

The Bow River Reservoir Options

Phase 2 Feasibility Study

May 2021 Update

Thank you for your continued interest in the Bow River Reservoir Options initiative.

In our fall 2020 update, we mentioned that Alberta Environment and Parks is proceeding with Phase 2 of the Bow River Reservoir Options initiative, the feasibility study. Wood Environment & Infrastructure Solutions, the consultant that completed the conceptual assessment (Phase 1), has been selected to further investigate the feasibility of three reservoir options on the Bow River, upstream of Calgary:

- “Morley” – a new reservoir between Seebe and Morley on Stoney Nakoda Nation reserve lands;
- “Relocated Ghost Dam” – an expansion of the existing Ghost Reservoir; and
- “Glenbow East” – a new reservoir between Cochrane and the Bearspaw Dam at the western edge of Calgary.

The feasibility study will run until March 2023. There will be various opportunities for Indigenous groups, stakeholders and the public to provide comments and input. Further information on the Bow River Reservoir Options initiative, including feasibility study updates and engagement opportunities, will be provided through email updates similar to this one and be available online at: <https://www.alberta.ca/bow-river-reservoir-options.aspx>.

This update includes an overview of what we learned in the conceptual assessment and what’s next in the feasibility study. Information is also provided about the necessary field work program and its importance to the larger project.

We look forward to continuing our discussions with you during the feasibility study!

Thank you,
Bow River Reservoir Options Project Team

Phase 1 Conceptual Assessment – What We Learned

The conceptual assessment began in November 2018 and concluded in spring 2020. It looked at three reservoir options from a high level of conceptual design. Findings confirmed it is conceptually possible to provide flood and drought storage at all three sites. No comparisons between the reservoir options were made during the conceptual assessment.

Information gathered through engagement with Indigenous groups, stakeholders and the public on social, environmental and cultural considerations, traditional land uses, as well as engineering and economic information, was used to help inform the conceptual assessment.

Details about what we heard and a summary of the work completed during Phase 1 can be found in the [Conceptual Assessment Final Report](#).



Phase 2 Feasibility Study – What’s Next?

The feasibility study continues to explore the three flood and drought mitigation options identified in the conceptual assessment. (At this time, study of the Morley option is being discussed exclusively with the Stoney Nakoda Nations). The aim is to assess technical feasibility, while carefully considering a variety of social, environmental, cultural, traditional land use, engineering and economic elements. Study findings will help the Alberta government decide if there is an option that should proceed to Phase 3, the engineering & regulatory approval process.

What is Included in the Study?

The feasibility study started in spring 2020 and is expected to conclude by spring 2023. For each option, the study will:

- examine its technical feasibility;
- analyze its effectiveness in mitigating flood and drought risk, while also providing water management flexibility;
- assess the potential impacts on communities, the environment and infrastructure;
- quantify the costs and potential benefits; and
- include additional engagement opportunities for Indigenous groups, stakeholders and the public.

Field Work and Land Access

As part of the feasibility study, our consultant will be carrying out field work to learn more about the areas in which a dam might be built. The field work will include environmental surveys of plants, fish and wildlife. It will also include geotechnical drilling to understand the rock formations and soil properties in the area of each potential dam site. This information will help determine if it is technically feasible to construct a dam at any of the potential locations.

Field work will occur both at the proposed dam sites and in the surrounding areas. The data collected, along with traditional land use information gathered from Indigenous groups, will help us understand the environment around each potential site.

Permission is required to access all public, private and Reserve lands in the field study area. If your property is a potential location for field studies you will be contacted and asked for permission to access your property. A field study team member will provide further information and explain what kinds of studies will be completed on your property, the timing and scheduling of the work, and any safety concerns.

No studies will be undertaken on any property without proper permissions.

How Can You Be Involved?

The study team wants to hear from anyone that lives, works or plays in the study area. Opportunities for you to provide input will occur throughout the feasibility study. The planned engagement includes:

- Spring 2021 – Provide an overview of the conceptual assessment findings, introduce the feasibility study and share ideas on what should be considered when selecting an option.
- Spring 2022 – Discuss feasibility study findings and share details about how information may be considered when selecting an option.
- Fall 2022 – Share the results of the evaluation and how input was considered, and explore any remaining concerns.

Current COVID-19 health restrictions require the spring 2021 engagement to be carried out online or through virtual meetings. Details will be provided in our next update email, and on our website. If you know others who might be interested in this initiative, encourage them to sign up for these email updates by directing them to our [website](#) where they can click on the link to the email updates subscription form.



Field Work for Infrastructure Projects: Learning by Getting Out on the Land

Field work is essential to the information gathering stage of any infrastructure project. It builds upon the desktop studies often conducted early on in a project. Both environmental and engineering field work is usually required.

Environmental field studies are conducted to gain a better understanding of the baseline environmental conditions within a project area. These studies can also identify issues or conditions that may impact the project plans. Environmental field studies can look at soils, wildlife, birds, vegetation, wetlands, groundwater, fisheries and cultural resources. Environmental studies typically occur during all four seasons.

Engineering field work is conducted to assess whether the project area is suitable for the proposed structure. This type of field work often focuses on ground conditions. To assess these conditions, vertical holes may be drilled to gather soil and bedrock samples. These samples provide information on the type of soil and rock formations located in the area, as well as the strength and porosity of formations. This information helps determine the suitability of the formations to support the planned structure. The information gained from the samples also helps determine the type of materials that may be best suited for construction.

Field work allows the team to assess the suitability of the area. The information gathered helps the team make important decisions before design work has begun.