



# **Rose Lithium-Tantalum Project**

**Annual report 2024**

**Presented to :**

**Canadian Impact Assessment Agency  
and  
Cree Nation Government**

**By :**

**Critical Elements Lithium Corporation**

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## Summary

Since the federal Decision Statement was issued on August 21, 2021, Critical Elements Lithium Corporation ("Critical Elements") has continued its efforts at the provincial level, and on October 31, 2022, the certificate of authorization was issued by the Quebec Ministry of the Environment.

Critical Elements is working on the detailed engineering of the Rose lithium-tantalum project (the "Project"). Consultants have been retained to develop the required pre-construction monitoring programs and action plans, in accordance with the terms of the Decision Statement (the "Decision") and Certificate of Authorization.

Consultations were held with the communities of Eastmain and Nemaska as part of the development of these programs. In 2024, additional field work was carried out for groundwater, avifauna and chiropteran inventories.

Based on an analysis of alternatives and an impact assessment, a new location for the workers' camp was identified. This proposal was approved by the Quebec Ministry of the Environment on August 6, 2024. The Canadian Impact Assessment Agency (the "Agency") is continuing its analysis and consultations for the amendment of the project description for this camp. In 2024, Critical Elements made progress in transmitting documents in response to the conditions set out in the Decision and Certificate of Authorization.

Critical Elements has obtained occupancy leases from the Ministère des Ressources naturelles et des Forêts ("MRNF") and environmental discharge objectives for Lakes 3, 4 and 6, as well as for the camp. Other permit applications are under analysis. While working to complete the financing of the Project, Critical Elements will continue work and consultations in 2025 to meet the requirements of the Decision and Certificate of Authorization.

## 1. Introduction

Critical Elements is proposing the construction, operation and decommissioning of an open-pit lithium and tantalum mine on the territory of the Regional Government of Eeyou Istchee, on the traditional lands of the Cree Nation of Eastmain, approximately 38 kilometers north of Nemaska (Figure 1).

As proposed, the Project includes open pit mining, waste rock and tailings management areas, and an industrial ore processing facility. Infrastructure includes access road, camp, explosives and detonator storage, maintenance garage, diesel and gasoline storage, main electrical substation, fresh and potable water supply, wastewater treatment system, surface water management infrastructure with final effluent treatment plant, communications system, guardhouse and administration building.

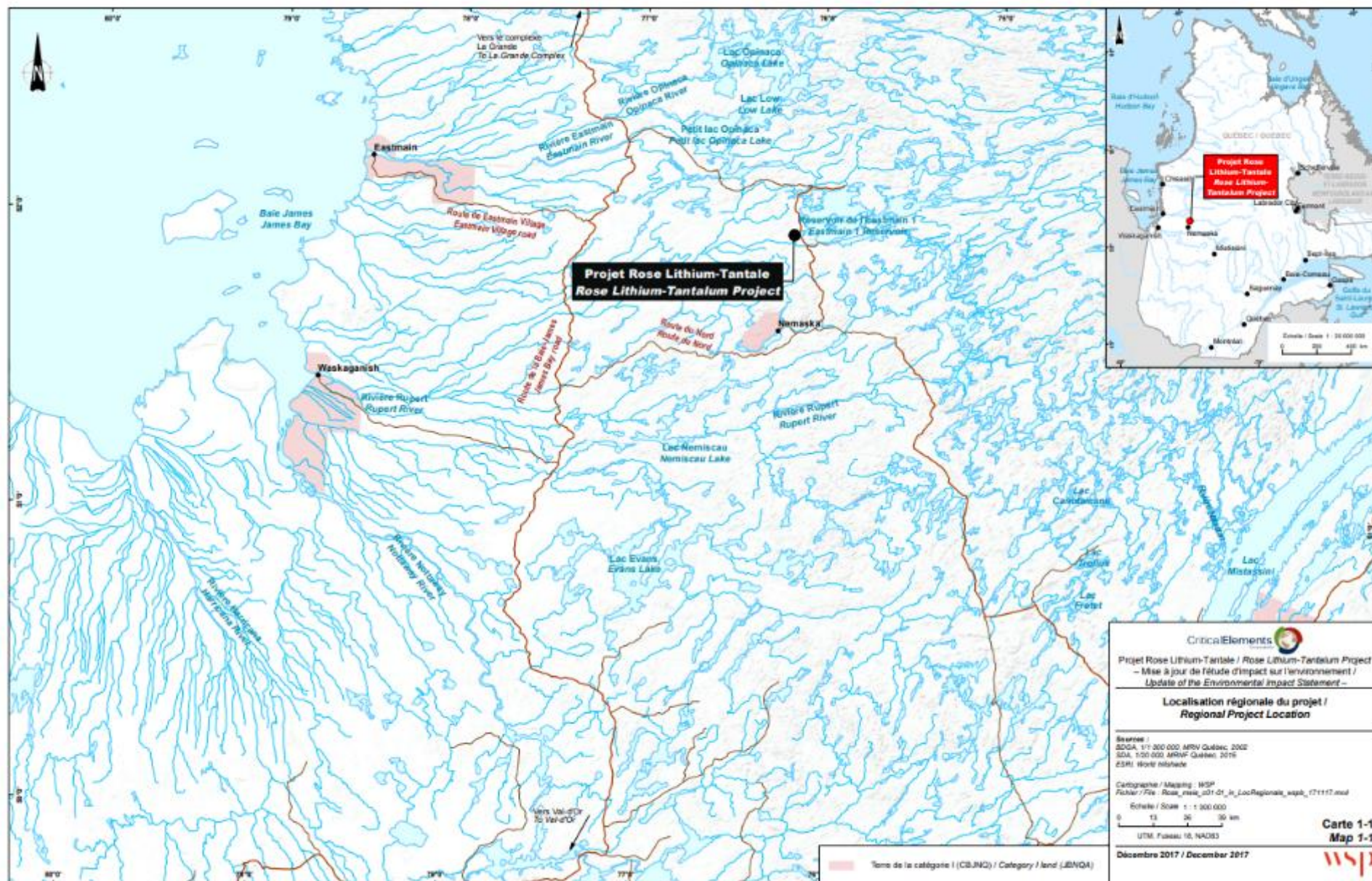
The mine would produce approximately 4,500 tonnes of ore per day over a mine life of more than 17 years. The Project would have a total life of 26 years, including the construction and reclamation phases.

The Decision Statement ("Decision") issued under section 54 of the Canadian Environmental Assessment Act, 2012 to Critical Elements for the Lithium-Tantalum Rose Project was signed on August 21, 2021 by Canada's Minister of the Environment and Climate Change. The Decision contains 12 conditions to be met, many of which must be implemented before construction begins, and requires consultation with third parties such as First Nations.

At the provincial level, Certificate of Authorization 3214-14-053 ("CA") was issued on October 31, 2022 by the Ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs ("MELCCFP"). An amendment to the CA was obtained on August 6, 2024 to add the workers' camp and borrow pits. The certificate and its amendment include 28 conditions to be met, many of which must be implemented prior to the first ministerial authorization allowing construction. The first annual environmental and social monitoring report will be submitted to the provincial administrator when this program is implemented

In accordance with articles 2.11 to 2.13 of the Decision, Critical Elements submits to the Agency and the Cree Nation Government an annual report summarizing the work carried out, the results obtained and the implementation of the Project. This third annual report is available in both official languages and will be submitted no later than March 31, 2025.

**Figure 1** Location of the Rose lithium-tantalum property





## 2. Project Implementation

The project is in the pre-construction phase. In parallel with the search for funding, detailed engineering is continuing. Several programs and action plans have been drawn up and are discussed in Chapter 4. Some studies have been updated, and additional characterization work has been carried out, and is presented in Chapter 5.

### Entente Pihkuutaau

As part of the Pihkuutaau Impact and Benefits Agreement signed in 2019, an Implementation Committee and an Environmental Committee have been formed. Critical Elements can discuss various aspects of the mining project with community representatives, and to address any questions or concerns raised.

Over the course of 2024, several meetings and discussions were held with tallymen, notably concerning fish compensation plans and the environmental and social follow-up program. Details of the consultation process are presented in Chapter 3 of this report

### Authorizations

During 2024, several authorizations were issued. Table 1 lists the authorizations issued.

**Table 1** List of Authorizations issued

Date	Issued by	Description
2024-01-25	MELCCFP	Environmental objectives for discharges to lakes 3, 4 and 6
2024-01-29	MRNF	Occupancy lease for the co-disposal hall
2024-01-29	MRNF	Occupancy lease for the storage of explosives
2024-01-29	MRNF	Occupancy leases for mining infrastructures
2024-08-01	MELCCFP	Environmental targets for camp waste
2024-08-06	MELCCFP	Modification #1 certificat d'autorisation globale
2024-10-07	MRNF	Occupancy lease for the camp

MELCCFP: Ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs (Ministry of the Environment, the Fight against Climate Change, Wildlife and Parks)

MRNF: Ministère des Ressources naturelles et des forêts (Ministry of Natural Resources and Forestry)

Further applications were submitted to the MELCCFP in 2024 for ministerial authorizations to develop construction areas for the mine and to establish the permanent camp. These permits are expected to be issued in 2025.

### Workers Camp

As mentioned in the 2023 annual report, Critical Elements has selected a new site about 3 km from the mine, along the Nemiscau-Eastmain 1 Road. Figure 2 shows the location of the worker's camp. In addition to being close to the mining facilities, which will limit long daily commutes for workers, it will reduce greenhouse gas ("GHG") emissions and minimize the negative effects of road traffic, as well as enhancing the safety of road users. During peak construction of the mine site, there will be close to 500 employees at the camp, while during operations the camp will accommodate approximately 250 employees.

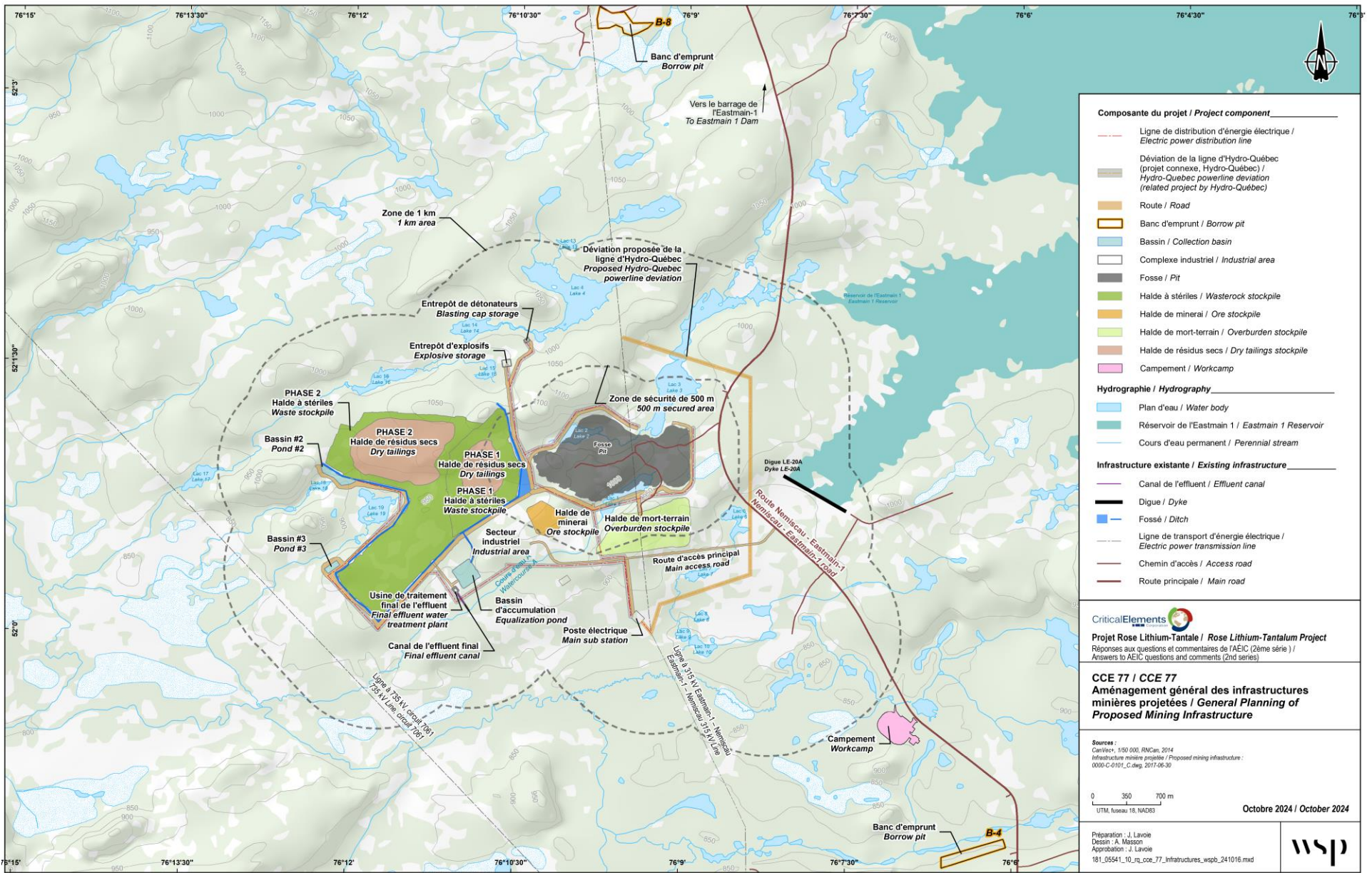
Following the study submitted to the MELCCFP in October 2023, an amendment to the CA was obtained. In addition, the Critical Elements team advanced its detailed engineering for the design of the permanent camp, and finalized the choice of technologies for drinking water and domestic wastewater treatment. With this information, a request for ministerial authorization was filed with the MELCCFP, covering the construction and operation of a permanent camp, more specifically site preparation, infrastructure construction and operation. In terms of activities during the construction and operating periods, the schedule is presented, along with the various activities likely to result in the release of contaminants or a change in environmental quality.

The worker's camp includes several major infrastructures requiring plans and specifications. These main infrastructures and facilities include surface water management, groundwater withdrawal, water production facilities for human consumption with aqueduct systems, as well as domestic wastewater treatment facilities (temporary and permanent) with sewer systems.

### Fieldwork

During 2024, Critical Elements updated the bird and chiropteran inventories that had to be postponed last year due to the forest fires. Groundwater sampling was also carried out. The results are presented in Chapter 5.

Figure 2 General layout of the mine site and proposed camp





### Next steps

While working to complete the financing of the project, Critical Elements will continue work and consultations in 2025 to meet the requirements of the Decision Statement and Certificate of Authorization.

## 3. Consultations

Condition 2.4 of the Decision Statement specifies the formalities surrounding the community consultation process. This process involves informing and gathering input from the Cree Nation of Eastmain, the Crees of the Waskaganish First Nation, the Cree Nation of Nemaska and/or the Cree First Nation of Waswanipi. As mentioned in condition 2.5, Critical Elements held discussions with representatives of the First Nations to agree on how to meet the requirements. According to condition 13 of the Certificate of Authorization, tallymen must be consulted regarding their interest in participating in the fishery planned prior to the dewatering of lakes 1 and 2. This meeting took place on July 17, and the interest is to be informed at the time of the fishing and to relocate the fish in Eastmain-1 reservoir if possible.

Table 2 lists the various meetings with dates, locations and activities that took place in 2024. The consultation process is still ongoing for various programs and action plans. Further consultations are planned for 2025.

In 2024, a series of community meetings were held to introduce the Critical Elements team and, more specifically, to consult community members on the environmental and social follow-up program and the transportation plan. A general project update was also presented. Questions and concerns focused on water quality during operations, establishing a hunting perimeter to ensure everyone's safety, wildlife protection during concentrate haulage to the transshipment yard, and commercial contract opportunities. The most common concern was the safety of users of the Billy Diamond and Route du Nord when transporting concentrate. These concerns will be addressed in the transportation plan..

**Table2** List of meetings and consultations

<b>Date</b>	<b>Location</b>	<b>Participants</b>	<b>Topics</b>	<b>Concern / comments</b>
January 17, 2024	Teleconference	Alvin Cheezo (Eastmain) Jean-Philippe Roux-Groleau (Nemaska) Graeme Morin (CNG) Eva-Maria Hanchar (CNG) Nancy Duquet-Harvey (Critical Elements) Sébastien Perreault (Critical Elements)	Environment Committee - Monitoring programs - Part 4	Follow-up with tallymen on traditional use of territories in the follow-up program. Mitigation measures put in place for concentrate transportation must be applied to other types of transport.
January 30, 2024	Eastmain	Community Nancy Duquet-Harvey (Critical Elements) Lloyd Mayappo (Critical Elements) Andy Fortin (Critical Elements)	Community consultation – Environmental and Social Monitoring program, update on the Rose project (including the new worker camp) and transportation	Availability of transportation for Eastmain community members not residing in Eastmain.
January 30, 2024	Eastmain	Ernie Moses - Tallyman RE01 Nancy Duquet-Harvey (Critical Elements) Lloyd Mayappo (Critical Elements) Andy Fortin (Critical Elements)	Review Environmental and Social Monitoring Program and Transportation Plan	Water management during operation.

<b>Date</b>	<b>Location</b>	<b>Participants</b>	<b>Topics</b>	<b>Concern / comments</b>
February 24, 2024	Teleconference	Chief Clarence Jolly (Nemaska) Deputy Chief Teddy Wapachee (Nemaska) Jean-Philippe Roux-Groleau (Nemaska) George (Jodge) Wapachee (Tallyman R19) Tanya Lamoureux (Nemaska) Aaron Jolly (CEO NDC - Nemaska) Jean-Sébastien Lavallée (Critical Elements) Yves Perron (Critical Elements) Nancy Duquet-Harvey (Critical Elements) Andy Fortin (Critical Elements)	Project Update, Environmental and Social Monitoring program and transportation	Liaison officer not present enough in Community - suggest hiring Nemaska rep for the operations
February 28, 2024	Teleconference	Alvin Cheezo (Eastmain) Eva-Maria Hanchar (CNG) Graeme Morin (CNG) Tanya Lamoureux (Nemaska) Aurora Maria Hernandez (CNG) Nancy Duquet-Harvey (Critical Elements) Sébastien Perreault (Critical Elements)	Environment Committee - Meeting #5	Have committee members review the consultation section of the annual report ahead of its publication. Include, where possible, community members input for additional compensation measures
March 18, 2024	Waskaganish	Community Nancy Duquet-Harvey (Critical Elements) Andy Fortin (Critical Elements) Lloyd Mayappo (Critical Elements)	Community consultation - Environmental and Social Monitoring program, Project update (including new worker camp), Transportation	Ensure to properly communicate the hunting perimeter outlining the 'no hunting' zone. Safety and road maintenance on the Billy Diamond Highway

<b>Date</b>	<b>Location</b>	<b>Participants</b>	<b>Topics</b>	<b>Concern / comments</b>
March 19, 2024	Nemaska	Community Nancy Duquet-Harvey (Critical Elements) Andy Fortin (Critical Elements)	Community consultation - Environmental and Social Monitoring program, Project update (including new worker camp), Transportation	Safety and road maintenance of the Route du Nord and the Billy Diamond highway due to concentrate transport. Mitigation measures to limit collisions between transports and fauna..
April 24, 2024	Teleconference	Tanya Lamoureux (Nemaska) Lucas del Vecchio (CNG Alternate) Yves Perron (Critical Elements) Nancy Duquet-Harvey (Critical Elements) Andy Baribeau (GCC(EI)/CRA) Andy Fortin (Critical Elements)	Implementation Committee - informal meeting	Mitigation measures to establish a no-hunting, no-fishing policy to reduce the impact on hunting and fishing on the RE01 territory. Retention plan for Cree employees Contract opportunities section of IBA must be well understood.
May 6, 2024	Teleconference	Aurora Maria Hernandez (CNG) Graeme Morin (CNG) Nancy Duquet-Harvey (Critical Elements) Paule Blanchet (WSP)	Preliminary discussion of additional Fisheries Compensation Measures	Ensure that proposed compensation measures don't have a greater impact considering the past mining activities.
May 27, 2024	Teleconference	Jarred Benac (Waswanipi) Nancy Duquet-Harvey (Critical Elements)	Project Update, New Workers Camp Location, Communication Plan	



<b>Date</b>	<b>Location</b>	<b>Participants</b>	<b>Topics</b>	<b>Concern / comments</b>
May 31, 2024	Val-d'Or	Norman Cheezo (Eastmain) Lucas Del Vecchio (CNG) Alvin Cheezo (Eastmain) Georges (Jodge) Wapachee (Nemaska) Tanya Lamoureux (Nemaska) Yves Perron (Critical Elements) Nancy Duquet-Harvey (Critical Elements) Andy Baribeau (GCC(EI)/CRA) Andy Fortin (Critical Elements) Sébastien Perreault (Critical Elements)	Implementation Committee - Meeting #4	Project Update Environment & Transportation update Timing for Business Sub-committee
May 31, 2024	Val-d'Or	Alvin Cheezo (Eastmain) Kenneth Tanoush (Nemaska) Norman Cheezo (Eastmain) Eva-Maria Hanchar (CNG) Graeme Morin (CNG) Tanya Lamoureux (Nemaska) Aurora Maria Hernandez (CNG) Yves Perron (Critical Elements) Nancy Duquet-Harvey (Critical Elements) Sébastien Perreault (Critical Elements) Andy Fortin (Critical Elements)	Environment Committee - Meeting #6	Summary of 2023 Annual Report Community Meeting Outcomes Communication Plan & Emergency Response Plan Summary
July 17, 2024	Val-d'Or	Ernie Moses - Tallyman RE01 & Nancy Duquet-Harvey (Critical Elements) Andy Fortin (Critical Elements) Lloyd Mayappo (Critical Elements)	Project Update, Hunting perimeter, Fishout Lake 1, Place Name Glossary	Exploration activity notification to be in writing, water quality is most important for traditional foods

<b>Date</b>	<b>Location</b>	<b>Participants</b>	<b>Topics</b>	<b>Concern / comments</b>
July 31, 2024	Teleconferencing	Graeme Morin (CNG) Jean-Philippe Roux-Groleau (Nemaska) Eva-Maria Hanchar (CNG) & Nancy Duquet-Harvey (Critical Elements) Sébastien Perreault (Critical Elements)	Additional meeting of the Environment Committee to review current actions	Quorum not reached - minutes to be approved at August meeting.
August 13, 2024	Eastmain	Alvin Cheezo (Eastmain) Lucas Del Vecchio (CNG alternate) Yves Perron (Critical Elements) Nancy Duquet-Harvey (Critical Elements) Andy Fortin (Critical Elements)	Implementation Committee - Meeting #5	Project Update, Hunting Perimeter, Water Management presentation.
August 14, 2024	Eastmain	Alvin Cheezo (Eastmain) Graeme Morin (CNG) Kenneth Tanoush (Nemaska) Eva-Maria Hanchar (CNG) Nancy Duquet-Harvey (Critical Elements) Sébastien Perreault (Critical Elements) Yves Perron (Critical Elements)	Environment - Meeting #7	Hunting perimeter Mitigation measures for dust mitigation and geese

## 4. Programs and Action Plans

Critical Elements consulted during 2024 on several programs to address the conditions of the Decision Statement and Certificate of Authorization. The main programs are presented below.

### 4.1 Environmental and Social Monitoring Program

Critical Elements commissioned WSP to develop an environmental and social monitoring program that would ensure compliance with all measures taken during the environmental assessment, reduce any significant residual effects identified and comply with regulations.

This program includes several action plans to meet the conditions set out in the environmental and social impact analysis report of the provincial Certificate of Authorization, and in the Decision of Environment and Climate Change Canada.

As mentioned in the previous section, the monitoring program was presented to the communities and to the Environmental Committee. Government agencies such as Health Canada, Environment and Climate Change Canada, Cree Nation Government, Cree Board of Health and Social Services of James Bay were consulted regarding the monitoring program. Comments received will be added to the monitoring program before being submitted to the IAAC when the process is completed.

### 4.2 Fish compensation plan

In November 2023, Critical Elements submitted an updated fisheries compensation plan developed as part of the environmental assessment. Following the update of the hydrogeological study, the impact of the lowering of the water table is reduced, and consequently so are the affected water bodies. Habitat losses are now estimated at just under 27 ha.

Following an analysis by Fisheries and Oceans Canada, compensation measures were deemed insufficient for the losses caused by the Project. Following additional field work, community consultations and the Cree Nation Government, an updated compensation plan was submitted in October 2024.

To compensate for habitat losses, Critical Elements proposes the following projects (presented in the 2023 annual report):

- Development of a lake sturgeon spawning ground on the Eastmain River with financial participation in a research project on lake sturgeon in the Eastmain River.
- Development of brook trout spawning grounds on streams in the vicinity of the proposed mine site.
- Financial participation in a research project on lake sturgeon in the River

Critical Elements added the following project in 2024:

- Rehabilitation of three culverts in the Chibougamau area to restore free movement of fish and improve habitats for species of interest.

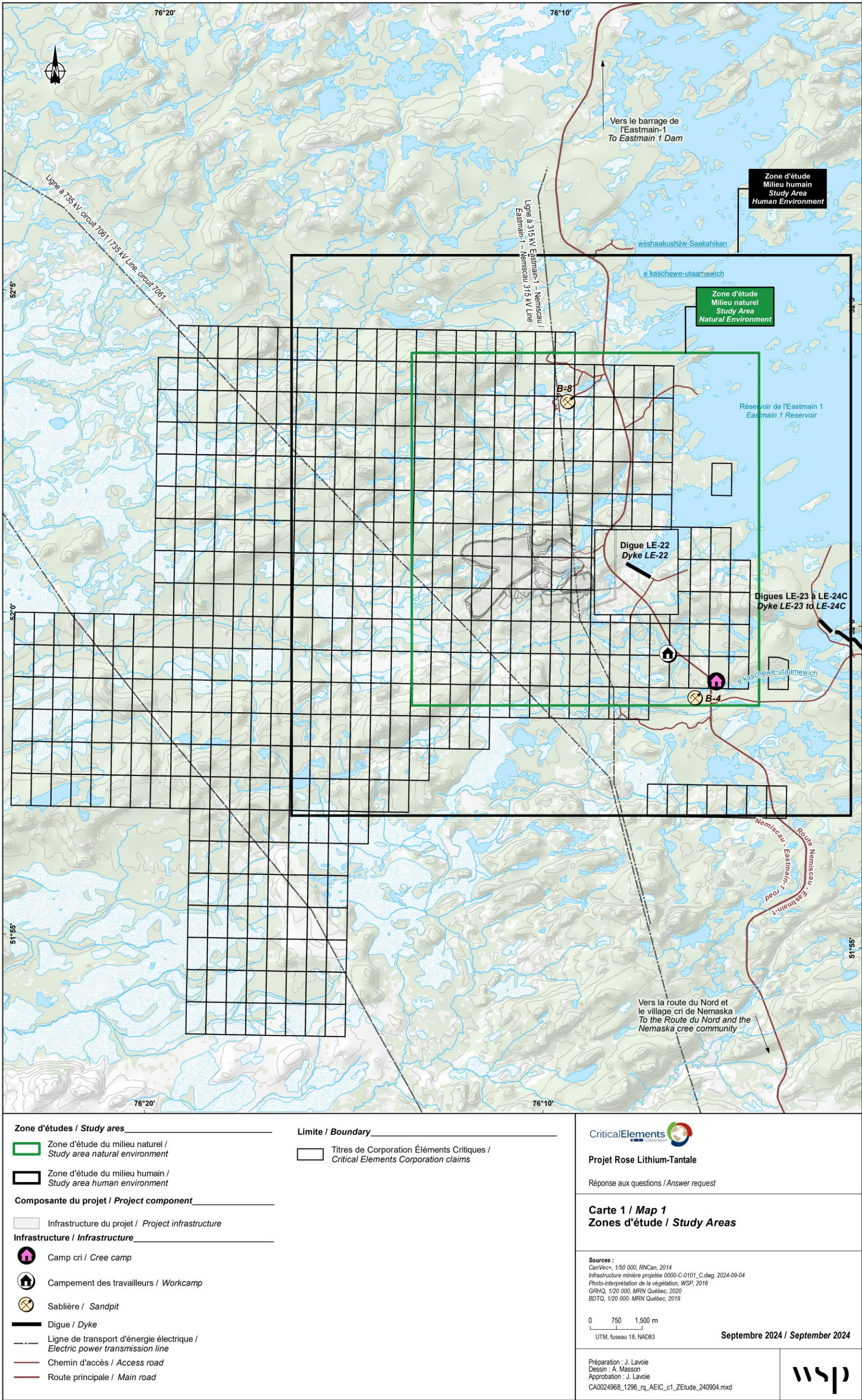
Fisheries and Oceans Canada is currently analyzing the additional projects.

### 4.3 Toponymic Glossary

A glossary of place names was developed in consultation with the Cree communities and the Department of Social and Cultural Development of the Cree Nation Government, as indicated in condition 19 of the CA. The glossary of existing Cree place names is used to identify geographic locations within the study area. From the *Knowledge Portrait (Place Names)* document, shared for the Department of Social and Cultural Development of the Cree Nation Government, a map was produced to include Cree place names in the study area of the designated project (Figure 3)



Figure 3 Study area with Cree place names





## 5. Characterization and Results

Given that the Mining Project is in the pre-construction phase, there are no specific environmental monitoring requirements. The 2024 surveys were carried out to update some of the baseline information, mainly concerning groundwater and bird inventories.

### 5.1 Groundwater

Groundwater sampling took place in May and August 2024 in the nine observation wells mentioned in the monitoring program (WSP, 2023) in order to acquire more data on the current state of this component prior to the establishment of the Mining Project (Stantec, 2024). As indicated in the monitoring program, the parameters to be analyzed were selected on the basis of site use, and include those required under Directive 019. Considering that the groundwater at the study site could resurface in surface water, the criteria applicable to the assessment of the environmental quality of groundwater are the "resurgence in surface water" (RES) criteria presented in the MELCCFP's Intervention Guide. Furthermore, given the presence of a surface water body hydraulically downstream of the site, alert thresholds equivalent to 50% of the RES criteria will be used.

During the campaign carried out in May 2024, analyses showed concentrations in excess of RES criteria for certain metals. For six of the nine samples taken, a concentration exceeding RES criteria for one or other of the following metals was noted: silver (4/9) and copper (5/9). Also, one sample showed a concentration exceeding the alert threshold for these two metals.

During the August 2024 campaign, nine observation wells were sampled. Analyses showed concentrations in excess of RES criteria for some metals. For eight of the nine samples taken, a concentration exceeding the RES criteria for one or other of the following metals was noted: silver (5/9) and copper (6/9). Also, one sample showed a concentration exceeding the alert threshold for zinc.

These results are used to establish a baseline for groundwater quality prior to the start of mine construction and operation.

### 5.2 Bird and Chiropteran Inventories

Stantec was commissioned to carry out inventories of avian fauna and chiropterans according to a previously established environmental and social monitoring protocol carried out by WSP (2023). The study area covers a total surface area of 32.6 km<sup>2</sup>. The field visits took place in four different campaigns between May 13 and August 30, 2024.

#### 5.2.1 Songbirds

A combination of two methods (DRL and IPA) was used for the diurnal bird inventories, in order to better represent the species richness of breeding birds throughout the study area. Twenty-six songbird species were counted in the listening station inventory (Table 3 ). The species with the highest number of breeding pair equivalents per hectare were White-throated Sparrow, Hermit Thrush, Alder Flycatcher and Ruby-crowned Kinglet. The habitat category with the highest number of species recorded was shrub swamp, with 17 species.

In addition to these twenty-six species, a further twenty were recorded opportunistically while moving between stations or during other work (Table 2), for a total of forty-six species. Among these opportunistic observations, one species listed as precarious status was identified: the Olive-sided Flycatcher. This species is designated as Special Concern under Schedule 1 of the SARA and Vulnerable under the LEMV. The Olive-sided Flycatcher was heard on May 25 at station SAUV-04 and on June 16 at the camp. In Canada, although Schedule 1 of the SARA lists species of special concern, prohibitions do not apply to species of special concern. In Quebec, vulnerable wildlife species and their habitats are governed by the Act respecting the conservation and development of wildlife (Chapter C-61.1) (LCMVF). The LCMVF applies wherever the individual is found, and under section 26 of the Act, no one may disturb, destroy or damage the eggs, nest or den of such a species. In the current context, the eggs and nest of the Olive-sided Flycatcher are protected. During previous inventories conducted in 2012 and 2016 by WSP (2017a), the olive-sided flycatcher, rusty blackbird and Canada warbler were not recorded.

Table 3 Number of couple equivalents (CE) per hectare (ha) by habitat category

	Espèce		Catégorie d'habitat																				
			Anthropique			Feuilleu			Marécage arbustif			Mixte			Résineux			Tourbière ombrotrophe boisée			Tourbière ombrotrophe ouverte		
			DRL		IPA	DRL		IPA	DRL		IPA	DRL		IPA	DRL		IPA	DRL		IPA	DRL		IPA
			ÉC/ha	Fréquence d'observation (%)		ÉC/ha	Fréquence d'observation (%)		ÉC/ha	Fréquence d'observation (%)		ÉC/ha	Fréquence d'observation (%)		ÉC/ha	Fréquence d'observation (%)		ÉC/ha	Fréquence d'observation (%)				
	Nom commun	Nom latin	Moyenne		ÉC (moy.)	Moyenne		ÉC (moy.)	Moyenne		Nb ind.	Moyenne		ÉC (moy.)	Moyenne		ÉC (moy.)	Moyenne		ÉC (moy.)	Moyenne		ÉC (moy.)
1	Bec-croisé des sapins	<i>Loxia curvirostra</i>						0,06	2,5											0,03	2,5		
2	Bruant à gorge blanche	<i>Zonotrichia leucophrys</i>	0,03	2,5	1	0,02	5	1	0,06	20		0,05	5	3	0,03	10	4	0,04	10	3	0,05	10	2
3	Bruant chanteur	<i>Melospiza melodia</i>										0,03	2,5										
4	Bruant des marais	<i>Melospiza georgiana</i>							0,04	15					0,03	5							
5	Griva solitaire	<i>Catharus guttatus</i>	0,03	2,5		0,03	7,5		0,05	12,5		0,05	12,5		0,03	15	2	0,04	10		0,06	10	
6	Jaseur boréal	<i>Bombycilla garrulus</i>							0,03	2,5													
7	Junco ardoisé	<i>Junco hyemalis</i>	0,03	2,5		0,03	2,5					0,04	12,5		0,03	2,5		0,05	5		0,04	10	
8	Mésange à tête brune	<i>Poecile hudsonicus</i>							0,03	7,5													
9	Mésangeai du Canada	<i>Perisoreus canadensis</i>	0,03	2,5		0,03	2,5			2,5	2	0,03	2,5								0,03	2,5	
10	Moucherolle à ventre jaune	<i>Empidonax flaviventris</i>													0,06	2,5							
11	Moucherolle des aulnes	<i>Empidonax alnorum</i>	0,06	2,5		0,03	2,5		0,03	5		0,05	5		0,03	2,5					0,03	2,5	
12	Moucherolle Tchébec	<i>Empidonax minimus</i>				0,03	7,5		0,05	10		0,04	10		0,03	2,5		0,03	2,5		0,03	2,5	
13	Paruline à couronne rousse	<i>Setophaga palmarum</i>				0,03	7,5					0,03	5		0,04	7,5		0,03	2,5				
14	Paruline à croupion jaune	<i>Setophaga coronata</i>							0,03	22,5		0,03	7,5		0,03	5		0,03	5		0,06	5	
15	Paruline à gorge orangée	<i>Setophaga fusca</i>							0,03	2,5					0,03	2,5		0,03	2,5				
16	Paruline à joues grises	<i>Leiothlypis ruficapilla</i>																0,03	2,5				
17	Paruline à tête cendrée	<i>Setophaga magnolia</i>				0,03	2,5		0,03	5					0,05	5							
18	Paruline couronnée	<i>Seiurus aurocapilla</i>							0,06	2,5													
19	Paruline des ruisseaux	<i>Parkesia noveboracensis</i>							0,06	2,5													
20	Paruline masquée	<i>Geothlypis trichas</i>	0,03	2,5					0,05	5		0,03	2,5										
21	Roitelet à couronne rubis	<i>Regulus calendula</i>				0,03	7,5		0,05	20	1	0,06	15		0,05	17,5		0,05	5		0,05	10	
22	Sittelle à poitrine rousse	<i>Sitta canadensis</i>																0,03	2,5				
23	Tétras du Canada	<i>Canachites canadensis</i>							0,03	5													
24	Troglodyte des forêts	<i>Troglodytes hiemalis</i>				0,03	2,5																
25	Troglodyte des marais	<i>Cistothorus palustris</i>							0,03	2,5													
26	Viréo solitaire	<i>Vireo solitarius</i>				0,06	2,5								0,03	2,5							
	Moyenne ÉC/ha		0,04			0,03			0,04			0,04			0,04			0,04			0,04		
	Richesse spécifique cumulative (Nb d'espèce)		6		1	11		1	17		2	11		1	13		2	10		1	9		1



### 5.2.2 Common Nighthawk

In Canada, the whip-poor-will (*Chordeiles minor*) is listed as a species of special concern on Schedule 1 of the SARA. In Quebec, the whip-poor-will is a species likely to be designated as threatened or vulnerable. Nocturnal surveys at six listening stations were carried out from June 14 to 16, 2024, to monitor the whippoorwill. The presence of the common nighthawk was confirmed at 5 locations within the study area, and based on the observations made, the species' nesting index was deemed probable. The number of probable nesting pairs in the study area would be similar to that estimated by WSP (2017a).

### 5.2.3 Short-eared owl

In Canada, the short-eared owl (*Asio flammeus*) is listed as a species of special concern on Schedule 1 of the SARA. In Quebec, this owl is one of the species likely to be designated as threatened or vulnerable. The short-eared owl inventory was carried out according to the MELCCFP (2024) protocol. Five survey stations were visited twice, in May and June. The presence of short-eared owls was not confirmed during these surveys. However, a nocturnal raptor was observed in flight at station CS-S4 during the chiropteran survey carried out on July 9, 2024. This could be a short-eared owl, as the habitat where this individual was seen corresponds to the species' requirements. During the 2016 surveys (WSP 2017a), no individuals were recorded.

### 5.2.4 Waterfowl

Waterfowl surveys were carried out in May and July 2024 at six ground stations located along the edges of water bodies. The number of pair-equivalents is shown in Table 4. Black duck (*Anas rubripes*) showed the highest number of pair-equivalents. The highest number of pair-equivalents was observed at station SAUV-05, with 6.5 for all species combined. Groups of Canada geese (*Brenta canadensis*) and Greater snow geese (*Chen caerulescens atlantica*) were heard in flight. The Canada goose was probably on its way to breeding grounds. Breeding grounds for this species include lowlands with large expanses of wet, grassy meadows, and an abundance of ponds and lakes providing refuge from foxes and other terrestrial predators (Environment and Climate Change Canada & Canadian Wildlife Federation, 2003). No breeding sites have been confirmed for this species. As for the Greater snow goose, the individuals heard were possibly migrating to their breeding grounds on northern Ellesmere Island (Environment and Climate Change Canada & Canadian Wildlife Federation, 2005).

**Table 4** Abundance and diversity of waterfowl species observed in the study area

<b>Species</b>		<b>Station number</b>	<b>Date</b>	<b>Number of individuals</b>	<b>Number of couple equivalents</b>
<b>Common name</b>	<b>Latin name</b>				
Canada Goose	Branta canadensis	SAUV-04 SAUV-05	May 25 May 25	Group Group	Unknown Unknown
Black duck	Anas rubripes	SAUV-05	May 25 July 9th	2 (couple) 3	1,5 3
Common Goldeneye	Bucephala clangula	SAUV-04 SAUV-05 SAUV-05	May 25 May 25 July 9th	2 (couple) 2 (couple) 2 (couple)	1 1 1
Red-breasted Merganser	Mergus serrator	SAUV-02	May 25	3 (female)	0
Surf Scoter	Melanitta perspicillat	SAUV-02	May 24	2 (couple)	1
Common Loon	Gavia immer	SAUV-02	May 24	2 (couple)	1
Teal	Anas crecca	SAUV-03	May 25	1 (male)	1

#### 5.2.5 Chiropterans

Ambient noise and nocturnal luminosity are two parameters likely to disturb chiropteran activity during the mine's construction and operation phases. The information gathered as part of the monitoring program will initially be used to correlate bat activity with these parameters. Secondly, it will enable validation of the actual attenuation of these parameters in relation to the levels predicted during simulations. Monitoring of ambient noise, nocturnal luminosity and chiropteran was carried out on two separate nights at each of the six stations, in June and July. The luminescence values measured during the monitoring were relatively low and in line with those expected in a natural environment. Noise levels recorded during two periods of pre-construction monitoring also correspond to values expected in a natural environment. They are also comparable to the measurements made as part of the impact study, i.e. sound levels below 40dBA at night (WSP,2019). No bats were detected during monitoring. In order to improve the monitoring program, it would be necessary to record bats over longer periods so as to be able to correlate their activity with noise and luminescence.

**Table 5** Results for each outing for ambient noise, nocturnal luminosity and chiropteran monitoring

Measure identifier	Station	Date	Time	Laeq (dBA)	Lux level	Chiroptera
1	CS3	June 16	21 h 58	32	2,05	No screams
2	CS1	June 17	21 h 52	33	2,20	No screams
3	CS4	June 17	22 h 28	34	0,11	No screams
4	CS6	June 17	23 h 20	33	0,01	No screams
5	CS5	June 18	0 h 8	32	0,01	No screams
6	CS2	June 18	00h52	29	0,10	No screams
7	CS1	June 18	21h53	34	4,22	No screams
8	CS4	June 18	22h23	35	0,25	No screams
9	CS3	June 18	23h17	31	0,11	No screams
10	CS2	June 19	00h10	34	0,01	No screams
11	CS5	June 19	0h56	34	0,01	No screams
12	CS6	June 19	1h46	34	0,01	No screams
13	CS3	July 8	21:50	26	1,02	No screams
14	CS6	July 8	22:54	29	0,01	No screams
15	CS1	July 9th	21:50	29	1,52	No screams
16	CS4	July 9th	22:23	28	0,09	No screams
17	CS3	July 9th	23:17	28	0,03	No screams
18	CS2	July 10	00:09	29	0,08	No screams
19	CS5	July 10	00:49	30	0,01	No screams
20	CS6	July 10	01:37	22	0,01	No screams
21	CS1	July 10	21:50	33	1,43	No screams
22	CS4	July 10	22:20	30	0,06	No screams
23	CS2	July 10	22:58	23	0,07	No screams
24	CS5	July 10	23:35	21	0,01	No screams

## 6. Mitigation Measures

Project mitigation measures were developed as part of the environmental assessment. At this stage of the Project, no changes to these mitigation measures or additional measures have been considered.

## 7. Accidents and Malfunctions

According to the communication plan developed with First Nations, accidents and malfunctions that may cause adverse environmental effects must be communicated in writing at the time of the event. This section of the annual report will summarize any such events.

No accidents or malfunctions occurred in 2024.

## 8. Calendar

Condition 12.3 of the Decision Statement states that Critical Elements shall update implemented schedules of conditions and construction activities annually. Since the Project is in the pre-construction stage, no schedules have been submitted to the Agency. These schedules will be prepared and submitted to the Agency and the Cree Nation Government 60 days prior to the start of construction.

## 9. Anticipated Changes to the Project

The Agency has been informed of the addition of the workers' camp and two borrow pits in accordance with condition 2.17 of the Decision Statement. The description of the proposed changes, the public consultations, the potential impacts and the cumulative impacts of these two elements, as well as any additional mitigation measures as required by articles 2.17.1, 2.17.2 and 2.17.3, can be found in the complementary document provided to the Agency. With the application of appropriate mitigation measures, already integrated into the environmental and social monitoring and construction monitoring programs, no significant impact is expected on the components of the natural and human environments potentially affected by the development of the worker's camp and borrow pits. The Agency is continuing its analysis of the file and its consultation process.

## 10. Conclusion

Critical Elements is currently in the pre-construction phase of the Project. To meet the requirements set out in the Decision Statement and the provincial CA, Critical Elements has pulled together a multidisciplinary team and retained the services of qualified and recognized firms to assist in the development of the Project, applying industry best practices. Through communications, discussions and community consultations, the team is working carefully and prudently to develop the Project.



During 2024, certain permits were issued and many of the conditions were addressed. In 2025, the team will continue the search for financing, detailed engineering and the process of obtaining the necessary permits to begin construction

The 2025 annual report will be submitted no later than March 31, 2026.

## References

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