

Community Information Session Springbank Off-Stream Reservoir (SR1)

September/October 2020
Alberta Transportation

2013 Flood

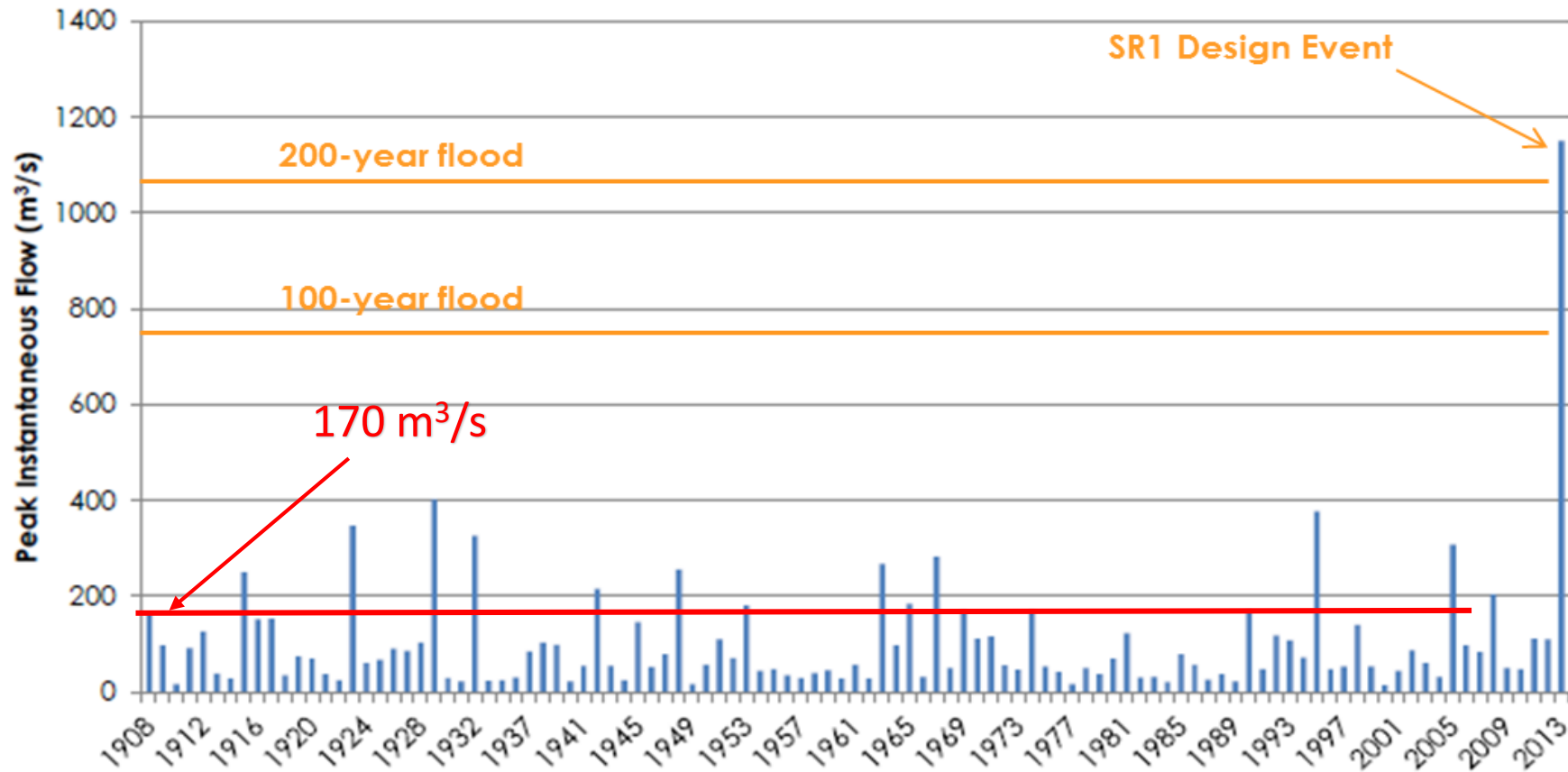
Massive flooding in southern Alberta and Calgary in 2013 resulted in significant economic and personal costs for the province:

- \$5 billion+ in damages and recovery costs
- 5 fatalities
- 4,000 impacted businesses
- Damage to roads, bridges, pathways, parks, and transit systems.
- 80,000 people evacuated
- 3,000 buildings flooded

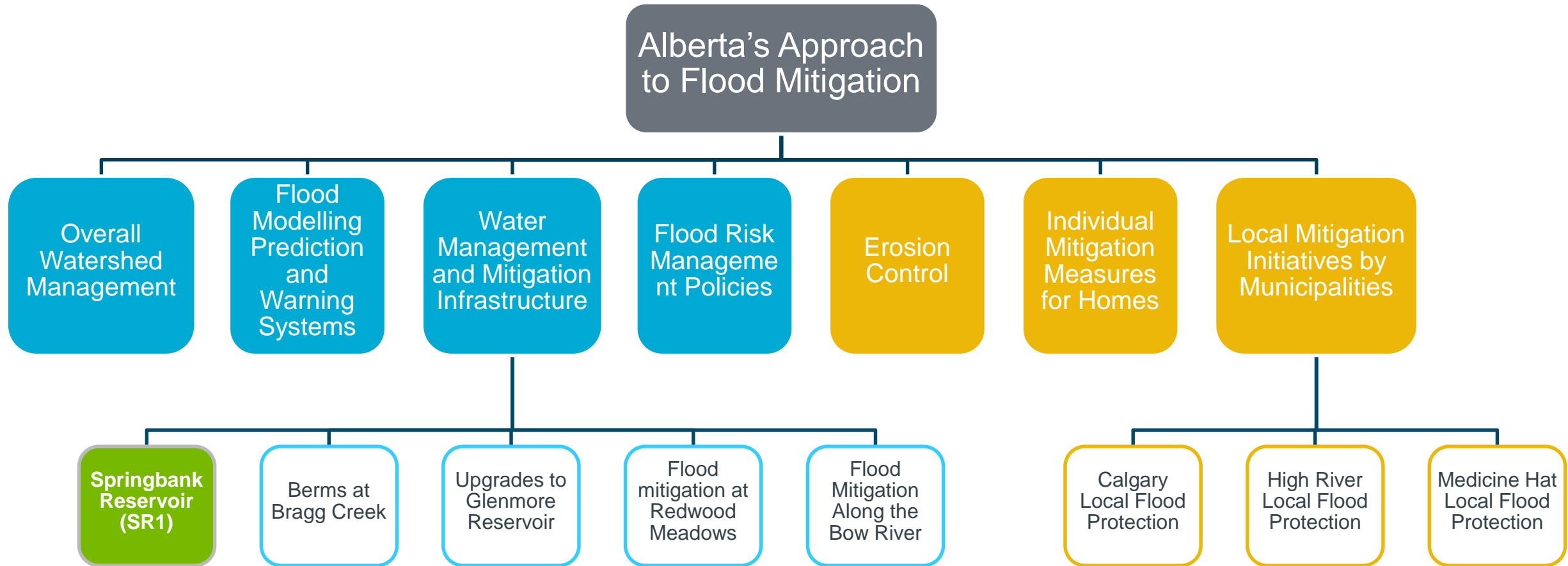


Historic Floods on Elbow River

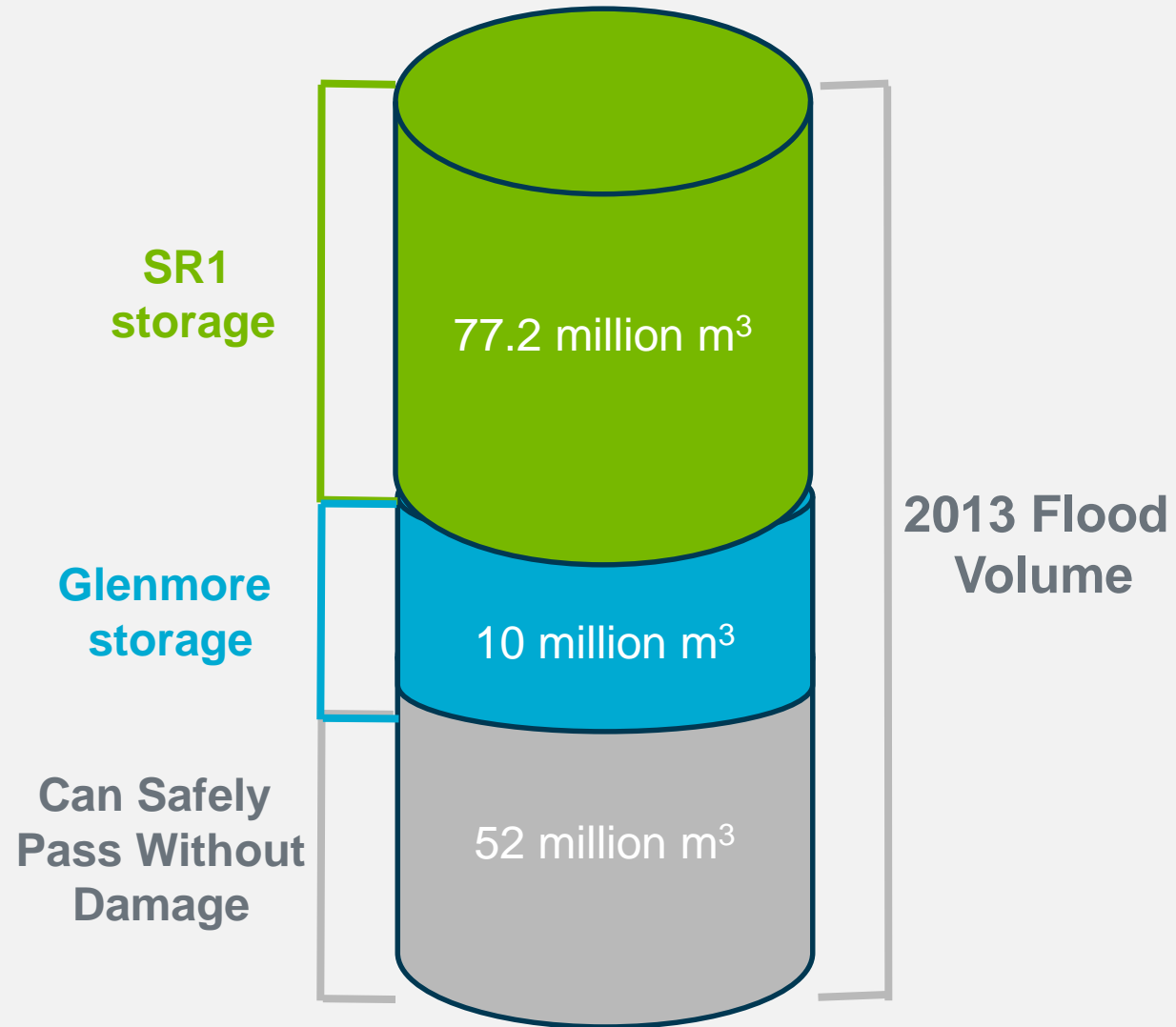
Historically, flooding in southern Alberta is a regular and common occurrence. We cannot predict when a major flood will occur, but we do know that it will flood again in the future.



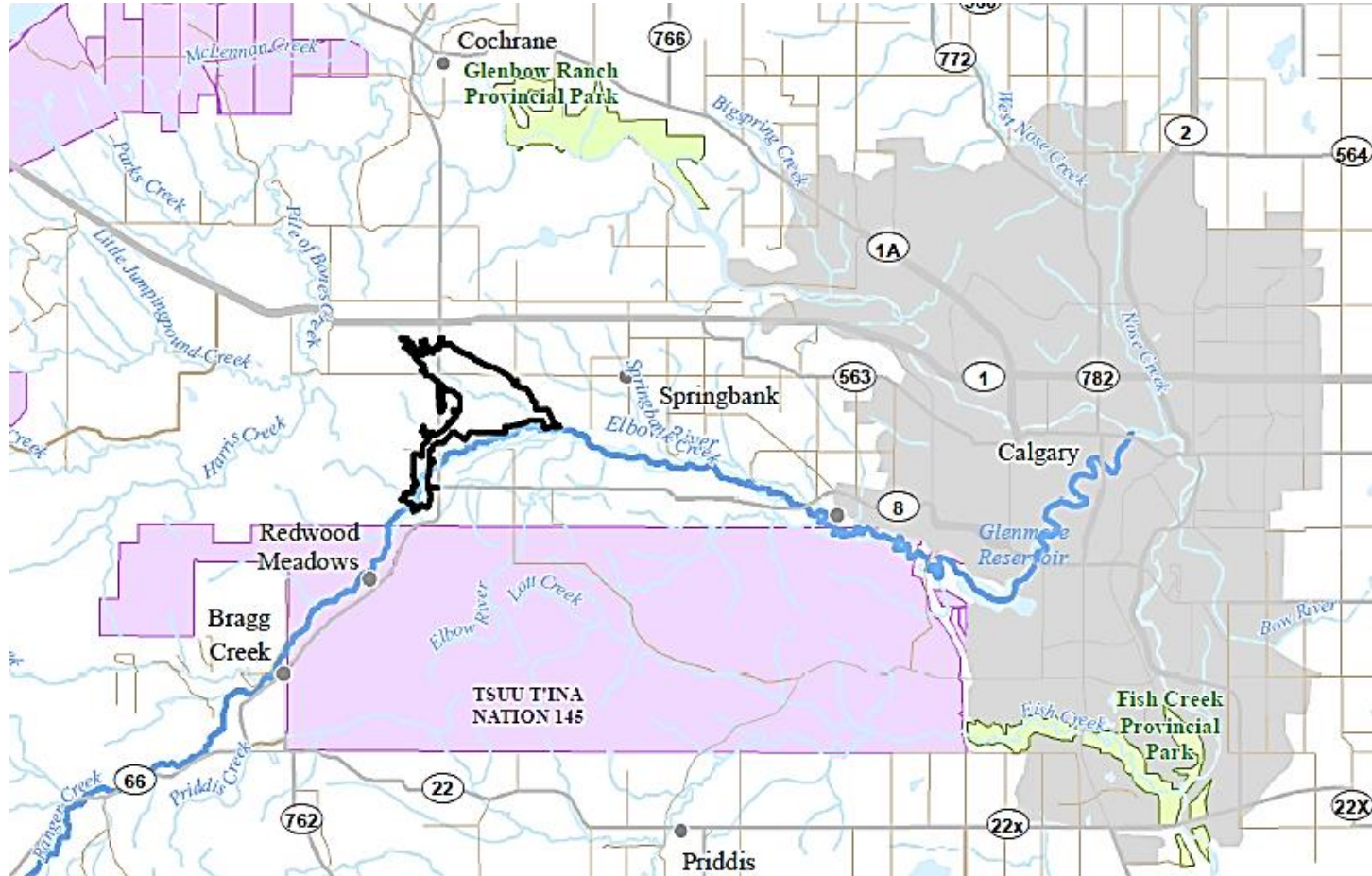
Provincial System for Flood Mitigation



How Does SR1 Work?

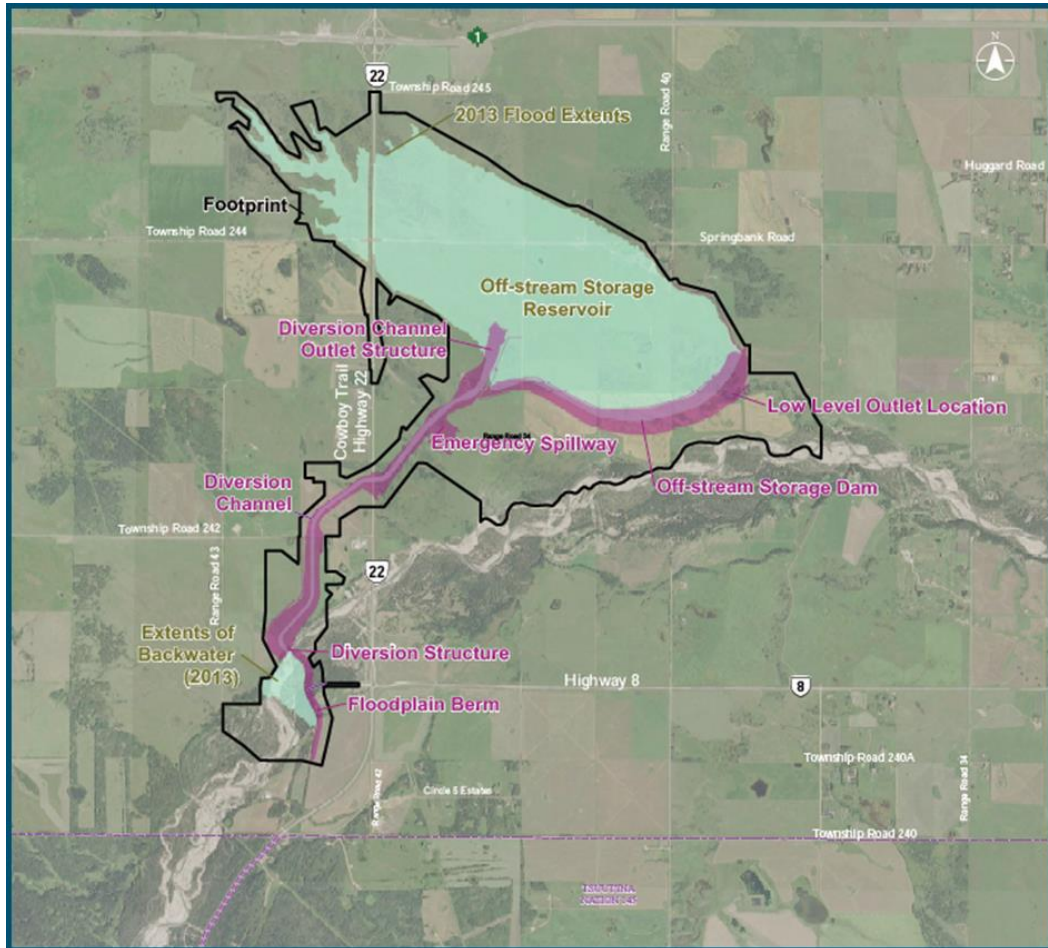


SR1 Location



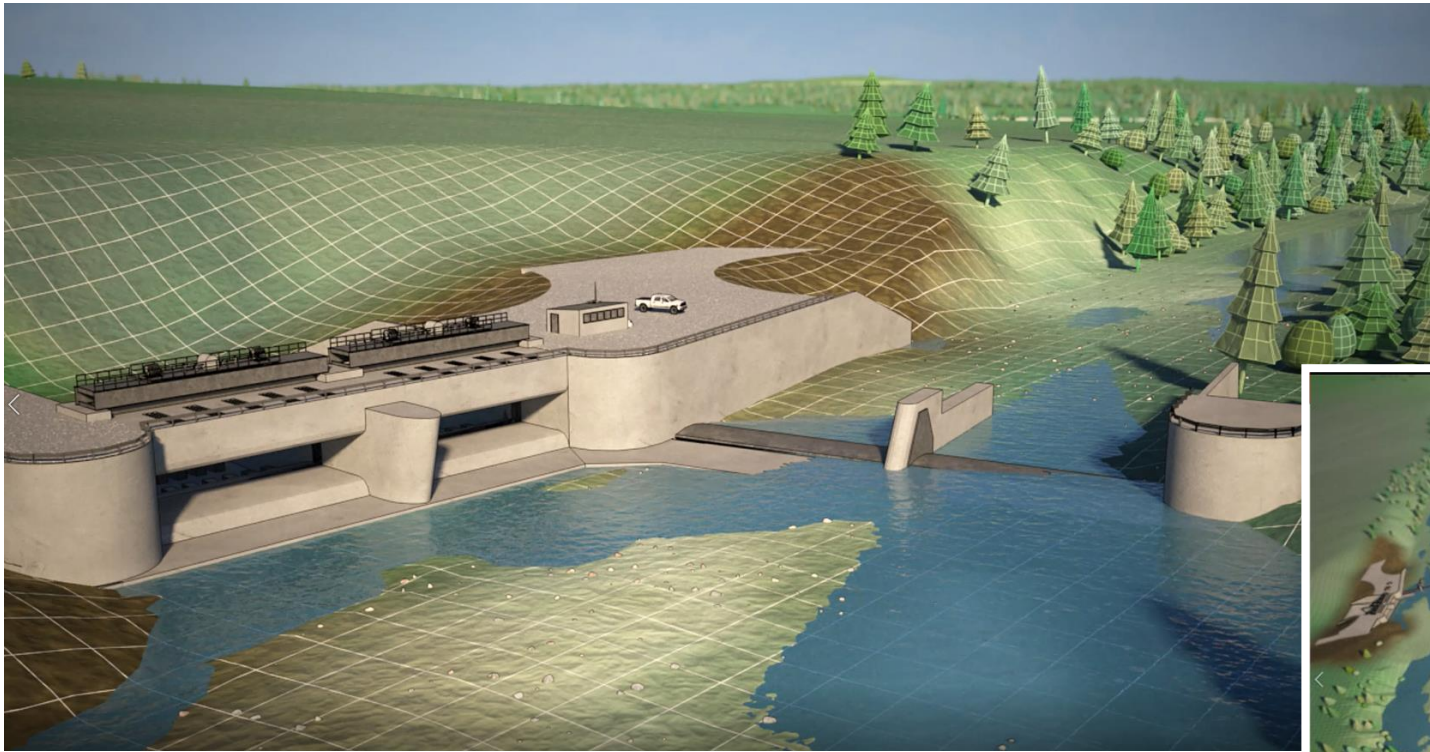
- Location selected based on: existing topographic conditions.
- Existing depression provides:
 - fewer risks during construction;
 - lower overall environmental impact during construction; and
 - higher efficiency of water capture offering additional flood protection.

Key Components



- Diversion Structure
 - Debris Barrier
- Floodplain Berm
 - Auxiliary Spillway
- Diversion Channel
 - Emergency Spillway
- Dam
- Low Level Outlet

Diversion Structure and Floodplain Berm



Project Before

Location: Elbow River at the Diversion Structure



Project After



Project Before

Location: Highway 22, bridge crossing the Elbow river



Project After



Project Before

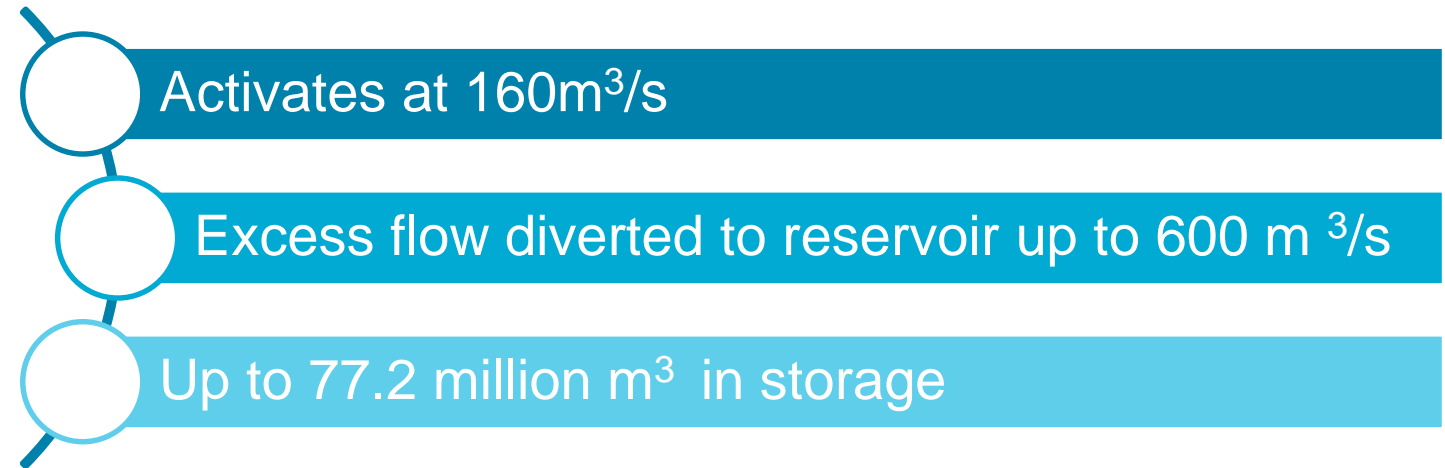
Location: Highway 22, Intersection with Springbank Road



Project After



Project Operations



- Springbank road will close during a 1:50 year event. Highway 22 will remain open.
- Project will operate similar to a bathtub, sloped to fill at the lowest point first.
- Some sediment is expected in the reservoir, but vegetation is expected to recover naturally. Some additional seeding may be required.
- Conditions will be monitored, and mitigations will be employed as needed.

Emergency Operations Notification

- Alberta Environment and Parks will implement an Emergency Operations Notification system in case of emergencies such as a flood warning:
 - Residents and Indigenous groups will be notified, and public warnings will be issued.
 - Local authorities and emergency services will be contacted.
 - Evacuation zones will be established.
 - Applicable government agencies will be contacted as required.

Regulatory Process

Provincial Approval

- Environmental Impact Assessment (EIA) submitted
- Supplemental Information Requests (SIRs) responded to and EIA deemed complete.
- Natural Resources Conservation Board (NRCB) process:
 - Prehearing meeting
 - Public Hearing.

Federal Approval

- The Impact Assessment Agency of Canada EIA review.
- Construction approvals:
 - Fisheries Act
 - Canadian Navigable Waters Act

Engagement

Stakeholders:

- Landowners
- City of Calgary
- Rocky View County
- Springbank Community Association
- Calgary River Communities Action Group
- Irrigation companies
- Downstream communities
- Bow River Basin Council
- Elbow River Sustainability Alliance

Indigenous Groups:

- Kainai/Blood Tribe
- Piikani Nation
- Siksika Nation
- Stoney Nakoda Nations
- Tsuut'ina Nation
- Ermineskin Nation
- Louis Bull Tribe
- Montana Nation
- Samson Cree Nation
- Metis Nation of Alberta Region 3
- Metis Nation of British Columbia
- Ktunaxa Nation Council
- Foothills Ojibway Society

SR1 Stakeholder Concerns and Mitigations

- Impacts to land, air, water and wildlife.
 - Monitoring plans have been developed to identify and address impacts.
- Land Use
 - Transportation is engaging with First Nations and others to:
 - Determine future land uses.
 - Enable Indigenous participation in construction and operations.

SR1 Land Use

- The project is not expected to be used for flood mitigation every year.
- Safety is paramount in any decisions that allow access to the project lands.
- The Land Use Principles consider secondary uses that do not conflict with flood mitigation or safety.
 - Project Infrastructure (ie. berms, gates) will remain off limits at all times
 - Non-motorized recreational activities (hiking, biking or cross country skiing) in some areas of the project.
 - Use by First Nations for the exercise of treaty rights and traditional uses, including hunting.
 - Grazing will be used as a tool to manage and maintain grassland landscape in the land use area.
- The final land use plan will be developed by Alberta Environment and Parks with meaningful consideration of input from stakeholders and First Nations.

SR1 Land Acquisition

- Land acquisition
 - Voluntary acquisitions are being pursued.
 - Compensation for acquiring properties (inclusive of land, buildings, and businesses) is based on Expropriation Act principles. These principles are:
 - market value of land;
 - damages (for general disturbance, injurious affection, etc.);
 - payment of landowners' reasonable legal and appraisal costs.

SR1 Environmental Impacts and Mitigation

- Environmental concerns have been expressed by stakeholders, Indigenous groups, regulators, as well as the SR1 team:
 - Concerns include: Fish and fish habitat, sediment and dust, surface water quality and contamination, groundwater, wildlife and wildlife habitat, vegetation and air quality.
 - The Project has been designed to minimize environmental impacts and mitigate many of these concerns.
 - Impacts that cannot be mitigated by Project design will be addressed through modeling, monitoring plans, and other restoration measures after construction.



SR1 Mitigation and Monitoring

- Mitigation and Monitoring plans are in place to identify when impacts occur and to determine mitigation response.

Fish, Fish Habitat, and Downstream Migration

- Ongoing monitoring and fish rescue during construction.
- Designed to avoid impacts to fish passage.
- SR1 only activates at 7-8 year flood.

Sediment and Dust

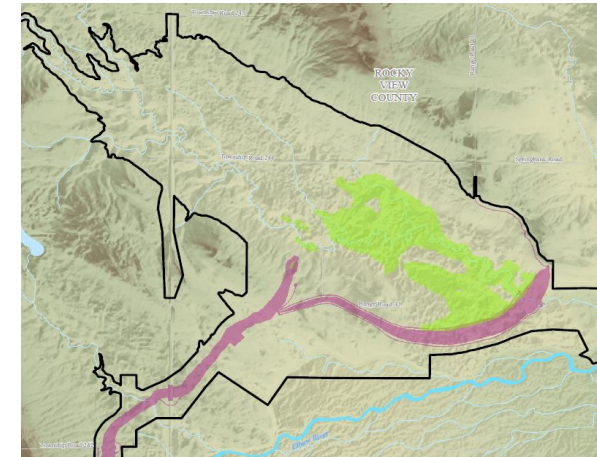
- Tackifiers during construction and re-vegetation after construction for long-term control.

Surface Water Quality and Contamination

- Testing and monitoring of flood water that is stored prior to release.

Groundwater and Well Water Impacts

- Modeling rules out concern but a water well monitoring plan will be in place.



SR1 Mitigation and Monitoring

- Mitigation and Monitoring plans are in place to identify when impacts occur and to determine mitigation response.

Wildlife – Project designed to limit effects on wildlife

- Monitoring post-construction (via remote video).
- Habitat should not be drastically altered from any natural state following operation.

Vegetation – Reverts pasture land to more natural state

- Ongoing monitoring; pre-construction harvesting by Indigenous groups.

Air Quality – Dust during construction / operations

- Air monitoring and dust suppression (with water and tackifiers).



Cost and Budget

- Total project cost is estimated to be \$432 million.
- Final budget will be based on:
 - final land acquisition costs;
 - final design and tendering;
 - cost of conditions from the regulatory process; and
 - project taking longer to complete relative to initial assumptions.
- SR1 is eligible for federal support of \$168.5 million under the Government of Canada's Disaster Mitigation and Adaptation Fund.

Next Steps

- Complete responses to federal and provincial SIRs
- Continue engagement with stakeholders and Indigenous groups
- NRCB issues Notice of Prehearing meeting
- Prehearing meeting (opportunity to ask NRCB to participate in public hearing)
- NRCB Hearing (opportunity for public participation)

Questions or Comments?



To stay up to date about the project please visit our webpage at:

<https://www.alberta.ca/springbank-off-stream-reservoir.aspx>

For future inquiries please email us at:

Springbank-Project@gov.ab.ca