

## Healthy Watersheds

The Watershed Resiliency and Restoration Program (WRRP) has supported the restoration and enhancement of over 1,500 hectares of wetlands and riparian lands in the Bow River basin. Investing in healthy wetlands is an important element in fighting floods as they hold water on the land during spring melts and rainfall events.

## Flood Mapping

New flood mapping for more than 1,300 kilometres of river through more than 30 communities across Alberta is currently underway. This includes new flood mapping for both the Elbow River and Bow River through Calgary.

## Flood Forecasting

Since 2013, the province's River Forecast Centre partnered with Environment and Climate Change Canada to improve the use of weather forecast data in the flood forecasting models. The province has also installed new rainfall and river level alarms upstream of Calgary.

## Emergency Preparedness

In 2016 the province developed a new emergency managers' portal that provides near real-time information and instant contact with the province's River Forecast Centre, allowing our municipal partners to respond faster and more efficiently during a flood emergency.

The Alberta Rivers app and new rivers.alberta.ca website provide Albertans with detailed information on river conditions. The mobile application also enables important advisories to be sent directly to users via a push notification.

## Upstream Storage

The province is committed to improving and developing upstream storage to protect the City of Calgary. In 2015, the province committed to moving forward with the Springbank Reservoir.

One year later, in 2016 the province finalized a five-year agreement with TransAlta to modify operations at Ghost Reservoir and three Kananaskis-area reservoirs to help manage both high and low flows. The province is also moving forward with conceptual assessments for three of the upstream storage options identified in the Bow River Water Management Project report.

## Erosion Control

Following the 2013 floods the province invested more than \$50 million to reinforce riverbanks at nearly 40 sites in Calgary.

## Community Protection

In 2015 the province committed \$150 million over 10 years in dedicated funding for the City of Calgary through the Alberta Community Resilience Program (ACRP) to fund high priority flood resilience projects that protect communities, improve municipal water and wastewater infrastructure, and better manage stormwater.

Key projects include improvements to the Centre Street Bridge lower deck flood barrier and new flood barriers along Heritage Drive and West Eau Claire. These projects are funded in partnership with City of Calgary.

## Water and Wastewater Infrastructure

Upgrades to Glenmore Dam, Bonnybrook Wastewater Treatment Plant and the Roxboro Sanitary Lift Station will improve the flood resilience of these critical municipal infrastructure assets. These projects are funded in partnership with City of Calgary.

## Stormwater Management

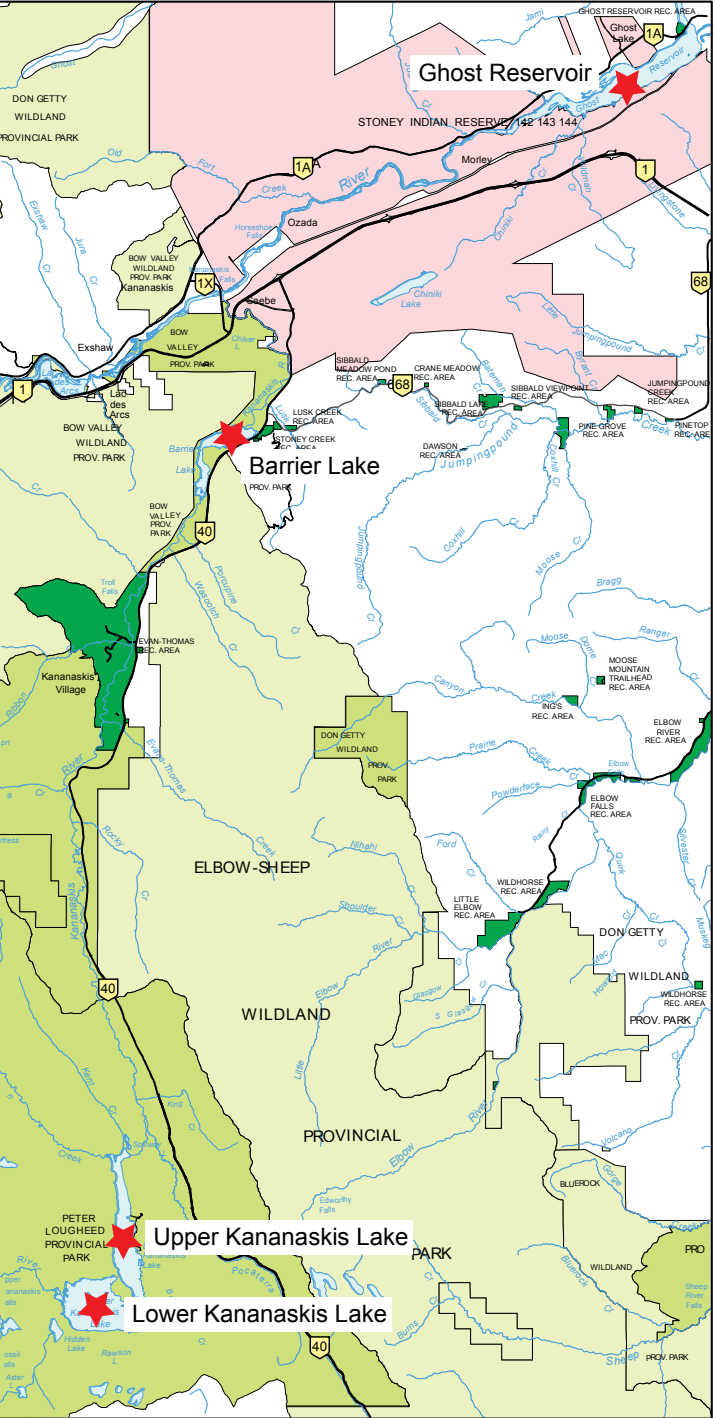
Plans for new pump stations in Sunnyside and various new stormwater outfall gates will improve how stormwater is managed in vulnerable parts of the city. These projects are funded in partnership with City of Calgary.

# Building a more flood-resilient Calgary

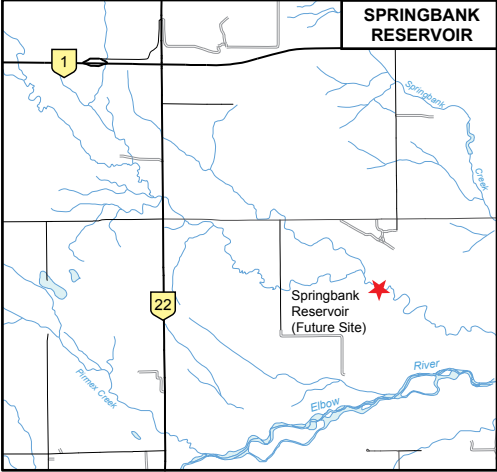


Since the flood of 2013, significant improvements have been made to protect Calgary residents and businesses. The Government of Alberta, in partnership with the City of Calgary, is committed to developing, investing and building critical flood infrastructure that will better prepare the city for extreme weather events.

Calgary Flood Resilience Projects



- 1. Upper Plateau Separation Project - \$4,153,027 - Approved
- 2. Sunnyside Pumpstation #2 Improvements - \$6,416,953 - Pre-construction stage
- 3. Sunnyside Pump Station #1 - \$3,400,000 - Pre-construction stage
- 4. West Eau Claire Flood Barrier - \$2,115,005 - Pre-construction stage
- 5. Centre Street Bridge lower deck flood barrier improvements - \$1,530,000 - Pre-construction stage
- 6. Downtown Flood Barrier - \$4,153,028 - Approved
- 7. Calgary Zoo Erosion Protection - \$600,000 - Complete
- 8. 9th Avenue (Inglewood) Bridge - Flood Resiliency - \$5,240,487 - Approved



- 9. Stormwater outfall improvements - \$1,800,000 - Active construction
- 10. Roxboro Sanitary Lift Station Replacements - \$1,728,900 - Complete
- 11. Glenmore Dam Infrastructure Improvement Program - Elevated Hoists - \$7,600,000 - Active Construction
- 12. Site Condition Improvements at the Western Headworks Diversion - \$567,000 Pre- construction
- 13. Bonnybrook WWTP - Flood Mitigation Prg. \$11,455,600 - Active Construction
- 14. Heritage Drive permanent flood barrier - \$3,960,000 - Pre-construction stage
- 15. Carburn Park - \$110,000 - complete
- 16. Rain Gardens for Resilience - \$100,000
- 17. Rainwater for Resilience - \$873,246
- 18. Bioengineering Demonstration and Education Project Partnership - Implementation of Project Education Plan \$522,500 - Active construction
- 19 - 22. Riparian Health Restoration - Multiple Sites - \$750.000

**Cost-shared with the City of Calgary**

- Community Protection and Public Safety
- Risk Assessments
- Stormwater Management
- Water/Wastewater Infrastructure

- ★ Five-year modified operations agreement with TransAlta - \$5,500,000/year
- ◆ Healthy Watersheds/Riparian Restoration
- Erosion Control/Bank Stabilization  
All erosion control/bank stabilization projects are complete, except for one (Montgomery) - \$50,800,000

