

# Flood Forecast and Preparedness 2020

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# Agenda

- What causes flooding
- Current conditions
- City flood preparations during COVID-19
- Calgary's flood resilience plan
  - Projects completed and underway
- How to be prepared for this year's flood season
  - Understand your flood risk, be prepared, stay informed



# What causes flooding?

- Many factors contribute to flooding
  - Heavy rainfalls (May-July): biggest driver
  - Snowpack: Less than 20% of river flow during a flood
  - Seasonal temperatures
- We're monitoring Calgary's watershed and the Alberta River Forecast Centre 24/7 to monitor potential flood events using updated forecasting and monitoring tools.
- Challenging to predict heavy rainfalls in the mountain areas.
  - 12 to 24 hours warning



# Current conditions and looking ahead

- **Snow pack is above seasonal average**
  - Not too unusual, nor does it significantly increase risk of river flooding
  - Elbow and Bow River flows are elevated
  - Conditions may vary if we get more snow, or high temperatures, in the coming days and weeks
  - Slight precipitation expected on the Elbow and Bow River catchments over the next few days. Much of this will fall as snow at higher elevations. River levels are expected to rise slightly as a result.



# City flood preparations during COVID-19

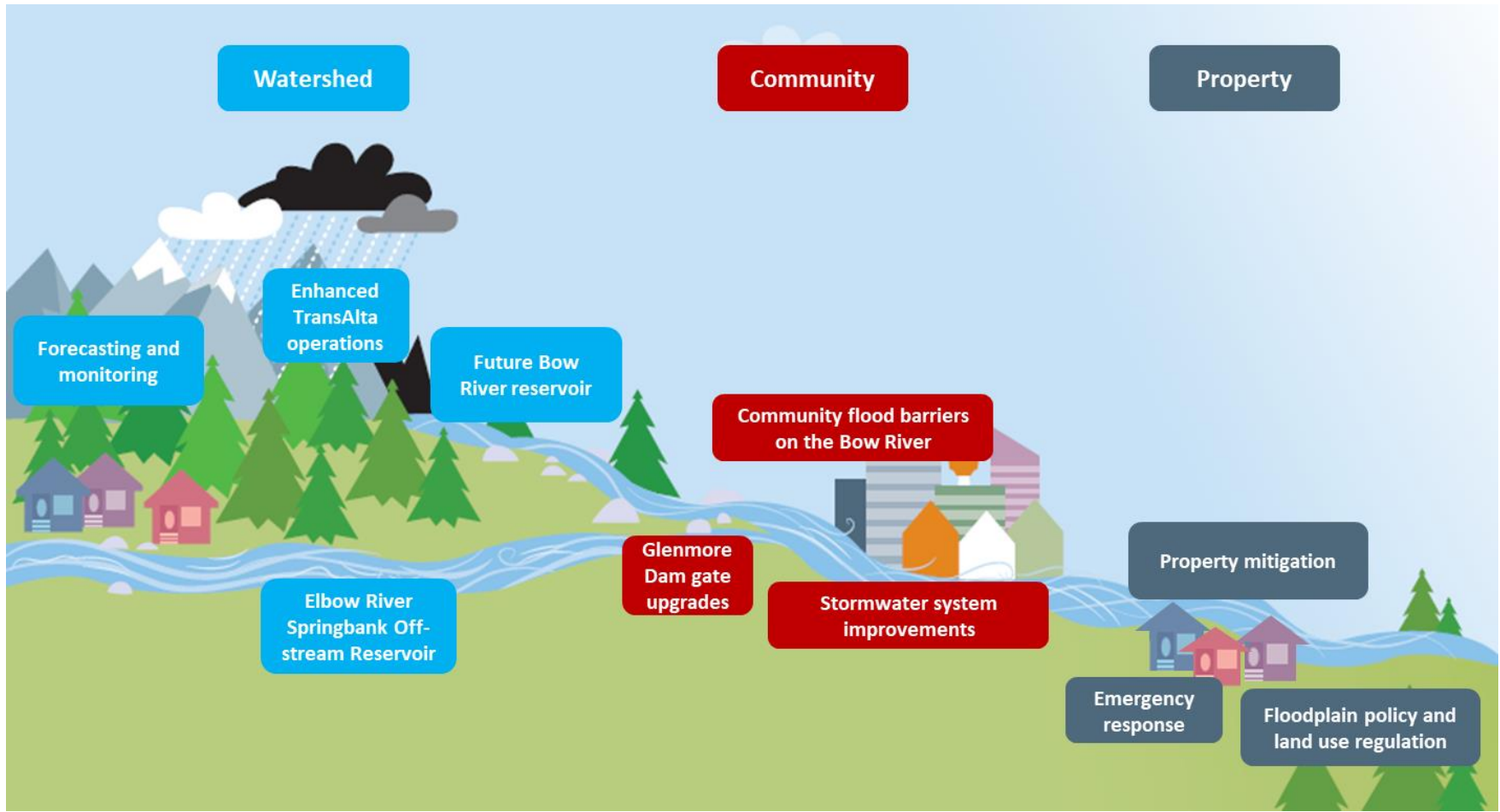
- Temporary barriers
- Field readiness
- Training and exercises
- Communication
- Reviewing flood response plans during COVID-19
  - Appropriate considerations for supporting evacuees.
  - Continue practicing physical distancing
  - Training extra staff



*\* The photos above were taken in 2017*



# Calgary's flood resilience plan

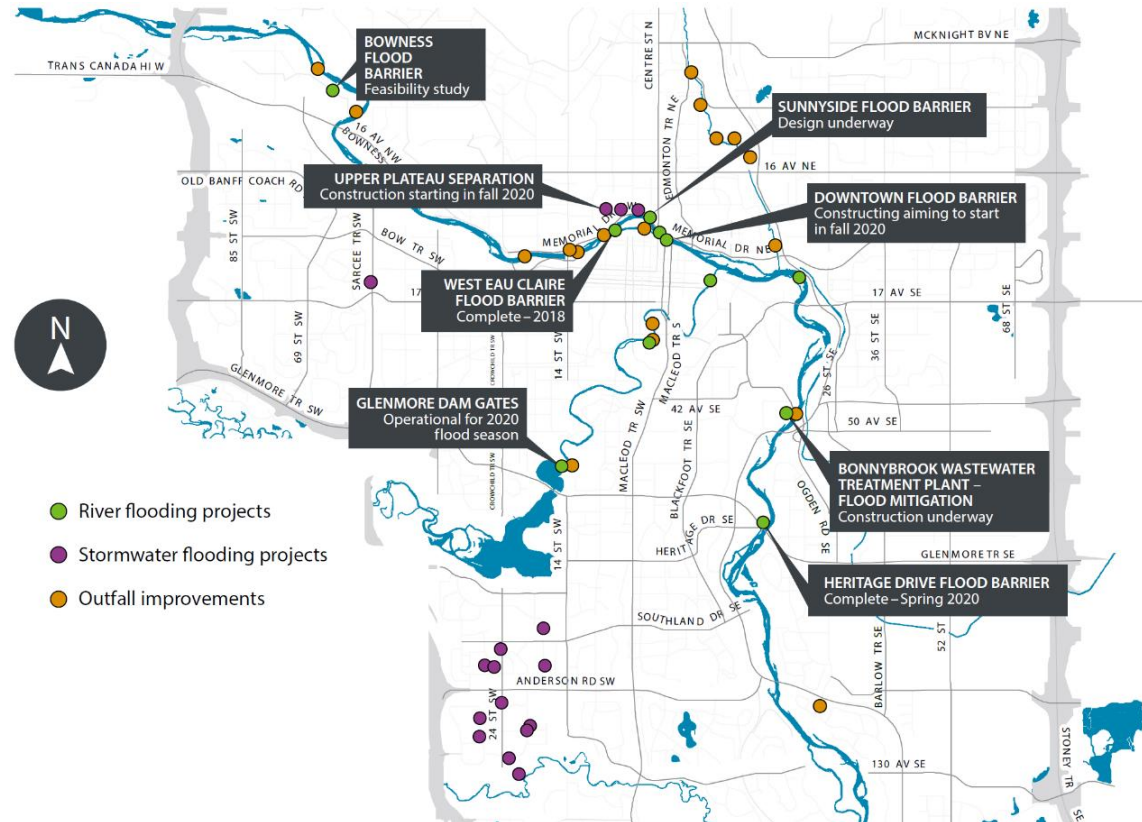




# Flood resilience projects

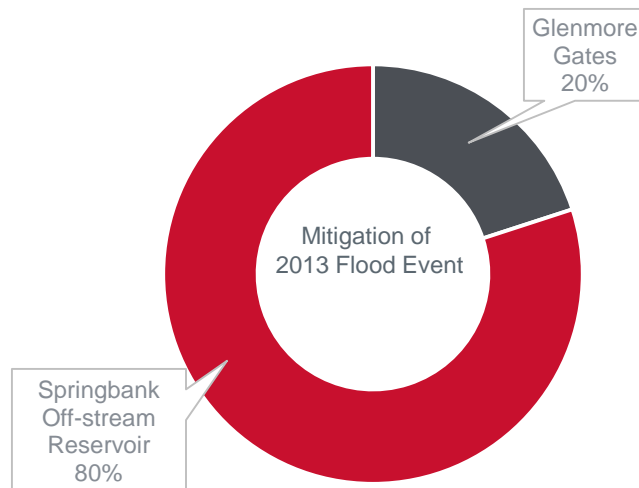
## Better prepared than 2013

- Investments in flood mitigation have reduced Calgary's flood risk by approximately half
- 7 permanent flood barriers complete



## New - Glenmore Dam gates

- Glenmore Dam gates construction complete.
- Doubles volume of water Glenmore Reservoir can hold.
- Ability to manage small and moderate level floods (e.g. 2005 flood event)
- Reservoir has been lowered in preparation for flood season
- Pathway will re-open this summer







## Upstream reservoirs update: Elbow River

### Springbank Reservoir (SR1) project

- Expecting Environmental Impact Assessment report in 2020
- If approved, the project will proceed to construction 2021
- Reservoir will be fully operational after the third year of construction



# Upstream reservoirs update: Bow River

**I. Ghost Reservoir has been kept low for 2020 flood season**

**II. TransAlta agreement for Ghost Reservoir ends spring 2021**

- Government of Alberta Administration has permission to discuss extension

**III. Bow River Reservoir Options Project**

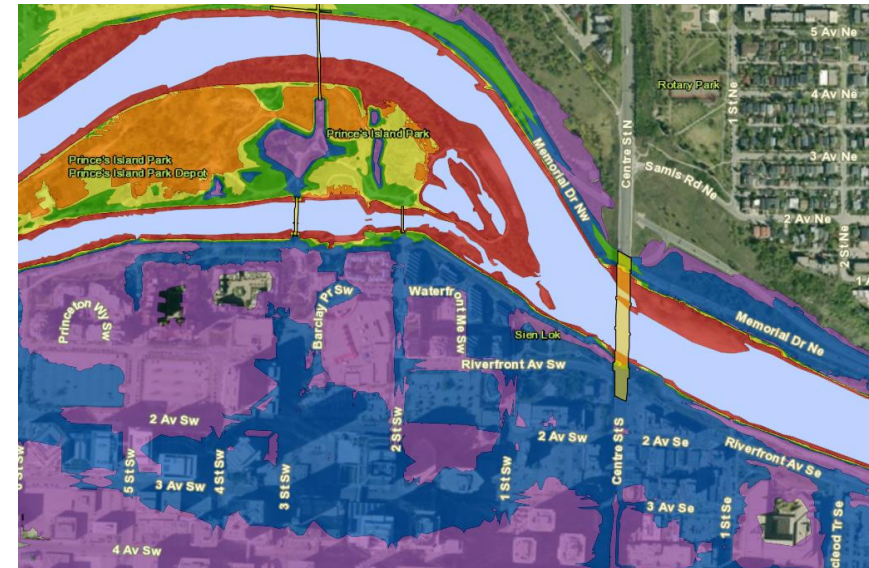
- Phase 1 conceptual study of 3 sites completed by the Province in March 2020
- Phase 1 report to be released publicly
- Funding for Phase 2 approved in 2020 February provincial budget

# Understand your flood risk

## Check out flood maps

- Look up your property's flood risk at [calgary.ca/floodinfo](http://calgary.ca/floodinfo)

LEGEND	Flowrate that could flood this area – Bow River upstream of the Elbow River	Natural chance of a property within this area flooding in any given year without mitigation – given as “% chance” of this flood occurring in any year, and as “1:X” probability flood	Natural chance of a property within this area flooding in 25 years without mitigation – given as “% chance” of this flood occurring at least once over 25 years (e.g., a typical mortgage life)
	up to 839 m <sup>3</sup> /s	12.5% (1:8)	97%
	840-927 m <sup>3</sup> /s	10% to 12.5% (1:8 to 1:10)	93% to 97%
	928-1230 m <sup>3</sup> /s	5% to 10% (1:10 to 1:20)	72% to 93%
	1231-1660 m <sup>3</sup> /s	2% to 5% (1:20 to 1:50)	40% to 72%
	1661-2020 m <sup>3</sup> /s	1% to 5% (1:50 to 1:100)	22% to 40%
	2021-3340 m <sup>3</sup> /s	0.1% to 1% (1:100 to 1:1000)	2.5% to 22%





## Be prepared

### Take precautions to prepare your family and property

- Move valuables and documents out of the basement
- If you have a sump pump or backflow preventer valve, check it as part of your regular home maintenance schedule
- In light of COVID-19 - review your emergency plan
  - Consider where you might stay
  - Know how you would get there
  - Know what you need to bring (medications, documents)
  - Contact your insurance provider to review coverage



# COVID-19 and your emergency plan



## Meeting place

- Consider meeting in an outdoor open area
  - large parking lots
  - quiet streets
  - uncrowded greenspaces

# COVID-19 and your emergency plan

## Alternative accommodations



- Talk to your friends/family to confirm in advance
- Avoid staying with a senior or immune-compromised individual
- Discuss how you will continue to practice physical distancing and preventing spread of the virus

If anyone in your family or the destination household is in self-isolation:

- Consider staying in a hotel or unshared accommodation
- If you need to stay with others, ensure the person(s) in self-isolation will have a separate room, and ideally a separate bathroom



# COVID-19 and your emergency plan



## Helping others

If you need assistance to evacuate or need to help a friend, family or neighbor evacuate, take precautions to prevent the spread of the virus:

- Wear a cloth face covering
- Maintain a 2 metre distance from others as much as possible

# COVID-19 and your emergency plan



## Emergency kit

To help limit the spread of COVID-19 consider having the following items in your emergency kit.

- Hand sanitizer
- Soap
- Cloth facial covering

Find best practices for what to put in your emergency kit at [calgary.ca/floodinfo](https://calgary.ca/floodinfo)



# Stay informed

## Emergency notifications resources

- Alberta Emergency Alert app
- Alberta Rivers app for river conditions
- Environment Canada for weather advisories



## City of Calgary alerts and notices



[calgary.ca](http://calgary.ca)



[twitter.com/cityofcalgary](https://twitter.com/cityofcalgary)



[facebook.com/cityofcalgary](https://facebook.com/cityofcalgary)

**Stay connected with neighbours and community through social media**



Questions?

Learn more at [calgary.ca/floodinfo](https://calgary.ca/floodinfo)