

Appendix I

STRUM CONSULTING/2022. MAINLAND MOOSE ASSESSMENT.
L8005 TRANSMISSION LINE RIGHT-OF-WAY, CUMBERLAND AND
COLCHESTER COUNTIES



December 9, 2022

Mr. Daniel Thompson
Nova Scotia Power Inc.
1223 Lower Water Street
Halifax, NS B3J 3S8

Dear Mr. Thompson,

Re: Mainland Moose Assessment
L8005 Transmission Line Right-of-way, Cumberland and Colchester Counties, NS

INTRODUCTION

Strum Consulting was retained to complete a Mainland moose (*Alces alces americana*) assessment along the proposed L8005 Transmission Line Right-of-Way (ROW) (the Project).

The proposed Project consists of a High-voltage transmission line that extends from Lower Onslow, NS, to the New Brunswick/Nova Scotia border near Amherst, NS. The L8005 ROW runs parallel along the northeast side of the existing L8001 transmission line.

The objective of this assessment was to collect information on the distribution and habitat utilization of Mainland moose within 1 km of the ROW (the Study area) to inform mitigations and management for these animals throughout the Project's development.

To achieve the study objective, the following tasks were completed:

- Desktop Review
- Winter snow tracking surveys
- Spring Pellet group surveys

This report describes the methodologies and results of the 2022 study program.

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METHODOLOGY

Desktop Review

The desktop review was conducted to review existing information on Mainland moose observations, topography and habitat mapping in order to identify areas where Mainland moose may concentrate throughout the winter and early spring periods, and to inform the location of snow tracking and pellet group survey transects. Sources of information include:

- Wetland mapping along the ROW completed by Strum (2020)
- Nova Scotia Resources and Renewables (NSNRR) Wetland inventory
- NSNRR Significant Species and Habitats Database
- Topographic and water body maps
- NSNRR Moose Observation Database (obtained in 2018)

Drawing 1 (attached) shows the results of the desktop review.

Field Surveys

Snowtracking Surveys

The objective of the snow tracking surveys was to assess areas identified in the desktop review for the presence of Mainland moose tracks and sign in order to collect evidence on the distribution of moose in the winter period. Information from the desktop review was used to identify suitable routes for snow tracking transects. Methods for terrestrial wildlife field assessments were based on those provided by NSNRR in 2022. A total of 20 transects ranging in length from 1005 m to 7000 m, and totalling 30.1 km, were identified. Transects were distributed somewhat evenly within the Study area along the ROW, and were dispersed to represent the habitat diversity present along the ROW. Transects were selected to assess specific habitat features, usually near a location where Mainland moose were observed previously. Efforts were made to include sections of the existing L8001 transmission line corridor in the transect routes to assess if Mainland moose move along it, as they are known to transit along linear developments. Table A1 (attached) summarizes information about each of the snow tracking survey transects. Snow tracking survey transects are shown on Drawing 2 (attached).

Snowtracking transects were surveyed by a team of biologists with demonstrated experience in Mainland moose sign identification. Surveys were completed in February and March 2022 within 4 days of a snowfall of 10 cm or more, provided no periods of high wind or rainfall occurred between the snowfall event and the survey. On either side of each transect 2 m were surveyed by biologists walking on foot and using a handheld GPS to navigate along the transect. Observations of animal signs, including tracks, pellets / scat, rubs, and direct observation were recorded and georeferenced using ESRI's Survey123 running on a tablet, as well as a handheld GPS. When suspected Mainland moose activity was observed, detailed notes and photos were recorded. Additional notes relating to habitat, weather, and animal activity were recorded in a wildlife tracking spreadsheet.

Pellet Group Surveys

The objective of the pellet group surveys was to assess areas identified in the desktop review for the presence of Mainland moose pellets and other signs (i.e., browse) in order to collect evidence on the distribution of moose in the spring and winter period (as pellets may be preserved by cold temperatures and snow for several months over the winter). Information from the desktop review was used to identify suitable routes for pellet group survey transects, and different transects were used for pellet group surveys than for the snow tracking survey transects. A total of 13 transects ranging in length from 1000 m to 1669 m, and totalling 16 km, were identified. Transects were distributed somewhat evenly along within the Study area along the ROW, and were dispersed to represent the habitat diversity present along the ROW. Transects were selected to assess specific habitat features, usually near a location where Mainland moose were observed previously. Efforts were made to include sections of the existing L8001 transmission line corridor in the transect routes. Table A2 (attached) summarizes information about each of the pellet group survey transects. Pellet group survey transects are shown on Drawing 2.

Pellet group transects were surveyed by a team of biologists with demonstrated experience in Mainland moose sign identification. Transects were surveyed in April 2022, after snow had melted in the Study Area, and before greenup. On either side of each transect 2 m were surveyed by biologists walking on foot and using a handheld GPS to navigate along the transect. Observations of animal sign, including tracks, pellets / scat, rubs, and direct observation were recorded and georeferenced using ESRI's Survey123 running on a tablet, as well as a handheld GPS. Additional notes relating to habitat, weather, and animal activity were recorded in a wildlife tracking spreadsheet.

RESULTS

Desktop Review

The Mainland moose observation dataset provided by NSNRR (2018) shows higher concentrations of observations in the Northwestern portion of the Study Area near the Amherst Marsh, between Highway 366 and the New Brunswick border. This area is part of the Chignecto Isthmus, which connects Mainland Nova Scotia to New Brunswick. The area has been a focus of conservation efforts, with the goal of establishing a corridor for Nova Scotia's Mainland moose population to move freely across the Isthmus into New Brunswick, and vice versa. This area is also of conservation interest due to the high concentration of wetlands and other surface water features that may provide Mainland moose with adequate summer browse (aquatic vegetation is a primary part of the diet during the summer months) and thermal refuge from the heat. The extent to which these features provide overwintering habitat for Mainland moose in the area is unknown, but the abundant water features could be a source of liquid flowing surface water for moose during the winter. A similarly high concentration of Mainland moose observations has been recorded in the area of Higgins Mountain, adjacent to Foley Lake. Strum has also made several direct observations of Mainland moose and recorded moose sign on Higgins Mountain during fieldwork for another project in July and August of 2020. This area, particularly the Dicks Meadow wetland complex (Drawing 2-9), appears to be an important habitat feature for Mainland moose during the summer. Aside from these two concentration

areas, observations of Mainland moose have been made near the Study area along the entirety of the ROW in low concentrations.

Southwest of Highway 366, towards the Onslow terminus of the ROW, the ROW crosses several dozen watercourse and river valleys that may attract Mainland moose seasonally, either as a source of liquid water in winter, or for foraging on shrub growth during spring and summer. Areas of open marsh and surface waterbodies that would be suitable for thermal refuge during the summer are scant along the ROW, with the exception of the Amherst Marsh area.

No habitat features specific to Mainland moose, such as moose wintering areas, were identified within or near the Study Area.

Field Surveys

Snowtracking Surveys

Results of the snow tracking surveys are presented in Table B1 (attached) and on Drawing 2. Three observations of Mainland moose browse were made. These observations were made on Transect 19 (See Table B1, Drawing 2-2 and Photo 5 in the appended photolog), Transect 20 (Drawing 2-10), and an off transect area within the existing L8001 transmission line corridor to the west of Highway 366 (Drawing 2-2, Photo 6). In all three cases, the browse was on young regenerating hardwood saplings, and was not recent.

Pellet Group Surveys

Results from the pellet group surveys are presented in Table B2 (attached) and on Drawing 2. No observations of Mainland moose sign or pellets were observed during the pellet group surveys.

DISCUSSION

Discussion of Assessment Results

A variety of wildlife species were identified throughout the field surveys. Common wildlife species such as snowshoe hare (*Lepus americanus*), red squirrel (*Tamiasciurus hudsonicus*), and white-tailed deer (*Odocoileus virginianus*) were the most frequent observations, while other small mammals were also prevalent. Carnivorous species observed included Eastern coyote (*Canis latrans*) and bobcat (*Lynx rufus*).

Mainland moose browse was observed in several areas within the Study Area (Drawings 2-2 and 2-10 respectively). Browse does not provide an indication of the seasonality of habitat use, as it could have occurred at any point within the past 1-2 years. The lack of observations of snow tracks or pellets indicates that the density of animals in these areas is likely low in the winter and early spring. Winter snowtracking surveys conducted on Higgins Mountain in 2021 yielded a similar conclusion, where a consistent presence of the animals in the summer was observed, however it appeared that they move elsewhere for the winter, likely seeking softwood forest cover in lower lying areas that provides thermal refuge.

Guidance for assessing Mainland moose provided by NSNRR recommends three rounds of winter snow tracking surveys, in early, mid and late winter. Only one round of snow tracking surveys was able to be completed for this program in 2022. Future winter surveys or monitoring coinciding with the Projects construction, or post-construction should be targeted at areas with softwood cover and low road density within the Study Area.

While the pellet group surveys did not yield any observations of Mainland moose sign, this protocol could be replicated in parts of the Study Area where Mainland moose sign was observed. Areas to prioritize for future pellet group surveys should include the Amherst Marsh and the Higgins and Foley Mountain areas, as well as other areas in the ROW where there is low road density and significant softwood cover.

Discussion of the Project's Impact on Mainland Moose

Mainland moose populations in Nova Scotia have declined by 20% in the last 30 years, and are considered critically imperilled. Furthermore, Mainland moose are protected under the Nova Scotia Endangered Species Act (NSNRR 2021). In 2021, NSNRR released an updated recovery plan for the moose in Mainland Nova Scotia (the MMRP 2021) in which they set a goal for increasing the Mainland moose population by 10%. The MMRP 2021 also designated core habitat that is critical for Mainland moose recovery, and identified threats to Mainland moose based on the World Conservation Union–Conservation Measures Partnership's unified threat classification system. The L8005 ROW extends through core habitat identified in the MMRP 2021 (which encompasses much of Cumberland and Colchester Counties). Furthermore, the MMRP 2021 identifies 'utility and service lines' as a threat to Mainland moose owing to their potential to contribute to habitat and population fragmentation and isolation (see Table 2 in section 4 of the MMRP 2021).

As the L8005 ROW is proposed to be co-located alongside the existing L8001 transmission line corridor, the Project's contribution to habitat fragmentation is small. Mainland moose are using habitat within the existing L8001 corridor, as evident by the observation of Mainland moose browse to the west of Highway 366 (Drawing 2-2). However, the cumulative effect of increasing the width of the corridor to accommodate the L8005 infrastructure should be considered for its contribution to habitat alteration and fragmentation.

Forest management is discussed in the MMRP 2021. Forest management practices can both enhance and degrade Mainland moose habitat (NSNRR, 2021). Harvesting trees to create a transmission line corridor can make browse more available in the form of regenerating trees, however the loss of sufficient cover for thermoregulation and shelter reduces the benefits of new browse availability in these cleared areas. Habitat within the L8001 corridor varies, but in the Amherst Marsh area, where our assessment indicates that Mainland moose are likely in the highest relative abundance along the ROW, habitat types include regenerating hardwood trees and low shrubs (e.g., alder thickets), which may offer good browse production and provide a foraging location for Mainland moose. However, the loss of forested habitat within the L8005 ROW may result in the loss of thermoregulatory shelter for the animals. Furthermore, clearing the L8005 ROW may result in increased transiting opportunities for Mainland moose alongside other species such as white-tailed deer; this interspecies transit may

increase opportunities for the transfer of parasites from deer to moose, such as undulate brainworm (*Parelaphostrongylus tenuis*), which is a significant threat to Mainland moose. The potential benefit associated with more accessibly transit corridors for Mainland moose should be considered against the risk of increased contact with white-tailed deer.

In addition to the biophysical effects of the Project discussed above, the impact of human presence within the ROW during and after construction should also be considered. During construction, workers and equipment will be required to clear the vegetation and construct the towers. After construction is completed, the line will require maintenance and inspections, which will increase human traffic. Mainland moose density is known to decrease with proximity to roads (Beazley et al. 2004), and it will be important to implement mitigations to ensure opportunities for human traffic are diminished along the L8001 / L8005 ROW in order to prevent a similar effect. Designs that reduce reliance for powerline maintenance should be considered, as well as non-invasive means of inspection, such as the use of aircrafts or drones. Likewise, the means of maintaining compatible vegetation within the ROW (e.g., the cutting of tree species while maintaining low shrub species that do not interfere with the powerlines) should be considered with regards to the impact of vegetation maintenance on Mainland moose. Additionally, the construction of the Project may increase opportunities for non-project related human access into the ROW, such as by ATV users, hikers, or even hunters (including illegal hunters targeting moose). Increased access for poaching is noted as a major threat to Mainland moose in the MMRP 2021 (NSNRR, 2021). These other users may take advantage of roads and trails constructed or upgraded for access to, or along, the L8005 ROW. It will be important to include plans to decommission and re-vegetate access roads required for construction and maintenance in order to mitigate this threat.

Seasonality should be considered when planning construction activities. Our assessment indicates that where Mainland moose presence is likely the highest along the ROW (e.g., the Amherst Marsh area and the Higgins Mountain area), moose appear to be absent or in low abundance during the winter. Targeting late fall or winter for construction and post-construction maintenance activities in these areas will help reduce the impact of construction on the animals.

CLOSURE

This report was prepared by Scott Dickey, MREM, Manager, Environmental Sciences, and was reviewed by Shawn Duncan, BSc., President. Should additional information become available, Strum requests that this information be brought to our attention immediately so that we can re-assess the conclusions presented in this report.

This Report and any use of the Report is subject to the terms herein (see attached Statement of Qualifications and Limitations).

If you have any questions, please contact us.

Thank you,



Scott Dickey, MREM
Manager, Environmental Science
sdickey@strum.com



Shawn Duncan, BSc.
President
sduncan@strum.com

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REFERENCES

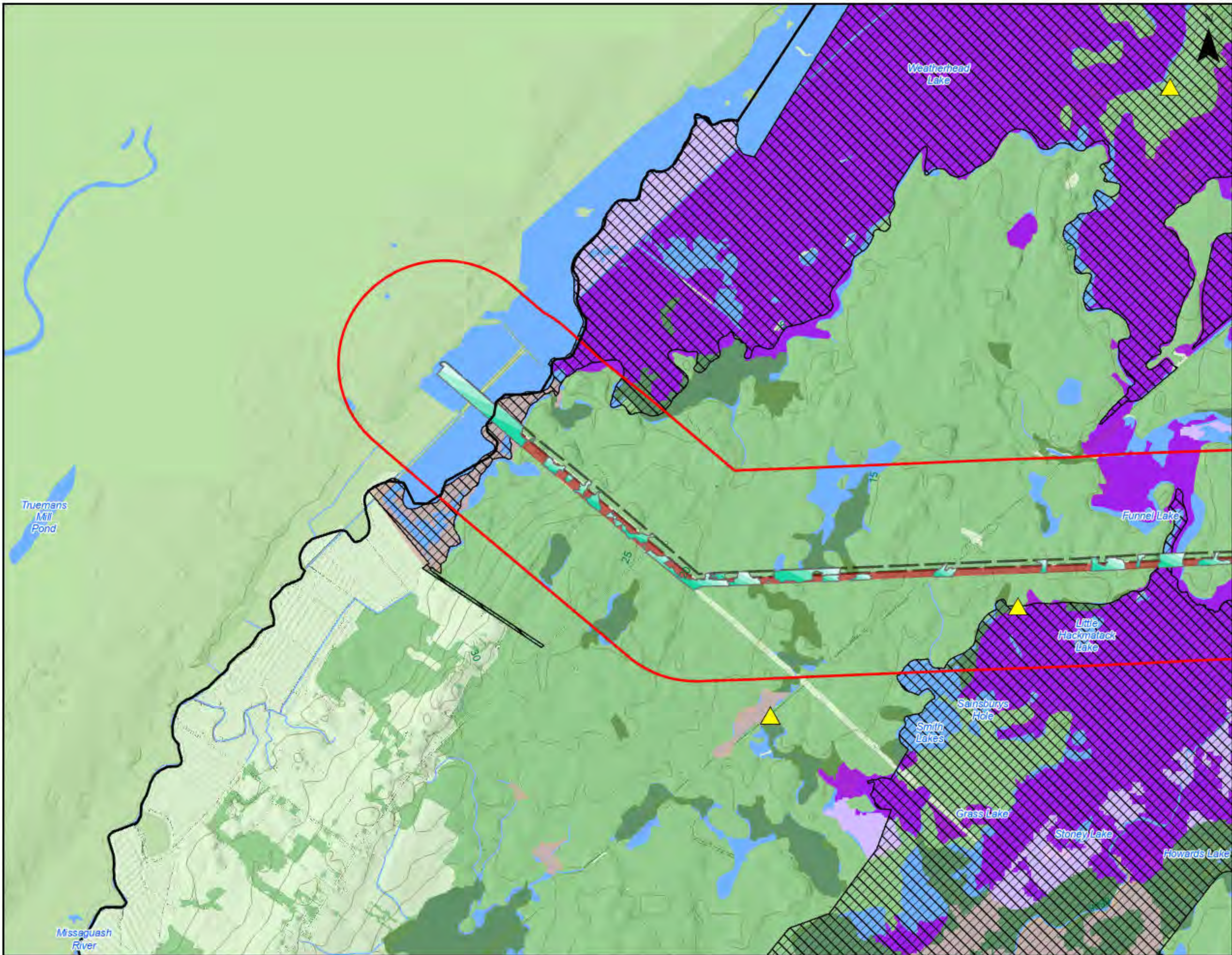
Beasley, K.F., Snaith, T.V., MacKinnon, F., David, C. 2004. Road Density and the Potential Impact of Wildlife Species such as American Moose in Mainland Nova Scotia. Proceedings from the Nova Scotia Institute of Science. 2004. Vol 23, Pt. 2, pp. 339-357

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Nova Scotia Natural Resources and Renewables (NSNRR). (2021). Recovery Plan for the Moose (*Alces alces Americana*) in Mainland Nova Scotia. Nova Scotia Endangered Species Act Recovery Plan Series. 96pp.



Proposed L8005 Transmission Line ROW

Desktop Review

Legend

- NSDRR Moose Observations Dataset (2018)
- Existing L8001 ROW
- Proposed L8005 ROW
- 1km Buffer for Moose Transect
- Contours (m)
- Migratory Bird
- NSDNR Wetland Inventory
- Bog or Fen
- Fen
- Marsh
- Swamp
- Water Features**
- Mapped Stream
- Mapped Indefinite Stream
- Lakes and Rivers
- Field Delineated Watercourses
- Field Delineated Wetlands

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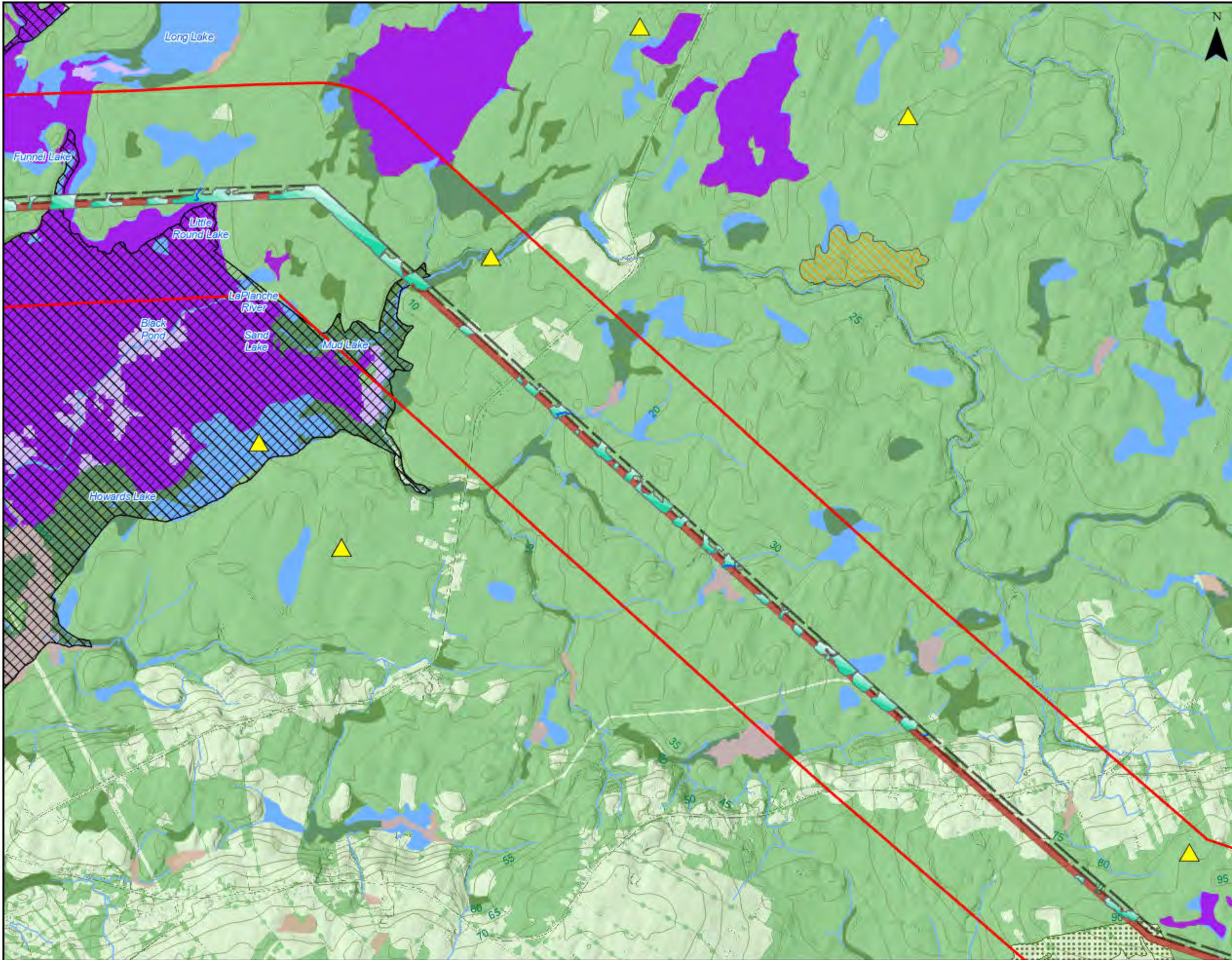
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Date: December 2022 Project #: 22-8446

Drawn By: E. Johnson Drawing #: 1-1

Checked By: S. Dickey

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Proposed L8005 Transmission Line ROW

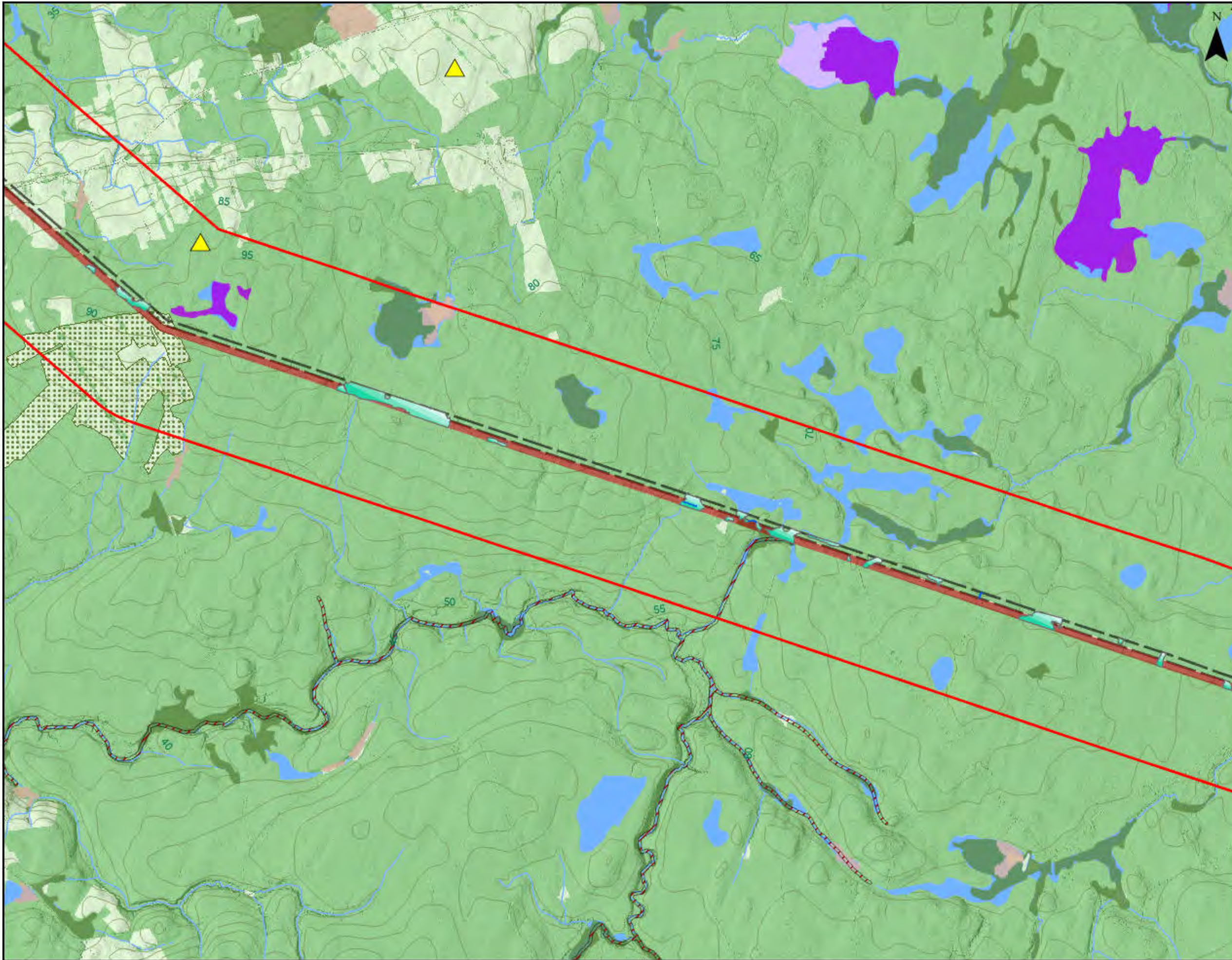
Desktop Review

- Legend**
- NSDRR Moose Observations Dataset (2018)
 - Existing L8001 ROW
 - Proposed L8005 ROW
 - 1km Buffer for Moose Transect
 - Contours (m)
 - Migratory Bird
 - Other Habitat (Talus Slopes)
 - NSDNRR Wetland Inventory - Bog or Fen
 - NSDNRR Wetland Inventory - Fen
 - NSDNRR Wetland Inventory - Marsh
 - NSDNRR Wetland Inventory - Swamp
 - Water Features - Mapped Stream
 - Water Features - Mapped Indefinite Stream
 - Water Features - Lakes and Rivers
 - Water Features - Field Delineated Watercourses
 - Water Features - Field Delineated Wetlands



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Kilometers
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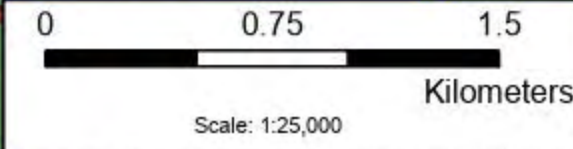
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Proposed L8005 Transmission Line ROW

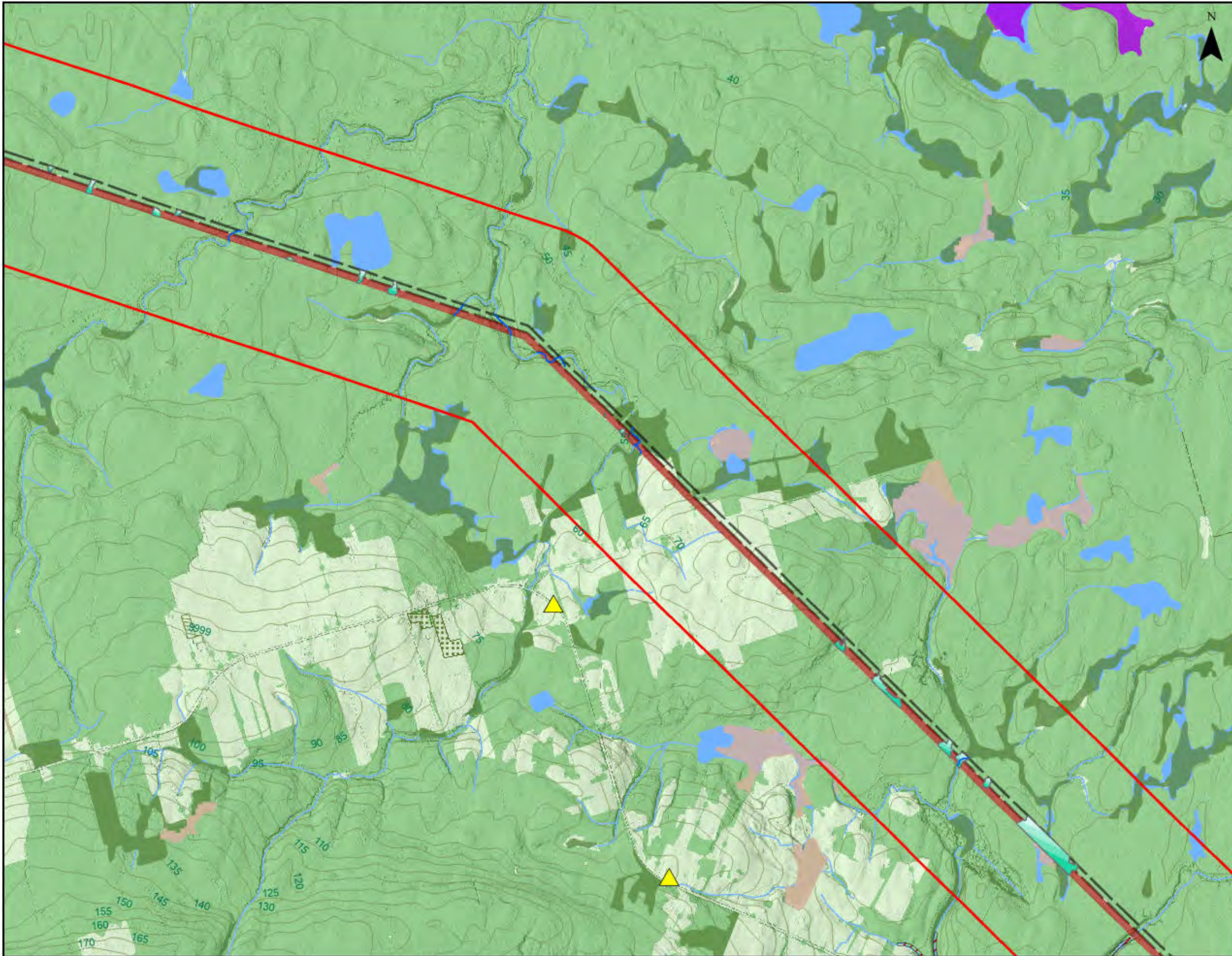
Desktop Review

- Legend**
- NSDRR Moose Observations Dataset (2018)
 - Existing L8001 ROW
 - Proposed L8005 ROW
 - 1km Buffer for Moose Transect
 - Contours (m)
 - Species at Risk
 - NSDNRR Wetland Inventory Bog or Fen
 - Fen
 - Marsh
 - Swamp
 - Water Features**
 - Mapped Stream
 - Mapped Indefinite Stream
 - Lakes and Rivers
 - Field Delineated Watercourses
 - Field Delineated Wetlands



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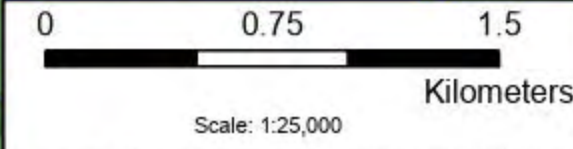




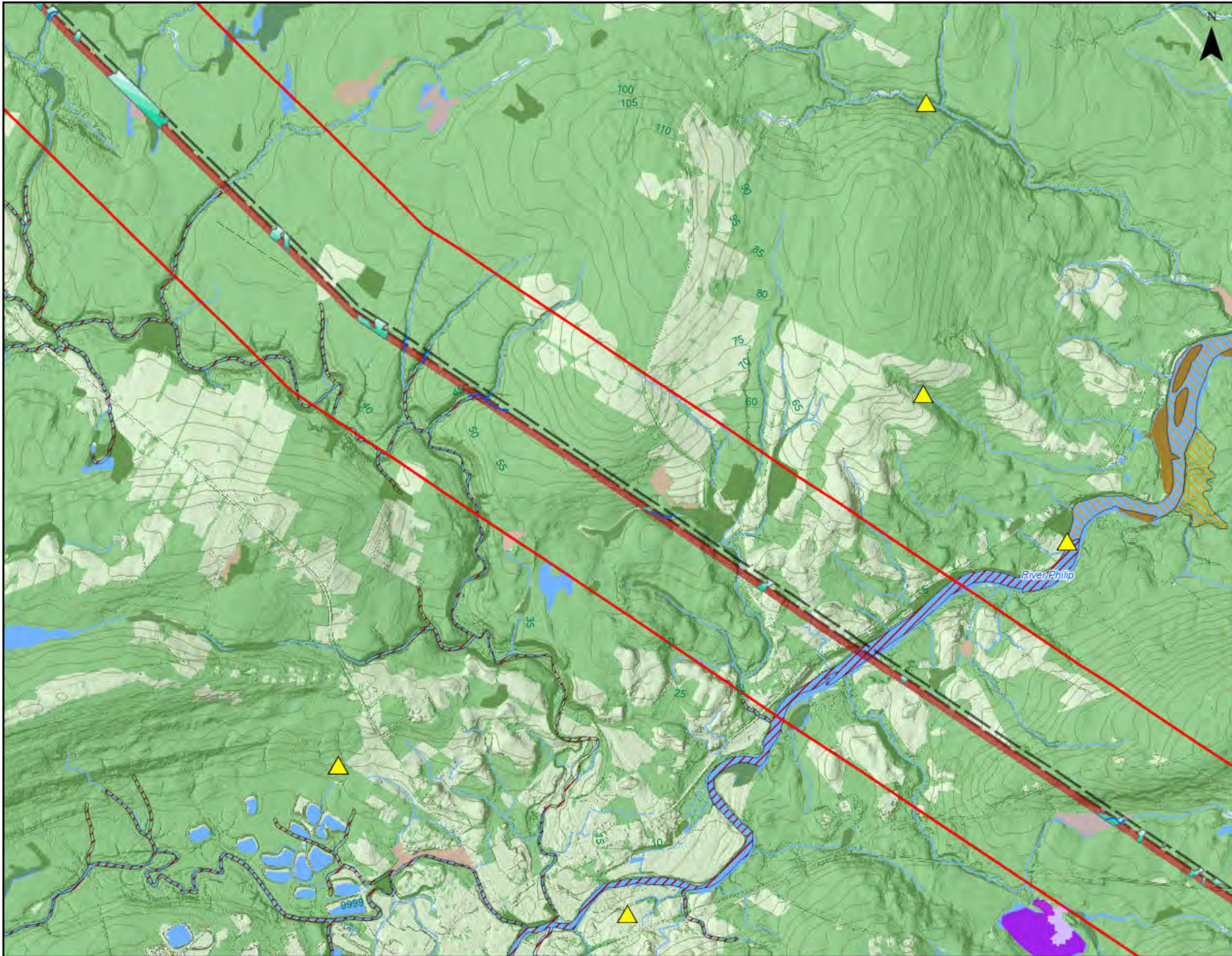
Proposed L8005 Transmission Line ROW

Desktop Review

- Legend**
- NSDRR Moose Observations Dataset (2018)
 - Existing L8001 ROW
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 - 1km Buffer for Moose Transect
 - Contours (m)
 - Species at Risk
 - NSDNRR Wetland Inventory - Bog or Fen
 - NSDNRR Wetland Inventory - Marsh
 - NSDNRR Wetland Inventory - Swamp
 - Water Features - Mapped Stream
 - Water Features - Mapped Indefinite Stream
 - Water Features - Lakes and Rivers
 - Water Features - Field Delineated Watercourses
 - Water Features - Field Delineated Wetlands



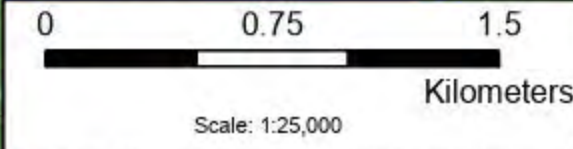
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Proposed L8005 Transmission Line ROW

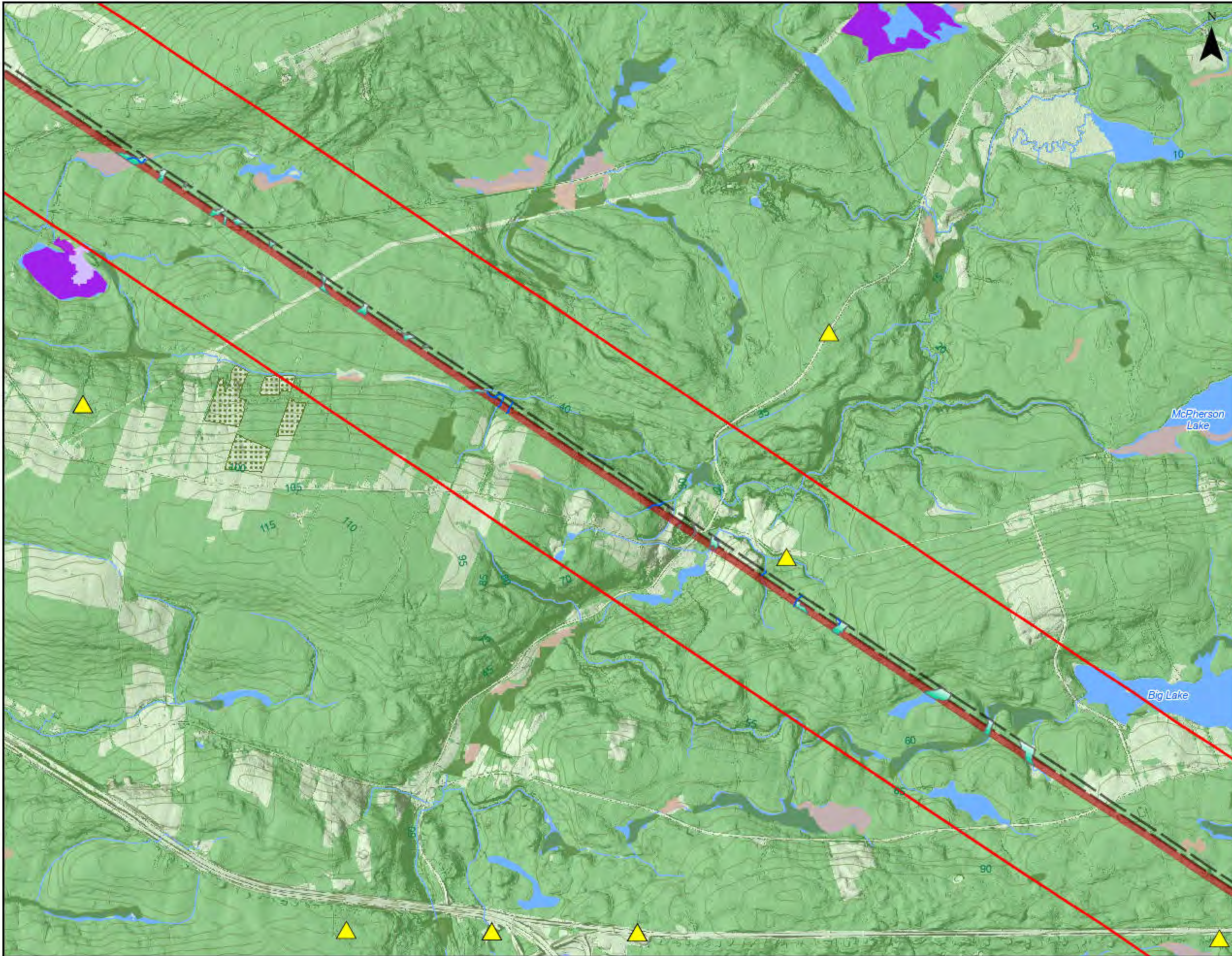
Desktop Review

- Legend**
- NSDRR Moose Observations Dataset (2018)
 - Existing L8001 ROW
 - Proposed L8005 ROW
 - 1km Buffer for Moose Transect
 - Contours (m)
 - Other Habitat (Talus Slopes)
 - Species at Risk
 - NSDRR Wetland Inventory Bog or Fen
 - Fen
 - Marsh
 - Salt Marsh
 - Swamp
 - Water Features**
 - Mapped Stream
 - Mapped Indefinite Stream
 - Lakes and Rivers
 - Field Delineated Watercourses
 - Field Delineated Wetlands



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









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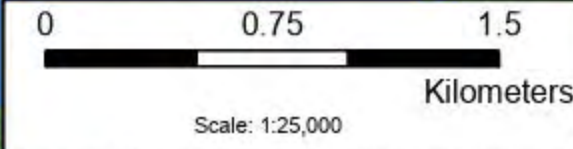


Proposed L8005 Transmission Line ROW

Desktop Review

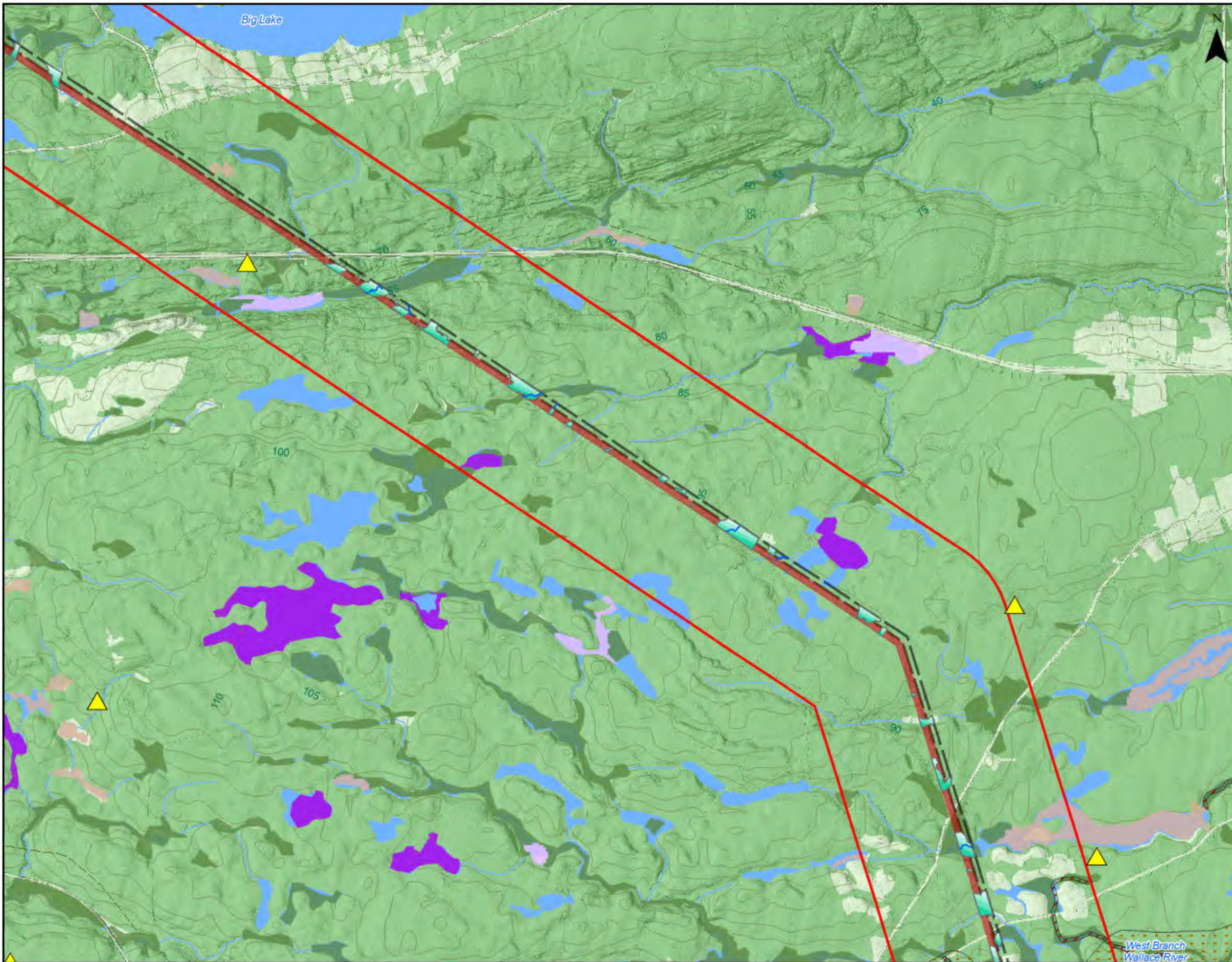
Legend

-  NSDRR Moose Observations Dataset (2018)
-  Existing L8001 ROW
-  Proposed L8005 ROW
-  1km Buffer for Moose Transect
-  Contours (m)
-  Bog or Fen
-  Fen
-  Marsh
-  Swamp
- Water Features**
-  Mapped Stream
-  Mapped Indefinite Stream
-  Lakes and Rivers
-  Field Delineated Watercourses
-  Field Delineated Wetlands



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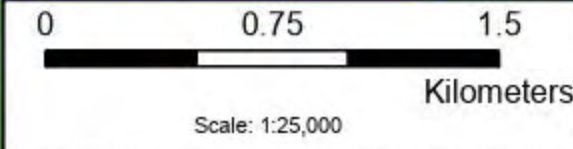


Proposed L8005 Transmission Line ROW

Desktop Review

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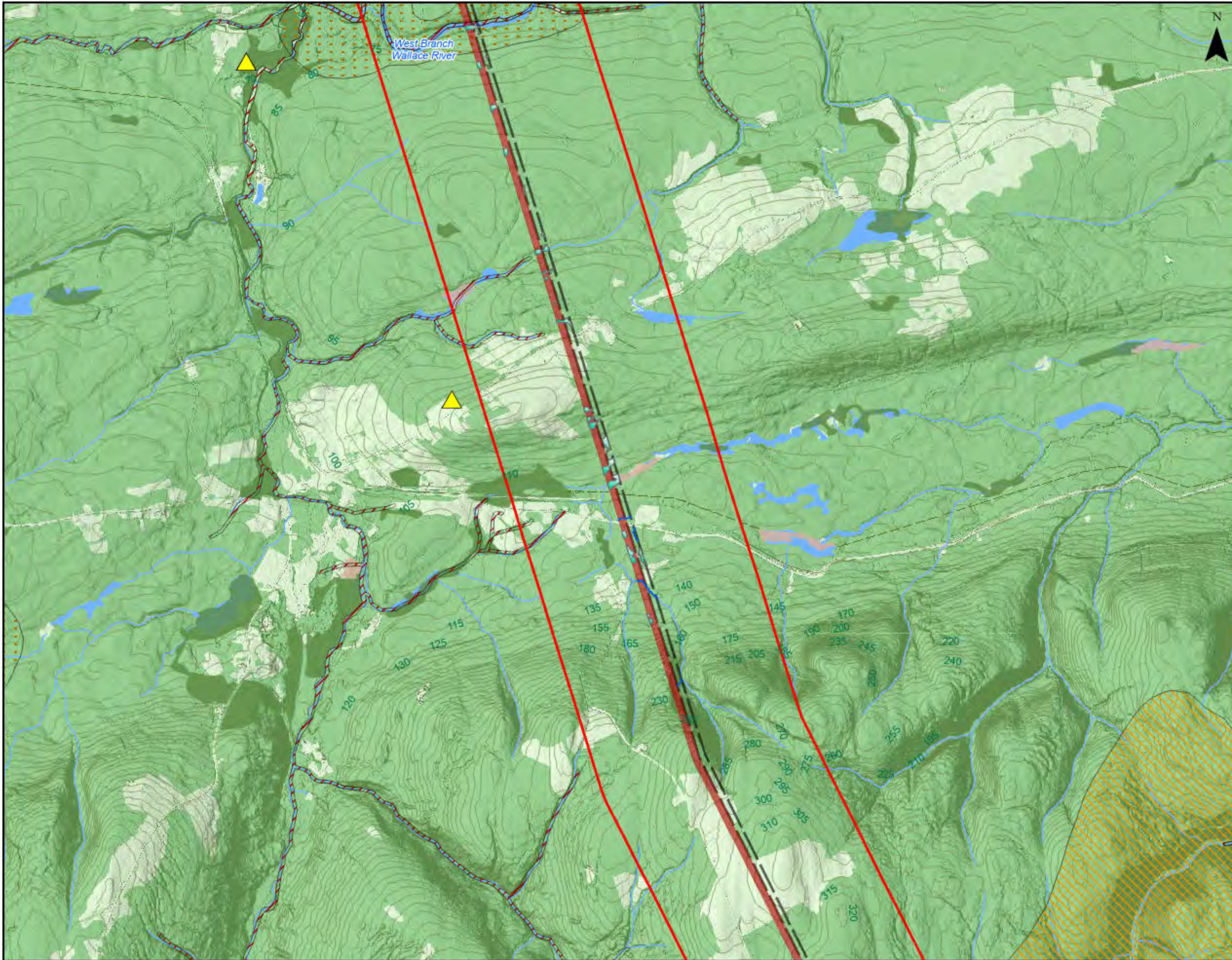
- NSDRR Moose Observations Dataset (2018)
- Existing L8001 ROW
- Proposed L8005 ROW
- 1km Buffer for Moose Transect
- Contours (m)
- Deer Wintering
- Species at Risk
- NSDNRR Wetland Inventory - Bog or Fen
- NSDNRR Wetland Inventory - Fen
- NSDNRR Wetland Inventory - Marsh
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- Water Features - Lakes and Rivers
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Proposed L8005 Transmission Line ROW

Desktop Review

Legend

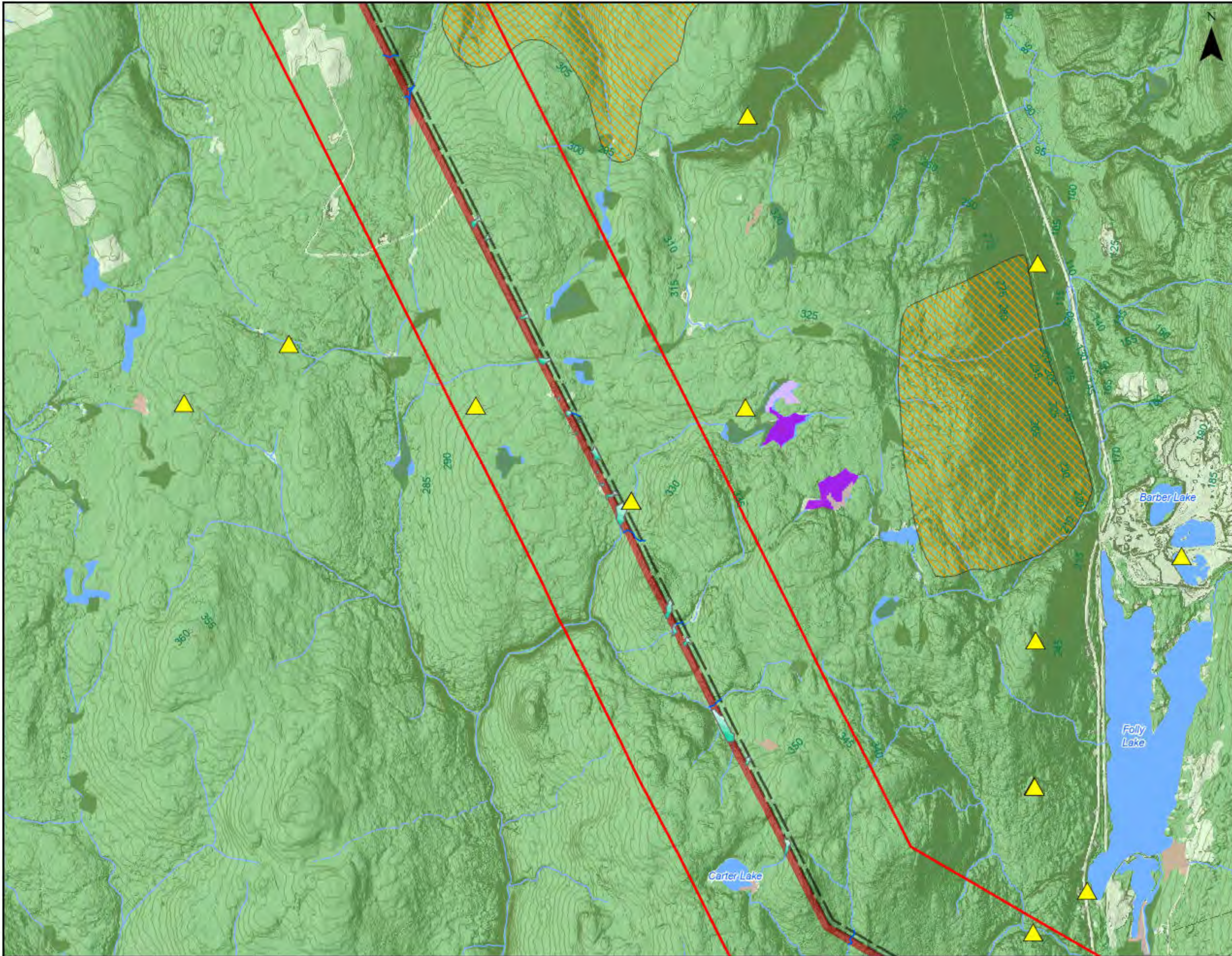
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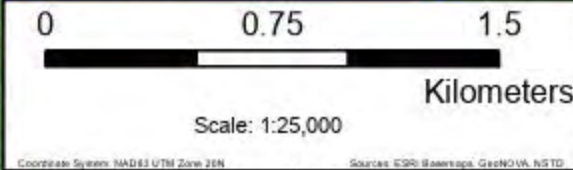




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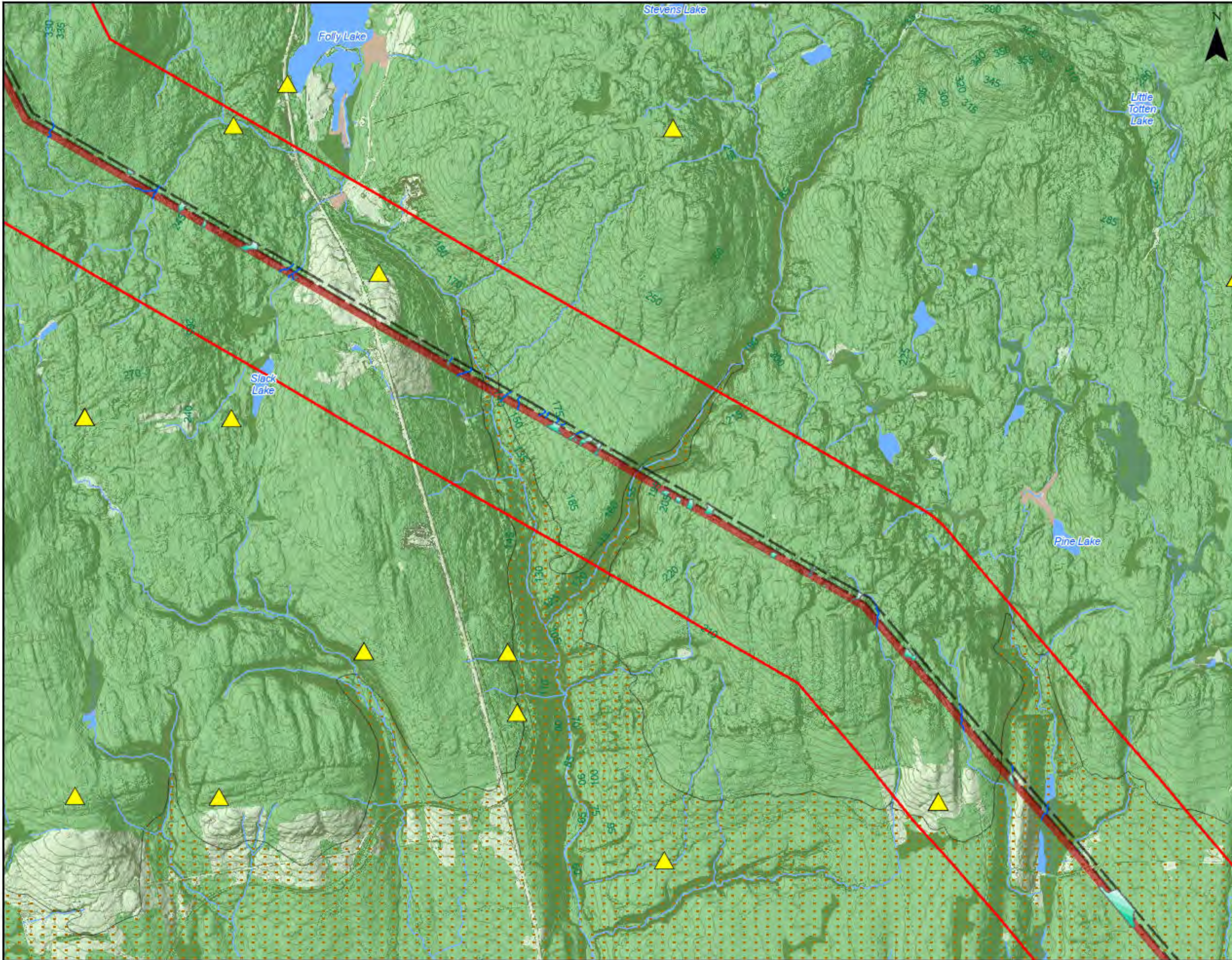
Desktop Review

- Legend**
- NSDRR Moose Observations Dataset (2018)
 - Existing L8001 ROW
 - Proposed L8005 ROW
 - 1km Buffer for Moose Transect
 - Contours (m)
 - Other Habitat (Talus Slopes)
 - Species at Risk
 - Bog or Fen
 - Fen
 - Marsh
 - Swamp
 - Mapped Stream
 - Mapped Indefinite Stream
 - Lakes and Rivers
 - Field Delineated Watercourses
 - Field Delineated Wetlands



Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	1-9
Checked By:	S. Dickey		



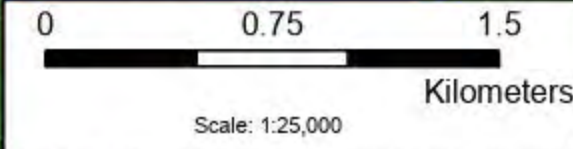


Proposed L8005 Transmission Line ROW

Desktop Review

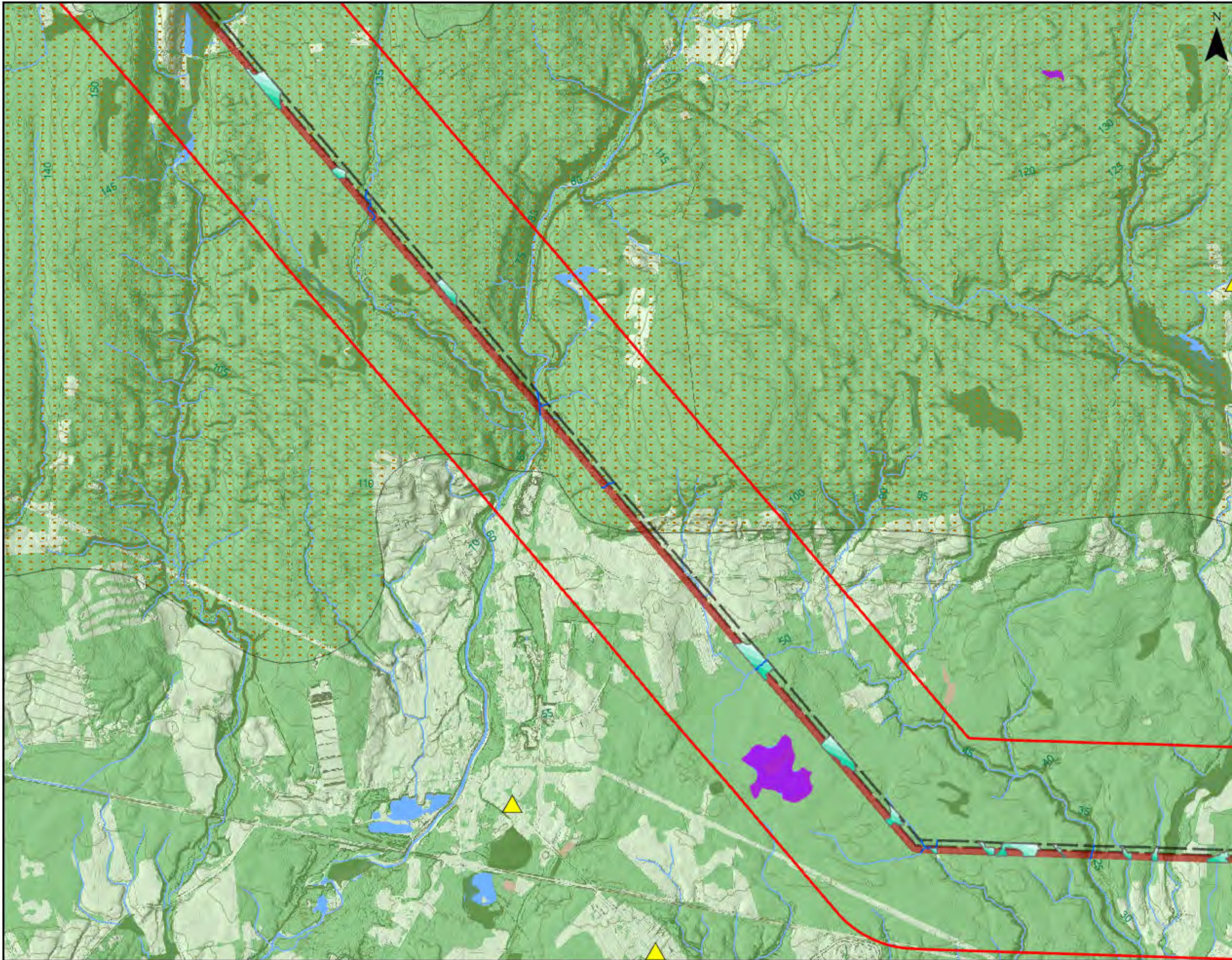
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- NSDRR Moose Observations Dataset (2018)
- Existing L8001 ROW
- Proposed L8005 ROW
- 1km Buffer for Moose Transect
- Contours (m)
- Deer Wintering
- NSDNRR Wetland Inventory - Marsh
- NSDNRR Wetland Inventory - Swamp
- Water Features**
- Mapped Stream
- Mapped Indefinite Stream
- Lakes and Rivers
- Field Delineated Watercourses
- Field Delineated Wetlands



Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	1-10
Checked By:	S. Dickey		

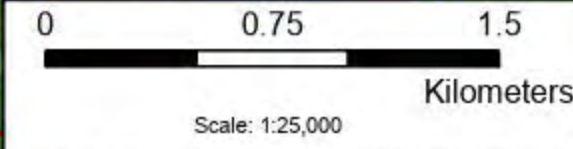




Proposed L8005 Transmission Line ROW

Desktop Review

- Legend**
- NSDRR Moose Observations Dataset (2018)
 - Existing L8001 ROW
 - Proposed L8005 ROW
 - 1km Buffer for Moose Transect
 - Contours (m)
 - Deer Wintering
 - NSDNRR Wetland Inventory - Bog or Fen
 - NSDNRR Wetland Inventory - Marsh
 - NSDNRR Wetland Inventory - Swamp
 - Water Features - Mapped Stream
 - Water Features - Mapped Indefinite Stream
 - Water Features - Lakes and Rivers
 - Water Features - Field Delineated Watercourses
 - Water Features - Field Delineated Wetlands



















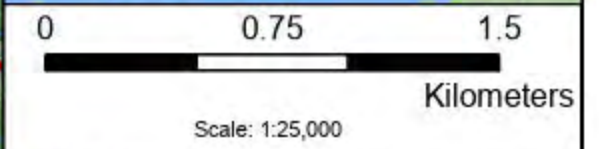
Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	1-11
Checked By:	S. Dickey		

Proposed L8005 Transmission Line ROW

Desktop Review

Legend

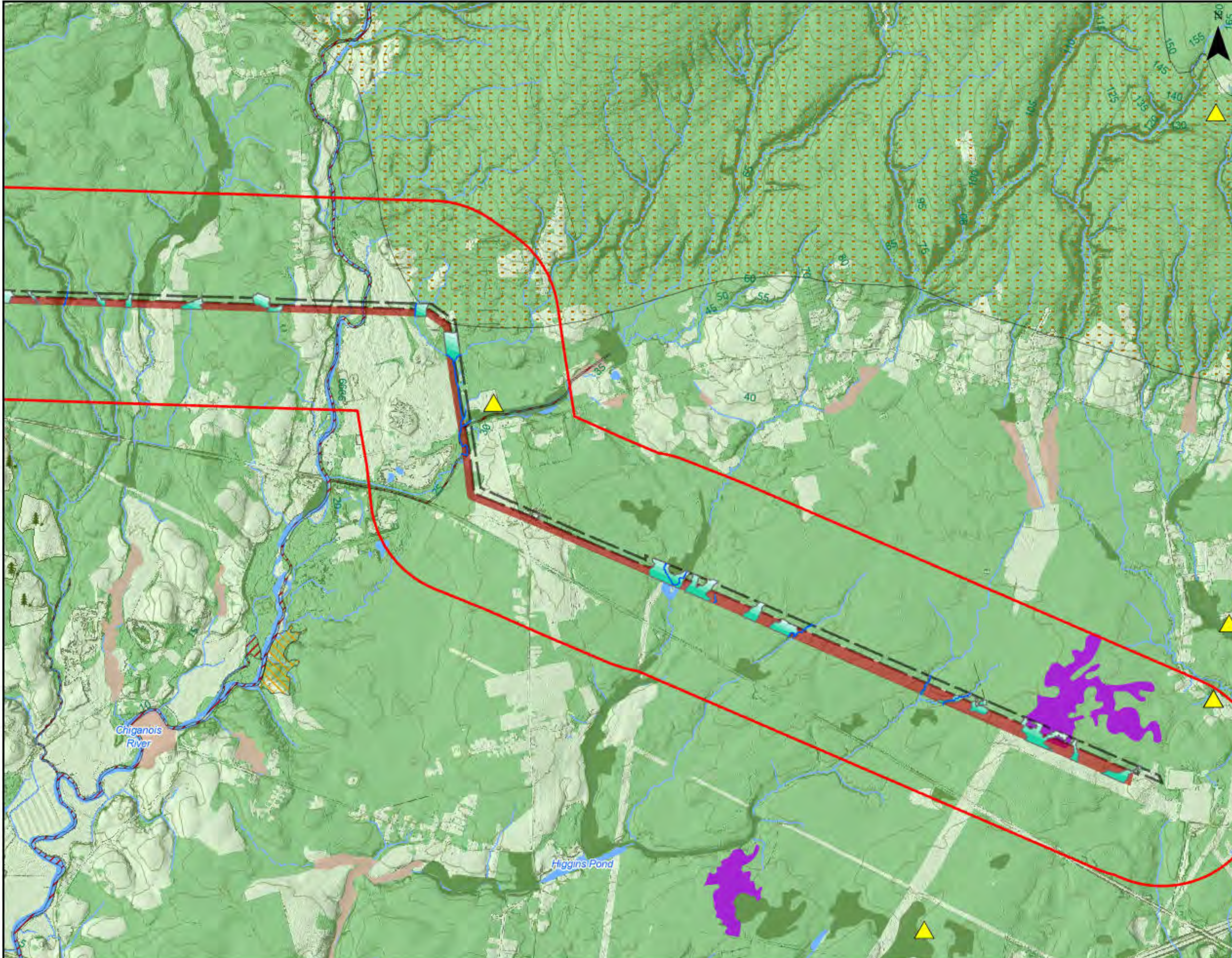
-  NSDRR Moose Observations Dataset (2018)
-  Existing L8001 ROW
-  Proposed L8005 ROW
-  1km Buffer for Moose Transect
-  Contours (m)
-  Deer Wintering
-  Other Habitat (Talus Slopes)
-  Species at Risk
-  NSDNRR Wetland Inventory - Bog or Fen
-  Marsh
-  Swamp
-  Water Features - Mapped Stream
-  Mapped Indefinite Stream
-  Lakes and Rivers
-  Field Delineated Watercourses
-  Field Delineated Wetlands



Date: December 2022		Project #: 22-8446	
Drawn By: E. Johnson		Drawing #: 1-12	
Checked By: S. Dickey			



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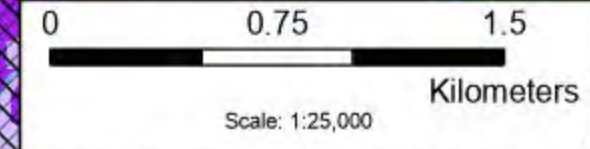
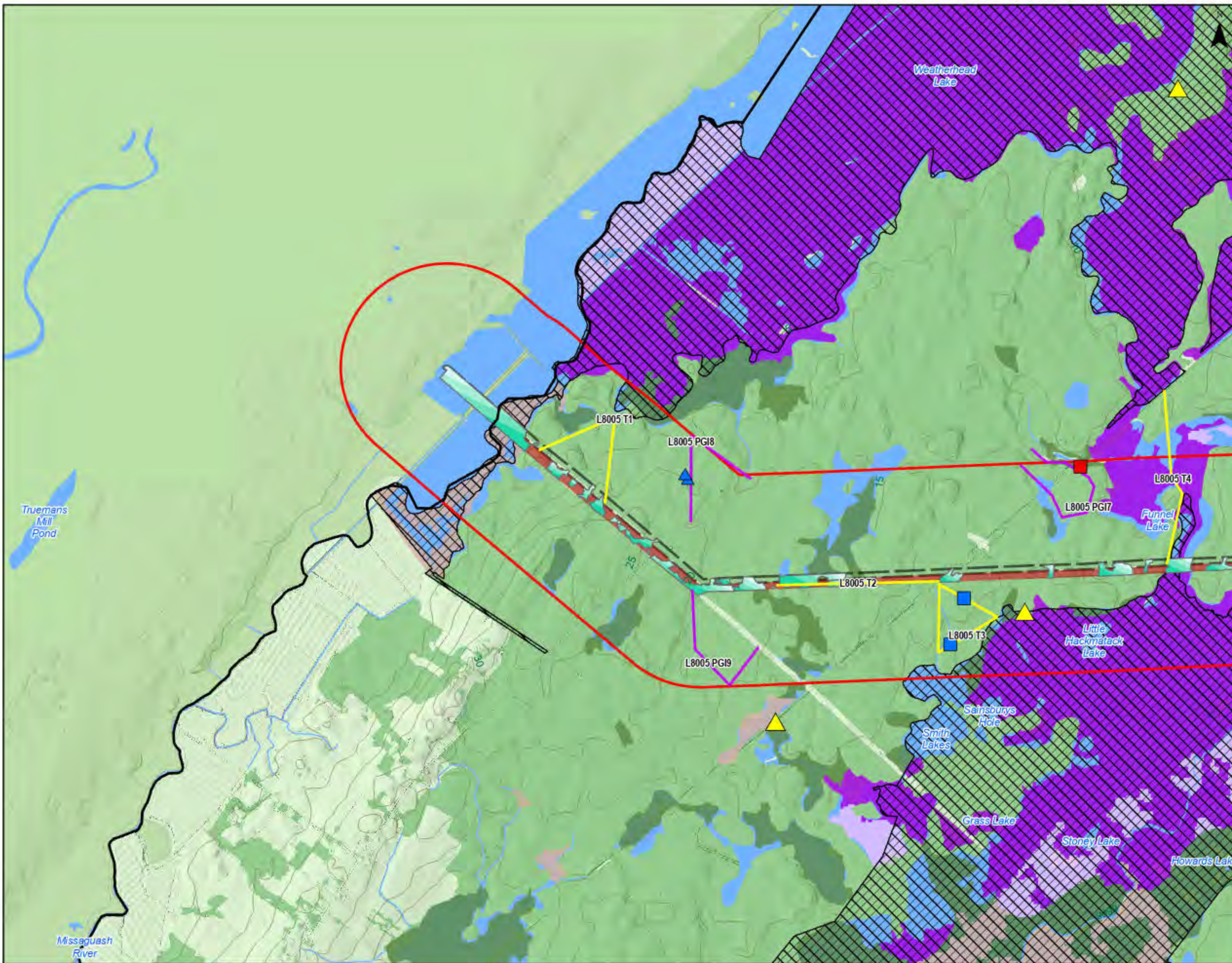


Proposed L8005 Transmission Line ROW

Snowtracking and Pellet Group Survey Results

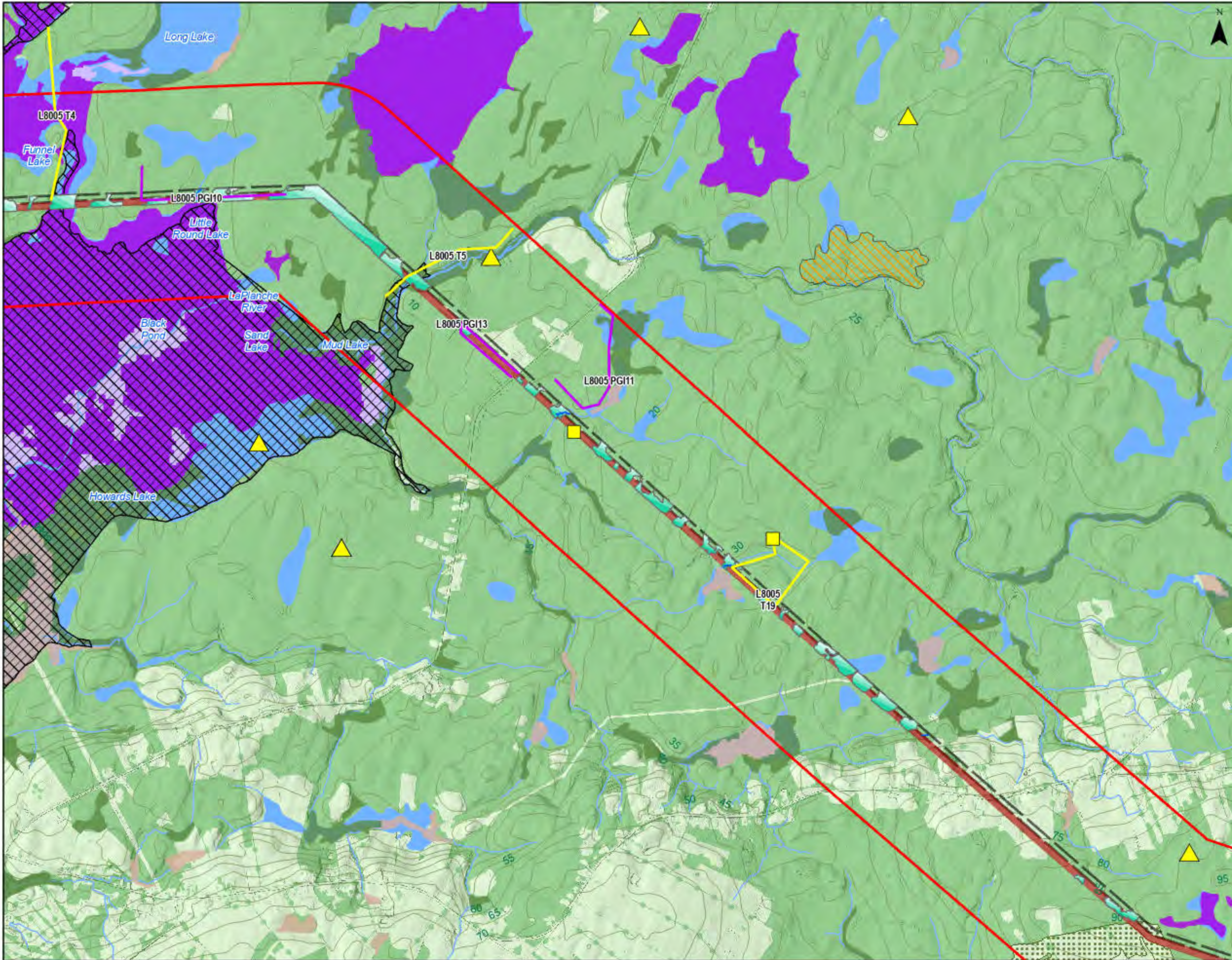
Legend

- Existing L8001 ROW
- Proposed L8005 ROW
- N.B. / N.S. Border
- 1km Buffer for Moose Transect
- Winter Moose Tracking Transects
- Spring Pellet Group Inventory Transects
- Winter Tracking Observations
 - Bobcat
 - Eastern Coyote
 - Mainland Moose
 - Eastern Coyote
- Significant Species & Habitats
 - Migratory Bird
- NSDNRR Wetland Inventory
 - Bog or Fen
 - Fen
 - Marsh
 - Swamp
- Water Features
 - Mapped Stream
 - Mapped Indefinite Stream
 - Lakes and Rivers
 - Field Delineated Watercourses
 - Field Delineated Wetlands



Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	2-1
Checked By:	S. Dickey		





Proposed L8005 Transmission Line ROW

Snowtracking and Pellet Group Survey Results

Legend

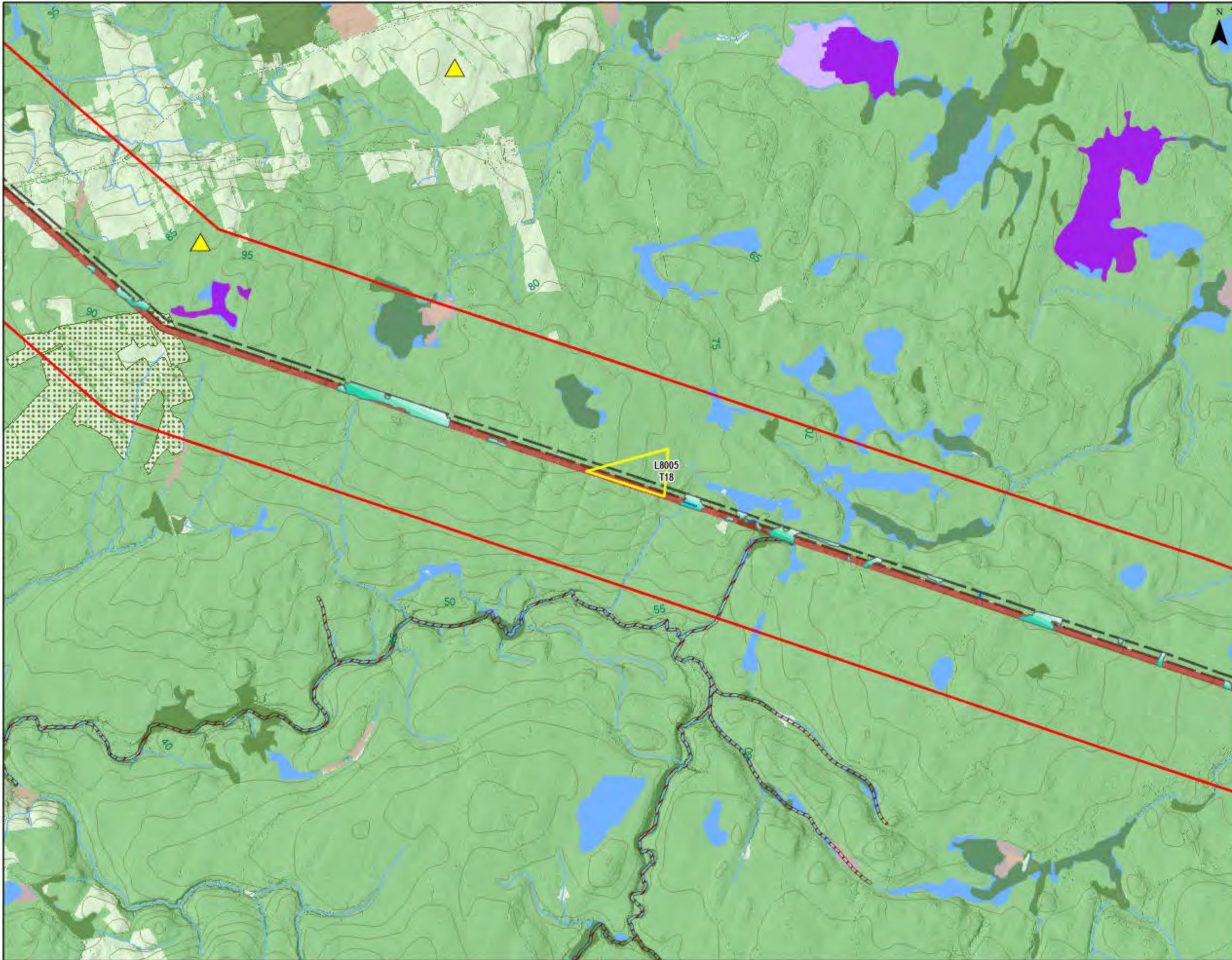
Existing L8001 ROW	Other Habitat (Talus Slopes)
Proposed L8005 ROW	NSDNR Wetland Inventory
N.B. / N.S. Border	Bog or Fen
1km Buffer for Moose Transect	Fen
Winter Moose Tracking Transects	Marsh
Spring Pellet Group Inventory Transects	Swamp
Winter Tracking Observations	Water Features
Bobcat	Mapped Stream
Eastern Coyote	Mapped Indefinite Stream
Mainland Moose	Lakes and Rivers
Eastern Coyote	Field Delineated Watercourses
Significant Species & Habitats	Field Delineated Wetlands
Migratory Bird	



0 0.75 1.5
Kilometers
Scale: 1:25,000

Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	2-2
Checked By:	S. Dickey		

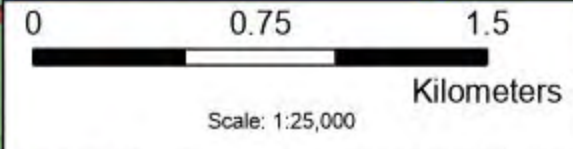
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Proposed L8005 Transmission Line ROW

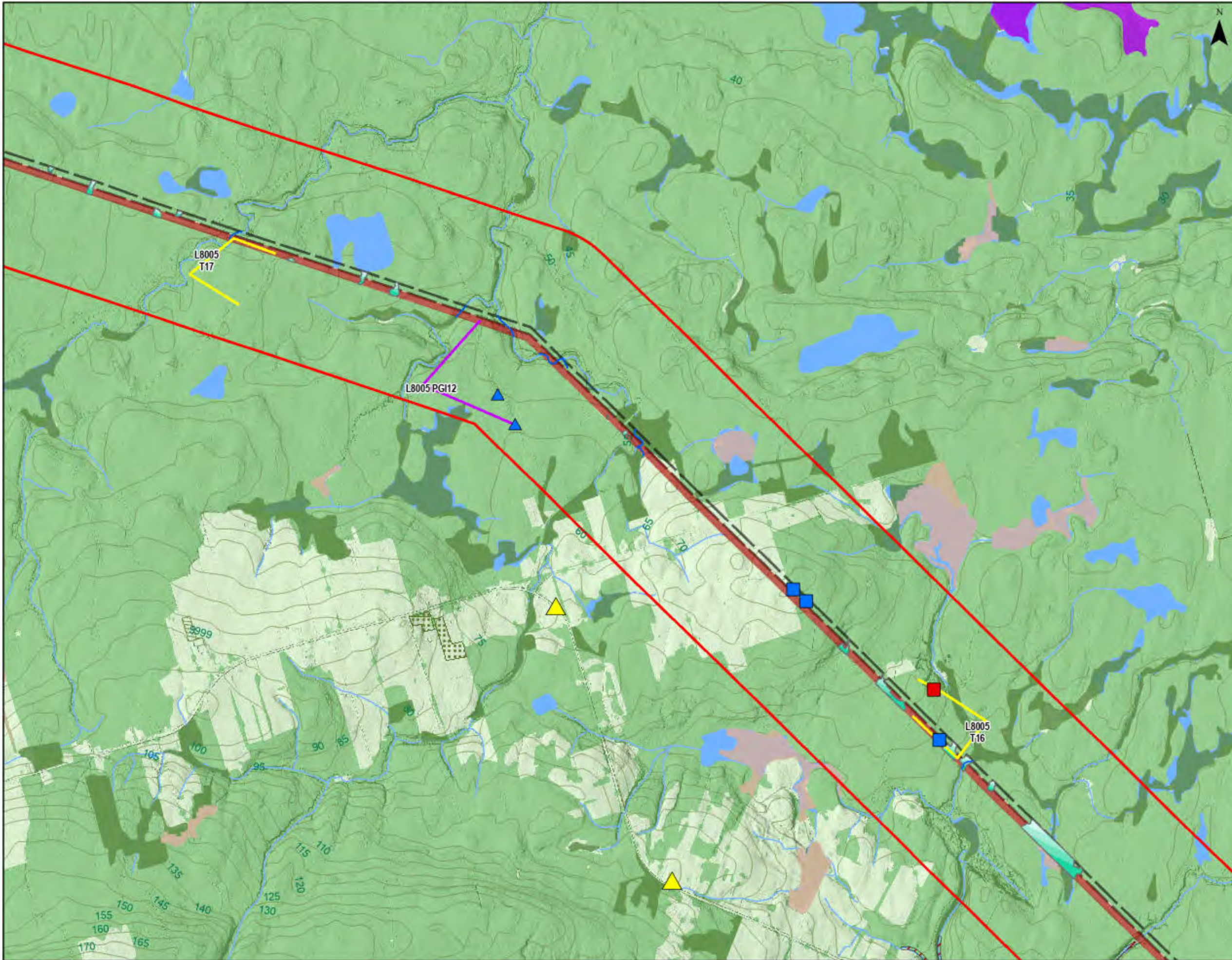
Snowtracking and Pellet Group Survey Results

- Legend**
- Existing L8001 ROW
 - Proposed L8005 ROW
 - N.B. / N.S. Border
 - 1km Buffer for Moose Transect
 - ▲ Winter Moose Tracking Transects
 - Spring Pellet Group Inventory Transects
 - Bobcat
 - Eastern Coyote
 - Mainland Moose
 - ▲ Eastern Coyote
 - Species at Risk
- NSDNR Wetland Inventory**
- Bog or Fen
 - Fen
 - Marsh
 - Swamp
- Water Features**
- Mapped Stream
 - Mapped Indefinite Stream
 - Lakes and Rivers
 - Field Delineated Watercourses
 - Field Delineated Wetlands
- Winter Tracking Observations**
- Significant Species & Habitats**



Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	2-3
Checked By:	S. Dickey		



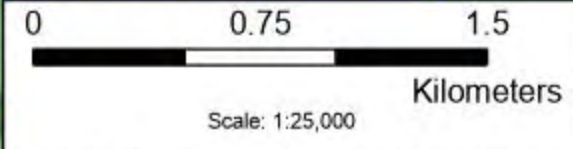


Proposed L8005 Transmission Line ROW

Snowtracking and Pellet Group Survey Results

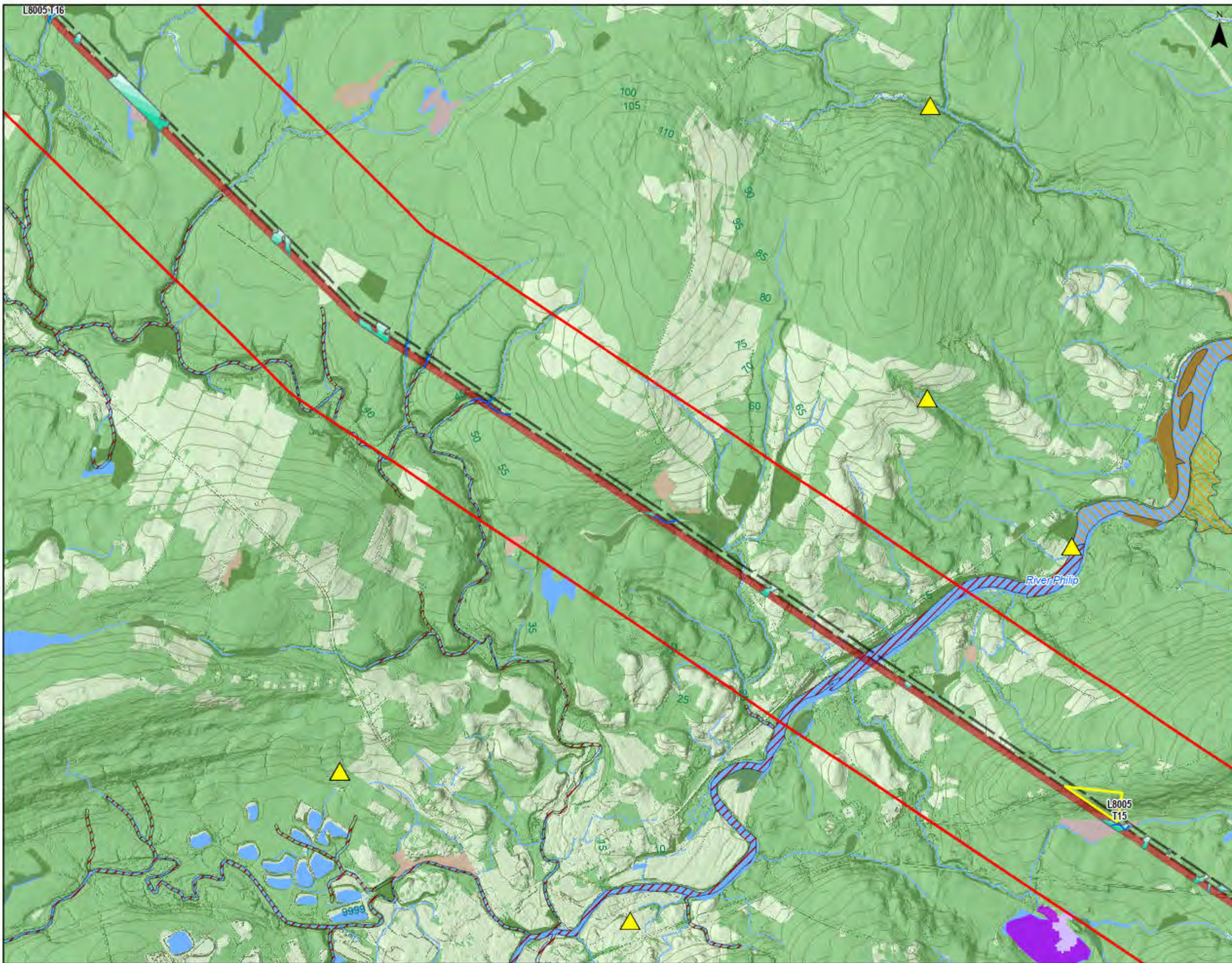
Legend

Existing L8001 ROW	Significant Species & Habitats
Proposed L8005 ROW	Species at Risk
N.B. / N.S. Border	NSDNR Wetland Inventory
1km Buffer for Moose Transect	Bog or Fen
Winter Moose Tracking Transects	Marsh
Spring Pellet Group Inventory Transects	Swamp
Winter Tracking Observations	Water Features
Bobcat	Mapped Stream
Eastern Coyote	Mapped Indefinite Stream
Mainland Moose	Lakes and Rivers
Eastern Coyote	Field Delineated Watercourses
	Field Delineated Wetlands



Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	2-4
Checked By:	S. Dickey		

Strum
CONSULTING
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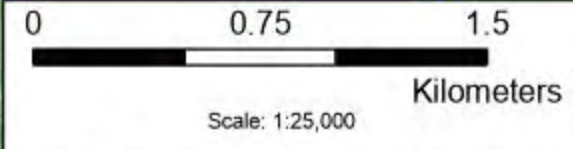


Proposed L8005 Transmission Line ROW

Snowtracking and Pellet Group Survey Results

Legend

Existing L8001 ROW	Species at Risk
Proposed L8005 ROW	NSDNR Wetland Inventory
N.B. / N.S. Border	Bog or Fen
1km Buffer for Moose Transect	Fen
Winter Moose Tracking Transects	Marsh
Spring Pellet Group Inventory Transects	Salt Marsh
	Swamp
Winter Tracking Observations	Water Features
Bobcat	Mapped Stream
Eastern Coyote	Mapped Indefinite Stream
Mainland Moose	Lakes and Rivers
Eastern Coyote	Field Delineated Watercourses
Significant Species & Habitats	Field Delineated Wetlands
Other Habitat (Talus Slopes)	

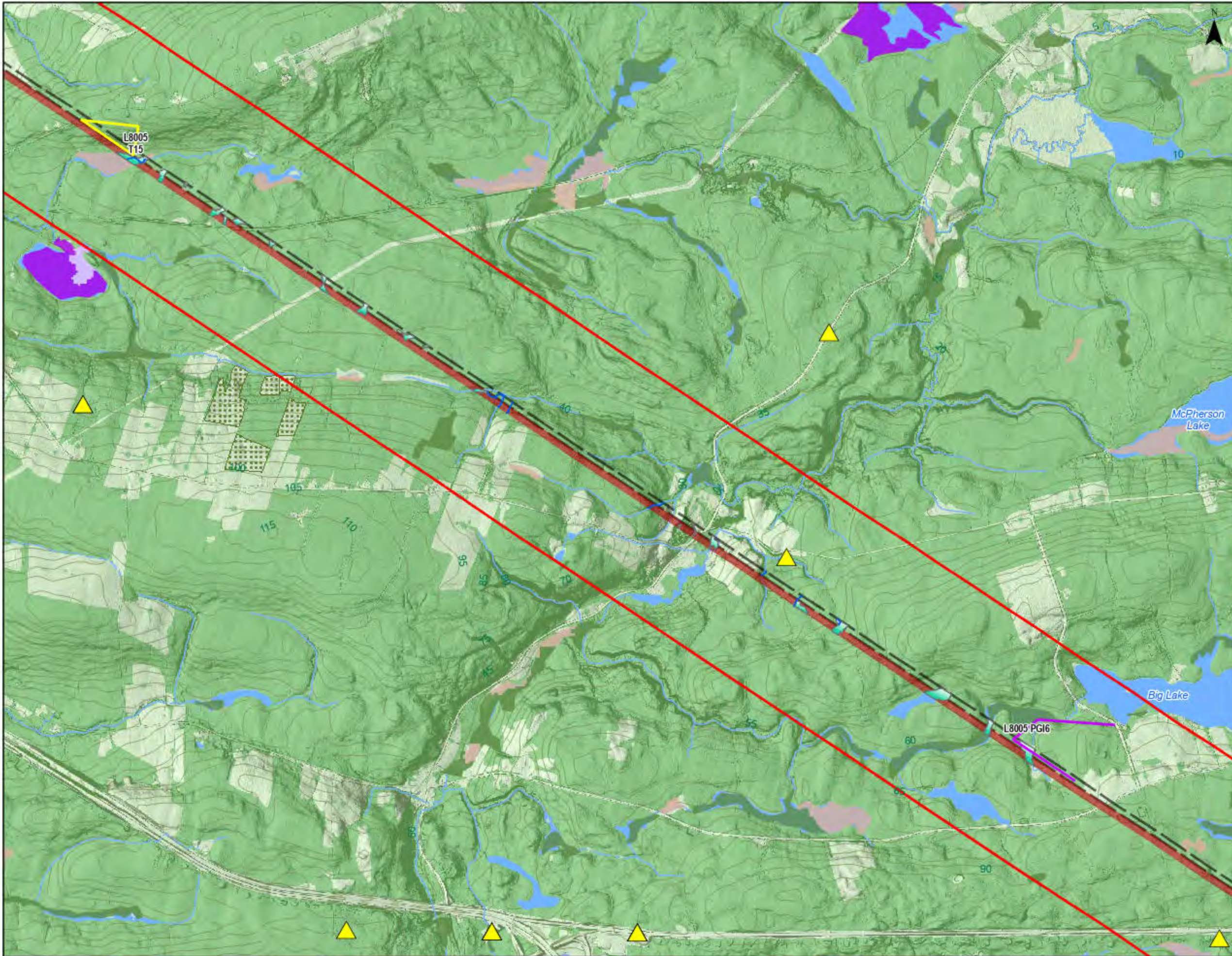


Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	2-5
Checked By:	S. Dickey		

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Proposed L8005 Transmission Line ROW

Snowtracking and Pellet Group Survey Results

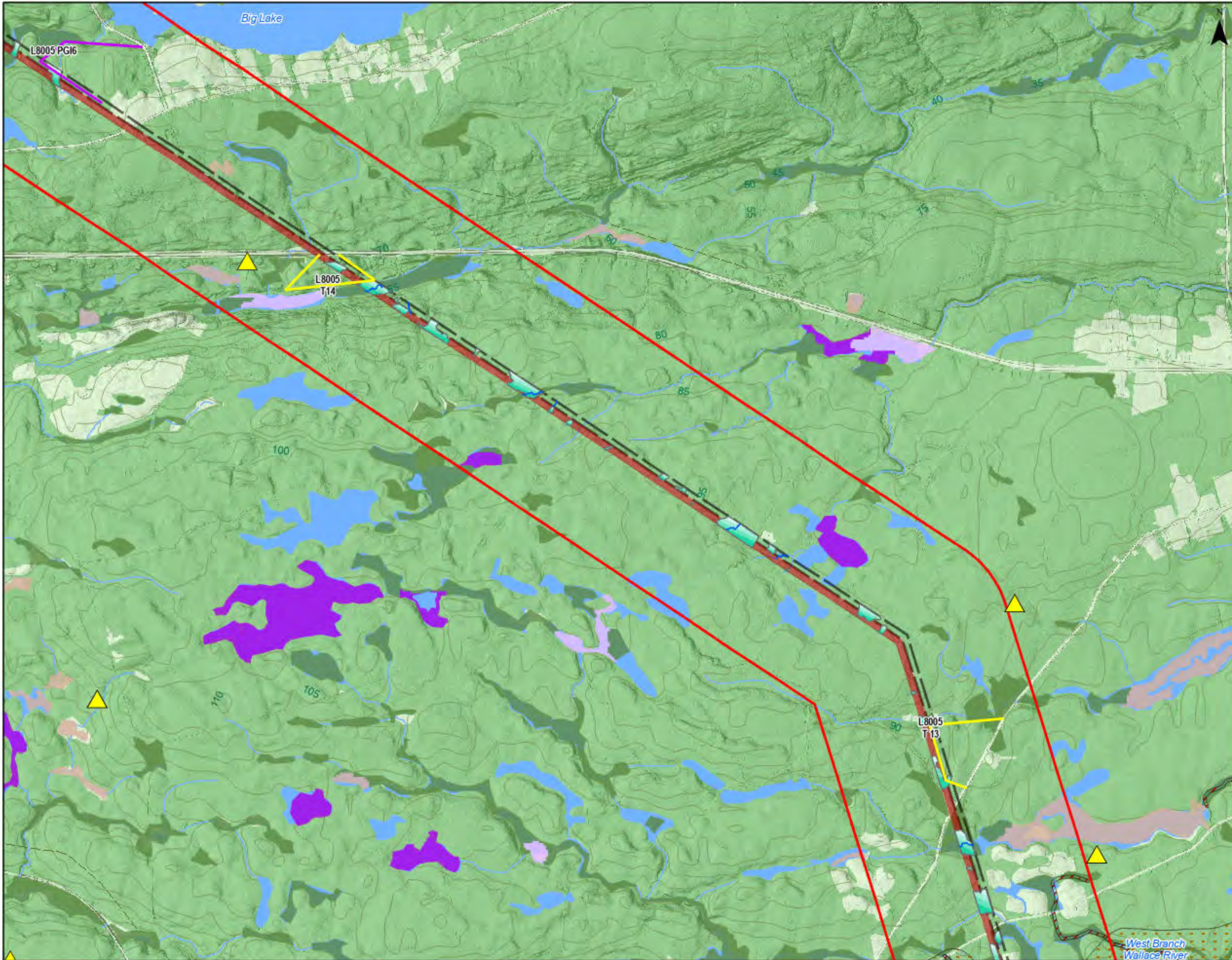
- Legend**
- Existing L8001 ROW
 - Proposed L8005 ROW
 - N.B. / N.S. Border
 - 1km Buffer for Moose Transect
 - Winter Moose Tracking Transects
 - Spring Pellet Group Inventory Transects
 - Bobcat
 - Eastern Coyote
 - Mainland Moose
 - ▲ Eastern Coyote
- NSDNR Wetland Inventory**
- Bog or Fen
 - Fen
 - Marsh
 - Swamp
- Water Features**
- Mapped Stream
 - Mapped Indefinite Stream
 - Lakes and Rivers
 - Field Delineated Watercourses
 - Field Delineated Wetlands



0 0.75 1.5
Kilometers
Scale: 1:25,000

Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	2-6
Checked By:	S. Dickey		

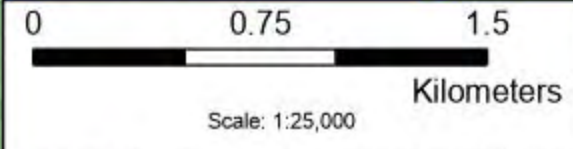

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Proposed L8005 Transmission Line ROW

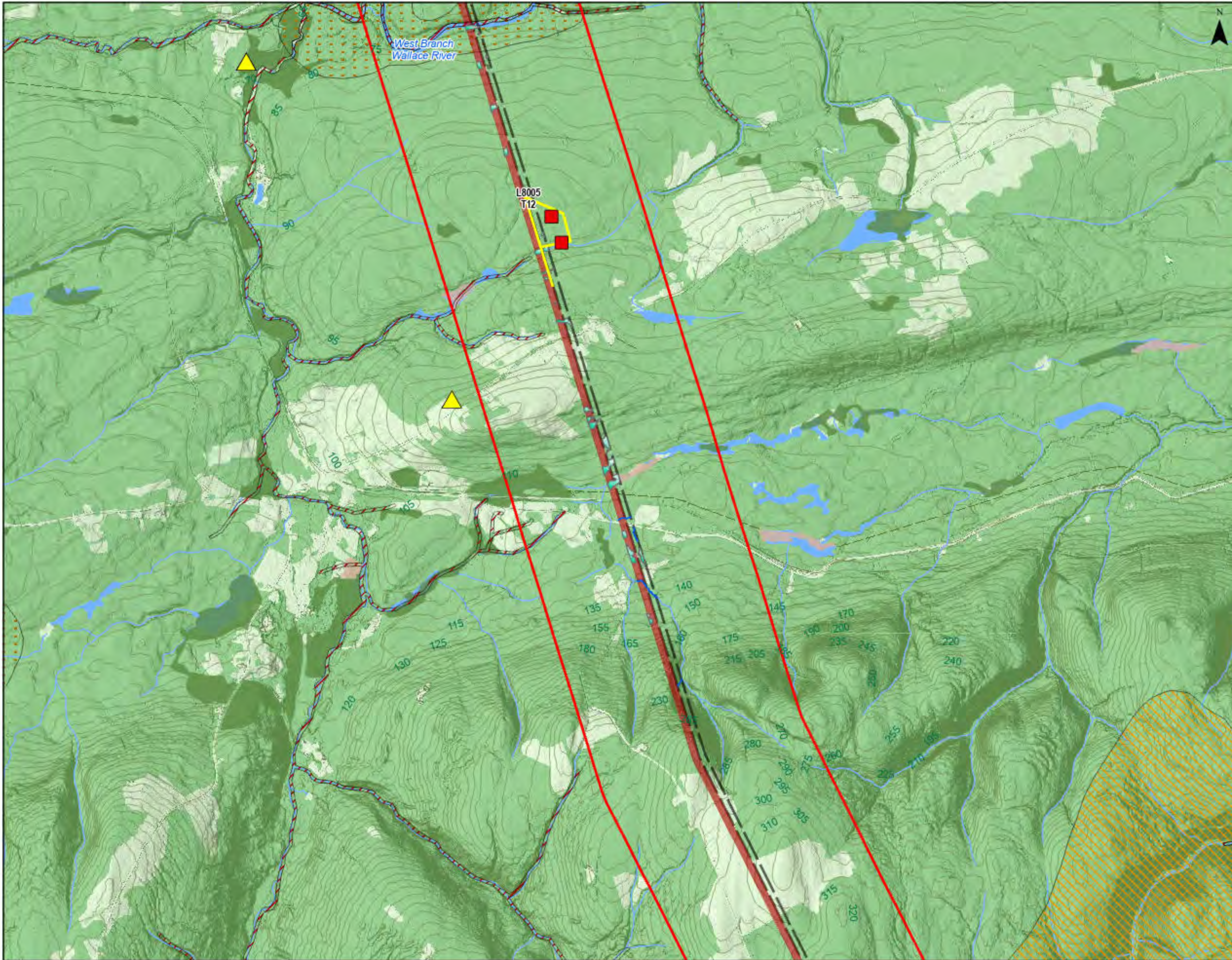
Snowtracking and Pellet Group Survey Results

- Legend**
- Existing L8001 ROW
 - Proposed L8005 ROW
 - N.B. / N.S. Border
 - 1km Buffer for Moose Transect
 - Winter Moose Tracking Transects
 - Spring Pellet Group Inventory Transects
 - Species at Risk
 - NSDNRR Wetland Inventory**
 - Bog or Fen
 - Fen
 - Marsh
 - Swamp
 - Water Features**
 - Mapped Stream
 - Mapped Indefinite Stream
 - Lakes and Rivers
 - Field Delineated Watercourses
 - Field Delineated Wetlands
 - Bobcat
 - Eastern Coyote
 - Mainland Moose
 - Eastern Coyote
 - Significant Species & Habitats**
 - Deer Wintering



Coordinate System: NAD83 UTM Zone 21N		Source: EPSR Bearings, GeoNova, NSTD	
Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	2-7
Checked By:	S. Dickey		

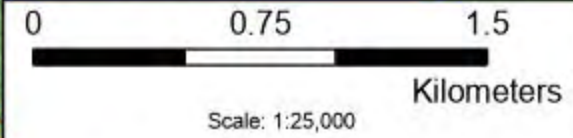




Proposed L8005 Transmission Line ROW

Snowtracking and Pellet Group Survey Results

- Legend**
- Existing L8001 ROW
 - Proposed L8005 ROW
 - N.B. / N.S. Border
 - 1km Buffer for Moose Transect
 - Winter Moose Tracking Transects
 - Spring Pellet Group Inventory Transects
 - Other Habitat (Talus Slopes)
 - Species at Risk
 - NSDNRR Wetland Inventory**
 - Marsh
 - Swamp
 - Water Features**
 - Mapped Stream
 - Mapped Indefinite Stream
 - Lakes and Rivers
 - Field Delineated Watercourses
 - Field Delineated Wetlands
 - Winter Tracking Observations**
 - Bobcat
 - Eastern Coyote
 - Mainland Moose
 - Eastern Coyote
 - Significant Species & Habitats**
 - Deer Wintering



Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	2-8
Checked By:	S. Dickey		


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Proposed L8005 Transmission Line ROW

Snowtracking and Pellet Group Survey Results

Legend

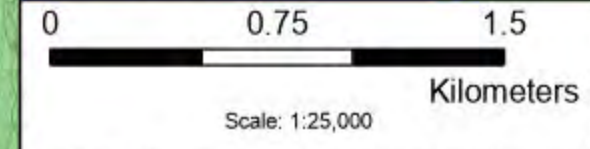
- Existing L8001 ROW
- Proposed L8005 ROW
- N.B. / N.S. Border
- 1km Buffer for Moose Transect
- Winter Moose Tracking Transects
- Spring Pellet Group Inventory Transects
- Bobcat
- Eastern Coyote
- Mainland Moose
- Eastern Coyote
- Other Habitat (Talus Slopes)
- Species at Risk
- NSDNR Wetland Inventory**
- Bog or Fen
- Fen
- Marsh
- Swamp
- Water Features**
- Mapped Stream
- Mapped Indefinite Stream
- Lakes and Rivers
- Field Delineated Watercourses
- Field Delineated Wetlands

Winter Tracking Observations

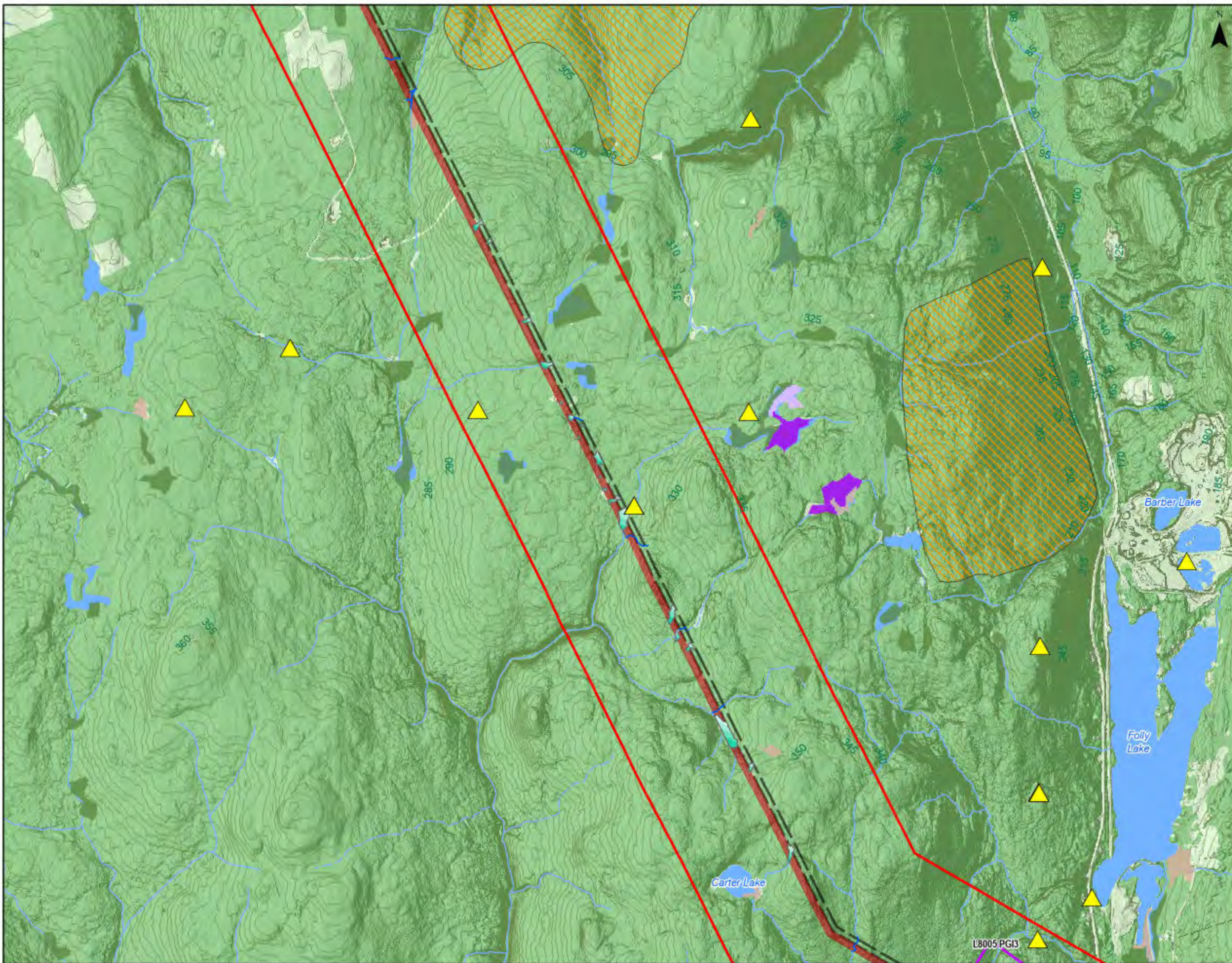
- Bobcat
- Eastern Coyote
- Mainland Moose
- Eastern Coyote

Significant Species & Habitats

- Other Habitat (Talus Slopes)



Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	2-9
Checked By:	S. Dickey		



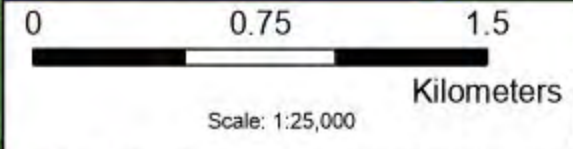


Proposed L8005 Transmission Line ROW

Snowtracking and Pellet Group Survey Results

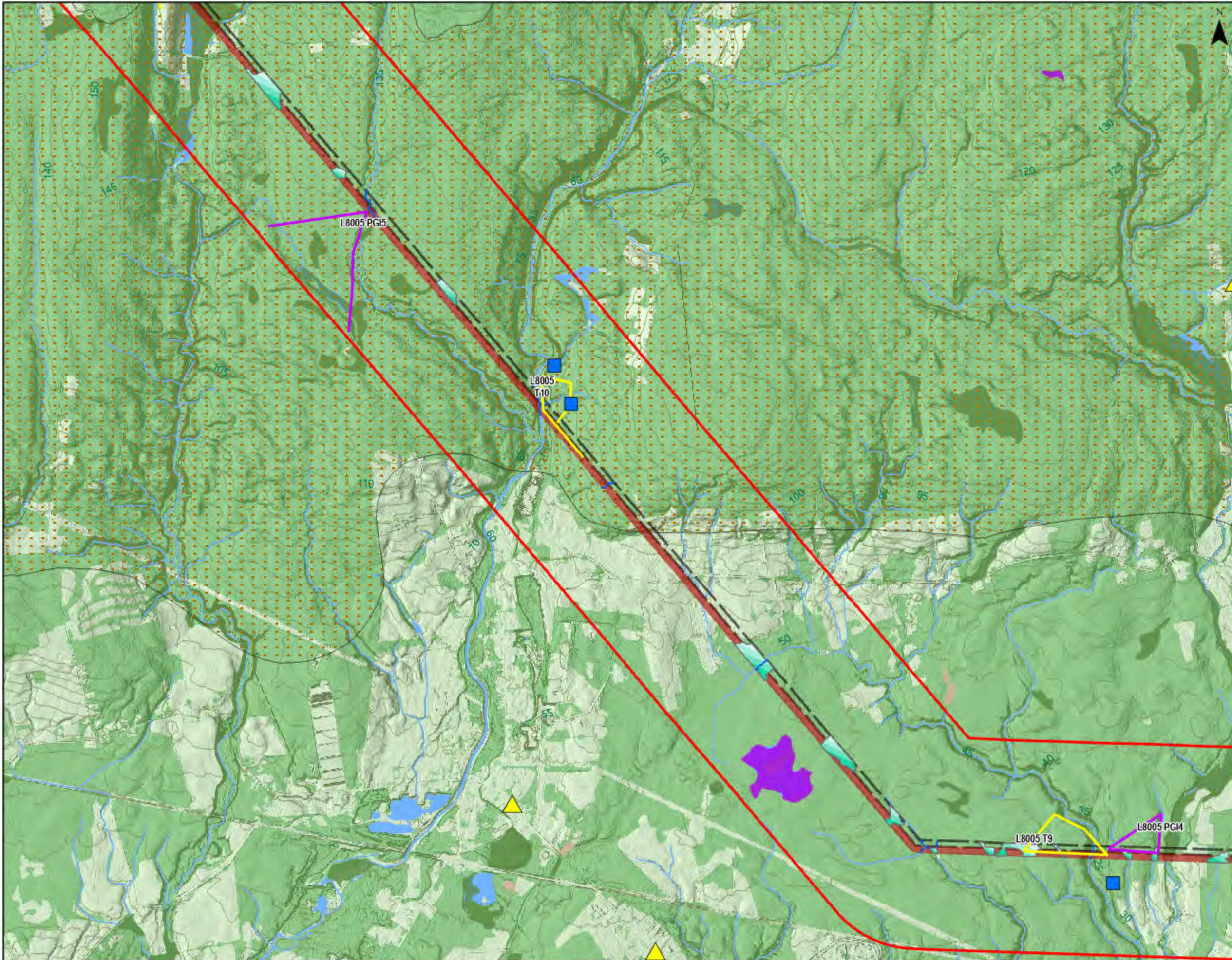
Legend

Existing L8001 ROW	Significant Species & Habitats
Proposed L8005 ROW	Deer Wintering
N.B. / N.S. Border	NSDNR Wetland Inventory
1km Buffer for Moose Transect	Marsh
Winter Moose Tracking Transects	Swamp
Spring Pellet Group Inventory Transects	Water Features
Winter Tracking Observations	Mapped Stream
Bobcat	Mapped Indefinite Stream
Eastern Coyote	Lakes and Rivers
Mainland Moose	Field Delineated Watercourses
Eastern Coyote	Field Delineated Wetlands



Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	2-10
Checked By:	S. Dickey		

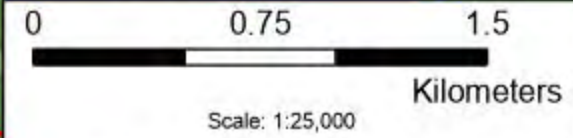
Strum
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Proposed L8005 Transmission Line ROW

Snowtracking and Pellet Group Survey Results

- Legend**
- Existing L8001 ROW
 - Proposed L8005 ROW
 - N.B. / N.S. Border
 - 1km Buffer for Moose Transect
 - Winter Moose Tracking Transects
 - Spring Pellet Group Inventory Transects
 - Bobcat
 - Eastern Coyote
 - ▲ Mainland Moose
 - ▲ Eastern Coyote
- Significant Species & Habitats**
- Deer Wintering
 - Bog or Fen
 - Marsh
 - Swamp
- NSDNR Wetland Inventory**
- Mapped Stream
 - Mapped Indefinite Stream
 - Lakes and Rivers
 - Field Delineated Watercourses
 - Field Delineated Wetlands
- Water Features**

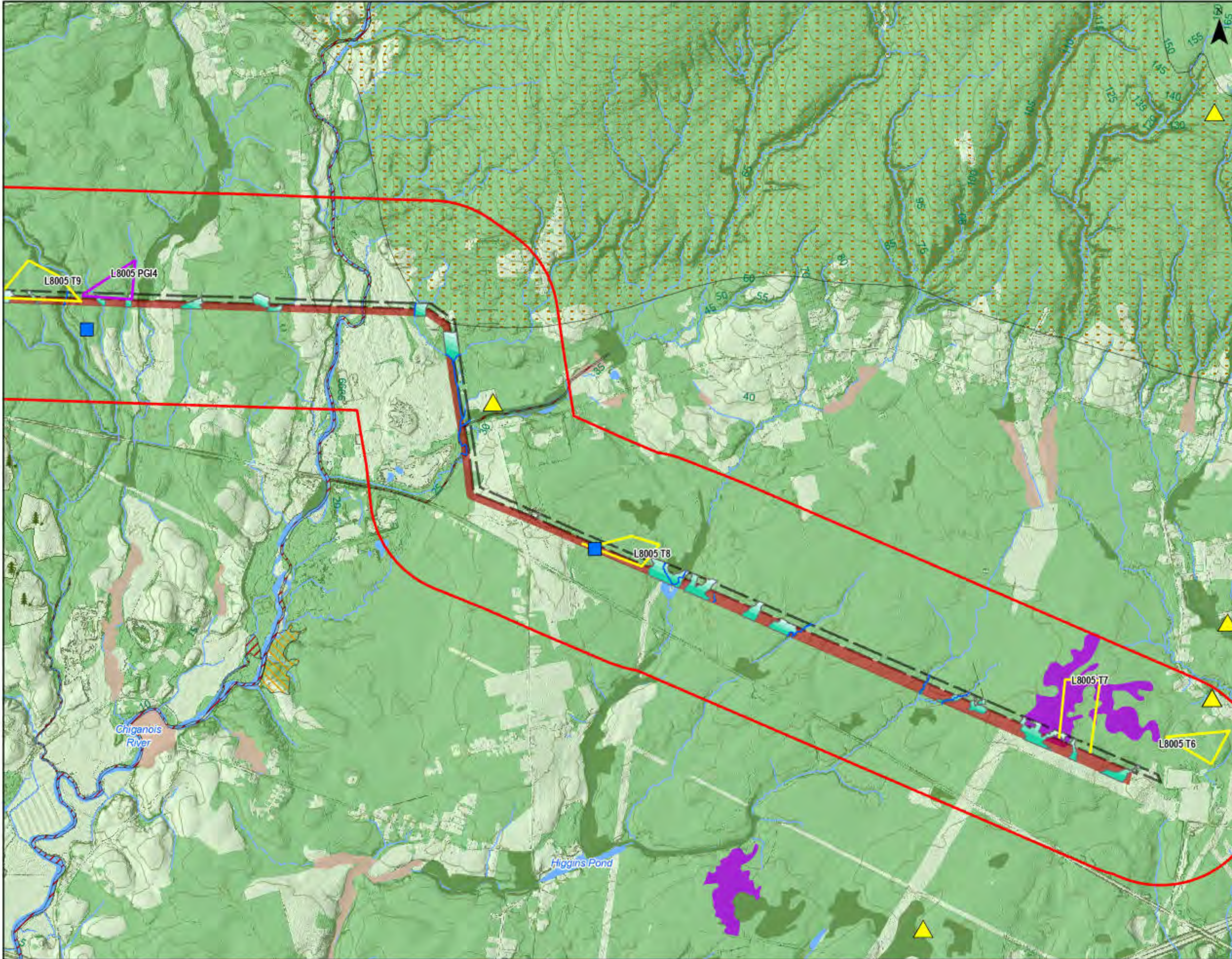


Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	2-11
Checked By:	S. Dickey		


Strum
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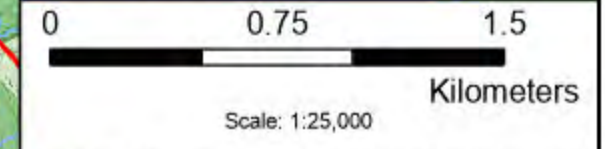
Proposed L8005 Transmission Line ROW

Snowtracking and Pellet Group Survey Results



Legend

- Existing L8001 ROW
- Proposed L8005 ROW
- N.B. / N.S. Border
- 1km Buffer for Moose Transect
- Winter Moose Tracking Transects
- Spring Pellet Group Inventory Transects
- Other Habitat (Talus Slopes)
- Species at Risk
- NSDNR Wetland Inventory**
- Bog or Fen
- Marsh
- Swamp
- Water Features**
- Mapped Stream
- Mapped Indefinite Stream
- Lakes and Rivers
- Field Delineated Watercourses
- Field Delineated Wetlands
- Bobcat
- Eastern Coyote
- Mainland Moose
- Eastern Coyote
- Deer Wintering



Coordinate System: NAD83 UTM Zone 21N		Source: CBR Bearings, GeoNova, NSTD	
Date:	December 2022	Project #:	22-8446
Drawn By:	E. Johnson	Drawing #:	2-12
Checked By:	S. Dickey		





Photo 1: Sighting of whitetail deer (*Odocoileus virginianus*) and subsequent tracks, on trail south of Onslow Mountain.



Photo 2: Beaver (*Castor canadensis*) damming, found within transmission line corridor in southwest of Hansford.



Photo 3: Eastern coyote (*Canis latrans*) scat, found on overgrown trail east of Point de Bute.



Photo 4: Bobcat (*Felis rufus*) tracks, found in the woods northeast of Westchester Station.



Photo 5: Mainland moose browse (*Alces alces*) browse, found in woods northwest of Truemanville. (Transect # 19)



Photo 6: Probable Mainland moose (*Alces alces*) browse, found within transmission line corridor north of Warren.



Photo 7: Snowshoe hare (*Lepus americanus*) tracks, found within transmission line corridor north of Warren.



Photo 8: Red squirrel (*Tamiasciurus hudsonicus*) tracks, found in woods northwest of Truemanville.



Photo 9: Representative habitat, northeast of Oxford.



Photo 10: Representative habitat, southeast of Point de Bute.



Photo 11: Representative habitat, southeast of Hansford.



Photo 12: Representative habitat, west of Folly Lake Station.

Table A1: L8005 Transmission Line Mainland Moose Assessment - Snowtracking Transect Informatio

Project # 22-8446

Transect ID	Targeted Habitat	Siting justification	Region	Length (m)	Date Assessed	Biologist(s)
L8005 T1	Softwood, swamp	Near NB boarder	Amherst	1138	28-Feb-22	DK/MM
L8005 T2	Softwood forest edge, marsh, linear clear cut	Isolated stretch of linear T-line coridor	Amherst	1089	28-Feb-22	DK
L8005 T3	Softwood, Mixed wood, marsh edge	Near historic moose sighting and major habitat features	Amherst	1295	28-Feb-22	DK
L8005 T4	Softwood, Mixed wood, marsh edge, floodplane	Near major habitat features that may concentrate moose movements	Amherst	1199	28-Feb-22	MM
L8005 T5	Softwood, Floodplain	Near major watercourse near moose record	Amherst	1008	28-Feb-22	DS/RK
L8006 T6	Softwood, bog, powerline coridor	Near bog and intact SW forest with historic moose sighting, includes, 300m of powerline coridor	Onslow	1049	1-Mar-22	DS/EJ
L8005 T7	Softwood, bog	Near bog and intact SW forest, more isolated than T5	Onslow	1122	1-Mar-22	DS/EJ
L8005 T8	Powerline coridor, mixed wood, barren, swamp	Includes a variety of habitat including powerline coridor	Onslow	1082	1-Mar-22	DS/EJ/AD
L8005 T9	Powerline coridor, mixed wood, watercourse valley / floodplain	Isolated area with a variety of habitats including watercourse valley and powerline coridor	Debert	1358	1-Mar-22	AD
L8005 T10	Powerline coridor, hardwood, rivey valley	Isolated area with a stretch of the Debert river valley, deeper wintering habitat	Debert	1381	1-Mar-22	AD
L8005 T11	Powerline coridor, hardwood, tallus slopes	Upland hardwood area near several moose records	Higgins Mountain	1385	28-Feb-22	AD/EJ
L8005 T12	Powerline coridor, mixed wood, river vealley	Isolated area, mixed wood, swamp, near historic moose record	Wentworth	1305	28-Feb-22	AD/EJ
L8005 T13	Mixed wood, swamp, powerline cooridor	Variety of habitat, including wetlands, in isolated area near historic moose record	Greenville Station	1005	28-Feb-22	AD/EJ
L8005 T14	Mixed wood, wetlands	Variety of habitat, including wetlands, in isolated area near historic moose record	Greenville Station	1233	28-Feb-22	AD/EJ
L8005 T15	Mixed wood, swamp, powerline cooridor	Variety of habitat, including wetlands, in isolated area	Oxford	1013	4-Mar-22	AD/DK
L8005 T16	Softwood, Swamp	Softwood and swamp habitat in isolated area near historic moose record	Oxford	1265	4-Mar-22	AD/DK
L8005 T17	Mixed wood , swamp, powerline coridor	Mixed wood and swamp habitat in isolated area near historic moose sighting	Mansfield	1064	1-Mar-22	DK/MM
L8005 T18	Mixed wood , swamp clearcut, swamp	Mixed wood and swamp habitat in isolated area near historic moose sighting	Mansfield	1495	1-Mar-22	DK/MM
L8005 T19	Clearcut, swamp,mixed wood	A variety of habitats in isolated area	Amherst	1494	28-Feb-22	DS/RK
L8005 T20	hardwood, clearcut, powerline cooridor	Isolated hardwood and clearcut area	Folly Mountain	7000	16-Feb-22	SD
			Total	29980		

Table A2. L8005 Transmission Line Mainland Moose Assessment - Pellet Group Survey Transect Information

Transect ID	Targeted Habitat	Siting justification	Region	Length (m)
L8005_PGI1	Hardwood stands with treed swamp and a brook running N-S through the area	Moose Browse seen during tracking survey ~100m North	Higgins Mt.	1236
L8005_PGI2	Mature Mixed Forest, Seletively cut areas	Between Branches of Folly River - Proximity to both	Folly Rivers	1669
L8005_PGI3	Mature Hardwoods, watercourse throughout	Mature Hardwoods with known moose in area	Higgins Mt.	1359
L8005_PGI4	Rough Spruce forest with dense understory	Low traffic area of T-Line Near Belmont	Belmont	1015
L8005_PGI5	Bog, Treed swamps, Debert River tributary	Abundance of Water Features in the Area	Debert	1494
L8005_PGI6	Mixed Forest, Meandering watercourse/Fen	Proximity to the lake, wet areas, low-traffic area of T-Line	East Hansford	1234
L8005_PGI7	Boggy and Softwood Dense area	Moose Sign seen during Summer 2021 Surveys - adequate wintering area	Amherst	1329
L8005_PGI8	Mixed Forest, Swampy in spots	Proximity to NB Border, Moose sign seen under T-line nearby in Summer 2021	Amherst	1073
L8005_PGI9	Mixed Forest, Swampy in spots	Summer 2021 Sign seen in area, near to other T-line in area.	Amherst	1052
L8005_PGI10	Under T-Line, some Softwood areas nearby	Isolated area of T-Line near Irving Experimental	Amherst	1206
L8005_PGI11	Mixed/softwood forest near open bogs and treed swamps	Major habitat features to attract and/or concentrate movements of Moose	Amherst	1115
L8005_PGI12	Mixed Mature Forest, areas of Watercourse and treed swamps	Forestry roads near by, Mature forest with adequate browse year-round	Mansfield	1272
L8005_PGI13	Under T-Line, mixed wood areas nearby	Proximity to initially planned L8005_PGI7 - Similar wet habitat with suitable wintering areas	Amherst	1000
			Total	16054

Date of Survey	Weather Conditions	Days since last snowfall >10 cm	Transect ID	Staff	Transect Length (km)	Species Observed	Density (Abundant, Moderate, Trace)	Habitat Notes	Additional Info
2/16/2022	(-) 5 degrees, sunny, low wind	2	20	SD	7	Snowshoe Hare	M	Powerline corridor: graminoid and low shrub growth with several wet areas Upland areas: mature hardwood - maple, beach and yellow birch. Cutover areas: regenerating yellow birch Lowland / valleys: Mature hardwood with sparse fir and spruce cover South facing slopes: mixed wood with fir regen.	Very little deer activity in hardwood forest , moderate prey abundance (hare and rodents), moderate carnivore activity (some coyote, one bobcat sign) Moose browse from approximately late summer / fall 2021 observed.
						Deer	M		
						Red Squirrel	M		
						Coyote	M		
						Rodent Spp. 1	T		
						Rodent Spp. 2	T		
						Bobcat	T		
Moose	N/A								
2/28/2022	(-) 18 degrees, sunny, moderate wind	3 (some flurries on Feb 27)	19	DS, RK	1.5	Rodent Ssp. 1	T	Powerline corridor: several wetland areas with abundant shrubs (alders, willow) and some regenerating firs and pine. Lowland areas with minimal snow, mature mixedwood forest with spruce, maple, some yellow birch. Wetland areas with low shrubs, upland areas clearcut or thick regenerating spruce.	Abundant hare activity. Other prey activity including squirrel and unknown rodent species present. Recent woodpecker activity observed at bottom of trunks. No predator activity observed. High activity observed along corridor outside transect. Moose browse observed.
						Snowshoe Hare	A		
						Red	A		
						Moose	N/A		
2/28/2022	(-) 15 degrees, sunny, low wind	3	5	DS, RK	1	Rodent Ssp. 1	T	Immature forest, softwood dominant (spruce, some fir). Large swamp area next to transect with minimal shrub growth. Transect was either within or nearby potentially active Irving logging area. (Recent truck tracks on woods road.)	Highly abundant squirrel activity.
						Rodent Ssp. 2	T		
						Snowshoe Hare	M		
						Red Squirrel	A		
3/1/2022	(-1) 20 degrees, cloudy, low wind	4	6	DS, EJ	1.1	Whitetail Deer	M	Sparse vegetation, some immature softwoods, but mainly low shrubs. Close to trail.	Deer sighting along trail (near power station), many deer tracks throughout transect however likely originated from one deer. Hare abundant, no predator activity observed.
						Snowshoe Hare	A		
3/1/2022	(-1) 20 degrees, streaks of clouds, low wind	4	7	DS, EJ	1.1	Whitetail Deer	M	Shrubs along powerline corridor, path directly underneath lines with no vegetation. Transect adjacent to boggy area, black spruce/tamarack dominant. High coverage of labrador tea.	Snowshoe hare abundant, some predator activity observed (Multiple sets of coyote tracks, potential bobcat tracks - marked as unknown in survey). Man-made trail crossing transect with human footprints and canine prints following the human prints. Canine prints could be a dog as it was next to the human prints on the trail, however, the canine prints were more fresh than the human prints.
						Coyote	T		
						Bobcat	T		
						Snowshoe Hare	A		
3/1/2022	(-1) 20 degrees, cloudy, low wind	4	8	DS, EJ, AD	1.1	Red Squirrel	T	Immature, spruce dominant forest with shrubs in understory. Sparsely vegetated - pockets of thick vegetation throughout.	Hare abundant, one set of coyote tracks observed.
						Snowshoe Hare	A		
						Whitetail Deer	M		
2/28/2022	(-15) degrees, sunny, low wind	3	4	MM	1.2	Red Squirrel	M	Inaccessible due to wetland conditions. Instead, larger transect was walked directly to the west of T-4. Mixed woods, often immature, as well as partially frozen wetlands throughout. Transect was mainly wetland.	One set of bobcat tracks observed along watercourse. Hare abundant.
						Snowshoe Hare	A		
						Whitetail Deer	A		
						Bird spp	M		
						Field mouse	T		
						Bobcat	T		
3/1/2022	(-1) 20 degrees, sunny, medium wind	4	18	DK, MM	1.5	Red Squirrel	M	Mixed woods but somewhat softwood dominant. Mixed to mature in age. Pits and mounds featured areas of thinly frozen water.	Hare and deer were abundant. Small rodents such as squirrels and field mice also present. One denning site was recorded, species unknown.
						Snowshoe Hare	A		
						Whitetail Deer	A		
						Field mouse	T		
						Rodent spp	T		
3/1/2022	(-1) 20 degrees, sunny, medium wind	4	17	DK, MM	1.1	Red Squirrel	M	T-17 was inaccessible due to watercourse. Team instead made a similar transect directly to the west of the original T-17. Largely mature softwood, adjacent watercourse. Patches of dense coniferous regen in some places, but largely open understory.	Deer and hare were abundant and transect featured areas of dense tracks by both species. Small rodent species were noted.
						Snowshoe Hare	A		
						Whitetail Deer	A		
						Field mouse	M		
						Rodent spp	T		
2/28/2022	(-15) degrees, sunny, low wind	3	1	DK, MM	1.2	Red Squirrel	T	Fairly dry throughout transect. Large portion of transect was along transmission line, but hardly any tracks were found there. Not many tracks were found in this transect.	Deer and snowshoe hare were abundant comparative to other species recorded.
						Snowshoe Hare	A		
						Whitetail Deer	A		
						Field mouse	T		
2/28/2022	(-15) degrees, sunny, low wind	3	11	AD, EJ	1.4	Red Squirrel	T	Mixture of blueberry fields, mixed forest and open canopy hardwood stands. Blowing wind made tracking in blueberry field inaccessible. Relatively sloped towards the Northeast, with some wet areas interspersed.	Relatively few tracks as a whole given the deep snow, but one unclear coyote/bobcat, some sign of snowshoe hare and Squirrels and some old moose browse that is at least several months old.
						Snowshoe Hare	T		
						Predator Canine/feline	T		
						Moose	N/A		
2/28/2022	(-15) degrees, sunny, low wind	3	12	AD, EJ	1.3	Red Squirrel	A	Cleared powerline corridor with a smaller road, along with relatively open and in tact softwood dominant forest. More variety in tree/shrub species near wetland areas.	At least one bobcat was clearly hunting in the area, tracking in "circles" around the swampy area, while also travelling through the thickets of the softwood area. Otherwise only small mammal prey.
						Snowshoe Hare	A		
						Bobcat	M		
						Rodent spp	T		

Date of Survey	Weather Conditions	Days since last snowfall >10 cm	Transect ID	Staff	Transect Length (km)	Species Observed	Density (Abundant, Moderate, Trace)	Habitat Notes	Additional Info
2/28/2022	(-15) degrees, sunny, low wind	3	13	AD, EJ	1	Red Squirrel	M	Relatively thick hardwood regen under the transmission line, while the area away from the line is primarily thick softwood regen - varying from 5-20 years of age.	Deer browse was abundant on smaller shrubs through the softwood areas, along with snowshoe hare and squirrel. Clear sign of old beaver activity near the northern part of the transect. A flock (12) of Black-capped chickadees and Red-breasted nuthatches was feeding in the softwood area.
						Snowshoe Hare	A		
						Whitetail Deer	M		
						Beaver	T		
2/28/2022	(-15) degrees, sunny, low wind	3	14	AD, EJ	1.2	Red Squirrel	T	Upland area contains regen of 5-10 years old, while the wetland area was barren of trees. One area of mature softwood was present near the east end.	Very few tracks as a whole. The transect ran mostly parallel to a partially frozen/thawing river area. One large beaver dam was present upstream from the existing power corridor but also appeared to have been bolstered at some point for crossing.
						Snowshoe Hare	T		
						Beaver	T		
						Jumping Mouse	T		
3/1/2022	(-15) degrees, sunny, low wind	4	10	AD	1.1	Coyote	M	The whole area of the transect is sloped down towards the Debert River, with mixed forest covering most of the area. One open hardwood area was observed near the northern end.	There were coyote tracks along a couple of the trails, including nearest the water. Red Squirrel and Snowshoe hare were abundant throughout the wooded areas, as well as the smaller road that crossed the transmission line.
						Snowshoe Hare	A		
						Red Squirrel	A		
						Sorex spp.	T		
3/1/2022	(-15) degrees, sunny, low wind	4	9	AD	1.4	Red Squirrel	M	The area was mostly covered by relatively immature softwood, but it was interspersed with some larger trees. Near the brook that was impassable there were some larger hardwoods and alders in abundance	Coyote tracks were abundant along Lightbody road towards the transect. The road was impassable to larger vehicles from the end of the paved road near the houses. Beavers had dammed the brook, causing the bridge to be flooded/washed-out. A single track of what appeared to be porcupine crossed the trail, along with extensive snowshoe hare and red squirrel
						Snowshoe Hare	A		
						Beaver	T		
						Porcupine	T		
						Coyote	M		
2/28/2022	(-15) degrees, sunny, low wind	3	3	DK	1.4	Red Squirrel	A	The area started with mostly softwood regen, then transitioned into more mature stands of mixedwood. There was some open canopy area with thickets of alder near the end of the transect (right side of triangle).	Few tracks as a whole. Primarily whitetail deer and snowshoe hare, with one set of older coyote tracks in the alder thicket at the end. The left portion of the transect (above Smith Lakes) was softwood regen, likely due to historic timber harvest.
						Snowshoe Hare	M		
						Coyote	T		
						Whitetail Deer	M		
						Rodent spp.	M		
3/4/2022	(-15) degrees, sunny, low wind	1	16	DK, AD	1.4	Red squirrel	M	Walked ~2km through agricultural land & along transmission line to access transect. There were occasional canine prints. Transect was majority mixed age, mixed wood. End of transect followed along a stream.	Few tracks as a whole. Primarily coyote and deer. Possibly one set of feline tracks that were dusted with snow and hard to distinguish.
						Snowshoe hare	M		
						Coyote	A		
						Whitetail Deer	M		
						Rodent spp.	M		
3/4/2022	(-15) degrees, sunny, low wind	1	15	DK, AD	1.4	Red squirrel	M	Transect started along transmission line, then cut into mixedwood forest, and finished along the road in an area being logged by local resident.	Few tracks, primarily whitetail deer. Saw 1 deer, plus an imprint of where a deer had previously been laying down. Occasional coyote tracks as well.
						Snowshoe hare	M		
						Coyote	M		
						Whitetail Deer	A		
						Rodent Spp.	M		
2/28/2022	(-15) degrees, sunny, low wind	3	2	DK	1.1	Red Squirrel	T	Under Transmission Line with typical vegetation, including alder swails, low softwood thickets, and bordering on mostly immature mixed woods.	Relative few tracks, but typical for areas under transmission lines. Hares showed sign of browse as well as tracks, with a few deer tracks and several smaller rodents along fringes and near the edges of the clearing under the transmission line.
						Snowshoe Hare	A		
						Coyote	T		
						Whitetail Deer	M		
						Rodent spp.	M		

Table B2 - L8005 Transmission Line Mainland Moose Assessment - Pellet Group Survey Result:

Date of Survey	Weather Conditions	Transect ID	Staff	Transect Length (km)	Species Observed	Density (Abundant, Moderate, Trace)	Habitat Notes	Additional Info
18-04-2022	Scattered clouds, 10 degrees, light wind	10	RK	1.2	Coyote	M	This transect spent roughly 250 m in the woods while the rest was following the powerlines. The wooded section was about 75% young BF, WS, RM, and WB forest. This forest was densely growing with trees no taller than 5 m. There was surface water present with ground cover including Lambkill, Lowbush blueberry, and mosses such as Schrebbers, Stairstep, and predominantly Sphagnum sp. The other 25% of wooded section was in a Single aged WS, RS, Bf forest. These trees are single aged with a moss covered ground. Trees are roughly all 7 m in height and all fairly slim, no larger than pole diameter. The rest of the transect which followed the powerlines were thick with BF, WS, and RM re-gen with grasses making up majority of ground cover.	A Canada jay was spotted swooping from tree to tree along the road which conected the transmission line to Irving #G6 road. Coyote scat was only found under powerlines, Deer and Hare are found equally throughout transect, while a single porcupine was spotted along the powerline trail
					Deer	M		
					Snowshoe Hare	M		
					Porcupine	T		
18-04-2022	Scattered clouds, 10 degrees, light wind	11	RK	1.1	Deer	A	PGI11 spent roughly 275 m along an ATV trail, and roughly 800 m within a forest. The 275 m which were along an ATV trail had trees bordering the trail such as WP, WS, BF, and the occasional RM and WB. These trees are fairly young and stand no taller than 5-10 m. The rough 800 m that was forested was predominantly softwood with the occasional hardwood. This transect occasionally opened up into a grassy fen. Softwoods present (from most dominant to least) include WS, RS, BF, and WP. The occasional hardwood includes RM and WB. This forest was primarily single aged with very few patches of BF-WS re-gen. The trees found throughout are roughly all 5-10 m tall. The occasional fen was predominantly grass species with the occasional Leatherleaf and Labrador tea found throughout. The only tree species which bordered the fen were RM.	Deer and Hare scat are equally found throughout entire transect.
					Snowshoe Hare	A		
19-04-2022	Overcast, 5 degrees, moderate to heavy wind	3	RK	1.4	Deer	M	This transect spent roughly 500 m in a young tolerant hardwood forest, 200 m in a mixed forest, and another roughly 500 m bordering a small river. The first 500 m has trees such as YB, SM, IW, Striped maple, BE, and RM. This forest has little ground veg but abundant Hayscented and Christmas fern found throughout. YB, SM, and RM are roughly 5-10 m tall. A secondary lower canopy consists of IW, STM, and BE which are roughly 1-3 m tall. The tolerant hardwood forest slowly transitioned into a mixed/softwood dominant forest. Similar hardwood species are present but no softwoods such as WS, RS, and BF are present. Eventually this forest comes across a small river which is bordered predominantly by softwood with the scattered hardwood. Softwoods include WS, RS, and BF. Large diameter RS are found along this river. Softwoods such as RM and WB are found scattered along the river.	Deer scat is present only in tolerant hardwood forest where there is heavy browsing on re-gen, while hare scat is present predominantly along river with trace amounts in hardwood stand.
					Snowshoe Hare	M		
19-04-2022	Overcast, 5 degrees, moderate to heavy wind	4	RK	1	Snowshoe Hare	M	This transect spent about 700 m in the woods and the other 300 m along powerline trails. Of the 700 wooded metres, there was about 250 m which bordered a stream while the rest was straight woods. The wooded portion was all young WP, WS, and BF stands. The trees were densely growing and were no taller than 5-8 m. While this forest was predominantly softwood, there were scattered WB and RM found throughout. Ground cover was 99% mosses such as Schrebbers, Stairstep, and Whipwort with patches of Sphagnum sp found throughout. The occasional Lamb kill and lowbush blueberry were found throughout. The ground was fairly wet and had standing water throughout. The roughly 250 m which bordered the stream presented identical tree species as the forest with thick Speckled alder patches growing throughout the entire streams length. The 300 m along the powerline was along grassy trails with Lambkill and Labrador tea growing. Tree re-gen includes WB, RM, BF, and WS.	Hare was only found throughout thick softwood forest.
18-04-2022	ten degrees, sun, mod wind	7		NA			Transect inaccessible due to road conditions	
18-04-2022	ten degrees, sun, mod wind	8	MM	1.1	Coyote	A	Mixed woods with fairly clear understory and significant moss coverage throughout. Varying ages in stand. 0-70 yrs. ATV Trail running through. No evidence of deer noted. Other parts of transect were wet with vernal pools and some alder thickets and swamps. No animal evidence found in these areas.	Coyote scat found exclusively in ATV Trails, while snowshoe hare scat was found in all parts of transect.
					Snowshoe Hare	M		
18-04-2022	ten degrees, sun, mod wind	9	MM	1.6	Squirrel	T	Transect was very wet, with alder thickets and tall grasses common. Softwood stands and dense moss coverage throughout. (BS, stairstep moss.) Swamp in one section (Lambkill, Lab tea, sphagnum, black spruce, open canopy.)	Saw no significant evidence in transect except a few squirrel chews and snowshoe hare scat. Raptor nest along T line with two ospry present.
					Snowshoe Hare	T		
19-04-2022	5 degrees, overcast, just before rain.	12	MM	1.3	Coyote	M	Majority softwood stands. RS, WP, BF, good moss coverage throughout. Scattered RM. Meandering stream with fringe floodplain at the bottom of a steep ravine. WB, RM, IW, AB. Seasonally wet areas with grass hummocks and sphagnum	Moderate evidence of coyotes found exclusively on trails.
19-04-2022	5 degrees, overcast, just before rain.	6	MM	1.2	Deer	A	Primarily mature hardwood. Followed along a river for 1/3 of transect, also followed T-Line for part. Some softwood regenas well.	Deer scat found evenly throughout transect.
19-04-2022	5 degrees, overcast, just before rain.	1	MM	1.2	Snowshoe Hare	A	Followed a wide, well maintained trail for a large portion of the transect. Flanked by young hardwoods, mainly YB. Culverts on this trail is very good condition. Very hilly, with hardwood ravines and seeps present.	Coyote evidence found on trails, deer and snowshoe hare dispersed evenly throughout transect.
					Deer	M		
					Coyote	T		
20-04-2022	5 degrees, int sun/cloud, mod wind	2	MM	1.7	Deer	M	Young hardwoods, RM and YB. Open understory with spring seeps and small rivers.	Deer pellets found mostly in woods.
20-04-2022	5 degrees, int sun/cloud, mod wind	5	MM	1.5	Deer	M	Wet stand, completely inundated by river in some areas. Sphagnum cover very high with wetland flora present, Lambkill, wild raisin, RM, BF, BS.	Animal evidence found in dry areas of transect, further from the river.
					Snowshoe hare	M		
					Garter snake	T		
18-04-2022	Scattered clouds, 10 degrees, moderate wind	13	RK	1	Hare	T	This transect replaced T7, which could not be completed due to road conditions. This transect follows the powerlines. Habitat under the lines are primarily grass fields with some WS, RM, and Speckled alder regen. Grasses and sedges are present with many types of brambles, roses. Plants such as lamb kill and leather leaf are also present. Surface water is present in some areas. A portion of this transect has wetland with standing water, sphagnum, and grass hummucks. Leather leaf has a high presense here.	