

Project Summary Table

Proponent name:	TBD*: MD of Acadia and Special Areas Board	Date:	February 12, 2025 (Rev 2)
Project name:	MD Of Acadia and Special Areas Joint Irrigation Project	Company contact name and information:	Trent Caskey
Name of company that will hold approval:	TBD*: MD of Acadia and Special Areas Board	Company website:	https://specialareas.ab.ca/regionalirrigation/
Type of project (e.g., water management, hydroelectric, etc.):	Irrigation with supporting gas and solar power generation	New project, expansion, additional phase or modification:	New project
Project location (legal land description and municipality):	MD of Acadia and Special Areas No. 2 and 3.(See Figure 1, attached conceptual Project map)	Total project area (ha):	Covers 56,047 ha **
Indicate whether the project is on private, federal or provincial land:	Private and provincial	List any parks/protected areas/conservation areas that may be impacted:	N/A
Nearest First Nation Reserve(s) and Métis Settlements (name and km):	Siksika Nation (145km)	Nearest waterway/ water body (name and km):	Red Deer River (0 km)
Nearest provincial highway (# and distance):	Highway 41 (0 km) and Highway 555 (0 km)	Potential annual water usage and source:	Estimated to require up to 175,000,000 m ³ / year from the Red Deer River
Expected types of air emissions (e.g., SO ₂ , NO _x , CO ₂ , etc.):	CO ₂	Types of wastes generated and disposal location:	N/A
Brief Project Description			
Include major project processes and products, components including capacity and size, infrastructure requirements and general project location.			

The MD of Acadia and Special Areas Joint Irrigation Project (the Project) is a proposed greenfield irrigation project that will provide irrigation within the MD of Acadia and Special Areas. The Project will divert up to an estimated 175,000,000 m³ of water per year from the Red Deer River near the location of the Bindloss Bridge (where range road 30A crosses the Red Deer River). The maximum instantaneous diversion from the river is estimated to be 15 m³/s.

Water will be diverted to two separate off stream reservoirs. The first reservoir (Reservoir A1) will be located on the north side of the river and have a live storage volume of 34,000,000 m³. The maximum dam height for this reservoir will be 30.5 m. The second reservoir (Prince's Spring Reservoir) will be located on the south side of river and have a live storage volume of 134,000,000 m³. The maximum dam height for this reservoir will be 40 m. Pumping stations will be used to pump water through a conveyance system of pipelines and canals to the irrigable lands.

While the volume of water pumped appears to exceed the capacity of the two reservoirs (175,000,000 m³ vs 168,000,000 m³, respectively), the volume of water pumped is over the course of the irrigation season, and the reservoirs are not anticipated to be full as water will be removed for irrigation throughout that period.




















On-site generation is anticipated to power the pumps at the river intake, Acadia Booster Pumping Station and Prince's Spring Reservoir; grid-supplied energy will be available for reliability. Two gas powered generation facilities (30MW combined output) will be located in Special Areas Board lands near the Red Deer River and Prince's Spring, and one solar facility (approximately 20 MW) will occupy approximately 1/4 section of private land near the A1 reservoir in the MD of Acadia.

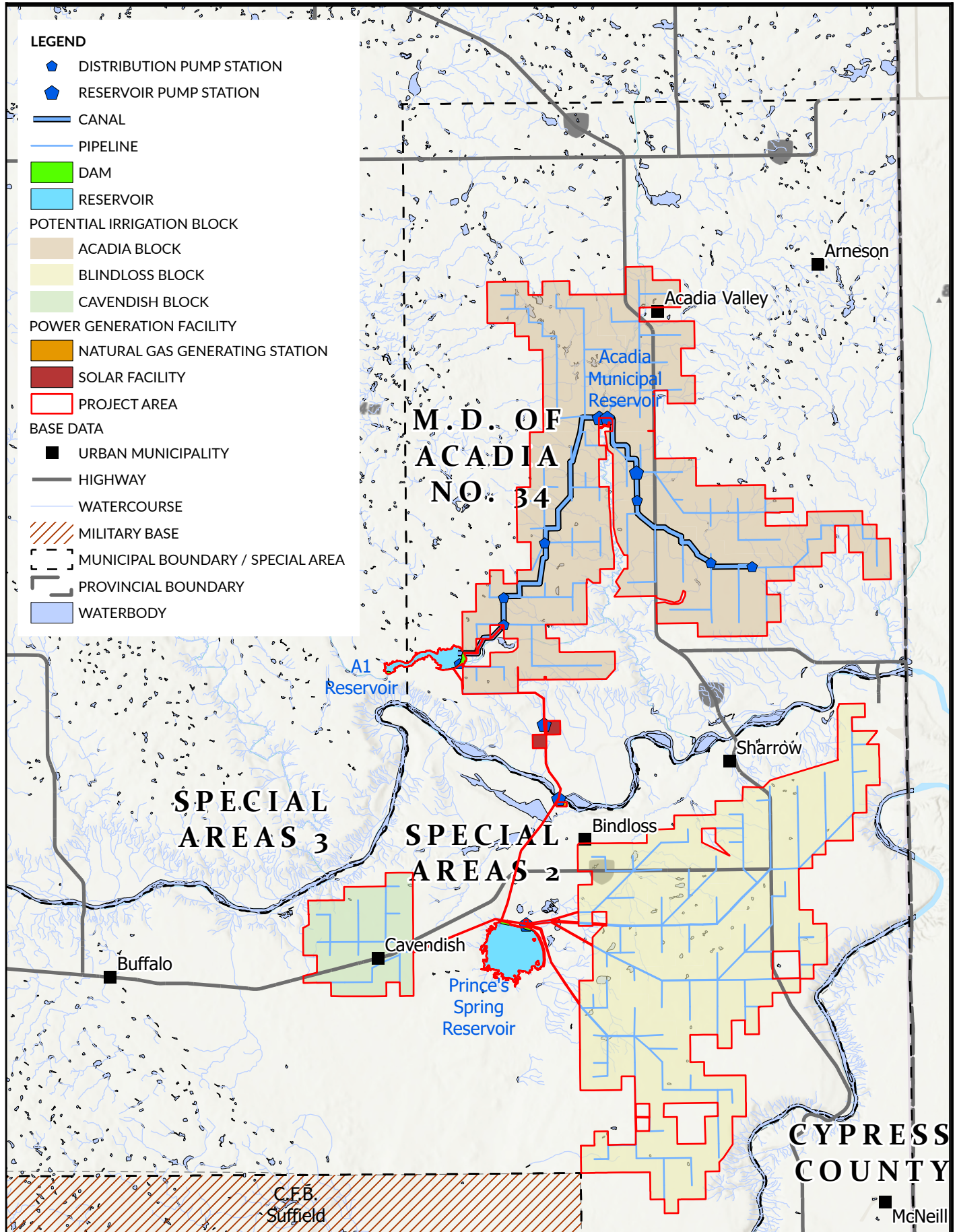
All irrigation is expected to be located on existing cultivated fields, however, reservoir locations and conveyance infrastructure will impact grassland habitat. An estimated 4,262 ha will be removed for the construction of reservoirs and water conveyance infrastructure.

- *It is anticipated that in the future, a governing entity (possibly a Municipally Controlled Corporation or Private Corporation) will be the appropriate "Proponent" and "Proposal Holder", however at this time those titles will be jointly held by the MD of Acadia and Special Areas Board.
- **This area encompasses the following approximate areas:
 - proposed irrigated area (54,450 ha);
 - dams (58 ha);
 - reservoirs (1154 ha);
 - pumping stations (4 ha),
 - Water intake (8.15 ha)
 - power generation and solar facilities (149 ha); and
 - water conveyance (485km).

Since development footprints overlap, the added areas above are greater than the Total project area identified. Areas provided are estimates and are subject to change as design progresses.

LEGEND

-  DISTRIBUTION PUMP STATION
-  RESERVOIR PUMP STATION
-  CANAL
-  PIPELINE
-  DAM
-  RESERVOIR
- POTENTIAL IRRIGATION BLOCK
 -  ACADIA BLOCK
 -  BLINDLOSS BLOCK
 -  CAVENDISH BLOCK
- POWER GENERATION FACILITY
 -  NATURAL GAS GENERATING STATION
 -  SOLAR FACILITY
- PROJECT AREA 
- BASE DATA
 -  URBAN MUNICIPALITY
 -  HIGHWAY
 -  WATERCOURSE
 -  MILITARY BASE
 -  MUNICIPAL BOUNDARY / SPECIAL AREA
 -  PROVINCIAL BOUNDARY
 -  WATERBODY



PLOT DATE: 2024-10-16 12:55:14 PM
 SAVE DATE: 2024-10-16 12:54:54 PM SAVED BY: LIJE

Base map: Esri, NASA, NGA, USGS, Esri Canada, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NRCan, Parks Canada; Military Base: Altalis Ltd., 2019; Road: Statistics Canada, 2022; Hydrography: Altalis Ltd., 1996; Municipality: Altalis Ltd., 2021; Special Area: Altalis Ltd., 2021; Municipal District: Altalis Ltd., 2022.

**MD OF ACADIA AND SPECIAL AREAS
 BOARD JOINT IRRIGATION PROJECT**
Scale: 1:300,000
Projection: NAD 1983 UTM Zone 12N

Figure 1: Conceptual Project Map

