

What happens before construction starts?

A basic summary of the approval process for
water infrastructure projects in Alberta, Canada



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Disclaimer

This document intends to summarize publicly gathered information from municipal, provincial and federal government websites and documents. Its objective is to increase understanding of the requirements for water infrastructure projects from an approval process perspective. It is not to be considered as a guide for approval processes, nor is it intended as a definitive list of requirements for approval in the approach for water infrastructure projects, or any other project/s for that matter. Language and terminology used in this document reflect the most up to date information available from the sources listed throughout.

1.0 Introduction

When a major climatic event occurs in Alberta, numerous response options are often identified. For example, plans to mitigate future flooding in Alberta after the 2013 flood included berm construction and repair, dam building, diversion channels and tunnels, and more. However, there is often a delay between the formulation of a response plan and the actual construction of this measure.

This document outlines the regulatory and logistical processes which must be followed when major projects are proposed in Alberta, to illustrate why it appears some projects take a long time to build.

When a project is proposed, a specific regulatory process is followed to ensure the project is in the best interests of Albertans and the environment. This process can be broken down into five steps:

1. **Municipal approval** – a municipality must ensure a project aligns with its bylaws and strategic plans, when the project is within its boundaries.
2. **Environmental impact assessment [EIA]** – examines a project to determine what the environmental, social, economic and health implications may be.
3. **Public interest decision** – the applicable board or Minister decides whether it is in the public interest to let the project go ahead.
4. **Approval with conditions** – regulators give formal approval to the project and set specific conditions for building and operating the project.
5. **Compliance** – ensures the project is operating within the specified approval conditions.¹

Preceding these five steps, the project proponent must perform pre-work to develop the project and determine the roles and responsibilities of various regulatory bodies.

To see a graphic of the considerations in the steps to approval for water infrastructure projects in Alberta visit www.albertawater.com/before-construction-starts

2.0 Project preparation

A project can be proposed by a department of the Provincial Government, a municipality, or a private company. Before engaging in the five-step process outlined in Section 1.0, a proponent must develop the project through engineering, research, and design such that it can be assessed.

Specifically, this pre-work helps determine which, if any, municipality will have jurisdiction over it and whether an EIA and public interest decision are required. When these reviews are required, work such as a project description will indicate which government department(s) will be responsible and it will inform the early stages of assessment. This pre-work by the proponent to prepare the project for the approval process may take a few weeks or several months, depending on the complexity of the project and the proponent's preferred operating plan.

¹"Alberta's Environmental Assessment Process". Government of Alberta. Updated December 2015.
<http://aep.alberta.ca/land/land-industrial/programs-and-services/environmental-assessment/documents/EnvironmentalAssessmentProcess-Dec2015A.pdf>

3.0 Role of the municipal government

The role of Albertan municipalities in approving construction projects is outlined in the *Municipal Government Act*. Per the Act, municipalities have the power to make bylaws and develop Municipal Development Plans and Area Structure Plans, although these Plans and related policies developed by a municipality must align with the policies set out by the Lieutenant Governor in Council in the Alberta Legislature. Assuming they do align, the municipality is thereby able to dictate which, and where, construction projects can occur within its municipal boundaries. Under these Plans and bylaws, a project proponent must have a licence or approval prior to any kind of development, industrial use, business, or thing² within municipal boundaries.

If an inter-municipality land use Plan is in place, this can extend the jurisdiction of these rules beyond a single municipality. The process for attaining a licence varies depending on the project and municipality, however a large project—occurring within the jurisdictional boundaries of a single municipality or multiple municipalities operating under the same Plan—is generally expected to be debated by the corresponding municipal council(s). In this situation, it could take time to gather public input and/or carry out a vote.

Although a municipality may develop bylaws and Plans and dispense approvals, it must also respect an approval or decision made by the National Resource Control Board, Alberta Energy Regulator, Energy Resources Conservation Board, Alberta Energy and Utilities Board, and/or Alberta Utilities Commission.

This means large construction projects, which require approval by one or more of the agencies mentioned, can be largely outside of a municipality's direct control; however, the municipality can participate in the process/s as a stakeholder.

4.0 Environmental Impact Assessments

An Environmental Impact Assessment (EIA) is carried out prior to construction by a project proponent under the guidance of a regulatory body. Throughout the process, the project proponent must give public notice and provide the regulator with sufficient information for a decision on whether the proposed project will have adverse environmental effects. Not all projects require an EIA, but for those that do, the assessment aims to accomplish the following:

1. Gather information for public and government to review the consequences of a given project;
2. Public involvement to allow affected citizens (including First Nations) to voice concerns and/or have questions answered regarding the project; and
3. Support sustainable development by understanding the project's impact on Alberta's environment and economy.

² "Municipal Government Act" Government of Alberta. Updated July 1, 2016.
<http://www.qp.alberta.ca/documents/acts/m26.pdf>

EIA reports typically include:

- Project description;
- Project location (including baseline environmental conditions);
- Baseline environmental, social, and cultural information;
- Information on the potential impacts (both positive and negative) of the project in the context of health, social well-being, economics, culture, and the environment (including consideration of the cumulative effects);
- Plans to address negative impacts through mitigation and emergency response plans; and
- Public and First Nation consultation records³.

Each of the above components can be further broken down into detailed report sections that may require significant research and consultation with experts, stakeholders, and First Nations. For example, the project description typically includes a history of the area and existing infrastructure, information on adjacent land use, identification of potentially at-risk environmental and human factors, assessment of soil and stratigraphy, a site layout map, and a pre-construction site assessment which considers site drainage and physical limitations⁴.

Depending on the nature of the project, various regulatory agencies within Canada will be responsible for overseeing the EIA, if one is required.

The Government of Alberta, the Government of Canada, municipalities, corporations, and lending institutions may each administer their own EIAs⁵, meaning projects may be subject to multiple EIAs; in practice, if a project requires multiple EIAs, it is most common that they are provincially and federally mandated. In this situation, the EIA administrators at both levels of government will attempt to streamline the process through communication and coordination, but it may take longer having multiple agencies conducting EIAs for a project.

It is also possible some projects will require a federal EIA but not a provincial one although this situation occurs infrequently. This section (4.0) focuses on provincial and federal EIAs, as independent and municipal EIAs are less common.

After an EIA, the following questions will be answered:

1. What are the existing conditions of the site?
2. What effects would this project have on the environment and human safety?
3. What are the mitigation measures which would minimize these effects?
4. What are the residual effects and their significance?
5. What are the cumulative effects?

³ “Environmental Assessment Program Frequently Asked Questions” Government of Alberta. Updated February 2010. <http://aep.alberta.ca/land/land-industrial/programs-and-services/environmental-assessment/documents/EnvironmentalAssessmentProgram-FAQ-2010A.pdf>

⁴ Joint Practice Standard – “Professional Responsibilities in Completion and Assurance of Reclamation and Remediation Work in Alberta” APEGGA 2007 <https://www.apega.ca/assets/PDFs/reclamation.pdf>

⁵ Ibid.

For projects with an impact on a watershed an EIA considers both local and downstream impacts. Depending on the scale of the project this regional context can be large. For example, the Springbank Off-stream Reservoir project's EIA considers impacts 20km downstream⁶.

4.1 EIA: First Nations and Aboriginal Consultation

Throughout both the provincial and federal EIA processes, project proponents are encouraged to integrate First Nations and Aboriginal consultations where possible. In both cases, the appropriate level of government will indicate to the project proponent if a dedicated Consultation process is required. In both cases the trigger is whether land management and resource development decisions related to the project "may infringe upon existing treaty or other constitutional rights"⁷.

In Alberta, the Aboriginal Consultation Office (ACO), of the Government of Alberta will conduct a preliminary assessment of the project to determine if the above statement applies. Federally, the Canadian Environmental Assessment Agency handles the equivalent assessment.

If it is found Consultation is required in Alberta, ACO provides the proponent with a list of First Nations who must be contacted in writing to inform them of the project and invite feedback. These Nations then have 21 calendar days to write back expressing concerns; if they don't or if they write back expressing the absence of concerns, then the dedicated Consultation process is recorded and closed through a review process which also involves these same Nations⁸.

A proponent may also be exempt from First Nations Consultations if their project is going through the EIA process for a second (or third, etc.) time after minor changes and an acceptable Consultation process has been completed previously.

If the First Nations involved express concern, then the proponent must engage in the First Nations Consultation process. Proponents must first develop a First Nations Consultation Plan, which encompasses:

- Proponent contact information
- A list of First Nations to be consulted (recommended list provided by Government)
- Plain language project specific information
- Delivery methods for providing project information and direct notices to First Nations
- Any information regarding potential adverse impacts to First Nations
- Timelines and schedules for consultation activities
- Procedures for reporting to Alberta Environment on the progress and results of consultation.

⁶ "Welcome to the Springbank Off-stream Reservoir (SR1) Open House" Government of Alberta. May 2016. <http://aep.alberta.ca/water/programs-and-services/flood-mitigation/flood-mitigation-projects/documents/SpringbankReservoir-OpenHouses-May2016.pdf>

⁷ "Environmental Assessment Program Frequently Asked Questions" Government of Alberta. Updated February 2010. <http://aep.alberta.ca/land/land-industrial/programs-and-services/environmental-assessment/documents/EnvironmentalAssessmentProgram-FAQ-2010A.pdf>

⁸"The Government of Alberta's Guidelines on Consultation with Metis Settlements on Land and Natural Resource Management 2016" Government of Alberta, 2016 <http://www.indigenous.alberta.ca/documents/GOA-Guidelines-Consultation-Metis-LandNaturalResourceManagement-2016.pdf?0.1898236863107831>

As a proponent executes their Plan, the Government of Alberta will ensure traditional use information is integrated and provide information to First Nations and proponents to assist in the Consultation.

The Government of Alberta also determines adequacy of consultation (by answering questions such as “did the two parties consult in a meaningful way in the spirit of collaboration?” and “were potential impacts specifically identified?” etc.) and has a responsibility to report on the Consultation to proponents and First Nations.

If the completed Consultation is deemed inadequate, proponents have an opportunity to restart the process within the same review (i.e. the initial assessment of impact to First Nations is not repeated).

At the Federal level, essentially the same process is followed for Aboriginal Consultations. However, a key difference is the Government of Canada will act as the lead consultant in the process, as opposed to the proponent. The Government of Canada also provides funding and additional resources to enable the participation of all impacted Aboriginal groups and communities⁹.

These Consultations can help develop critical information about the project, including the traditional uses of nearby Aboriginal Peoples, such as hunting, fishing, and cultural uses. It is also important for proponents (and/or the Government of Canada, for federal EIAs) to investigate public health and socio-economic implications for Aboriginal communities and groups in the project area.

At both the provincial and federal level, as part of the final EIA decision, comments made by First Nations and Aboriginal groups during consultation will be considered; significant concerns which are not adequately addressed by project proponents, even after repetition of some or all the Consultation process, may result in a rejected project.

4.2 EIA: Role of the Provincial Government

Under the *Environmental Protection and Enhancement Act*, the Government of Alberta has legislation that specifies construction activities that do and do not require a provincial EIA. This legislation is the *Environmental Assessment (Mandatory and Exempted Activities) Regulation*. In this regulation, dams over 15 metres in height, water diversion structures with capacity of 15m³/second or greater, and water reservoirs with capacity of 30 million m³ or greater are included in the list of activities which require a provincial EIA. However, constructing or maintaining some water and wastewater systems (falling under *Wastewater and Storm Drainage Regulation*), water wells, and subsurface sewage disposal systems are exempt. Further, the maintenance and rehabilitation of existing water management infrastructure, such as dikes, dams, weirs, embankments, and reservoirs, does not require a provincial EIA¹⁰.

Using the pre-work from the project proponent an initial assessment determines if an EIA is required and which agency within the Government of Alberta will be responsible for it. Energy projects, such as oil and gas and coal, are the responsibility of the Alberta Energy Regulator. For all other industrial activities, Alberta Environment and Parks is responsible for administering the EIA.

⁹“Aboriginal Consultation in Federal Environmental Assessment” Government of Canada, updated July 2016
<https://www.canada.ca/en/environmental-assessment-agency/programs/aboriginal-consultation-federal-environmental-assessment.html>

¹⁰ “*Environmental Assessment (Mandatory and Exempted Activities) Legislation*” Government of Alberta, 2008.
http://www.qp.alberta.ca/1266.cfm?page=1993_111.cfm&leg_type=Regs&isbncln=9780779738137

During the provincial EIA process the responsible regulatory body reviews an initial application whereupon they may request additional information from the project proponent. This information must be provided promptly to facilitate the review, whereupon the regulator may return with additional questions; this back and forth process may continue through several iterations before the regulator is satisfied with the provided information and rules that the EIA is completed.

On average, the regulator will make almost 250 additional questions or information requests during the review process¹¹. Any delays on the part of project proponents, such as submitting incomplete information, delay the review process.

Once initiated, the average review period for a provincial EIA in Alberta is 80 weeks (just over a year and a half), although it varies by project type and complexity between 20-160 weeks¹². Typically, it takes 13 weeks for a submitted project to be opened for the first time by the review team; as many as 12 projects are simultaneously under review throughout a given year.

If a project initially fails an EIA at the provincial level, the proponents may re-apply and address outstanding concerns to facilitate future approval. For example, the Dunvegan Site C hydroelectric dam proposed by Glacier Power was initially denied in 2003, but a second application in 2004 successfully passed the provincial EIA process in 2009¹³.

4.3 EIA: Role of the Federal Government

Unlike a provincial EIA, a federal EIA can be required under a range of circumstances, as opposed to under a single regulation.

If a project meets certain regulatory criteria, will occur on federal lands and poses a risk to the environmental health of those lands, or is referred for an EIA by order of the Minister of Environment, then a federal EIA is required. The Minister may require a federal EIA for a project if this project will, in their judgement, result in significant environmental impacts and/or public concern. Otherwise, projects that meet criteria outlined in *Regulations Designating Physical Activities* will fall under the jurisdiction of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). In this case, projects will be assessed at a project description level to determine if a federal EIA is indeed required.

The *Regulations Designating Physical Activities* serve as a “filter” to help manage the volume of projects which receive a federal EIA; only projects which fit descriptions contained therein will be assessed under this process.

With respect to water infrastructure, projects are identified under the *Regulations Designating Physical Activities* and are therefore regulated by the CEAA 2012 are as follows:

¹¹ “Environmental Assessment Program 2014 Year-End Statistics” Government of Alberta, December 31, 2014. <https://open.alberta.ca/dataset/495944a5-0005-4709-b1c2-d049036f8c28/resource/75efc7b9-ebd7-41a6-9c80-08411cdb32ae/download/2015-EPA-2014-YearEndStatistics-Mar23.pdf>

¹² Ibid.

¹³ “Draft Environmental Impact Assessment Terms of Reference” Glacier Power Ltd. February, 2004. <https://open.alberta.ca/dataset/42bba1b2-5726-4920-bb04-96e2c20929e1/resource/ae88e3ff-0785-49c3-8097-84e54038b4bc/download/App-A---Dunvegan-TOR.pdf>

- Construction, operation, decommissioning and abandonment in a wildlife area or migratory bird sanctuary of:
 - A dam, dyke, or other structure for the diversion of water; and
 - A canal or lock;
- Expansion of an existing hydroelectric dam facility resulting in 50% capacity increase in power output;
- Construction, operation, decommissioning and abandonment of a dam or dyke which produces a water body with a surface area exceeding the natural water body's surface area by 1,500 hectares or more; and
- Expansion of existing dam or dyke resulting in 35% or greater increase to the surface area of the water body.

Other major projects, such as some large oil and gas developments and anything related to nuclear power generation or nuclear waste, are automatically required to have a federal EIA, administered by a specific group with relevant expertise. For example, nuclear projects complete a federal EIA through the Canadian Nuclear Safety Commission.

When a project is found to require a federal EIA the process may be administered by the Canadian Environmental Assessment Agency (CEAA), or an expert review panel, such as the National Energy Board. In Alberta, close to 20 projects are currently under review through a federal EIA, ranging from highway construction to oil sands development. The federal EIA process is currently under review by the Government of Canada, with changes expected in 2017.

As with provincial EIAs, federal EIAs are initiated once a project proponent submits documents to describe the project. A period up to a maximum of 55 days is used to accept project documents, allow for a 20-day public comment period, and to determine if a federal EIA is required. If a federal EIA is required, it can be administered by the Canadian Environmental Assessment Agency over no more than a year, or an expert review panel can handle the process (lasting up to two years).

In addition to these prescribed timelines, the review period may be extended by order of the Minister of the Environment up to three months, or by order of the Governor in Council indefinitely. Further, the time required for project proponents to respond to requests made by EIA administrators is not counted in the one and two year timelines¹⁴. Depending on project complexity and project proponent efforts to facilitate the assessment, federal EIAs can last many years.

If a project initially fails an EIA at the federal level, the proponents may re-apply and address outstanding concerns to facilitate future approval. For example, the Dunvegan Site C hydroelectric dam proposed by Glacier Power was initially denied in 2003, but a second application in 2004 successfully passed the federal EIA process in 2009¹⁵.

¹⁴ "Basics of Environmental Assessment" Government of Canada. Updated July 2016.
<http://www.ceaa.gc.ca/default.asp?lang=en&n=B053F859-1#ea02>

¹⁵ "Draft Environmental Impact Assessment Terms of Reference" Glacier Power Ltd. February, 2004.
<https://open.alberta.ca/dataset/42bba1b2-5726-4920-bb04-96e2c20929e1/resource/ae88e3ff-0785-49c3-8097-84e54038b4bc/download/App-A---Dunvegan-TOR.pdf>

5.0 The Natural Resource Conservation Board and a public interest decision

In addition to an EIA, non-energy projects within Alberta may be reviewed through an independent, quasi-judicial process to assess whether its construction would serve the public interest in a social, environmental, and economic context.

The *Natural Resource Conservation Board Act* outlines the role played by the Natural Resource Conservation Board (NRCB) in reviewing projects, as well as the nature of projects which require a review.

This includes *water management projects* defined in Section 1 of the Act as:

- (i) *a project to construct a dam, reservoir or barrier to store water or water containing any other substance for which an environmental impact assessment report has been ordered, or*
- (ii) *a project to construct a water diversion structure or canal capable of conducting water or water containing any other substance for which an environmental impact assessment report has been ordered.*¹⁶

If the Lieutenant Governor in Council refers a non-energy project, or if it requires a provincial EIA (see page 7, section 4.2), it is reviewed by the NRCB in Alberta.

The Lieutenant Governor in Council would refer a project to the NRCB if they believe that significant environmental impacts and/or public concern will be produced by the project. When a project *does* require a provincial EIA, efforts are made by the NRCB and the EIA administrator to streamline the overall review process by asking project proponents for the same information; however, the NRCB review cannot begin until the EIA is completed. Once the public interest review is completed, the Alberta cabinet must also approve the decision by the NRCB.

The NRCB decision does not inform the federal approval process, since the NRCB is a provincial agency. Instead, the federal public interest decision is tied into the federal EIA process, the outputs of which are approved by the federal cabinet.

Examples of major water projects reviewed by the NRCB include the Amisk Hydroelectric Project, the Springbank Off-stream Reservoir, and the Cougar Creek Debris Flood Retention Structure in Canmore¹⁷.

During the review process evidence is heard, often through public hearings, from the project proponent, relevant government agencies and non-governmental organizations, citizens and may include First Nations groups. Ongoing public engagement may be required to address the concerns of a wide range of stakeholders; this process could take 12 months or more.

¹⁶ “*Natural Resources Conservation Board Act*” Government of Alberta. Updated December 17, 2014
<http://www.qp.alberta.ca/documents/Acts/N03.pdf>

¹⁷ “Natural Resource Projects” Natural Resources Conservation Board. Online source.
<https://nrcb.ca/NRPHome.aspx>

6.0 Project approval and compliance

Once the appropriate provincial EIA administrator, the CEAA or expert review panel, and/or the NRCB have reviewed a project, it may be granted conditional approval by the Provincial and/or Federal cabinets.

Conditional approval means project proponents may proceed with construction if any conditions specified throughout the review process(s) are adhered. These conditions may include expected monitoring frequency, frequency and nature of compliance reporting, and implementation of mitigation measures. The conditions could also include any additional conditions that an appointed Director feels are appropriate¹⁸. These conditions may be imposed for the protection of the environment, economy, and human population.

If a project does not receive cabinet approval a legal appeal may be launched by the proponent through Canada's courts system.

Similarly, if the project receives approval but there are groups opposed to it, those groups may also launch an appeal.

This means cabinet approval is not always the final step in the regulatory process, especially for large projects. Regardless of who initiates it, the legal appeals process may take years or delay a project indefinitely.

As a project is constructed and operated, project proponents need to ensure continued compliance with the approval conditions mandated by regulatory agencies. Projects must also comply with regional development plans per the *Public Land Stewardship Act*.

7.0 Pre-construction considerations

In addition to the regulatory process outlined above, project proponents must satisfy the logistical requirements of the project. This includes obtaining funding, acquiring necessary land, securing construction contracts, and procuring materials.

If government, e.g. the provincial government is the project proponent and funding will come from the government it may take some time to secure funding for the project. For example, the Springbank Off-stream Reservoir is proposed by the Government of Alberta is planned to be funded through government flood mitigation programs. Similarly, if a project is proposed by private industry while relying on government funding in some capacity, funding approvals may take time.

Land acquisition may also extend the process. For example, to construct the Springbank Off-stream Reservoir, the provincial government must negotiate for or otherwise acquire land parcels worth at least \$40 million¹⁹ in a process estimated to take 14 to 18 months²⁰.

¹⁸ “*Environmental Protection and Enhancement Act*” Section 68. Government of Alberta. Current as of June 30, 2016 <http://www.qp.alberta.ca/documents/Acts/E12.pdf>

¹⁹ “The Alberta government is planning to spend \$447 million on flood mitigation, including the controversial Springbank reservoir” The Calgary Herald. October 26, 2015. <http://calgaryherald.com/storyline/breaking-the-province-will-build-297-million-springbank-off-stream-reservoir-to-prevent-future-flooding>

For any project, affected landowners may or may not be hostile to negotiations; for private projects, this can lead to significant delays, while for government projects, this may lead to a scenario where required lands are expropriated.

Under the *Expropriation Act*, expropriation is the process by which the government may seize land without the consent of the landowners while financially compensating these owners. A private contractor does not have this option and may need to engage in extended negotiations to acquire land.

Regardless of how the necessary land is acquired, project proponents will be required to consult extensively with land owners before the project can proceed; and any delay to construction because of this process depends on the nature of the project, how much land is required to be obtained, and the relationship between affected landowners and project proponents.

8.0 Close and feedback

To close, what happens before construction starts on a project can be an involved and at times iterative process. We hope this document helps Albertans increase their knowledge and understanding of the process and the potential steps involved for major water infrastructure projects.

We welcome ongoing improvements to this document. For feedback please contact:

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²⁰ "Springbank Off-Stream Reservoir Project: *Canada Environmental Assessment Act, 2012*" Stantec Consulting Limited. April 18, 2016 <http://www.ceaa.gc.ca/050/documents/p80123/114315E.pdf>