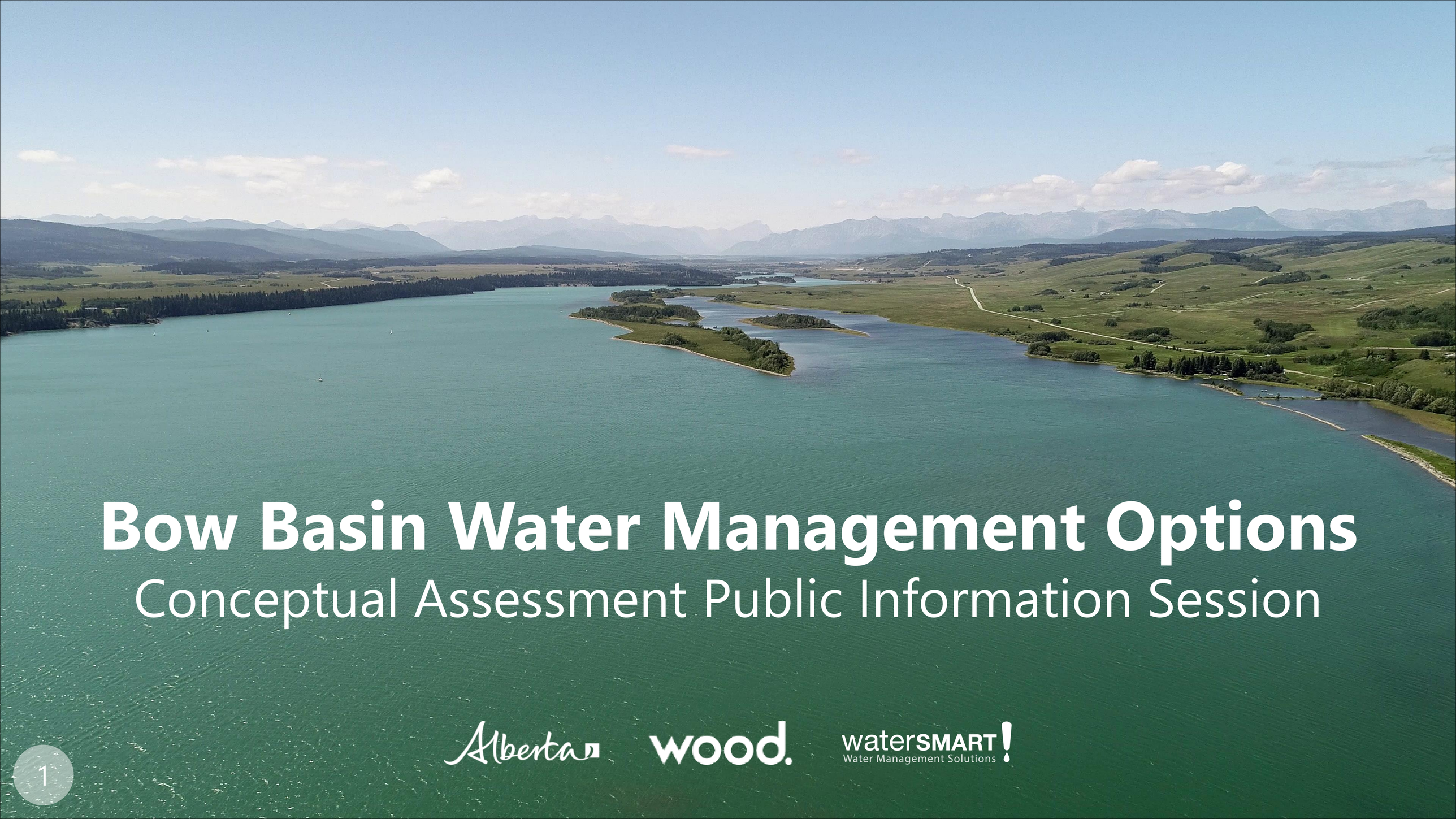

Bow Basin Water Management Options

Conceptual Assessment Public Information Session

Alberta wood. waterSMART! Water Management Solutions

Understanding Our Stakeholders

Background

Bow River Working Group (BRWG)

The BRWG is a multi-stakeholder group of water managers and users including Provincial Ministries, Municipalities, First Nations, Non-Government Organizations, Industry and Irrigation Districts.

Following the 2013 flood, which resulted in over $5 billion in damages, the Government of Alberta asked the BRWG to study and provide recommendations on how to reduce flood and drought risks while protecting the long-term health of the Bow River Basin. In 2017, the BRWG completed its assessment and submitted a report entitled: *"Advice to Government on Water Management in the Bow Basin"*.

As one of its findings, the BRWG identified new reservoir storage on the Bow River upstream of Calgary as a means of reducing flood and drought risk, and recommended that conceptual assessments of three options be completed: Morley Reservoir, Expanded Ghost Reservoir and Glenbow Reservoir.

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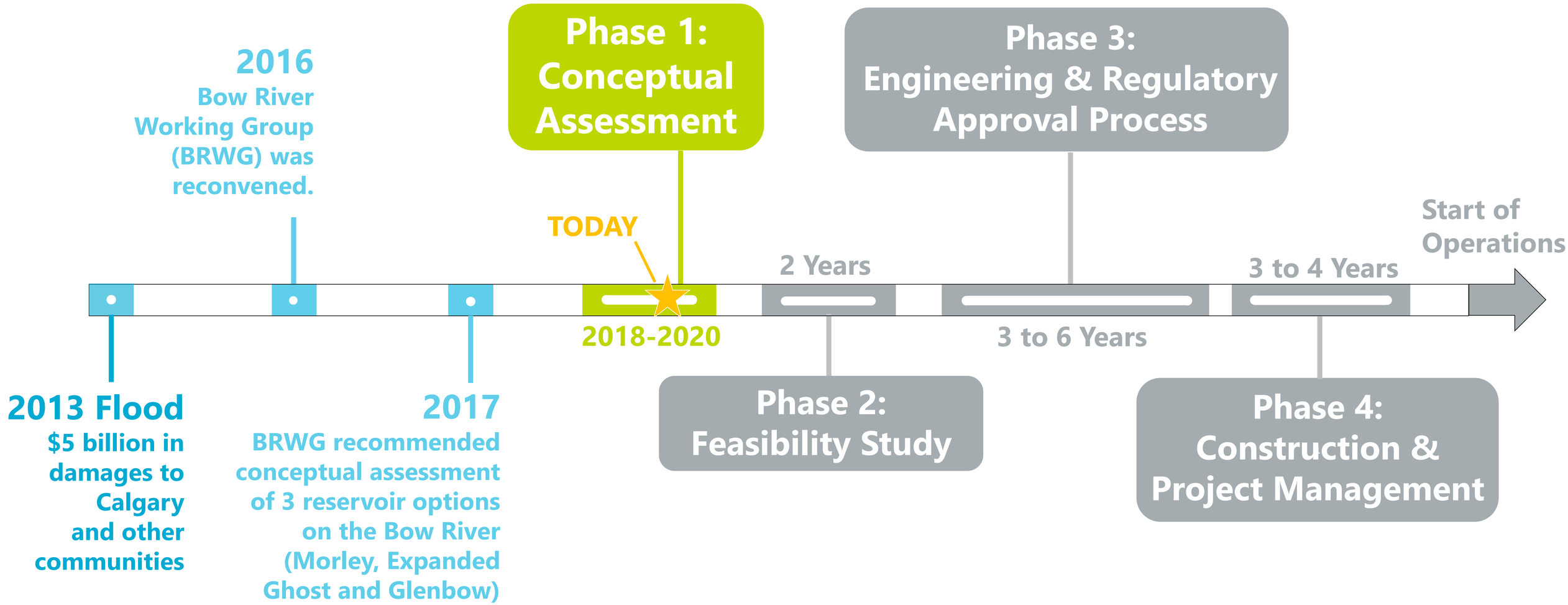
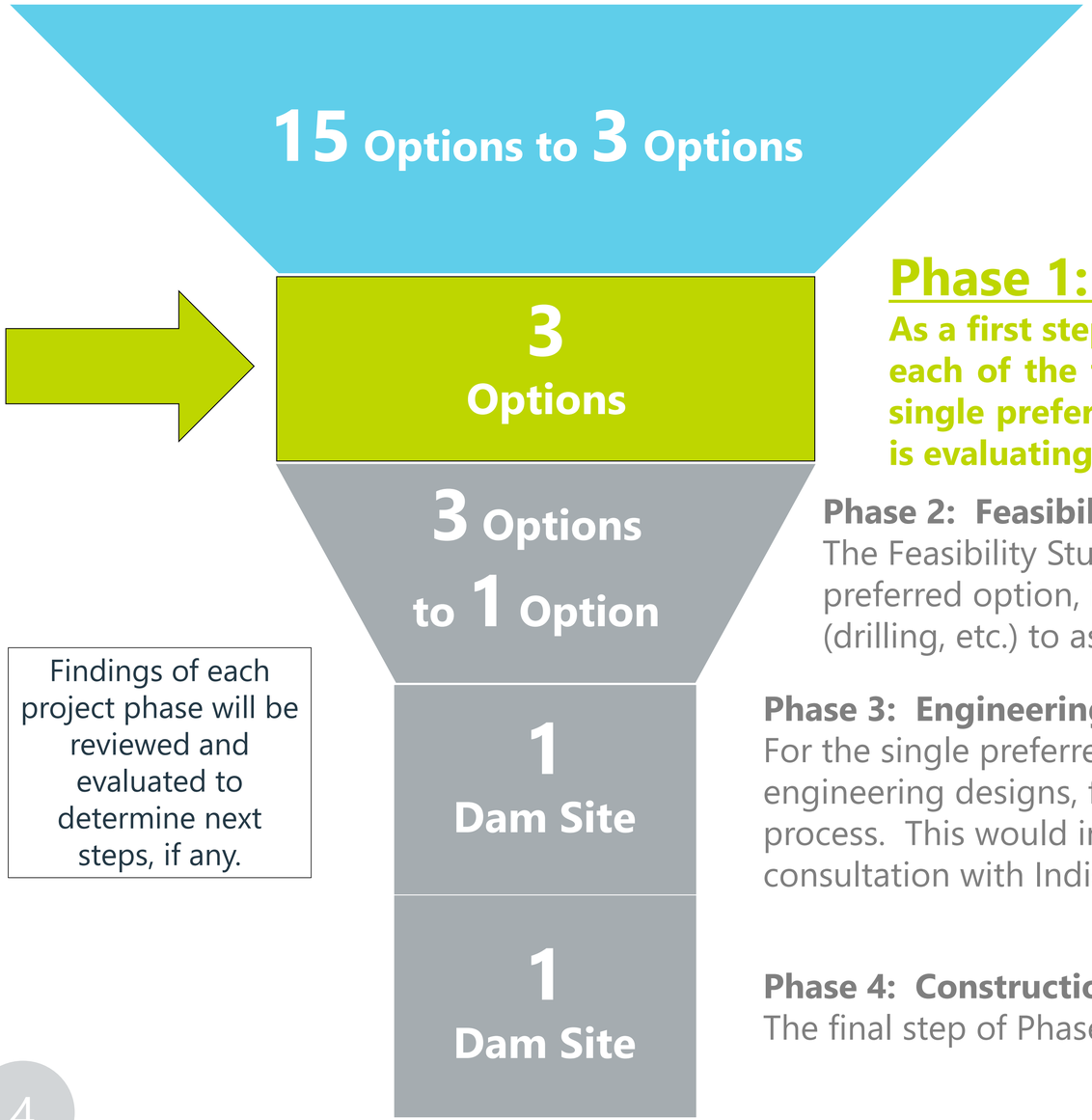
Project Timeline



- Project implementation will take a minimum of 12 years.
- Findings of each project phase will be reviewed and evaluated to determine next steps, if any.

Option Assessment Process



Findings of each project phase will be reviewed and evaluated to determine next steps, if any.

Bow River Working Group

The Bow River Working Group (BRWG) reviewed 15 previously identified reservoir storage options within the Bow River basin upstream of Calgary, and recommended conceptual assessment of three options (Morley Reservoir, Expanded Ghost Reservoir and Glenbow Reservoir) in its 2017 "*Advice to Government*" report.

Phase 1: Conceptual Assessment (Current Study)

As a first step, the Conceptual Assessment rigorously reviewed potential dam site options for each of the three reservoirs (four for Morley, two for Ghost, and four for Glenbow), and a single preferred site was selected for each of the three reaches of river. The on-going study is evaluating the three reservoir options, as determined through the site screening process.

Phase 2: Feasibility Study

The Feasibility Study would evaluate the three options in more detail, and recommend a single preferred option, if any. The Feasibility Study would include geotechnical site investigations (drilling, etc.) to assess soil and bedrock conditions.

Phase 3: Engineering & Regulatory Approval Process

For the single preferred option recommended in the Feasibility Study, Phase 3 would include preliminary engineering designs, followed by detailed engineering designs and the regulatory review & approval process. This would include a comprehensive environmental impact assessment (EIA) and formal consultation with Indigenous People and stakeholders.

Phase 4: Construction & Project Management

The final step of Phase 4 would be dam site commissioning to start reservoir operations.

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Conceptual Assessment Objectives

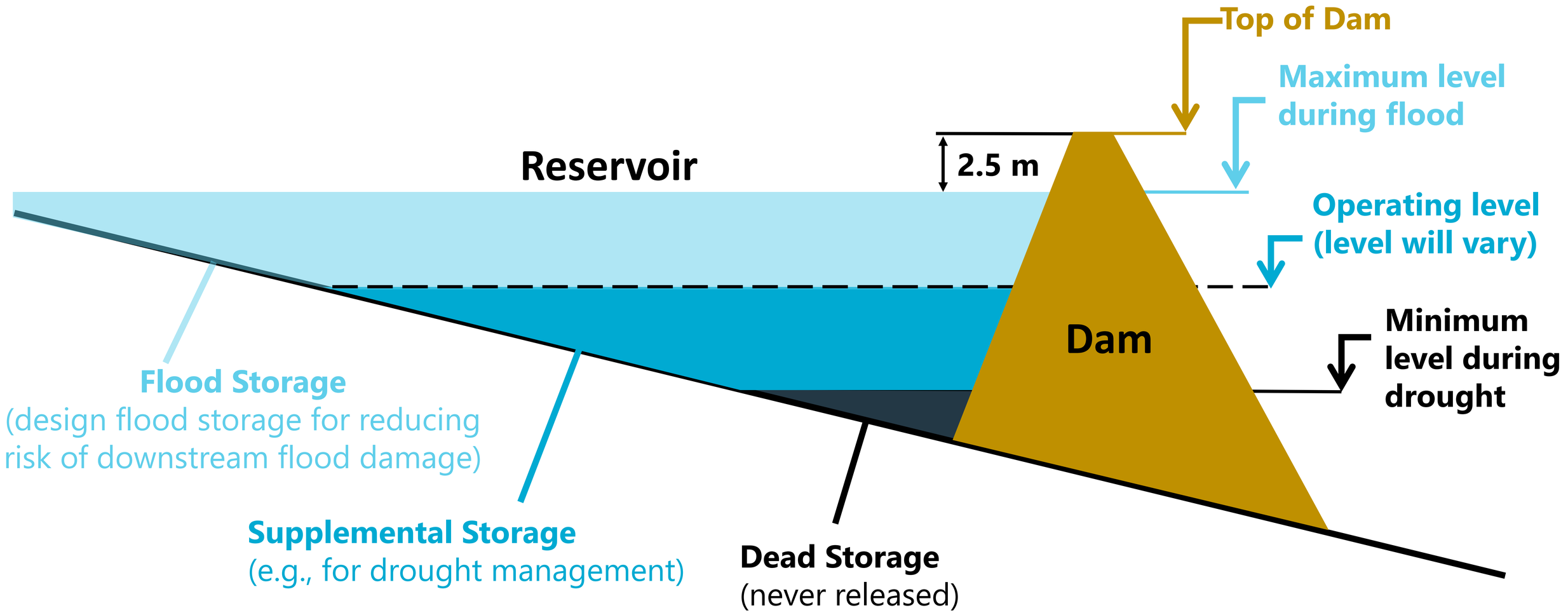
Develop conceptual engineering designs for three reservoir storage options on the Bow River upstream of Calgary and, at a high level, identify potential engineering, environmental, social, economic, cultural and traditional land use factors (both positive and negative). Prepare high level estimates of development costs.

Having more reservoir water storage capacity on the Bow River would:

- Reduce the risk of future flood damage;
- Improve the availability of water, including during droughts; and
- Protect the long-term health of the river.

Typical Dam Components

Reservoir Storage Schematic



- Reservoir level will vary seasonally dependent on flood and drought risk. Details have not yet been established.
- Live Storage = Flood Storage + Supplemental Storage

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Conceptual Assessment Scope of Work*

ENGINEERING

- Hydrotechnical
- Geotechnical
- Conceptual Designs and Cost Estimates

ENGAGEMENT

- Indigenous
- Bow River Working Group (BRWG)
- Other Direct & Indirect Stakeholders

ENVIRONMENT

- Traditional Land Use
- Environmental

* Desktop studies of the three options, based on existing information only.

Environmental Desktop Conceptual Assessment

- Fisheries and Aquatic Resources
- Surface Water Quality
- Industrial Land Use
- Wetlands
- Groundwater
- Social Impacts
- Vegetation
- Soils
- Historical Resources
- Wildlife
- Land & Resource Use

These same disciplines would be involved in preparing an environmental impact assessment (EIA) if one of the options is selected as a preferred option in the future.

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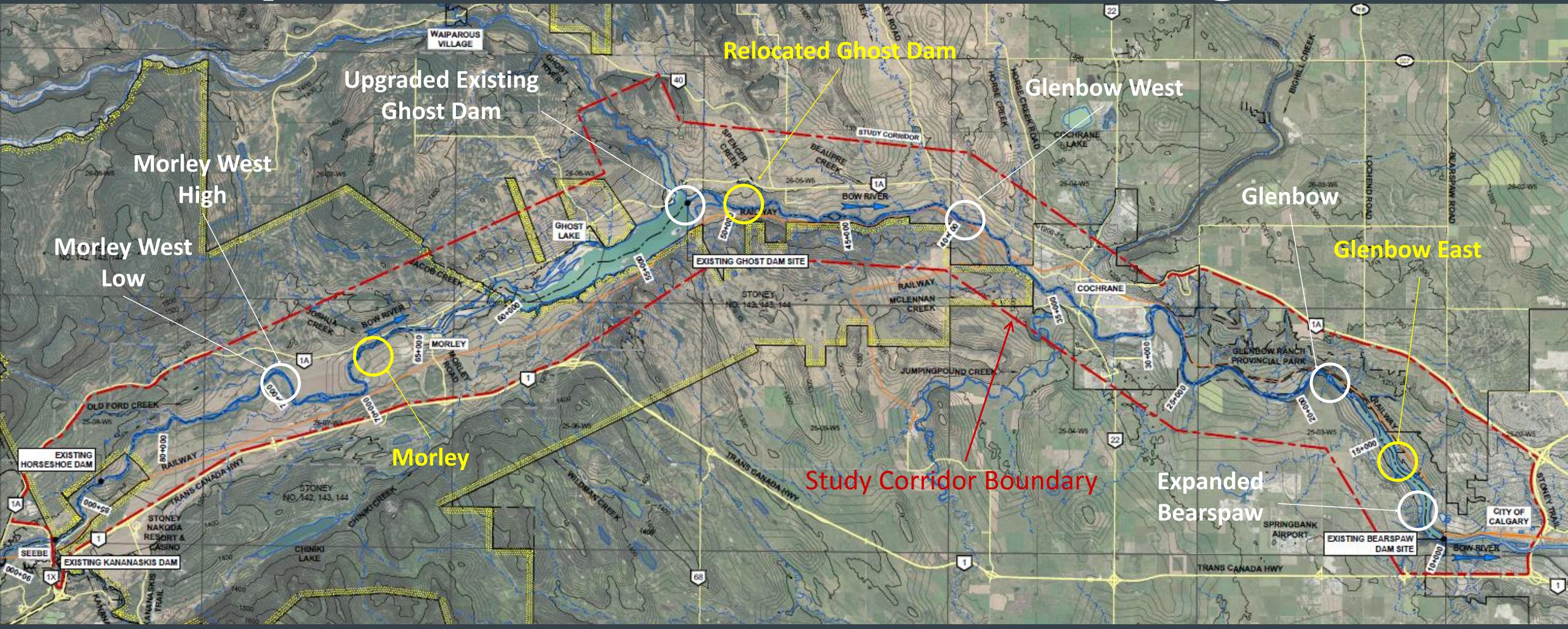
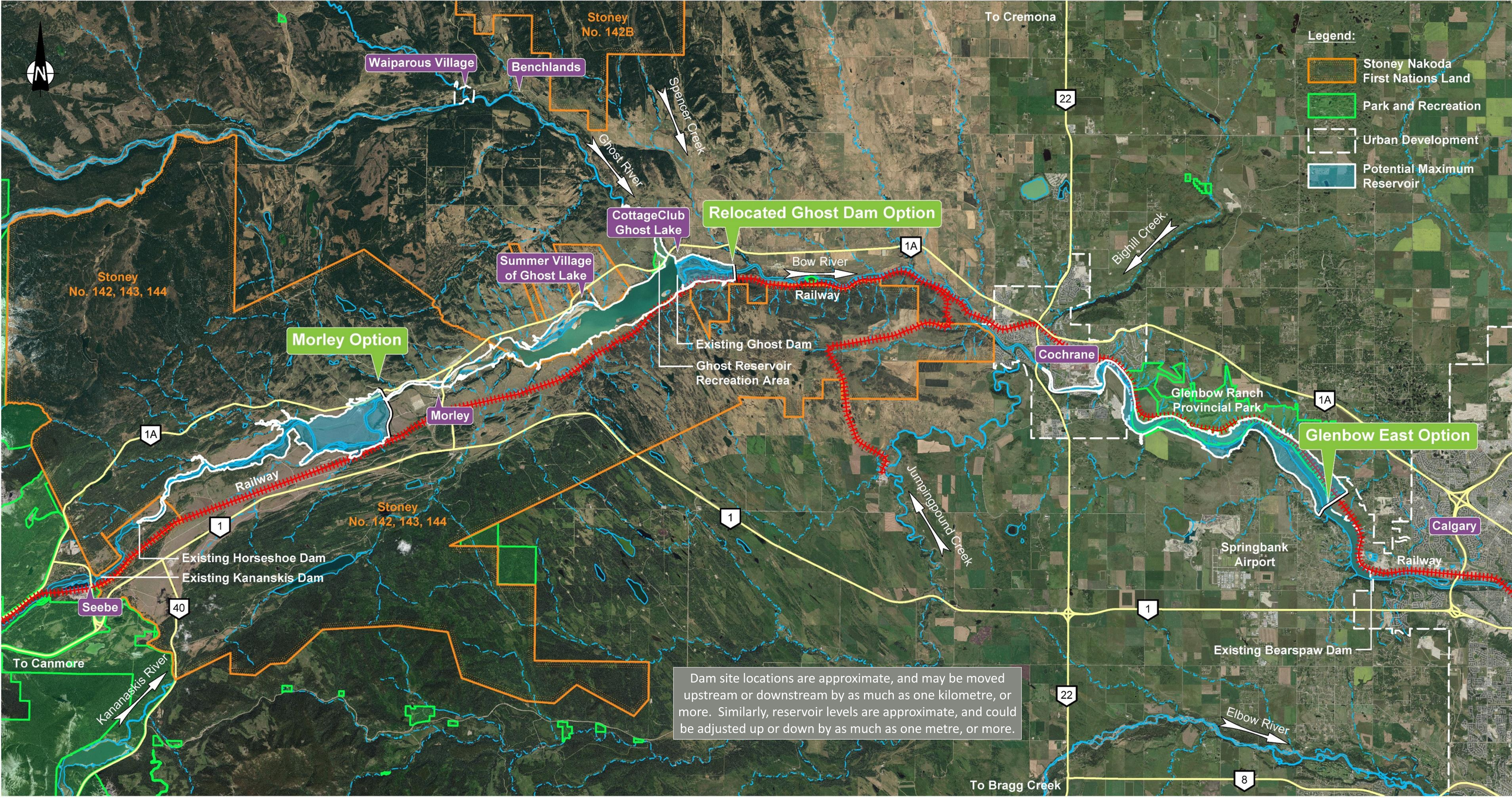
Conceptual Assessment Site Screening Process



The Study Corridor extended from Seebe to Calgary, and potential dam sites were identified.
The site screening process considered reservoir storage capacity and cost, as well as incremental impacts to Indigenous lands, all homes and buildings, public and private land and infrastructure, and parks land.
One preferred dam site location was selected for each reach of river (Morley, Ghost and Glenbow).



BOW BASIN WATER MANAGEMENT OPTIONS
CONCEPTUAL ASSESSMENT - SEPTEMBER 6, 2019

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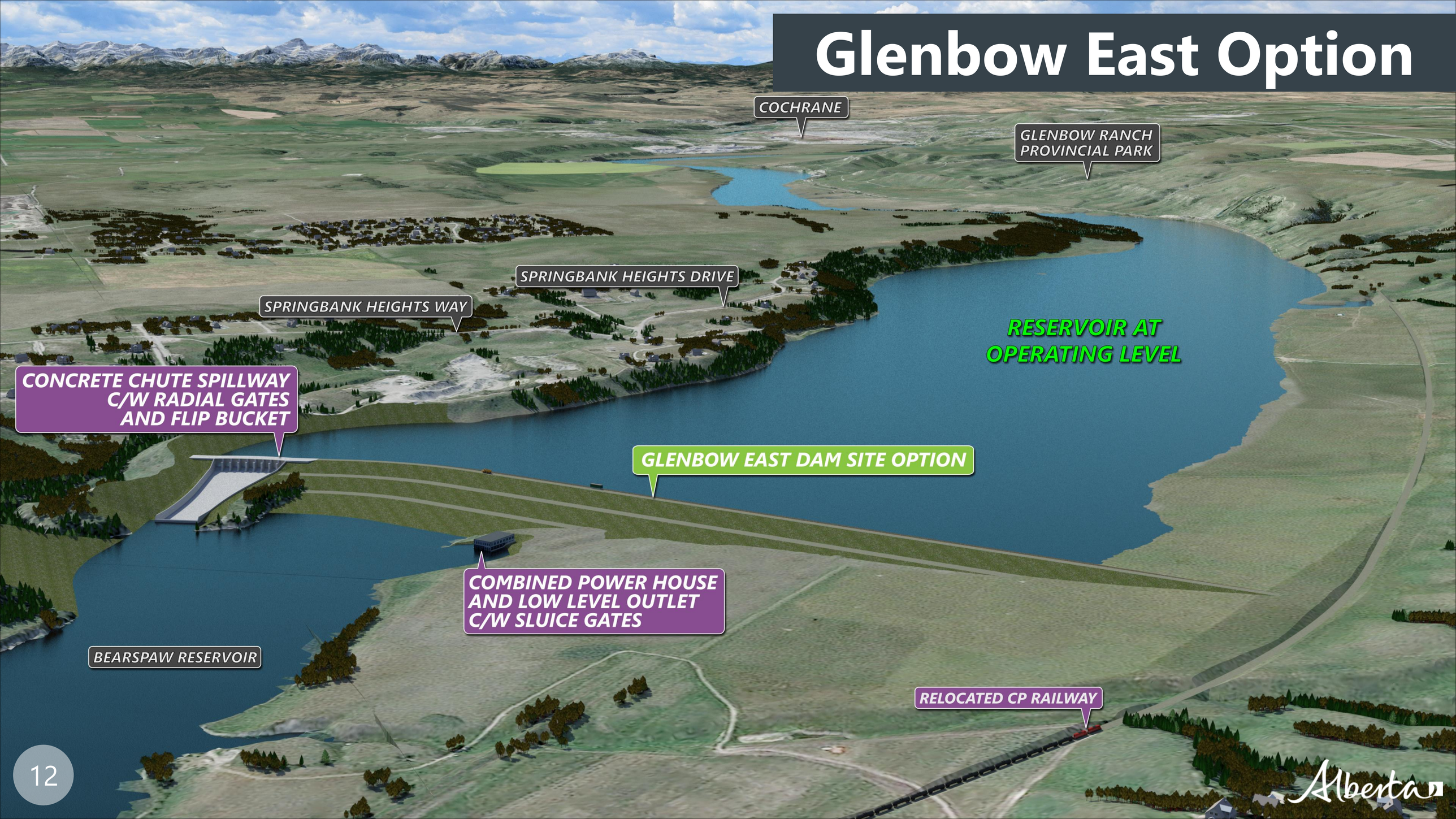
MAP ILLUSTRATING RESERVOIR OPTIONS

Glenbow East Option



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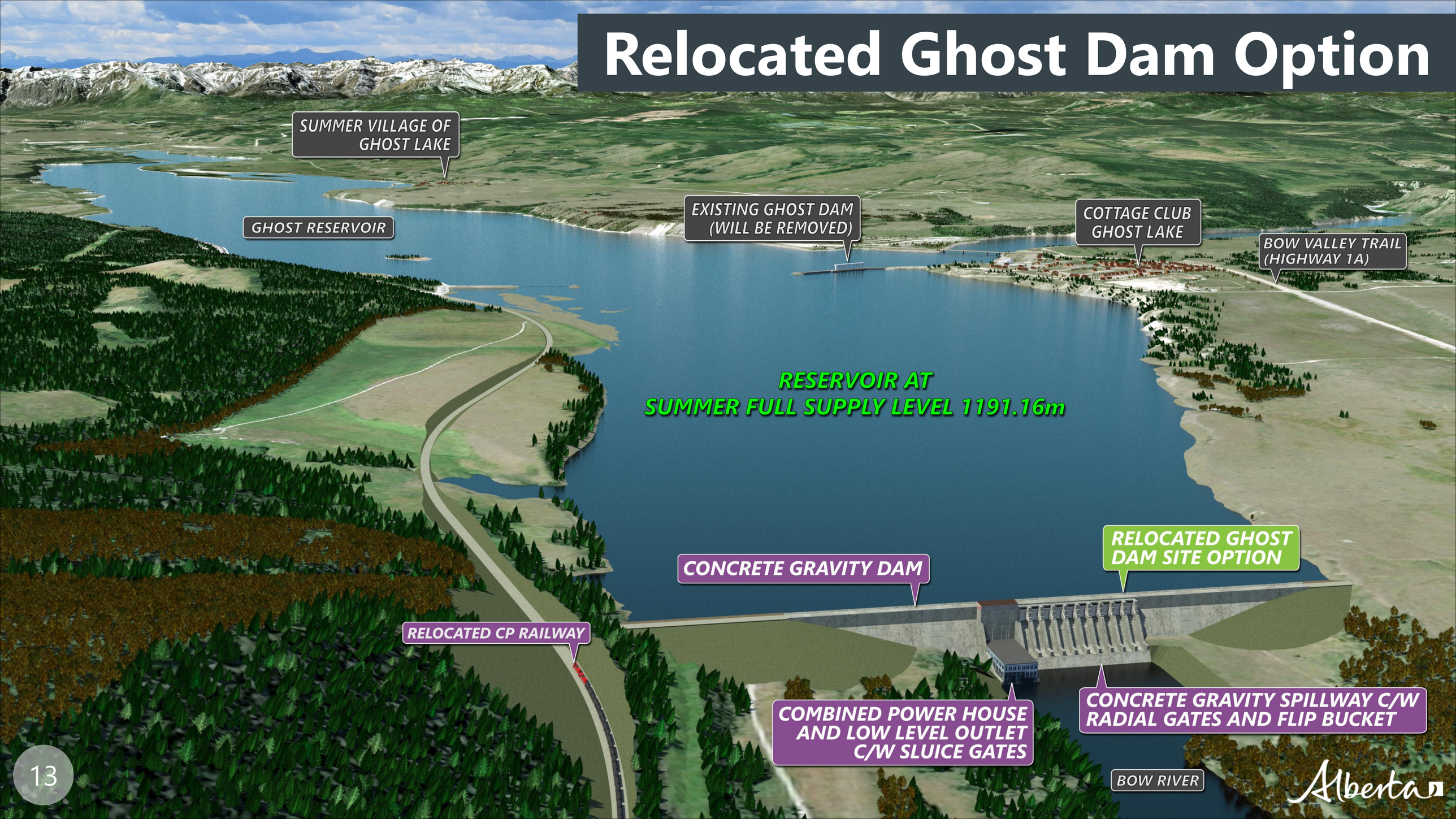
Relocated Ghost Dam Option



Morley Option

Details about the Morley Option cannot be provided at this time, as the Government of Alberta is still in the process of having discussions with the Stoney Nakoda First Nation, who would be directly impacted.

Regulatory Legislation & Approvals

If one of the options being considered today is selected as a preferred option in the future, a comprehensive regulatory approval process would have to be followed before the option could be approved as a project and constructed. This would include, but not be limited to, an environmental impact assessment (EIA) and formal consultation with Indigenous People and stakeholders. The regulatory approval process would be in accordance with all applicable provincial and federal legislation, policies and procedures.

Engagement Continues

1. The Government of Alberta wants to hear your feedback on the Conceptual Assessment information that was shared today.

2. Engagement will also continue through the next phases of the project, if future phases are implemented.

3. Engagement feedback will be reviewed and considered in all phases of the project, and project updates will be provided.

For More Information

Project website:
alberta.ca/bow-basin-water-management-options

Engagement opportunities:
TalkAEP.alberta.ca

Telephone: (403) 355-2491

e-mail: AEP.bowbasin@gov.ab.ca

Your Thoughts on Bow River Water Management