



Impact Assessment Agency of Canada  
Prairie and Northern Region  
Canada Place  
Suite 1145, 9700 Jasper Avenue  
Edmonton, Alberta T5J 4C3

**July 11, 2022**

**Andrew Clarke**  
**Environmental Assessment Officer, Prairie and Northern Region**

Dear Mr. Clarke:

**Re: Snake Lake Reservoir Expansion Project - Response to Letter Requesting IAA Designation**

The Eastern Irrigation District (EID) is the proponent of the Snake Lake Reservoir Expansion Project, located in southeastern Alberta (Project). MPE Engineering Ltd. (MPE) is the EID's lead consultant on the Project and is supported by Thurber Engineering Ltd. and Applied Aquatic Research Ltd. Environmental Services (AARES).

On April 12, 2022, a request was made to the Minister of Environment and Climate Change Canada (Minister) to designate the Project under the *Impact Assessment Act* (IAA). On April 21, 2022, a letter was sent to the EID (Appendix A) advising that to inform its advice to the Minister, the Impact Assessment Agency of Canada (Agency) requires further information about the Project. We write on behalf of the EID to provide the requested information and context to assist the Minister with his decision under section 9 of the IAA.

## **1. PROJECT INFORMATION**

**Request 1 - Information about key project activities, the anticipated surface area in hectares of the existing reservoir and expansion, maps and layouts of the location of project components, land tenure, zoning, and estimated timelines for planning, construction, operation, decommissioning and abandonment.**

### **1.1. Existing Snake Lake Reservoir**

The EID is proposing an expansion of the existing Snake Lake Reservoir. The existing reservoir is located within Townships 19 and 20, Ranges 16 and 17, west of the fourth Meridian (W4M),

approximately 18 km southeast of Bassano, and 23 km northwest of Brooks. It was constructed between 1995 and 1997 and is contained by two earth-fill dams: the east end (East Dam) located in Section 31-19-16 W4M, and the west end (West Dam) located in Section 3-20-17 W4M. (Appendix B – Figures 1.1, 1.2, 1.3).

Water from the Bow River is diverted at Bassano Dam into the East Branch Canal. Water is diverted from the canal into the reservoir and exits from the reservoir through the East Dam Low-Level Outlet Structure. Current storage totals 14,900 acre\*feet (18.4 million m<sup>3</sup>) of water with Full Supply Level (FSL) at a geodetic elevation of 781.70 metres above sea level (masl) and top of the dam constructed to 783.70 masl. The area of the existing reservoir is 321 ha.

## **1.2. Snake Lake Reservoir Expansion Rationale**

The EID is a corporation established pursuant to the *Alberta Irrigation Districts Act*. In accordance with section 6(1) of the Act, the EID's mandate is to convey and deliver water through irrigation works, divert and use quantities of water in accordance with the licences granted to the EID under the *Alberta Water Act*, construct, operate and maintain the irrigation works of the district, and to maintain the economic viability of the district.

In accordance with this statutory mandate, the EID currently operates an extensive water distribution network supporting approximately 310,000 acres (130,000 ha) of irrigated agricultural land. Approximately 50% of the acres are supplied directly from the Bow River with limited or no reservoir support.

Additional storage is desired for areas of the EID that do not currently have supporting storage, since they are subject to immediate water shortages when the Bow River flow is too low to meet demand levels. For example, the irrigated area served by the EID's Springhill Canal System is not supported by off-stream storage. River supply shortages typically occur in the early season prior to spring runoff and in midseason when irrigation demands are high and river flows are reduced. The expansion of storage within the Snake Lake Reservoir to 70,000 ac-ft (86 million m<sup>3</sup>) will provide additional storage capacity for approximately 50,000 ac (20,000 ha) of irrigated agriculture downstream of Snake Lake Reservoir.

The additional storage capacity will create water security for the agriculture industry during times of prolonged dry and hot weather conditions and is an anticipatory climate change adaptation to the EID's irrigation system.

## **1.3. Proposed Snake Lake Reservoir Expansion**

The Project required that the EID acquire approximately 860 hectares (2,130 acres) of land immediately east of the existing Snake Lake Reservoir. The acquisition is complete, and the EID owns all land required for the Project. Due to backlog at the Alberta Land Titles Registry in registering instruments, the executed land transfers associated with the acquisition are still being processed and certificates of title should be issued to the EID in the next 1 to 2 weeks.

A 10 km long earthen berm will be constructed in Sections 29, 30, 31, and 32 in Township 19, Range 16, W4M, to extend the reservoir to the east and south of the existing area. The current East Dam and outlet structure will be removed, and a new outlet structure will be constructed along the north berm. No changes will be made to the west dam or to the reservoir inlet structure.

The expansion proposes to maintain the existing operating levels and Top of Dam elevation. The surface area of the proposed reservoir will increase by 779 ha to a total of 1,100 ha.

The outlet structure will have an increased capacity from the current 8.5 m<sup>3</sup>/s to 19.8 m<sup>3</sup>/s to fully support downstream acres. The outlet canal will also need to be upgraded from 8.5 m<sup>3</sup>/s to 19.8 m<sup>3</sup>/s, requiring expanded crossings of the Canadian Pacific Railway and Highway 1. (Appendix B: Figure 1.4).

#### **1.4. Land Tenure**

As noted above, all land required for the construction and operation of the Project has been acquired by and is owned by the EID.

In March 2021, the EID met with the two landowners adjacent to the land acquired by EID for the Project (Snake Lake Land and Cattle and Ducks Unlimited Canada) to review the proposed Project and obtain approval to complete environmental baseline field investigations. The field investigations were completed up to 800 m beyond the Project limits, therefore access outside the Project area was secured. Access to and from the site is available along public road allowances or through EID-owned properties. There are no farmyards within 5.5 km of the proposed work area.

There is currently an undeveloped County of Newell (County) road allowance within the proposed reservoir footprint. MPE and EID met with the Manager of Planning, Development, and Engineering Services for the County, in March 2022 to review the proposed Project and discuss setback requirements from the existing road allowance and how to discharge the undeveloped road allowance. The County Manager indicated that a 15-metre offset would be acceptable to the County. He also indicated that the EID and County often work together to discharge road allowances and that he would assist with getting County Council Approval.

There are gas pipelines and wells, owned by Torxen Energy Ltd. (Torxen) located within the Project area. In 2018 the EID contacted Torxen regarding a potential Snake Lake Reservoir Expansion Project. The EID is currently working with Torxen to develop a plan to decommission and abandon the wells and pipelines within the Project area. The EID has also been in contact with Inter Pipeline Ltd. who own and operate a pipeline that may need to be lowered or re-routed. In addition, AltaLink Management Ltd. (AltaLink) and Fortis Alberta Inc. (Fortis) have overhead transmission and distribution lines, respectively, located adjacent to the existing East Dam that follows along the west side of the planned expansion area. Fortis

also has a separate overhead powerline located on the Project lands. Discussions with AltaLink and Fortis have also commenced.

Historical industrial development on the lands involved 2 gravel pit mining operations. Both operations have been inactive for many years. EID has contacted Alberta Transportation to have the leases terminated and caveats discharged from title to the lands.

## **1.5. Project Schedule and Financial Assistance**

EID has received project funding from the Alberta Government and a loan from the Canada Infrastructure Bank (CIB) to fund expansion of the EID system. The funding includes a 30% grant from the province, a 20% contribution from the EID, and a 50% loan from the CIB to the EID. All funded projects are to be completed by 2028. The Snake Lake Reservoir Expansion Project can be broken into the following components and timelines:

- Baseline environmental studies, historical assessments, geotechnical investigations, and preliminary design to be completed by Spring 2023.
- Preparation of a project environmental impact assessment (EIA) under EPEA by Summer 2023.
- Regulatory review, final approvals, and detailed design are to be completed by December 2024.
- Sourcing of materials, tendering, and construction to be completed by December 2027.
- Commencement of operation in 2028.
- Decommissioning of the Project after the end of useful life is estimated at 200 years.

## **2. REGULATORY LIST**

**Request 2- A list of all regulatory approvals (federal, provincial, and municipal, other) and any federal financial assistance that would be required for the Project and the associated project components or activities.**

### **2.1. Legislation Requiring Approvals**

A broad definition of “approval” has been applied, including legislation that requires a permit, approval, or other form of authorization to be obtained. Note that municipal legislation typically requires the passage of a specific bylaw by municipal council, and once passed, this provides the approval to proceed. Other municipal legislation, such as the Land Use Bylaw and various policies are pre-existing laws or guidelines that must be met when developing a project. The following list includes legislation at the federal, provincial, and municipal levels that must be followed during the construction and operations of this Project.

- Federal Legislation
  - *Canadian Environmental Protection Act (CEPA)*
  - *Migratory Birds Convention Act (MBCA)*
  - *Species at Risk Act (SARA)*
  - *Fisheries Act*
  - *Canadian Navigable Waters Act*
  - *Canada Water Act*
  
- Provincial Legislation
  - *Environmental Protection and Enhancement Act (EPEA)*
  - *Natural Resources Conservation Board Act (NRCBA)*
  - *Oil and Gas Conservation Act (OGCA)*
  - *Water Act and Alberta Wetland Policy (AWP)*
  - *Wildlife Act*
  - *Public Lands Act*
  - *Weed Control Act and Regulations*
  - *Historical Resources Act (HRA)*
  - *Hydro and Electric Energy Act*
  
- Municipal Bylaws
  - Land Use Bylaw
  - Road Construction Bylaw
  - Road Closure Bylaw
  - Road Allowance Closure Bylaw

### 3. REGULATORY APPROVALS

#### Request 3.

a) For each regulatory approval that would be required, please provide the following information:

i. Name of the licence, permit, authorization or approval, the associated legislative framework, and the responsible jurisdiction.

ii. The status of attaining any regulatory approvals.

iii. Whether it would involve an assessment of any of the effects outlined in the paragraphs above, and if so, a general description of the assessment that you intend to undertake and if applicable, any benchmarks or standards you intend to meet. Would conditions be set and if yes, what effects would those conditions address?

iv. Whether public and/or Indigenous consultation would be required and if yes, provide information on the approach you intend to take (if any steps have been taken, please provide a summary, including issues raised as well as your responses). If the Project is anticipated to result in permanent changes or cumulative effects, how you intend to manage those impacts.

### 3.1. Federal Legislation

#### Canadian Environmental Protection Act (CEPA)

- i. The *Canadian Environmental Protection Act* (Federal Jurisdiction) was enacted to protect the environment and human health, prevent environmental degradation, and to promote and reinforce enforceable waste and pollution prevention approaches (1999, c 33, s 2). To ensure the provisions of CEPA are achieved, the following tools are issued: environmental quality objectives, release guidelines to limit the amount or concentration of substances released, and codes of practice to protect the environment and conserve natural resources. The act also provides specifications including fuel efficiency for vehicles and equipment and regulates the release of air and water pollution.
- ii. No approval is needed at this point. If the Project requires the use of or release of toxic or polluting substances, this information must be self-reported to the Ministry and may result in enforcement action.
- iii. As part of the environmental assessment for this Project, all waste materials, toxic substances, and pollution sources related to the construction and operation of this Project will be identified, quantified, and a management plan will be developed to prevent release into the environment. Fuels to be used in construction and maintenance equipment will be assessed, including the amount to be used and the emissions to be released. Waste materials and pollution that will need to be released into land, air, or water will be summarized and compared to standards. If there are no exceedances or if standards are being achieved, no reporting to the Ministry under CEPA will be required.
- iv. Public and Indigenous consultation will be completed as per the methods discussed in Responses 5 and 6 below. The environmental assessment documents will also be subject to public and Indigenous review. Assessment of project and cumulative effects and planned methods to manage these effects will be completed as part of the environmental assessment. If adverse residual effects are likely to remain, mitigations will be developed and implemented.

#### Migratory Birds Convention Act

- i. Wildlife Management is a shared responsibility between federal and provincial jurisdictions. Federal legislation includes the *Migratory Birds Convention Act* (MBCA) and the *Species at Risk Act* (SARA). The MBCA was enacted to protect and conserve

- migratory birds and to ensure no harm comes to breeding individuals. The act specifically protects nesting migratory birds during the breeding season (SC 1994, c 22, s 4). Baseline surveys for migratory birds were completed in 2021 to assess their current occupancy in the Project area. This showed a total of 43 migratory bird species were detected on the Project lands and surrounding area (Appendix C). To ensure migratory bird species and their nesting locations are protected throughout the planning, construction, and operations of the Project, nest sweeps will be conducted during the applicable breeding season for this area as per guidance available on the Environment and Climate Change Canada (ECCC) website. A wildlife management plan will be developed to specify mitigation measures, including setbacks and monitoring requirements to protect nesting migratory birds that occur in the vicinity of Project activities. Mitigations will also be developed to reduce project impacts on migratory birds during the construction and operations of the Project.
- ii. An application for a letter of advice or approval will be sought from the responsible Ministry (Environment and Climate Change Canada) for implementing deterrent measures to prevent migratory bird species from nesting during construction and operations, including filling the reservoir with water. An application for approval (Damage or Danger Permit) will also be needed if any migratory birds or their nests need to be moved from the Project site to prevent direct effects on individuals or nesting families.
  - iii. Assessment of effects on migratory birds will be included in the wildlife section of the environmental assessment. At this time, the Project Terms of reference has not been issued for the EIA and the standards for assessment have not been determined.
  - iv. Public and Indigenous consultation will be completed as per the methods discussed in Responses 5 and 6 below. The environmental assessment documents will also be subject to public and Indigenous review. Assessment of project and cumulative effects and planned methods to manage these effects will be completed as part of the environmental assessment. If adverse residual effects are likely to remain, mitigations will be developed and implemented.

#### Species at Risk Act (SARA)

- i. The *Species at Risk Act* (Federal Jurisdiction) was enacted to prevent wildlife species from being extirpated or becoming extinct, to provide for the recovery of wildlife species that are extirpated, endangered, or threatened because of human activity, and to manage species of special concern to prevent them from becoming endangered or threatened (SC 2002, c 29, s 6). For terrestrial species, SARA applies on federal lands (defence, national parks, etc.) or on provincial lands where a Ministerial Order has been issued (Government of Canada, 2002). The only such order in Alberta is for Sage Grouse in SE Alberta, well outside the work area of the Project. SARA also applies to species at risk that are protected under the Migratory Birds Convention Act and aquatic species on all lands regardless of ownership or jurisdiction. The Project

- site is not within federal lands and there are no outstanding orders for protection for any of the species at risk identified on this site (Appendix C). No SARA-listed fish species are found in the Nelson-Saskatchewan River system which includes the Bow River - the source of water for this Project. Lake Sturgeon is currently under consideration for inclusion in Schedule 1 of SARA, but at this time is not protected under SARA. As such SARA does not apply on this site except for the protection of migratory bird species risk.
- ii. An application for a letter of advice or approval will be sought from the responsible Ministry (Environment and Climate Change Canada) for implementing deterrent measures to prevent species at risk migratory birds from nesting during construction and operations, including filling the reservoir with water. An application for approval (Damage or Danger Permit) will also be needed if any migratory birds or their nests need to be moved from the Project site to prevent direct effects on individuals or nesting families.
  - iii. Assessment of effects on species at risk, whether listed federally or provincially, will be included in the wildlife section of the environmental assessment. At this time, the Project Terms of reference has not been issued for the EIA and the standards for assessment have not been determined.
  - iv. Public and Indigenous consultation will be completed as per the methods discussed in Responses 5 and 6 below. The environmental assessment documents will also be subject to public and Indigenous review. Assessment of project and cumulative effects and planned methods to manage these effects will be completed as part of the environmental assessment. If adverse residual effects are likely to remain, mitigations will be developed and implemented.

#### Fisheries Act

- i. The *Fisheries Act* (Federal Jurisdiction) provides a framework for the management and control of fisheries and the conservation and protection of fish and habitats, including by prevention of pollution (R.S., 1985, c. 35 (1st Supp.), ss. 2, 6 2019, c. 14, s. 3). Several fish species occur within the existing Snake Lake Reservoir and are subject to the Fisheries Act.
- ii. An application for authorization will be submitted to Fisheries and Oceans Canada (DFO) for isolation work as per the Interim Code of Practice: Temporary Cofferdam and Diversion Channels and Interim code of Practice: end of Pipe Fish Protection Screens for Small Water Intakes in Freshwater. In addition, it may be needed to monitor and quantify changes in habitat. If habitat is lost compensation may be required. However, the expansion of the reservoir should also result in the creation of new habitat areas, which should offset any habitat losses.
- iii. An assessment of effects on fisheries and aquatic species, including potential effects on species at risk or on the spread of invasive species or diseases will also be included in the aquatic ecology section of the provincial environmental assessment. At this



- time, the Project Terms of reference has not been issued for the EIA and the standards for assessment have not been determined.
- iv. Public and Indigenous consultation will be completed as per the methods discussed in Responses 5 and 6 below. The environmental assessment documents will also be subject to public and Indigenous review. Assessment of project and cumulative effects and planned methods to manage these effects will be completed as part of the environmental assessment. If adverse residual effects are likely to remain, mitigations will be developed and implemented.

#### Canadian Navigable Waters Act (CNWA)

- i. The *Canadian Navigable Waters Act* (Federal Jurisdiction) sets out requirements for completing works within navigable waterways which may cause restrictions to the public (S.C. 1985, c. N-22). At this time, it has not been determined if the existing Snake Lake Reservoir is subject to the Act or whether the expansion Project is considered a lawful works as per the CNWA.
- ii. If determined to be required, an application to Transport Canada under the CNWA will be submitted for approval.
- iii. At this time, it has not been determined if Navigation requires assessment in the upcoming provincial EIA.
- iv. Completion of a Navigable Waters approval requires public notice be provided in the form of signage and other methods to ensure potentially affected parties have knowledge of the intended disruption not navigation. It is unknown at this time if an assessment of cumulative effects for navigation is warranted.

### 3.2. Provincial Legislation

#### Environmental Protection and Enhancement Act (EPEA)

- i. The *Environmental Protection and Enhancement Act* (Provincial Jurisdiction) ensures proposed activities do not cause an adverse impact on the environment. The Snake Lake Reservoir Expansion Project qualifies as a mandatory activity pursuant to Schedule 1(c) and 1(e) of the Environmental Assessment (Mandatory and Exempt Activities) Regulation.
- ii. Pursuant to Section 44(1)(a) of EPEA, the EID is to submit an Environmental Impact Assessment (EIA) (RSA 2000, c E-12) to address all environmental, social, and economic concerns.
- iii. The EIA is to be prepared in accordance with the provisions of Division 1 Part 2 of the EPEA.
- iv. Initial discussions with Provincial regulators are underway to discuss submission requirements for the EIA. Public and Indigenous consultation will be completed as per the methods discussed in Responses 5 and 6 below. The environmental assessment documents and proposed Terms of Reference will be subject to public and Indigenous

review. Assessment of project and cumulative effects and planned methods to manage these effects will be completed as part of the environmental assessment. If adverse residual effects are likely to remain, mitigations will be developed and implemented.

#### Natural Resources Conservation Board Act (NRCBA)

- v. The *Natural Resources Conservation Board Act* (Provincial Jurisdiction) provides for the review of certain natural resource projects by the Natural Resource Conservation Board (NRCB). The purpose of the Act is to provide for an impartial process to review projects that will or may affect the natural resources of Alberta to determine whether, in the Board's opinion, the projects are in the public interest, having regard to the social and economic effects of the projects and the effect of the projects on the environment (1990 cN 5.5 s2). As a water management project for which a provincial EIA is required, the Snake Lake Reservoir Expansion Project is a reviewable project by the NCRB.

The NRCB will coordinate with Alberta Environment and Parks, EID, and its consultants to establish the joint terms of reference for the EIA for the Project.

#### Water Act and Alberta Wetland Policy (AWP)

- i. The purposes of the *Water Act* (Provincial Jurisdiction) include to support and promote the conservation and management of water, including the wise allocation and use of water, while recognizing the need to manage and conserve water resources to sustain our environment and to ensure a healthy environment and high quality of life in the present and the future. Any activity that affects or has the potential to affect a waterbody/aquatic environment requires approval.
- ii. *Water Act* applications will be submitted to Alberta Environment and Parks to permit exploration and project delineation activities that interact with wetlands or other water resources. *Water Act* approvals will also be needed for the eventual removal or alteration of waterbodies, including wetlands, drainages, and dugouts. There are several wetlands in the Project footprint that will be permanently impacted. To date, a *Water Act* approval has been issued allowing exploration activities (geotechnical drilling) to occur in wetlands. A Notice under the Code of Practice for Watercourse Crossings, supported by a Wetland Assessment and Impact Form, has also been submitted, allowing construction of temporary access through wetlands.
- iii. The removal or alteration of wetlands must meet the requirements of the Alberta Wetland Policy (AWP). The AWP provides a framework for conserving, restoring, and protecting wetlands by avoiding, minimizing, or mitigating negative impacts of development on wetlands. Compensation (wetland replacement fees or commitment to replace areas on offsite lands) will be required to allow wetland replacement, at the required ratio of areas replaced to areas removed. As the wetland removals would

fall under Alberta Wetland Policy, no net loss of wetlands or wetland functions will be permitted.

- iv. *Water Act* applications have their own public notice requirement that will have to be followed. If public consultation with Indigenous groups is required, it will be addressed through the Aboriginal Consultation Office as required as part of a *Water Act* submission. As there will be no net loss of wetlands, cumulative effects on wetlands would not be expected.

### Wildlife Act

- i. The purpose of the Alberta *Wildlife Act* (Provincial Jurisdiction) is to provide for the protection and management of wildlife on all lands.
- ii. A Wildlife Management Plan (WMP) has been submitted for approval to the Provincial Wildlife Biologist, Lethbridge Region. This plan was developed to protect Sensitive or At-Risk species during the initial planning stages of the Project design. An updated WMP will be completed as part of the provincial EIA, to allow for the protection of wildlife during the filling of the new reservoir area. Additional approvals may be required to remove or transplant sensitive species and/or their nests, prior to flooding of the site.
- iii. Any approval conditions or requirements related to the WMP will be followed. The effects on wildlife will also be addressed in the provincial EIA.
- iv. Public and Indigenous consultation will be completed as per the methods discussed in Responses 5 and 6 below. The environmental assessment documents and proposed Terms of Reference will be subject to public and Indigenous review. Assessment of project and cumulative effects and planned methods to manage these effects will be completed as part of the environmental assessment. If adverse residual effects are likely to remain, mitigations will be developed and implemented.

### Public Lands Act

- i. Under the *Public Lands Act* (Provincial Jurisdiction) the province manages temporary access or other activities within Crown lands. The Project is located on private lands; however, the Crown, in right of the Government of Alberta, can claim the bed and shores of naturally occurring water bodies including watercourses and wetlands, if they are deemed to be permanent with a distinct bed and shore.
- ii. An evaluation will be completed and submitted to Alberta Environment and Parks (AEP) to determine if any waterbodies on the Project site are likely Crown-claimable. Most waterbodies in the Project area are not expected to be claimable, as they are mainly temporary to seasonal ponds, non-natural waterbodies (canals, dugouts or reservoirs), or ephemeral drainages, however, the final determination can only be made by AEP.
- iii. If any waterbodies are deemed to be Crown lands, an application for a Temporary field authorization, to access the lands, or for a for a departmental Licence of

- Occupation or other disposition, for permanent activities, would be needed. Alternatively, there is an option for a proponent to purchase the land from the Crown.
- iv. Public and Indigenous consultation will be completed as per the methods discussed in Responses 5 and 6 below. If there is Crown land present, public notice requirement under the Act would be followed. If public consultation with Indigenous groups is required, it will be addressed through the Aboriginal Consultation Office as required as part of a Public Lands Act submission. It is unknown at this time if an assessment of cumulative effects for Public Lands access or activities is warranted.

#### Weed Control Act and Regulation

- i. The Alberta *Weed Control Act* and *Weed Control Regulation* requires all noxious and prohibited noxious weeds to be identified and controlled.
- ii. An approval under this Act is not required; however, sites may be subject to inspection. Pesticide regulations will also need to be followed to ensure harm does not come to site waterbodies.
- iii. An assessment of effects of weed spread on the Project will be included in the vegetation ecology section of the provincial environmental assessment. Standard mitigations to control weeds during and after development in reclaimed and aquatic areas will be required.
- iv. Public and Indigenous consultation will be completed as per the methods discussed in Responses 5 and 6 below. It is unknown at this time if an assessment of cumulative effects due to weed spread is warranted.

#### Historical Resources Act (HRA)

- i. The *Historical Resources Act* (Provincial Jurisdiction) provides protection for the use, designation, and protection of historical resources (RSA 2000, c H-9).
- ii. Historical sites have been identified on the Project footprint and archeological assessments are currently underway. An Historical Resources Impact Assessment (HRIA) was completed and submitted to the Alberta Ministry of Culture and Status of Women (CSW). Upon review, CSW has determined that an Historical Resources Impact Mitigation (HRIM) study is required to mitigate impacts to intact cultural resources. The HRIM must be completed before the HRIA will be approved by CSW. Following this approval, Clearance can be granted to allow ground disturbance activities (clearing, stripping, and grading).
- iii. Public and Indigenous consultation will be completed as per the methods discussed in Responses 5 and 6 below. It is unknown at this time if an assessment of cumulative effects on Historical Resources is warranted.

### 3.3. Municipal Bylaws and Policies

- i. The following are examples of bylaws previously enacted by the County of Newell, and similar laws may be required for this Project. Consultation with the County will be needed to determine if these apply.
- ii. If any of the bylaws are required, they must be approved by County of Newell Council.
- iii. At this time, it is unknown if any of these approvals will be required. If so, the requirement of the bylaw will be followed. The matters dealt with in these bylaws pertain to site development and would occur after the provincial EIA is completed and the Project is provincially approved under EPEA.
- iv. It is unknown if additional consultation will be required. It is unknown if cumulative effects pertaining to these bylaws would be required.

Road Closure Bylaw: A bylaw may need to be approved by the County of Newell if any roads need to be closed to facilitate construction.

Road Allowance Closure Bylaw: A bylaw may need to be approved if any road allowances will need to be permanently altered so that roads cannot be constructed.

Land Use Bylaw: All municipal developments are guided by this document, including any need for grading or stripping permits. An Environmental Construction Operations (ECO) Plan, including erosion and sedimentation control (ESC) measures, may be required prior to construction.

Road Construction Bylaw: A bylaw may be needed if any new roads need to be built or if new access from existing roads need to be developed.

## 4. POTENTIAL ADVERSE EFFECTS

**Request 4- For all federal licenses, permits, authorizations, approvals, and/or financial assistance that may be provided for the Project, describe any anticipated adverse direct or incidental effects (including changes to health, social and economic conditions) that may occur as a result.**

### 4.1. Environmental Setting

The following section provides a summary of known environmental and historical conditions of the Project site.

The proposed Project is in the County of Newell and within the Dry Mixedgrass Subregion of Alberta. This subregion is an area of level to gently undulating semiarid prairie, with inclusions of hummocky and dissected uplands, broken in places by coulees, valleys, badlands, and dune fields. The climate supports grasses, shrubs, and herbs that are adapted to long cold winters with low snow cover followed by hot summers with high evaporation leading to moisture

deficits and prolonged droughts. The underlying bedrock is mostly non-marine Upper Cretaceous sandstones, siltstones, and shales with some marine shales. Surficial materials are dominated by medium textured, moderately calcareous glacial till deposits. Brown Chernozems and Solonchic soils are dominant. Land use within the Project area consists of native grassland, which was used for livestock grazing until the EID purchased the land in 2021. Cultivated lands occurs west of the Project and native grassland surrounds most of the areas to the north, east, and south. Wetlands are frequent in this area, covering 5 to 10 % of the area. Human infrastructure includes fences, access trails and roads, irrigation infrastructure (dams, canals, dugouts), and natural gas well sites, pipelines, and remnants of gravel quarries. The Snake Lake Reservoir and an irrigation canal border the western boundary. The reservoir is used by local anglers in summer and winter.

The Project is in the initial planning stages for completion of a provincial EIA under EPEA. The reservoir expansion is a Mandatory Activity pursuant to Schedule 1(c) and 1(e) of the Environmental Assessment Regulation. Regulatory consultation with the province to determine the scope of the EIA by issuance of a project Terms of Reference (ToR) has begun. It is anticipated, based on recently completed assessments in Alberta, that the ToR for the EIA will include the following subject areas/sections:

- Air Emissions, Noise, and Climate Change
- Hydrogeology
- Hydrology and Water Quality
- Water Management
- Vegetation and Wetlands
- Soils and Terrain
- Reclamation
- Wildlife and Biodiversity
- Aquatic Ecology
- Historic Resources
- Traditional Ecological Knowledge
- Land Use
- Socio-economic Assessment
- Transportation
- Public Health and Safety
- Dam Safety
- Public Engagement
- Indigenous Consultation
- Cumulative Effects,
- Mitigation Measures, and
- Residual Impacts

While the provincial EIA has just been initiated in May 2022, baseline assessment completed in 2021 provides information on the environmental and historical resources that are expected to be affected by the Project. At this time, it is not possible to identify if any effects will be adverse or what final mitigation and offsetting measures will be needed to reduce effects; however, the following summary of potential changes and protection measures are anticipated:

**Water Quantity and Quality:** The existing Snake Lake Reservoir provides deep and shallow water areas which provide habitat for numerous fish and aquatic species. Water quality results show the reservoir can support fish throughout the year, as oxygen levels remain high, even under winter ice cover. Water chemistry met or exceeded requirements of the Canadian Council of Ministers of the Environment Guidelines for the Protection of Aquatic Life. The expansion is expected to provide additional areas of high-quality water and aquatic habitats.

**Aquatic Ecology:** The existing Snake Lake Reservoir provides a range of habitats that support sport and forage fishes. Substrates within the reservoir include areas of sand, gravel, fines, and boulders, providing good habitat for spawning and rearing. Fish species observed in Snake Lake Reservoir included lake whitefish, burbot, white sucker, northern pike, spottail shiner and Prussian carp. The reservoir is known to be used by anglers. The expanded reservoir is expected to increase the area of suitable fish habitat, increasing the number and biomass of fish present, and supporting additional angling opportunities.

**Soils:** The Project area includes relatively level to gently rolling terrain. Soils are mainly Orthic Brown Chernozems with some Solonchic intergrades and Solonchic soils, mainly occurring on thin glacial till and on lacustrine and eolian or glaciofluvial deposits. Wetlands are a mixture of Humic, Orthic, and Luvis Gleysols. Soils and terrain areas within the footprint of the reservoir would be fully removed and/or inundated with water. Reclamation on the outer berms and dam structures will replace some of these losses.

**Vegetation:** The vegetation communities observed in the Project area included a mix of native and non-native (agronomic) grasses. Most grassland areas are native plant communities. Noxious weeds were uncommon. The Project area is not located within a provincial Sensitive and Endangered Plant Species Range, but the potential for rare plants, as tracked by the Alberta Conservation Information Management System, is high. There have been previous observations of the rare plant dwarf woollyheads. Another rare species, common beggarticks, and two rare plant communities, Nuttall's salt-meadow grass community and red sapphire marsh have also been previously observed within the region. No rare plants or rare plant communities were observed on the Project area. Impacts on vegetation will include losses of native prairie habitats. Offsetting opportunities will be explored to reduce these effects.

**Wetlands:** The Project will result in permanent removal of onsite wetlands, but no-net-loss will be achieved through the wetland replacement process. All wetland losses must be

permitted under the Alberta Water Act, pursuant to Alberta Wetland Policy. As such, wetland replacement will be required for all removed wetland area, fully compensating for wetland removals. Additional offsetting measures may also be investigated. Support for wetland creation and maintenance, may be completed in partnership with Ducks Unlimited Canada (DUC) (EID has a long history of working with DUC on Wetland Habitat Projects and will examine the use of these sites as possible offsets for wetland losses).

**Wildlife and Species at Risk:** The Dry Mixedgrass Subregion contains wildlife typical of grassland habitats. The habitats in and near the Project area include lightly to highly grazed grasslands, open prairies, tall shrub and woodland areas, wetlands, and deep and shallow water habitats. The Project is within the following Provincial Sensitive Wildlife Ranges:

- Sensitive Amphibians
- Burrowing Owl
- Sharp-tailed Grouse
- Sensitive Raptor: Golden Eagle, Ferruginous Hawk, Prairie Falcon
- Other Sensitive and Endangered Species: Grassland

During wildlife surveys in 2021, the following surveys were completed:

- Breeding Bird Audio Point Counts and Ground Surveys (6 days)
- Waterfowl/Shorebird Point Counts (3 days)
- Burrowing Owl Call-playback Survey Transects (4 days)
- Common Nighthawk Surveys (5 days)
- Short-eared Owl Surveys (8 days)
- Amphibian Auditory Surveys (10 days)
- Amphibian Visual Surveys (4 days)
- Yellow Rail Surveys (7 days)
- Sharp-tailed Grouse Lek Surveys (6 days)
- Raptor Stick Nest Surveys (3 days)

The following Sensitive to At-Risk species as per the provincial General Status Listing 2020 were observed:

- Amphibians: northern leopard frog
- Birds: American white pelican, Baird's sparrow, barn swallow, black-necked stilt, chestnut-collared longspur, common nighthawk, common yellowthroat, eared grebe, ferruginous hawk, grasshopper sparrow, great blue heron, long-billed curlew, sora, Sprague's pipit, trumpeter swan
- Mammals: American badger, pronghorn

Losses of wildlife habitat will occur during the flooding of the reservoir, although new deepwater and shoreline habitat will be created, which will provide new habitat areas for fish and semi-aquatic wildlife. Permitting to remove sensitive species features will be required and offsetting



opportunities will be examined. At-Risk Species, such as the Northern Leopard Frog, listed under SARA, were observed within the Project area in 2021. If required, northern leopard frogs will be salvaged and replaced into suitable offsite habitats under permit from AEP. A known ferruginous hawk nesting site will also need to be permitted for removal and a suitable nesting structure will be considered to offset this removal. Wildlife will be protected throughout the filling of the new reservoir to ensure nesting species are not harmed during the flooding process.

**Historical Resources:** An Historical Resource Application was made to Alberta Culture and Status of Women (CSW). A signed requirement letter was issued (File No. 4825-21-0010-001), which called for an HRIA for all areas of high archaeological potential. The HRIA was conducted in 2021. A paleontological HRIA is also in progress. A Historical Resources Impact Mitigation program will occur in 2022.

## **4.2. Potential Adverse Effects Related to Federal Requirements**

### **4.2.1. Species at Risk Act**

The Species at Risk Act (GC 2002) provides for protection of species at risk listed on Schedule 1 of SARA and their habitats on federal lands, and for species at risk that are protected under the Migratory Birds Convention Act and aquatic species on all lands regardless of ownership or jurisdiction. SARA can only be applied on provincial lands in cases where a Ministerial Order has been issued. The only such order is for Sage Grouse in SE Alberta, well beyond the boundaries of this Project. As such SARA does not apply on land areas within this site. Based on onsite species surveys in 2021 and known locations of downstream aquatic species, the following SARA Schedule 1 species occur on the Project site: amphibians: northern leopard frog, Birds: Baird's sparrow, barn swallow, chestnut-collared longspur, common nighthawk, ferruginous hawk, long-billed curlew, and Sprague's pipit, and mammals: American badger (Appendix C). As these species are protected either under the Migratory Birds Convention Act or are listed on the provincial general status listing 2020 and/or protected under Alberta Wildlife Regulations, they will be protected as per the Wildlife Management Plan.

No SARA-listed fish species are found in the Nelson-Saskatchewan River system which includes the Bow River - the source of water for this Project. Lake Sturgeon is currently under consideration for inclusion in Schedule 1 of SARA, but at this time is not protected under SARA. In addition, no impacts on this species are predicted, as there are no new allocations for water from the Bow River and development of the Project will allow water levels in the Bow and further down the Nelson-Saskatchewan River to be maintained, even in years of drought, as irrigation water will be drawn for the reservoir rather than directly from the river at those times.

No adverse effects on Schedule 1 species are anticipated as a result of this Project. Where migratory bird species at risk or fish species are encountered, they will be protected, and work shut down or management and mitigations will be in place until they naturally move from the

site. Permitting would be required from Environment and Climate Change Canada (ECCC) for the disturbance or removal of a Threatened or Endangered species to allow for Project construction.

#### **4.2.2. Migratory Birds Convention Act**

Potential effects on migratory bird species include local loss or alteration of habitat, including removal of terrestrial vegetation and wetland communities or site structures where birds can nest, forage, or travel, increased areas of open water habitats, direct (mortalities) and indirect effects (harassment, reduced viability) on nesting birds, including eggs/young and adult birds. Regional effects on bird species may include alterations of habitat due to increased area of irrigated lands, and positive impacts are expected due to enhanced aquatic/edge habitats and in habitat offset areas.

Effects on migratory birds will be managed throughout the planning and construction stages of the Project. Wildlife sweeps, a wildlife management plan for individual species, and behavioral monitoring will be completed before and during construction of the Project area. By having mitigation strategies, monitoring, pre-clearing, sweeps, and deterrents in place, the level of effects of migratory bird species is expected to be low.

#### **4.2.3. Fisheries Act**

Approval under the Fisheries Act will be needed to allow the removal of the old dam and installation of a new dam which will affect fish habitat. The new reservoir is expected to be similar in water quality and depth to the existing reservoir, providing suitable, well-oxygenated deep-water areas and shallow areas around the outside edges of the north, west, and south berms. Alkaline/sodic soils, which are typical for this area, will be managed to ensure water does not initially become brackish. Aquatic plants are expected to naturally recruit into this area. In addition, fish habitat enhancements, such as the creation of shallow areas, or placement of boulders, gravel, or wood materials, will be considered during the reservoir design to enhance fish habitat. Therefore, positive benefits on Fish and Fish Habitat are expected following the construction of this Project.

No adverse effects are anticipated to occur as there will be increased habitat. The provisions of the Fisheries Act approval will ensure that no harm will come to fish or fish habitat. The existing Snake Lake Reservoir is already a well-known fishing destination among local anglers. The use of this reservoir for angling is expected to increase because of the Project.

#### **4.2.4. Canadian Navigable Waters Act**

The Canadian Navigable Waters Act (CNWA, GC 2019d) outlines requirements for completing works within navigable waterways. Although Snake Lake Reservoir is not listed under the “scheduled navigable waters”, the Project may be considered lawful works as per the CNWA (GC 2019d). Thus, an application to Transport Canada under the CNWA may be required.

No adverse effects are anticipated to occur as appropriate mitigations would be put in place for any loss of use of the reservoir during construction.

#### **4.2.5. Impact Assessment Act**

The Impact Assessment Act outlines the federal process for impact assessments and the prevention of significant adverse environmental effects of proposed projects. If the Project is designated pursuant to Section 9(1) of the IAA and the Physical Activities Regulation, a Federal Environmental Impact Assessment will be required.

If the Project is approved, all adverse effects, if any are identified, would be directly related to the exercise of this power. Adverse effects then will be determined as part of the impact assessment.

#### **4.2.6. Canadian Environmental Protection Act - Green House Gas Emissions**

The development of the Project may affect the loss of soil carbon back to the atmosphere by reducing the rate of decomposition (as flooded conditions are low oxygen environments). However, the reservoir itself may be a source of GHG emissions and their extent will be determined as part of the environmental impact assessment along with any reduction expected from terrestrial sources. At this time, it is not known what the net effect on greenhouse gases will be. Notwithstanding, given the size of the Project, any such effect is not anticipated to be significant. A detailed assessment of greenhouse gases will likely be required during the provincial EIA.

#### **4.2.7. Federal Financial Assistance**

The EID contends that no potential adverse effects will flow from or relate to the loan being provided by the Canada Infrastructure Bank (CIB). Further, the CIB is responsible for meeting legal obligations such as the duty to consult with potentially affected Indigenous groups and ensuring that the Project meets environmental assessment and regulatory requirements.

## **5. STAKEHOLDER AND PUBLIC CONSULTATION**

**Request 5 – What steps have you taken to consult with the public? What steps do you plan to undertake during all phases of the Project? Are you aware of any public concerns in relation to this project? If yes, provide an overview of the key issues and the way in which (in general terms) you intend to address these matters?**

### **5.1. Initial Consultation**

Initial public consultation has occurred through local notifications involving the media and discussions within nearby communities. In January and February 2021, the EID held four (4) information sessions with irrigators prior to a successful February 2021 district plebiscite vote to

increase the district expansion limit in support of the proposed Snake Lake Reservoir Expansion Project. Additional information regarding the plebiscite and the Snake Lake Reservoir Expansion Project was published in the Brooks Bulletin newspaper on February 10 and 17, 2021 and the Bassano Times newspaper on February 15, 2021.

In September 2021, the district posted the proposed Project on its website: [Rehab Projects \(eid.ca\)](https://www.eid.ca/Rehab-Projects).

Discussion with irrigators, district staff, and the board of directors occurred at the EID Annual General Meeting on March 8, 2022.

The EID, along with representatives of Irrigating Alberta Inc. (IAI) and some participating irrigation districts met with the Southern Alberta Group for Environment (SAGE) on May 12, 2022, to discuss a November 30, 2021, Ecojustice letter, as further referenced below. The IAI is a consortium of the irrigation districts, which includes the EID, participating in and administering the CIB infrastructure program. The district will continue to provide Project updates on its web page. The district will also be required to publicly post information as required by the regulatory approval agencies.

In general, there has been strong support locally for this Project and strong support from the Alberta irrigation community. Local farmers have expressed support for the Project while expressing concern that the Project is constructed technically correct with a commitment to environmental and First Nations involvement. The engineering, environmental investigations, and land acquisition have already taken 3 years to complete and are anticipated to take another 3 years before construction will commence.

The major public concerns that have been received at the district are formally outlined in the letter dated April 12, 2022, from Ecojustice on behalf of several environmental groups requesting that the Project be designated. An earlier Ecojustice letter dated November 30, 2021, requesting a provincial environmental assessment, and supported by the same organizations referenced in the April 12, 2022, letter, was submitted to Stephen Mathyk, Lethbridge Regional Assurance Manager of Alberta Environment and Parks.

## **5.2. Known Public Concerns**

As noted above, the April 12, 2022, letter from Ecojustice was sent to the Minister of Environment and Climate Change on behalf of a number of environmental groups requesting designation of the Snake Lake Reservoir Expansion Project. This letter outlines their specific concerns regarding the Project in relation to species, habitats, water use and pollution and indigenous rights and use of land. This letter has been carefully reviewed by our project team and this submission constitutes our response to the letter.

Additional public interest and concerns pertaining to the Project will be addressed through consultation and outreach as part of the provincial environmental assessment process.

## 6. INDIGENOUS CONSULTATION

**Request 6 - What steps have you taken to consult with Indigenous communities? What steps do you plan to undertake during all phases of the Project? Are you aware of any Indigenous community concerns in relation to this project? If yes, provide an overview of the key issues and the way in which (in general terms) you plan to address these matters?**

Our formal indigenous consultation on the Project has not yet commenced. We understand the importance of indigenous consultation and look forward to undertaking consultation and engagement with our Indigenous neighbours. The Aboriginal Consultation Office (ACO) had been provided with a pre-consultation assessment for the Snake Lake Reservoir Expansion Project. The FNC number for this Project is FNC202251256 and we will be having discussions with the ACO over the coming weeks. Following its established procedure, the ACO will determine the level of indigenous consultation required and the EID will adhere to their requirements.

During our consultation and engagement with Indigenous Communities, our work will follow the Federal and Provincial guidance that has been produced, particularly the Government of Alberta's guidance issued by the ACO. We will also work closely with the Natural Resources Conservation Board to ensure we meet any requirements they may have in this regard.

## 7. POTENTIAL EFFECTS TO PUBLIC AND INDIGENOUS PEOPLES

**Request 7 – Do you have any other comments in relation to environmental effects or impacts to the public or Indigenous peoples and how you intend to address and manage those?**

Yes, the following comments provide additional information on impacts that may affect Indigenous people and lands:

- The assessment will include assessment of current and traditional land uses and flooding of traditional use lands. Loss of any traditional territory lands and their use will be addressed through the Traditional Ecological Knowledge (TEK) assessment in the provincial EIA. This assessment will also consider the future availability of these lands as there would be a reservoir with public access allowing uses by indigenous people and the public. Opportunities to enhance this use of the future lands will be explored in further detail in the EIA.
- Loss of cultural heritage sites, i.e., sites where indigenous people may gather for cultural activities, including land uses (hunting, fishing, wild food, and materials gathering, religious or cultural ceremonies, training or study sites, or general recreation). To assess this, there will need to be a study to examine for the presence of cultural heritage sites. This can be assessed during the consultation and engagement process and by completion

of a traditional land use study as part of the TEK section of the provincial EIA.

- Loss of physical heritage sites, these would include actual known sites of heritage resources. These sites are currently being evaluated through an HRIA. The HRIA identified 3 potentially significant sites. CSW has requested additional investigation into 2 of these sites. This will be completed in summer 2022. This will also be confirmed through the indigenous consultation and engagement process.
- Loss of historical, archeological, or paleontological resources. These sites are currently being evaluated through a submitted HRIA process and if there are significant sites determined they will be remediated prior to Project development and flooding.
- Loss of features of architectural importance. There were no important structures identified on this land.

## 8. RATIONALE FOR NOT DESIGNATING THE PROJECT UNDER THE IAA

### Request 8 – Explain your views on whether the Project should be designated under the IAA.

We understand the IAA and its impact assessment process are intended to serve as a project planning tool, which takes into consideration the whole range of environmental, health, social and economic effects of a project.

Based on the foregoing discussion, we do not consider that the Project should be designated for the following reasons:

1. The IAA defines “direct or incidental effects” to mean “effects that are directly linked or necessarily incidental to a federal authority’s exercise of a power or performance of a duty or function that would permit the carrying out, in whole or in part, of a physical activity or designated project, or to a federal authority’s provision of financial assistance to a person for the purpose of enabling that activity or project to be carried out, in whole or in part”. As discussed above, the Snake Lake Reservoir Expansion Project is being funded in part through a loan from the Canada Infrastructure Bank (CIB), a federal Crown corporation with an independent Board of Directors. Other than the CIB loan, the Project is not receiving any federal grants or contributions. The CIB is responsible for meeting legal obligations such as the duty to consult with potentially affected Indigenous groups and ensuring that the Project meets environmental assessment and regulatory requirements. Therefore, designation of the Project by the Minister is unnecessary as the same requirements for assessment that would occur in a federal assessment process will be met while meeting the requirements of the CIB.
2. Alberta Environment and Parks (AEP) have already designated the Project as requiring an environmental assessment under EPEA. We believe that the environmental impact assessment mandated by the Government of Alberta will adequately address the

environmental, public, and Indigenous interests and concerns as well as drive strict mitigation strategies and practices that would reduce or remove any potential adverse Project effects.

3. Federally designated (Schedule 1) SARA species observed on the Project site included the northern leopard frog, Baird's sparrow, barn swallow, chestnut-collared longspur, common nighthawk, ferruginous hawk, long-billed curlew, Sprague's pipit, and American badger. None of these species are federally protected by Ministerial Order on the Project lands and therefore remain under provincial jurisdiction. While the latter six species are migratory bird species, protected during the breeding season under the federal MBCA, none of these species are anticipated to be adversely affected during Project development as the Wildlife Management Plan submitted to the province and in effect during project development includes mitigation and monitoring procedures to protect any observed breeding individuals or nests. To date, none of these species has been observed nesting on the Project lands. No SARA listed aquatic species occur on the Project site or within the Nelson-Thompson Watershed, downstream of the Project. Therefore, no federally listed species at risk are expected to have adverse effects as a result of the Project.
4. The Project is located on private land owned by the Eastern Irrigation District. While a direct loss of some 860 ha of degraded native prairie is anticipated, this loss is not considered to be a trigger for federal designation. Additionally, the Eastern Irrigation District will work with government agencies to assess if offset initiatives are required to reduce these losses. An offset program would be discussed in more detail during completion of the provincial EIA.
5. The total surface area of the proposed expanded reservoir will increase only by 779 ha to a total of 1100 ha which is significantly lower than the 1,500 ha threshold set out in Sec. 58 of Schedule 2 to the Physical Activities Regulations (SOR/2019-285). In addition, our understanding is that sec. 58 applies only to new dam or dyke projects on a natural water body. As the Snake Lake Reservoir and planned expansion are not natural waterbodies, Sec. 58 should not apply to the Project.
6. The Project will not require any amendments to existing EID water licenses due to increased water volume diversions or increased rates of withdrawals from the Bow River. The Project will provide an opportunity to divert water from the river when flows are abundant and temporarily store the water while reducing diversion during times of low flow in the river.

## 9. CLOSING

Thank-you for providing an opportunity to respond to the questions regarding potential designation of the Snake Lake Reservoir Expansion Project under subsection 9(1) of the Impact Assessment Act (IAA). Should there be any additional questions regarding the responses provided, or if you require any additional information about the Project, please contact the following individuals signed below.

<Original signed by>

<Original signed by>

Kevin Whittmire, P.Tech.(Eng.)  
MPE: An Englobe Company  
<contact information removed>

Wayne Bessie, M.Sc., P. Biol  
AAR Environmental Services  
<contact information removed>





# APPENDIX A.

## IMPACT ASSESSMENT AGENCY OF CANADA REQUEST FOR INFORMATION





Prairie and Northern Region  
Canada Place  
Suite 1145, 9700 Jasper Avenue  
Edmonton, Alberta T5J 4C3

Région des Prairies et du Nord  
Place Canada  
Pièce 1145, 9700 rue Jasper  
Edmonton (Alberta) T5J 4C3

April 21, 2022

**ELECTRONIC MAIL**

550 Industrial Road West,  
Brooks, AB T1R 1B2  
403-362-1400  
[eid@eid.ca](mailto:eid@eid.ca); [ivan.friesen@eid.ca](mailto:ivan.friesen@eid.ca)

Dear Ivan Friesen,

On April 12, 2022, the Minister of Environment and Climate Change (the Minister) received a request to designate the proposed Snake Lake Reservoir Expansion Project (the Project) under subsection 9(1) of the *Impact Assessment Act* (IAA). The letter requesting designation (enclosed) and a description of the Project will be posted to the Canadian Impact Assessment Registry internet site, publicly available at <https://iaac-aeic.gc.ca/050/evaluations>.

Under subsection 9(1) of the IAA the Minister may, by order, designate a physical activity that is not prescribed in the *Physical Activities Regulations*. The Minister may do this if, in the Minister's opinion, the physical activity may cause adverse effects within federal jurisdiction or adverse direct or incidental effects (resulting from federal decisions), or public concerns related to those effects warrant the designation. In accordance with subsection 9(4) of the IAA, it is expected that the Minister will respond, with reasons, to the request by July 11, 2022.

The Impact Assessment Agency of Canada (the Agency) will review information about the Project; any concerns expressed from the public and Indigenous groups; and expert advice from federal authorities and input from provincial ministries in order to inform the Minister on whether to designate the Project. If designated, to proceed with the Project, the Eastern Irrigation District would be required to submit an Initial Project Description to the Agency, thereby commencing the planning phase of the IAA. In that case, the planning phase would include the Agency determining whether a federal impact assessment is required.



Additional information regarding the process for designation requests can be found at the following link: <https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/designating-project-impact-assessment-act.html>.

In accordance with subsection 9(3) of the IAA, and to inform its advice to the Minister, the Agency is requesting that you provide information you have about the Project, along with relevant documents. By **May 12, 2022**, please provide available information regarding potential adverse effects to:

- fish and fish habitat;
- migratory birds and species at risk;
- potential adverse changes to the environment that would occur on federal lands and lands outside Alberta or Canada;
- greenhouse gas emissions including loss of carbon sequestration; and
- potential adverse impacts resulting from any change to the environment, on Indigenous peoples (e.g., changes to the environment impacting physical and cultural heritage, current use of lands and resources for traditional purposes, and structures, sites or things of historical, archaeological, paleontological or architectural significance) or changes to their health, social or economic conditions.

Please also include available information regarding potential adverse effects (changes to the environment or to health, social or economic conditions) that are directly linked or necessarily incidental to a federal authority's exercise of a power, performance of a duty or function, or provision of financial assistance, that would enable the carrying out of the Project, in whole or in part.

In particular, the Agency requests available information regarding:

1. Information about key project activities, the anticipated surface area in hectares of the existing reservoir and expansion, maps and layouts of the location of project components, land tenure, zoning, and estimated timelines for planning, construction, operation, decommissioning and abandonment.
2. A list of all regulatory approvals (federal, provincial, municipal, other) and any federal financial assistance that would be required for the Project and the associated project components or activities.
3.
  - a) For each regulatory approval that would be required, please provide the following information:

- i. Name of the licence, permit, authorization or approval, the associated legislative framework, and the responsible jurisdiction.
  - ii. The status of attaining any regulatory approvals.
  - iii. Whether it would involve an assessment of any of the effects outlined in the paragraphs above, and if so, a general description of the assessment that you intend to undertake and if applicable, any benchmarks or standards you intend to meet. Would conditions be set and if yes, what effects would those conditions address?
  - iv. Whether public and/or Indigenous consultation would be required and if yes, provide information on the approach you intend to take (if any steps have been taken, please provide a summary, including issues raised as well as your responses). If the Project is anticipated to result in permanent changes or cumulative effects, how you intend to manage those impacts.
4. For all federal licences, permits, authorizations, approvals, and/or financial assistance that may be provided for the Project, describe any anticipated adverse direct or incidental effects (including changes to health, social and economic conditions) that may occur as a result.
5. What steps have you taken to consult with the public? What steps do you plan to undertake during all phases of the Project? Are you aware of any public concerns in relation to this project? If yes, provide an overview of the key issues and the way in which (in general terms) you intend to address these matters?
6. What steps have you taken to consult with Indigenous communities? What steps do you plan to undertake during all phases of the Project? Are you aware of any Indigenous community concerns in relation to this project? If yes, provide an overview of the key issues and the way in which (in general terms) you plan to address these matters?
7. Do you have any other comments in relation to environmental effects or impacts to the public or Indigenous peoples and how you intend to address and manage those?
8. Explain your views on whether the Project should be designated under IAA.

Eastern Irrigation District is strongly encouraged to contact the Agency in the next few days to discuss the information required and ensure that it can be provided within the timeline.

In the coming days, a Registry page for the Project will be available on the Canadian Impact Assessment Registry Internet site. Please provide information regarding this file to the Agency's Prairie and Northern Regional Office by email to [pnr-rpn@iaac-aeic.gc.ca](mailto:pnr-rpn@iaac-aeic.gc.ca), which will also be posted on the Project's Registry page.

**Important Note:** All records produced, collected or received in relation to the designation request process – unless prohibited under the *Access to Information Act* or *Privacy Act* – will be considered public and may be released. Should you wish to provide any comments or documents that contain confidential or sensitive information that you believe should be protected from release to the public, please contact the Agency before submitting the information. Information marked as confidential will not be accepted without prior contact made with the Agency.

Further questions regarding this request can be directed to me at 587-341-3290 or [andrew.clarke@iaac-aeic.gc.ca](mailto:andrew.clarke@iaac-aeic.gc.ca).

Sincerely,

*<signed electronically>*

Andrew Clarke  
Environmental Assessment Officer, Prairie and Northern Region

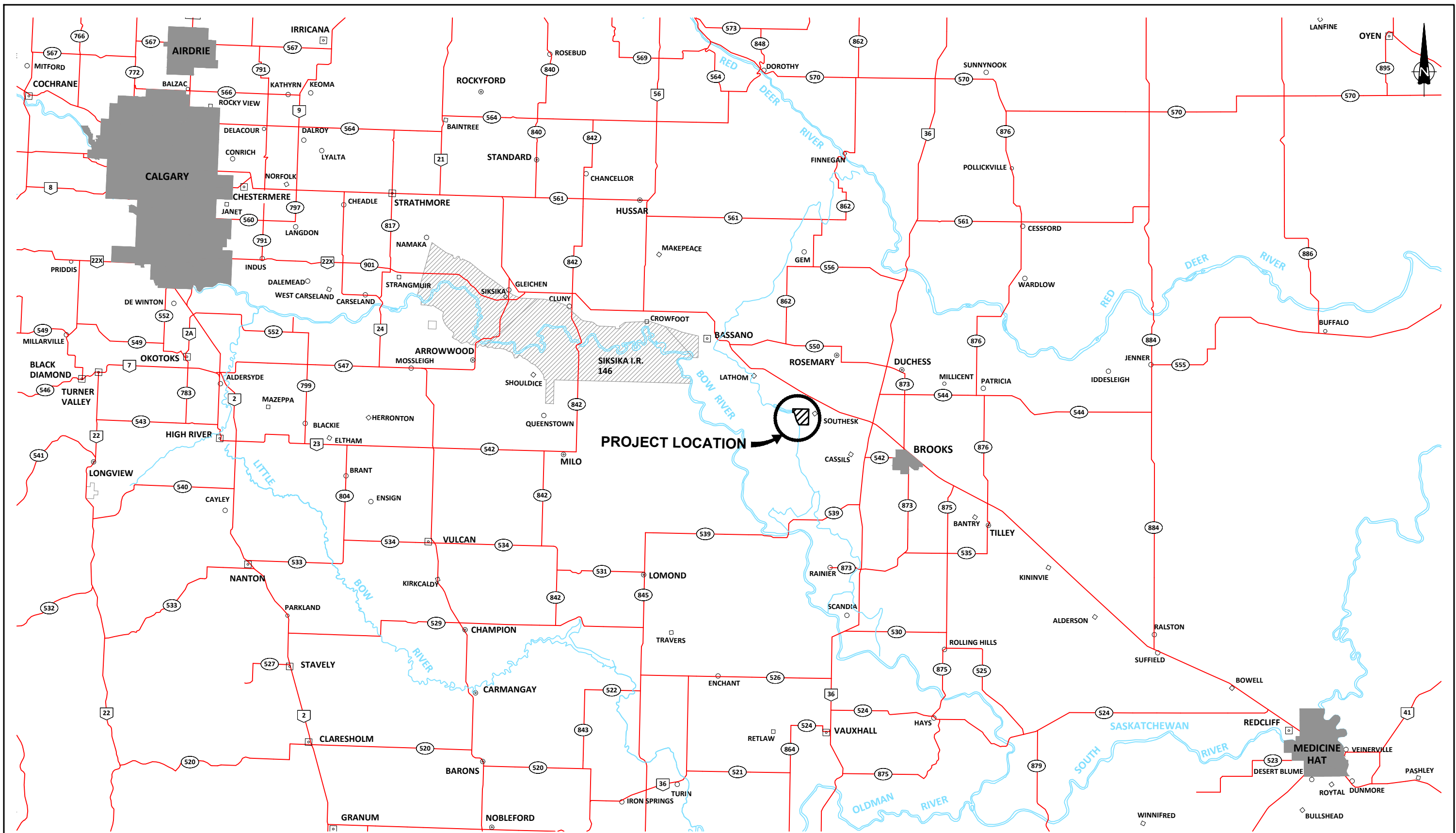
Enclosure (1):

- 1) Letter requesting designation the Snake Lake Reservoir Expansion Project

<p>Please note: If you would prefer this document, and any future correspondence, in an official language other than what has been provided, please advise Andrew Clarke</p>	<p>Remarque : Si vous préférez que ce document, ainsi que toute correspondance ultérieure, soit rédigé dans une autre langue officielle que celle qui vous a été fournie, veuillez en informer Andrew Clarke.</p>
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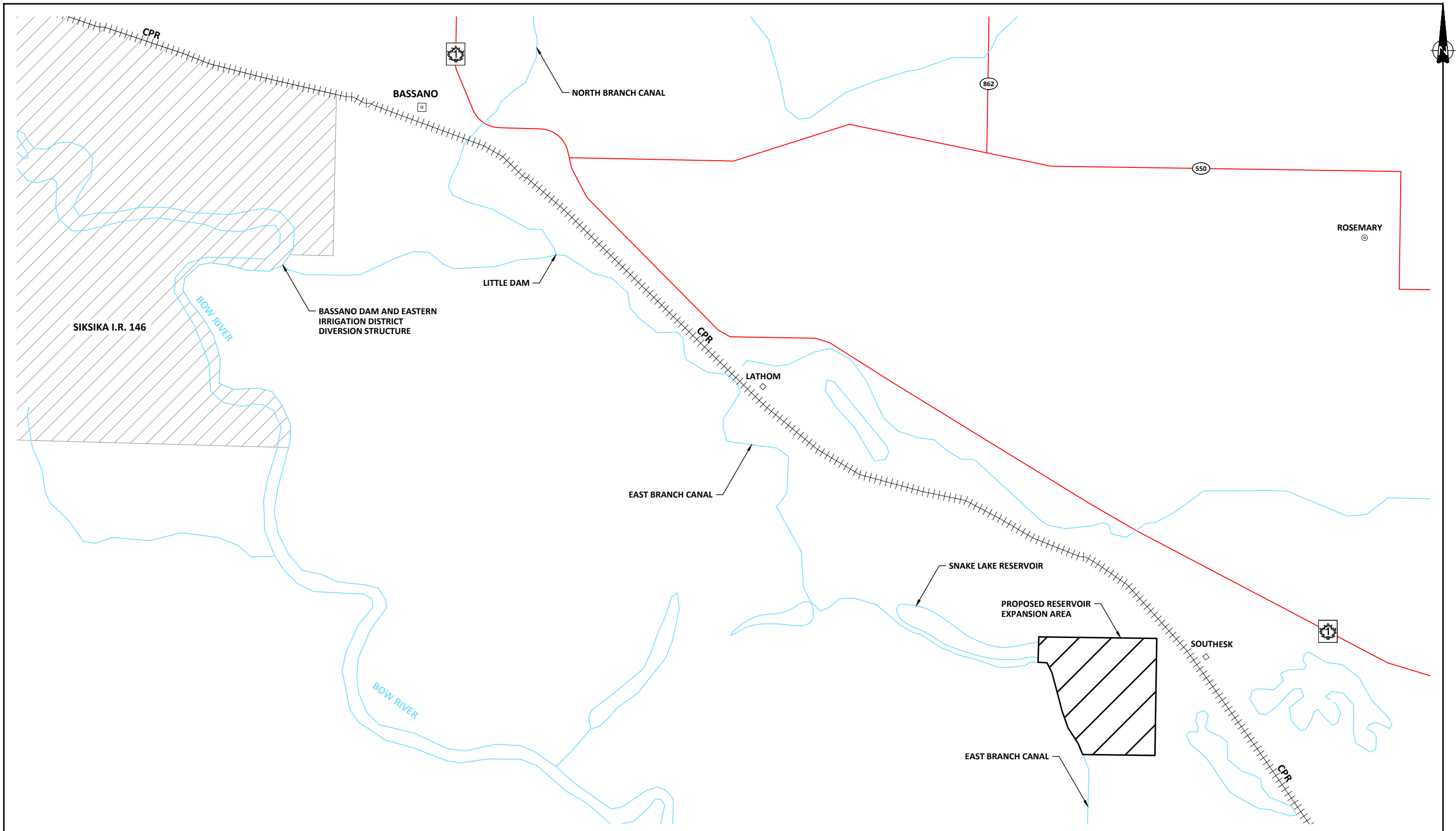
# APPENDIX B. FIGURES





**EASTERN IRRIGATION**  
**SNAKE LAKE RESERVOIR EXPANSION**  
**LOCATION PLAN**

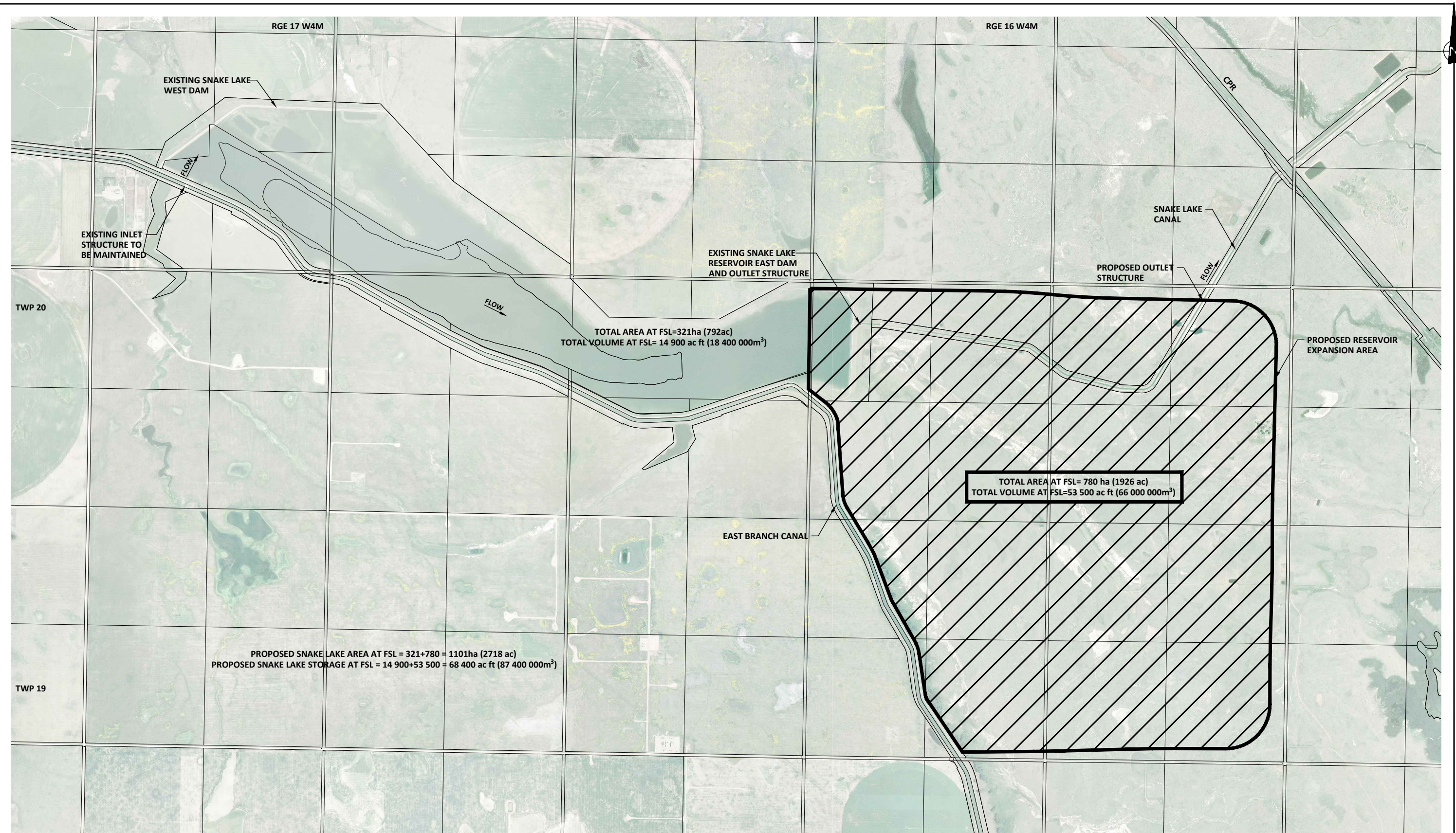
SCALE: 1:750 000	DATE: MAY 2022	JOB: 1560-193-00	FIGURE: 1.1
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**EASTERN IRRIGATION  
SNAKE LAKE RESERVOIR EXPANSION  
PROJECT PLAN**

SCALE: 1:100 000	DATE: MAY 2022	JOB: 1560-193-00	FIGURE: 1.2
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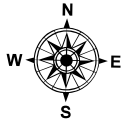
EASTERN IRRIGATION  
 SNAKE LAKE RESERVOIR EXPANSION  
 SITE PLAN

SCALE: 1:25 000

DATE: MAY 2022

JOB: 1560-193-00

FIGURE: 1.3



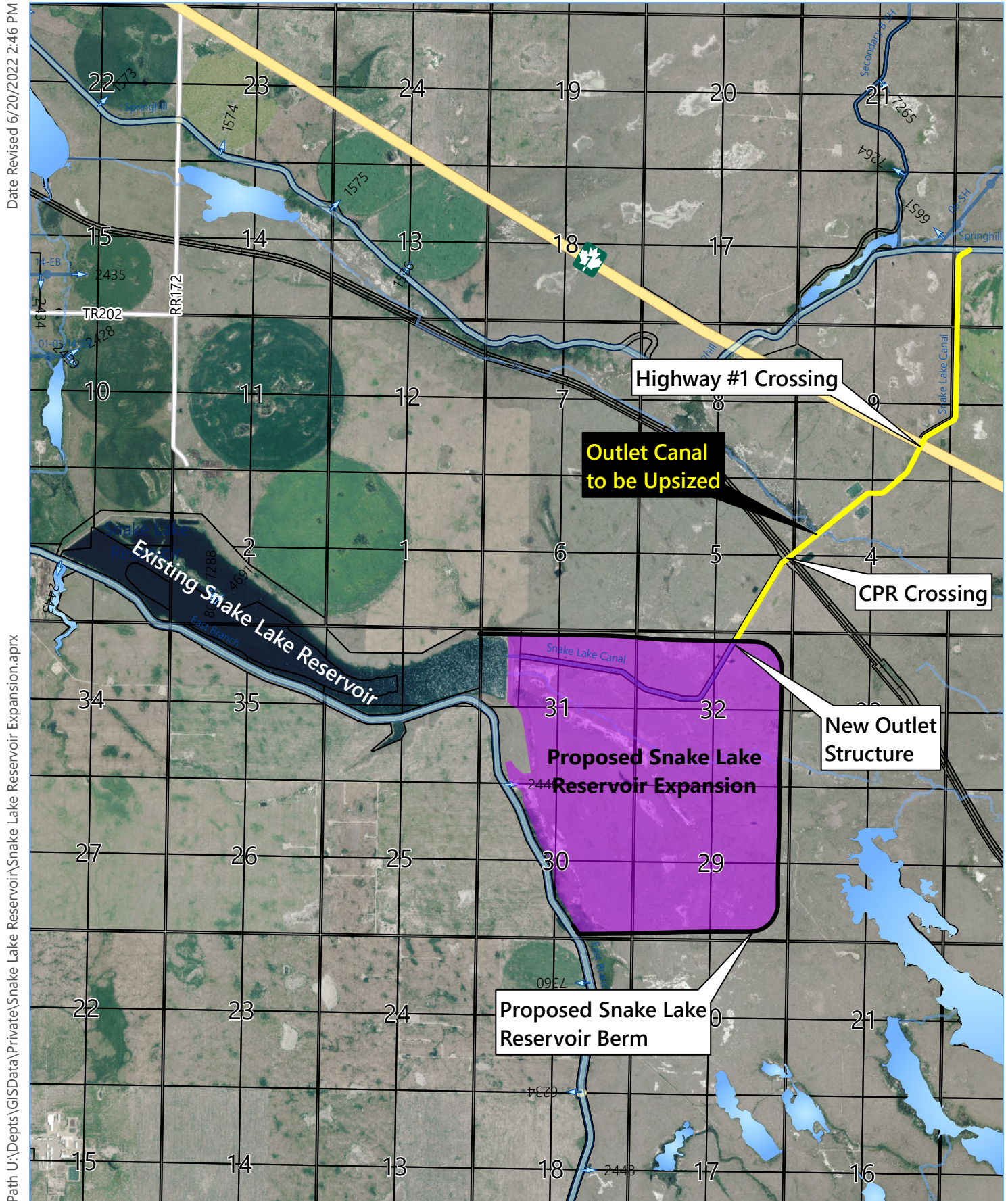
http://www.eid.ca  
email: eid@eid.ca

1 mm equals 54 meters  
Scale: 1:53,615

# Eastern Irrigation District

## Snake Lake Reservoir Expansion

### Figure 1.4



Date Revised 6/20/2022 2:46 PM

Path U:\Depts\GISData\Snake Lake Reservoir Expansion.aprx

## APPENDIX C.

# SPECIES AT RISK OBSERVED ON THE SNAKE LAKE EXPANSION PROJECT SITE - 2021



**Table C-1. Terrestrial Species at Risk and Species Protected under the Migratory Birds Convention Act (MBCA) Observed on the Existing Snake Lake Reservoir and Proposed Expansion Area in 2021**

Taxonomic Group	Species	Migratory Bird as per the MBCA <sup>1</sup>	Provincial General Status Listing 2020	Species at Risk Act Schedule 1	Alberta Wildlife Regulation Status
Amphibians	northern leopard frog	N/A	At Risk	Special Concern	Threatened
Birds	American white pelican	Yes	Sensitive	N/A	Non-game
	Baird's sparrow	Yes	Sensitive	Special Concern	Non-game
	barn swallow	Yes	May Be At Risk	Threatened	Non-game
	black-necked stilt	Yes	Sensitive	N/A	Non-game
	chestnut-collared longspur	Yes	May Be At Risk	Threatened	Non-game
	common nighthawk	Yes	Sensitive	Threatened	Non-game
	common yellowthroat	Yes	Sensitive	N/A	Non-game
	eared grebe	Yes	Sensitive	N/A	Non-game
	ferruginous hawk	No	At Risk	Threatened	Endangered
	grasshopper sparrow	Yes	Sensitive	N/A	Non-game
	great blue heron	Yes	Sensitive	N/A	Non-game
	long-billed curlew	Yes	May Be At Risk	Special Concern	Non-game
	sora	Yes	Sensitive	N/A	Migratory Game Bird
	Sprague's pipit	Yes	Sensitive	Threatened	Non-game
	trumpeter swan	Yes	Sensitive	N/A	Non-game
Mammals	American Badger	N/A	Sensitive	Special Concern	Furbearer
	pronghorn	N/A	Sensitive	N/A	Big Game

1. Additional observed species protected under the MBCA: American avocet, American robin, American wigeon, blue-winged teal, bufflehead, Canada goose, clay-colored sparrow, cliff swallow, common loon, gadwall, hermit thrush, horned lark, killdeer, lesser scaup, mallard, northern pintail, northern shoveler, red-breasted merganser, ring-billed gull, rock wren, savannah sparrow, snow goose, vesper sparrow, western kingbird, western meadowlark, white-throated sparrow, willet, Wilson's snipe, and yellow warbler.