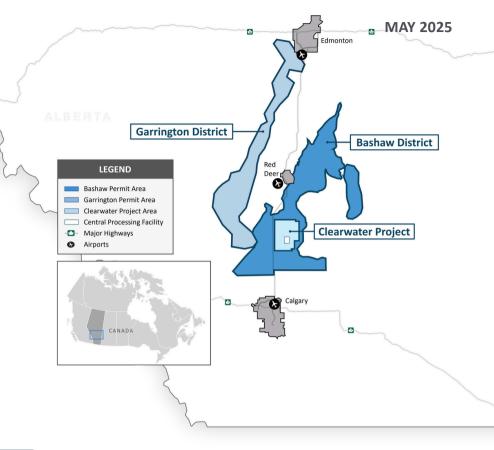
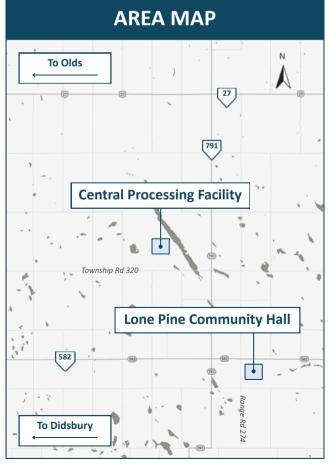
## WELCOME

#### ABOUT E3 LITHIUM

E3 Lithium is a leader in Canadian lithium, with the country's most advanced brine development and largest high-confidence lithium resources. Located in Alberta, the heart of Canada's energy sector, the company is advancing the Clearwater Project, which is set to become a significant North American lithium producer. Leveraging proven technology, strong global partnerships, and a commitment to sustainability, E3 Lithium aims to deliver high-purity, battery-grade lithium for the intercontinental critical mineral supply chain.





#### STAKEHOLDER ENGAGEMENT OVERVIEW

E3 Lithium is committed to transparent, proactive, and meaningful stakeholder engagement that values community input and supports local development. As we move forward with our first commercial development, the Clearwater Project, ongoing dialogue and consultation with stakeholders remains a key priority.

This Open House offers an opportunity to learn more about E3 Lithium, the Clearwater Project, and the Central Processing Facility. While we aim to provide as much information as possible at this stage, some details are still being finalized due to the early phase of the regulatory process.

If your questions or concerns are not addressed during the event, we encourage you to contact us at <u>land@e3lithium.ca</u> to arrange a follow-up discussion with the Stakeholder Relations Team.

We appreciate your interest and participation as we continue to shape the future of lithium development in Alberta.

## E3 LITHIUM

## 2. LITHIUM 101

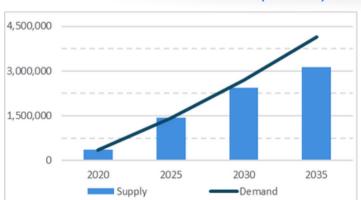
#### **ABOUT LITHIUM**

- Lithium is a stable and non-hazardous metal that can be found in various forms, including brines, hard-rock deposits, and clays
- It is part of the alkali metals (salt) group, which includes sodium, potassium, rubidium, cesium, and francium
- 77% of lithium production (all forms) is currently sourced from Australia, South America, and Africa, with upwards of 80% processed in China
- There are various types of lithium products, and many different applications for the mineral, including lithium hydroxide, lithium metal, and lithium carbonate
- E3 Lithium will produce lithium carbonate from the lithium-enriched Leduc brine

#### **BENEFITS FOR ALBERTA**

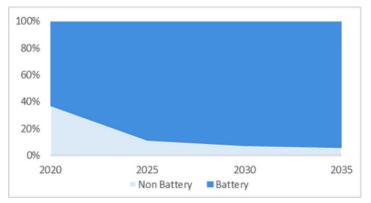
- **Employment:** Several skilled workers will be expected during construction, in addition to an estimated 150+ permanent workers on site at full operational capacity
- Services: Numerous services to be provided by CAOEC and Enserva member companies, including drilling and well servicing requirements to provide ongoing rig fleet activity
- Investment: More than \$2.5B in total capital investment in the project area, contributing to local tax revenues
- **Revenue:** A significant estimated potential royalties paid (Crown + Freehold) over the total life of the project
- Security: Lithium is included in the list of Critical Minerals in both Canada and the U.S. due to its importance in securing regional supply chains to increase energy independence

The total global demand for lithium is expected to double by 2030, largely driven by rising battery demand from the electric vehicle ("EV") sector, and will outpace lithium supply by 2027



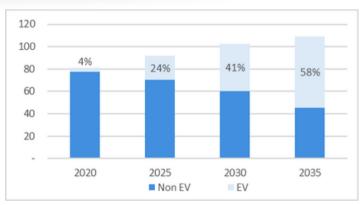
### GLOBAL LITHIUM SUPPLY & DEMAND (TONNES)

#### EV vs NON-EV LITHIUM USE (% OF GLOBAL DEMAND)

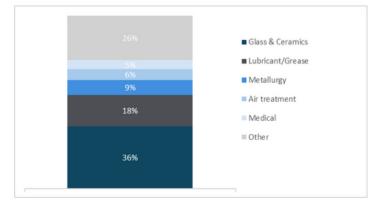


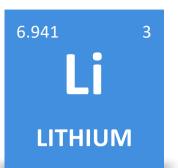
1. Benchmark Minerals Intelligence Lithium Forecast Report Q1 2025

### **GLOBAL DEMAND BY TYPE (TONNES)**



#### NON BATTERY USES OF LITHUM





### **3. REGULATORY**

ALBERTA ENERGY REGULATOR OVERVIEW

The Alberta Energy Regulator ("AER") is the provincial body responsible for regulating energy resource developments in Alberta, including oil and gas and emerging resources such as geothermal, helium, and lithium extracted from subsurface brine. Its role is to ensure that all energy projects are developed safely, responsibly, and with care for the environment and surrounding communities.

#### LITHIUM-IN-BRINE REGULATORY PROCESSESS

Alberta's lithium-in-brine approval process is largely modeled on the province's existing oil and gas regulatory framework. This means the process is familiar, well-tested, and built on decades of experience. While lithium development is governed by slightly different legislation, the Mineral Resources Development Act ("MRDA") instead of the Oil and Gas Conservation Act ("OGCA"), the core rules and environmental standards set by the AER remain the same.

#### **COMPLIANCE AND OVERSIGHT**

Lithium projects in Alberta must comply with a range of AER directives, including those related to infrastructure licensing (well, facilities, and pipelines), groundwater protection, spill and emissions reporting, and site reclamation. E3 Lithium plans to adhere to these directives through detailed planning, regular reporting, and third-party reviews, ensuring that all activities meet the province's high standards for safety, environmental protection, and operational integrity.

#### LIABILITY SECURITY

The AER has implemented a comprehensive liability management framework to ensure companies have the funds to safely close, remediate, and reclaim energy sites throughout their lifecycle.

#### **Environmental Protection and Enhancement Act Requirements**

Under the Environmental Protection and Enhancement Act ("EPEA"), industrial projects must meet a range of environmental approval requirements before construction begins. This includes:

- Submitting a comprehensive environmental approval application;
- Conducting baseline studies (water, soil, wildlife, noise);
- Preparing impact assessments and mitigation plans;
- Developing a decommissioning and reclamation plan;
- Engaging in stakeholder consultation: and
- Complying with ongoing monitoring, reporting, and approval conditions.

These requirements ensure responsible development, environmental protection, and proper site closure.

TARGET TIMELINES AND APPROVALS REQUIRED FOR THE CLEARWATER PROJECT <sup>1</sup>	
Directive 56: Wells & Pipelines	100 business days
Directive 56: Facility	100 business days
Directive 65 & 51: Resource Applications	30 business days
Environmental Protection and Enhancement Act	180 business days
Alberta Utilities Commission: Rule 7	Up to 290 days
Municipal Development Permit	Up to 90 days
Water Act Approval	60 days
Safety Codes Act Approvals	30 days
Alberta Transportation	90 days

1. Alberta Energy Regulator, Applications Target Timelines, 2025

## E3 LITHIUM

## 4. SUBSURFACE & GEOLOGY

#### ENHANCED GROUNDWATER PROTECTION MEASURES

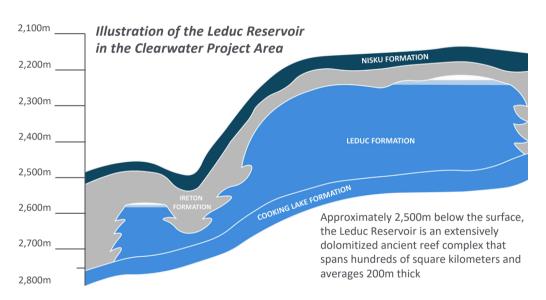


**Surface Casing:** The surface casing is set far below the base of the groundwater to provide a physical barrier between drilling activities and freshwater zones



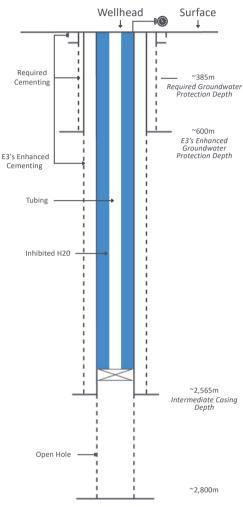
**Cemented Wells:** Both surface and production casing are fully cemented in place to ensure the groundwater is sealed off from well operations

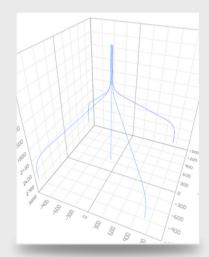
**Ongoing Monitoring:** Annular pressure monitoring and regular inspections of the casing and annulus help maintain well integrity and prevent any potential exposure



#### Proposed Design for Producer and Injector Wells

**MAY 2025** 





Bottom-Hole Locations from a Single Surface Wellpad

### WELLS & DRILLING

#### WELL PAD CONSTRUCTION

The project will include several well pads, each initially measuring approximately 160m x 120m, which will be reduced in size for operations

#### SURFACE EQUIPMENT

Production wells will be equipped with electric submersible pumps, and each pad will include a transformer, motor control centre, and electrical building **DRILLING CONFIGURATION** 

Each pad will host up to five directionally drilled wells in an "S" pattern to vertically intersect the Leduc Reservoir

#### **RECLAMATION ACTIVITIES**

All well pads will be fully reclaimed to their original use upon decommissioning using stored subsoil and topsoil

## E3 LITHIUM

## **5. GATHERING SYSTEMS**

#### **PIPELINE SPECIFICATIONS & COMPLIANCE**

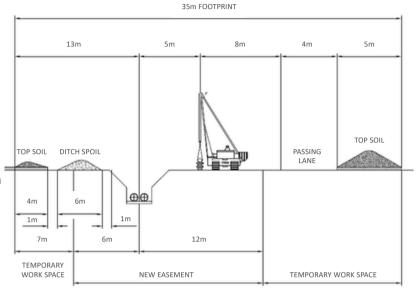
In compliance with all applicable regulations, E3 Lithium anticipates using the following pipeline components and materials:

- **Size:** Pipeline sizes will range from 8 inches to 24 inches, dependent on flow requirements and design specifications
- Material: Composite reinforced piping, most likely fiberglass, will be used due to its strength and corrosion resistance
- **Configuration:** Each right-of-way includes two pipelines, one for production and one for injection
- Installation Depth: Pipelines will be installed below the frost line, with a minimum cover depth of 1.2m
- Installation Method: Open trench for general installation and directional drilling for road and watercourse crossings

#### **EMERGENCY SHUTDOWN VALVES**

Emergency Shutdown Valves ("ESDVs") are a critical component of E3 Lithium's safety system, designed to automatically isolate sections of pipeline if a leak is detected. Any abnormal activity recognized by the pressure sensors and leak detection system will activate the ESDVs, trigger alarms in the control room, and send email and SMS notifications to key personnel. Upon alert, the system initiates emergency response protocols including verification and issue identification to ensure timely action and minimize potential impacts.

#### Proposed Trench Schematic



#### WELL PAD LOCATIONS & PIPELINE ROUTES

Well pad locations and pipeline routes will be surveyed in 2026. The planning process will take into account several important factors, including proximity to local residences, direct consultation with landowners, and design considerations to minimize impact and support responsible development.

For questions surrounding well pad locations and pipeline routes, please contact <u>land@e3lithium.ca</u>.



Example of FOS technology On-Pipe External Deployment

### LEAK DETECTION TECHNOLOGY

**PIPELINE MONITORING TECHNOLOGY** Fiber Optic Sensing ("FOS") technology will be installed along all production and injection pipelines, enabling continuous monitoring across the route

#### **SENSING CAPABILITIES**

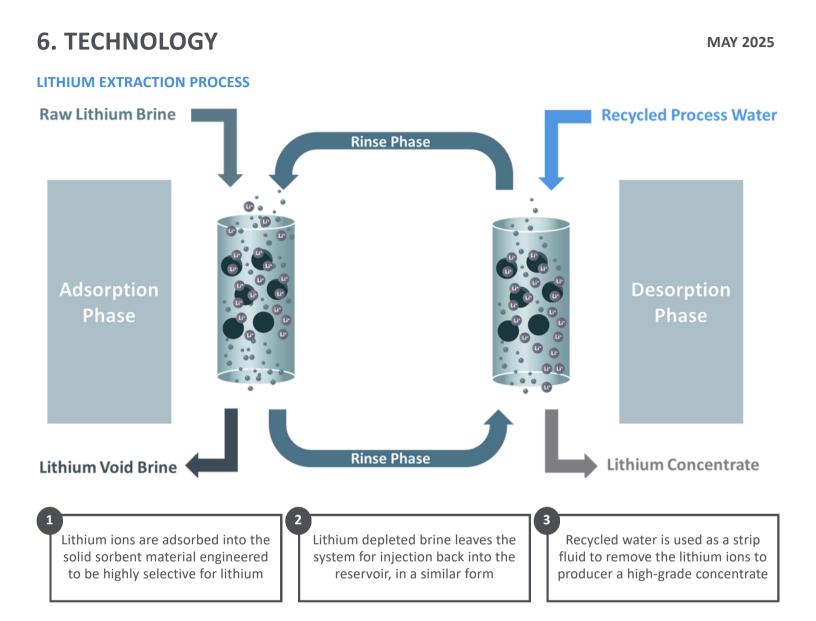
FOS technology detects changes in temperature, vibration, strain, and acoustics, allowing for early detection of even the smallest, most subtle leaks

#### **INTEGRATION & COVERAGE**

FOS systems integrate easily during construction and deliver full-length coverage without requiring individual sensors or complex infrastructure

#### **SAFETY & EFFICIENCY**

Enabling the early detection of pipeline anomalies, FOS improves operational safety, reduces environmental risk, and supports faster incident response





Battery-Quality Lithium Carbonate Produced from Leduc Brine

### **PROCESS CHEMICALS**

#### HYDROCHLORIC ACID (HCI) Commonly used in metal cleaning and food processing, and is used in process operations for pH adjustment and resin regeneration

**SODA ASH (Na₂CO₃)** Commonly used in glass manufacturing and water treatment and is used in process operations for the production of battery-quality lithium carbonate

#### **CAUSTIC SODA (NaOH)**

Commonly used in water treatment and soap manufacturing, and is used in process operations for ion exchange regeneration

### LITHIUM CARBONATE (Li<sub>2</sub>CO<sub>3</sub>)

A white, odorless powder used in lithium battery production which has a low acute toxicity, classified as practically non-toxic

## 7. CENTRAL PROCESSING FACILITY

**MAY 2025** 



This image is a graphical representation of the Central Processing Facility, and may not represent the final facility process or design

#### **CENTRAL PROCESSING FACILITY OVERVIEW**

At full capacity, the Central Processing Facility ("CPF") is designed to produce approximately 36,000 tonnes per annum of lithium carbonate equivalent. The brine produced through the CPF is highly saline and contains 75 ppm of lithium.

#### **OPERATIONS & LOGISTICS**

E3 Lithium has secured an option to purchase a brownfield site for the CPF. This chosen site is close to existing power grids, transportation corridors, and a highly skilled local workforce. The CPF will operate 24 hours a day, yearround and support approximately 100 on-site jobs.

#### PHASED DEVELOPMENT APPROACH

The CPF will be developed in three phases. The first phase will likely include the majority of the infrastructure that cannot be easily scaled to a smaller size and will produce approximately 12,000 tonnes per annum of lithium carbonate equivalent.

#### **NOISE MITIGATION**

The CPF will undergo a noise impact assessment to ensure regulatory compliance, with major equipment designed to minimize noise. Mitigation may include baffles and mufflers, sound-insulated buildings, double-pane windows, and cooler orientation. The noise levels will be assessed after commissioning to confirm compliance.

### **ENVIRONMENTAL CONSIDERATIONS**

#### WATER MANAGEMENT

The CPF will employ a "zero liquid discharge" philosophy, using recycled plant water and lithiumdepleted brine for all process operations, eliminating the reliance on external water sources and creating a fully closed-loop system.

#### **CARBON CAPTURE**

Co-generation will provide efficient power and steam for process systems and potential carbon capture and sequestration will help reduce emissions in future development phases.

#### LAND USAGE & RECLAMATION

The CPF will seek to minimize its land footprint by repurposing a former industrial site, avoiding the need for tailings ponds or waste piles, and committing to full site reclamation once operations conclude.

### 8. MINERAL RIGHTS

#### **OVERVIEW OF MINERAL RIGHTS IN ALBERTA**

In Alberta, approximately 81 per cent of mineral rights are owned by the Crown, with the remaining 19 per cent classified as "freehold" mineral rights, held by private individuals, corporations, the federal government, and descendants of original homesteaders. The mineral rights owner holds the legal entitlement to all mineral substances located on and beneath the surface of the property.<sup>1</sup>

#### **LEGACY OF OIL & GAS OPERATIONS**

The Clearwater Project area has a legacy of more than 75 years of oil and gas development. Currently, most of the remaining producing assets are considered mature and approaching the end of their operational life. Freehold mineral rights owners who previously leased their oil and gas rights still retain the ability to lease their lithium rights, even while continuing to receive royalties from existing oil and gas operations.

### MINERAL RIGHTS IN THE CLEARWATER PROJECT AREA

Mineral rights in the Clearwater Project area are held by a combination of the Crown, Imperial Oil Ltd., oil and gas companies, and private freehold owners. To date, E3 Lithium has secured mineral rights for approximately 93 per cent of the Clearwater Project area, through agreements with both the Crown and Imperial Oil Ltd. The company is currently working to establish lease agreements with the remaining freehold mineral rights holders.

#### Interested in Leasing Your Lithium Rights?

Lithium leases follow a similar structure to traditional oil and gas leases, typically including:

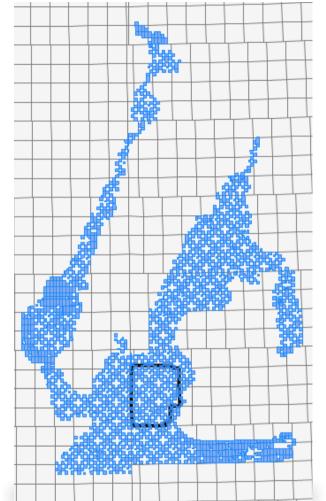
- A bonus payment upon signing;
- A defined lease term; and
- A monthly royalty payment once lithium production begins.

To learn more about lithium leasing, please contact <u>land@e3lithium.ca</u>.

### PROCUREMENT

E3 Lithium's procurement strategy is designed to secure high-quality, cost-effective goods and services while maintaining strict adherence to applicable laws, health and safety regulations, and environmental standards. This strategy uses a structured approach to evaluate suppliers based on defined criteria, including insurance coverage, Workers Compensation Board ("WCB") certification, Certificate of Recognition ("COR") safety competency, and overall cost. Potential vendor and contracting opportunities include earthworks and excavation, waste management, drilling and completions services, mechanical contracting, safety personnel, surveying, well operations, and water trucking and hauling.

Contractors are encouraged to scan the QR code to register for future opportunities.



E3 Lithium's Crown Mineral Rights Licenses in Alberta

