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Our File Reference: 162612

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PLEASE REPLY TO EDMONTON OFFICE

March 29, 2021

**SENT BY EMAIL**

Natural Resources Conservation Board  
19<sup>th</sup> Floor, 250 5<sup>th</sup> Street SW  
Calgary AB T2P 0R4

**Attention: Laura Friend, Manager, Board Reviews**

Dear Ms. Friend:

**Re: Alberta Transportation - Springbank Off-stream Reservoir Project  
(SR1) - NRCB Application No. 1701**

Further to the above captioned matter, please find enclosed the responses of Alberta Transportation to the undertakings given by Mr. Hebert on March 23, 2021 (see Vol 2; pg. 291; ln 8, Exhibit #357) and the responses of Alberta Transportation to the undertakings given by Mr. Hebert on March 24, 2021 (see Vol 3; pg. 747; ln 2; Vol 3; pg. 772; ln 16; and Vol 3; pg. 791; ln 11, Exhibit #365).

Thank you.

Yours truly,

RONALD M. KRUHLAK

MOC/rs  
Enclosures

cc William Kennedy, General Counsel, Natural Resources Conservation Board  
Gavin. S. Fitch, Q.C., McLennan Ross LLP  
Michael Barbero, McLennan Ross LLP  
Richard Secord, Ackroyd LLP  
Doug Rae, Rae and Company

00162612 - 4160-3971-8444 v.1

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**Springbank Off-stream Reservoir Project (SR1) – NRCB Application No. 1701**

<b>UNDERTAKING # 4 RESPONSE OF ALBERTA TRANSPORTATION</b>	
Reference	Volume 2; March 23 2021, Exhibit #357  Pg. 291 / ln. 8
Undertaking	To confirm which communities specifically Alberta Transportation sent mail-outs to and what information those mail-outs included specifically about effects from the Project.
Response	<p>Please see attached Appendix “A”, a table prepared by Alberta Transportation setting out the dates Alberta Transportation sent mail-outs containing information on SR1 Project effects to the communities of South Springbank and Elbow Valley, Springbank, Bragg Creek, and Redwood Meadows (Tsuut’ina Nation). This table also summarizes the information contained in those mail-outs.</p> <p>Please see attached Appendix “B”, copies of the mail out content, which can also be accessed online at the following website: <a href="https://open.alberta.ca/publications/springbank-off-stream-reservoir-update">https://open.alberta.ca/publications/springbank-off-stream-reservoir-update</a></p>

## APPENDIX “A”

### SR1 PROJECT EFFECTS COMMUNICATION TO COMMUNITIES

Information on SR1 Project effects was communicated to communities through the following (documents attached):

Name	Date	Method	Distribution	Sent To	Description
Project Update #1	Week of June 10, 2019	Mail drop by Canada Post	1,181 addresses	<ul style="list-style-type: none"> <li>• South Springbank and Elbow Valley Area</li> <li>• Springbank</li> </ul>	<ul style="list-style-type: none"> <li>• Overview of project effects</li> <li>• Regulatory review: next steps</li> <li>• Future land use</li> </ul>
Project Update #2	Week of May 25, 2020	Mail drop by Canada Post	3,730 addresses	<ul style="list-style-type: none"> <li>• South Springbank and Elbow Valley Area</li> <li>• Springbank</li> <li>• Bragg Creek</li> <li>• Redwood Meadows (Tsut'ina Nation)</li> </ul>	<ul style="list-style-type: none"> <li>• Bow River Basin Flood Mitigation Strategy</li> <li>• Benefits of Off-stream Storage</li> <li>• Living by the Proposed Springbank Reservoir</li> </ul>
Project Update #3	Week of October 5, 2020	Mail drop by Canada Post	3,721 addresses	<ul style="list-style-type: none"> <li>• South Springbank and Elbow Valley Area</li> <li>• Springbank</li> <li>• Bragg Creek</li> <li>• Redwood Meadows (Tsut'ina Nation)</li> </ul>	<ul style="list-style-type: none"> <li>• Impacts to roads</li> <li>• Operations overview</li> <li>• Debris deflection barrier</li> <li>• Public Lands Act &amp; Water Act submission</li> </ul>
Project Update #4	Week of March 1, 2021	Mail drop by Canada Post	3,728 addresses	<ul style="list-style-type: none"> <li>• South Springbank and Elbow Valley Area</li> <li>• Springbank</li> <li>• Bragg Creek</li> <li>• Redwood Meadows (Tsut'ina Nation)</li> </ul>	<ul style="list-style-type: none"> <li>• What will the Springbank Reservoir look like?</li> <li>• Groundwater effects and mitigation</li> <li>• Springbank reservoir video profile</li> </ul>

A door hanger was also distributed by hand in November 2020 to adjacent and directly affected landowners (a total of 169 residents). The door hanger provided general project information, a link to the project website, and invited recipients to sign up for the email distribution list

Alberta Transportation has made all regulatory filings and submissions available to the public by posting information to the SR1 project website (see: <https://www.alberta.ca/springbank-off-stream-reservoir.aspx>). These regulatory submissions were communicated to key stakeholders including identified Indigenous groups, Rocky View County, City of Calgary, CRCAG, Springbank Community Association through emails. In addition, links to this information was provided in email newsletters that were distributed between July 2020 and March 2021 to a distribution list that currently contains close to 600 addresses.

## Future Land Use

We have heard from Indigenous groups and stakeholders that there is a desire to access the project lands in the future. Alberta Transportation will continue to engage with these groups regarding potential future options for the land use area.

Future land use decisions will be guided by principles, including:

- The primary use of the land will be for flood mitigation.
- Public safety is an overriding factor in land use decisions.
- Uses and activities must have minimal impact on the land. In general, Indigenous groups' traditional activities will be allowed, in keeping with approved land use plans.

## Regulatory Review: Next Steps

Alberta Transportation has responded to regulators' information requests, as described in the "What's New?" Section, to further their understanding of the project and its effects. Once AEP and the NRCB have no further questions for Alberta Transportation, AEP will determine if the EIA is complete so the project can proceed through the NRCB process. The NRCB will provide opportunities for the public to participate in the hearing process. Federally, CEAA will prepare a draft agency report, which will be made available for public comment before a final report is released.

## Talk to Us

Stakeholders and Indigenous groups have submitted their concerns to the project team, including questions related to:

- Benefits and costs
- Land use
- Indigenous consultation
- Water and hydrogeology
- Environmental Impacts

We continue to engage with Indigenous groups and stakeholders and look forward to further discussions about the Springbank Reservoir.

### Please contact us with your questions at:

**Phone:** 780-644-5612

**Toll free:** 310-0000 before the phone number (in Alberta)

**Email:** [springbank-project@gov.ab.ca](mailto:springbank-project@gov.ab.ca)

### Address:

Alberta Transportation  
Major Capital Projects  
Twin Atria Building  
2<sup>nd</sup> Floor, 4999 98 Avenue NW  
Edmonton, Alberta T6B 2X3

To learn more about these topics and sign up for email updates, visit [www.alberta.ca/springbank-off-stream-reservoir-project.aspx](http://www.alberta.ca/springbank-off-stream-reservoir-project.aspx)

There you will find up-to-date project information, including a video of how the Springbank Reservoir will work when in operation. We will continue to share information as the project advances.

# Springbank Off-stream Reservoir Update

Summer 2019

The Springbank Off-stream Reservoir (the Springbank Reservoir) will work in tandem with the Glenmore Reservoir in Calgary to accommodate water volumes equal to the 2013 flood on the Elbow River.

The project reduces flood risk by managing downstream river flow rates and volume. This goal will be met while protecting river processes, critical habitats and fish and wildlife.

Alberta Transportation continues to move the Springbank Reservoir forward, engage with stakeholders and Indigenous groups, and welcome further dialogue about project impacts and how they will be mitigated.

## What's New?



Alberta Environment and Parks (AEP), the Natural Resources Conservation Board (NRCB), and the Canadian Environmental Assessment Agency (CEAA) have reviewed the Springbank Reservoir's Environmental Impact Assessment (EIA) and asked for additional information as part of the regulatory process. Alberta Transportation provided this information in June 2019. The EIA and information requests and responses are available at: [www.alberta.ca/springbank-off-stream-reservoir-project.aspx](http://www.alberta.ca/springbank-off-stream-reservoir-project.aspx)



The Government of Alberta appointed lawyer Martin Ignasiak, Osler LLP, to provide advice for regulatory approvals.



The Government of Alberta has acquired roughly 20 per cent of the land required to build the Springbank Reservoir.



The federal government has announced up to \$168.5 million for the Springbank Reservoir through Infrastructure Canada's Disaster Mitigation and Adaptation Fund.



The Springbank Reservoir project team is responding to the concerns of the public and Indigenous groups. For example, we are adding a debris deflector to prevent large in-stream debris, such as trees, from entering the diversion channel during operation.

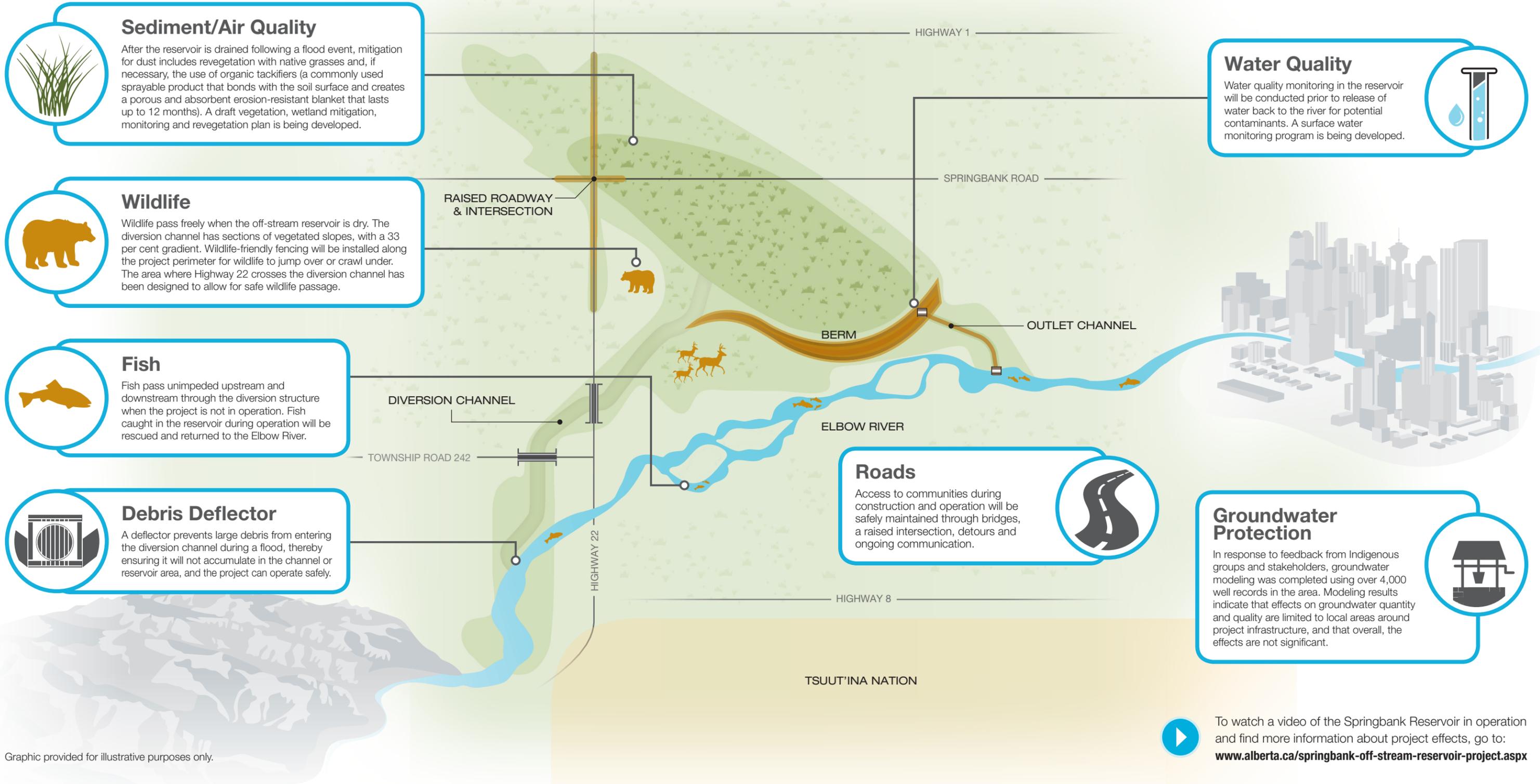
## Project Timing & Budget

The Government of Alberta is dedicated to moving forward with the Springbank Reservoir. An independent expert has been hired to assess the project's status and advise government about immediate action to move the project forward, while respecting the regulatory approval process and the ongoing consultation and engagement required with stakeholders and Indigenous groups.

Construction will begin following regulatory approval. The Springbank Reservoir will be functionally operational (1:100 year flood) after the second year of construction and fully operational after the third year of construction.

The budget for the Springbank Reservoir is \$432 million. The final budget will be known once land acquisition is complete, and costs for final design are known.

# Studying Effects and Taking Action



## Sediment/Air Quality

After the reservoir is drained following a flood event, mitigation for dust includes revegetation with native grasses and, if necessary, the use of organic tackifiers (a commonly used sprayable product that bonds with the soil surface and creates a porous and absorbent erosion-resistant blanket that lasts up to 12 months). A draft vegetation, wetland mitigation, monitoring and revegetation plan is being developed.

## Water Quality

Water quality monitoring in the reservoir will be conducted prior to release of water back to the river for potential contaminants. A surface water monitoring program is being developed.

## Wildlife

Wildlife pass freely when the off-stream reservoir is dry. The diversion channel has sections of vegetated slopes, with a 33 per cent gradient. Wildlife-friendly fencing will be installed along the project perimeter for wildlife to jump over or crawl under. The area where Highway 22 crosses the diversion channel has been designed to allow for safe wildlife passage.

## Fish

Fish pass unimpeded upstream and downstream through the diversion structure when the project is not in operation. Fish caught in the reservoir during operation will be rescued and returned to the Elbow River.

## Roads

Access to communities during construction and operation will be safely maintained through bridges, a raised intersection, detours and ongoing communication.

## Debris Deflector

A deflector prevents large debris from entering the diversion channel during a flood, thereby ensuring it will not accumulate in the channel or reservoir area, and the project can operate safely.

## Groundwater Protection

In response to feedback from Indigenous groups and stakeholders, groundwater modeling was completed using over 4,000 well records in the area. Modeling results indicate that effects on groundwater quantity and quality are limited to local areas around project infrastructure, and that overall, the effects are not significant.

Graphic provided for illustrative purposes only.

To watch a video of the Springbank Reservoir in operation and find more information about project effects, go to: [www.alberta.ca/springbank-off-stream-reservoir-project.aspx](http://www.alberta.ca/springbank-off-stream-reservoir-project.aspx)

**The Springbank Reservoir is located approximately 15 kilometres west of Calgary, a location that allows for:**

- ◆ The capture of water from a large area of the basin, offering flood risk reduction to the City of Calgary and Rocky View County properties that are downstream, along the Elbow River.
- ◆ A low-profile diversion structure that has lower impact on fish passage than conventional in-stream dams.
- ◆ Close proximity to operational response teams and access roads.
- ◆ The project to be constructed and operated with less impact on the environment than more remote locations.

## Benefits of Off-stream Storage

Off-stream storage has many benefits over in-stream storage, including:

- River flows will not be affected except during flood events, thereby also reducing the impact on fish habitat.
- The bull trout – a threatened species – would be less impacted by the off-stream project's low-elevation diversion structure, which do not need artificial passageways and other structures, allowing fish to maintain migration patterns.
- A smaller structure in the river valley allows better wildlife movement than a large dam and the permanent head-pond it creates.
- With no permanent pond, there is less impact to water quality: permanent pools create low-oxygen conditions, higher water temperatures and can concentrate nutrients and contaminants that are then released in operation.
- Sediment transport will be unaffected except during flood conditions.
- Sediment management and removal (if required) does not require dredging (removing sediment from the bottom of a water body).
- Off-stream storage can allow existing navigation and recreational activities on the waterway.
- Off-stream storage is safer in operation:
  - » In an emergency, the flow of water to the reservoir can be stopped.
  - » The diversion structure of an off-stream reservoir can actively manage flood debris, whereas in-stream alternatives rely on passive systems that can clog during operation.

## Living by the Proposed Springbank Reservoir

Open communication about the Springbank Reservoir will continue from project planning through construction and operation. During construction, a community liaison will provide updates and be a point of contact for neighbouring stakeholders, landowners, and Indigenous groups should they have questions or concerns. Concerns raised will be shared with the construction contractor for investigation and appropriate steps taken. During operation, the Government of Alberta anticipates pre-season (spring) operations and emergency preparedness sessions with affected communities, Indigenous groups, stakeholders, and responders, as required.

## Talk to Us

Stakeholders and Indigenous groups have submitted their concerns to the project team, including questions related to:

- Benefits and costs
- Land use
- Indigenous consultation
- Water and hydrogeology
- Environmental impacts

We continue to engage with Indigenous groups and stakeholders and are pleased to engage in further discussion about the Springbank Reservoir.

To learn more about these topics and sign up for email updates, visit [www.alberta.ca/springbank-off-stream-reservoir.aspx](http://www.alberta.ca/springbank-off-stream-reservoir.aspx). There you will find up-to-date project information, including a video of how the Springbank Reservoir will work when in operation. We will continue to share information as the project advances.

### Please contact us with your questions at:

**Phone:** 780-644-5612

**Toll free:** 310-0000 before the phone number (in Alberta)

**Email:** [springbank-project@gov.ab.ca](mailto:springbank-project@gov.ab.ca)

### Address:

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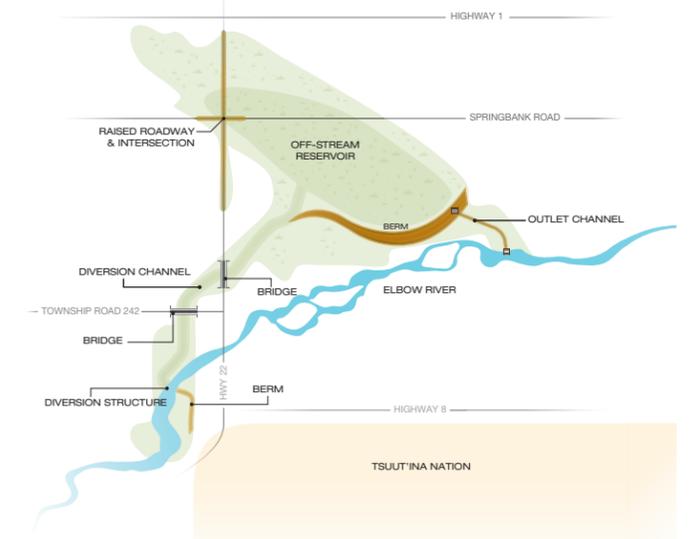
# Springbank Off-stream Reservoir Update

Spring 2020

## What is the Project?

The Springbank Off-stream Reservoir Project (the Springbank Reservoir) is a dry reservoir that will store water temporarily during a flood, working together with other flood mitigation projects such as the upgrades to the Glenmore Reservoir. The Springbank Reservoir reduces flood risk by managing downstream river flow rates and volume. This goal will be met while protecting river processes (erosion, transportation, and disposition), critical habitats, fish, and wildlife.

During a flood, a **diversion channel** will carry water from the Elbow River to the **off-stream reservoir**, which would have a storage capacity of 70.2 million cubic meters or about 28,000 Olympic-sized swimming pools. When peak waters have passed, an **outlet channel** will safely release the water back to the Elbow River in a controlled manner.



## What's New?



Alberta Environment and Parks (AEP), the Natural Resources Conservation Board (NRCB), and the Impact Assessment Agency of Canada (IAAC) (formerly known as the Canadian Environmental Assessment Agency), are reviewing the Environmental Impact Assessment (EIA) for the Springbank Reservoir and questions are being asked as part of the normal review process. Responses to regulatory questions that have been submitted and are available at [www.alberta.ca/springbank-off-stream-reservoir.aspx](http://www.alberta.ca/springbank-off-stream-reservoir.aspx). This website will be updated with responses to additional questions as they are completed.



The Government of Alberta has acquired roughly 25% of the land required to build the Springbank Reservoir.



The Springbank Reservoir project team continues to respond to questions and concerns from the public and Indigenous groups.

## Project Timing & Budget

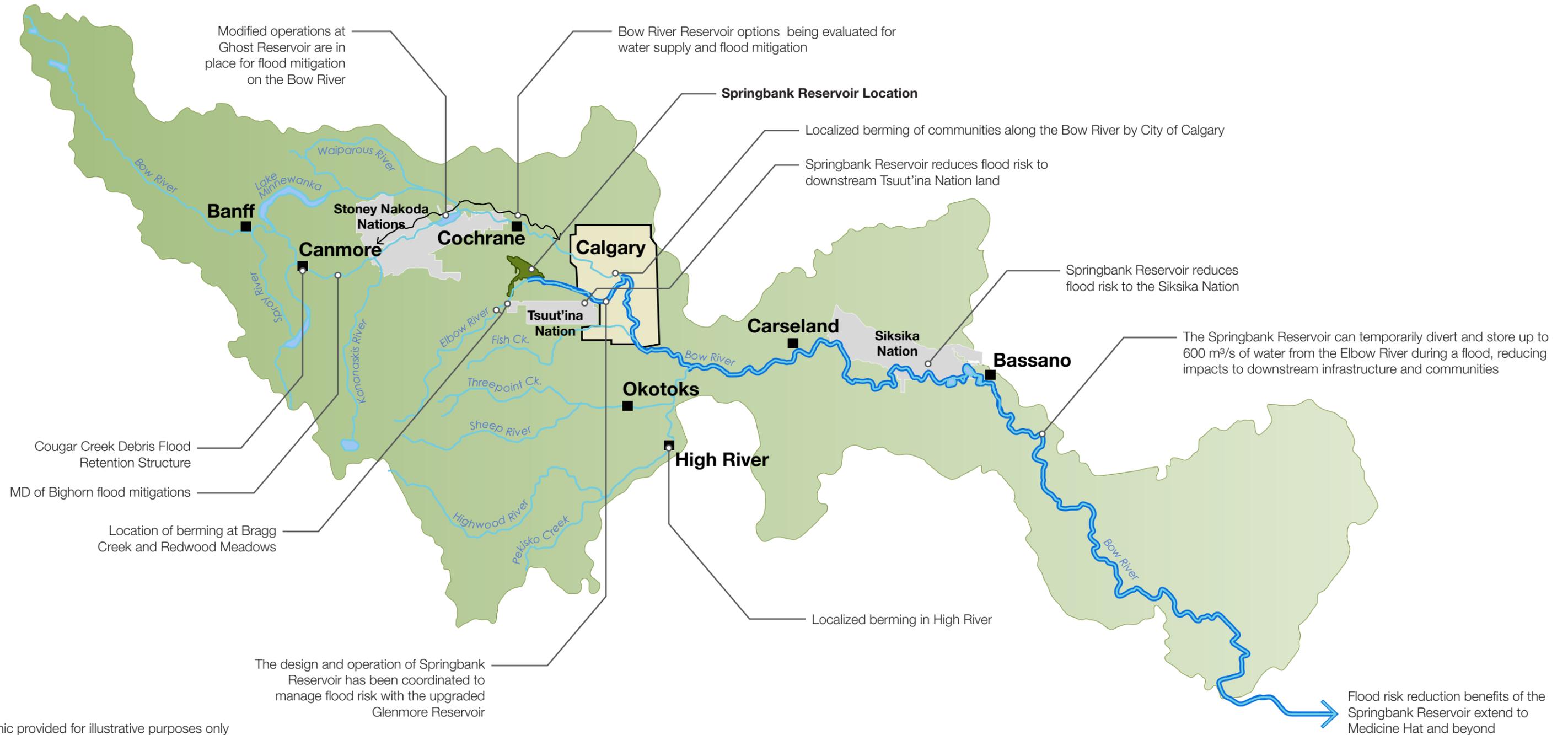
The Government of Alberta is committed to improving and developing flood mitigation to protect southern Alberta and Calgary. This includes moving forward with the Springbank Reservoir. Construction would begin following regulatory approval.

The Springbank Reservoir will be functionally operational (1:100-year flood) after the second year of construction and fully operational after the third year of construction.

The budget for the Springbank Reservoir is \$432 million. The final budget will be known once land acquisition is complete and costs for final design are known.

# Springbank Reservoir's Place in the Bow River Basin Flood Mitigation Strategy

The Springbank Reservoir is a piece of the larger flood, drought, and fire management plan led by Alberta Environment and Parks throughout the province. This plan is comprised of several existing, planned, and proposed projects at provincial and municipal levels, with the Springbank Reservoir functioning as a significant portion of the flood management strategy within the Bow River Basin. Additional information on province-wide flood mitigation projects can be found at [www.alberta.ca/flood-mitigation.aspx](http://www.alberta.ca/flood-mitigation.aspx). The graphic below provides a high-level overview of how the Springbank Reservoir fits into the larger plan.



Graphic provided for illustrative purposes only

**The Springbank Reservoir is located approximately 15 kilometres west of Calgary, a location that allows for:**

- ◆ The capture of water from a large area of the Elbow River basin, offering flood risk mitigation to Calgary and Rocky View County properties that are downstream, and further downstream along the Bow River.
- ◆ A low-profile diversion structure that has lower impact on fish passage than conventional in-stream dams.
- ◆ Close proximity to operational response teams and access roads.
- ◆ The project to be constructed and operated with less impact on the environment than more remote locations.

## Debris Deflection Barrier

The debris deflection barrier is designed to reduce the amount of debris that enters the reservoir with the floodwaters while minimizing the impact to the river channel and navigation. The barrier consists of a rack, nearly 6 m high, made of steel pipe that runs approximately 160 m along the north bank of the Elbow River. The deflection barrier is positioned at an angle that promotes the passage of debris downstream.

During operation, it is likely that debris would accumulate on the debris deflection barrier, which would be removed following operation of the reservoir once the risk of flooding has subsided.

The debris deflection barrier was added to the structure in response to stakeholder concerns about the amount of debris entering the reservoir.

## Public Lands Act & Water Act Submission

The Springbank Reservoir requires approval under both the Alberta Water Act and Alberta Public Lands Act. These approvals are needed to regulate the safe construction and operation of the dam; account for the changes in how water flows through the area; and the impacts to the Elbow River, wetlands, and other waterbodies during construction and operation of the reservoir.

AEP will review both the Alberta Water Act and Alberta Public Lands Act applications. The application packages draw from the engineering design, Environmental Impact Assessment (EIA), and information prepared as part of the

Provincial and Federal Information Requests to provide details on the waterbodies, wildlife, vegetation, fish, and project design. The Water Act application is under review by AEP and the Public Lands Act application is currently being prepared for submission to AEP.

Approval under both the Alberta Water Act and Alberta Public Lands Act are required before construction work within the waterbodies can begin. The Alberta Water Act and Alberta Public Lands Act approvals are in addition to the Alberta Environmental Protection and Enhancement Act (EPEA) requirements and Federal approvals processes.

## Talk to Us

Stakeholders and Indigenous groups have submitted their concerns to the project team, including questions related to:

- Benefits and costs
- Land use
- Indigenous consultation
- Water and hydrogeology
- Environmental impacts

We continue to engage with Indigenous groups and stakeholders and are pleased to engage in further discussion about the Springbank Reservoir.

To learn more about these topics and sign up for email updates, visit [www.alberta.ca/springbank-off-stream-reservoir.aspx](http://www.alberta.ca/springbank-off-stream-reservoir.aspx). There you will find up-to-date project information, including a video of how the Springbank Reservoir will work when in operation. We will continue to share information as the project advances.

### Please contact us with your questions at:

**Phone:** 780-644-8354

**Toll free:** 310-0000 before the phone number (in Alberta)

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Springbank Offstream Reservoir Project Management Office  
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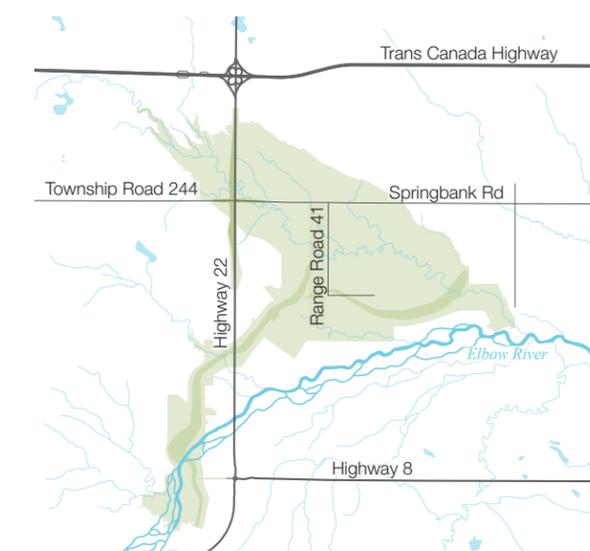
# Springbank Off-stream Reservoir Update

Fall 2020

## What is the Project?

The Springbank Off-stream Reservoir Project (SR1) is a dry reservoir that can store water temporarily during a flood event, working together with other flood mitigation projects such as upgrades to the Glenmore Reservoir. The Springbank Reservoir is designed to reduce flood risk by managing downstream river flow rates and volume. This goal can be met while also allowing river processes to continue (such as erosion, transportation and deposition, fish and wildlife movement), even during a flood event.

During a flood, a diversion channel would carry water from the Elbow River to the off-stream reservoir, which would have a storage capacity of 70.2 million cubic metres or about 28,000 Olympic-sized swimming pools. When peak waters have passed, an outlet channel can safely release the water back to the Elbow River in a controlled manner.



## What's New?



Alberta Transportation received a second round of information requests from NRCB and AEP (provincial regulators) in November 2019 and IAAC (federal regulator) in March 2020. Responses to provincial information requests were submitted June 23, 2020. Responses to federal information requests are being developed and submitted as they are completed. All submitted responses are available on the project website at [www.alberta.ca/springbank-off-stream-reservoir.aspx](http://www.alberta.ca/springbank-off-stream-reservoir.aspx)

## How Roads Will Be Impacted by the Springbank Reservoir

If the Springbank Reservoir is approved, Springbank Road is the only roadway affected by the Springbank Reservoir during active operations. Should a flood event exceed the 1:50-year flood event level, Springbank Road will be temporarily inundated and closed to traffic. East-west traffic would be detoured north to Highway 1 (Trans Canada Highway)/ Township Road 250 via Highway 22 and Range Road 40, which will remain open to traffic at all times. The Government of Alberta has committed to repairing Springbank Road following a flood.

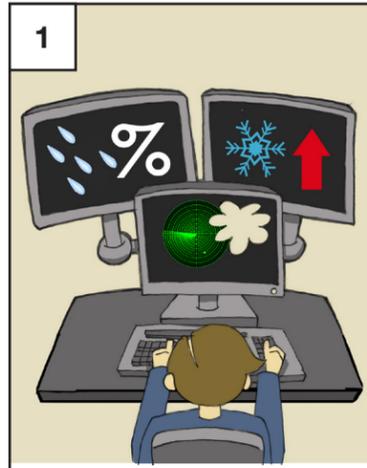
Highway 22 will be raised along with the intersection of Springbank Road and Highway 22 so that traffic may continue to flow north-south freely during a flood event. The portion of Range Road 41 situated directly within the reservoir will be permanently closed upon commencement of construction. All other roads remain open to traffic as usual.

Road	Status During Flood Event
Highway 1 (Trans Canada Hwy)	Open to traffic at all times
Highway 8	Open to traffic at all times
Highway 22 (Cowboy Trail)	Open to traffic at all times
Springbank Road	Closed should a flood event exceed 1:50-year level
Range Road 41	Permanently Closed
Township Road 244	Open to traffic at all times

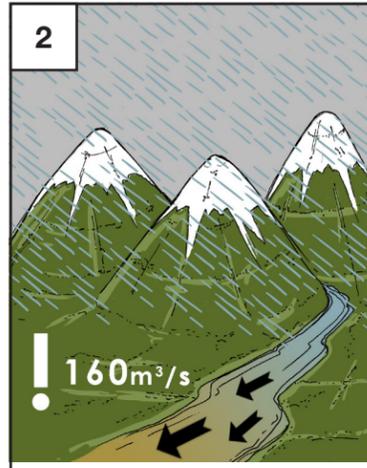
During construction, temporary detours may be put in place by the company undertaking construction of the Reservoir. The traffic accommodation strategy must be developed in accordance with the Alberta Transportation's Standard Specification for Highway Construction.

# Operations of the Springbank Reservoir in a Flood Scenario

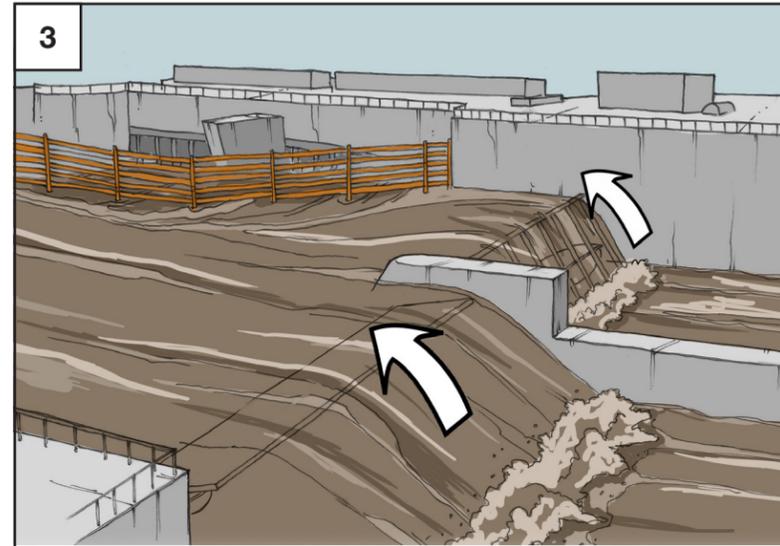
The operation of the Springbank Reservoir would be rare (only when flows in the Elbow River exceed  $160 \text{ m}^3/\text{s}$ ), the protocol for its operation is defined and integrated with other flood mitigation infrastructure, providing flood mitigation protection for communities in Southern Alberta. The following illustrates the operation of the Springbank Reservoir from start to finish, highlighting key stages from activation, through to the controlled release of water back into the Elbow River.



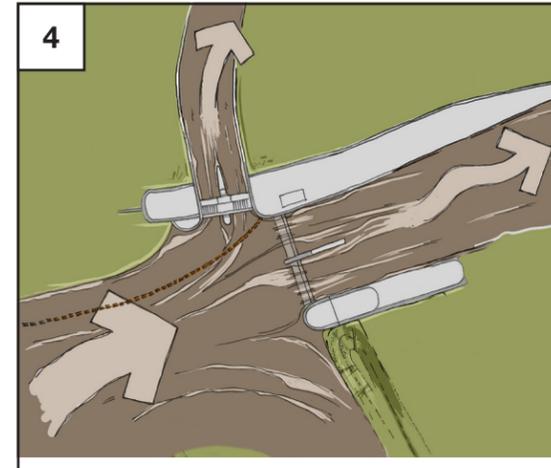
1  
Alberta Environment and Parks (AEP), the operator of the Springbank Reservoir, monitors precipitation levels, snow melt, and Doppler radar. Flood watches or Warnings are issued based on the forecast.



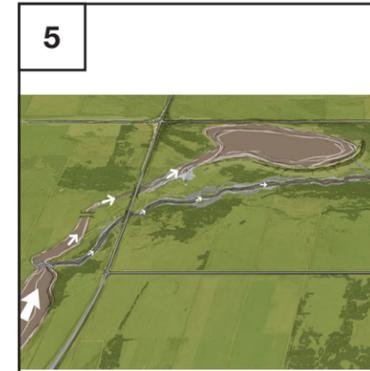
2  
Flooding on the Elbow River typically occurs in May and June from heavy rainfall, often on a melting snowpack. The Springbank Reservoir is activated when the Elbow River flows reach or exceed  $160 \text{ m}^3/\text{s}$ .



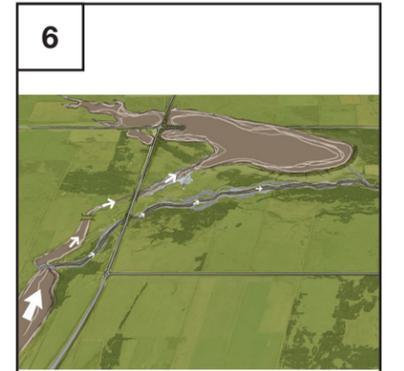
3  
The operator raises the spillway gates, diverting flood water into the diversion channel. The debris deflection barrier stops any large debris (such as broken trees, etc.) from entering the diversion channel and reservoir.



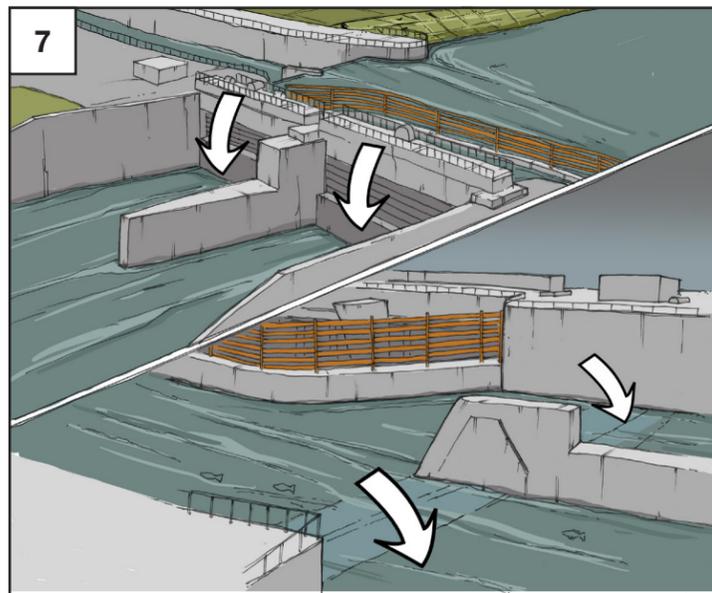
4  
The Springbank Reservoir begins to fill, the diversion creates a temporary backwater on the Elbow River. Water continues to flow over the service spillway gates and down the river at a controlled flow rate while excess flood water is diverted to the off-stream reservoir.



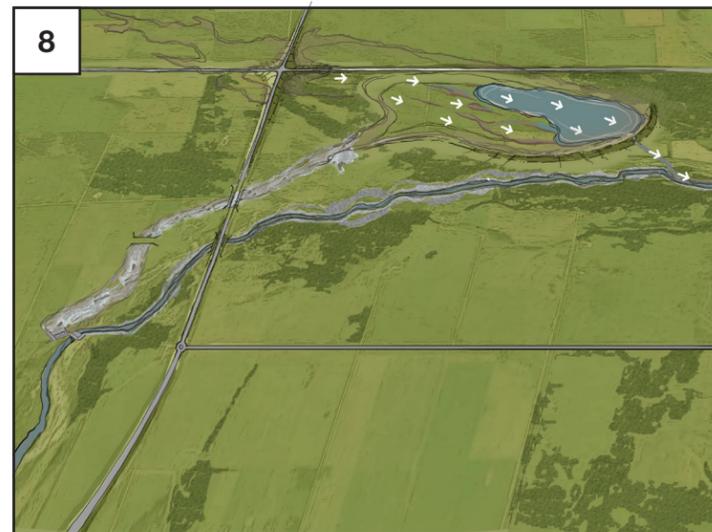
5  
Water is carried through the diversion channel into the reservoir. While the reservoir fills, traffic is able to flow freely along Highway 22 and Springbank Road.



6  
If the flood event exceeds the 1:50-year flood event, Springbank Road is temporarily inundated and traffic is detoured to the north. Highway 22 remains open to traffic.



7  
Once flood conditions have subsided, the diversion inlet gates close and the service spillway gates are lowered once again, allowing the Elbow River to free flow normally.



8  
Once the risk of flooding has passed, the water in the reservoir is released back into the river using the outlet channel. Flow rates from the reservoir are controlled so that the flow in the Elbow River does not exceed the  $160 \text{ m}^3/\text{s}$  threshold.



9  
Once the reservoir has emptied back into the Elbow River, AEP operations and maintenance staff clear the channel of any problematic sediment or debris (if any).



10  
Following operation of the Springbank Reservoir, the lands become available for prior uses (i.e. uses permitted when the Springbank Reservoir is not in operation).

# Springbank Reservoir Video Update

The Springbank Reservoir conceptual animation video has recently been updated, providing a fly-through of key project components including the diversion structure, diversion channel, reservoir, and the low level outlet works. The focus of the video is to demonstrate, if the project is approved:

- What the landscape would look like after construction;
- What the Springbank Reservoir would look like during normal conditions (non-flood);
- How the Springbank Reservoir would function during operations (flooding); and
- How water would be released back into the Elbow River from the reservoir.

The images below are taken from the conceptual animation video available on the Alberta Transportation website at:

[alberta.ca/resources-springbank-off-stream-reservoir.aspx](http://alberta.ca/resources-springbank-off-stream-reservoir.aspx)



Diversion structure and service spillway gates during normal conditions



Raised Highway 22 and Springbank Road intersection during normal conditions



Highway 22 Bridge over the diversion channel during normal conditions

## Talk to Us

Stakeholders and Indigenous groups have submitted their comments and questions to the project team, including those related to:

- Land use
- Indigenous consultation
- Water and hydrogeology
- Environmental impacts
- Benefits and costs

Alberta Transportation continues to engage with Indigenous groups and stakeholders and are interested in engaging in further discussions about the Springbank Reservoir.

### Please contact us with your questions at:

**Phone:** 780-644-8354

**Toll free:** 310-0000 before the phone number (in Alberta)

**Email:** [springbank-project@gov.ab.ca](mailto:springbank-project@gov.ab.ca)

### Address:

Alberta Transportation  
Springbank Off-stream Reservoir Project Management Office  
-Twin Atria Building  
2<sup>nd</sup> Floor, 4999 98 Avenue NW  
Edmonton, Alberta T6B 2X3

To learn more about these topics and sign up for email updates, visit [www.alberta.ca/springbank-off-stream-reservoir.aspx](http://www.alberta.ca/springbank-off-stream-reservoir.aspx). There you will find up-to-date project information, including a video of the Springbank Reservoir as it appears during normal conditions, as well as in operation. Alberta Transportation will continue to share information as the project advances. Please be sure to add the project email address to your safe sender list to avoid the information going to a spam or junk mail folder.

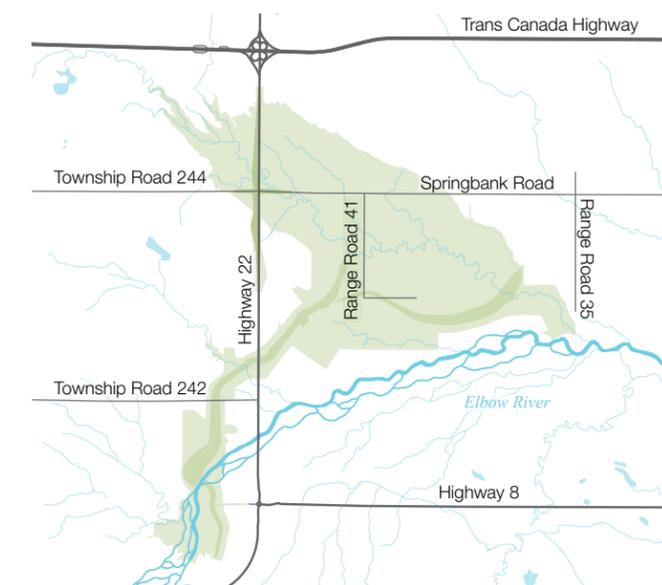
# Springbank Off-stream Reservoir Update

Winter 2020

## What is SR1?

The Springbank Off-stream Reservoir Project (Springbank Reservoir, or 'SR1') is a dry reservoir that can store water temporarily during a flood event, working together with other flood mitigation projects such as upgrades to the Glenmore Reservoir. The Springbank Reservoir is designed to reduce flood risk by managing flow rates and volume in the Elbow River. This goal can be met while also allowing river processes to continue (such as erosion, transportation and deposition, fish and wildlife movement), even during a flood event.

During a flood, a diversion channel would carry water from the Elbow River to the off-stream reservoir, which would have a storage capacity of 70.2 million cubic metres, or about 28,000 Olympic-sized swimming pools. When peak waters have passed, an outlet channel can safely release the water back to the Elbow River in a controlled manner.



## What's New?



Conceptual renderings illustrating the visual assessment of the Springbank Reservoir from a number of viewpoints are now available online at: [alberta.ca/maps/locations-springbank-off-stream-reservoir.aspx](http://alberta.ca/maps/locations-springbank-off-stream-reservoir.aspx)



An update to the conceptual animation of the Springbank Reservoir has been prepared by Alberta Transportation and is available online at: [alberta.ca/resources-springbank-off-stream-reservoir.aspx](http://alberta.ca/resources-springbank-off-stream-reservoir.aspx)

## What Will the Springbank Reservoir Look Like?

In response to stakeholder and Indigenous groups' requests for additional information regarding how the Springbank Reservoir will look if it is approved and then constructed, Alberta Transportation prepared visual renderings to better demonstrate the scale, materials, and overall visual impact of the project.

A digital 3D model and aerial photography from spring 2020 were used to create renderings of key project components and areas. These renderings illustrate what the Springbank Reservoir would look like from viewpoints surrounding the project area, particularly along public roadways. In some cases where components of the project were difficult to see, labels and overlays were added to highlight portions of the

project footprint/components. These images can be viewed at: [alberta.ca/maps/locations-springbank-off-stream-reservoir.aspx](http://alberta.ca/maps/locations-springbank-off-stream-reservoir.aspx)



Example render & overlay - Trans Canada Highway looking south at diversion channel

## What Effects Might The Springbank Reservoir Have on Groundwater?

Potential effects on groundwater quantity and quality have been assessed in the Environmental Impact Assessment (EIA) and were determined to be not significant. Potential effects include localized changes in groundwater levels near project infrastructure including the diversion channel, off-stream reservoir, and dam. Existing domestic wells in these areas would be decommissioned during project construction unless they will be used for monitoring purposes. Should wells outside the Project Development Area (PDA) be negatively affected by the project, the Government of Alberta is legally obligated to compensate for damages shown to have been caused by its activities and will entertain claims by landowners.

Risks to groundwater and the operation of local water wells from project construction are primarily related to dewatering (i.e. lowering of groundwater levels to facilitate excavations), which may be required in localized areas depending upon groundwater conditions at the time. The need for construction dewatering will be assessed on a site specific basis as pre-construction planning progresses and site specific timelines are firmed up.

## How Will Groundwater Effects be Monitored?

A draft Groundwater Monitoring Plan has been prepared for the project and is included in Alberta Transportation's response to Round 1 CEEA Package 3, IR 3-15, Appendix IR15-1, available at: <https://open.alberta.ca/publications/environmental-assessment-springbank-off-stream-reservoir-eia-and-application-for-approval-sir1> (see "SIR1 - CEEA Package 3 - Appendix IR15-1"). The groundwater monitoring program considers both groundwater quantity and quality and has been developed to provide monitoring through all project phases: pre-construction baseline, construction, dry operations, flood operations, and post-flood operations. Proposed mitigation measures for potential effects on groundwater are also presented therein.



**Pre-construction Baseline** - During baseline data collection, there will be monitoring conducted prior to any project disturbances with the intent to understand the variability in hydrogeologic conditions in location and time.



**Construction** - During the construction phase, monitoring will be generally localized around construction activities that could lead to effects on groundwater (e.g. construction dewatering, deep excavations).



**Dry Operations** - During dry operations, there will be monitoring to confirm consistency with baseline conditions and to observe potential longer-term regional trends that are unrelated to project activities (e.g. long-term climatic trends).



**Flood and Post-flood Operations** - During flood and post-flood operations, there will be monitoring to observe potential effects on groundwater both near project infrastructure and farther afield in the regional assessment area.

If reduced water quantity or quality is determined to be directly associated with the Springbank Reservoir, appropriate management controls will be put in place to mitigate the impact. These would differ depending on the issue, location and circumstances, however, could include activities such as:

- Providing potable water until quality returns to baseline (pre-project) conditions
- Rehabilitating or deepening and recompletion of the existing water well
- Installing a new groundwater well
- Accessing surface water
- Adding a valve to the wellhead to control pressure
- Pump the well to decrease hydraulic head



Example of a nested monitoring well installation for monitoring of groundwater at multiple depths



Example of a single monitoring well installation



Example of a baseline testing of a pre-existing water well (1)



Example of a baseline testing of a pre-existing water well (2)

## Who Do We Contact With Groundwater Questions During the Project Phases?

Alberta Transportation will appoint a Community Liaison (a representative from Alberta Transportation during construction and from AEP during operations) who will serve as point of contact with stakeholders; they will primarily communicate through the local representation for Indigenous groups, community associations, local businesses, government administration and local government officials. The Community Liaison will provide updates on Project construction activities through these local representatives.

In addition to providing updates, complaints received during project construction will be directed by the Community Liaison to the construction contractor. The construction contractor will investigate the conditions and cause of the conditions that led to the complaint. The construction contractor will take necessary actions to try to address the complaint.

AEP actively communicates with the public, Indigenous groups, and stakeholders at their other operating facilities and will use this experience as a basis for establishing communications through all phases of the project. AEP anticipates pre-season (spring) operations and emergency preparedness sessions with affected communities, Indigenous groups, stakeholders, and responders as required. Should the project be approved, your concerns about the potential impacts on well water on your property will be relayed to the Community Liaison.

## UNDERTAKING #5 RESPONSE OF ALBERTA TRANSPORTATION

Reference	Volume 3; March 24, 2021, Exhibit #365 Pg. 747 / ln. 2
Undertaking	Provide an example of how AT is committed to the principles under the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).
Response	<p>Alberta's position on the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) is stated here: <a href="https://www.alberta.ca/united-nations-declaration-on-the-rights-of-indigenous-peoples.aspx">https://www.alberta.ca/united-nations-declaration-on-the-rights-of-indigenous-peoples.aspx</a></p> <p>Accordingly, Alberta Transportation has incorporated some of the UNDRIP principles into the planning of the Springbank Project through respectful engagement with Indigenous groups to address their concerns; and, through fulfilling any duty to consult that may be owed by the Crown regarding potential adverse impacts to the exercise of rights to which section 35 of the Constitution Act, 1982 pertains, and to traditional uses, as defined in Alberta's First Nations consultation policy and guidelines:</p> <p><a href="https://open.alberta.ca/dataset/801cf837-4364-4ff2-b2f9-a37bd949bd83/resource/8fa6a92a-3523-457a-b3b0-1e72f3cb79b8/download/ir-policy-consultation-first-nations-land-resources-2013-amended-2020.pdf">https://open.alberta.ca/dataset/801cf837-4364-4ff2-b2f9-a37bd949bd83/resource/8fa6a92a-3523-457a-b3b0-1e72f3cb79b8/download/ir-policy-consultation-first-nations-land-resources-2013-amended-2020.pdf</a></p> <p><a href="https://open.alberta.ca/dataset/f1eb5282-5784-45f7-a35a-f03bf206de0e/resource/263300f3-5ca9-4477-98d4-d30d505aa694/download/3775118-2014-guidelines-consultation-first-nations-land-natural-resource-management.pdf">https://open.alberta.ca/dataset/f1eb5282-5784-45f7-a35a-f03bf206de0e/resource/263300f3-5ca9-4477-98d4-d30d505aa694/download/3775118-2014-guidelines-consultation-first-nations-land-natural-resource-management.pdf</a></p>

**UNDERTAKING #6 RESPONSE OF ALBERTA TRANSPORTATION**

Reference	Volume 3; March 24, 2021, Exhibit #365 Pg. 747 / ln. 16
Undertaking	To advise where the construction cost estimate would be found in Exhibit 159, Appendix G-2.
Response	Alberta Transportation understands the construction costs referred to in this undertaking are the costs associated with finding new or alternative access for the landowners who are impacted by the Project. The Cost Opinion located in Exhibit 159, Appendix G-2 does not include costs associated with finding new or alternative access for landowners impacted by the Project. At the time of developing the Cost Opinion, and as of today, Alberta Transportation cannot confirm which landowners who are directly adjacent to the Project development area will remain in their homes. Any costs associated with land negotiations, including finding new or alternative access, would be allocated to land acquisition costs.

## UNDERTAKING #9 RESPONSE OF ALBERTA TRANSPORTATION

Reference	Volume 3; March 24, 2021, Exhibit #365 Pg. 791 / ln. 11
Undertaking	To advise whether Alberta Transportation would berm and tree and fence the perimeter of the Project area with attractive wildlife friendly fencing.
Response	<p>Alberta Transportation has committed to installing wildlife friendly fencing. All fencing in or along the Project development area (“PDA”) boundary will be wildlife-friendly, except where chain-link fencing will be installed around certain facilities (e.g., control building) for public safety and security (response to Round 1 CEAA Package 2, IR2-15; Figure IR15-1; no exhibit number). The chain-link fencing around certain facilities will prevent both human and wildlife access to these facilities, whereas the wildlife-friendly fencing will be designed to facilitate wildlife movement in and through the PDA.</p> <p>Alberta Transportation is open to considering requests from local landowners directly adjacent to the PDA regarding localized berming, as long as it does not alter the natural drainage in the area. Alberta Transportation is not able to construct a berm around the perimeter of the PDA due to the SR1 reservoir being located within the downstream portion of a watershed drainage area and berming of the perimeter of the Project area would alter the natural drainage in the area, impacting the wetlands within the reservoir area and the watercourses running into and through the site. Berming would also subject areas upstream and outside of the Project area to flood risk by preventing overland flow into the reservoir area resulting in water backups upstream.</p> <p>Alberta Transportation is open to considering requests from landowners who will continue to live in residences directly adjacent to the PDA regarding the planting of trees or a shelter belt.</p> <p>Further, Alberta Transportation is open to receiving feedback from local landowners, Rocky View County, community stakeholders, and Indigenous groups regarding the esthetics of the wildlife friendly fencing.</p>