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## Project Development Activities Continue on Multiple Fronts to Advance Mavis Lake Lithium Project

### Highlights

- Environmental Field Teams continue to progress key monitoring and assessment programs to support the permitting of a potential future mining operation at Mavis Lake.
- Environmental monitoring and characterisation workstreams advance towards second-year data collection, which is a key enabler for successful permitting.
- Liaison and engagement with the First Nations Community continues with a series of information sessions held throughout November and December 2023.
- Archaeology studies currently underway for the Mavis Lake, Gullwing and Tot areas.
- Full work program developed for 2024 and scheduled to commence in early Q1 2024 with Winter Season hydrology studies along with wetland and terrestrial studies.

Lithium exploration and project development company Critical Resources Limited **ASX:CRR** ("Critical Resources" or "the Company") is pleased to provide a progress update on the multi-pronged environmental, permitting and community engagement activities being undertaken to support the development of its 100%-owned Mavis Lake Lithium Project in Ontario, Canada.

The current series of environmental studies commenced in the Spring of 2023, with the aim of determining the baseline conditions associated with the undeveloped claims area, referred to as the Mavis Lake Project Area. Baseline studies are essential in the development of an Environmental Assessment required to support the permitting of a future mine facility at Mavis Lake.

Extensive environmental fieldwork has been conducted in the Mavis Lake Area of Focus ("AOF"), which is an area approximately 3km by 3km centred on the location of the current Mineral Resource Estimate.

The AOF encompasses an area beyond the expected footprint of a future mining operation and was designed to ensure that studies and assessments capture and consider both primary and secondary order impacts of any future activity.

### Current Workstreams

Baseline program work conducted during the Autumn/Fall season includes:

- **Surface Water Quality and Hydrology:** following previous Spring and Summer fieldwork programs, the Autumn sampling and monitoring program has been completed with detailed mapping and study of intermittent and permanent creeks in the AOF (see Figure 1).
- **Terrestrial and Wetlands:** several trail cameras were installed throughout the Mavis Lake AOF. The cameras are motion activated and will capture wildlife movement throughout the area (see Figure 2). Data will be downloaded in early Q1 2024, followed by camera relocation to alternate habitat.

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- **Geochemistry:** an assessment of all lithographies within the geological database was undertaken. Representative samples were selected and sent to a laboratory for testing to inform environmentally conscious and safe waste rock management.



**Figure 1 – Water flow measurements in local creeks, taken every season, to understand the water movement throughout the AOF.**

## **First Nations Engagement**

Following initiation as part of the Spring 2023 environmental fieldworks, Critical Resources continued its current practice of conducting pre-mobilisation cultural training sessions for all staff and contractors involved in field activities. The training session was delivered by Wabigoon Lake Ojibway Nation (WLON) and covered key themes of Treaty 3, Resource law (Manito-Aki-Inakonigaawin), First Nations Bands and Languages, conduct around First Nations, the Seven Teachings and important historical milestones.

Critical Resources staff also continued formal engagement and meetings with First Nations communities during October and November, with final meetings for 2023 scheduled for mid-December. During these formal engagement sessions, Critical Resources staff provided updates on exploration activities and environmental baseline studies.





## 2024 Baseline Studies Program

2024 will see the completion of a number of study areas that require two years of baseline data. Study fields follow similar themes to those pursued in 2023.

The first Winter program capturing surface water quality and hydrology will commence in January 2024 to complete a full four seasons of water flow measurements, levels and quality. The monitoring program will continue throughout 2024 for a second full year.

Following the expected completion of Stage 1/desktop archaeology studies in late 2023, Q1 2024 will see review and feedback from First Nations Communities, followed by field programs to confirm any points of interest and/or significance identified in the Stage 1 assessment.

Ecological classification of vegetation communities, studies of breeding birds and an evaluation of potentially significant wildlife habitat will be undertaken throughout 2024 to build on data captured during 2023. Similar efforts will be made for fisheries monitoring and baseline data capture.

Geochemistry assessment initiated in Q4 2023 will be completed in early 2024, with initial results to be used to support mine planning and waste rock management assessments. Furthermore, an initial hydrogeology study (groundwater) will be undertaken to establish baseline conditions and allow for trend assessment of groundwater conditions, with initial works scheduled to commence in Q1 2024.

The outcomes of hydrogeology studies will inform both mine planning and process water requirements.



**Figure 2 – Motion-activated trail cameras set for late-fall/early-winter monitoring.**



**Critical Resources' Managing Director Alex Cheeseman said:**

*"These important monitoring and baseline study workstreams are essential in advancing the Mavis Lake Project. We are getting on the front foot with a wide range of activities for environmental assessment, permitting and community engagement.*

*"We made the strategic decision to advance this portion of works to de-risk the project schedule and allow for mine/operational design activities to incorporate the findings.*

*"We are pleased to see continued and meaningful engagement with our First Nations Partners. Their input and counsel for archaeological studies is essential to ensure that we advance the project in a manner that is conscious and respectful to the customs and traditions of the First Nations Communities."*

**This announcement has been approved for release by the Board of Directors.**

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**ABOUT CRITICAL RESOURCES LIMITED** Critical Resources is advancing and developing critical metals projects for a decarbonised future. The Company holds a suite of lithium prospects across Ontario, Canada, including Mavis Lake, Graphic Lake, Plaid and Whiteloon Lake. The Company's other projects include a copper project in Oman, and a base metals project in Halls Peak NSW, Australia.

The Company's primary focus is the rapid development of its flagship Mavis Lake Lithium Project. Mavis Lake is an advanced exploration project with near-term development potential. The Company completed over 19,500m of drilling in 2022 and has commenced another significant drilling program in 2023. In early 2023, Critical Resources released its maiden JORC Code 2012 Compliant Inferred Mineral Resource Estimate (MRE) for Mavis Lake with 8.0Mt at 1.107% Li<sub>2</sub>O – making Critical Resources just one of two ASX-listed companies with a JORC Code 2012 compliant mineral resource in Ontario. In parallel with continued Resource growth, the Company has also commenced initial studies that will underpin the transition from explorer to developer.

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