

APPENDIX C

Bat Habitat and Snag Density Field Form



Bat SWH and Snag Density Survey

Project Name:	Project Number:	Surveyors:	Date:	Polygon ID:	Ecosite:	
Location Description (or wpt):		Start Time:	End Time:	Photos:		
Polygon Size (ha):	Plots Needed:	Temp:	Wind speed:	Wind Dir:	Precip:	
Comments (i.e., disturbance level):	Stand Structure:	Even-aged	Tiered	Stand Composition:	Homogeneous	Complex/Diverse
	Canopy:	Cluttered	Open	Approx. Total Cavities:	<100/ha	>100/ha
	Proximity to open water:	> 100m	<100m	Karst/sinkhole/cliff/crevice//talus/rock pile/rock outcrop:	>100m	<100m

>25 cm DBH Snags/ha _____ (see page 2+)

“Survey a min of 10 plots for ≤10 ha and add 1 plot/ha up to max 35 plots”

General estimate of the density of trees in the entire community:

Trees	<25cm dbh (estimated)		>25cm dbh (estimated)		Description	Comments
Live Trees	<100/ha	>100/ha	<100/ha	>100/ha		
Standing Snags	<10/ha	>10/ha	<10/ha	>10/ha	Dead tree erect	
Deadfall	<10/ha	>10/ha	<10/ha	>10/ha	Dead trees on ground	
Mast Trees	<10/ha	>10/ha	<10/ha	>10/ha	Breaching Canopy / High seeds	
Bark Trees	<10/ha	>10/ha	<10/ha	>10/ha	Exposed or peeling bark	
Cavity Trees	<10/ha	>10/ha	<5/ha	5/ha – 10/ha	>10/ha	Holes or cracks in trees
“Leaf Clumps”	<10/ha	>10/ha	<10/ha	>10/ha		

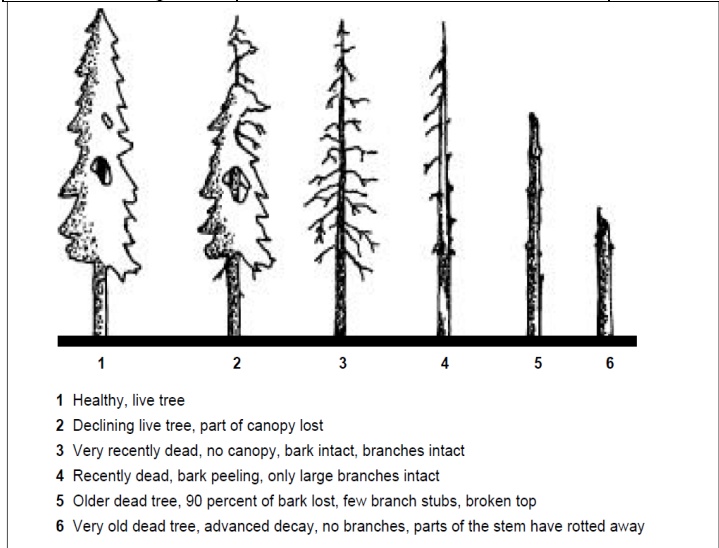


Figure 1: Sample Classification system for snags.

Incidental Tree Observations:

Wpt	Easting	Northing	Photos	Species	Description

Bat Snag Density

Project Name: _____ Project Number: _____ Surveyors: _____ Date: _____ Polygon ID: _____

Total Polygon Area: _____ Total Plots Used: _____

"12.6 m radius survey plot = 0.05 ha"

"Survey a min of 10 plots for ≤10 ha and add 1 plot/ha up to max 35 plots"

(to be completed in office)

Plot Number	Cavity trees >25cm DBH	Area Surveyed	Cavity Trees per Hectare	Comments
1		0.05		
2		0.05		
3		0.05		
4		0.05		
5		0.05		
6		0.05		
7		0.05		
8		0.05		
9		0.05		
10		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
		0.05		
Total Cavity Trees per hectare = Total cavity trees found / total area surveyed				
		Cavity Trees Per Hectare		

Bat Snag Density

Project Name: _____ Project Number: _____ Surveyors: _____ Date: _____ Polygon ID: _____

Cavities Trees Tally Plot Number: **1** Station Centre UTM: _____ Radius: **12.6m(0.05ha)**

Snag #	Pic#	WPT	Location		Cavity			Tree					
			Easting	Northing	HT (m)	Dia (cm)	Description	Species	DBH (cm)	HT (m)	Snag Class	Description	
Plot Comments:											Total snag >25dm DBH:	Snag/ha:	

Cavities Trees Tally Plot Number: **2** Station Centre UTM: _____ Radius: **12.6m(0.05ha)**

Snag #	Pic#	WPT	Location		Cavity			Tree					
			Easting	Northing	HT (m)	Dia (cm)	Description	Species	DBH (cm)	HT (m)	Snag Class	Description	
Plot Comments:											Total snag >25dm DBH:	Snag/ha:	

Bat Snag Density

Project Name: _____ Project Number: _____ Surveyors: _____ Date: _____ Polygon ID: _____

Cavities Trees Tally Plot Number: 3 Station Centre UTM: _____ Radius: 12.6m(0.05ha)

Snag #	Pic#	WPT	Location		Cavity			Tree					
			Easting	Northing	HT (m)	Dia (cm)	Description	Species	DBH (cm)	HT (m)	Snag Class	Description	
Plot Comments:											Total snag >25dm DBH:	Snag/ha:	

Cavities Trees Tally Plot Number: 4 Station Centre UTM: _____ Radius: 12.6m(0.05ha)

Snag #	Pic#	WPT	Location		Cavity			Tree					
			Easting	Northing	HT (m)	Dia (cm)	Description	Species	DBH (cm)	HT (m)	Snag Class	Description	
Plot Comments:											Total snag >25dm DBH:	Snag/ha:	

Bat Snag Density

Project Name: _____ Project Number: _____ Surveyors: _____ Date: _____ Polygon ID: _____
Cavities Trees Tally Plot Number: 5 Station Centre UTM: _____ Radius: 12.6m(0.05ha)

Snag #	Pic#	WPT	Location		Cavity			Tree					
			Easting	Northing	HT (m)	Dia (cm)	Description	Species	DBH (cm)	HT (m)	Snag Class	Description	
Plot Comments:											Total snag >25dm DBH:	Snag/ha:	

Cavities Trees Tally Plot Number: 6 Station Centre UTM: _____ Radius: 12.6m(0.05ha)

Snag #	Pic#	WPT	Location		Cavity			Tree					
			Easting	Northing	HT (m)	Dia (cm)	Description	Species	DBH (cm)	HT (m)	Snag Class	Description	
Plot Comments:											Total snag >25dm DBH:	Snag/ha:	

Bat Snag Density

Project Name: _____ Project Number: _____ Surveyors: _____ Date: _____ Polygon ID: _____

Cavities Trees Tally Plot Number: 7 Station Centre UTM: _____ Radius: 12.6m(0.05ha)

Snag #	Pic#	WPT	Location		Cavity			Tree					
			Easting	Northing	HT (m)	Dia (cm)	Description	Species	DBH (cm)	HT (m)	Snag Class	Description	
Plot Comments:											Total snag >25dm DBH:	Snag/ha:	

Cavities Trees Tally Plot Number: 8 Station Centre UTM: _____ Radius: 12.6m(0.05ha)

Snag #	Pic#	WPT	Location		Cavity			Tree					
			Easting	Northing	HT (m)	Dia (cm)	Description	Species	DBH (cm)	HT (m)	Snag Class	Description	
Plot Comments:											Total snag >25dm DBH:	Snag/ha:	

Bat Snag Density

Project Name: _____ Project Number: _____ Surveyors: _____ Date: _____ Polygon ID: _____

Cavities Trees Tally Plot Number: **9** Station Centre UTM: _____ Radius: **12.6m(0.05ha)**

Snag #	Pic#	WPT	Location		Cavity			Tree					
			Easting	Northing	HT (m)	Dia (cm)	Description	Species	DBH (cm)	HT (m)	Snag Class	Description	
Plot Comments:											Total snag >25dm DBH:	Snag/ha:	

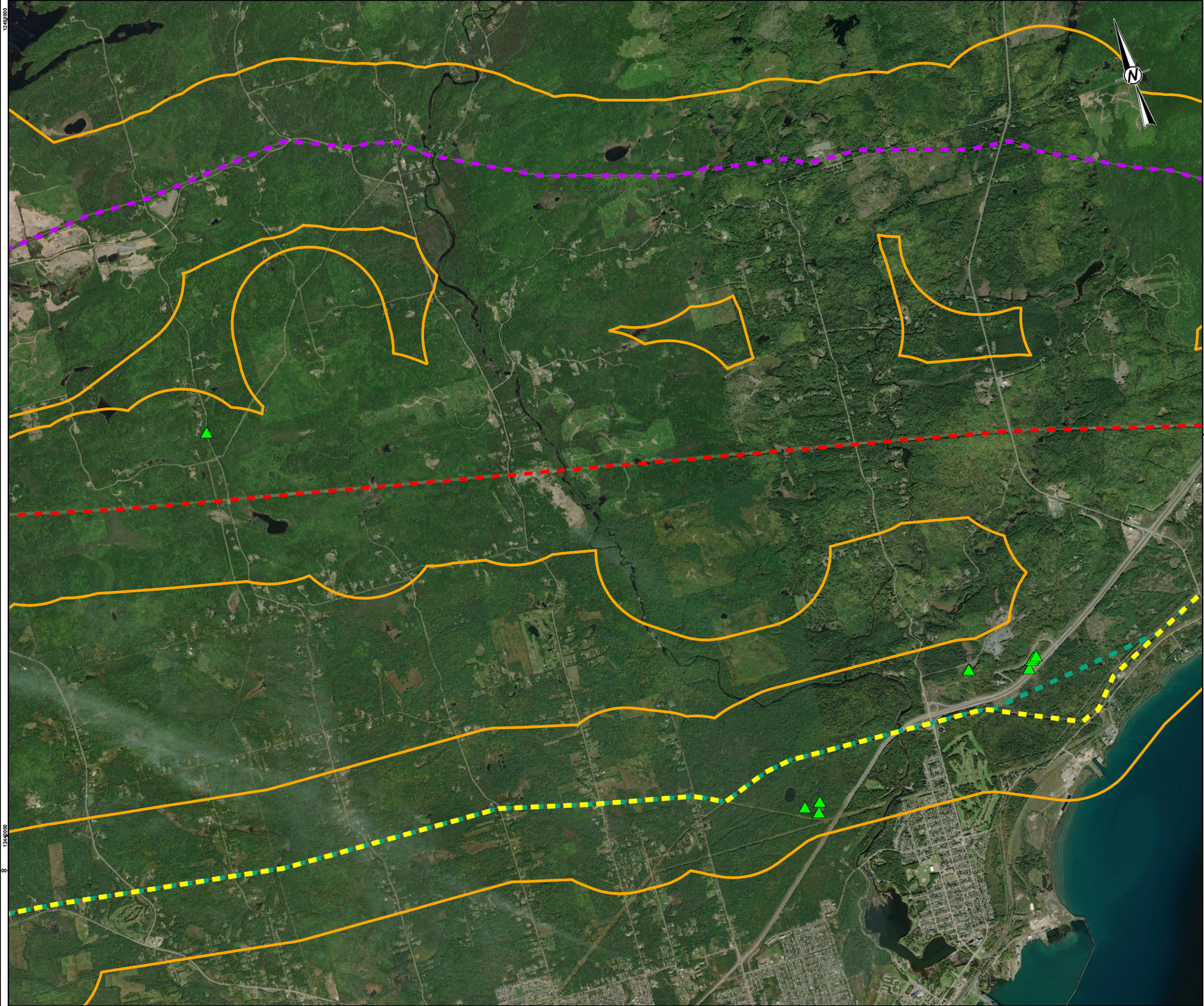
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Snag #	Pic#	WPT	Location		Cavity			Tree					
			Easting	Northing	HT (m)	Dia (cm)	Description	Species	DBH (cm)	HT (m)	Snag Class	Description	
Plot Comments:											Total snag >25dm DBH:	Snag/ha:	

APPENDIX D

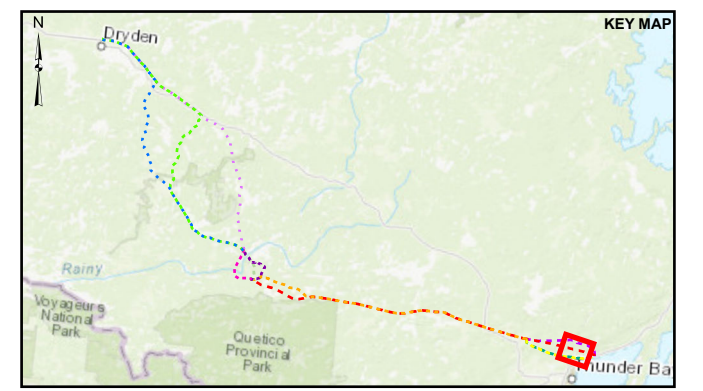
Proposed Bat Hibernacula Survey Locations





LEGEND

- ▲ CANDIDATE BAT HIBERNACULUM SLATED FOR 2022 FIELD VISIT
- - - Alternative Route 1
- - - Alternative Route 1A
- - - Alternative Route 1B - 1
- - - Alternative Route 1B - 2
- SECONDARY HIGHWAY
- + RAILWAY
- WATERCOURSE
- LOCAL STUDY AREA
- WATERBODY



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NOTE(S)
 ALL LOCATIONS ARE APPROXIMATE
 LOCATIONS OF AMIS FEATURES HAVE BEEN ADJUSTED SLIGHTLY FOR ILLUSTRATIVE PURPOSES TO AVOID OVERLAPPING SYMBOLOGY

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 HYDRO ONE NETWORKS INC.

PROJECT
 WAASIGAN TRANSMISSION LINE

TITLE
 CANDIDATE BAT HIBERNACULA SITES

CONSULTANT	YYYY-MM-DD	2022-03-21
	DESIGNED	CS
	PREPARED	MM
	REVIEWED	####
	APPROVED	####

PROJECT NO.	CONTROL	REV.	FIGURE
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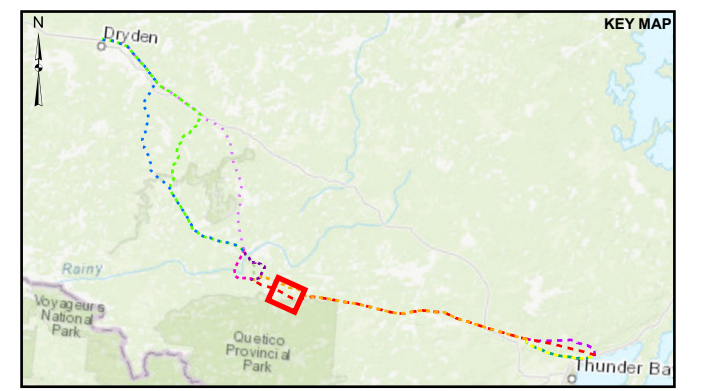
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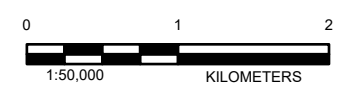


LEGEND

- ▲ CANDIDATE BAT HIBERNACULUM SLATED FOR 2022 FIELD VISIT
- - - Alternative Route 1
- - - Alternative Route 1C
- SECONDARY HIGHWAY
- + RAILWAY
- WATERCOURSE
- LOCAL STUDY AREA
- WATERBODY



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PROJECT
 WAASIGAN TRANSMISSION LINE

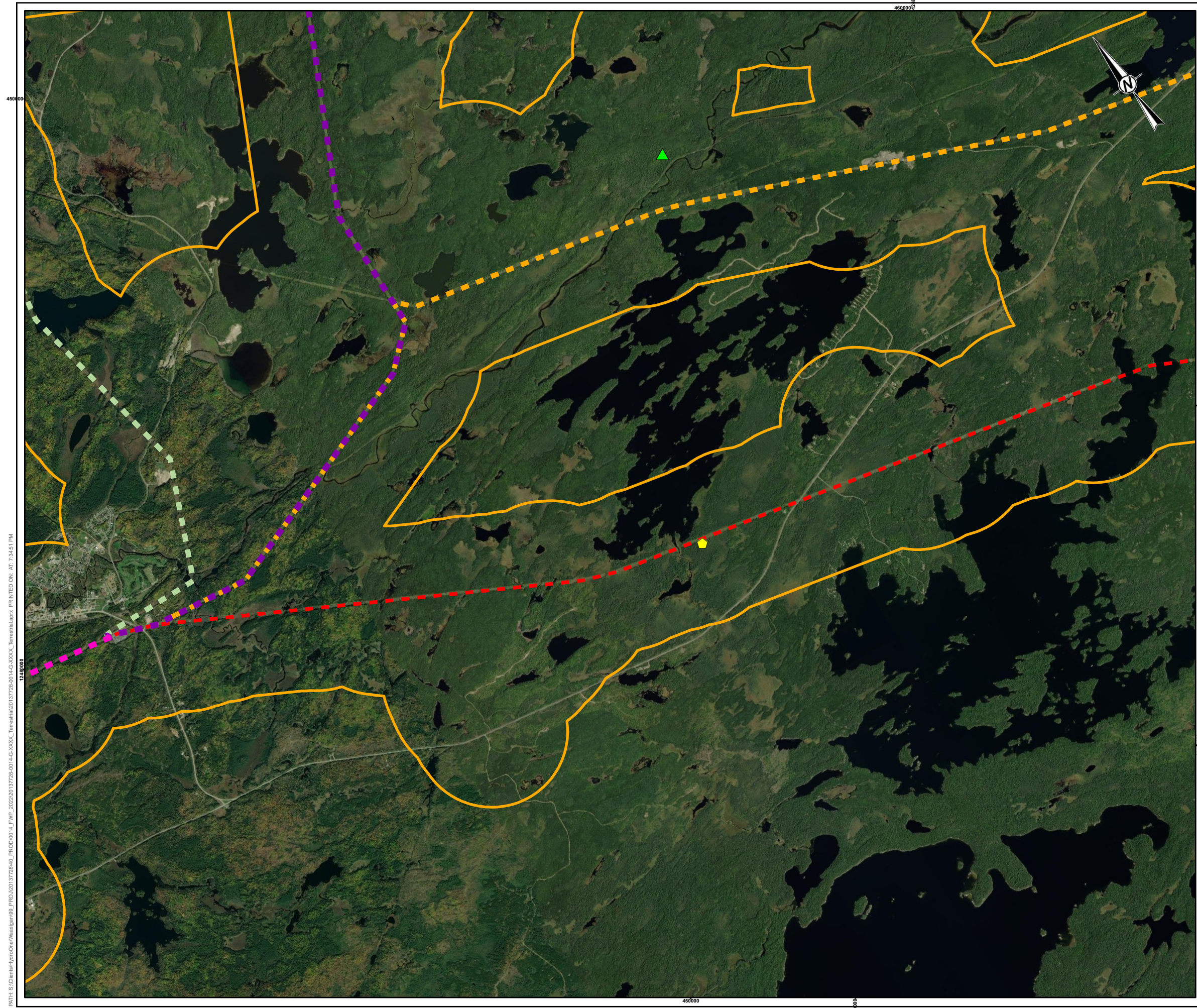
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	DESIGNED	CS
	PREPARED	MM
	REVIEWED	####
	APPROVED	####

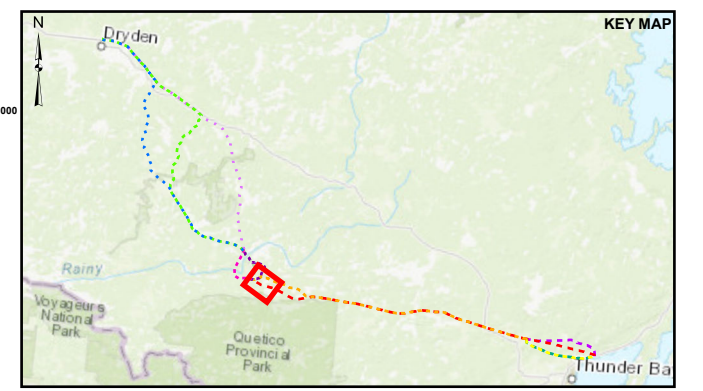
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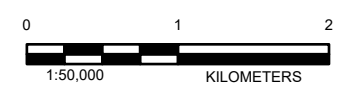
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- LEGEND**
- ⬠ CANDIDATE BAT HIBERNACULUM 2020 MINE SITE SURVEY - LOW POTENTIAL
 - ▲ CANDIDATE BAT HIBERNACULUM SLATED FOR 2022 FIELD VISIT
 - - - Alternative Route 1
 - - - Alternative Route 1C
 - - - Alternative Route 2A
 - - - Alternative Route 2B
 - - - Alternative Route 2C
 - SECONDARY HIGHWAY
 - + RAILWAY
 - WATERCOURSE
 - LOCAL STUDY AREA
 - WATERBODY



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PROJECT
 WAASIGAN TRANSMISSION LINE

TITLE
 CANDIDATE BAT HIBERNACULA SITES
















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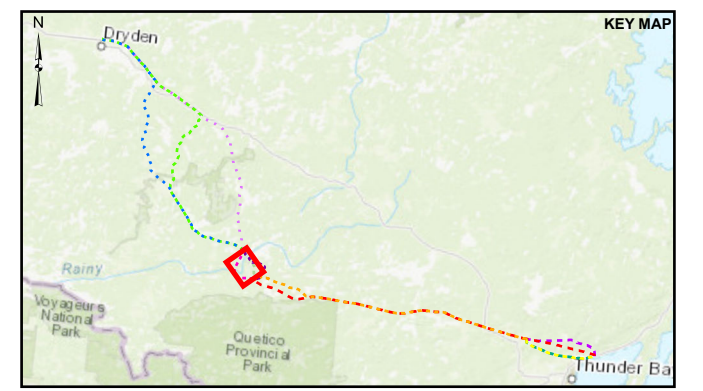
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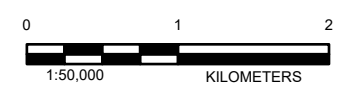
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 25mm



- LEGEND**
-  CANDIDATE BAT HIBERNACULUM 2020 MINE SITE SURVEY - MODERATE POTENTIAL (LOW POTENTIAL)
 -  CANDIDATE BAT HIBERNACULUM 2020 MINE SITE SURVEY - LOW POTENTIAL
 -  CANDIDATE BAT HIBERNACULUM SLATED FOR 2022 FIELD VISIT
 -  Alternative Route 1
 -  Alternative Route 1C
 -  Alternative Route 2A
 -  Alternative Route 2B
 -  Alternative Route 2C
 -  Alternative Route 3B
 -  Alternative Route 3C
 -  SECONDARY HIGHWAY
 -  RAILWAY
 -  WATERCOURSE
 -  LOCAL STUDY AREA
 -  WATERBODY



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 PROJECTION: HYDRO ONE LAMBERT CONFORMAL CONIC DATUM: NAD 83

CLIENT
 HYDRO ONE NETWORKS INC.

PROJECT
 WAASIGAN TRANSMISSION LINE

TITLE
 CANDIDATE BAT HIBERNACULA SITES

CONSULTANT	YYYY-MM-DD	2022-03-21
	DESIGNED	CS
	PREPARED	MM
	REVIEWED	####
	APPROVED	####

PROJECT NO.	CONTROL	REV.	FIGURE
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 25mm



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