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CONSULTING



**INITIAL PROJECT DESCRIPTION SUMMARY
Flipi Gas-Fired Generation Project**

December 23, 2025

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Appendix A: Project Location Drawings

LIST OF ACRONYMS

Acronym	Definition
°	Degree
%	Percent
2S+	Two-Spirit and related identities
2SLGBTQI+	Inclusive acronym that represents Two-Spirit, lesbian, gay, bisexual, transgender, queer, intersex, and additional people who identify as part of sexual and gender diverse communities
AAAQO	Alberta Ambient Air Quality Objective
ABMI	Alberta Biodiversity Monitoring Institute
ACIMS	Alberta Conservation Information Management System
ACO	Aboriginal Consultation Office
AEPA	Alberta Environment and Protected Areas
AER	Alberta Energy Regulator
AESO	Alberta Electric System Operator
AGRASID	Agricultural Region of Alberta Soil Inventory Database
AHS	Alberta Health Services
AIES	Alberta Interconnected Electric System
AQA	Air Quality Assessment
AUC	Alberta Utilities Commission
BTES	Bear Tracks Environmental Services (2015) Ltd.
CAAQS	Canadian Ambient Air Quality Standards
CEMS	Continuous Emissions Monitoring System
CEO	Chief Executive Officer
cm	Centimetre
CO	Carbon monoxide
CO ₂	Carbon dioxide
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
EMF	Electromagnetic Fields
EO	Element Occurrences
EPEA	<i>Environmental Protection and Enhancement Act</i> , R.S.A. 2000, c. E-12
EPC	Engineering, Procurement, and Construction
EPP/C&R	Environmental Protection Plan and Conservation and Reclamation Plan
ESA	Environmentally Significant Area
ft	Feet
FWIMT	Alberta Fish and Wildlife Internet Mapping Tool
GBA Plus	Gender Based Analysis Plus

Acronym	Definition
GHG	Greenhouse gas
ha	Hectares
HRA	<i>Historical Resources Act</i> , R.S.A. 2000, c. H-9
HRIA	Historical Resources Impact Assessment
HRSG	Heat Recovery Steam Generator
HV	High voltage
IAA	<i>Impact Assessment Act</i> , S.C. 2019, c. 28, s. 1
IAAC	Impact Assessment Agency of Canada
IBA	Important Bird Area
KEC	Kiwetinohk Energy Corporation
km	Kilometre
km ²	Square kilometre
kV	Kilovolt
LAIRT	Landscape Analysis Indigenous Relations Tool
LGA	Local Geographic Area
LSRS	Land Suitability Rating System
LV	Low Voltage
m	Metres
m ³	Cubic metres
men+	Men (and/or boys), as well as some non-binary persons
MGLC	Maximum ground level concentration
MW	Megawatt
MV	Medium voltage
NH ₃	Ammonia
NIA	Noise Impact Assessment
NO ₂	Nitrogen dioxide
NO _x	Nitrogen oxide
O ₂	Oxygen
PDC	Power Distribution Center
PIP	Participant Involvement Program
PM _{2.5}	particulate matter
POI	Point of interconnection
PSIP	Project Specific Information Package
PSL	Permissible Sound Level
Q	Quarter
RWDI	Rowan Williams Davies & Irwin Inc.

Acronym	Definition
tCO ₂ /GWh	Tonnes of carbon dioxide per gigawatt hour
TransAlta	TransAlta Corporation
TSP	Total suspended particulate matter
VC	Valued Component
women+	Women (and/or girls), as well as some non-binary persons

PART A: GENERAL INFORMATION

TransAlta Corporation (TransAlta, or the “Proponent”) is proposing to permit, construct, and operate the 460-megawatt (MW) Flipi Gas-Fired Generation Project (the “Project”). The Project is located on private land, approximately 18 kilometres (km) southwest of the Town of Rimbey, Alberta.

This Initial Project Description Summary has been prepared in accordance with the Impact Assessment Agency of Canada (IAAC) Guide to Preparing an Initial Project Description (2025a) under the *Impact Assessment Act*, S.C. 2019, c. 28, s. 1 (IAA). The numbers and titles used as main headings in the document align with the guide for ease of reference. The content of this document, alongside the full Initial Project Description, meets the information requirements of the Information and Management of Time Limit Regulations, Schedule 1, SOR/2019-283.

1.0 PROJECT INFORMATION

TransAlta is one of Canada’s largest publicly traded power generators, with more than 110 years of experience delivering reliable, affordable energy. We own and operate a diverse fleet across Canada, the United States, and Western Australia. Our portfolio includes hydro, wind, solar, battery storage, natural gas, and coal (to be phased out globally by the end of 2025) and is complemented by our exceptional asset optimization and energy marketing capabilities. As one of Canada’s largest producers of wind and thermal generation and Alberta’s largest producer of hydro power, TransAlta remains committed to a balanced, technology-agnostic generation mix.

At the end of September 2025, TransAlta reached an agreement to acquire the Flipi Gas-Fired Generation Project located 18 km southwest of the Town of Rimbey, Alberta. The Project was originally developed by Kiwetinohk Energy Corporation (KEC) as a high-efficiency, natural gas-fired power generation facility. TransAlta will advance the Project’s development and permitting toward construction and operation.

The Project will connect to the province’s transmission network, which includes a new 240-kilovolt (kV) substation and a short transmission line [approximately 200 metres (m) in length] that will link the power plant to the existing grid. This connection will enable electricity generated by the Project to be safely and reliably delivered to homes, businesses, and industries across Alberta.

Natural gas is anticipated to be supplied from a new third-party pipeline tied into an existing 22-inch natural gas pipeline approximately 1.6 km south of the Project Area.

Within this Initial Project Description Summary, there may be references to carbon capture technology associated with the Project. The Project was initially evaluated and designed to

incorporate carbon capture in conjunction with power generation. Design work on the carbon capture component of the Project is currently paused and is not being pursued at this time. The potential integration of carbon capture may be considered in the future if technological advancements render the carbon capture component economically and technically feasible. If the carbon capture portion of the Project progresses, the appropriate regulatory approvals, permits, and authorizations will be secured.

1.1 Project Location

The Project is in the southwest quarter section of Section 33, Township 41, Range 4, West of the 5th Meridian (SW-33-041-04-W5M), approximately 18 km southwest of the Town of Rimbey, Alberta, within Clearwater County (Drawing 1, Appendix A).

The Project will be constructed within 13.2 hectares (ha) of privately owned (leased), cultivated land. The selected location of the Project was based on:

- Demand for electricity and available grid interconnection capacity
- Proximity to a transmission line
- Proximity to natural gas supply pipelines
- Adequate acreage
- Reasonable soil conditions
- Topography
- Minimum number of stakeholders to avoid noise disturbance
- Convenient access to site
- Road load capacity
- Environmental factors

The approximate center of the Project Area is at:

- Latitude: 52.569063°
- Longitude: -114.522132°
- Easting (NAD83): 11U 667937 m E
- Northing (NAD83): 11U 5827213 m N

1.1.1 Ancillary Facilities

1.1.1.1 *Natural Gas Pipeline*

Natural gas is anticipated to be supplied by a third-party from a new pipeline tied into an existing 22-inch natural gas pipeline approximately 1.6 km south of the Project Area (Drawing 2, Appendix A). The point of interconnection (POI) will be at SE-28-041-04-W5M. The natural gas pipeline will be permitted, constructed, owned, and operated by the third-party.

The exact pipeline routing has not yet been surveyed. The route, once surveyed, will be assessed, and permitted as per Alberta Energy Regulator (AER) requirements. This will include an assessment of environmental site conditions. TransAlta intends to follow existing disturbances where practical, and official routing will be submitted through the AER.

1.1.1.2 Transmission Line and Substation

Electricity will be delivered to the existing 240 kV high voltage (HV) transmission line owned and operated by AltaLink Management Ltd. approximately 70 m east of the Project Area (Drawing 2, Appendix A).

TransAlta will be responsible for the transmission interconnection (a 240 kV circuit approximately 200 m in length) between the power plant and AltaLink Management Ltd. substation. The POI is expected to be at 02-33-041-04-W5M, immediately east of the eastern boundary of the Project Area. The 240 kV HV transmission interconnection will be overhead. Assessment and permitting for the transmission line and route is currently underway and an application has been submitted to the Alberta Utilities Commission (AUC) for approval.

1.1.2 Alternative Project Locations

Alternative locations for the Project were identified from aerial photographs and site reconnaissance. Several alternate locations were reviewed prior to further assessment of the Project's final location. Both the selected location and the alternate locations were evaluated to determine which site would have the least impact on operational design, environmental features, existing infrastructure, landowners, and existing land use.

The Proponent evaluated a larger area to identify potential sites that generally met the high-level criteria outlined above. This included identifying multiple potential sites for the Project during a site selection process initiated in early 2021. The landowners of the identified sites were engaged to determine if there was a general willingness to discuss the potential to host the power plant. During the site selection process, the current Project Area met more criteria than any other; therefore, no further alternative sites were advanced. The following criteria were used to identify the current site in SW-33-041-04-W5M, which was prioritized over other sites for its optimal alignment with Project objectives:

- Proximity to electrical interconnection: In addition to the power plant, the potential for impacts associated with the transmission line interconnection were considered. Shorter distances for the interconnection using primarily agricultural lands were prioritized. Given the size of the generating unit, lower voltage transmission lines were not suitable for the interconnection. As such, sites were evaluated for proximity to grid infrastructure, specifically 240 kV transmission lines capable of supporting the Project's capacity and ensuring reliable connection to the Alberta Interconnected Electric System (AIES). The selected site offers optimal access to an adjacent high-voltage line, minimizing interconnection costs, linear disturbance, and transmission losses.
- Grid capacity: An interconnection assessment was conducted to evaluate local and regional electricity demand and potential export capacity for energy. The selected site aligns with the Alberta Electric System Operator's (AESO) grid capacity requirements, supporting efficient integration and regional energy needs.

- Proximity to natural gas supply: Sites were assessed for access to natural gas infrastructure capable of supplying sufficient volumes and meeting the gas composition requirements (e.g., non-sour gas) for the Project's combined cycle technology. The selected site is located near reliable gas infrastructure, ensuring minimal disturbance during construction, operational efficiency of the power plant, and cost-effectiveness.
- Environmental factors: Sites were assessed for potential environmental impacts, prioritizing locations that avoid disturbance or disruption to sensitive habitats (including wetlands, watercourses, critical habitat for species at risk, protected areas, and native prairie). The site was selected for its low environmental impact, as it is sited on previously disturbed/cultivated land and avoids sensitive habitats. This assessment was confirmed through the completion of field surveys as outlined in the provincial AUC Environmental Evaluation and the *Environmental Protection and Enhancement Act*, R.S.A. 2000, c. E-12 (EPEA) Industrial Approval application.
- Adequate acreage (parcel size): Potential sites required sufficient land to accommodate the Project, including the heat recovery steam generator (HRSG) stack, turbines, and ancillary facilities. The site was selected for its availability of adequate acreage with a willing landowner, facilitating streamlined land agreements.
- Soil conditions: Soil quality was analyzed to ensure suitability for construction and long-term operational stability. The selected site has favourable geotechnical conditions, reducing foundation costs and construction risks.
- Topography: While some site grading is expected, more complex site grading requires additional space for cut and fill activities and more complex surface water plans. Sites were prioritized that were generally flat or had gently sloping terrain to minimize excavation and grading. The selected site's topography supports efficient construction and operational layouts.
- Site accessibility and road access: Sites were evaluated for proximity to major highways and the suitability of local road infrastructure, such as range or township roads, to support transportation of heavy equipment and materials during construction and operation. The selected site is close to multiple highways, with access via range or township roads. A conceptual site access assessment has been conducted, indicating sufficient access for both construction and operational logistics. TransAlta is committed to further evaluating transportation route through the municipal development permit process in consultation with local authorities and stakeholders to minimize disruptions to residents and landowners.
- Avoidance of historical resources areas: Sites were evaluated for the presence of historical, archaeological, or cultural resources, as required under Alberta's *Historical Resources Act*, R.S.A. 2000, c. H-9 (HRA) to avoid impacts on protected sites. The site selected has no known historical resources, as confirmed by assessments conducted

in compliance with provincial regulations, ensuring no impact on protected areas and simplifying permitting. On November 18, 2024, the Project Area received HRA Approval 4940-24-0092-001.

2.0 PROPONENT INFORMATION

TransAlta is one of Canada's largest publicly traded power generators, with more than 110 years of experience delivering reliable, affordable energy. We own and operate a diverse fleet across Canada, the United States, and Western Australia. TransAlta's portfolio includes hydro, wind, solar, battery storage, natural gas and coal (to be phased out globally by the end of 2025) and is complemented by our exceptional asset optimization and energy marketing capabilities. As one of Canada's largest producers of wind and thermal generation and Alberta's largest producer of hydro power, TransAlta remains committed to a balanced, technology-agnostic generation mix.

At the end of September 2025 TransAlta reached an agreement to acquire the Project. The Project was originally developed by KEC. TransAlta plans to advance the Project's development and permitting toward construction and operation.

There may be references to KEC conducting studies and collecting information before September 2025. Forward looking, TransAlta will conduct the work required to advance the Project.

Refer to Table 2.1 for the Proponent's contact information.

Table 2.1: Proponent and Primary Representative Contact Information

Name of the Designated Project	Flipi Gas-Fired Generation Project
Name of the Proponent	TransAlta Corporation
Address of the Proponent	1100 1st Street Southeast Suite 1400, Calgary, Alberta T2G 1B1
President and Chief Executive Officer (CEO)	John H. Kousinioris
Primary Representative	Andrea Ortega Manager Environmental Planning & Permitting Andrea_ortega@transalta.com Office: +1.403.267.2099

3.0 ENGAGEMENT WITH THE PUBLIC, REGULATORY AGENCIES, & OTHER PARTIES

TransAlta is committed to meaningful engagement for the Project to ensure clear and accessible opportunities are available for members of the public, stakeholders, Indigenous peoples, industry, and regulatory bodies to stay informed, raise concerns, and provide input on the Project. Engagement activities are being conducted in accordance with public participation processes including (which are detailed as part of the full Initial Project Description):

- AUC application process
- EPEA Industrial Approval application process
- Initial Project Description (under IAA) process

As per AUC Rule 007 requirements, a Participant Involvement Program (PIP) was initiated by the previous owner, KEC, in June 2024 and supplemented by TransAlta in November 2025. The goal of the PIP is to meaningfully engage and equip all potentially affected stakeholders and rights holders with the information about the Project to enable them to ask questions, voice concerns, and provide suggestions through personal consultations and other engagement methods.

TransAlta's Supplemental Stakeholder and Rights-Holder Engagement Report for the Flipi Project (October 20 to November 17, 2025), Post KEC Acquisition has been submitted and outlines the engagement undertaken since the Project purchase, including:

- Direct correspondence, meetings, and a Project Specific Information Package (PSIP) provided to Indigenous communities.
- Open House invitations and information packages are provided to landowners residing within 2,000 m of the Project.
- Reached out to Clearwater County, Ponoka County, and Lacombe County within meetings with Clearwater County and Ponoka County.
- Public advertisements for the Open House in local community papers.
- A public Open House in Rimbey, Alberta on November 13, 2025.
- The development of a Project-specific website (www.transalta.com/flipi-project/).

Considering the public and Indigenous engagement undertaken, TransAlta is confident that stakeholders and rights-holders have been:

- Properly and adequately notified about the Project.
- Given the opportunity to ask questions and raise issues and concerns about the Project and have had those questions, issues, and concerns addressed.
- Able to provide initial feedback to the Project design.

A detailed record of engagement completed for the Project is provided in the full Initial Project Description.

3.1 Participant Involvement Program Materials

Engagement materials provided as part of the PIP are detailed as part of the full Initial Project Description. In summary, materials included two PSIPs (in August 2024 and November 2024) which were provided by KEC. Following the Project's purchase, TransAlta sent out a Project Newsletter (PSIP #3) along with Open House Invites in October 2025. TransAlta then hosted a community Open House in Rimbey, Alberta on November 13, 2025, to engage with local residents and gather input on the Project. Within two weeks of the event, TransAlta provided follow-up information to stakeholders who had submitted specific questions about the Project via email.

3.2 List of Regulatory Agencies, Public, & Other Parties Engaged

The following lists federal, provincial, and municipal agencies; stakeholders, rights holders and other industries engaged on the Project.

Federal

- IAAC
- NAV Canada
- Transport Canada

Provincial

- AER
- Alberta Environment and Protected Areas (AEPA)
- Alberta Arts, Culture, and Status of Women
- AUC
- Alberta Jobs, Economy and Trade
- Aboriginal Consultation Office (ACO) (informed, not consulted)

Municipal

- Clearwater County, Alberta
- Lacombe County, Alberta
- Ponoka County, Alberta

Public and Stakeholders

As a component of AUC Rule 007 (2025), the Project is required to conduct public and stakeholder engagement. Prior to the TransAlta purchase, Project notifications were sent to all applicable occupants, residents, and landowners, within 2,000 m, measured from the edge of the Project Area boundary. Personal engagement was conducted with occupants, residents, and landowners, within 800 m, measured from the edge of the Project Area boundary.

Rights Holders

- Sunchild First Nation
- Ermineskin First Nation
- Louis Bull First Nation
- Samson Cree Nation
- Foothills Ojibway First Nation
- O'Chiese First Nation
- Paul First Nation
- Montana First Nation
- Enoch Cree Nation
- Alexander Cree Nation
- Otipemisiwak Metis Government, District 3

Details regarding engagement with Indigenous communities are provided in Section 4.0.

Industry

- New North Resources Ltd.
- Tourmaline Oil
- Canlin Energy Corporation
- NOVA Gas Transmission Ltd. (TC Energy)
- Cenovus Energy Inc.
- Gran Tierra Energy
- Plains Midstream Canada ULC
- Entrada Resources Inc.
- Keyera Energy Ltd.
- Pembina Pipelien Corporation
- Taqa North Ltd.
- G.L.D.C Gas Co-op Ltd.
- Freehold Royalties Ltd.

3.3 Regulatory Requirements of Federal, Provincial, & Municipal Jurisdictions

The provincial regulatory processes the Project are subject to provide a comprehensive framework that sufficiently assesses the potential effects of the Project and includes engagement processes in which individuals or groups can participate. The Project is subject to multiple regulatory requirements at the provincial and municipal levels, all designed to identify, manage, and mitigate impacts (including those within federal jurisdiction such as impacts to fish and fish habitat, aquatic species, and migratory birds). Together, the provincial and municipal processes form a robust and integrated system that ensures environmental, social, and jurisdictional concerns are thoroughly considered and managed.

A summary of existing federal, provincial, and municipal regulatory requirements is provided in the sections that follow.

3.3.1 Impact Assessment Agency of Canada

The Project is a “designated project” as defined in Section 30 of the Physical Activities Regulations, SOR/2019-285:

“the construction, operation, decommissioning and abandonment of a new fossil fuel-fired electrical generating facility with a production capacity of 200 MW or more.”

As the Project is anticipated to have a maximum production capacity of 460 MW, the threshold of 200 MW would be exceeded. TransAlta is therefore submitting an Initial Project Description (the more detailed version of this summary document) to IAAC to inform the decision as to whether a federal Impact Assessment is required.

The Proponent has engaged IAAC throughout the process of developing and submitting the Initial Project Description and Initial Project Description Summary.

3.3.2 Environment & Climate Change Canada

The operation of the Project will be regulated under the Regulations Limiting Carbon Dioxide Emissions from Natural Gas-fired Generation of Electricity, SOR/2018-261. This regulation establishes a regime for limiting carbon dioxide (CO₂) emissions from electricity generated by the combustion of natural gas.

TransAlta intends the Project to meet the “planned unit” designation as defined under the Clean Electricity Regulations, SOR/2024-263. The Clean Electricity Regulations, SOR/2024-263 set limits on CO₂ emissions of electricity generated from fossil fuels.

3.3.3 NAV Canada

A Land Use Submission package including Project map and equipment heights was submitted to NAV Canada on September 13, 2024, with the approval received on October 10, 2024. This application package was submitted to assess the potential impacts of the Project on air navigation systems.

3.3.4 Transport Canada

An Aeronautical Assessment form was submitted to Transport Canada on September 13, 2024, to determine if the Project has marking or lighting requirements for potential obstacles to air navigation systems. Transport Canada advised that because the construction start date is more than 18 months in the future, they could not accept the application.

This application is not anticipated to be required as Project equipment will remain below the 90 m above ground level threshold established by Transport Canada. Should an application be required based on the final design, the Proponent will take necessary steps to submit an Aeronautical Assessment form.

3.3.5 Alberta Environment & Protected Areas

Environmental Impact Assessment

Since power plants are not a listed mandatory or exempt activity under the Environmental Assessment (Mandatory and Exempted Activities) Regulation, Alta. Reg. 111/1993, a Project Summary Table was provided to AEPA to determine if a provincial Environmental Impact Assessment would be required for the Project. On February 2, 2025, the Proponent received confirmation from AEPA that the Project does not require an Environmental Impact Assessment report.

Industrial Approval

The construction, operation, and eventual reclamation of power plants in Alberta is regulated by AEPA under EPEA. The Project is captured under the definition of a “power plant” in Schedule 1, Division 2 of the Activities Designation Regulation, Alta. Reg. 276/2003 as an activity requiring an EPEA approval.

The EPEA Industrial Approval application was prepared according to requirements of the Guide to Content for Industrial Approval Applications (GOA, 2014). The Proponent submitted the EPEA Industrial Approval application on January 3, 2025, and received a draft EPEA Approval from AEPA on July 30, 2025. This approval will remain in draft form until the AUC application (discussed in Section 3.3.6) is approved.

Details regarding the information requirements of the Industrial Approval application, associated public comment period, and applicable provisions of the draft approval are provided in the full Initial Project Description.

Water Act Licence

TransAlta will engage AEPA to obtain a water diversion licence (as required) or other approvals (as necessary) under the *Water Act*, R.S.A. 2000, c. W-3 as part of the detailed design phase of the Project. The water source is currently under evaluation with options including groundwater, surface water, or water trucking. If groundwater or surface water are selected for the Project's water sourcing, a licence under the *Water Act*, R.S.A. 2000, c. W-3 will be required.

3.3.6 Alberta Utilities Commission

The Project will be providing electrical energy to the provincial power grid; therefore, the Proponent submitted an application to the AUC on February 4, 2025, pursuant to Section 11 and 19 of the *Hydro and Electric Energy Act*, R.S.A. 2000, c. H-16, as amended. The AUC application requirements for thermal power plants at a high level include the following:

- Details regarding Project information, location/siting, and design details.
- A PIP to document engagement activities, correspondence, and concerns documented for the Project. The PIP also includes steps and actions taken by the Proponent to address concerns or questions raised during engagement.
- Air Quality Assessment (AQA) to assess impacts on air quality and compliance with regulatory requirements.
- Noise Impact Assessment (NIA) to assess noise impacts and compliance with regulatory requirements.
- Visual Impact Assessments (as applicable) to assess potential impacts on the visual landscape. The Project is not within a designated buffer or visual impact assessment zone which requires visual assessments to be completed (as per the Electric Energy Land Use and Visual Assessment Regulation, Alta. Reg. 203/2024); however, as part of public and stakeholder engagement efforts, the Proponent completed visual simulations for nearby landowners who expressed concerns regarding visual impacts.
- HRA Approval/Clearance to ensure the identification, preservation, and avoidance of historic resources.
- Environmental Evaluation to document baseline conditions and assess the potential environmental effects of the Project using a standardized ecological approach. The Environmental Evaluation includes a combination of desktop and field data to identify and assess potential adverse effects on ecological components (including those under

federal jurisdiction such as fish and fish habitat, aquatic species, and migratory birds). Mitigation and monitoring measures that will be implemented to manage and reduce potential Project impacts are also included. Information provided in the Environmental Evaluation completed for the Project is summarized in Section 14.0.

- Environmental protection planning, emergency response planning, end of life management, and reclamation security.
- Additional approvals or permits for the Project.

As part of the AUC application process, a public hearing process has been initiated and is scheduled to begin on January 12, 2026. This formal process brings together interested parties to present views and supporting evidence. Hearings are conducted before a panel of commissioners to ensure the AUC makes a fully informed and balanced decision.

3.3.7 Alberta Arts, Culture, & Status of Women

The Proponent submitted a Historic Resources Application to the Historical Resources Management Branch for review under the HRA, to determine whether a Historical Resources Impact Assessment (HRIA) for archaeology or paleontology is required. The Project received an HRA Approval on November 18, 2024 (HRA Number: 4940-24-0092-001), and therefore, an HRIA is not required.

3.3.8 Municipalities

A Development Permit will be required from Clearwater County for the Project. The Development Permit application will be submitted to Clearwater County following AUC approval. TransAlta has begun discussing certain aspects of the Development Permit process, including emergency response, visual screening, and road use with Clearwater County, and will be incorporated into the Development Permit application.

3.4 **Overview of Key Comments and Concerns Expressed**

A summary of key comments and concerns expressed by stakeholders is provided in the following sections.

3.4.1 Landowners & Occupants

Details of the questions and concerns raised, along with the Proponent's responses are described below. Detailed consultation records for individual stakeholders are available on request.

Project Schedule: Stakeholders inquired about the Project schedule and timeline for AUC submission. The Proponent confirmed that they filed the AUC power plant application in February 2025. The Proponent confirmed that following submission and initial review of the application, the AUC mails out notices to all stakeholders with details about the Project application and review process.

AEPA Submission Schedule and Process: A stakeholder inquired about the AEPA application submission timeline and the process for intervening on the application. TransAlta provided details about the notice requirements, review period, decision, and appeals process.

Emissions Modelling: Stakeholders inquired about the emissions modelling, and TransAlta provided a copy of the AQA report.

Noise: Stakeholders raised concerns over noise from the Project. TransAlta explained requirements to assess noise and ensure compliance with Permissible Sound Levels (PSL) under AUC Rule 012 (AUC, 2024). The Proponent also provided a copy of the NIA completed for the Project.

Location: Stakeholders inquired about the specific location of the Project within the quarter section, and TransAlta provided a copy of the survey plan.

Environmental: Stakeholders inquired about the environmental surveys completed for the Project. TransAlta advised that surveys were completed in 2023 and included two rounds of raptor nest surveys, two rounds of breeding bird surveys, wetland survey, and a preliminary soil survey. These surveys (with the exception of the preliminary soil survey) were completed again in 2025 during the appropriate seasonal windows as part of the Proponent's due diligence and to ensure environmental findings remained current.

Siting: Several stakeholders inquired about the siting of the Project. TransAlta explained that there are several factors that go into siting a Project, including:

- Proximity to existing 240 kV interconnection
- Proximity to a sufficient natural gas (sweet) supply
- Availability of grid capacity for the Project size
- Proximity to load centers
- Relatively flat area with minimal topographical constraints
- Low environmental impact
- A willing host landowner

Access and Haul Routes: Questions and concerns were raised by several stakeholders with respect to access to the Project, and particularly the haul routes. The Proponent has undertaken an assessment to determine viable routes and solicit feedback from landowners/residents as well as the three impacted municipalities. TransAlta included an update on the potential routes in a newsletter and is committed to keeping stakeholders informed about potential access routes. Haul routes will need to be formally approved by all municipalities in the municipal Development Permit application stage.

Visual Impacts: Stakeholders raised concerns over visual impacts. TransAlta completed a visual simulation for stakeholders that requested one. One of the stakeholders will not be able to see the Project from their residence, based on the visual simulation, due to other

obstructions between the residence and the Project. TransAlta is continuing to discuss mitigation measures with other stakeholders.

Wastewater: One stakeholder inquired about wastewater from the Project. TransAlta advised that no industrial wastewater will be released to the environment. Wastewater will be directed to an on-site aboveground storage tank where it will be stored and monitored, then removed by tanker truck to a third-party certified wastewater disposal/treatment facility, once filled. Haul routes will need to be formally approved by all municipalities in the municipal Development Permit application stage. All tanks used to store wastewater will meet the requirements for design characteristics, and disposal details will be recorded. Reuse and reduction of wastewater will be analyzed for the Project and any wastewater that has potential to be reused in the facility will be stored in separate tanks for further use or treatment.

Water: Stakeholders inquired where the Proponent would obtain water, how much water would be used, and the regulatory process for water sourcing. The Proponent indicated that very little water will be used on the site and water may be sourced from groundwater, surface water, or water trucking. If groundwater or surface water withdrawals are determined to be required during the detailed design phase, separate provincial regulatory approvals/licences will be applied for under the *Water Act*, R.S.A. 2000, c. W-3.

Carbon Capture Questions: Several stakeholders inquired about more details regarding the potential CO₂ capture portion of the Project. Design work on the CO₂ capture component of the Project is paused until the technology advances to be both economically and technically feasible. If the CO₂ capture portion of the Project progresses, the appropriate regulatory approvals, permits, and authorizations will be secured.

Property Value Impacts: Stakeholders raised concerns over the impact of the Project on nearby property values. The Proponent hired Serecon to undertake a property value study to determine whether there is likely to be an impact on nearby property values because of the Project. Serecon's report from December 13, 2024, has been presented to the concerned stakeholders for review and continued discussion.

Alberta Electric System Operator Process: One stakeholder inquired about what stage of the AESO process the Project is in. The Proponent advised that they are in Stage 3 of the AESO legacy process, currently working on the Service Proposal that is part of the AESO requirements. The Proponent advised that the engineering study work is moving forward and should be completed later this year.

Lighting Requirements: Stakeholders inquired about what type of lighting would be required for the facility and raised concern about lighting impacts at night. TransAlta provided information on potential lighting requirements and explained that lighting requirements will be in accordance with Canadian Aviation Regulations. Potential mitigation options were offered that can be explored after the final design of the power plant is complete. Lighting will be part of municipal Development Permit requirements.

Community Benefits: Stakeholders inquired what benefits the community would receive because of the Project. TransAlta advised of the commitment to support the local communities in which they operate. They explained that due to the early stage of the Project, information is still being gathered on community needs, local initiatives, and potential partnerships. The Proponent thanked the stakeholder for providing input on potential opportunities and will consider these as the Project progresses.

Project Benefits: A stakeholder inquired about the benefits of the Project. The Proponent advised of the following benefits: a reliable, cost-effective source of new electricity supply, enhancing local and regional reliability of power supply, providing employment opportunities during construction as well as operating and maintenance jobs during operations, and generating tax revenue for the municipality.

Project Cost: One stakeholder inquired about the capital cost of the Project. TransAlta advised it was estimated at \$900 million based on 2022 data.

Building/Equipment Height: Stakeholders inquired about the height of the buildings and equipment. The tallest structures on the power plant will be the HRSG stack. It is anticipated for the HRSG stack height to be approximately 48.76 m tall. The tallest building expected is the generator building that will be approximately 25 m tall.

Tree Removal: One stakeholder inquired if trees would need to be removed. TransAlta advised that at this time, it does not appear that any tree removal is required as there are no trees in the Project Area.

Dust: Stakeholders raised concerns about dust during construction and dust control. TransAlta advised that they will be required by the County to enter into a dust abatement agreement and ensure that dust is kept to a minimum during construction. It was advised that dust control typically involves applying water or calcium during dusty times but would be determined with Clearwater County.

Electromagnetic Fields: One stakeholder raised concerns over increased electromagnetic fields (EMF) in the area from the Project. Information was emailed to the stakeholder regarding EMF guidelines, examples, and EMF levels from household appliances.

TransAlta continues to engage with stakeholders directly and through their committed email inbox at stakeholderengagement@transalta.com.

3.4.2 Federal & Provincial Regulators

Engagement with federal and provincial regulators primarily involved their respective permitting processes. No specific concerns were raised.

3.4.3 Municipalities

Clearwater County: The Proponent provided Project information, requested clarification on the municipal permitting process, and offered to meet with Clearwater County for discussion. Clearwater County responded by providing details on the municipal permitting process and advising they did not have any concerns with the Project at that time. The Proponent stayed in contact with Clearwater County regarding stakeholder engagement updates and inquiries, questions about new potential new residences, haul routes and bridges, and the Emergency Response Plan for the Project. Through engagement efforts, TransAlta and Clearwater County have agreed to a number of commitments related to the municipal permitting process, which have been documented as part of the AUC application. TransAlta intends to complete the municipal Development Permit process closer to construction, as Development Permits are typically valid for a maximum of 12 months.

Lacombe County: KEC reached out to Lacombe County due to potential haul routes utilizing Lacombe County controlled roads. Lacombe County indicated they had some concerns and would provide feedback. Lacombe County requested a joint meeting including KEC, Clearwater County, Lacombe County, and Ponoka County. The meeting was held on December 16, 2024, and additional input was provided on potential haul routes. Representatives from Lacombe County attended the November 2025 open house hosted by TransAlta, again expressing interest in haul routes used. TransAlta will continue discussions with all impacted municipalities with respect to the haul routes.

Ponoka County: Due to the proximity of the Project to Ponoka County, the Proponent emailed Project information to the Development Officer and the Chief Administrative Officer. The Proponent provided details of the Project, invited any questions or concerns and offered to meet to discuss the Project. Ponoka County representatives attended the November 2025 open house hosted by TransAlta and requested a follow up meeting which occurred with representatives from TransAlta on December 3, 2025. During the open house and following meeting, Ponoka County raised residents' concerns with the Project's location, haul routes, and opportunities for future economic development in Ponoka County. TransAlta explained why the site was selected and committed to continuing to engage with the three municipalities on haul route options as TransAlta works through the development process.

3.4.4 Industrial Interest Holders

As per AUC requirements industrial interest holders within 2,000 m of the Project boundary were notified, and consultation undertaken with those within 800 m of the boundary. The PSIPs were sent by regular mail on August 27, 2024, as well as email (where available) to ensure receipt. TransAlta also included industry interest holders in the open house invite and newsletter sent in October 2025.

Questions were raised with respect to noise and emissions compliance. The Proponent was able to address all questions and concerns and is not aware of any outstanding issues from industrial interest holders.

3.5 Ongoing Engagement Activities & Future Engagement Plans

The Proponent is committed to ongoing engagement and will continue to engage landowners, stakeholders, rights holders, regulators, and industrial interest holders throughout application review, pre-construction, construction, and operational activities. As the Project proceeds through pending stages of development including the achievement of milestones such as significant regulatory approvals, a final investment decision by the Proponent, or during the construction phase of the Project, the Proponent will update stakeholders and rights holders as necessary through mailed Project update letters, or if preferred through email or face-to-face meetings. The Proponent's email inbox and telephone contact information will remain open to all stakeholders and rights holders at all stages of Project development, including operations.

4.0 ENGAGEMENT WITH INDIGENOUS COMMUNITIES

4.1 Provincial Consultation Office Requirements

Given the Project is on private land, KEC did not consult the ACO. Following the purchase of the Project, TransAlta used Alberta's Landscape Analysis Indigenous Relations Tool (LAIRT), to determine the traditional lands of Indigenous communities where the Project is located. KEC conducted some engagement prior to TransAlta's ownership of the Project. TransAlta began engagement with Indigenous communities immediately post-closure of the transaction with KEC and met with the ACO in October 2025 to introduce the Project.

4.2 Impact Assessment Agency of Canada Requirements

On February 20, 2023, KEC engaged IAAC to inquire about a preliminary review of the Project to determine which Indigenous communities may require engagement as part of the federal IAAC process. On March 6, 2023, IAAC indicated Indigenous communities preliminarily scoped into the Project. On February 3, 2025, IAAC confirmed this preliminary scoping.

Based on IAAC's review of updated Project information, IAAC provided a revised preliminary list of Indigenous communities on December 11, 2025.

4.3 List of Potentially Affected & Interested Indigenous Communities

The results of the LAIRT and engagement with IAAC identified the following Indigenous communities as potentially affected and/or interested communities:

- Alexander Cree Nation
- Enoch Cree Nation
- Ermineskin Cree Nation
- Foothills Ojibway First Nation
- Louis Bull Tribe
- Montana First Nation
- O'Chiese First Nation
- Otipemisiwak Métis Government, District 3
- Paul First Nation
- Samson Cree Nation
- Sunchild First Nation

4.4 Engagement Completed by KEC Prior to Purchase by TransAlta

The following is a detailed description of pre-acquisition engagement activity undertaken by KEC. KEC commenced engagement with the Indigenous communities in September 2024.

On September 4, 2024, the first PSIP (PSIP #1) was sent to all 11 Indigenous communities which included the following materials:

- Project newsletter containing an introduction to the Project and KEC, preliminary design information, Project studies summary, an outline of the engagement process, Project benefits, a preliminary Project schedule, next steps, and contact information for KEC.
- Preliminary Project layout.
- AUC Brochure – Participating in the AUC’s Independent Review Process.

On November 28, 2024, the second PSIP (PSIP #2) was sent to all 11 Indigenous communities and included the following materials:

- Project newsletter containing an overall update on the Project, clarification on carbon capture and storage, information on-site access, responses to common concerns raised (including construction noise, lighting and Project siting), and contact information for any questions or concerns.
- AUC Brochure – Participating in the AUC’s Independent Review Process.
- Letter from KEC regarding IAAC Process (“IAAC Project Information Letter”). The IAAC Project Information Letter informed recipients that given the Project is over 200 MW, it is considered a designated project under the IAA and explained the opportunity to engage in the federal assessment process.

Indigenous communities were asked to contact KEC if they had any questions or wished to coordinate a meeting to review the Project. KEC was contacted by five Indigenous communities:

- Enoch Cree Nation No.440
- Ermineskin Cree Nation
- O’Chiese First Nation
- Otipemisiwak Métis Government, Region 4
- Samson Cree Nation

Of the five communities, KEC met with four: O’Chiese First Nation, Enoch Cree First Nation, Otipemisiwak Métis Government Region 4, and Samson Cree Nation. KEC also attempted to meet with Ermineskin Cree Nation. The presentations contained information about KEC, a brief overview of the Project and potential contracting and employment opportunities, among other topics. A brief overview of the potential for carbon capture and storage capability was provided. Carbon capture and storage is no longer contemplated for the Project. This was clarified in PSIP #2.

KEC committed to ongoing Indigenous engagement for the life of the Project and advised that any revised information about the Project would be available online and as the Project progressed throughout the different stages, Indigenous communities would be notified and encouraged to engage with KEC.

4.4.1 Detailed Engagement with Indigenous Communities

Details regarding KEC’s engagement with each of the Indigenous communities is provided as part of the full Initial Project Description.

4.4.2 Comments or Concerns Expressed by Indigenous Communities

Detailed in Table 4.1 is a summary of comments or concerns that were brought forward by Indigenous communities along with KEC’s provided response at the time of engagement. Continued engagement with Indigenous communities following the Project’s purchase by TransAlta is detailed in Section 4.5.

Table 4.1: Concerns Expressed by Indigenous Communities in Discussions with KEC

Concern	Indigenous Community	Response from KEC
<p>Effects such as noise, smells, dust, air pollution, increased traffic and people, signs and fences, all migrate off the direct footprint and are not compatible with the exercise of rights in accordance with our Natural Laws. The AUC recognizes the potential for migrating effects to rights, with Rule no. 012 which states that continuous and persistent ceremonial and cultural sites within 1.5 km of a project’s boundary may be considered as receptors</p>	<p>O’Chiese First Nation Ermineskin Cree Nation</p>	<p><u>Noise</u>: The Project is located entirely upon freehold land. The nearest Crown land is approximately ±3.3 km from the center of the Project. Per AUC Rule 012, an NIA was completed and receptors considered from the lease to 1.5 km and 3.0 km. Three residents were identified within 1.5 km of the site, the lands within the 1.5 km radius are privately owned and outside Alberta Crown lands. The NIA determined that the Project is predicted to comply with the PSL as defined by AUC Rule 012, including estimated and predicted cumulative noise levels.</p> <p><u>Dust</u>: KEC will implement appropriate dust suppression measures (in consultation with applicable Counties) on roads, work areas, or transportation and loading routes, as necessary. The decision to control dust will be made at the field level and will depend upon site conditions, level of activity, and worker health and safety.</p> <p><u>Air Pollution and Odours</u>: an AQA has been completed and determined the Project to be compliant with Alberta Ambient Air Quality Objectives (AAAQOs). KEC anticipates that on a per MW water use and CO₂ emissions efficiency basis, if built as engineered, the Project will produce electricity that is lower in emissions than the Alberta average today (using the 2023 emissions grid displacement factor).</p> <p><u>Increased Traffic</u>: The Project will utilize existing roads and infrastructure to access the Project site; the routing has not yet been determined. KEC will engage with interested parties on routing. There will be an increase in traffic during construction.</p>

Concern	Indigenous Community	Response from KEC
		<p><u>Signs and Fences</u>: KEC anticipates that any signs and fences involved with the Project will be on freehold land or near the road on county land.</p>
<p>Visual impacts of the Project</p>	<p>O'Chiese First Nation Ermineskin Cree Nation</p>	<p>KEC has conducted visual simulations for residences located near the Project that have requested them. The height of the facility is approximately the same height as the existing transmission lines adjacent to the Project.</p>
<p>Site visit of the proposed Project location</p>	<p>O'Chiese First Nation Samson Cree Nation</p>	<p>The Project is located on cultivated, privately owned (freehold) land. The nearest Crown land is located approximately ±3.3 km from the Project. Under the terms of the lease that KEC has with the landowner, KEC did not have the ability to grant third party access to the site. Therefore, landowner consent is required. KEC indicated they were working with the landowner, and with the Indigenous communities, to accommodate the request.</p>
<p>Details on considerations for impacts to Inherent and Treaty rights undertaken to-date and upcoming such as studies, valued components, measures etc.</p>	<p>O'Chiese First Nation Samson Cree Nation</p>	<p>KEC conducted the following studies for the Project: wetland, soil, vegetation, breeding bird, and raptor surveys. KEC indicated that results of the surveys will be filed with the AUC once completed, and at that time, KEC would be happy to share these studies. To further explore and conduct meaningful engagement on this topic, KEC kindly requested a list of the concerns respecting Inherent and Treaty rights. KEC indicated that once the concerns have been identified, KEC would like to collaborate with the group to mitigate any potential effects of the Project.</p> <p>Results of the environmental studies are detailed in the Project's Environmental Evaluation, which is publicly available on the AUC's website, and summarized in Section 14.0.</p>
<p>Details on any mitigation measures already identified to address any effects to Inherent and Treaty rights identified to-date</p>	<p>O'Chiese First Nation Ermineskin Cree Nation</p>	<p>KEC indicated that once they better understand the individual concerns, they can work together with Indigenous communities on potential mitigation measures.</p>
<p>Consultation capacity funding available for Nations to participate in engagement on the Project</p>	<p>O'Chiese First Nation</p>	<p>KEC indicated that funding may become available through IAAC after the Proponent has filed its Initial Project Description. Additional information about the funding and how to apply once the Proponent has filed the Initial Project Description can be found here: https://www.canada.ca/en/impact-assessment-agency/programs/participation-indigenous-peoples.html</p>
<p>Project consultation plan, or details on any consultation activities planned as part of the Project application</p>	<p>O'Chiese First Nation Ermineskin Cree Nation</p>	<p>KEC indicated that they will continue to engage as necessary and desired by Indigenous communities to further understand specific interests and concerns.</p>

Concern	Indigenous Community	Response from KEC
How the location of the Project was selected	O'Chiese First Nation Ermineskin Cree Nation	The location of the Project was selected due to its proximity to the existing AltaLink transmission line, short tie-in point for the proposed gas line, capacity to supply the electrical grid with additional power, low population density, privately held land and pre-existing disturbed land, thereby reducing the overall Project impacts. Additional details regarding alternative Project locations and an overview of the selection criteria/process are detailed in Section 1.1.2.
Additional information on the proposed gas line tie in	O'Chiese First Nation Ermineskin Cree Nation	The proposed natural gas pipeline route is still to be determined and will be finalized as part of the Project's detailed design. The pipeline is anticipated to be located on cultivated, privately held farmland and follow existing disturbances where applicable. Once the routing has been determined a separate application will be filed with the applicable regulatory body.
Environmental studies completed to date	Otipemisiwak Metis Government	KEC has conducted the following studies: wetland surveys, preliminary soil survey, breeding bird surveys, and raptor nest surveys. Results of the environmental studies are detailed in the Project's Environmental Evaluation, which is publicly available on the AUC's website, and summarized in Section 14.0.
Artifacts found during construction phase	Enoch Cree Nation	If artifacts are discovered during the construction phase of the Project, construction will be stopped immediately, and the appropriate resources and regulatory bodies will be contacted.
Noise Impacts to animals	Samson Cree Nation	KEC indicated that the environmental assessments will be completed for the Project, giving KEC baseline information about animals in the area. Once the assessments have been completed KEC will submit them as part of the AUC application which is available to the public. Results of the Project's Environmental Evaluation, which is publicly available on the AUC's website, and summarized in Section 14.0.
Contract and Employment Opportunities for local Indigenous Communities	Samson Cree Nation Enoh Cree Nation Otipemisiwak Metis Nation	KEC indicated that they are committed to awarding contracts to local and Indigenous companies whenever possible. The organization maintains an internal list of Indigenous and affiliated companies, and Indigenous communities are encouraged to share their vendor lists with KEC. Currently, KEC does not have a defined scope of work for construction. As the Project progresses towards the construction phase, KEC indicated they will have a clearer understanding of the types of vendors required.

Overall, Indigenous communities have expressed some concern over the Project, mostly related to Indigenous Treaty Rights and disturbance associated with construction of the Project.

4.5 Engagement Conducted by TransAlta Following Project Purchase

In the fall of 2025, TransAlta reached out to Indigenous communities to announce the acquisition of the Project, introduce TransAlta, and re-initiate engagement regarding the Project. An introductory email was sent to each Indigenous community's Consultation Office, introducing TransAlta and inviting Indigenous communities to discuss the Project.

In October 2025, after TransAlta's acquisition of the Project, TransAlta sent a third PSIP (PSIP #3) to all 11 Indigenous communities and included the following materials:

- Open House invitation, including an update that TransAlta had recently acquired the Project from KEC.
- Project Newsletter, including a Project summary, outline of the regulatory process and status, TransAlta contact information, and a Project map.

Indigenous communities were extended an opportunity to connect with TransAlta if they had any questions or wished to coordinate a meeting to review the Project.

4.5.1 Detailed Engagement with Indigenous Communities

TransAlta's engagement with each of the Indigenous communities is provided as part of the full Initial Project Description.

4.5.2 Comments or Concerns Expressed by Indigenous Communities

Since acquiring the Project in fall 2025, TransAlta has reached out to each Indigenous community. Each Indigenous community was provided with PSIP #3 and an invitation to discuss the Project. The majority of Indigenous communities accepted TransAlta's invitation, and meetings have been held or are scheduled in-person or online in the near future, as per the community's preference.

Some meetings between TransAlta and Indigenous communities were outstanding at the time of this Initial Project Description's development and submission. Some Indigenous communities expressed non-Project-specific concern regarding Canada's and Alberta's Indigenous Consultation processes. Another Indigenous community expressed concern with the general development of the area surrounding the Project. Several Indigenous communities expressed interest in pursuing economic opportunities associated with Project development. TransAlta remains committed to ongoing dialogue and engagement with Indigenous communities throughout the life of the Project.

4.6 Future Engagement Plan

TransAlta is committed to regular engagement with Indigenous communities throughout the lifecycle of the Project and responding to issues or concerns raised. Additional opportunities for Indigenous engagement will be identified through direct engagement with Indigenous communities, and may include the following:

- In-person or virtual meetings with Indigenous communities.
- Identifying and communicating opportunities for Indigenous vendors to participate in Project construction.
- Site visits where possible.
- Community meetings and open house engagements.
- Project notifications and ongoing updates of Project information.
- Email and telephone communication.
- Participation in community events to promote informal dialogue regarding the Project.
- Continue to engage with the Indigenous communities who have identified concerns or have requests to discuss concerns.
- Discuss opportunities with Indigenous communities.

Should Indigenous communities not identified by the LAIRT or IAAC, express interest in the Project, TransAlta will engage with those interested groups. Proposed engagement and notification delivery methods would be like those listed above.

Should the Project proceed to development additional regulatory applications will be required that may result in Indigenous engagement/consultation requirements.

5.0 RELEVANT STUDIES OR REGIONAL ASSESSMENTS CONDUCTED

As of November 14, 2025, the Project is not taking place in an area with a previously completed regional assessment, according to the Canadian Impact Assessment Registry (IAAC, 2025b).

As of November 14, 2025, the AEPA, Land-use Framework, Regional Plans website indicated that the North Saskatchewan Region Land Use Plan is currently in the draft phase of the Land Use planning process (GOA, 2025a). Therefore, there are no land use frameworks in place.

No known Traditional Land and Resource Use studies have been conducted in the Project Area.

6.0 RELEVANT STRATEGIC ASSESSMENTS CONDUCTED

According to the Canadian Impact Assessment Registry (IAAC, 2025b), the Strategic Assessment of Climate Change, conducted under Section 95(2) of the IAA is applicable to the Project.

PART B: PROJECT INFORMATION

7.0 PURPOSE & NEED FOR THE PROJECT

The purpose of the Project is to generate electricity from natural gas to provide a reliable source of electricity to meet the growing future demand of the AIES. Demand for electricity in Alberta is expected to grow due to increased electrification and data centers. The Province of Alberta is actively seeking \$100 billion of investment in artificial intelligence technology to drive innovation, create jobs and diversify its economy. The Project would support greater electricity demand in the province with reliable, efficient power. Positive effects and benefits of the Project include:

- **Reliable, Efficient Power Generation**
 - Utilizes combined-cycle technology to provide up to 460 MW of high-efficiency, dependable electricity at lower emissions than simple cycle generation.
 - Enhances grid stability and reliability to support Alberta's growing energy needs.
 - Aligns with Alberta's transition to a cleaner, more resilient energy mix.
- **Economic Growth and Local Investment**
 - Significant capital investment based on a \$900 million estimate, according to 2022 data.
 - Creates hundreds of construction jobs and over a dozen long-term operational roles.
 - Increase to municipal tax revenue.
- **Community and Regional Benefits**
 - Strengthens regional infrastructure.
 - Commitment to local engagement, environmental stewardship, and safety excellence throughout project development, construction and operations.

8.0 PHYSICAL ACTIVITY

The Project is a "designated project" as defined in Section 30 of the Physical Activities Regulations, SOR/2019-285, as "the construction, operation, decommissioning and abandonment of a new fossil fuel-fired electrical generating facility with a production capacity of 200 MW or more."

As the Project is anticipated to have a maximum production capacity of 460 MW, the threshold of 200 MW would be exceeded. TransAlta is therefore submitting an Initial Project Description (the more detailed version of this summary document) to IAAC to inform the decision as to whether a federal Impact Assessment is required.

TransAlta notes that the Project will not take place on federal lands, will not require federal funding, and is not anticipated to require any federal authorizations, licences, or permits other than what is required through IAAC and NavCanada (as detailed in Section 3.3).

The Project is a standalone project and is not a component of any larger project that is not listed under the Physical Activities Regulations, SOR/2019-285.

9.0 ACTIVITIES, COMPONENTS, & INFRASTRUCTURE

As the purpose of the Project is to generate electricity as required to meet power grid demands, the major process of the facility is electrical power generation. Design details and specifications of the Project are summarized in the following sections; additional information is provided as part of the full Initial Project Description.

9.1 Infrastructure & Components

9.1.1 Size of the Designated Project Footprint

The Project Area is approximately 13.2 ha in size and will incorporate the footprint of the Project infrastructure.

During construction, the areas proposed to incorporate Project infrastructure will be stripped of soils and vegetation, levelled, and infrastructure put in place. Topsoil and subsoils will be stored separately. The additional lands around the proposed infrastructure are not expected to be impacted following construction.

9.1.2 Project Access

Road access to the Project Area was originally proposed to be from the west by Range Road 44, approximately 7.7 km south of the intersection of the Range Road and Highway 53.

Through engagement with landowners and municipal counties, it was determined that accessing the site from the east side of the Project Area, instead of the west, may result in a greater reduction of noise disturbance to nearby landowners from construction traffic.

The updated proposed access road from the east side of the Project Area would run east-west and approach the eastern boundary of the Project Area from Range Road 43. Several routes have been proposed but have not been finalized; each are approximately 850 m in length. Once surveyed, a final route will be selected, and all applications will be updated with the relevant information (as necessary).

Preliminary access and haul routes are presented as part of the full Initial Project Description.

9.1.3 Natural Gas Supply

While the Proponent has not finalized natural gas supply at this point, it is anticipated that the Project's natural gas will be supplied by a third-party from a new pipeline tied into an existing 22-inch natural gas pipeline approximately 1.6 km south of the Project Area. The POI will be at SE-28-041-04-W5M. The natural gas pipeline will be permitted, constructed, owned, and operated by the third-party.

The exact pipeline routing has not yet been surveyed. The route, once surveyed, will be assessed, and permitted as per AER requirements. This will include an assessment of environmental site conditions. TransAlta intends to follow existing disturbances where practical, and official routing will be submitted through the AER.

9.1.4 Electrical Interconnection

Electricity will be delivered to the existing 240 kV HV transmission line owned and operated by AltaLink Management Ltd. located approximately 70 m east of the Project Area.

TransAlta will be responsible for the transmission interconnection (a 240 kV circuit approximately 200 m in length) between the power plant and AltaLink Management Ltd. substation. The POI is expected to be at 02-33-041-04-W5M, immediately east of the eastern boundary of the Project Area. The 240 kV HV transmission interconnection will be overhead. Assessment and permitting for the transmission line and route is currently underway and an application has been submitted to AUC for approval.

9.1.5 Water Supply

The Project will require an anticipated initial water volume of 6,000 cubic metres (m³), which will be recycled throughout power generation. TransAlta is currently evaluating several water source options, including water trucking, surface water sourcing, and groundwater sourcing. The chosen source will be confirmed following AUC Approval as part of the detailed design phase and any water withdrawal (surface or groundwater) will be subject to permitting under the *Water Act*, R.S.A. 2000, c. W-3.

9.1.6 Project Processes

The major process of the plant is electrical power generation. The generation of electrical power requires the implementation of supporting processes (which are detailed as part of the full Initial Project Description), including:

- Waste heat recovery
- Condenser and air removal system
- Exhaust system
- Steam, feedwater, and condensate system
- Close-cooling system
- Inlet air heating system
- Combustion air system
- Auxiliary steam generation
- Compressed air system
- Natural gas fuel system
- Backup generation
- Fire protection system
- Wastewater discharge system
- Lubricating, hydraulic, and used oil
- Glycol storage

- Diesel fuel
- Raw and portable domestic water
- Service/firewater storage tank
- Demineralized water
- Sanitary drains storage tank
- Water treatment and boiler water chemical storage

9.1.7 Buildings & Enclosures

Table 9.1 lists the expected buildings or enclosures at the Project.

Table 9.1: Buildings and Enclosures

Name	Type
Administration/Warehouse/Control	Building
Generation Building	Building
Water Treatment	Building
Auxiliary Boiler	Building
Boiler Feedwater	Building
Utility Rack	Enclosure
Fuel Conditioning Skid	Building
Fuel Compressor	Building
ACC Electrical PDC	Building
LV and MV PDC	Building
Diesel Engine/Generator	Enclosure
CEMS	Building
HRSG Drum Penthouse	Building
Stormwater pump(s)	Building

PDC = Power Distribution Centre

LV = Low Voltage

MV = Medium Voltage

CEMS = Continuous Emissions Monitoring System

HRSG = Heat Recovery Steam Generator

9.1.8 Equipment

Table 9.2 shows the total quantity of major equipment anticipated to be installed at the Project. In cases where one is operating and one on standby, equipment is identical.

Table 9.2: Major Equipment at the Project

Major Equipment	Installed
Air Cooled Condenser	1
Auxiliary Boiler	1
Boiler Feedwater Pumps	2
Closed Cooling Water Heat Exchanger	1

Major Equipment	Installed
Closed Cooling Water Pumps	2
Combustion Turbine Generator	1
Condensate Extraction Pumps	2
Condensate Collection Tank and Deaerator	1
Emergency Diesel Generator	1
Fuel Gas Filter/Separator	2
Fuel Gas Knockout Drum	1
Fuel Gas Performance Heater	1
Fuel Gas Compressor	1
Heat Recovery Steam Generator	1
HRSG Pumps, typically	2
HRSG Blowdown Tank	1
Service/Instrument Air Compressor	2
Steam Jet Air Ejector (Holding)	2
Steam Jet Air Ejector (Hogging)	1
Steam Turbine	1

9.1.9 Existing Infrastructure

The only existing infrastructure that is present and adjacent to the Project lands includes five buried oil pipelines east and south directly adjacent to the Project Area boundaries as well as the existing transmission line to the east of the Project.

9.2 Project Activities

9.2.1 Site Preparation

Site preparation, excavation, backfill, and grading will be performed as per requirements to construct the Project and achieve finished site grades. The Project Area will be cleared of vegetation to the extent necessary to construct the Project. The Engineering, Procurement, and Construction (EPC) contractor will maintain the primary control points and provide all detailed measurement and layout for the Project with qualified survey personnel and certified equipment.

During soil stripping activities, every effort will be made to perform site work, and in particular the salvaging of topsoil in a season and under conditions most suitable for that activity. All topsoil, organic soil, soft or weak native subgrade will be removed from the development and access road areas. Erosion control for wind and water erosion will be implemented as required.

A geotechnical study will be completed, and recommendations from the report with respect to soil depth and handling will be followed. Topsoil stripping equipment will be selected based on suitability for handling the topsoil that is encountered and to reduce the commingling of soil

types. Contracts let for site preparation will include clauses limiting activities to times of suitable conditions.

9.2.2 Construction

Guidelines for how the various phases of the work will be executed, including physical construction, erection, and infrastructure interconnection, are currently being developed so that the various assets are constructed as required. A detailed overview of construction activities is provided as part of the full Initial Project Description.

9.2.3 Operations & Maintenance

Day-to-day operation, maintenance, safety, and security will be provided by a staff of over a dozen operators, engineers, and support staff (actual numbers to be determined).

Operations management will include managing personnel, energy inputs to the facility from natural gas, operational requirements of the infrastructure, emissions and control monitoring during operations, and energy output to the electrical transmission grid. Within each of these tasks there are detailed design processes that will be developed.

Maintenance management will include regularly scheduled maintenance of infrastructure and the Project Area, including annual plant turnarounds as required, in addition to unscheduled maintenance.

9.2.4 Decommissioning & Reclamation

The design life of the Project is approximately 30 years; however, the actual lifespan is dependent on the Project's continuing economic and technical viability. Decommissioning will adhere to the applicable Alberta regulations, permits, and licences in place at that time.

Decommissioning and removal of equipment and surface reclamation of soils, vegetation, and wildlife habitat will adhere to the applicable Alberta regulations, permits, and licences in place at the time. TransAlta will provide Indigenous communities with the opportunity to be involved and provide input and involvement in the eventual restoration and rehabilitation of this land at the end of the Project or as otherwise required by applicable Alberta regulations in place at that time.

9.3 **Physical Activities Incidental to the Project Within TransAlta's Control**

Activities that are incidental to the Project's construction and operation that are within TransAlta's control include:

1. Construction and operation of the power plant.
2. Construction and maintenance of the transmission interconnection between the power plant and AltaLink Management Ltd. substation.
3. Construction and maintenance of the access road from the power plant to Range Road.
4. Water supply for the power plant (to be confirmed upon sourcing option selected).

9.4 Physical Activities Associated with the Project Outside TransAlta’s Control

Activities that are incidental to the Project’s construction and operation that are outside of TransAlta’s control include:

1. Maintenance and upgrading of the existing Range Road 43 (the provincial road that runs north-south approximately 850 m east of the Project Area).
2. General telecommunications in the Project Area.
3. Construction and operation of AltaLink Management Ltd.’s substation and upgrades to the 240 kV HV transmission line that will provide electrical interconnection between the plant and the existing transmission line, located approximately 70 m east of the Project.
4. Construction and operation of the third-party pipeline routed underground to the site that will provide natural gas from an existing underground gas pipeline approximately 1.6 km south of the Project at SE-28-041-04-W5M.

9.5 Project Expansion

The Project is a new facility and neither a component of, nor expansion of, another project.

10.0 MAXIMUM PRODUCTION CAPACITY

When fully operational, the Project will be capable of producing an estimated maximum power output of 460 MW, which is above the threshold of 200 MW set out in the Physical Activities Regulations, SOR/2019-285, Section 30. The Project production process involves producing electricity via a combined cycle power plant consisting of one natural gas-fired combustion turbine, one HRSG, and one steam turbine.

11.0 ANTICIPATED CONSTRUCTION, OPERATION, & DECOMMISSIONING SCHEDULES

Details regarding estimated Project timelines and major milestones are provided in Table 11.1. The Project is expected to have a lifespan of approximately 30 years.

If IAAC deems an Impact Assessment is required, Project timelines are anticipated to extend approximately three to five years beyond the dates provided in Table 11.1.

Table 11.1: Project Timelines

Task	Date
Site Access for Mobilization	Q2 to Q4 2027
Start of Construction	Q3 2027
Start of Commissioning Phase	Q2 2030 to Q4 2030
Construction Completion & Commercial Operations	Q4 2030 to Q1 2031
Decommissioning	2059 to 2060
Surface Reclamation	2061 to 2064

Q = Quarter

12.0 ALTERNATIVES TO THE PROJECT

The goal of the Project is to produce electrical power in an economic and environmentally responsible manner that is suitable for the selected geographic location. In Alberta, the electrical load grows every year and will continue to grow year over year. The main alternatives to gas fired thermal power generation are coal, solar, wind, hydro, nuclear, hydrogen fired generation, and biomass. The generation mix in Alberta is site-specific and driven by economics and market factors. Natural gas is an energy transition fuel that offers reliable, dispatchable, affordable power for Albertans at-scale.

12.1 Alternative Locations

Alternative locations for the Project are discussed in Section 1.1.2.

12.2 Alternative Means for Natural Gas Supply

No alternative fuel source was identified for the Project as natural gas is reliable, cost-effective, and with a potential option to add carbon capture and storage in the future, it is in alignment with TransAlta's energy transition strategy of providing clean, reliable, dispatchable, and affordable energy to Albertans.

12.3 Alternative Technologies

The Proponent undertook a high-level evaluation of several different technologies and processes that were initially considered feasible for Project execution. The study considered several different turbine generators and processes to maximize efficiency and reduce the waste of resources such as water.

The preliminary design study concluded that a 1x1x1 Combined Turbine Generator/HRSG/Steam Generator configuration, with a high efficiency, large scale (HL-class) gas turbine, such as the Siemens STG6-9000HL, would best meet the objectives.

12.4 Technical Alternatives to the Project

TransAlta has not identified any potential alternatives to the Project that are technically or economically feasible in the region. The Project is a standalone project to provide electricity to the AIES. Capacity access at the electrical grid is the single largest limiting factor to the location and power output design of the Project. In addition, the Project requires both land access to the source gas, and an adequate supply of source gas, to provide energy inputs to the facility. Therefore, through engineering, technology, and financial feasibility analysis, it was determined the Project proposed represents the best technological, technical, and economically feasible option.

PART C: LOCATION INFORMATION & CONTEXT

13.0 PROJECT LOCATION DESCRIPTION

The Project is approximately 18 km southwest of the Town of Rimbey, Alberta, within Clearwater County (Drawing 1, Appendix A).

13.1 Geographic Coordinates

The center of the Project is located at:

- Latitude: 52.569063°
- Longitude: -114.522132°
- Easting (NAD83): 11U 667937 m E
- Northing (NAD83): 11U 5827213 m N

13.2 Site Maps

Please refer to the Project Drawings (Appendix A):

- Drawing 1: Regional Project Location
- Drawing 2: Project Area
- Drawing 3: Soil Polygons
- Drawing 4: Watercourses
- Drawing 5: Wetlands
- Drawing 6: Indigenous Communities
- Drawing 7: Parks and Protected Areas

13.3 Legal Land Description

The Project is located on private land in Clearwater County, Alberta. The Project is in Legal Subdivisions 3 and 4, within SW-33-041-04-W5M.

13.4 Proximity to Residences

The Project is located on cultivated lands with the closest seasonal and/or permanent residence located approximately 0.9 km southeast of the Project Area.

13.5 Proximity to Indigenous Lands

The Project is located on privately-owned land and is not located on reserve or Indigenous lands. The Project is located within the traditional lands of the following Indigenous communities (Drawing 6, Appendix A):

Treaty 6 First Nations

- O'Chiese First Nation
- Sunchild First Nation
- Paul First Nation
- Ermineskin First Nation

- Louis Bull Tribe
- Montana First Nation
- Samson Cree Nation
- Enoch Cree Nation
- Alexander Cree Nation

Métis

- Otipemisiwak Métis Government, District 3

Non-Treaty Indigenous Communities

- Foothills Ojibway First Nation

The following provides distances to nearby First Nation Reserves and Métis Settlements:

- Buck Lake First Nation Reserve #133C, located 35 km north-northwest
- O'Chiese First Nation Reserve #203, located 48 km west-northwest
- Sunchild Cree First Nation Reserve #202, located 53 km west-northwest
- O'Chiese Cemetery First Nation Reserve #203A, located 53 km southwest
- Pigeon Lake First Nation Reserve #138A, located 56 km northwest
- Louis Bull First Nation Reserve #138B, located 69 km northeast
- Ermineskin Cree Nation Reserve #138 located 67.5 km east-northeast
- Samson First Nation Reserve # 137/137A, located 73 km east-northeast
- Montana First Nation Reserve # 139, located 72 km east-northeast
- Otipemisiwak Métis Government, District 3 (Project is located within District 3)

13.6 Proximity to Federal Lands

No federal protected areas are located adjacent to or within 10 km of the Project. The closest national park is Banff National Park, approximately 125 km southwest of the Project Area (Drawing 7, Appendix A). The nearest federal lands are reserve lands (specifically Buck Lake First Nation Reserve #133C) located 35 km north-northwest.

14.0 PHYSICAL & BIOLOGICAL ENVIRONMENT

The evaluation of physical and biological environment for the Project was completed for the Project through the following processes/steps which are further detailed in Sections 14.1 and 14.2:

- Desktop Review – conducted to gain an understanding of the Project's location, regional and local landscape, and to inventory available/existing data.
- Identification of Valued Components (VCs) – VCs were selected based on the experience of the Project team, results of the desktop review, and regulatory requirements.
- Assessment of VCs – VCs selected underwent additional assessments which consisted of modelling or field verification/studies (as necessary) along with a review of potential Project-related effects and proposed mitigation/monitoring measures.

14.1 Desktop Review

A desktop review was conducted prior to the baseline field surveys to characterize the physical and biological environment within the Project Area. The desktop review included a review of current and historical satellite imagery and regional information (e.g., Ecoregion) to gain an understanding of past and current land use, relative vegetation types, and potential sensitive features within the Project Area. The following databases and resources were also reviewed to determine potential sensitive species in the area and to develop proposed mitigation measures if warranted by a confirmed presence of species of management concern.

- The Alberta Conservation Information Management System (ACIMS) database was searched to identify historical observations of rare plants in the area.
- The Alberta Fish and Wildlife Internet Mapping Tool (FWIMT) was used to identify wildlife species at risk or of concern that have been previously observed within a 2 km radius of the Project.
- The Alberta Key Wildlife and Biodiversity Zone layer was reviewed to determine if the Project Area overlaps with a Key Wildlife and Biodiversity Zone.
- Wildlife Sensitive Ranges spatial mapping data, provided by AEPA to identify if the Project Area overlaps with sensitive species ranges.
- Canada Land Inventory was reviewed to assess land capability within the Project Area for ungulate and waterfowl use.
- Protected area mapping (e.g., wildlife sanctuaries, provincial protected areas, national parks, and critical wildlife habitat) was reviewed to determine if the Project Area was located in a protected or managed area.
- The Environmentally Significant Area (ESA) layer was reviewed to determine if the quarter section containing the Project Area is considered an ESA.
- The Important Bird Area (IBA) layer was reviewed to assess the Project's proximity to IBAs.

Additionally, the following resources were reviewed to determine sensitive species inventory protocols and wildlife protection measures that may be applicable to the Project:

- Sensitive Species Inventory Guidelines (ESRD, 2013)
- Alberta Wild Species General Status Listing (GOA, 2020)
- Master Schedule of Standards and Conditions (GOA, 2024a)
- *Wildlife Act*, R.S.A. 2000, c. W-10
- *Species At Risk Act*
- Committee on the Status of Endangered Wildlife in Canada (COSEWIC) (2023)

Special consideration is given for species that receive regulatory protections and/or are designated as "Endangered," "Threatened," or "Special Concern" under the federal *Species at Risk Act*, provincial *Wildlife Act*, R.S.A. 2000, c. W-10, and/or by the COSEWIC. In addition, consideration is given for species listed as "Sensitive," "May be at Risk," or "At Risk" under the provincial General Status of Alberta's Wild Species (GOA, 2022).

14.1.1 Aerial Photography

14.1.1.1 *Google Earth*

Google Earth historical satellite imagery was searched by year to determine if changes in land use or vegetation cover were evident within the Project Area. Images reviewed were dated 1985, 2003, 2018, and 2023 (Google, n.d.). The Project Area and adjacent lands appear to have been cultivated since 2003, with tree clearing for cultivation occurring sometime between 1985 and 2003.

14.1.1.2 *AbaData*

Available satellite images between 2006 to 2022 were reviewed for the Project Area (Abadata, 2025). No evidence of significant land use or vegetation changes was present within the Project Area between the images.

14.1.2 Ecoregion

The Project is in the White Area of Alberta, within the Boreal Forest Natural Region. The Project is within the defined Wildlife Management Unit ID 332: the Alder Flats Management Unit, located within the Foothills Wildlife Management Unit (GOA, n.d.).

14.1.2.1 *Dry Mixedwood Subregion*

The Project is within the Boreal Forest Natural Region, within the Dry Mixedwood Subregion (AEPA, 2014). The topography of the region ranges from level to gently undulated and rolling. There are three separate areas of dry mixedwood subregions, one which is within northwestern Alberta, and the two others being located to the south closer to Edmonton, which includes the Project lands. The ecoregion is known to be the most productive region within the Boreal Forest Natural Region, due to its warm summers and significant solar energy. Vegetation in the subregion is dominated by aspen forests and cultivated areas. Wetland habitats, most notably bogs and fens, are common throughout the Dry Mixedwood Subregion. It is estimated that over 40 to 70 percent (%) of the Southern Dry Mixedwood Subregion has been cultivated.

14.1.3 Alberta Conservation Information Management System Results

ACIMS is a database that provides biodiversity information on Alberta's species, natural ecological communities and sites. The results of the ACIMS search (conducted November 2025) within 2 km of the Project Area indicated (GOA, 2022):

1. No non-sensitive element occurrences (EO)
2. No sensitive EOs (i.e., rare plants)
3. No protected areas found
4. No Crown reservations/notations found

According to the ACIMS database, an EO is "is an area of land and/or water in which a species or natural community is, or was, present. An EO should have practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location" (GOA, 2022).

14.1.4 Fish & Wildlife Internet Mapping Tool Search Results

The FWIMT search (conducted November 2025) identified five species of management concern have been historically documented within 2 km of the Project (GOA, 2024b):

- Common yellowthroat (*Geothlypis trichas*) and eastern kingbird (*Tyrannus tyrannus*), sandhill crane (*Grus canadensis*, both listed as 'Sensitive.'
- Western wood-pewee (*Contopus sordidulus*), which is listed provincially as 'May Be at Risk.'

14.1.5 Key Wildlife & Biodiversity Zone

The nearest Key Wildlife and Biodiversity Zone is approximately 11.6 km west-northwest of the Project Area (AEPA, 2025). Therefore, there are no construction timing restrictions related to the Key Wildlife and Biodiversity Zone proposed for the Project.

14.1.6 Wildlife Sensitivity Ranges

The Project is not within any sensitive species ranges. No known sensitive species regional habitat ranges are within 5 km of the Project Area (AEPA, 2025).

14.1.7 Fish & Fish Species

There are no permanent watercourses within the Project Area; therefore, an assessment for fish and fish habitat was not completed for the Project.

Medicine River runs north-south approximately 2.2 km east of the Project Area. Welch Creek also runs north-south and is approximately 1.3 km west of the Project Area. No impacts to these watercourses are anticipated due to the distance from the Project Area and no watercourses or fish habitat are present within the Project Area. If TransAlta requires surface water withdrawals to provide the Project's source water, a Licence under the *Water Act*, R.S.A. 2000, c. W-3 will be applied for alongside an authorization application under the *Fisheries Act* (as required). The intake will comply with the Interim code of practice: End-of-pipe fish protection screens for small water intakes in freshwater (DFO, 2020).

14.1.8 Canada Land Inventory

The Canada Land Inventory is a comprehensive land inventory of rural Canada. Land capability for agriculture, forestry, recreation, and wildlife (i.e., ungulates and waterfowl) was mapped between 1960 and the early 1980s (GOC, 2022). There are seven classes used to rate agricultural land capability. Class 1 lands have the highest and Class 7 lands the lowest capability to support land use activities. Subclasses are used to identify specific limiting factors for each class.

14.1.8.1 *Waterfowl*

The lands within the Project are classified as Waterfowl Subset A – Class 6 – 100%. Lands in this class have severe limitations to the production of waterfowl due to adverse topography (Subclass T) and low fertility (Subclass F) (Abadata, 2025).

14.1.8.2 Ungulates

The lands within the Project are classified as Ungulate Subset A – Class 4 – 90%. Lands in this class have moderate limitations to the production of ungulates due to landform (Subclass G) and fertility (Subclass F) (Abadata, 2025). The remaining portion of the lands (10%) are classified as Ungulate Subset B – Class 4 – 10%. Lands in this class have moderate limitations to the production of ungulates due to soil (Subclass M) and low fertility (Subclass F) (Abadata, 2025).

14.1.9 Wildlife Sanctuaries

No wildlife sanctuaries were identified within 10 km of the Project.

14.1.10 Provincial Protected Areas

The Welch Creek Natural Area is the closest protected area to the Project, approximately 6.6 km west-northwest of the Project Area, with the next closest being the Open Creek Natural Area approximately 10 km northwest (GOA, 2025b). The closest Provincial Park to the Project is the Crimson Lake Provincial Park, approximately 33.8 km west-southwest of the Project Area (Drawing 7, Appendix A).

14.1.11 National Parks

The closest National Park to the Project is Banff National Park, approximately 125 km southwest of the Project Area.

14.1.12 Critical Wildlife Habitat

There is no federally defined critical wildlife habitat present within 10 km of the Project (GOC, 2025).

14.1.13 Environmentally Significant Areas

ESAs are (Fiera Biological Consulting Ltd., 2014):

- Important to the long-term maintenance of biological diversity, soil, water, or other natural processes, at multiple spatial scales.
- Areas that contain rare or unique elements or that include elements that may require special management consideration due to their conservation needs.

An ESA Value of 0.189 was professionally determined as the cut-off value for designating quarter sections as ESAs in Alberta. The ESA map was reviewed, and it was determined that the Project Area has an ESA value of 0.025, which is under the cut-off value, and therefore, the Project is not within an ESA.

14.1.14 Important Bird Area

The nearest IBA to the Project is the Bearhills Lake (AB038) IBA, approximately 70.6 km northeast of Project (IBA Canada, 2024).

14.2 Valued Components

VCs were selected based on the experience of the Project team, results of the desktop analysis, and requirements of AUC Rule 007 – Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments and Gas Utility Pipelines (AUC, 2024). The VCs identified and assessed for the Project include:

- Air Quality
- Noise
- Land Use
- Vegetation
- Soils
- Groundwater
- Wildlife (including migratory birds)
- Watercourses, Waterbodies and Wetlands

Details of the desktop and baseline field surveys, the potential effects of the Project, and the mitigation measures for each VC are summarized in the following sections. Mitigation and management measures are also detailed in the Project's Environmental Protection Plan and Conservation and Reclamation Plan (EPP/C&R Plan).

VCs requiring specific consideration under IAA are described in Part E.

14.2.1 Air Quality

14.2.1.1 *Baseline Conditions*

An AQA and associated dispersion modelling was completed in January 2024 by Horizon Compliance Group Inc. to ensure the predicted maximum ground level concentrations (MGLCs) comply with the current Alberta Ambient Air Quality Objectives (AAAQOs) (AEPA, 2019).

Dispersion modelling was performed using the United States Environmental Protection Agency AERMOD v.22112 dispersion model, in accordance with the requirements outlined within the Air Quality Model Guideline (AEPA, 2021).

14.2.1.2 *Potential Effects*

The primary substance of concern from the Project is nitrogen oxide (NO_x) from the combustion of natural gas. Secondary substances of concern include carbon monoxide (CO), particulate matter less than 2.5 microns in diameter (PM_{2.5}) and total suspended particulate matter (TSP). Potential ammonia (NH₃) resulting from operation of the selective catalytic reduction system was also evaluated.

The results of the AQA determined the predicted MGLCs of nitrogen dioxide (NO₂), CO, PM_{2.5}, TSP, and NH₃ associated with various operating conditions of the Project comply with the applicable AAAQOs.

14.2.1.3 Mitigation Measures

No targeted mitigation measures in relation to air quality are proposed as the Project complies with applicable AAAQOs. During operations, the Project will track key air quality parameters through continuous air-quality monitoring. General mitigation measures and best management practices for the control of dust are also detailed in the Project's EPP/C&R Plan.

14.2.2 Noise

14.2.2.1 Baseline Conditions

An NIA and associated modelling was completed in October 2023 (revised in May 2025) by Rowan Williams Davies & Irwin Inc. (RWDI) to assess the potential noise effects of the Project on the surrounding environment. The NIA was prepared as per requirements under AUC Rule 012 (2024). AUC Rule 012 (2024) requires that a cumulative assessment be considered for the development of any energy related facilities (regulated through AUC or AER) in Alberta. The cumulative assessment includes contributions from both existing and approved (but not yet built) facilities.

14.2.2.2 Potential Effects

Three dwellings were identified within 1.5 km from the Project; therefore, the predicted sound levels at those receptors were assessed for compliance with the PSLs established within AUC Rule 012.

The Project is predicted to comply with AUC Rule 012 PSLs at all receptors with the implementation of noise control recommendations on select equipment.

14.2.2.3 Mitigation Measures

Implementation of noise control recommendations on select equipment was advised and is further detailed in the Project's NIA. A pre-construction NIA will be updated once detailed mitigation designs are finalized for the Project. The Proponent has also committed to completing a post-construction noise survey at the identified dwelling receptors.

14.2.3 Land Use

14.2.3.1 Baseline Conditions

The Project Area is on privately-owned and disturbed (i.e., cultivated) land. Historic satellite imagery (Google Earth) reveals the lands have been cultivated since at least 2003, with the lands being cleared of vegetation between the years of 1985 and 2003.

14.2.3.2 Potential Effects

Potential effects include loss of cultivated land use within the Project Area, as it transitions from agricultural to industrial during the Project's lifespan. Following decommissioning, lands will be restored to equivalent land capability as per reclamation standards in place at that time and in consultation with the landowner. Land use changes from the development of the Project would be restricted to the Project Area.

14.2.3.3 Mitigation Measures

No mitigation measures are proposed.

14.2.4 Vegetation

14.2.4.1 Baseline Conditions

The Project Area is sited within disturbed (i.e., cultivated) land, and no record of EOs (i.e., rare plants) were recorded on the ACIMS database within the Project Area. Vegetation within the Project Area was recorded parallel to the soils assessment completed by Bear Tracks Environmental Services (2015) Ltd. (BTES) on July 12, 2023.

No rare plants or rare plant communities or weeds governed under the *Weed Control Act*, S.A. 2008, c. W-5.1 were identified during the 2023 soil assessment. Four cultivated vegetation species were observed (Table 14.1), and therefore, the Project Area does not meet the requirements to be considered native grassland (i.e., >30% native species).

Table 14.1: Vegetation Identified within the Project Area

Vegetation Species	Percentage (%) of Vegetation
Cereal	75
Canola	12.5
Lentil	6.25
Peas	6.25

Photos of the vegetation within the Project Area are provided as Photos 1 and 2.



Photo 1: Project lands facing north from the southeast corner of the Project Area.



Photo 2: Project lands facing west from the southwest corner of the Project Area.

14.2.4.2 Potential Effects

All vegetation will be removed from those areas required for construction and operations (i.e., the Project Area).

14.2.4.3 Mitigation Measures

Mitigation measures and best management practices for vegetation removal/management and weed control are detailed in the site-specific EPP/C&R. Key mitigation measures and best management practices include:

- Restrict vegetation clearing to the Project Area. The boundaries of the Project Area should be flagged or staked to indicate where Project activities can occur.
- Maximize the use of existing roads and areas with existing disturbance.
- Inspect all construction equipment for attached vegetative matter to prevent the introduction of weeds.
- Clean construction equipment of soil and plant material prior to entering site and when leaving site.
- Manage weeds according to the *Weed Control Act*, S.A. 2008, c. W-5.1.
- Educate Project personnel on identification and management of weeds.

No woody vegetation (including salvageable timber) is present within the Project Area, and therefore, mitigation measures for woody vegetation management are not applicable.

14.2.5 Soils

14.2.5.1 Baseline Conditions

A soil assessment was conducted by BTES on July 12, 2023, to record soil depths within the Project Area (Table 14.2). A total of six soil pits were surveyed. Soils were classified according to Canadian System of Soil Classification 3rd Edition (Agriculture and Agri-Food Canada, 1998). Shallow inspection locations were completed to the total depth of the column (topsoil and subsoil), or topsoil plus 0.3 m of subsoil (whichever is less). In most instances, the profile is completed to the depth of the parent material.

Table 14.2: Sampled Soil Depths in the Project Area

Site ID	Horizon A	Depth (cm)	Horizon B	Depth (cm)	Horizon C	Depth (cm)
FP1	Ap	0 to 15	Bm	15 to 24	BC	24 to 42
FP2	Ap	0 to 12	AB	12 to 31	C	31+
FP3	Ap	0 to 10	AB; BC	10 to 23; 23 to 34	C	34+
FP4	Ap	0 to 17	AB; BC	17 to 24; 24 to 34	C	34+
FP5	Ap	0 to 19	BC1	19 to 30	BC2	30+
FP6	Ap	0 to 23	BC1	23 to 44	C	44+

cm = centimetre

Agricultural Region of Alberta Soil Inventory Database Information

The Agricultural Region of Alberta Soil Inventory Database (AGRASID) was reviewed to provide data on soils in the Project Area (GOA, 2025c) (Table 14.3).

Table 14.3: Soil Series and Land Suitability Rating within the Project Area

Polygon ID	Map Unit Name	Land Suitability Rating System (LSRS) Classification	Soil Subgroup	Drainage	Amount of Area for each LSRS Class Impacted by the Project (ha)
18276 ^(a)	HGV16/U1h	3H(10) ^(c)	Orthic Gray Luvisol	Well	13.18
18266 ^(b)	DEV1/O1	7WV(10) ^(d)	Typic Mesisol	Very Poorly	0.02 ^(e)

Source: (GOA, 2025c)

^(a)18276: Orthic Gray Luvisol on moderately fine textured (CL, SCL, SiCL) sediments deposited by water (HGV). The polygon includes Chernozemic soils (16). Undulating, high relief landform with a limiting slope of 4% (U1h).

^(b)18266: Typic Mesisol on Sphagnum Peat (DEV). The polygon may include soils that are not strongly contrasting from the dominant or co-dominant soils (1). Level organic landform with a limiting slope of 1% (O1).

^(c)3H(10): 3 = Moderate Limitations to growth; H = Temperature (inadequate heat units for the optimal growth); 10 = Proportion of Area (100%).

^(d)7WV(10): 7 = Unsuitable for growth; W = Drainage [soils in which excess water (not due to inundation) limits the production]] V = Soil reaction (soils with a pH value either too high or too low for optimal growth); 10 = Proportion of Area (100%).

^(e)Intersects slightly with the southwestern corner of the Project Area.

ha = hectares

The soils information provided from AGRASID indicate generally silty loam or clay loam in the upper soil layers, while deeper layers indicate a dominance of silty loam, silty clay, or clay loam. The lower percentages of clay in the soil layers also suggest there is a low risk of compaction as a result of the Project.

Clubroot Management

The cumulative clubroot infestations shown on the Alberta clubroot website and associated map (2023) shows low clubroot infestations between the years of 2005 to 2023 within Clearwater County (GOA, 2024c).

Salinity

No salinity mapping has been completed for Clearwater County (GOA, 2024d).

Potential for Contamination

No evidence of contamination was observed during the baseline field surveys within the Project Area; however, further consultation with the landowner would be required to determine if the site has been previously contaminated. A brief desktop review using AbatData (2025) was completed. AbatData is a web-based oilfield mapping program that also provides information on published oil and gas regulatory non-compliance and spills. A search of the AbatData online database indicated that no reported spills or incidents associated with oil and gas infrastructure has occurred within the Project Area (Abadata, 2025).

The review of desktop resources should not be considered as containing all relevant information to determine the likelihood of contamination. The potential presence/absence of contamination cannot be based upon this desktop review only.

14.2.5.2 Potential Effects

Soils and terrain will be disturbed within the Project Area primarily during the site preparation and construction phase (e.g., grading and infrastructure installation), and again during infrastructure removal and reclamation. Activities identified as having the greatest potential impact upon soils and terrain are predominantly associated with the following:

- Earthworks (e.g., stripping and grading of surface soils).
- Use of construction equipment.
- Installation and subsequent removal of Project infrastructure.

During the above activities, soils have the potential to be affected through compaction or rutting from equipment use, erosion and sedimentation of exposed soils, and admixing of the topsoil and subsoil. In addition, there is the potential for soil contamination as a result of clubroot and equipment accidents/malfunctions.

The soils information provided in the online soil map unit characteristics, as well as the results of the soil assessment, indicate that construction activities would be anticipated to operate inside normal parameters with no special mitigation measures required.

14.2.5.3 Mitigation Measures

The soil assessment, along with the experience of the EPC contractor on-site at the time of construction, will be used to determine soil characteristics of the Project Area to guide effective construction methods to reduce impacts to soils where possible. In addition, a site-specific EPP/C&R Plan has been developed for the Project which includes mitigation measures and best management practices related to soil handling, storage, and management during Project activities. Also included in the EPP/C&R Plan is a protocol for assessing clubroot within the Project Area; should clubroot be identified, additional mitigation, monitoring, and best management measures will be developed and implemented for the Project.

Stockpiling

For soils that are stripped on the site, two-lift stripping will be implemented. The topsoil layer will be stripped and stockpiled separately from the subsoil layers. Stockpiles will be managed as follows:

- Stockpiles in place for more than 30 days on or off-site need to be labelled on construction drawings.
- Stockpiles that are in place for more than 30 days need to be covered and stabilized with mulch, seeded vegetative cover, or other suitable measures.
- Erosion control measures should be implemented, if necessary, although permanent erosion control is recommended for areas that cannot be leveled right away.

- Erosion control tools such as silt fencing, fibre rolls, or compost socks must be used where soils are likely to migrate downslope.
- Additional erosion control measures are required for areas within 100 m upstream of a waterbody or areas that contain steep slopes.

Erosion Control

Erosion and sediment controls will follow current best management practices and guidelines at the time of construction, which may be determined by the construction personnel at the time based on their relevant experiences. The Project will rely on the expertise of professionals that will be on-site at the time of construction.

Accidents & Malfunctions

To reduce and prevent potential spills and leaks, a site-specific Emergency Response Plan will be developed and made available on-site. Emergency spill kits will be on-site, and hazardous waste will be disposed in a safe manner. Fueling of equipment will occur more than 100 m from any wetland, and fuel and/or other potential hazardous material will be stored within appropriate containers in a designated area.

A preliminary table of contents for the Project's ERP is provided as part of the full Initial Project Description.

General Soils Management

An overview of general soil management and mitigation measures is provided in the full Initial Project Description.

14.2.6 Groundwater

14.2.6.1 *Baseline Conditions*

Groundwater levels are expected to rise and fall with the seasons and after prolonged rain events or snowmelt. Perched groundwater may be found in sandy layers between clay deposits above the groundwater table, which will dissipate after wet periods as groundwater infiltrates down to the static groundwater level during drier periods.

A detailed geotechnical study to assess subsurface conditions has not been completed for the Project location at this stage. The Proponent is committed to initiating a geotechnical study as part of detailed engineering following AUC approval and to support foundation design and construction planning, which would include an assessment of groundwater conditions and levels within the Project Area. Based on available groundwater well data (through the Alberta Water Well Information Database), the section containing the Project (i.e., 33-041-04-W5M) has recorded water depths between 8 feet (ft) and 20 ft (approximately 2.4 m and 6.1 m).

14.2.6.2 *Potential Effects*

Groundwater can be broadly evaluated through two characteristics: groundwater quantity and quality. Groundwater quantity refers to the availability of groundwater at a given rate for production and use and can vary widely depending on local geology and past/current use.

Groundwater quality refers to the chemical composition of groundwater and its suitability for different uses and also varies widely based on the local geology and past/current land uses. In evaluating potential effects on groundwater resources, both quantity and quality are considered.

The Project will interact with groundwater during the construction phase, operational phase, and decommissioning/reclamation phase. Interactions between the Project and groundwater may occur during the installation of permanent sub-surface infrastructure (e.g., buried electrical lines, building foundations) along with subsequent removal during reclamation.

Interactions between the Project and groundwater quantity can include:

- Groundwater withdrawals during construction (if required).
- Groundwater withdrawals for Project water supply during operations (if required; the water source for the Project is under evaluation and will be determined as part of detailed engineering). Water withdrawals (if required) will adhere to provincial requirements and guidelines, including the *Water Act*, R.S.A. 2000, c. W-3, the Water (Ministerial) Regulation, Alta Reg. 205/1998, and the AEPA Guide to Groundwater Authorization (GOA, 2023).
- Changes to how water recharges into the ground due to new Project infrastructure or drainage systems.

Interactions between the Project and groundwater quality can include:

- Changes to groundwater flow patterns during construction and/or operations that can in turn affect groundwater quality.
- Accidental groundwater contamination related to construction activities.
- Accidental groundwater contamination related to Project operations.

Groundwater information assessed as part of the desktop review indicates that general construction, operation, and reclamation activities at grade are not anticipated to interact with groundwater as a result of the measured depth below surface (ranging from 8 ft to 20 ft, or approximately 2.4 m and 6.1 m). Permanent subsurface infrastructure (i.e., utilities, foundations/pilings, etc.) may interact with the groundwater table as pilings are anticipated to be required to a maximum depth of 11 m.

14.2.6.3 Mitigation Measures

A site-specific EPP/C&R has been developed for the Project and will be used to guide construction, operations, and reclamation to further reduce the Project's effects on groundwater. If groundwater is encountered during construction, measures such as conventional pumping may be required and are expected to be effective.

During construction, mitigation may include:

- Follow waste management procedures.
- Implement and follow procedures to manage the risk of spills (i.e., Emergency Response Plan).
- Reduce the amount of time that excavations are open during construction.
- Develop and install a groundwater monitoring network as required by AEPA.

If groundwater is selected as the source for the Project's water supply during operations, withdrawals will adhere to mitigation and monitoring stipulated in the Licence terms and conditions along with requirements under the *Water Act*, R.S.A. 2000, c. W-3, the Water (Ministerial) Regulation, Alta Reg. 205/1998, and the AEPA Guide to Groundwater Authorization (GOA, 2023).

14.2.7 Wildlife

14.2.7.1 *Baseline Conditions*

Habitat

The ecological impacts of a Project will depend on the nature and extent of the existing disturbance, and the degree to which natural and semi-natural habitats are already fragmented and isolated by intervening land use. The existing disturbance around this Project is related to existing cultivation and pasture, as well as oil and gas infrastructure (i.e., pipelines, wellsites) located approximately 460 m northwest, 640 m north, 400 m east, and 1.2 km south of the Project Area. The nearest forest stands are isolated mixedwood forests approximately 450 m north and 460 m west of the Project Area.

Cultivated vegetation (i.e., cereal, canola, lentil, and peas crop) and lack of natural waterbodies throughout the Project Area generally indicates wildlife habitat of poor quality (which is further discussed in the full Initial Project Description). Due to the lands being cultivated, there is inadequate cover for thermal and security requirements, and inadequate under-story vegetation and food availability for small and large ungulates.

Ungulates

Ungulate species expected to inhabit the vicinity of the Project were identified through an examination of distribution maps, review of the Canada Land Inventory (GOC, 2022), and comparison of preferred habitat with that in the vicinity of the Project Area.

- Moose (*Alces alces andersoni*)
- Mule Deer (*Odocoileus hemionus*)
- White-tailed Deer (*Odocoileus virginianus*)

Carnivores

Carnivore species expected to inhabit the vicinity of the Project were identified through an examination of distribution maps and comparison of preferred habitat with that in the vicinity of the Project Area.

- American marten (*Martes Americana*): Prefers mature, particularly coniferous forests that contain numerous dead trunks, branches, and leaves and is not expected within the Project Area.
- Striped skunk (*Mephitis mephitis*): Prefers groves of hardwood trees and semi-open areas. Suitable habitat characteristics are found in the local area, however, are not present within the Project Area.
- Canada lynx (*Lynx canadensis*): Occupies coniferous and deciduous forests with numerous fallen trees and dense thickets and is not expected within the Project Area.
- Cougar (*Puma concolor*): As the prey requirements for the cougar appear within the region, cougar is expected within the region; however, cougars rarely occupy expansive open areas (AEPA, 2012) (such as cultivation) so it is unlikely they will be found in the Project Area.
- Short-tailed weasel (*Mustela erminea*): Most abundant in coniferous or mixed forests and streamside woodlands and is expected in the forest systems, but lack of cover suggests limited use within the Project Area.
- Black bear (*Ursus americanus*): Based upon the vegetation characteristics in adjacent areas and the high potential for forage capabilities, in addition to prey species, black bears are expected within the region; however, are unlikely to be found within the Project Area as black bears prefer wooded/forested habitat.
- Coyote (*Canis latrans*): Very common in the local area. Adapts easily to human disturbance.

Avifauna

Breeding Bird Surveys

Breeding bird surveys were completed by BTES on June 9 and 30, 2023 and again on June 5 and 26, 2025, in accordance with the Alberta Sensitive Species Inventory Guidelines. During the surveys, breeding bird activity was observed throughout the Project Area and in adjacent habitats, with species associated with both grassland and arboreal habitats detected during the assessments.

Three species of management concern were identified during the surveys: common yellowthroat, eastern kingbird, and American kestrel (*Falco sparverius*) all of which are listed

as 'Sensitive' in Alberta. Two species observed were listed as 'Exotic/Alien' in Alberta: European starling (*Sturnus vulgaris*) and rock pigeon (*Columba livia*). All other species observed have a 'Secure' management status under provincial legislation. No species at risk, as defined under the federal *Species at Risk Act* and provincial *Wildlife Act*, R.S.A. 2000, c. W-10 were identified. A complete list of species observed during the assessment, along with their provincial and federal status, is presented in Table 14.4.

Table 14.4: Avifauna Identified During the 2023 and 2025 Breeding Bird Surveys

Common Name	Latin Name	Species Status			
		Alberta General Status	Wildlife Act, R.S.A. 2000, c. W-10	COSEWIC	Species at Risk Act
Alder Flycatcher	<i>Empidonax alnorum</i>	Secure	-	-	-
American Crow	<i>Corvus brachyrhynchos</i>	Secure	-	-	-
American Goldfinch	<i>Spinus tristis</i>	Secure	-	-	-
American Kestrel	<i>Falco sparverius</i>	Sensitive	-	-	-
American Robin	<i>Turdus migratorius</i>	Secure	-	-	-
Black-billed Magpie	<i>Pica hudsonia</i>	Secure	-	-	-
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	Secure	-	-	-
Brown-headed Cowbird	<i>Molothrus ater</i>	Secure	-	-	-
Canada Goose	<i>Branta canadensis</i>	Secure	-	-	-
Clay-colored Sparrow	<i>Spizella pallida</i>	Secure	-	-	-
Common Yellowthroat	<i>Geothlypis trichas</i>	Sensitive	-	-	-
Eastern Kingbird	<i>Tyrannus tyrannus</i>	Sensitive	-	-	-
European Starling	<i>Sturnus vulgaris</i>	Exotic/Alien	-	-	-
Horned Lark	<i>Eremophila alpestris</i>	Secure	-	-	-
House Wren	<i>Troglodytes aedon</i>	Secure	-	-	-
Killdeer	<i>Charadrius vociferus</i>	Secure	-	-	-
Least Flycatcher	<i>Empidonax minimus</i>	Secure	-	-	-
Mourning Dove	<i>Zenaida macroura</i>	Secure	-	-	-
Mallard	<i>Anas platyrhynchos</i>	Secure	-	-	-
Northern Flicker	<i>Colaptes auratus</i>	Secure	-	-	-
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Secure	-	Not at Risk	-
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	Secure	-	-	-
Rock Pigeon/Dove	<i>Columba livia</i>	Exotic/Alien	-	-	-
Savannah Sparrow	<i>Passerculus sandwichensis</i>	Secure	-	-	-
Song Sparrow	<i>Melospiza melodia</i>	Secure	-	-	-
Vesper Sparrow	<i>Poocetes gramineus</i>	Secure	-	-	-

Common Name	Latin Name	Species Status			
		Alberta General Status	Wildlife Act, R.S.A. 2000, c. W-10	COSEWIC	Species at Risk Act
Western Meadowlark	<i>Sturnella neglecta</i>	Secure	-	-	-
White-crowned sparrow	<i>Zonotrichia leucophrys</i>	Secure	-	-	-
White-throated Sparrow	<i>Zonotrichia leucophrys</i>	Secure	-	-	-
Wilson's Snipe	<i>Gallinago delicata</i>	Secure	-	-	-
Yellow Warbler	<i>Setophaga petechia</i>	Secure	-	-	-
Yellow-rumped Warbler	<i>Dendroica coronata</i>	Secure	-	-	-

Bold = Sensitive species

COSEWIC = Committee on the Status of Endangered Wildlife in Canada

Raptor Nest Surveys

Raptor nest surveys were completed by BTES in conjunction with the breeding bird surveys on June 9 and 30, 2023 and again on June 5 and 26, 2025 within 1,000 m of the Project Area. The nearest suitable raptor nesting habitat is tree stands approximately 450 m from the boundary of the Project Area. However, suitable raptor hunting habitat exists within and in proximity to the Project Area. Red-tailed hawk (*Buteo jamaicensis*) and American kestrel were the only raptor species observed during the baseline field surveys. Red-tailed hawk is listed as 'Secure' in Alberta while American kestrel is listed as 'Sensitive'.

No raptor nests were identified within 1,000 m of the Project Area during the 2023 and 2025 field surveys. As no nests were identified within 1,000 m of the Project Area, no mitigation is currently required with respect to this species group.

14.2.7.2 Potential Effects

Disturbance and displacement of wildlife is expected during construction and operations as a result of physical disturbance (e.g., vegetation removal, infrastructure installation) and sensory disturbance (e.g., noise, light). Loss of habitat will be restricted to the Project Area as the Project will be fully fenced. The footprint of the Project Area has been minimized to the extent possible (13.2 ha) and the Project has been sited in cultivated habitat (low quality habitat) to reduce impacts to wildlife and associated habitat.

The Project's potential effect on ungulate and carnivore species is anticipated to be minor as suitable habitat for these species was not identified within the Project Area. Potential effects associated with sensory disturbance may occur; however, effects are anticipated to be localized.

Some migratory and non-migratory bird species may also be affected during construction and operation of the Project. Specifically, removal of cultivated vegetation from the Project Area (13.2 ha) and ground disturbance could reduce bird habitat for select species who utilize crops for vegetative cover. Potential sensory disturbance (e.g., noise, light) may also cause birds to avoid the localized area. The risk of bird mortality from collisions with equipment during

construction and operations is anticipated to be low as it is expected that bird species will avoid the Project Area due to physical and sensory disturbance. Dust and emissions from vehicles and equipment may make the area temporarily less suitable for birds by reducing food or nesting site availability.

Wildlife habitat remains available outside the Project Area. Further, following Project decommissioning, the Project Area will be reclaimed to equivalent land capability.

14.2.7.3 Mitigation Measures

No species requiring construction timing restrictions or nest protection were found or are expected in the Project Area. Therefore, no mitigation is proposed at this time.

14.2.8 Watercourses, Waterbodies, & Wetlands

14.2.8.1 Baseline Conditions

Potential watercourses, ephemeral waterbodies, and wetlands within and adjacent to the Project Area were identified and preliminarily classified using current and historic satellite imagery, as well as reviewing the Alberta Biodiversity Monitoring Institute (ABMI) Wetland Inventory Data (2021). Subsequent field surveys were completed by BTES on July 12, 2023, and again on May 27, 2025, within 100 m of the Project Area to field-verify watercourse, ephemeral waterbody, and wetland features. Wetland boundaries were classified according to the Alberta Wetland Classification System (GOA, 2015) using an evaluation of soil conditions, dominant wetland vegetation species, and a determination of water permanency. All wetlands encountered were also visually inspected for evidence of amphibian presence (i.e., eggs, tadpoles, frogs/toads and froglets/toadlets).

Watercourses

No mapped watercourses were identified within or adjacent to the Project Area which was subsequently confirmed by field surveys. The nearest named watercourses to the Project Area are Medicine River, approximately 2.2 km to the east and Welch Creek, approximately 1.3 km to the west. No impacts to these two watercourses are expected due to the distance from the Project Area (Drawing 4, **Error! Reference source not found.**).

Wetlands

According to the ABMI Wetland Inventory Data (2021), no provincially mapped wetlands are present within the Project Area, which was subsequently confirmed during field surveys.

Outside of the Project Area, two seasonal marsh wetlands were identified. One is located immediately adjacent to the western boundary of the Project Area and the other is approximately 160 m north of the Project Area (Drawing 5, Appendix A).

Ephemeral Water Features

One ephemeral drainage feature, which undergoes annual cultivation, was identified during field surveys within the northeastern corner of the Project Area. The ephemeral drainage

feature does not meet the definition of a watercourse and does not require a setback as it undergoes annual cultivation; however, a Code of Practice Notification will be required 10 days prior to direct disturbance. No other ephemeral water features were identified within 100 m of the Project Area during the field surveys.

14.2.8.2 Potential Effects

No direct impacts to watercourses, waterbodies, and wetlands are anticipated at this time as these freshwater features have been avoided by the Project. The one ephemeral drainage located within the northeastern portion of the Project Area will be impacted by Project construction.

14.2.8.3 Mitigation Measures

No mitigation is proposed as watercourses, waterbodies, and wetlands are not proposed to be impacted by Project. A setback is not required for the ephemeral drainage feature identified within the northeast corner of the Project Area as it undergoes annual cultivation; however, a Code of Practice Notification will be submitted 10 days prior to direct disturbance.

15.0 HEALTH, SOCIAL, & ECONOMIC CONTEXT

Clearwater County encompasses approximately 18,691 square kilometres (km²) and includes the Project. The nearest town to the Project is the Town of Rimbey (approximately 18 km northwest of the Project Area), located in Ponoka County, Alberta. The next nearest population centers of adequate size include the Town of Sylvan Lake, approximately 40 km southeast, and the City of Red Deer, approximately 53 km southeast of the Project Area.

In 2021, the Town of Rimbey had a population of 2,470, a 3.8% decrease since 2016 (Statistics Canada, 2024). About 160 residents (6.5%) identified as Indigenous, which is close to the provincial average of 6.7%. According to Statistics Canada (2024), the median total income in 2020 for the Town of Rimbey was \$33,200.

Rocky Mountain House had a population of 6,765 people in 2021, showing a 2% increase since 2016. Around 750 people (11.1%) identified as Indigenous, which is higher than both Rimbey and the Alberta average (Statistics Canada, 2024). According to Statistics Canada (2024), the median total income in 2020 for the Rocky Mountain House was \$41,600.

From 2016 to 2021, Clearwater County's population slightly declined by 0.7%. In 2021, the median age was 46.4 years, and the median individual income was \$37,600. In 2023, the County collected about \$52.8 million in net municipal taxes (Statistics Canada, 2024). According to Statistics Canada (2024), the median total income in 2020 for the Clearwater County was \$37,600.

Alberta Health Services (AHS) is the provincewide integrated health system in Alberta. AHS operates both the Community Health Centre and the Hospital and Care Centre in the Town of Rimbey. In Rocky Mountain House, AHS runs the Health Centre. Facilities in each town

provide access to several health services, such as emergency care, addiction and mental health support, occupational therapy, as well as sexual health and social work services.

AHS publishes community health profiles every two to three years. These reports include health, demographic, and socio-economic data to help plan primary health care services. The profiles are created for 132 Local Geographic Areas (LGAs) across Alberta. Each profile gives a snapshot of the health of the status of the people living in the area. The Town of Rimbey LGA includes the town and nearby area where residents would use the health services of the town. Similarly, the Town of Rocky Mountain House LGA includes the town as well as the nearby area (GOA, 2025e; GOA, 2025f).

Life expectancy at birth is often recognized as a strong determinant of health status and a good predictor of future health-related costs. Between 2014 and 2023, people in the Rimbey LGA had an average life expectancy of about 79 years, which is slightly lower than Alberta's average of about 81 years over the same period (GOA, 2025e). In the Rocky Mountain House LGA, life expectancy between 2014 and 2023 was about 77 years, also slightly below the provincial average of about 81 years over the same period (GOA, 2025f).

Specific information regarding the health of Indigenous peoples within the towns of Rimbey and Rocky Mountain House is not readily available, but resources such as AHS' Indigenous Wellness Core aim to provide culturally appropriate healthcare. Health Canada's report on Indigenous health in Alberta, titled Health Determinants for First Nations in Alberta (2016), outlines disparities in education, income, and housing. It is the hope of Health Canada that the report will contribute to the discussion and awareness of differences in Indigenous health outcomes and determinants in Alberta and lead actions to decrease the differences.

Overall, there is likely limited potential population growth and activity associated with the Project. Therefore, there would be minimal increased pressure for social and medical services, or other local health care service providers. However, there is a lack of data from which to make final conclusions and there are many variables that could impact health care services. Health care service providers and infrastructure may be vulnerable if increased population growth occurs. However, the potential impact on the health and social services to the surrounding communities, including potential impacts to Indigenous peoples, Indigenous youth, women+, and members of the 2SLGBTQI+ community (as defined below), is not anticipated as the Project is expected to have a minimum impact on population growth.

15.1 Gender Based Analysis Plus

Gender Based Analysis Plus (GBA Plus) is a tool used to assess how a project may affect different groups of people, including potentially vulnerable populations such as the Two-Spirit, lesbian, gay, bisexual, transgender, queer, intersex, and additional people who identify as part of sexual and gender diverse communities (2SLGBTQI+) community. It looks at various identity factors such as gender, age, disability, race, income, and where people live to ensure policies and projects are inclusive and responsive to the needs of diverse groups.

The 2SLGBTQI+ community is comprised of people who identify as two-spirited, lesbian, gay, bisexual, transgender and/or gender expansive, queer and/or questioning, intersex, as well as people who identify as part of (+) sexual and gender diverse communities who use additional terminologies.

The Project is not located within an area with a known pride network, but nearby groups like Rocky Pride, Central Alberta Pride Society, and Red Deer Queer Community Association support 2SLGBTQI+ people in rural and central Alberta. AHS also provides resources to make healthcare more inclusive for 2SLGBTQI+ individuals and other diverse groups.

In the towns of Rimbey and Rocky Mountain House, the gender breakdown is close to equal, though women (and/or girls), as well as some non-binary persons (women+) slightly outnumber men (and/or boys), as well as some non-binary persons (men+), especially in older age groups. These demographics are similar to the rest of Alberta.

No gender-related or equity concerns were raised by Indigenous communities or the public during engagement. Indigenous and public engagement was open to all groups, including women+, unemployed, low income, seniors, disabled, and other marginalized groups.

TransAlta is committed to creating an environment that fosters diversity and inclusion and has several policies in place to achieve this goal. TransAlta developed a five-year equity, diversity and inclusion strategy that invests in local communities and employees – supporting an inclusive workplace and operational site environment.

TransAlta policies that support inclusiveness include:

- Workplace Violence and Harassment Policy
- Health, Safety, and Environment Policy
- Equity, Diversity and Inclusion Strategy

Additional information regarding GBA Plus, local pride networks, and gender statistics is provided as part of the full Initial Project Description.

PART D: FEDERAL, PROVINCIAL, TERRITORIAL, INDIGENOUS & MUNICIPAL INVOLVEMENT

16.0 FEDERAL FINANCIAL SUPPORT

The Project does not include any proposed or anticipated federal financial support.

17.0 FEDERAL LANDS USED FOR THE PROJECT

No federal lands will be used for the Project or associated activities for the purposes of carrying out the Project, nor will there be any granting of interest in federal land required.

18.0 FEDERAL, PROVINCIAL, LEGISLATIVE OR OTHER REGULATORY REQUIREMENTS

The Project is a “designated project” under Section 30 of the federal Physical Activities Regulations, SOR/2019-285, and the operation of the Project will also be regulated under the Regulations Limiting Carbon Dioxide Emissions from Natural Gas-fired Generation of Electricity, SOR/2018-261. TransAlta intends the Project to meet the “planned unit” designation as defined under the Clean Electricity Regulations, SOR/2024-263.

While no permits or approvals are expected to be required under the following federal legislation, general compliance may apply to the Project:

- *Fisheries Act*
- *Species at Risk Act*
- *Migratory Birds Convention Act, 1994*

Other regulatory requirements are summarized in Section 3.3, which are further detailed as part of the full Initial Project Description. Together, the provincial and municipal processes form a robust and integrated system that ensures environmental, social, and jurisdictional concerns are thoroughly considered and managed (including those under federal jurisdiction such as fish and fish habitat, aquatic species, and migratory birds).

PART E: POTENTIAL EFFECTS OF THE PROJECT

19.0 IMPACTS TO ENVIRONMENTAL COMPONENTS

19.1 Fish & Fish Habitat

The Project is not anticipated to impact fish and fish habitat (as defined under section 2 of the *Fisheries Act*) as no fish habitat was identified within the Project Area or within the immediate vicinity.

The Project will require an anticipated initial water volume of 6,000 m³, which will be recycled throughout power generation. The Proponent is currently investigating water supply sources, including groundwater, surface water, and water trucking. If water withdrawals are required for the Project, a diversion licence under the *Water Act*, R.S.A. 2000, c. W-3 will be obtained. If surface water withdrawals are required, an authorization application will be applied for under the *Fisheries Act* (as required) and the intake will comply with the Interim code of practice: End-of-pipe fish protection screens for small water intakes in freshwater (DFO, 2020).

19.2 Aquatic Species

The *Species at Risk Act* defines aquatic species under subsection 2(1) as “wildlife species that are fish as defined in section 2 of the *Fisheries Act*, or a marine plant, as defined in section 47 of that Act”. Potential effects to aquatic species are not anticipated as the Project is over 800 km from any marine environment and no habitat for aquatic species was identified within the Project Area.

19.3 Migratory Birds

The Project Area has limited potential to support tree nesting migratory birds as the Project is on cultivated land with no trees or native vegetation present. The lands have undergone cultivation since at least 2003.

Some migratory birds may be affected during construction and operation of the Project. Specifically, removal of cultivated vegetation from the Project Area (13.2 ha) and ground disturbance could reduce migratory bird habitat for select songbird species who utilize crops for vegetative cover. Potential sensory disturbance (e.g., noise, light) may also cause migratory birds to avoid the localized area. The risk of bird mortality from collisions with equipment during construction and operations is anticipated to be low as it is expected that bird species will avoid the Project Area due to physical and sensory disturbance. Dust and emissions from vehicles and equipment may make the area temporarily less suitable for birds by reducing food or nesting site availability.

Some of the species documented on-site are protected under the *Migratory Bird Convention Act, 1994*, which prohibits the destruction of nests of specific bird species. If vegetation clearing is required during the breeding season (April 15 to August 31; AEP 2018) or within the migratory bird nesting period for nesting Zone B4 (mid-April to Late August; ECCC, 2018), a nest sweep will be required beforehand. The nest sweep will be completed in accordance with

the Wildlife Sweeps Protocol: Sensitive Species Inventory Guidelines (GOA, 2021). Nest sweeps will be performed by an experienced wildlife biologist within 100 m of the proposed construction area to identify potential breeding birds or their nests. The nest sweeps should be undertaken no more than seven days prior to construction. If breeding activity is identified, a minimum setback buffer of 50 m will be clearly marked to protect the suspected nest locations. The protective buffer will remain in place until young fledge to minimize the risk of disturbing birds, nests, or eggs, in accordance with the *Migratory Bird Convention Act, 1994* and the *Wildlife Act*, R.S.A. 2000, c. W-10.

The Project is not expected to directly harm any sensitive wildlife species or rare plants. The Project Area is currently used for cultivation and does not contain important wildlife habitats such as mature forests, wetlands, or watercourses. Any impacts to migratory birds can be minimized by clearing vegetation outside of the breeding season when birds are not nesting, and by using best management practices during construction to avoid unnecessary wildlife disturbance or interaction.

20.0 POTENTIAL ENVIRONMENTAL IMPACTS ON FEDERAL LANDS, IN OTHER PROVINCES, OR OUTSIDE OF CANADA

20.1 Federal Lands

The Project will not be carried out on federal land and is not a federal work or undertaking, as defined in subsection 3(1) of the *Canadian Environmental Protection Act, 1999*. The Project has no potential to cause any non-negligible adverse changes to the marine environment that are caused by pollution.

No federal lands will be used for the Project, nor will there be any granting of interest in federal land required. No federal protected areas are located within 10 km of the Project boundaries. Due to the distance of federal land from the Project, no direct changes to the environment will occur on federal lands because of the Project.

Potential air emissions from the Project will be monitored continuously and were evaluated to comply with regulatory requirements. In addition, noise from the Project was evaluated to meet the standards of AUC Rule 012 (2024). Therefore, indirect changes to the environment on federal lands, such as through increased noise or reduced air quality, will not occur due to the distance of the Project from federal lands.

20.2 Other Canadian Provinces

The Project will not have any environmental impacts on any other Canadian provinces as the Project Area is located approximately 172 km northeast of the Alberta – British Columbia border and 306 km west of the Alberta – Saskatchewan border. The Project has no potential to cause any non-negligible adverse changes to interprovincial waters that are caused by pollution.

Given the size of the Project, the localization of effects to environmental components, and the expected lack of effects on aquatic resources, the Project is not anticipated to have any adverse environmental effects outside of Alberta.

20.3 Outside of Canada

The Project will not have any environmental impacts outside of Canada as the Project Area is located approximately 400 km north of the Canada (Alberta) – United States (Montana) border.

The Project has no potential to cause any non-negligible adverse changes to the boundary waters or international waters that are caused by pollution and that would occur outside Canada.

Given the size of the Project and the localization of effects environmental components, and the expected lack of effects on aquatic resources, the Project is not anticipated to have any adverse environmental effects outside of Canada.

21.0 POTENTIAL ENVIRONMENTAL IMPACTS ON INDIGENOUS PEOPLES

Discussion on potential Project effects to human health, social factors, and economic factors for Indigenous communities are presented in the following sections.

21.1 Physical & Cultural Heritage

The environmental effects of the Project's construction and operation are expected to be minimal and localized. Changes to the environment, including air quality, noise, land use, vegetation, soil, wildlife, and heritage resources are expected to be localized in or near the Project Area, and therefore, potential impacts to Indigenous peoples are anticipated to be localized to the Project Area.

Access to the proposed Project Area without landowner permission is restricted and there are currently no public or private access roads within the land parcel containing the Project. As such, public access to the Project Area is currently restricted and will continue to be restricted during the construction and operation of the Project. Based on existing access restrictions associated with private land, use of the land within the Project Area for cultural practices is currently not occurring.

21.2 Current Use of Lands & Resources for Traditional Purposes

The Project is located on freehold lands without access granted to the public.

21.2.1 Hunting

Current land use in and immediately adjacent to the Project is agricultural land, most notably cultivated land, with some industrial uses in the area (e.g., oil and gas facilities, transmission lines). The Project is located within the Alberta Wildlife Management Unit 332, which allows hunting for bear, cougar, moose, elk, and deer (GOA, 2025; Alberta Hunt Map, 2025); therefore, hunting is expected within the regional area but is restricted to:

- Crown land.
- Private land with permission only.
- Areas outside a 183 m radius of occupied buildings for hunting with the use of firearms (as per provincial restrictions regarding the discharge of firearms) (GOA, 2024e).
 - The Project is expected to be considered an occupied building, and therefore, use of a firearm will be prohibited within 183 m of the Project.

Public access within the Project Area is restricted as the Project is located on private land, and therefore, Indigenous hunting activities are not known to currently occur within the Project Area. Based on information provided by Indigenous communities through the AUC application process, Indigenous harvesters have been granted permission to harvest deer, elk, and moose on agricultural lands surrounding the Project (at the request or invitation of landowners), in areas near Highway 53, in areas immediately north of the Project and southeast of Buck Lake, along with privately held lands northwest of the town of Rimbey near Highway 20. Indigenous communities have documented traditional practices, including hunting, throughout Indigenous Ancestral Territory on the boundaries of agricultural lands and timberlands.

During construction of the Project, there will be heavy traffic and noise that may displace local wildlife. Displacement or disturbance of wildlife associated with construction will be temporary and the Project will implement construction related mitigations and best management practices as per the EPP/C&R Plan. In addition, the Project is located in an area that is subject to existing disturbance associated with agricultural activities and traffic noise from Township Road 420 and Range Road 43.

During operation of the Project, noise and light will be generated by the Project which may deter wildlife from the localized area; however, noise generated by the Project is within regulatory requirements and light will be minimized to the extent possible (except what is required for safety purposes). Vehicle traffic will be minimal during operations, limited to plant operations and maintenance staff (approximately 30 people) plus commercial traffic associated with supplies and removal of waste. In addition, the Project Area will be fenced for security and safety of people and wildlife.

21.2.2 Plant Gathering

The Project Area is located on cultivated land; vegetation identified within the Project Area consists of four non-native cultivated plant species (i.e., cereal, canola, lentil, peas). It is the Proponent's experience that the immediate Project Area is not currently used by Indigenous communities for plant gathering; however, the wider regional area does contain Crown land where gathering may occur. It is also recognized that plant gathering may occur on private lands with permission.

Based on information provided by Indigenous communities through the AUC application process, Indigenous communities have documented traditional use in relation to the harvesting of plants and medicines in undisturbed areas near Highway 53 extending westward from Rimbey, Alberta; Indigenous communities noted that this corridor is used extensively by members to practice Indigenous and Treaty rights.

21.2.3 Fishing

There are no watercourses within the Project Area. The Project and associated infrastructure will not have an effect on fish or fish habitat. Continued use of fisheries resources by Indigenous communities in surrounding areas would not be affected.

21.2.4 Trapping

During Project engagement, no registered trappers were identified as using the immediate Project Area, nor was evidence of trapping observed during the field surveys. The wider regional area does contain Crown land where trapping may occur, and it is also recognized that trapping may occur on private lands with permission. It is the Proponent's experience that the immediate Project Area is not currently used by Indigenous communities for trapping; therefore, impacts to Indigenous peoples' ability to trap is not anticipated as a result of the Project.

21.2.5 Use of Navigable Waters

The Project and associated infrastructure will not interact with navigable waters.

21.2.6 Recreational Use

The Project is located on private land with no current recreational use documented.

21.2.7 Commercial Use of the Lands by Indigenous Communities

The Project is located on private agricultural land with no commercial outfitting or other commercial use in place.

21.3 **Sites & Structures of Historical, Archaeological, Paleontological, or Architectural Significance**

The Government of Alberta's Listing of Historical Resources (GOA, 2025d) was reviewed to confirm the presence or absence of historical resources within the Project Area. According to the database, there are no previously recorded sites or structures of historical, archaeological, paleontological, or architectural significance in the Project Area. Approximately 5 km west of the Project Area (16-26-041-05-W5M) is identified as having a "high potential to contain a historic resource". Approximately 400 m west of that location (15-26-041-05-W5M), the database identifies a historic resource that "may require avoidance or assessment." The identification of sites and potential risk to historical resources is first searched through the Government of Alberta's Listing of Historic Resources interactive map (GOA, 2025d).

As per AUC requirements, a Historic Resources Application was submitted to the Historical Resources Branch for review. On November 18, 2024, the Project received HRA Approval/Clearance to proceed (HRA Number: 4940-23-0013-001, Online Permitting and Clearance Application Number: 028637711).

If undocumented historical resources are discovered during construction, salvage operations will be completed according to the Reporting Incidental Historic Resource Discoveries in Development Context (Province of Alberta. (2025) along with regulatory requirements,

including the HRA and the Archaeological and Paleontological Research Permit Regulation, Alta. Reg. 254/2002.

22.0 POTENTIAL HEALTH, SOCIAL, OR ECONOMIC IMPACTS ON INDIGENOUS PEOPLES

22.1 Health & Social Impacts on Indigenous Peoples

The Project is not expected to have adverse effects to the health, social conditions, or overall well-being of Indigenous communities, including women, LGBTQ+, Indigenous youth, and other marginalized groups. Indigenous communities and the public did not identify any gender gap issues or other disparities during the consultation and engagement process.

The AQA determined that the Project will comply with regulatory requirements for air quality. Similarly, the NIA determined compliance with the PSLs outlined in AUC Rule 012 (2024) with the implementation of noise control recommendations on select equipment.

No ingestion or inhalation pathways that could trigger the need for a Human Health Risk Assessment are anticipated. The emissions (air and noise) from the Project during operations will be compliant with provincial regulations and will decrease with distance from the Project.

There is the potential for population growth and activity associated with the Project; however, pressures for social or medical services, or other local health care service providers are not anticipated to significantly increase as a direct result of the Project. There is a lack of data from which to make final conclusions and there are many variables that could impact health care services, such as if another doctor is recruited to the area and if the labour force associated with the Project lives in the area.

At this time, there are no anticipated worker camps proposed for the Project. Non-local workers will likely stay at hotels within the towns of Rimbey or Rocky Mountain House, or possibly within the Town of Sylvan Lake or the City of Red Deer, where there is established infrastructure, access to health and social services, and an RCMP station. With local employment opportunities, there may be slight increases in population due to non-local personnel coming to the communities within the area. This may create temporary pressure on local housing markets to accommodate new workers. Given the prevalent oil and gas industry in the region, Rimbey, Rocky Mountain House, Sylvan Lake and Red Deer have been proven to be able to accommodate non-local workers to the area with the current infrastructure and health and social services available.

Overall, the construction, operation, and decommissioning/reclamation of the Project is not anticipated to impact the health, social conditions, or overall well-being of Indigenous Communities and peoples of Canada, including women+, Indigenous youth, and other marginalized groups.

TransAlta will continue the engagement process with the Indigenous communities identified in Section 4.0, and will provide updates regarding the Project's permitting, construction, operation, and decommissioning schedules and related activities. If Project activities are found to produce negative impacts to the health and social well-being of Indigenous communities and peoples, TransAlta will provide an opportunity for the identified Indigenous communities to engage in the mitigation process. Future engagement with Indigenous communities and the public will be inclusive to all stakeholders, including individuals, Indigenous communities, women+, unemployed, low income, seniors, disabled, and other marginalized groups.

22.2 Economic Impacts on Indigenous Peoples

As stated in Section 7.0, the Project will have positive impacts on the local and regional employment market. The Proponent is committed to promoting these opportunities to Indigenous communities, including:

- Contract opportunities: TransAlta will identify potential professional services and contract opportunities that will be required to construct the Project. Once known, TransAlta will engage with Indigenous businesses to determine interest in accessing those opportunities. It's expected that this work will adapt as the Project moves through various phases in the future.
- TransAlta's Supply Chain Management team maintains an Indigenous Vendor List: As Indigenous communities are engaged for the Project, TransAlta will actively seek out Indigenous Vendor information for existing TransAlta operations and potential new opportunities.

The Project is not anticipated to have any negative economic impacts on Indigenous communities and peoples, including Indigenous youth, women, and 2S+, during planning, permitting, construction, operation, decommissioning, and reclamation.

Throughout the Project, TransAlta will work with Indigenous communities to understand workforce needs and, where possible, create opportunities for training, contracts, and job programs. All workers will receive mandatory safety training before working on-site.

23.0 GREENHOUSE GAS EMISSIONS ESTIMATE

An Emissions Intensity Report was completed by Horizon Compliance Group Inc. for the Project to assess greenhouse gas (GHG) estimates and compliance with federal regulatory requirements.

Current GHG regulations applicable to the Project include the federal Regulations Limiting Carbon Dioxide Emissions from Natural Gas-fired Generation of Electricity, SOR /2018-261. These regulations specify how carbon intensity emissions are to be calculated. The results of the calculations predict that the Project's CO₂ Emission Intensity of 365 tonnes of carbon dioxide per gigawatt hour (tCO₂/GWh) will comply with the federal emissions intensity limit of 420 tCO₂/GWh during operation.

Additionally, the Canadian Ambient Air Quality Standards (CAAQS) (CCME, 2023) are applicable to the Project. To understand the potential impact on local air quality, a Project-specific AQA was completed, which confirmed that the predicted MGLCs comply with the applicable CAAQS.

TransAlta remains committed to continuous evaluations of technological advancements and alternative solutions to further reduce or achieve net-zero emissions by 2050.

24.0 EMISSIONS, DISCHARGE, & WASTE

The construction and operation of the Project will result in atmospheric emissions, surface runoff discharges, industrial wastewater, and general domestic and operational waste.

24.1 Atmospheric Emissions

24.1.1 Operational Emissions

Horizon Compliance Group Inc. completed an AQA and Emissions Intensity Report for the Project. The results of the AQA modelling predict that MGLC of contaminants of concern resulting from the addition of the Project to existing emissions sources were less than their corresponding AAQOs for all averaging periods. The Emissions Intensity Report determined the Project would be compliant with federal emissions intensity limits and the CAAQS.

To maintain the lowest possible air emissions associated with the Project's processes, all equipment will be designed in accordance with the latest codes and regulations. The Project will also be equipped with a CEMS used for monitoring CO, NO_x, oxygen (O₂), and opacity. Additional parameters may need to be monitored based on the conditions of the EPEA Industrial Approval issued by AEPA. A Data Acquisition and Report Generating System will also be provided.

24.1.2 Fugitive Emissions

Construction, operations, and reclamation activities can affect air quality by producing dust and fugitive emissions (i.e., tailpipe exhaust emitting CO₂ and nitrogen and sulphur oxides), mainly due to heavy machinery use and transportation. Fugitive emissions will be limited to tailpipe emissions from vehicle use during construction and operations, and dust associated with construction and operation equipment.

An estimate of fugitive emissions for the Project is provided as part of the full Initial Project Description.

The key elements for effective long-term control of fugitive emissions are the application of best available technology and standards, implementation of management systems, and corporate commitment. Reliable fugitive emissions control requires the development of monitoring programs, operating procedures, and performance objectives for controlling fugitive emissions along with management's commitment to the implementation and maintenance of an inspection and maintenance program.

As a component of successful and profitable operation of the Project, necessary components are subjected to regular screening for leaks as part of regular and scheduled maintenance. The objective is to reduce the potential for leaks in the most practicable manner possible. This is done by focusing efforts on the types of components and service applications and maintenance requirements, most likely to offer significant cost-effective control opportunities.

If a leak is detected and is determined to need fixing, this will be done within a reasonable period of time or at the next facility turnaround if a major shutdown is required.

24.1.3 Dust

The Project will implement appropriate dust suppression measures on roads, work areas, transportation and loading routes, or on soil piles or exposed soil surfaces prone to wind and water erosion, as necessary. The decision to control dust will be made at the field level and will depend upon site conditions, level of activity, and worker health and safety.

24.1.4 Odour

If an adverse odour event occurs on-site that has potential to impact surrounding areas the following steps will be undertaken to address the situation:

1. The source of the odour will be investigated and identified.
2. The contributing process/substance will be relocated, removed or otherwise managed as deemed appropriate.
3. If the odour is indicative of a potentially hazardous event, the appropriate regulatory agency will be contacted immediately for assistance. Such assistance may include guidance on notification to nearby residents, business or other land users. The Proponent will mitigate odours from potential ammonia leaks.
4. If the odour event is deemed to be unhazardous but substantially offensive and objectionable, nearby public will be contacted and provided with information regarding the odour.

24.1.5 Noise

RWDI completed an NIA for the Project as per requirements of AUC Rule 012 (2024). The results of the NIA determined the Project will be compliant with AUC Rule 012 requirements for noise with the implementation of noise control recommendations on select equipment. Additional information regarding the NIA is provided in Section 14.2.2.

24.2 **Surface Runoff**

Surface water from the Project Area will be collected to keep the operational areas as dry as possible. Site drainage, soil erosion, and sediment control will be reviewed and implemented during construction and included into the final grading, drainage, and landscape design.

Drainage work will be limited to within the Project Area. Surface runoff from the operational area will be collected and managed by ditches, swales, and grading which will be directed to a stormwater pond located within the southwestern portion of the Project Area. Dikes and berms will be installed along the plant perimeter as required to keep runoff within the operational area.

The purpose of the stormwater pond is to hold runoff from major events and allow any solids to settle before being released. The Project is not allowed to use water collected in the stormwater ponds for operation purposes. Once stormwater reaches the pond, water will be tested to meet AEPa discharge criteria before being released back to the surrounding environment. Details regarding the sizing of the stormwater pond are provided in the full Initial Project Description.

TransAlta will have a site-specific Emergency Response Plan available, and any spills or leaks will be immediately handled to ensure no effects to surface water or runoff.

Any stormwater from the pond will be emptied via a mobile pumped system discharging to an existing open drainage swale located approximately 230 m west of the proposed stormwater pond. Details of the pump, its enclosure, and the exact discharge location will be determined as part of the detailed design. Stormwater will be discharged in a manner that mitigates erosion (i.e., erosion controls will be provided at the discharge point). Discharge events will be monitored to ensure equipment remains operational and erosion/sediment controls remain effective, and to terminate equipment if necessary. Any water that is not suitable for release to the environment will be trucked out to a third-party certified wastewater disposal/treatment facility.

The fire department, may, at their discretion utilize the pond water for emergency firefighting. At this time, all water collected will be discharged back to the surrounding environment. Any water that is not suitable for release will be trucked out to a third-party certified wastewater disposal/treatment facility.

24.3 Industrial Wastewater

Industrial wastewater will not be released to the environment. All industrial wastewater and process liquids will be collected, stored, and monitored in aboveground tanks and wastewater will be trucked offsite to an approved wastewater collection facility. All tanks used for storage of industrial wastewater will meet requirements for design characteristics. Industrial wastewater disposal details will be recorded.

Sewage will also be generated during construction, operations, and reclamation of the Project. Construction and reclamation sewage will be managed with portable toilets. Sewage generated during operations will be contained within an on-site septic system including water and solids flowing to an underground tank within the Project Area. As required, domestic bio-solids will be vacuumed from the septic tanks and hauled to the nearest sewage treatment facility for disposal.

24.4 Domestic Waste

All domestic and industrial garbage is disposed using approved refuse containers for hauling and disposal at an approved landfill. Bear proof containers will be used on location for holding domestic and industrial garbage as necessary.

24.5 Operational Waste

Operational wastes from the Project may include:

- Used oil and/or grease
- Process wastewater
- Oily wastewater
- Relief valve discharges
- Domestic grey water, black water
- Solid wastes
- Exhausted resin

PART F: SUMMARY

25.0 INITIAL PROJECT DESCRIPTION SUMMARY

This Initial Project Description Summary (in both English and French), has been submitted to IAAC alongside the Initial Project Description.

26.0 STATEMENT OF QUALIFICATIONS & LIMITATIONS

This Report (the “Report”) was initially prepared by Strum Consulting (“Consultant”) for the benefit of Kiwetinohk Energy Corp. (“Client”) in accordance with the agreement between Consultant and Client, including the scope of work detailed therein (the “Agreement”). TransAlta Corporation subsequently acquired the Project on September 29, 2025, and TransAlta and the Consultant have worked together to finalize the Report for submission to IAAC.

The information, data, recommendations, and conclusions contained in the Report (collectively, the “Information”):

- is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the “Limitations”)
- represents Consultant’s professional judgement in light of the Limitations and industry standards for the preparation of similar reports
- may be based on information provided to Consultant which has not been independently verified
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued
- must be read as a whole and sections thereof should not be read out of such context
- was prepared for the specific purposes described in the Report and the Agreement
- in the case of subsurface, environmental, or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time

Consultant shall be entitled to rely upon the accuracy and completeness of information that was provided and has no obligation to update such information. Consultant accepts no responsibility for any events or circumstances that may have occurred since the date on which the Report was prepared and, in the case of subsurface, environmental, or geotechnical conditions, is not responsible for any variability in such conditions, geographically or over time.

Consultant agrees that the Report represents its professional judgement as described above and that the Information has been prepared for the specific purpose and use described in the Report and the Agreement, but Consultant makes no other representations, or any guarantees or warranties whatsoever, whether express or implied, with respect to the Report, the Information or any part thereof.

The Report is to be treated as confidential and may not be used or relied upon by third parties, except:

- as agreed in writing by Consultant and Client
- as required by law
- for use by governmental reviewing agencies

Consultant accepts no responsibility, and denies any liability whatsoever, to parties other than Client who may obtain access to the Report or the Information for any injury, loss, or damage suffered by such parties arising from their use of, reliance upon, or decisions or actions based on the Report or any of the Information (“improper use of the Report”), except to the extent those parties have obtained the prior written consent of Consultant to use and rely upon the Report and the Information. Any damages arising from improper use of the Report or parts thereof shall be borne by the party making such use.

This Statement of Qualifications and Limitations forms part of the Report and any use of the Report is subject to the terms hereof.

Should additional information become available, Strum requests that this information be brought to our attention immediately so that we can reassess the conclusions presented in this report. This report was prepared by Destin Gardner, MREM, Project Coordinator & Environmental Scientist and Lyndsay Eichinger, MREM, Project Manager & Environmental Scientist and was reviewed by Melanie Smith, MES, Vice President Environmental Assessment & Approvals.

27.0 REFERENCES

AbaData. (2025). *AbaData online subscription mapping service*. Retrieved from <https://abadata.ca/abadata2>

Alberta Biodiversity Monitoring Institute (ABMI). (2021). *ABMI Alberta Wetland Inventory Data*. Retrieved from <https://abmi.ca/data-portal/40.html>

Activities Designation Regulation, Alta. Reg. 276/2003

Agriculture and Agri-Food Canada. (1998). *The Canadian System of Soil Classification, 3rd ed.* Retrieved from <https://sis.agr.gc.ca/cansis/publications/manuals/1998-cssc-ed3/index.html>

Alberta Environment and Protected Areas (AEPA). (2012). *Management Plan for Cougars in Alberta*. Retrieved from <https://open.alberta.ca/dataset/339ba6c0-e39c-447a-9328-118b43457f67/resource/f45c7208-ca67-4d04-a53b-735d8f764d52/download/6551784-2012-management-plan-for-cougars-in-alberta.pdf>

Alberta Environment and Protected Areas (AEPA). (2014). *Natural Regions and Subregions of Alberta. A Framework for Alberta's Parks*. Retrieved from <https://www.albertaparks.ca/media/6256258/natural-regions-subregions-of-alberta-a-framework-for-albertas-parks-booklet.pdf>

Alberta Environment and Protected Areas (AEPA). (2019). *Alberta Ambient Air Quality Objectives and Guidelines Summary*. Retrieved from <https://open.alberta.ca/publications/9781460134856>

Alberta Environment and Protected Areas (AEPA). (2021). *Air Quality Model Guideline*. Retrieved from <https://open.alberta.ca/publications/air-quality-model-guideline-2021>

Alberta Environment and Protected Areas (AEPA). (2025). *Wildlife sensitivity maps*. Retrieved from <https://www.alberta.ca/wildlife-sensitivity-maps>

Alberta Environment and Sustainable Resource Development (ESRD). (2013). *Sensitive species inventory guidelines*. Retrieved from <https://open.alberta.ca/dataset/93d8a251-4a9a-428f-ad99-7484c6ebabe0/resource/f4024e81-b835-4a50-8fb1-5b31d9726b84/download/2013-SensitiveSpeciesInventoryGuidelines-Apr18.pdf>

Alberta Hunt Map. (2025). *AlbertaHuntMap.ca*. Retrieved from <https://www.albertahuntmap.ca/>

Alberta Utilities Commission (AUC). (2024). *Rule 012. Noise Control*. Retrieved from https://media.auc.ab.ca/prd-wp-uploads/regulatory_documents/Consultations/Rule012.pdf

Alberta Utilities Commission (AUC). (2025). *Rule 007. Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines*. Retrieved from <https://www.auc.ab.ca/Rule-007/>
Archaeological and Paleontological Research Permit Regulation, Alta. Reg. 254/2002

Canadian Council of Ministers of the Environment (CCME). (2023). *Canadian Ambient Air Quality Standards (CAAQS)*. Retrieved from <https://ccme.ca/en/air-quality-report#slide-7>

Clean Electricity Regulations, SOR/2024-263

Committee on the Status of Endangered Wildlife in Canada (COSEWIC). (2023). *Canadian Wildlife Species at Risk 2023*. Retrieved from <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/publications/canadian-wildlife-species-risk-2023.html>

Environment Climate Change Canada (ECCC). (2018). *General nesting periods of migratory birds*. Retrieved from <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods.html>

Environmental Protection and Enhancement Act, R.S.A. 2000, c. E-12

Fiera Biological Consulting Ltd. (2014). *Environmentally Significant Areas in Alberta: 2014 Update*. Retrieved from <https://open.alberta.ca/publications/environmentally-significant-areas-in-alberta-2014-update-final-report>

Fisheries Act, R.S.C, 1985, c.F-14

Fisheries and Oceans Canada (DFO). (2020). *Interim code of practice: End-of-pipe fish protection screens for small water intakes in freshwater*. Retrieved from <https://www.dfo-mpo.gc.ca/pnw-ppp/codes/screen-ecran-eng.html>

Google. (n.d.). *Google Earth Pro (Version 7.3)*. Retrieved from <https://www.google.com/earth/>

Government of Alberta (GOA). (n.d.) *Wildlife Management Units*. Retrieved from <https://www.alberta.ca/wildlife-management-units>

Government of Alberta (GOA). (2014). *Guide to Content for Industrial Approval Applications*. Retrieved from <https://open.alberta.ca/publications/9781460112557>

Government of Alberta (GOA). (2015). *Alberta Wetland Identification and Delineation Directive*. Retrieved from <https://open.alberta.ca/publications/9781460123638>

Government of Alberta (GOA). (2020). *Alberta Wild Species Status Search*. Retrieved from <https://www.alberta.ca/lookup/wild-species-status-search.aspx>

Government of Alberta (GOA). (2021). *Wildlife Sweep Protocols: Sensitive Species Inventory Guidelines*. Retrieved from <https://open.alberta.ca/publications/wildlife-sweep-protocols-sensitive-species-inventory-guidelines>

Government of Alberta (GOA). (2022). *Alberta Conservation Information Management System (ACIMS)*. Retrieved from: <https://www.albertaparks.ca/albertaparksca/management-land-use/alberta-conservation-information-management-system-acims/search-acims-data/>

Government of Alberta (GOA). (2023). *Guide to Groundwater Authorization*. Retrieved from <https://open.alberta.ca/publications/guide-to-groundwater-authorization>

Government of Alberta (GOA). (2024a). *Master Schedule of Standards and Conditions*. Retrieved from <https://open.alberta.ca/publications/master-schedule-of-standards-and-conditions> Government of Alberta (GOA). (2024b). *Fish and Wildlife Internet Mapping Tool (FWIMT)*. Retrieved from https://geospatial.alberta.ca/FWIMT_Pub/?TermsOfUseRequired=true&Viewer=FWIMT_Pub

Government of Alberta (GOA). (2024c). *Cumulative clubroot infestations in Alberta*. Retrieved from <https://www.alberta.ca/cumulative-clubroot-infestations-in-alberta>

Government of Alberta (GOA). (2024d). *Alberta Soil Information and Data – Salinity Maps of Selected Counties*. Retrieved from <https://www.alberta.ca/salinity-maps-of-selected-counties>

Government of Alberta (GOA). (2024e). *2024 Alberta guide to Hunting Regulations*. Retrieved from <https://open.alberta.ca/dataset/995b1ca1-0e65-4204-b432-98e4d6ccb46/resource/ee82d86f-aedd-497a-948c-942ba9398acb/download/fp-alberta-guide-to-hunting-regulations-2024.pdf>

Government of Alberta (GOA). (2025a). *North Saskatchewan Region: Regional plans. Land-Use Framework*. Retrieved from <https://landuse.alberta.ca/RegionalPlans/NorthSaskatchewanRegion/Pages/default.aspx>

Government of Alberta (GOA). (2025b). *Parks and Protected Areas of Alberta*. Retrieved from <https://open.alberta.ca/opendata/gda-6b96341f-2e19-4885-98af-66d12ed4f8dd>

Government of Alberta (GOA). (2025c). *Agricultural Region of Alberta Soil Inventory Database (AGRASID) (Version 4.1)*. Retrieved from <https://soil.agric.gov.ab.ca/agrasidviewer/>

Government of Alberta (GOA). (2025d). *Listing historic resources*. Retrieved from <https://www.alberta.ca/listing-historic-resources>

Government of Alberta (GOA). (2025e). *Community profile: Rimbey health data and summary*. Retrieved from <https://open.alberta.ca/publications/community-profile-rimbey>

Government of Alberta (GOA). (2025f). *Community profile: Rocky Mountain House health data and summary*. Retrieved from <https://open.alberta.ca/publications/community-profile-rimbey>

Government of Canada (GOC). (2022). *Canada Land Inventory*. Retrieved from <https://sis.agr.gc.ca/cansis/nsdb/cli/index.html>

Government of Canada (GOC). 2025. *Critical Habitat for Species at Risk National Dataset – Canada*. Retrieved from <https://data-donnees.az.ec.gc.ca/data/species/protectrestore/critical-habitat-species-at-risk-canada/>

Health Canada. (2016). *Health Determinants for First Nations in Alberta*. Retrieved from https://publications.gc.ca/collections/collection_2016/sc-hc/H34-217-2016-eng.pdf

Historical Resources Act, R.S.A. 2000, c. H-9

Hydro and Electric Energy Act, R.S.A. 2000, c. H-16

Impact Assessment Act, S.C. 2019, c. 28, s. 1

Impact Assessment Agency of Canada (IAAC). (2025a). *Guide to Preparing an Initial Project Description*. Retrieved from <https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/guide-preparing-project-description-detailed-project-description.html>

Impact Assessment Agency of Canada (IAAC). (2025b). *Canadian Impact Assessment Registry*. Retrieved from <https://iaac-aeic.gc.ca/050/evaluations?culture=en-CA>

IBA Canada. (2024). *Important Bird Areas*. Retrieved from https://www.ibacanada.com/iba_what.jsp?lang=en

Migratory Birds Convention Act, 1994, S.C. 1994, c. 22

Physical Activities Regulations, SOR/2019-285, s. 30

Province of Alberta. (2025). *Reporting Incidental Historic Resource Discoveries in Development Context*. Retrieved from <https://open.alberta.ca/publications/reporting-incident-historic-resource-discoveries-development-contexts>

Regulations Limiting Carbon Dioxide Emissions from Natural Gas-fired Generation of Electricity, SOR/2018-261

Species at Risk Act, S.C 2002, c.29

Statistics Canada. (2024). *Census Profile, 2021 Census of Population*. Retrieved from <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/index.cfm?Lang=E>

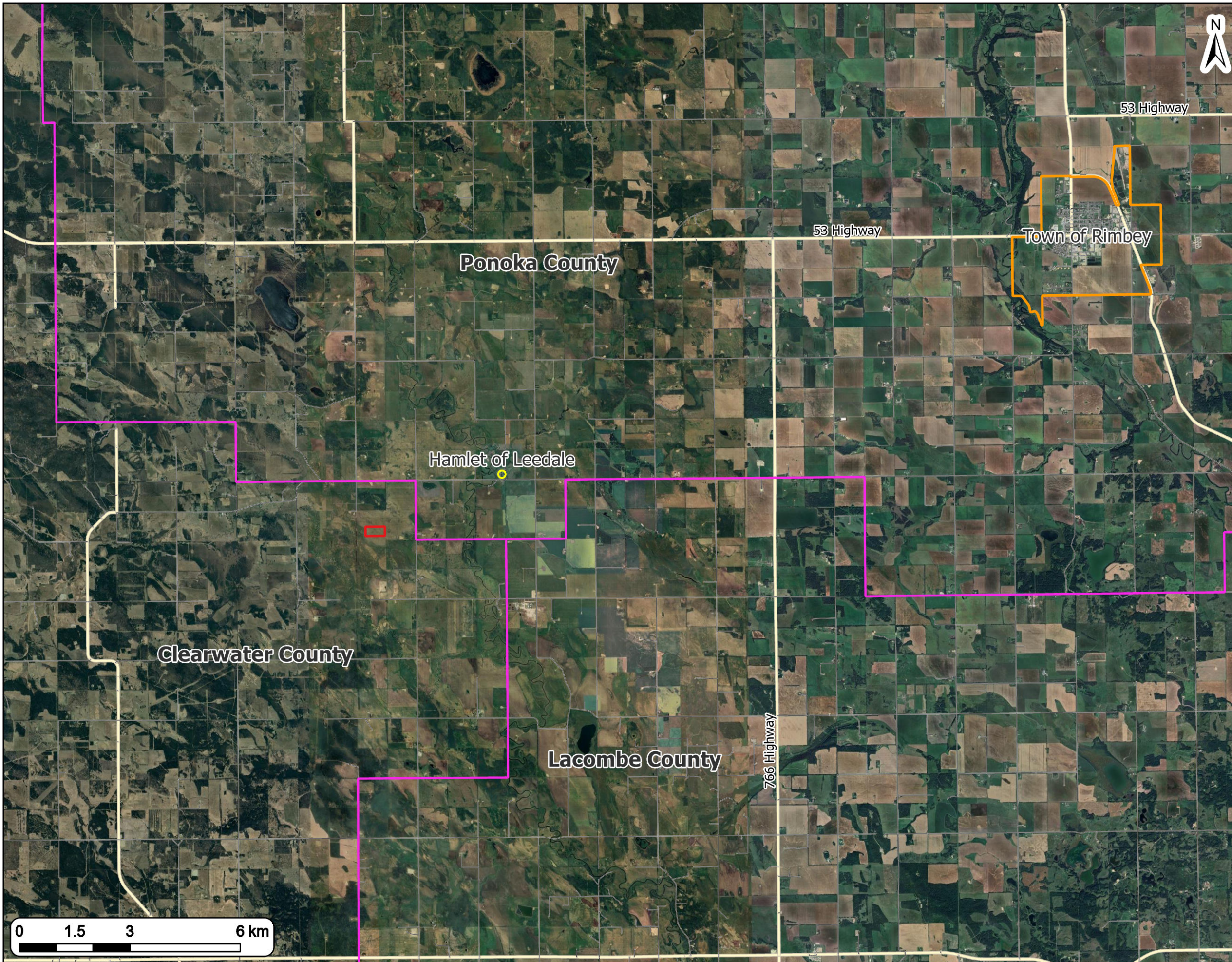
Water Act, R.S.A. 2000, c. W-3

Water (Ministerial) Regulation, Alta Reg. 205/1998

Weed Control Act, S.A. 2008, c. W-5.1

Wildlife Act, R.S.A. 2000, c. W-10

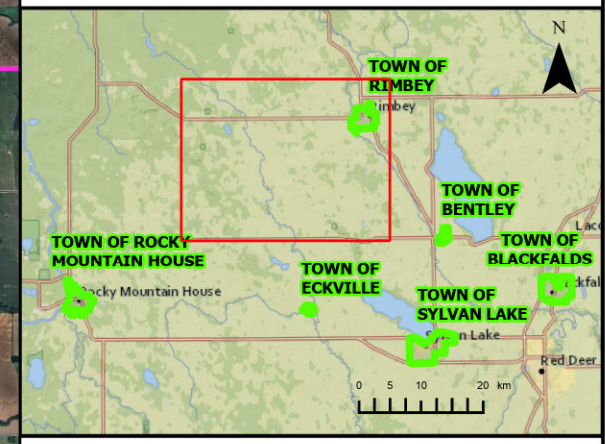
APPENDIX A
PROJECT LOCATION DRAWINGS



Flipi Gas-Fired Generation Project
Regional Project Location



- Project Area
- Municipal District
- Hamlet of Leedale
- Town of Rimbey
- Transportation**
- Highway
- Road



Coordinate System: NAD1983 CSRS 10TM AEP Forest
Sources: Google Imagery (Maxar), HERE, Garmin, USGS, NRCan, Canvec

Date: 2025-12-16	Project #: 24-9987
Scale: 1:100,000	Drawing #: 1
Drawn By: E. Johnson	
Checked By: L. Eichinger	

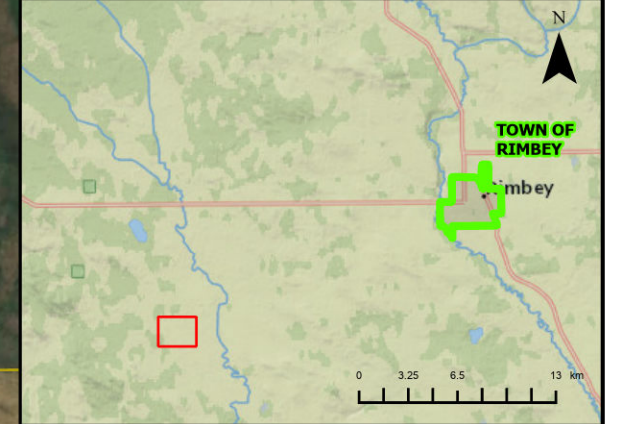




Flipi Gas-Fired Generation Project
Project Area

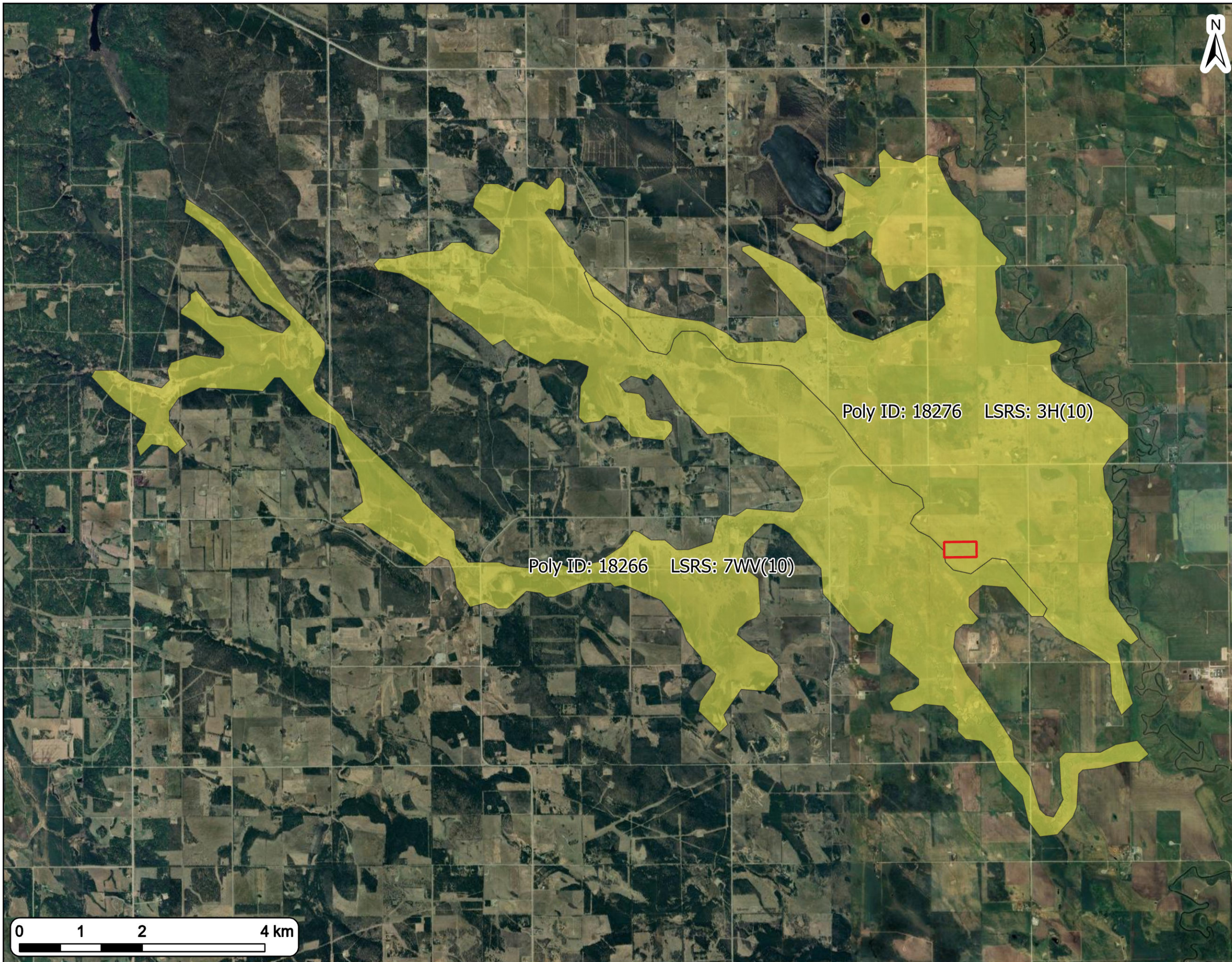


Project Area	
Quarter Section	
Preliminary Gas Supply Interconnection Point	
AltaLink Substation	
TransAlta Transmission Interconnection	
AltaLink Transmission Line	
Project Plot Plan	
AltaLink Existing 240 kV Transmission Line	
Road	



Coordinate System: NAD1983 CSRS 10TM AEP Forest		Sources: Google Imagery (Maxar), HERE, Garmin, USGS, NRCAN, Canvec	
Date:	2025-12-16	Project #:	24-9987
Scale:	1:7,500	Drawing #:	2
Drawn By:	E. Johnson		
Checked By:	L. Eichinger		





Flipi Gas-Fired Generation Project

AGRASID Soil Polygons



Project Area

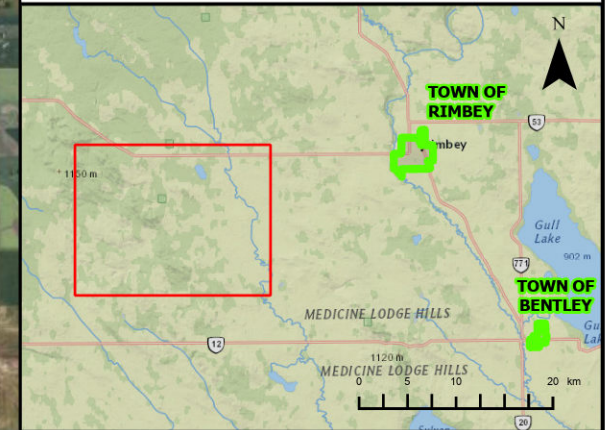


AGRASID - Agricultural Region of Alberta Soil Inventory Database



Poly ID: 18276 LSRs: 3H(10)

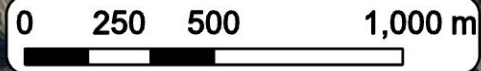
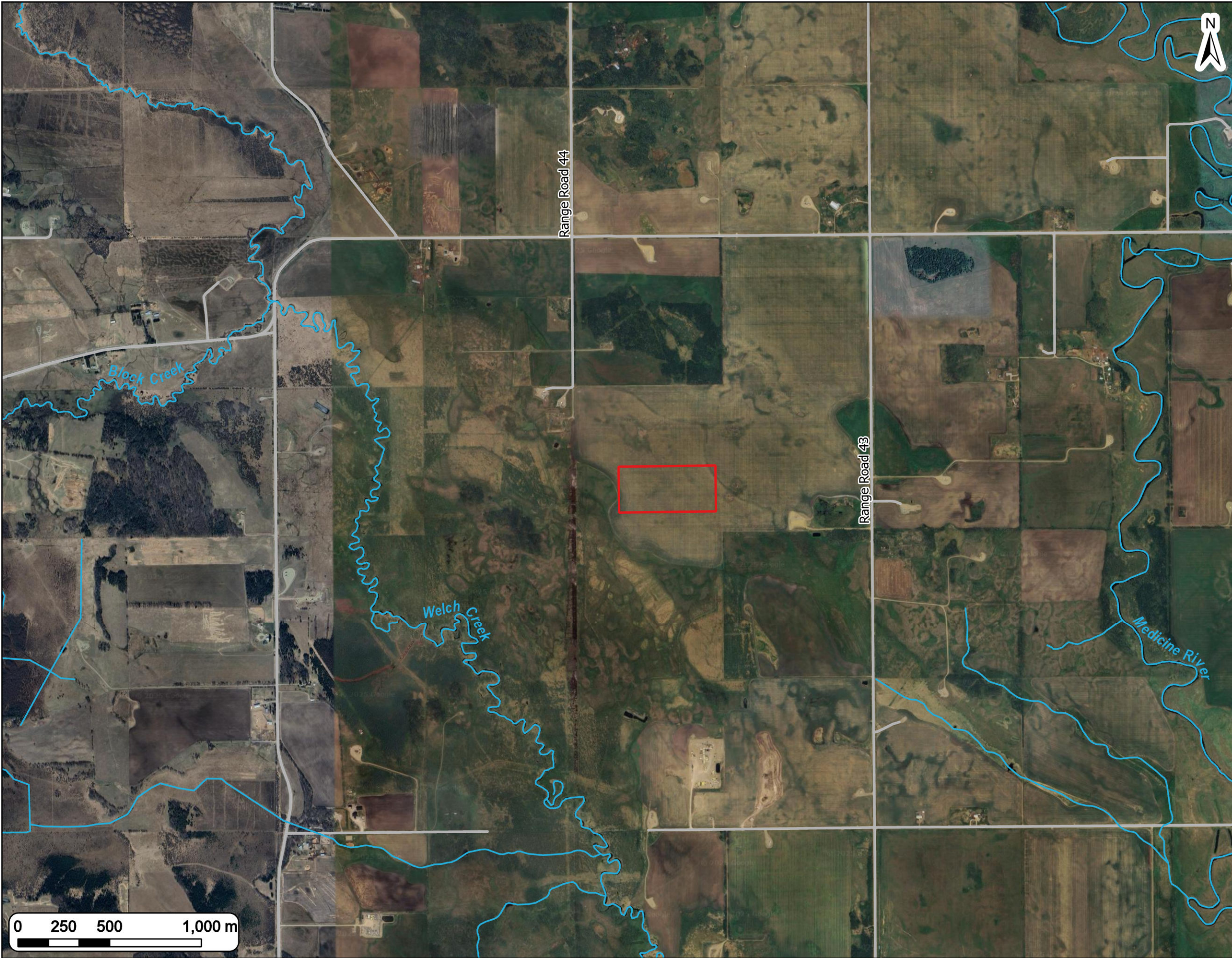
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Coordinate System: NAD1983 CSRS 10TM AEP Forest Sources: Google Imagery (Maxar), HERE, Garmin, USGS, NRCAN, Canvec

Date: 2025-12-16	Project #: 24-9987
Scale: 1:60,000	Drawing #: 3
Drawn By: E. Johnson	
Checked By: L. Eichinger	





Flipi Gas-Fired Generation Project

Watercourses



Project Area

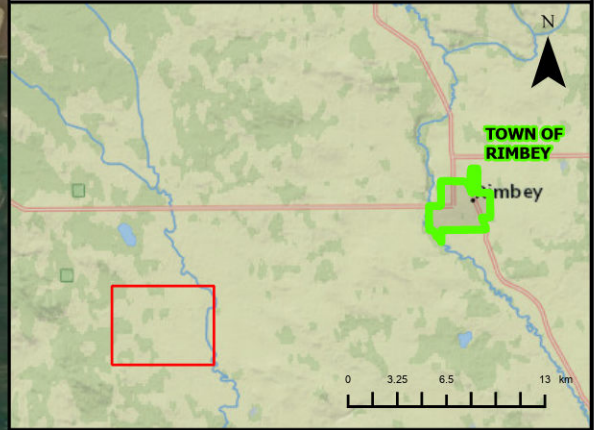


Watercourse



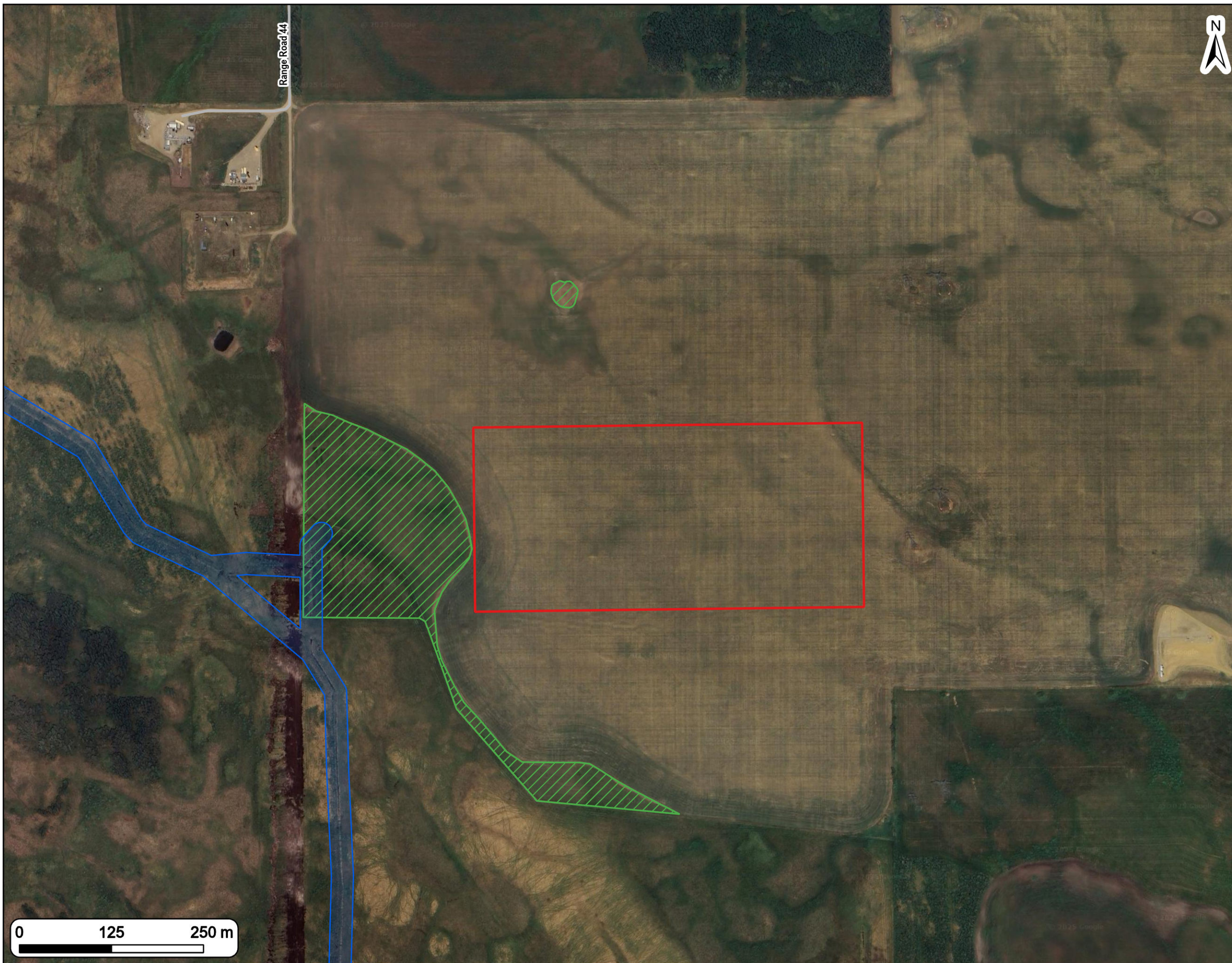
Transportation

Road



Coordinate System: NAD1983 CSRS 10TM AEP Forest		Sources: Google Imagery (Maxar), HERE, Garmin, USGS, NRCAN, Canvec	
Date:	2025-12-16	Project #:	24-9987
Scale:	1:20,000	Drawing #:	4
Drawn By:	E. Johnson		
Checked By:	L. Eichinger		



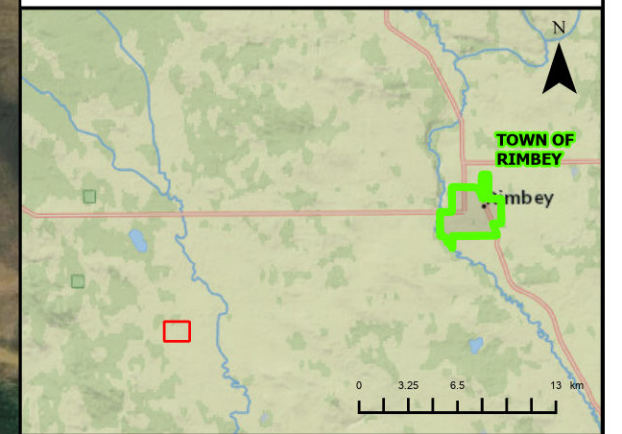


Flipi Gas-Fired Generation Project

Wetlands

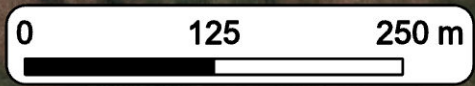


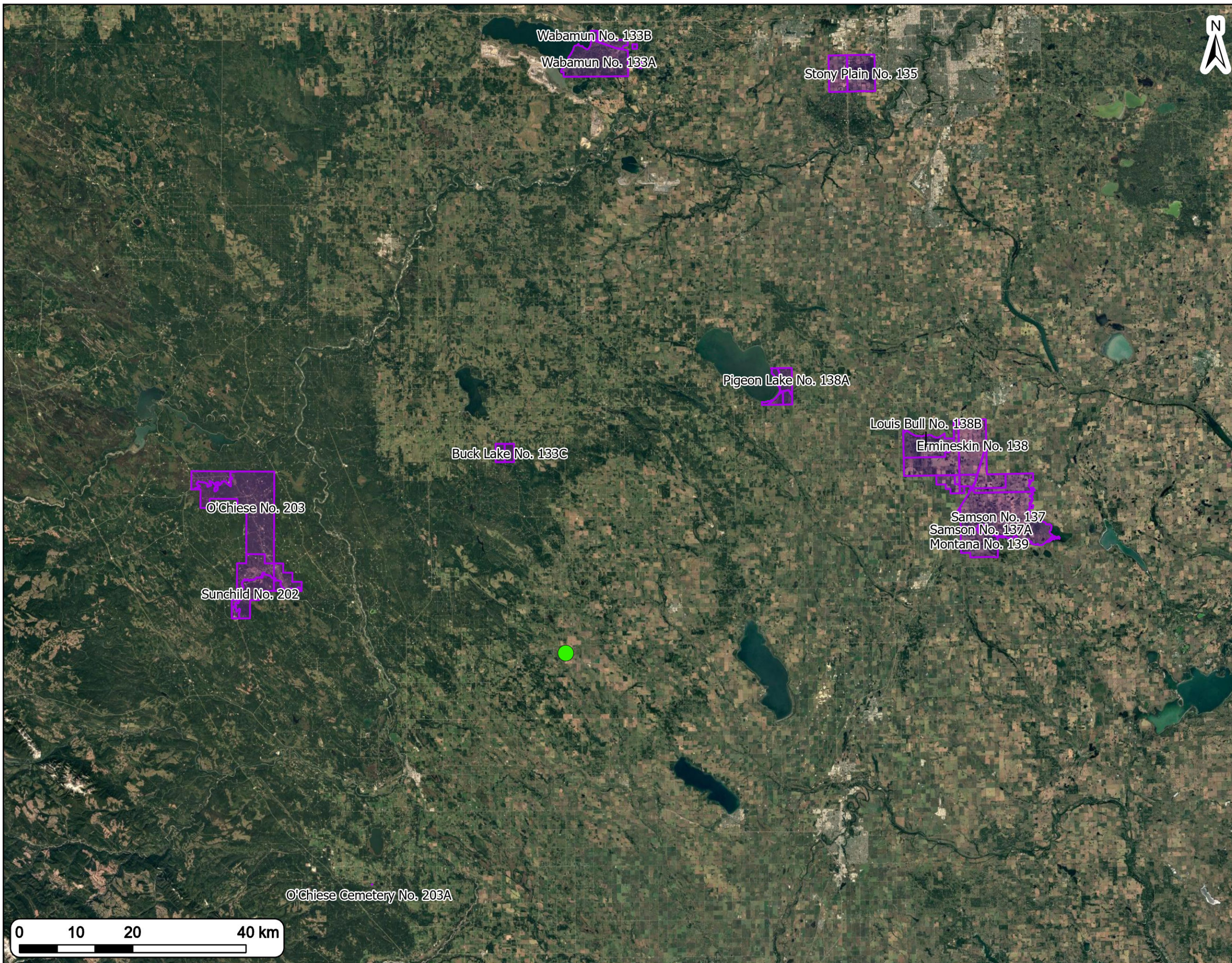
- Project Area
- Seasonal Marsh Wetlands
- Existing Open Drainage / Constructed Drainage Swale
- Transportation**
- Road



Coordinate System: NAD1983 CSRS 10TM AEP Forest Sources: Google Imagery (Maxar), HERE, Garmin, USGS, NRCAN, Canvec



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Drawn By: E. Johnson	
Checked By: L. Eichinger	





Flipi Gas-Fired Generation Project
Indigenous Reserves

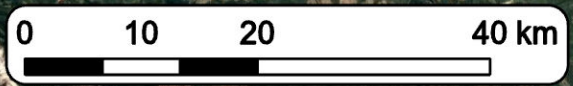


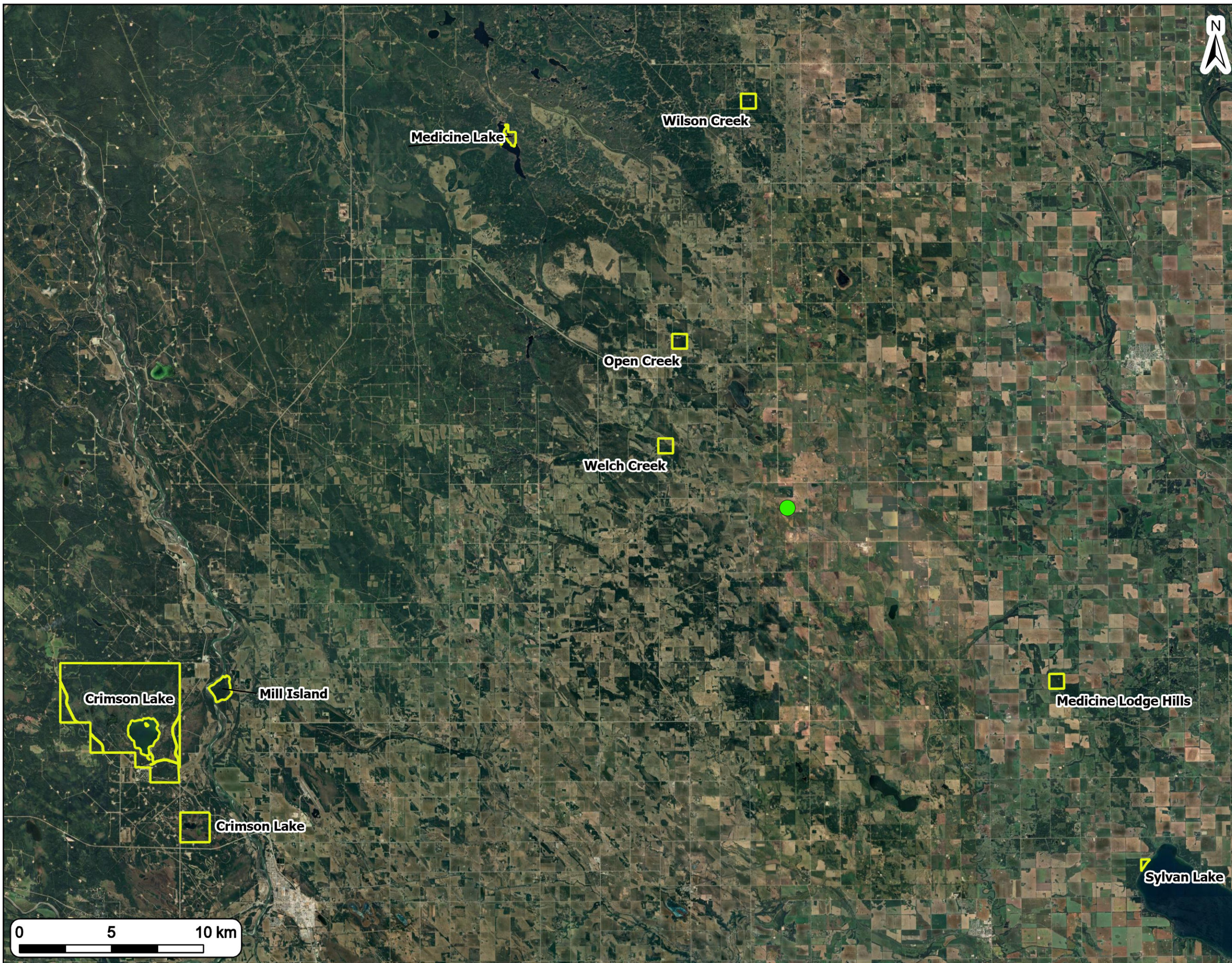
Project Centre 
 Indigenous Communities 



Coordinate System: NAD1983 CSRS 10TM AEP Forest
 Sources: Google Imagery (Maxar), HERE, Garmin, USGS, NRCan, Canvec

Date: 2025-12-16	Project #: 24-9987
Scale: 1:650,000	Drawing #: 6
Drawn By: E. Johnson	
Checked By: L. Eichinger	





Flipi Gas-Fired Generation Project

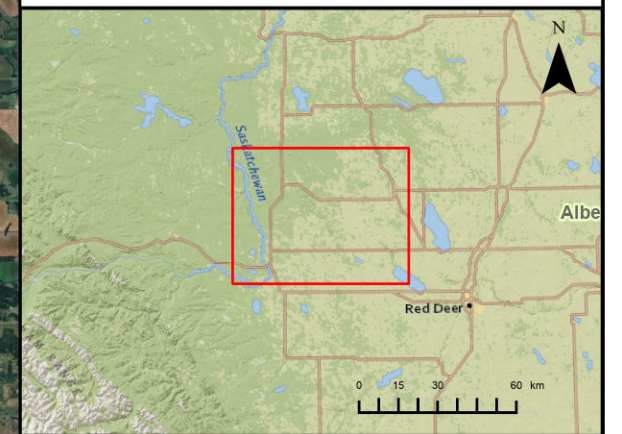
Parks and Protected Areas



Project Centre



Parks and Protected Areas



Coordinate System: NAD1983 CSRS 10TM AEP Forest Sources: Google Imagery (Maxar), HERE, Garmin, USGS, NRCAN, Canvec

Date: 2025-12-16

Project #: 24-9987

Scale: 1:200,000

Drawing #: 7

Drawn By: E. Johnson

Checked By: L. Eichinger

