Flood Mitigation Update

Presentation to Calgary River Communities Action Group
Annual General Meeting
April 25, 2017

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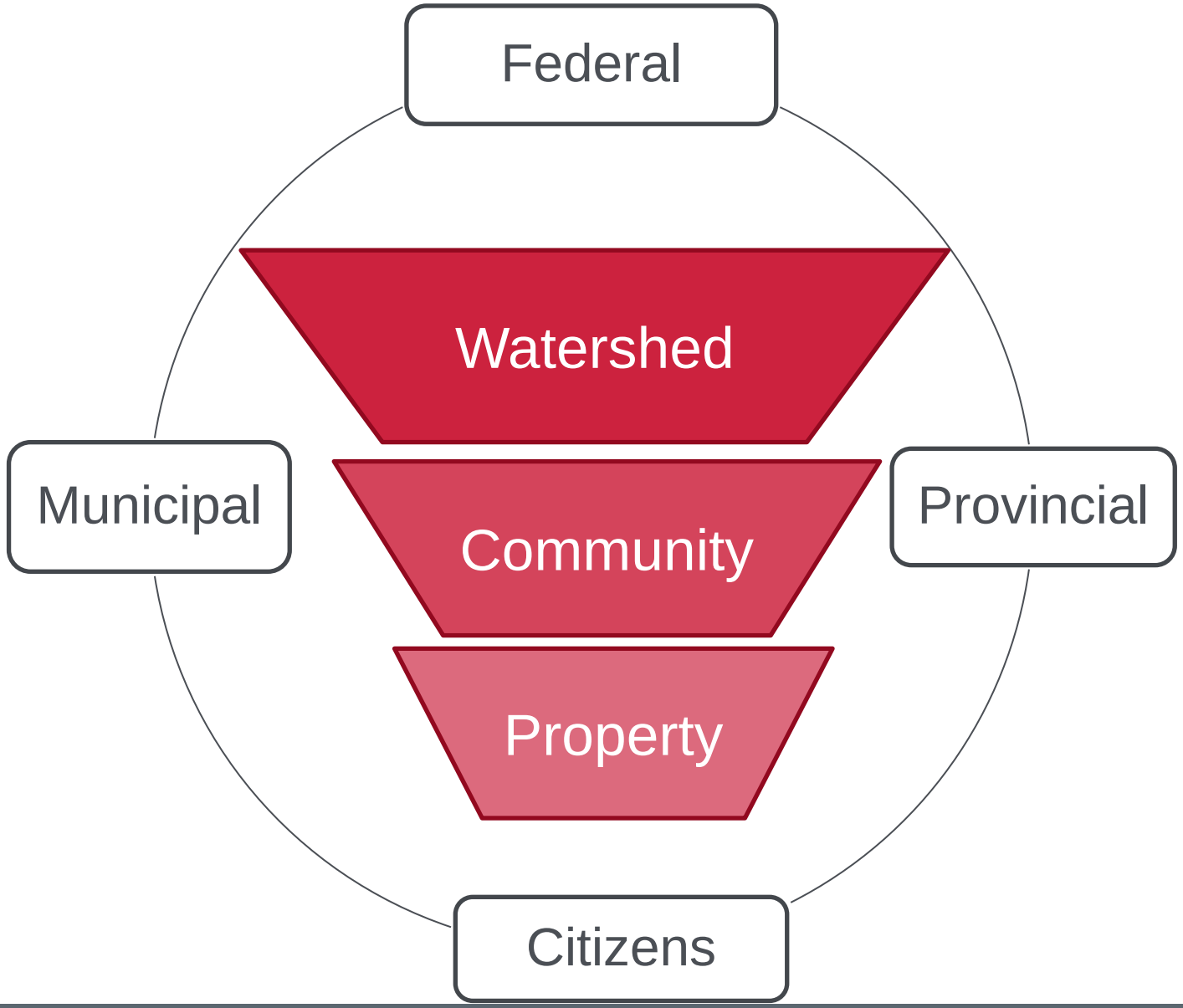
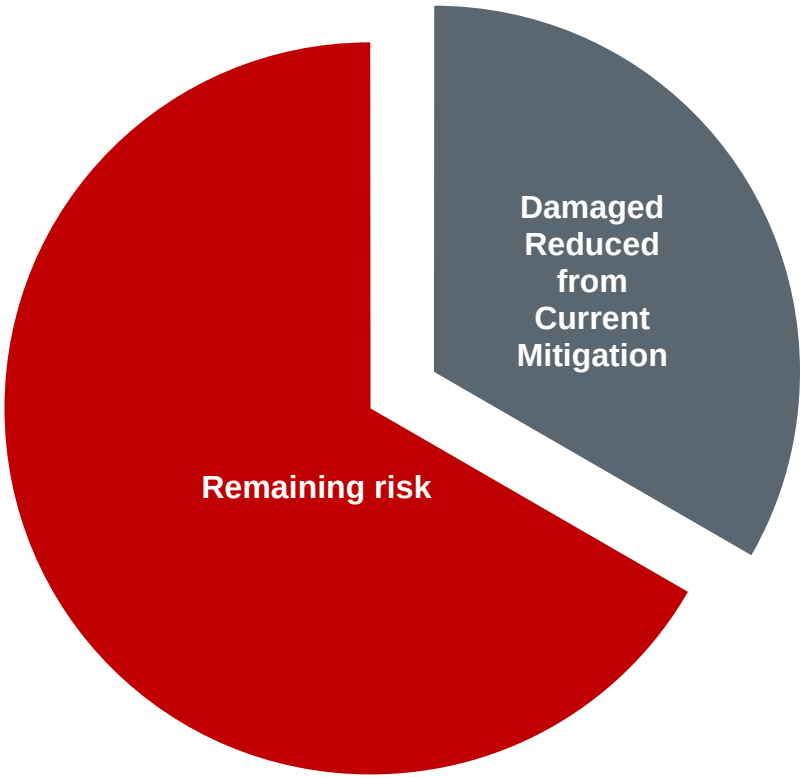
The City of Calgary
Water Services

ISC: Unrestricted

Resiliency through integrated levels of flood mitigation



Flood mitigation projects to date



City Projects:

- Raising Glenmore gates
- Reinforcement of existing barriers
- New local barriers underway
  - West Eau Claire
  - Centre Street
  - Montgomery
  - Heritage Drive
  - Bonnybrook
- Drainage & stormwater improvements

Others:

- TransAlta Operating Agreement
- Springbank Reservoir Project

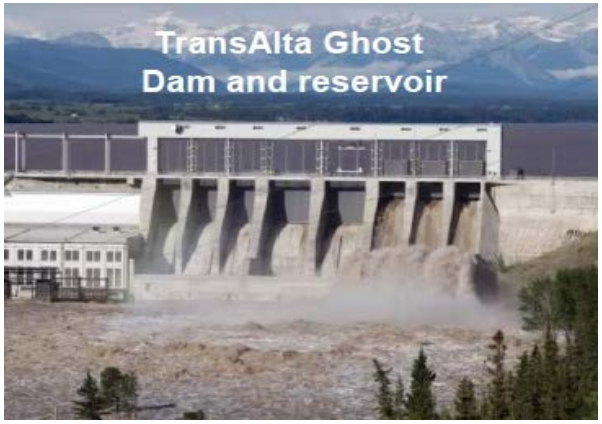
Completion of these projects and continuation of the TransAlta Operating Agreement will provide mitigation on the Elbow River for a flood similar to 2013.

Remaining risk is primarily on the Bow River.

Elements of flood mitigation & preparedness for Calgary

New reservoirs upstream

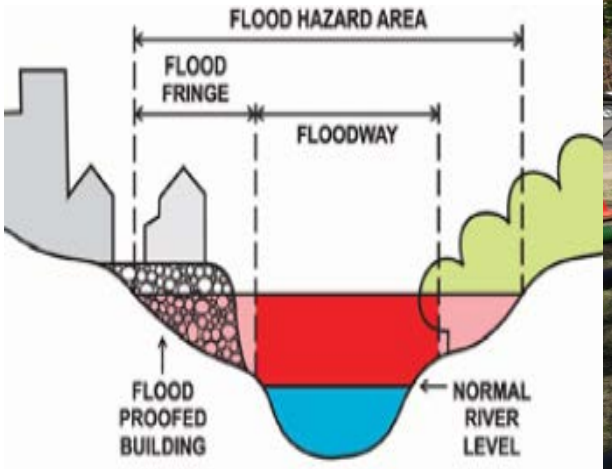
New operational efficiencies



New community barriers & local infrastructure

New property – level programs

Update land use policy & non-structural measures



Improved forecasting/emergency

Council Direction

1. Advocate for an upstream reservoir and continuation of the Provincial-TransAlta operational agreement for the Bow River;

2. Continue to support the development of the Springbank Off-stream Reservoir on the Elbow River by the Province;

3. Develop an implementation and funding plan for community level flood mitigation;

4. Explore the development of a property level mitigation program; and

5. In alignment with Provincial mapping and policy updates, conduct further investigation on land use policy and building regulations for areas prone to flooding.

Flood mitigation underway

Elbow River

Springbank Reservoir + Increasing size of Glenmore gates

= manage flood similar to 2013 on the Elbow River

☑ **Underway**

Recommended flood mitigation

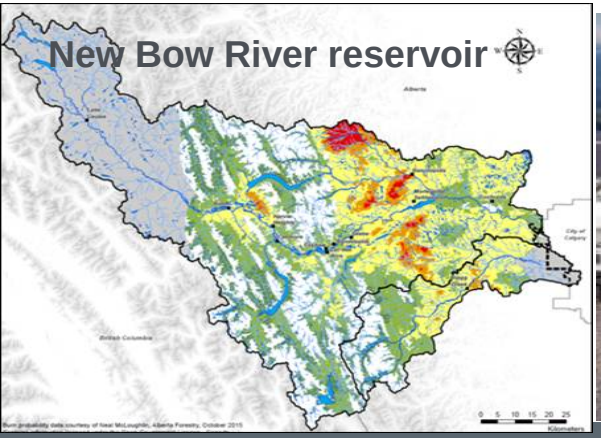
Bow River

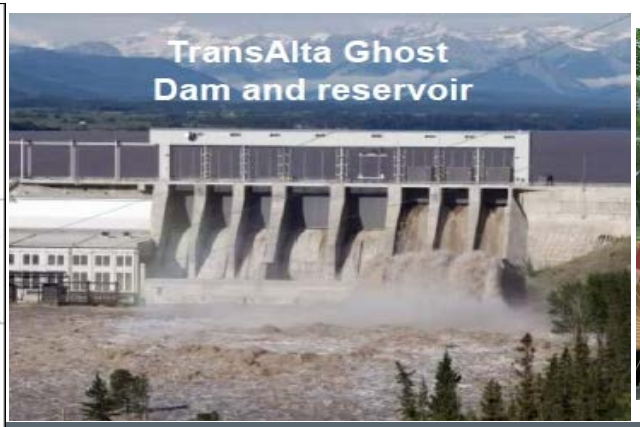
New upstream reservoir + TransAlta agreement

+ Complementary barriers

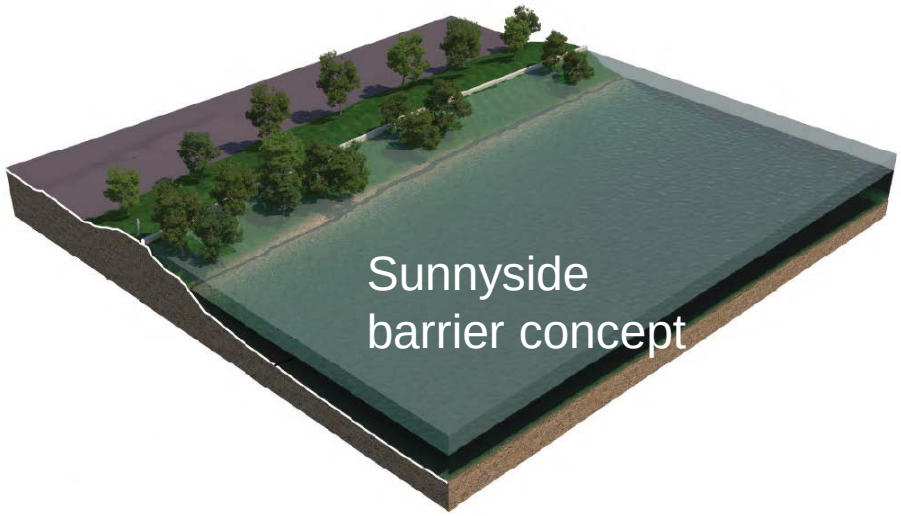
= manage flood similar to 2013 on the Bow River, and other potential benefits: water supply and drought protection, climate resilience and energy generation

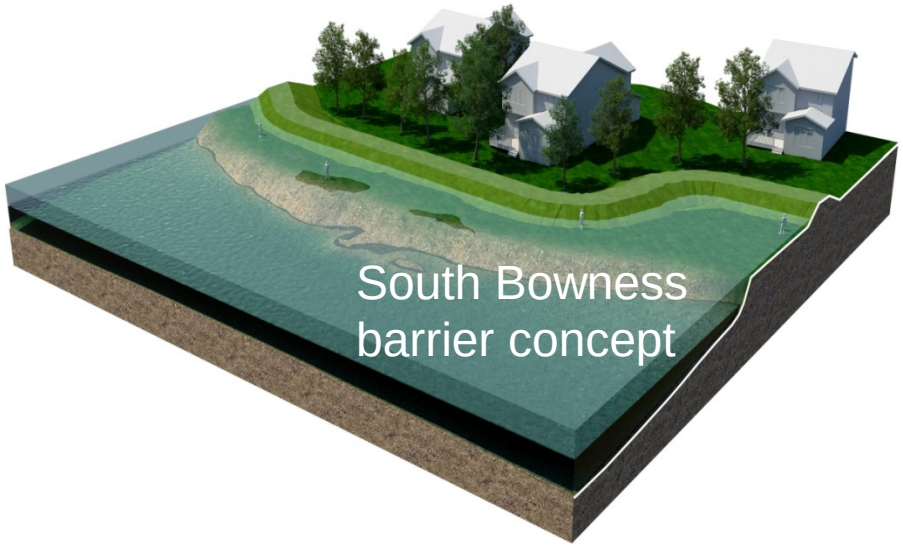
➔ **Commitment required**





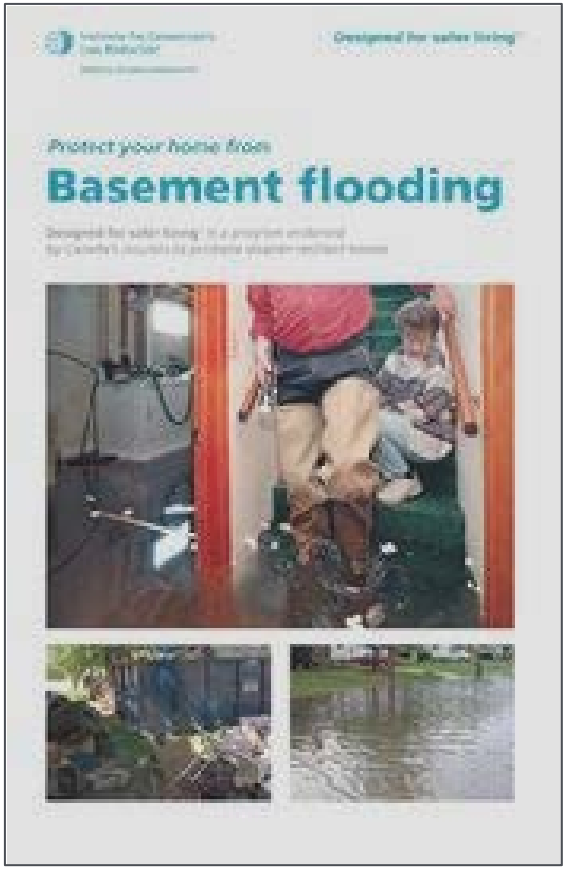
Initial barrier concepts





Property level flood mitigation

- Explore property level mitigation.
  - Explore feasibility of an incentive program.
  - Include an education/resource component.
- Assess additional policy measures.
  - Must align with structural investments and future Provincial Federal policies.



Source: Institute for Catastrophic Loss Reduction

Strengthening Emergency Preparedness

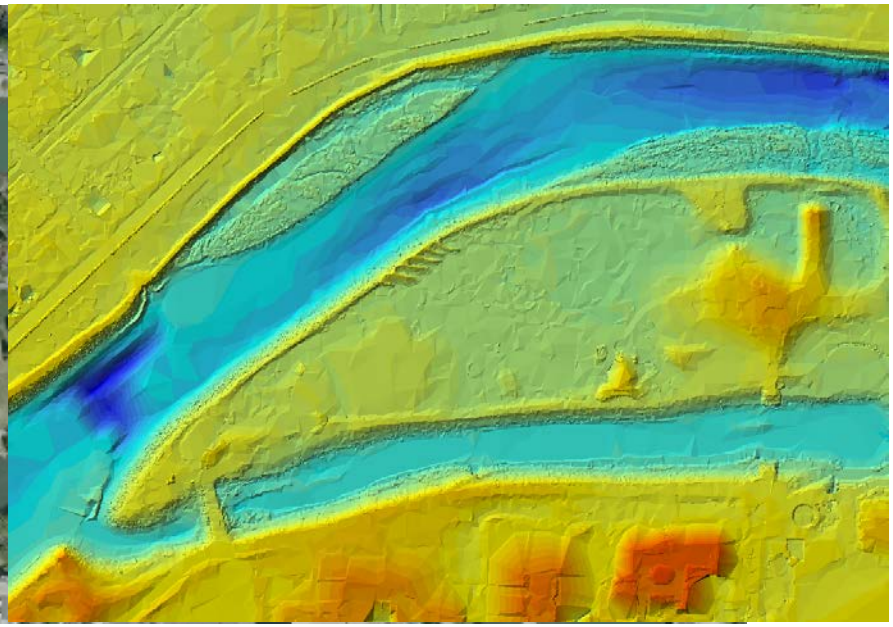
Strengthening River Banks

Elbow River at Ramsay

Bend in the Bow Project

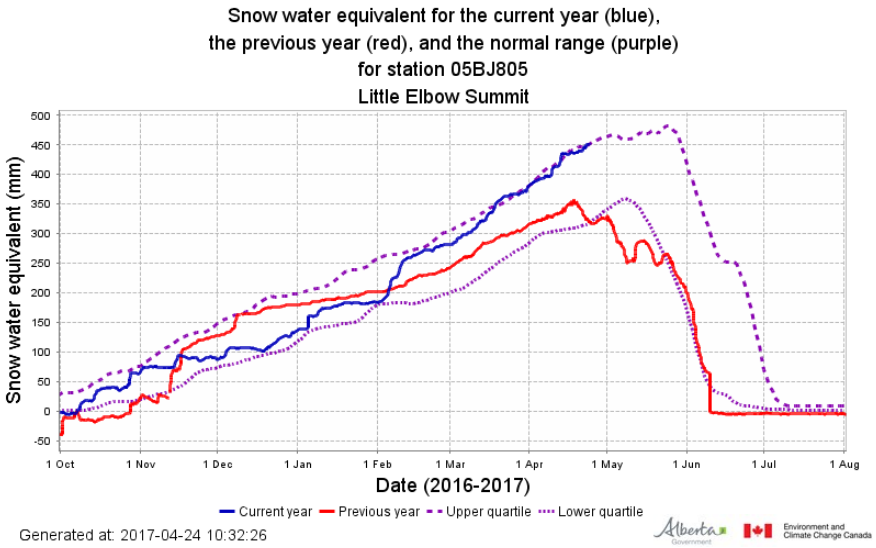
Strengthening Policies and Knowledge

- Updated flood policy in MDP and Land Use Bylaws.
- Studies of the river to understand how it changed in 2013, and how it will change in the future.
- Technical studies to assess mitigation options



Flood Outlook 2017

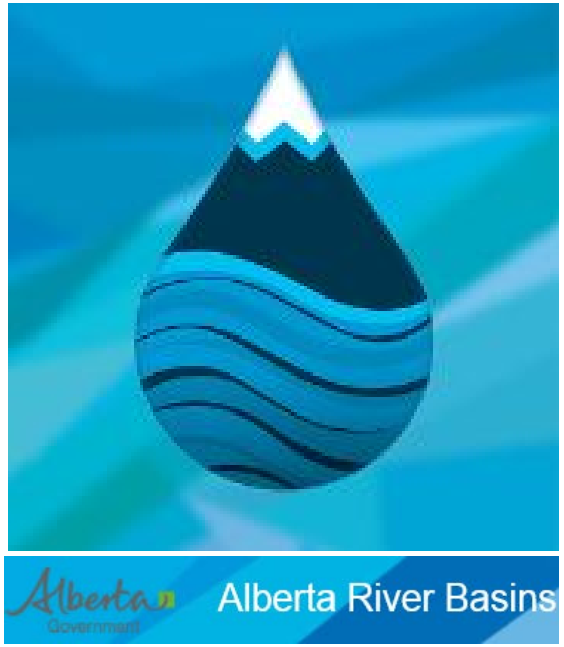
- There is flood risk every year, highest likelihood is May 15-July 15
- Flooding happens quickly and with little warning because of the short, steep distance the rivers travel from the mountains to Calgary. We cannot prevent flooding entirely but we are working to reduce its impact.
- Snowpack – above average
- River flow rates - average
- Forecast: normal precipitation



How you can prepare for flooding

ALBERTA EMERGENCY ALERT

Alberta Government



calgary.ca/floodinfo

for more information on flood risk and preparedness

Thank you