

Ottawa River
Regulation
Planning Board

Commission de planification de la régularisation de la rivière des Outaouais

# Ottawa River Integrated Management of the Principal Reservoirs

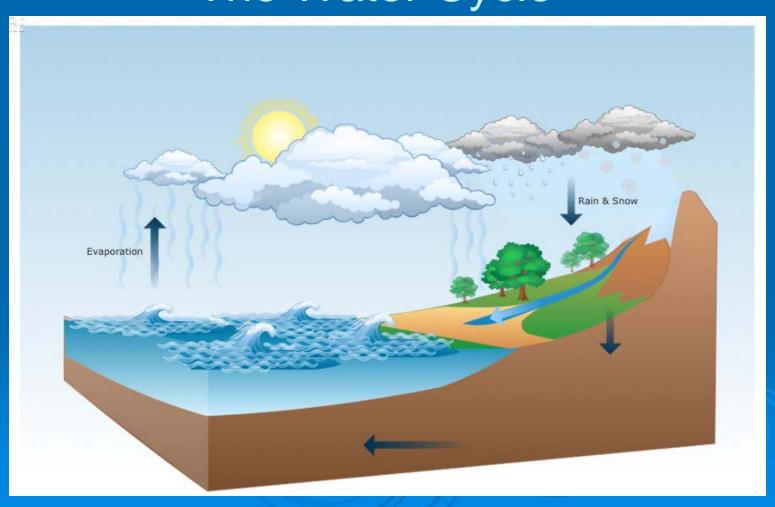
Michael Sarich Senior Regulation Engineer

Manon Lalonde Executive Engineer

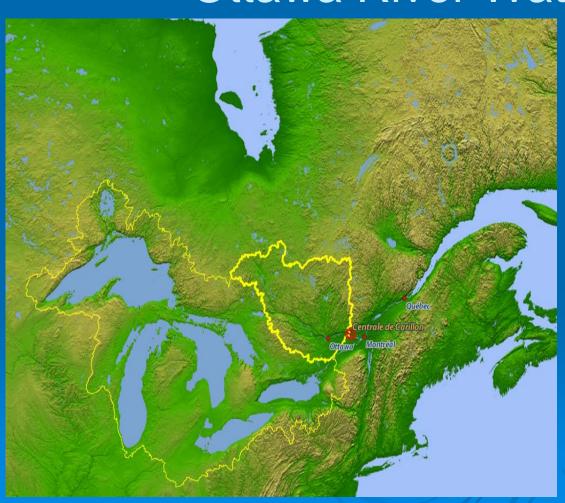
#### **Board Mandate**

- The Ottawa River Regulation Planning Board was established in 1983 to ensure integrated management of the flow from the <u>principal reservoirs</u> of the Ottawa River Basin.
- > The goal of this integrated management is to provide protection against flooding and maintain the interests of the various users particularly in hydro-electric energy production.

## The Water Cycle



#### Ottawa River Watershed



#### SPRING FLOODS VARY

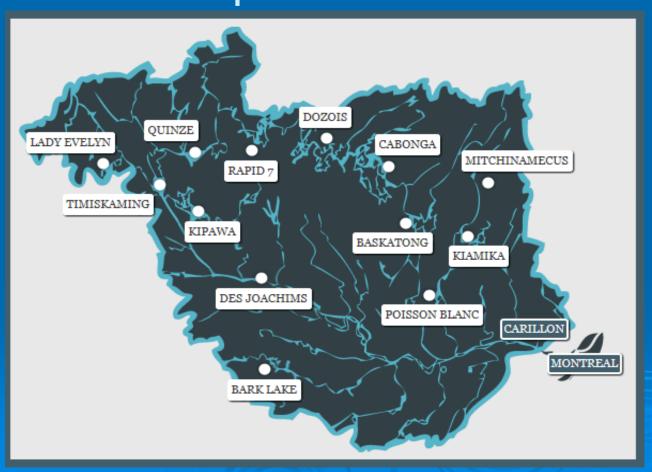
#### <u>1950-2016</u>:

Maximum daily flow at Carillon dam varied between 3,635 and 8,295 m3/s

#### <u>In 2017</u>:

Maximum daily flow on May 8th ~ 8,860 m<sub>3</sub>/s

## Principal Reservoirs



## The 1983 Canada-Ontario-Quebec Agreement

- **E**stablished:
  - Ottawa River Regulation Planning Board
  - Ottawa River Regulating Committee
  - Ottawa River Regulation Secretariat

#### **Board Members**

#### Quebec

Ministère du Développement durable, de l'Environnement, et de la Lutte contre les changements climatiques

Hydro-Québec

#### Canada

Public Services and Procurement Canada

Canadian Coast Guard

Environment and Climate Change Canada

#### **Ontario**

Ministry of Natural Resources and Forestry

Ontario Power Generation

#### **How is the Board Structured?**

Ottawa River Regulation Planning Board

Ottawa River Regulating Committee Ottawa River Regulation Secretariat

## Regulating Committee Members

Quebec

Canada

**Ontario** 

Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques

Public Services and Procurement Canada

Ontario Power Generation

Hydro-Québec

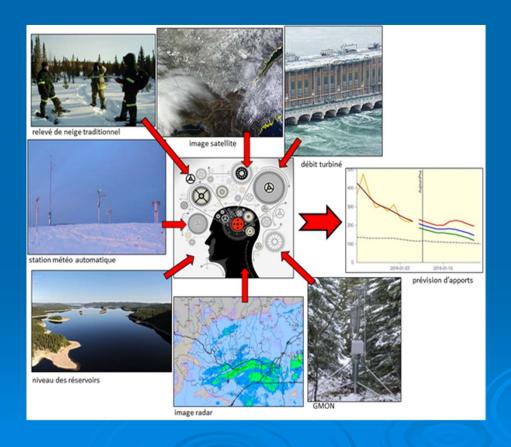
The Agreement signed in 1983 established that:

« Membership on the Regulating Committee shall be limited to Operators. »

### Daily Work of Regulating Committee

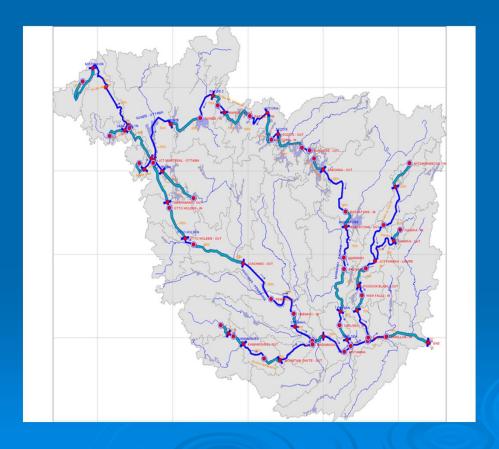
- Assess how much water
  - snowmelt, rainfall runoff?
- Assess water levels and flows
  - focus is on flood plains areas vulnerable to flooding
- Share data among Committee members
  - to optimize their flow management of reservoirs
- Disseminate results to provincial authorities / public

#### Assess How much Water



mathematical model of watershed hydrology

### Assess Water Levels and Flows



mathematical model of river hydraulics

## **Sharing of Data – Optimization** HQ **MRNF MDDELCC** FTP **PSPC OPG Others**

### Disseminate Flow Forecasts to Provincial Authorities

- MNRF Surface Water Monitoring Centre
  - Participate in daily conference calls & obtain model results
  - Transfer flow forecasts to provincial authorities responsible for flood advisories
- Secretariat brief local MNRF authorities
  - Participate in freshet calls
    - MNRF local District offices, municipal authorities
    - Conservation Authorities (Mississippi, Rideau Valley, South Nation)

#### Disseminate Flow Forecasts



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#### OTTAWA RIVER WATER LEVELS

OTTAWA/GATINEAU, Friday April 28, 2017 – The Ottawa River Regulating Committee cautions that water levels and flows along the main stem of the Ottawa River between Mattawa and the Montreal region will remain high for a sustained period of time. Well above normal April precipitation combined with snowmelt runoff have resulted in recent peak levels not seen in the last 20 years in many locations. Current meteorological forecasts are calling for additional rainfall of 30-60 mm over much of the Ottawa River basin. This additional precipitation is expected to once again increase levels that had been in decline.

Current weather forecasts predict very significant precipitation beginning Sunday, April 30<sup>th</sup> into Monday, May 1<sup>st</sup>. These weather conditions could cause rapid increases in levels and flows between Mattawa and the Montreal region. The increase in levels and extent of possible flooding will depend on the amount of precipitation received, the tracking of the storm as well as the amount of snowmelt in the north.

With current forecasts, northern snowmelt runoff combined with precipitation is expected to fill most northern reservoirs in the next few days. As a result, the capacity to retain additional runoff from the headwater areas in the north will be diminished. Residents of low-lying areas and communities located in areas prone to flooding along the Ottawa River are advised to monitor river conditions closely by consulting the daily update of river conditions on the ORRPB website at <a href="http://www.ottawariver.ca">http://www.ottawariver.ca</a> and checking with their local provincial agency that is responsible for issuing flood advisories.

#### Disseminate Flow Forecasts - NEW!

#### OTTAWA RIVER FORECAST FLOOD LEVELS

\*\*\* 2017-05-02 12:00:00 AM

	CURRENT LEVEL		FORECAST PEAK LEVEL		
	DATE-TIME	LEVEL (m) *	DATE	LEVEL (m) *	CHANGE (cm) **
MATTAWA	2017-05-02 10:00	153.78	2017-05-02	153.80	2
PEMBROKE	2017-05-02 8:00	112.90	2017-05-02	112.95	5
LAC COULONGE	2017-05-02 8:00	108.21	2017-05-04	108.35	14
LAC CHATS	2017-05-02 9:00	75.59	2017-05-05	75.65	6
LAC DESCHENES/BRITANNIA	2017-05-02 10:00	60.00	2017-05-05	60.10	10
GATINEAU/HULL MARINA	2017-05-02 9:00	44.25	2017-05-06	44.40	15
THURSO	2017-05-02 9:00	42.87	2017-05-06	43.00	13
GRENVILLE/HAWKESBURY	2017-05-02 9:00	42.19	2017-05-06	42.35	16

<sup>\*</sup> All levels are in reference to mean sea level

#### Warning

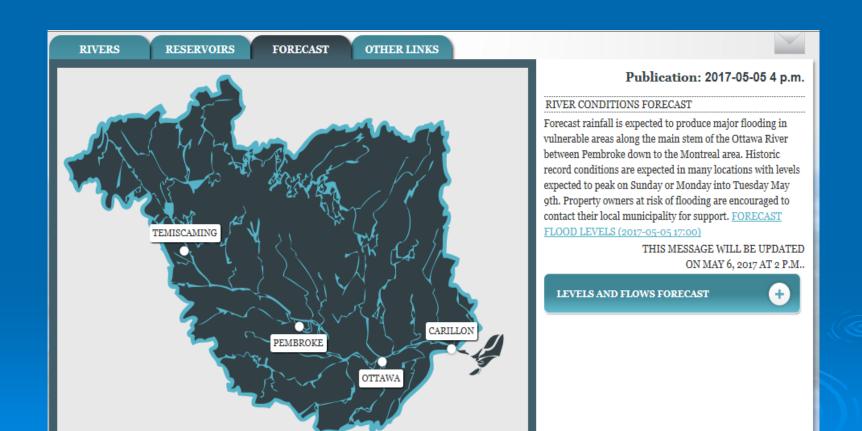
- Water level forecasts are subject to a high degree of uncertainty and should be used as an approximate reference only,
- The flow rate and actual levels can change rapidly without warning, particularly during the freshet period. We advise those using bodies of water to exercise caution and to follow safety rules at all times.

Table with forecast peak levels - updated twice daily starting May 2nd

<sup>\*\*</sup> CHANGE is the forecast change in level in centimeters

<sup>\*\*\*</sup> This forecast will be updated as warranted

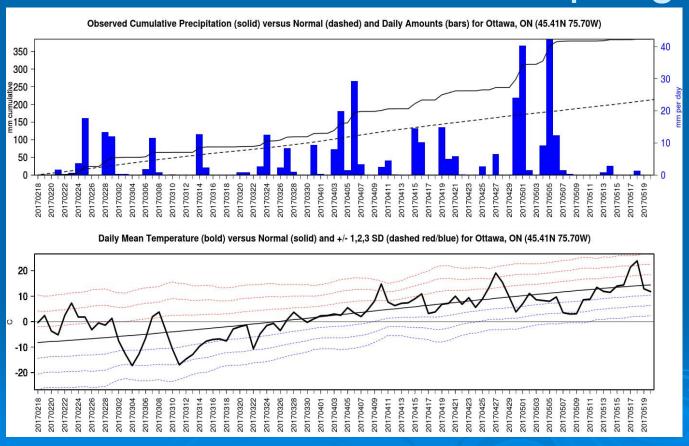
#### Disseminate Flow Forecasts



## Exceptional Spring Flood Lower Reach

- Chats Lake level within 9 cm of 1951 record level
- Historic flooding from Lac Deschenes down to Montreal
  - Highest level observed at Britannia beach (since start of record 1915)
  - Highest level in Gatineau (since start of record -1964)
  - Largest flow rate at Carillon dam (since construction -1962)
- Exceptional floods occurred in 20's, 50's, 70's, and this year
  - Other exceptional floods are to be expected in the future

### Twice as much Rain this Spring



Source: Internal Product, Meteorological Service of Canada, ECCC

### Want to help?

- > Tell us how we can improve the Website
  - What information did you find useful?
  - What additional information would you like to see?
  - Did you find the information to be clear?
- > Give us your name and coordinates
  - We will send you a questionnaire
  - May seek your participation in focus group



#### Information

Current Water levels
Toll free number 24 hours per day

Ottawa-Gatineau

Outside

613-995-3443

English 1 800 778-1246

613-995-3455

French

1 800 778-1243

Flow forecasts during freshet

Web Site: http://www.ottawariver.ca

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Email: secretariat@ottawariver.ca