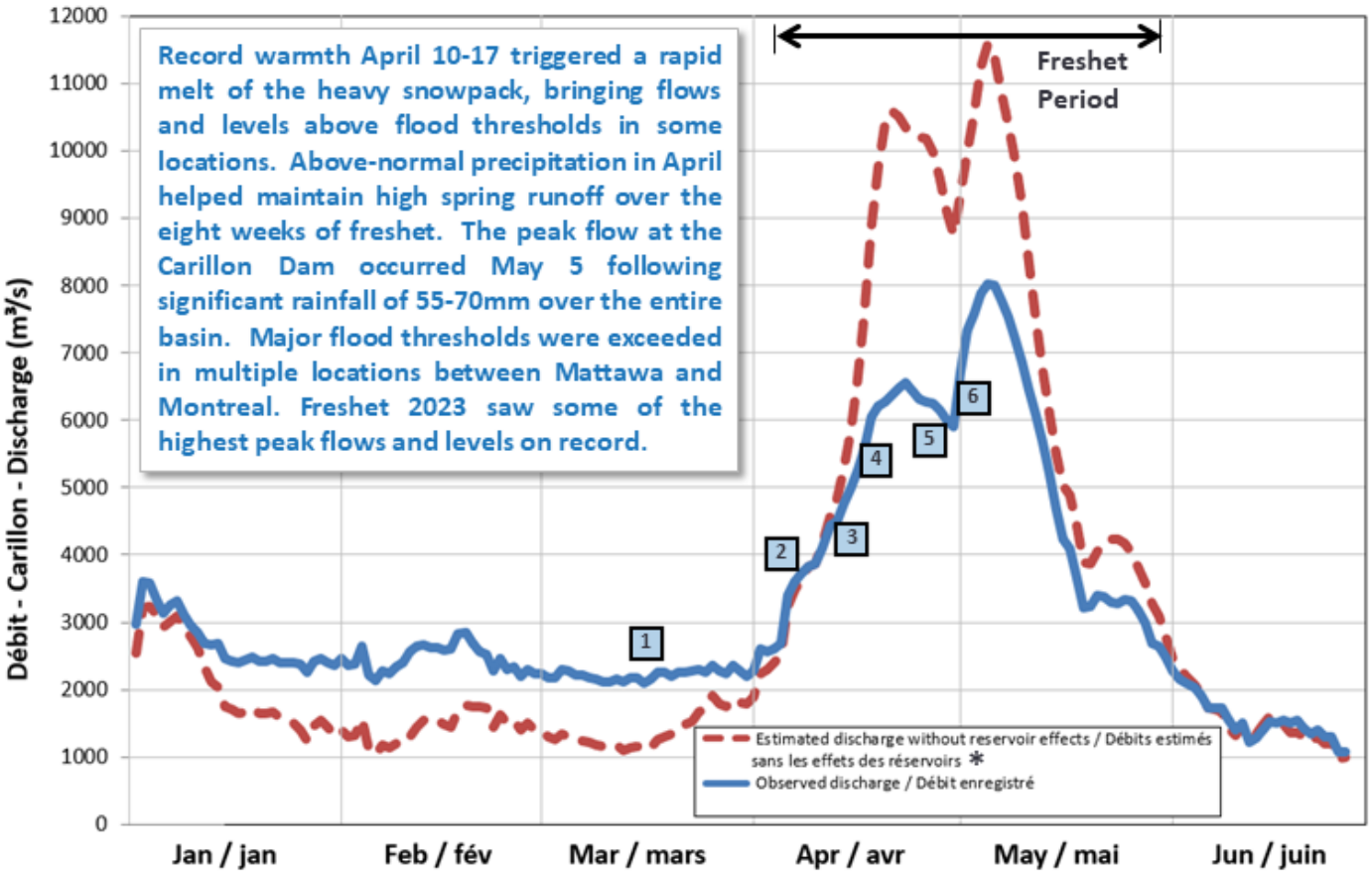
**Ottawa River Regulation Planning Board**

**Commission de planification de la régularisation de la rivière des Outaouais**

# Ottawa River Basin - 2023 Spring Freshet Review

## Discharges at the Carillon dam provide a good overview of freshet conditions on the river




**Bulletins and press releases to keep the public informed (see Latest News on our website)**

1. March 16 – Early Spring Conditions Overview
2. April 7 – Rising Ottawa River Water Levels
3. April 14 – Expecting Minor Flooding
4. April 17 – Expecting Major Flooding
5. April 28 – Update on Flood Risks
6. May 1 – Increasing Flood Risks

*Information on the natural lakes that existed prior to the construction of reservoirs (1911-1954) is sparse or missing. It is therefore only possible to estimate the natural (unregulated) discharge.

## Ranking of daily peak flows and levels along the Ottawa River

**Mattawa**
Start of Record Period: 1910

| Rank | Date | Daily Level (m) |
|---|---|---|
| 1 | 1960.05.15 | 155.78 |
| 2 | 1928.05.17 | 155.56 |
| 3 | 2019.05.11 | 155.53 |
| 4 | 1947.06.15 | 155.38 |
| 5 | 1979.05.04 | 154.85 |
| 6 | 1922.05.11 | 154.83 |
| 7 | 2023.05.02 | 154.69 |
| 8 | 1951.04.18 | 154.47 |
| 9 | 1945.06.02 | 154.46 |
| 10 | 1936.05.15 | 154.43 |

**Pembroke**
Start of Record Period: 1913

| Rank | Date | Daily Level (m) |
|---|---|---|
| 1 | 2019.05.12 | 113.69 |
| 2 | 1960.05.16 | 113.67 |
| 3 | 1928.05.13 | 113.65 |
| 4 | 1947.05.30 | 113.42 |
| 5 | 1951.04.17 | 113.34 |
| 6 | 1979.04.29 | 113.32 |
| 7 | 2023.05.03 | 113.31 |
| 8 | 1941.04.23 | 113.24 |
| 9 | 1922.04.22 | 113.22 |
| 10 | 1919.05.25 | 113.19 |

**Lake Deschenes at Britannia (Ottawa)**
Start of Record Period: 1916

| Rank | Date | Daily Flows ($m^3/s$) | Daily Level (m) |
|---|---|---|---|
| 1 | 2019.05.01 | 5,977 | 60.68 |
| 2 | 2017.05.07 | 5,368 | 60.44 |
| 3 | 1928.05.15 | 5,160 | 60.35 |
| 4 | 2023-05-06* | 5,144 | 60.35 |
| 5 | 1979.05.04 | 5,060 | 60.24 |
| 6 | 1951.04.19 | 4,821 | 60.21 |
| 7 | 1919.05.27 | 4,710 | 60.16 |
| 8 | 1922.04.23 | 4,710 | 60.16 |
| 9 | 1960.05.16 | 4,654 | 60.14 |
| 10 | 1974.05.20 | 4,450 | 59.99 |

**Carillon Generating Station**
Start of Record Period: 1962

| Rank | Date | Daily Flows ($m^3/s$) |
|---|---|---|
| 1 | 2019.04.30 | 9,217 |
| 2 | 2017.05.08 | 9,094 |
| 3 | 1976.04.04 | 8,190 |
| 4 | 1974.05.23 | 8,105 |
| 5 | 2023.05.05 | 8,015 |
| 6 | 1998.04.04 | 7,239 |
| 7 | 1983.05.12 | 6,907 |
| 8 | 1991.04.11 | 6,728 |
| 9 | 1979.05.06 | 6,686 |
| 10 | 1997.05.07 | 6,382 |

* Maximum daily level was observed on May 5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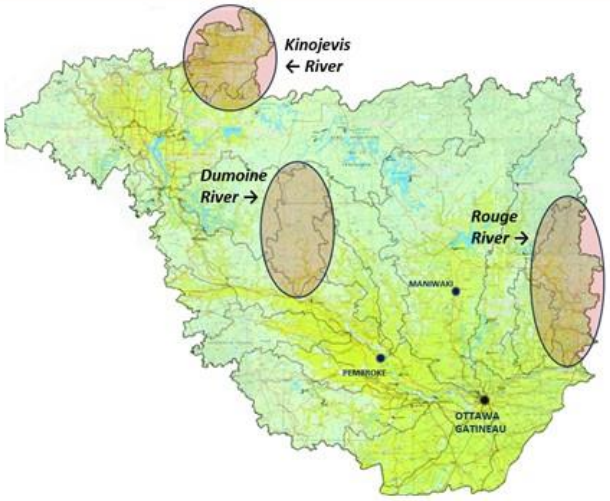
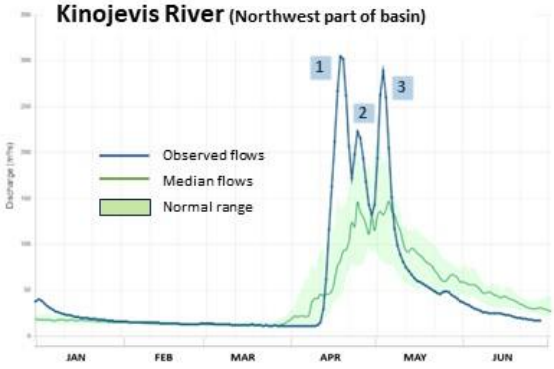
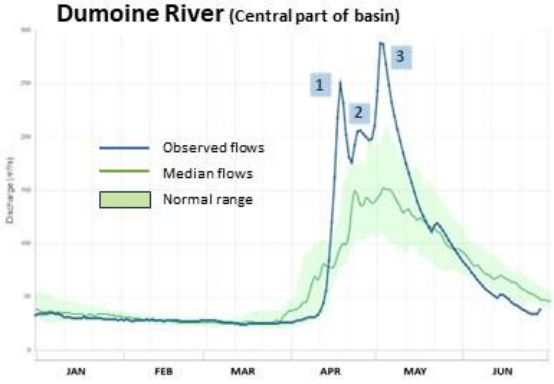
## Three significant weather events shaped the 2023 freshet

Flows observed in three unregulated tributaries of the Ottawa River illustrate the effects of three separate weather events on spring runoff (shown below).

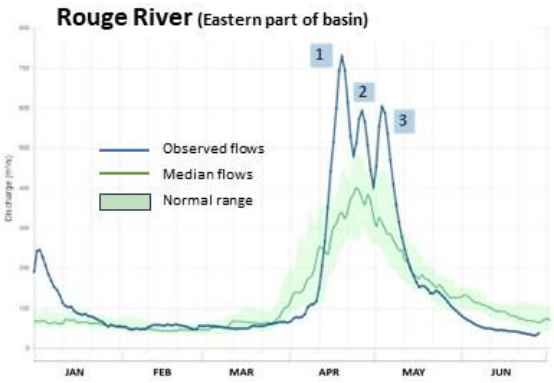



#1 – Record high 'summer like' temperatures of up to 30°C from April 10 to 17 caused the snowpack to melt more rapidly than normal.

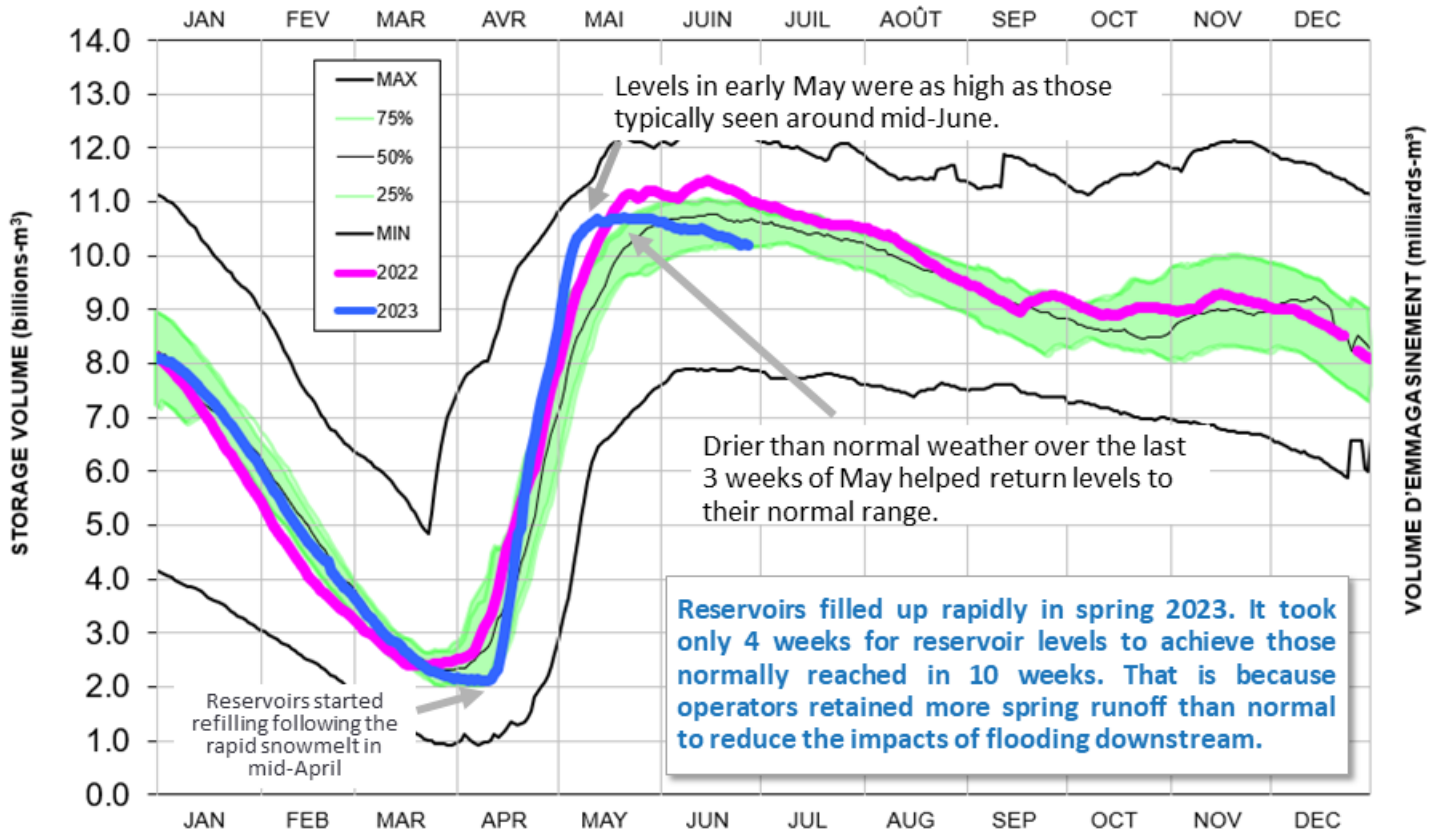



#2 – Precipitation of up to 35 mm fell on a large portion of the basin on April 22-23, when snowmelt runoff was still high in all tributaries and on the main stem of the Ottawa River.




#3 – Major precipitation event brought 55 - 70 mm of rain over much of the basin between April 29 and May 3, bringing flows and levels to a peak on the main stem of the Ottawa River a few days later.

## The amount of water stored in the 13 principal reservoirs of the basin




Note: Normal conditions (green band) based on the 25% and 75% percentiles and median (50% line) of 1992-2021 records.

## INFORMATION

General information about the Ottawa River Regulation Planning Board: About ORRPB

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