

**ENVIRONMENTAL COMMITTEE**

**Canada Nickel Company — Crawford Nickel-Cobalt Sulphide Project**

**6<sup>th</sup> MEETING REPORT**

MEETING INFORMATION																							
DATE	November 28 <sup>th</sup> , 2024																						
TIME	14:00 - 16:30 EST																						
LOCATION	Videoconference—MICROSOFT TEAMS																						
PARTICIPANTS	<table border="1"> <thead> <tr> <th>Members</th> <th>Present</th> </tr> </thead> <tbody> <tr> <td>Jared Alcock, Town of Cochrane</td> <td></td> </tr> <tr> <td>Brian Finner, Town of Iroquois Falls</td> <td></td> </tr> <tr> <td>Scott Tam, City of Timmins &amp; Mattagami Region Source Protection Committee</td> <td>✓</td> </tr> <tr> <td>Eric Neilson, Town of Smooth Rock Falls</td> <td>✓</td> </tr> <tr> <td>Michel Dupuis, Friends of the Porcupine River Watershed</td> <td>✓</td> </tr> <tr> <td>Lianne Catton, Porcupine Health Unit</td> <td></td> </tr> <tr> <td>Angie Corsen, Friends of the Porcupine River Watershed</td> <td></td> </tr> <tr> <td>Suzanne Lajoie, Porcupine Health Unit</td> <td>✓</td> </tr> <tr> <td>Lino Morandin, Cochrane Local Citizen Committee</td> <td>✓</td> </tr> <tr> <td>Laurent Robichaud, Ontario Rivers Alliance</td> <td>✓</td> </tr> </tbody> </table>	Members	Present	Jared Alcock, Town of Cochrane		Brian Finner, Town of Iroquois Falls		Scott Tam, City of Timmins & Mattagami Region Source Protection Committee	✓	Eric Neilson, Town of Smooth Rock Falls	✓	Michel Dupuis, Friends of the Porcupine River Watershed	✓	Lianne Catton, Porcupine Health Unit		Angie Corsen, Friends of the Porcupine River Watershed		Suzanne Lajoie, Porcupine Health Unit	✓	Lino Morandin, Cochrane Local Citizen Committee	✓	Laurent Robichaud, Ontario Rivers Alliance	✓
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CANADA NICKEL	<ul style="list-style-type: none"> <li>✓ Lauri Corlett, Sustainable Communities Coordinator</li> <li>✓ Mathieu Boucher, Environmental Manager</li> </ul>																						
FACILITATION	<ul style="list-style-type: none"> <li>✓ Isaac Gauthier – Facilitator – Transfer Environment and Society (TES)</li> <li>✓ Dominik Boudreault Lapierre – Note taker – Transfer Environment and Society (TES)</li> </ul>																						
AGENDA	<ol style="list-style-type: none"> <li>1. Welcome and Roll Call</li> <li>2. Discussion Related to the Impact Statement – Summary of Anticipated Impacts and Respective Mitigation Measures</li> <li>3. Overview of Ongoing Engagement with Indigenous Nations</li> <li>4. Overview of Ongoing Engagement with Local Communities</li> <li>5. Final Statements and Meeting Closure</li> </ol>																						

## MEETING HIGHLIGHTS

ISSUES AND CONCERNS	
✓	<input type="checkbox"/> Concerns from the committee related to potential water quality exceedances in the mixing zone to human health.
✓	<input type="checkbox"/> Concerns from the committee related to potential nitrate, nitrite and copper impacts to fish habitat and health.
✓	<input type="checkbox"/> Concerns from the committee related to Project’s water discharge into the environment (impacts to water quality and water flow).

ACTION ITEM		
✓	<input type="checkbox"/> CNC to provide more information to the committee regarding water quality impacts in the mixing zone, specifically regarding the effects of nitrite, nitrate and copper on fish habitat and health.	Action 28Nov24-1

### 1. WELCOME AND ROLL CALL

Isaac Gauthier, the meeting facilitator, opens the meeting and welcomes the committee members.

Gauthier invites all the participants to introduce themselves.

Gauthier presents the meeting agenda and mentions that it was adjusted to focus on the Project’s environmental impacts and respective mitigation measures, as there are a lot of topics to cover. As such, it may be necessary to schedule another meeting to get through all the items. This will be revisited at the end of the meeting. For further details, please refer to the presentation available in Appendix I.

The members agree with the proposed agenda and no questions are raised.

### 2. DISCUSSION RELATED TO THE IMPACT STATEMENT – SUMMARY OF ANTICIPATED IMPACTS AND RESPECTIVE MITIGATION MEASURES

Gauthier invites Mathieu Boucher to present an overview of the environmental aspects related to the Impact Statement (IS).

Boucher first explains why the Crawford Nickel Project is undergoing a federal Impact Assessment (IA), its objectives, and the overall process. He reiterates CNC’s intention to solicit feedback from committee members regarding the proposed mitigation measures that have been developed to address potential environmental impacts.

Boucher mentions that the Project is currently in the second phase of the IA process and presents the next steps. Boucher specifies that the Impact Statement (IS) for the Crawford Project was submitted to the Impact Assessment Agency of Canada (IAAC) on November 22<sup>nd</sup>, 2024, and that IAAC will soon hold a 60-day public consultation period related to the IS, following their 10-day review of the IS to ensure that all information is

included as required under the Tailored Impact Statement Guidelines (TISG). CNC will also continue to engage and consult with Indigenous Nations and local communities throughout the Project's development.

Boucher presents an overview of the relevant chapters of the IS, highlighting that the meeting will focus on the Project's potential residual environmental impacts, as well as their respective mitigation measures. He points out that the Project is still under consideration and could continue to evolve as it goes through the remaining steps of the IA process. He also mentions that the Project's social, economic and health components were presented separately to the Socioeconomic Committee earlier in the week.

For further details, please refer to the presentation available in the Appendix I.

QUESTIONS AND INTERVENTIONS		ANSWERS
<b>Q &amp; I 1</b>	A member asks what the Review Panel is with regards to the IS.	<p>Boucher replies that there are two types of reviews in the federal IA process, one by IAAC and the other by the Review Panel. The Review Panel includes additional regulatory bodies (provincial, territorial or Indigenous) that review the IS, when a project is susceptible to impact more than one jurisdiction (provincial, territorial or Indigenous). The Crawford Project is not subject to a Review Panel.</p> <p>Gauthier shares a link with the committee members presenting general information of the federal IA process. (<a href="#">Link to the website</a>)</p>

## 2.1. Surface Water

Boucher presents a summary of the Project's anticipated residual impacts on surface water quality and quantity, and their respective mitigation measures. He notes that the information in the presentation is a summary and that the full details are available in the IS, which will be made available online on IAAC's website.

Boucher points out that the residual effects are assessed based on hydrological modelling of current and future conditions, which enables CNC and its technical experts to identify appropriate mitigation measures.

Boucher presents the site layout and locates the neighbouring watercourses that were considered and assessed in the IS. He adds that the North Driftwood River will be partially deviated, as it runs through the open pit area. In terms of surface water impacts and mitigation measures, the IS focused on maintaining surface water levels and flows of the surrounding waterbodies. Per the completed modelling, the residual effects with regards to change in surface water quality and quantity would be low in magnitude. Additionally, all site contact water being discharged to the environment will be treated if any pre-discharge samples indicate an exceedance with respect to regulatory thresholds.

QUESTIONS AND INTERVENTIONS		ANSWERS
<b>Q &amp; I 1</b>	A member asks if CNC will be using water from local waterbodies.	Boucher replies that they will not. CNC will only pump drinking water from wells for on-site employees. All other water usage (e.g. for processing) will be from site dewatering, recycling within the process plant of collected in ponds on-site, which will be treated as needed and recycled.
<b>Q &amp; I 2</b>	A member asks if there will be water quality exceedances in the mixing zone.	Boucher presents a slide on the Surface Water Mixing Zone for regulatory normal conditions and explains that the water quality is anticipated to be within regulatory guidelines.
<b>Q &amp; I 3</b>	A member expresses concern about the impacts of the site's water discharge into neighbouring water courses.	Boucher presents the Project site plan and explains that the excess site water that will be treated and discharged into the environment will be divided into the local watershed (North Driftwood, West Buskegau), to ensure that the Project is not depriving the area of the hydric resources that sustain local habitats.
<b>Q &amp; I 4</b>	A member asks whether there will only be only one water treatment plant at the site.	Boucher presents the Project site plan and the different ponds that will receive runoff and seepage water from the site. These ponds are linked to different water treatment plants.

Boucher continues to detail the Surface Water Mixing Zone, explaining the different Mine Life Phases that were considered in the assessment – the Operations Phase (years 4 to 30), and the Post Closure Phase (Year 167). The assessment considered Jocko Creek, as well as the most downstream final discharge points (West Buskegau River and North Driftwood River). He continues by mentioning that under normal conditions, the impacts on surface water quality and quantity will be considerably lower than regulatory conditions, which are considered extreme conditions unlikely to happen.

QUESTIONS AND INTERVENTIONS		ANSWERS
<b>Q &amp; I 1</b>	Gauthier asks CNC to explain the difference between regulatory and normal conditions.	Boucher explains that the regulatory conditions represent the maximum discharge criteria, with the water treatment plant discharging at maximum capacity, under a severe drought in the environment, while the normal conditions are what CNC expects as

QUESTIONS AND INTERVENTIONS		ANSWERS
		the impacts, under normal operations in average hydrologic conditions in the environment and per the planned mitigation measures (e.g.: water treatment).
<b>Q &amp; I 2</b>	A member seeks clarification as to whether the Regulatory Mixing Zone represents the waterbody area that would be impacted when the mine complies solely with regulatory thresholds.	Boucher confirms that this interpretation is correct.
<b>Q &amp; I 3</b>	A member asks whether fish could live in the Mixing Zone, and if exceedances of the Guidelines for the Protection of Aquatic Life - Freshwater Aquatics Long Term (CWQG-FAL) for nitrite, nitrate and copper predicted in the North driftwood near discharge locations could be problematic for fish.	Boucher replies that discharge criteria were based on factors such as fish health, but that he will go back to the work done by the Fish Biologist from Stantec and provide an answer at the following meeting. <b>(Action 28Nov24-1)</b>
<b>Q &amp; I 4</b>	A member asks whether the regulatory conditions represent the worst-case scenario.	Boucher answers that CNC considers the regulatory conditions as a worst-case.
<b>Q &amp; I 5</b>	A member asks whether anyone uses the impacted area and what the public health recommendations are with regards to water consumption.	<p>Boucher replies that there are no known water consumers within the impacted area, also known as the Modelled Mine Boundary (MMB). CNC will continue to engage with the community to better understand that area and inform local users of the Project's impacts and associated mitigation measures, to ensure safe cohabitation. CNC also intends to work with water treatment companies to minimize the Project's impacts to local water quality.</p> <p>Boucher also presents a table that shows the federal water quality criteria, specifying that CNC aims to discharge water into the environment that will be much lower than the federal limit, to be as close to the current (baseline) water quality conditions. He points</p>

QUESTIONS AND INTERVENTIONS		ANSWERS
		<p>out that even if CNC uses a long Mixing Zone, the water quality of the discharge would still be reasonably good.</p> <p>Boucher also mentions that a human health risk assessment was completed factoring potential water consumptions by humans downstream from the discharges, and the conclusions were that no unacceptable risks would be generated.</p>
<b>Q &amp; I 6</b>	A member asks if the current water quality conditions have been measured, to allow an assessment of the difference during operations.	Boucher answers that CNC has over two years of baseline data and has a good understanding of current conditions. The environment has naturally high concentrations of certain elements (e.g. aluminum, iron, and phosphorus). However, the majority are below the provincial water quality objectives.

## 2.2. Groundwater

Boucher continues by presenting a summary of the Project's residual impacts on groundwater quality and quantity, as well as the respective mitigation measures. He adds that there will be a significant groundwater monitoring program implemented throughout the life of the Project.

QUESTIONS AND INTERVENTIONS		ANSWERS
<b>Q &amp; I 1</b>	A member asks why the maps on slide 16 ( <i>Groundwater Drawdown and Mounding – Year 30 of Operations</i> ) shows a modelled impact over a 30-year period, when the Project's estimated lifetime is 40 years.	Boucher explains that the maps depict impacts at years 17 and 30 to show the evolution in conditions at key milestones in the Project development, to show a portrait of key phases.
<b>Q &amp; I 2</b>	A member asks what CNC would do if they observed an increase in contaminant concentrations in groundwater.	Boucher mentions that CNC will employ an adaptive management approach, allowing for adjustments to their mitigation measures as needed to address any emerging issues. He highlights that there are various strategies available to manage groundwater impacts, including trenches and pumping wells.

## 2.3. Fish and Fish Habitat

Boucher presents a summary of the Project’s residual impacts on fish and fish habitat, as well as the respective mitigation measures.

He explains that due to the Project’s size and location, it is not possible for CNC to completely avoid fish habitat. The anticipated impacts predominantly affect baitfish habitat, which could be considered a lower quality fish habitat. He also specifies that additional studies will be conducted to better understand the potential impact on riffle habitat, and that certain sectors will be monitored very closely, as needed. He concludes by presenting a map illustrating the various impacted fish habitats within the Project area.

QUESTIONS AND INTERVENTIONS		ANSWERS
<b>Q &amp; I 1</b>	A member asked about the effects of nitrite, nitrate and copper on fish.	Boucher says he will raise the question with a fish biologist and get back to the committee with an answer. <b>(Action 28Nov24-1)</b>
<b>Q &amp; I 2</b>	A member asks if CNC has obtained the necessary approvals from the Department of Fisheries and Oceans Canada (DFO).	Boucher notes that CNC has been collecting baseline data since 2021 to support the regulatory process and ensure a comprehensive understanding of the Project’s potential impacts on fish health and fish habitat. He adds that CNC has not yet received its permit and is required by regulations to collect all necessary baseline information before providing the compensation plan for fish habitat that would include a list of compensation projects to DFO.

## 2.4. Atmospheric Environment

Boucher follows by presenting a summary of the Project’s residual impacts on the atmospheric environment, including changes to ambient air quality and ambient light, along with corresponding mitigation measures. He notes that the IS was carried out by Stantec, who modelled the mine’s air quality at various stages throughout its lifecycle.

Boucher explains that certain minerals in the environment could become airborne as particulate matter. However, he emphasizes that the modelling indicates the Project’s emissions would remain below regulatory requirements. He also mentions that the modelling approach is highly conservative, ensuring a cautious assessment of potential impacts, and that the mine’s remote location significantly mitigates its effects on air quality.

QUESTIONS AND INTERVENTIONS		ANSWERS
<b>Q &amp; I 1</b>	A member asks whether the air quality impacts would be mainly from internal combustion engines.	Boucher confirms they will be, in addition to road dust. He points out that one of the mitigation measures is the use electric trolley-assisted trucks to reduce diesel consumption. He points out that CNC is looking into fully electric trucks, once available on the market, and adds that water will be used as a dust suppressant.

Boucher presents a map illustrating the modelled air quality impacts. To address these impacts, he explains that CNC will implement measures to ensure that there are no overnight stays within the MMB. He also mentions that the mine’s vibrations can affect fish health but completed modelling shows vibrations would be below applicable thresholds at the surrounding watercourses and waterbodies. To mitigate these impacts, he explains that in addition to restrictions imposed within the MMB, two receptors located outside the MMB would be acquired. A complaints management process will also be put in place.

QUESTIONS AND INTERVENTIONS		ANSWERS
<b>Q &amp; I 1</b>	A member asks whether there will be specific measures regarding dust management in the Air Quality Management Plan.	Boucher confirms this, emphasizing that managing road dust emissions will be a key component of the Air Quality Management Plan. He acknowledges that road dust presents significant challenges, and highlights CNC’s commitment to implementing targeted strategies to effectively address this.

## 2.5 Acoustic Environnement

Boucher follows by presenting a summary of the Project’s residual impacts on the acoustic environment, specifically potential changes in noise and vibration, as well as corresponding mitigation measures.

Boucher highlights that the primary finding indicates that the Project will have acoustic (noise) impacts extending beyond the MMB. He also notes that vibrations from mine activities could potentially affect fish health. To mitigate these impacts, he explains that two monitoring receptors will be installed outside the MMB to monitor impacts. Additionally, a complaints process will be established to ensure community concerns are promptly addressed.

No questions or comments are raised.

## 2.6. Climate Change

Boucher follows by presenting a summary of the Project’s residual impacts on climate change, including the potential change in release of greenhouse gas (GHG) emissions and carbon sinks, as well as corresponding mitigation measures.

Boucher explains that the mine’s operations will naturally sequester carbon dioxide (CO<sub>2</sub>), a significant GHG, through passive carbonation, where mine tailings naturally react with atmospheric CO<sub>2</sub> overtime. He adds that CNC has developed an innovative method to enhance this process, known as In-Process Tailings (IPT) Carbonation. This technology actively stores CO<sub>2</sub> during the milling process by leveraging the brucite minerals present in the tailings, accelerating the conversion of CO<sub>2</sub> into stable carbonate minerals. Boucher highlights that this method will enable CNC to maximize carbon sequestration throughout the Project’s lifecycle, aligning with its commitment to reduce GHG emissions.

QUESTIONS AND INTERVENTIONS		ANSWERS
<b>Q &amp; I 1</b>	Gauthier asks if CNC will be able to obtain carbon credits, noting that the Project appears to be carbon negative.	Boucher clarifies that it is challenging for a Project to claim carbon negativity under current legislation, as it requires capturing its own GHG emissions. He adds that it remains uncertain whether CNC will be able to achieve official recognition as being carbon negative, although the carbon sinks will be larger than carbon emissions.
<b>Q &amp; I 2</b>	A member asks if the IPT Carbonation is expensive.	Boucher states that CNC considers the process to be both economically and technically feasible.
<b>Q &amp; I 3</b>	A member asks how carbon capture compares with other natural carbon sequestration processes, such as those in swamps and wetlands.	Boucher replies that CNC plans to conduct a detailed comparison and notes that initial estimates indicate that the IPT Carbonation process will yield a net-positive impact, even when accounting for the loss of carbon sequestration potential from local wetlands.
<b>Q &amp; I 4</b>	A member asks if carbon capture would be possible during the construction phase.	Boucher explains that the carbon capture would not be possible during the construction phase, only during the operations.

Boucher continues by mentioning that other mitigation measures are planned, and that CNC’s objective is to be carbon neutral by 2050 at the latest with the Crawford Project. He also explains that Crawford would be storing CO<sub>2</sub> emissions from other sources that would be transported to the site.

## 2.7. Soil

Boucher follows by presenting a summary of the Project’s potential residual impacts on soil quality and quantity, as well as the respective mitigation measures. He explains that CNC’s goal is to gradually reclaim the site through progressive reclamation, prior to full closure.

No questions or comments are raised.

## 2.8. Geology and Geological Hazards

Boucher follows by presenting a summary of the Project’s anticipated residual impacts on geology and geological hazards, specifically potential changes in terrain stability, as well as the respective mitigation measures. He adds that every mitigation measure is designed to ensure site stability during operations and closure.

## 2.9. Closure

Boucher follows by presenting a summary of the site’s preliminary Conceptual Closure Plan. He outlines CNC’s commitment to progressive reclamation, emphasizing that areas will be rehabilitated as they are mined out, rather than waiting until final closure. He adds that the Conceptual Closure Plan will continue to evolve overtime and highlights CNC’s intention to create customized habitats for species at risk, such as caribou, as well as wildlife and vegetation significant to Indigenous Nations.

QUESTIONS AND INTERVENTIONS		ANSWERS
<b>Q &amp; I 1</b>	A member asks if, during closure, the site water will go into the two rivers.	Boucher answers that CNC’s objective is to balance the local water flow by releasing the water into two local rivers, to reproduce natural flow. He adds that at some point, the newly created lakes will likely be able to support fish and other habitats.
<b>Q &amp; I 2</b>	A member asks if the water in those lakes will be treated and if it will be clean.	Boucher mentions that the assumption is that the water would indeed be clean, but the objective is to treat the water until it meets regulatory requirements, and that CNC will monitor water quality.

Due to time constraints, Boucher proposes proceeding with agenda topics 3, 4 and 5, and postponing the following topics to the next meeting:

- Birds and Bird Habitat
- Wildlife and Wildlife Habitat
- Vegetation, Riparian and Wetland Environments

## 3. CRAWFORD PROJECT UPDATE

The topic is postponed until the next meeting.

## 4. OVERVIEW OF ONGOING ENGAGEMENT WITH INDIGENOUS NATIONS

Gauthier invites Lauri Corlett to present an overview of CNC’s ongoing 2024 engagement with Indigenous Nations.

Corlett emphasizes the importance of involving Indigenous Nations throughout the IA process. She provides examples of actions taken to ensure meaningful engagement, detailing how Indigenous Nations participated in the development of the IS. She notes that CNC has actively met with Indigenous Nations to share Project updates and address their questions.

Corlett also presents a summary of Indigenous donations and sponsorships that have been provided by CNC as part of its ongoing support and collaboration.

## 5. OVERVIEW OF ONGOING ENGAGEMENT WITH LOCAL COMMUNITIES

Corlett continues by presenting an overview of CNC's ongoing 2024 engagement with local communities.

Corlett shares details about the three Open Houses that were held over the summer, highlighting strong community attendance at each event and their overall success.

Corlett also shares an overview of CNC's ongoing community engagement efforts, including the various events the team has attended, organized, and sponsored as part of its commitment to building strong relationships with local communities.

## 6. FINAL STATEMENTS AND MEETING CLOSURE

Corlett proceeds to outline CNC's next steps regarding the Project's development and the Environmental Committee.

Gauthier asks if the committee members have any final comments or questions. None are raised.

He notes that Corlett will follow up with the committee to schedule the next meeting, which will focus on the remaining topics from the current presentation. The next meeting will also be an opportunity to further discuss topics raised in the first meeting, per the members' interest.

Corlett assures the members that she will send a selection of date options shortly. The meeting ends.

# APPENDIX I PRESENTATION



# Canada Nickel - Crawford Nickel Project

Environmental Committee Meeting  
November 28<sup>th</sup>, 2024

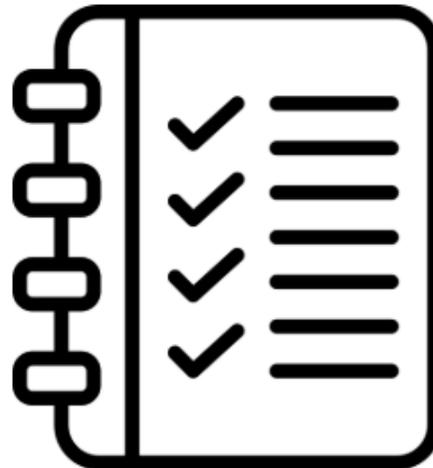
# Revised Agenda

No.	Time	Topic	Lead
1	2:00 – 2:10 pm	Welcome and Roll Call	TES (Isaac Gauthier, External Consultant)
2	2:10 – 4:20 pm	<p>Discussion Related to the Impact Statement – Summary of Anticipated Impacts and Respective Mitigation Measures</p> <ul style="list-style-type: none"> <li>• Surface Water</li> <li>• Groundwater</li> <li>• Fish and Fish Habitat</li> <li>• Atmospheric Environment</li> <li>• Acoustic Environment</li> <li>• Birds and Bird Habitat</li> <li>• Wildlife and Wildlife Habitat</li> <li>• Vegetation, Riparian and Wetland Environments</li> <li>• Climate Change</li> <li>• Soil</li> <li>• Geology and Geological Hazards</li> <li>• Closure</li> </ul>	CNC (Mathieu Boucher, Environmental Manager)
3	4:20 – 4:30 pm	Final Statements and Meeting Closure	TES (Isaac Gauthier, External Consultant)

# Agenda

## Time Permitting

<b>4</b>	15 minutes	Crawford Project Update	CNC (Mathieu Boucher, Environmental Manager)
<b>5</b>	10 minutes	Overview of Ongoing Engagement With Indigenous Nations	CNC (Lauri Corlett, Sustainable Communities Coordinator)
<b>6</b>	10 minutes	Overview of Ongoing Engagement With Local Communities	CNC (Lauri Corlett, Sustainable Communities Coordinator)



# Impact Statement – Summary of Anticipated Impacts and Respective Mitigation Measures



# Why is an Impact Assessment Needed?

An impact assessment is a planning and decision-making tool used to **assess the potential positive and negative effects** of proposed projects. Impact assessments consider a wide range of factors and **propose measures to mitigate projects' adverse effects**.

It includes all phases of the Project: construction, operation, decommissioning and closure



# Impact Assessment Process

## Why:

- Creating opportunities for sustainable economic development by making sure that environment, and health and social components are protected from adverse effects potentially caused by projects;
- Ensuring respect for the rights of Indigenous peoples in the process, and during decision-making
- Promoting communication and cooperation with Indigenous peoples;
- Ensuring that assessments takes into account science, Indigenous knowledge and community knowledge; and, providing opportunities for meaningful public engagement.

## When:

- For mining, the threshold to begin the federal Impact Assessment process is **5000+ tonnes processed or mined per day – Crawford is 120,000 tpd**

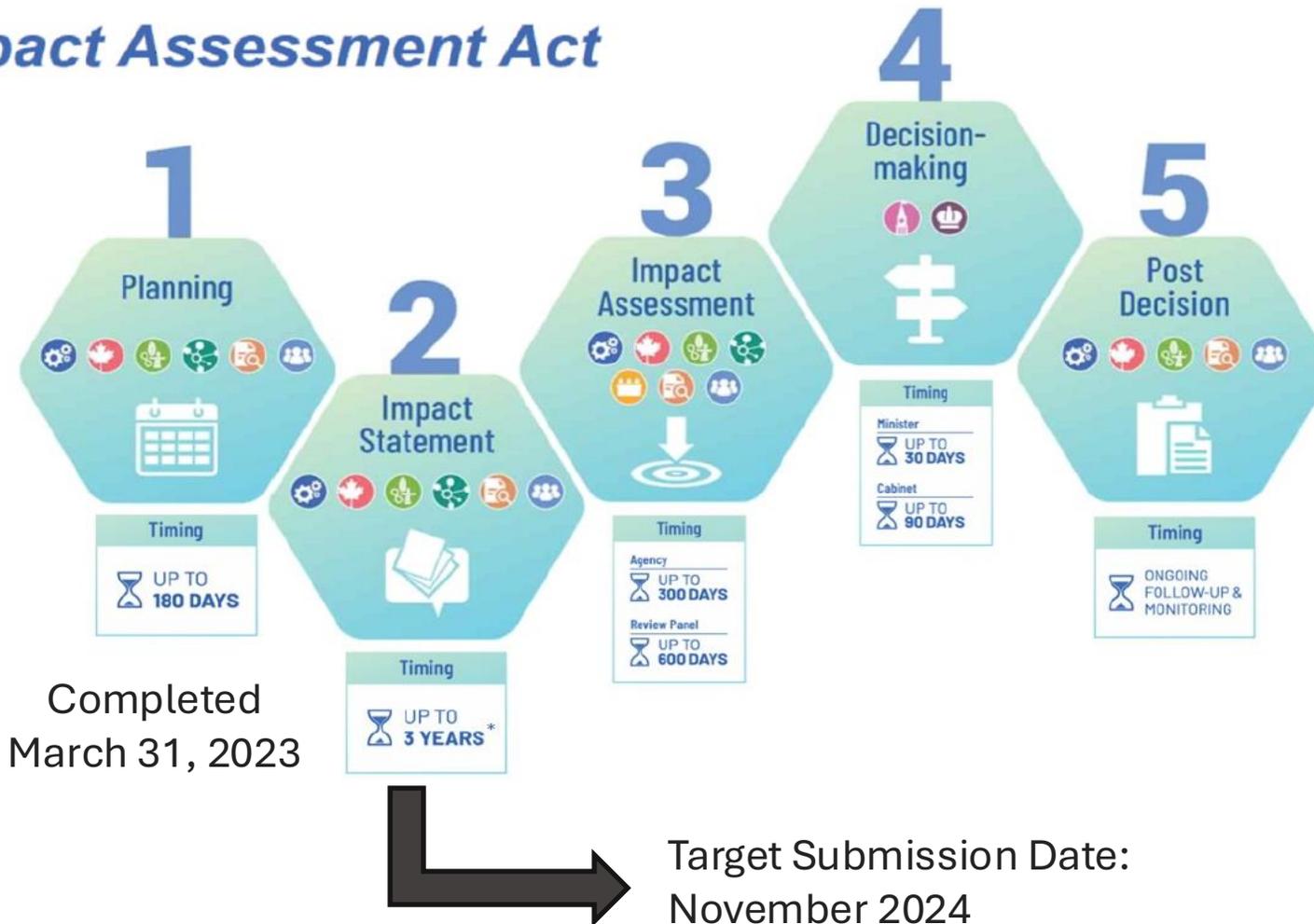
## Benefits:

- Impact Assessments ensure that **better decisions** about a project can be made **early on**, during a project's planning stage.



# Impact Assessment Process

## Impact Assessment Act



# Relevant Impact Statement Chapters

- Chapter 1 – Introduction
- Chapter 2 – Proponent Information
- Chapter 3 - Project Description
- Chapter 8 – Assessment Methodology
- Chapter 9 – Existing Conditions
- **Chapter 10 – Geology**
- **Chapter 11 – Soil**
- **Chapter 12 – Atmospheric**
- **Chapter 13 – Acoustic Environment**
- **Chapter 14 – Groundwater**
- **Chapter 15 – Surface Water**
- **Chapter 16 – Vegetation, Riparian, and Wetland Environments**
- **Chapter 17 – Fish and Fish Habitat**
- **Chapter 18 – Birds and Bird Habitat**
- **Chapter 19 – Wildlife and Wildlife Habitat**
- **Chapter 20 – Climate Change**

35 Chapters

> 14,000 Pages



# Surface Water

## Summary of Anticipated Residual Impacts

The key potential effects addressed in the assessment of potential effects on surface water are **change in quality and quantity**.

- Changes in flow were assessed at the downstream extent of the hydrologic model, as follows:
  - No flow reductions or exceedances were predicted beyond the 10% threshold for the Jocko Creek or the West Buskegau River
  - Modeling suggests 20 days during the operations phase with predicted flow reductions greater than the 10% in the North Driftwood watershed; however, further analysis concluded that the predicted flow changes would not affect ecosystem health
- Water levels within Mel Lake, Sutherland Lake, Jack Lake, Gerry Lake, and Martin Lake are predicted to remain within natural variability (e.g., 0.02 and 0.05 m).
- Local water quality downstream of discharge points may exceed baseline levels and guidelines within mixing zones but is expected to dissipate at the mixing zone edge.
- Effluent will comply with regulatory requirement limits/guidelines at the final discharge points



# Surface Water

## Summary of Key Mitigation Measures

- 1 Limit Project footprint to the extent possible to limit the number of subwatersheds overprinted by the PA
- 2 Develop and implement a Site-Wide Water Management Plan, including water management system designed to manage the 100-year return period, 24-hour duration storm event.
- 3 Water discharges to the North Driftwood River and West Buskegau River will be balanced to the extent feasible to maintain watercourse flows
- 4 Develop a Metal Leaching and Acid Rock Drainage Plan (100% of tailings, ore and till + 98% of waste rock are non-PAG)
- 5 Develop an Erosion and Sediment Control Plan
- 6 Recycle contact water for use on-site (e.g., dust suppression, makeup water in the Process Plant), where practical
- 7 Treat water prior to discharge, as required, to meet regulatory criteria



# Surface Water Mixing Zones

## 1 REGULATORY CONDITIONS

- Low flow in the receiving watercourses (7Q20)
- Concentrations already high in the environment (75<sup>th</sup> percentile)
- Mine discharging at maximum capacity
- Mine discharging at proposed maximum daily concentrations
- Seepage flowing directly to watercourses at maximum flow rates

## 2 NORMAL CONDITIONS

- Average flow in the receiving watercourses
- Average concentrations in the environment
- Mine discharging at average flow
- Mine discharging at targeted effluent objectives
- Seepage flowing directly to watercourses at average flow rates



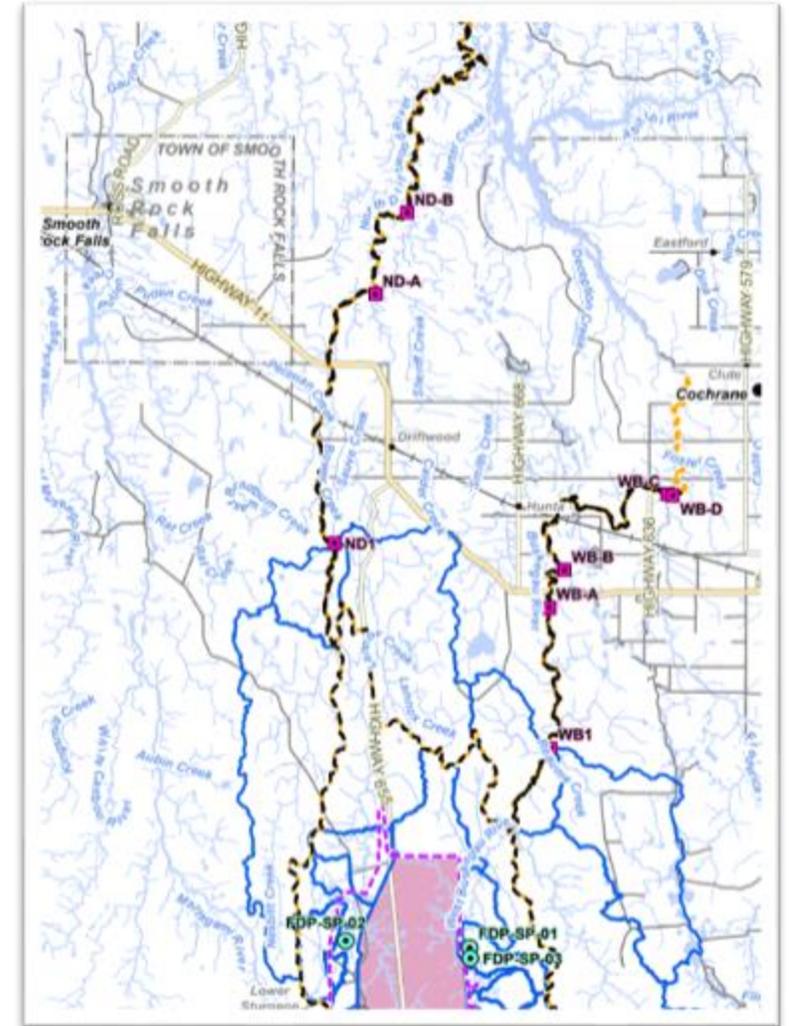
# Surface Water Mixing Zones

**Table ES.2 PoPC Assimilative Capacity Assessment Summary Results in Jocko Creek, the West Buskegau River and the North Driftwood River**

Mine Life Phase	Discharge Conditions	Jocko Creek		West Buskegau River (Most Downstream FDP – SP-01)		North Driftwood River (Most Downstream FDP – SP-02)	
		Ultimate Mixing Zone Extent <sup>*</sup>	Mixing Zone Extent Control Parameter(s) <sup>**</sup>	Ultimate Mixing Zone Extent	Mixing Zone Extent Control Parameter(s) <sup>**</sup>	Ultimate Mixing Zone Extent	Mixing Zone Extent Control Parameter(s) <sup>**</sup>
Operations Phase (Modelled Years 4 to 30)	Regulatory	NA	NA	40.2 km at the Frederick House River Confluence	Nitrite, Total Phosphorus	87 km at the Abitibi River Confluence	Iron, Nitrite, Total Phosphorus
	Normal	NA	NA	0.166 km at the Point of Full Mixing	10 Parameters <sup>***</sup>	3.6 km at Sub-watershed ND8 Outlet	Nitrate
Post Closure Phase (Pit is Full) (Year 167)	Regulatory	NA	NA	NA	NA	NA	NA
	Normal	NA	NA	NA	NA	NA	NA

**Notes:**

- NA - Mixing zone assessment due to FDP is not applicable; Concentrations did not exceed the regulatory objective/guidelines
- \* - Distance between the most downstream FDP in the receiver and the point where concentrations decrease below the regulatory objective/guidelines
- \*\* - Parameters with the longest mixing zones
- \*\*\* - Nitrite, nitrate, arsenic, cobalt, chromium (VI) and (III), copper, selenium, uranium and vanadium



**Extent of the Regulatory Mixing Zone**

# Surface Water Discharge Criteria

Table 7.7 Recommended Effluent Criteria

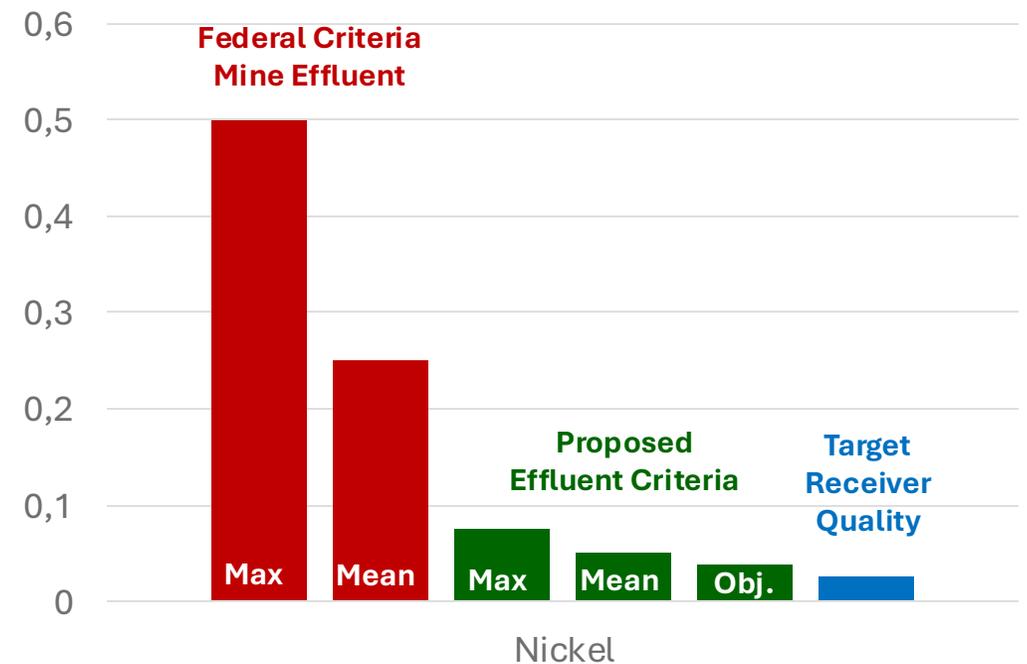
Parameter	MDMER		Regulatory Guidelines (mg/L) *	Target Effluent Objective (mg/L)	Monthly Mean Limit (mg/L)	Daily Maximum Limit (mg/L)
	Maximum Authorized Monthly Mean Concentration (mg/L)	Maximum Authorized Concentration in a Grab Sample (mg/L)				
Nitrite (as N)	-	-	0.06*	0.5	0.75	1
Nitrate (as N)	-	-	3*	6	10	12
Fluoride	-	-	0.12*	0.18	0.24	0.36
Aluminum (Total)	-	-	0.1*	0.12	0.15	0.225
Aluminum (Dissolved)	-	-	0.075	0.018	0.023	0.034
Arsenic (Total)	0.1	0.2	0.005	0.0075	0.01	0.015
Boron (Total)	-	-	0.2	0.3	0.4	0.6
Cobalt (Total)	-	-	0.0009	0.0018	0.0027	0.0036
Chromium III	-	-	0.0089	0.013	0.018	0.027
Chromium VI	-	-	0.001	0.0015	0.002	0.003
Copper (Total)	0.1	0.2	0.005	0.0075	0.01	0.015
Iron (Total)	-	-	0.3	0.5	0.6	0.9
Nickel (Total)	0.25	0.5	0.025	0.0375	0.05	0.075
Selenium (Total)	-	-	0.001*	0.001	0.002	0.003
Uranium (Total)	-	-	0.005	0.0075	0.01	0.015
Vanadium (Total)	-	-	0.006	0.01	0.012	0.018
Zinc (Total)	0.4	0.8	0.02	0.03	0.04	0.06
Zinc (Dissolved)	-	-	0.075-0.079 <sup>A</sup>	0.03	0.04	0.06

**Federal Criteria  
Mine Effluent**

**Receiver  
Quality**

**Proposed Effluent  
Criteria**

## Nickel Discharge Criteria



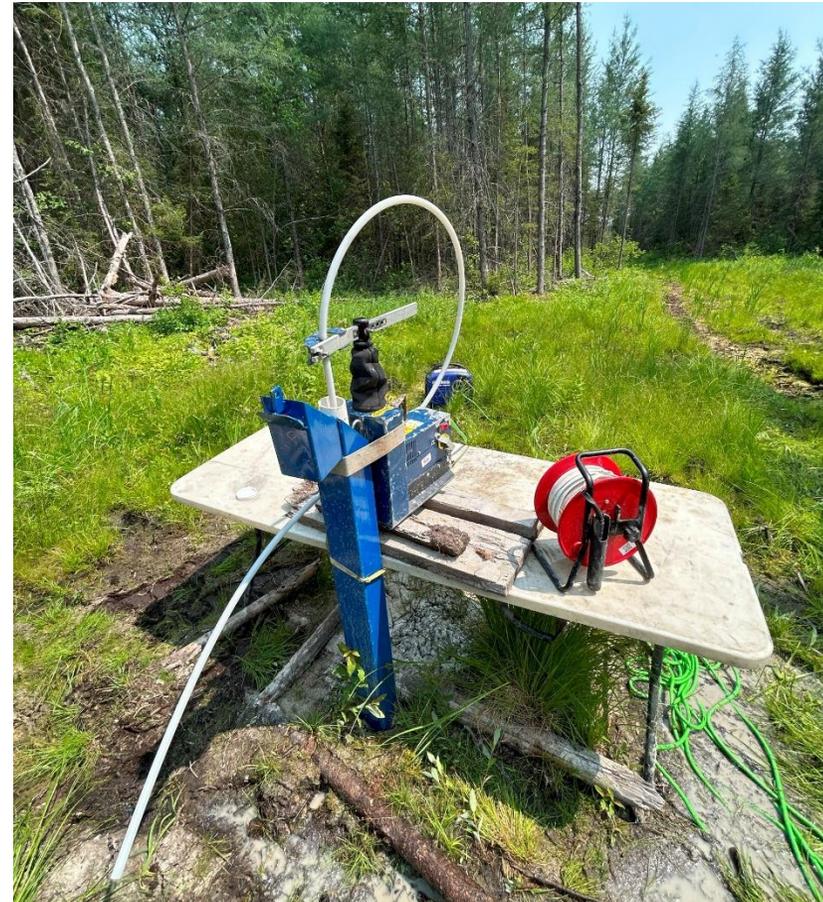
# Groundwater

## Summary of Anticipated Residual Impacts

The key potential effects addressed in the assessment of potential effects on groundwater are **change in quality and quantity**.



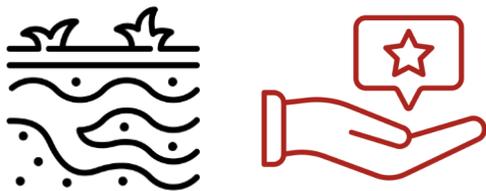
- Project activities, specifically dewatering and the management of contact water, will result in measurable changes in groundwater levels (no known users will be there once the project is in operation)
- Groundwater levels will gradually rise during passive closure as the Open Pit becomes a pit lake (around 100 years)
- Residual effects of the Project on groundwater quality may result in measurable changes in concentrations of parameters in groundwater and groundwater that discharges to surface water features (thick clay layer, slow migration)



# Groundwater

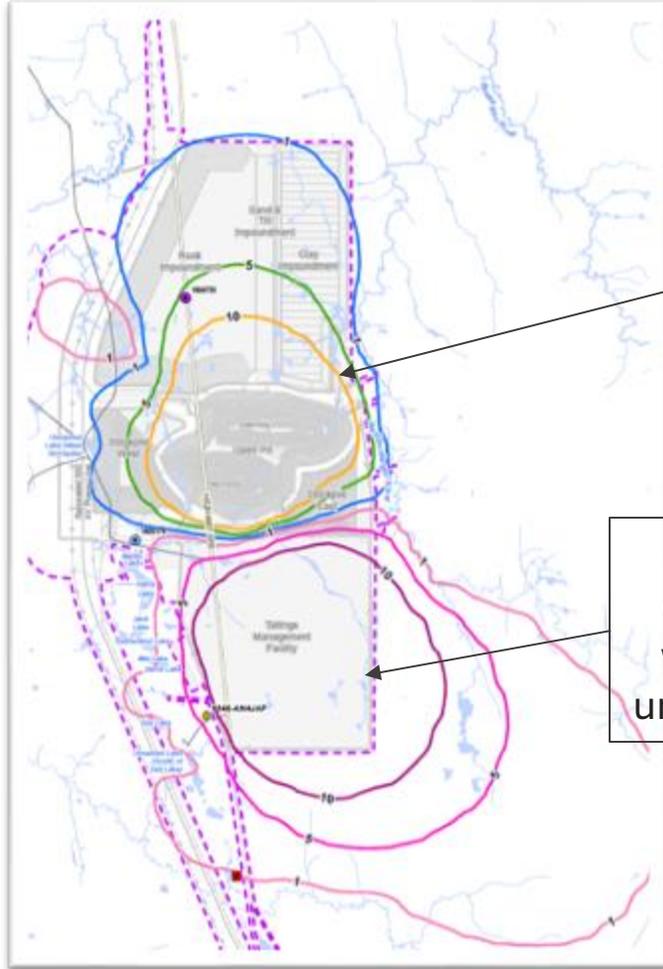
## Summary of Key Mitigation Measures

- 1** Limit Project footprint to reduce potential reductions in groundwater recharge and the number of subwatersheds overprinted by the Project Area (PA)
- 2** Limit seepage (i.e., lining trenches) and apply best management practices to reduce contact water infiltration
- 3** If faults or fractures are encountered, implement measures to reduce groundwater inflow to the Open Pit, as needed
- 4** Install contact water collection ditches around the Stockpiles, Impoundment Facility, and Tailings Management Facility to collect toe seepage and groundwater recharge from these Project components.
- 5** Develop and implement Emergency Preparedness and Response Plan, Spill Prevention and Contingency Plan, and Metal Leaching and Acid Rock Drainage Plan
- 6** Conduct progressive rehabilitation (placement of a vegetated soil cover) to reduce infiltration



# Groundwater

## Effects on Groundwater Level



**Groundwater Drawdown and Mounding – Year 17 of Operation**

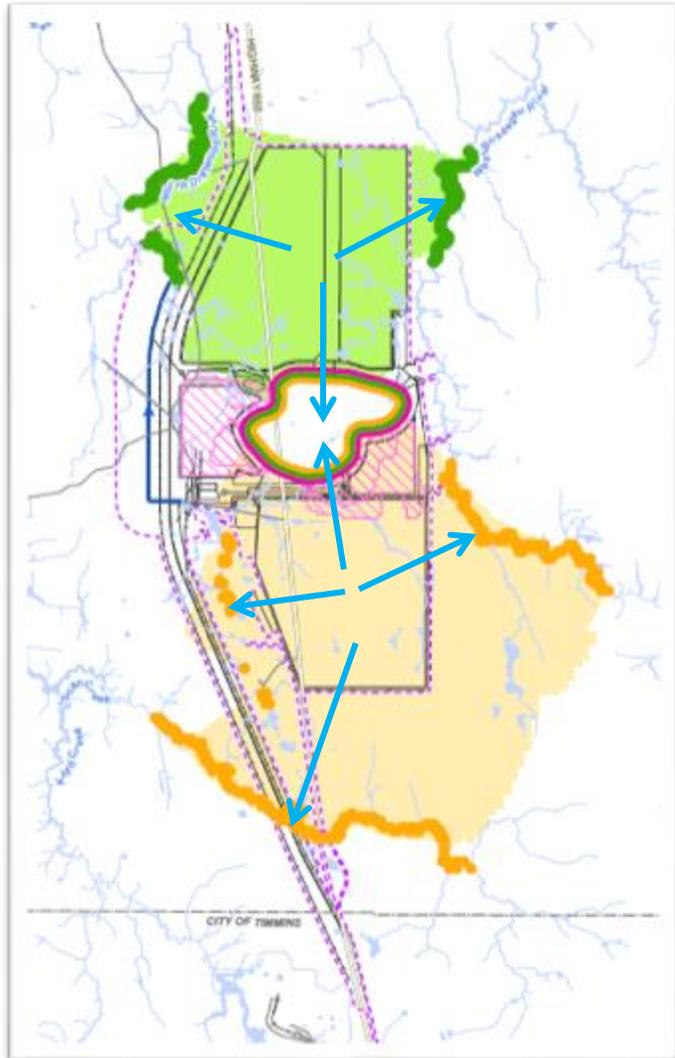
Drawdown from pit dewatering

Mounding (rise) in the water table under the TMF



**Groundwater Drawdown and Mounding – Year 30 of Operation**

# Groundwater Seepage Fate



Seepage Fate - Operation

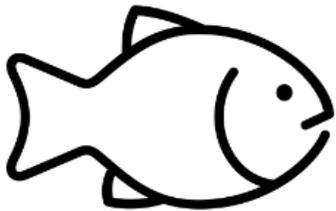
- Seepage will go preferentially to the open pit during operations (drawdown cone around the pit)
- Part of the seepage will slowly migrate towards local waterbodies and watercourses
- Migration will be slow (estimation of 275 years needed for seepage from the TMF to reach an existing pumping well south of the TMF)
- Metals leaching is predicted to be low, and attenuation will reduce the concentrations further as water slowly migrates in the subsurface
- Monitoring wells will be installed to monitor groundwater quality all around mining infrastructures to detect any unforeseen increase in concentrations



# Fish and Fish Habitat

## Summary of Anticipated Residual Impacts

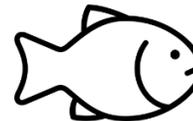
- Direct loss of fish habitat totalling approximately 147 ha
- Includes spawning/rearing, adult/migration, and overwintering habitat mainly for forage fish (358.4 HU), and also for a variety of species, including Northern pike (32.4 habitat units (HU)), White sucker (115.6 HU), and Walleye (12.3 HU).
- No effects on lake sturgeon are predicted as a result of Project changes that avoid discharges to the Mattagami River.
- The Project is predicted to change flows, which has the potential to affect riffle habitat.
- Water quality in the receiving environment is not predicted to exceed the Guidelines for the Protection of Aquatic Life - Freshwater Aquatics Long Term (CWQG-FAL):
  - With the exception of the guideline for nitrite, nitrate, and copper in the North Driftwood river near discharge locations
- Predicted changes in flow and water quality during the Project are not expected to substantially impact benthic invertebrate habitats or communities in downstream watersheds.
- Fish habitat loss in the North Driftwood and West Buskegau River headwaters will likely reduce benthic invertebrate biomass and drift available for downstream fish over time.



# Fish and Fish Habitat

## Summary of Key Mitigation Measures

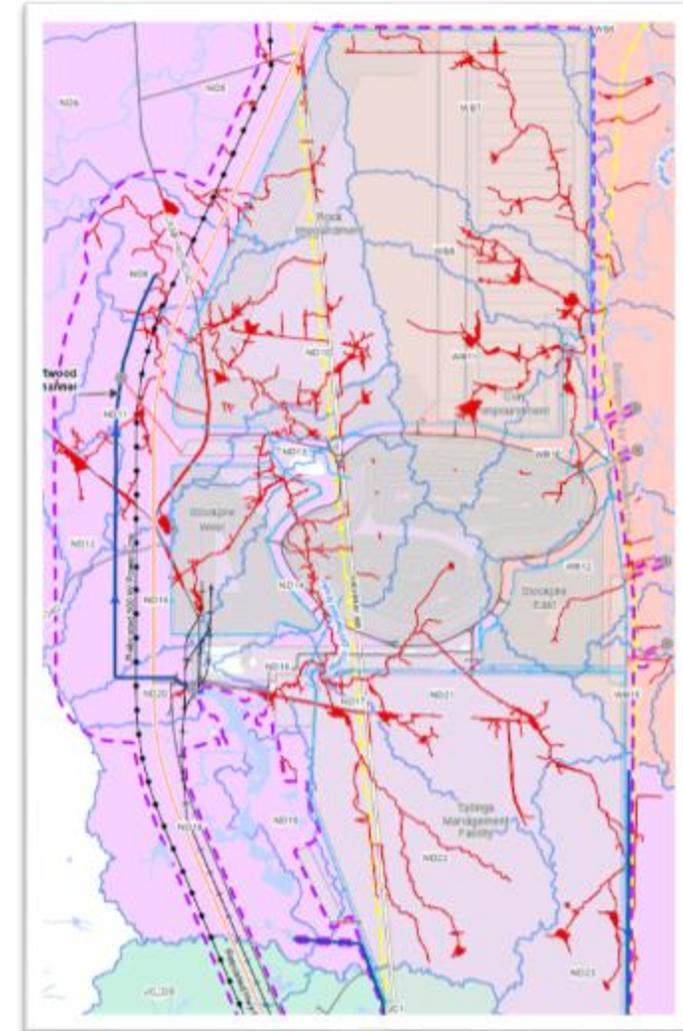
- Obtain a Fisheries Act Authorization, including the development and implementation of fisheries offsetting plan to compensate for unavoidable loss of fish habitat
- Using natural channel design principles to design and construct the North Driftwood River Diversion Channel
- Limit the Project footprint, including not locating infrastructure in the West Buskegau River mainstem to the east and the headwater lakes of the North Driftwood River watershed (i.e., Martin, Gerry, Jack, Mel, Sutherland, Davis lakes) to the west of the PA
- Constructing mine infrastructure in a progressive manner to delay alteration of fish habitat
- Conduct any in-water construction activities outside of the restricted activity periods
- Isolate work areas when conducting in-water activities, and conduct fish salvages by a qualified person prior to dewatering
- Progressively construct and reclaim mine infrastructure
- Design culverts to maintain fish passage and maintain fish habitat values (i.e., open bottom structures)
- Maintain downstream flows when conducting in-water works



# Fish and Fish Habitat

## Summary of Key Mitigation Measures

- Fitting all intakes with screens that comply with the DFO's end-of-pipe fish screen requirements to prevent impingement or entrainment of fish
- No angling will be permitted within the PA and no fishing by Project personnel will be permitted near the PA while on shift .
- Develop and implement:
  - Erosion and Sediment Control Plan,
  - Explosives Management Plan
  - Invasive Species Management Plan
  - Waste Management Plan
  - Spill Prevention and Contingency Plan
  - Fish Salvage Plan
  - Site-Wide Water Management Plan
  - Construction Environmental Protection Plan



**Fish Habitat Overprinted (red)**

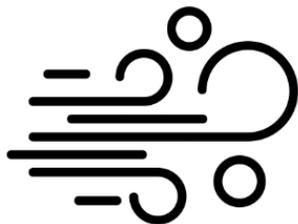


# Atmospheric Environment

## Summary of Anticipated Residual Impacts

The key potential effects addressed in the assessment of potential effect on the atmospheric environment are **Changes to Ambient Air Quality** and **Changes to Ambient Light**.

- Prediction of future concentrations of over 80 parameters of potential concern, most of them below applicable thresholds
- Modelling scenarios used conservative assumptions
- Limited presence of sensitive receptors in the area
- Predicted concentrations for Suspended Particulate Matter (SPM), particulate matter less than 10 microns ( $PM_{10}$ ), aluminum and muscovite were above their applicable criteria. However, predicted exceedances will occur infrequently.
- Predicted Benzo(a)pyrene (B(a)P) concentrations were also predicted to be above their criteria; however, the Project was only a small contributor to the maximum predicted concentrations.
- Dispersion modelling predicted that nitrogen dioxide ( $NO_2$ ) may be above the applicable thresholds.



# Atmospheric Environment

## Summary of Key Mitigation Measures

- 1 Develop and implement an Air Quality Management Plan
- 2 Impose restrictions within the Modelled Mine Boundary
- 3 Implement design measures to reduce dust, including dust collectors on crushers, and installing a trolley-assist system on pit ramps
- 4 Implement dust suppression on Project roads
- 5 Implement measures to reduce vehicles emissions (idling policy, Tier 4 emissions standards, where feasible) and equipment emissions



**Trolley-assist System** (source: Caterpillar)

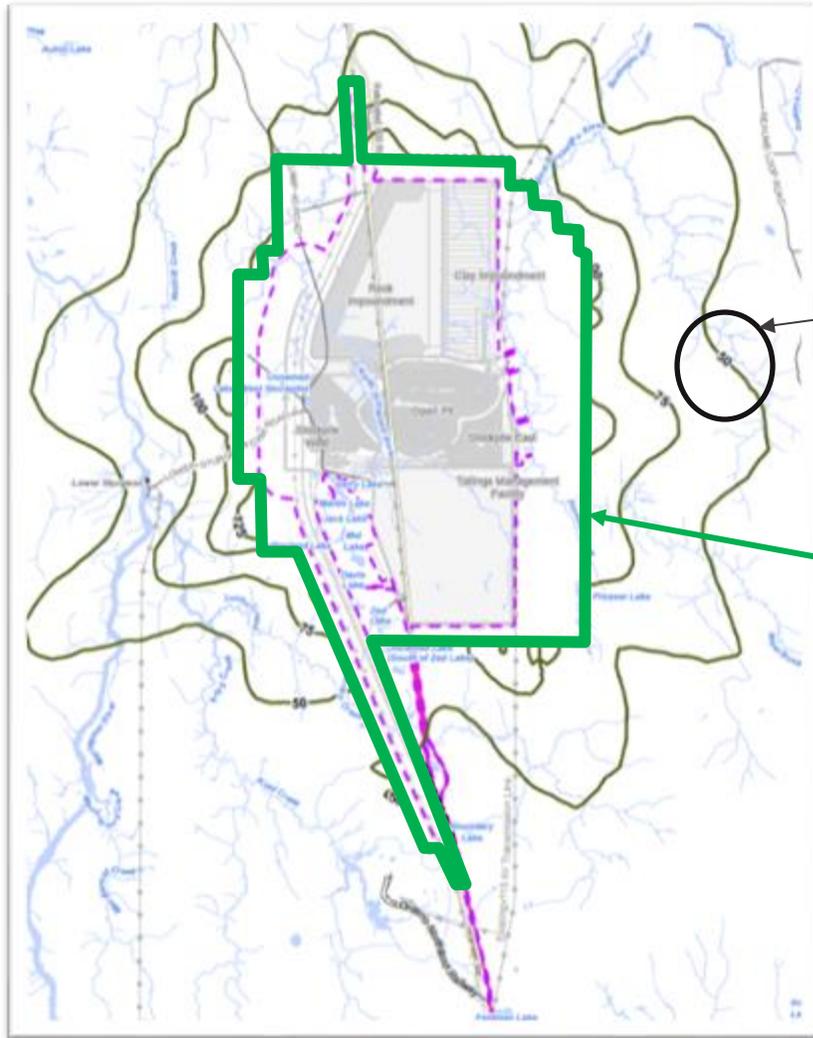


**Road Dust Suppression** (source: Caterpillar)



# Atmospheric Environment

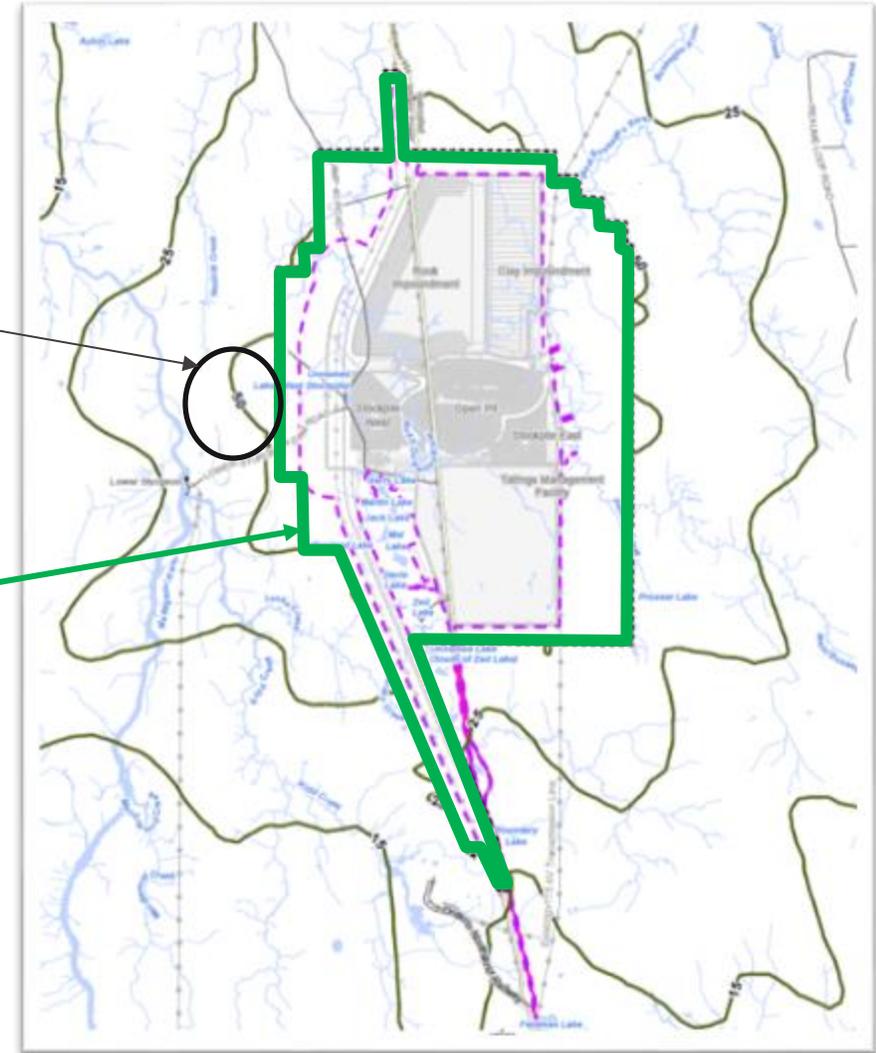
## Example of modelling Results – PM10



Base Case – Maximum PM10 Under  
Reduced Control Efficiency

Isocontour  
showing  
AACQ of 50  
 $\mu\text{g}/\text{m}^3$

Modelled  
Mine  
Boundary – No  
overnight stay

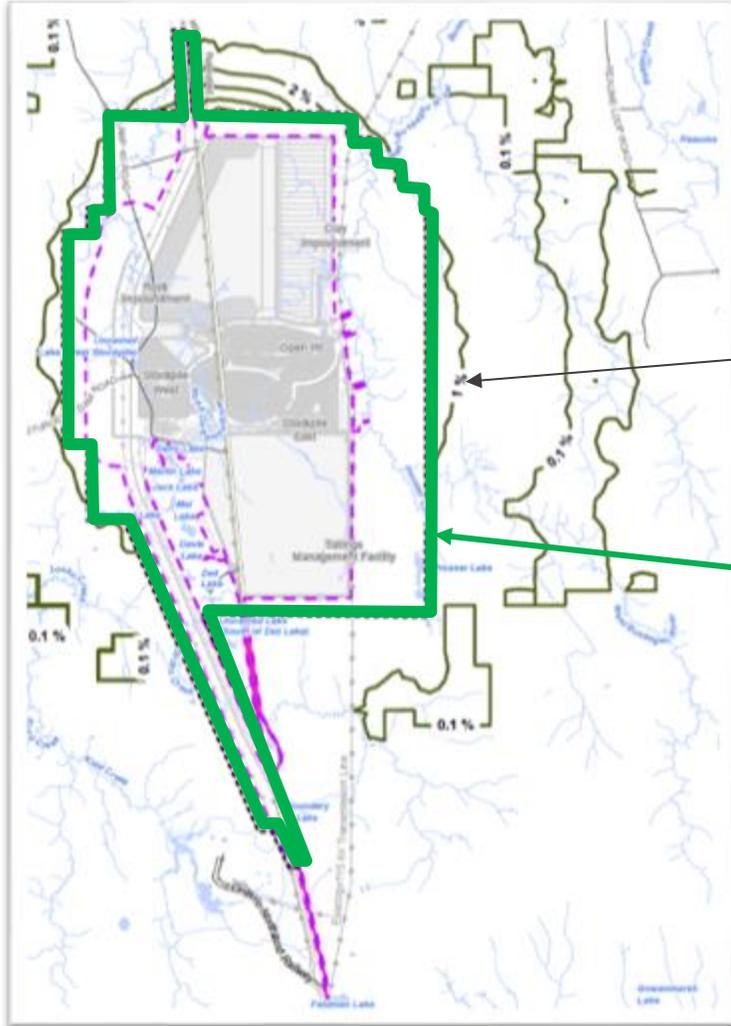


Base Case – Maximum PM10 Under  
Increased Control Efficiency



# Atmospheric Environment

## Example of modelling Results – PM10



Frequency of exceedance 1% of the time of AACQ of 50 µg/m<sup>3</sup>

Modelled Mine Boundary – No overnight stay

**Base Case – Frequency of Exceedance of Threshold for PM10 Under Reduced Control Efficiency**



**PM10 Monitoring Equipment Used During Baseline**

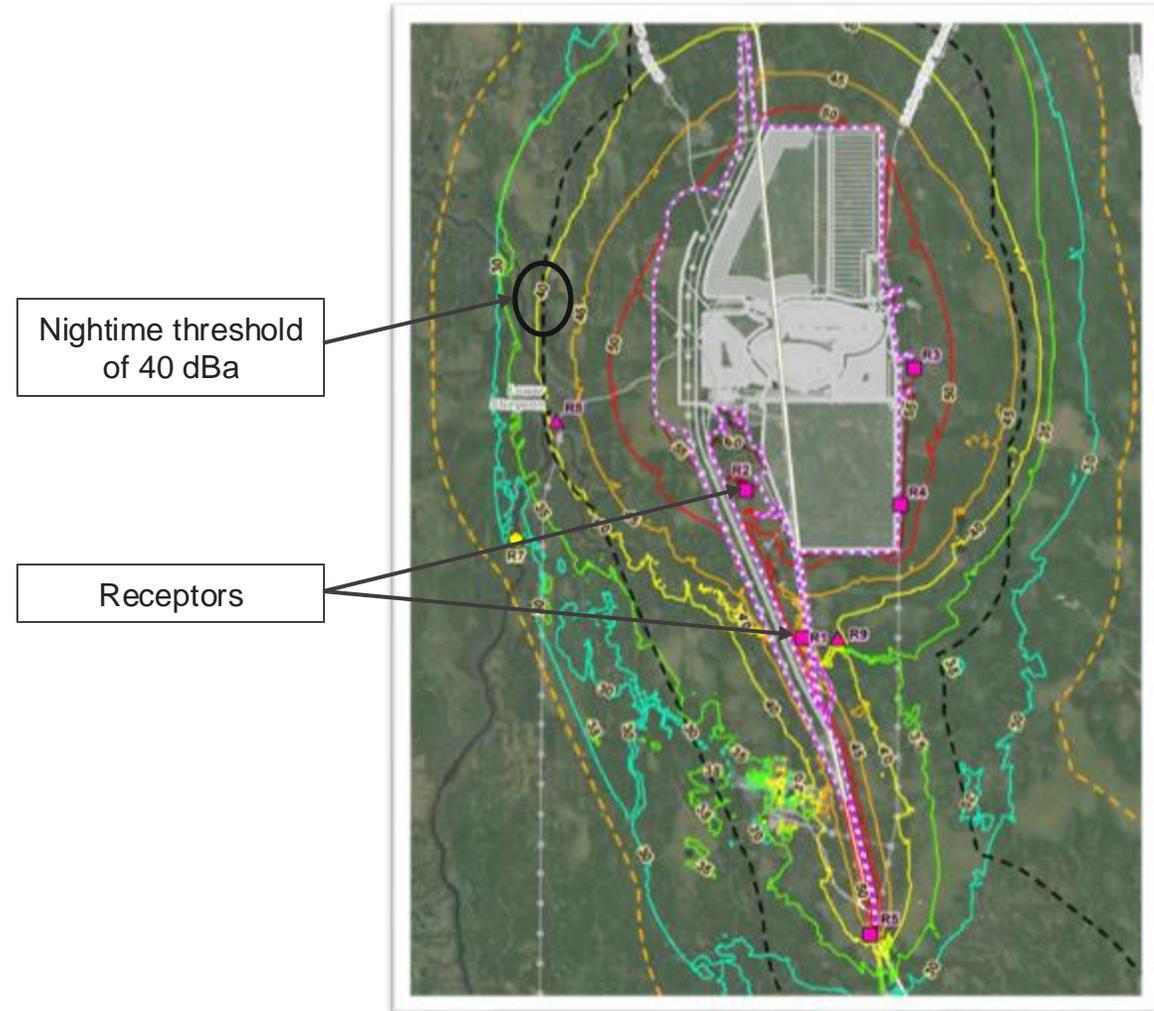
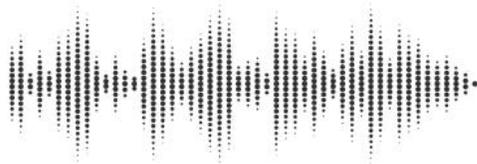


# Acoustic Environment

## Summary of Anticipated Residual Impacts

The key potential effects addressed in the assessment on the acoustic environment are **change in noise** and **change in vibration**.

- Construction and operations activities, including blasting, are predicted to increase noise and vibrations levels but will be within applicable federal and provincial criteria at receptors
- Canada Nickel will impose restrictions at receptors primarily within the Modeled Mine Boundary, but also at two other receptor locations



$L_{dn}$  Noise Contours for Operation



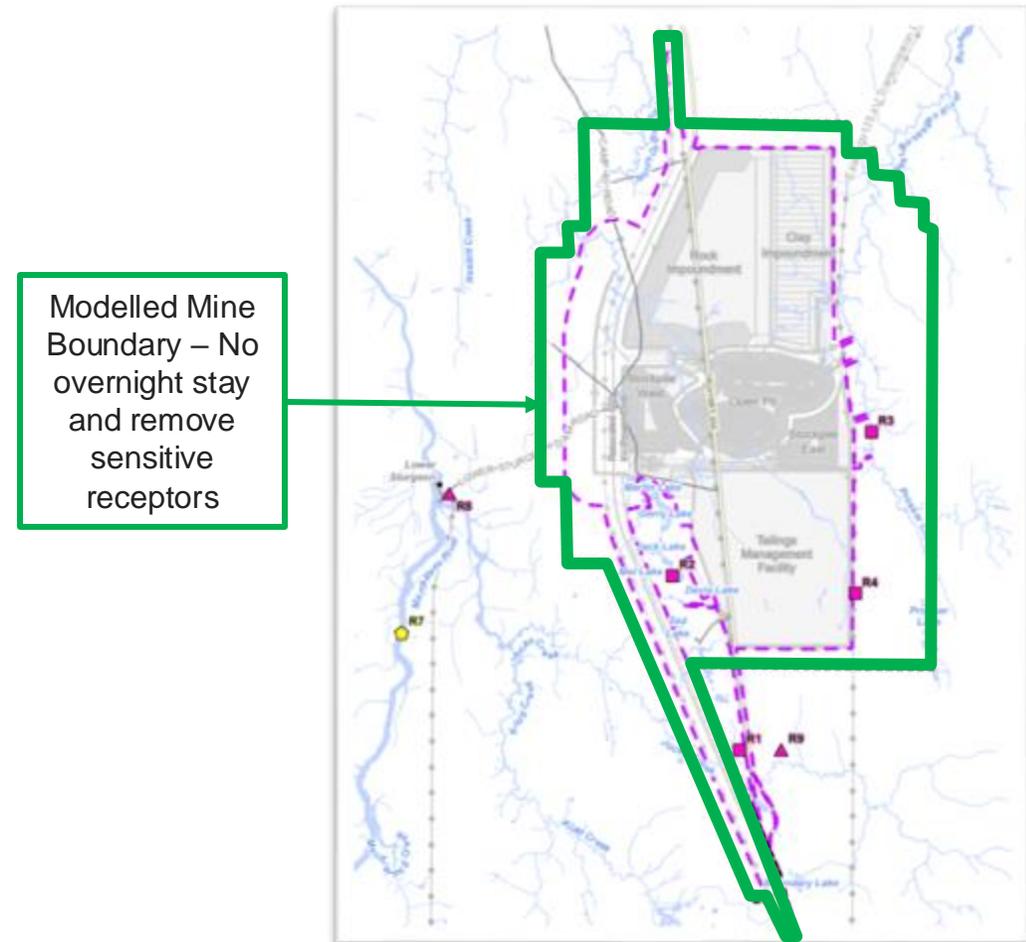
# Acoustic Environment

## Summary of Key Mitigation Measures

- 1 Develop and implement a Noise and Vibration Management Plan that includes a complaint reporting protocol
- 2 Impose restrictions within the Modelled Mine Boundary
- 3 Locating large stationary machinery (e.g., crushers) inside buildings and locating primary crushers below grade
- 4 Implement measures to reduce vehicles and equipment emissions (idling policy)



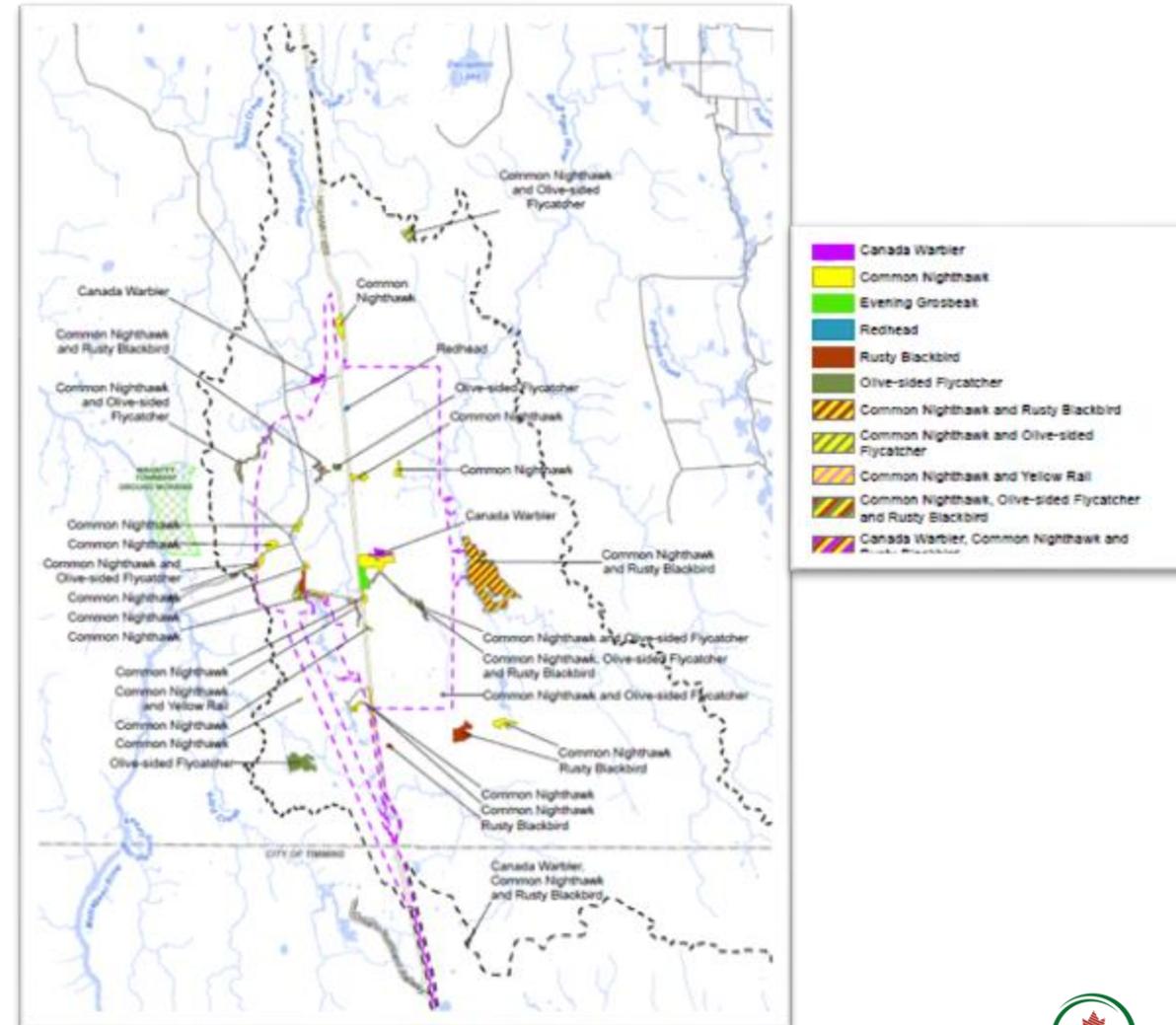
- 5 Implement communication protocol and a procedure for verifying and addressing complaints



# Birds and Bird Habitat

## Summary of Anticipated Residual Impacts

- Direct loss of bird habitat of 11,785 ha of bird habitat, a 22% decrease in habitat from existing conditions in the LSA.
- Project activities will cause sensory disturbance and effects resulting in an indirect effect to bird habitat during construction and operations.
- Direct loss of species at risk (SAR) and species of conservation concern (SOCC)
- Species distribution will shift to undisturbed areas where suitable habitat is available, and diversity and abundance of SAR will remain stable.
- Habitat remaining in the Regional Study Area (RSA) for various bird species range from 94 to 99%.



**Species at Risk and Species of Conservation Concern Habitat**



# Birds and Bird Habitat

## Summary of Key Mitigation Measures

- Limit Project footprint and vegetation clearing
- Avoid vegetation clearing and site preparation activities during restricted activity periods (i.e., core breeding period for migratory birds)
- Implement design measures to discourage bank swallows from nesting in stockpiles (i.e., flatter slopes, knock down vertical face of stockpiles)
- Deploy bird deterrents (e.g., noise makers, wire barricades) around key Project infrastructure (e.g., ponds, TMF)
- Implement progressive rehabilitation and the Mine Development Closure Plan
- Complete pre-disturbance surveys to locate raptor nests and nests of species protected on Schedule 1 of the Migratory Bird Regulations (Pileated Woodpecker, Great Blue Heron)
- Do not disturb or remove nests of provincially protected species (e.g., Bald Eagle, Osprey) unless a permit has been issued through the Fish and Wildlife Conservation Act



# Wildlife and Wildlife Habitat

## Summary of Anticipated Residual Impacts

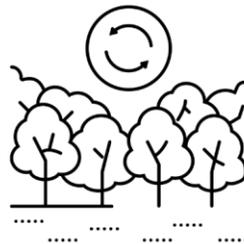
- The Project will cause 11,785 ha of wildlife habitat loss (22% decrease in the LSA) from land clearing and site preparation
- Habitat loss within the PA will result in a 21% reduction for amphibians, reptiles, moose, furbearers (e.g., black bear, red fox, coyote, Canada lynx, and gray wolf), bats, snapping turtles, painted turtle, monarchs, and yellow-banded bumble bees.
- Displaced species will relocate and adapt to their new surroundings with predator-prey dynamics stabilizing.
  - Habitat loss will be incremental, giving wildlife time to adapt to activities occurring within the PA and relocate to the LSA and RSA.
- Habitat alteration and fragmentation from sensory disturbances (e.g., light, noise, vibrations) may affect habitat quality and resource access.
- Impediments to movement associated with the relocated Highway 655 are similar to those that exist for the existing alignment.
- Mortality risk is predicted to increase as a result of potential vehicle collisions
- In regard to wildlife health, exposure to potential contaminants was considered negligible to low for all species and unacceptable risks to wildlife are not anticipated.



# Wildlife and Wildlife Habitat

## Summary of Key Mitigation Measures

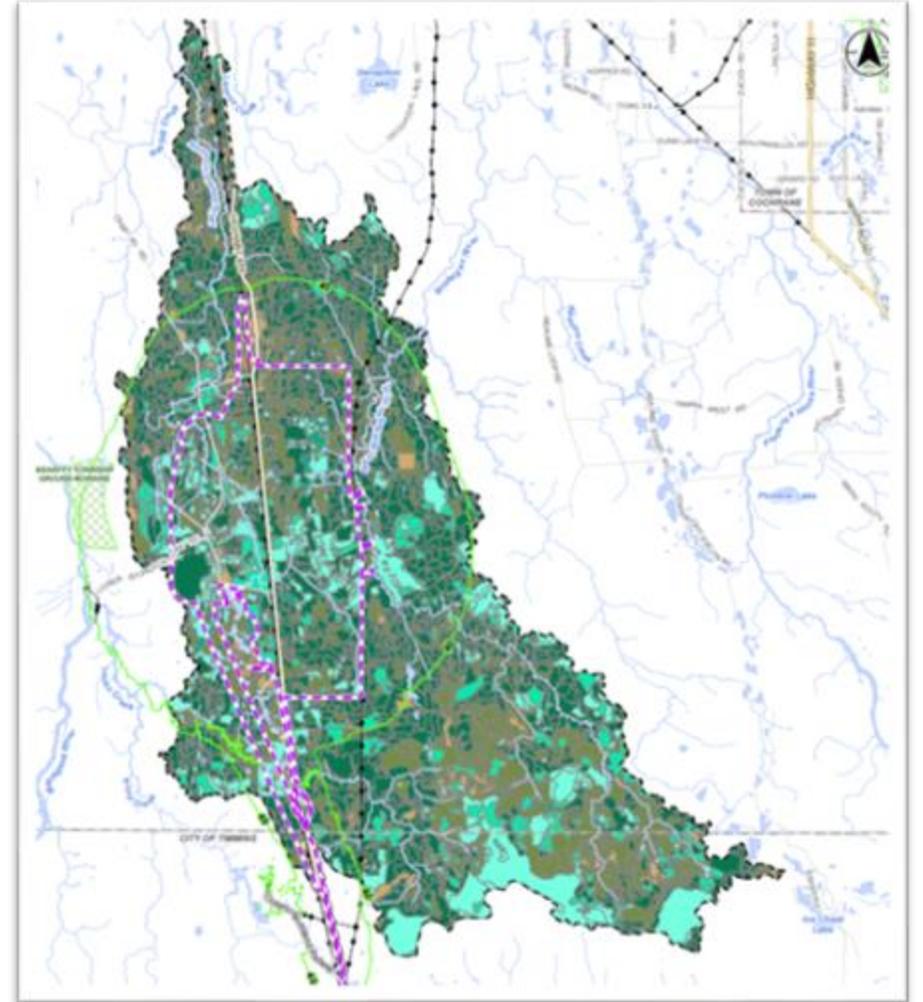
- Limit the Project footprint and vegetation clearing
- Avoid vegetation clearing during restricted activity periods (i.e., sensitive time periods for turtle overwintering, bat roosting)
- Progressive rehabilitation and implementation of the Mine Development Closure Plan
- Implement road safety measures, including wildlife friendly design principles such as signage or speed limits
- Record wildlife vehicle-collisions, near misses and observations
- Deploy wildlife deterrents and limit vegetation growth around key Project infrastructure, such as TMF and collection ponds, until reclamation activities are underway
- If wildlife are encountered, temporarily suspend activities until the species is out of harm's way
- Obtain an Overall Benefit Permit, if required through consultation with the Ministry of the Environment, Conservation and Parks, for impacts to Category 2 Blanding's turtle habitat, Category 3 caribou habitat, and bat roosting habitat within the PA.



# Wildlife and Wildlife Habitat



**Kesagami Range for the Boreal Caribou**



**Noise Sensory Disturbance – 40 dBa  
(Green)**

# Vegetation, Riparian, and Wetland Environments

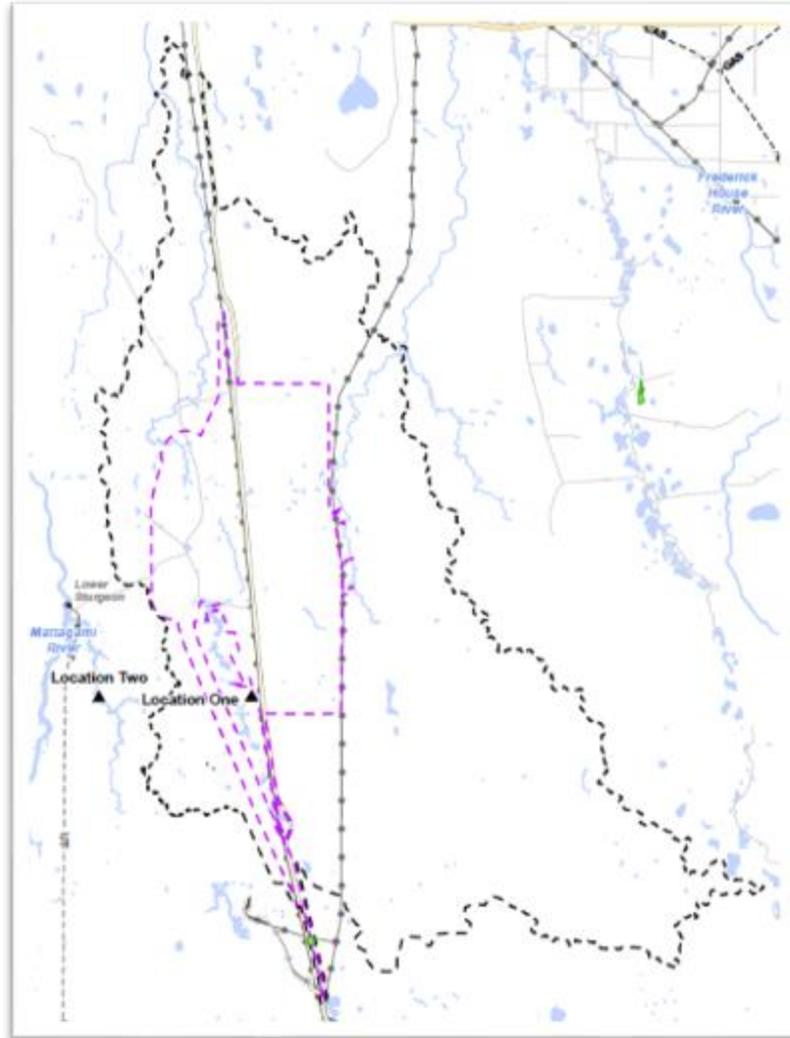
## Summary of Anticipated Residual Impacts

- Direct loss of vegetation through the clearing of the PA, including approximately 11,504 hectares of natural vegetation
- Loss of approximately 178 ha or 32% of the naturally vegetated riparian habitat within the LSA
- Loss of approximately 8,667 ha or 22% of wetland habitat within the LSA
- No plant species at risk (SAR) or species of conservation concern (SOCC) are documented within the PA, but Black ash present in the LSA
- Loss of 3 ha of Hardwood Swamps (rare vegetation community) out of 7 ha in the LSA
- No change in richness of plant species of importance to Indigenous Nations richness in the LSA is expected
- Edge effects such as changes in wind, light, hydrology are also anticipated because of vegetation clearing
- Dewatering activities are predicted to lower the water table, potentially affecting wetlands and riparian habitat
- Project activities has the potential to introduce invasive species
- Progressive reclamation over the life of the Project and the rehabilitation of the site through closure planning will re-introduce vegetation to PA



# Vegetation, Riparian, and Wetland Environments

## Summary of Anticipated Residual Impacts



**Black Ash Presence Around the Project**

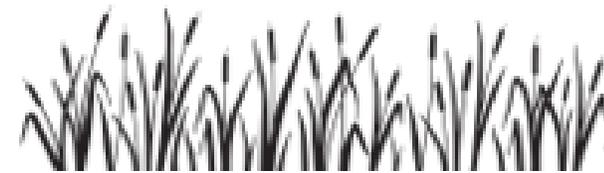


**Wetlands Potentially Impacted by the Project**

# Vegetation, Riparian, and Wetland Environments

## Summary of Key Mitigation Measures

- Limit Project footprint
- Limit vegetation clearing to the PA and mark clearing boundaries and limits of environmentally sensitive areas, where practical
- Prior to disturbance, provide Indigenous Nations some time to harvest plant species of interest
- Implement dust suppression measures
- Implement measures to prevent the introduction of invasive species, and undertake invasive species management initiatives if required
- Implement progressive rehabilitation using native species, plant species at risk (SAR) and species of conservation concern, and species of Indigenous importance, where practical
- Incorporate rare vegetation communities and wetlands into reclamation planning
- Maintain hydraulic conductivity when crossing watercourses or wetlands
- Develop and implement an Erosion and Sediment Control Plan to reduce site erosion and protect nearby riparian and wetland communities from sedimentation
- Develop and implement a Construction Environmental Protection Plan to reduce effects on vegetation



# Climate Change

## Summary of Anticipated Residual Impacts

The key potential effects addressed in the assessment of potential effects on Climate Change are **Change in Release of GHG** and **Change in Carbon Sinks**.

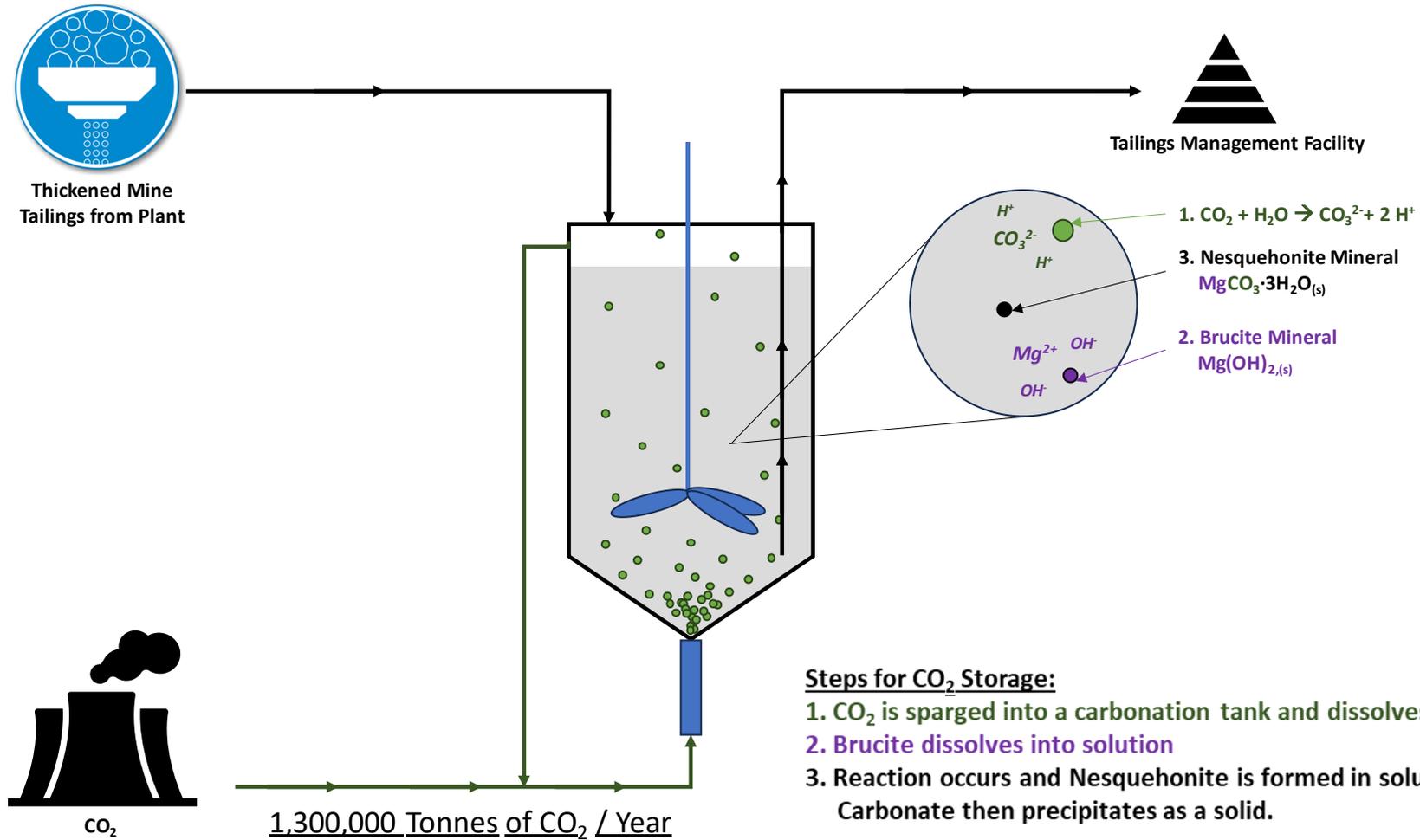
- Over the life of the Project, this Project will sequester more Carbon dioxide equivalent ( $\text{CO}_2\text{e}$ ) than will be emitted by Project activities.
- It is predicted that the Project will release 11,135 kt  $\text{CO}_2\text{e}$  of greenhouse gases (GHG).
- The Project is predicted to sequester 46,678 kt  $\text{CO}_2\text{e}$  over its lifetime through active carbonation (IPT Carbonation), passive carbonation (natural reactions with atmospheric  $\text{CO}_2$  during mining, milling, and tailings storage), reclamation, and accounting for carbon sink losses from clearing.



**Pilot Test Summer 2024 (included IPT Carbonation)**



# Climate Change In-Process Tailings Carbonation



# Climate Change

## Summary of Key Mitigation Measures

- Implement measures to reduce vehicles emissions (idling policy, Tier 4 emissions standards, where feasible) and equipment emissions
- Implement design measures to reduce emissions, including installing a trolley-assist system on pit ramps to reduce diesel emissions
- Develop and implement a Net-Zero Plan that considers the best available technologies (BAT), including:
  - ✓ Biomass chipping and spreading
  - ✓ Merchantable timber recovery
  - ✓ Passive mineral carbonation
  - ✓ In Process Tailings carbonation
  - ✓ Site remediation and land reclamation
  - ✓ Vehicle and equipment idling policy
  - ✓ Vehicle and equipment optimal sizing
  - ✓ Vehicle and equipment regular maintenance
  - ✓ Traffic Management Plan
  - ✓ Strategic site design to reduce haulage distances
  - ✓ Use of trolley assist haulage
  - ✓ Use of electric vehicles and equipment
  - ✓ Use of autonomous vehicles



# Soil

## Summary of Anticipated Residual Impacts

The key potential effects addressed in the assessment on soil are **changes to soil quality and quantity**.

- Soil erosion, compaction, admixing, and contamination are predicted to potentially affect soil quality.
- Soil quantity can be impacted by changes in soil depths, but by salvaging soil and managing it throughout the life of the Project, potential adverse effects on soil will be reduced and suitable reclamation soils can be sourced from the site.



# Soil

## Summary of Key Mitigation Measures

- 1 Develop and implement an Erosion and Sediment Control Plan, a Spill Prevention and Contingency Plan, and a Soils Management and Rehabilitation Plan.
- 2 Salvage soil for reuse during rehabilitation
- 3 Limit Project footprint impacts.
- 4 Implement dust control.



# Geology and Geological Hazards

## Summary of Anticipated Residual Impacts

The key potential effect addressed in the assessment on geology and geohazards is the **change in terrain stability** due to Project construction and operations.

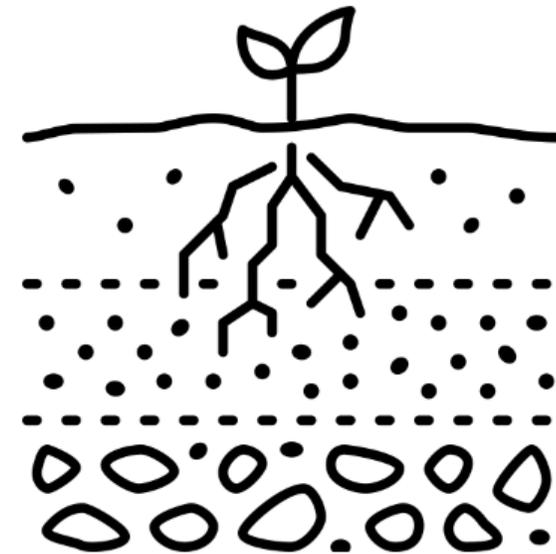
- Changes in terrain are predominantly attributed to ground disturbance and the construction and operations of the Open Pit, Impoundment Facility and TMF
- There are no known geological hazards in the area and through proper design potential slope failure of Project components (e.g. Open Pit, stockpiles) can be mitigated



# Geology and Geological Hazards

## Summary of Key Mitigation Measures

- 1 Develop and implement an Erosion and Sediment Control Plan
- 2 Mitigate through design of the Open Pit, TMF, Impoundment Facility, stockpiles, including following applicable guidelines
- 3 Conduct a slope stability assessment at closure to demonstrate the long-term physical stability of the Open Pit, Impoundment Facility and TMF



# Closure

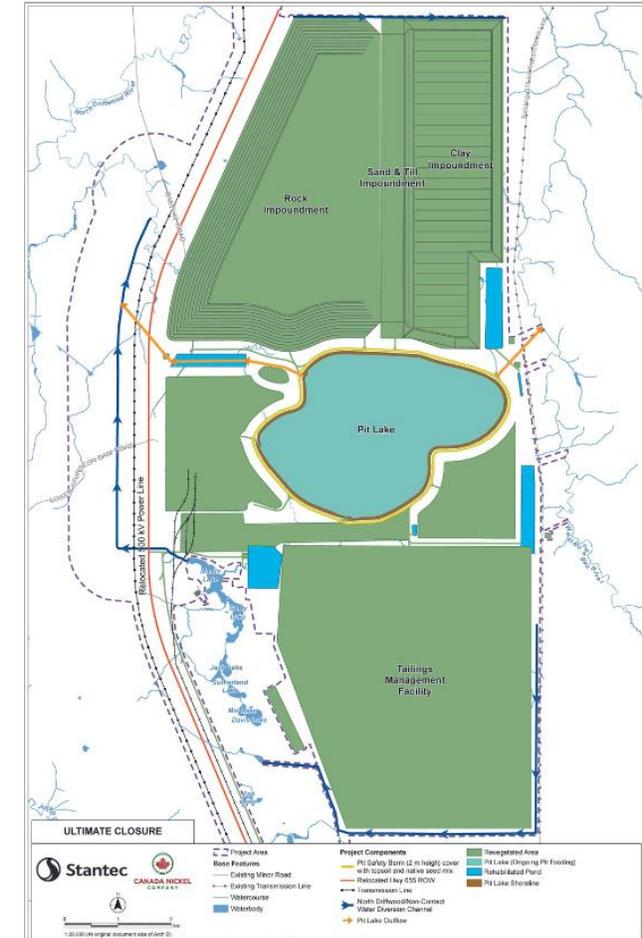
Mine closure planning in Ontario is regulated by the province. Progressive rehabilitation will be completed throughout the operation phase with the objectives of:

- Informing design and planning for final rehabilitation and closure
- Testing rehabilitation methods (where possible)
- Stabilizing Project components as they reach completion to meet end land use objectives
- Reducing the long-term liabilities associated with the site and thereby reducing the required financial assurance

## Active Closure (Years 1-5)



## Ultimate Closure



# Questions or Comments?

Please Contact:



[community@canadanickel.com](mailto:community@canadanickel.com)



[lauricorlett@canadanickel.com](mailto:lauricorlett@canadanickel.com)

Looking for More Information?



IAAC  
Project  
Website



Crawford  
Project



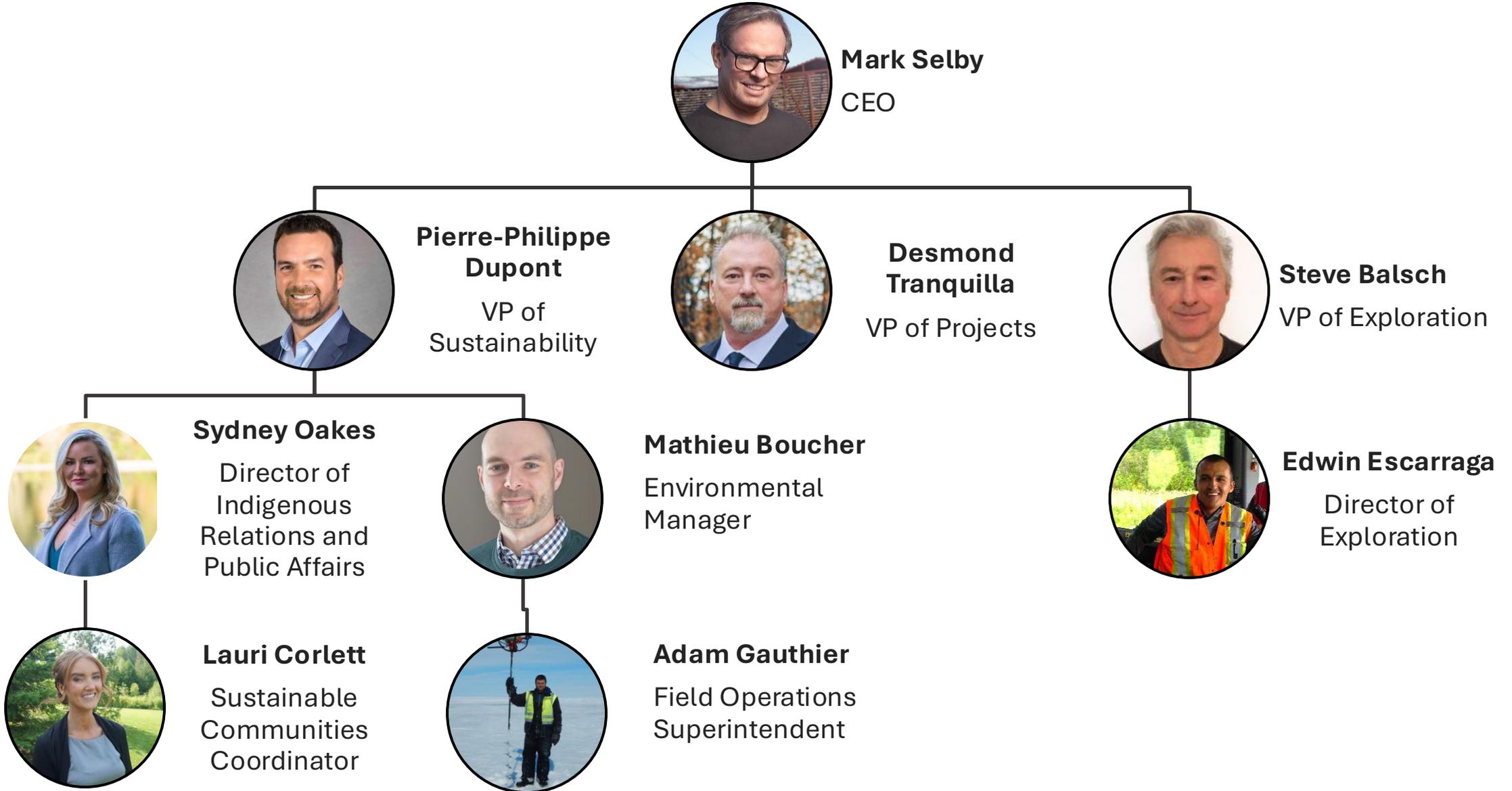
CANADA NICKEL  
COMPANY

# Project Update



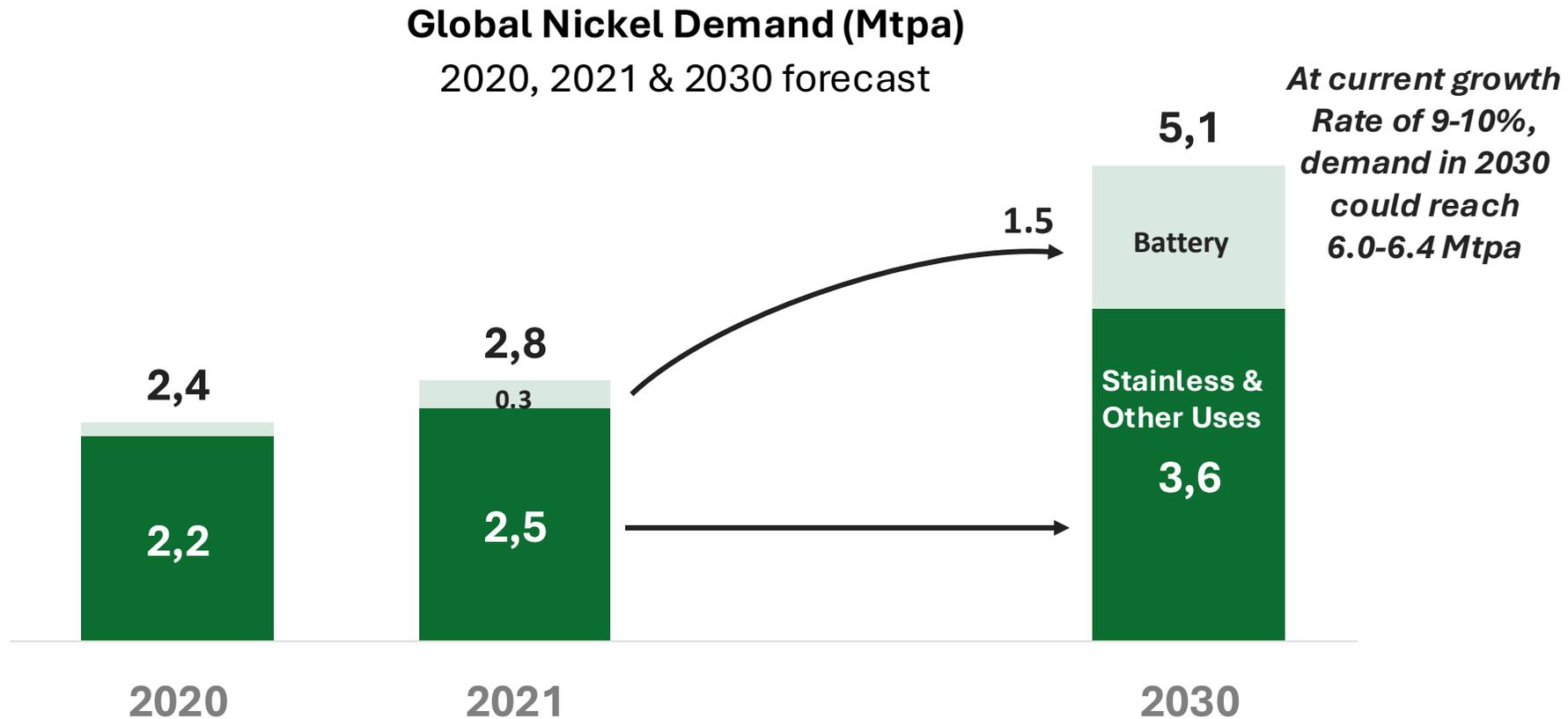
CANADA NICKEL  
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# Who We Are



# Why Nickel?

Nickel demand growth continues to be underestimated – demand on track to be up 9-10% annually in first 3 years of decade (3-4X other base metals) and forecasted by CNC to double by 2030 to 5+ Mt and potentially > 6 Mt.



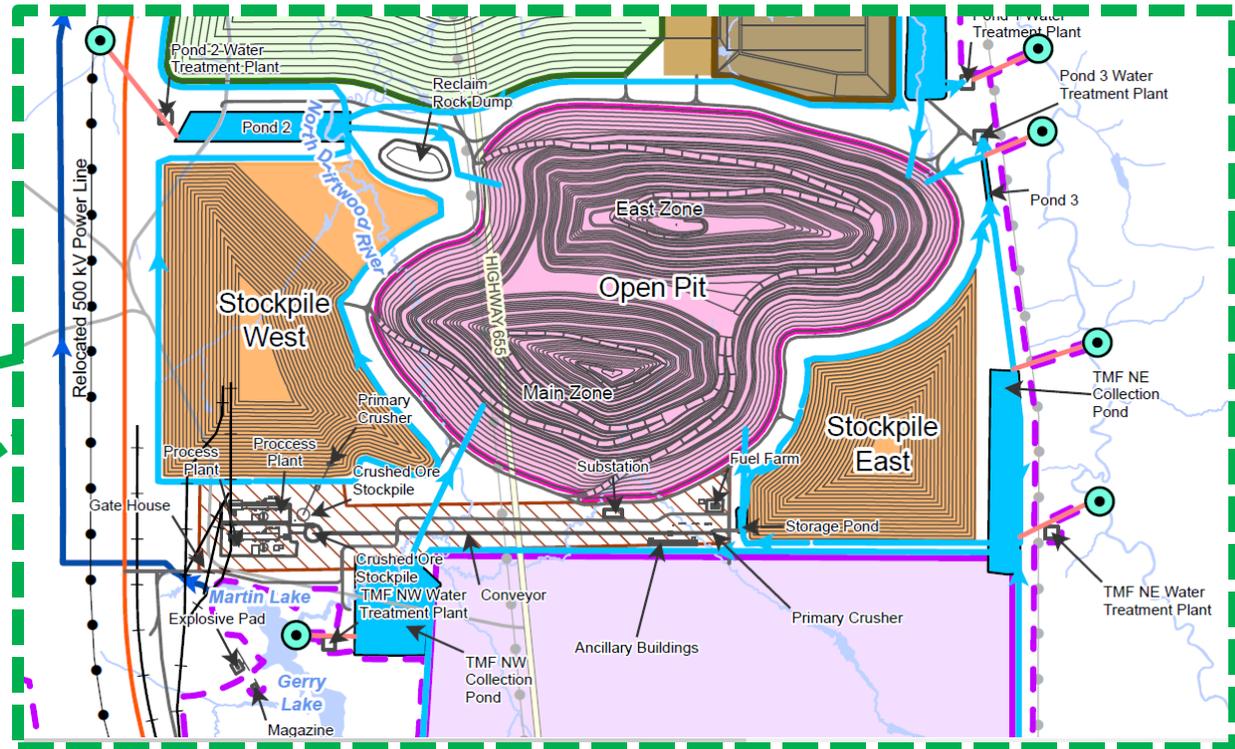
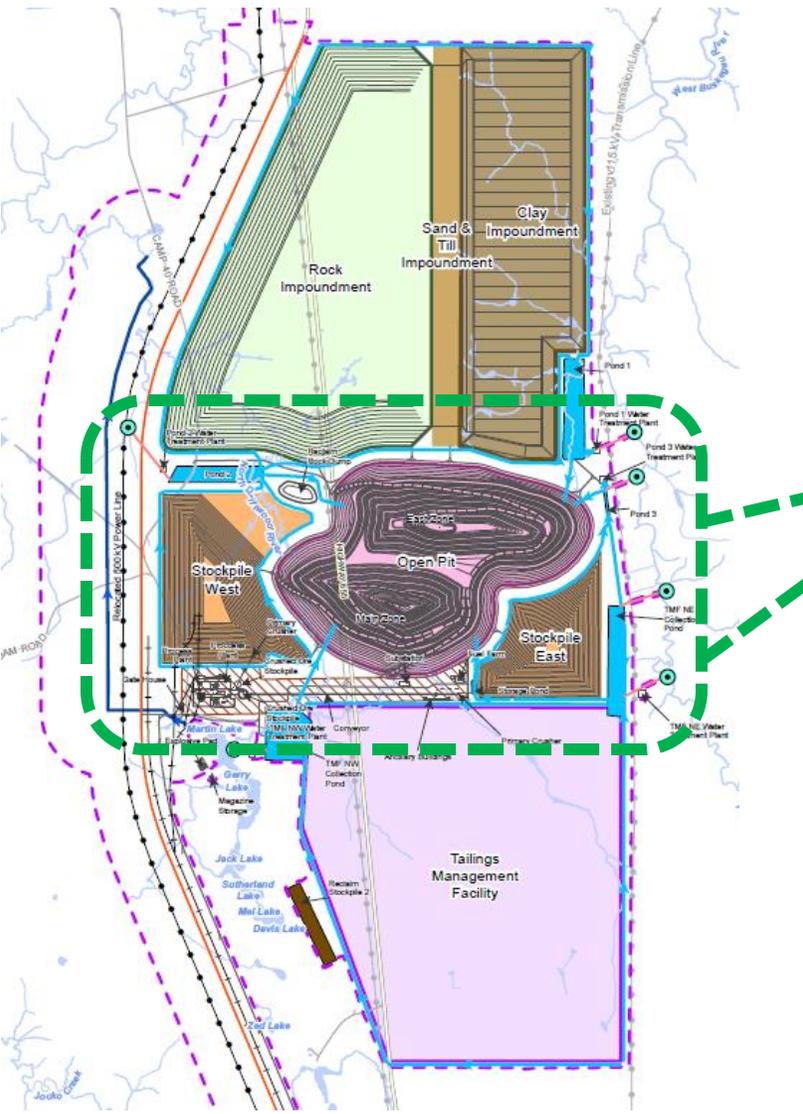
Source: INSG, CNC Analysis

Note: "f" denotes forecast



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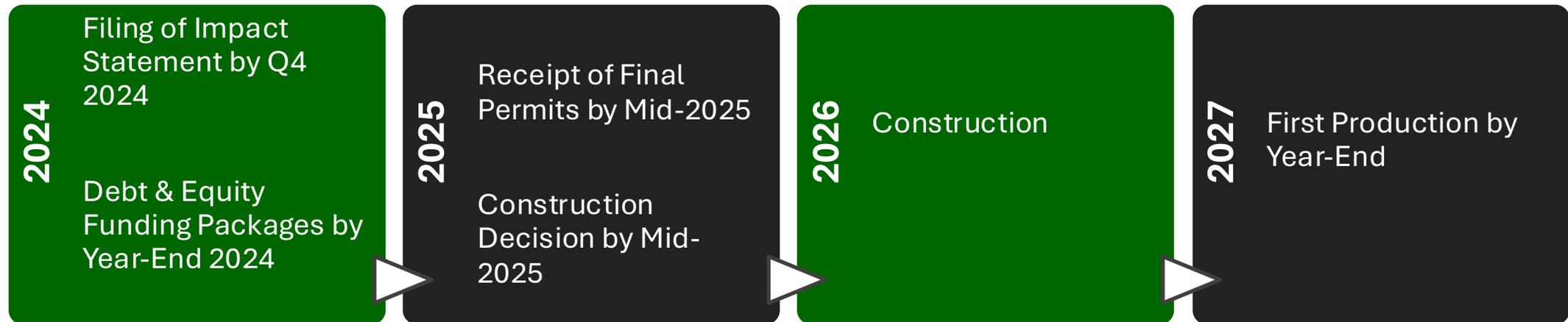
# Project Site Plan



- Legend**
- Project Area**
- Project Area
- Base Features**
- Existing Major Road
  - Existing Minor Road
  - Existing Transmission Line
  - Watercourse
  - Waterbody
- Proposed Project Components**
- Discharge Route
  - North Dirtwood Diversion Channel (Potential fish habitat enhancement Area)
  - Rail Spur
  - Relocated Hwy 655 ROW
  - Contact Water Channel
  - Site Road
  - Transmission Line
  - Discharge Location
  - Low Grade Ore Stockpile
  - Open Pit
  - Clay Impoundment
  - Pond
  - Tailings Management Facility
  - Rock Impoundment
  - Reclaim Stockpile
  - Sand & Till Impoundment
  - Process Plant Area



# Crawford Project Timeline



# Overview of Ongoing Engagement With Indigenous Nations



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# Indigenous Involvement in Impact Assessment Process

- ✓ Establishment of Technical Working Group – Meetings in March and June 2024
- ✓ Bi-weekly Impact Assessment Coordinator Meetings
- ✓ Development of Valued Components for Indigenous Nations
- ✓ Development of Tailored Chapters Specific to Each Indigenous Nation (Mini Impact Statement)
- ✓ Tour of Crawford Project Site – June 2024
- ✓ Participation in Baseline Environmental Monitoring Programs
- ✓ Completion of Traditional Land Use Knowledge and Socio-economic Studies, Funded by CNC
- ✓ Community Updates by Invitation (TTN – June, MGFN – November)
- ✓ Public Information Centres – TTN Chief and Deputy Chief attended Cochrane PIC in June



# Indigenous Donations

- ✓ Matachewan First Nation – Annual Pow Wow
- ✓ Mattagami First Nation – Beaverfest, Annual Pow Wow
- ✓ Mushkegowuk Council – Creefest
- ✓ Talon Resources and Community Development – Basketball Tournament
- ✓ Taykwa Tagamou Nation – Annual Youth Council Trip
- ✓ Wabun Tribal Council – PDAC 2024 Skookum Jim Award Replicas



# Overview of Ongoing Engagement With Local Communities



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# Community Relations – Open Houses

- Three in-person Open Houses held:
  - Timmins - June 19th, 52 attendees
  - Cochrane - June 20th, 145 attendees, including Chief Bruce Archibald, Deputy Chief Derek Archibald, Taykwa Tagamou Nation Council members, MPP John Vanthof, and Mayor Peter Politis
  - Smooth Rock Falls - July 26th, 100 attendees, including Mayor Patrick Roberts
- 129 verbal comments/questions documented during three in-person Open Houses
- Thank you to Socioeconomic Committee members Phil Archambault and Shannon Piper for their support!



# Community Relations

## Community Events

- June site tour - 27 attendees – representatives from Flying Post, Matachewan, and Mattagami First Nations, DFO, ECCC, MINES, MNRF.
  - Tour included: Lower Sturgeon Dam Road, process plant entrance, SW-9 hydrology station, former air quality station
- Canadian Institute of Mining Golf Tournament in June – 4 CNC participants; hole sponsorship
- Ongoing CNC participation in Women in Mining – Timmins and Toronto series
- CNC received a tour of the Timmins Youth Wellness Hub (YWH) and Timmins Learning Centre in October
- Ongoing consultations with local municipalities and government representatives:
  - Visit with Mayor of Iroquois Falls, Tory Delaurier
  - Site tour of Crawford Project with Minister of Mines George Pirie



# Community Relations

## Community Events

- CNC participation in the Timmins Santa Clause Parade in November
- CNC to host a personalized stocking workshop at Timmins YWH in December
- CNC to tour the Timmins and District Hospital in December to see program results for 2023 Legacy donation
- CNC scheduled to support with purchasing and packaging toys for North Eastern Ontario Family and Children's Services
- Potential December collaboration with Timmins Anti-hunger Coalition to pack and deliver holiday food boxes
- Samsung SDI Dinner in August – attendees from First Nations, City of Timmins, Town of Cochrane, Town of Iroquois Falls, Town of Smooth Rock Falls



# Next Steps

## Impact Statement:

- Impact Assessment Agency of Canada Review of Draft Statement
- Indigenous / Public Review of Impact Statement
- **Committee Charter and Membership**
  - Verification of membership – ie. additional representatives to be added to align with Committee Charter
  - Option to revise charter and expand membership



# Questions or Comments?

Please Contact:



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[lauricorlett@canadanickel.com](mailto:lauricorlett@canadanickel.com)

Looking for More Information?



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# Forward Looking Statements

This Presentation contains certain information that may constitute "forward-looking information" under applicable Canadian securities legislation about Canada Nickel Company Inc. ("CNC" or the "Company"). All statements, other than statements of historical fact, are forward-looking statements and based upon expectations, estimates and projections as at the date of this Presentation. Often, but not always, forward-looking statements can be identified by the use of words such as "may", "will", "expect", "believe", "anticipate", "illustrative", "potential" or the negative of these terms or variations of them or similar terminology. In this Presentation, forward looking information includes, but is not limited to, statements regarding the potential of the Company's Crawford project, including future zero carbon production; potential size of carbon storage facilities and ability to have a net negative carbon footprint; , timing and results of economic studies, including the bankable feasibility study ("BFS"); mineral resource estimates and mineral reserve estimates; ability to realize on projected economic estimates, including EBITDA, NPV, IRR, all-in sustaining costs, free cash flow and C1 cash costs; scale, capital costs, operating costs and life of mine projections; potential to commercialize the IPT Carbonation process; timing of receipt of permits and commencement of construction and initial production; eligibility for Canadian federal refundable tax credits; the ability to sell marketable materials; strategic plans, including future exploration and development results; and corporate and technical objectives; statements regarding the future of the nickel market, including supply and political risks; and exploration activities at the Company's regional properties. Forward-looking information is necessarily based upon several assumptions that, while considered reasonable, are subject to known and unknown risks, uncertainties, and other factors which may cause the actual results and future events to differ materially from those expressed or implied by such forward-looking information. Factors that could affect the outcome include, among others: future prices and the supply of metals, the future demand for metals, the results of drilling, the ability to accurately predict mineralization, inability to raise the money necessary to incur the expenditures required to retain and advance the property, environmental liabilities (known and unknown), general business, economic, competitive, political and social uncertainties, results of exploration programs, risks of the mining industry, delays in obtaining governmental approvals, changes in international, national and local government, legislation, controls, regulations and political or economic developments, failure to obtain regulatory or shareholder approvals, relationships with local stakeholders, and the impact public health related disruptions in relation to the Company's business operations including upon its employees, suppliers, facilities and other stakeholders. There can be no assurance that such information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. All forward-looking information contained in this Presentation is given as of the date hereof and is based upon the opinions and estimates of management and information available to management as at the date hereof.

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All amounts discussed herein are denominated in CAD dollars unless otherwise specified.

