NATURAL ENVIRONMENT EXISTING CONDITIONS & IMPACT ASSESSMENT REPORT

FINAL

Ontario Northland

Northlander Passenger Rail
Timmins-Porcupine Station Transit and Rail Project Assessment Process

December 13, 2024

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Draft B	December 8, 2023	Updated draft to address ONTC comments.	
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Draft 0	July 26, 2024	Revised final report to address GRT comments and other project updates.	
Draft 1	December 13, 2024	Revised final report.	

This submission was completed and reviewed in accordance with the Quality Assurance Process for this project.

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EXECUTIVE SUMMARY

Introduction

As part of the Northlander Passenger Rail (NPR) program, and as identified via the Updated Initial Business Case (UIBC) work, a new station in the City of Timmins is proposed. Terminating the Northlander service in the Timmins region will provide long-distance passenger rail service to the regional transportation hub and fifth largest municipality in Northern Ontario. The Timmins terminus station provides community and economic benefits by serving a relatively larger population center in Northern Ontario compared to other options previously studied to support the return of the Northlander rail service.

Report Purpose

This report represents a combination of desktop assessment and subsequent field investigations for the site proposed to host the Timmins-Porcupine Station. The characterization of existing conditions was used to identify natural heritage constraints and to identify appropriate mitigation from a natural environment perspective to minimize impacts, where required.

Study Area

The Study Area for the TRPAP is defined as the area where the station and potential future bus maintenance and storage facility components are proposed plus a conservative 50 metre buffer area for completing technical and environmental studies. Refer to **Figure 2.**

Existing Conditions

The Study Area is characterized by dry-moist old field cultural meadow and mineral marsh vegetation. These vegetation communities are relatively common and secure and reflect anthropogenic influence/previous disturbance and clearing; however, they likely provide habitat for a variety of wildlife. No species at risk (SAR) were observed during field investigations. Field investigations identified a small drainage feature that appears to convey intermittent flows after storm events from west to east through the Study Area. Flow, likely originating from stormwater runoff, is conveyed from west of Falcon Street, and along a ditch running north to south on Falcon Street. The flow then passes through a culvert into the Study Area and under the rail corridor through a culvert towards the BTr9-2 community and then under the snowmobile trail where it disperses and does not appear to have a connection to Bob's Lake.

Potential Impacts, Mitigation Measures & Monitoring Activities

The proposed works for the new Timmins-Porcupine Station includes vegetation clearing and grubbing for the construction/ installation of the station building, associated parking area and curbline. The proposed works also include, as well as the installation of bus stops and upgrades to the station platform adjacent to the rail corridor. The proposed works are located in the southern half of the Study Area and the northern half of the Study Area is currently identified as a location for a potential future bus maintenance and storage facility. It has been assumed for impact assessment purposes that the area proposed for the future facility will be cleared and grubbed at the same time as the southern part of the Study Area.

No impacts to surface water, fish and fish habitat, and SAR or SAR habitat are anticipated within the Study Area.

The proposed works will result in a permanent loss of 0.8 ha of naturalized vegetation and wildlife habitat. The ELC communities that will be impacted are not sensitive or rare and reflect the historic anthropogenic influence (as this area has been cleared in the past).

Recommended mitigation measures include:

- Allow incidentally encountered wildlife to passively move out of the work area.
- Vegetation removal should be minimized where possible.
- Any post-construction planting and landscaping efforts should include native vegetation species that are consistent with the current vegetation communities (i.e. native grasses and pollinator plants) and contribute to wildlife habitat.
- Use previously disturbed/paved areas or cultural/manicured areas for construction laydown and staging to the extent possible.
- Develop and implement an erosion and sediment control plan; control access and movement of equipment and people; designate areas for equipment storage; minimize the area and duration of soil exposure; control erosion, sedimentation and nutrient inputs through use of best management practices.
- Initiate construction during the late/fall winter if possible to avoid disturbing sensitive species.
- Vegetation clearing to occur outside of the breeding bird window of April 1- August 31. If tree clearing is required during the breeding bird window, a nest sweep will be completed by a qualified biologist no more than 48 hours prior to vegetation removal.
- If an active nest is found, then a protective buffer will be established around the nest. The extent of the buffer will be determined in consultation with a qualified biologist and if applicable, additional consultation with the agencies having jurisdiction (e.g., MECP) may be required to determine extent of protection and mitigations.
- Vegetation clearing to occur outside of the bat roosting season of May 1-August 31. Should removal of potential SAR bat habitat be required, SAR bat surveys will be completed by a qualified specialist in advance of the removal activities to confirm SAR bat habitat presence.
- If removal of confirmed SAR bat habitat is required, all requirements under the ESA will be met, including any registration, compensation, replacement structures and/or permitting requirements.
- All requirements of the ESA and/or SARA Species-specific mitigation measures will be implemented, in consultation with MECP as required.
- Allow incidentally encountered wildlife during construction to passively move out of the work area.
- Delineate all work areas using erosion fencing or similar barriers to avoid incidental intrusion into any adjacent wildlife habitat.

1.0 INTRODUCTION

Ontario Northland Transportation Commission (Ontario Northland) is an agency of the Province of Ontario responsible for providing efficient, safe, and reliable transportation services in Northern Ontario. Current services include inter-community motor coach services connecting Northern Ontario to urban centres including Toronto, Ottawa and Winnipeg, and passenger rail services connecting Cochrane to Moosonee and communities of the James Bay Coast. Rail freight services are also provided throughout Northeastern Ontario and Northwestern Quebec.

Ontario Northland carries large volumes of goods great distances and is a reliable partner linking businesses to the global supply chain. The Government of Ontario has issued direction to Ontario Northland to reinstate passenger rail service between Toronto (Union Station) and Northeastern Ontario via the Northlander Passenger Rail (NPR). The design will be based on Option 2 in the Updated Initial Business Case (UIBC) prepared to assess the relative merits and costs of the project and includes passenger train service that begins at Union Station and terminates in Timmins, with a rail connection from Timmins to Cochrane.

The rail corridor between Toronto and Timmins (with a connection to Cochrane) is approximately 740 km long and consists of five (5) main railway subdivisions owned by: Metrolinx, Ontario Northland, and Canadian National Railway (CN). CN is a Class 1 railway that operates freight rail services that connect to other Class 1 railways to ship goods across North America. Passenger rail operators in the corridor include GO Transit, which operates the Richmond Hill commuter rail service. Ontario Northland operates freight service from North Bay to Cochrane, mixed passenger/freight rail service between Cochrane and Moosonee, as well as operation of the Cochrane Station Inn at the departure point for the Polar Bear Express.

A key plan of the NPR route is illustrated in **Figure 1**.

Figure 1: Northlander Passenger Rail Key Map

2.0 PROJECT DESCRIPTION

2.1 Ontario Regulation 231/08: Transit and Rail Project Assessment Process (TRPAP)

The proposed Timmins-Porcupine Station is subject to *Ontario Regulation 231/08: Transit and Rail Projects Assessment Process* (as amended February 16, 2024).

2.2 TRPAP Scope

The scope of the TRPAP examines the potential environmental effects associated with the new Timmins-Porcupine Station. In addition, the environmental impact assessment studies also consider the area of land adjacent to the proposed station where a future bus maintenance and storage facility may be built. At the time of preparing this EPR, the decision to build the bus facility was not yet definitive, and therefore an engineering design was not completed. Should the bus facility go forward in the future, the environmental impact assessment studies undertaken as part of the TRPAP will need to be revisited and updated, as required. These updated/additional impact assessment studies will be carried out as part of completing an Environmental Project Report (EPR) Addendum process (as per O. Reg. 231/08), which would also entail Ontario Northland carrying out additional public, stakeholder, and Indigenous Communities consultation.

Table 1 below provides a summary of the project components.

Table 1: Project Components

Project Component	Approximate Location	Description
Train Station Platform	The train platform is to be located on the east side of the station building.	Train platform material will consist of concrete. Platform features will include tactile warning strips, platform edge, and areas for Accessibility Vehicles to park at the north and south ends of the platform.
Station Building	The station building is surrounded by various station elements, and includes access to Ontario Northland bus bays, the train platform, and the parking lot.	Features in the station building may include: • Wicket for Travel Tickets and information; • Wicket for parcel drop-off/pick-up; • Station waiting area; • Station washroom; • Breakroom for crews and station staff; and, • Staff washroom and utility spaces.
Station Parking Facilities	Parking facilities will be located on lands adjacent to the proposed Timmins-Porcupine Station. Station building, bus stops, and train platform are in proximity to the parking spaces.	Parking facilities at the station will contain a variety of features designated to accommodate accessibility, taxi stalls, drop off /pick up, general parking, employee parking, etc.
Station Pedestrian Walkway	The station pedestrian walkway is proposed on all sides of the station building. There is access to areas for accessibility, bus stops, and train platform.	Pedestrian walkway is to be built around the station building, providing access to various station elements.

Project Component	Approximate Location	Description
Track Works	Minimal track work to occur near the train station platform. New bumping post will be located east of King Street on the existing tracks.	Minimal track work will be required. Ontario Northland will install new bumping post at the end of the alignment.
Ontario Northland Bus Bays	Bus bays will be situated adjacent to the station building with accessible walkway from station building/platform.	Bus bays to be provided for a seamless connection to Ontario Northland motor coach services.
Bus Storage & Maintenance Facility	The potential Bus Storage & Maintenance Facility will be located east of the station building and platform.	The TRPAP has considered for the approximate area of land that may be required for the potential/future construction of a Bus Storage & Maintenance Facility. Additional impact assessment studies and consultation will need to be undertaken in the future, as/if applicable. Components and features of the proposed Bus Storage and Maintenance Facility may include: • Replacement of the old facility currently in use in Timmins (currently located at 895 Monta Ave., Timmins); • Two (2) parking bays, one (1) bus wash bay, and one (1) service and fueling bay, and the capacity to service four (4) buses at any time; • Regular maintenance activities including wash bays and service bays; • Employee washrooms, locker rooms, and a lunchroom, as well as bus and employee parking; and, • An approximate size of 1,200 m^2.

2.3 TRPAP Study Area

The Study Area for the TRPAP was defined based on the conceptual engineering design prepared for the project plus a conservative 50 metre buffer area to allow for more conservative impact assessment studies. Refer to **Figure 2**.

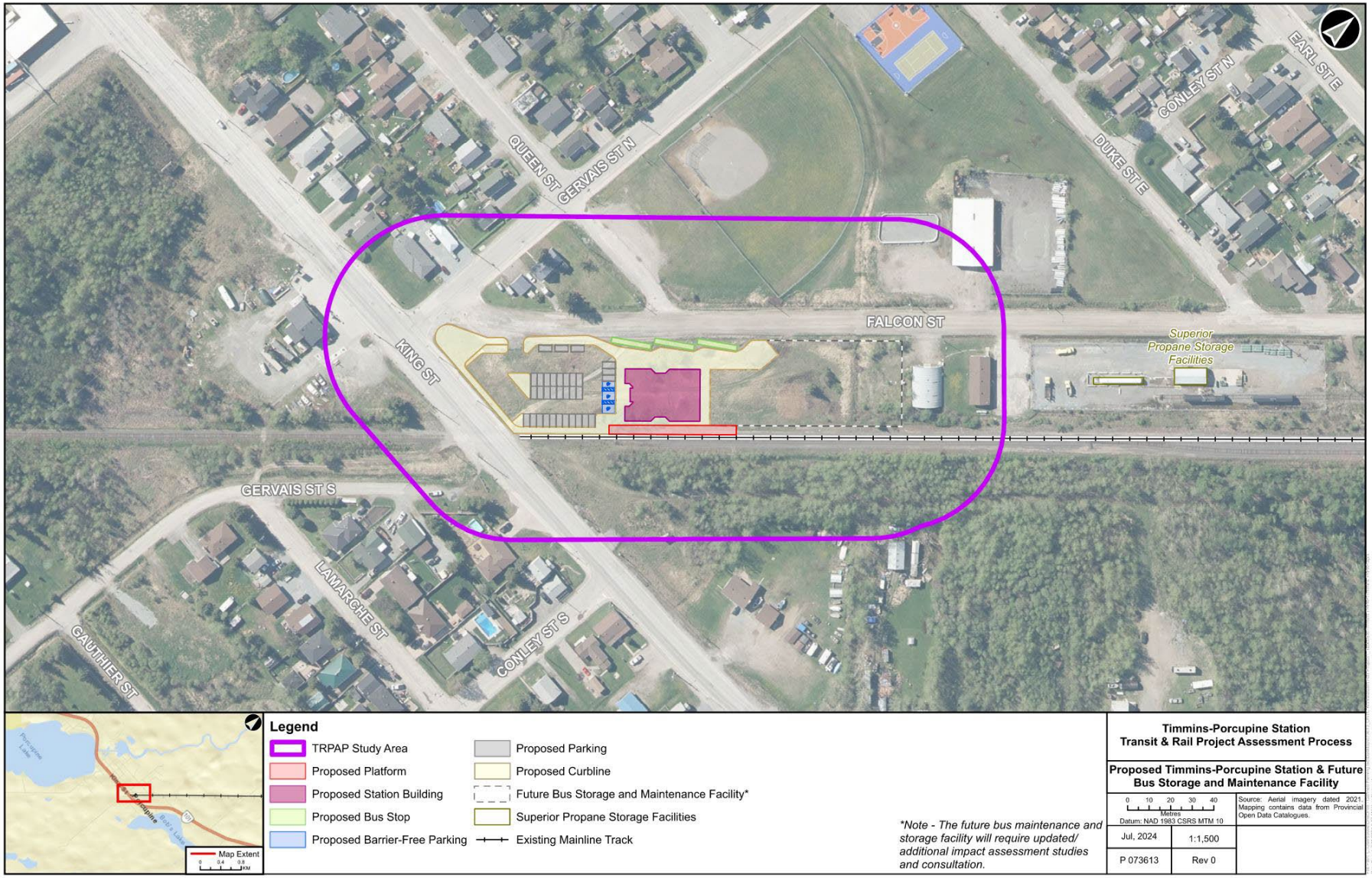

Figure 2: Timmins-Porcupine Station Study Area

2.4 Report Purpose

This purpose of this Natural Environment Report is two-fold:

- **Section 3.0**– provides a review of natural environment existing conditions (i.e., terrestrial and aquatic) within and surrounding the Study Area; and,
- **Section 4.0**– provides an assessment of potential impacts to natural heritage features, proposed mitigation measures and monitoring activities, as required.

3.0 EXISTING CONDITIONS

3.1 Methodology

3.1.1 Review of Background Information

Available secondary source background information was collected from available sources and reviewed. This included, but was not limited to, air photographs, historical information, data obtained from regulatory authorities, any publicly available information from municipalities and the province, and open-source GIS data, as follows:

- Aerial imagery and orthoimagery;
- Mapping of physiography and soils;
- Municipal Official Plans;
- Ministry of Natural Resources and Forestry (MNRF) Land Information Ontario (LIO);
- Natural Heritage Information Centre (NHIC);
- Conservation Authorities (CA) open data;
- Atlas of the Breeding Birds of Ontario (2001-2005); and,
- Fisheries and Oceans Canada's (DFO) Species at Risk Mapping.

Secondary source information will be compiled to develop a general description of the terrestrial and aquatic ecosystems, vegetation, and wildlife within the Study Area.

3.1.2 Review of Applicable Legislation/Guidance Documents

A review of applicable legislation and guidance documents was undertaken and included the following:

- *Environmental Assessment Act, 1990;*
  - Ontario Regulation 231/08: Transit and Rail Project Assessment Process;
- *Planning Act;*
  - Provincial Policy Statement (2023);
- *Federal Species at Risk Act (SARA), 2002;*
- *Migratory Birds Convention Act (MBCA), 1994;*
- *Ontario Endangered Species Act (ESA), 2007;*
- *Fisheries Act, 1985;*
- Municipal Official Plans (pertaining to locally significant environmental features);
- Significant Wildlife Habitat Technical Guide (2000).

3.1.3 Field Investigations

Field investigations were undertaken wherever necessary to ground-truth information found in secondary source research, fill in any information gaps, and to validate desktop research.

The following field investigations were undertaken to document existing conditions within the Study Area:

- Terrestrial field investigations to confirm data and existing information on SAR, woodlands, vegetated communities, wetland communities (provincial and local significance) and unevaluated wetlands to be obtained from the MNRF, LIO and NHIC;
- Vegetation and wildlife surveys (during appropriate field survey seasons) to determine presence of potential wildlife habitat including wildlife corridors and SAR habitat;
- Screening Level breeding bird habitat assessment, including SAR; and,
- Aquatic habitat surveys.

3.1.4 Mapping

Data collected was captured within a GIS database and detailed mapping was prepared (refer to mapping included in **Section 3.2** below).

3.2 Summary of Existing Conditions

3.2.1 Desktop Review

The documentation of existing conditions included a desktop screening to characterize the Study Area in the context of natural environment. This includes the documentation of open space, parklands, stream corridors, woodlands, designated natural areas, and areas of significance within various local, regional and provincial policies. These results are noted in the following sections and displayed in **Figure 3**.

3.2.1.1 Physiography

A secondary source investigation was undertaken to identify physiography, bedrock, surficial geology and soils within the Study Area. Information in this regard was obtained through:

- Geological Survey of Canada. 1967. Physiographic Regions of Canada, Map 1254A, scale 1: 5 000 000.
- Ontario Geological Survey. 1984. Niagara-Welland Southern Ontario Quaternary Geology, Map 2496, scale 1: 50 000; and,
- Ontario Geological Survey. 1991. Bedrock Geology of Ontario, southern sheet; Ontario Geological Survey, Map 2544, scale 1: 1 000 000.

The Study Area is located within the Abitibi physiographic region which spans from west of Timmins and south of Sudbury, east into Quebec (Geological Survey of Canada 1967). The Abitibi physiographic region is described as and area of uplands and is Archean in age. Bedrock geology is mainly metasedimentary rocks and comprised of wacke, siltstone, arkose, argillite, slate, mudstone, marble, chert, iron formation, minor metavolcanic rocks, conglomerate, arenite, paragneiss, and migmatites (Ontario Geological Survey 1991). Surficial geology is derived from glaciolacustrine deposits and is Pleistocene in age and comprised of silt and clay, minor sand, and water deposits (Ontario Geological Survey 1984).

Figure 3: Natural Heritage Screening

3.2.1.2 Areas of Natural and Scientific Interest

Provincially significant Areas of Natural and Scientific Interest (ANSI) are determined by the MNRF. The agency defines ANSIs as "lands and waters with features that are important for natural heritage protection, appreciation, scientific study or education". No ANSIs are identified within or in the vicinity of the Study Area.

3.2.1.3 Significant Wetlands

The potential occurrence of wetland features was screened through a review of available GIS data layers provided by MNRF. Three types of wetland features are identified in MNRF data layers: provincially significant wetlands (PSWs), unevaluated wetlands and other wetlands. The status of wetlands is determined through an evaluation according to the Ontario Wetland Evaluation System (OWES). PSWs are those for which an OWES evaluation has resulted in a score sufficient to qualify as a provincially significant feature. Unevaluated wetlands are wetland features that have not undergone an OWES evaluation, while those presented as evaluated or as 'other' wetlands are features where an OWES evaluation has been completed and the resulting score was insufficient to qualify as a provincially significant feature. Evaluated/other wetlands may also be considered locally significant wetlands. No PSWs or other wetlands are identified within or in the vicinity of the Study Area.

3.2.1.4 City of Timmins Official Plan

The Study Area is largely designated as a Neighbourhood Area with a very small portion in the south end designated as Employment Area, and a Mineral Development Zone as per Schedule A2 and B2, respectively, of the City of Timmins Official Plan. There are no Natural Heritage Features, Provincial Parks, or Management Areas within the Study Area.

3.2.1.5 Terrestrial Ecosystems

Collection of background information specific to wildlife and wildlife habitat includes a wildlife species documented across the Study Area (see **Table 2**). A total of 29 bird species were documented for the area. Of these, 26 species are considered migratory and regulated under the *Migratory Birds Convention Act* (MBCA), while one additional species is protected under the *Fish and Wildlife Convention Act, 1997*. Only two of the documented bird species are not under any legislative protection. Four bird species identified in the vicinity of the Study Area are classified as species at risk (SAR) under the *Endangered Species Act, 2007*. One SAR invertebrate species was also identified in the vicinity of the project area. SAR are further discussed in **Section 3.2.1.7**. A total of eight bird species are considered area sensitive according to the Significant Wildlife Habitat Technical Guide (SWHTG, 2000). Due to the limited size of the Study Area and habitat present, some of these species occurrences may be ruled out. Field studies were conducted to confirm species presence and are further discussed in **Section 3.3.2.2** and **Section 3.2.2.4**.

Table 2: Records of Wildlife within the Study Area

Scientific Name	Common Name	NHIC	OBBA	G-Rank	S-Rank	SARA	SARO	FWCA	MBCA	Area Sensitive
Empidonax alnorum	Alder Flycatcher		X	G5	S5B				X	
Zenaida macroura	Mourning Dove		X	G5	S5				X	
Scolopax minor	American Woodcock		X	G5	S4B				X	
Larus argentatus	Herring Gull		X	G5	S5B, S5N				X	
Chlidonias niger	Black Tern	X		G4	S3B		SC		X	(marshes >20 ha, adjacent grassland)
Gavia immer	Common Loon		X	G5	S5B,S5N				X	(large, open, undisturbed lakes)
Sphyrapicus varius	Yellow-bellied Sapsucker		X	G5	S5B				X	(dry, second growth forests)
Colaptes auratus	Northern Flicker		X	G5	S4B				X	
Vireo olivaceus	Red-eyed Vireo		X	G5	S5B				X	
Corvus brachyhrynchos	American Crow		X	G5	S5B					
Corvus corax	Common Raven		X	G5	S5			P		
Tachycineta bicolor	Tree Swallow		X	G5	S4B				X	
Hirundo rustica	Barn Swallow		X	G5	S4B	THR	SC		X	
Sturnus vulgaris	European Starling		X	G5	SNA					
Catharus fuscescens	Veery		X	G5	S4B				X	(10 ha young forest, habitat fragmentation)
Catharus ustulatus	Swainson's Thrush		X	G5	S4B				X	
Turdus migratorius	American Robin		X	G5	S5B				X	
Bombycilla cedrorum	Cedar Waxwing		X	G5	S5B				X	
Spinus tristis	American Goldfinch		X	G5	S5B				X	
Spizella passerina	Chipping Sparrow		X	G5	S5B				X	

Scientific Name	Common Name	NHIC	OBBA	G-Rank	S-Rank	SARA	SARO	FWCA	MBCA	Area Sensitive
Zonotrichia albicollis	White-throated Sparrow		X	G5	S5B				X	
Passerculus sandwichensis	Savannah Sparrow		X	G5	S4B				X	(>50 ha grassland)
Dolichonyx oryzivorus	Bobolink	X		G5	S4B	THR	THR		X	(>50 ha dense grassland)
Oreothylpis ruficapilla	Nashville Warbler		X	G5	S5B				X	
Geothlypis trichas	Common Yellowthroat		X	G5	S5B				X	
Setophaga magnolia	Magnolia Warbler		X	G5	S5B				X	(30 ha forest with dense shrubs)
Setophaga pensylvanica	Chestnut-sided Warbler		X	G5	S5B				X	
Cardellina canadensis	Canada Warbler	X		G5	S4B	THR	SC		X	(30 ha dense forest with riparian)
Geothlypis philadelphia	Mourning Warbler		X	G5	S4B				X	
Bombus terricola	Yellow-banded Bumble Bee	X		G3, G4	S3S5	SC	SC			

Legend

S-Rank

(Provincial or Subnational ranks): used by the Natural Heritage Information Centre to set protection priorities for rare species and natural communities. Provincial ranks are assigned in a manner similar to that described for global ranks, but consider only those factors within the geo-political boundaries of Ontario.

SX-presumed extirpated; not located despite intensive searches
SH-historical; no known extant occurrences in past 20 years
S1-critically imperiled; typically 1 to 5 extant occurrences
S2-imperiled; typically 6 to 20 extant occurrences
S3-vulnerable; typically 21 to 80 extant occurrences
S4-apparently secure; uncommon but not rare; some cause for long-term concern; usually >80 extant occurrences
S5-secure; common, widespread and abundant
SNA-status not applicable; not a suitable target for conservation (e.g. non-native species)

SU-unrankable; insufficient information to rank confidently
SNR-not ranked

SARA

Species at Risk Act Schedule 1- official list of wildlife species at risk
THR-threatened; a wildlife species likely to become endangered if limiting factors are not reversed
END-endangered; a wildlife species facing imminent extirpation or extinction
EXT-extirpated; a species no longer existing in the wild in Canada but occurring elsewhere
SC-special concern; a wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats

SARO

Species at Risk in Ontario
END-Endangered; a species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA
EXP-Extirpated; a species that no longer exists in the wild in Ontario but exists elsewhere
THR-Threatened; a species that is at risk of becoming endangered in Ontario if limiting factors are not reversed
SC-Special Concern; a species with characteristics that make it sensitive to human activities or natural events

FWCA –*Fish and Wildlife Conservation Act*, 1997
P-protected species, G – game species, F – furbearing species

MBCA –*Migratory Birds Convention Act*, 1994
X-protected

SWH-TG – Species with specific habitat requirements and considered 'area sensitive' as a result (Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide. Queen's Printer for Ontario. Ontario, Canada.)

3.2.1.6 Fish and Fish Habitat

The Study Area is within the Upper Mattagami River watershed. There are no watercourses identified by LIO within the Study Area and all waterbodies are greater than 300 m away and do not contain SAR fish or critical SAR habitat as per DFO.

3.2.1.7 Species at Risk (SAR)

A review of the MNRF's NHIC database was conducted to search for records of SAR and/or rare species for the Study Area. Records for a total of seven species were returned, to include special concern Barn Swallow (*Hirundo rustica*), Black Tern (*Chlidonias niger*), Canada Warbler (*Cardellina canadensis*), and Yellow-banded Bumble Bee (*Bombus terricola*), as well as threatened Bobolink (*Dolichonyx oryzivorus*), and endangered Little Brown Myotis (*Meyotis lucifugus*) and Northern Myotis (*Myotis septentrionalis*). Given the habitat present in the Study Area, it is unlikely that habitat for all of these SAR is currently available.

The results of the background review to identify SAR, combined with field investigation results and information about habitat preferences were combined to determine a list of SAR with potential to occur in the Study Area or the surrounding area. **Appendix A** summaries the results of that effort to determine where there is potential for SAR to be impacted by project works, or where additional effort related to SAR may be warranted.

3.2.2 Field Investigation

3.2.2.1 Vegetation and Vegetation Communities

Vegetation surveys were conducted on June 16 and June 28, 2023 to confirm the current condition, limits and extent of vegetation communities identified through review of aerial imagery and available resources for the Study Area. Natural vegetation features identified within the Study Area were classified according to the Ecological Land Classification for Southern Ontario: First Approximation and Its Application (Lee et al. 1998), The Ecosystems of Ontario (William et al. 2009) and A Field Guide to Forest Ecosystems of Northeastern Ontario (Taylor et al. 2000). Vascular plant nomenclature follows Newmaster and Ragupathy (2012).

Vegetation Communities

Vegetation communities within the Study Area include forest, a small wetland inclusion, cultural meadow, and manicured lawn (M). Within the forested community a snowmobile trail bisects this community and runs north/south parallel to the rail corridor.

Table 3: Summary of Vegetation Communities

ELC Code	Vegetation Type	Species Association	Comments
Terrestrial			
BTr9-2	Balsam poplar – Trembling aspen/speckled alder/dewberry	**Canopy:** Balsam poplar (*Populus balsamifera ssp. balsamifera*), trembling aspen (P*opulus tremuloides)*, balsam fir (*Abies balsamea*), tamarack (*Larix laricina*) and black spruce (*Picea mariana*). **Ground Cover:** includes currant (*Ribes spp.),* red raspberry (*Rubus idaeus ssp. idaeus*), large-leaved aster (*Eurybia macrophylla*), lady fern (*Athyrium filix-femina*) and horsetails (*Equisetum spp*).	• Tree cover >60% • Deciduous trees >75% of canopy cover
CUM	Cultural Meadow		
CUM1-1	Dry- Moist Old Field Meadow	**Ground cover:** Fireweed (*Chamerion angustifolium ssp. angustifolium*), common milkweed (*Asclepias*	• Tree cover <25%

ELC Code	Vegetation Type	Species Association	Comments
		syriaca), asters (*Asteraceae spp.),* timothy (*Phleum pratense*), wild carrot (*Daucus carota),* and common dandelion (*Taraxacum officinalis*).	
Wetland Inclusion			
MAM	MEADOW MARSH		
MAM2	Mineral Meadow Marsh	**Ground cover:** Reed-canary grass (*Phalaris arundinacea*), small-fruited bulrush (*Scirpus microcarpus),* red-osier dogwood (*Cornus sericea ssp. sericea*), water horsetail (*Equisetum fluvitale*).	• Tree cover <25%
OTHER*			
M	Manicured	**Ground Cover**: includes Kentucky bluegrass (*Poa pratensis*), timothy, wild carrot, and common dandelion.	• Areas where grass/shrubs/trees are maintained/retained and/or planted.

Flora

During field investigations a total of 52 vascular plant taxa were recorded within the Study Area. A full list of these species is found in **Appendix C**. Of these plant species, one was identified only to genus. Of the 52 plants identified, 32 (61%) are native and 20 (39%) are non-native. All of the plant communities found within the Study Area are common and secure in northern Ontario. No federally or provincially listed plants species at risk were documented in the Study Area.

3.2.2.2 Wildlife and Wildlife Habitat

Wildlife data was collected during the June 16 and June 28, 2023 field visits through pedestrian surveys of the Study Area with a focus on natural areas and where structures with the potential to provide habitat (e.g. buildings, culverts) were noted in proximity to the design alternatives. Wildlife identification was completed through visual and auditory observations as well as indirect incidental observations (i.e. tracks, scat, and scents). Wildlife observations were screened to identify species listed as at risk provincially or federally; and, for species of local concern.

The majority of the Study Area is characterized as cultural meadow with a small wetland inclusion (MAM2). These vegetation communities/areas are not considered rare or sensitive and reflect an anthropogenic origin because of previous vegetation clearing. However, the communities provide foraging, movement, and breeding opportunities for some bird, insects, and wildlife species. The cultural meadow is adjacent to a wooded community to the east of the rail corridor. The wooded area includes deciduous forest (BTr9-2), this community likely provides valuable wildlife habitat.

Wildlife trees may provide shelter or roosting opportunities for bats. A formal leaf-off snag survey was not completed, but no wildlife trees with either cavities, sloughing bark, or large cracks were observed within the Study Area west of the rail corridor during site visits. There is general habitat available for bats in the woodland east of the rail corridor.

Breeding Bird Survey

A breeding bird survey was completed according to the Ontario Breeding Bird Atlas Protocol (Cadman *et al.* 2007) and consisted of two early morning visits between sunrise and 8am. The first visit occurred on June 16, 2023 and the second visit occurred on June 28, 2023. One ten-minute point count (**Figure 4**) and meandering transects were completed within the Study Area. Territorial songs, along with direct observations of breeding bird behaviour and presence of bird nests and fledged young were used to record breeding bird evidence (BBE) within the Study Area. Evidence of bird breeding success was categorized according to the OBBA survey methodology (Cadman et al. 2007) using the following criteria:

Possible Breeding: Species observed in its breeding season in suitable nesting habitat (H).
Singing male present in its breeding season in suitable nesting habitat (S).

Probable Breeding: Pair observed in suitable nesting habitat in nesting season (P).
Permanent territory presumed through registration of territorial song heard on at least two days, one week or more apart, at the same place (T).

Confirmed Breeding: Fledged young or downy young, including young incapable of flight (FY).

Bird species were identified through visual and auditory observations, and incidental observations of any wildlife species encountered while in the Study Area were also recorded, including birds heard outside of the 10-minute point counts. Incidental wildlife observations were noted during all field visits to document all species using the Study Area.

A total of 17 bird species were documented within the Study Area (see **Table 4**). The bird species documented are relatively common overall and expected within the vegetation communities found on site. None of the bird species observed are regulated under ESA, SARA, or Schedule 1 of the MBCA.

Table 4: Breeding Bird Surveys Results

Common Name	Scientific Name	SARA/ESA Status	Legal Status	BBE
American Crow	*Corvus brachyhrynchos*		-	Probable (T)
American Goldfinch	*Spinus tristis*		MBCA	Probable (T)
American Redstart	*Setophaga ruticilla*		MBCA	Possible (S)
American Robin	*Turdus migratorius*		MBCA	Probable (T)
Belted Kingfisher	*Megaceryle alcyon*		FWCA	Observed (X)
Black-capped Chickadee	*Poecile atricapillus*		MBCA	Incidental
Cedar Waxwing	*Bombycilla cedrorum*		MBCA	Incidental
Common Yellowthroat	*Geothlypis trichas*		MBCA	Probable (T)
Eastern Kingbird	*Tyrannus tyrannus*		MBCA	Possible (S)
Northern Flicker	*Colaptes auratus*		MBCA	Incidental
Purple Finch	*Carpodacus purpureus*		MBCA	Incidental
Red-eyed Vireo	*Vireo olivaceus*		MBCA	Probable (S)
Rock Dove	*Columba livia*		-	Possible (S)
Savannah Sparrow	*Passerculus sandwichensis*		MBCA	Possible (S)
Song Sparrow	*Melospiza melodia*		MBCA	Probable (T)
Veery	*Catharus fuscescens*		MBCA	Probable (P)
White-throated Sparrow	*Zonotrichia albicollis*		MBCA	Probable (S)

Legend:	
Abbreviation	**Description**
SARA/ESA	
THR	Threatened; a wildlife species likely to become endangered if limiting factors are not reversed
SC	Designated Special Concern under Ontario *Endangered Species Act* and Canada *Species at Risk Act*
Legal Status:	
MBCA	*Migratory Bird Convention Act*
FWCA(P)	*Fish and Wildlife Conservation Act* Protected Species
-	Not protected under MBCA or FWCA
BBE:	Breeding Bird Evidence
Incidental:	Species observed outside of its breeding season (not observed during breeding bird surveys)
Observed:	
X	Species observed in its breeding season (no evidence of breeding).
Possible Breeding:	
H	Species observed in its breeding season in suitable nesting habitat.
S	Singing male present in its breeding season in suitable nesting habitat.
Probable Breeding:	
P	Pair observed in suitable nesting habitat in nesting season
T	Permanent territory presumed through registration of territorial song on at least two days, a week apart, at the same place.
Confirmed Breeding:	
FY	Fledged young or downy young, including young incapable of sustained flight.

Invertebrates

Two species of invertebrates were incidentally observed during field visits. Forest tent caterpillars (*Malacosoma disstria*) were documented on vegetation throughout the Study Area and a Chalk-fronted Corporal (*Ladona julia*) was observed.

Mammals

Mammals are typically challenging to survey given their cryptic nature. As such, mammals were documented as incidental encounters or through evidence of presence (tracks/roadkill/dens/scat/scent). No mammals were observed during field visits with the Study Area.

3.2.2.3 Fish and Fish Habitat

The objective of the site investigation as it pertained to surface water features was to supplement or confirm the data collected through background review.

Background review did not identify any watercourses within the Study Area; however, field investigations identified a small drainage feature that appears to convey intermittent flows after storm events from west to east through the Study Area (**Figure 4**). Flow, likely originating from stormwater runoff, is conveyed from west of Falcon Street, and along a ditch running north to south on Falcon Street. The flow then passes through a culvert into the Study Area and under the rail corridor through a culvert towards the BTr9-2 community and then under the snowmobile trail where it disperses and does not appear to have a connection to Bob's Lake.

Where the drainage feature is conveyed through the anticipated area of construction the channel was relatively poorly defined. During the June 16, 2023 field investigations after minimal rain there was no flow evident;

however, soils were saturated and some pooling of water was observed. During the June 28, 2023 field investigations after substantial rain there was evident flow and the wetted depth was approximately 5 cm deep in the culvert on the south side of Falcon Street. Substrate was very fine organic material upstream of the culvert on Falcon Street and riparian vegetation consisted mainly of reed canary grass (*Phalaris arundinacea),* horsetails, and willow shrubs with abundant instream vegetation. Downstream of the anticipated construction area through the forested community, the drainage feature has a wetted width of approximately 0.5 metres and a bankfull width of approximately 2-3 metres. Water remained minimal through this reach with only a slight flow and substrate was a mixture of sand, silt, and gravel. Riparian vegetation consisted of grasses, dogwood, and canopy trees, and there was abundant woody debris in the channel. Given the lack of connectivity to permanent watercourses and the ephemeral nature of the channel, there is little likelihood of fish habitat.

3.2.2.4 Species at Risk

The results of the background review to identify SAR, combined with field investigation results and information about habitat preferences were combined to determine a list of SAR with potential to occur in the Study Area or the surrounding area. **Appendix A** summarizes the results of that effort to determine where there is potential for SAR to be impacted by project works, or where additional effort related to SAR may be warranted. No species at risk were observed during field investigations.

Figure 4: Natural Environment Existing Conditions

4.0 IMPACT ASSESSMENT

This impact assessment considers the station upgrades and improvements and the activities that may impact the natural heritage system (e.g., vegetation removal, grading, etc.) within the Study Area. Impacts are discussed in terms of permanent footprint impacts and temporary construction impacts on identified ecosystem components, each component is described in detail in the following sections.

The analysis of potential impacts arising from the proposed development were determined by overlaying the plans onto air photography to determine the extent of the disturbance footprint. The outcome of the analysis is based primarily on the significance and sensitivity of the natural features identified on site and directly adjacent to the project components during background review and biophysical inventories/site visits. Consideration has been given to pre-construction, construction, and post-construction impacts, and mitigation measures are identified to avoid or minimize potential negative effects.

Negative effects to the natural heritage system that may occur as a result of the project consider the following:

- sensitivities such as species, plant communities, hydrology/wetlands;
- disturbance of areas and duration; and,
- direct on-site effects such as clearing, grading, grubbing, elimination of habitat, and vegetation loss.

4.1 Methodology

4.1.1 Establish Impact Assessment Criteria

The following natural environment criteria were established for the purposes of evaluating potential effects associated with the Project:

- Potential effects on vegetation communities;
- Potential effects on wildlife and wildlife habitat;
- Potential effects on SAR and their habitat;
- Potential effects on wetlands;
- Potential effects on fish and fish habitat; and,
- Other relevant matters of provincial interest relating to the natural environment (e.g. Areas of Natural and Scientific Interest (ANSI).

4.1.2 Carry Out Impact Assessment

The following steps were followed in order to assess potential impacts associated with the Project:

- **Step 1 –** Identify potential effects (positive and negative) resulting from the construction and/or operation of the Project infrastructure;
- **Step 2 –** Establish avoidance/mitigation/compensation measures to eliminate or minimize potential negative effects (as required);
- **Step 3 –** Carry out consultation with stakeholders/regulatory authorities; update impact assessment results and/or proposed mitigation measures as appropriate; and,
- **Step 4 –** Document impact assessment results.

Potential environmental impacts were generally characterized as outlined in Table 5:

Table 5: Types of Potential Effects

Potential Effect	Description/Examples
Operations and Maintenance Effects	• Potential permanent displacement or loss of existing natural heritage resources/features due to implementation and operation of the physical project infrastructure components (e.g., operation of new station).
Construction Effects	• Potential short-term effects on natural heritage resources/features (e.g., disruption/disturbance) due to construction activities associated with the Project.

4.1.3 Updated Mapping

Mapping was updated to help inform the assessment of impacts and for reporting purposes (refer to mapping included in **Section 4.3** and **4.4** below).

4.2 Impact Assessment

The Project is anticipated to involve vegetation clearing and grubbing for the construction of the station building, associated parking area and curbline. The proposed works also include the installation of bus stops and upgrades to the station platform adjacent to the rail corridor. The proposed works are located in the southern half of the Study Area and the northern half of the Study Area is currently identified as a location for a future facility with no level of design at this time. It is assumed that the area proposed for the future facility will be cleared and grubbed at the same time as the southern part of the Study Area. The limits of disturbance are shown in **Figure 5**.

4.2.1 Vegetation and Vegetation Communities

4.2.1.1 Operations and Maintenance Effects

Operations and maintenance effects to vegetation and vegetation communities include a permanent removal of 0.8 ha of natural vegetation. ELC communities that will be impacted include cultural meadow (CUM1-1; 0.74 ha) and a mineral meadow marsh inclusion (MAM2; 0.06 ha). None of these vegetation communities are considered sensitive or rare and the communities reflect the historic anthropogenic influence (as this area has been cleared in the past). Effects to trees will be limited to the removal of open grown trees within the cultural meadow. Effects will also occur to herbaceous and shrubby vegetation.

There are no (mapped) PSWs within 30 metres the Study Area.

Operational activity may result in an increase of invasive plant species dispersal.

4.2.1.2 Construction Effects

Construction effects such as silt or sedimentation in areas of retained vegetation communities may occur during site grading operations and construction of the proposed infrastructure. Increased traffic during construction may result in an increase of invasive plant species dispersal to retained vegetation communities.

4.2.1.3 Mitigation Measures

The vegetation communities proposed for removal are common and widespread through Ontario (and in the local landscape) and impacts are limited to areas that already reflect some level of disturbance. The development footprint will be clearly delineated prior to clearing to prevent any equipment from operating outside of the

delineated area. Construction material/equipment staging should be confined to areas that are previously disturbed/cleared. All vegetation clearing will follow a specified Clearing and Grubbing Plan.

Construction equipment should be cleaned prior to entering the site to reduce the spread of non-native invasive plant species. Construction staff should be educated on the importance of limiting disturbance to avoid stockpiling/laydown usage in adjacent natural areas.

Post-construction planting and landscaping efforts should include native vegetation species that are consistent with the current vegetation communities and contribute to wildlife habitat. Landscaping and restoration efforts should be completed within 45 days following site disturbance, or temporary cover should be placed to reduce erosion and potential siltation of adjacent communities.

Appropriate erosion and sediment control (ESC) measures will be in place during construction and until vegetation is fully established in disturbed areas to limit migration of sediment into adjacent vegetation communities. Refer to **Table 6** for a summary of proposed mitigation and monitoring measures.

4.2.2 Wildlife and Wildlife Habitat

4.2.2.1 Operations and Maintenance Effects

The proposed work is adjacent to and within foraging and nesting habitat for several species listed under the *Migratory Birds Convention Act*. Operations and maintenance effects to bird habitat are anticipated and permanent habitat loss is proposed. The footprint impacts may decrease the available nesting habitat for breeding birds and available cover for mammals and insects. For breeding birds specifically, reduction of the available habitat may result in the loss of nesting territories or the amount of food available, with the net result being a reduction in brood success.

Permanent alteration to habitat due to decreased connectivity and fragmentation across the Study Area may occur. However, the development footprint is located on the edge of higher quality/more naturalized areas and likely provides very little connectivity to surrounding natural areas.

Increased periodic noise related to operation of the passenger rail and use of the Timmins Station may deter and interrupt wildlife such as large mammals (deer), small mammals (rodents, racoons, etc.), and birds. Increased vehicular and train traffic has the potential to increase collision related wildlife mortality.

4.2.2.2 Construction Effects

Equipment noise during construction may deter and interrupt wildlife such as large mammals (deer), small mammals (rodents, raccoons, etc.) birds, amphibians, and reptiles. Increased vehicular traffic will be present during construction and may cause vehicular related mortality. Increased noise related to construction traffic may discourage the use by migratory bird species.

4.2.2.3 Mitigation Measures

To mitigate any construction effects to wildlife and wildlife habitat the following measures should be implemented.

- Retain as much of the vegetation communities as possible;
- Any wildlife incidentally encountered during construction and operation activities will not be knowingly harmed and will be allowed to passively move out of the work area, where possible;
- Use previously disturbed/paved areas or cultural/manicured areas for construction laydown and staging to the extent possible;
- Clearly delineate work area using erosion fencing, or similar barrier, to avoid accidental intrusion into wildlife habitat, this fencing will also serve to exclude wildlife from entering the work area;

- No vegetation removal should occur between April 1 and August 30 of any given year in order to protect birds afforded protection under the *Migratory Birds and Convention Act*; and,
- If vegetation removal must be undertaken from April 1 to August 30, a nest survey must be conducted prior to clearing by a qualified avian biologist to identify and locate active nests of species covered by the MBCA.

The current station design does not include any impacts east of the rail corridor in the woodland where habitat may occur for SAR bats. If the work/disturbance areas are changed and trees that are part of a wooded community require pruning or removal, a further screening should be completed to characterize bat habitat. Refer to **Table 6** for a summary of proposed mitigation and monitoring measures.

4.2.3 Surface Water

Based on the preliminary design, no effects to natural surface watercourses are anticipated. Alterations to surface water in the Study Area are limited to the drainage feature which convey stormwater. Works are proposed approximately 400 m from aquatic habitat of Bob's Lake; however, best management practices and a robust ESC plan will minimize risk of indirect impact. Otherwise, no additional mitigation measures are recommended.

4.2.4 Fish and Fish Habitat

Based on the preliminary design, no effects to fish and fish habitat are anticipated. The drainage feature within the Study Area does not provide fish habitat as it appears to convey stormwater during rain events. Works are proposed approximately 400 m from aquatic habitat of Bob's Lake; however, best management practices and a robust ESC plan will minimize risk of indirect impact. Otherwise, no additional mitigation measures are recommended.

4.2.5 Species at Risk

No SAR or SAR habitat was documented within the Study Area. In the event SAR are encountered, mitigation measures contained in **Table 6** should be adhered to.

It should be noted that there is no planned vegetation clearing south of the rail corridor in this area as part of the project.

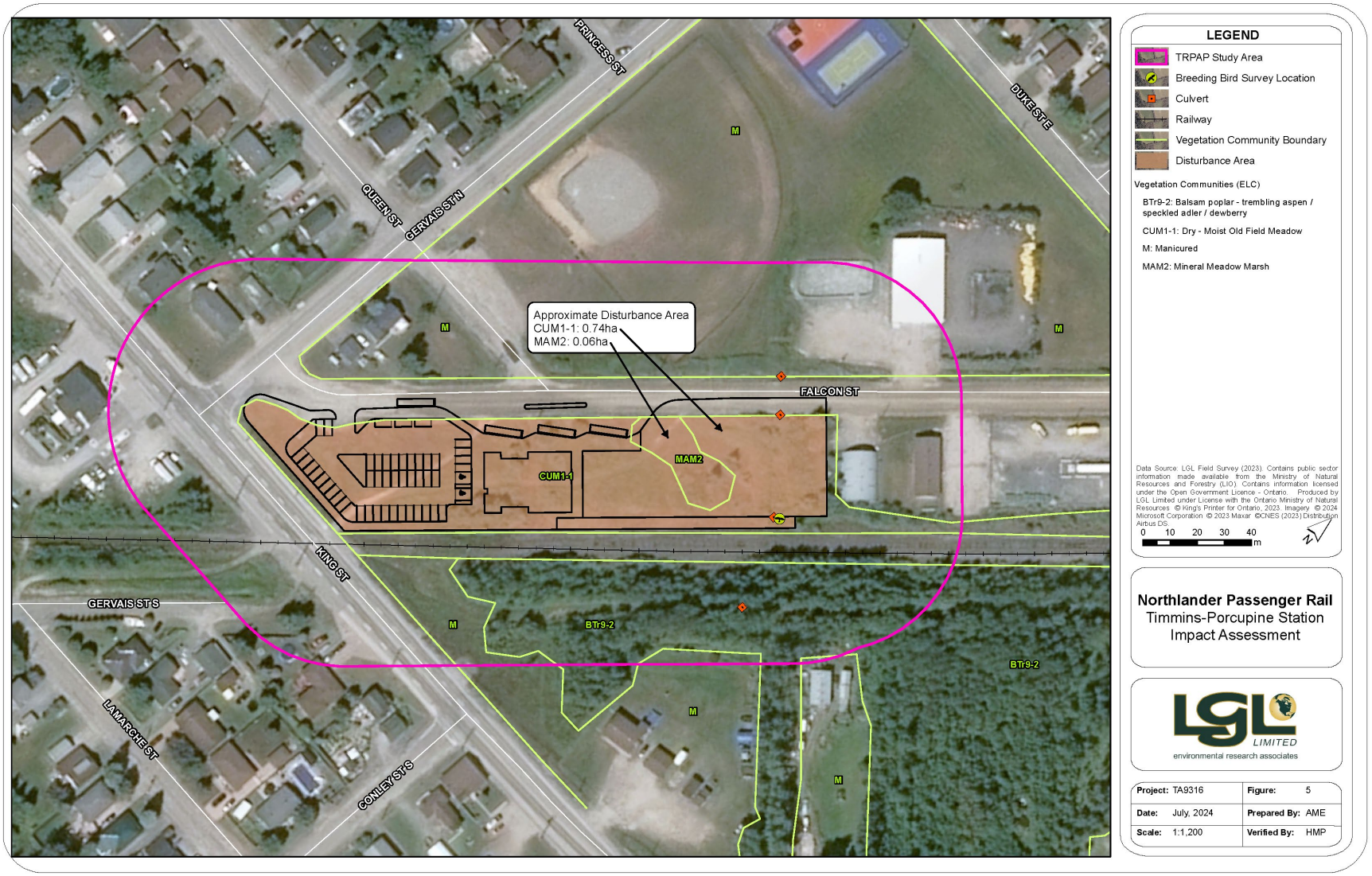

Figure 5: Timmins-Porcupine Station Limits of Disturbance

5.0 SUMMARY OF POTENTIAL IMPACTS, MITIGATION MEASURES AND MONITORING ACTIVITIES

Table 6 provides a summary of the key project components/activities, potential natural environment effects, mitigation measures, and proposed monitoring activities (as required).

Table 6: Summary of Natural Environment Potential Impacts, Mitigation and Monitoring Commitments

Project Component	Project Activities	Potential Effect	Mitigation Measures/ Commitments	Monitoring/Future Work Commitments
Proposed Timmins-Porcupine Station	• Operations and Maintenance	• Incidental encounters of wildlife.	• Allow incidentally encountered wildlife to passively move out of the work area.	• While no SAR vegetation was observed, nuts or other seeds may be dispersed by wildlife. Educate personnel with respect to seedling identification.
	• Construction	• Loss of vegetation.	• Vegetation removal should be minimized where possible. • Any post-construction planting and landscaping efforts should include native vegetation species that are consistent with the current vegetation communities (i.e., native grasses and pollinator plants) and contribute to wildlife habitat. • Use previously disturbed/paved areas or cultural/manicured areas for construction laydown and staging to the extent possible.	• The health and success of any planted or revegetated areas should be confirmed post construction and documented through a site visit.
		• Increased silt or sedimentation of retained vegetation communities.	• Develop and implement an erosion and sediment control plan; control access and movement of equipment and people; designate areas for equipment storage; minimize the area and duration of soil exposure; control erosion, sedimentation, and nutrient inputs through use of best management practices.	• Erosion and sediment control measures are to remain in place until vegetation is confirmed to be established (through a site visit) and/or soils are stabilized.
		• Disturbance of wildlife species and habitat due to increased loss of vegetation and noise produced by clearing/grading or general construction.	• Initiate construction during the late/fall winter if possible to avoid disturbing sensitive species. • Vegetation clearing to occur outside of the breeding bird window of April 1-August 31. If tree clearing is required during the breeding bird window, a nest sweep will be completed by a qualified biologist no more than 48 hours prior to vegetation removal. • If an active nest is found, then a protective buffer will be established around the nest. The extent of the buffer will be determined in consultation with a qualified biologist and if applicable, additional consultation with the agencies having jurisdiction (e.g., MECP) may be required to determine extent of protection and mitigations. • Vegetation clearing to occur outside of the bat roosting season of May 1-August 31. Should removal of potential SAR bat habitat be required, SAR bat surveys will be completed by a qualified specialist in advance of the removal activities to confirm SAR bat habitat presence. • If removal of confirmed SAR bat habitat is required, all requirements under the ESA will be met, including any registration, compensation, replacement structures and/or permitting requirements. • All requirements of the ESA and/or SARA Species-specific mitigation measures will be implemented, in consultation with MECP, as required. • Allow incidentally encountered wildlife during construction to passively move out of the work area. • Delineate all work areas using erosion fencing or similar barriers to avoid incidental intrusion into any adjacent wildlife habitat.	• On-site inspection will be undertaken to confirm the implementation of the mitigation measures and identify corrective actions if required. • Corrective actions may include additional site maintenance and alteration of activities to minimize impacts. • Species-specific monitoring activities will be developed in accordance with any registration and/or permitting requirements under the ESA.

6.0 PERMITS AND APPROVALS

A preliminary assessment of potential permits and approvals that may be required during subsequent design and implementation phases of the Project have been summarized below.

6.1 Federal

There are no federal approvals anticipated to be required as part of implementing the Project.

6.2 Provincial

6.2.1 Endangered Species Act, 2007

No SAR were identified for the Study Area; therefore, permits under the ESA will not be required.

6.2.2 Fish and Wildlife Conservation Act, 1997

Based on the mitigation measures proposed, approvals under the FWCA are not anticipated to be required.

7.0 FUTURE WORK

The following section summarizes Ontario Northland's commitments during future project phases, as applicable.

- Performing vegetation removal outside of typical breeding period for birds and occupation of SAR habitat:
  - Breeding bird window is April 1-August 31.
  - Bat roosting season is May 1-August 31.
- Consult with MECP should removal of candidate SAR habitat be required (if the project design changes post TRPAP);
- Post-construction planting and landscaping efforts should include native vegetation species that are consistent with the current vegetation communities and contribute to wildlife habitat. Landscaping and restoration efforts should be completed within 45 days following site disturbance, or temporary cover should be placed to reduce erosion and potential siltation of adjacent communities;
- The current station design does not include any impacts east of the rail corridor in the woodland where habitat may occur for SAR bats. If the work/disturbance areas are changed and trees that are part of a wooded community require pruning or removal, a further screening should be completed to characterize bat habitat; and,
- The natural environment impact assessment report study will be revisited and updated (as required) once design details are available for the future bus maintenance and storage facility should this go forward in the future.

8.0 REFERENCES

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APPENDIX A

Screening for Species at Risk with Potential to Occur in the Study Area

GANNETT FLEMING

Group	Species	SARO Status/ ESA Protection	SARA Status Schedule 1	Data Source	Habitat Description	Habitat Potential/ Results of Field Investigations	Further Effort Recommended
Bird	Black Tern (*Chlidonias niger*)	Special Concern/ ESA protections do not apply	-	NHIC	Black tern breeds in freshwater marshlands where it forms small colonies. It prefers marshes or marsh complexes greater than 20 ha in area and which are not surrounded by wooded area. Black terns are sensitive to the presence of agricultural activities. The black tern nests in wetlands with an even combination of open water and emergent vegetation, and still waters of 0.5-1.2 m deep. Preferred nest sites have short dense vegetation or tall sparse vegetation often consisting of cattails, bulrushes and occasionally burreed or other marshland plants. Black terns also require posts or snags for perching.	Field surveys were conducted in 2023. Foraging or suitable breeding habitat not identified within the Study Area.	No further studies recommended at this time.
Bird	Barn Swallow *(Hirundo rustica*)	Special Concern/ ESA protections do not apply	Threatened	NHIC	Barn swallow breeds in areas that contain a suitable nesting structure, open areas for foraging, and a body of water. This species nests in human made structures including barns, buildings, sheds, bridges, and culverts. Preferred foraging habitat includes grassy fields, pastures, agricultural cropland, lake and river shorelines, cleared right-of-ways, and wetlands. Mud nests are fastened to vertical walls or built on a ledge underneath an overhang. Suitable nests from previous years are reused.	Field surveys were conducted in 2023. No individuals or nesting was observed during field studies. Barn swallows could use structures in the vicinity of the project area for nesting.	No further studies recommended at this time.
Bird	Bobolink (*Dolichonyx oryzivorus*)	Threatened/ Species and Specific Habitat Protection	Threatened	NHIC	Bobolink breeds in grasslands or graminoid dominated hayfields with tall vegetation. Bobolink prefers grassland habitat with a forb component and a moderate litter layer. They have low tolerance for presence of woody vegetation and are sensitive to frequent mowing within the breeding season. They are most abundant in established, but regularly maintained, hayfields, but also breed in lightly grazed pastures, old or fallow fields, cultural meadows and newly planted hayfields. Their nest is woven from grasses and forbs. It is built on the ground, in dense vegetation, usually under the cover of one or more forb.	Field surveys were conducted in 2023. Adequate breeding habitat is not identified within the Study Area.	No further studies recommended at this time.
Bird	Canada Warbler (*Cardellina canadensis*)	Special Concern/ ESA protections do not apply	Threatened	NHIC	Breeding habitat for Canada warbler consists of moist mixed forests with a well-developed shrubby understory. This includes low-lying areas such as cedar and alder swamps, and riparian thickets. It is also found in densely vegetated regenerating forest openings. Suitable habitat often contains a developed moss layer and an uneven forest floor. Nests are well concealed on or near the ground in dense shrub or fern cover, often in stumps, fallen logs, overhanging stream banks or mossy hummocks.	Field surveys were conducted in 2023. No individuals were observed during field studies. There is limited breeding habitat in the woodland east (BTr9-2) of the rail corridor.	No further studies recommended at this time.
Bird	Eastern Whip-poor-will (*Antrostomus vociferus*)	Threatened/ Species and Specific Habitat Protection	Threatened	MECP	In Ontario, the whip-poor-will breeds in semi-open forests with little ground cover. Breeding habitat is dependent on forest structure rather than species composition, and is found on rock	The cultural meadow where project works are proposed provides low likelihood of foraging habitat for Eastern Whip-poor-will due to its small size (less than 3 ha).	No further studies recommended at this time. If project plans change to include impacts east of the rail

Group	Species	SARO Status/ ESA Protection	SARA Status Schedule 1	Data Source	Habitat Description	Habitat Potential/ Results of Field Investigations	Further Effort Recommended
					and sand barrens, open conifer plantations and post-disturbance regenerating forest. Territory size ranges from 3 to 11 ha.	Nesting may occur in the woodland (BTr9-2) east of the rail corridor; however, that area is not anticipated to be impacted and higher quality nesting habitat is locations south and north of the Study Area.	corridor, then species-specific studies are recommended.
Bird	Short-eared Owl (*Asio Flammeus*)	Threatened/ Species and General Habitat Protection	Special Concern	MECP	The short-eared owl breeds in a variety of open habitats including grasslands, tundra, bogs, marshes, clearcuts, burns, pastures and occasionally agricultural fields. The primary factor in determining breeding habitat is proximity to small mammal prey resources. Nests are built on the ground at a dry site and usually adjacent to a clump of tall vegetation used for cover and concealment.	The small size of the site (approximately 0.7 ha) is unlikely to provide suitable nesting habitat (50-100 ha). Adequate breeding habitat is not identified in the Study Area.	No further studies recommended at this time.
Mammal	Little Brown Bat (*Myotis lucifugus*)	Endangered/ Species and General Habitat Protection	Endangered	Bat Conservation International	Little Brown Bats will roost in both natural and man-made structures. They require a number of large dead trees, in specific stages of decay and that project above the canopy in relatively open areas. They may form nursery colonies in the attics of buildings within 1 km of water. Caves or abandoned mines may be used for hibernaculum, but high humidity and stable above freezing temperatures are required.	Field surveys were conducted in 2023. No suitable potential roosting habitat was identified.	No further studies recommended at this time. If project plans change to include impacts east of the rail corridor, then bat habitat characterization studies are recommended.
Mammal	Northern Myotis (*Myotis septentrionalis*)	Endangered/ Species and General Habitat Protection	Endangered	Bat Conservation International	This species will usually roost in hollows, crevices, and under loose bark of mature trees. Roosts may be established in the main trunk or a large branch of either living or dead trees. Caves or abandoned mines may be used for hibernaculum, but high humidity and stable above freezing temperatures are required.	Field surveys were conducted in 2023. No suitable potential roosting habitat was identified.	No further studies recommended at this time. If project plans change to include impacts east of the rail corridor, then bat habitat characterization studies are recommended.
Invertebrate	Yellow-banded Bumble Bee (*Bombus terricola)*	Special Concern/ ESA protections do not apply	Special Concern	NHIC	Yellow-banded Bumble Bee is an early emerging species, making it likely an important pollinator of early blooming wild flowering plants (e.g., wild blueberry) and agricultural crops (e.g. apple). This species is a forage and habitat generalist and can be found in mixed woodlands, farmlands, urban areas, prairie grasslands and boreal habitats. Nest sites are mostly abandoned rodent burrows and queens overwinter underground or in decomposing organic material such as logs.	Field surveys were conducted in 2023. There is potential habitat in the Study Area and abundant flowering vegetation.	No further studies recommended at this time.

APPENDIX B

Photos

GANNETT FLEMING

Project No. 073613
Northland Passenger Rail

Photo Appendix

Photo. 1: Facing north on site in CUM1-1 community, June 16, 2023.

Photo. 2: Facing north-east on site in CUM1-1 community, June 16, 2023.

Photo. 3: Facing south on site in CUM1-1 community, June 28, 2023.

Photo. 4: Decommissioned rail line facing north-east from south edge of Study Area, June 16, 2023.

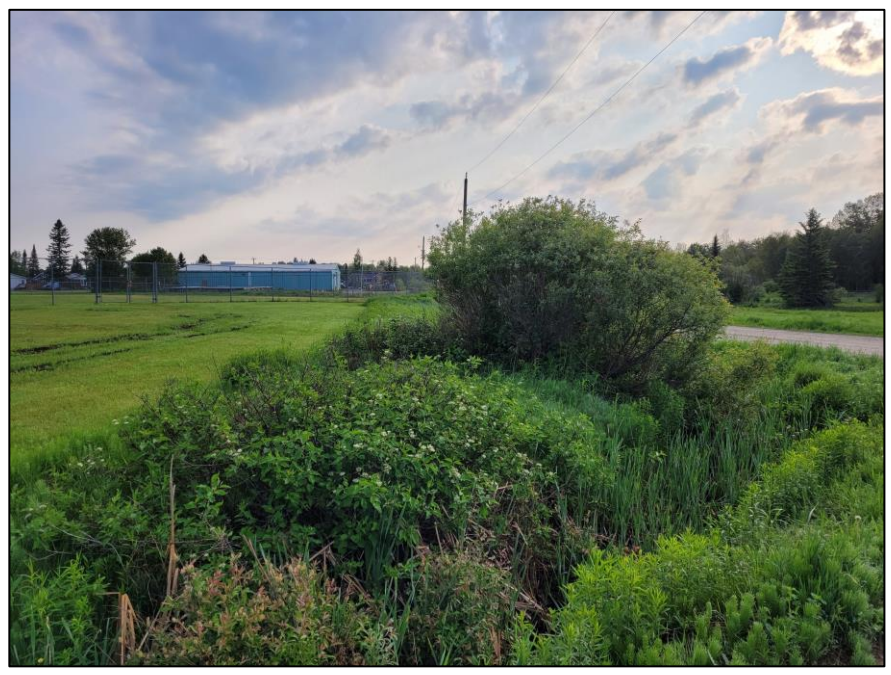

Photo. 5: Drainage ditch west of Falcon Street conveying flow to site, June 16, 2023.

Photo. 6: Culvert conveying flow east of Falcon Street, June 16, 2023.

Project No. 073613
Northland Passenger Rail

Photo Appendix

Photo. 7: Drainage feature looking south east from Falcon Street, June 16, 2023.

Photo. 8: Drainage feature through project area after minimal rain, June 16, 2023.

Photo. 9: Drainage feature through project area after substantial rain, June 28, 2023.

Photo. 10: Culvert conveying flow from site to east of rail line, June 28, 2023

Photo. 11 Drainage feature east of project area through BTr9-2 community, June 16, 2023.

Photo. 12: BTr9-2 community east of rail line, June 16, 2023.

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Northland Passenger Rail

Photo Appendix

Photo. 13: Trail through BTr9-2 east of rail line, June 28, 2023.

Photo. 14: Potential wildlife habitat feature north of study area, June 16, 2023.

APPENDIX C

Vascular Plant List of Species Identified in the Study Area

GANNETT FLEMING

Int	Scientific Name	Common Name	GRank	SRank	ESA	SARA
	EQUISETACEAE	**HORSETAIL FAMILY**				
	Equisetum arvense	field horsetail	G5	S5		
	Equisetum fluviatile	water horsetail	G5	S5		
	DRYOPTERIDACEAE	**WOOD FERN FAMILY**				
	Athyrium filix-femina var. angustum	northern lady fern	G5T5	S5		
	PINACEAE	**PINE FAMILY**				
	Abies balsamea	balsam fir	G5	S5		
	Larix laricina	tamarack	G5	S5		
	Picea mariana	black spruce	G5	S5		
	RANUNCULACEAE	**BUTTERCUP FAMILY**				
*	*Ranunculus acris*	tall buttercup	G5	SE5		
	BETULACEAE	**BIRCH FAMILY**				
	Alnus incana spp. rugosa	speckled alder	G5T5	S5		
	CARYOPHYLLACEAE	**PINK FAMILY**				
*	*Silene latifolia*	bladder campion	GNR	SE5		
	POLYGONACEAE	**SMARTWEED FAMILY**				
*	*Rumex crispus*	curly-leaf dock	G?	SE5		
	SALICACEAE	**WILLOW FAMILY**				
	Populus balsamifera ssp. balsamifera	balsam poplar	G5	S5		
	Populus tremuloides	trembling aspen	G5	S5		
	Salix sp.	willow				
	GROSSULARIACEAE	**GOOSEBERRY FAMILY**				
	Ribes sp.	currant				
	ROSACEAE	**ROSE FAMILY**				
	Fragaria virginiana ssp. glauca					
*	*Potentilla recta*	rough-fruited cinquefoil	GNR	SE5		
	Prunus pensylvanica	pin cherry	G5	S5		
	Rosa acicularis ssp. sayi	prickly rose	G5TU	S5		

Int	Scientific Name	Common Name	GRank	SRank	ESA	SARA
*	*Rubus idaeus ssp. idaeus*	red raspberry	G5T5	SE1		
	Rubus pubescens	dwarf raspberry	G5	S5		
	FABACEAE	**PEA FAMILY**				
*	*Lotus corniculatus*	bird's-foot trefoil	GNR	SE5		
*	*Trifolium arvense*	rabbit-foot clover	GNR	SE4		
*	*Trifolium repens*	white clover	GNR	SE5		
*	*Vicia cracca*	tufted vetch	GNR	SE5		
	ONAGRACEAE	**EVENING-PRIMROSE FAMILY**				
	Chamerion angustifolium ssp. angustifolium	fireweed	G5	S5		
	CORNACEAE	**DOGWOOD FAMILY**				
	Cornus canadensis	bunchberry	G5	S5		
	Cornus rugosa	round-leaved dogwood	G5	S5		
	Cornus sericea ssp. sericea	red-osier dogwood	G5	S5		
	ARALIACEAE	**GINSENG FAMILY**				
	Aralia nudicaulis	wild sarsaparilla	G5	S5		
	APIACEAE	PARSLEY FAMILY				
*	*Daucus carota*	wild carrot	G?	SE5		
	ASCLEPIADACEAE	**MILKWEED FAMILY**				
	Asclepias syriaca	common milkweed	G5	S5		
	BORAGINACEAE	**BORAGE FAMILY**				
*	*Echium vulgare*	blueweed	GNR	SE5		
	Myosotis macrosperma	large-seeded forget-me-not	G5	S1		
	LAMIACEAE	MINT FAMILY				
	Prunella vulgaris ssp. lanceolata	heal-all	G5T5	S5		
	PLANTAGINACEAE	**PLANTAIN FAMILY**				
*	*Plantago major*	common plantain	G5	SE5		
	SCROPHULARIACEAE	**FIGWORT FAMILY**				
*	*Verbascum thapsus*	common mullein	GNR	SE5		
	ASTERACEAE	**ASTER FAMILY**				

Int	Scientific Name	Common Name	GRank	SRank	ESA	SARA
*	*Achillea millefolium var. millefolium*	common yarrow	G5	SNA		
*	*Cirsium arvense*	Canada thistle	G5	SE5		
	Erigeron philadelphicus ssp. provancheri	Philadelphia fleabane	G5T1T2	SU		
	Eurybia macrophylla	large-leaved aster	G5	S5		
*	*Hieracium aurantiacum*	devil's paintbrush	GNR	SE5		
	Solidago canadensis	canada goldenrod	G5	S5		
*	*Taraxacum officinale*	common dandelion	G5	SE5		
*	*Tragopogon dubius*	doubtful goat's-beard	GNR	SE5		
	JUNCACEAE	**RUSH FAMILY**				
	Juncus balticus	Baltic rush	G5	S5		
	CYPERACEAE	**SEDGE FAMILY**				
	Scirpus microcarpus	small-fruited bulrush	G5	S5		
	POACEAE	**GRASS FAMILY**				
	Phalaris arundinacea	reed canary grass	G5	S5		
*	*Phleum pratense*	timothy	GNR	SE5		
	Poa pratensis ssp. pratensis	Kentucky bluegrass	G5T	S5		
	LILIACEAE	**LILY FAMILY**				
*	*Asparagus officinalis*	garden asparagus	G5?	SE5		
	Maianthemum canadense	wild lily-of-the-valley	G5	S5		
	Sisyrinchium montanum	montane blue-eyed-grass	G5	S5		

Acronyms and Definitions Used in Plant Species List

1) Int Introduced species that does not naturally occur in the area and has established due to human action

2) G-Rank Global Rank

Global ranks are assigned by a consensus of the network of Conservation Data Centres, scientific experts, and the Nature Conservatory to designate a rarity rank based on the range-wide status of a species, subspecies or variety.

The most important factors considered in assigning global ranks are the total number of known, extant sites world-wide, and the degree to which they are potentially or actively threatened with destruction. Other criteria the number of known populations considered to be securely protected, the size of the various populations, and the ability of the taxon to persist at its known sites. The taxonomic distinctness of each taxon has also been considered. Hybrids, introduced species, and taxonomically dubious species, subspecies and varieties have not been included.

G1=	Extremely rare; usually 5 or fewer occurrences in the overall range or very few remaining individuals; or because of some factor(s) making it especially vulnerable to extinction.
G2 =	Very rare; usually between 5 and 20 occurrences in the overall range or with many individuals in fewer occurrences; or because of some factor(s) making it vulnerable to extinction.
G3 =	Rare to uncommon; usually between 20 and 100 occurrences; may have fewer occurrences, but with a large number of individuals in some populations; may be susceptible to large-scale disturbances.
G4 =	Common; usually more than 100 occurrences; usually not susceptible to immediate threats.
G5 =	Very common; demonstrably secure under present conditions.
GH =	Historic, no records in the past 20 years.
GU =	Status uncertain, often because of low search effort or cryptic nature of the species; more data needed.
GX =	Globally extinct. No recent records despite specific searches.
? =	Denotes inexact numeric rank (i.e. G4?).
G" " =	A "G" (or "T") followed by a blank space means that the NHIC has not yet obtained the Global Rank from The Nature Conservancy.
G? =	Unranked, or, if following a ranking, rank tentatively assigned (e.g. G3?).
Q =	Denotes that the taxonomic status of the species, subspecies, or variety is questionable.
T =	Denotes that the rank applies to a subspecies or variety.
GNR =	Unranked- global rank not yet assessed

3) S-Rank Provincial Rank

Provincial (or Sub-national) ranks are used by the Ontario Ministry of Natural Resources Natural Heritage Information Centre (NHIC) to set protection priorities for rare species and natural communities. These ranks are not legal designations. Provincial ranks are assigned in a manner similar to that described for the global ranks, but consider only those factors within the political boundaries of Ontario. By comparing the global and provincial ranks, the status, rarity, and the urgency of conservation needs can be ascertained. The NHIC evaluates provincial ranks on a continual basis and produces updated list at least annually.

S1 =	Critically imperilled in Ontario because of extreme rarity (often 5 or fewer occurrences) or because of some factor (s) such as very steep declines making it especially vulnerable to extirpation.
S2 =	Imperiled in Ontario because of rarity due to very restricted range, very few populations (often 20 or fewer occurrences) steep declines or other factors making it very vulnerable to extirpation.
S3 =	Vulnerable in Ontario due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
S4 =	Apparently secure - uncommon but not rare; some cause for long-term concern due to declines or other factors.
S5 =	Secure - common, widespread, and abundant in Ontario.
SX =	Presumed Extirpated - specie or community is believed to be extirpated from Ontario.
SNR =	Unranked - conservation status in Ontario not yet assessed
SU =	

	Unrankable - currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
SNA =	Not applicable - a conservation status rank is not applicable because the species is not a suitable target for conservation activities.
S#S# =	Range rank - a numeric range rank (e.g. S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g. SU is used rather than S1S4).

4) ESA Ontario Endangered Species Act, 2007

Extirpated (XT)	A species that no longer exists in the wild in Ontario but exists elsewhere.
Endangered (E)	A species facing imminent extinction or extirpation in Ontario.
Threatened (T)	A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
Special Concern (SC)	A species with characteristics that make it sensitive to human activities or natural events.

5) SARA Species at Risk Act Schedule 1

Extirpated (EXP)	A species that no longer exist in the wild in Canada but still occurs elsewhere.
Endangered (END)	A species facing imminent extinction or extirpation in Canada.
Threatened (THR)	A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
Special Concern (SC)	A species with characteristics that make it sensitive to human activities or natural events.