Appendix C

Environmental Inventory

Appendix C-1

Stage 1 Archaeological Assessment Report

Stage 1 Archaeological Assessment

Hydro One Networks Inc. Wawa Timmins Power Line Project, within the Districts of Algoma, Sudbury, Cochrane and Temiskaming, Geographic Townships of Biggs, Borden, Bristol, Caouette, Carscallen, Carty, Chapleau, Chappise, Chewett, Cosens, Crockett, Deloro, Denton, Evans, Foleyet, Gallagher, Garvey, Gilliland, Hellyer, Hoey, Ivanhoe, Keefer, Keith, Lackner, Lastheels, Maness, McGee, McNaught, Michano, Miskokomon, Mountjoy, Muskego, Nebonaionquet, Ogden, Pawis, Peters, Pinogami, Price, Quill, Recollet, Reeves, Sandy, Sewell, Silk, located near the Municipality of Wawa, the Township of Chapleau, and the City of Timmins Ontario

Original Report

Hydro One Networks Inc.

Licensee: Sherri Pearce, MA
License: P316
PIF Number: P316-0568-2025

Project number: 60753913

November 03, 2026

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Executive Summary

AECOM Canada ULC (AECOM) was retained by Hydro One Networks Inc. (Hydro One) to conduct a Stage 1 Archaeological Assessment (AA) to support the Class Environmental Assessment (EA) for the Transmission Facilities for the Wawa Timmins Power Line Project (the Project). The Project involves a new single-circuit 500-kilovolt (kV) transmission line between the Wawa Transformer Station (TS) near the Town of Wawa, to the Porcupine TS near the City of Timmins, Ontario. The study area is situated within the Districts of Algoma, Sudbury, Cochrane and Temiskaming, within the Geographic Townships of Biggs, Borden, Bristol, Caouette, Carscallen, Carty, Chapleau, Chappise, Chewett, Cosens, Crockett, Deloro, Denton, Evans, Foleyet, Gallagher, Garney, Gilliland, Hellyer, Hoey, Ivanhoe, Keefer, Keith, Lackner, Lastheels, Maness, McGee, McNaught, Michano, Miskokomon, Mountjoy, Muskego, Nebonaionquet, Ogden, Pawis, Peters, Pinogami, Price, Quill, Recollet, Reeves, Sandy, Sewell, Silk, and Tisdale, Ontario (**Figure 1 and 2**).

The Route Identification Study Area (RISA) will be used to develop a range of feasible alternative routes that will be evaluated as part of the Class EA to select a preferred alternative route (**Figure 1**). For the purposes of the Stage 1 assessment, Hydro One provided AECOM the proposed alternative routes, and the Stage 1 study areas included a 675-meter (m) buffer (337.5 m on each side of the centre line) for each proposed route alternative under consideration (**Figure 2**). The various route segments range from roughly 97 kilometres (km) to 124 km in length with some overlapping and converging at points. With the exception of the City of Timmins, the Stage 1 study areas are mostly located in largely undeveloped wooded areas; portions of the route segments follow Highway 101. The route segments are illustrated on **Figure 2** and described in detail below. The Stage 1 AA also evaluated the archaeological potential for the larger area to accommodate the proposed substation located near the existing Wawa TS near Anjigami, Ontario (**Figure 2-1** and **2-2**).

Route A1: Approximately 99 km in length, beginning at the Wawa TS, running north for approximately nine (9) km, pivoting east parallel to Highway 101, continuing for 87 km to its eastern terminus.

Route A2: Approximately 98 km in length, beginning at the Wawa TS, following Route A1's path for approximately four (4) km then diverting east, running parallel to Route A1 for approximately 13 km until it intersects with Route A1, following A1 along the remainder of the route until its eastern terminus.

Route B1: Approximately 124 km in length, Route B1 begins west of Highway 101 north of Devon Lake, running south approximately seven (7) km, pivoting east approximately 25 km, pivoting north approximately 20 km until it intersects with Highway 101 running parallel to Highway 101 to its eastern terminus.

Route B2: Approximately 117 km in length, Route B2 follows Route B1 for approximately 75 km, pivoting east across the Ivanhoe River approximately four (4) km, pivoting northeast for the remainder of the route to the eastern terminus.

Route B3: Approximately 111 km in length, Route B3 follows Route B1 for approximately 38 km, pivoting northeast for approximately 49 km and then following Route B2 for the remainder of the route to the eastern terminus.

Route C1: Approximately 85 km in length, Route C1 begins north of the intersection of Highway 101 and Regional Road 616, running northeast parallel to Highway 101 approximately 25 km, pivoting north for approximately two (2) km, pivoting northeast for approximately 43 km parallel to Highway 101, pivoting southeast for approximately two (2) km across the Mattagami River, pivoting east for approximately nine (9) km passing the Village of Delnite, pivoting north for the remainder of the route terminating at the Porcupine TS.

Route C2: Approximately 97 km in length, Route C2 follows Route C1 for approximately 60 km, pivoting southeast for approximately 12 km across the Mattagami River, pivoting east for approximately nine (9) km, pivoting north for the remainder of the route terminating at the Porcupine TS.

Substation Study Area: At the western terminus is an approximately 7,898 hectare (ha) area encompassing the proposed substation study area and Routes A1 and A2. The substation study area includes a stretch of Highway 101 through woodlands and wetlands, the southeast shoreline of Anjigami Lake, the northern half of Byron Lake, Lac de Zajac, a southeastern part of Whitefish Lake, and the Kinniwabi River.

The Stage 1 AA was completed under PIF number P316-0568-2028 issued to Professional Archaeologist Sherri Pearce, MA (P316) of AECOM. The assessment was completed in accordance with the provisions of the *Ontario Heritage Act*

(1990b) and the Ontario Ministry of Citizenship and Multiculturalism's (MCM) *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011a). This report provides the results of the Stage 1 AA and provides recommendations.

AECOM's Stage 1 background study for the Project indicated that the study area has moderate to high archaeological potential for pre- and post-contact Indigenous and 19th century settler resources based on the proximity to both past and modern watercourses, resource areas, proximity to registered archaeological sites, and areas of early colonial settlement. In accordance with Section 2.1.5 of the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011a), areas within 50 m of any sources of water, including historic water sources such as glacial shorelines, or other indicators of archaeological potential including registered archaeological sites, contain high archaeological potential. The conclusions on archaeological potential are described below for each Route Segment, summarized in **Table 4** and as shown in **Figure 9**.

AECOM's Stage 1 background study for the Project study areas has determined that the potential for the recovery of pre- and post-contact Indigenous and 19th century settler archaeological resources within the study areas is moderate to high. As such, the following recommendations are made:

1. All areas depicted green in **Figure 9** are considered to have low archaeological potential. As a property inspection was not conducted as part of this assessment, areas of low archaeological potential within the preferred route will need to be confirmed and photo documented at the time of Stage 2 survey, as per Section 2.1.2 of the MCM's *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a). If the areas are determined to require Stage 2 survey upon visual inspection, then a test pit survey will be required and should be conducted in accordance with Section 2.1.5 of the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a).
2. All areas depicted red in **Figure 9** are considered to have high archaeological potential and recommended for Stage 2 AA. This assessment should take place in accordance with Section 2.1.5 of the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a). The Stage 2 survey should consist of a standard test pit survey at five (5) m intervals within 50 m of any features of archaeological potential, and standard test pit survey at 10 m intervals between 50 and 150 m from features of archaeological potential, including indicators of past water sources (e.g. former shorelines and glaciofluvial channels) and early historic transportation routes. Survey is not required beyond 150 m.
3. All areas depicted blue in **Figure 9** are understood to be waterbodies and watercourses. For waterbodies and watercourses throughout the study area, it is recommended that a marine archaeological checklist be completed. This may result in a recommendation to complete a marine archaeological assessment by a licensed archaeologist in advance of any riverbed impacts within the study area.
4. Areas subject to previous assessments depicted in yellow in **Figure 9** have been previously assessed using methods in keeping with the 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a) and were cleared of further archaeological concerns, no further assessment is recommended for these areas.
5. The ClId-2, is located within or within proximity to the study areas (Supplementary Documentation, **Figure 3**). As it was found prior to the 2011 *Standards and Guidelines for Consultant Archaeologists*, (Ontario Government 2011a), and as the cultural heritage value and interest (CHVI) of the site is unclear, it is recommended that an attempt should be made to relocate the site should it be subject to future impacts from the Project, and it should be subject to Stage 2 re-assessment to re-evaluate the site's CHVI to determine if the site requires further Stage 3 assessment. The Stage 2 re-assessment should include, at minimum, standard test pit survey at five (5) m intervals, and if archaeological resources are found, intensified survey coverage as per Section 2.1.3, Standard 2 (Government of Ontario 2011a).

Should additional land outside of the current study areas be included as part of the Project, the standard requirements for AAs to be conducted prior to land disturbance remain in place. Additional AA(s) must be conducted by a licensed archaeologist and follow the requirements set out in the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a).

The MCM is asked to accept this report into the Ontario Public Register of Archaeological Reports, thereby concurring with the recommendations presented herein. **As further archaeological assessment is recommended,**

archaeological concerns for the Hydro One Networks Inc. Wawa Timmins Power Line Project study areas, within the Districts of Algoma, Sudbury, Cochrane and Temiskaming, Various Geographic Townships, located near the Municipality of Wawa, the Township of Chapleau, and the City of Timmins, Ontario, have not been fully addressed.

Please note that this archaeological assessment report has been written to meet the requirements of the MCM's *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011); however, properties that are subject to archaeological assessment are not considered cleared for ground disturbance activities until the associated report has been reviewed and accepted by the MCM. In order to maintain compliance with the MCM and the *Ontario Heritage Act* (Government of Ontario 1990b), no ground disturbing activities are to occur until the proponent and approval authority receive a formal letter from the MCM stating that the recommendations provided herein are compliant and that the report has been accepted into the Ontario Public Register of Archaeological Reports.

Project Personnel

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1. Project Context

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In accordance with Hydro One's request, and with the draft technical bulletin entitled *Engaging Aboriginal Communities in Archaeology* (Ontario Government 2011b), the Indigenous Communities with the closest cultural affiliation, or with interest in the Project, were given opportunity to review this Stage 1 report. Engaged communities include Brunswick House First Nation, Chapleau Cree First Nation, Chapleau Ojibwe First Nation, Flying Post First Nation, Matachewan First Nation, Mattagami First Nation, Michipicoten First Nation, Missanabie Cree First Nation, and Taykwa Tagamou Nation. Engagement throughout the EA consists of meetings with leadership of Partner Nations, emails, phone calls, Technical Advisory Committee workshops, and Indigenous Community Information Sessions. Non-Partner Nations have also been engaged by Hydro One.

Should communities believe there are areas of interest that have value to community or cultural identity, communities can discuss with Hydro One. Should this information be considered sensitive or Traditional Knowledge, Hydro One will work with communities to understand how this should be included in this report and the overall project

1.1.1 Objectives

The objectives of a Stage 1 AA are to document the archaeological and land use history and present conditions within the study area. This information will be used to evaluate in detail the study area's archaeological potential, which will support recommendations for the Stage 2 survey for all or parts of the study area, as well as recommending appropriate Stage 2 strategies. The results of Stage 1 AA presented in this report are drawn in part from:

- The MCM's Archaeological Sites Database (OASD) for a listing of registered archaeological sites within a one (1) km radius of the study area;
- Reports of previous archaeological assessments within 50 m of the study area;
- Recent and historical maps of the study area;
- Archaeological management plans or other archaeological potential mapping where available; and,
- Municipal Registers of listed heritage properties and properties designated under the *Ontario Heritage Act* (Ontario Government 1990b), commemorative plaques, and monuments identified on or near the study area.

The Stage 1 AA has been conducted to meet the requirements of the MCM's *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a).

1.2 Historical Context

Archaeological research in northern Ontario is generally limited in comparison to southern Ontario, which has resulted in less robust understanding by archaeologists of the pre-contact settlement history of this part of the province. Soil conditions in northern Ontario and a scarcity of archaeological sites make it difficult to determine absolute dates. Given the challenging landscape and relative scarcity of known archaeological sites, archaeological periods in the north have approximate, and often overlapping date ranges. **Table 1** provides a general cultural chronology for northern Ontario.

Table 1. Cultural Chronology for Northern Ontario

Archaeological Period	Culture	Time Period	Characteristics
Paleo	Plano	~8000-4500 BC	• Lanceolate bifacial tools associated with large-game focused hunting • Sites often associated with relic lake shores north of the Upper Great Lakes
Middle	Shield	~5400 – 250 BC	• Broad spectrum seasonal resource exploitation

			• Development of environmental conditions similar to the present • Slight reduction in group territory size • Introduction of copper tools • Highly mobile • Introduction of bow and arrow technology • Domestication of dog
Initial Woodland	Laurel	~700 BC – AD 1000	• Introduction of pottery • Introduction of horticultural production, primarily through trade • Development of distinctive Algonquian ceramic styles • Large earthen mounds in some regions (e.g., western end of Lake Superior)
Terminal Woodland	Blackduck Selkirk	~AD 750-1650	• Diverse ceramics – out-flaring vessel rims, textile impressions, and punctates • Increasing variation in regional stylistic characteristics in various lithics and ceramics • Evidence of extensive long-range Indigenous trade activities • Communal burials • Direct ancestors of modern Indigenous communities
Contact Period – Indigenous Settlement	Northern Ojibway	AD 1600-1875	• Early written records and treaties • Participation in fur trade
Post Contact Colonial Settlement	N/A	AD 1749-present	• Colonial and Pioneer settlement

The following sections provide a detailed summary of the archaeological cultures that have settled in northern Ontario over the past 11,000 years.

1.2.1 Pre-contact Indigenous Settlement

The Paleo Period

Much of northern Ontario lies within the Pre-Cambrian (Canadian) Shield and is covered in boreal forest. This part of the province is rugged and is speckled with lakes, bogs, and streams. The first people to inhabit northwestern Ontario are referred to as Paleo people, a general term to refer to the first Indigenous occupants in the region in the post glacial period. They reached the north shore of Glacial Lake Minong / Duluth (the pre-cursers to Lake Superior) in about 8,000 B.C. after the glaciers had retreated. During the immediate post-glacial period, the portions of the province that were available for human occupation had a tundra-like ecological and climate regime. Given these conditions, Paleo groups lived in relatively small nomadic groups that followed larger, migratory game (notably caribou), across the landscape, preferring to camp on high ground, immediately adjacent to water sources, such as glacial lakes or spillways, where smaller game and plant food would have also been harvested. Although there were initial occupation dating back to ca. 8,000 B.C. immediately northwest of modern Lake Superior, the central interior of northern Ontario did not become available for human occupation until roughly 5,500 B.C. Thus, the earliest known sites north of the Great Lakes date to this period and in relatively close proximity to the modern shores of Lakes Superior and Huron. Tool assemblages appear to be dominated by finely made lanceolate-shaped, sometimes fluted, projectile points, or spear tips. Raw materials obtained from bedrock outcrops or glacial cobbles were used in the production of tools such as distinctive unfluted, ribbon flaked, lanceolate spear points and knives (Dawson, 2004).

The Middle Period

The next major cultural period following the Paleo period is termed the Middle period, or the Archaic period. The term “Archaic” is commonly used by archaeologists to denote the period between the Paleo and Woodland periods, but as

the term is culturally laden, this period is referred to here as the Middle period. The transition to the Middle period lifeway was directly related to changing environmental conditions to those more closely approximating the present. This change is best seen in changes in technological and stylistic characteristics of the overall lithic toolkit, including projectile point styles and assemblage composition. The Middle period (ca. 5,400 – 250 BC) in northwestern Ontario is defined by notched projectile points, the use of native copper, and more frequent recovery of woodworking tools such as wedges and adzes (Wright 1972; Dawson 1983; Fox 1977; Hinshelwood 2004). Throughout the Middle period the natural environment warmed, and vegetation changed from closed conifer-dominated vegetation cover, to mixed coniferous and deciduous forest in the north and deciduous vegetation in the south that we see in Ontario today (Wright 1972). During the Middle period there are indications of increasing populations and decreasing size of territories exploited during annual rounds, fewer moves of residential camps throughout the year and longer occupations at seasonal campsites, continuous use of certain locations on a seasonal basis over many years, increasing attention to ritual associated with the deceased, and long range exchange and trade systems for the purpose of obtaining valued and geographically localized resources (Wright 1972; Hinshelwood 2004)..

The Woodland Period

The beginning of the Woodland period in northern Ontario approximately 3,500 years ago is distinguished from the Late Archaic period primarily by the addition of ceramic technology, which provides a useful demarcation point for archaeologists but is expected to have made less difference in the lives of the Woodland peoples. Unlike southern Ontario, the Woodland period in northern Ontario is divided into only two distinct phases- the Initial, and Terminal Woodland periods.

The introduction of pottery within the Initial Woodland period beginning ca. 2,200 years ago (700 B.C. – A.D. 1,000) is believed to have occurred in northern Ontario through trade and other influences from the southwest and east, creating the Laurel culture within the Boreal Shield stretching from Saskatchewan to northern Quebec. Laurel ceramics were dominated by conical style tapered base pottery manufactured using the coil method adorned with decoration across the upper portion of the vessel's exterior surface. The overall Laurel ceramic tradition appears to be related to a broader Initial Woodland pattern known across much of eastern North America and bears strong resemblances to the Saugeen and Point Peninsula traditions in southern Ontario and the northeastern United States.

During the Initial Woodland period, groups would come together into large macro-bands through the spring-summer at lakeshore or marshland areas to take advantage of spawning fish; in the fall inland river valleys were occupied for deer and nut harvesting and groups split into small micro-bands for winter survival. Few Laurel sites have been securely dated, but archaeologists believe that the style persisted until about 1,000 years ago (Hamilton, 2013).

A Woodland tradition present in southern Ontario, the Rainy River District in northern Ontario, and southeastern Manitoba, consists of burial mound ceremonialism (Kenyon, 2012). These impressive mounds represent the internment of multiple humans within a single dirt structure. In southern Ontario the most impressive mound structure is the Serpent Mound adjacent to Rice Lake. These mounds were built by the Laurel and extended into the Blackduck peoples during the Middle Woodland tradition. Most of them are low and broad structures, though one at Long Sault Rapids in the Rainy Rivier District is the largest in Canada at 34 m in diameter and seven (7) m high. The mounds contained a plethora of grave goods, including furniture, clay pots, shell, bone, and copper beads, which were all sprinkled with red ochre. This behavior appears to be an extension of the Adena and Hopewell Interaction Sphere from the Midwest United States (Mason, 1970, 1981; Kenyon, 2012).

The Terminal Woodland period in northern Ontario differed significantly from the settlement and subsistence shift that occurred in southern Ontario where there was increasing reliance on maize horticulture. The climate and landscape of the Canadian Shield prohibited the agricultural shift occurring in the south with continued reliance on fish and large game as in previous periods. Population growth was also restricted by the Canadian Shield environment and settlement patterns were similar to those of the Initial Woodland with large summer camps located close to fish resources and typically located on level, well drained ground with access to canoe landing beaches.

After approximately 1,200 years ago, new technological innovations appear in the archaeological record, indicating Terminal Woodland cultural influences spread widely throughout the Boreal Forest. Archaeologists define the Terminal Woodland period by the use of the bow and arrow and by a variety of new pottery wares that differ drastically from the previous Laurel style (Hamilton, 2013). Within the Terminal Woodland period three distinct cultures arise: the Blackduck Complex; the Selkirk Complex to the north; and Sandy Lake Ware to the south. All three wares differ slightly in timespans and overlap geographically (Meyer and Hamilton, 1994). The Blackduck Complex (ca. A.D. 800-1400) is

identified by the contrasting pottery tradition to the Laurel. Pottery vessels were large and globular, rather than conical and tapered and manufacture techniques involved a paddle and anvil technique over coiling. Decorations were also changed and are characterized by horizontal and / or oblique lines along with circular indentations (punctate) that are found on the neck, rim and inner rim of the vessel.

The Selkirk culture is also defined by its pottery style. Manufacturing techniques are similar to that of the Blackduck Complex but with a distinct variation in decoration. The decorative styles, if decorated at all, were simple and generally included either a single row of punctate indentations or impressions made with a cord-wrapped stick (Dawson, 1983). Selkirk pottery is found predominantly in the northern portion of north Ontario. Sandy Lake Ware (c. A.D. 1000-1750) consists of globular vessels with thin and fairly straight walls, made with grit or shell temper, and exhibiting interior notched or plain decoration. Surface finish may be textile impressed, smoothed, checked or simple stamped (Taylor-Hollings, 1999).

The Terminal Woodland period also sees the emergence of rock art as an expression of spiritual life and ritual practices. Rock paintings, or pictographs, comprised of red ochre mixed with binding agent such as bear fat or sunflower oil, are typically found within western Ontario on the vertical faces of cliffs where they enter a body of water (Rajnovich, 1994). Pictographs constitute a form of written language, signifying sounds, objects, and ideas in reference to subsistence, geography, climate, history and also sacred or religious beliefs and visions (Dewdney & Kidd, 1962; Bursey et al, 2013); although, they could have served a variety of cosmological functions and even political ones by marking territory (Wright, 2004: 1545). The damming of lakes and rivers by the timber and hydroelectric industries may have drowned many pictograph sites and the fragile nature of the painting themselves also reduces their chances of survival. Rock etchings, or petroglyphs, are also relatively rare within the Canadian Shield, with most examples occurring within the south and east of the province. Likewise, petroforms, or artificial arrangements of stones in pits or cairns, are rare in northern Ontario (Dawson, 1983).

1.2.2 Post Contact Period Settlement

It is important to note that, when discussing the historical documentation of the movement of Indigenous people, what has been documented by early colonial explorers and settlers represents only a very small snap-shot in time. Documentation of where Indigenous groups were residing during colonial exploration and settlement is restricted to only a very short period of time and does not reflect previous and subsequent movements of these groups. This brief history does not reflect the full picture of the pre- or post-contact period occupation of Indigenous groups or cultures. As such, relying on historic documentation regarding Indigenous occupation and movement across the landscape can lead to misinterpretation. For example, noting the movement of Indigenous groups into an area may incorrectly suggest to the reader that these groups had not occupied the area previously; however, this is not the case. It is clear from Indigenous oral histories and the archaeological record that pre-contact Indigenous populations were extremely mobile and not tied to any one specific area. Over the vast period prior to the arrival of colonial settlers, Indigenous groups, language families, and cultures were fluid across the landscape.

The post-contact Indigenous populations of northern Ontario spoke variations of the Algonquian language group, notably Ojibwe and Cree. The environmental conditions of northern Ontario remained vastly different from those in the south with unpredictable natural factors such as forest fires and winter icing influencing the size of human population the region could support, the distribution of groups, and the frequency in which they had to move. Therefore, the groups in northern Ontario remained small, mobile, and loosely associated with each other through the post-contact era (Dawson, 1983: 9).

1.2.2.1 Early European Exploration

The arrival of Europeans in northern Ontario occurred in the early 1600s as part of the exploration of the continent and expansion of the fur trade. British and French colonialist explorers and later merchants entered what is now northern Ontario during the 1600s and established footholds in the area through the establishment of trading outposts. These trading posts followed waterways in the area and were placed in established meeting and mercantile locations of Indigenous Nations such as the rapids between Lake Superior and Lake Huron, modern-day Sault Ste. Marie (Lytwyn, 2003: 26-27). French trading posts followed the Great Lakes, establishing posts on the shores of Lake Superior at modern day Sault Ste. Marie in 1670, Thunder Bay in 1679 (Camenestiguouia), and Michipicoten in 1714 with further posts built along waterways off Lake Superior including on Lake Nipigon in 1684 (The National Atlas of Canada, 1974: 79-80). In the same time period, British trading posts were being established along James Bay and Hudson Bay by the

Hudon's Bay Company (HBC) that had been founded in 1670. British trading posts included Moose Fort in 1673 (later Moose Factory in 1730), Albany in 1675 (later Albany Fort in 1721), and Severn in 1685 (re-established in 1759). Indigenous trappers played the two sides against each other to secure the greatest benefit for themselves, using the waterways between the Great Lakes and the Hudson Bay to move between the trading posts for the best deals (Driben & Trudeau, 1983: 17).

After the fall of New France in 1763, the HBC expanded in the region, taking over old French colonialist outposts and pushing further into the interior. New fur trading companies including the North West Company and the XY Company competed for furs in northern Ontario, establishing new trading posts along waterways in the region resulting in a web of posts throughout the region as the companies vied for control of the fur trade (The National Atlas of Canada, 1974: 79-80). The amalgamation of the rival companies, first the XY Company with the North West Company in 1804, followed by the North West Company with the HBC in 1821, saw the HBC achieve a monopoly on fur trading in the region, with competition only existing from south of the Great Lakes in the American Fur Company and independent Canadian traders (Catton, 2003: 52). The monopoly of the HBC saw Indigenous trappers and traders suffer the most as they lost economic freedom and autonomy (Finch, 2020: 178-179). Further economic freedom and autonomy was lost as the HBC undertook several cost cutting and conservation measures to protect the fur trade. Redundant posts and posts located in areas where furs were depleted were closed to save money. As furs were depleted in the region, new conservation efforts were implemented, such as a quota system, that limited the economic wealth of Indigenous trappers as the HBC attempted to protect the declining stocks and the value of fur (Catton, 2003: 53-54). As the HBC struggled to keep fur trading afloat, growing interest in other resources in region and establishing further settlement west attracted new attention from Canadians to the south. The Robinson-Superior Treaty (Treaty 60) was signed in 1850 to help facilitate resource extraction along the shores of Lake Superior and in 1858 the new territories were divided into the first districts (Government of Ontario, 2025). In 1869, the HBC sold the remainder of their rights over the Prince Rupert's Land to the new Dominion of Canada, ending their monopoly and paving the way for Canadian settlement of the region.

The fur trade in Canada provided the principal motivation and economic base for the exploration of the Canadian interior by Europeans. During the period between 1670 and 1713, French traders began to leave established settlements and construct trading posts that enabled traders to make direct contact with the Indigenous groups of the interior including the area around the Great Lakes.

By the dawn of the 19th century, the HBC depended heavily on the Métis, who made up nearly seventy percent of its labour force in the Lake Superior area (Gale, 2005: 12). Additionally, some fur traders with the North West Company established settlements with their Métis or Indigenous wives, varying in number up to approximately 25 traders and their families (Gale, 2005: 10).

An examination of the map *Posts of the Canadian Fur Trade* (The National Atlas of Canada, 1974) indicates the presence of fur trade posts in the general vicinity of the study area (**Figure 3**). The presence of major fur trade posts along the eastern shore of Lake Superior indicates that the region where the study area is located was likely used for travel between fur trade posts between Lake Superior and James Bay. The French, British, HBC, North West Company, and independent traders all held fur trading posts during the period from 1600 to 1870 (Wright 1981; Dawson; 1977).

1.2.2.2 Treaty History

The Stage 1 study areas for the proposed alternative routes and substation falls within Treaty 60 (Robinson-Superior Treaty), and Treaty 9 (James Bay Treaty) (**Figure 4**). The larger RISA also covers portions of Treaty 61, or the Robinson-Huron Treaty. The Robinson-Superior Treaty was signed in Sault Ste. Marie on September 7, 1850, between representatives of the Crown and nine (9) Ojibwe groups from along the north shore of Lake Superior. The Treaty included the establishment of reserves, a one-time payment of £2,000, and an annual payment of £500 to be paid in perpetuity (Government of Canada, 2013). The Treaty was intended to provide settlers with access to the north shore of Lake Superior for resource exploration with a focus on mineral prospecting and mining (Government of Ontario, 2024). The full text of the Robinson-Superior Treaty is provided below:

> *THIS AGREEMENT, made and entered into on the seventh day of September, in the year of Our Lord one thousand eight hundred and fifty, at Sault Ste. Marie, in the Province of Canada, between the Honorable WILLIAM BENJAMIN ROBINSON, of the one part, on behalf of HER MAJESTY THE QUEEN, and JOSEPH PEANDECHAT, JOHN IUINWAY, MISHE-MUCKQUA, TOTOMENCIE, Chiefs, and JACOB WARPELA, AHMUTCHIWAGABOU, MICHEL SHELAGESHICK,*

MANITSHAINSE, and CHIGINANS, principal men of the OJIBEWA Indians inhabiting the Northern Shore of Lake Superior, in the said Province of Canada, from Batchewana Bay to Pigeon River, at the western extremity of said Lake, and inland throughout that extent to the height of land which separates the territory covered by the charter of the Honorable the Hudson's Bay Company from the said tract, and also the Islands in the said Lake within the boundaries of the British possessions therein, of the other part, witnesseth:

THAT for and in consideration of the sum of two thousand pounds of good and lawful money of Upper Canada, to them in hand paid, and for the further perpetual annuity of five hundred pounds, the same to be paid and delivered to the said Chiefs and their Tribes at a convenient season of each summer, not later than the first day of August at the Honorable the Hudson's Bay Company's Posts of Michipicoton and Fort William, they the said chiefs and principal men do freely, fully and voluntarily surrender, cede, grant and convey unto Her Majesty, Her heirs and successors forever, all their right, title and interest in the whole of the territory above described, save and except the reservations set forth in the schedule hereunto annexed, which reservations shall be held and occupied by the said Chiefs and their Tribes in common, for the purpose of residence and cultivation, and should the said Chiefs and their respective Tribes at any time desire to dispose of any mineral or other valuable productions upon the said reservations, the same will be at their request sold by order of the Superintendent General of the Indian Department for the time being, for their sole use and benefit, and to the best advantage.

And the said William Benjamin Robinson of the first part, on behalf of Her Majesty and the Government of this Province, hereby promises and agrees to make the payments as before mentioned; and further to allow the said chiefs and their tribes the full and free privilege to hunt over the territory now ceded by them, and to fish in the waters thereof as they have heretofore been in the habit of doing, saving and excepting only such portions of the said territory as may from time to time be sold or leased to individuals, or companies of individuals, and occupied by them with the consent of the Provincial Government. The parties of the second part further promise and agree that they will not sell, lease, or otherwise dispose of any portion of their reservations without the consent of the Superintendent General of Indian Affairs being first had and obtained; nor will they at any time hinder or prevent persons from exploring or searching for mineral or other valuable productions in any part of the territory hereby ceded to Her Majesty as before mentioned. The parties of the second part also agree that in case the Government of this Province should before the date of this agreement have sold, or bargained to sell, any mining locations or other property on the portions of the territory hereby reserved for their use and benefit, then and in that case such sale, or promise of sale, shall be forfeited, if the parties interested desire it, by the Government, and the amount accruing therefrom shall be paid to the tribe to whom the reservation belongs. The said William Benjamin Robinson on behalf of Her Majesty, who desires to deal liberally and justly with all Her subjects, further promises and agrees that in case the territory hereby ceded by the parties of the second part shall at any future period produce an amount which will enable the Government of this Province without incurring loss to increase the annuity hereby secured to them, then, and in that case, the same shall be augmented from time to time, provided that the amount paid to each individual shall not exceed the sum of one pound provincial currency in any one year, or such further sum as Her Majesty may be graciously pleased to order; and provided further that the number of Indians entitled to the benefit of this Treaty shall amount to two thirds of their present numbers (which is twelve hundred and forty) to entitle them to claim the full benefit thereof, and should their numbers at any future period not amount to two thirds of twelve hundred and forty, the annuity shall be diminished in proportion to their actual numbers.

Schedule of Reservations made by the above named subscribing Chiefs and principal men.

FIRST - Joseph Pean-de-chat and his Tribe, the reserve to commence about two miles from Fort William (inland), on the right bank of the River Kiminitiquia thence westerly six miles, parallel to the shores of the lake; thence northerly five miles; thence easterly to the right bank of the said river, so as not to interfere with any acquired rights of the Honorable Hudson's Bay Company.

SECOND - Four miles square at Gros Cap, being a valley near the Honorable Hudson's Bay Company's post of Michipicoton, for Totominai and Tribe.

THIRD - Four miles square on Gull River, near Lake Nipigon, on both sides of said river, for the Chief Mishimuckqua and Tribe.

Signed, sealed and delivered at Sault Ste. Marie, the day and year first, above written in presence of,

(Signé,)	*George Ironside, S.A.I.*	
“	*Arthur P. Cooper, Capt. Com. Détachement Brig. des Car.*	
“	*H.M. Balfour, 2d Lieut. Brig. des Car.*	
“	*John Swanston, C.I. Hon. Compagnie de la Baie d'Hudson.*	
“	*Geo. Johnston, Interprète.*	
“	*J.W. Keating.*	*(Sceau)*
“	*W.B. Robinson,*	*“*
“	*Joseph Peau de Chat*	*“*
“	*John Ininway,*	*“*
“	*Mishe Muckqua,*	*“*
“	*Totomenai,*	*“*
“	*Jacob Wasseba,*	*“*
“	*Ah-Mutchiwagabou,*	*“*
“	*Michel Shebageshick,*	*“*
“	*Manitou Shainse,*	*“*
“	*Chigenaus,, S.A.I.*	*“*

The James Bay Treaty was negotiated in stages, with the first signing on November 6, 1905, and the second on October 5, 1906, with further adhesions made in 1929 and 1930. The Treaty was negotiated between representatives of the Crown and various Ojibwe and Cree Nations located in the James Bay watershed, with the adhesions extending the Treaty area north of the Albany River to Hudson Bay (Government of Ontario, 2024). The push for the Treaty was increasing mining and railway construction beyond the northern boundary of the Robinson-Superior Treaty. The ending of the HBC’s commercial monopoly in 1870 by the Canadian Government saw provincial and commercial interests push for the James Bay Treaty to provide them with the opportunity to exploit resources. The treaty commissioners made it “advisable to extinguish the Indian [sic] title” to the land to help advance these interests to the Albany River (Government of Canada, 2013). The goal of the adhesions was to open more of northern Ontario for further resource extraction with mining, lumbering, and later hydroelectricity as major regional industries.

1.2.3 District Organization and Settlement

The organization of local government in northern Ontario into districts that provided judicial and provincial services to the population starting in 1858. As the population grew, new districts were created and boundaries changed to accommodate the population growth. Northern districts are organized into incorporated improvement districts, villages, towns, cities, and townships, but they are not incorporated themselves, meaning they have no council like counties in southern Ontario (Government of Ontario, 2025). In most cases, the term only refers to a geographic boundary with no municipal government purpose. Municipalities within the districts are effectively single-tier municipalities. Some districts do have District Social Services Administration Boards that provide social services for the unincorporated areas that are sparsely populated (Association of Municipalities of Ontario, 2025).

The Project traverses through four districts: Algoma, Sudbury, Cochrane and Temiskaming. All segments of Route A run through the Districts of Algoma and Sudbury, while all segments of Route B run through the District of Sudbury, and all segments of Route C run through the Districts of Sudbury and Cochrane. The Wawa TS is located near the Municipality of Wawa, while the convergent point of Routes A and B is near the Township of Chapleau, and the Porcupine TS is located in the City of Timmins (**Figures 1 and 2**).

District of Algoma

The District of Algoma was first established in 1858 as one of the first districts of northern Ontario and has undergone changes to its size until it reached its current size in 1922 (Government of Ontario, 2025). The history of the district was first shaped by fur trading with the French trading post at Sault Ste. Marie forming the first European settlement in what would become Algoma. The presence of copper and iron ore in the vicinity of Sault Ste. Marie encouraged mining activities as early as 1850 and the wealth of mining soon became the key staple of Algoma into the 20th century (Mika & Mika, 1977: 39). The construction of the Canadian Pacific Railway in the early 1880s through northern Ontario took it through Algoma as the established shipping lanes and trading posts along Lake Superior were used to help move rails and building materials for the line. Michipicoten Harbour, originally a fur trading outpost under the French and later HBC helped supply the railway in 1883 as it was built through the northern reaches of Algoma (Douglas, 1996: 17-18). The railway helped create new settlements through Algoma in the form of work camps which later became lumber camps to support the growing lumber industry.

The discovery of gold and other minerals in northern Algoma at the end of the 19th and beginning of the 20th centuries saw increased settlement northward with the new town of Wawa becoming a major settlement based around gold discoveries in 1897 (Douglas, 1996: 18-19). The growth of mining and lumber in Algoma prompted Francis Clergue to build a new railway line connecting Lake Superior to Hudson Bay to exploit the development of natural resources in northern Ontario. The Algoma Central Railway was incorporated in 1899, and construction began in Sault Ste. Marie and Wawa running in a north-south direction (Nock, 1975: 31-32). While plans to extend the line all the way to Hudson Bay, it never reached that far and ended in Hearst. The Canadian National Railway constructed their transcontinental line further north in 1915, creating more logging and other settlements further north (Douglas, 1996: 21). Mining fortunes wavered after the initial gold and iron ore rush but was stabilized in the 1930s and 1940s by Sir James Dunn who developed a strong link between iron ore in Wawa and the blast furnaces in Sault Ste. Marie (Douglas, 1996: 55-67).

District of Sudbury

The District of Sudbury was first established in 1907, created from parts of the Districts of Algoma and Nipissing and reached its current size and shape in 1912 (Government of Ontario, 2025). Redistribution of municipalities within the district saw the largest change in 1973 when the Regional Municipality of Sudbury was created with the City of Sudbury and the surrounding townships amalgamated and were severed from the District of Sudbury (Mika & Mika, 1977: 464). The District of Sudbury's history has been shaped by the railway, with the Canadian Pacific Railway built through the district in the 1880s and the Canadian National Railway in the early 20th century. The Sudbury Basin became the site of a surveyor's camp in 1882 and was turned into Sudbury Junction, the meeting point several lines to Toronto, North Bay, Sault Ste. Marie, and Thunder Bay (Wallace, 1996: 11-13). The discovery of mineral ores around the townsite of Sudbury resulted in the growth of the settlement with mining, along with logging industries, developing in the late 19th century into the 20th century (Wallace, 1996: 19-22). The development of the District of Sudbury north of the City of Sudbury was primarily based on the two railway lines which saw work camps turned into permanent settlements based on logging or mining. These settlements began to replace the older fur trading posts as the railway provided greater access to the outside world and brought new amenities to the region (Crichton, 1975: 12-19).

The City of Sudbury and the surrounding townships grew in size over the 20th century and in 1973 were severed from the District of Sudbury into the Regional Municipality of Sudbury to provide greater local resources and organization for residents. The Township of Chapleau became the largest remaining settlement in the District of Sudbury, located on the Canadian Pacific Railway line as well as on the major east-west Highway 101 and Highway 129 just south of the Township. Other settlements developed along the Canadian National Railway further north in the District of Sudbury, with the settlement at Foleyet developing on the railway and Highway 101.

District of Cochrane

The District of Cochrane was first established in 1922, created from parts of the Districts of Thunder Bay, Algoma, and Temiskaming (Government of Ontario, 2025). The District of Cochrane was named after Frank Cochrane, a former

Ontario Minister of Lands, Forests, and Mines, and Minister of Education in the early 20th century (Mika & Mika, 1977: 449). The first settlements in the District of Cochrane were on James Bay and Hudson Bay where trading posts of the HBC were founded including Moose Factory (later Moosonee) and Fort Albany. Settlement in what became Cochrane began in the late 19th century with plans to build a railway line from North Bay to James Bay, with the first stretch constructed in 1900 from North Bay to New Liskeard in what is now the Ontario Northland Railway. Further lines were built with the line reaching Moosonee in 1932 (Mika & Mika 1977: 449).

Settlement in the southern area of Cochrane began in the early 20th century when gold was found at Night Hawk Lake and Porcupine Lake. In 1909, gold north of Porcupine Lake resulted in the first gold rush into the area and the establishment of the big three mines of Dome, Hollinger, and McIntyre as they dominated gold mining and the largest producers of gold in North America (Ontario Heritage Trust, 2012). The brothers Noah and Henry Timmins purchased the rights to the Hollinger Mine and in 1912 after fires ravaged mines and the first settlement in the area on Porcupine Lake, the townsite for Timmins was made further west. That same year, a spur line of the Ontario Northland Railway was built to the gold fields, helping to push development and growth (Ontario Heritage Trust, 2012). The growth of Timmins led to the City of Timmins separating from the District of Cochrane in 1973 (Barnes, 1993: 140).

District of Temiskaming

The District of Timiskaming was created in 1912, formed from the Districts of Algoma, Nipissing, and Sudbury to accommodate a growing economic and population boom in the early 20th century (Ontario Government, 2025). The region is north of the Sudbury District and is named after Lake Timiskaming, which is in both Ontario and Quebec.

In 1613, Étienne Brûlé, a French interpreter, explorer, and merchant, traveled through the Lake Temiskaming region. Following his visit, thousands of explorers and traders travelled through the area (Lake Temiskaming Tour, 2026). Fort-Témiscamingue was a strategic location during the fur trade era, as it was a halfway point between Montreal and James Bay and functioning as an important trading post for more than 200 years (Lake Temiskaming Tour, 2026).

In the 1830s and 1840s, the first missionary Oblates and Sulpicians arrived in the area (Bray, 2006). During the same period, lumbermen acquired the cutting rights along the eastern shore of Lake Timiskaming in the Kipawa region (Bray, 2006). By the 1870s, the lumbermen had moved northward and crossed the lake to the western shore (Bray, 2006). In the 1880s, permanent settlements emerged around the lake on both the Ontario and the Quebec sides, due to the efforts of missionary colonizers (Bray, 2006).

The first commercial steamer on the lake arrived in 1882, and by 1900, fourteen steamers were in operation (Bray, 2006). The District of Timiskaming in Ontario was served by two (2) railways, first was the branch line railway owned and operated by the Canadian Pacific Railway, the Temiskaming Colonization Railway, which ran northward in Quebec from Mattawa, and reached Temiskaming in 1894 and Ville-Marie in 1925 (Bray, 2006). The second railway was the Temiskaming and Northern Ontario Railway (T&NO), owned and operated by the Ontario Government (Middleton, 1927). This section of the railway was built in 1902 (Lake Temiskaming Tour, 2026; Bray, 2014). By 1905, the T&NO had reached New Liskeard, and three years later had connected with the National Transcontinental Railway at Cochrane (Bray, 2006).

The T&NO resulted in the establishment of a host of silver and gold mining towns along the railway as the discovery of these precious metals occurred during construction (Bray, 2006). The larger region included a rich mining area, including Cobalt, Porcupine, and Kirkland Lake, and extends over the height of land to Hudson Bay (Middleton, 1927). The 1903 silver rush in Cobalt and the arrival of the railroad allowed the development of Northern Ontario to take a firm hold (Lake Temiskaming Tour, 2026).

With the construction of additional railways and highways between North Bay and Mattawa in the 1920s, Lake Timiskaming declined as a commercial transportation route after World War I, instead becoming important for tourism and recreational purposes (Bray, 2006).

City of Timmins

The City of Timmins was founded in 1912 by the brothers Noah and Henry Timmins. The brothers had made their fortune in the previous decade supplying miners and surveyors in the Cobalt Silver Rush and had moved north to Porcupine Lake following the gold rush in the region (Ontario Heritage Trust, 2012). In 1912, the brothers purchased

Hollinger Mine, one of three (3) biggest mines in the gold rush, which was also the farthest from the original settlement on Porcupine Lake. In 1911, the town of Porcupine burned down, and the Timmins brothers took the opportunity to build a new settlement that was closer to their mine, and one that was laid out with a street plan rather than the haphazard manner of the original town (Ontario Heritage Trust, 2012). The townsite was built on a rise, known as The Hill, where houses for managers were built, by the shores of Gillies Lake. While some of the lots in the new settlement were opened for public auction, the majority of the lots remained in the hands of the Timmins Townsite Company, owned by Hollinger Mines. Hollinger Mines built amenities for the town including providing land for churches, as well as building community facilities including a hockey rink, baseball diamond, golf course, library, and recreation hall (Ontario Heritage Trust, 2012).

Settlements also sprang up in the region around other mines, with the other two big mines developing their own townsites at Schumacher for McIntyre Mine, and South Porcupine and Golden City for Dome Mine (Torlone, 1976: 5). Smaller mines existed throughout the area, with new mines opening in the 1930s helping to make Timmins a thriving and growing town in the midst of the Great Depression with company settlements arising around the smaller mines (Barnes, 1993: 139-140; Angus & Palu, 2001: 53). These other settlements were primarily residential in nature, housing miners and managers of the nearby mines, with the settlement of Timmins serving as a commercial, transportation, and political hub for the region. As such, Timmins was able to thrive and survive economic downturns in mining as it also serviced other industries including lumber and tourism, as well as providing services for residents of the area (Torlone, 1976: 1-14).

Mining began to slow in the second half of the 20th century. Smaller mines around Timmins began to close with the first of the big three, Hollinger Mine, ceasing operations in 1968. The second of the big three, McIntyre Mine, ceased operations in 1988, while Dome Mine was the last of the big three, ceasing operations in 2017. Timmins was able to diversify its economy to stay viable even as the gold mines shut down as mining for other minerals, along with lumber, tourism, and service industries helped grow and sustain the settlement (Torlone, 1976).

Historical mapping (**Figures 5 and 6**) illustrates the development of resource extraction and transportation infrastructure in northern Ontario throughout the 20th century. These historical maps provide insight into the economic forces that shaped the region, particularly in towns such as Timmins and Wawa. Both communities emerged in response to mining booms and were heavily influenced by the availability of natural resources and the construction of supporting infrastructure such as railways and roads. Figures 5 and 6 do not show many changes in regard to roads and railways indicating that the area remained stable. Both maps also show the small settlements along the rail lines with each name marked next to a circle.

Timmins population grew steadily through the mid-20th century as gold and base metal mining expanded, supported by significant investment in transportation infrastructure. By 1975, the population had peaked at approximately 48,500. However, by 2000, the population had declined slightly to around 46,470. This decline reflects broader economic trends, including the automation of mining processes, the depletion of high-grade ore bodies, and increased global competition. Despite its early growth and regional importance, Timmins remained heavily reliant on the mining sector, with limited success in diversifying its economic base (Cityfacts, 2025).

Wawa followed a similar trajectory, though on a smaller scale. In 1960, Wawa and Sault Ste. Marie were connected via Highway 17, while Highway 101 also connected Wawa to the City of Timmins, helping to boost tourism to the area as part of the Trans-Canada Highway system (Municipality of Wawa, 2021). By 1975, the town's population had reached approximately 3,339, but like Timmins, it experienced a gradual decline, falling to around 3,253 by 2000. Wawa's geographic isolation and dependence on a single industry limited its long-term urban and economic development (Cityfacts, 2025). The comparison of Timmins and Wawa highlights the boom-and-bust nature of resource-based economies in northern Ontario. The historical mapping clearly demonstrates how industrial activity shaped settlement patterns and infrastructure.

The Town of Chapleau

The Township of Chapleau was founded in 1885 by the CP Railway with the settlement founded on the Chapleau River (today called the Kebsquasheshing River) to serve as a divisional point for the new railway housing maintenance and offices for members of the railway company (Crichton, 1975: 11, 132-133). The railway opened the area to exploitation, resulting in the closure of a number of Hudson's Bay Company trading posts and the arrival of new lumber companies to exploit the untouched old-growth forests. The first sawmill was established in 1899 in the settlement of Chapleau,

with mills emerging in the early 20th century in the town and the surrounding area (Crichton, 1975: 26-27). Several lumber companies did not process the logs in the area, instead transporting them by water or sleigh (depending on the season) to Chapleau where it was loaded onto trains to be shipped to other mills (Crichton, 1975: 26). The growth of Chapleau with the lumber and railway industries saw the settlement incorporated in 1901 as the Township of Chapleau (Evans, 2001). The town was named after Sir Joseph-Adolphe Chapleau, a member of the government of Sir John A. Macdonald as well as the Premier of Quebec (Crichton, 1975: 9).

In 1908, the Canadian Government established a new agency in Chapleau for First Nations living in the area (Crichton, 1975: 83). The Hudson's Bay Company had opened a fur trade and store in Chapleau in 1887 to connect itself with the new railway. The post remained operational until 1892 (Archives of Manitoba). The movement of the Hudson's Bay Company and the development of new economic opportunities drew several First Nations communities to Chapleau as part the growth of the settlement. With furs still a lucrative business, new fur trade posts opened in Chapleau under James Austin, a lumber company owner, who hired William McLeod, a former Hudson's Bay Company and CP Railway employee, to run his fur posts in 1900 (Crighton, 1975: 154). McLeod wrote a report to the Ontario Government in 1923 outlining concerns with fur trapping and game hunting in northern Ontario with a series of recommendations to help solve the decline in furs (Crighton, 1975: 155-156). The most significant result of his work was the establishment of the Chapleau Game Preserve north of the settlement in 1925. The Game Preserve was designed to protect animals prized in the fur trade to allow them space to breed free of trapping (Calverley, 2009). While protecting animal population numbers, the creation of the Game Preserve restricted the hunting, trapping, and fishing rights of Indigenous Communities (Calverley, 2009). A Residential School was opened in 1908 in Chapleau, operating until 1950 in two (2) separate locations (Crichton, 1975: 84-85). The large Indigenous populations that developed around Chapleau saw the development of reservations including Chapleau Cree Fox Lake (Chapleau Cree First Nation), Chapleau 74 and 74A (Chapleau Ojibwe), Chapleau 61 (Michipicoten), Chapleau 61A (Chapleau Ojibwe), Chapleau 75 (Chapleau Cree First Nation), and Duck Lake 76B (Brunswick House).

The town developed modern amenities in the early 20th century with electricity arriving in 1905 from a local sawmill, water system in 1910, hospital in 1914, town hall in 1914, and fire hall in 1915 (Evans, 2001). In 1929, the Township of Chapleau was promised a road to connect it to Highway 17, which was not completed until 1950, providing the first ground access to the settlement besides the railway (Crichton, 1975: 20-21). Later developments included the construction of Highway 101 east to Timmins in 1961 and west to Wawa in 1964 (Crichton, 1975: 22). Declines in the lumber industry has seen the Township of Chapleau decline from a high of approximately 5,000 residents to approximately 2,100 residents in the early 21st century (Bray, 2012).

Town of Foleyet

The Town of Foleyet was created around 1912 as a divisional point on the Canadian Nation Railway. Timothy Foley was a contractor on the railway and Sir David Mann, a railway builder, decided to name the train station after Timothy. The story of the town's name is claimed to come from the fact that there was already another settlement named Foley so it was claimed that Mann said, "I'll name that place Foley yet!" and the name stuck. In 2010 the town had a population of 381 (Scott 2010).

1.3 Archaeological Context

1.3.1 Natural Environment

Historically, glacial Lake Agassiz encompassed the modern Lake Winnipeg, Lake Winnipegosis, and Lake Manitoba basins approximately 11,700 years ago (Teller 1985, 1995). It covered much of the province of Manitoba and northwestern Ontario. As the glaciers retreated, isostatic rebound resulted in a severely fluctuating water plane, creating relic shorelines throughout the province discussed as phases of the lake (i.e., Lockhart, Moorhead, Emerson, Nipigon, and Ojibway) (Teller 1985, 1995). Between 9,300 and 8,000 B.P. Lake Agassiz began shifting northward as water drained through an outlet in northwestern Ontario that allowed overflow into the Lake Nipigon and Lake Superior basins. This exposed the eastern half of Manitoba and northwestern Ontario, east of the Lake Winnipeg basin by 8,500 years ago.

The glacial lake levels of all the early Great Lakes are complex and inter-related, each affecting the other in various ways as ice retreated and melted. The lake levels rose and fell accordingly thereby creating the deposits observed

within the existing topography. These lake fluctuations resulted in the creation of moraines and beach ridges that became attractive to Paleo peoples. The study area would have been under the Laurentian ice sheet until the glacier receded. After the recession of the ice sheet, Lake Barlow and Lake Ojibway would have covered a substantial portion of northern Ontario and northwestern Quebec. By approximately 7,700 years ago, water levels had dropped dramatically as the breakup of ice led to catastrophic drainage north into the Tyrell Sea, which would form modern day Hudson's Bay (Teller 1985, 1995).

The retreat of the glaciers also allowed for spruce-dominated boreal forests to move quickly north, occupying the once open tundra (Hinshelwood 1990; Phillips 1993). By 10,000 years ago, the closed spruce forest gave way to the rapid introduction of jack pine and white birch because of the increasingly warm, dry, and windy environment (Hypsithermal) (Wright 1974). In general, where soils are present within the vicinity of the study area, they are simply classed as "organic." The majority of the study area consists of bedrock (**Figure 7**).

These environmental characteristics would have provided an ideal environment for both temporary and permanent settlement throughout the pre- and post -contact periods. The water sources and navigable waterways would have served as important pre-and post-contact transportation routes as well as sources of potable water and riverine resources, especially abundant fish resources.

The single most important environmental feature necessary for extended human occupation is potable water. As such, proximity to water is regarded as a useful index for the determination of potential for the presence of archaeological resources. The study area contains major waterways including the Michipicoten River, Ivanhoe River and Lake, the Groundhog River, and the Mattagami River, along with other tributaries and lakes. In general, the area around the study area is characterized by numerous lakes, tributaries, creeks, streams, and wetlands.

Ivanhoe Lake spans 25 km in the Unorganized North Part of the Sudbury District and flows into the Ivanhoe River in the James Bay drainage system, approximately eight (8) km southwest of Foleyet (Natural Resources Canada, 2011a) Ivanhoe Lake is known as *Pishkanogami* in the Anishinaabe language and was once the site of Pishkanogami Post, a Hudson's Bay trading site. Renamed Ivanhoe Lake in 1960, the area preserves a boreal forest that's known as 'Songbird Nursery' since a variety of bird species can be observed throughout the forest (Neufedlt, 2022).

1.3.2 Reports with Relevant Background Information

To inform the current Stage 1 AA and further establish the archaeological context of the study area, a search of the MCM's Register of Archaeological Reports was completed to determine if any previous archeological work has been completed within the current Stage 1 study areas for the proposed alternative routes and substation study area, or within 50 m of their boundaries. **Table 2** lists reports regarding previous archaeological work relevant to the study area; these are illustrated in **Figure 8**.

Table 2. Archaeological Reports with Relevant Background Information

Year	Title	Author	PIF Number	Proximity to Route Segment
1988	*N/A (ClId-2**)**	John Pollock	N/A	Route A1
2001	*No Title/Report (DbHp-4 Ivanhoe Lake Site)	William Finlayson	N/A	Route B1 Route B3
2002	*DbHp-2, 2002: Ivanhoe Lake Hudson's Bay Co. Outpost	John Pollock and William Finlayson	N/A	Route B1 Route B3
2014	Stage 1 Archaeological Assessment New East West Tie Transmission Project Districts of Thunder Bay and Algoma	Archaeology Inc.	P027-0245-2014	Insufficient Data
2015a	Stage 1 and 2 Archaeological Resource Assessment of Sections of Highway 101 from 16.9 km West of the Junction of Highway 144 Westerly 31 km. Located in Keefer Township, District of Cochrane; Hillary Township, District of	Woodland Heritage Northeast Limited	P208-0076-2013	Route C1 Route C2

Year	Title	Author	PIF Number	Proximity to Route Segment
	Timiskaming; and Sewell and Reeves Townships, District of Sudbury, (all townships unsurveyed), Ontario. GWP 5056-05-00			
2015b	Stage 1 and 2 Archaeological Resourcse Assessment of Severn Culverts: The Trap Creek Culvert in Chappise Township, The Poulin Creek Culvert in Daoust Township, The Five Mile Creek and Vincent Creek Culverts in Reaney Township, and The Burying Creek Culvert in Langlois Township (All Unsurveyed), in The Sudbury District, and The Philips Creek Culvert in Brigland Township and The Shapsand River Tributary Culvert in Rioux Township (Both Unsurveyed), in The Algoma District. GWP 5222-05-00.	Woodland Heritage Northeast Limited	P208-0118-2015, P208-0119-2015, P208-0121-2015	Route B1 Route B2 Route B3
2017	Stage 1 & 2 Archaeological Assessments for the Detail Design Study for the Big Pine Lake Culvert Replacement (Site 46-327c; GWP 5125-12-00), Highway 101, Geographic Township of Peters, now Chapleau Township, Sudbury District	Past Recovery Archaeological Services Inc.	P111-0039-2016	Route A1 Route A2
2018	Stage 2 Property Survey: Proposed Wawa TS Expansion, Anjigami, Geographic Township of Nebonaionquet (A.C.R.), District of Algoma, Unorganized, North Part	The Central Archaeology Group Inc.	P248-0299-2017	Route A1 Route A2 Substation Study Area
2018	Stage 1 Archaeological Resource Assessment of the Nat River Bridge on Highway 101, in Reeves Township, District of Sudbury, and the Sand River Bridge on Highway 17, in Goodwillie Township, District of Algoma, Ontario G.W.P. 5180-16-00 (Nat River Bridge) G.W.P. 5376-11-00 (Sand River Bridge)	Woodland Heritage Northeast Limited	P208-0165-2018	Route C1 Route C2
2020a	Stage 1 Archaeological Assessment, MTO Aggregate Site – I07-013 (Ivanhoe Lake #013), Foleyet Township, District of Sudbury, Province of Ontario	WSP	P476-0029-2020	Route B1 Route B3
2020b	Stage 1 Archaeological Assessment, MTO Aggregate Site – F14-009 (Foleyet #009, Foleyet Township, District of Sudbury, Province of Ontario	WSP	P476-0031-2020	Route B1 Route B3
2020	Stage 2 Archaeological Resource Assessment of the Nat River Bridge on Highway 101, in Reeves Township, District of Sudbury, Ontario G.W.P. 5180-16-00	Woodland Heritage Northeast Limited by AECOM	P208-0208-2019	Route C1 Route C2
2021	Stage 1-2 Archaeological Assessment Road Weather Information System Upgrades – Northern Region, District of Rainy River, City of	Archaeological Services Inc (ASI)	P383-0224-2020	Route B1 Route B2 Route B3

Year	Title	Author	PIF Number	Proximity to Route Segment
	Thunder Bay, District of Thunder Bay, District of Cochrane, District of Sudbury, Town of Bruce Mines, District of Algoma, Municipality of Killarney, District of Sudbury, City of North Bay, District of Nipissing, District of Parry Sound, Ontario			
2022	Stage 1 Archaeological Assessment of the West Cache Project Ogden, Bristol and Godfrey Townships City of Timmins District of Cochrane P387-0031-2020	Horizon Archaeology Inc.	P387-0031-2020	Route C1 Route C2
2024	Stage 1 Archaeological Assessment Wood Pole Replacement Program 2024: Sault Ste. Marie Circuit (Various Lots and Concessions, Geographical Townships of Wells, Parkinson, Gladstone, Patton, Cobden, Striker, Long, Thompson, Nebonaionquet, Maness, Michano, Pawis, Quill, Recollet, Cosens, Peters, Gilliland, Hoey, Caouette, and Chapleau) Municipality of Huron Shores, Town of Blind River, Township of Chapleau, Districts of Algoma and Sudbury	ASI	P1066-0364-2023	Route A1 Route A2 Substation Study Area
2025a	Stage 1 Archaeological Assessment Rehabilitation of Highways 101 and 547 GWP 5210-18-00 (Geographical Townships of Esquega Algoma Central Railway, Lastheels, and Maness Algoma Central Railway) District of Algoma	ASI	P1066-0293-2022	Route A1 Substation Study Area
2025b	Stage 1-2 Archaeological Assessment Wood Pole Replacement Program 2024: Sault Ste. Maire Circuit, (Geographical Townships of Awenge, Cobden, Long, Peters and Patton) City of Sault Ste. Marie, Districts of Algoma and Sudbury	ASI	P1066-0375-2023, P1066-0438-2025	Route A1 Route A2

**No reporting or mapping was accessible through the MCM*

Between 2001 and 2004, archaeologist William D. Finlayson conducted surveys and limited excavations at DbHp-2 and DbHp-4 located in the Geographical Township of Ivanhoe, near Ivanhoe Lake in northeastern Ontario. These investigations were part of Finlayson's post-retirement research into HBC posts in the region. The work focused on documenting the material remains of a former HBC outpost and its associated habitation areas. Site DbHp-2 included structural depressions and a range of fur trade-era artifacts and DbHp-4 yielded fire-cracked rock (FCR) and lithic artifacts indicative of earlier Indigenous occupation. Available Site Records in the MCM Pastportal are detailed in Section 1.3.3, below. Due to the lack of georeferenced data available in the MCM Pastportal, these assessments are not depicted on **Figure 8**. These assessments surveyed portions of the study area within Route B1.

P027-0245-2014, Archaeology Inc. (2014)

In 2014, Scarlett Janusas of Archaeology Inc. was retained by NextBridge Infrastructure L.P. and Dillon Consulting Limited to conduct a Stage 1 AA for the New East West Tie Transmission Project, for a 57,602-ha study area along a 400 km corridor between Thunder Bay and Wawa, Ontario. Using LiDAR, aerial imagery, and topographic maps in lieu of field inspection due to the area's size and remoteness, the assessment identified 30.48% of the study area as having archaeological potential, primarily near waterways, historic routes, and known sites. The remaining area was deemed to have low or no potential. The assessment recommended that Stage 2 AA be conducted in all areas identified as

having archaeological potential, once final tower and infrastructure locations were confirmed. Due to the lack of georeferenced data for the LiDAR mapping available in the MCM Pastportal, this assessment is not depicted on **Figure 8**. This assessment preceded the Stage 2 AA (P248-0299-2017) undertaken by The Central Archaeology Group Inc., the area covered for the Stage 2 AA encompasses a portion of this Stage 1 AA.

P208-0076-2013, Woodland Heritage Northeast Limited (2015a)

In 2013, Woodland Heritage Northeast Limited was retained by AECOMto conduct a Stage 1 and 2 AA in advance of proposed rehabilitation work at eight (8) water crossings along a section of Highway 101, extending approximately 31 km west from a point 16.9 km west of the Highway 144 junction. The project area spans Keefer Township (District of Cochrane), Hillary Township (District of Timiskaming), and Sewell and Reeves Townships (District of Sudbury), and falls under Group Work Project (GWP) 5056-05-00. The assessments focused on evaluating archaeological potential within the existing highway right-of-way, specifically at the eight (8) culvert and drainage feature locations. Field investigations determined that the study areas had been previously disturbed by highway construction and maintenance activities, and several crossings were located in areas of permanently saturated soils. As no areas of archaeological potential were identified and no archaeological resources were encountered, it was concluded that the proposed rehabilitation work would not impact any previously unknown archaeological sites. Accordingly, no further archaeological assessment is recommended. This assessment surveyed portions of the current study area within Routes C1 and C2 (**Figure 8-11).**

P208-0118-2015, P208-0119-2015, P208-0121-2015, Woodland Heritage Northeast Limited (2015b)

In 2015, Woodland Heritage Northeast Limited was retained by AECOM to conduct a Stage 1 and 2 AA on seven (7) culverts along Highway 129. Five (5) of the culverts are located on the north part of Highway 129 – the Trap Creek Culvert in Chappise Township, the Poulin Creek Culvert in Daoust Township, the Five Mile Creek and Vincent Creek Culverts in Reaney Township, and the Burying Creek Culvert in Langlois Township, in the Sudbury District. Two culverts are located on the south part of Highway 129 – the Philips Creek Culvert in Brigland Township and the Sharpsand River Tributary Culvert in Rioux Township, in the Algoma District. Their assessment included visual inspection of all the culverts to evaluate archaeological potential. Their visual inspection concluded that only the Sharpsand River Tributary Culvert contained archaeological potential. The Sharpsand River Tributary Culvert was subject to Stage 2 test pit assessment, and no archaeological resources were found. As no archaeological resources were encountered, it was concluded that the proposed work would not impact any previously unknown archaeological sites. Accordingly, no further archaeological assessment was recommended. This assessment surveyed portions of the current study area within Routes B1, B2 an B3 under P208-0118-2015 (**Figure 8-9**). The remaining work completed under the additional PIF's is located outside of the current study area.

P111-0039-2016, Past Recovery Archaeological Services Inc. (2017)

In 2016, Past Recovery Archaeological Services Inc. was retained by McIntosh Perry Consulting Engineers Ltd., on behalf of the Ontario Ministry of Transportation (MTO), to conduct a Stage 1 and 2AA as part of the Detail Design Study for the replacement of the Big Pine Lake culvert on Highway 101 (MTO Site Code 46-327C), in the Geographic Township of Peters (now part of the Township of Chapleau), District of Sudbury. The study area, defined as a 55-m buffer around the culvert site and confined to the existing Highway 101 right-of-way, totalled approximately 0.5 ha. The Stage 1 assessment identified archaeological potential associated with the watercourse connecting Big Pine Lake to the Grazing River. A Stage 2 test pit survey was conducted on November 9, 2016, at five (5) metre intervals across undisturbed portions of the study area. No archaeological resources were encountered. As a result, no further archaeological assessment is recommended for the defined study area. This assessment surveyed portions of the current study area within Routes A1 and A2 (**Figure 8-6)**.

P248-0299-2017, The Central Archaeology Group Inc. (2018)

In 2017, The Central Archaeology Group Inc. (CAGI) was retained by Hydro One Networks Inc. to conduct a Stage 2 archaeological property survey in advance of the proposed Wawa Transformer Station (TS) Expansion in the Unorganized North Part of Algoma District. This assessment followed recommendations made by Scarlett Janusas of Archaeology Inc. in 2014 (P027-0245-2014), which identified areas of archaeological potential requiring Stage 2 testing prior to development. The Stage 2 survey was conducted in accordance with the *Standards and Guidelines for*

Consultant Archaeologists, using test pit survey at five (5) m intervals within 50 m of features of archaeological potential and 10 m intervals between 50 and 150 m, with visual inspection of exposed bedrock areas. No archaeological materials or culturally significant features were identified during the investigation. Engagement with Michipicoten First Nation was conducted directly by Hydro One's Senior Manager of Indigenous Relations. Based on the results, CAGI recommended that the project area be cleared of archaeological concern. This assessment surveyed portions of the study area within the substation study area (**Figure 8-1***).*

P208-0165-2018, Woodland Heritage Northeast Limited (2019)

In 2018, Woodland Heritage Northeast Limited was retained by AECOM to conduct a Stage 1 AA in advance of proposed bridge replacement projects at the Nat River on Highway 101 in Reeves Township (GWP 5180-16-00) and the Sand River on Highway 17 in Goodwillie Township (GWP 5376-11-00), located in the Sudbury and Algoma Districts, respectively. The assessment evaluated lands within the MTO right-of-way, extending 50 m from the Nat River and 150 m from the Sand River. Field inspection determined that most of the Nat River study area was either disturbed or permanently saturated, with two (2) areas of archaeological potential identified on the northeast and northwest sides of the crossing. At the Sand River, while some areas showed evidence of past disturbance, undisturbed portions were identified as having archaeological potential. As a result, Stage 2 AA are recommended for both locations. This assessment surveyed portions of the current study area within Routes C1 and C2 (**Figure 8-10**).

P208-0208-2019, Woodland Heritage Northeast Limited (2019)

Subsequent to the previous Stage 1 assessment discussed above, in 2019, Woodland Heritage Northeast Limited was retained by AECOM to conduct the Stage 2 AA in advance of the proposed replacement of the Nat River bridge on Highway 101 in Reeves Township, Sudbury District, Ontario (G.W.P. 5180-16-00). The assessment followed the identification of two (2) areas of archaeological potential during the prior Stage 1 assessment and involved a test pit survey. No archaeological resources were encountered during the Stage 2 test pit survey. As a result, no further archaeological assessment was recommended prior to the commencement of bridge replacement activities within the defined study area. This assessment surveyed portions of the current study area within Routes C1 and C2(**Figure 8-11**).

P383-0224-2020, Archaeological Services Inc (2021)

In 2020, Archaeological Services Inc (ASI) was retained by IBI Group to conduct a Stage 1 and 2 AA as part of the Road Weather Information System Upgrades in Northern Ontario for the MTO. This project involved the construction of eight (8) additional weather stations to in-fill gaps in the current network. Their assessment involved the visual inspection of 13 areas to be affected by the construction. Their visual inspection concluded that only Site 13 retained archaeological potential and it was subject to Stage 2 test pit assessment. No archaeological resources were recovered during the Stage 2 and all 13 areas were cleared of further archaeological concerns. The assessment surveyed portions of the current study are within Route B1, B2 and B3 (**Figure 8-9**).

P476-0029-2020, WSP (2020a)

In 2020 WSP was retained by the MTO, Northeastern Region to conduct a Stage 1 AA of the I07-013 (Ivanhoe Lake #013) aggregate site, which is located in Foleyet Township, District of Sudbury, Ontario. The assessment was triggered by the *Aggregate Resources Act* to ensure the proponent met the requirements identified in the *Ontario Heritage Act*. This assessment was carried out for the existing aggregate property including 12 ha and 31 ha of permitted lands proposed for the expansion. The extent of the lands to be assessed was provided by the proponent. A desktop study and a property inspection were completed; based on the report findings no further archaeological assessment was recommended. This assessment surveyed portions of the current study area within Routes B1 and B3 (**Figure 8-10)**.

P476-0031-2020, WSP (2020b)

In 2020 WSP was retained by the MTO, Northeastern Region to conduct a Stage 1 AA of the F14-009 (Foleyet #009) aggregate site, which is located in Foleyet Township, District of Sudbury, Ontario. The assessment was triggered by the *Aggregate Resources Act* to ensure the proponent met the requirements identified in the *Ontario Heritage Act*. This assessment was carried out for the existing aggregate property including 20 ha and 43 ha of permitted lands proposed for the expansion. The extent of the lands to be assessed was provided by the proponent. A desktop study and a

property inspection were completed; based on the report findings no further archaeological assessment was recommended. This assessment surveyed portions of the study area within Routes B1 and B3 (**Figure 8-10)**.

P387-0031-2020, Horizon Archaeology Inc. (2022)

In 2020, Horizon Archaeology Inc. was retained by Story Environmental Inc. to conduct a Stage 1 AA of the Galleon Mines project area, located in Ogden, Bristol, and Godfrey Townships within the City of Timmins, District of Cochrane. The assessment was triggered under the *Mining Act*. A Stage 1 AA site inspection was carried out on November 7, 2020, focusing on areas accessible from legal roadways. Due to the inaccessibility of much of the project area, the remainder was assessed under Section 1.3.4 of the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011a), which allows for alternative strategies in remote or inaccessible terrain. Based on background research and the results of the inspection, it was determined that all lands within 50 m of modern water sources exhibit archaeological potential and should be subject to Stage 2 test pit survey. All other areas beyond 50 m from water sources were considered to have low archaeological potential and are recommended as cleared of further archaeological concern. This assessment surveyed portions of the study area within Routes C1 and C2 (**Figure 8-14 and Figured 8-15)**.

P1066-0364-2023, ASI (2024)

In 2023, ASI was retained by Hydro One Networks Inc. to conduct a Stage 1 archaeological desktop screening for the Wood Pole Replacement Program across five (5) transmission line sections in the Districts of Algoma and Sudbury. The study area consisted of a 30 m wide corridor along the following lines: Algoma 230 Junction (JCT) x Mississagi TS, Striker Distribution Station x Algoma TS, Sowerby JCT x Cobden JCT, Wawa TS x Chapleau JCT, and Wallace Sub Circuit Terminal Station (CTS) x Flakeboard CTS. The assessment identified large portions of the study area as having high archaeological potential, particularly within 50 m of modern water sources and within 150 m of other indicators such as well-drained soils, historic transportation routes, and glacial shorelines. These areas would require Stage 2 test pit survey at five (5) - or 1 0-m intervals, depending on the nature of the potential. Additional areas were identified for pedestrian survey due to recent cultivation. Areas of low potential—due to steep slopes, saturated soils, previous disturbance, or remoteness—were identified but retain archaeological potential until confirmed through property inspection. Areas of deep and extensive disturbance, including road and rail corridors, were assessed as not requiring further work. In addition to the above recommendations, ASI also recommended that if impacts were proposed within the high-water mark of waterbodies, marine archaeological potential must be evaluated separately using the MCM's 2016 checklist. Finally, should the project footprint expand beyond the current study area, additional Stage 1 assessment would be required. This assessment surveyed portions of the study area within the substation study area, Routes A1 and A2 (**Figure 8-1 to 8-8)**.

P1066-0293-2022, ASI (2025a)

In 2022, ASI was retained by McIntosh Perry, on behalf of the MTO, to complete a Stage 1 AA for the Highway 101 and Highway 547 rehabilitation project (GWP 5210-18-00) in Esquega, Lastheels, and Maness Townships. The project involved paving, frost heave treatment, and non-structural culvert replacements along approximately 20.6 km of highway. The Stage 1 background study identified seven (7) previously registered archaeological sites within one (1) km of the study area, one of which is CIId-2 and discussed in Section 1.3.3 below; it also determined that several portions of the corridor exhibited high archaeological potential, particularly within 50 m of modern water sources such as McVeigh Creek, Hawk River, and the Michipicoten River. No property inspection was conducted during Stage 1; therefore, visual inspection was recommended during Stage 2 to confirm the extent of existing disturbance and to identify any additional indicators of archaeological potential. Areas within existing roadbeds and paved surfaces were assessed as having low archaeological potential. The report also recommended that if impacts to riverbeds were proposed, marine archaeological potential must be evaluated separately using the MCM's 2016 checklist. Finally, any proposed work extending beyond the current study area would require additional Stage 1 assessment. This assessment surveyed areas within the substation study area portion of the study area (**Figure 8-1, 8-2)**.

P1066-0375-2023, P1066-0438-2025, ASI (2025b)

In 2023, ASI conducted a Stage 1-2 AA for the Hydro One Wood Pole Replacement Program 2024 Sault Ste. Marie Circuit, in accordance with the *Ontario Heritage Act* and the *Standards and Guidelines for Consultant Archaeologists.* Background research identified areas of archaeological potential within 50 m of water sources and areas requiring visual inspection to confirm disturbance or wetland conditions. Fieldwork was carried out on October 10 - 11 and

November 8, 2023, and included test pit surveys and property inspections. Approximately 1.59% of the study area (0.01 ha) was subject to test pit survey at five (5) m intervals, with no archaeological resources encountered. Additional areas were assessed and excluded from Stage 2 testing due to confirmed deep disturbance (10.79%), steep slopes (3.73%), exposed bedrock (46.01%), low archaeological potential due to distance from features (10.81%), and permanently wet conditions (17.58%). Three (3) structures (6.76%) were inaccessible but exhibited archaeological potential would require Stage 2 test pit survey if not replaced "like-for-like." Based on these findings, no further archaeological assessment was recommended for the majority of the study area, with the exception of the three (3) identified structures pending future ground disturbance. This assessment surveyed portions of the study area within Routes A1 and A2 (**Figure 8-6).**

Cultural Heritage Existing Conditions Wawa Timmins Power Line Project Class EA

In 2025 AECOM completed the Cultural Heritage Existing Conditions Wawa Timmins Power Line Project Class EA report for Hydro One in support the Class EA for Transmission Facilities for the Project. Their assessment aimed to identify known (i.e., listed and/or designated) and potential built heritage resources (BHRs) and cultural heritage landscapes (CHLs) located within the Study Area. Each BHR and CHL were each assigned a specific number as an identifier. Their assessment included the same routes detailed as part of this Stage 1 AA but their overall study area was not the same as the one reported herein. The report concluded with a recommendation for the selection of Route A2; any of the Route Segments B1, B2, B3; and Route Segment C2. This configuration would ensure the lowest number of BHRs and CHLs to be potentially directly and/or indirectly impacted by the Project with seven (7) BHRs or CHLs. AECOM concluded that once Hydro One had selected a preferred route, a Preliminary Impact Assessment as well as any Cultural Heritage Evaluation Reports would be required should any of the BHRs or CHLs be directly impacted by development (AECOM 2025).

1.3.3 Registered Archaeological Sites

AECOM conducted a site data search of the MCM's OASD to determine if any registered archaeological sites are located within one (1) km of the study area. This search resulted in the identification of three (3) registered archaeological sites within one (1) km of the study area, one (1) of which falls within the study area boundaries, shown in **bold** in **Table 3**. Although not listed in the development status in the OASD, all three (3) sites are considered to retain cultural heritage value and interest (CHVI).

Table 3. Registered Archaeological Sites Within and Within 1 km of the Study Area

Borden #	Site Name	Cultural Affiliation	Site Type	Development Status	Proximity to Route Segment
Clld-2	**N/A**	**Pre-Contact Indigenous**	**Other - camp / campsite**	**N/A**	**Route A1**
DbHp-4	Ivanhoe Lake	Pre-Contact Indigenous and Euro-Canadian Historic	Other - camp / campsite	N/A	Route B1
DbHp-2	Ivanhoe Lake Hudson's Bay Co. Outpost	Pre-Contact Indigenous and Euro-Canadian Historic	N/A	N/A	Route B1

Clld-2, 1988

In 1988, the Clld-2 site was identified by licensee John Pollock. There is no mapping of this assessment available; however, some notes were available to review from MCM. Located on a flat terrace approximately two (2) m above the west bank of the Michipicoten River in the Geographical Township of Manesson, Algoma District, the site was identified in 2007. Six (6) large test pits (0.5–1 m in size) were excavated in a sand-gravel matrix with numerous large stones; only two (2) yielded cultural material. Artifacts recovered include one (1) FCR, six (6) FCR spalls, and approximately 20 fragments of burned and calcined bone, all found within a shallow cultural layer no deeper than 10 centimetres (cm). These findings suggest limited but significant past human activity at the site and further work was recommended. This site falls within the current study area boundaries.

DbHp-2, 2002: Ivanhoe Lake Hudson's Bay Co. Outpost

Originally assigned a Borden number by J. Pollock in 1974, site DbHp-2 was revisited and updated by W. Finlayson in 2002, although no formal site record form was submitted. Preliminary archaeological work included mapping and the excavation of a one (1) m x one (1) m test unit within cellar depressions associated with the former Pishkanogami Post, now Ivanhoe Lake (1960) Hudson's Bay trading site and HBC outpost. Site DbHp-2, located on the old shoreline of Ivanhoe Lake on the east side of a former channel of the Ivanhoe River, was investigated in 2002 by William Finlayson. Artifacts recovered reflect a strong fur trade component and include iron stove parts, axe heads, logging spikes, nails, metal cups and plates, glass fragments, porcelain, ceramics (including a partially reconstructed jug), faunal remains, and lithics. Field notes and maps from the Ivanhoe Provincial Park Survey provide additional contextual information for this and other nearby sites (Finlayson, 2018).

DbHp-4, 2001: Ivanhoe Lake Site

Site DbHp-4, located on the old shoreline of Ivanhoe Lake in northeastern Ontario, was identified during a 2001 surface survey and is interpreted as a possible pre-contact Indigenous campsite. The site lies within sandy soils in an area that was logged in the winter of 1999–2000 and replanted in the summer of 2000. Archaeological work included surface mapping and the excavation of a single one (1) m x one (1) m test unit. Cultural materials recovered include FCR from six (6) distinct surface locations, one (1) hammerstone, and one (1) quartzite pebble.

Information concerning specific site locations is protected by provincial policy and is not fully subject to the *Freedom of Information and Protection of Privacy Act* (FIPPA). The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to all media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MCM will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

1.3.4 Existing Conditions

The study area is situated within the unorganized territories of the Districts of Algoma, Sudbury, Cochrane and Temiskaming, and in the City of Timmins, passing through the Geographic Townships of Biggs, Bordon, Bristol, Caouette, Carscallen, Carty, Chapleau, Chappise, Chewett, Cosens, Crockett, Deloro, Denton, Evans, Foleyet, Gallagher, Garney, Gilliland, Hellyer, Hoey, Ivanhoe, Keefer, Keith, Lackner, Lastheels, Maness, McGee, McNaught, Michano, Miskokomon, Mountjoy, Muskego, Nebonaionquet, Ogden, Pawis, Peters, Pinogami, Price, Quill, Recollet, Reeves, Sandy, Sewell, Silk, and Tisdale. The landscape varies between mining and former mining landscape conditions in the City of Timmins and the undeveloped woodlots of rural northern Ontario. The existing conditions will be described in detail based on the location of each Route Segment listed below:

Route A1: Route Segment A1 is approximately 99 km in length and runs from the Wawa TS along an existing transmission corridor and Algoma Central Railway north, running parallel to the Michipicoten River. The route segment turns east after crossing Highway 101 and follows an existing corridor east, approximately parallel to Highway 101, crossing the highway in six (6) locations, until reaching the western boundary of the Township of Chapleau where it turns south off the existing corridor, into a new easement, through the Township of Chapleau. After passing through the Township of Chapleau, the route segment turns east to a convergent point with Routes B1, B2, and B3. Route Segment A1 runs along existing hydro corridors for approximately 88 km. Route Segment A1 travels through the unorganized territory of the District of Algoma, into the unorganized territory of the District of Sudbury and passes through the southwest corner of the Township of Chapleau. Route Segment A1 primarily passes through natural landscapes of woodlands, wetlands, and waterways including the Shoals Provincial Park, and the Windermere Goldie Lake Complex Conservation Reserve. Route Segment A1 crosses the Algoma Central Railway at three (3) locations

Route A2: Route Segment A2 is approximately 98 km in length and runs from the Wawa TS north along an existing transmission corridor and Algoma Central Railway before turning east, south of Highway 101 into a new easement, for approximately 13 km, before connecting with an existing corridor and running east, parallel to Highway 101, crossing Highway 101 five (5) times. After reaching the western boundary of the Township of Chapleau, Route Segment A2 turns south off the existing corridor into a new easement, through the Township of Chapleau before turning east to a convergent point with Route Segments B1, B2, and B3. Route Segment A2 runs along the existing hydro corridors for approximately 71 km. Route Segment A2 travels through the unorganized territory of the District of Algoma into the

unorganized territory of the District of Sudbury and through the southwest corner of the Township of Chapleau. Route Segment A2 primarily passes through natural landscapes of woodlands, wetlands, and waterways including the Shoals Provincial Park and the Windermere Goldie Lake Complex Conservation Reserve. Route Segment A2 crosses the Algoma Central Railway in three locations..

Route B1: Route Segment B1 is approximately 124 km in length and consists of a new easement along the entire length of the route segment. It begins at the convergence point with Route Segments A1 and A2, traveling south, west of the community of Devon, before turning east after crossing Highway 101, and crosses Highway 129. The route turns north after approximately 25 km to converge with Highway 101 and continues in a northeasterly direction parallel to the highway. The route crosses Highway 101 four (4) times, and Highway 129 once (1). South of the Village of Foleyet, the route travels east, away from Highway 101, crossing the Canadian National (CN) Railway, until it reconnects with Highway 101 in a southeastern trajectory to the intersection of Highway 101 and Regional Road 616 where it ends at the convergent point with Route Segments C1 and C2. The entirety of Route Segment B1 travels through the unorganized territory of the District of Sudbury. Route Segment B1 primarily passes through natural landscapes, crossing the Ivanhoe River north of Ivanhoe Lake Provincial Park. Route Segment B1 crosses the Canadian Pacific (CP) Railway once (1) and the CN Railway once (1).

Route B2: Route Segment B2 is approximately 117 km in length and will consist of a new easement along the entire length of the route. It begins at the convergence point with Route Segments A1 and A2, traveling south, west of the community of Devon, before turning east after crossing Highway 101, and crosses Highway 129. The route turns north after approximately 25 km to converge with Highway 101 and continues in a northeasterly direction parallel to the highway. It follows Highway 101 for approximately 23 km before turning east. The route crosses Highway 101 four (4) times and Highway 129 once (1). Route Segment B2 travels in a northeastern trajectory, crossing the CN Railway, ending at the convergent point with Route Segments C1 and C2. The entirety of Route Segment B2 travels through the unorganized territory of the District of Sudbury. Route Segment B2 primarily passes through natural landscapes, crossing the Ivanhoe River in Ivanhoe Lake Provincial Park. Route Segment B2 crosses the CP Railway once (1) and the CN Railway once (1).

Route B3: Route Segment B3 is approximately 111 km in length and will consist of a new easement along the entire length of the route. It begins at the convergence point with Route Segments A1 and A2, traveling south, west of the community of Devon, before turning east after crossing Highway 101, and crosses Highway 129. The route continues east for approximately 25 km, then turns north for approximately 6 km before turning east and steadily heads in a northeast direction for approximately 46 km, crossing the CN Railway west of the intersection of Highway 101 and Regional Road 616 where it ends at the convergent point with Route Segments C1 and C2. The route crosses Highway 101 two (2) times and Highway 129 once (1). The entirety of Route Segment B3 travels through the unorganized territory of the District of Sudbury. Route Segment B3 primarily passes through natural landscapes, crossing the Ivanhoe River in Ivanhoe Lake Provincial Park. Route B3 also crosses the CP Railway once (1) and the CN Railway once (1). .

Route C1: Route Segment C1 is approximately 85 km in length and runs in a new easement from the convergent point with Route Segments B1, B2, and B3 northeast, parallel to Highway 101 for approximately 25 km to an existing hydro corridor where it turns north, crossing Highway 101, and then northeast for approximately 43 km, taking a turn north, then east, and then back on the northeast trajectory at Boom Lake to avoid residential properties. The route crosses Highway 101 five (5) times. It turns southeast off the existing hydro corridor at the Mattagami River for approximately Six (6) km before turning east and then southeast to go south of the Village of Delnite until it reaches an existing hydro corridor. Route Segment C1 follows the existing hydro corridor north where it ends at the Porcupine TS. Route Segment C1 travels along approximately 36 km of existing hydro corridors. Route Segment C1 travels through the unorganized territory of the District of Sudbury, into the unorganized territory of the Districts of Timiskaming and Cochrane and then into the City of Timmins. Route Segment C1 primarily passes through natural landscapes including crossing the Ground Hog River in the Ground Hog River Waterway Provincial Park, the Vimy Lake Uplands Conservation Reserve, and the Tatachikapika River Plain Conservation Reserve, with the northern end of the route located in former mining landscapes in the City of Timmins. Route Segment C1 crosses the Mattagami River once (1)..

Route C2: Route Segment C2 is approximately 97 km in length and runs from the convergent point with Route Segments B1, B2, and B3 northeast along a new easement, parallel to Highway 101 for approximately 25 km to an existing hydro corridor where it turns north, crossing Highway 101, and then northeast for approximately 35 km. The route crosses Highway 101 five (5) times. It turns southeast off the existing corridor, just north of Timmins West Mine in a new easement, and travels southeast then east for approximately 21 km where it meets an existing hydro corridor

and turns north. It follows the existing hydro corridor north to its end at the Porcupine TS. Route Segment C2 travels along approximately 46 km of existing hydro corridors. Route Segment C2 travels through the unorganized territory of the District of Sudbury, into the Districts of Timiskaming and Cochrane and into the City of Timmins. Route Segment C2 primarily passes through natural landscapes including crossing the Ground Hog River in the Ground Hog River Waterway Provincial Park, the Vimy Lake Uplands Conservation Reserve, and the Tatachikapika River Plain Conservation Reserve, with the northern end of the route located in former mining landscapes in the City of Timmins. Route Segment C2 crosses the Mattagami River once (1).

Substation Study Area: At the western terminus is an approximately 7898 ha area encompassing the proposed substation location and Routes A1 and A2. The substation study area includes a stretch of Highway 101 through woodlands and wetlands, the southeast shoreline of Anjigami Lake, the northern half of Byron Lake, Lac de Zajac, a southeastern part of Whitefish Lake, and the Kinniwabi River.

2. Analysis and Conclusion

2.1 Determination of Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Criteria commonly used by the MCM to determine areas of archaeological potential are listed in Section 1.3.1 of *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011a).

Based on a review of the historical, environmental, and archaeological context of the study area, it has been determined that potential for the recovery of pre- and post-contact Indigenous and 19th century archaeological resources within the study area is high based on the presence of the following features:

- Proximity to previously identified archaeological sites within one (1) km (ClId-2, DbHp-2, and DbHp-4);
- Distance to various types of water sources (Michipicoten River, the Nebskwashi River, Borden Lake, Ivanhoe River and Lake, Groundhog River, Mattagami River, and numerous other named and unnamed lakes, rivers, tributaries, streams, creeks, and wetlands); and,
- Areas of early colonialist settlement and early transportation routes (Algoma Central Railway, Canadian Pacific Railway, Canadian National Railway, City of Timmins, and Early Fur Trading Posts).

Certain features indicate that archaeological potential has been removed, such as land that has been subject to extensive and intensive deep land alterations that have severely damaged the integrity of any archaeological resources. This includes landscaping that involves grading below the topsoil level, building footprints, quarrying and sewage and infrastructure development such as constructed roadways and buildings (Ontario Government 2011a).

2.2 Conclusions

AECOM's Stage 1 background study for Hydro One's Wawa Timmins Power Line Project indicated that the study area has moderate to high archaeological potential for pre- and post-contact Indigenous and 19th century settler resources based on the proximity to both past and modern watercourses, resource areas, proximity to registered archaeological sites, and areas of early colonial settlement. In accordance with Section 2.1.5 of the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011a), areas within 50 m of any sources of water, including historic water sources such as glacial shorelines, or other indicators of archaeological potential including registered archaeological sites, contain high archaeological potential. The conclusions on archaeological potential are described below for each Route Segment, summarized in **Table 4** and as shown in **Figure 9**.

Route A1: Approximately 99 km in length, beginning at the Wawa TS, running north for approximately nine (9) km, pivoting east parallel to Highway 101, continuing for 87 km to its eastern terminus. The overall study area for Route A1 is approximately 6,583 ha (16,266.9 acres(ac) in size. Based on analysis, approximately 3,844.4 ha (9,499.7 ac; 58.4%) is considered to have low archaeological potential, 979.1 ha (2,419.4 ac; 14.9%) retains high archaeological potential, 478.8 ha (1,183.1 ac, 7.3%) is sloped, and 330 ha (815.4ac; 5%) has been previously assessed. Approximately 950.8 ha (2,349.5 ac; 14.4%) of Route A1 represents watercourses or waterbodies.

Route A2: Approximately 98 km in length, beginning at the Wawa TS, following Route A1's path for approximately four (4) km then diverting east, running parallel to Route A1 for approximately 13 km until it intersects with Route A1, following A1 along the remainder of the route until its eastern terminus. The overall study area for Route A2 is approximately 6,542.1 ha (2,349.5 ac) in size. Based on analysis, approximately 3,798.4 ha (9,386.1 ac; 58.1%) is considered to have low archaeological potential, 946.7 ha (2,339.3 ac; 14.5%) retains high archaeological potential, 591.5 ha (1,461.6 ac, 9%) is slope, and 285.7 ha (706 ac; 4.4%) has been previously assessed. Approximately 919.9 ha (2,273.1 ac; 14.1%) of Route A2 represents watercourses or waterbodies.

Route B1: Approximately 124 km in length, begins west of Highway 101 north of Devon Lake, running south approximately seven (7) km, pivoting east approximately 25 km, pivoting north approximately 20 km until it intersects with Highway 101 running parallel to Highway 101 to its eastern terminus. The overall study area for Route B1 is approximately 8,477 ha (119,789.3 ac) in size. Based on analysis, approximately 4,632.4 ha (11,446.9 ac; 54.64%) is

considered to have low archaeological potential, 1,476.7 ha (3,649 ac; 17.4%) retains high archaeological potential, 41.8 ha (103 ac, 0.49%) is sloped, and 25.3 ha (62.5 ac; 0.30%) has been previously assessed. Approximately 2,300.8 ha (5,685.4 ac; 27.1%) of Route B1 represents watercourses or waterbodies.

Route B2: Approximately 117 km in length, Route B2 follows Route B1 for approximately 75 km, pivoting east across the Ivanhoe River approximately four (4) km, pivoting northeast for the remainder of the route to the eastern terminus. The overall study area for Route B2 is approximately 7,991.5 ha (19,747.4 ac) in size. Based on analysis, approximately 4,748.9 ha (11,734.8 ac; 59.4%) is considered to have low archaeological potential, 1,322.1 ha (3,267 ac; 68.1%) retains high archaeological potential, 77.2 ha (190.8 ac, 1%) is sloped, and 0.7 ha (1.7 ac, 0.01%) has been previously assessed. Approximately 1842.6 ha (4553.2 ac; 5.3%) of Route B2 represents watercourses or waterbodies.

Route B3: Approximately 111 km in length, Route B3 follows Route B1 for approximately 38 km, pivoting northeast for approximately 49 km and then following Route B2 for the remainder of the route to the eastern terminus. The overall study area for Route B3 is approximately 7,734.3 ha (19,111.9 ac) in size. Based on analysis, approximately 5,081.7 ha (12,557.2 ac; 65.7%) is considered to have low archaeological potential, 1,229 ha (3,036.9 ac; 15.9%) retains high archaeological potential, 104.9 ha (259.2 ac, 1.4%) is sloped, and 0.7 ha (1.7 ac; 0.01%) has been previously assessed. Approximately 1,318 ha (3,256.8 ac; 17%) of Route B3 represents watercourses or waterbodies.

Route C1: Approximately 85 km in length, Route C1 begins north of the intersection of Highway 101 and Regional Road 616, running northeast parallel to Highway 101 approximately 25 km, pivoting north for approximately two (2) km, pivoting northeast for approximately 43 km parallel to Highway 101, pivoting southeast for approximately two (2) km across the Mattagami River, pivoting east for approximately nine (9) km passing the Village of Delnite, pivoting north for the remainder of the route terminating at the Porcupine TS. The overall study area for Route C1 is approximately 5,769.1 ha (14,255.8 ac) in size. Based on analysis, approximately 3,881.4 ha (9,591.1 ac; 67.3%) is considered to have low archaeological potential, 708.7 ha (1,751.2 ac; 12.3%) retains high archaeological potential, 509.6 ha (1259.2 ac, 8.8%) is sloped and 509.6 ha (1,259.2 ac; 8.83%) has been previously assessed. Approximately 634.7 ha (1,568.4 ac; 11%) of Route C1 represents watercourses or waterbodies.

Route C2: Approximately 97 km in length, Route C2 follows Route C1 for approximately 60 km, pivoting southeast for approximately 12 km across the Mattagami River, pivoting east for approximately nine (9) km, pivoting north for the remainder of the route terminating at the Porcupine TS. The overall study area for Route C2 is approximately 6,545.5 ha (16,174.3 ac) in size. Based on analysis, approximately 4,469.5 ha (11,044.4 ac; 68.3%) is considered to have low archaeological potential, 982.9 ha (2,428.6 ac; 15%) retains high archaeological potential, 81.7 ha (201.9 ac, 1.2%) is sloped, and 79.4 ha (196.2 ac; 1.2%) has been previously assessed. Approximately 931.9 ha (196.2 ac; 14.2%) of Route C2 represents watercourses or waterbodies.

Substation Study Area: At the western terminus is an approximately 7,937.4 ha (19,515.9 ac) area encompassing the proposed substation study area and terminus of Routes A1 and A2. The substation study area includes a stretch of Highway 101 through woodlands and wetlands, the southeast shoreline of Anjigami Lake, the northern half of Byron Lake, Lac de Zajac, a southeastern part of Whitefish Lake, and the Kinniwabi River. Based on analysis, approximately 4,355.2 ha (10,761.9 ac; 54.9%) is considered to have low archaeological potential, 1,529.6 ha (3,779.7 ac, 19.3%) is sloped, 924.3 ha (2,284 ac; 11.7%) retains high archaeological potential, and 157.9 ha (390.2 ac; 2%) has been previously assessed. Approximately 970.3 ha (2,397.7 ac; 12.2%) of the substation study area represents watercourses or waterbodies.

Table 4. Archaeological Potential of Routes within Study Area

Route	Total Size (ha)	Low Potential Area (ha)	High Potential Area (ha)	Previously Assessed	Water(ha)	Sloped
A1	6,583	3,844.4	979.1	330	950.8	478.8
A2	6,542.1	3,798.4	946.7	285.7	919.9	591.5
B1	8,477	4,632.4	1,476.7	25.3	2,300.8	41.8
B2	7,991.5	4,748.9	1,322.1	0.7	1,842.6	77.2
B3	7,734.3	5,081.7	1,229	0.7	1318	104.9
C1	5,769.1	3,881.4	708.7	509.6	634.7	34.7

Route	Total Size (ha)	Low Potential Area (ha)	High Potential Area (ha)	Previously Assessed	Water(ha)	Sloped
C2	6,545.5	4,469.5	982.9	79.4	931.9	81.7
Substation Study Area	7,937.4	4,355.2	924.3	157.9	970.3	1,529.6

In addition to the above, the Clld-2 site falls within the study area boundary of one (1) of the proposed alternative routes. As it was found prior to the 2011 S*tandards and Guidelines for Consultant Archaeologists*, (Ontario Government 2011a), and as the CHVI of the site is unclear, it is recommended that an attempt should be made to relocate the site should it be subject to future impacts from the Project, and it should be subject to Stage 2 re-assessment to re-evaluate the site's CHVI to determine if the site requires further Stage 3 assessment.

3. Recommendations

AECOM's Stage 1 background study for the Project study areas has determined that the potential for the recovery of pre- and post-contact Indigenous and 19th century settler archaeological resources within the study areas is moderate to high. As such, the following recommendations are made:

1. All areas depicted green in **Figure 9** are considered to have low archaeological potential due to being sloped. Sloped areas were determined using topographic information. As a property inspection was not conducted as part of this assessment, areas of low archaeological potential within the preferred route will need to be confirmed and photo documented at the time of Stage 2 survey, as per Section 2.1.2 of the MCM's *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a). If the areas are determined to require Stage 2 survey upon visual inspection, then a test pit survey will be required and should be conducted in accordance with Section 2.1.5 of the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a).
2. All areas depicted red in **Figure 9** are considered to have high archaeological potential and recommended for Stage 2 AA. This assessment should take place in accordance with Section 2.1.5 of the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a). The Stage 2 survey should consist of a standard test pit survey at five (5) m intervals within 50 m of any features of archaeological potential, and standard test pit survey at 10 m intervals between 50 and 150 m from features of archaeological potential, including indicators of past water sources (e.g. former shorelines and glaciofluvial channels) and early historic transportation routes. Survey is not required beyond 150 m.
3. All areas depicted blue in **Figure 9** are understood to be waterbodies, watercourses and wetlands. These areas were determined using available mapping regarding waterbodies, watercourses and wetlands. For waterbodies and watercourses throughout the study area, it is recommended that a marine archaeological checklist be completed. This may result in a recommendation to complete a marine archaeological assessment by a licensed archaeologist in advance of any riverbed impacts within the study area.
4. Areas subject to previous assessments depicted in yellow in **Figure 9** have been previously assessed using methods in keeping with the 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a) and were cleared of further archaeological concerns, no further assessment is recommended
5. The ClId-2, is located within or within proximity to the study areas (Supplementary Documentation, **Figure 3**). As it was found prior to the 2011 *Standards and Guidelines for Consultant Archaeologists*, (Ontario Government 2011a), and as the CHVI of the site is unclear, it is recommended that an attempt should be made to relocate the site should it be subject to future impacts from the Project, and it should be subject to Stage 2 re-assessment to re-evaluate the site's CHVI to determine if the site requires further Stage 3 assessment. The Stage 2 re-assessment should include, at minimum, standard test pit survey at 5 m intervals, and if archaeological resources are found, intensified survey coverage as per Section 2.1.3, Standard 2 (Government of Ontario 2011a).

Should additional land outside of the current study areas be included as part of the Project, the standard requirements for archaeological assessments to be conducted prior to land disturbance remain in place. Additional archaeological assessment(s) must be conducted by a licensed archaeologist and follow the requirements set out in the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a).

The MCM is asked to accept this report into the Ontario Public Register of Archaeological Reports, thereby concurring with the recommendations presented herein. **As further archaeological assessment is recommended, archaeological concerns for the Hydro One Networks Inc. Wawa Timmins Power Line Project study areas, within the Districts of Algoma, Sudbury, Cochrane and Temiskaming, Various Geographic Townships, located near the Municipality of Wawa, the Township of Chapleau, and the City of Timmins, Ontario, have not been fully addressed.**

Please note that this archaeological assessment report has been written to meet the requirements of the MCM's *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a); however, properties that are subject to archaeological assessment are not considered cleared for ground disturbance activities until the associated report has been reviewed and accepted by the MCM. In order to maintain compliance with the MCM and the *Ontario*

Heritage Act (Government of Ontario 1990b), no ground disturbing activities are to occur until the proponent and approval authority receive a formal letter from the MCM stating that the recommendations provided herein are compliant and that the report has been accepted into the Ontario Public Register of Archaeological Reports.

4. Advice on Compliance with Legislation

This report is submitted to the Ontario Ministry of Citizenship and Multiculturalism as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with Standards and Guidelines that are issued by the Ministry, and that the archaeological fieldwork and report recommendations ensure the conservation, protection, and preservation of the cultural heritage of Ontario.

When all matters relating to archaeological sites within the Project Area of a development proposal have been addressed to the satisfaction of the Ministry of Citizenship and Multiculturalism, a letter will be issued by the Ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed fieldwork on the site, submitted a report to the Ministry stating that the site has no further cultural heritage value or interest, and the report has been filed in the *Ontario Public Register of Archaeology Reports* referred to in Section 65.1 of the *Ontario Heritage Act*.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act*.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license.

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ontario Ministry of Government and Consumer Services.

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6. Figures

All figures pertaining to the Stage 1 archaeological assessment are provided within the following pages.

Canadian National Railway
Canadian Pacific Railway
Flying Post 73
CITY OF TIMMINS
Timmins
MISSINAIBI
Missanabie Cree First Nation
Missanabie 62
OBATANGA
TOWNSHIP OF WAWA
CHAPLEAU-NEMEGOSENDA RIVERS
GROUNDHOG RIVER WATERWAY
DANA-JOWSEY LAKES
IVANHOE RIVER CLAY PLAIN
IVANHOE LAKE
DISTRICT OF SUDBURY
Chapleau Cree Fox Lake
POTHOLES
THE SHOALS
TOWNSHIP OF CHAPLEAU
Chapleau 75
Chapleau 61
Chapleau 74A
Mountbatten 76A
Mattagami 71
GRASSY RIVER-MOND LAKE LOWLANDS AND FERRIS LAKE UPLANDS
WEST MONTREAL RIVER
LA MOTTE LAKE
MACMURCHY TOWNSHIP END MORAINE
DISTRICT OF ALGOMA
LAKE SUPERIOR
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WAKAMI LAKE
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WAKAMI LAKE ADDITION
WENEBEGON RIVER
MISSISSAGI RIVER

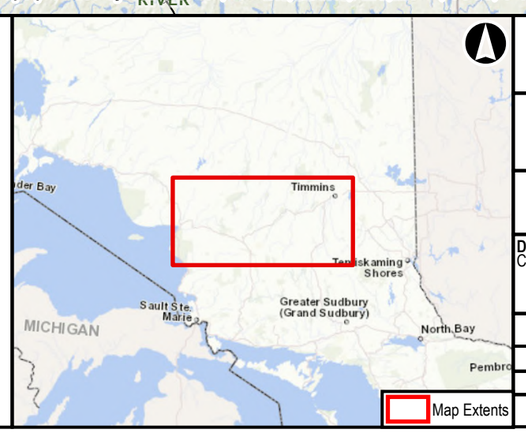
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LEGEND

- RISA Project Area
- Study Area (675m)

General Features

- Main Railway
- Indigenous Reservation
- Provincial Park Limit
- Municipal Boundary



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Location of the Study Area

0 15 30 km

NAD 1983 UTM Zone 17N

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Anjigami Lake
Perry Creek
Kinniwabi River
101
Byron Lake
Frost Lake
Perry Lake
Lac de Zajac
Whitefish Lake

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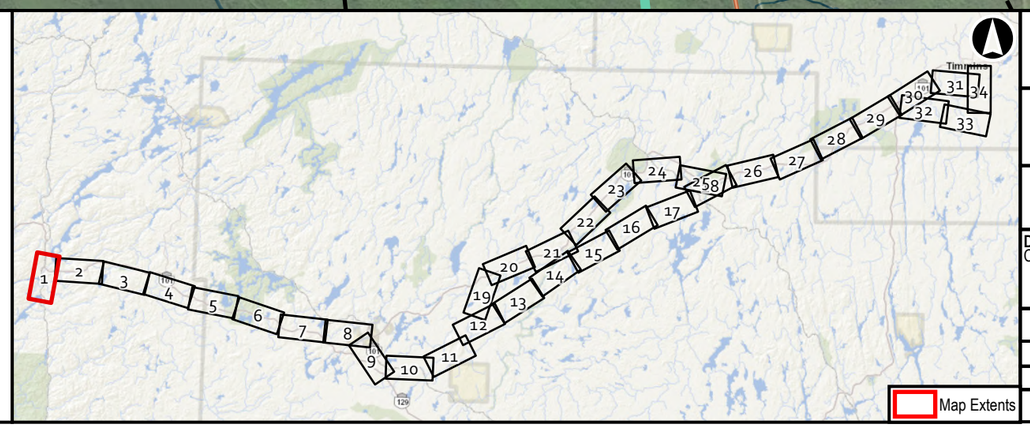
LEGEND

Study Area (675m)

Route Option

A1

A2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

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Figure: 2-1

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Whitefish Lake

Kinniwabi River

Zola Lake

101

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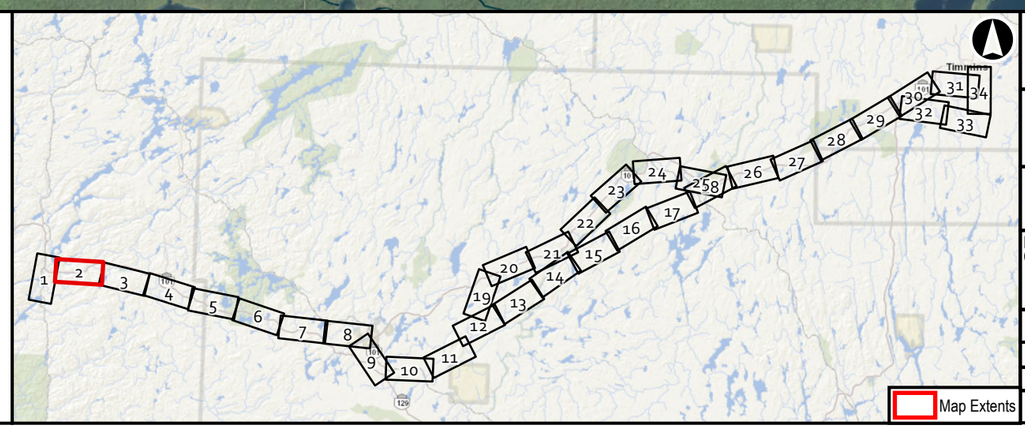
LEGEND

Study Area (675m)

Route Option

A1

A2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

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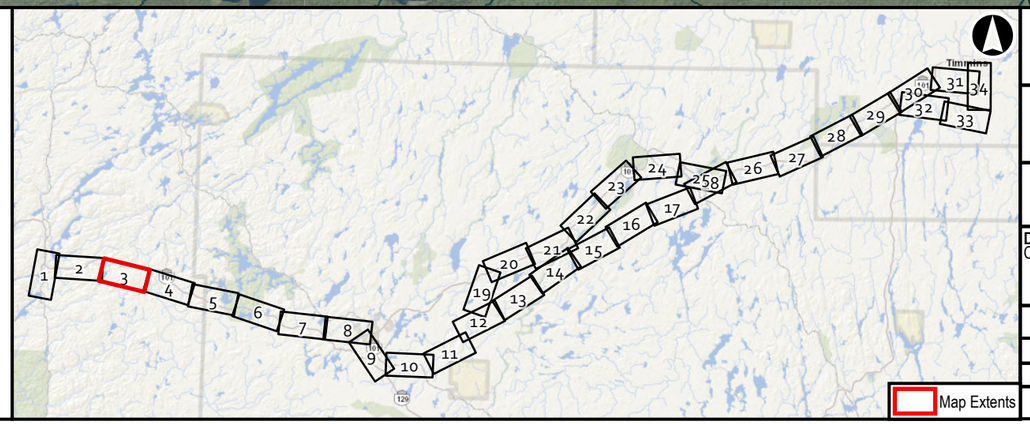
LEGEND

Study Area (675m)

Route Option

A1

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Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

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NAD 1983 UTM Zone 17N

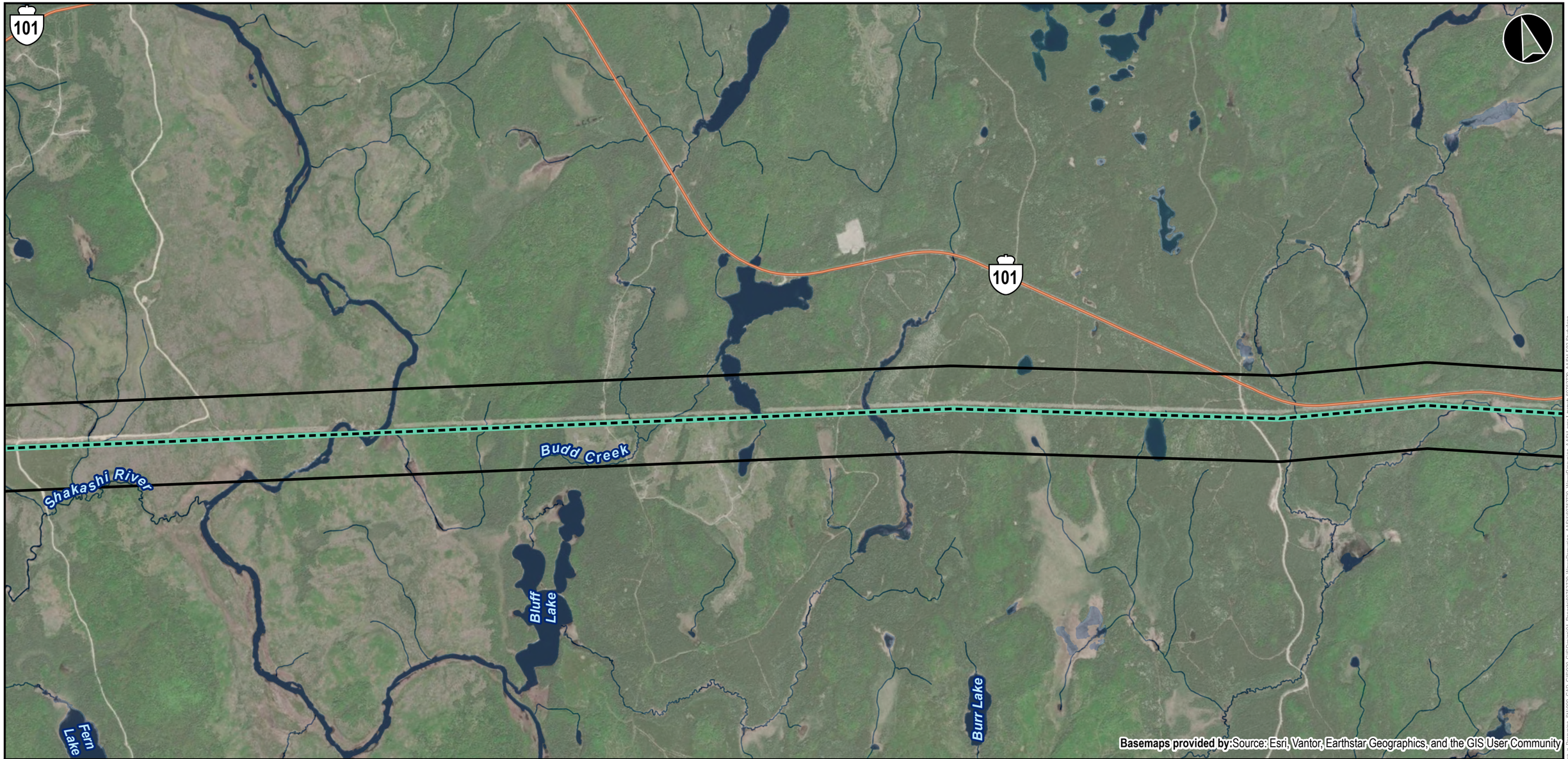
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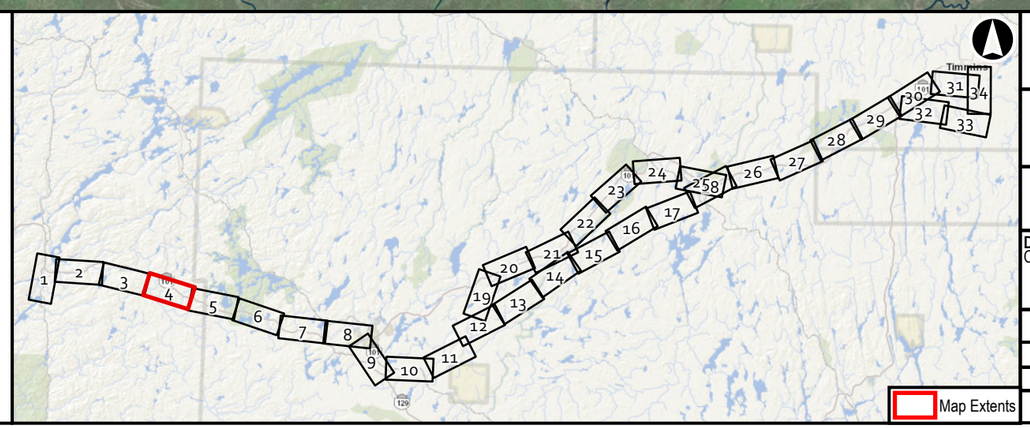
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Study Area (675m)

Route Option

A1

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Stage 1 Archaeological Assessment
Hydro One Networks Inc.
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Study Area in Detail

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Amelia Lake

Cosens Lake

Lower Prairie Bee Lake

Prairie Bee Lake

101

Goodwin Lake

Prairie Bee River

Side Lake

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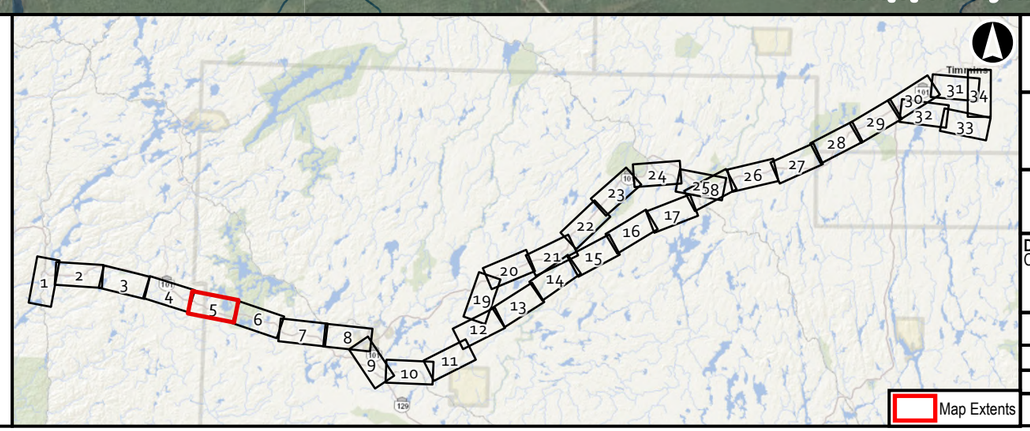
LEGEND

Study Area (675m)

Route Option

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Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

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Little Wawa Creek

101

Big Pine Lake

Square Lake

Little Pine Lake

Little Wawa Lake

Sissons Lake

Lawson Lake

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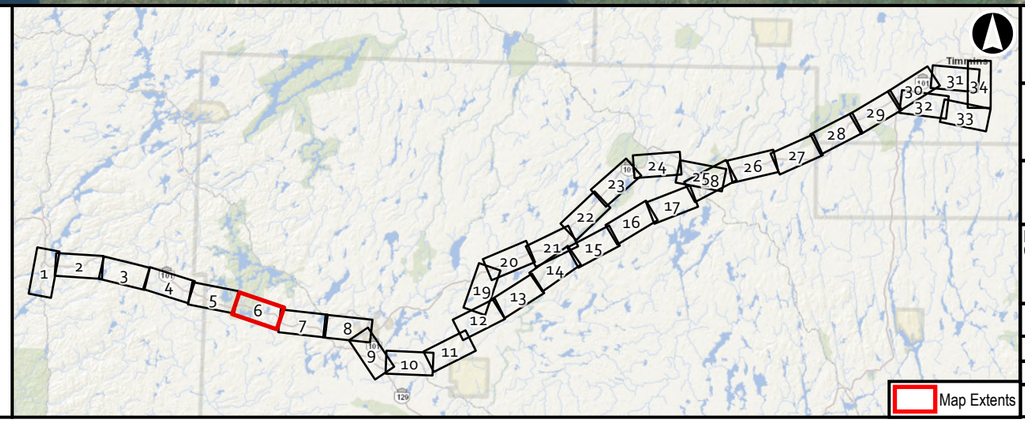
LEGEND

Study Area (675m)

Route Option

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Stage 1 Archaeological Assessment
Hydro One Networks Inc.
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Study Area in Detail

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Wilkison Lake
Brusaw Lake
Wangoon Lake
Jaybee Lake
Wilkison Creek
Morden Lake
Hoey Creek
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Hoey Lake
Canthook Lake
Babin Lake

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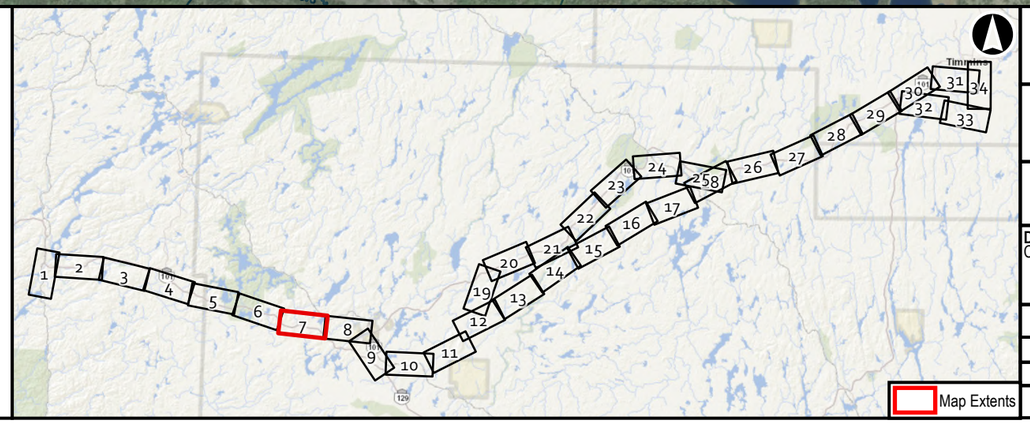
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Study Area (675m)

Route Option

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Stage 1 Archaeological Assessment
Hydro One Networks Inc.
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Study Area in Detail

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Colin Creek

Kebsquasheshing River

Fife Lake

TOWNSHIP OF CHAPLEAU

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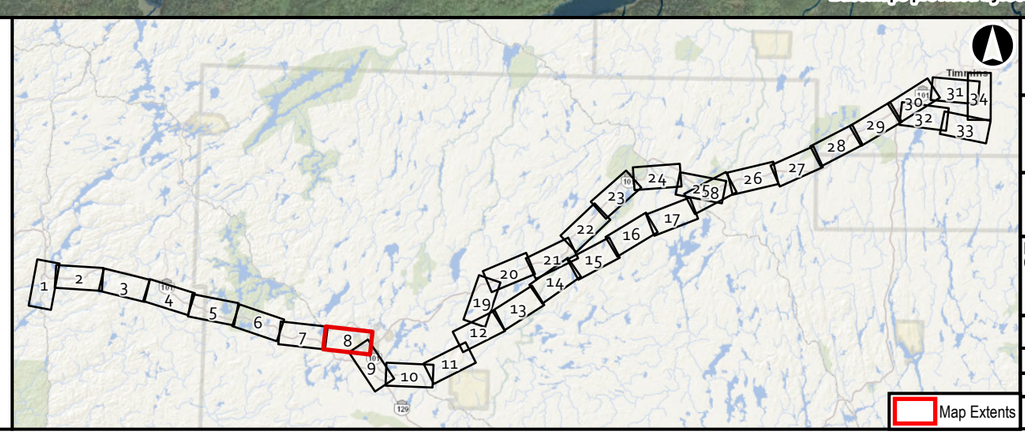
LEGEND

Study Area (675m)

Route Option

A1

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Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

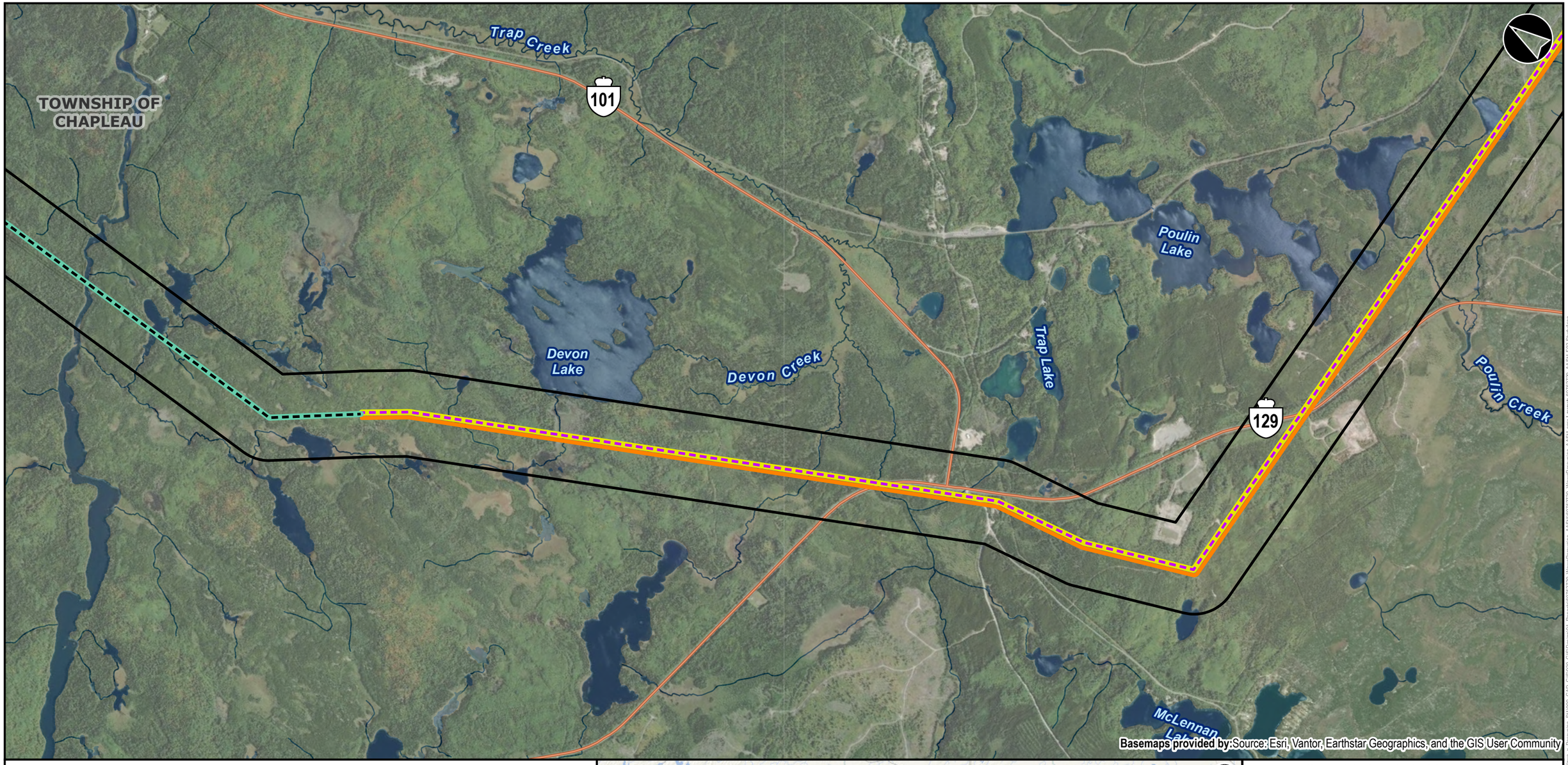
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Figure: 2-8

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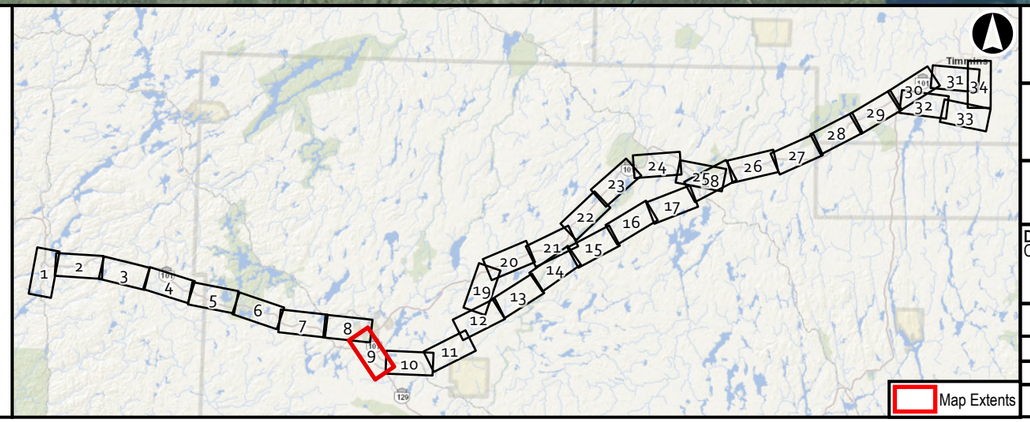


LEGEND

Study Area (675m)

Route Option

- A1
- A2
- B1
- B2
- B3



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-9

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Earl Lake

May Lake

Kilpatrick Lake (lac Kilpatrick)

Poulin Creek

Nemegosenda River (rivière Nemegosenda)

129

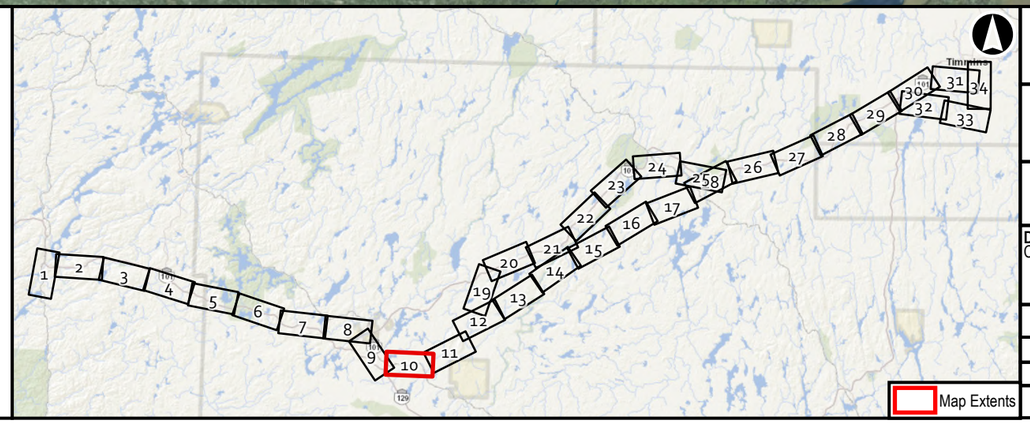
Basemaps provided by: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

LEGEND

Study Area (675m)

Route Option

- B1
- B2
- B3



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-10

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Nemegosenda River (rivière Nemegosenda)

Lackner Lake

Motz Lake

Wright Creek

Halsey Lake

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LEGEND

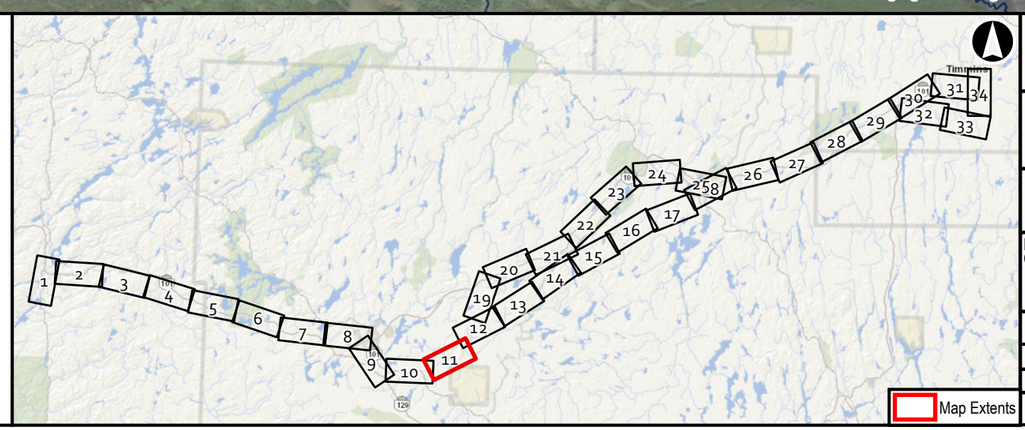
Study Area (675m)

Route Option

B1

B2

B3



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-11

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Joseph Lake

Wright Creek

Lost Lake

Paul Lake

Motz Lake

Basemaps provided by: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

LEGEND

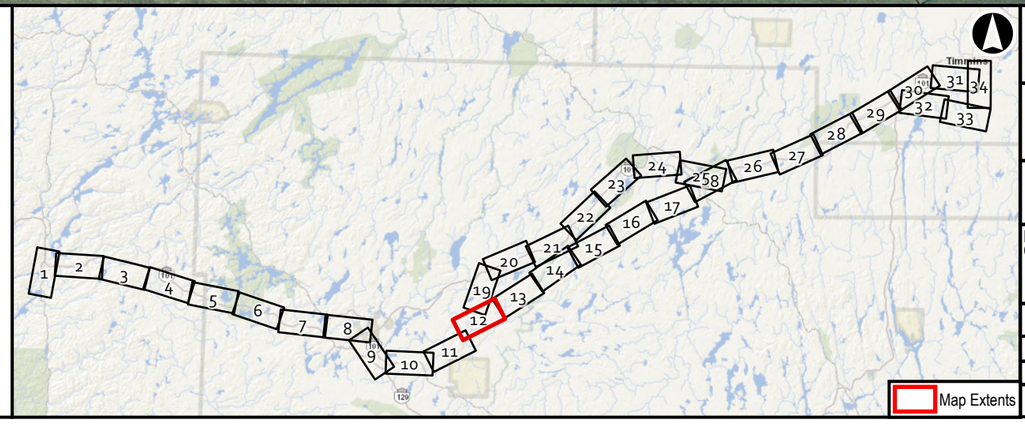
Study Area (675m)

Route Option

B1

B2

B3



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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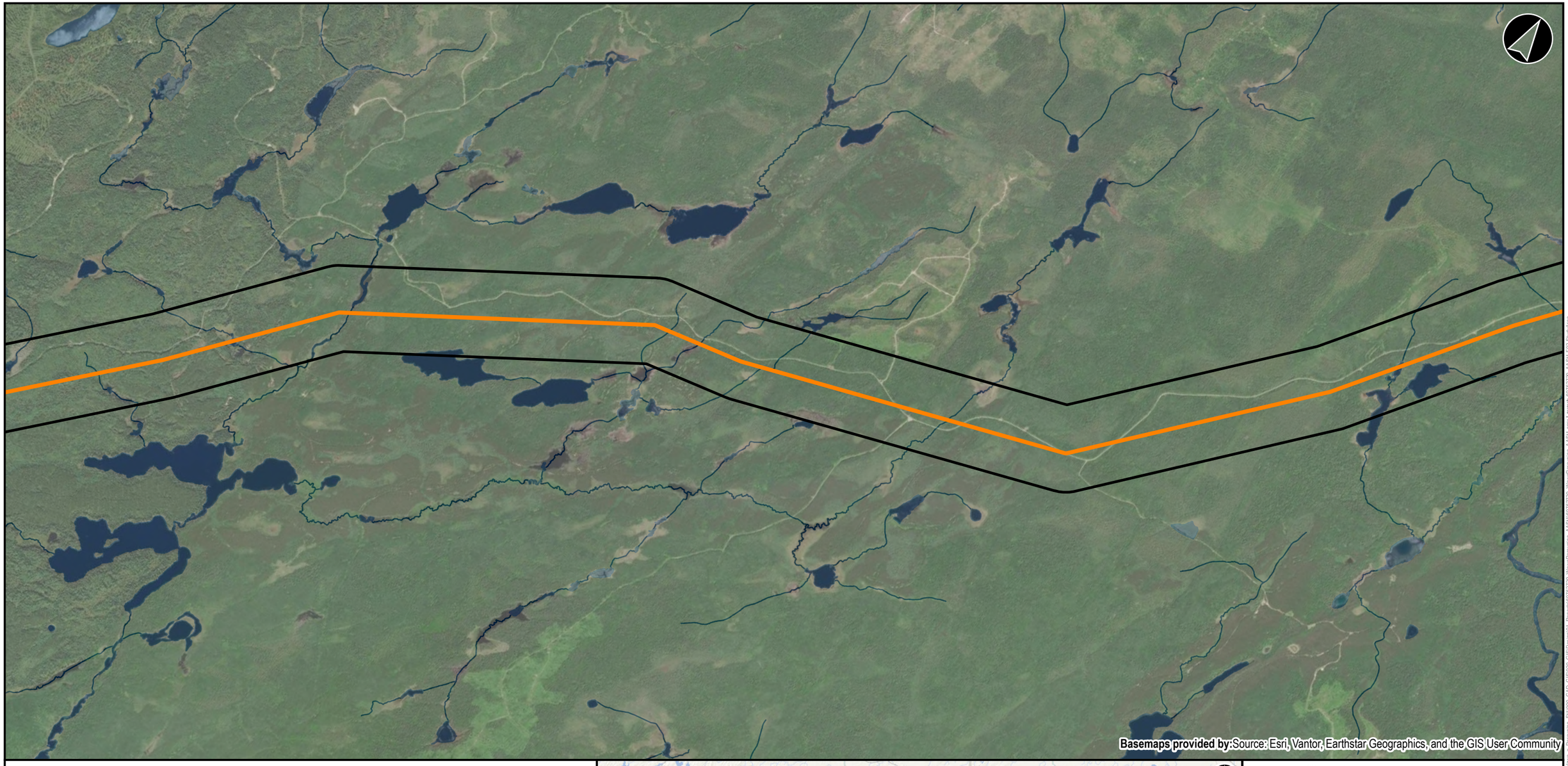
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Figure: 2-12

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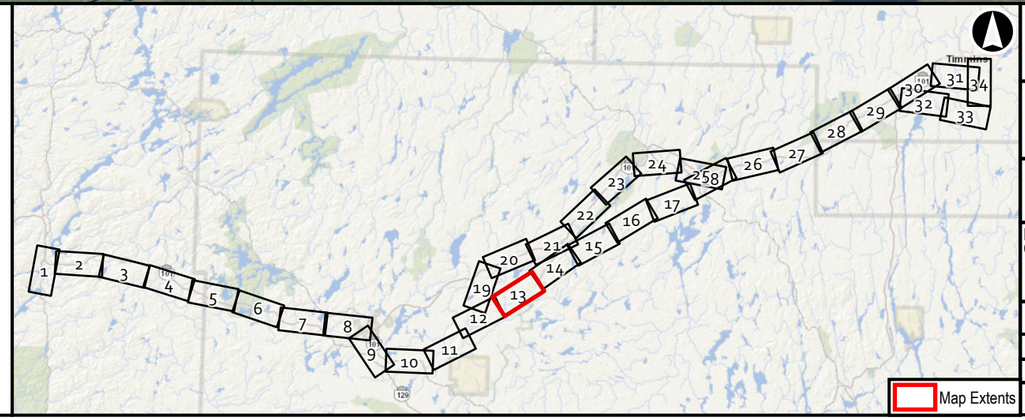


LEGEND

Study Area (675m)

Route Option

B3



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-13

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Hellyer Creek

Ivanhoe Lake

Little Biggs Lake

Biggs Lake

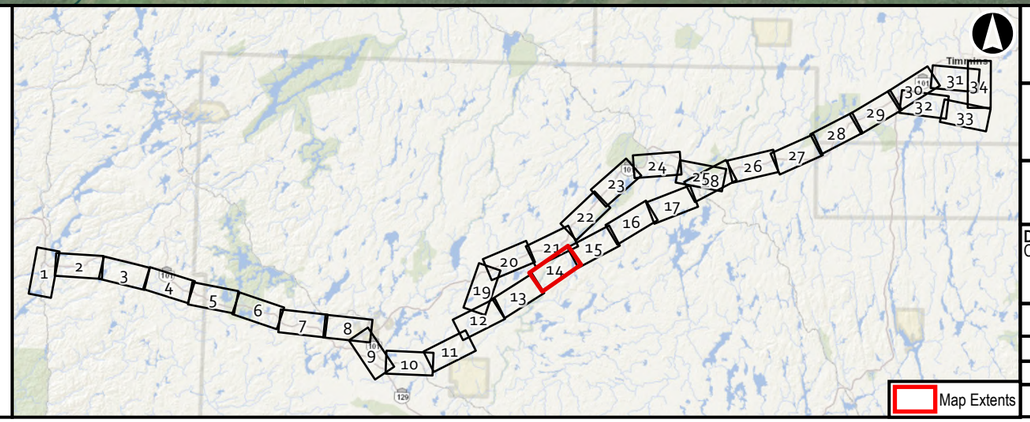
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LEGEND

Study Area (675m)

Route Option

B3



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-14

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Date Saved: 3/13/2026 5:42 PM User: dakib

Tom Smith Lake

Gullystone Lake

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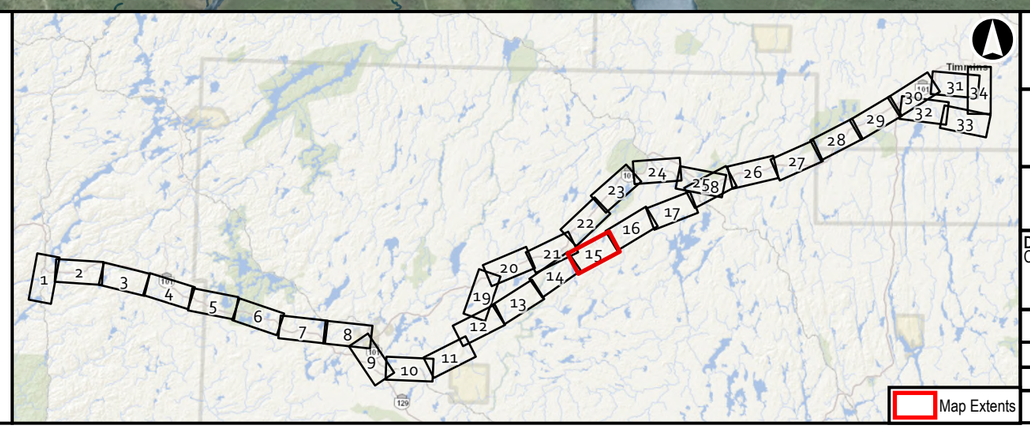
LEGEND

Study Area (675m)

Route Option

B2

B3



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-15

Project Location: \\na.aecomnet.com\ts\AMER\London\CALON1\Data\Projects_ENV\60752913_HON_Wawa_Timmins_Porcupine_BH1900_CAD_GIS\900_GIS\Design\01_Reports\60752729_WawaPorcupine_AAS1160752729_WawaPorcupine_AAS11 mxd Layout: 60752729_AAS11-F06-StudyArea
Date Saved: 3/13/2026 5:42 PM User: clarkb

Gullystone Creek

Moose Lake

Linekar Lake

Norfolk Lake

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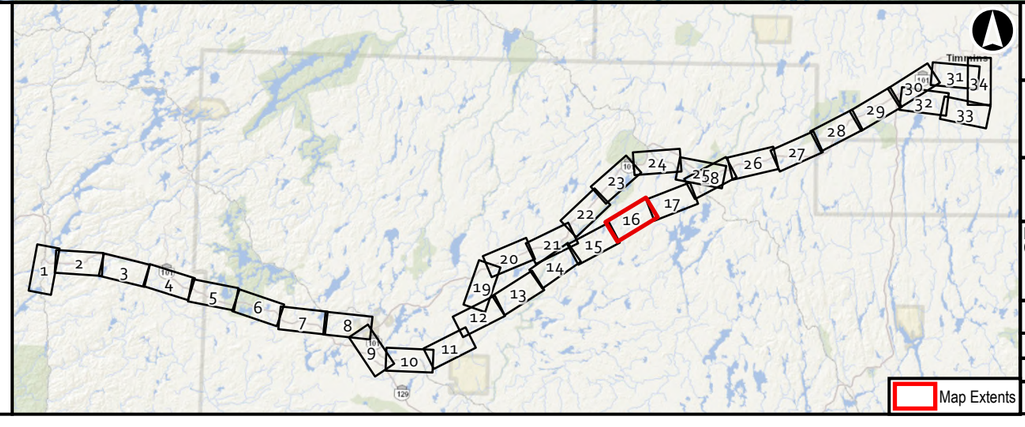
LEGEND

Study Area (675m)

Route Option

B2

B3



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-16

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Keith Creek

Hoodoo Lake

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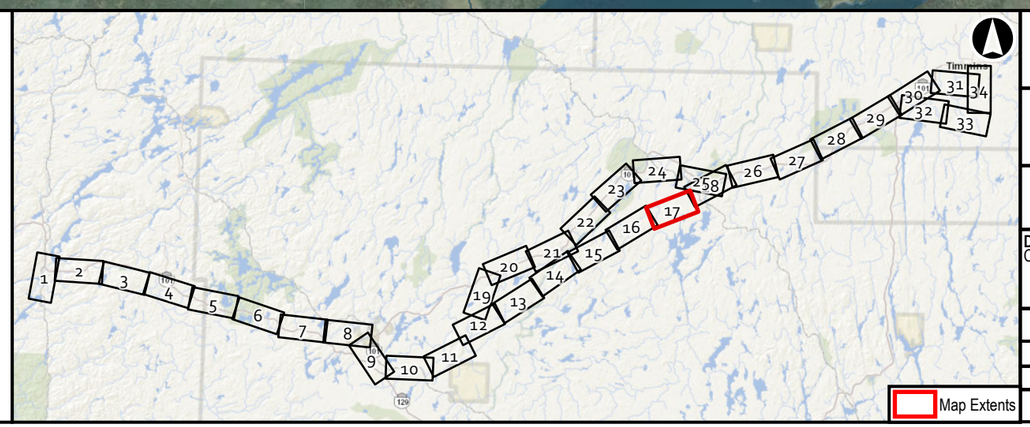
LEGEND

Study Area (675m)

Route Option

B2

B3



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-17

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Keith Lake
Scorch Creek
101
Blackbill Lake
Vimy Creek
Palomar Lake

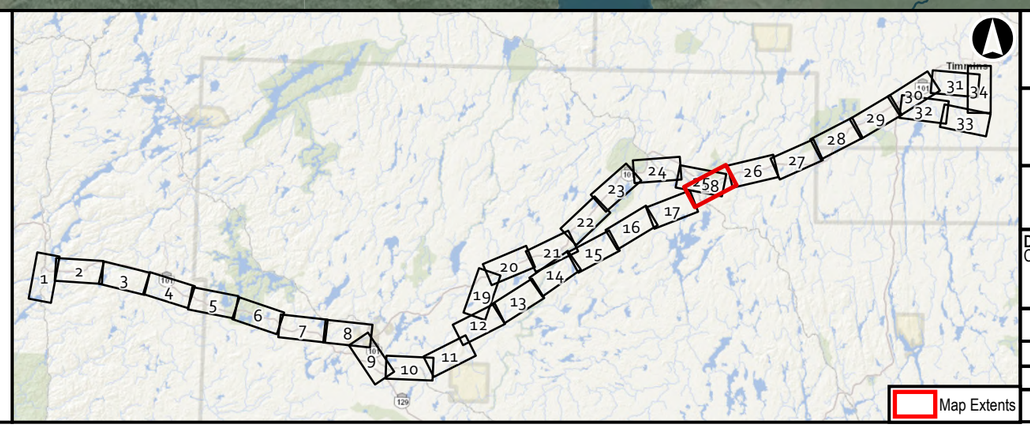
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LEGEND

Study Area (675m)

Route Option

- B1
- B2
- B3
- C1
- C2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-18

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Bobs Lake
Roswell Lake
Roswell Creek
Cedric Lake
101
Oscar Lake
Lost Lake
King Lake
Paul Lake

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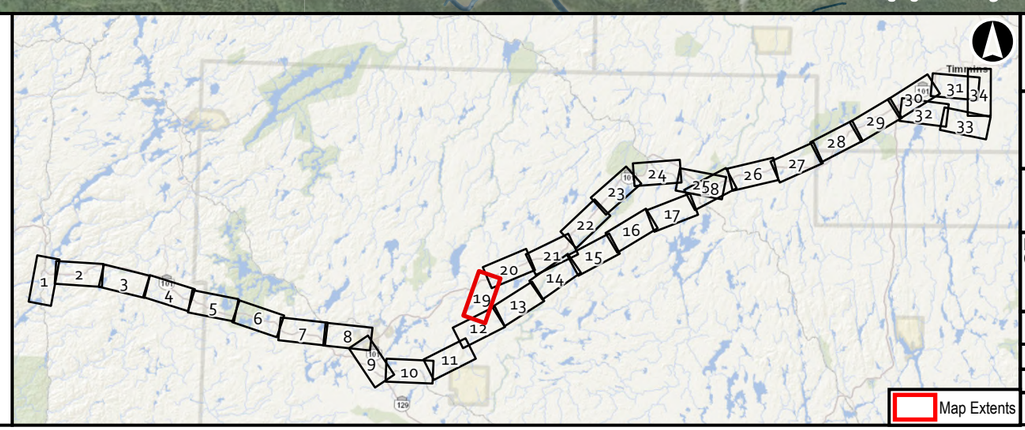
LEGEND

Study Area (675m)

Route Option

B1

B2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-19

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Sandy Lake

101

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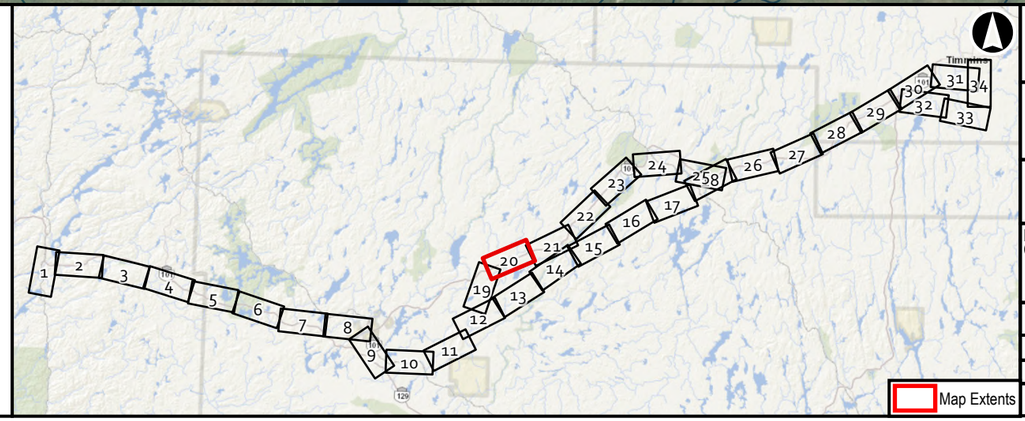
LEGEND

Study Area (675m)

Route Option

B1

B2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

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Figure: 2-20

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Birch Lake

Ivanhoe Lake

101

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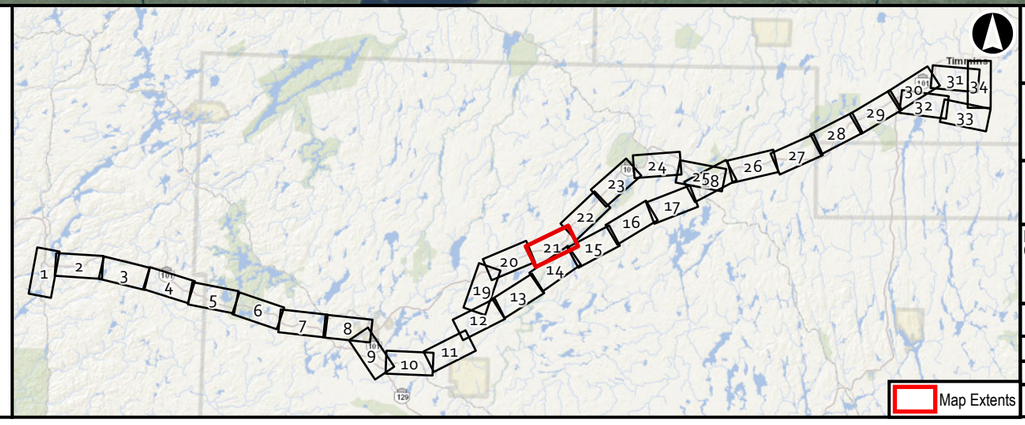
LEGEND

Study Area (675m)

Route Option

B1

B2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-21

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Jackpine Creek

101

Carty Creek

East
Carty Lake

Ivanhoe Lake

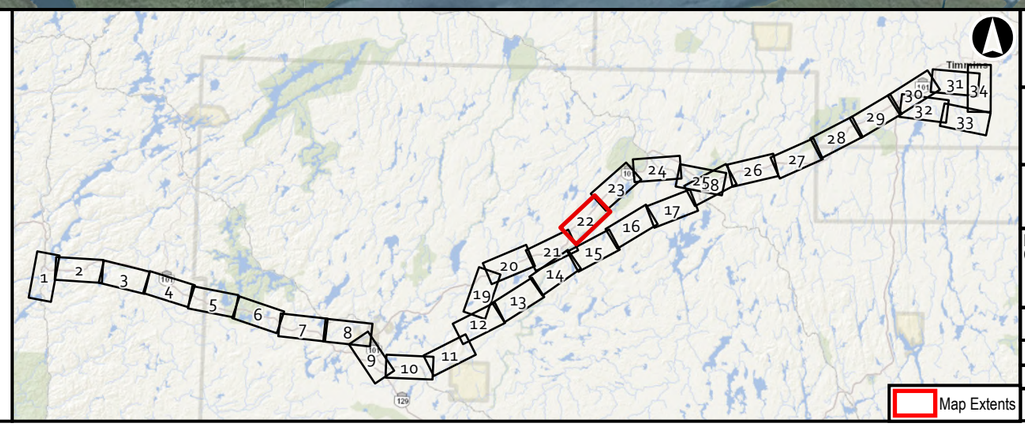
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LEGEND

Study Area (675m)

Route Option

B1



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-22

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Libby Lake

Sloans Lake

Twin Lakes

101

Ivanhoe Lake

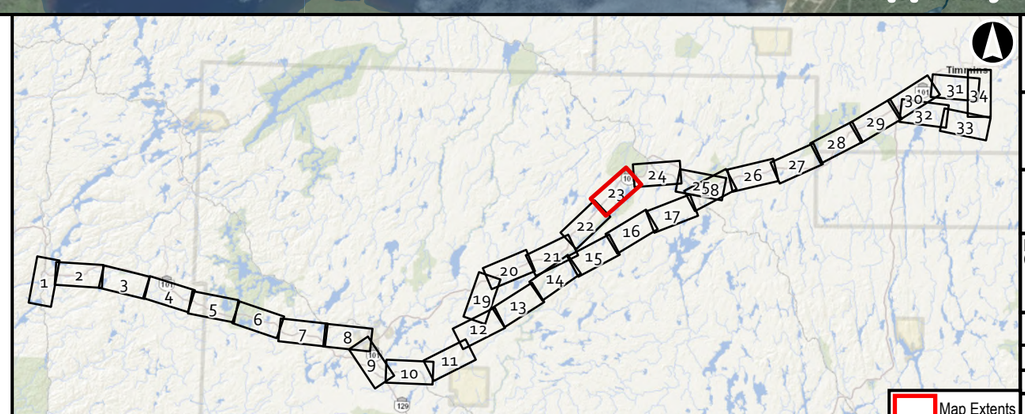
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LEGEND

Study Area (675m)

Route Option

B1



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-23

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7172

Heart Lake

101

Moonshine Creek

101

Slate Rock Lake

Singed Tree Lake

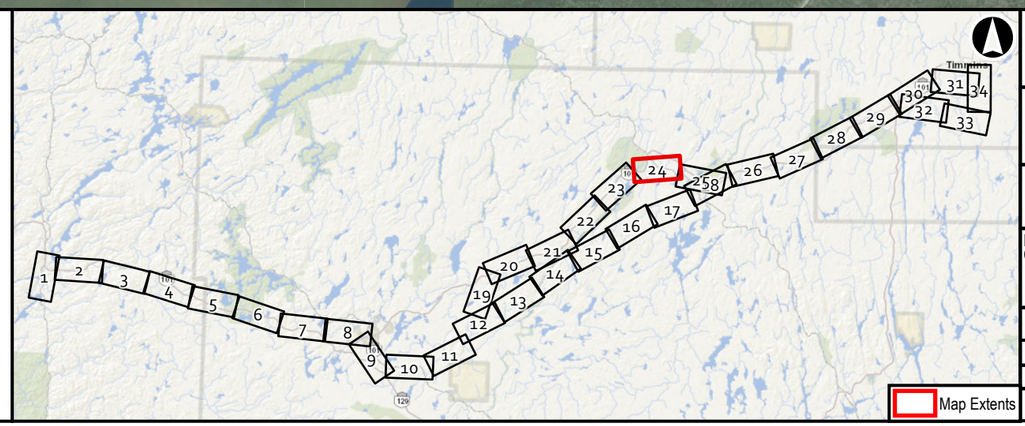
Basemaps provided by: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

LEGEND

Study Area (675m)

Route Option

B1



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-24

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Bryce Creek
Boulder Lake
Vimy Creek
101
Blackbill Lake
White Duck Lake
Singed Tree Lake
Keith Lake
Slate Rock Lake
Scorch Creek

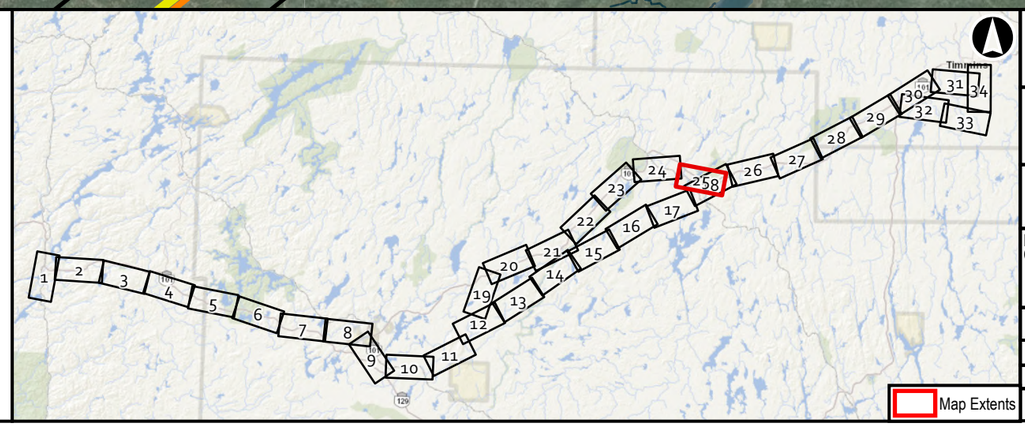
Basemaps provided by: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

LEGEND

Study Area (675m)

Route Option

- B1
- B2
- B3
- C1
- C2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-25

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North Storm Creek

Storm Creek

101

Basemaps provided by: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

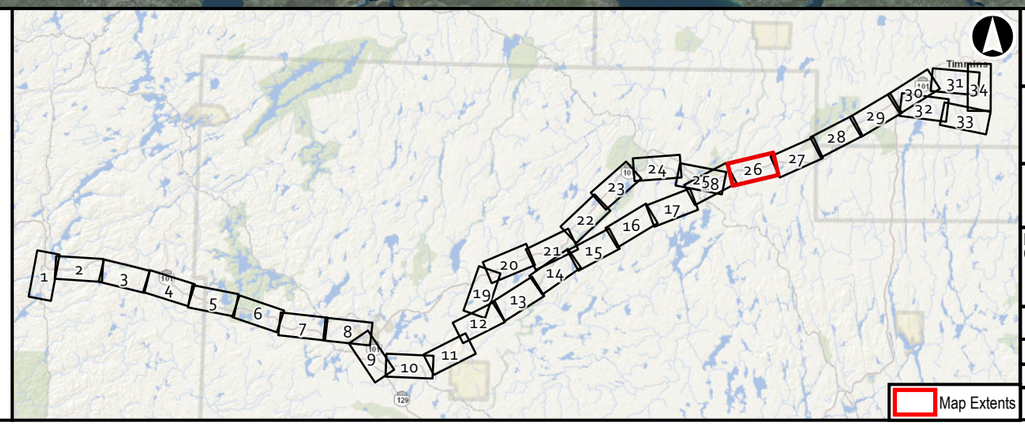
LEGEND

Study Area (675m)

Route Option

C1

C2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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AECOM

Figure: 2-26

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Date Saved: 3/13/2026 5:42 PM User: clarkb

Sewell Creek
Weston Lake
101
Deerfoot Creek
Sewell Lake
Opishing Lake
Crossover Lake
Crawford River

Basemaps provided by: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

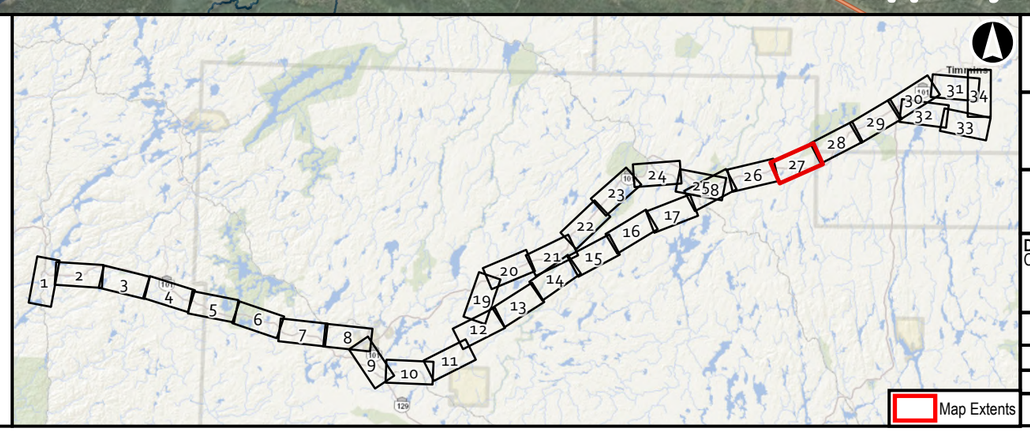
LEGEND

Study Area (675m)

Route Option

C1

C2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-27

Project Location: n:\ca\toronto\projects\AMER\London-CALON1\DCS\Projects_ENV\60752729\3_HOW_Wawa_A_Porcupine_SR1900_CAD_GIS\900_GIS\Design\01_Reports\60752729_WawaPorcupine_AA_Date Saved: 3/13/2026 5:42 PM User: clarkb



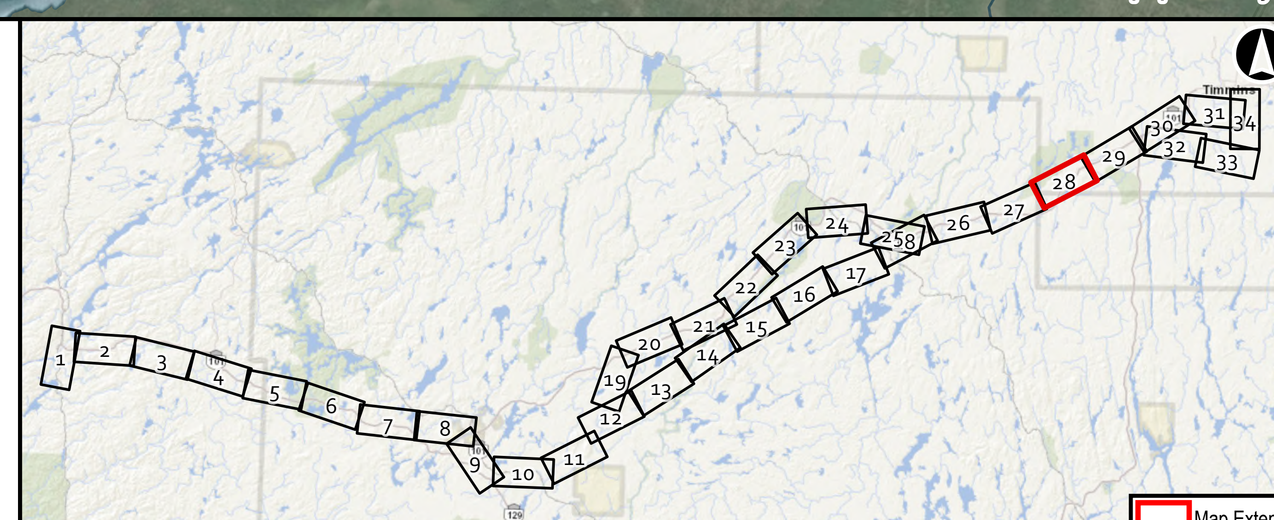
LEGEND

Study Area (675m)

Route Option

C1

C2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-28

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Date Saved: 3/13/2026 5:42 PM **User:** clarkb

Hoof Lake

Denton Lake

101

CITY OF TIMMINS

Cripple Creek

Mahoney Creek

Godon Lake

Godon Creek

144

Basemaps provided by: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

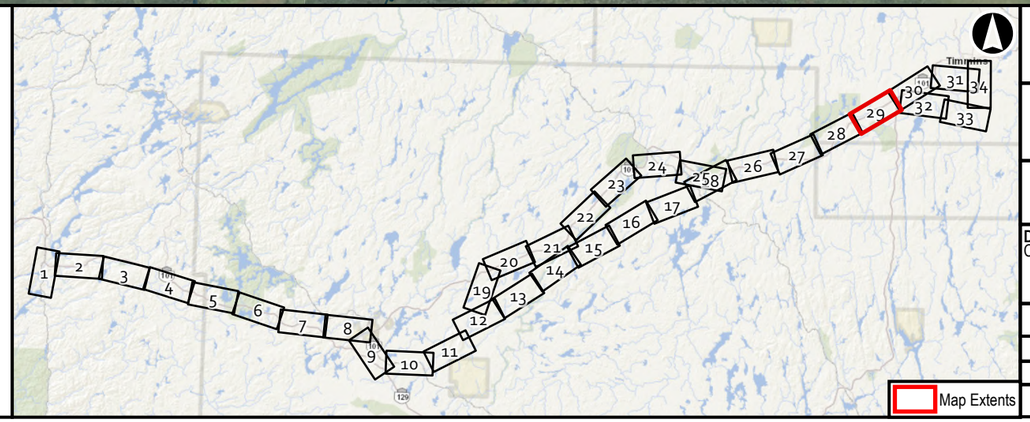
LEGEND

Study Area (675m)

Route Option

C1

C2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-29

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Date Saved: 3/13/2026 5:42 PM; User: dakib

Thunder Creek

Waterhen Lake

CITY OF TIMMINS

101

144

Bristol Creek

Basemaps provided by: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

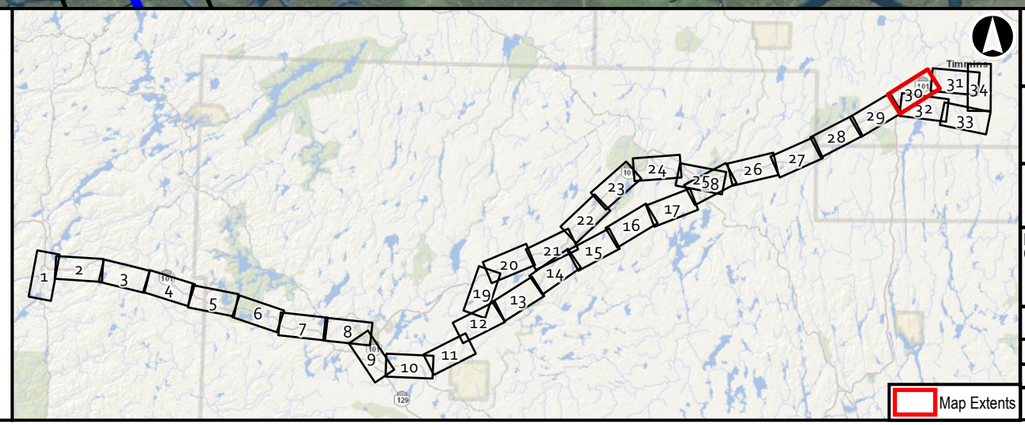
LEGEND

Study Area (675m)

Route Option

C1

C2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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AECOM

Figure: 2-30

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Date Saved: 3/13/2026 5:42 PM User: clarkb

CITY OF TIMMINS

101

Smith Lake

Reid Lake

Flynn Lake

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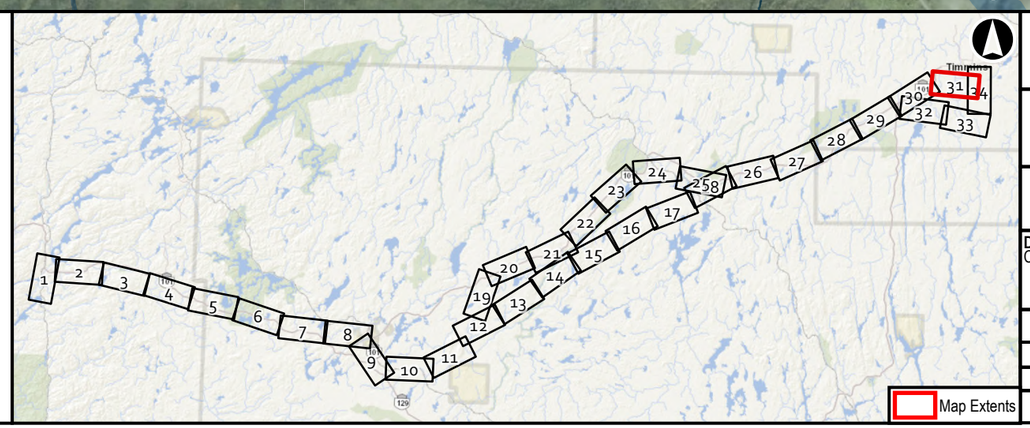
LEGEND

Study Area (675m)

Route Option

C1

C2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-31

Project Location: n:\ca\ajaxcmd.corp\AMER\Canada\CALGN1\DCS\Projects_ENV\60752729\3.0_HOL\Wawa_to_Timmins_SR1900_CAD_GIS\500_GIS\Design\01_Report\mxd\752729_WawaPrincipline_AAS11\60752729_WawaPrincipline_AAS11.aprx Layouts: 60752729_AAS11-F02-StudyArea
Date Saved: 3/13/2026 5:42 PM User: clarkb

Thunder Creek

Hope Lake

CITY OF TIMMINS

101

Basemaps provided by: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

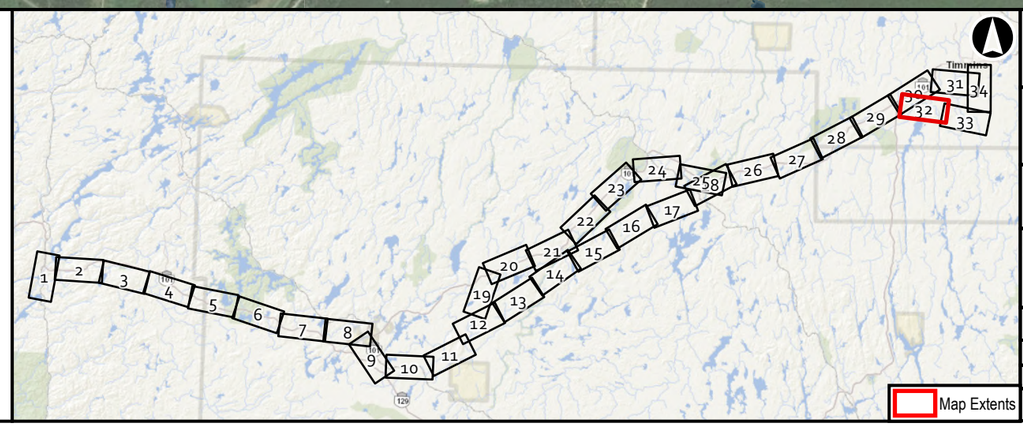
LEGEND

Study Area (675m)

Route Option

C1

C2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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AECOM

Figure: 2-32

Project Location: n:\ca\accord.com\ts\AMER\Locations\CALON\1\2\3\Projects_ENV\60752729\3\P3_HON_Wawa_to_Timmins_SI\1900_CAD_GIS\900_GIS\Design\01_Report\60752729_YWawaPowerline_AAS1160752729_YWawaPowerline_AAS1160752729_WawaPowerline_AAS01.aprx Layouts: 60752729_AAS1 P:60-StudyArea
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CITY OF TIMMINS

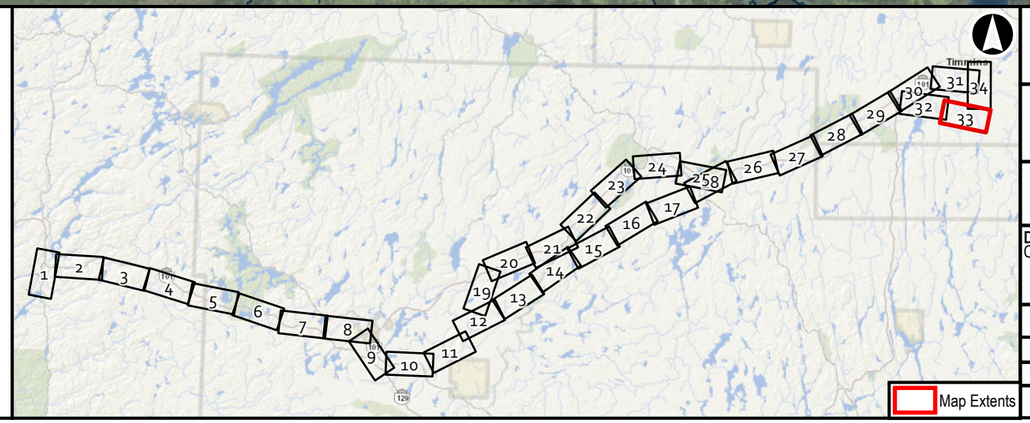
Basemaps provided by: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

LEGEND

Study Area (675m)

Route Option

C2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Rev:00
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AECOM

Figure: 2-33

Project Location: \\na.aecomnet.com\ab\AMER\Toronto-CALON1\DOS\Projects_ENV\60752729\3910_HON\Wawa_to_Porcupine_St1\900_CAD_GIS\200_GIS\Design\01_Reports\60752729_WawaPorcupine_AAS01.aprx Layout: 60752729_AAS01-F02-StudyArea
Date Saved: 3/13/2026 5:42 PM User: clamb

Flynn Lake
Gold Lake
Paradis Creek
CITY OF TIMMINS
McKay Lake
McDonald Lake
Shaw Creek
South Porcupine River
Simpson Lake

Basemaps provided by: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

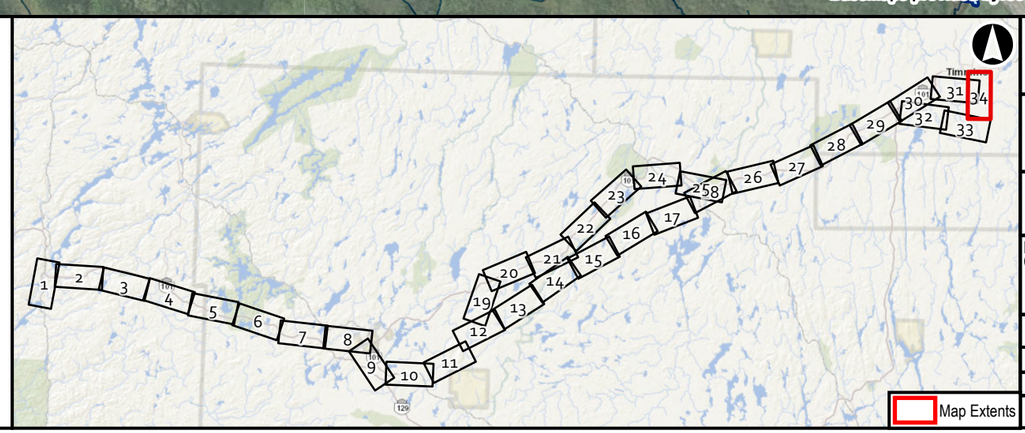
LEGEND

Study Area (675m)

Route Option

C1

C2



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Study Area in Detail

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 2-34

Project Location: \\ca.aecomnet.com\NAMER\Canada\CALON1\DGS\Projects_ENV\60752729\03_PROD\Design\01_Reports\60752729_WawaPorcupine_AA\$\$\60752729_WawaPorcupine_AA$$1#.mxd Layout: 60752729_AA$$1-#"60-StudyArea
Date Saved: 3/13/2026 5:42 PM User: clamb

Capusacasee
1820

Misinabee Lake 1800

Kenogamissi
1794

Flying
Post 1800

Michipicoten
1816

Michipicoten
1766

Michipicoten
1796

Mattagmi 1814

1794
Mattagami

DISTRICT OF ALGOMA

DISTRICT OF SUDBURY

IVANHOE RIVER CLAY PLAIN

MOUNTBATTEN 76A

MATTAGAMI 71

FLYING POST 73

Godfrey Creek

Border River

Ridout River

Pemache River

Turnbull Creek

LEGEND

- RISA Project Area
- Study Area (675m)

First Known Owner of Post*

- 4 to 15 Years Canadian Independent
- Over 50 Years, Canadian Independent
- 1 to 3 Years, Hudson's Bay Company
- 4 to 15 Years Hudson's Bay Company
- 16 to 50 Years Hudson's Bay Company
- 1 to 3 Years North West Company
- 4 - 15 Years,North West Company



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Posts of the Canadian Fur Trade, The Atlas of Canada, 1974

0 10 20 40 km

NAD 1983 UTM Zone 16N

Data Sources:
Rand McNally 1924

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AECOM

Figure: 3

Project Location: \\ca.aecomnet.com\NAM\Toronto\CAL\ON\Projects_ENV\60752729_HONI_Wawa_to_Porcupine_St1\900_CAD_GIS\900_GIS\Design\01_Reports\60752729_WawaPorcupine_AAS\01\mxd\Layouts\60752729_AAS01-Fig3-FurTradePosts
Date Saved: 3/13/2020 5:42 PM User: clarkb

Flying Post 73

Missanabie 62

Missanabie Cree First Nation

Gros Cap 49

Gros Cap Indian Village 49A

Chapleau Cree Fox Lake

Chapleau 61A

Chapleau 61

Duck Lake 76B

Chapleau 74

Chapleau 74A

Mountbatten 76A

Mattagami 71

DRAFT

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LEGEND

- RISA Project Area
- Study Area (675m)
- Indigenous Reservation

Treaty

- **James Bay Treaty,Treaty 9,1905-1906**
- **Robinson-Superior Treaty,Treaty 60,September 7, 1850**
- **Robinson-Huron Treaty, Treaty 61, September 9,1850**

Map Extents

Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Treaties and Purchases

0 15 30 km

NAD 1983 UTM Zone 17N

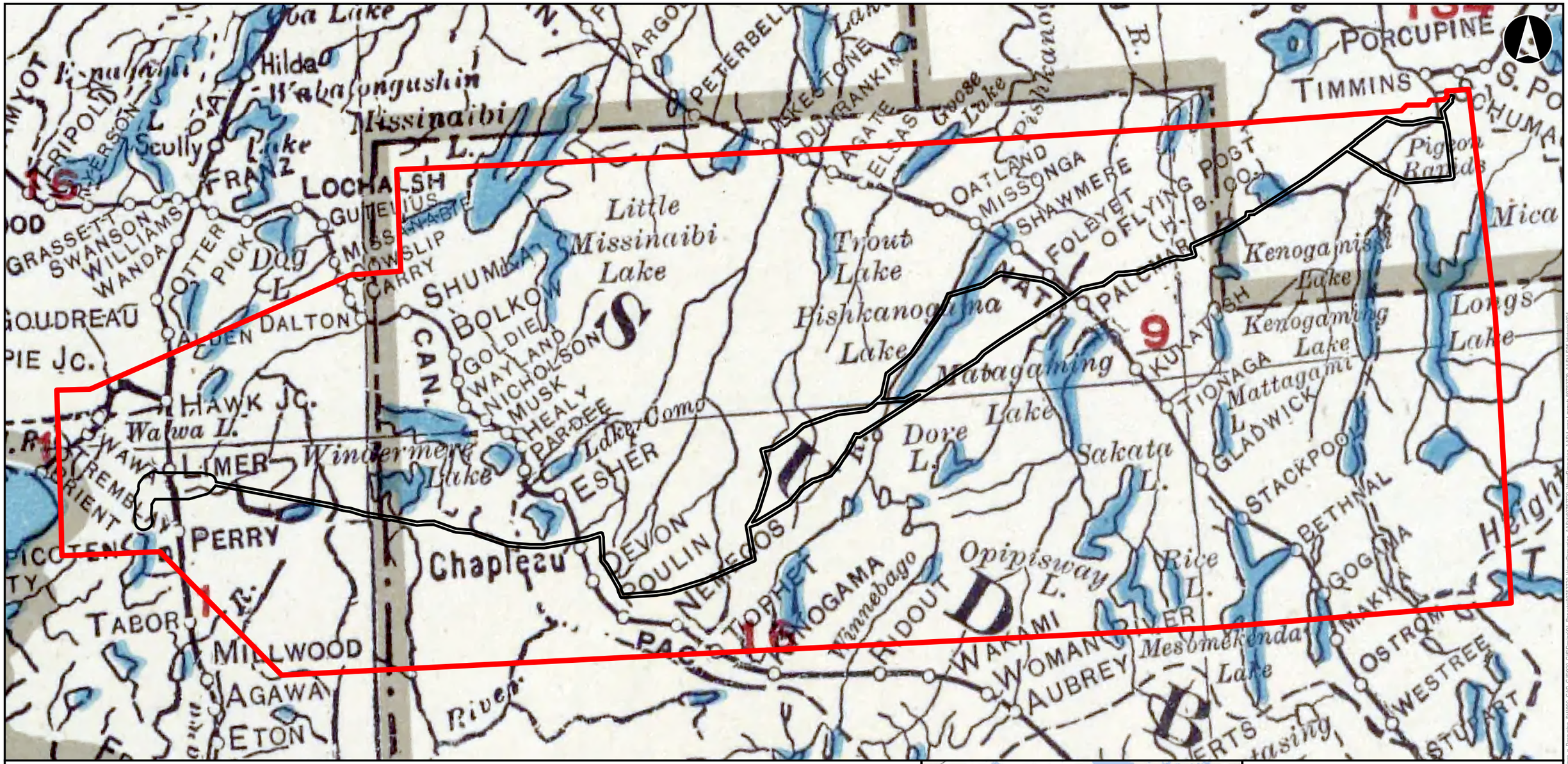
Data Sources:
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AECOM

Figure: 4

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Date Saved: 3/13/2026 5:42 PM User: clarkb



LEGEND

- RISA Project Area
- Study Area (675m)



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Northern Ontario Railroads, Rand McNally, 1924

0 10 20 40 km

NAD 1983 UTM Zone 16N

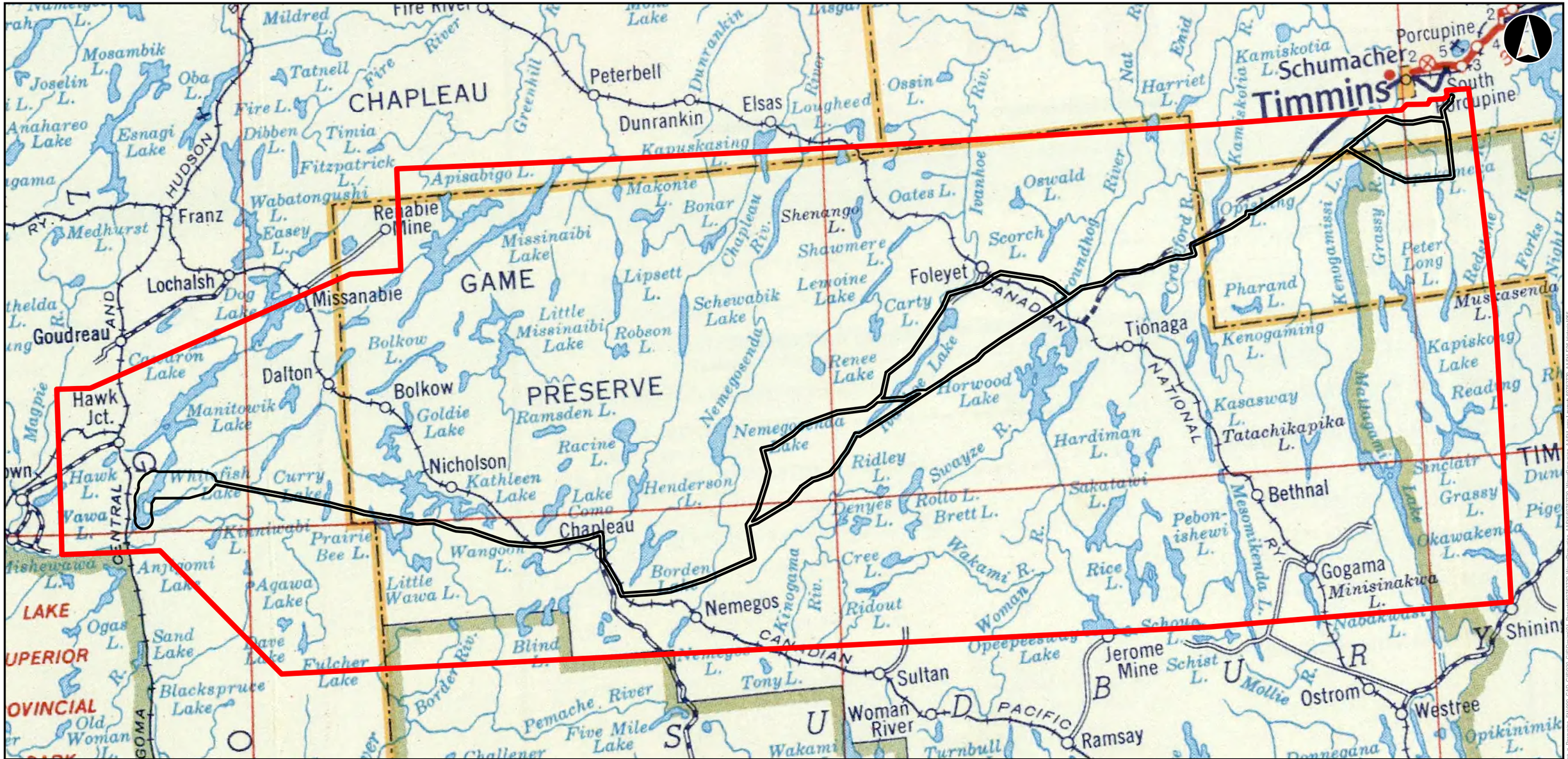
Data Sources:
Rand McNally 1924

Mar, 2026	
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AECOM

Figure: 5

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Date Saved: 3/13/2026 5:42 PM User: clarkb



LEGEND

- RISA Project Area
- Study Area (675m)



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Various Maps of Cities and Districts in Ontario, Canada, Shell Oil Company, 1955

0 10 20 40 km

NAD 1983 UTM Zone 16N

Data Sources:
Shell Oil Company, 1955

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AECOM

Figure: 6

Project Location: \\na.aecomnet.com\Projects\AMER\Canada\CALN1\Drawing\60752729_WawaPowerline_AAS\1.aprx Layout: 60752729_AAS1-FIG-Historic1955 Date Saved: 3/13/2020 5:42 PM User: clarkb

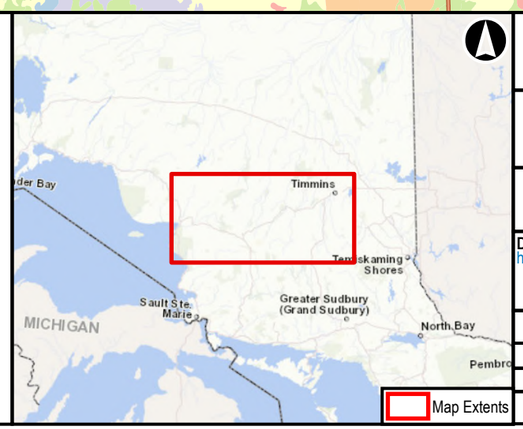
631
519
TOWNSHIP OF WAWA
651
547
17
101
TOWNSHIP OF CHAPLEAU
129
667
655
CITY OF TIMMINS
101
144
661
560
560A
DRAFT

LEGEND

- RISA Project Area
- Study Area (675m)
- Municipal Boundary

LANDFORM

- End moraine
- Ground moraine
- Hummocky moraine
- Ice contact delta
- Esker
- Kame
- Outwash plain
- Raised beach
- Glaciolacustrine plain
- Alluvial
- Sand dunes
- Organics
- Bedrock knob
- Bedrock plain
- Bedrock ridge



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Physiography within the Study Area

0 7.5 15 30 45 km

NAD 1983 UTM Zone 17N

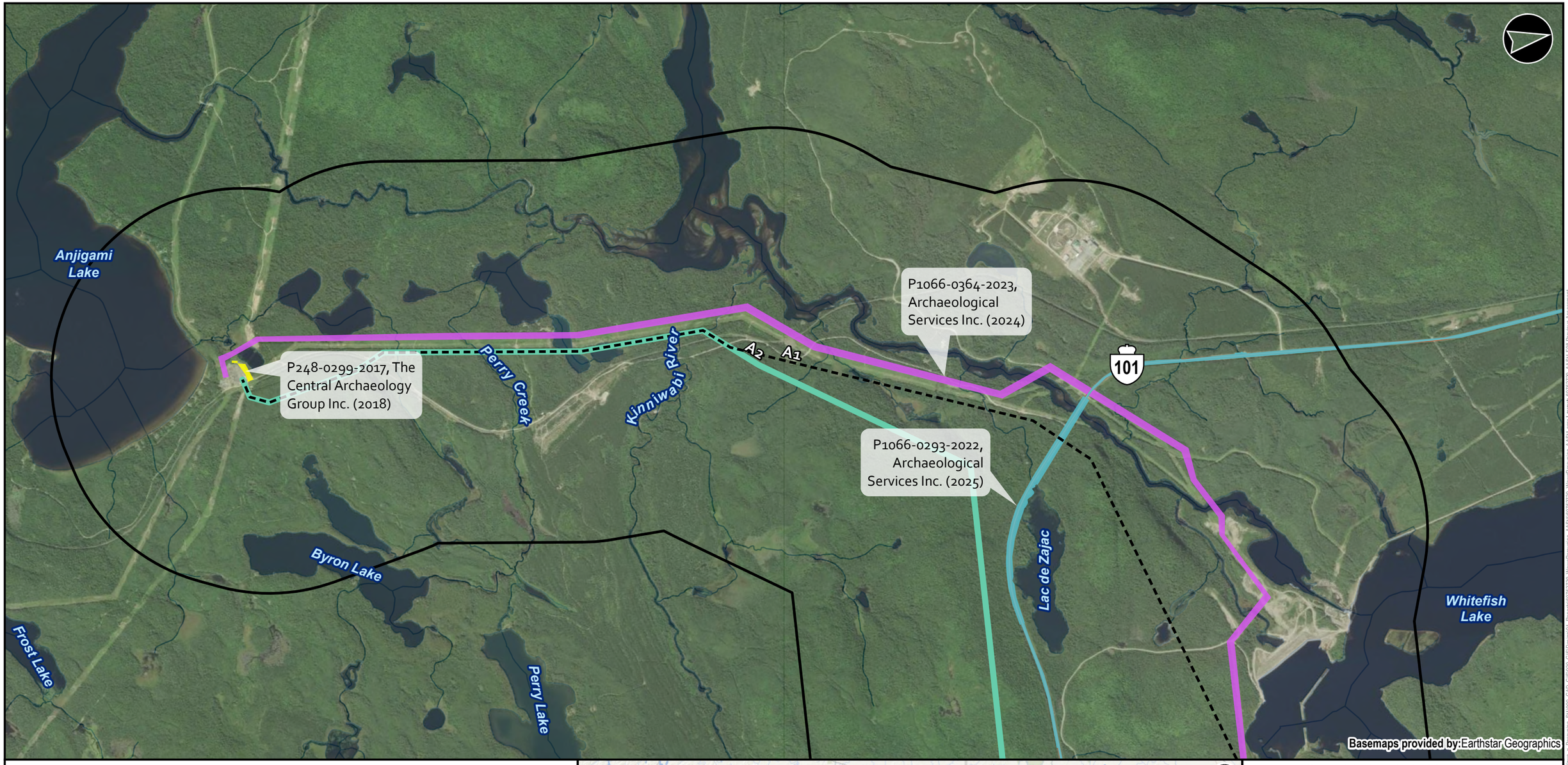
Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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AECOM

Figure: 7

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Date Saved: 3/13/2026 5:42 PM User: clarkb



LEGEND

Study Area (675m)

Route Option

A1

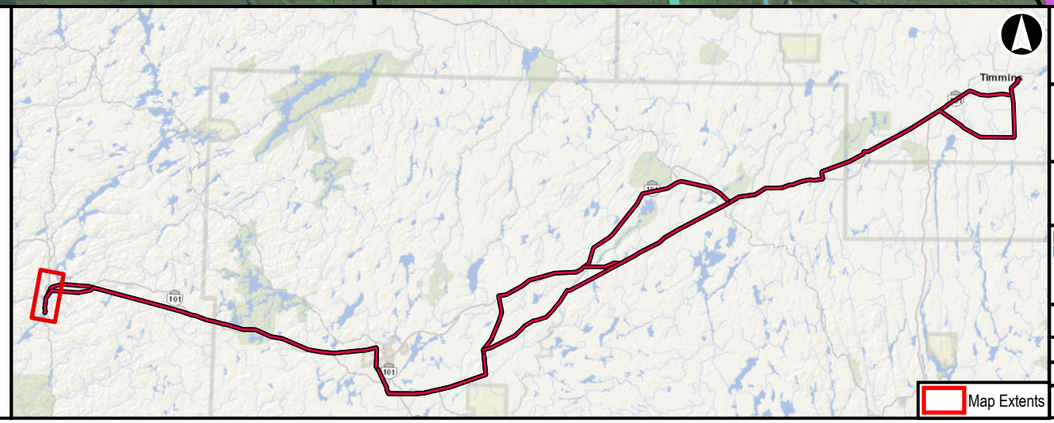
A2

Previous Assessments

P1066-0293-2022, Archaeological Services Inc. (2025)

P1066-0364-2023, Archaeological Services Inc. (2024)

P248-0299-2017, The Central Archaeology Group Inc. (2018)



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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Figure: 8-1

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Date Saved: 3/16/2026 2:50 PM User: clarkb

Whitefish Lake

P1066-0364-2023, Archaeological Services Inc. (2024)

A1

Kinniwabi River

P1066-0293-2022, Archaeological Services Inc. (2025)

101

A2

Zola Lake

Basemaps provided by: Earthstar Geographics

LEGEND

Study Area (675m)

Route Option

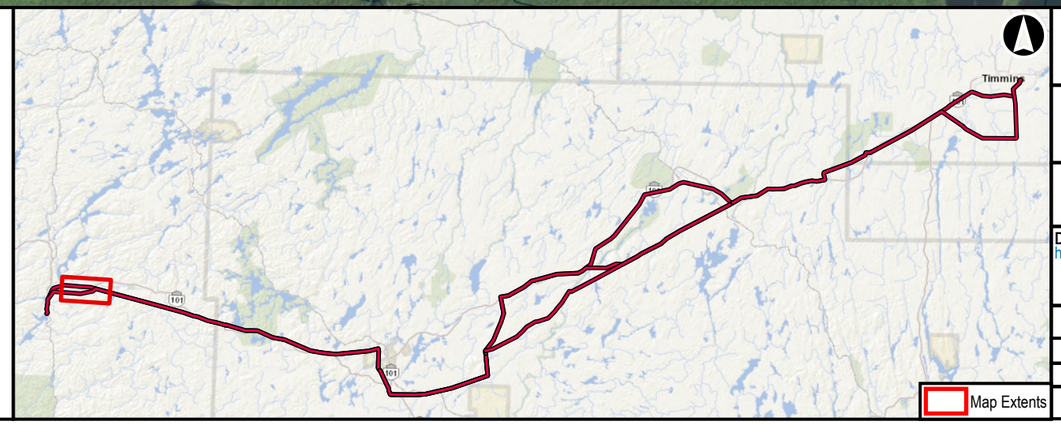
A1

A2

Previous Assessments

P1066-0293-2022, Archaeological Services Inc. (2025)

P1066-0364-2023, Archaeological Services Inc. (2024)



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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P:60752729

Rev:00

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AECOM

Figure: 8-2

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LEGEND

Study Area (675m)

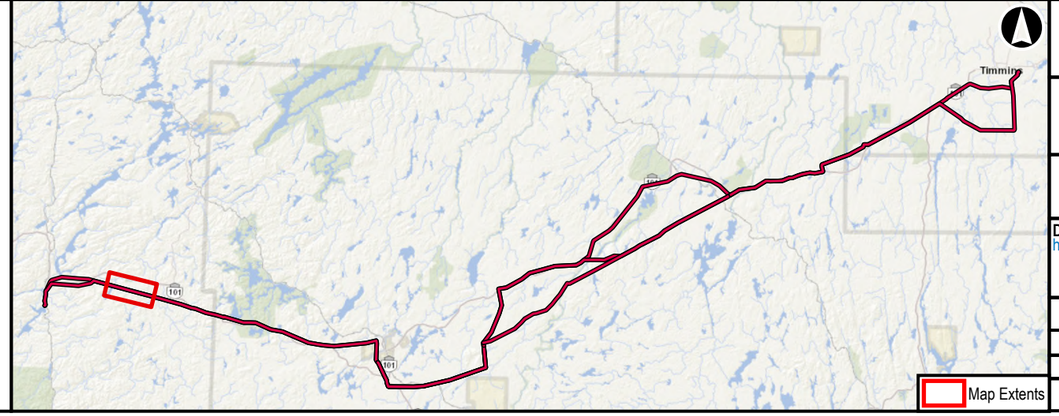
Route Option

A1

A2

Previous Assessments

P1066-0364-2023, Archaeological Services Inc. (2024)



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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Figure: 8-3

Project Location: \\na.aecomnet.com\ca\AMER\London-CALON1\DCS\Projects_ENV\60752729_HONI_Wawa_to_Porcupine_St1\900_CAD_GIS\200_GIS\Design\01_Reports\60752729_WawaPorcupine_AAS1\60752729_WawaPorcupine_AAS1.aprx Layouts: 60752729_AAS1-F08-Previous Assessment
Date Saved: 3/16/2026 2:50 PM User: clarkb

101

101

P1066-0364-2023, Archaeological Services Inc. (2024)

A2 A1

Budd Creek

Shakashi River

Bluff Lake

Fern Lake

Burr Lake

Basemaps provided by: Earthstar Geographics

LEGEND

Study Area (675m)

Route Option

A1

A2

Previous Assessments

P1066-0364-2023, Archaeological Services Inc. (2024)

Timmins

101

Map Extents

Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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AECOM

Figure: 8-4

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Amelia Lake

Cosens Lake

Lower Prairie Bee Lake

Prairie Bee Lake

THE SHOALS

P1066-0364-2023, Archaeological Services Inc. (2024)

A2 A1

101

Goodwin Lake

Prairie Bee River

Side Lake

Basemaps provided by: Earthstar Geographics

LEGEND

Study Area (675m)

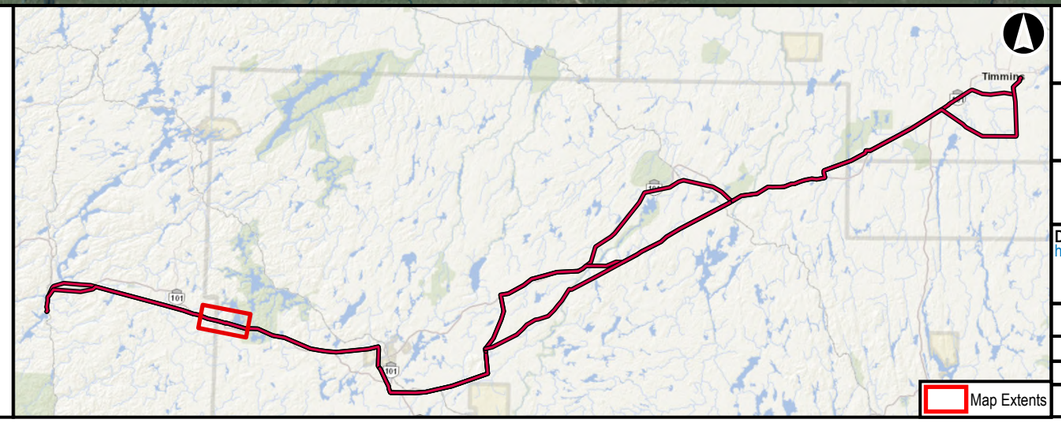
Route Option

A1

A2

Previous Assessments

P1066-0364-2023, Archaeological Services Inc. (2024)



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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AECOM

Figure: 8-5

Project Location: n:\ca\accnmt1\cmt\projects\AMER\Business\CALON\12\25\Projects_ENV\60752729\13_HON_Wawa_a_Porcupine_St1\900_CAD_GIS\900_GIS\Design\01_Report\fig\60752729_WawaPorcupine_AAS1\60752729_WawaPorcupine_AAS1.aprx Layout: 60752729_AAS1-F08-Previous Assessment
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THE SHOALS

Square Lake

Big Pine Lake

Little Wawa Creek

P1066-0375-2023, P1066-0438-2025, Archaeological Services Inc. (2025)

P1066-0364-2023, Archaeological Services Inc. (2024)

101

A1 A2

P111-0039-2016, Past Recovery Archaeological Services Inc. (2017)

Little Pine Lake

Little Wawa Lake

Sissons Lake

Lawson Lake

Basemaps provided by: Earthstar Geographics

LEGEND

Study Area (675m)

Route Option

A1

A2

Previous Assessments

P1066-0364-2023, Archaeological Services Inc. (2024)

P1066-0375-2023, P1066-0438-2025, Archaeological Services Inc. (2025)

P111-0039-2016, Past Recovery Archaeological Services Inc. (2017)

Timmins

Map Extents

Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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AECOM

Figure: 8-6

Project Location: \\na.aecomnet.com\ts\AMER\London\CALON1\DGS\Projects_ENV\60752913_HON_Wawa_Timmins_Porcupine_SH1900_CAD_GIS\900_GIS\Design\01_Reports\60752729_WawaPorcupine_AAS1\60752729_WawaPorcupine_AAS1.aprx Layouts: 60752729_AAS1-F08-Previous Assessment
Date Saved: 3/16/2026 2:50 PM User: clarkb

Wilkison Lake
Brusaw Lake
Wangoon Lake
Jaybee Lake
Wilkison Creek
Morden Lake
A2
A1
Hoey Creek
101
Hoey Lake
Canthook Lake
Babin Lake
P1066-0364-2023, Archaeological Services Inc. (2024)
Basemaps provided by: Earthstar Geographics

LEGEND

Study Area (675m)

Route Option

A1

A2

Previous Assessments

P1066-0364-2023, Archaeological Services Inc. (2024)

Timmins
101
Map Extents

Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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AECOM

Figure: 8-7

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Date Saved: 3/16/2026 2:50 PM User: clarkb

Colin Creek

Kebsquasheshing River

A1

A2

P1066-0364-2023, Archaeological Services Inc. (2024)

TOWNSHIP OF CHAPLEAU

129

Fife Lake

101

Basemaps provided by: Earthstar Geographics

LEGEND

Study Area (675m)

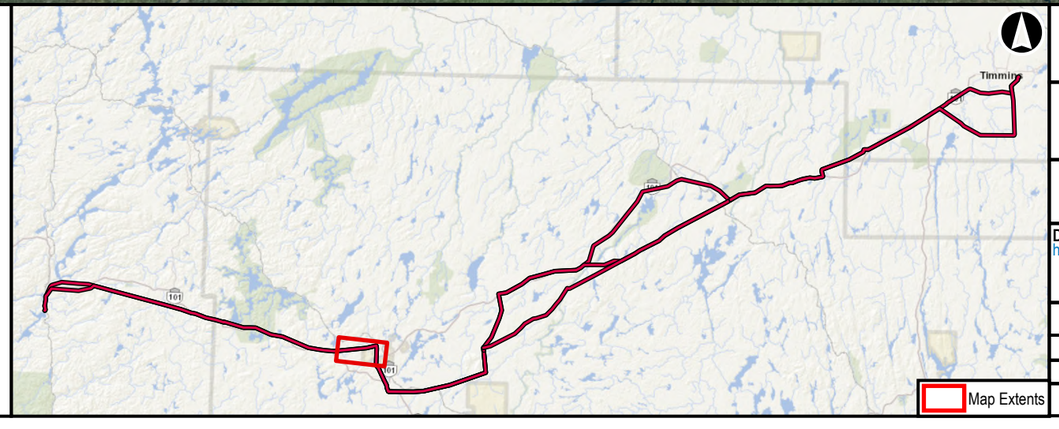
Route Option

A1

A2

Previous Assessments

P1066-0364-2023, Archaeological Services Inc. (2024)



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

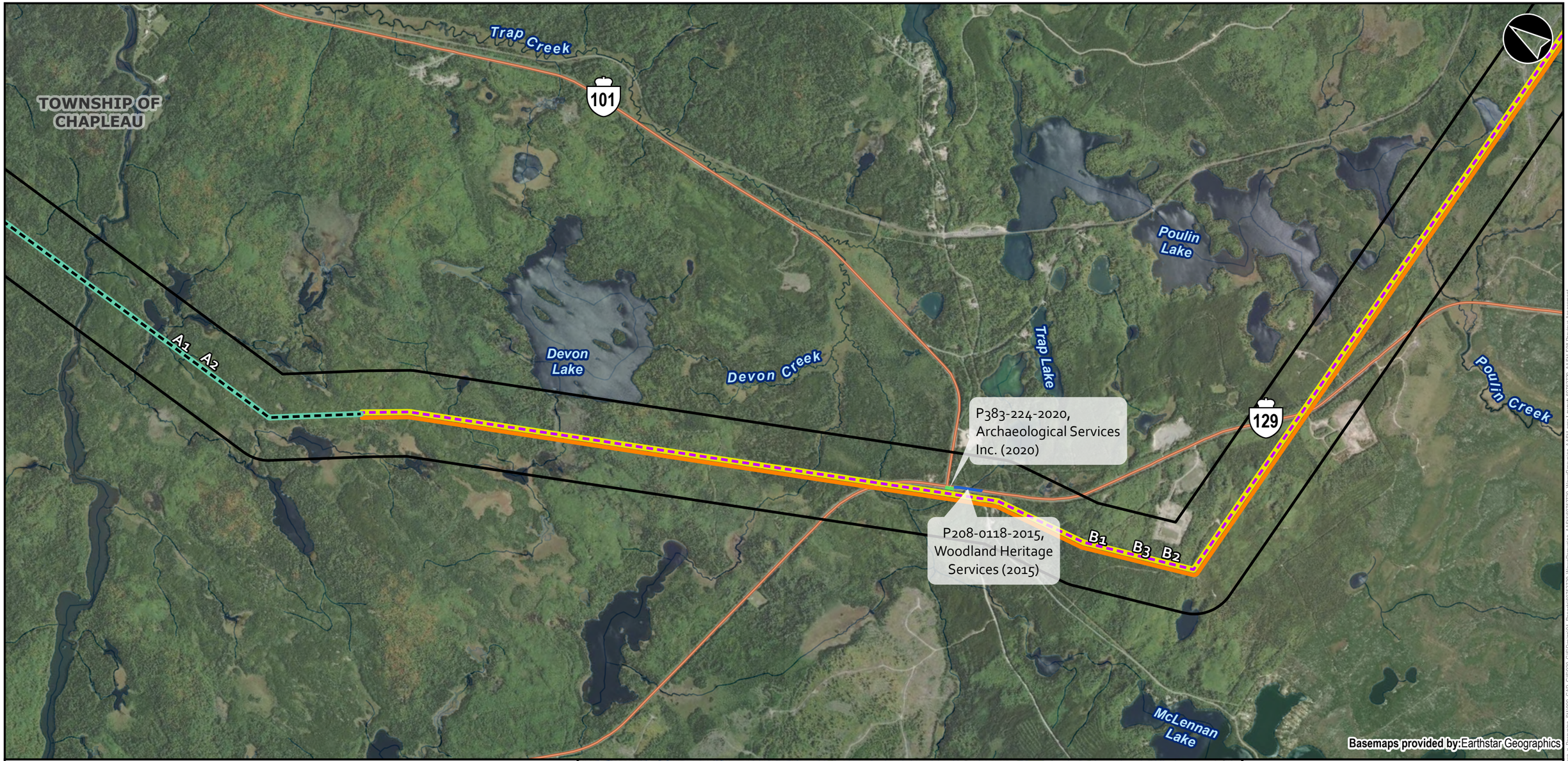
Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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AECOM

Figure: 8-8

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LEGEND

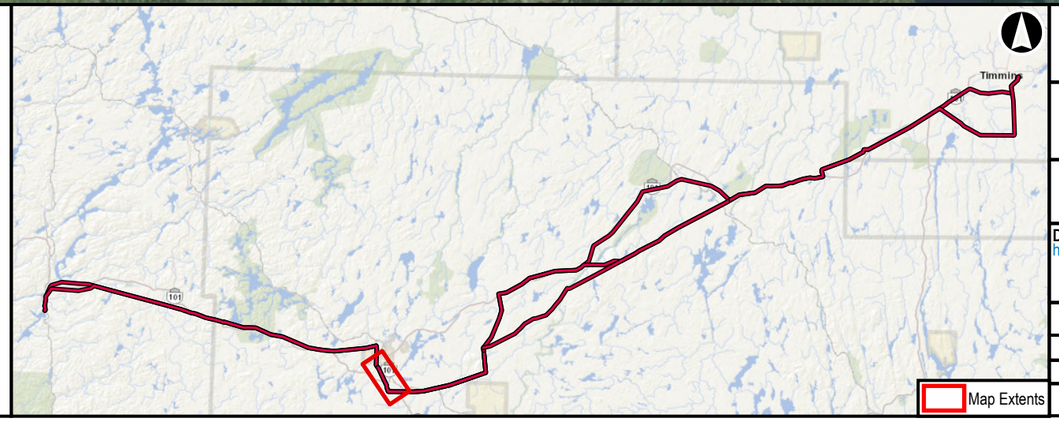
Study Area (675m)

Route Option

- A1
- A2
- B1
- B2
- B3

Previous Assessments

- P208-0118-2015, Woodland Heritage Services (2015)
- P383-224-2020, Archaeological Services Inc. (2020)



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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AECOM

Figure: 8-9

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Libby Lake

Sloans Lake

Twin Lakes

B1

101

P476-0029-2020, WSP (2020a)

P476-0031-2020, WSP (2020b)

Ivanhoe Lake

IVANHOE LAKE

Basemaps provided by: Earthstar Geographics

LEGEND

Study Area (675m)

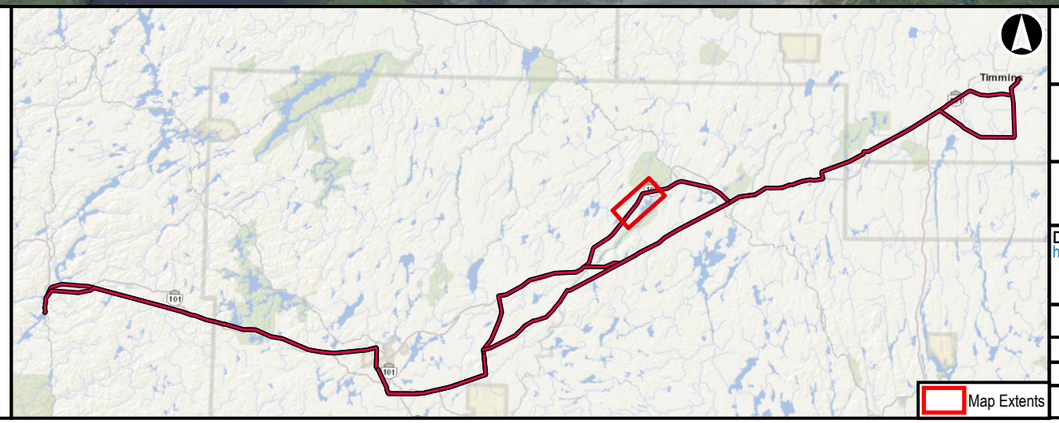
Route Option

B1

Previous Assessments

P476-0029-2020, WSP (2020a)

P476-0031-2020, WSP (2020b)



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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AECOM

Figure: 8-10

Project Location: n:\ca\toronto\projects\AMER\Canada\CAON1\DOS\Projects_ENV\60752729\3910_HON_Wawa_to_Porcupine_SH1900_CAD_GIS\920_GIS\Design\01_Reports\60752729_WawaPorcupine_AAS\1\60752729_WawaPorcupine_AAS1.aprx Layout: 60752729_AAS1-F08-Previous Assessment
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GROUNDHOG
RIVER
WATERWAY

101

P208-0208-2019, Woodland Heritage Northeast Limited (2020)

P208-0165-2018, Woodland Heritage Northeast Limited (2019)

P208-0076-2013, Woodland Heritage Northeast Limited (2015)

C2 C1

North Storm Creek

Storm Creek

Basemaps provided by: Earthstar Geographics

LEGEND

Study Area (675m)

Route Option

C1

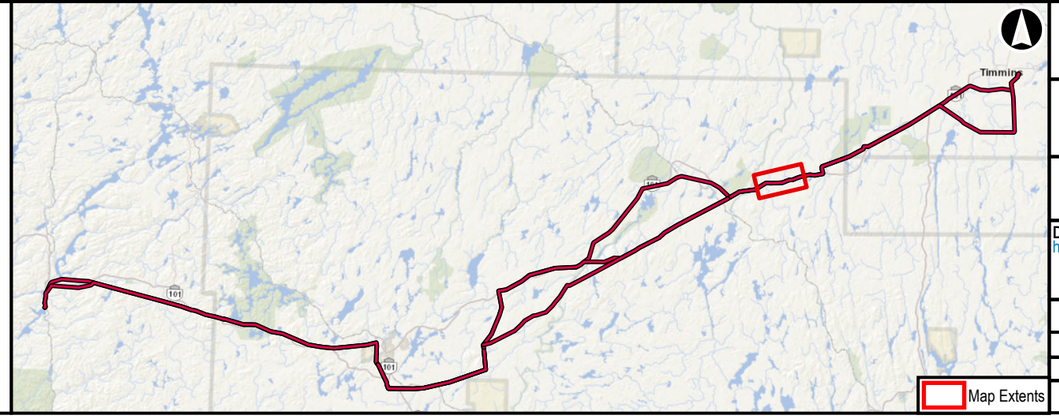
C2

Previous Assessments

P208-0076-2013, Woodland Heritage Northeast Limited (2015)

P208-0165-2018, Woodland Heritage Northeast Limited (2019)

P208-0208-2019, Woodland Heritage Northeast Limited (2020)



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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AECOM

Figure: 8-11

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P208-0076-2013, Woodland Heritage Northeast Limited (2015)

101

Weston Lake

Sewell Creek

C2

C1

DANA-JOWSEY LAKES

Deerfoot Creek

Sewell Lake

Crossover Lake

Crawford River

Opishing Lake

Basemaps provided by: Earthstar Geographics

LEGEND

Study Area (675m)

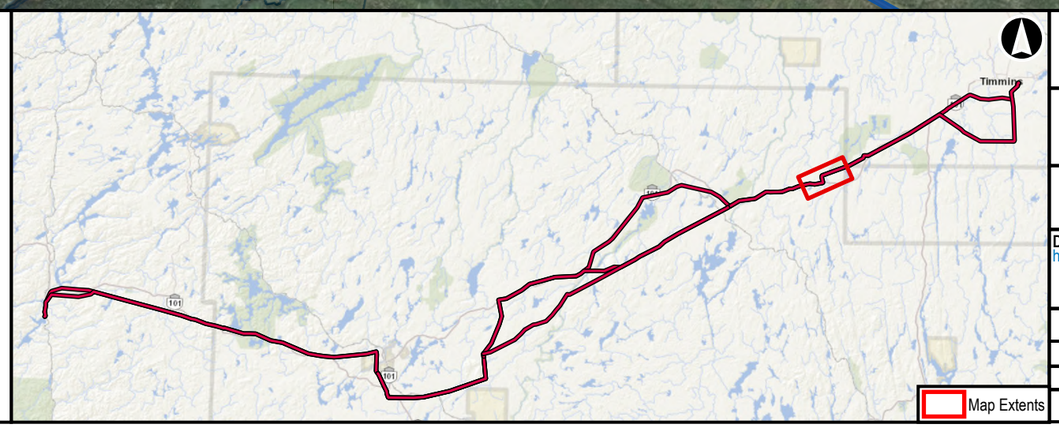
Route Option

C1

C2

Previous Assessments

P208-0076-2013, Woodland Heritage Northeast Limited (2015)



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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AECOM

Figure: 8-12

Project Location: \\na.aecomnet.com\ca\AMER\London-CALON1\DCS\Projects_ENV\60752729_HONI_Wawa_to_Porcupine_St1\900_CAD_GIS\200_GIS\Design\01_Reports\60752729_WawaPorcupine_AA\St1\60752729_WawaPorcupine_AA\St1.aprx Layouts: 60752729_AA St1 Fig8-Previous Assessment
Date Saved: 3/16/2026 2:50 PM User: clarkb

DANA-JOWSEY LAKES

Cosgrove Lake

Norris Lake

Keefer Creek

Opishing Lake

Little Star Lake

Star Lake

Star Creek

Denton Lake

Ellery Lake

C_1

C_2

Boom Lake

Crest Lake

P208-0076-2013, Woodland Heritage Northeast Limited (2015)

101

CITY OF TIMMINS

Keefer Lake

Kelly Creek

Basemaps provided by: Earthstar Geographics

LEGEND

Study Area (675m)

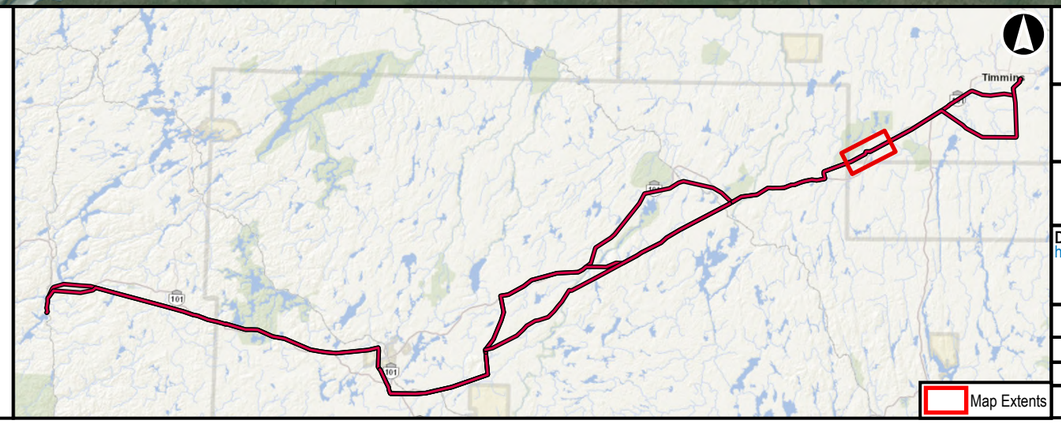
Route Option

C1

C2

Previous Assessments

P208-0076-2013, Woodland Heritage Northeast Limited (2015)



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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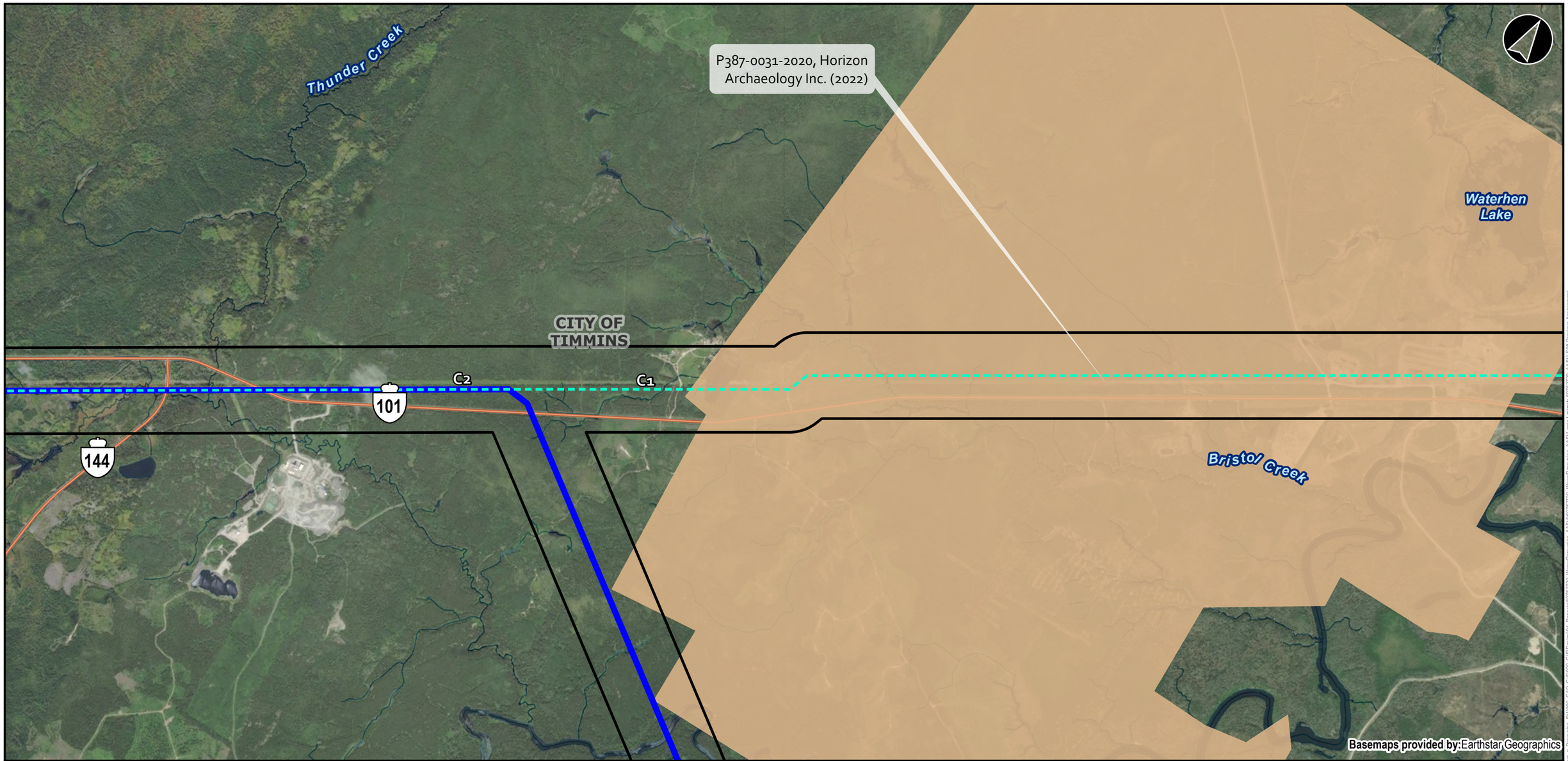
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AECOM

Figure: 8-13

Project Location: \\ca.aecomnet.com\AMER\London\CALON1\Data\Projects_ENV\60752913_HONI_Wawa_Timmins_Powerline_SR1900_CAD_GIS\900_GIS\Design\01_Reports\60752729_WawaPowerline_AAS\160752729_WawaPowerline_AAS1 aprx Layout: 60752729_AAS1-F08-Previous Assessment
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LEGEND

Study Area (675m)

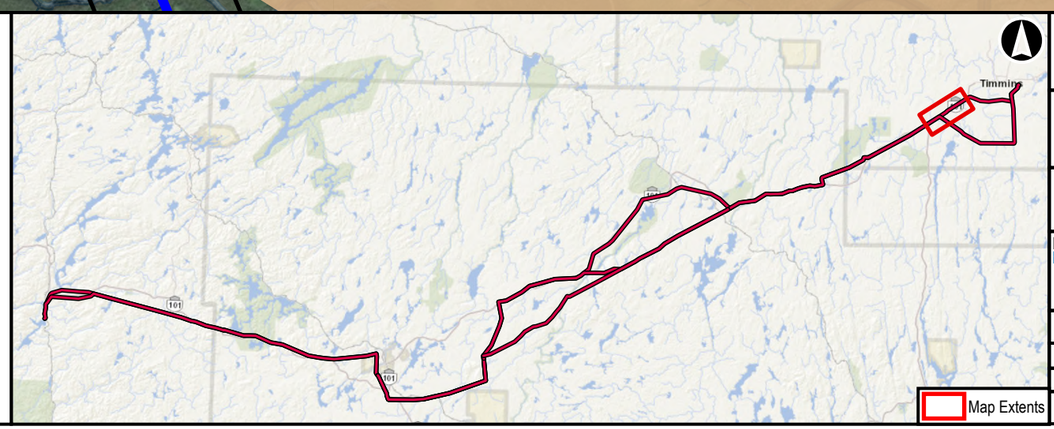
Route Option

C1

C2

Previous Assessments

P387-0031-2020, Horizon Archaeology Inc. (2022)



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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AECOM

Figure: 8-14

Project Location: \\na.aecomnet.com\ab\AMER\Edmon-CALON1\DGS\Projects_ENV\60752729_HON_Wawa_to_Porquis_St1\900_CAD_GIS\200_GIS\Design\01_Reports\60752729_WawaPorquis_AAS1\60752729_WawaPorquis_AAS1.aprx Layout: 60752729_AAS1-F08-Previous Assessment
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C1

101

Thunder Creek

P387-0031-2020, Horizon Archaeology Inc. (2022)

C2

Hope Lake

CITY OF TIMMINS

Basemaps provided by: Earthstar Geographics

LEGEND

Study Area (675m)

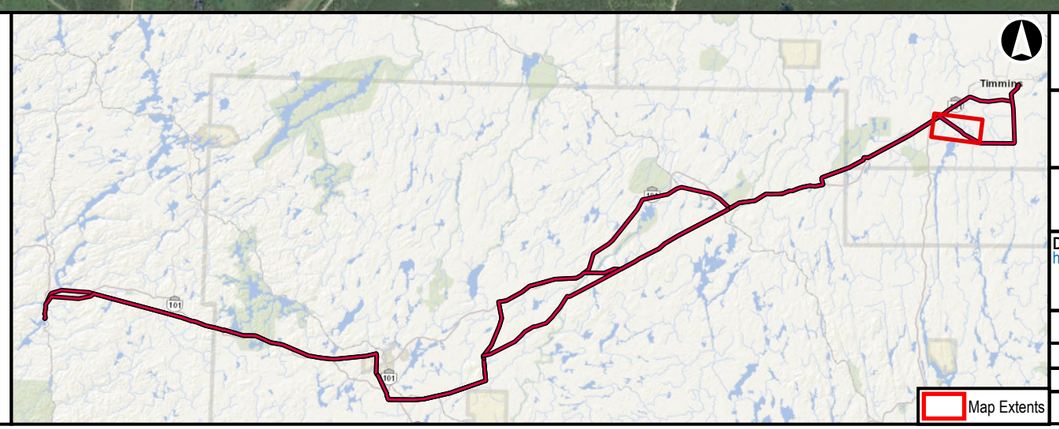
Route Option

C1

C2

Previous Assessments

P387-0031-2020, Horizon Archaeology Inc. (2022)



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Previous Archaeological Assessments within the Study Area and within 50 m if the Study Area

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

Data Sources:
https://www.geologyontario.mines.gov.on.ca/publication/MRD160

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AECOM

Figure: 8-15

Project Location: \\na.aecomnet.com\fs\AMER\Canada\CALDN\1\DCS\Projects_ENV\60752729.3_HON_Wawa_to_Porcupine_St1\900_CAD_GIS\920_GIS\Design\01_Report\60752729_WawaPorcupine_AAS1160752729_WawaPorcupine_AAS11.aprx Layout: 60752729_AAS11-F08-Previous Assessment
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P248-0299-2017, The Central Archaeology Group Inc. (2018)

P1066-0293-2022, Archaeological Services Inc. (2025)

P1066-0364-2023, Archaeological Services Inc. (2024)

CHL 1

101

Basemaps provided by:https://www.ontario.ca/page/open-government-licence-ontario, Vantor

LEGEND

- Study Area (675m)
- Watercourse

Cultural Heritage Designation

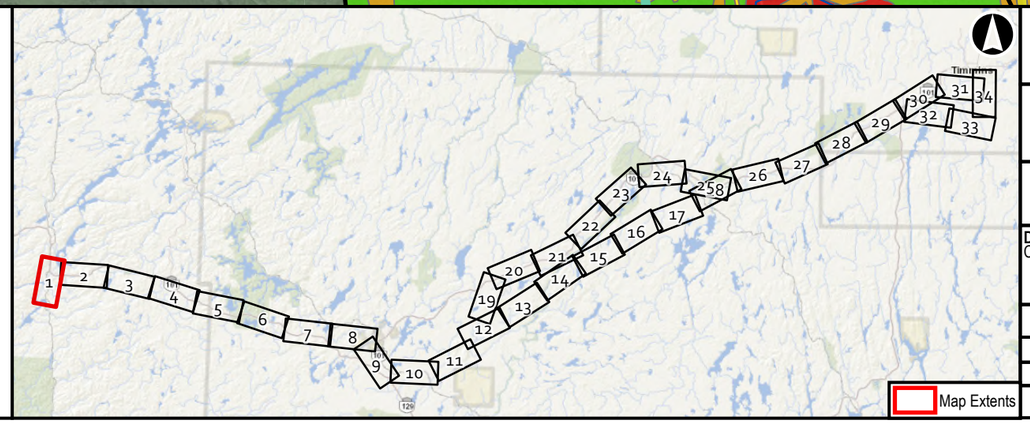
- Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

- A1
- A2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Previously Assessed - Cleared of Archaeological Concerns
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km
NAD 1983 UTM Zone 17N

Data Sources:
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AECOM

Figure: 9-1

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P1066-0293-2022, Archaeological Services Inc. (2025)

P1066-0364-2023, Archaeological Services Inc. (2024)

BHR 1

101

Basemaps provided by: https://www.ontario.ca/page/open-government-licence-ontario, Earthstar Geographics

LEGEND

- Study Area (675m)
- Watercourse

Cultural Heritage Designation

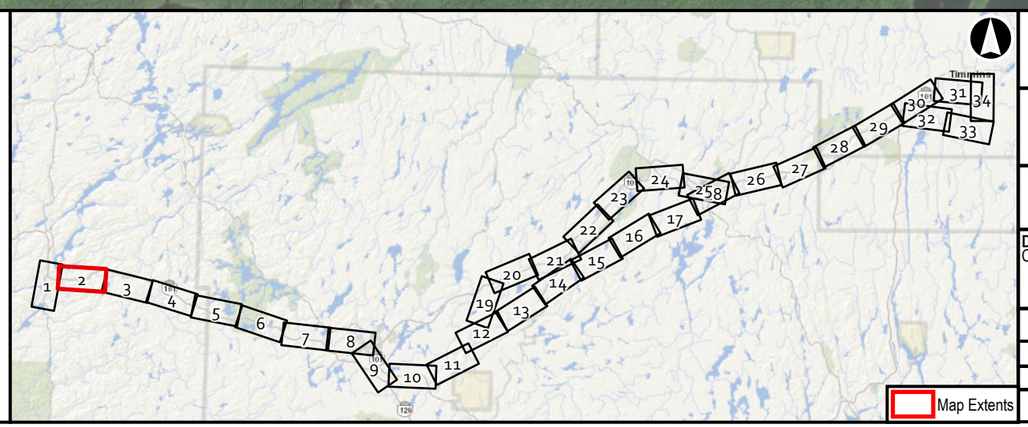
- Built Heritage Resource (BHR) – None (Potential)

Route Option

- A1
- A2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Previously Assessed - Cleared of Archaeological Concerns
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

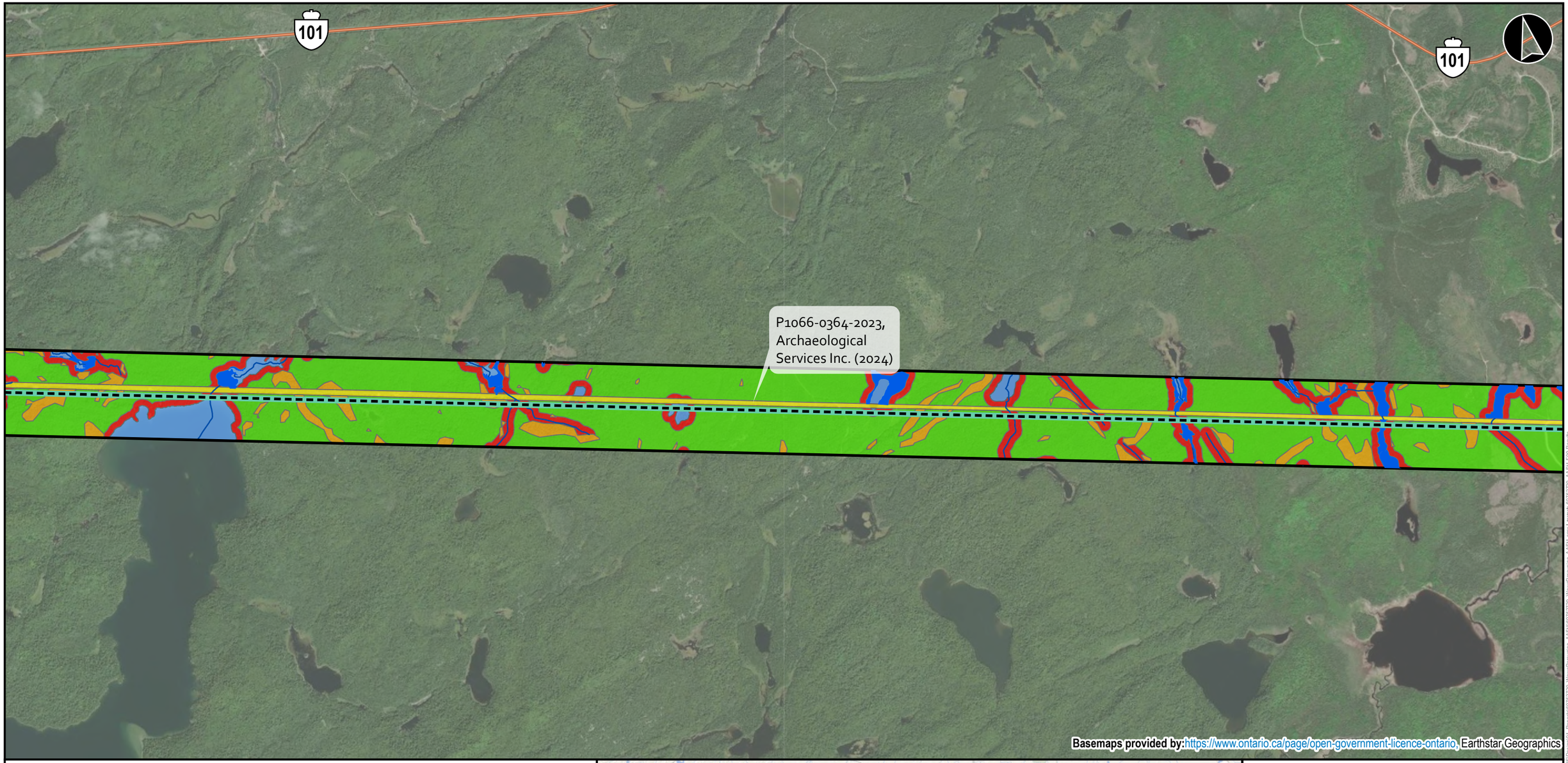
Data Sources:
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AECOM

Figure: 9-2

Project Location: I:\GIS\Projects_ENV\60752729_HOW_Wawa_x_Porcupine_3819000_CAD_GIS\GIS_GIS\Design\01_Reports\60752729_WawaPorcupine_AA3\1\60752729_WawaPorcupine_AA3\1.aprx Layout: 60752729_AA3\1-F09-Results
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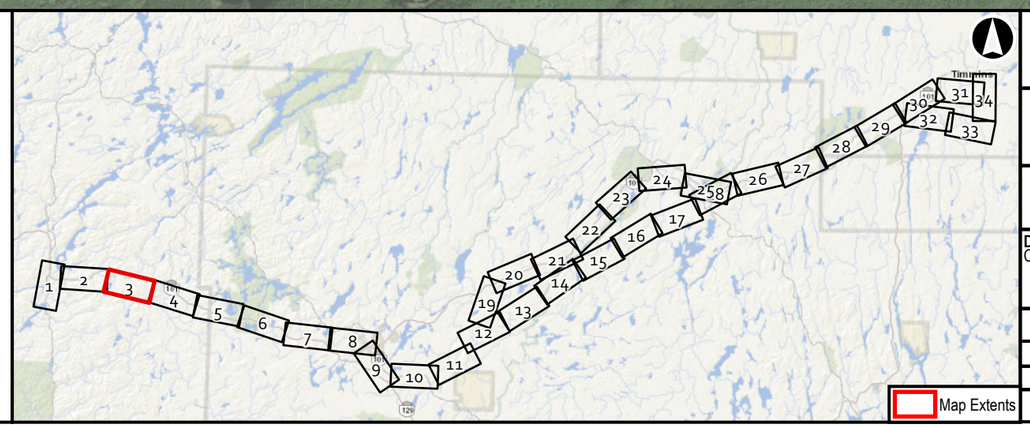
- Study Area (675m)
- Watercourse

Route Option

- A1
- A2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Previously Assessed - Cleared of Archaeological Concerns
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km
NAD 1983 UTM Zone 17N

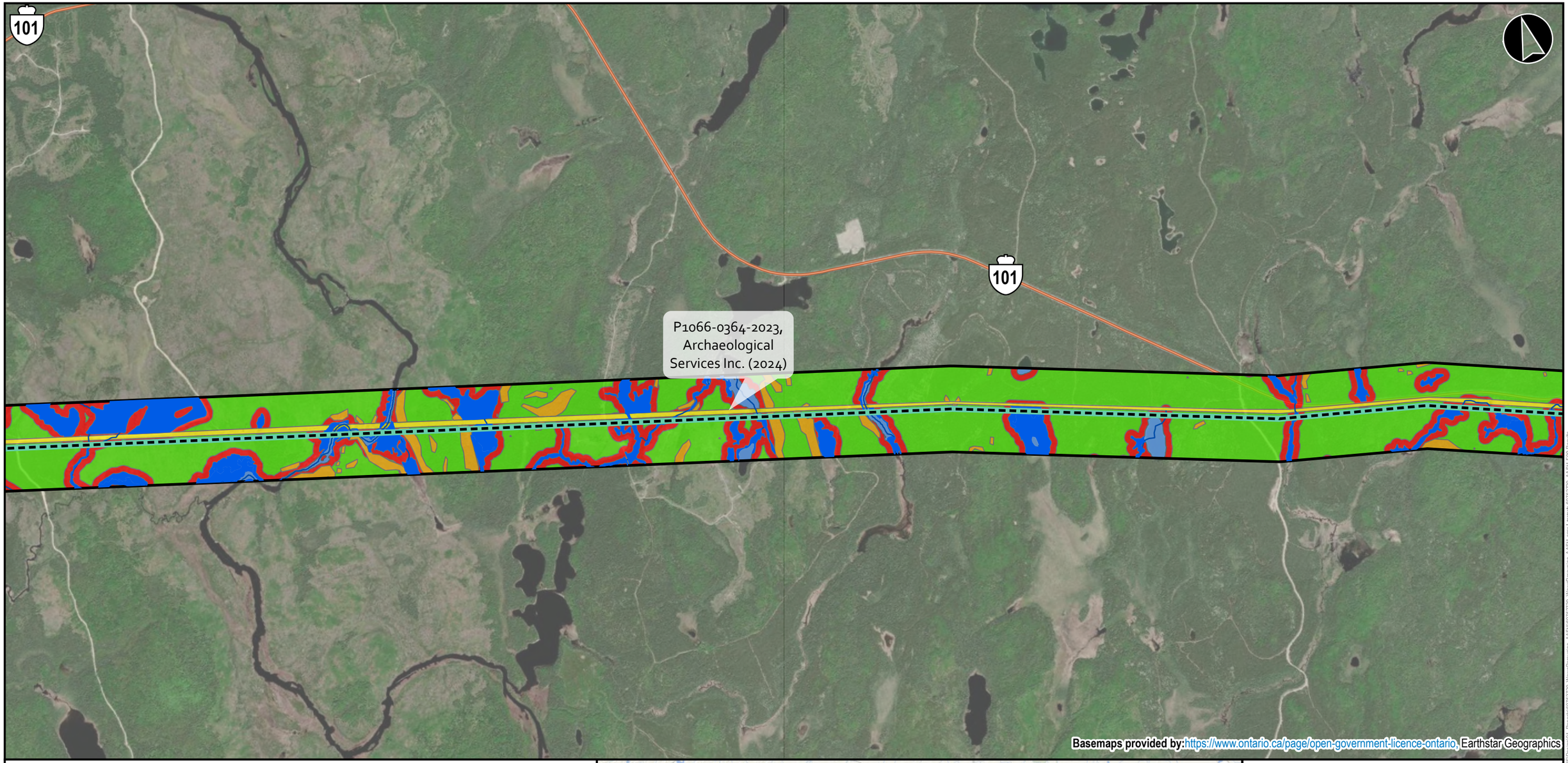
Data Sources:
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Figure: 9-3

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LEGEND

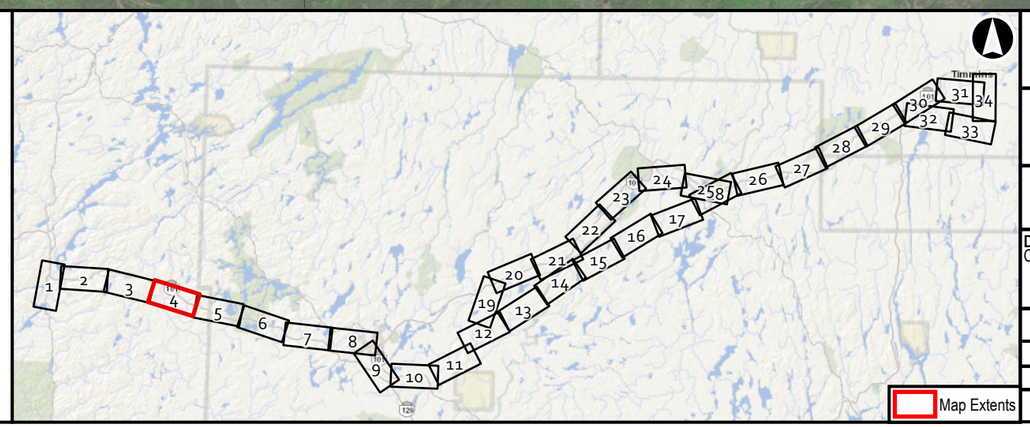
- Study Area (675m)
- Watercourse

Route Option

- A1
- A2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Previously Assessed - Cleared of Archaeological Concerns
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km
NAD 1983 UTM Zone 17N

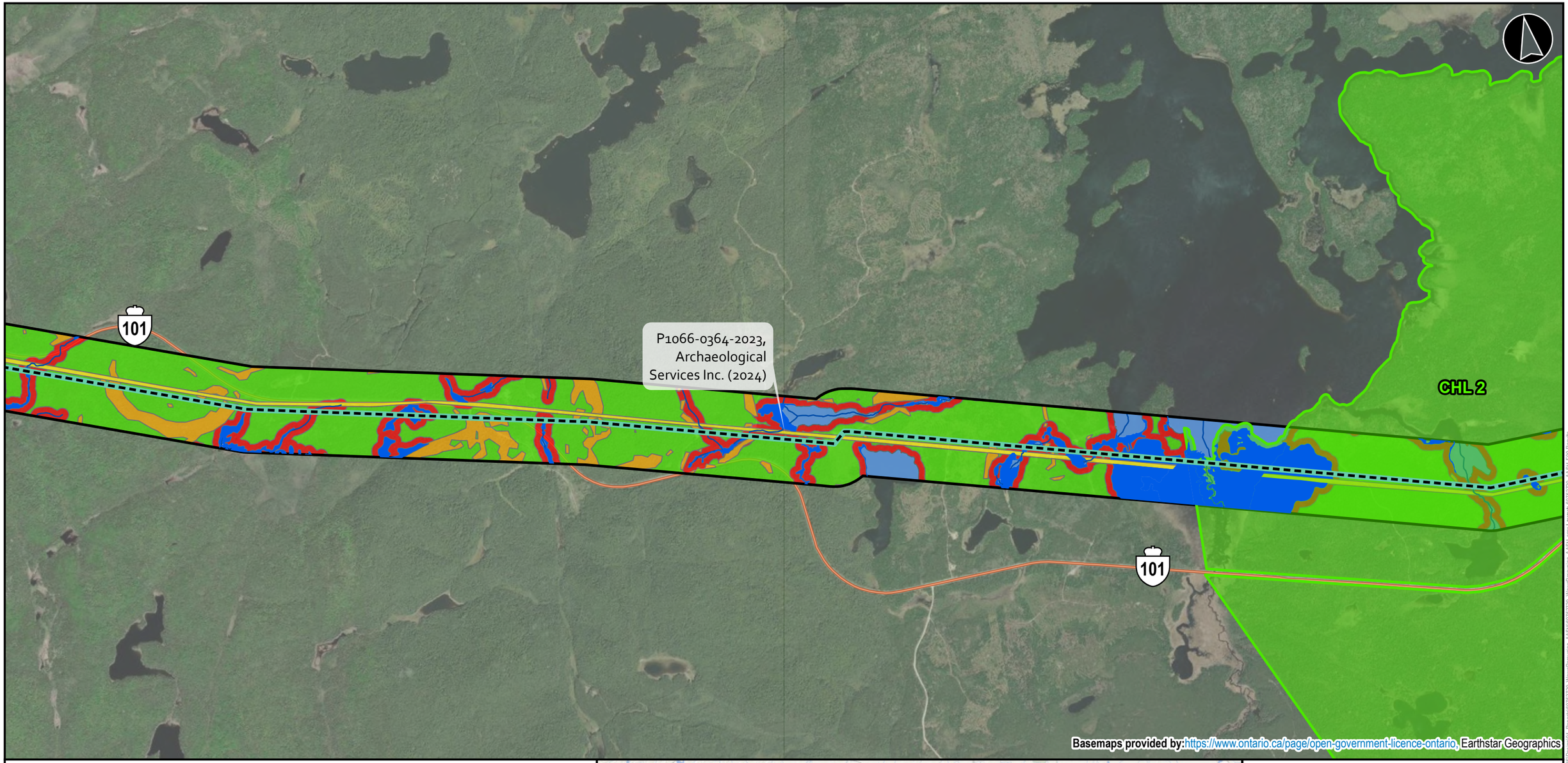
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Figure: 9-4

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Date Saved: 2026-11-03 10:08 AM User: clarkb



LEGEND

- Study Area (675m)
- Watercourse

Cultural Heritage Designation

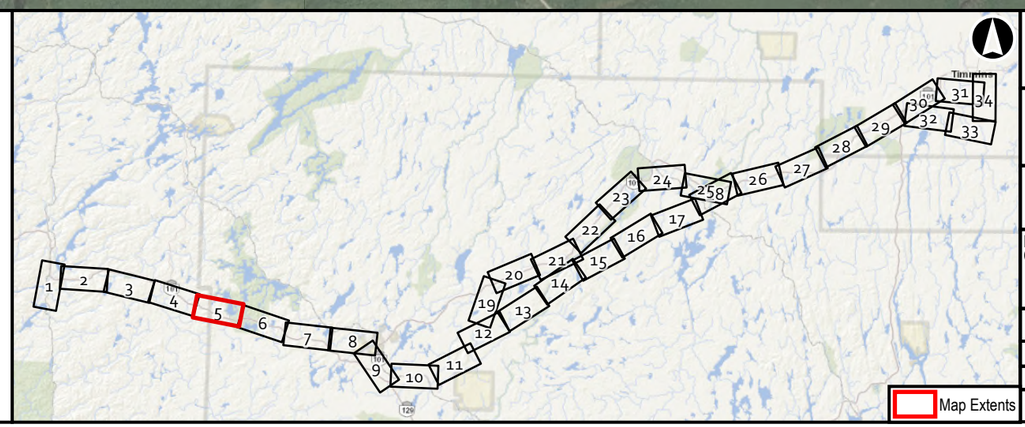
- Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

- A1
- A2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Previously Assessed - Cleared of Archaeological Concerns
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km
NAD 1983 UTM Zone 17N

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Figure: 9-5

Project Location: L:\DCS-Projects_ENV\60752729_HONI_Wawa_2_Porcupine_ST1900_CAD_GIS\900_GIS\Design\01_Reports\60752729_WawaPorcupine_AAS\160752729_WawaPorcupine_AAS1.aprx Layout: 60752729_AAS11-F09-Results
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CHL 2

101

P1066-0375-2023, P1066-0438-2025, Archaeological Services Inc. (2025)

P111-0039-2016, Past Recovery Archaeological Services Inc. (2017)

P1066-0364-2023, Archaeological Services Inc. (2024)

Basemaps provided by: https://www.ontario.ca/page/open-government-licence-ontario, Earthstar Geographics

LEGEND

- Study Area (675m)
- Watercourse

Cultural Heritage Designation

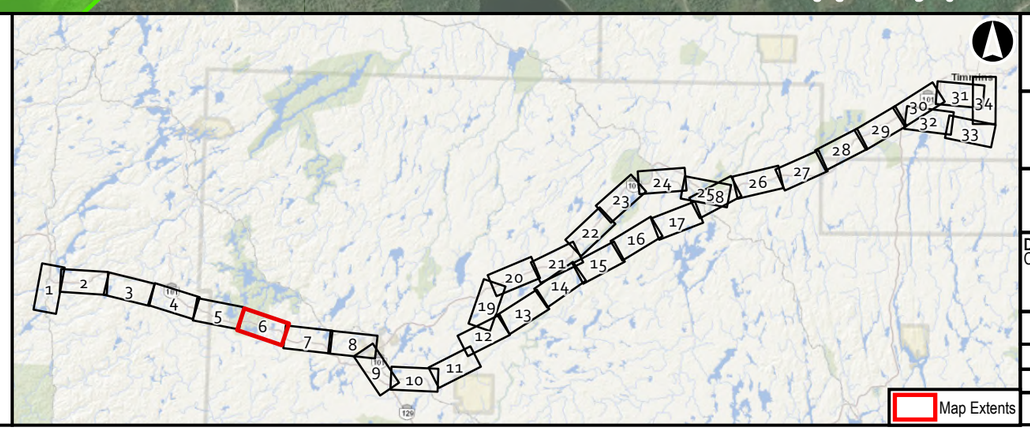
- Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

- A1
- A2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Previously Assessed - Cleared of Archaeological Concerns
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 9-6

Project Location: L:\GIS\Projects_ENV\60752729_HONI_Wawa_2_Porcupine_ST1900_CAD_GIS\900_GIS\Design\01_Reports\60752729_WawaPorcupine_AAS1\60752729_WawaPorcupine_AAS1.aprx Layout: 60752729_AAS1-F09-Results
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CHL

P1066-0364-2023, Archaeological Services Inc. (2024)

101

101

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LEGEND

- Study Area (675m)
- Watercourse

Cultural Heritage Designation

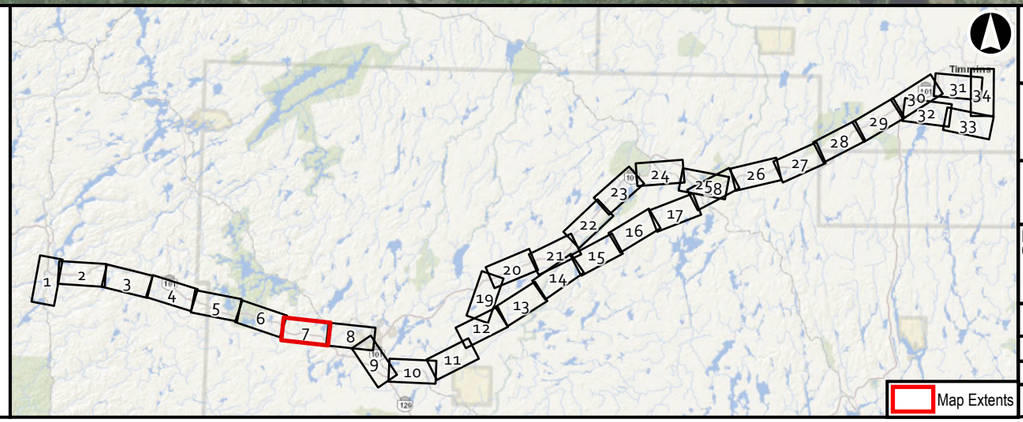
- Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

- A1
- A2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Previously Assessed - Cleared of Archaeological Concerns
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 9-7

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CHL 3

Fife Lake

P1066-0364-2023, Archaeological Services Inc. (2024)

129

101

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LEGEND

- Study Area (675m)
- Watercourse

Cultural Heritage Designation

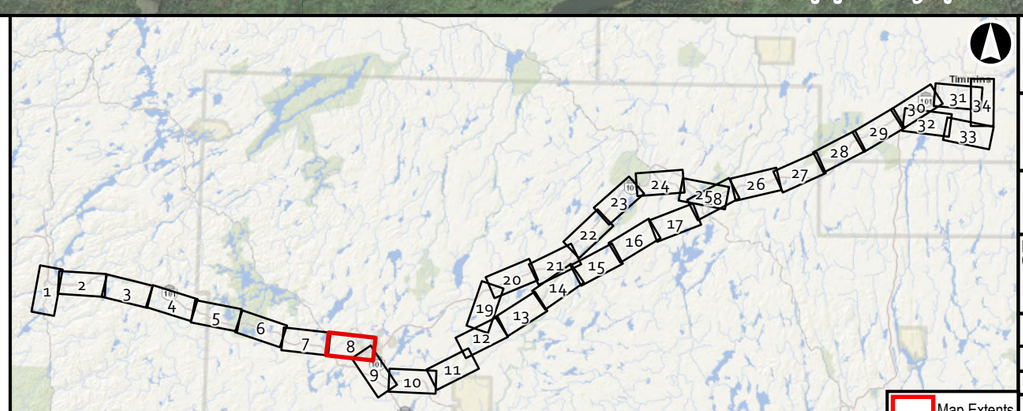
- Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

- A1
- A2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Previously Assessed - Cleared of Archaeological Concerns
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km
NAD 1983 UTM Zone 17N

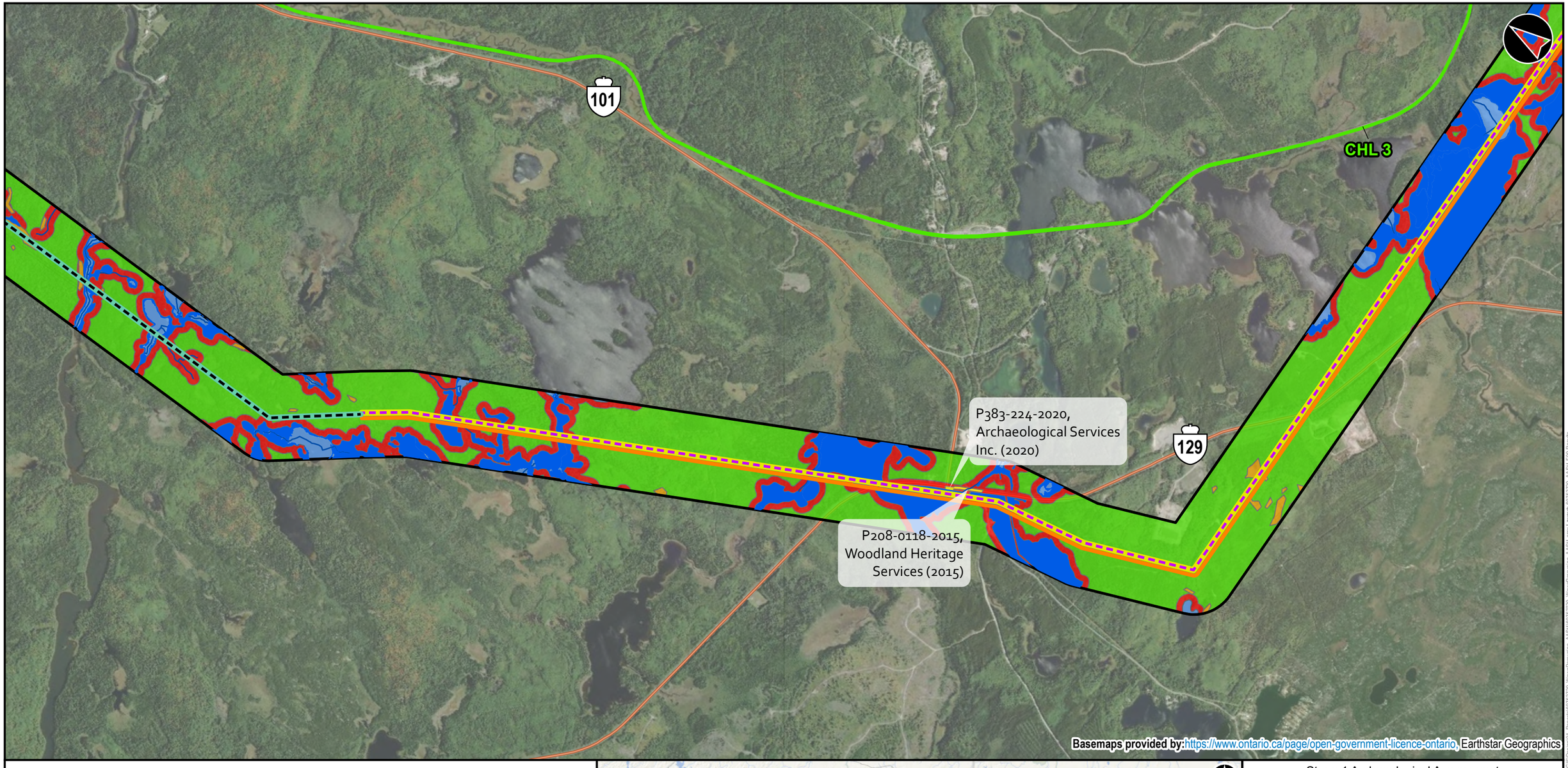
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Figure: 9-8

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LEGEND

- Study Area (675m)
- Watercourse

Cultural Heritage Designation

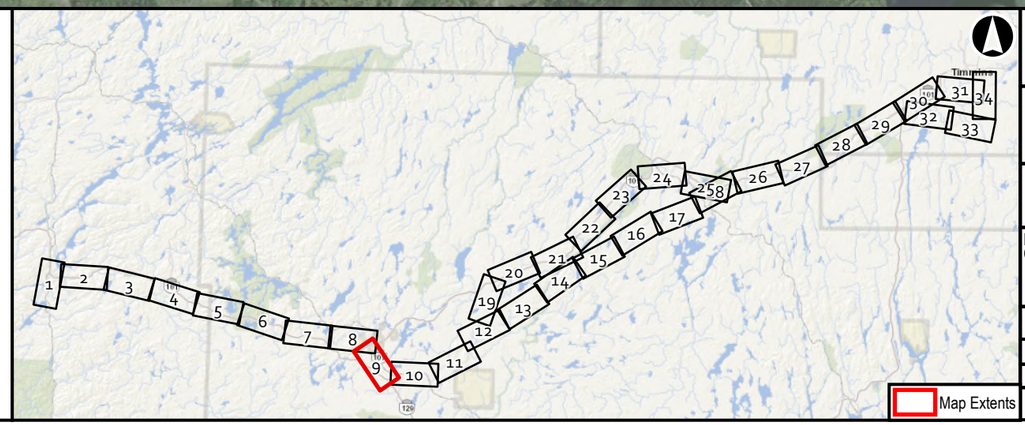
- Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

- A1
- A2
- B1
- B2
- B3

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Previously Assessed - Cleared of Archaeological Concerns
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km
NAD 1983 UTM Zone 17N

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Figure: 9-9

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CHL 3

129

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LEGEND

- Study Area (675m)
- Watercourse

Cultural Heritage Designation

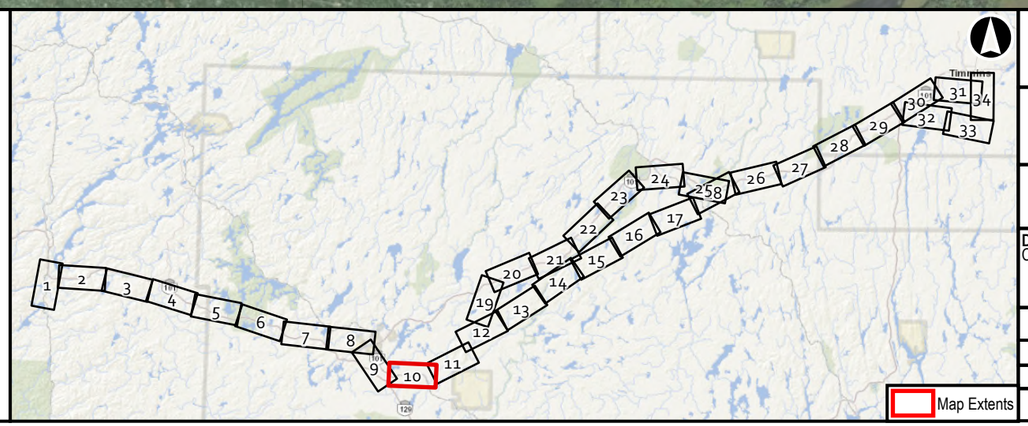
- Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

- B1
- B2
- B3

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 9-10

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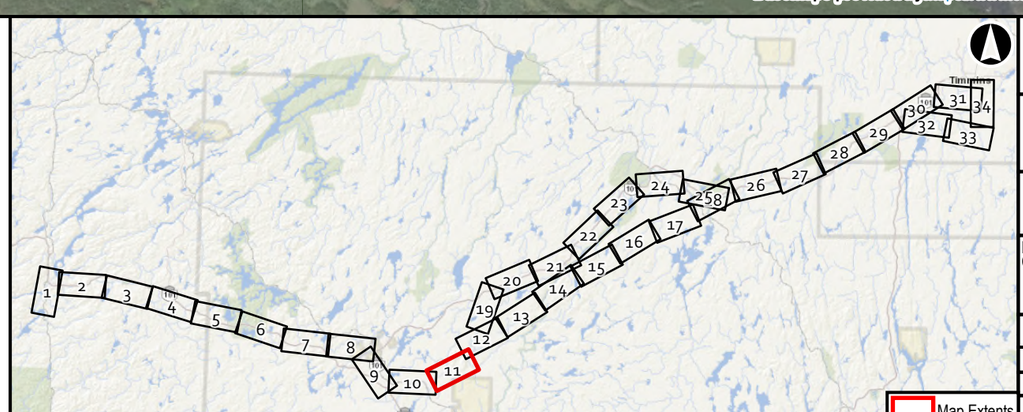
- Study Area (675m)
- Watercourse

Route Option

- B1
- B2
- B3

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km
NAD 1983 UTM Zone 17N

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Figure: 9-11

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Wright Creek

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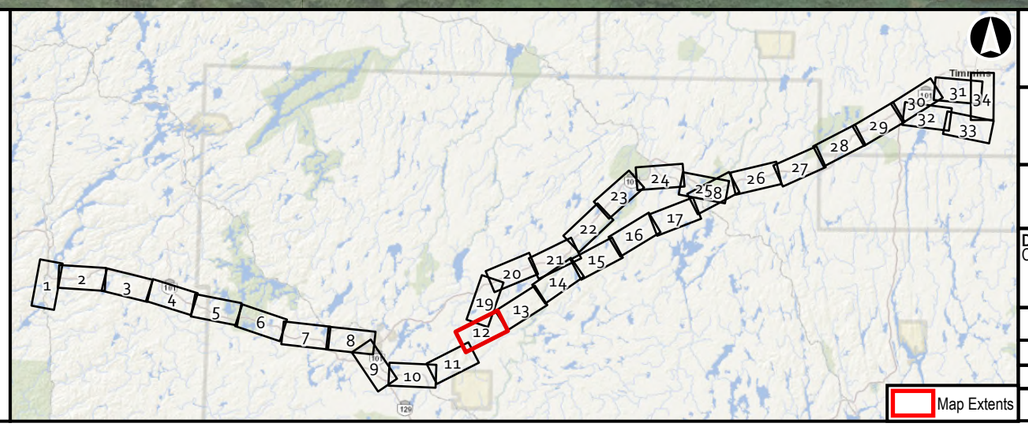
- Study Area (675m)
- Watercourse

Route Option

- B1
- B2
- B3

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 9-12

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CHL 4

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LEGEND

Study Area (675m)

Watercourse

Cultural Heritage Designation

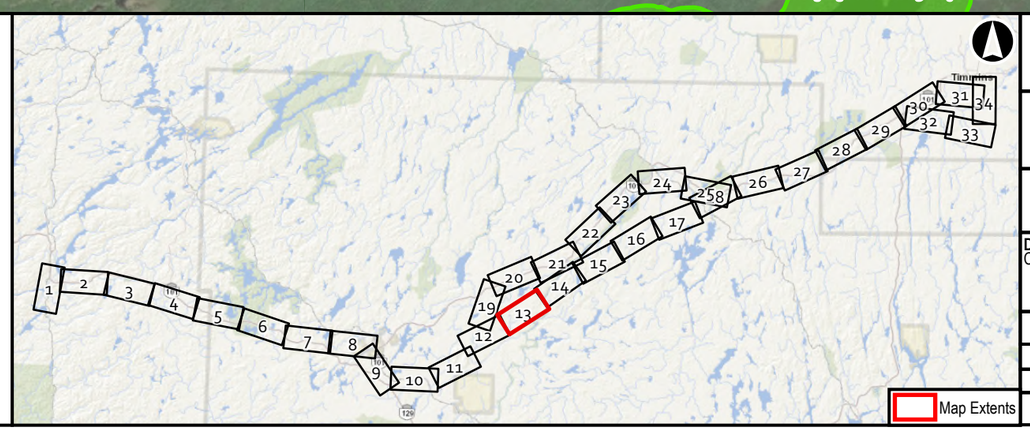
Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

B3

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

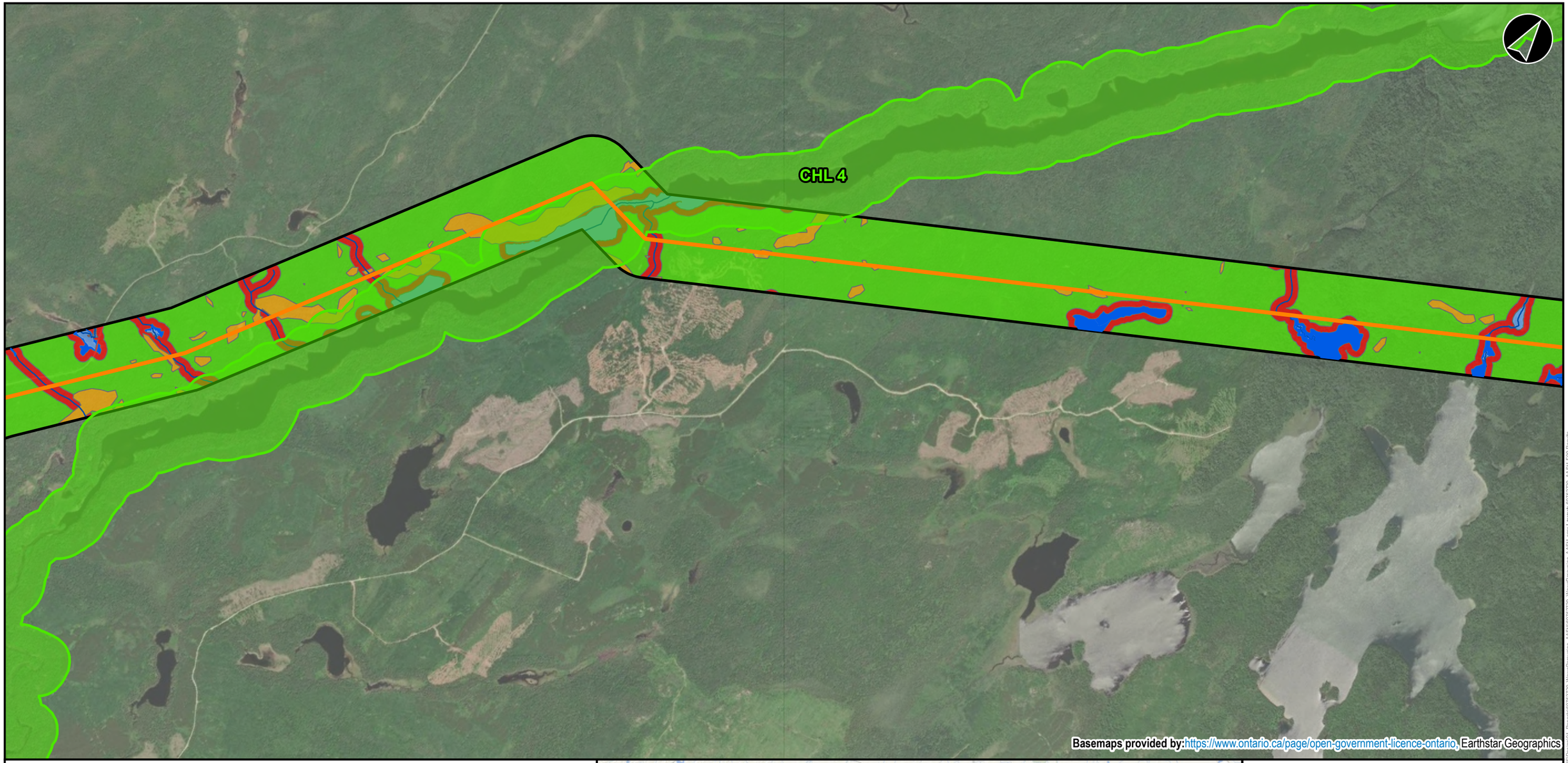
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Figure: 9-13

Project Location: L:\DCS-Projects_BV\60752729\10_HON_Wawa_3_Perception_ST\900_CAD_GIS\900_GIS\Design\01_Reports\60752729_WawaPerception_AAS1\60752729_WawaPerception_AAS1.aprx Layouts: 60752729_AAS1-F09-Results
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LEGEND

Study Area (675m)

Watercourse

Cultural Heritage Designation

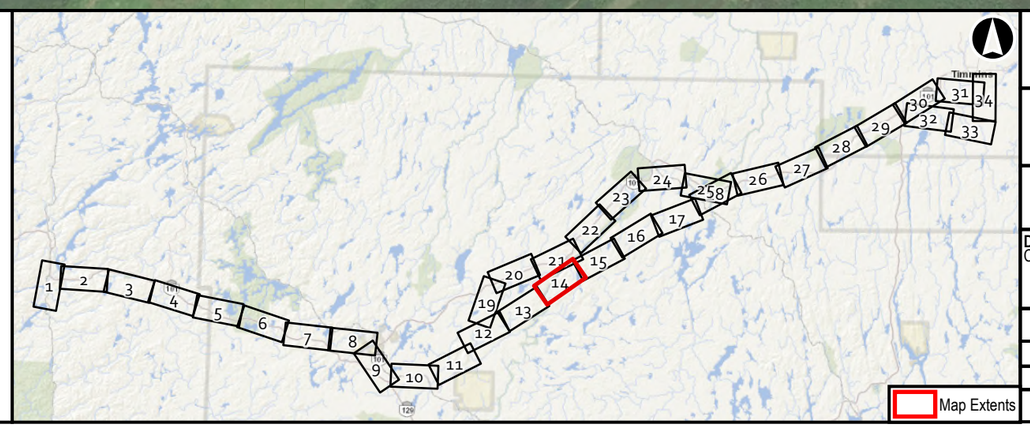
Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

B3

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

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Figure: 9-14

Project Location: L:\GIS\Projects_ENV\60752729_HONI_Wawa_2_Porcupine_ST1900_CAD_GIS\900_GIS\Design\01_Reports\60752729_WawaPorcupine_AAS1\60752729_WawaPorcupine_AAS1.aprx Layout: 60752729_AAS1-F09-Results
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CHL 4

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LEGEND

- Study Area (675m)
- Watercourse

Cultural Heritage Designation

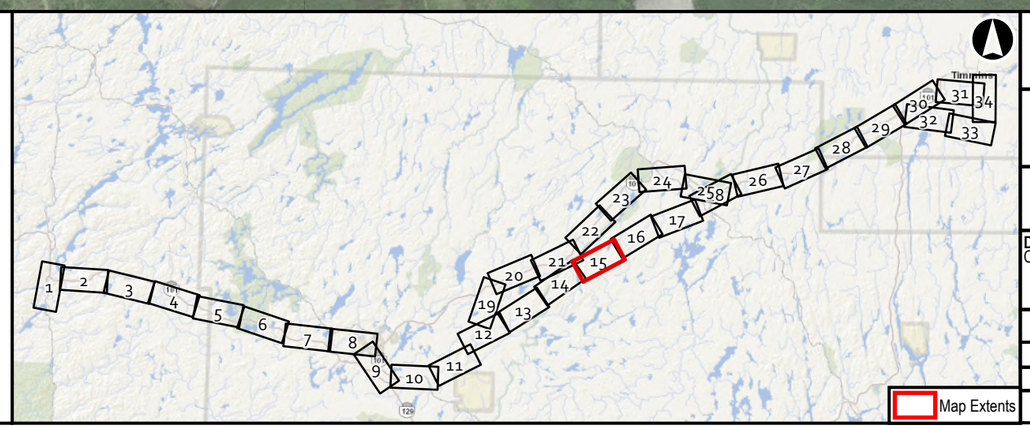
- Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

- B2
- B3

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km
NAD 1983 UTM Zone 17N

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Figure: 9-15

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LEGEND

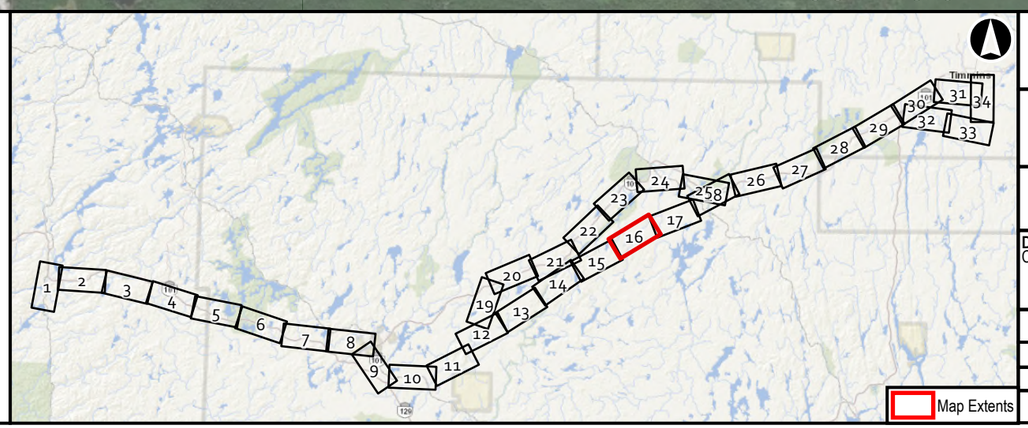
- Study Area (675m)
- Watercourse

Route Option

- B2
- B3

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 9-16

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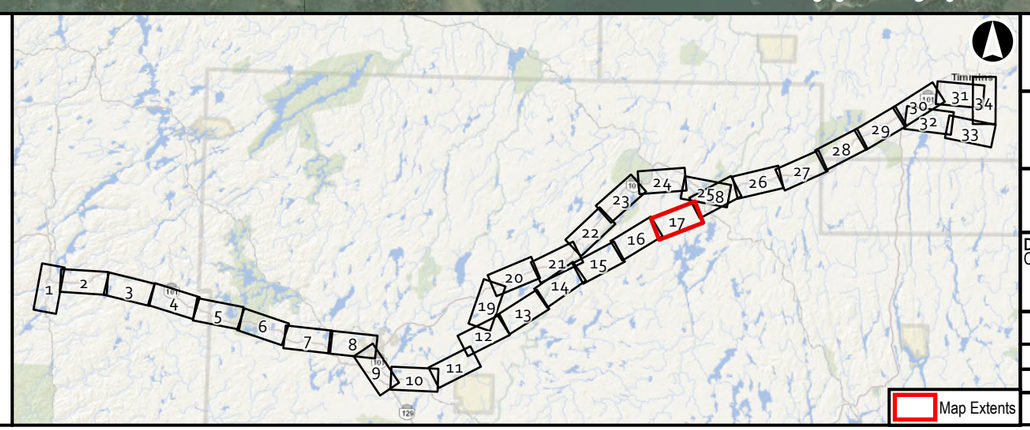
- Study Area (675m)
- Watercourse

Route Option

- B2
- B3

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km
NAD 1983 UTM Zone 17N

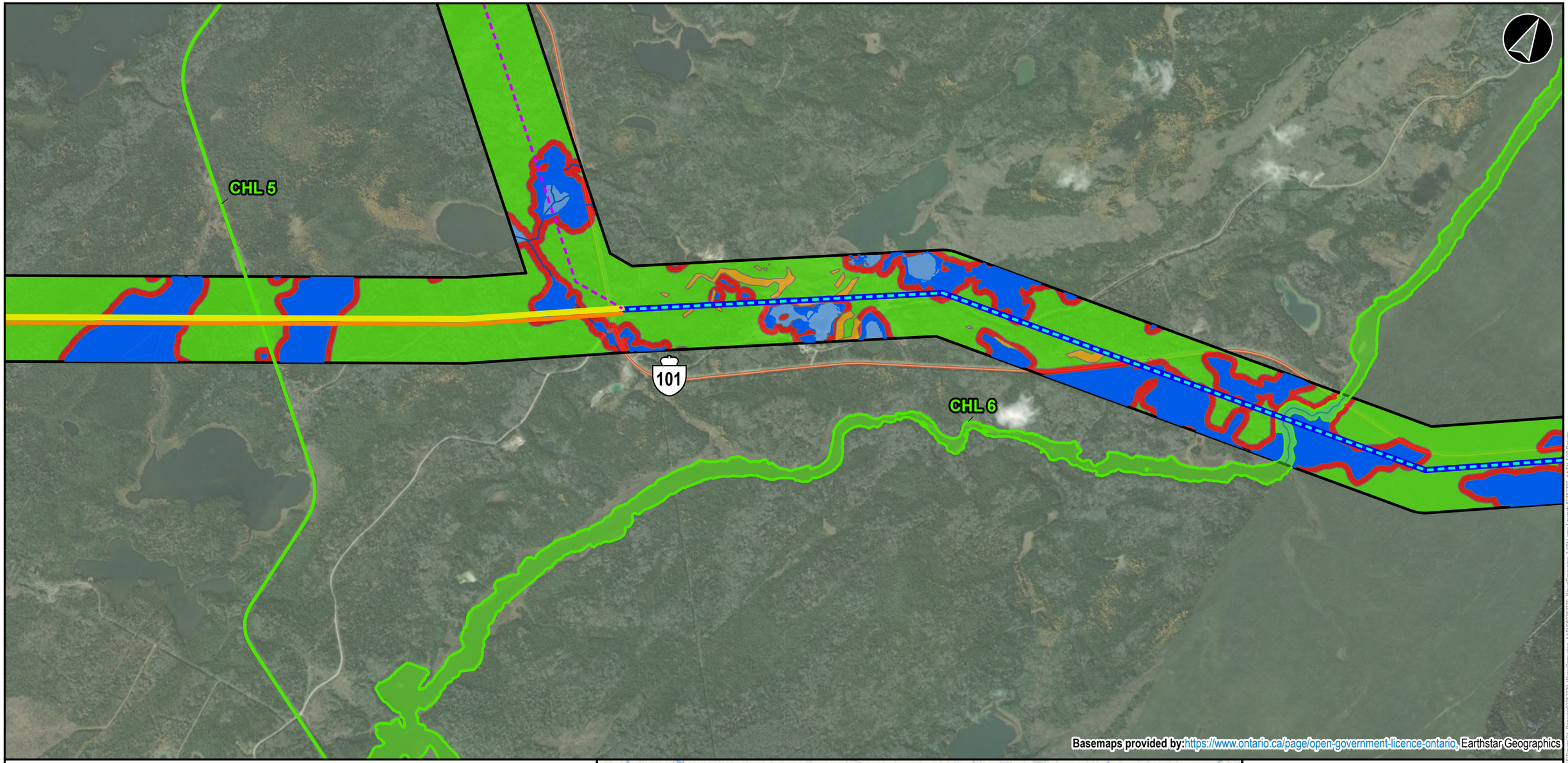
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AECOM

Figure: 9-17

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LEGEND

- Study Area (675m)
- Watercourse

Cultural Heritage Designation

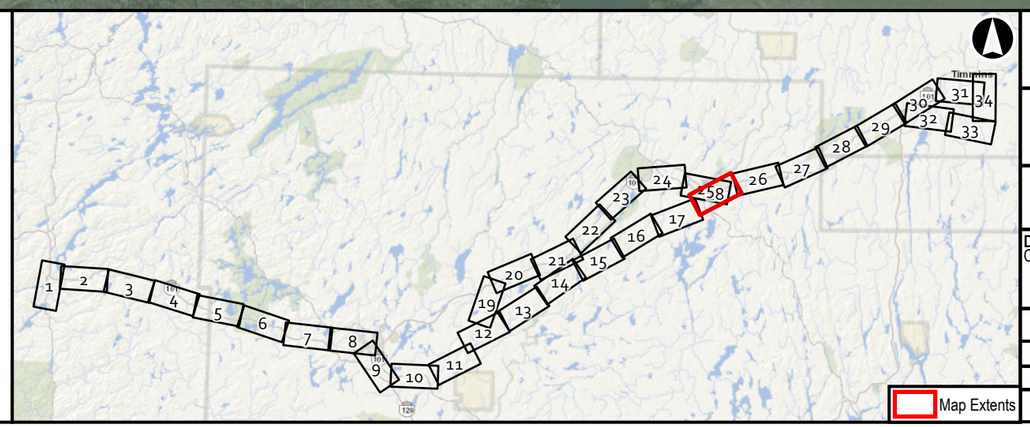
- Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

- B1
- B2
- B3
- C1
- C2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

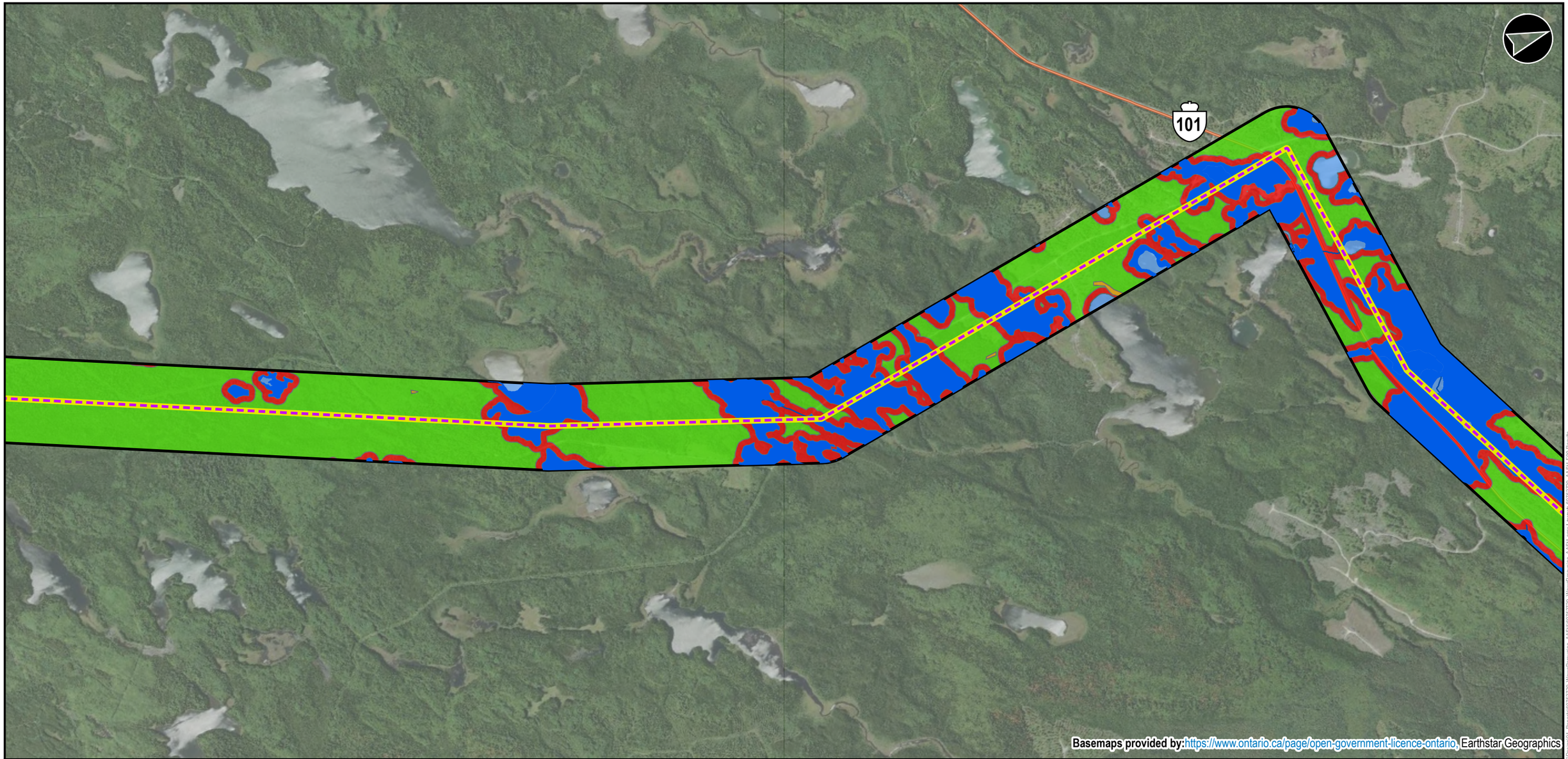
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Figure: 9-18

Project Location: L:\DCS-Projects_ENV\60752729_HONI_Wawa_2_Perception_ST1900_CAD_GIS\900_GIS\Design\01_Reports\60752729_WawaPerception_AAS1\60752729_WawaPerception_AAS1.aprx Layouts: 60752729_AAS1 Fish Results
Date Saved: 2026-11-03 10:08 AM User: clarkb



LEGEND

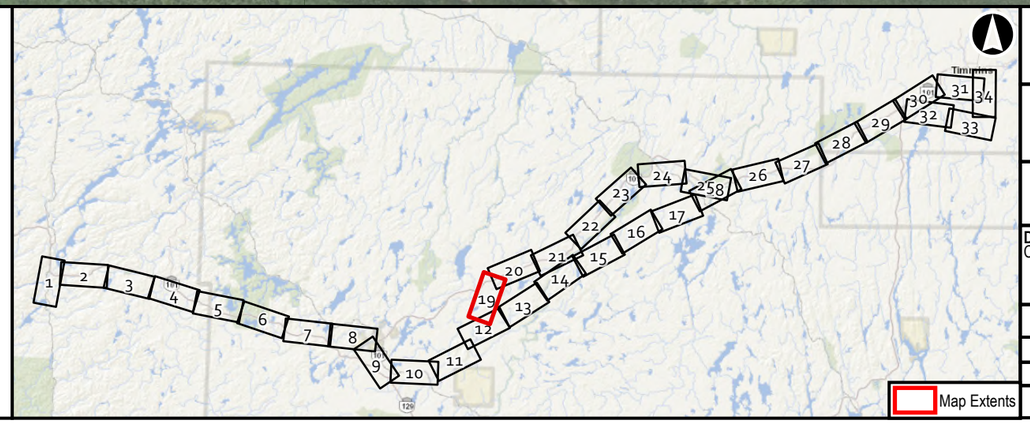
- Study Area (675m)
- Watercourse

Route Option

- B1
- B2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

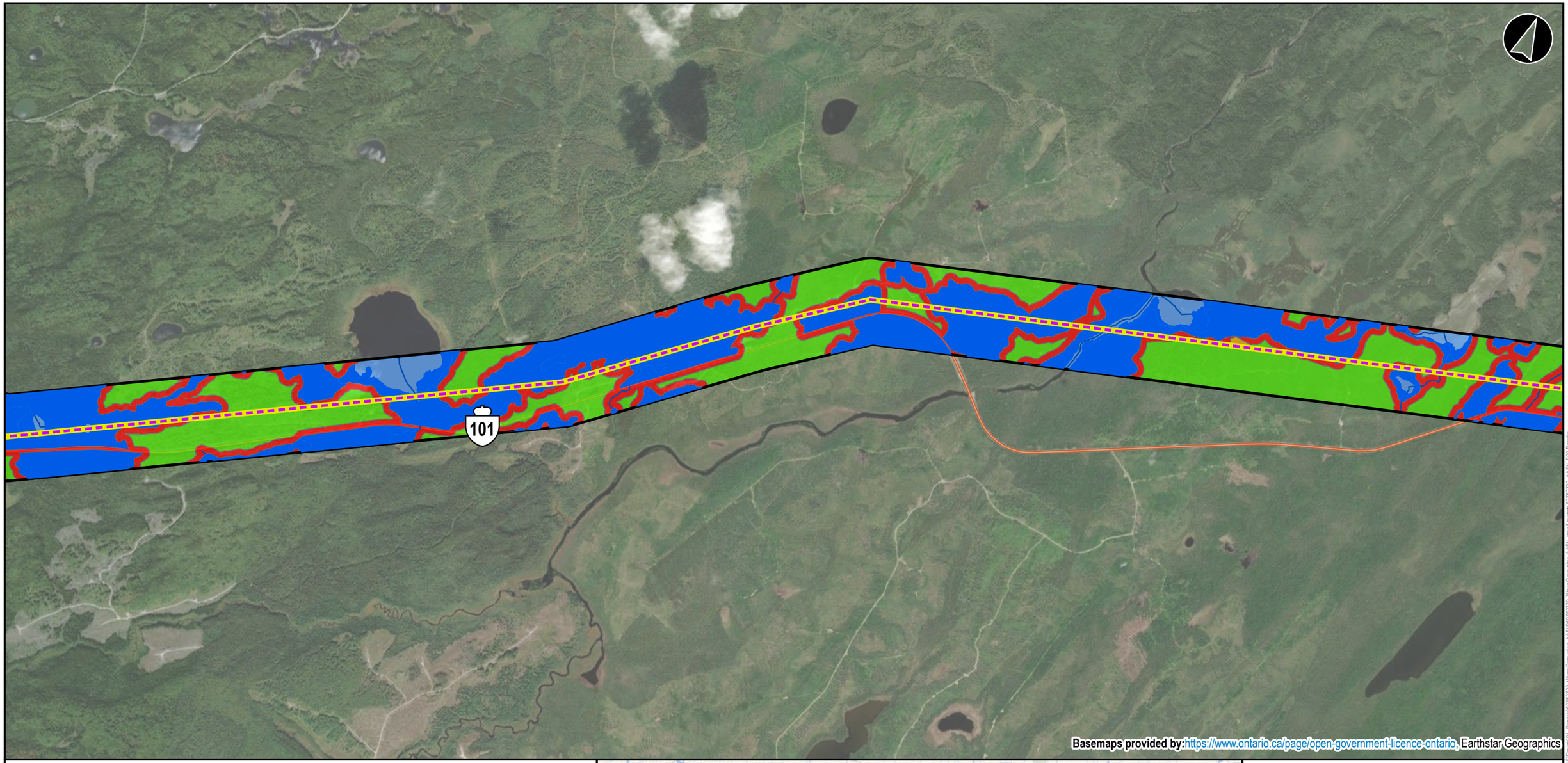
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Figure: 9-19

Project Location: L:\OCS\Projects_ENV\60752729_HON_Wawa_x_Porcupine_St1\900_CAD_GIS\900_GIS\Design\01_Reports\60752729_WawaPorcupine_AAS1\60752729_WawaPorcupine_AAS1.aprx Layout: 60752729_AAS1-Fig9-Results
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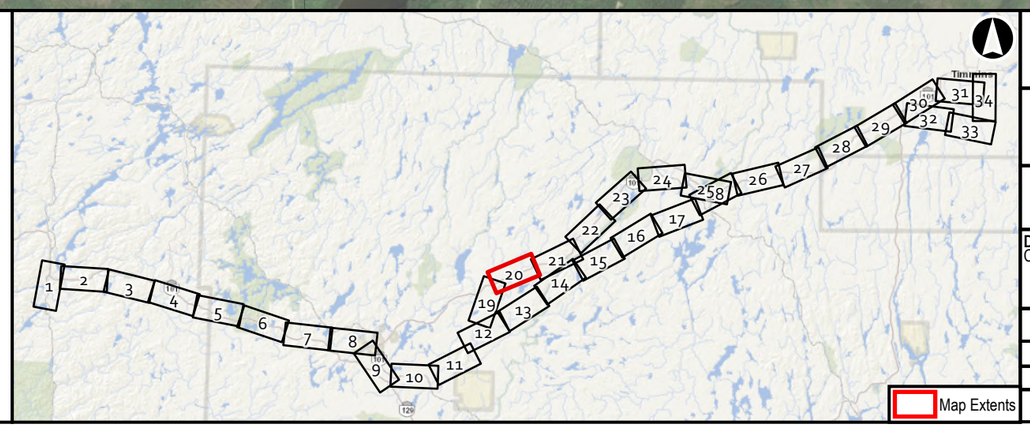
- Study Area (675m)
- Watercourse

Route Option

- B1
- B2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km
NAD 1983 UTM Zone 17N

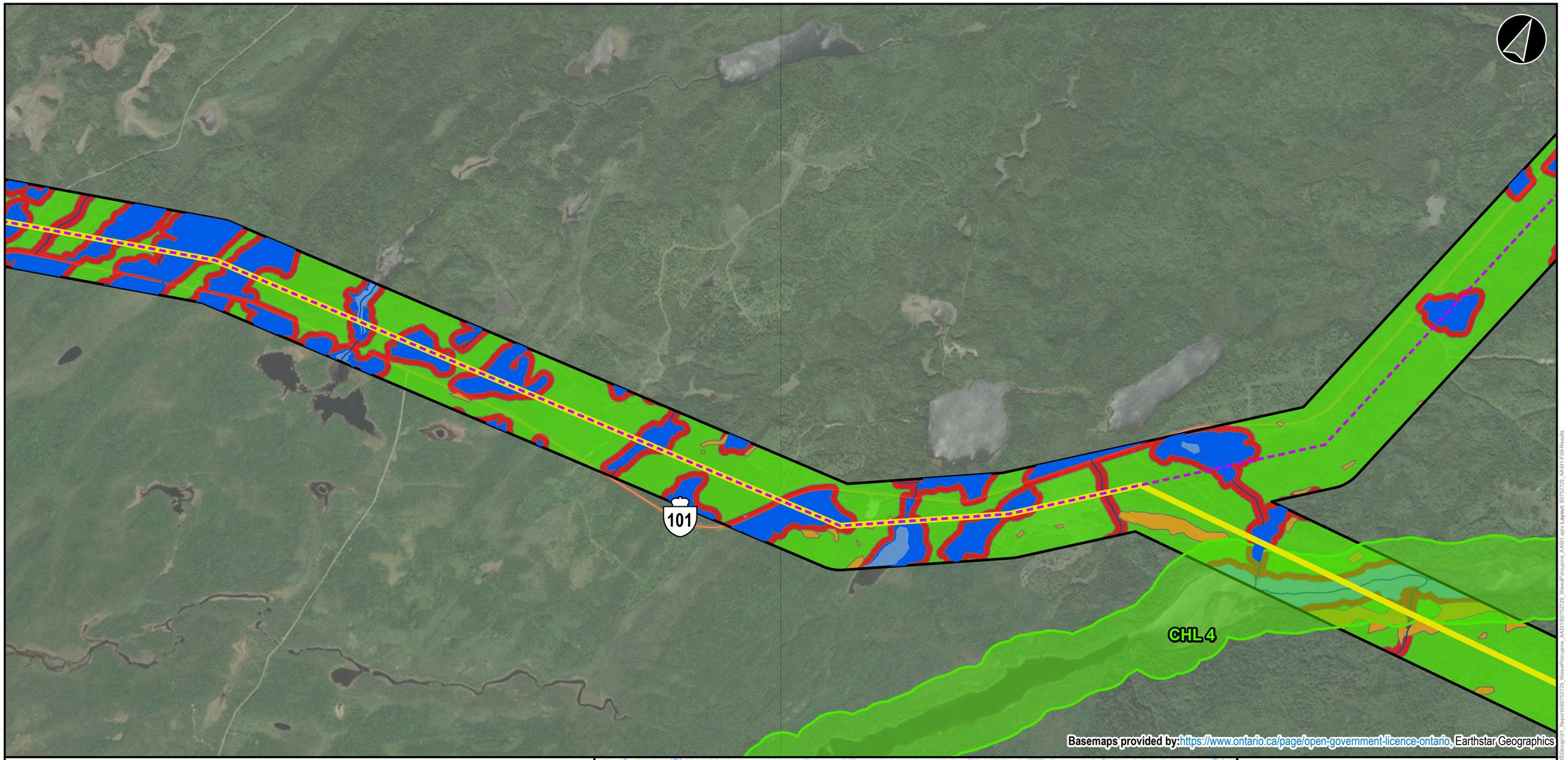
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Figure: 9-20

Project Location: L:\GIS\Projects_ENV\60752729_HONI_Wawa_2_Porcupine_ST1900_CAD_GIS\900_GIS\Design\01_Reports\60752729_WawaPorcupine_AAS1\60752729_WawaPorcupine_AAS1.aprx Layout: 60752729_AAS1-F09-Results
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LEGEND

Study Area (675m)

Watercourse

Cultural Heritage Designation

Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

B1

B2

Stage 1 Archaeological Assessment

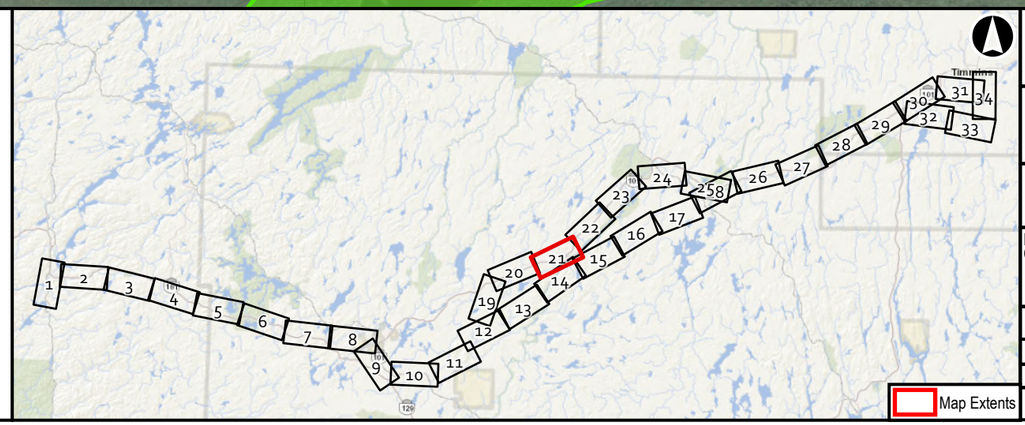
High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey

Low Archaeological Potential - Visual Confirmation Required

Steeply Sloped Areas - Visual Confirmation Required

Waterbody - Visual Confirmation Required

Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

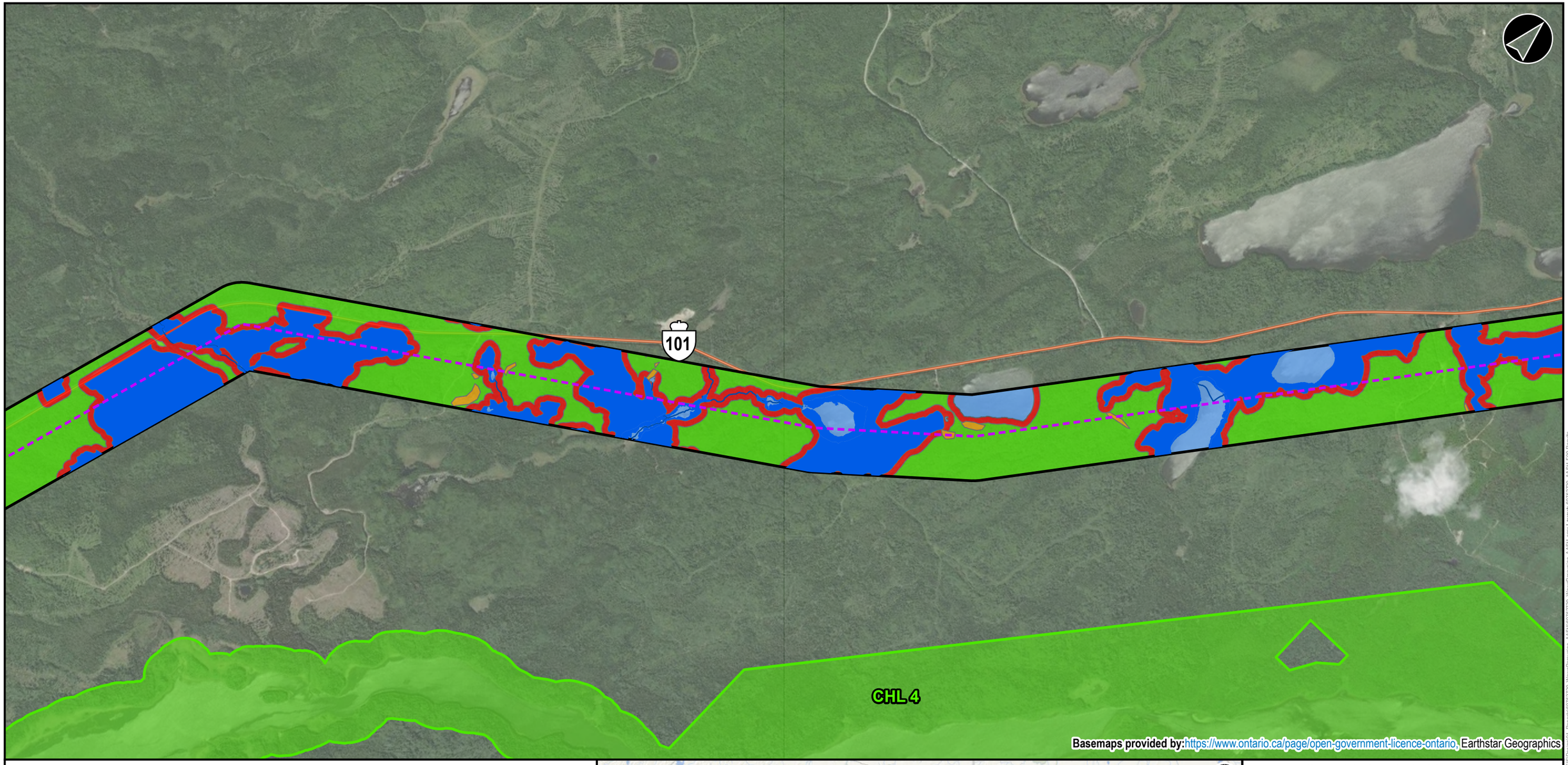
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Figure: 9-21

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Date Saved: 2026-11-03 10:08 AM User: clarkb



LEGEND

Study Area (675m)

Watercourse

Cultural Heritage Designation

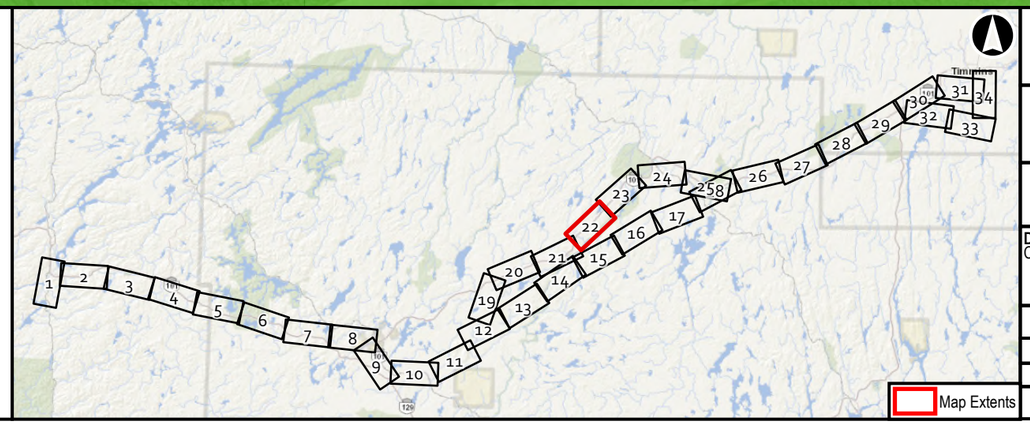
Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

B1

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 9-22

Project Location: L:\OCS\Projects_ENV\WS\SHN_Wawa_A_Porcupine_St1\900_CAD_GIS\500_GIS\Design\01_Reports\60752729_WawaPorcupine_AAS\1\60752729_WawaPorcupine_AAS1.aprx Layout: 60752729_AAS1-F09-Results
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P476-0029-2020, WSP (2020a)

P476-0031-2020, WSP (2020b)

CHL 4

101

101

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LEGEND

Study Area (675m)

Watercourse

Cultural Heritage Designation

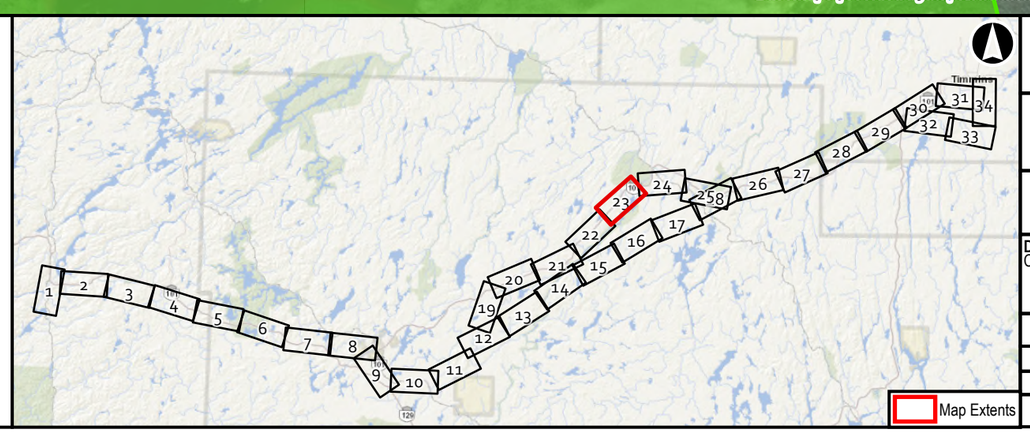
Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

B1

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Previously Assessed - Cleared of Archaeological Concerns
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 9-23

Project Location: L:\DCS\Projects_ENV\60752729_HON_Wawa_2 Powerpro_SH\900_CAD_GIS\920_GIS\Mxd\gn1_Report\60752729_WawaPowerpro_AAS1\60752729_WawaPowerpro_AAS1 apx Layout: 60752729_AAS1-F09-Results
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CHL 5

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LEGEND

Study Area (675m)

Watercourse

Cultural Heritage Designation

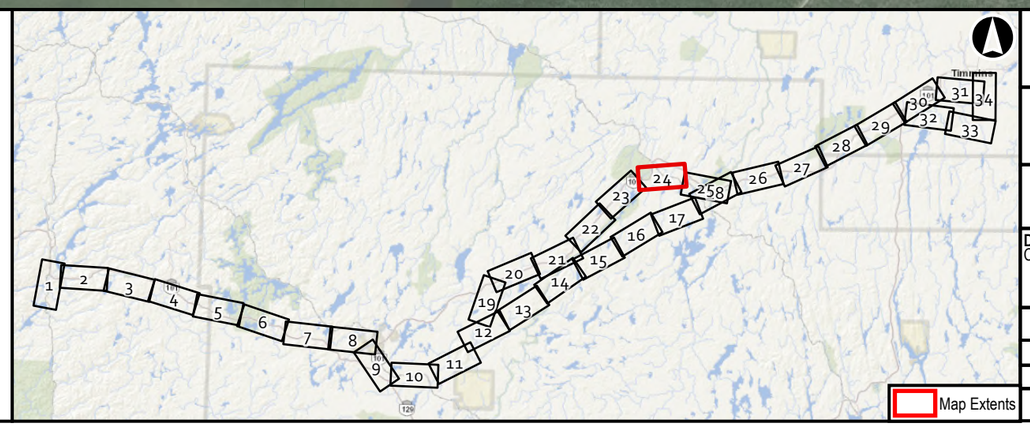
Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

B1

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

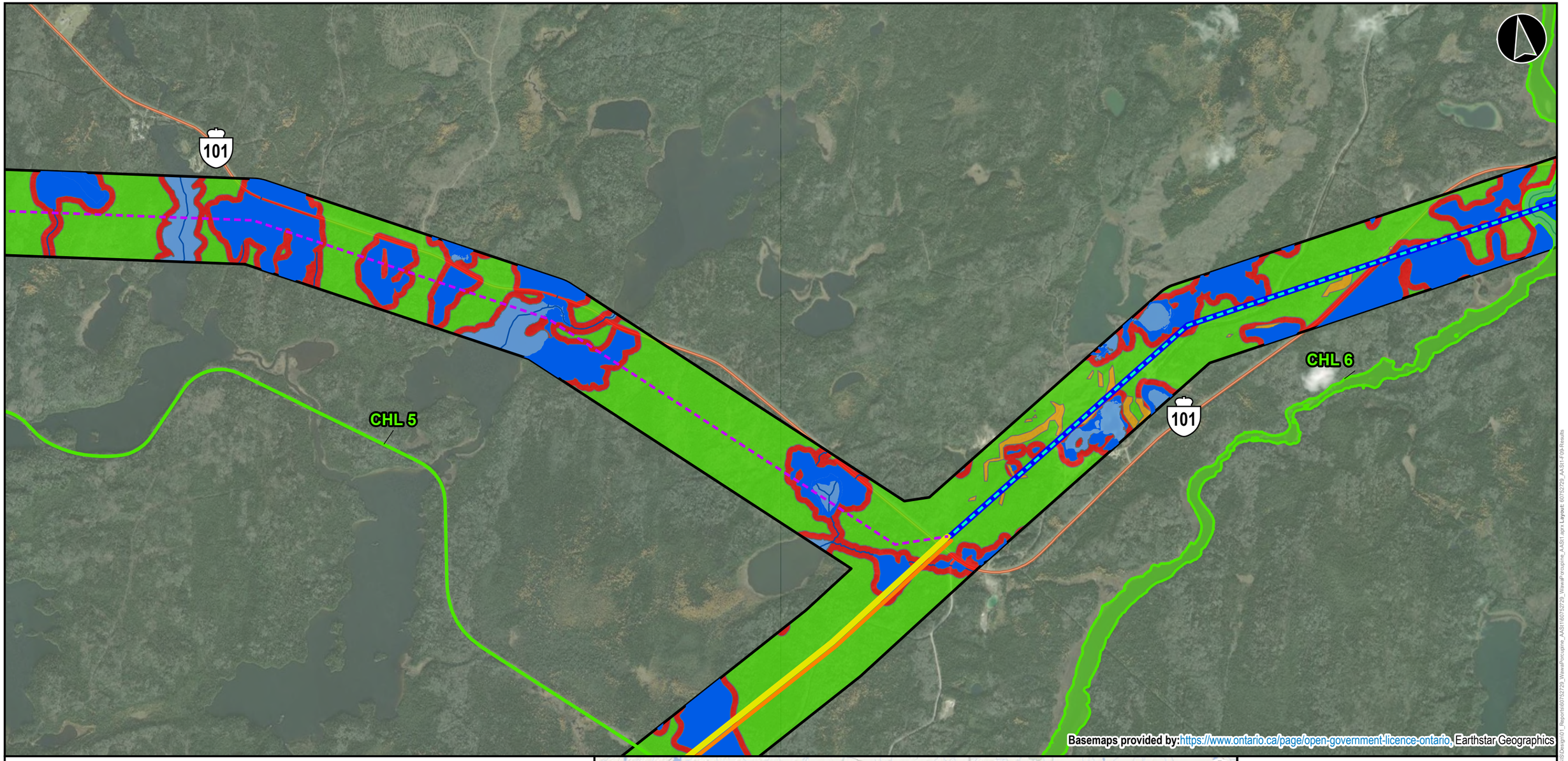
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AECOM

Figure: 9-24

Project Location: I:\DCS\Projects_ENV\60729\3_HDN_Wawa_x_Porcupine_341900_CAD_GIS\GIS_GIS\Design\01_Report\Rev00\60752729_WawaPorcupine_AAS\1\60752729_WawaPorcupine_AAS1.aprx Layouts: 60752729_AAS1-F09-Results
Date Saved: 2026-11-03 10:08 AM User: clarkb



LEGEND

- Study Area (675m)
- Watercourse

Cultural Heritage Designation

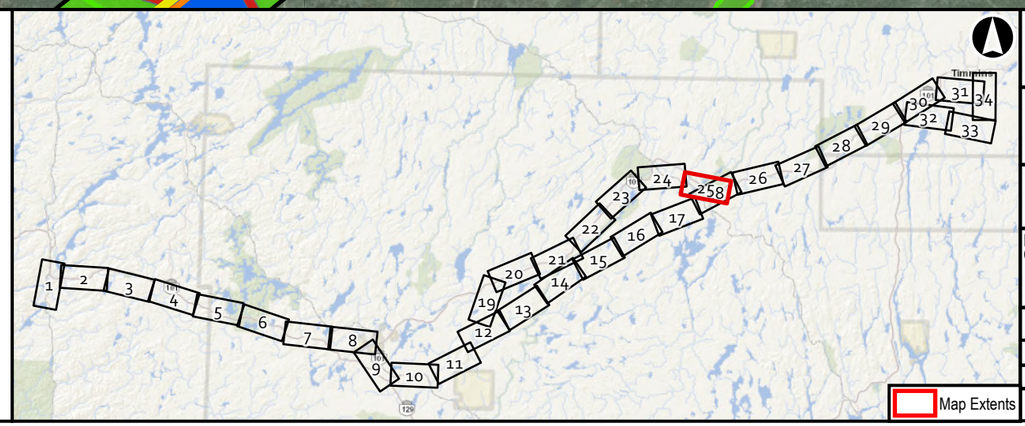
- Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

- B1
- B2
- B3
- C1
- C2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 9-25

Project Location: I:\GIS\Projects_ENV\60752729_ACN_Wawa_to_Porquis_3\1500_CAD_GIS\GIS_GIS\Design\01_Reports\60752729_WawaPorquis_AA\S11\60752729_WawaPorquis_AA\S11.aprx Layout: 60752729_AA\S11-F09-Results
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CHL 6

P208-0208-2019, Woodland Heritage Northeast Limited (2020)

P208-0165-2018, Woodland Heritage Northeast Limited (2019)

P208-0076-2013, Woodland Heritage Northeast Limited (2015)

101

101

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LEGEND

Study Area (675m)

Watercourse

Cultural Heritage Designation

Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

C1

C2

Stage 1 Archaeological Assessment

High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey

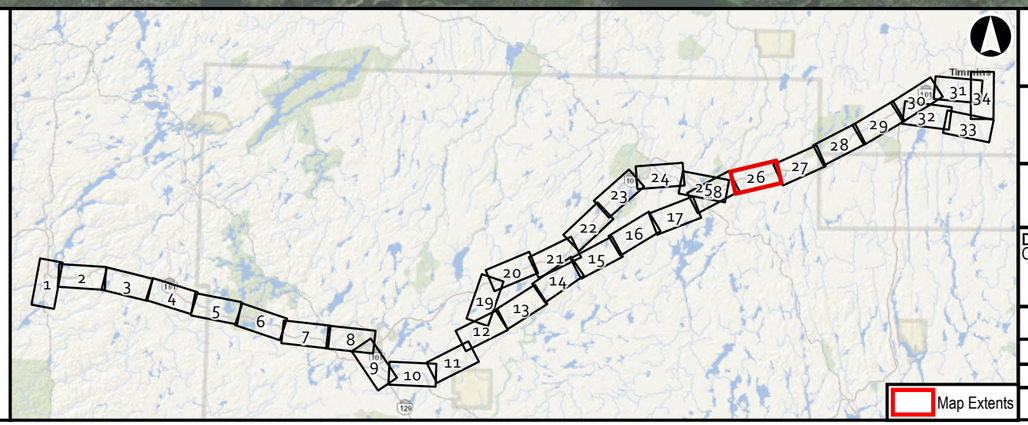
Low Archaeological Potential - Visual Confirmation Required

Previously Assessed - Cleared of Archaeological Concerns

Steeply Sloped Areas - Visual Confirmation Required

Waterbody - Visual Confirmation Required

Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

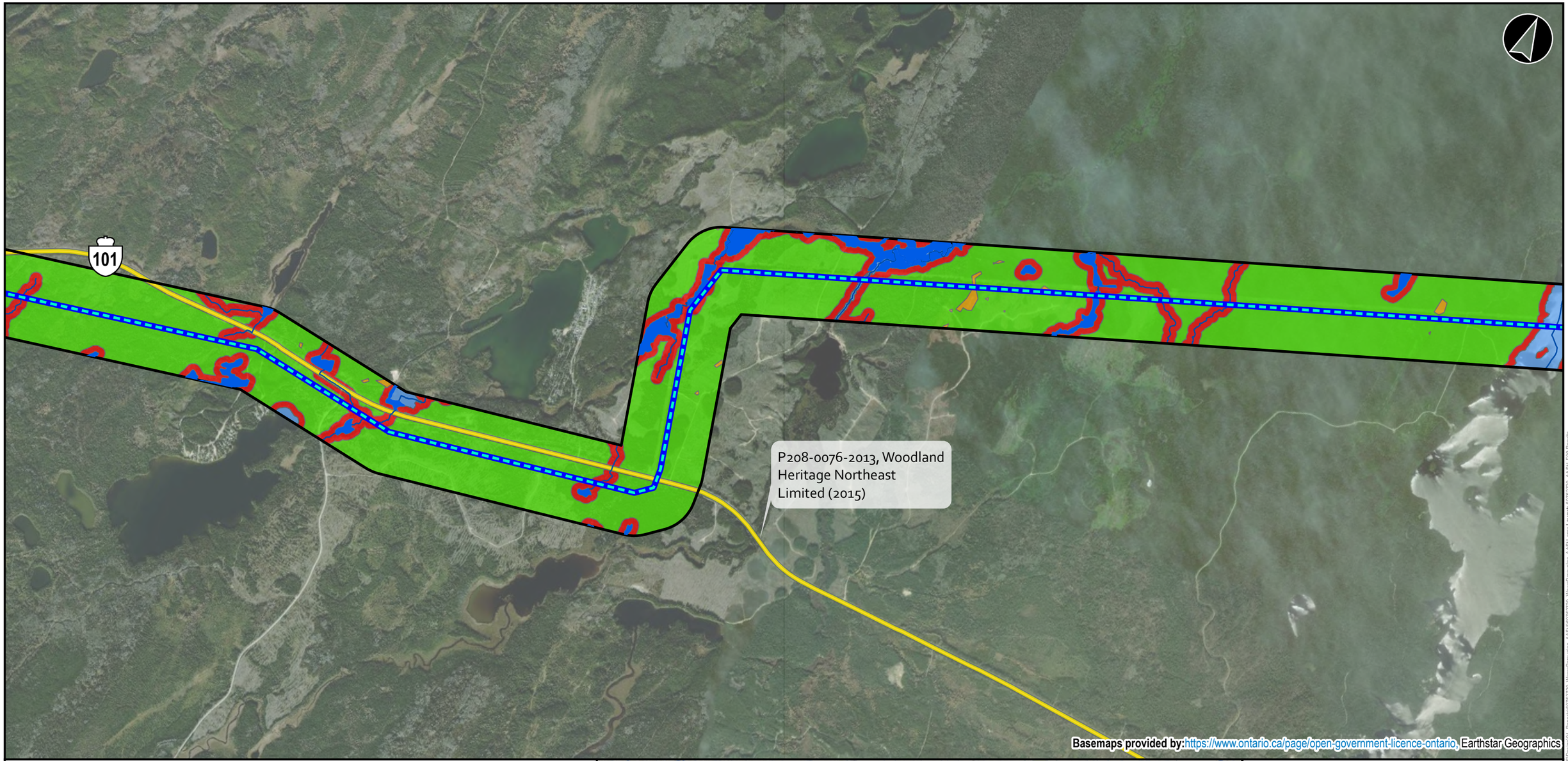
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Figure: 9-26

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LEGEND

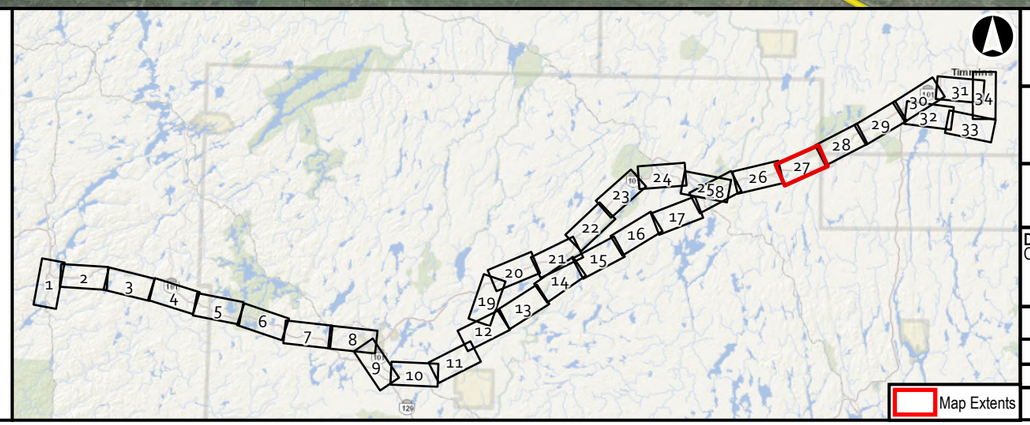
- Study Area (675m)
- Watercourse

Route Option

- C1
- C2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Previously Assessed - Cleared of Archaeological Concerns
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 9-27

Project Location: L:\OCS\Projects_ENV\60752729_HONI_Wawa_to_Porquis_St1\900_CAD_GIS\900_GIS\Design\01_Reports\60752729_WawaPorquis_AAS\1\60752729_WawaPorquis_AAS11.aprx Layout: 60752729_AAS11-F09-Results
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P208-0076-2013, Woodland Heritage Northeast Limited (2015)

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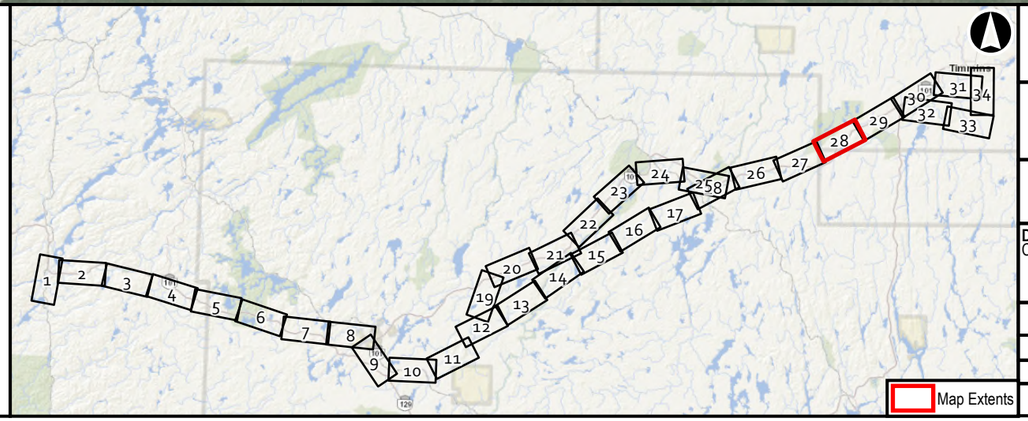
- Study Area (675m)
- Watercourse

Route Option

- C1
- C2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Previously Assessed - Cleared of Archaeological Concerns
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

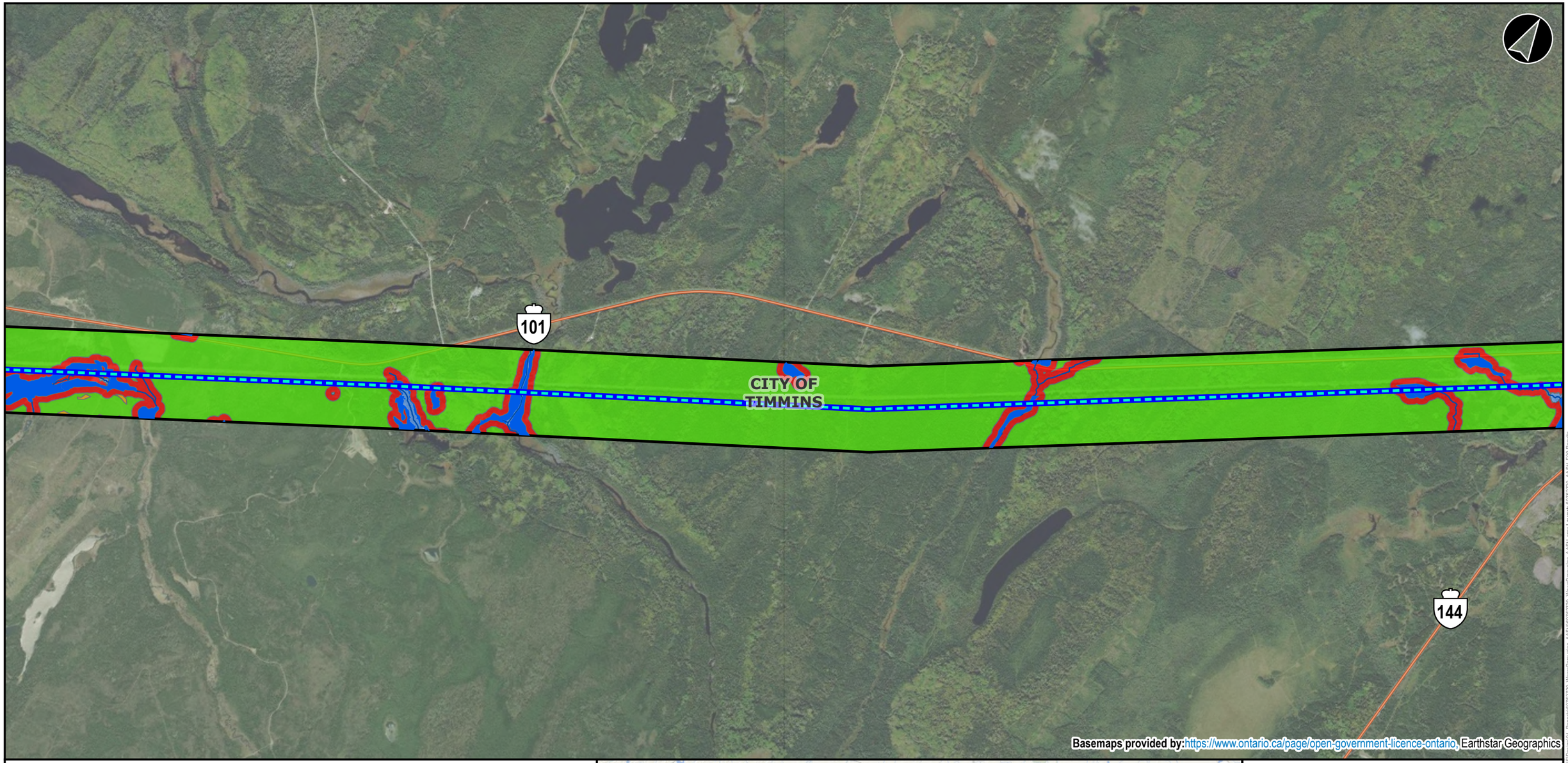
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Figure: 9-28

Project Location: L:\DC\Projects_ENV\60752729\1_HON_Wawa_to_Timmins_SH1\60_CAD_GIS\02_GIS\Mxd\gn1_Report\60752729_WawaTimmins_AA1\60752729_WawaTimmins_AA1 apx Layout: 60752729_JAA1 Date Saved: 2026-11-03 10:08 AM User: clakb



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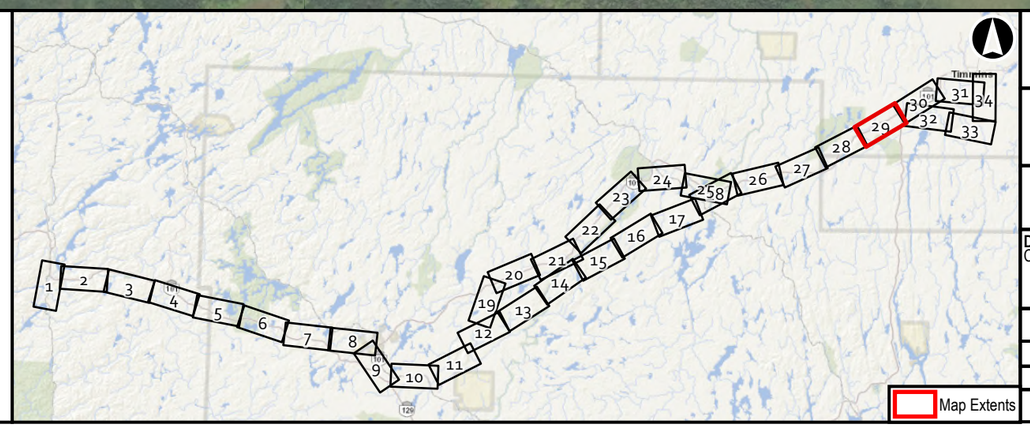
- Study Area (675m)
- Watercourse

Route Option

- C1
- C2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km
NAD 1983 UTM Zone 17N

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Figure: 9-29

Project Location: L:\DCS-Projects_ENV\60752729_HONI_Wawa_2_Porcupine_ST1900_CAD_GIS\900_GIS\Design\01_Reports\60752729_WawaPorcupine_AAS1\60752729_WawaPorcupine_AAS1.aprx Layout: 60752729_AAS1-F09-Results
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P387-0031-2020, Horizon Archaeology Inc. (2022)

CITY OF TIMMINS

144

101

BHR 2

CHL 7

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LEGEND

Study Area (675m)

Watercourse

Cultural Heritage Designation

Built Heritage Resource (BHR) – None (Potential)

Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

C1

C2

Stage 1 Archaeological Assessment

High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey

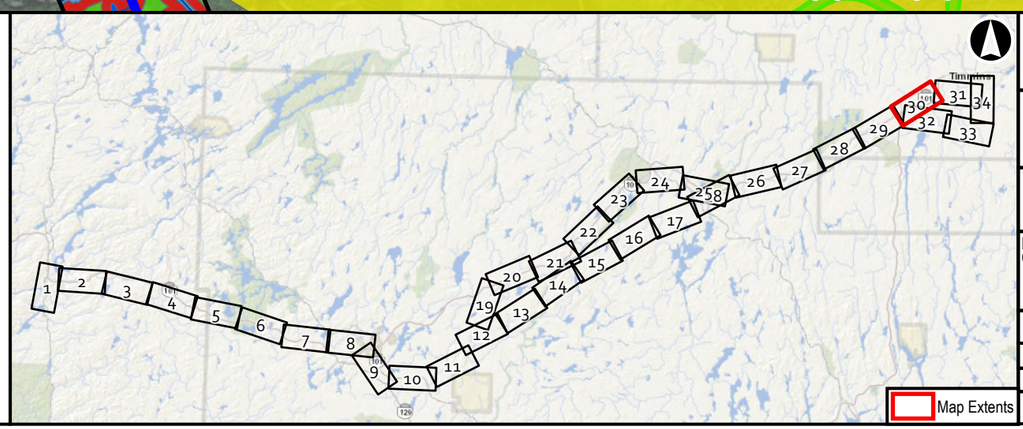
Low Archaeological Potential - Visual Confirmation Required

Previously Assessed - Cleared of Archaeological Concerns

Steeply Sloped Areas - Visual Confirmation Required

Waterbody - Visual Confirmation Required

Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 9-30

Project Location: I:\DCS\Projects_ENV\60752729_HONI_Wawa_a_Porcupine_$N\600_CAD_GIS\620_GIS\Design\01_Reports\60752729_WawaPorcupine_AAS1\60752729_WawaPorcupine_AAS1.aprx Layout: 60752729_JAAS1-F30-Results
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CHL 7

101

CITY OF TIMMINS

BHR 2

P387-0031-2020, Horizon Archaeology Inc. (2022)

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LEGEND

- Study Area (675m)
- Watercourse

Cultural Heritage Designation

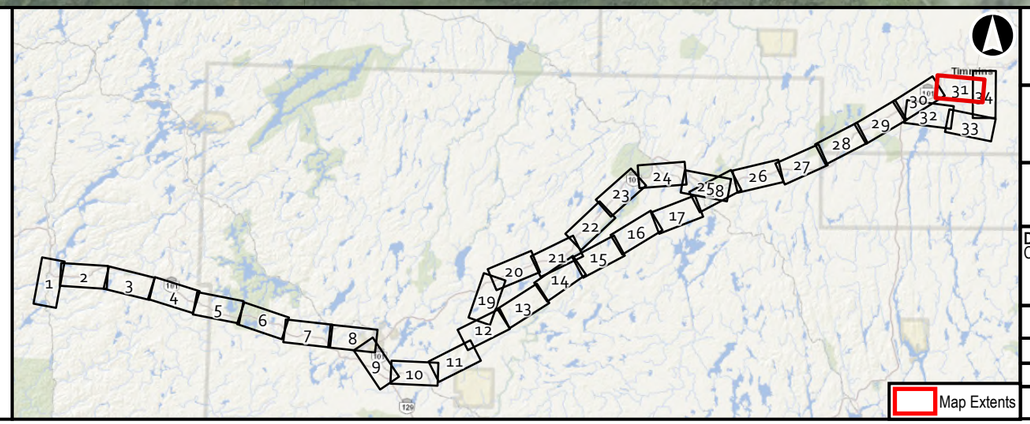
- Built Heritage Resource (BHR) – None (Potential)
- Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

- C1
- C2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Previously Assessed - Cleared of Archaeological Concerns
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km
NAD 1983 UTM Zone 17N

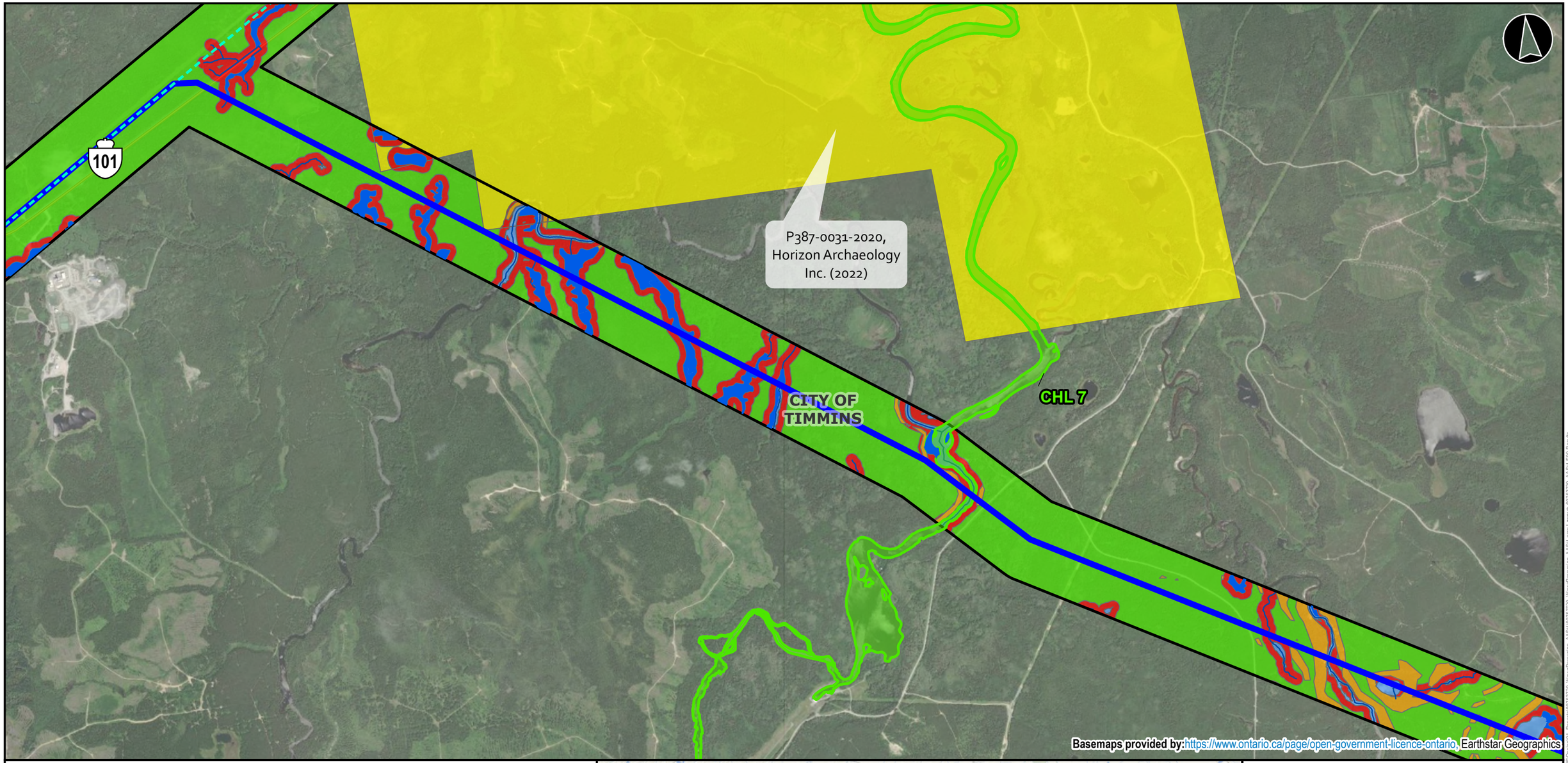
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AECOM

Figure: 9-31

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LEGEND

- Study Area (675m)
- Watercourse

Cultural Heritage Designation

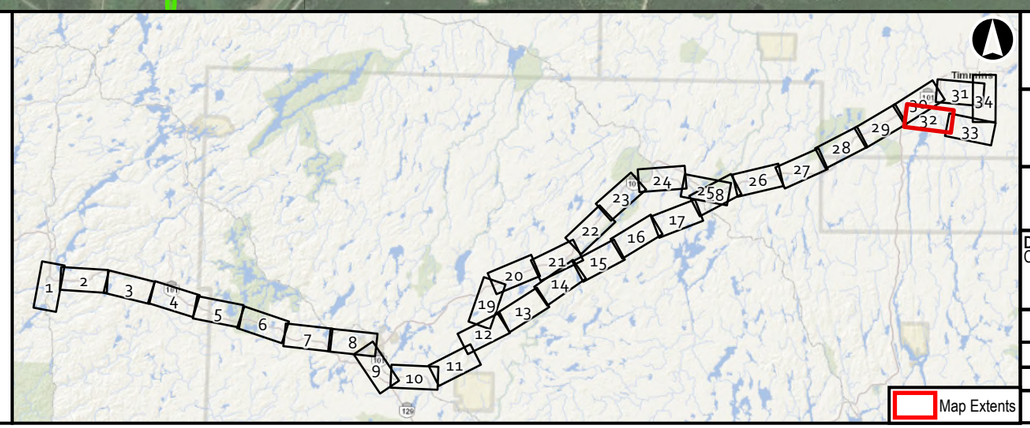
- Cultural Heritage Landscape (CHL) – None (Potential)

Route Option

- C1
- C2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Previously Assessed - Cleared of Archaeological Concerns
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km
NAD 1983 UTM Zone 17N

Data Sources:
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Figure: 9-32

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CITY OF TIMMINS

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LEGEND

Study Area (675m)

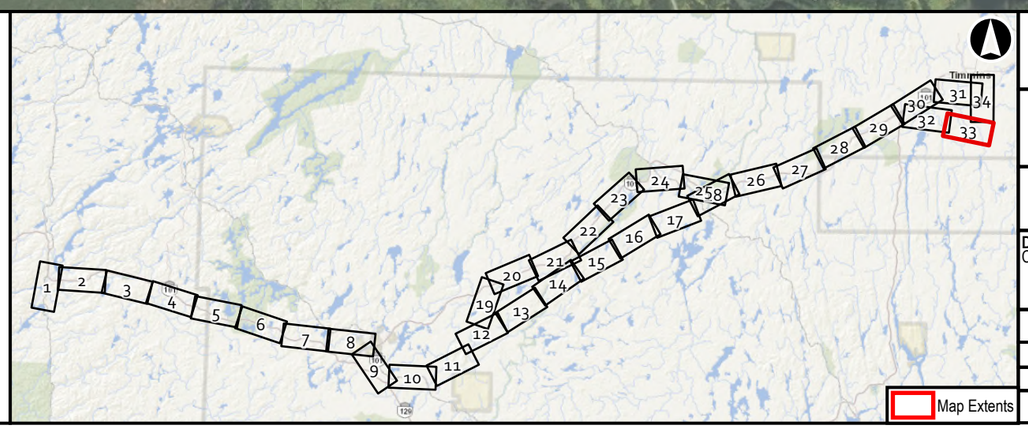
Watercourse

Route Option

C2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 9-33

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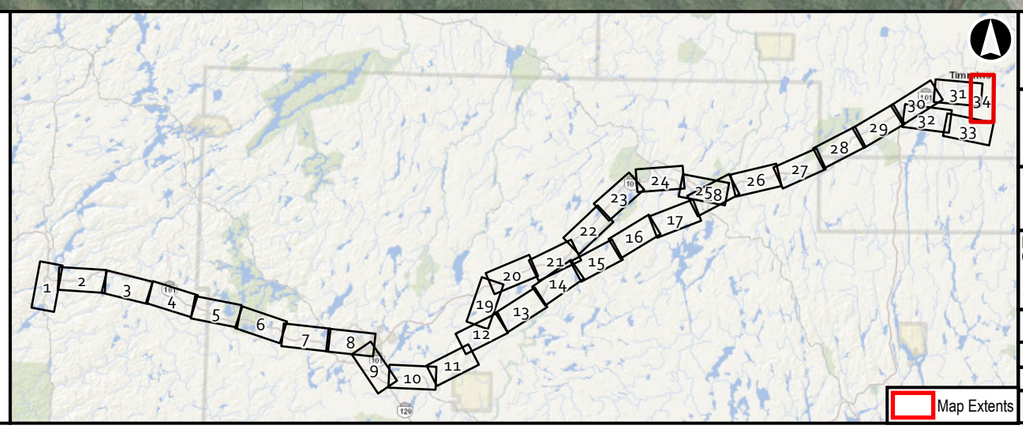
- Study Area (675m)
- Watercourse

Route Option

- C1
- C2

Stage 1 Archaeological Assessment

- High Archaeological Potential, Stage 2 Recommended – 5 m Interval Survey
- Low Archaeological Potential - Visual Confirmation Required
- Steeply Sloped Areas - Visual Confirmation Required
- Waterbody - Visual Confirmation Required
- Water (Wetlands) - Visual Confirmation Required



Stage 1 Archaeological Assessment
Hydro One Networks Inc.
Wawa Timmins Power Line Project

Results of the Stage 1 Archaeological Assessment

0 0.5 1 2 km

NAD 1983 UTM Zone 17N

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Figure: 9-34

Project Location: L:\DCS\Projects_ENV\60729\03_HDN_Wawa_to_Pinewarre_3P1900_CAD_GIS\03_GIS\Design\01_Reports\60752729_WawaPinewarre_ASR1\60752729_WawaPinewarre_ASR1.aprx Layout: 60752729_JAA_R11-F09-Results
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Appendix C-2

Cultural Heritage Existing Conditions Report

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DRAFT: Cultural Heritage Existing Conditions

Wawa Timmins Power Line Project Class EA

Hydro One Networks Inc.

Project Number: 60752729

March 2026

Delivering a better world

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Revision History

Rev #	Revision Date	Revised By:	Revision Description
0	August 1, 2025	Bryan McClure & Liam Ryan	Draft CHEC
1	November 21, 2025	Bryan McClure & Liam Ryan	Updates to Route Alternatives
2	February 6, 2026	Bryan McClure & Liam Ryan	Updates to Route Alternatives and Hydro One Comments
3	March 3, 2026	Bryan McClure & Liam Ryan	Hydro One Comments

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Executive Summary

In March 2025, Hydro One Networks Inc. (Hydro One) retained AECOM Canada ULC. (AECOM) to provide a Cultural Heritage Existing Conditions (CHEC) report to support the Class Environmental Assessment (EA) for Transmission Facilities for the Wawa Timmins Power Line Project (the Project). The Project involves a new single-circuit 500-kilovolt transmission line between the Wawa Transformer Station (TS) near the Municipality of Wawa to Porcupine TS in the City of Timmins. The new transmission line will support forecasted rapid growth in electricity demand in northern Ontario. There are three route alternatives with various route segments (Route Segments A1, A2, B1, B2, B3, C1, and C2) and three convergent points.

The objective of this CHEC is to identify known (i.e., listed and/or designated) and potential built heritage resources (BHRs) and cultural heritage landscapes (CHLs) located within the Project Study Area. This CHEC will also evaluate the route alternatives to determine the preferred route alternative from a cultural heritage perspective. This CHEC will form part of the Class EA documentation that will be shared with external parties and will conform to *Hydro One Cultural Heritage Identification and Evaluation Process* (I&E Process) (2019).

Based on data collection, including a review of municipal heritage registers and previous heritage reporting, the Hydro One *Class EA for Transmission Facilities* (2024), stakeholder engagement, a field review conducted by qualified person, a review of Ontario architectural styles[1], professional knowledge/experience and using the Ministry of Citizenship and Multiculturalism *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes: A Checklist for the Non-Specialist* (2022), the CHEC has found the following number of BHRs and CHLs.

- Route Segment A1: One (1) BHR and two (2) CHLs
- Route Segment A2: Two (2) CHLs
- Route Segment B1: Three (3) CHLs
- Route Segment B2: Three (3) CHLs
- Route Segment B3: Three (3) CHLs
- Route Segment C1: One (1) BHR and two (2) CHLs
- Route Segment C2: Two (2) CHLs

Additionally, Hydro One acknowledges the importance of Indigenous Cultural Landscapes. Hydro One welcomes input from Indigenous communities and remains committed to their inclusion should they be identified through ongoing engagement and review.

After completing this CHEC, which evaluated the existing conditions of the Route Segments, from a cultural heritage perspective the preferred route alternative would include Route Segment A2; any of the Route Segments B1, B2, B3; and Route Segment C2. This configuration would ensure the lowest number of BHRs and CHLs to be potentially directly and/or indirectly impacted by the Project with seven (7) BHRs or CHLs. Within the route segments, a total of nine (9) known or potential BHRs and CHLs

[1] To identify architectural styles, sources were consulted including Ontario Architecture: A Guide to Styles and Building Terms, 1784 to Present (1990) by Blumenson, Ontario House Styles: The Distinctive Architecture of the Provinces 18th and 19th Century Homes (2004) by Robert Mikel, and www.OntarioArchitecture.com, as well as professional expertise, a review of the existing conditions and the municipal heritage registers.

have been identified as potentially being directly and/or indirectly impacted by the Project. The results of the evaluation are:

- Route A1: Less Preferred
- Route A2: Most Preferred
- Route B1: Preferred
- Route B2: Preferred
- Route B3: Preferred
- Route C1: Less Preferred
- Route C2: Most Preferred

Based on Hydro One's I&E Process; the next steps should follow the outlined methodology:

1. Hydro One will confirm and select the preferred route alternative for the Project.

2. AECOM will complete the Preliminary Impact Assessment (PIA) based on the preferred route alternative.
   - Conduct a PIA to assess the direct or indirect impacts on BHRs and CHLs identified in the CHEC that are anticipated to be adversely impacted by the preferred route alternative;
   - The PIA shall provide recommendations for avoidance and mitigation measures, including a summary table of impacts and proposed mitigation; and
   - Following this assessment, the PIA recommends next steps for each BHR or CHL located within the preferred route alternative which may include, mitigation measures, further heritage studies [Cultural Heritage Evaluation Reports (CHERs)], or that no additional action is required.

3. If required, CHERs will be completed.
   - If the PIA identifies that certain BHRs and CHLs are to be directly adversely impacted by the preferred route alternative, site-specific CHERs will be conducted; and
   - A CHER will evaluate the Cultural Heritage Value or Interest of the identified properties based on Ontario Regulations 9/06 and 10/06.

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Appendices

Appendix A. Mapping

Appendix B. MCM Screening Checklist: Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes (2022)

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Acronyms

AECOM Canada ULC	AECOM
Built Heritage Resource	BHR
Canada's Historic Places	CHP
Canadian Pacific Railway	CP Railway
Canadian National Railway	CN Railway
Cultural Heritage Evaluation Reports	CHERs
Cultural Heritage Existing Conditions	CHEC
Cultural Heritage Identification and Evaluation Process	I&E Process
Cultural Heritage Landscape	CHL
Cultural Heritage Value or Interest	CHVI
Environmental Assessment	EA
Environmental Assessment Act	EAA
Heritage Impact Assessment	HIA
Hydro One Networks Inc.	Hydro One
Kilometre	km
Metre	m
Ministry of Citizenship and Multiculturalism	MCM
National Topographic System	NTS
Wawa Timmins Power Line	The Project
Ontario Energy Board	OEB
Ontario Heritage Act	OHA
Ontario Heritage Trust	OHT
Ontario Regulation	O. Reg.
Preliminary Impact Assessment	PIA

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Project Study Area	PSA
Provincial Heritage Property	PHP
Provincial Heritage Property of Provincial Significance	PHPPS
Right-of-Way	ROW
Standards & Guidelines	S&Gs
Transformer Station	TS

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1. Introduction

1.1 Study Purpose and Objectives

In March 2025, Hydro One Networks Inc. (Hydro One) retained AECOM Canada ULC. (AECOM) to provide a Cultural Heritage Existing Conditions (CHEC) report to support the Class Environmental Assessment (EA) for Transmission Facilities for the Wawa Timmins Power Line Project (the Project). The Project involves a new single-circuit 500-kilovolt transmission line between the Wawa Transformer Station (TS) near the Municipality of Wawa to Porcupine TS in the City of Timmins. The new transmission line will support forecasted rapid growth in electricity demand in northern Ontario. There are three route alternatives with various route segments (Route Segments A1, A2, B1, B2, B3, C1, and C2) and three convergent points.

The objective of this CHEC is to identify known (i.e., listed and/or designated) and potential built heritage resources (BHRs) and cultural heritage landscapes (CHLs) located within the Project Study Area (PSA). The CHEC will also evaluate the route alternatives to determine the preferred route alternative from a cultural heritage perspective. This CHEC will form part of the Class EA documentation that will be shared with external parties and will conform to *Hydro One's Cultural Heritage Identification and Evaluation Process* (I&E Process) (2019).

Following guidelines provided by the *Class EA for Transmission Facilities* (2024) and the I&E Process (2019) this CHEC provides:

- An overview of the relevant heritage policies for identifying and protecting BHRs and CHLs in Ontario;
- A summary of the study's objectives, scope, and the methods used to identify BHRs and CHLs in the PSA;
- Development of an inventory of properties of known and potential BHRs and CHLs within the PSA, including data from Indigenous Cultural Landscapes, as provided; and
- A description of the Project and an assessment of potential adverse effects to the identified known and potential BHRs and CHLs.

1.2 Project Description and Study Area

1.2.1 Project Study Area

For the purpose of this report, Hydro One has provided a PSA which consists of a 120 metre (m) buffer from the edge of the Right-of-Way (ROW) of each route alternative. The PSA is 315 m wide in total and includes the 75 m ROW and 120 m buffer on each side of the edge of the ROW. The route alternatives with their route segments are shown on **Figure 1** with the Route Segments A1, A2, B1, B2, B3, C1, and C2.

The implementation of the above buffers aligns with Hydro One's I&E Process, approved by the Ministry of Citizenship and Multiculturalism (MCM) in 2020, which outlines that large corridor projects must identify existing baseline cultural heritage conditions within a study area and that study areas should include, at a minimum, the Project footprint. The I&E Process also states that adjacent properties should be reviewed depending on the nature of the work to be conducted. The project has not entered the detailed engineering phase and therefore the temporary footprint associated with construction activities is not fully known. At this point in time, it is anticipated that temporary storage, stacking and working areas

associated with construction will occur within the Project ROW, although there will be access roads that extend beyond the Project ROW. Further details on the project works will be provided once the preferred route alternative has been confirmed.

While potential direct and indirect impacts will be assessed during the Preliminary Impact Assessment (PIA) phase of the Project, the CHEC buffers reflect research and consultation with AECOM's vibration specialists which determined a 60 m buffer from the edge of the ROW is adequate for capturing potential vibration impacts to physical heritage attributes such as BHRs. Historic structures, particularly of masonry construction, are susceptible to damage from vibration caused by pavement breakers, plate compactors, utility excavations, and increased heavy vehicle travel in the immediate vicinity. Note, there is no applicable policy defining the distance within which vibration impacts must be considered, however, 60 m is a standard screening radius used in State Departments of Transportation (Carman et. al. 2012:31) and is adopted in this report.

Additionally, consultation with Hydro One about the proposed project works, including the anticipated height and structure of infrastructure within the Project ROW, and past experience from transmission line projects in southwestern Ontario, determined that a 120 m buffer from the edge of the ROW is appropriate to capture potential indirect impacts on contextual heritage attributes such as views, vistas, and the movement of construction materials and personnel. While final tower heights and design details are not yet confirmed, this buffer represents a minimum distance to account for potential visual prominence, noise, and activity during construction and operation. It also considers variations in topography and sightlines, ensuring potential impacts are not underestimated. The 120 m buffer was determined to be sufficient to encompass the area where indirect impacts from the Project may occur, ensuring that all potential adverse impacts on known and potential BHRs and CHLs are adequately captured. For BHRs and CHLs identified within the PSA, the full property parcel is screened as part of the CHEC and will be assessed through the Preliminary Impact Assessment (PIA) if intersected by the preferred route alternative. As a result, the CHEC study area often extends beyond the 120 m buffer, particularly where large farm properties are involved, to include the legal boundaries of known or potential BHRs and CHLs.

1.2.2 Project Description

The Project is located across the Districts of Algoma, Sudbury, Timiskaming and Cochrane with the Wawa TS near the Municipality of Wawa, District of Algoma, and Porcupine TS in the City of Timmins, District of Cochrane (**Figure 1**). All Route Segments will require new easements, with parts of Route Segments A1, A2, C1 and C2 parallelling existing hydro corridors. All Segments of Route Alternative A run through the unorganized territory of the Districts of Algoma and Sudbury as well as through the Township of Chapleau. All segments of Route Alternative B run through the unorganized territory of the District of Sudbury. All segments of Route Alternative C run through the unorganized territory of the Districts of Sudbury, Cochrane, and Timiskaming into the City of Timmins. All segments for Route Alternative A and Route Alternative B primarily travel through natural landscapes including forests, rivers, creeks, wetlands, and other natural habitats. Route Alternative C and its segments travel primarily through natural landscapes into the remnants of mining landscapes.

As described in **Section 1.2.1**, in accordance with the Hydro One *Class EA for Transmission Facilities* (2024) and the 2019 I&E Process, the PSA is delineated to encompass the potential area of Project effects, including the location of the proposed route alternatives. The PSA includes all lands that may be impacted adversely either through displacement and/or disruption by the proposed construction of the existing and new easement, as well as the off-route zones adjacent or abutting the existing easement (ROW). The PSA for this report is comprised of the Project ROW and the 120 m buffer from the edge of the Project ROW:

Project ROW

The Project ROW is 75 m across, to 37.5 m on each side of the proposed route segment's centreline, which will make up the easement for the Project. This is expected to be the preliminary construction disturbance area, which includes all land anticipated to experience direct (physical) construction impacts.

120 m Buffer

For the purpose of this report, Hydro One has provided a PSA which consists of a 120 m buffer from the edge of the ROW for each route alternative (240 m total). The 120 m buffer is located immediately beside the easement which has potential for associated land disturbance. The anticipated impacts are direct or indirect, permanent, or temporary, negative impacts from displacement, disruption, isolation, vibration, change to character of setting and full or partial removal, or demolition, etc.

A field review was conducted from July 7-9, 2025, by Bryan McClure and Emlyn Tuck, Cultural Heritage Specialists, at AECOM, to examine the existing conditions of the PSA from within the road allowance. Due to inclement weather and limited access to remote areas without road infrastructure, not all route segments could be fully documented. Where possible, photographs were taken from accessible vantage points along the road to capture the landscape through which the proposed route segments pass. The following sections provides an overview of the existing conditions of the PSA.

1.2.3 Route Alternative A

1.2.3.1 Route Segment A1

Route Segment A1 is approximately 99 kilometres (km) in length and runs from the Wawa TS along an existing transmission corridor and Algoma Central Railway north, running parallel to the Michipicoten River (**Photograph 1**). The route segment turns east after crossing Highway 101 and follows an existing corridor east, approximately parallel to Highway 101, crossing the highway in six (6) locations (**Photograph 2, Photograph 3,** and **Photograph 4**), until reaching the western boundary of the Township of Chapleau where it turns south off the existing corridor, into a new easement, through the Township of Chapleau. After passing through the Township of Chapleau, the route segment turns east to a convergent point with Routes B1, B2, and B3. Route Segment A1 runs along existing hydro corridors for approximately 88 km. Route Segment A1 travels through the unorganized territory of the District of Algoma, into the unorganized territory of the District of Sudbury and passes through the southwest corner of the Township of Chapleau. Route Segment A1 primarily passes through natural landscapes of woodlands, wetlands, and waterways including the Shoals Provincial Park, and the Windermere Goldie Lake Complex Conservation Reserve. Route Segment A1 crosses the Algoma Central Railway at three (3) locations (**Photograph 5**).



Photograph 1: View of the existing transmission corridor, looking north from Wawa TS (AECOM, July 2025)



Photograph 2: View of the existing transmission corridor running parallel to Highway 101, looking west (AECOM, July 2025)



Photograph 3: View of the existing transmission corridor running parallel to Highway 101, looking east (AECOM, July 2025)



Photograph 4: View of the existing transmission corridor crossing Highway 101, looking east (AECOM, July 2025)



Photograph 5: View of the existing transmission corridor crossing Algoma Central Railway, looking south (AECOM, July 2025)

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1.2.3.2 Route Segment A2

Route Segment A2 is approximately 98 km in length and runs from the Wawa TS north along an existing transmission corridor and Algoma Central Railway before turning east, south of Highway 101 into a new easement, for approximately 13 km, before connecting with an existing corridor and running east, parallel to Highway 101, crossing Highway 101 five (5) times (**Photograph 2, Photograph 3,** and **Photograph 4**). After reaching the western boundary of the Township of Chapleau, Route Segment A2 turns south off the existing corridor into a new easement, through the Township of Chapleau before turning east to a convergent point with Route Segments B1, B2, and B3. Route Segment A2 runs along the existing hydro corridors for approximately 71 km. Route Segment A2 travels through the unorganized territory of the District of Algoma into the unorganized territory of the District of Sudbury and through the southwest corner of the Township of Chapleau. Route Segment A2 primarily passes through natural landscapes of woodlands, wetlands, and waterways including the Shoals Provincial Park and the Windermere Goldie Lake Complex Conservation Reserve. Route Segment A2 crosses the Algoma Central Railway in three locations (**Photograph 5**).

1.2.4 Route Alternative B

1.2.4.1 Route Segment B1

Route Segment B1 is approximately 124 km in length and will consist of a new easement along the entire length of the route segment. It begins at the convergence point with Route Segments A1 and A2, traveling south, west of the community of Devon, before turning east after crossing Highway 101, and crosses Highway 129. The route turns north after approximately 25 km to converge with Highway 101 and continues in a northeasterly direction parallel to the highway (**Photograph 6**). The route crosses Highway 101 four (4) times, and Highway 129 once (1). South of the Village of Foleyet, the route travels east, away from Highway 101, crossing the Canadian National (CN) Railway, until it reconnects with Highway 101 in a southeastern trajectory to the intersection of Highway 101 and Regional Road 616 where it ends at the convergent point with Route Segments C1 and C2 (**Photograph 7**). The entirety of Route Segment B1 travels through the unorganized territory of the District of Sudbury. Route Segment B1 primarily passes through natural landscapes, crossing the Ivanhoe River north of Ivanhoe Lake Provincial Park. Route Segment B1 crosses the Canadian Pacific (CP) Railway once (1) and the CN Railway once (1).



Photograph 6: View of the landscape north of Highway 101 and the Shawmere River looking



Photograph 7: View of the approximate location Route Segments B1, B2, B3 cross Highway 101

west where Route Segments B1 and B2 travel (AECOM, July 2025)

west of convergent point with Route Alternative C, looking east (AECOM, July 2025)

1.2.4.2 Route Segment B2

Route Segment B2 is approximately 117 km in length and will consist of a new easement along the entire length of the route. It begins at the convergence point with Route Segments A1 and A2, traveling south, west of the community of Devon, before turning east after crossing Highway 101, and crosses Highway 129. The route turns north after approximately 25 km to converge with Highway 101 and continues in a northeasterly direction parallel to the highway (**Photograph 6**). It follows Highway 101 for approximately 23 km before turning east (**Photograph 8**). The route crosses Highway 101 four (4) times and Highway 129 once (1). Route Segment B2 travels in a northeastern trajectory, crossing the CN Railway, ending at the convergent point with Route Segments C1 and C2 (**Photograph 9**). The entirety of Route Segment B2 travels through the unorganized territory of the District of Sudbury. Route Segment B2 primarily passes through natural landscapes, crossing the Ivanhoe River in Ivanhoe Lake Provincial Park. Route Segment B2 crosses the CP Railway once (1) and the CN Railway once (1).



Photograph 8: View of the approximate location Route Segment B2 turn east away from Highway 101, looking west (AECOM, July 2025)

1.2.4.3 Route Segment B3

Route Segment B3 is approximately 111 km in length and will consist of a new easement along the entire length of the route. It begins at the convergence point with Route Segments A1 and A2, traveling south, west of the community of Devon, before turning east after crossing Highway 101, and crosses Highway 129. The route continues east for approximately 25 km, then turns north for approximately 6 km before turning east and steadily heads in a northeast direction for approximately 46 km, crossing the CN Railway west of the intersection of Highway 101 and Regional Road 616 where it ends at the convergent point with Route Segments C1 and C2 (**Photograph 7**). The route crosses Highway 101 two (2) times and Highway 129 once (1). The entirety of Route Segment B3 travels through the unorganized territory of the District of Sudbury. Route Segment B3 primarily passes through natural landscapes, crossing the Ivanhoe River in Ivanhoe Lake Provincial Park. Route B3 also crosses the CP Railway once (1) and the CN Railway once.

1.2.5 Route Alternative C

1.2.5.1 Route Segment C1

Route Segment C1 is approximately 85 km in length and runs in a new easement from the convergent point with Route Segments B1, B2, and B3 northeast, parallel to Highway 101 for approximately 25 km to an existing hydro corridor where it turns north, crossing Highway 101 (**Photograph 9** and **Photograph 10**), and then northeast for approximately 43 km, taking a turn north, then east, and then back on the northeast trajectory at Boom Lake to avoid residential properties (**Photograph 11** and **Photograph 12**). The route crosses Highway 101 five (5) times. It turns southeast off the existing hydro corridor at the Mattagami River (**Photograph 13**) for approximately 6 km before turning east and then southeast to go south of the Village of Delnite until it reaches an existing hydro corridor (**Photograph 14** and **Photograph 15**). Route Segment C1 follows the existing hydro corridor north where it ends at the Porcupine TS. Route Segment C1 travels along approximately 36 km of existing hydro corridors. Route Segment C1 travels through the unorganized territory of the District of Sudbury, into the unorganized territory of the Districts of Timiskaming and Cochrane and then into the City of Timmins. Route Segment C1 primarily passes through natural landscapes including crossing the Ground Hog River in the Ground Hog River Waterway Provincial Park, the Vimy Lake Uplands Conservation Reserve, and the Tatachikapika River Plain Conservation Reserve, with the northern end of the route located in former mining landscapes in the City of Timmins. Route Segment C1 crosses the Mattagami River once (1).



Photograph 9: View of the location where Route Segments C1 and C2 cross Highway 101 towards an existing hydro corridor, looking south (AECOM, July 2025)



Photograph 10: View of the existing hydro corridor looking north from Highway 101 along Route Segments C1 and C2 (AECOM, July 2025)



Photograph 11: View of the existing hydro corridor crossing Highway 101, looking east (AECOM, July 2025)



Photograph 12: View of the existing hydro corridor along 5310 Highway 101, looking southwest (AECOM, July 2025)



Photograph 13: View of the existing hydro corridor crossing Highway 101 approaching Mattagami River looking east (AECOM, July 2025)



Photograph 14: View of the existing hydro corridor, looking south from Gold Mine Road (AECOM, July 2025)



Photograph 15: View of the existing hydro corridor, looking north from Gold Mine Road travelling to Porcupine TS (AECOM, July 2025)

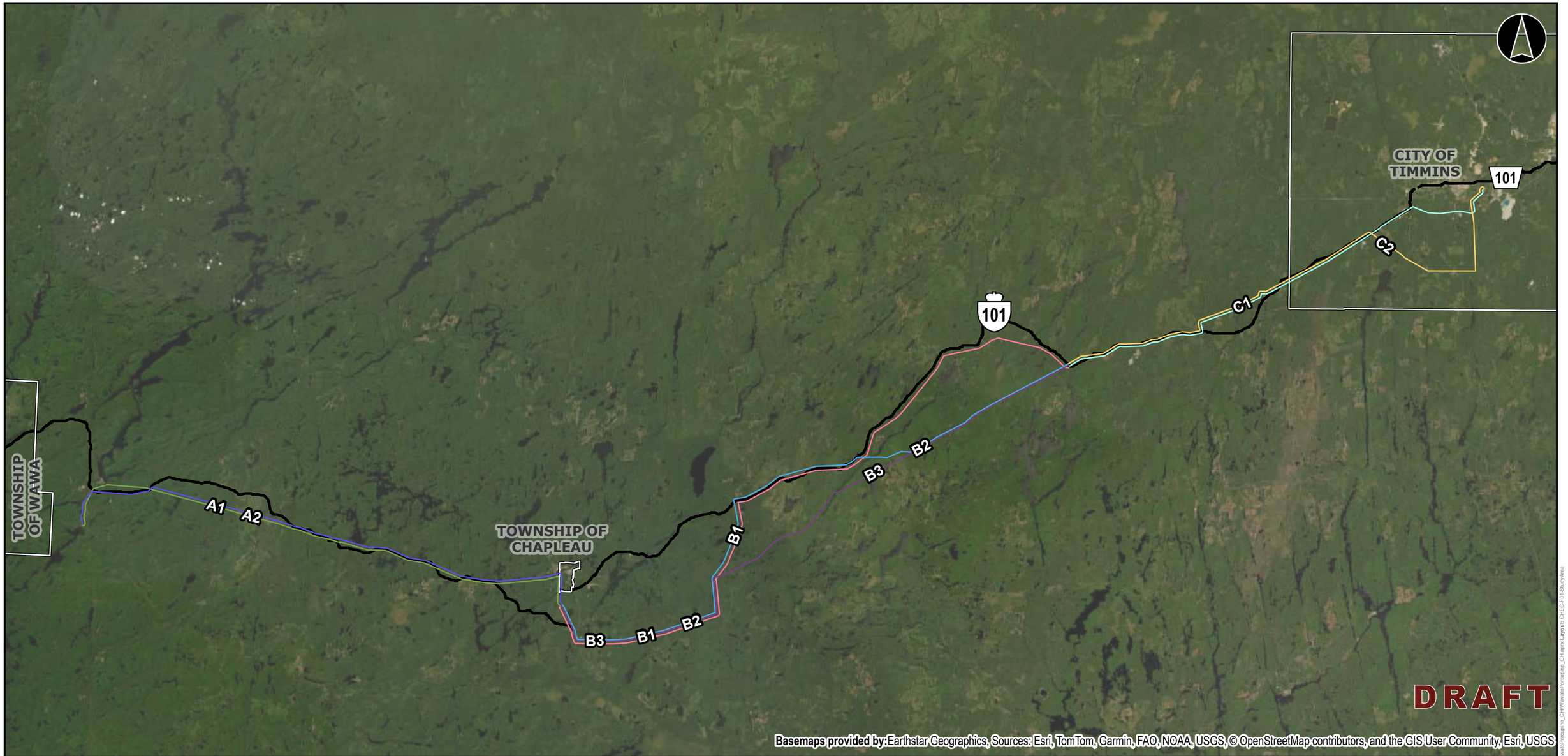
1.2.5.2 Route Segment C2

Route Segment C2 is approximately 97 km in length and runs from the convergent point with Route Segments B1, B2, and B3 northeast along a new easement, parallel to Highway 101 for approximately 25 km to an existing hydro corridor where it turns north, crossing Highway 101 (**Photograph 9** and **Photograph 10**), and then northeast for approximately 35 km (**Photograph 11**). The route crosses Highway 101 five (5) times. It turns southeast off the existing corridor, just north of Timmins West Mine (**Photograph 16**) in a new easement, and travels southeast then east for approximately 21 km where it meets an existing hydro corridor and turns north (**Photograph 14** and **Photograph 15**). It follows the existing hydro corridor north to its end at the Porcupine TS. Route Segment C2 travels along approximately 46 km of existing hydro corridors. Route Segment C2 travels through the unorganized territory of the District of Sudbury, into the Districts of Timiskaming and Cochrane and into the City of Timmins. Route Segment C2 primarily passes through natural landscapes including crossing the Ground Hog River in the Ground Hog River Waterway Provincial Park, the Vimy Lake Uplands Conservation Reserve, and the Tatachikapika River Plain Conservation Reserve, with the northern end of the route located in former mining landscapes in the City of Timmins. Route Segment C2 crosses the Mattagami River once (1).



Photograph 16: View of the approximate location where Route Segment C2 turns southeast and crosses Highway 101, looking north (AECOM, July 2025)

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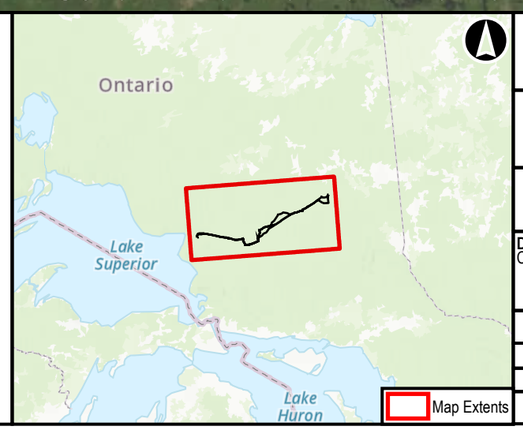


Basemaps provided by: Earthstar Geographics, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

LEGEND

Route Name

- A1
- A2
- B1
- B2
- B3
- C1
- C2
- Municipal Boundary



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Location of Project Study Area

0 15 30 km

NAD 1983 UTM Zone 17N

Data Sources:
Contains Information licensed under the Open Government License Ontario.

Jan, 2026	
P:60752729	
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AECOM

Figure: 1

Project Location: L:\DCS\CH\Projects\60752729_WawatoPerceptron\Design\01_Reports\CulturalHeritage\WawatoPerceptron_CH\Wawato Perceptron_CH.aprx Layout: CHEC-FIG1-StudyArea
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2. Policy Framework

BHRs and CHLs are recognized, protected, and managed through several provincial and municipal planning and policy frameworks, as well as guidance developed at the federal and international levels. These policies have varying levels of authority at the local level, though generally all inform decision-making on the identification and evaluation of BHRs and CHLs.

2.1 Federal and International Heritage Policies

Guidance for the conservation of federally protected heritage sites is found in Canada's Historic Places (CHP) Standards and Guidelines (S&Gs) for the Conservation of Historic Places in Canada (CHP 2010; hereafter CHP S&Gs). These S&Gs were drafted in response to international and national agreements such as the 1964 International Charter for the Conservation and Restoration of Monuments and Sites (Venice Charter), 1979 Australia International Council on Monuments and Sites Charter for Places of Cultural Significance (Burra Charter, updated 2013), and 1983 Canadian Appleton Charter for the Protection and Enhancement of the Built Environment. The CHP S&Gs define three conservation "treatments" — preservation, rehabilitation, and restoration— and outlines the process and required and recommended actions to meet the objectives for each treatment for a range of BHRs and CHLs.

2.2 Provincial Legislative Framework

2.2.1 *Ontario Heritage Act* and Standards and Guidelines for Conservation of Provincial Heritage Properties

The *Ontario Heritage Act* (OHA) provides the primary statutory framework for the conservation of cultural heritage resources (which includes their identification, protection, and wise management) in Ontario. The conservation of cultural heritage resources is also a matter of provincial interest as reflected in provincial legislation such as the *Planning Act* and the *Environmental Assessment Act*, (*EAA*) among others. Under the OHA, all Ontario government ministries and public bodies prescribed under Ontario Regulation 157/10 (O. Reg.) (*Public Bodies)*, including Hydro One, are required to follow the *Standards and Guidelines for Conservation of Provincial Heritage Properties* (hereafter OHA S&Gs), prepared under section 25.2 of the OHA, when making any decisions affecting cultural heritage resources on lands under their control.

Consistent with the OHA S&Gs, and with Hydro One's I&E Process (as approved by the Deputy Minister of MCM), Hydro One hires qualified person(s) to undertake technical heritage studies, e.g., to determine whether a property (or properties) under its ownership or control has Cultural Heritage Value or Interest (CHVI) based on the criteria under O. Reg. 9/06 (*Criteria for Determining CHVI)* and O. Reg. 10/06 (*Criteria for Determining CHVI of Provincial Significance)*.

The criteria for determining CHVI are defined in O. Reg. 9/06 (as amended by O. Reg. 522/69 *Criteria for Determining CHVI*). This regulation was created to ensure a consistent approach to the identification of heritage properties under the OHA. All designations under the OHA made after 2006 must meet the criteria outlined in the regulation.

If a provincially or prescribed public body owned property meets one or more criterion of O. Reg. 9/06, it may be considered to possess CHVI for designation as a "provincial heritage property" (PHP), while a property that meets one or more of the criteria under O. Reg. 10/06 may be considered for designation as a "provincial heritage property of provincial significance" (PHPPS). PHPs and PHPPS are formally

described with a Statement of Cultural Heritage Value that includes a brief property description, a succinct statement of the property's cultural heritage significance, and a list of its heritage attributes. Once determined to have CHVI, the identified BHRs or CHLs are then added to a list maintained by MCM.

A property must meet at least one criterion outlined in O. Reg. 9/06 to possess CHVI at the local level:

1. The property has design value or physical value because it is a rare, unique, representative or early example of a style, type, expression, material or construction method;

2. The property has design value or physical value because it displays a high degree of craftsmanship or artistic merit;

3. The property has design value or physical value because it demonstrates a high degree of technical or scientific achievement;

4. The property has historical value or associative value because it has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community;

5. The property has historical value or associative value because it yields, or has the potential to yield, information that contributes to an understanding of a community or culture;

6. The property has historical value or associative value because it demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community;

7. The property has contextual value because it is important in defining, maintaining or supporting the character of an area;

8. The property has contextual value because it is physically, functionally, visually or historically linked to its surroundings; and

9. The property has contextual value because it is a landmark.

A property may possess CHVI at the provincial level if it meets at least one of the following criteria outlined in O. Reg. 10/06:

1. The property represents or demonstrates a theme or pattern in Ontario's history;

2. The property yields, or has the potential to yield, information that contributes to an understanding of Ontario's history;

3. The property demonstrates an uncommon, rare or unique aspect of Ontario's cultural heritage;

4. The property is of aesthetic, visual or contextual importance to the province;

5. The property demonstrates a high degree of excellence or creative, technical or scientific achievement at a provincial level in a given period;

6. The property has a strong or special association with the entire province or with a community that is found in more than one part of the province. The association exists for historic, social, or cultural reasons or because of traditional use;

7. The property has a strong or special association with the life or work of a person, group or organization of importance to the province or with an event of importance to the province; and

8. The property is located in an unorganized territory and the Minister determines that there is a provincial interest in the protection of the property. O. Reg. 10/06, s. 1 (2).

2.2.1.1 Provincial Standards & Guidelines

As mentioned above, heritage conservation on provincial properties must comply with the OHA S&Gs. After introducing the requirement for the S&Gs and key definitions, the document outlines the overall principles, general provisions, and a series of comprehensive policies for how Ministries and public bodies shall operate to maintain, use, and dispose of provincial heritage properties. The S&Gs also require all provincial ministries and public bodies to develop their own "evaluation process to identify provincial heritage properties" (Section B.2). To address this requirement, Hydro One developed the I&E Process (2019). Additional documents drafted to support implementing the OHA S&Gs include the *Standards and Guidelines for the Conservation of Provincial Heritage Properties – Heritage Identification & Evaluation Process* (2014), which provides detailed explanations of the O. Reg. 9/06 and O. Reg. 10/06 criteria and their application, and *Information Bulletin 3*, which describes how to organize the sections of a Heritage Impact Assessment (HIA) and the range of possible impacts and mitigation measures.

The province, through the MCM, has also developed a series of products to advise municipalities, organizations, and individuals on heritage protection and conservation. One product is the MCM *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes: A Checklist for the Non-Specialist* which helps to identify if a study area contains or is adjacent to known BHRs and CHLs, provides general direction on identifying potential BHRs and CHLs, and aids in determining the next stages of evaluation and assessment.

For heritage evaluations, criteria to identify cultural landscapes is provided in greater detail in the Guidelines on the Man-Made Heritage Component of Environmental Assessments (1980:7), while recording and documentation procedures are outlined in the Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments (1992:3-7).

2.2.2 Environmental Assessment Act and Ontario Energy Board Act

The EAA was legislated to ensure that Ontario's environment is protected, conserved, and wisely managed. Under the EAA, "environment" includes not only natural elements such as air, land, water and plant and animal life, but also the "social, economic and cultural conditions that influence the life of humans or a community", and "any building, structure, machine or other device or thing made by humans".

Cultural heritage resources including archaeological resources, BHRs and CHLs are included in the cultural component of the environment. To determine the potential environmental effects of a new development, the EA process was created to standardize decision-making. A class EA is a document that sets out a standardized planning process for classes or groups of activities. It applies to projects that are carried out routinely and have predictable environmental effects that can be readily managed. For this project, this procedure is outlined in the *Class EA for Transmission Facilities* (2024).

The Project is also subject to Section 92 by the Ontario Energy Board [OEB] Act, 1998, which requires that transmitters and distributers obtain approval from the OEB. Once the OEB approves a project it will grant the transmitter or distributer a "Leave to Construct".

3. Scope and Method

3.1 Cultural Heritage Existing Conditions (CHEC)

The objective of the CHEC is to identify known and potential BHRs and CHLs within the PSA through desktop and field reviews. Analysis of all property parcels that are wholly or partially intersected by the PSA was undertaken.

BHRs and CHLs are defined by the Hydro One *Class EA for Transmission Facilities* (2024) document and are used in this report:

- **Built Heritage Resource (BHR)** – One or more significant buildings (including fixtures or equipment located in or forming part of a building), structures, earthworks, monuments, installations, or remains that have CHVI.
- **Cultural Heritage Landscape (CHL)** – A defined geographical area that human activity has modified and that has cultural heritage value. Such an area involves one or more groupings of individual heritage features, such as structures, spaces, archaeological sites, and natural elements, which together form a significant type of heritage form distinct from that of its constituent elements or parts. Heritage conservation districts designated under the OHA, villages, parks, gardens, battlefields, main streets and neighbourhoods, cemeteries, trails, and industrial complexes of cultural heritage value are some examples.

For the purpose of this report, BHRs and CHLs can be categorized as either:

- **Known BHR/CHL** – means BHRs or CHLs that have an existing level of municipal, provincial, or federal heritage protection, designation, or recognition.
- **Potential BHR/CHL** – means properties identified during the desktop screening and during the field review that contains a building or structure that appears to be older than 40 years of age, that, informed by the *Class EA for Transmission Facilities* list of typical data types and sources and combined with a review of historical maps, architectural style, and professional judgement, has been determined in this study to have potential CHVI.

In the course of the cultural heritage assessment, all potentially impacted properties are subject to inventory. Generally, when conducting a preliminary identification of known or potential BHRs and CHLs, several stages of research and data collection are undertaken to appropriately establish the potential for and existence of known or potential BHRs and CHLs in a geographic area.

The CHEC portion of this report aims to screen for BHRs and CHLs utilizing the *Class EA for Transmission Facilities* and the MCM *Checklist* lists of typical data types and sources as a guide which are indicators of CHVI including, but not limited to (Hydro One, February 2024):

- Properties of cultural heritage value, as defined by Regulation 9/06 of the OHA;
- Properties designated, or subject to a notice of intention to designate, under Part IV or B of the OHA*;*
- Properties subject to an agreement, easement or covenant under the OHA*;*
- Properties designated as a historic site under O. Reg 880 (*Historic Sites)* of the OHA*;*
- Provincial heritage properties;
- Properties listed on a register or inventory of heritage properties maintained by the municipality;
- Properties subject to a municipal, provincial or federal plaque;

- National historic sites;
- Known or reported burial sites;
- Properties that contain structures over 40 years old;
- Properties situated on a parcel of land that contains or is part of a CHL (e.g., Indigenous trail, park, relationship to a Canadian Heritage River, designed garden, historic road or rail corridor, unique landforms, etc.);
- Properties that are considered a landmark in the local community or contain any structures or sites that are important to define the character of the area (e.g., prominent buildings or landscape features, complexes of buildings, monuments, etc.);
- Properties that have special association with a community, person, or historical event (e.g., Indigenous sacred site, traditional use areas, battlefield, birthplace of an individual of importance to the community, etc.);
- Properties designated as an archaeological site under O. Reg 875 (*Archaeological Sites)* of the OHA;
- Known or reported archaeological sites;
- Areas of archaeological potential;
- Properties in the Canadian Register of Historic Places;
- Properties in the Canadian Inventory of Historic Buildings;
- Protected heritage properties as defined by the Provincial Planning Statement; and,
- Municipal Heritage Registers of Listed and Designated Properties.

In addition to the above list, this report also includes a review of the following resources to screen for known and potential BHRs and CHLs within the PSA of the Project:

- A review of historical and topographic maps including (**Figure 3**):
    - 1973 National Topographic System (NTS) of Michipicoten Harbour Ontario;
    - 1976 NTS of Kinniwabi Lake Ontario;
    - 1968 NTS of Nicholson Ontario;
    - 1968 NTS of Chapleau Ontario;
    - 1977 NTS of Rollo Lake Ontario;
    - 1979 NTS of Ivanhoe Lake Ontario;
    - 1979 NTS of Foleyet Ontario;
    - 1975 NTS of Kenogaming Lake Ontario;
    - 1975 NTS of Dana Lake Ontario; and,
    - 1979 NTS of Timmins Ontario.
- A review of online searchable databases including:
    - City of Timmins Municipal Heritage Register;
    - Ontario Heritage Trust (OHT) Conservation Easements;
    - OHT's Places of Worship Inventory;
    - OHT's provincial Plaque Program;
    - OHT's OHA Register;
    - Ontario Historical Society's Ontario Heritage Directory and Map;
    - Ontario Genealogical Society's Cemetery Index;
    - Parks Canada's National Historic Sites;
    - Parks Canada's The Canadian Register of Historic Places on CHP website;
    - Parks Canada's Directory of Federal Heritage Designations;
    - Parks Canada's Directory of Designated Heritage Railway Stations;
    - Parks Canada's Heritage Lighthouses of Canada;
    - Canadian Heritage River System website; and,
    - United Nations Educational, Scientific and Cultural Organization World Heritage Sites.

- While no specific Indigenous Cultural Landscapes have been identified by Indigenous Communities in the PSA to date, Hydro One welcomes input from Indigenous communities and actively supports the identification and inclusion of Indigenous Cultural Landscapes. Hydro One remains committed to their recognition and incorporation should they be identified through ongoing engagement and review.
- A field review completed from July 7 to July 9, 2025, by Cultural Heritage Specialists, Bryan McClure and Emlyn Tuck, along with a review of Google Earth and Google Street View to identify potential BHRs and CHLs based on architectural styles and historical mapping to screen for properties that may be over 40 years old but have not been previously identified and have no existing heritage recognition. The field review documented properties from the road allowance using the camera on a Samsung Galaxy S20 and Google Pixel 3A; and
- Completion of a table that identifies known and potential BHRs and CHLs within the PSA. The properties were screened using O. Reg. 9/06 and O. 10/06 to determine if the property is a potential Hydro One PHP or PHPPS.

3.1.1 Stakeholder Engagement

As part of the data collection, AECOM reached out via email to staff at the MCM, the OHT, and the heritage department of the City of Timmins to identify known BHRs or CHLs within the PSA. The result of the correspondence is provided in **Table 1** below.

Table 1: Results of Stakeholder Engagement

Contact	Organization	Date of Email	Notes
Mariana Nito Heritage Advisor Mariana.nito@ontario.ca	MCM	June 25, 2025	AECOM inquired if any PHPs and/or PHPPSs were in the PSA. As well, an inquiry was made about any provincial plaques and CHLs in the PSA.
		June 30, 2025	Mariana Nito replied via email to AECOM's request, confirming that to date no properties in the PSA have been designated by the Minister, nor does MCM have any records of a PHP within or adjacent to the PSA.
Samuel Bayefsky Real Property Coordinator Samuel.Bayefsky@heritagetrust.on.ca	OHT	June 25, 2025	AECOM inquired if the OHT owns or protects via easement any properties or CHLs within or immediately adjacent to the PSA. As well, an inquiry was made about any provincial plaques in the PSA.
		June 26, 2025	Samuel Bayefsky replied via email confirming that no

Contact	Organization	Date of Email	Notes
			properties in the PSA are owned or protected by OHT. As well, no heritage plaques are near the PSA.
Clerks Department clerks@timmins.ca Nicola Alexander Intermediate Planner Nicola.Alexander@timmins.ca	City of Timmins	June 25, 2025	AECOM inquired if the City of Timmins could confirm if any heritage properties or landscapes were located within the PSA in the boundaries of the city.
		July 2, 2025	Nicola Alexander replied via email confirming there are no listed or designated properties within or adjacent to the PSA in the City of Timmins. As well, there are no known CHLs within or adjacent to the PSA in the City of Timmins.
Judith Menyntz Chief Administrative Officer	Township of Chapleau	November 12, 2025.	AECOM inquired whether the Township of Chapleau could provide a link or list of all listed and designated heritage properties within the municipality. At the time of writing, the Township of Chapleau has not responded to AECOM's request.

3.1.2 Indigenous Community Engagement

Early project engagement with Partner Nations began prior to the Notice of Commencement for the Class EA, which was issued on June 9, 2025. Partner Nations for this project include Brunswick House First Nation, Chapleau Cree First Nation, Chapleau Ojibwe First Nation, Flying Post First Nation, Matachewan First Nation, Mattagami First Nation, Michipicoten First Nation, Missanabie Cree First Nation, and Taykwa Tagamou Nation. Engagement throughout the EA consists of meetings with leadership and representatives of Nations, emails, phone calls, Technical Advisory Committee workshops, and Indigenous Community Information Sessions. Non-Partner Nations and the Métis Nation of Ontario have also been engaged by Hydro One.

Should communities believe there are potential CHLs missing from the draft report, or simply areas of interest that have value to community values or cultural identity, communities can discuss with Hydro One. Should this information be considered sensitive or Traditional Knowledge, Hydro One will work with communities to understand how this should be included in this report and the overall project. This draft CHEC will be available for review and comment for Partner Nations for thirty (30) days.

4. Historical Context

4.1 Pre-Contact Overview of Northern Ontario

Prior to the arrival of Europeans, the numerous lakes and watercourses of northern Ontario provided access to potable water and other life sustaining resources such as fish and plants for local Indigenous inhabitants for thousands of years. Rivers also served as transportation routes for travel and attracted game to their shores. Throughout Ontario, water bodies are recognized for their close association with human occupation and land use, with 80 to 90% of all archaeological sites found within 300 m of water bodies (Government of Ontario). The PSA travels through two significant river systems, the Michipicoten River near the Wawa TS and the Mattagami River near Timmins, including three of the latter's tributaries, the Ivanhoe, Groundhog, and Tatachikapika Rivers. The Michipicoten River is approximately 113 km long and drains into Lake Superior just south of the town of Wawa. The Mattagami River is approximately 443 km long and flows north before joining with the Missinaibi River to form the Moose River, which drains into James Bay. The PSA traverses the Mattagami River and its tributaries but does not traverse the Missinaibi River.

Archaeological research in northern Ontario is generally limited in comparison to southern Ontario, which has resulted in less robust understanding by archaeologists of the pre-contact settlement history of this part of the province. However, it has been well established that in the area that is now northern Ontario, human settlement can be traced back at least 11,000 years. The Stage 1 Archaeological Assessment for the Project, drafted by AECOM in 2026, includes an overview of pre-contact histories and archaeological resources in the PSA and within municipalities traversed by the PSA. Please refer to the Stage 1 Report for additional information.

4.2 Post-Contact Overview of Indigenous History

It is important to note that, when discussing the historical documentation of the movement of Indigenous people, what has been documented by early colonialist explorers and settlers represents only a very small snapshot in time. Where Indigenous groups were residing during the period of early European exploration and settlement is restricted to only a very short period of time and does not reflect previous and subsequent movements of these groups. Indeed, there is evidence that, in some cases, what is identified as a movement of people was really little more than a change in the name used to refer to a group as they encountered various settler groups. As such, relying on historic documentation in regard to Indigenous occupation and movement across the landscape can lead to misinterpretation. For example, historic documentation of the movement of Indigenous groups into an area may suggest to the reader that these groups had not occupied the area previously; however, this is not the case. It is clear from Indigenous oral histories and the archaeological record that pre-contact Indigenous populations were extremely mobile and not tied to any one specific area. Over the vast period of time prior to the arrival of Europeans, Indigenous groups, language families, and cultures were fluid across the landscape. Similarly, while economic activity altered the way people used the landscape, particularly at the height of the fur trade, the overall socio-cultural system of kinship-based land use and group association remained intact.

At the time of European contact, the Indigenous Nations in the northern part of the province spoke variations of the Algonquian language group, notably Ojibwe and Cree. The environmental conditions in

northern Ontario remained vastly different from those in the south with unpredictable natural factors such as forest fires and winter icing influencing the size of human population the region could support, the distribution of groups, and the frequency in which they had to move. Therefore, the groups in northern Ontario remained small, mobile, and loosely associated with each other through the post-contact era (Dawson, 1983: 9).

4.3 Post-Contact Historical Context

4.3.1 Early European Exploration

The arrival of Europeans in northern Ontario occurred in the early 1600s as part of the exploration of the continent and expansion of the fur trade. British and French colonialist explorers, and later merchants, entered what is now northern Ontario established footholds in the area through the establishment of trading outposts. These trading posts followed waterways in the area and were placed in established meeting and mercantile locations of Indigenous nations, such as the rapids between Lake Superior and Lake Huron, in modern-day Sault Ste. Marie (Lytwyn, 2003: 26-27). French trading posts followed the Great Lakes, establishing posts on the shores of Lake Superior at modern day Sault Ste. Marie in 1670, Thunder Bay in 1679 (Camenestiguouia), and Michipicoten in 1714; with further posts built along waterways off Lake Superior including on Lake Nipigon in 1684 (The National Atlas of Canada, 1974: 79-80). In the same time period, British trading posts were being established along James Bay and Hudson Bay by the Hudson's Bay Company that had been founded in 1670. British trading posts included Moose Fort in 1673 (later Moose Factory in 1730), Albany in 1675 (later Albany Fort in 1721), and Severn in 1685 (re-established in 1759). Indigenous trappers played the two sides against each other to secure the greatest benefit for themselves, using the waterways between the Great Lakes and the Hudson Bay to move between the trading posts for the best deals (Driben & Trudeau, 1983: 17).

After the fall of New France in 1763, the Hudson's Bay Company expanded in the region, taking over old French outposts and pushing further into the interior. New fur trading companies including the North West Company and the XY Company competed for furs in northern Ontario, establishing new trading posts along waterways in the region resulting in a web of posts throughout the region as the companies vied for control of the fur trade (The National Atlas of Canada, 1974: 79-80). The amalgamation of the rival companies, first the XY Company with the North West Company in 1804, followed by the North West Company with the Hudson's Bay Company in 1821, saw the Hudson's Bay Company achieve a monopoly on fur trading in the region, with competition only existing from south of the Great Lakes in the American Fur Company and independent Canadian traders (Catton, 2003: 52). The monopoly of the Hudson's Bay Company caused Indigenous trappers and traders to suffer the most as they lost economic freedom and autonomy (Finch, 2020: 178-179). Further economic freedom and autonomy was lost as the Hudson's Bay Company undertook several cost cutting and conservation measures to protect the fur trade. Redundant posts and posts located in areas where furs were depleted were closed to save money. As furs were depleted in the region, new conservation efforts were implemented, such as a quota system, that limited the economic wealth of Indigenous trappers as the Hudson's Bay Company attempted to protect the declining stocks and the value of fur (Cattton, 2003: 53-54). As the Hudson's Bay Company struggled to keep fur trading afloat, growing interest in other resources in region and establishing further settlement west attracted new attention from Canadians to the south. The Robinson-Superior Treaty (Treaty 60) was signed in 1850 to help facilitate resource extraction along the shores of Lake Superior and in 1858 the new territories were divided into the first districts (Government of Ontario, 2025). In 1869, the Hudson's Bay Company sold the remainder of their rights over the Prince Rupert's

Land to the new Dominion of Canada, ending their monopoly and paving the way for Canadian settlement of the region.

The fur trade in Canada provided the principal motivation and economic base for the exploration of the Canadian interior by Europeans. During the period between 1670 and 1713, French traders began to leave established settlements and construct trading posts that enabled traders to make direct contact with the Indigenous groups of the interior, including the area around the Great Lakes.

By the dawn of the 19th century, there were substantial Métis populations living at Hudson's Bay Company posts born from the union of European fur traders and Indigenous women (Long, 1985: 139). The Hudson's Bay Company depended heavily on the Métis, who made up nearly seventy percent of its labour force in the Lake Superior area (Gale, 2005: 12). Additionally, some fur traders with the North West Company established settlements with their Métis or Indigenous wives, varying in number up to approximately 25 traders and their families (Gale, 2005: 10).

An examination of the Government of Canada's map "Posts and Forts of the Canadian Fur Trade, 1600-1780", indicates the presence of fur trade posts in the general vicinity of the PSA. The presence of major fur trade posts along the eastern shore of Lake Superior indicates that the region where the PSA is located was likely used for travel between fur trade posts between Lake Superior and James Bay. The French, British, Hudson's Bay Company, North West Company, and independent traders all held fur trading posts during the period from 1600 to 1870 (Wright 1981; Dawson; 1977). Trading posts in the area include the French post of Michipicoten from 1714, the Hudson's Bay Company posts of Michipicoten from 1796 and 1816, Kenogamissi from 1794, and Frederick House from 1785, North West Company posts of Flying Post from 1800, and Devil's Island from 1792, and finally an independent trading post at Michipicoten from 1766.

Fort Michipicoten was noted in *Historic Forts and Trading Posts of the French Regime and of the English Fur Trading Companies* (Voohris, 1930) as being one of the oldest French trading posts. The fort was located at the mouth of the Michipicoten River into Lake Superior and protected one of the routes to James Bay that followed the Michipicoten and Misssinabi River to the Moose River (Voohris, 1930: 7). The fort was said to be taken over by the North West Company, and then by the Hudson's Bay Company after 1821 and operated until 1900, servicing interior posts (Voohris, 1930: 113).

Flying Post was a North West Company post founded at the head of the Groundhog River on Groundhog Lake and was formerly known as Fort Kuckatoosh (from Kakozhisk). It was taken over by the Hudson's Bay Company in 1821 when the companies merged and it appears to have operated until 1900 (Voohris, 1930: 68).

Fort Kenogamissi was a Hudson's Bay Company post located on the north end of Lake Kenogamissi near the source of the Mattagami River and was dependent on Moose Factory on James Bay for supplies. It was built in the 1790s but was shut down around 1850 and was abandoned shortly after (Voorhis, 1930: 90).

4.3.2 Treaty History

The PSA passes through the traditional territories of several Ojibwe and Cree groups including the Chapleau Cree, Taykwa Tagamou, Missanabie Cree, the Flying Post, Brunswick House, Michipicoten,

and Chapleau Ojibwe First Nations. These lands, notwithstanding reservations, were transferred to the Crown under two separate treaties:

4.3.2.1 Robinson-Superior Treaty (Treaty No. 60)

The Robinson-Superior Treaty, or Treaty 60, encompasses the north shore of Lake Superior from present day Sault Ste. Marie to Thunder Bay and extended inland to the height of the land, including Lake Nipigon. Beyond the height of land, the Hudson's Bay Company continued to enjoy a commercial monopoly, particularly over the fur trade. The Robinson-Superior treaty was concluded between representatives of the Crown and nine Ojibwe groups along the north shore of the Lake Superior and included the establishment of reserves, a one time payment of 2,000 pounds, and an annual payment of 500 pounds to be paid in perpetuity (Government of Canada, 2013). The treaty was signed at Sault Ste. Marie on September 7, 1850, and was intended to provide access to the north shore of Lake Superior for resource exploration, with a particular focus on mineral prospecting and mining (Government of Ontario, 2024).

4.3.2.2 James Bay Treaty (Treaty No. 9)

The James Bay Treaty, or Treaty No. 9, was initially negotiated in the summers of 1905 and 1906 between representatives of the Crown and various Ojibwe and Cree nations in the James Bay watershed, with adhesions in 1929 and 1930, extending the treaty area north of the Albany River to Hudson Bay (Government of Ontario, 2024). The impetus for the treaty was increasing mining activity and railway construction beyond the height of the land, which had been the previous northern treaty boundary established under the Robinson-Superior Treaty in 1850. In the interim, in 1870 the Canadian Government had ended the Hudson's Bay Company's commercial monopoly north of the height of land, and so various provincial and commercial interests were served by the pursuit of the James Bay Treaty. These interests in the words of the treaty commissioners, made it "advisable to extinguish the Indian title" to the areas between the height of land and the Albany River (Government of Canada, 2013). The James Bay Treaty and its later adhesions opened vast areas of northern Ontario to resource exploitation, with mining, lumbering, and later, hydroelectricity developing as major regional industries.

4.3.3 Euro-Canadian Settlement

The organization of local government in northern Ontario was organized into districts that provided judicial and provincial services to the population starting in 1858. As the population grew, new districts were created and boundaries changed to accommodate the population growth. Northern districts are organized into incorporated improvement districts, villages, towns, cities, and townships, but they are not incorporated themselves, meaning they have no council like counties in southern Ontario (Government of Ontario, 2025). In most cases, the term only refers to a geographic boundary with no municipal government purpose. Municipalities within the districts are effectively single-tier municipalities. Some districts do have District Social Services Administration Boards that provide social services for the unincorporated areas that are sparsely populated (Association of Municipalities of Ontario, 2025).

The Project traverses through four districts: Algoma, Sudbury, Timiskaming, and Cochrane. All segments of Route Alternative A run through the Districts of Algoma and Sudbury, while all segments of Route Alternative B run through the District of Sudbury, and all segments of Route Alternative C run through the Districts of Sudbury, Timiskaming, and Cochrane. The Wawa TS is located near the Municipality of

Wawa, while the convergent point of Route Alternatives A and B is near the Township of Chapleau, and the Porcupine TS is located in the City of Timmins.

4.3.4 District Organization and History

4.3.4.1 District of Cochrane

The District of Cochrane was first established in 1922, created from parts of the Districts of Thunder Bay, Algoma, and Timiskaming (Government of Ontario, 2025). The District of Cochrane was named after Frank Cochrane, a former Ontario Minister of Lands, Forests, and Mines, and Minister of Education in the early 20th century (Mika & Mika, 1977: 449). The first settlements in the District of Cochrane were on James Bay and Hudson Bay where trading posts of the Hudson's Bay Company were founded including Moose Factory (later Moosonee) and Fort Albany. Settlement in what became Cochrane began in the late 19th century with plans to build a railway line from North Bay to James Bay. The first stretch was constructed in 1900 from North Bay to New Liskeard in what is now the Ontario Northland Railway. Further lines were built with the line reaching Moosonee in 1932 (Mika & Mika 1977: 449).

Settlement in the southern area of Cochrane began in the early 20th century when gold was found at Night Hawk Lake and Porcupine Lake. In 1909, gold north of Porcupine Lake resulted in the first gold rush into the area and the establishment of the big three mines of Dome, Hollinger, and McIntyre as they dominated gold mining and the largest producers of gold in North America (Ontario Heritage Trust, 2012). The brothers Noah and Henry Timmins purchased the rights to the Hollinger Mine and in 1912, after fires ravaged the mines and the first settlement in the area on Porcupine Lake, the townsite for Timmins was developed further west. That same year, a spur line of the Ontario Northland Railway was built to the gold fields, helping to push development and growth (Ontario Heritage Trust, 2012). The growth of Timmins led to the City of Timmins separating from the District of Cochrane in 1973 (Barnes, 1993: 140).

4.3.4.2 City of Timmins

The City of Timmins was founded in 1912 by the brothers Noah and Henry Timmins. The brothers had made their fortune in the previous decade supplying miners and surveyors in the Cobalt Silver Rush and had moved north to Porcupine Lake following the gold rush in the region (Ontario Heritage Trust, 2012). In 1912, the brothers purchased Hollinger Mine, one of three biggest mines in the gold rush, which was also the farthest from the original settlement on Porcupine Lake. In 1911, the town of Porcupine burned down, and the Timmins brothers took the opportunity to build a new settlement that was closer to their mine, and one that was laid out with a street plan rather than the haphazard manner of the original town (Ontario Heritage Trust, 2012). The townsite was built on a rise, known as The Hill, where houses for managers were built, by the shores of Gillies Lake. While some of the lots in the new settlement were opened for public auction, the majority of the lots remained in the hands of the Timmins Townsite Company, owned by Hollinger Mines. Hollinger Mines built amenities for the town, provided land for churches, as well as built community facilities including a hockey rink, baseball diamond, golf course, library, and recreation hall (Ontario Heritage Trust, 2012).

Settlements also sprang up in the region around other mines, with the other two big mines developing their own townsites at Schumacher for McIntyre Mine, and South Porcupine and Golden City for Dome Mine (Torlone, 1976: 5). Smaller mines existed throughout the area, with new mines opening in the 1930s helping to make Timmins a thriving and growing town in the midst of the Great Depression with

company settlements arising around the smaller mines (Barnes, 1993: 139-140; Angus & Palu, 2001: 53). These other settlements were primarily residential in nature, housing miners and managers of the nearby mines, with the settlement of Timmins serving as a commercial, transportation, and political hub for the region. As such, Timmins was able to thrive and survive economic downturns in mining as it also serviced other industries including lumber and tourism, as well as providing services for residents of the area (Torlone, 1976: 1-14).

Mining began to slow in the second half of the 20th century. Smaller mines around Timmins began to close with the first of the big three, Hollinger Mine, ceasing operations in 1968. The second of the big three, McIntyre Mine, ceased operations in 1988, while Dome Mine was the last, ceasing operations in 2017. Timmins was able to diversify its economy to stay viable even as the gold mines shut, as mining for other minerals, along with lumber, tourism, and service industries help grow and sustain the settlement (Torlone, 1976).

4.3.4.3 District of Sudbury

The District of Sudbury was first established in 1907, created from parts of the Districts of Algoma and Nipissing and reached its current size and shape in 1912 (Government of Ontario, 2025). Redistribution of municipalities within the district saw the largest change in 1973 when the Regional Municipality of Sudbury was created with the City of Sudbury and the surrounding townships amalgamated and were severed from the District of Sudbury (Mika & Mika, 1977: 464). The District of Sudbury's history has been shaped by the railway, as the CP Railway was built through the district in the 1880s and the CN Railway in the early 20th century. The Sudbury Basin became the site of a surveyor's camp in 1882 and was turned into Sudbury Junction, the meeting point of several lines to Toronto, North Bay, Sault Ste. Marie, and Thunder Bay (Wallace, 1996: 11-13). The discovery of mineral ores around the townsite of Sudbury resulted in the growth of the settlement as mining, along with logging, developed in the late 19th century into the 20th century (Wallace, 1996: 19-22). The development of the District of Sudbury north of the City of Sudbury was primarily based on the two railway lines, which saw logging or mining work camps turned into permanent settlements. These settlements began to replace the older fur trading posts as the railway provided greater access to the outside world and brought new amenities to the region (Crichton, 1975: 12-19).

The City of Sudbury and the surrounding townships grew in size over the 20th century and in 1973 were severed from the District of Sudbury into the Regional Municipality of Sudbury to provide greater local resources and organization for residents. The Township of Chapleau became the largest remaining settlement in the District of Sudbury, located on the CP Railway line as well as on the major east-west Highway 101 and Highway 129 just south of the Township. Other settlements developed along the CN Railway further north in the District of Sudbury, with the settlement at Foleyet developing on the railway and Highway 101.

4.3.4.4 Township of Chapleau

The Township of Chapleau was founded in 1885 by the CP Railway with the settlement founded on the Chapleau River (today called the Kebsquasheshing River) to serve as a divisional point for the new railway housing maintenance and offices for members of the railway company (Crichton, 1975: 11, 132-133). The railway opened the area to exploitation, resulting in the closure of a number of Hudson's Bay Company trading posts and the arrival of new lumber companies to exploit the untouched old-growth forests. The first sawmill was established in 1899 in the settlement of Chapleau, with mills emerging in

the early 20th century in the town and the surrounding area (Crichton, 1975: 26-27). Several lumber companies did not process the logs in the area, instead transporting them by water or sleigh (depending on the season) to Chapleau where it was loaded onto trains to be shipped to other mills (Crichton, 1975: 26). The growth of Chapleau with the lumber and railway industries saw the settlement incorporated in 1901 as the Township of Chapleau (Evans, 2001). The town was named after Sir Joseph-Adolphe Chapleau, a member of the government of Sir John A. Macdonald as well as the Premier of Quebec (Crichton, 1975: 9).

In 1908, the Canadian Government established a new agency in Chapleau for First Nations living in the area (Crichton, 1975: 83). The Hudson's Bay Company had opened a fur trade and store in Chapleau in 1887 to connect itself with the new railway. The post remained operational until 1892 (Archives of Manitoba). The movement of the Hudson's Bay Company and the development of new economic opportunities drew several First Nations communities to Chapleau as part the growth of the settlement. With furs still a lucrative business, new fur trade posts opened in Chapleau under James Austin, a lumber company owner, who hired William McLeod, a former Hudson's Bay Company and CP Railway employee, to run his fur posts in 1900 (Crighton, 1975: 154). McLeod wrote a report to the Ontario Government in 1923 outlining concerns with fur trapping and game hunting in northern Ontario with a series of recommendations to help solve the decline in furs (Crighton, 1975: 155-156). The most significant result of his work was the establishment of the Chapleau Game Preserve north of the settlement in 1925. The Game Preserve was designed to protect animals prized in the fur trade to allow them space to breed free of trapping (Calverley, 2009). While protecting animal population numbers, the creation of the Game Preserve restricted the hunting, trapping, and fishing rights of Indigenous Communities (Calverley, 2009). A Residential School was opened in 1908 in Chapleau, operating until 1950 in two separate locations (Crichton, 1975: 84-85). The large Indigenous populations that developed around Chapleau saw the development of reservations including Chapleau Cree Fox Lake (Chapleau Cree First Nation), Chapleau 74 and 74A (Chapleau Ojibwe), Chapleau 61 (Michipicoten), Chapleau 61A (Chapleau Ojibwe), Chapleau 75 (Chapleau Cree First Nation), and Duck Lake 76B (Brunswick House).

The town developed modern amenities in the early 20th century with electricity arriving in 1905 from a local sawmill, water system in 1910, hospital in 1914, town hall in 1914, and fire hall in 1915 (Evans, 2001). In 1929, the Township of Chapleau was promised a road to connect it to Highway 17, which was not completed until 1950, providing the first ground access to the settlement besides the railway (Crichton, 1975: 20-21). Later developments included the construction of Highway 101 east to Timmins in 1961 and west to Wawa in 1964 (Crichton, 1975: 22). Declines in the lumber industry has seen the Township of Chapleau decline from a high of approximately 5,000 residents to approximately 2,100 residents in the early 21st century (Bray, 2012).

4.3.4.5 District of Algoma

The District of Algoma was established in 1858 as one of the first districts of northern Ontario and has undergone changes to its size until it reached its current size in 1922 (Government of Ontario, 2025). The district is said to be named after the Ojibwe name for Lake Superior (Mika & Mika, 1977: 39). The history of the district was first shaped by fur trading with the French trading post at Sault Ste. Marie forming the first European settlement in what would become Algoma. The presence of copper and iron ore in the vicinity of Sault Ste. Marie encouraged mining activities as early as 1850 and the wealth of mining soon became the key staple of Algoma into the 20th century (Mika & Mika, 1977: 39). The construction of the CP Railway in the early 1880s through northern Ontario took it through Algoma as the established shipping lanes and trading posts along Lake Superior were used to help move rails and

building materials for the line. Michipicoten Harbour, originally a fur trading outpost under the French and later Hudson's Bay Company, helped supply the railway in 1883 as it was built through the northern reaches of Algoma (Douglas, 1996: 17-18). The railway helped create new settlements through Algoma in the form of work camps which later became lumber camps to support the growing lumber industry.

The discovery of gold and other minerals in northern Algoma at the end of the 19th and beginning of the 20th centuries saw increased settlement northward with the new town of Wawa becoming a major settlement based around gold discoveries in 1897 (Douglas, 1996: 18-19). The growth of mining and lumber in Algoma prompted Francis Clergue to build a new railway line connecting Lake Superior to Hudson Bay to exploit the development of natural resources in northern Ontario. The Algoma Central Railway was incorporated in 1899, and construction began in Sault Ste. Marie and Wawa running in a north-south direction (Nock, 1975: 31-32). While plans to extend the line all the way to Hudson Bay, it never reached that far and ended in Hearst, with settlements growing along the railway line including Hawk Junction, Dubreuilville, Coppell and Jogues. The CN Railway constructed their transcontinental line further north in 1915, creating more logging and other settlements further north (Douglas, 1996: 21). Mining fortunes wavered after the initial gold and iron ore rush but was stabilized in the 1930s and 1940s by Sir James Dunn who developed a strong link between iron ore in Wawa and the blast furnaces in Sault Ste. Marie (Douglas, 1996: 55-67). In 1960, Wawa and Sault Ste. Marie were connected via Highway 17, while Highway 101 also connected Wawa to the City of Timmins, helping to boost tourism to the area as part of the Trans-Canada Highway system (Municipality of Wawa, 2021).

4.3.4.6 District of Timiskaming

The District of Timiskaming was created in 1912, formed from the Districts of Algoma, Nipissing, and Sudbury to accommodate a growing economic and population boom in the early 20th century (Government of Ontario, 2025)[2]. The region is north of the Sudbury District and is named after Lake Timiskaming, which is in both Ontario and Quebec.

In 1613, Étienne Brûlé, a French interpreter, colonialist explorer, and merchant, traveled through the Lake Temiskaming region. Following his visit, thousands of colonialist explorers and traders travelled through the area (Lake Temiskaming Tour, 2026). Fort-Témiscamingue was a strategic location during the fur trade era, as it was a halfway point between Montreal and James Bay and functioning as an important trading post for more than 200 years (Lake Temiskaming Tour, 2026).

In the 1830s and 1840s, the first missionary Oblates and Sulpicians arrived in the area (Bray, 2006). During the same period, lumbermen acquired the cutting rights along the eastern shore of Lake Timiskaming in the Kipawa region (Bray, 2006). By the 1870s, the lumbermen had moved northward and crossed the lake to the western shore (Bray, 2006). In the 1880s, permanent settlements emerged around the lake on both the Ontario and the Quebec sides, due to the efforts of missionary colonizers (Bray, 2006).

The first commercial steamer on the lake arrived in 1882, and by 1900, fourteen steamers were in operation (Bray, 2006). The District of Timiskaming in Ontario was served by two railways, first was the branch line railway owned and operated by the Canadian Pacific Railway, the Temiskaming Colonization

[2] *The District of Timiskaming was originally spelled "Temiskaming" before revised to its current spelling.*

Railway, which ran northward in Quebec from Mattawa, and reached Temiskaming in 1894 and Ville-Marie in 1925 (Bray, 2006). The second railway was the Temiskaming and Northern Ontario Railway (T&NO), owned and operated by the Ontario Government (Middleton, 1927). This section of the railway was built in 1902 (Lake Temiskaming Tour, 2026; Bray, 2014). By 1905, the T&NO had reached New Liskeard, and three years later had connected with the National Transcontinental Railway at Cochrane (Bray, 2006).

The T&NO resulted in the establishment of a host of silver and gold mining towns along the railway as the discovery of these precious metals occurred during construction (Bray, 2006). The larger region included a rich mining area, including Cobalt, Porcupine, and Kirkland Lake, and extends over the height of land to Hudson Bay (Middleton, 1927). The 1903 silver rush in Cobalt and the arrival of the railroad allowed the development of Northern Ontario to take a firm hold (Lake Temiskaming Tour, 2026).

With the construction of additional railways and highways between North Bay and Mattawa in the 1920s, Lake Timiskaming declined as a commercial transportation route after World War I, instead becoming important for tourism and recreational purposes (Bray, 2006).

4.3.4.7 Geographic Townships

As noted**,** above, the various districts of Ontario are organized into townships, with over 200 townships across the province. While some historic townships have been amalgamated into municipalities and regional municipalities, particularly in southern Ontario, the northern part remains primarily divided into unorganized townships within the aforementioned districts. The PSA passes through the following geographic townships of the Algoma, Sudbury, Timiskaming, and Cochrane Districts:

- Biggs,
- Borden,
- Bristol,
- Caouette,
- Carscallen,
- Carty,
- Chapleau,
- Chewett,
- Cosens,
- Crockett,
- Deloro,
- Denton,
- Evans,
- Foleyet,
- Gallagher,
- Gamey,
- Gilliland,
- Hellyer,
- Hoey,
- Ivanhoe,
- Keefer,
- Keith,
- Lackner,
- Lastheels,
- Maness,
- McGee,
- McNaught,
- Michano,
- Miskokomon,
- Mountjoy,
- Muskego,
- Nebonaionquet
- Ogden,
- Pawis,
- Peters,
- Pinogami,
- Price,
- Quill,
- Recollet,
- Reeves,
- Sandy,
- Sewell,
- Silk, and
- Tisdale.

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5. Results and Next Steps

5.1 Project Study Area

Based on data collection including a review of municipal heritage registers, the Hydro One *Class EA for Transmission Facilities* (2024), stakeholder engagement, a field review conducted by qualified person, a review of Ontario architectural styles[2], professional knowledge/experience and using the MCM *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes: A Checklist for the Non-Specialist* (2022), **Table 2** summarizes and describes the known and potential BHRs and CHLs within the PSA. The property descriptions are based on information that was obtained during the field review from the road allowance, and the municipal heritage register. **Table 2** below provides a summary table. The known and potential BHRs and CHLs are mapped on **Figure 2**.

The following explanatory notes provide additional clarification on the information contained in **Table 2**:

- Each property has been assigned a feature identification number, which includes either a BHR or CHL;
- Known or potential BHRs and CHLs were identified by their property boundaries and municipal addresses where applicable; and
- Heritage recognition refers to existing cultural heritage recognition that may be conferred to a property, such as municipal designation under the OHA, listing on a municipal heritage register, cultural heritage easement or PHP/PHPPS.

The CHLs and BHRs identified using the desktop and field review are listed below in **Table 2** with a feature identification, the address and name (if applicable), the existing heritage recognition, and location of each resource within the PSA. In addition, a full description of each property is provided in **Table 2** where the table also provides a design/physical description, historical description, and contextual description of each property with photographs along with the potential CHVI and potential heritage attributes of each property. In addition to the screening process mentioned above, each BHR and CHL in **Table 2** underwent a preliminary heritage evaluation using O. Reg. 9/06 and 10/06 to assess potential CHVI under the OHA. Note, the properties with buildings or structures 40 years old or more evaluated at a preliminary level not to have CHVI were not included in **Table 2**. Due to the location of the structures on several properties being set back from the ROW and surrounded by trees, not all the properties have photographs of their structures. Descriptions of the structures as seen from aerial imagery is provided but does not always provide a clear identification of the type of structures or their architectural style. The location of each identified BHR and CHL have been noted in **Table 2** as either being within the ROW, in the 60 m buffer for the Cultural Heritage Vibration Study Area, or within the 120 m buffer for the PSA.

[2] *To identify architectural styles, sources were consulted including Ontario Architecture: A Guide to Styles and Building Terms, 1784 to Present (1990) by Blumenson, Ontario House Styles: The Distinctive Architecture of the Provinces 18th and 19th Century Homes (2004) by Robert Mikel, and www.OntarioArchitecture.com, as well as professional expertise, a review of the existing conditions and the municipal heritage registers.*

5.1.1 BHRs and CHLs with Known or Potential CHVI – Wawa Timmins Power Line Route Alternatives

Table 2 below contains all known or potential BHRs and CHLs identified for the CHEC. All identified BHRs and CHLs were evaluated at a preliminary level using O. Reg. 9/06 and O. Reg. 10/06 to have potential CHVI.

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Table 2: Summary of BHRs and CHLs Evaluated to have Potential CHVI within the PSA

Feature IDs	Location/ Address	Resource Type/Name	Heritage Recognition	Description	Photograph	Potential CHVI	Potential Heritage Attributes	Route Segment Easement
CHL 1	Algoma Central Railway, District of Algoma	Railway	None (potential)	**Design Description:** The Algoma Central Railway runs in a general north-south direction. The entire railway runs from the City of Sault Ste. Marie in the south to the Town of Hearst in the north. The railway is a single-track running north-south through the PSA. **Historical Description:** The Algoma Central Railway was chartered in 1899 and merged with the Ontario, Hudson Bay and Western Railway in 1901, becoming the Algoma Central and Hudson Bay Railway. The railway is visible on the 1973 NTS map of Michipicoten Harbour Ontario (**Figure 3-1**). **Contextual Description:** The Algoma Central Railway travels through natural landscapes in the PSA. It primarily follows an existing hydro corridor from the south to the Wawa TS and north out of the Wawa TS.	 View of the Algoma Central Railway within the PSA, AECOM, July 2025	The Algoma Central Railway potentially meets the following criteria of O. Reg. 9/06: ▪ Criteria 3: Potential design value in the engineering to construct the railway through the Precambrian Canadian Shield; ▪ Criteria 4: Potential historic value in its association with industry in northern Ontario; and ▪ Criteria 7: Potential contextual value in contributing to the character of the area.	▪ Railway line dating from late 19th and early 20th century traveling through natural landscapes of northern Ontario as an important and historic transportation route.	The Algoma Central Railway is within the ROW of: ▪ Route Segment A1 ▪ Route Segment A2
BHR 1	Kamp Kinniwabi, Highway 101, District of Algoma	Camp-ground	None (potential)	**Design Description:** Kamp Kinniwabi is a recreational campground consisting of four one-storey log cabin structures and one frame structure on Highway 101. All structures have gable roofs clad in sheet metal. Three log cabins are constructed with vertical wood logs, and one is constructed with horizontal wood logs. The frame building has vertical wood boards and a covered porch over the front façade. The frame building appears to be the main structure on the campground while the log cabins are sleeping quarters. Outbuildings are located around the campground with all structures connected by a gravel laneway. **Historical Description:** Kamp Kinniwabi appears on the 1976 NTS map of Kinniwabi Lake Ontario (**Figure 3-1**).	 View of the frame building, and three log cabins, AECOM, July 2025	Kamp Kinniwabi potentially meets the following criteria of O. Reg. 9/06: ▪ Criteria 1: Potential physical value in the representative log cabins and campground; and ▪ Criteria 7: Potential contextual value supporting the character of the area as a campground in a natural environment.	▪ Four one-storey log cabins with gable roofs ▪ Campground landscape as part of the natural environment of northern Ontario ▪ Scenic views of the Precambrian Canadian Shield	Kamp Kinniwabi is within the ROW of: ▪ Route Segment A1

Feature IDs	Location/ Address	Resource Type/Name	Heritage Recognition	Description	Photograph	Potential CHVI	Potential Heritage Attributes	Route Segment Easement
				Contextual Description: Kamp Kinniwabi is built off Highway 101, in the Kinniwabi River valley and is surrounded by steep valley walls covered in forests and natural landscapes. An unnamed road or trail travels east out of the campgrounds, providing access to the interior landscape of the Precambrian Canadian Shield.	 View of three log cabins on the property, AECOM, July 2025			
CHL 2	The Shoals Provincial Park, District of Sudbury	Provincial Park	None (potential)	**Design Description:** The Shoals Provincial Park is 10,644 hectares of natural landscapes straddling Highway 101 that consists of post-glacial landscapes and wetlands. It is a non-operating park with no staff onsite, but it has several campgrounds, as well as a boat launch onto Prairie Bee Lake. Within Shoals Provincial Park, on the side of Highway 101 under an existing transmission corridor, are five memorial crosses. The crosses are constructed of wood, with one bearing the text “SON FATHER” and another with the text “BROTHER UNCLE”. Solar lights have been attached to the crosses. This memorial was erected between 2009 and 2022 based on Google Street View images. **Historical Description:** The Shoals Provincial Park is visible on the 1968 NTS map of Nicholson Ontario (**Figure 3-3**). The park was previously used in the logging industry from the early 1900s to the 1930s with old logging roads, camps, and flumes still exist in the park, as well as the now abandoned mill town of Nicholson is on its border. **Contextual Description:** The Shoals Provincial Park is located in the Precambrian Canadian Shield and	 Entrance sign to park, AECOM, July 2025  Memorial Crosses, AECOM, July 2025	The Shoals Provincial Park potentially meets the following criteria of O. Reg. 9/06: ▪ Criteria 1: Potential physical value as a representative example of forests and natural landscape of the Provincial Park and post-logging environment; ▪ Criteria 7: Potential contextual value in supporting the character of the area in the logging infrastructure found throughout the park contributing to the landscape and ▪ Criteria 9: The memorial along Highway 101 in Shoals Provincial Park has potential contextual value as a landmark.	▪ Natrual landscapes of nothern Ontario forests in Provincial Parks and post-logging activities ▪ Wooden memorial crosses ▪ Logging infrastructure including: roads, camps, and flumes	The Shoals Provincial Park is within the ROW of: ▪ Route Segment A1 ▪ Route Segment A2

Feature IDs	Location/ Address	Resource Type/Name	Heritage Recognition	Description	Photograph	Potential CHVI	Potential Heritage Attributes	Route Segment Easement
				was created as part of the conservation of northern lakes and forests. The park has hiking trails and allows for observation of flora and fauna as well as scenic views of the northern Ontario landscape. The historic logging infrastructure of roads, camps, and flumes contribute to the contextual value of the park. The memorial located along Highway 101 potentially serve as a landmark within the park.				
CHL 3	CP Railway, District of Sudbury	Railway	None (potential)	**Design Description:** The CP Railway runs in a general north-south direction. The railway is part of the transcontinental railway of CP Railway with this line running between the depot in the City of Sudbury in the south to the City of Thunder Bay in the north. The railway is a single-track running north-south through the PSA. **Historical Description:** The CP Railway formed in 1881 and completed its transcontinental railway across Canada in 1885. Construction on the Lake Superior route between Sudbury and Thunder Bay took place in the 1880s. The railway is visible on the 1968 NTS map of Chapleau Ontario (**Figure 3-4**). **Contextual Description:** The CP Railway travels through natural landscapes in the PSA. It travels parallel to Highway 101.	 Candian Pacific Railway running parallel to Highway 101 in the PSA, AECOM, July 2025	The CP Railway potentially meets the following criteria of O. Reg. 9/06: ▪ Criteria 3: Potential design value in the engineering to construct the railway through the Precambrian Canadian Shield; ▪ Criteria 4: Potential historic value in its association with industry in northern Ontario; and ▪ Criteria 7: Potential contextual value in contributing to the character of the area.	▪ Railway line dating from late 19th century traveling through natural landscapes of northern Ontario as an important and historic transportation route.	The CP Railway is within the ROW of: ▪ Route Segment B1 ▪ Route Segment B2 ▪ Route Segment B3

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Feature IDs	Location/ Address	Resource Type/Name	Heritage Recognition	Description	Photograph	Potential CHVI	Potential Heritage Attributes	Route Segment Easement
CHL 4	Ivanhoe River, District of Sudbury	River	None (potential)	**Design Description:** The Ivanhoe River flows in a general northeastern trajectory, joining the Groundhog River and later the Mattagami River and Moose River to flow into James Bay. The Ivanhoe River flows into Ivanhoe Lake and continues in two outlets known as the Old Channel and the New Channel. A dam is located on the New Channel, regulating waterflow. The New Channel connects to the Old Channel north of the Village of Foylet. The Ivanhoe Lake Provincial Park is located along the south and eastern shore of Ivanhoe Lake and the southern end of Ivanhoe River where a sandy shoal beach is located. **Historical Description:** The Ivanhoe River and Lake are associated with Indigenous communities and European fur trading as a transportation route from James Bay. **Contextual Description:** The Ivanhoe River flows through natural landscapes. Several hydroelectric dams are located on the river with the largest on the New Channel from Ivanhoe Lake. Ivanhoe Lake is home to a sandy beach which has attracted camping sites in the provincial park. The river is a natural landmark in northern Ontario.	 View of the Old Channel from Highway 101, north of the PSA, AECOM, July 2025	The Ivanhoe River potentially meets the following criteria of O. Reg. 9/06: ▪ Criteria 1: Potential physical value as a representative example of the natural landscape of northern Ontario; ▪ Criteria 4: Potential historical value as due to its associations with Indigenous communities as well as its association with the fur trade; and ▪ Criteria 9: Potential contextual value as a natural landmark in northern Ontario.	▪ Historical and archaeological associations with Indigenous history and the history of the fur trade ▪ Landmark river in northern Ontario	The Ivanhoe River's Old and New Channels is within the ROW of: ▪ Route Segment B1 ▪ Route Segment B3 The Ivanhoe River (south of Ivanhoe Lake) is within the ROW of: ▪ Route Segment B2
CHL 5	CN Railway, District of Sudbury	Railway	None (potential)	**Design Description:** The CN Railway runs in a general north-south direction. The railway is part of the transcontinental railway system run by the CN Railway. This line of the railway runs from the City of Sudbury in the south to the City of Winnipeg in the northwest. The railway is a single track. **Historical Description:** The railway was originally constructed by the Canadian northern Railway in 1911 as part of a line from Sudbury to Thunder Bay. It was taken over by the CN Railway in 1923 when it absorbed the	 View of the CN Railway from Highway 101, north of the PSA, AECOM, July 2025	The CN Railway potentially meets the following criteria of O. Reg. 9/06: ▪ Criteria 3: Potential design value in the engineering to construct the railway through the Precambrian Canadian Shield; ▪ Criteria 4: Potential historic value in its association with industry in northern Ontario; and ▪ Criteria 7: Potential contextual value in contributing to the character of the area.	▪ Railway line dating from early 20th century traveling through natural landscapes of northern Ontario as an important and historic transportation route.	The CN Railway is within the ROW of: ▪ Route Segment B1 ▪ Route Segment B2 ▪ Route Segment B3

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Feature IDs	Location/ Address	Resource Type/Name	Heritage Recognition	Description	Photograph	Potential CHVI	Potential Heritage Attributes	Route Segment Easement
				Canadian Northern Railway. The railway is visible on the 1979 NTS map of Foleyet Ontario (**Figure 3-11**) **Contextual Description:** The CN Railway travels through natural landscapes in the PSA as it cuts through northern Ontario.				
CHL 6	Groundhog River, District of Sudbury	River	None (potential)	**Design Description:** The Groundhog River flows in a general north-south direction with its headwaters on Horwood Lake. It flows into the Mattagami River, which then flows into the Moose River and into Hudson Bay. The Groundhog River Waterway Provincial Park is located on both sides of the riverbanks. The park is in two sections, the southern section from the headwaters of Horwood Lake to Ten Mile Rapids, and the northern section from Tongue Island to the Mattagami River. The river has natural landscapes along its banks with various old-growth forests and fish including sturgeon and brook trout. **Historical Description:** The Groundhog River has been used by Indigenous communities for hunting, fishing, and transportation through the region. The river was also used as part of the fur trade and was harvested by settlers for resources including lumber and fish during construction of transcontinental railway lines. **Contextual Description:** The Groundhog River flows through natural landscapes. The provincial park along the river provides opportunities for fishing and canoeing along the river. Flying Post 73 Indigenous Reserve is located on the east bank of the river north of the PSA. The river is a natural landmark in northern Ontario.	 View of the Groundhog River and Highway 101 bridge over the river, north of the PSA, AECOM, July 2025  View of the Groundhog River north of Highway 101, AECOM, July 2025	The Groundhog River potentially meets the following criteria of O. Reg. 9/06: ▪ Criteria 1: Potential physical value as a representative example of the natural landscape of northern Ontario; ▪ Criteria 4: Potential historical value as due to its associations with Indigenous communities as well as its association with the fur trade; and ▪ Criteria 9: Potential contextual value as a natural landmark in northern Ontario.	▪ Historical and archaeological associations with Indigenous history and the history of the fur trade ▪ Landmark river in northern Ontario	The Groundhog River is within the ROW of: ▪ Route Segment C1 ▪ Route Segment C2

Feature IDs	Location/ Address	Resource Type/Name	Heritage Recognition	Description	Photograph	Potential CHVI	Potential Heritage Attributes	Route Segment Easement
BHR 2	5310 Highway 101, City of Timmins	Wakenagun Youth Healing Lodge	None (potential)	**Design Description:** The building at 5310 Highway 101 is a one-and-a-half-storey frame structure with a gable roof and clad in vertical wood boards. The building has a central entrance with central gable in the Modernist style with large windows and a staircase leading from the ground to entrance on the second storey. The rear of the building has a projecting wing with gable roof in the centre of the elevation. The windows are picture or casement windows in vinyl frames. The roof is clad in asphalt shingles. **Historical Description:** The building at 5310 Highway 101 was original constructed on a lumber yard, seen in the 1979 NTS map of Timmins Ontario (**Figure 3-16**). The building was later converted into its present use. **Contextual Description:** 5310 Highway 101 is located southwest of the City of Timmins, on the site of a former lumberyard. A parking lot is located west of the building with the remains of the lumberyard located north of the property which includes the concrete foundations of buildings of the lumberyard. These buildings have since been demolished leaving. Another former lumberyard is located on the south side of Highway 101, across from 5310 Highway 101, which has also been demolished with the concrete foundations left.	 AECOM, July 2025	5310 Highway 101, the Wakenagun Youth Healing Lodge, potentially meets the following criteria from O. Reg. 9/06: ▪ Criteria 4: Potential associative value with Indigenous communities as a site for healing and cultural value.	▪ One-and-a-half storey frame structure with vertical wood board siding, a central entrance with gable and picture windows in a Modernist style.	5310 Highway 101 is within the Cultural Heritage Vibration Study Area-60m of : ▪ Route Segment C1

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Feature IDs	Location/ Address	Resource Type/Name	Heritage Recognition	Description	Photograph	Potential CHVI	Potential Heritage Attributes	Route Segment Easement
CHL 7	Mattagami River, City of Timmins	River	None (potential)	**Design Description:** The Mattagami River flows in a general north-south direction with its headwaters on Mattagami Lake. It meets with the Missinaibi River to form the Moose River which flows in James Bay and Hudson Bay. The Mattagami River flows through Kenogamissi Lake, as well as through the City of Timmins which was founded on its banks. The river flows primarily through natural landscapes, with urban and suburban landscapes located in the City of Timmins. South of the City of Timmins, the river also flows through mining and lumber landscapes where the forests have been cut and replanted as part of the forestry and mining industry of the region. North of the City of Timmins are agricultural landscapes along the river. The Upper Mattagami River is part of the Mattagami Region Conservation Authority, which includes the City of Timmins and regulates waterflow and the natural heritage of the river. **Historical Description:** The Mattagami River has served as an important trade and transportation route for thousands of years by Indigenous and settler communities. The river was used during the fur trade to provide access from the interior to James Bay and Moose Factory, a major Hudson Bay Company trading post. The Mattagami First Nation signed Treaty 9 in 1906 and were settled on the north shore of Mattagami Lake. The City of Timmins was founded on the river during the Porcupine Gold Rush to facilitate mining operations in the area. **Contextual Description:** The Mattagami River is primarily covered with natural landscapes including forests along its banks. As it flows through the City of Timmins, suburban, urban, and agricultural	 View of the Mattagami River and Highway 101 in the City of Timmins, north of the PSA, AECOM, July 2025	The Mattagami River potentially meets the following criteria of O. Reg. 9/06: ▪ Criteria 1: Potential physical value as a representative example of the natural landscape of northern Ontario; ▪ Criteria 4: Potential historical value as due to its associations with Indigenous communities as well as its association with the fur trade; and ▪ Criteria 9: Potential contextual value as a natural landmark in northern Ontario.	▪ Historical and archaeological associations with Indigenous history and the history of the fur trade ▪ Landmark river in northern Ontario	The Mattagami River is within the ROW of: ▪ Route Segment C1 ▪ Route Segment C2

Feature IDs	Location/ Address	Resource Type/Name	Heritage Recognition	Description	Photograph	Potential CHVI	Potential Heritage Attributes	Route Segment Easement
				landscapes are present. The Mattagami First Nation Reserve No. 71 is located south of the PSA on the river and north shore of Mattagami Lake. The river is a natural landmark through the City of Timmins and northern Ontario.				

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5.2 Summary of Results- Preferred Route Alternative Analysis

Based on the findings of **Table 2**, the CHEC has found the following number of BHRs and CHLs:

- Route Segment A1: One (1) BHR and two (2) CHLs
- Route Segment A2: Two (2) CHLs
- Route Segment B1: Three (3) CHLs
- Route Segment B2: Three (3) CHLs
- Route Segment B3: Three (3) CHLs
- Route Segment C1: One (1) BHR and two (2) CHLs
- Route Segment C2: Two (2) CHLs

To evaluate the preferred route alternative from a cultural heritage perspective, each route segment has been ranked as “Most Preferred”, “Preferred”, “Less Preferred”, or “Least Preferred” based on the total number of BHRs and CHLs that were documented to have potential CHVI and may be impacted by the Project in **Table 3**. Note, this document will provide Hydro One the technical details to support the creation of the weighted criteria and scoring of each route alternative.

After completing this CHEC, which evaluated the existing conditions of the Route Segments, from a cultural heritage perspective the preferred route alternative would include Route Segment A2; any of the Route Segments B1, B2, B3; and Route Segment C2. This configuration would ensure the lowest number of BHRs and CHLs to be potentially directly and/or indirectly impacted by the Project with seven (7) BHRs or CHLs (see **Table 3**). Within the route segments, a total of nine (9) known or potential BHRs and CHLs have been identified as potentially being directly and/or indirectly impacted by the Project.

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Table 3: Cultural Heritage Preferred Route Alternative Evaluation

Measure	Route Segment A1	Route Segment A2	Route Segment B1	Route Segment B2	Route Segment B3	Route Segment C1	Route Segment C2
Number of known or potential BHRs or CHLs within Project ROW (75 m width)	3	2	3	3	3	2	2
Number of known or potential BHRs or CHLs within Cultural Heritage Vibration Study Area (60 m buffer) or PSA (120 m buffer)	0	0	0	0	0	1	0
Total potentially impacted BHRs/CHLs	3	2	3	3	3	3	2
Result of the Preferred Route Alternative Analysis	Less Preferred	Most Preferred	Preferred	Preferred	Preferred	Less Preferred	Most Preferred

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5.3 Next Steps

Based on the Hydro One's I&E Process; the next steps should follow the outlined methodology:

1. Hydro One will confirm and select the preferred route alternative for the Project.

2. AECOM will complete the PIA based on the preferred route alternative.
   - Conduct a PIA to assess the direct or indirect impacts on BHRs and CHLs identified in the CHEC that are anticipated to be impacted by the preferred route alternative;
   - The PIA shall provide recommendations for avoidance and mitigation measures, including a summary table of impacts and proposed mitigation; and
   - Following this assessment, the PIA recommends next steps for each BHR or CHL located within the preferred route alternative which may include, mitigation measures, further heritage studies [Cultural Heritage Evaluation Reports (CHERs)], or that no additional action is required.

3. If required, CHERs will be completed.
   - If the PIA identifies that certain BHRs and CHLs are to be directly adversely impacted by the preferred route alternative, site-specific CHERs will be conducted; and
   - A CHER will evaluate the CHVI of the identified properties based on O. Reg. 9/06 and 10/06.

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Appendix A: Mapping

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Anjigami Lake
Odawbi Lake
Kinniwabi River
CHL 1
Canadian National
Canadian National
Canadian National
A1
A2
101
Perry Creek
Byron Lake
Frost Lake
Perry Lake
Lac de Zajac
Whitefish Lake
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Basemaps provided by: Vantor, Esri, CGIAR, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

LEGEND

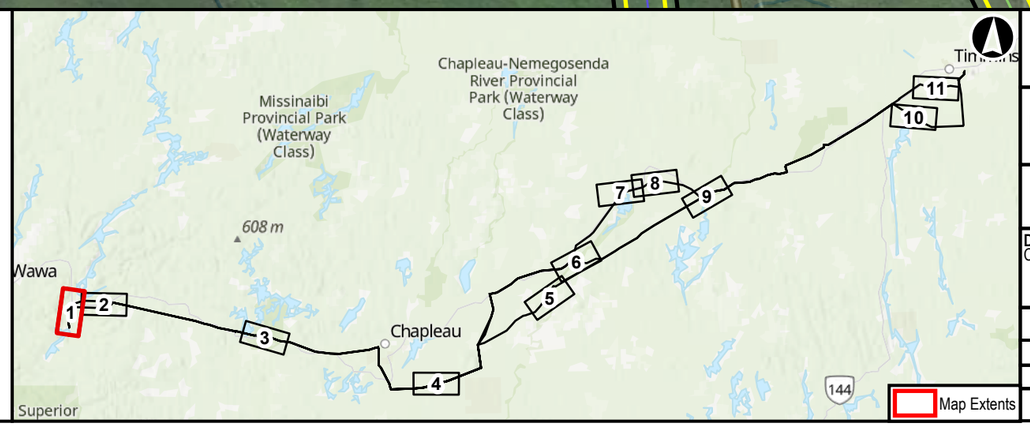
- Project Study Area Buffer - 120m
- Cultural Heritage Vibration Study Area - 60m

Cultural Heritage Designation

- None (Potential)

Route Name

- A1
- A2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Map of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Project Study Area

0 500 1,000 2,000 m

NAD 1983 UTM Zone 17N

Data Sources:
Contains Information licensed under the Open Government License Ontario.

Jan, 2026	
P:60752729	
Rev:00	
1:30,000	

AECOM

Figure: 2-1

Project Location: L:\GIS\GISProjects\60752729_WawaEndProspect\Design\01_Reports\CulturalHeritage\WawaEndProspect_CHExistingConditions_CHWawaEndProspect.aprx Layout: CHEC-F02-HeritageConstraints
Date Saved: 1/16/2026 1:00 PM User: MarinoS

Whitefish Lake

Kinniwabi River

A1

BHR 1

101

A2

Zola Lake

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Basemaps provided by: Vantor, Esri, CGIAR, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Kinniwabi Lake

LEGEND

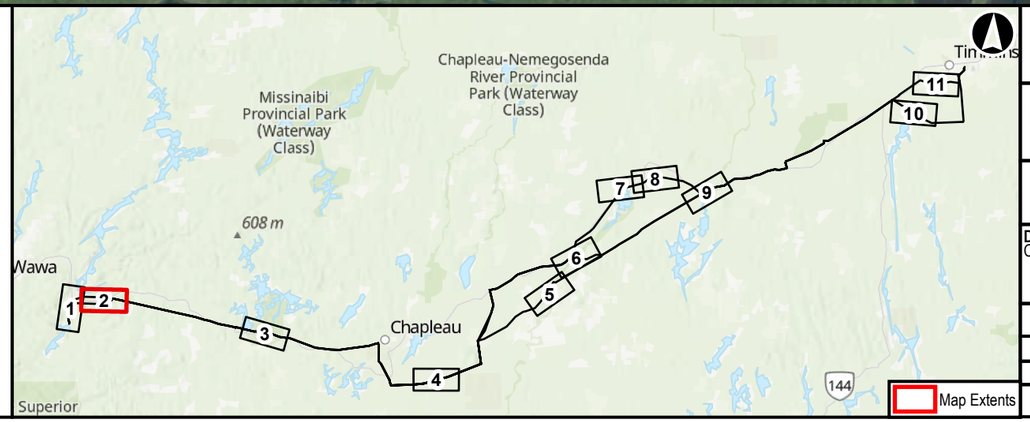
- Project Study Area Buffer - 120m
- Cultural Heritage Vibration Study Area - 60m

Cultural Heritage Designation

- None (Potential)

Route Name

- A1
- A2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Map of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Project Study Area

0 500 1,000 2,000 m

NAD 1983 UTM Zone 17N

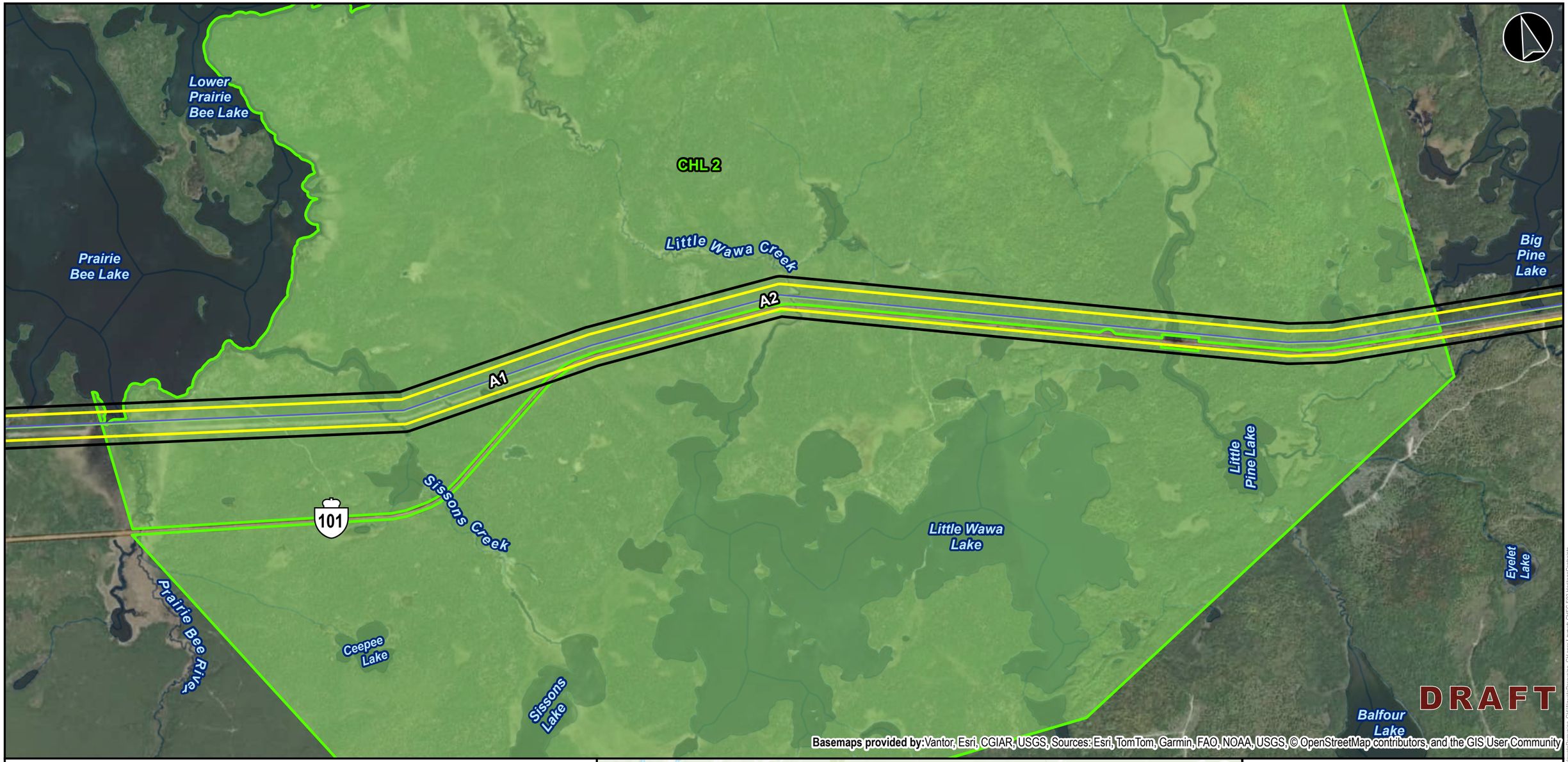
Data Sources:
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P:60752729	
Rev:00	
1:30,000	

AECOM

Figure: 2-2

Project Location: L:\DCS\Sites\projects\60752729_WawatoPrincipline_Design\1_Reports\CulturalHeritage\WawatoPrincipline_CH\WawatoPrincipline_CH.aprx Layout: CHEC-F102-HeritageContraints
Date Saved: 1/16/2026 1:00 PM User: MarinoS



LEGEND

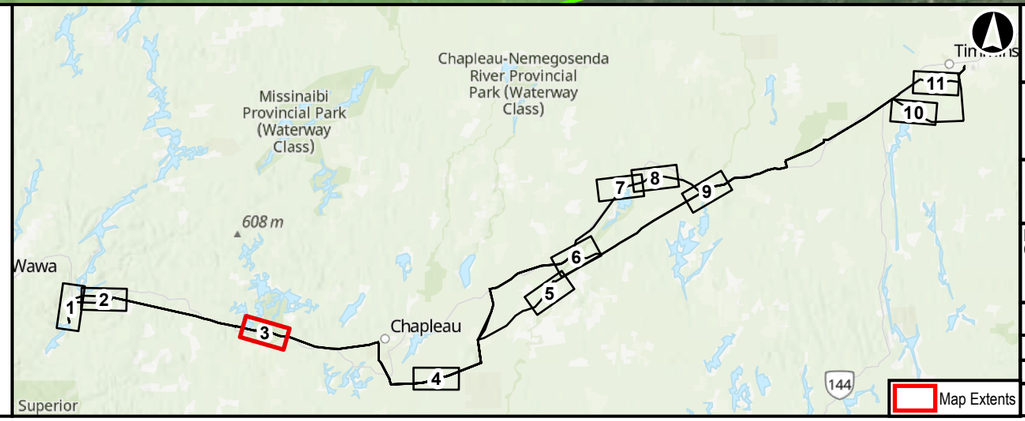
- Project Study Area Buffer - 120m
- Cultural Heritage Vibration Study Area - 60m

Cultural Heritage Designation

- None (Potential)

Route Name

- A1
- A2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Map of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Project Study Area

0 500 1,000 2,000 m

NAD 1983 UTM Zone 17N

Data Sources:
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1:30,000	

AECOM

Figure: 2-3

Project Location: L:\GIS\GIS\Projects\60752729_WawatoPinopolePowerline\Design\01_Reports\CulturalHeritage\WawatoPinopoline_CH\mxd\Pinopoline_CH1.mxd Layout: CHEC-F102-HeritageConstraints
Date Saved: 1/16/2026 1:00 PM User: MartinoS

May Lake
Canadian Pacific
Poulin Creek
CHL 3
B3
B1
B2
Canadian Pacific
Nemegosenda River (rivière Nemegosenda)
Halsey Lake
DRAFT
Basemaps provided by: Vantor, Esri, CGIAR, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

LEGEND

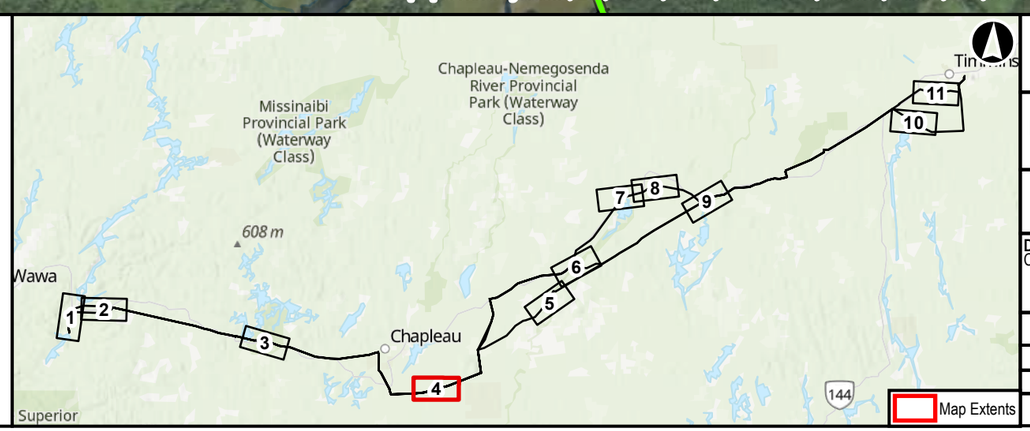
- Project Study Area Buffer - 120m
- Cultural Heritage Vibration Study Area - 60m

Cultural Heritage Designation

- None (Potential)

Route Name

- B1
- B2
- B3



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Map of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Project Study Area

0 500 1,000 2,000 m

NAD 1983 UTM Zone 17N

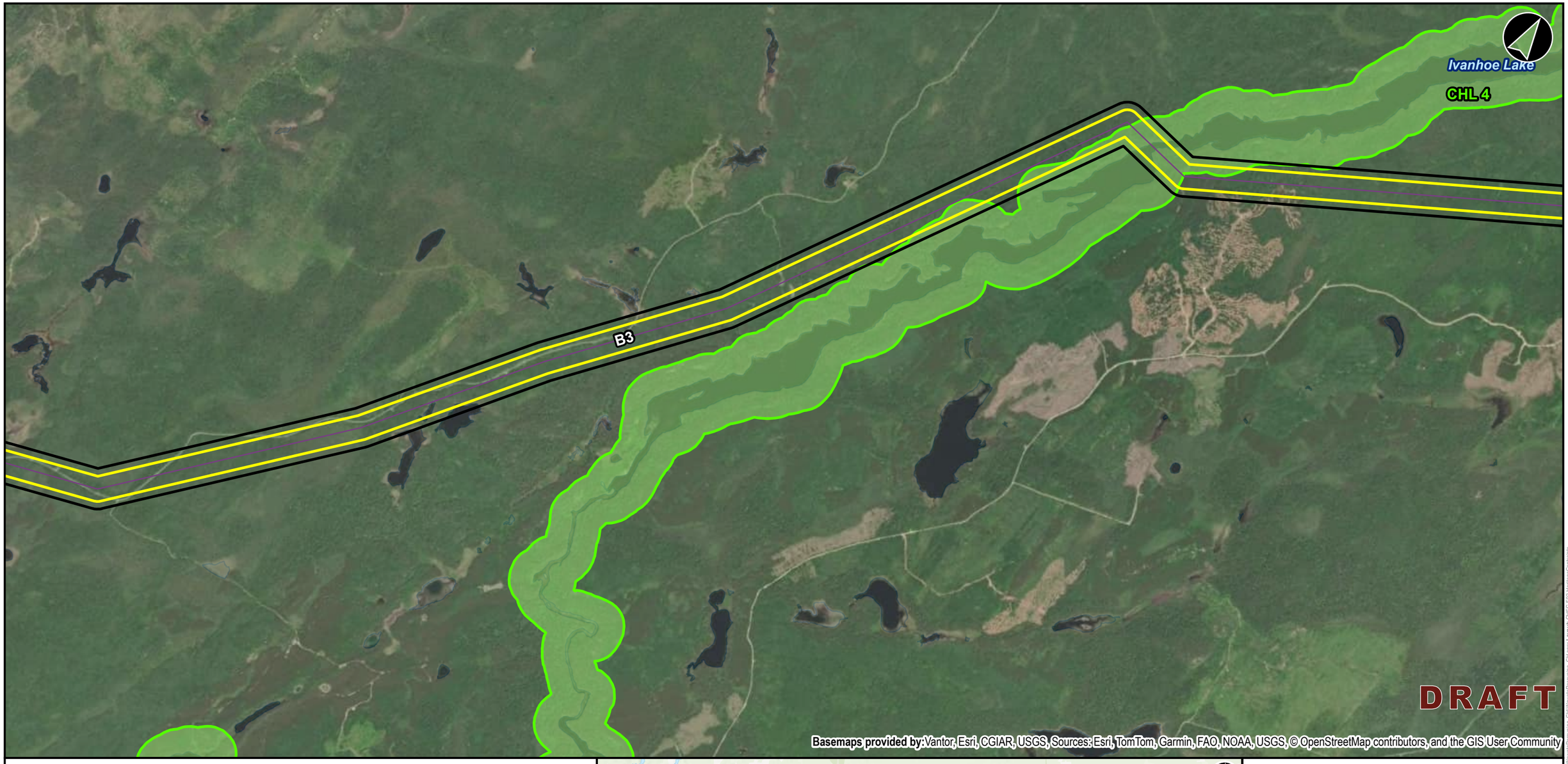
Data Sources:
Contains Information licensed under the Open Government License Ontario.

Jan, 2026
P:60752729
Rev:00
1:30,000

AECOM

Figure: 2-4

Project Location: \\CS\SBS\Projects\60752729_WawaPhosporinDesign\01_Report\Data\arcgis\WawaPhosporin_CH\Wawa\Phosporin_CH.aprx Layout: CHEC-F02-HeritageConstraints
Date Saved: 1/16/2026 1:00 PM User: MarinoS



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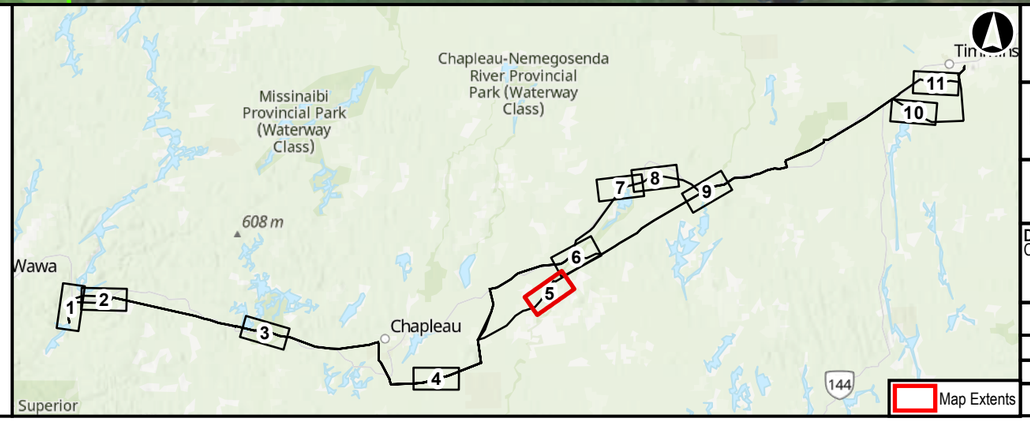
- Project Study Area Buffer - 120m
- Cultural Heritage Vibration Study Area - 60m

Cultural Heritage Designation

- None (Potential)

Route Name

- B3



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Map of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Project Study Area

0 500 1,000 2,000 m

NAD 1983 UTM Zone 17N

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P:60752729	
Rev:00	
1:30,000	

AECOM

Figure: 2-5

Project Location: L:\CS\GIS\Projects\60729729_WawaMinsPerceptionDesign\01_Reports\CulturalHeritage\WawaMinsPerceptionDesign_CHR\WawaMinsPerceptionDesign_CHR.aprx Layout: CHEC-F102-HeritageContraints
Date Saved: 1/16/2026 1:00 PM User: MarkoS

Birch Lake
Jackpine Creek
Ivanhoe Lake
101
B1
B2
CHL 4
DRAFT

Basemaps provided by: Vantor, Esri, CGIAR, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

LEGEND

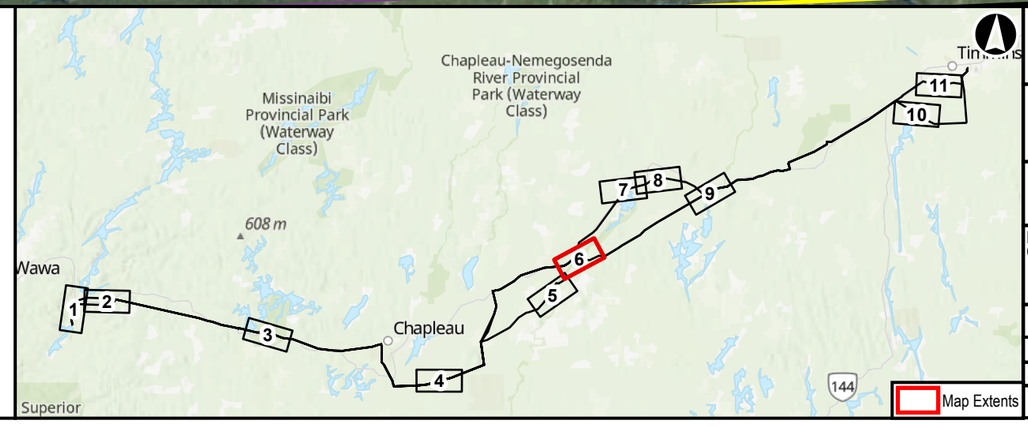
- Project Study Area Buffer - 120m
- Cultural Heritage Vibration Study Area - 60m

Cultural Heritage Designation

- None (Potential)

Route Name

- B1
- B2
- B3



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Map of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Project Study Area

0 500 1,000 2,000 m

NAD 1983 UTM Zone 17N

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Jan, 2026	AECOM
P:60752729	Figure: 2-6
Rev:00	
1:30,000	

Project Location: L:\DCS\SHP\projects\60752729_WawaBoreposPrograms\Design\01_Reports\CulturalHeritage\WawaBorepoPrograms_CH.aprx Layout: CHEC-F102-HeritageConstraints
Date Saved: 1/16/2026 1:00 PM User: MarinoS

Wakagami Lake
Sloans Lake
Libby Lake
B1
101
Ivanhoe Lake
CHL 4
DRAFT
Basemaps provided by: Vantor, Esri, CGIAR, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

LEGEND

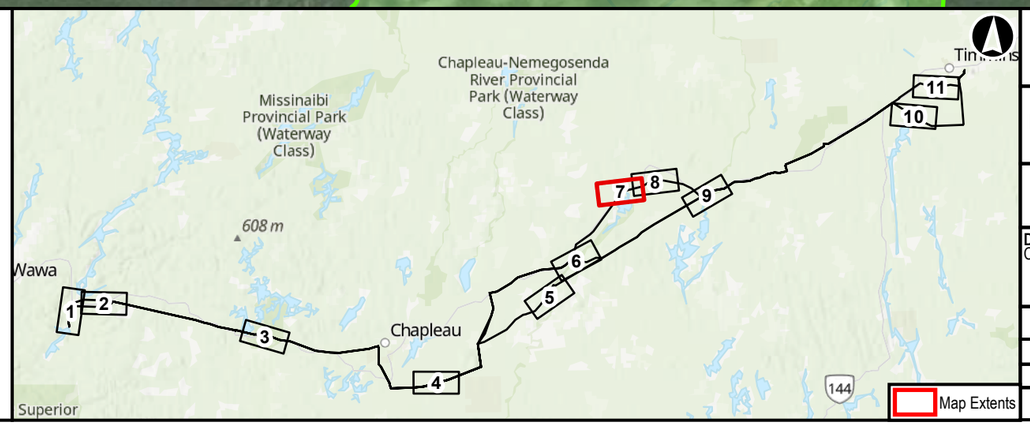
- Project Study Area Buffer - 120m
- Cultural Heritage Vibration Study Area - 60m

Cultural Heritage Designation

- None (Potential)

Route Name

- B1



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Map of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Project Study Area

0 500 1,000 2,000 m

NAD 1983 UTM Zone 17N

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P:60752729	
Rev:00	
1:30,000	

AECOM

Figure: 2-7

Project Location: I:\2025\05\Projects\60752729_WawaIsProvPark\Design\01_Reports\CulturalHeritage\WawaTimmins_CHVibrationStudyArea_CHExistingConditions_CHMapsOfKnownAndPotentialBuiltHeritageResources_CHWawaIsProvPark_CHExistingConditions.aprx Layout: CHEC-F02-HeritageConstraints
Date Saved: 1/16/2026 1:00 PM User: MarinoS

Heart Lake

Moonshine Creek

B1

Canadian National

CHL 5

101

101

Slate Rock Lake

Singed Tree Lake

DRAFT

Basemaps provided by: Vantor, Esri, CGIAR, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

LEGEND

Project Study Area Buffer - 120m

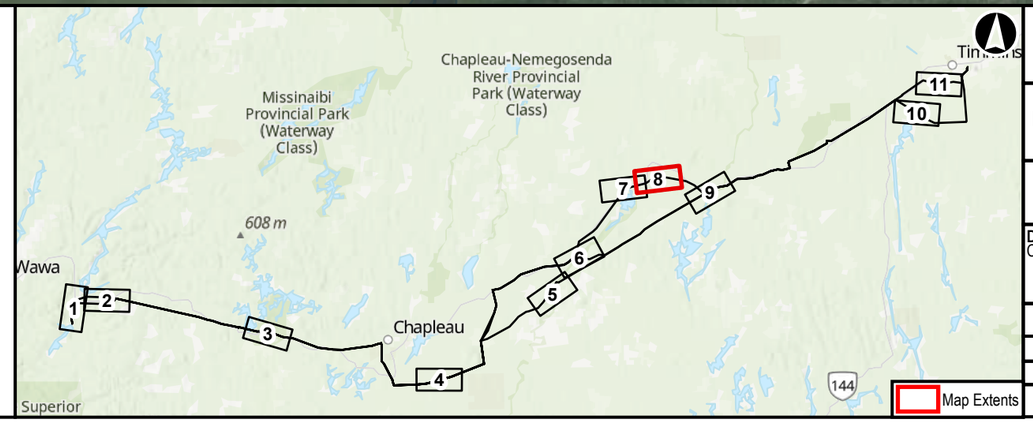
Cultural Heritage Vibration Study Area - 60m

Cultural Heritage Designation

None (Potential)

Route Name

B1



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Map of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Project Study Area

0 500 1,000 2,000 m

NAD 1983 UTM Zone 17N

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P:60752729

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1:30,000

AECOM

Figure: 2-8

Project Location: L:\DCS\Sprojects\60752729_WawatoPinopolne_CH\Wawa\Pinopolne_CH.aprx Layout: CHEC-F102-HeritageContraints
Date Saved: 1/16/2026 1:00 PM User: MarinoS

Keith Lake
Scorch Creek
B1
101
Blackbill Lake
Vimy Creek
B3 B2
CHL 5
Canadian National
C1 C2
CHL 6
Palomar Lake

DRAFT

Basemaps provided by: Vantor, Esri, CGIAR, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

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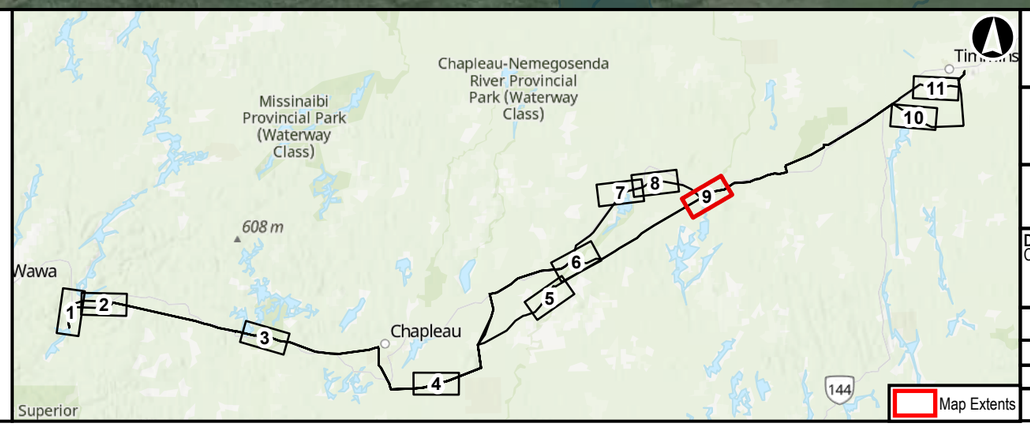
- Project Study Area Buffer - 120m
- Cultural Heritage Vibration Study Area - 60m

Cultural Heritage Designation

- None (Potential)

Route Name

- B1
- B2
- B3
- C1
- C2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Map of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Project Study Area

0 500 1,000 2,000 m

NAD 1983 UTM Zone 17N

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P:60752729	
Rev:00	
1:30,000	

AECOM

Figure: 2-9

Project Location: I:\DCS\GIS\Projects\60752729_WawaTimminsProject\Design\01_Reports\CulturalHeritage\WawaTimminsProjectline_CH\Figure Layout: CHEC-F02-HeritageConstraints
Date Saved: 1/16/2026 1:00 PM User: Marincs

Thunder Creek

Hope Lake

CHL 7

C2

Kenogamissi Lake

DRAFT

Basemaps provided by: Vantor, Esri, CGIAR, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

LEGEND

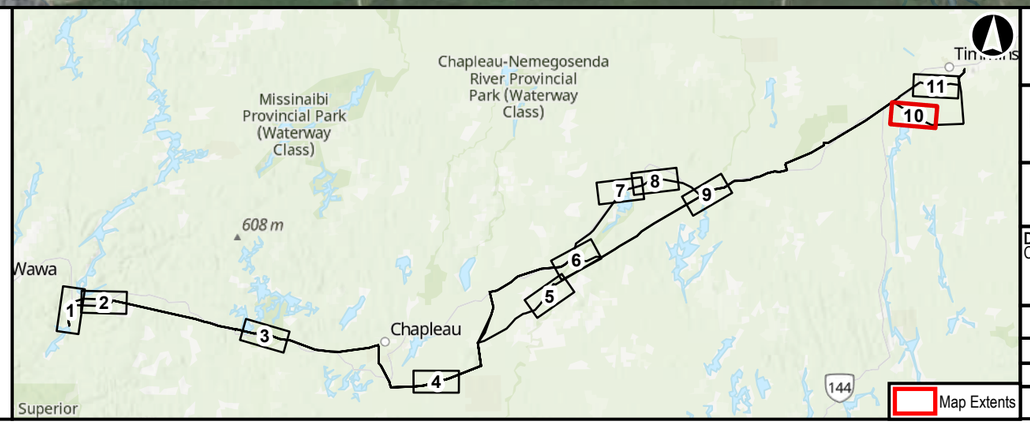
- Project Study Area Buffer - 120m
- Cultural Heritage Vibration Study Area - 60m

Cultural Heritage Designation

- None (Potential)

Route Name

- C1
- C2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Map of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Project Study Area

0 500 1,000 2,000 m

NAD 1983 UTM Zone 17N

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Rev:00	
1:30,000	

AECOM

Figure: 2-10

Project Location: L:\DCS\GIS\Projects\60752729_WawatoProvincialDesign\01_Reports\CulturalHeritage\WawatoTimmins_CH\WawatoProvincial_CH.aprx Layout: CHEC-F102-HeritageConstraints
Date Saved: 1/16/2026 1:00 PM User: MarinoS

A1

A2

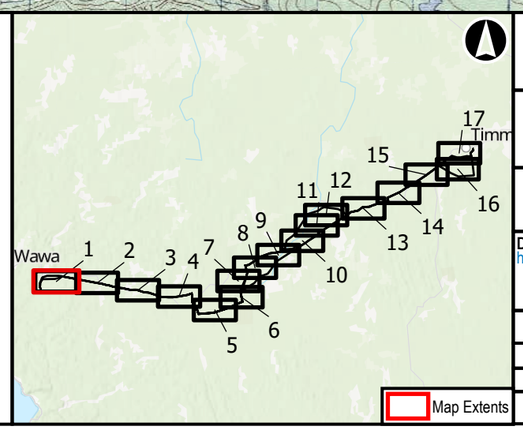
Basemaps provided by:Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

DRAFT

LEGEND

Route Name

- A1
- A2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

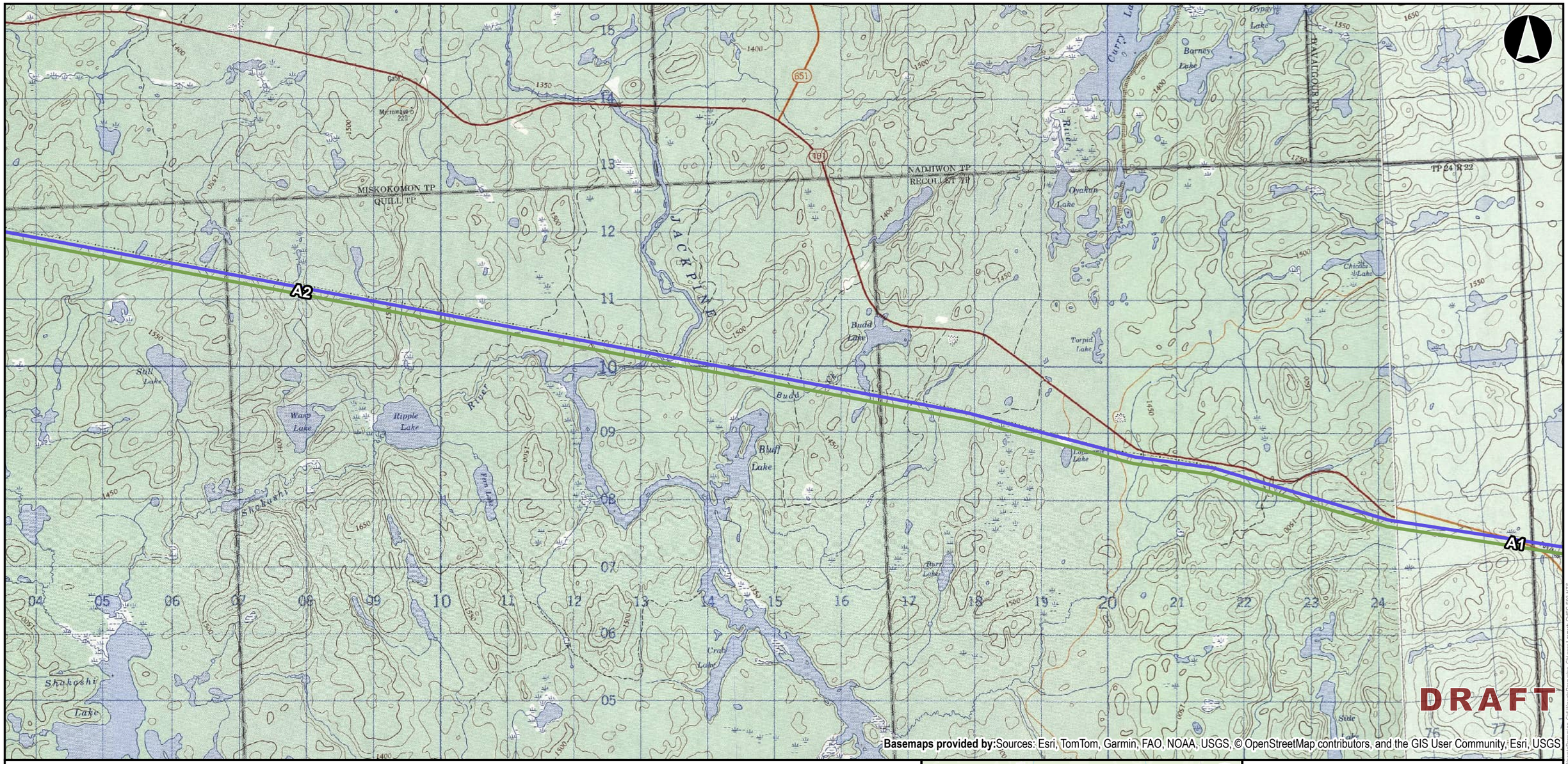
Data Sources:
https://geo2.scholarsportal.info/#/r/details/

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Rev:00	
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AECOM

Figure: 3-1

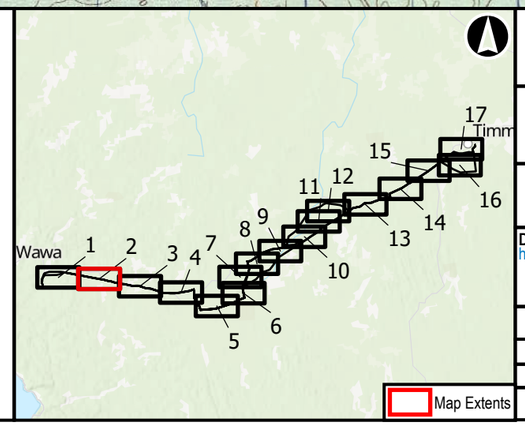
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Date Saved: 1/16/2026 12:09 PM User: MarinoS



LEGEND

Route Name

- A1
- A2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

Data Sources:
https://geo2.scholarsportal.info/#/r/details/

Jan, 2026	
P:60752729	
Rev:00	
1:57,000	

AECOM

Figure: 3-2

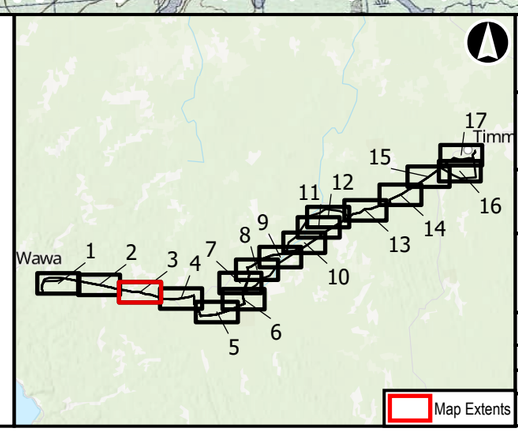
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Date Saved: 1/16/2026 12:09 PM User: MarinoS



LEGEND

Route Name

- A1
- A2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

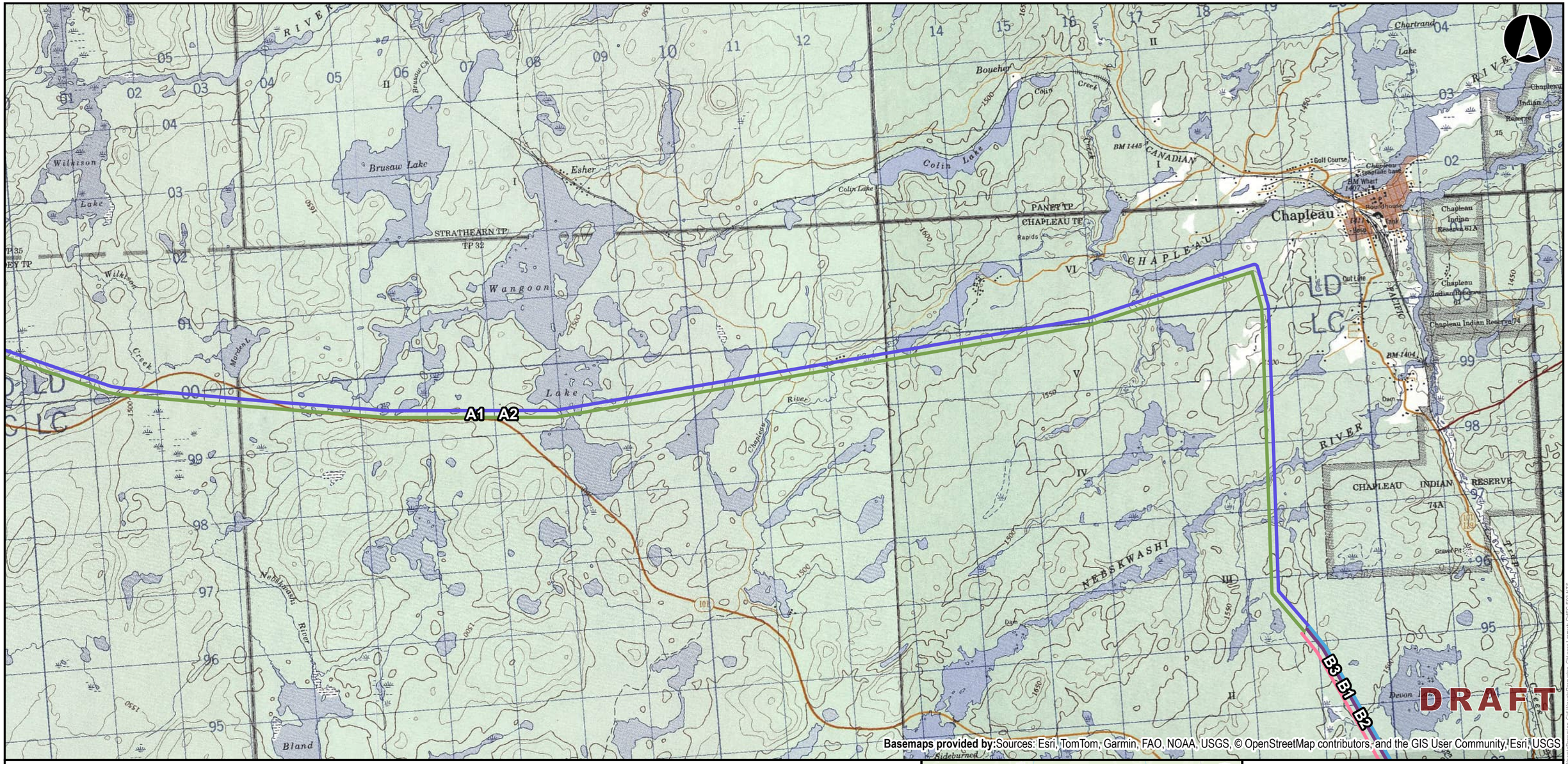
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AECOM

Figure: 3-3

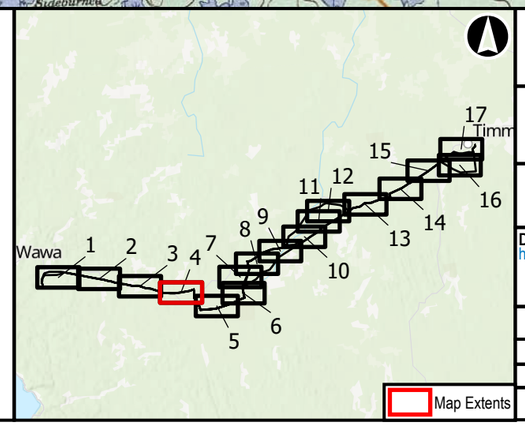
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Date Saved: 1/16/2026 12:09 PM User: MarinoS



LEGEND

Route Name

- A1
- A2
- B1
- B2
- B3



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

Data Sources:
https://geo2.scholarsportal.info/#/r/details/

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P:60752729	
Rev:00	
1:57,000	

AECOM

Figure: 3-4

Project Location: L:\GIS\Projects\60752729_WawaPowerline\Design\01_Report\Cultural\Heritage\WawaPowerline_CH\wawaPowerline_CHLayout.MXD Date Saved: 1/16/2026 12:09 PM User: MarinoS

B1
B2
B3
Devon Lake
Devon
Poulin Lake
Kilpatrick Lake
GALLAGHER TP
TP 28
McNAUGHT TP
HALSEY TP
Poulin
Nemegosenda River
Nemegos
Halsey Lake
Seven Mile Lake
McLennan Lake
Moodie
Pogo Creek
Kelpatrick Creek
Ekehner Creek
Ivanhoe River
Esker
Water Tank
BM 1436
BM 1445
CP
CANADIAN
PACIFIC
LAKE
South Ivanhoe Lake
DRAFT
Basemaps provided by: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

LEGEND

Route Name

- B1
- B2
- B3

Wawa
Timmins
Map Extents

Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

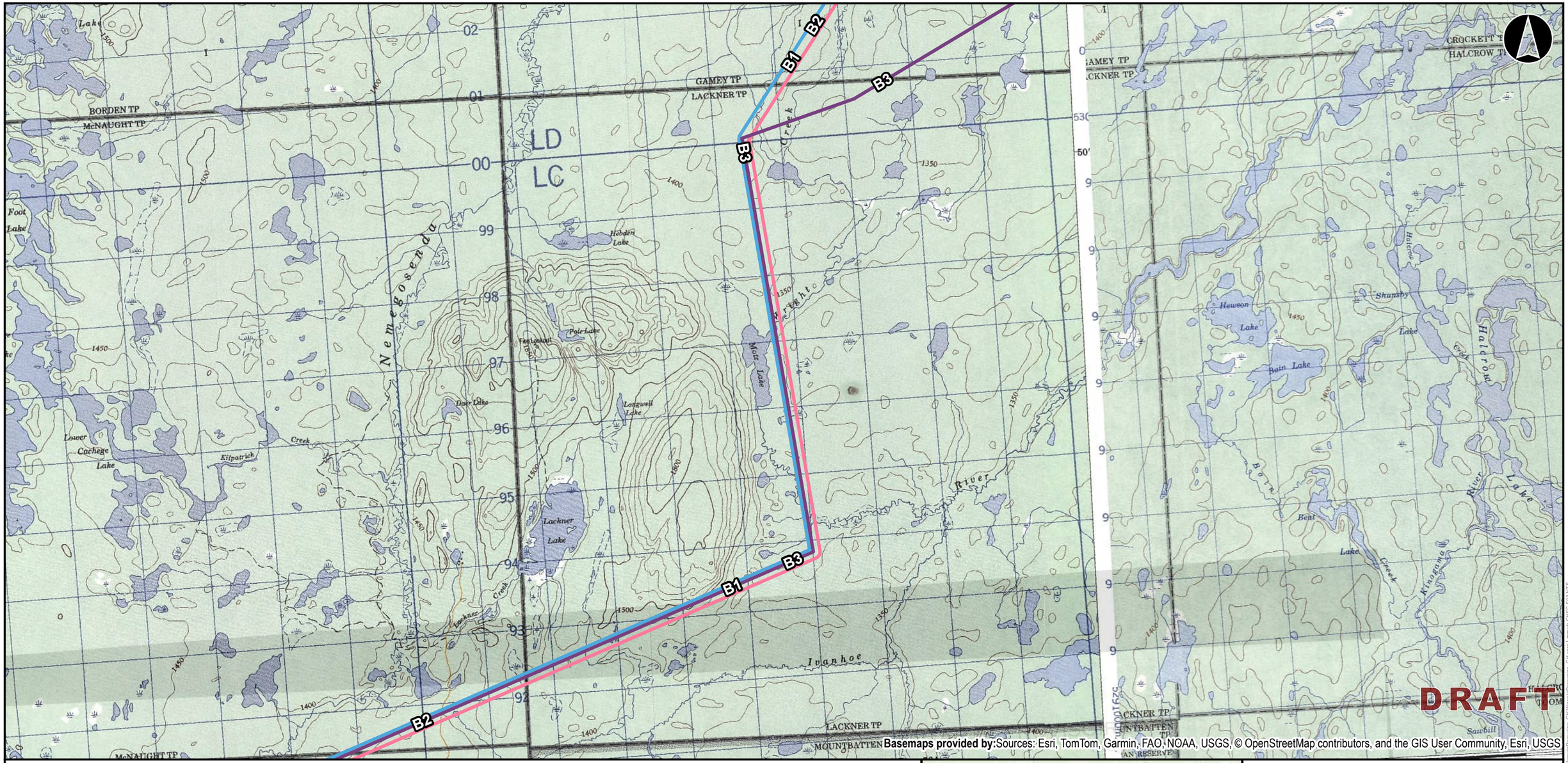
Data Sources:
https://geo2.scholarsportal.info/#/r/details/

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P:60752729
Rev:00
1:57,000

AECOM

Figure: 3-5

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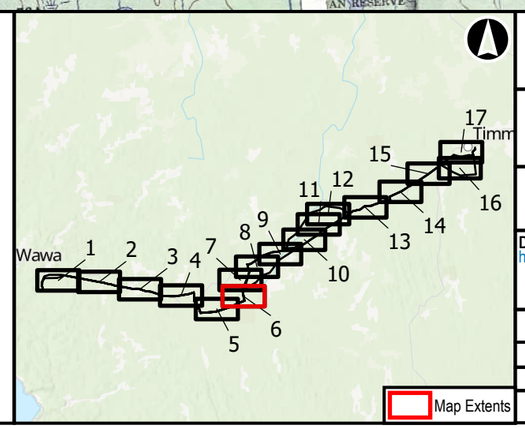


Basemaps provided by: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

LEGEND

Route Name

- B1
- B2
- B3



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

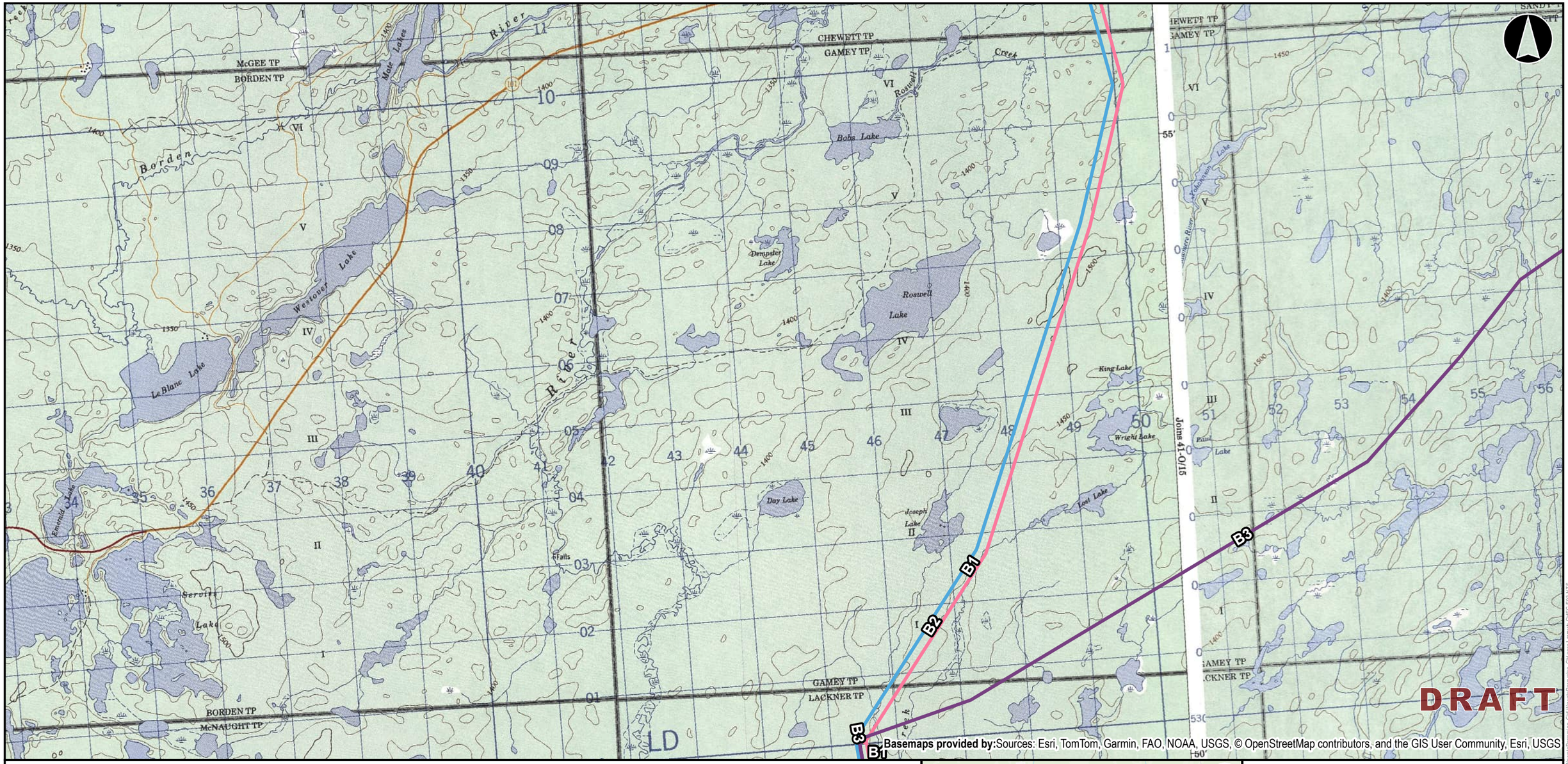
Data Sources: https://geo2.scholarsportal.info/#/r/details/

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AECOM

Figure: 3-6

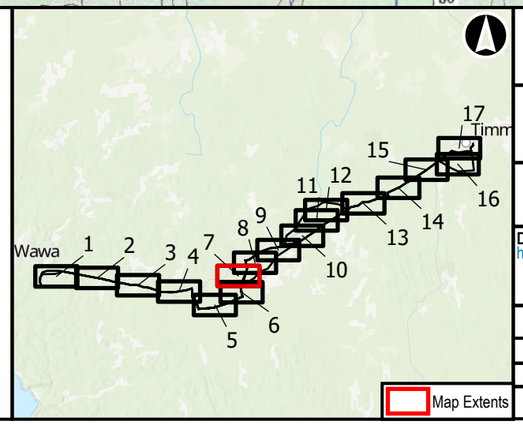
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Date Saved: 1/16/2026 12:09 PM User: MarinoS



LEGEND

Route Name

- B1
- B2
- B3



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

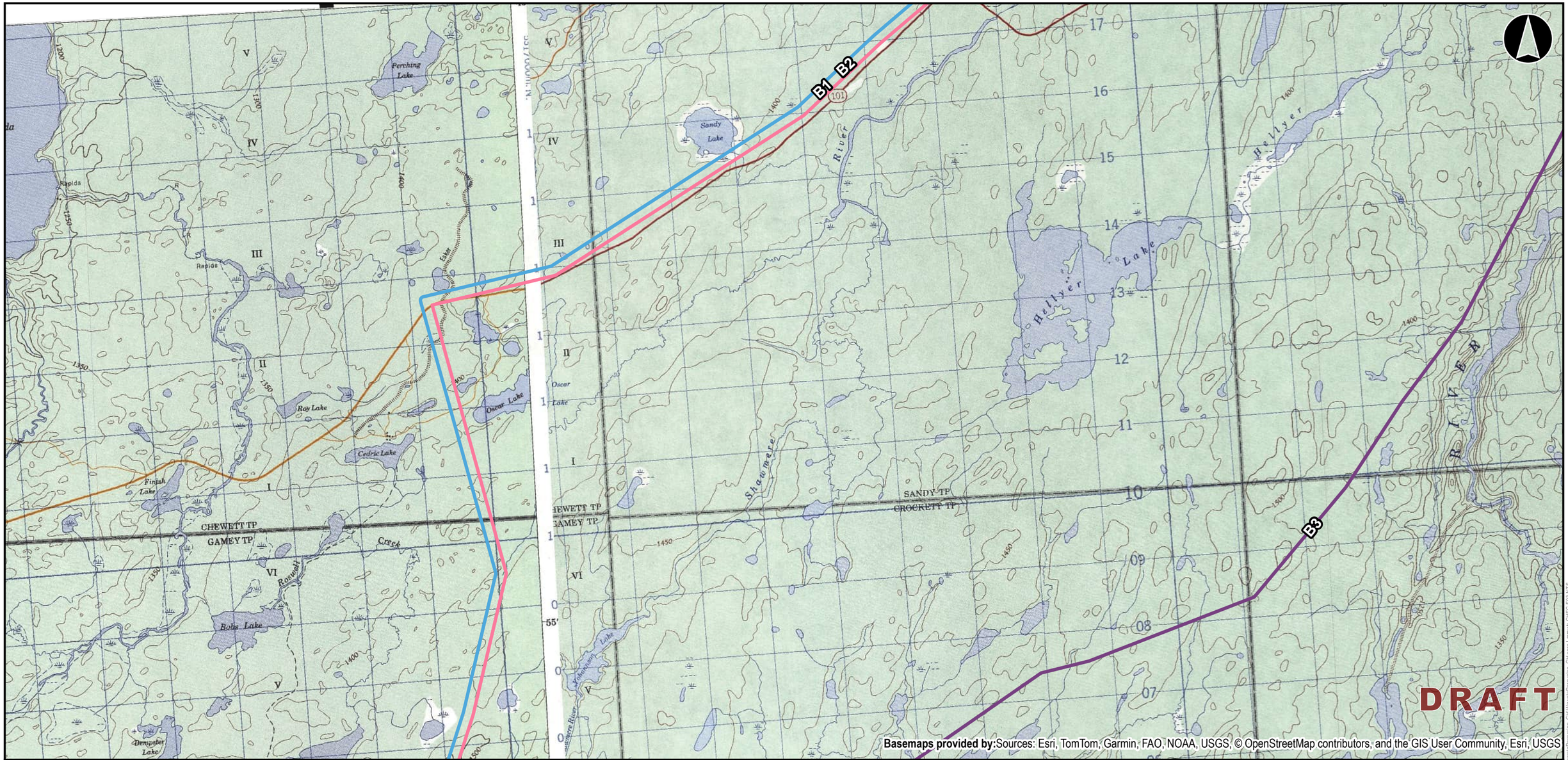
Data Sources:
https://geo2.scholarsportal.info/#/r/details/

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Rev:00	
1:57,000	

AECOM

Figure: 3-7

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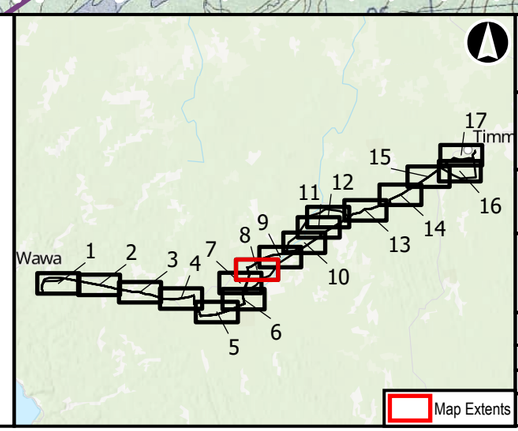


Basemaps provided by:Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

LEGEND

Route Name

- B1
- B2
- B3



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

Data Sources:
https://geo2.scholarsportal.info/#/r/details/

Jan, 2026	
P:60752729	
Rev:00	
1:57,000	

AECOM

Figure: 3-8

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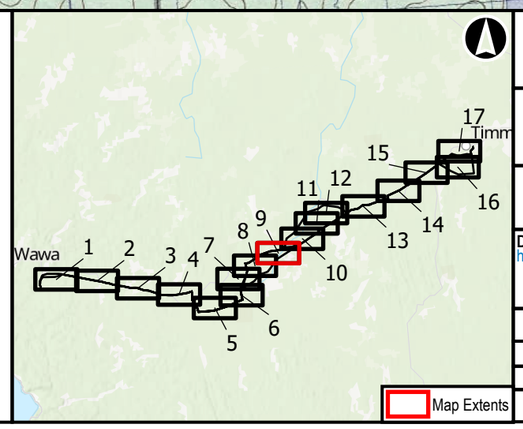
B1
B2
B3
EVANS TP
PINOGAMI TP
BIGGS TP
Birch Lake
Jackpine
Shawmere
Ivanhoe Lake
Helliwell Creek
Biggs Lake
BIGGS LAKE
Fire Lookout
101
1600
1500
1400
1350
1450
1650
1550
1250
DRAFT

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LEGEND

Route Name

- B1
- B2
- B3



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

Data Sources:
https://geo2.scholarsportal.info/#/r/details/

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Figure: 3-9

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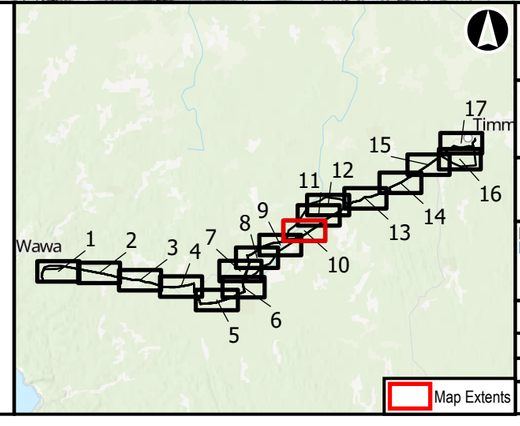
B1
B2
B3
CARTY TP
PINOGAMI TP
IVANHOE TP
SILK TP
LAKE
Tom Smith Lake
Gullystone Lake
Linekar Lake
Norfolk Lake
Birch Lake
Gullystone Creek
Little Dove Creek
Muskeg
DRAFT

Basemaps provided by: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

LEGEND

Route Name

- B1
- B2
- B3



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

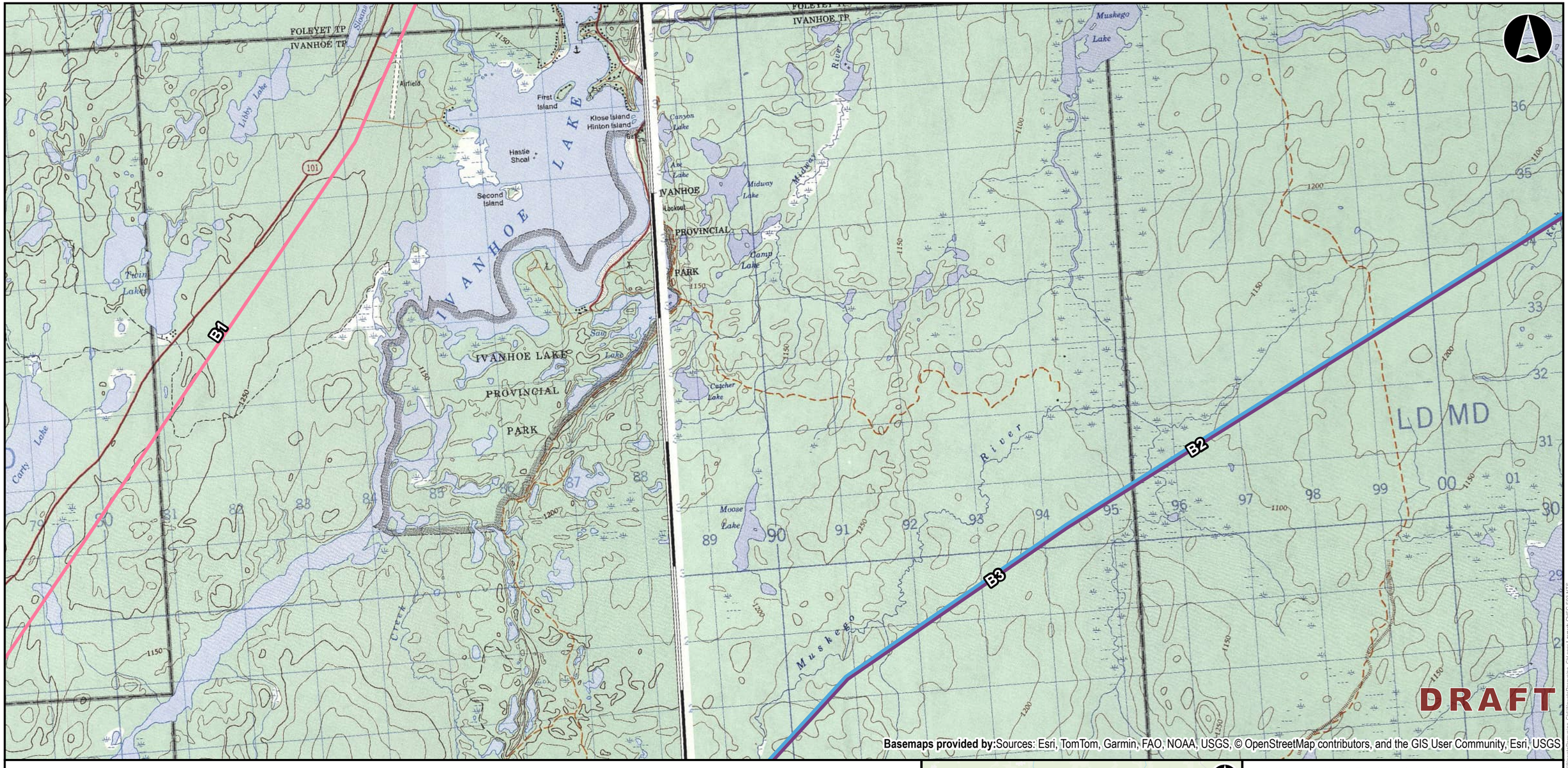
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Figure: 3-10

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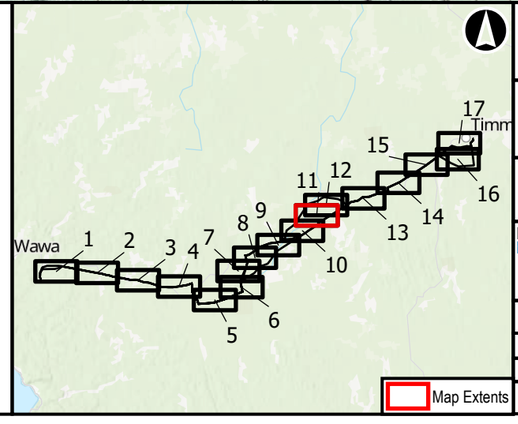


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LEGEND

Route Name

- B1
- B2
- B3



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

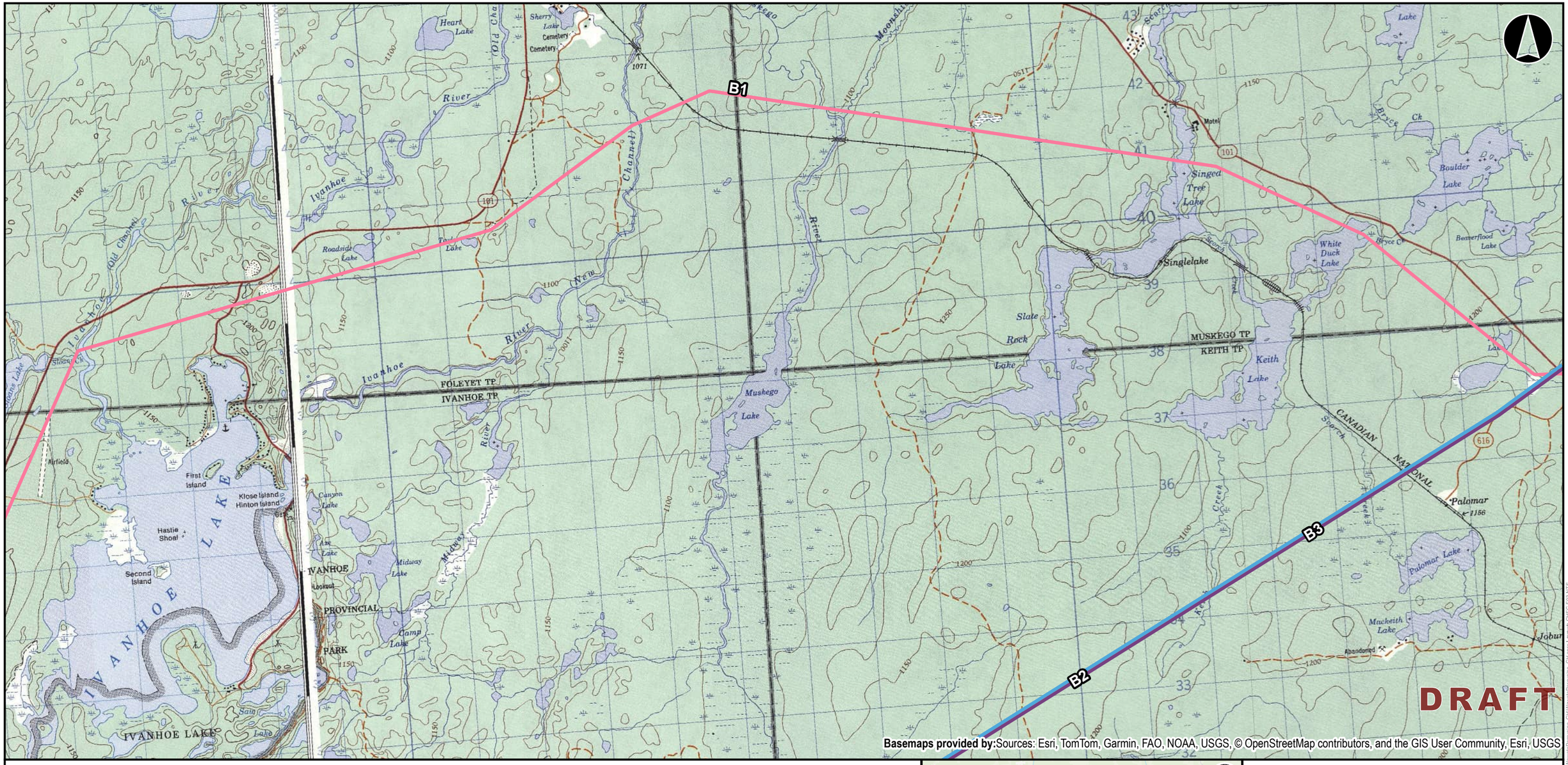
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Figure: 3-11

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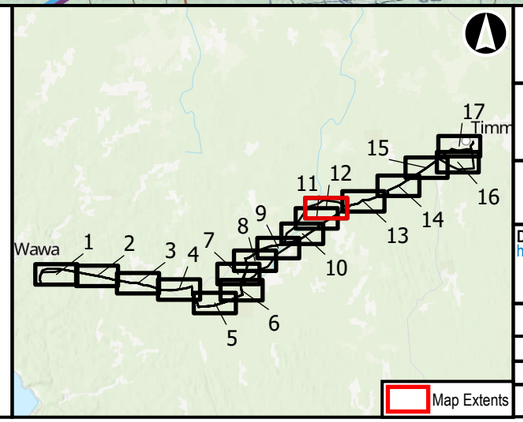


Basemaps provided by:Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

LEGEND

Route Name

- B1
- B2
- B3
- C2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

Data Sources:
https://geo2.scholarsportal.info/#/r/details/

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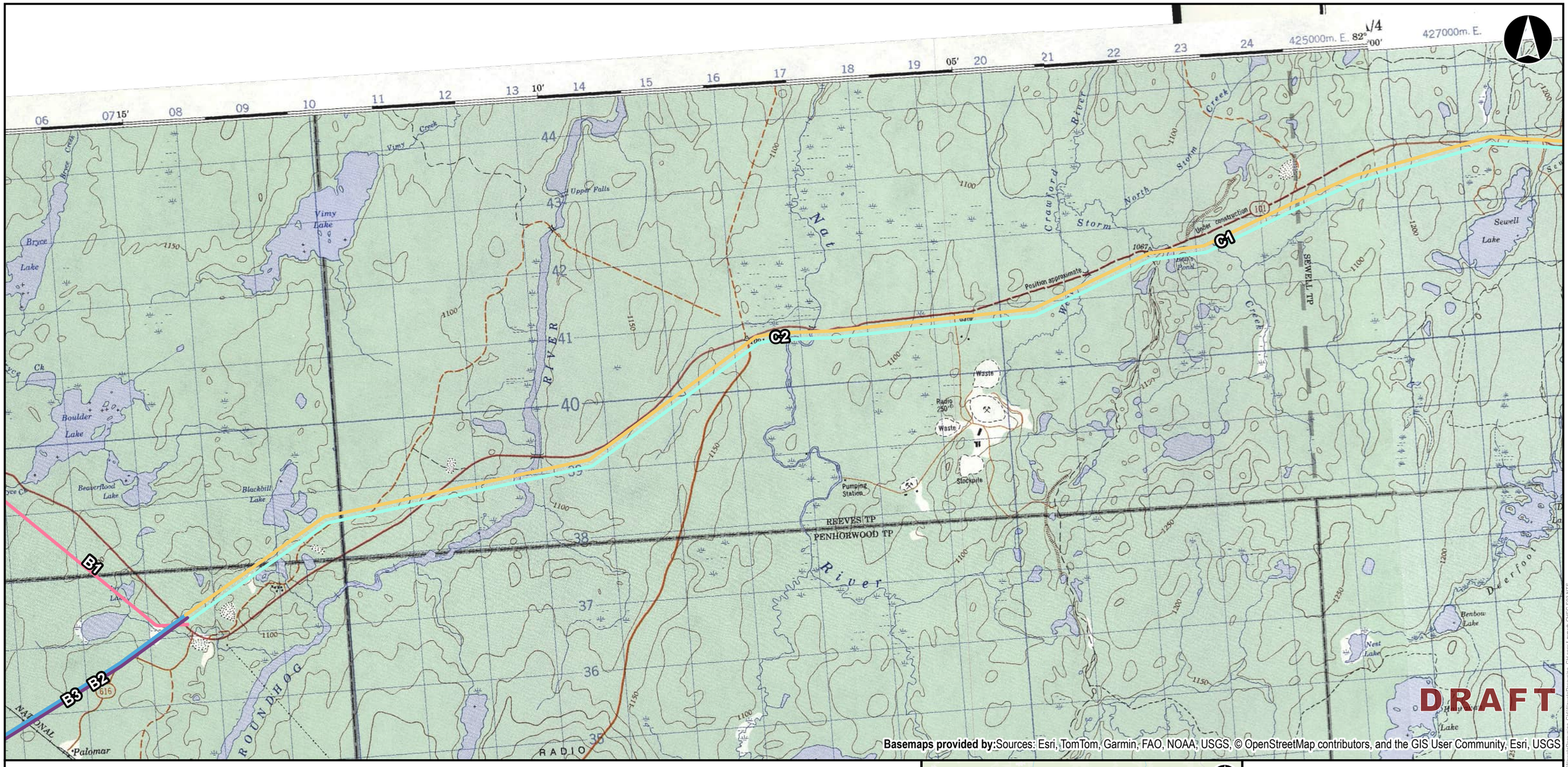
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Figure: 3-12

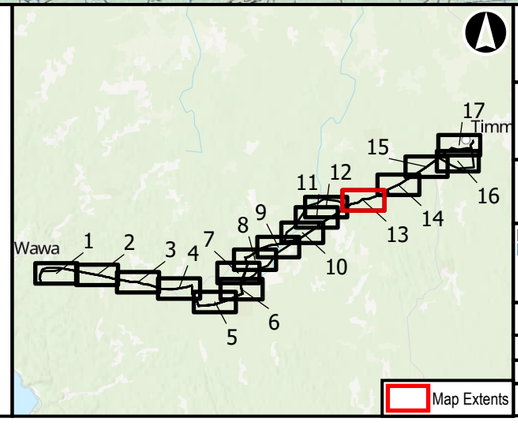
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Date Saved: 1/16/2026 12:09 PM User: MarinoS



LEGEND

Route Name

- B1
- B2
- B3
- C1
- C2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

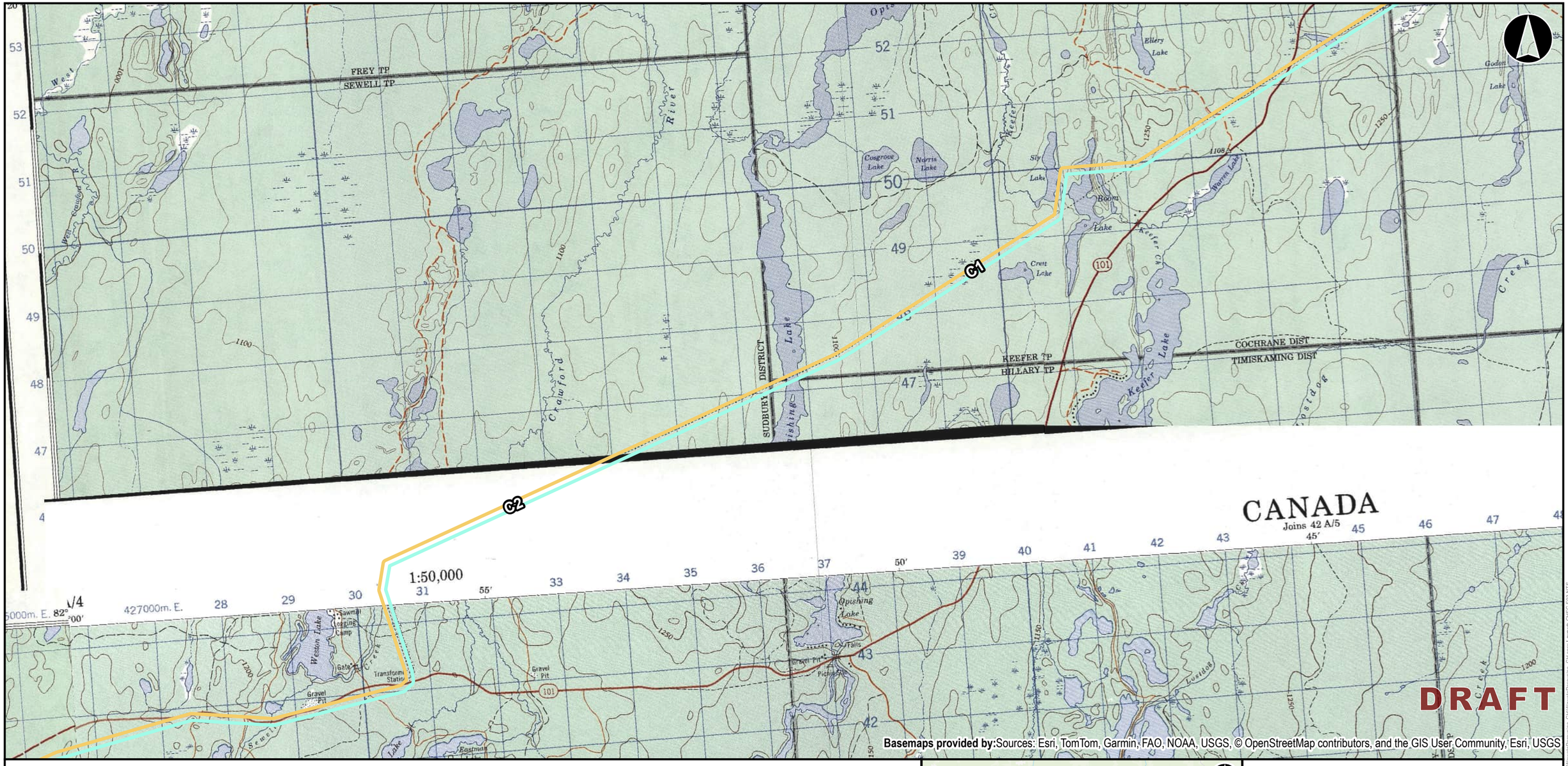
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Figure: 3-13

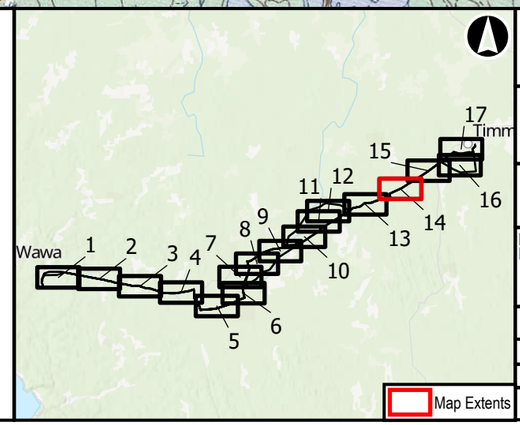
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LEGEND

Route Name

- C1
- C2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

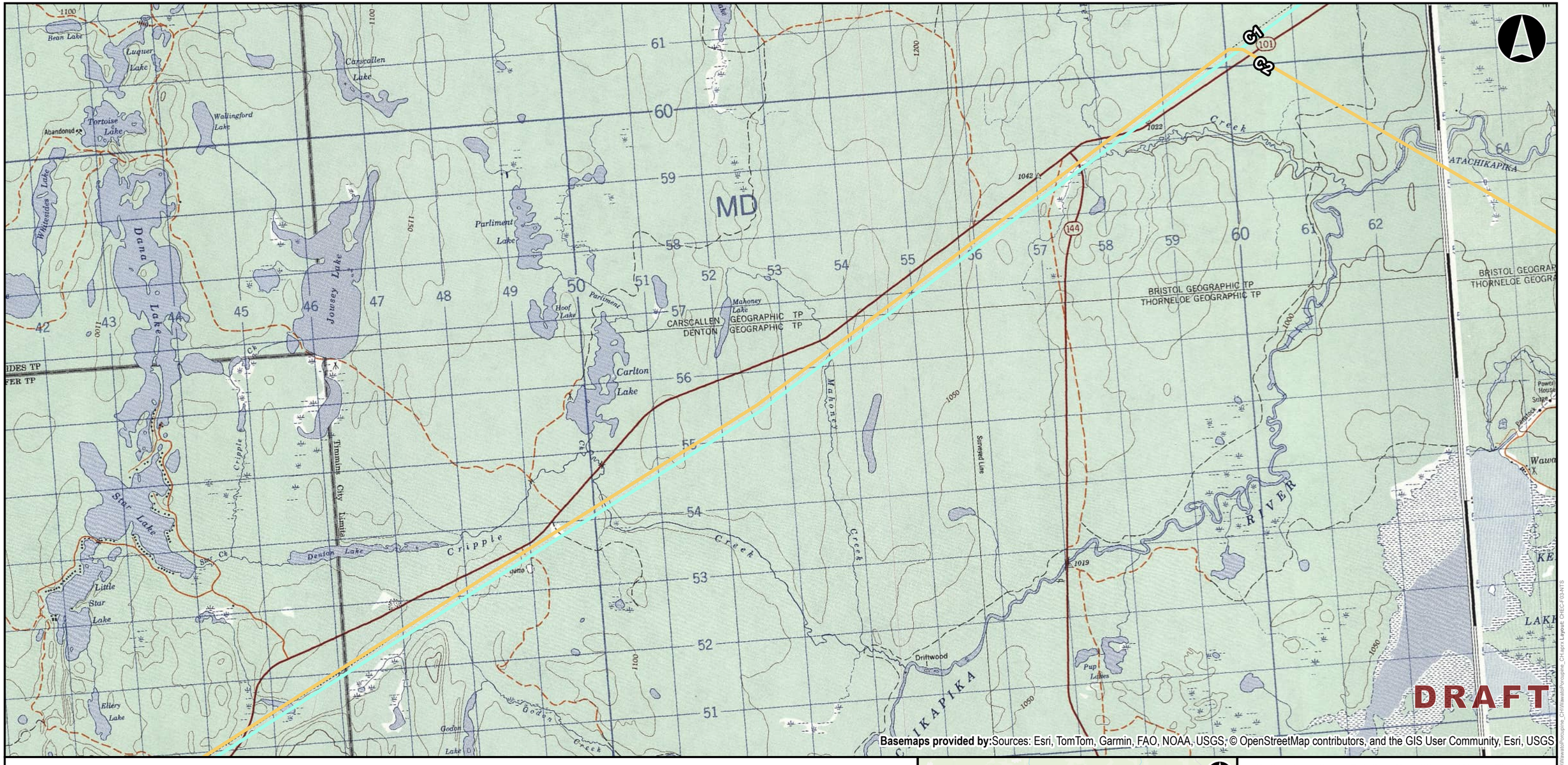
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Figure: 3-14

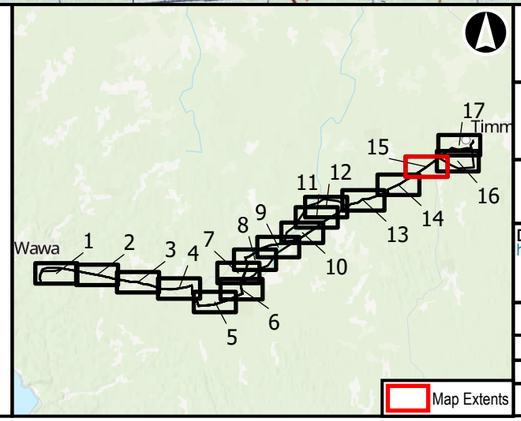
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LEGEND

Route Name

- C1
- C2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

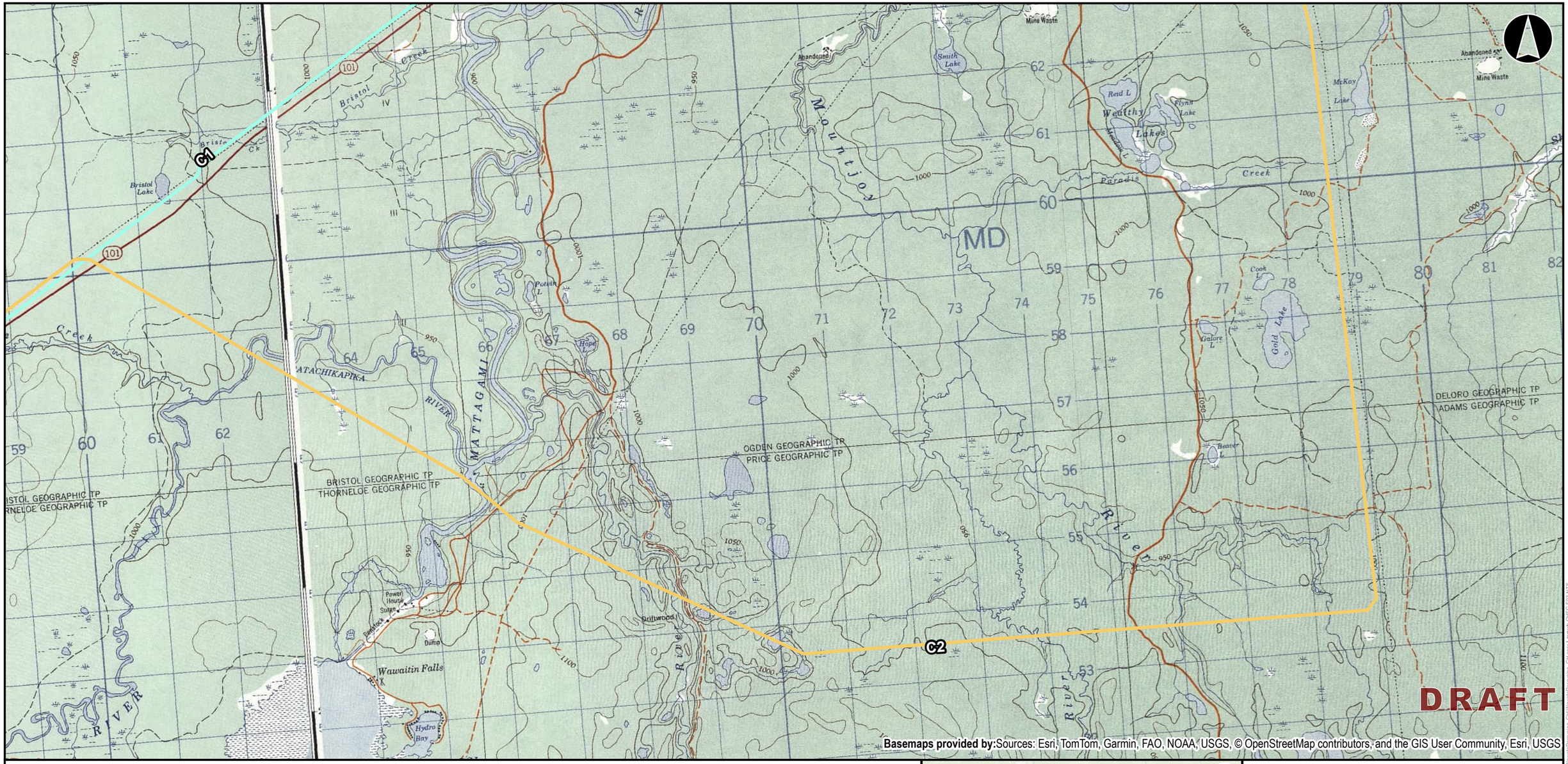
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Figure: 3-15

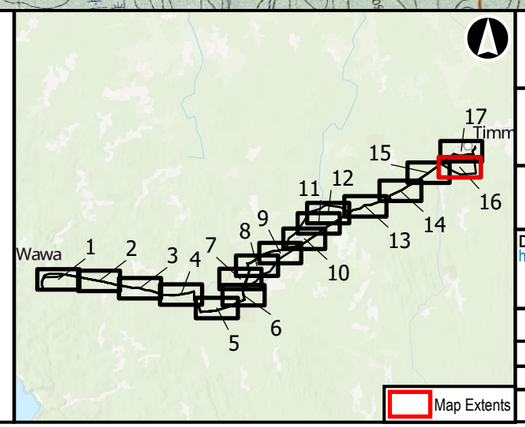
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LEGEND

Route Name

- C1
- C2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

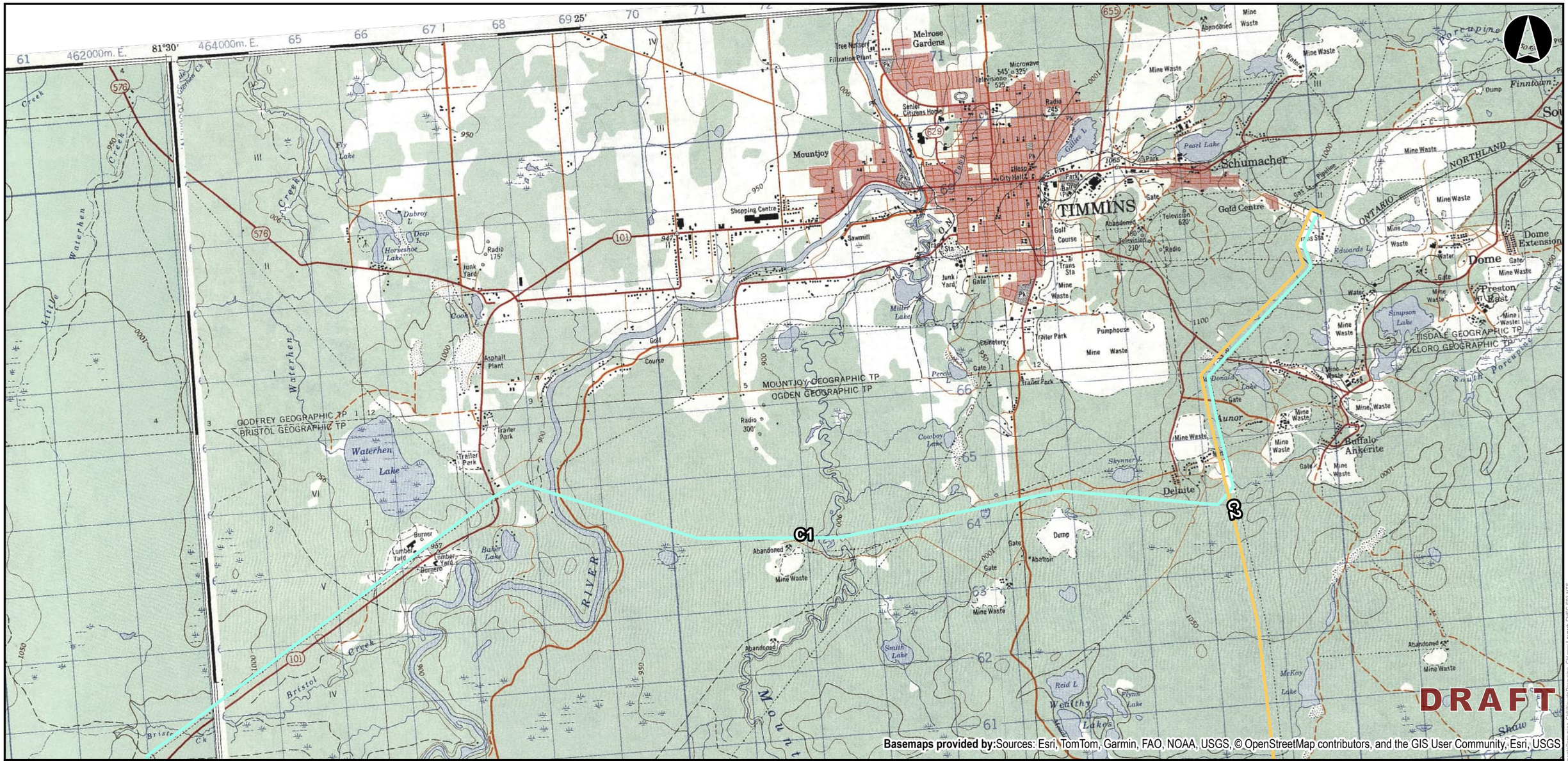
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Figure: 3-16

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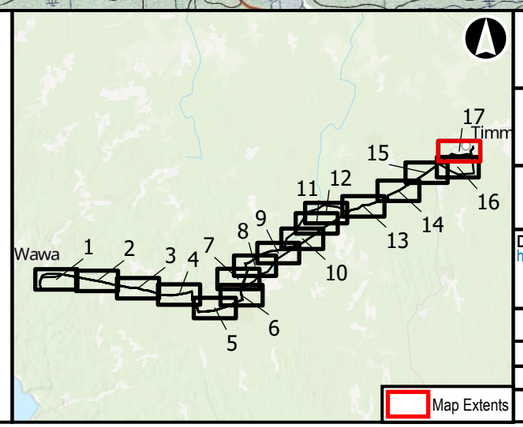


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LEGEND

Route Name

- C1
- C2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Project Study Area Overlaid on NTS Map

0 0.5 1 2 3 4 km

NAD 1983 UTM Zone 16N

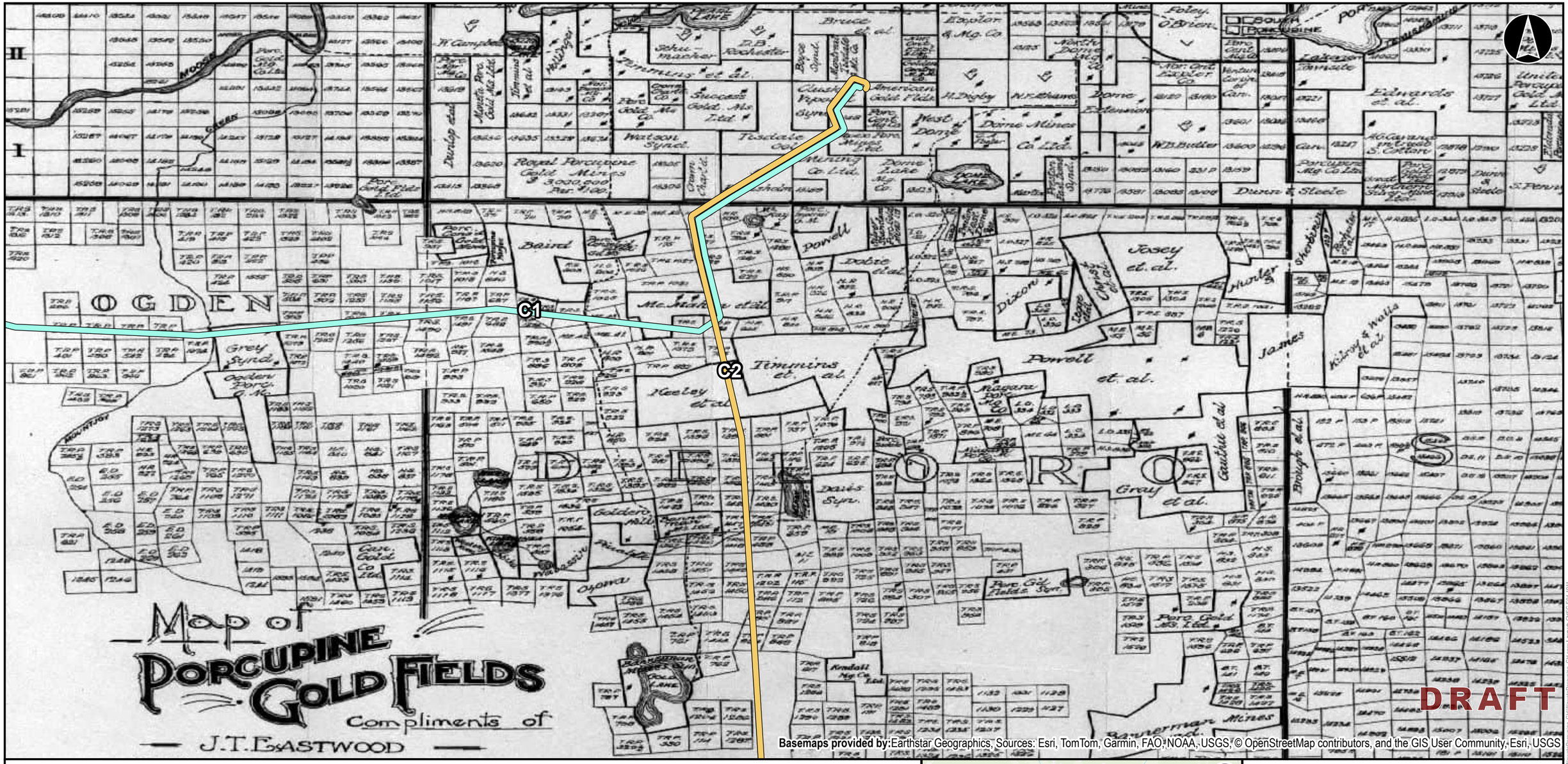
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Figure: 3-17

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Date Saved: 1/16/2026 12:09 PM; User: MarinoS

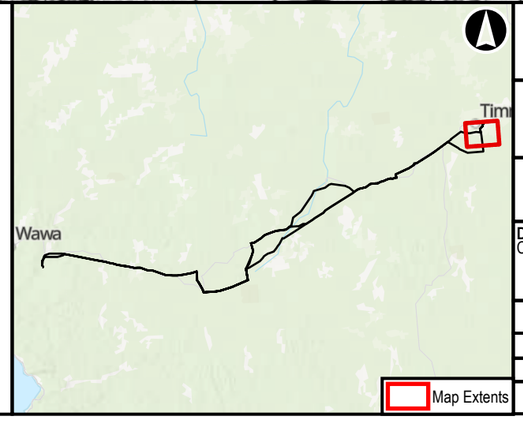


Basemaps provided by: Earthstar Geographics, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

LEGEND

Route Name

- C1
- C2



Cultural Heritage Existing Conditions: Wawa Timmins Power Line

Mining Claims in the Timmins Area 1911

0 1 2 4 km

Data Sources:
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Figure: 4

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Date Saved: 1/16/2026 12:09 PM User: MarinoS

Appendix B: MCM Screening Checklist: Criteria for Evaluating Potential for BHRs and CHLs (2022)

DRAFT

Ontario

Ministry of Tourism, Culture and Sport

Programs & Services Branch
401 Bay Street, Suite 1700
Toronto ON M7A 0A7

Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes

A Checklist for the Non-Specialist

The **purpose of the checklist** is to determine:

- if a property(ies) or project area:
    - is a recognized heritage property
    - may be of cultural heritage value
- it includes all areas that may be impacted by project activities, including – but not limited to:
    - the main project area
    - temporary storage
    - staging and working areas
    - temporary roads and detours

Processes covered under this checklist, such as:

- *Planning Act*
- *Environmental Assessment Act*
- *Aggregates Resources Act*
- *Ontario Heritage Act* – Standards and Guidelines for Conservation of Provincial Heritage Properties

Cultural Heritage Evaluation Report (CHER)

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a qualified person(s) (see page 5 for definitions) to undertake a cultural heritage evaluation report (CHER).

The CHER will help you:

- identify, evaluate and protect cultural heritage resources on your property or project area
- reduce potential delays and risks to a project

Other checklists

Please use a separate checklist for your project, if:

- you are seeking a Renewable Energy Approval under Ontario Regulation 359/09 – separate checklist
- your Parent Class EA document has an approved screening criteria (as referenced in Question 1)

Please refer to the Instructions pages for more detailed information and when completing this form.

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Project or Property Name

Wawa to Porcupine Power Line Project Class EA

Project or Property Location (upper and lower or single tier municipality)

District of Algoma, District of Sudbury, City of Timmins

Proponent Name

Hydro One Networks Inc.

Proponent Contact Information

Screening Questions

	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?	☐	☑

If Yes, please follow the pre-approved screening checklist, methodology or process.

If No, continue to Question 2.

Part A: Screening for known (or recognized) Cultural Heritage Value

	Yes	No
2. Has the property (or project area) been evaluated before and found **not** to be of cultural heritage value?	☐	☑

If Yes, do **not** complete the rest of the checklist.

The proponent, property owner and/or approval authority will:

- summarize the previous evaluation and
- add this checklist to the project file, with the appropriate documents that demonstrate a cultural heritage evaluation was undertaken

The summary and appropriate documentation may be:

- submitted as part of a report requirement
- maintained by the property owner, proponent or approval authority

If No, continue to Question 3.

	Yes	No
3. Is the property (or project area):		
a. identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value?	☐	☑
b. a National Historic Site (or part of)?	☐	☑
c. designated under the *Heritage Railway Stations Protection Act*?	☐	☑
d. designated under the *Heritage Lighthouse Protection Act*?	☐	☑
e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)?	☐	☑
f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?	☐	☑

If Yes to any of the above questions, you need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report, if a Statement of Cultural Heritage Value has not previously been prepared or the statement needs to be updated

If a Statement of Cultural Heritage Value has been prepared previously and if alterations or development are proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No, continue to Question 4.

Part B: Screening for Potential Cultural Heritage Value

	Yes	No
4. Does the property (or project area) contain a parcel of land that:		
a. is the subject of a municipal, provincial or federal commemorative or interpretive plaque?	☐	☑
b. has or is adjacent to a known burial site and/or cemetery?	☐	☑
c. is in a Canadian Heritage River watershed?	☐	☑
d. contains buildings or structures that are 40 or more years old?	☑	☐

Part C: Other Considerations

	Yes	No
5. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area):		
a. is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area?	☑	☐
b. has a special association with a community, person or historical event?	☑	☐
c. contains or is part of a cultural heritage landscape?	☑	☐

If Yes to one or more of the above questions (Part B and C), there is potential for cultural heritage resources on the property or within the project area.

You need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report (CHER)

If the property is determined to be of cultural heritage value and alterations or development is proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No to all of the above questions, there is low potential for built heritage or cultural heritage landscape on the property.

The proponent, property owner and/or approval authority will:

- summarize the conclusion
- add this checklist with the appropriate documentation to the project file

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g. under the *Environmental Assessment Act, Planning Act* processes
- maintained by the property owner, proponent or approval authority

Instructions

Please have the following available, when requesting information related to the screening questions below:

- a clear map showing the location and boundary of the property or project area
    - large scale and small scale showing nearby township names for context purposes
- the municipal addresses of all properties within the project area
- the lot(s), concession(s), and parcel number(s) of all properties within a project area

For more information, see the Ministry of Tourism, Culture and Sport's Ontario Heritage Toolkit or Standards and Guidelines for Conservation of Provincial Heritage Properties.

In this context, the following definitions apply:

- **qualified person(s)** means individuals – professional engineers, architects, archaeologists, etc. – having relevant, recent experience in the conservation of cultural heritage resources.
- **proponent** means a person, agency, group or organization that carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking.

1. Is there a pre-approved screening checklist, methodology or process in place?

An existing checklist, methodology or process may already be in place for identifying potential cultural heritage resources, including:

- one endorsed by a municipality
- an environmental assessment process e.g. screening checklist for municipal bridges
- one that is approved by the Ministry of Tourism, Culture and Sport (MTCS) under the Ontario government's Standards & Guidelines for Conservation of Provincial Heritage Properties [s.B.2.]

Part A: Screening for known (or recognized) Cultural Heritage Value

2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?

Respond 'yes' to this question, if all of the following are true:

A property can be considered not to be of cultural heritage value if:

- a Cultural Heritage Evaluation Report (CHER) - or equivalent - has been prepared for the property with the advice of a qualified person and it has been determined not to be of cultural heritage value and/or
- the municipal heritage committee has evaluated the property for its cultural heritage value or interest and determined that the property is not of cultural heritage value or interest

A property may need to be re-evaluated, if:

- there is evidence that its heritage attributes may have changed
- new information is available
- the existing Statement of Cultural Heritage Value does not provide the information necessary to manage the property
- the evaluation took place after 2005 and did not use the criteria in Regulations 9/06 and 10/06

Note: Ontario government ministries and public bodies [prescribed under Regulation 157/10] may continue to use their existing evaluation processes, until the evaluation process required under section B.2 of the Standards & Guidelines for Conservation of Provincial Heritage Properties has been developed and approved by MTCS.

To determine if your property or project area has been evaluated, contact:

- the approval authority
- the proponent
- the Ministry of Tourism, Culture and Sport

3a. Is the property (or project area) identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value e.g.:

i. designated under the *Ontario Heritage Act*

- individual designation (Part IV)
- part of a heritage conservation district (Part V)

Individual Designation – Part IV

A property that is designated:

- by a municipal by-law as being of cultural heritage value or interest [s.29 of the *Ontario Heritage Act*]
- by order of the Minister of Tourism, Culture and Sport as being of cultural heritage value or interest of provincial significance [s.34.5]. **Note**: To date, no properties have been designated by the Minister.

Heritage Conservation District – Part V

A property or project area that is located within an area designated by a municipal by-law as a heritage conservation district [s. 41 of the *Ontario Heritage Act*].

For more information on Parts IV and V, contact:

- municipal clerk
- Ontario Heritage Trust
- local land registry office (for a title search)

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ii. subject of an agreement, covenant or easement entered into under Parts II or IV of the *Ontario Heritage Act*

An agreement, covenant or easement is usually between the owner of a property and a conservation body or level of government. It is usually registered on title.

The primary purpose of the agreement is to:

- preserve, conserve, and maintain a cultural heritage resource
- prevent its destruction, demolition or loss

For more information, contact:

- Ontario Heritage Trust - for an agreement, covenant or easement [clause 10 (1) (c) of the *Ontario Heritage Act*]
- municipal clerk – for a property that is the subject of an easement or a covenant [s.37 of the *Ontario Heritage Act*]
- local land registry office (for a title search)

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iii. listed on a register of heritage properties maintained by the municipality

Municipal registers are the official lists - or record - of cultural heritage properties identified as being important to the community.

Registers include:

- all properties that are designated under the *Ontario Heritage Act* (Part IV or V)
- properties that have not been formally designated, but have been identified as having cultural heritage value or interest to the community

For more information, contact:

- municipal clerk
- municipal heritage planning staff
- municipal heritage committee

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iv. subject to a notice of:

- intention to designate (under Part IV of the *Ontario Heritage Act*)
- a Heritage Conservation District study area bylaw (under Part V of the *Ontario Heritage Act*)

A property that is subject to a **notice of intention to designate** as a property of cultural heritage value or interest and the notice is in accordance with:

- section 29 of the *Ontario Heritage Act*
- section 34.6 of the *Ontario Heritage Act.* **Note**: To date, the only applicable property is Meldrum Bay Inn, Manitoulin Island. [s.34.6]

An area designated by a municipal by-law made under section 40.1 of the *Ontario Heritage Act* as a **heritage conservation district study area**.

For more information, contact:

- municipal clerk – for a property that is the subject of notice of intention [s. 29 and s. 40.1]
- Ontario Heritage Trust

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v. included in the Ministry of Tourism, Culture and Sport's list of provincial heritage properties

Provincial heritage properties are properties the Government of Ontario owns or controls that have cultural heritage value or interest.

The Ministry of Tourism, Culture and Sport (MTCS) maintains a list of all provincial heritage properties based on information provided by ministries and prescribed public bodies. As they are identified, MTCS adds properties to the list of provincial heritage properties.

For more information, contact the MTCS Registrar at registrar@ontario.ca.

3b. Is the property (or project area) a National Historic Site (or part of)?

National Historic Sites are properties or districts of national historic significance that are designated by the Federal Minister of the Environment, under the *Canada National Parks Act*, based on the advice of the Historic Sites and Monuments Board of Canada.

For more information, see the National Historic Sites website.

3c. Is the property (or project area) designated under the *Heritage Railway Stations Protection Act*?

The *Heritage Railway Stations Protection Act* protects heritage railway stations that are owned by a railway company under federal jurisdiction. Designated railway stations that pass from federal ownership may continue to have cultural heritage value.

For more information, see the Directory of Designated Heritage Railway Stations.

3d. Is the property (or project area) designated under the *Heritage Lighthouse Protection Act*?

The *Heritage Lighthouse Protection Act* helps preserve historically significant Canadian lighthouses. The Act sets up a public nomination process and includes heritage building conservation standards for lighthouses which are officially designated.

For more information, see the Heritage Lighthouses of Canada website.

3e. Is the property (or project area) identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office?

The role of the Federal Heritage Buildings Review Office (FHBRO) is to help the federal government protect the heritage buildings it owns. The policy applies to all federal government departments that administer real property, but not to federal Crown Corporations.

For more information, contact the Federal Heritage Buildings Review Office.

See a directory of all federal heritage designations.

3f. Is the property (or project area) located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?

A UNESCO World Heritage Site is a place listed by UNESCO as having outstanding universal value to humanity under the Convention Concerning the Protection of the World Cultural and Natural Heritage. In order to retain the status of a World Heritage Site, each site must maintain its character defining features.

Currently, the Rideau Canal is the only World Heritage Site in Ontario.

For more information, see Parks Canada – World Heritage Site website.

Part B: Screening for potential Cultural Heritage Value

4a. Does the property (or project area) contain a parcel of land that has a municipal, provincial or federal commemorative or interpretive plaque?

Heritage resources are often recognized with formal plaques or markers.

Plaques are prepared by:

- municipalities
- provincial ministries or agencies
- federal ministries or agencies
- local non-government or non-profit organizations

For more information, contact:

- municipal heritage committees or local heritage organizations – for information on the location of plaques in their community
- Ontario Historical Society's Heritage directory – for a list of historical societies and heritage organizations
- Ontario Heritage Trust – for a list of plaques commemorating Ontario's history
- Historic Sites and Monuments Board of Canada – for a list of plaques commemorating Canada's history

4b. Does the property (or project area) contain a parcel of land that has or is adjacent to a known burial site and/or cemetery?

For more information on known cemeteries and/or burial sites, see:

- Cemeteries Regulations, Ontario Ministry of Consumer Services – for a database of registered cemeteries
- Ontario Genealogical Society (OGS) – to locate records of Ontario cemeteries, both currently and no longer in existence; cairns, family plots and burial registers
- Canadian County Atlas Digital Project – to locate early cemeteries

In this context, adjacent means contiguous or as otherwise defined in a municipal official plan.

4c. Does the property (or project area) contain a parcel of land that is in a Canadian Heritage River watershed?

The Canadian Heritage River System is a national river conservation program that promotes, protects and enhances the best examples of Canada's river heritage.

Canadian Heritage Rivers must have, and maintain, outstanding natural, cultural and/or recreational values, and a high level of public support.

For more information, contact the Canadian Heritage River System.

If you have questions regarding the boundaries of a watershed, please contact:

- your conservation authority
- municipal staff

4d. Does the property (or project area) contain a parcel of land that contains buildings or structures that are 40 or more years old?

A 40 year 'rule of thumb' is typically used to indicate the potential of a site to be of cultural heritage value. The approximate age of buildings and/or structures may be estimated based on:

- history of the development of the area
- fire insurance maps
- architectural style
- building methods

Property owners may have information on the age of any buildings or structures on their property. The municipality, local land registry office or library may also have background information on the property.

Note: 40+ year old buildings or structure do not necessarily hold cultural heritage value or interest; their age simply indicates a higher potential.

A building or structure can include:

- residential structure
- farm building or outbuilding
- industrial, commercial, or institutional building
- remnant or ruin
- engineering work such as a bridge, canal, dams, etc.

For more information on researching the age of buildings or properties, see the Ontario Heritage Tool Kit Guide Heritage Property Evaluation.

Part C: Other Considerations

5a. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) is considered a landmark in the local community or contains any structures or sites that are important to defining the character of the area?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has potential landmarks or defining structures and sites, for instance:

- buildings or landscape features accessible to the public or readily noticeable and widely known
- complexes of buildings
- monuments
- ruins

5b. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) has a special association with a community, person or historical event?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has a special association with a community, person or event of historic interest, for instance:

- Aboriginal sacred site
- traditional-use area
- battlefield
- birthplace of an individual of importance to the community

5c. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) contains or is part of a cultural heritage landscape?

Landscapes (which may include a combination of archaeological resources, built heritage resources and landscape elements) may be of cultural heritage value or interest to a community.

For example, an Aboriginal trail, historic road or rail corridor may have been established as a key transportation or trade route and may have been important to the early settlement of an area. Parks, designed gardens or unique landforms such as waterfalls, rock faces, caverns, or mounds are areas that may have connections to a particular event, group or belief.

For more information on Questions 5.a., 5.b. and 5.c., contact:

- Elders in Aboriginal Communities or community researchers who may have information on potential cultural heritage resources. Please note that Aboriginal traditional knowledge may be considered sensitive.
- municipal heritage committees or local heritage organizations
- Ontario Historical Society's "Heritage Directory" - for a list of historical societies and heritage organizations in the province

An internet search may find helpful resources, including:

- historical maps
- historical walking tours
- municipal heritage management plans
- cultural heritage landscape studies
- municipal cultural plans

Information specific to trails may be obtained through Ontario Trails.

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Appendix C-3

Natural Environment Existing Conditions Report

NorthWinds Environmental Services



Wawa Timmins Power Line
Natural Environment Existing Conditions Report

August 31, 2026

PREPARED FOR
Dillon Consulting Limited

PREPARED BY
NorthWinds Environmental Services
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1 INTRODUCTION

Hydro One Networks Inc. (Hydro One) is Ontario's largest electricity transmission and distribution service provider; energizing life in Ontario for over 110 years. In 2024, the Ministry of Energy and Mines (MEM)[1] identified that electricity demand in northeastern Ontario is anticipated to increase due to industrial expansion, community electrification, and economic development. To support this rapid growth and future electricity demand, Hydro One is proposing to construct a new, single-circuit 500 kilovolt (kV) transmission line approximately 305 kilometres (km) in length from Hydro One's Wawa Transformer Station (TS) near Wawa, Ontario to the Porcupine TS in Timmins, Ontario (Figure 1-1).

Hydro One is calling this undertaking the Wawa Timmins Power Line (the Project). To support the new transmission line, the Project also includes the establishment of a future 500 kV TS near the existing Wawa TS along with upgrades to the existing Wawa TS and Porcupine TS.

In June 2025, Hydro One commenced a Class Environmental Assessment (Class EA) for the Project. Hydro One retained Dillon Consulting Limited (Dillon) to support the Class EA. The Project is subject to the Class Environmental Assessment for Transmission Facilities (Class EA for TF) (Hydro One, 2024), an approved planning process under the *Environmental Assessment Act* (EA Act). The Class EA for TF is designed for proponents to characterize the existing environment, assess potential environmental effects and mitigation, identify and evaluate alternatives, conduct consultation, and document study findings.

NorthWinds Environmental Services (NWES) was hired by Dillon to conduct a natural environment existing conditions study as part of the Class EA. This document provides a summary of surveys conducted during the 2025 field season, and their associated findings.

1.1 STUDY AREA

As part of the Project planning process, a Route Investigation Study Area (RISA) was developed in which the background review of existing databases was conducted (Figure 1). Environmental values are often sparse, so it is necessary to conduct the background review over a larger area than field studies. The RISA was created early in the Project design process as a minimum convex polygon area within which all potential route alternatives would fall. It was also sufficiently large to capture environmental records to suitably describe the Project area.

A Project Study Area (PSA) and a Local Study Area (LSA) were created for each route as they became finalized (Figures 2-13):

- The PSA includes lands within 120 m of an identified route alternative centerline as well as the Wawa TS and Porcupine TS. The PSA is the scale at which field studies were conducted.
- The LSA consists of lands within 500 m of an identified route alternative centerline. The LSA is the scale at which habitat mapping was conducted.

[1] MEM was referred to as the Ministry of Northern Development and Mines in 2024. Provincial Ministries are referred to by their current names throughout this report, unless otherwise specified.

1.2 ROUTE ALTERNATIVES

1.2.1 Segment A

1.2.1.1 Route A1

Route A1 begins at the Wawa Transformer Station and proceeds generally north to Highway 101, paralleling an existing 115 kV transmission line for most of this stretch. The route then takes a more direct route crossing Highway 101 and turning eastward before rejoining the existing transmission line. Route A1 then parallels the existing transmission line for approximately 82 km east/southeast. Along this section, Route A1 crosses Highway 101 a total of six (6) times and parallels the highway (along with the 115 kV transmission line) for several stretches. The route turns southward approximately 1 km from the urban area of Chapleau and extends for approximately 5 km before tying into Segment B.

1.2.1.2 Route A2

Route A2 also begins at the Wawa Transformer Station and extends generally north toward Highway 101. However, this route turns eastward sooner than Route A1, remaining on the south side of Highway 101 where it traverses approximately 13 km of forest. Route A2 converges with Route A1 near Highway 101 and continues eastward to parallel the existing 115 kV transmission line. The remainder of Route A2 is identical to Route A1.

1.2.2 Segment B

1.2.2.1 Route B1

Route B1 extends southeast from Segment A, crossing Highway 101 before turning eastward. The route extends approximately 25 km east/northeast through forests, crossing Highway 129, and a railway. Route B1 then turns northward and extends approximately 21 km until it crosses to the north side of Highway 101. The route then continues northeast, generally paralleling Highway 101 (apart from a portion of the highway that extends through Foleyet) for approximately 72 km.

1.2.2.2 Route B2

Route B2 follows the same path as Route B1 for approximately 78 km until it diverges eastward from Highway 101 approximately 32 km from Foleyet. The route then extends approximately 41 km east/northeast through forests, crossing Ivanhoe Lake Provincial Park.

1.2.2.3 Route B3

Route B3 follows the same path as Routes B1 and B2 for approximately 39 km until it diverges and extends northeast for approximately 42 km through forests, also crossing Ivanhoe Lake Provincial Park. The route converges with Route B2 east of the park and continues on the same alignment as Route B2 through approximately 32 km of forest. Route B3 does not parallel Highway 101, apart from an 800 m stretch within the initial portion that it shares with Routes B1 and B2.

1.2.3 Segment C

1.2.3.1 Route C1

Route C1 extends northeast from Segment B, generally paralleling Highway 101 for approximately 25 km before turning north and then northeast to parallel an existing 115 kV transmission line for roughly 45 km. The route then turns eastward and extends through forests for approximately 11 km until it reaches an existing 115 kV transmission line. Route C1 then turns northward to parallel the existing transmission line for approximately 4 km before diverging to enter the Porcupine TS.

1.2.3.2 Route C2

Route C2 follows the same alignment as Route C1 for approximately 60 km, generally paralleling Highway 101 and the existing 115 kV transmission line northeastward. The route then diverges southeast through forests for roughly 21 km until it reaches the same 115 kV transmission line that Route C1 parallels. Route C2 then turns northward and parallels the transmission line for approximately 15 km before diverging to enter the Porcupine TS. The final 5 km of this route follows the same alignment as Route C1.

2 METHODS

2.1 BACKGROUND REVIEW

As part of the Project planning process, the RISA was used to guide the development of the 2025 Fieldwork Plan Methodology. At the onset of the Project, route alternatives were still being identified. The RISA was used as the extent of area considered during the background review for the Project.

A desktop background review of environmental data within the RISA was completed prior to beginning the natural environment field program (Section 2.2), as outlined in the Field Program Methodology (Appendix A).

Preliminary background data sources included in the desktop background review are provided below in Table 2.1.

Table 2.1 Preliminary Background Review Data Sources

Data Source	Comments
Indigenous communities	Traditional Ecological Knowledge (TEK), as provided by Indigenous staff through the course of conducting field studies.
Land Information Ontario (LIO)	At a minimum, queries of: • Aquatic Resource Area data. • Wildlife Values Areas. • Wildlife Values Sites.
Natural Heritage Information Centre (NHIC)	Species records and wildlife concentration areas.
Forest Resource Inventory (FRI)	FRI ecosite landcover provides the foundation upon which the environmental field program is built. Ecosites are used to frame field surveys, and are used to map candidate Significant Wildlife Habitat (cSWH) and potential Species at Risk (SAR) habitat, as well as to characterize general wildlife habitat.
Ontario Land Cover (OLC)	FRI landcover was not available for the portion of the LSA that passed through the Romeo Malette Forest. As such, Ontario Land Cover (OLC) mapping was used for this area instead. OLC codes were translated to rough approximate ecosites, that were used to map cSWH and potential SAR habitat, as well as to characterize general wildlife habitat.

Table 2.1 Preliminary Background Review Data Sources	
Data Source	Comments
Abandoned Mine Information System (AMIS; MNDM, 2024)	Feature-to-surface locations (potential bat hibernacula).
Northern Ontario Engineering Geology Terrain Study (NOEGTS)	Understanding of geological and terrain related challenges and features to further inform the Field Program Methodology study designs.
Local Forest Management Plans	Review of detailed mapping, including access points.
Significant Wildlife Habitat Criteria Schedules for Ecoregion 3E	Assessment and mapping of cSWH and candidate Rare Vegetation Communities (cRVC).
Ontario Breeding Bird Atlas (OBBA; Cadman et al., 2007)	Compile a list of documented breeding observations overlapping with the LSA.
iNaturalist	Compile list of observations overlapping with the RISA.
eBird	Compile list of observations overlapping with the RISA.
Ontario Reptile and Amphibian Atlas	Compile list of observations overlapping with the RISA.
Fur Management Information System (FURMIS)	Compile trapping records from traplines overlapping with the RISA.
DFO Aquatic SAR	Compile list of observations overlapping with the RISA, primarily looking for SAR.
Fish ON-Line website	Compile list of observations overlapping with the RISA, primarily looking for SAR.
Inland Ontario Lakes Designated for Lake Trout Management	Review of Lake Trout lakes overlapping with the RISA.
Satellite Imagery	To aid in refining the FRI, where needed to support in cSWH, SAR and general wildlife habitat delineations.
Ontario Digital Terrain and Digital Surface Models	Understanding local topography across the RISA, and to be used in conjunction with the NOEGTS.

2.1.1 Habitat Mapping

Ecosite mapping obtained from FRI landcover provides detailed information on local soil structure and moisture regime, as well as the expected indicator vegetation communities (Appendix B). However, this information is often too granular to meaningfully use when describing wildlife habitat. As such, NWES staff developed broad groupings of similar ecosites called “Habitat Types” that capture a wider range of conditions that wildlife will exploit (Table 2.1.1-1, Figures 14-25, Appendix B). The ecosite-to-habitat type conversion was developed with the guidance of Environment and Climate Change Canada (ECCC) for use on similar projects in northern Ontario (Table 2.1.1-2).

Habitat Types were used to frame the wildlife surveys in the environmental field program, discussed in Sections 2.2.4 and 3.2.2.

Table 2.1.1-1 LSA Habitat Area Summary

Habitat	Area (ha)
Barren	94.26
Bog	75.54
Coniferous	14,244.46
Deciduous	14,832.68
Disturbance	1,343.88
Fen	964.09
Marsh	526.20
Mixedwood	1,438.36
Shrubland	722.02
Swamp - Coniferous	6,594.02
Swamp - Deciduous	727.41
Water	1,551.63
Total	**43,114.55**

Table 2.1.1-2 Ecosite and Habitat Type Correlation Table

Habitat Class	Habitat Type	Ecosites
Upland	Coniferous	B011, B012, B013, B014, B023, B024, B025, B026, B033, B034, B035, B036, B037, B038, B048, B049, B050, B051, B052, B053, B064, B065, B066, B067, B068, B081, B082, B083, B084, B085, B086, B097, B098, B099, B100, B101, B102, B113, B114, B115, B116, B117
	Deciduous	B016, B017, B018, B040, B041, B042, B055, B056, B057, B058, B070, B071, B072, B073, B074, B075, B088, B089, B090, B091, B104, B105, B106, B107, B119, B120, B121, B122, B123, B124
	Mixedwood	B015, B019, B027, B028, B039, B043, B054, B059, B069, B076, B087, B092, B103, B108, B118, B125
	Shrubland	B009, B010, B021, B022, B031, B032, B046, B047, B062, B063, B079, B080, B095, B096, B111, B112
	Grassland	B008, B020, B029, B030, B044, B045, B060, B061, B077, B078, B093, B094, B109, B110
	Barren	B001, B002, B003, B004, B005, B006, B007, B154, B155, B156, B157, B158, B159, B160, B161, B162, B163, B164, B165, B166, B167, B168, B170, B171, B172, B173, B174, B175, B176, B177, B178, B179, B180, B181, B182, B183, B184, B186, B187, B188, B189, B201, B202, B203, B204, B205, B206, B207, B208, B209, B210, B211, B212, B213, B214, B215
	Disturbed	B169, B185, B190, B191, B192, B193, B194, B195, B196, B197, B198, B199, B200
Wetland	Marsh	B142, B143, B144, B145, B148, B149, B150, B151, B152, B219, B220, B221
	Swamp Coniferous	B127, B128, B129, B222, B223, B224
	Swamp Deciduous	B130, B131, B132, B133, B134, B135, B216
	Fen	B136, B139, B140, B141, B146, B147, B217, B218
	Bog	B126, B137, B138
Other	constructed water collection	B153

2.1.2 Species At Risk

2.1.2.1 Species at Risk Policy

2.1.2.1.1 Federal Policy

Species at Risk (SAR) in Canada are protected under the federal *Species at Risk Act* (*SARA*; 2002). The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) provides suggested ranking for assessed species in Canada, which are then reviewed and adopted into Schedule 1 of the Act. Federal SAR rankings include:

- *Extirpated*: a wildlife species that no longer exists in the wild in Canada, but exists elsewhere in the wild.
- *Endangered*: a wildlife species that is facing imminent extirpation or extinction in Canada.
- *Threatened*: a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
- *Special Concern*: a wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.

SARA applies to species on federal lands. Additionally, it provides nationwide protection for aquatic species and migratory birds listed the *Migratory Birds Convention Act* (*MBCA*; 1994) and as Endangered or Threatened under *SARA* Schedule 1. The federal Minister of the Environment may also make an order to protect species on non-federal lands if the species is not adequately protected under provincial laws.

Under *SARA*, species listed as *Extirpated*, *Endangered* or *Threatened* on lands under federal jurisdiction receive species protection (Section 32), residence protection (Section 33) and critical habitat protection (Section 58):

- ***32 (1)*** *No person shall kill, harm, harass, capture or take an individual of a wildlife species that is listed as an extirpated species, an endangered species or a threatened species.*
- ***33*** *No person shall damage or destroy the residence of one or more individuals of a wildlife species that is listed as an endangered species or a threatened species, or that is listed as an extirpated species if a recovery strategy has recommended the reintroduction of the species into the wild in Canada.*
- ***58 (1)*** *Subject to this section, no person shall destroy any part of the critical habitat of any listed endangered species or of any listed threatened species — or of any listed extirpated species if a recovery strategy has recommended the reintroduction of the species into the wild in Canada — if*
    - ***a)*** *the critical habitat is on federal land, in the exclusive economic zone of Canada or on the continental shelf of Canada;*
    - ***b)*** *the listed species is an aquatic species; or*
    - ***c)*** *the listed species is a species of migratory birds protected by the Migratory Birds Convention Act, 1994.*

Species listed as *Special Concern* do not receive protection under *SARA*, but may be protected under other federal legislation (e.g., *MBCA*). Since species designated as *Extirpated* under the *SARA* are no longer considered to exist in the wild, any *Extirpated* species identified during the background review were not included as having potential to occur within the RISA.

2.1.2.1.2 Provincial Policy

SAR listed as *Threatened*, *Endangered* or *Extirpated* in Ontario are protected under the *Species Conservation Act* (*SCA*; *2025*), which came into effect as of March 30, 2026. This legislation replaces the former *Endangered Species Act* (2007) and all supporting Ontario Regulations (*O.Reg.*). Under the *SCA* Section 2:

"section 16 activity" means,
(a) any activity that results or is likely to result in,
(i) the killing, harming, capturing or taking of a member of a species that is listed on the Protected Species in Ontario List, or
(ii) damage to or destruction of the habitat of a species that is listed on the Protected Species in Ontario List,
(b) possessing, transporting, collecting, buying, selling, leasing, trading or offering to buy, sell, lease or trade,
(i) a living or dead member of a species that is listed on the Protected Species in Ontario List,
(ii) any part of a living or dead member of a species referred to in subclause (i), or
(iii) anything derived from a living or dead member of a species referred to in subclause (i), or
(c) selling, leasing, trading or offering to sell, lease or trade anything that a person represents to be a thing described in subclause (b) (i), (ii) or (iii).

Also, habitat is defined as the following pursuant to *SCA* Section 2:

"habitat" means, subject to subsection (2),
(a) in respect of an animal species,
(i) a dwelling place, such as a den, nest or other similar place, that is occupied or habitually occupied by one or more members of a species for the purposes of breeding, rearing, staging, wintering or hibernating, and
(ii) the area immediately around a dwelling place described in subclause (i) that is essential for the purposes set out in that subclause,
(b) in respect of a vascular plant species, the critical root zone surrounding a member of the species, and
(c) in respect of all other species, an area on which any member of the species directly depends in order to carry on its life processes; ("habitat").

It is often difficult to identify wildlife dwelling places, even with targeted field studies. As such, a more conservative approach was applied to map potential SAR habitat for the purposes of this Natural Environment Existing Conditions Report. The approach included a more generalized review of the PSA and LSA to characterize where a SAR residence may occur, following MECP guidance (MECP, 2025[1]):

… where the species is known or likely to be present in the general area, you may assume that suitable areas are habitat and take appropriate action in advance of your project (e.g., register or seek a permit). This approach may result in cost and time savings in circumstances where precise habitat locations or boundaries are unknown and would require significant survey effort (e.g., multiple years) or research to determine.

Pursuant to *SCA* Section 16:

Prohibition, s. 16 activities
Registration required
16 *(1) No person shall engage in a registerable activity unless,*
(a) the person has registered the activity in the Registry in accordance with the regulations;
(b) the Minister has provided the person with a confirmation of registration in respect of the activity;
(c) the person engages in the activity in accordance with the regulations; and
(d) the registration is not suspended and has not been removed from the Registry.

Permit required
(2) No person shall, except under and in accordance with a permit, engage in a permit activity.

Exceptions

(3) Subsection (1) or (2), as applicable, does not apply in respect of any of the following section 16 activities:

1. In the case of an activity described in clause (b) of the definition of "section 16 activity" in subsection 2 (1), the member of the species affected by the activity was lawfully killed, captured or taken in a jurisdiction outside of Ontario.

2. A section 16 activity for which all of the criteria set out in subsection (4) in respect of the activity, the person engaging in the activity and the species affected by the activity are met.

3. If a geographic area is specified in the Protected Species in Ontario List in respect of a species, a section 16 activity engaged in with respect to that species outside of the geographic area.

4. Any other section 16 activity prescribed by the Lieutenant Governor in Council for the purposes of this subsection, subject to any conditions or restrictions prescribed by the Lieutenant Governor in Council.

Specific regulations regarding Registration, Permit and Exception activities can be found in:

- O. Reg. 75/26: REGISTRABLE ACTIVITIES;
- O. Reg. 74/26: PERMIT ACTIVITIES; and
- O. Reg. 61/26: EXCEPTED ACTIVITIES - NO PERMIT OR REGISTRATION

Since species designated as *Extirpated* under the *SCA* are no longer considered to exist in the wild, any *Extirpated* species identified during the background review were not included as having potential to occur within the RISA. Species listed as *Special Concern* do not receive protection under the *SCA,* but may require assessment under other provincial regulations (e.g., *Significant Wildlife Habitat*).

It is important to note that pursuant to *SCA* Section 4:

General non-application, aquatic species and migratory birds

4 *Unless otherwise provided in this Act or the regulations, this Act and the regulations do not apply with respect to the following species, if the species is listed as extirpated, endangered or threatened on the List of Wildlife Species at Risk under the Species at Risk Act (Canada):*

1. Species of birds protected by the Migratory Birds Convention Act, 1994 (Canada).

2. Aquatic species as defined in subsection 2 (1) of the Species at Risk Act (Canada).

2.1.2.2 SAR Habitat Mapping

SAR are relatively sparse on the landscape often due to specialized habitat requirements, large home ranges, low fecundity, declining populations and their cryptic natures. As such, it was necessary to examine records from an area much larger than the locations directly overprinted by Project infrastructure to develop a list of potential species. SAR records were compiled for all areas within the RISA.

Following the desktop background review, SAR with recent or known occurrences in the RISA were further considered through the mapping of potential habitat on a species-by-species basis based on species' habitat preferences and criteria. Habitat mapping criteria were derived from provincial or federal SAR documents (i.e., COSSARO and/or COSEWIC reports), and/or through information provided through discussions with the Ministry of the Environment, Conservation and Parks (MECP) on previous similar projects. Potential SAR habitat was mapped across the RISA using landcover information derived from FRI mapping, and further refined once the LSA and PSA were identified for the route alternatives.

2.1.3 Significant Wildlife Habitat (SWH) Screening:

The Ontario Government defines "wildlife habitat" as the following (OMNR, 2000):

"[A]reas where plants, animals, and other organisms live, and find adequate amounts of food, water, shelter, and space needed to sustain their populations. Specific wildlife habitats of concern may include areas where species concentrate at a vulnerable point in their annual or life cycle; and areas which are important to migratory or non-migratory species."

Further, the Province considered wildlife habitat to be "significant" where it is:

"[E]cologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or Natural Heritage System. Criteria for determining significance may be recommended by the Province, but municipal approaches that achieve the same objective may also be used."

SWH at a broad scale includes habitats for seasonal concentrations of animals, rare vegetation communities, habitat for species of conservation concern and animal movement corridors (as defined in the *Significant Wildlife Habitat Criteria Schedule* documents). Please note: "species of conservation concern" include SAR listed as *Special Concern* as well as wildlife communities with similar habitat requirements (e.g., marsh birds, open country birds, etc.).

The primary guidance document for identifying SWH in Ontario is the *Significant Wildlife Habitat Technical Guide* (OMNR, 2000), with a series of ecoregion-specific guides that provide finer-scale SWH definitions. The project overlaps with two ecoregions: 3E Lake Abitibi and 4E Lake Temagami. The desktop background review was used to identify areas with the potential to contain cSWH within the LSA as identified and described in *Significant Wildlife Habitat Criteria Schedules for Ecoregion 3E* (MNRF, 2015[a]). There are presently no criteria schedules for Ecoregion 4E, which a small portion of the Project overlaps near the western extent.

2.2 Field Data Collection

This section includes a summary of the methods developed as part of the Field Program Methodology (Appendix A). The approach for field surveys was developed to assess the existing conditions of the natural environment associated with the Project's route alternatives and to identify potential conflicts associated with the PSA. The results from the surveys outlined below will inform the Class EA for the Project.

The 2025 field program was initially designed for the RISA, however the Project team has made refinements to the route alternatives between the onset of field data collection and the writing of this report. As such, several field data collection locations do not fall within the current LSA. However, the RISA has remained consistent throughout the Class EA process. Data collected within the RISA are valuable, and can be meaningfully extrapolated to the LSA/PSA. This document presents the field methodology developed at the onset of the 2025 field program and all associated data.

2.2.1 Indigenous Knowledge and Participation

Our commitment to engaging Indigenous communities and building capacity is fundamental to the success of this Project. Indigenous communities possess invaluable local and TEK which will help the Project better understand environmental changes, guide Project development, and support critical decision making. Additionally, insights from communities are important when interpreting field data within the context of their local and traditional ecosystems.

The Fieldwork Plan was designed and executed in collaboration with Partner Nations to facilitate the integration of TEK into the Class EA process. Members of Partner Nations also had the opportunity to contribute as monitors to all fieldwork programs.

2.2.2 Digital Data Collection

NWES implemented the use of digital data collection wherever possible to increase efficiencies in data collection. Digital data collection included the use of tablets/digital data sheets, autonomous recording units (ARUs), drones, global positioning system (GPS), georeferencing digital cameras and trail cameras. Their use is described in detail below.

Digital Data Sheets – Field tablets with data sheets (created with Survey 123 software) tailored to each survey allowed for efficient data collection. The use of digital data sheets eliminated most field data entry error by using drop-down and forced entry fields. Data collected digitally in the field also allowed for efficiencies in downstream data management as data was quickly (and regularly) uploaded, backed up, and easily shared. Digital datasets were always supplemented by handwritten field notes.

Autonomous Recording Units (ARUs) – Ultrasonic ARUs (Wildlife Acoustics Song Meter MiniBAT) were deployed in key bat maternal roosting or potential bat hibernacula areas and programmed in 'trigger' mode and set to record from sunset to sunrise. Species identification was conducted through an analysis of recordings using Kaleidoscope software (Wildlife Acoustics) and manually vetted. ARUs were also used to supplement surveys for marsh birds, nightjars, owls, breeding birds and amphibians as per guidance from Canadian Wildlife Service (CWS, 2022). These deployments were particularly efficient at surveying hard to access areas, surveying for secretive species, and to survey a range of time windows and dates in accordance with a variety of survey protocols to maximize appropriate weather or other survey conditions.

Drones – The use of drones in environmental monitoring is beneficial because of its speed, cost-effectiveness and the ability to generate high-quality imagery and data, particularly in remote, hard to reach areas. Often data collected via drone can be used with minimal processing, making drones a practical and efficient choice to supplement data collection in hard to access areas. Aerial imagery obtained with the drone has the added advantage of being georeferenced which allowed for efficient photo review and organization. NWES incorporated a licensed, registered and insured drone to enhance data collection at water crossings, wetlands, and other areas that benefit from high resolution aerial imagery.

Trail Cameras – Reconyx HP2X Professional Infrared Trail cameras were deployed in suitable locations (e.g., game trails, clearings or potential den sites) in all habitat types during the 2025 field data collection. These cameras have the advantage of providing observations over long periods of time, in all weather, day or night. Trail cameras were set to trigger by motion sensor and record three (3) consecutive still photos spaced 1 second apart. Upon retrieval of the camera, all photos were manually vetted by experienced field technicians. All wildlife observations were catalogued along with their corresponding metadata (e.g., date, time, location, temperature) and descriptions of animal behaviour, where possible.

2.2.3 Vegetation Community Mapping

The purpose of the vegetation and wetlands field survey for the Project was to characterize the existing conditions and ground-truth existing FRI data. Baseline characterization consisted of combining and summarizing available information from the desktop background review with field data collected within the LSA.

Vegetation community mapping was also used to identify potential habitat for SAR, rare plants and vegetation communities. In addition, vegetation community mapping could be used to identify traditionally used/culturally significant plants, which were identified through consultation with Indigenous communities.

The main objectives of the vegetation and wetlands field surveys were to:

- Survey and confirm upland, wetland, and riparian vegetation community types and ecosites across the proposed route alternatives;
- Conduct a botanical assessment of the vegetation communities sampled, highlighting culturally significant plants identified by local Indigenous communities (e.g., blueberries [*Vaccinium spp.*] and Wild Rice [*Zizania palustris*]);
- Characterize vegetation communities and associated wildlife habitat in the PSA and LSA; and
- Identify plant SAR and rare plants within unique vegetation communities in the PSA and LSA (discussed below).

Field data are used to identify vegetation and wetlands criteria/indicators that are used for conducting the vegetation and wetlands environmental assessments. The data may also be used to support future permitting requirements.

Results from the desktop background review were used to determine the relative proportion of ecosites across the LSA. Information from the NHIC database was used to identify a prospective list of rare plants (NatureServe Conservation Ranks S1-S3) and vegetation communities that may be present, which field surveys later targeted where they overlapped with the PSA.

Sixty-one (61) unique ecosites were identified in the LSA from FRI mapping (Table 2.2.3, Figures 26-37, Appendix B). One hundred sixty-five (165) ecosite verification survey locations were spaced along the length of the LSA to obtain adequate spatial distribution in addition to proportional ecosite coverage. A total of 29 ecosites were surveyed to validate the information obtained from the FRI datasets from the intersecting Forest Management Units (discussed further in Section 3.1.1). Plots were circular with 3-m radii, for total areas of 28 m^2. Plots were located at least 60 m from the edge of each sampling unit (if possible) to minimize edge-effects.

Survey locations were distributed with a focus on the areas directly overprinted by the Project, as this area will be most affected by the project. The following variables were factored into survey location selection:

- Relative abundance of ecosites;
- Records of unique/rare vegetation communities;
- Existing surveys for rare plants and critical landform/vegetation associations; and
- Access constraints.

Surveys to characterize baseline conditions for vegetation and wetlands were completed in the PSA, including:

- Field verification surveys to confirm ecosites available from desktop mapping;
- Meandering transects to survey for plant SAR, rare plants and traditional use/culturally significant plants;
- Re-visitation of historical occurrences of plant SAR to confirm population; and
- Surveys of noxious weeds and invasive plants in disturbed areas within the PSA.

Table 2.2.3. Ecosite LSA Area Summary and Planned Survey Design

Ecosite Code	Ecosite Description	Total Area (ha)	LSA %	Surveyed Polygons	Surveyed %	Difference %
B007	Active Mineral Barren	82.3	0.20	2	1.21	1.0
B010	Very Shallow, Dry to Fresh: Pine - Black Spruce Conifer	722.0	1.74	2	1.21	-0.5
B012	Very Shallow, Dry to Fresh: Aspen - Birch Hardwood	40.3	0.10	0	0.00	-0.1
B016	Dry, Sandy: Red Pine - White Pine Conifer	33.7	0.08	0	0.00	-0.1
B034	Dry, Sandy: Jack Pine - Black Spruce Dominated	971.3	2.34	5	3.03	0.7
B035	Dry, Sandy: Pine - Black Spruce Conifer	1,512.0	3.64	6	3.64	0.0
B036	Dry, Sandy: Cedar - Hemlock Conifer	0.2	<0.01	0	0.00	0.0
B037	Dry, Sandy: Spruce - Fir Conifer	215.8	0.52	1	0.61	0.1
B040	Dry, Sandy: Red Pine - White Pine Mixedwood	845.5	2.03	0	0.00	-2.0
B048	Dry, Sandy: Aspen - Birch Hardwood	66.7	0.16	8	4.85	4.7
B049	Dry to Fresh, Coarse: Field	1,618.9	3.90	0	0.00	-3.9
B050	Dry to Fresh, Coarse: Shrub	4,694.8	11.30	1	0.61	-10.7
B051	Dry to Fresh, Coarse: Red Pine - White Pine Conifer	93.9	0.23	0	0.00	-0.2
B052	Dry to Fresh, Coarse: Jack Pine - Black Spruce Dominated	1,536.3	3.70	10	6.06	2.4
B053	Dry to Fresh, Coarse: Pine - Black Spruce Conifer	3.2	0.01	13	7.88	7.9
B054	Dry to Fresh, Coarse: Cedar - Hemlock Conifer	13.4	0.03	0	0.00	0.0
B055	Dry to Fresh, Coarse: Spruce - Fir Conifer	11,781.2	28.35	7	4.24	-24.1
B058	Dry to Fresh, Coarse: Conifer	330.4	0.79	0	0.00	-0.8
B059	Dry to Fresh, Coarse: Red Pine - White Pine Mixedwood	1,425.0	3.43	0	0.00	-3.4
B065	Dry to Fresh, Coarse: Aspen - Birch Hardwood	2,275.6	5.48	30	18.18	12.7
B066	Dry to Fresh, Coarse: Maple Hardwood	241.8	0.58	1	0.61	0.0
B067	Dry to Fresh, Coarse: Mixedwood	259.5	0.62	3	1.82	1.2
B068	Moist, Coarse: Pine - Black Spruce Conifer	72.8	0.18	8	4.85	4.7
B070	Moist, Coarse: Hemlock - Cedar Conifer	1,063.1	2.56	0	0.00	-2.6
B071	Moist, Coarse: Spruce - Fir Conifer	25.0	0.06	3	1.82	1.8
B074	Moist, Coarse: Conifer	26.0	0.06	0	0.00	-0.1
B097	Moist, Coarse: Aspen - Birch Hardwood	5.4	0.01	6	3.64	3.6
B098	Moist, Coarse: Elm - Ash Hardwood	7.6	0.02	0	0.00	0.0
B099	Moist, Coarse: Red Maple Hardwood	111.2	0.27	0	0.00	-0.3
B100	Fresh, Silty to Fine Loamy: Red Pine - White Pine Conifer	57.1	0.14	0	0.00	-0.1
B101	Fresh, Silty to Fine Loamy: Jack Pine - Black Spruce Dominated	175.8	0.42	0	0.00	-0.4
B104	Fresh, Silty to Fine Loamy: Pine - Black Spruce Conifer	589.1	1.42	0	0.00	-1.4
B114	Fresh, Silty to Fine Loamy: Hemlock - Cedar Conifer	182.3	0.44	0	0.00	-0.4
B115	Fresh, Silty to Fine Loamy: Spruce - Fir Conifer	12.8	0.03	2	1.21	1.2
B116	Fresh, Silty to Fine Loamy: Aspen - Birch Hardwood	89.0	0.21	0	0.00	-0.2
B119	Moist, Fine: Pine - Black Spruce Conifer	138.5	0.33	4	2.42	2.1
B126	Moist, Fine: Hemlock - Cedar Conifer	66.8	0.16	0	0.00	-0.2
B127	Moist, Fine: Spruce - Fir Conifer	245.8	0.59	0	0.00	-0.6
B128	Moist, Fine: Aspen - Birch Hardwood	4,918.9	11.83	0	0.00	-11.8
B129	Treed Bog	1,391.1	3.35	0	0.00	-3.3
B133	Poor Conifer Swamp	166.4	0.40	4	2.42	2.0
B134	Intermediate Conifer Swamp	216.8	0.52	20	12.12	11.6

Table 2.2.3. Ecosite LSA Area Summary and Planned Survey Design

Ecosite Code	Ecosite Description	Total Area (ha)	LSA %	Surveyed Polygons	Surveyed %	Difference %
B135	Rich Conifer Swamp	344.3	0.83	6	3.64	2.8
B136	Hardwood Swamp	577.9	1.39	0	0.00	-1.4
B137	Organic Thicket Swamp	7.2	0.02	2	1.21	1.2
B138	Sparse Treed Fen	1.6	0.00	2	1.21	1.2
B139	Sparse Treed Bog	174.0	0.42	0	0.00	-0.4
B140	Open Bog	57.2	0.14	0	0.00	-0.1
B142	Poor Fen	526.2	1.27	6	3.64	2.4
B146	Open Moderately Rich Fen	154.7	0.37	0	0.00	-0.4
B147	Mineral Meadow Marsh	0.4	<0.01	7	4.24	4.2
B158	Open Shore Fen	5.4	0.01	3	1.82	1.8
B164	Cliff	3.1	0.01	0	0.00	0.0
B165	Rock Barren	1.5	<0.01	0	0.00	0.0
B189	Open Rock Barren	1.9	<0.01	0	0.00	0.0
B191	Constructed Vertical Surface	13.1	0.03	0	0.00	0.0
B193	Active Coarse Clean Fill	73.2	0.18	1	0.61	0.4
B197	Pavement/Concrete	724.6	1.74	0	0.00	-1.7
B223	Mineral Intermediate Conifer Swamp	28.8	0.07	0	0.00	-0.1
B224	Mineral Rich Conifer Swamp	9.4	0.02	1	0.61	0.6
U997-999	Infrastructure ROWs	533.1	1.28	1	0.61	-0.7
	Total	**41,562.9**	**100.00**	**165**	**100.00**	

2.2.3.1 Ecosite Validation

Ecosite validation surveys involved collecting information on a suite of environmental factors, including physical conditions, soil conditions and vegetation community composition. General site conditions (e.g., slope, aspect, percent surface substrate, and surface expression) were recorded at each survey location. Ecosites were ground-truthed using the *Ecosites of Ontario* (MNRF, 2015[b,c]). Plant species were catalogued and the percent cover of each vegetation stratum (tree, shrub, emergent, groundcover, and moss) was estimated at each survey location. Vegetation communities were characterized based on species composition, abundance, and cover within the various strata. Uncommon plant species were documented and, if the species not identified in the field, samples collected for later taxonomical identification. Three representative soil samples were taken at each survey location to determine the substrate composition. Substrate identification was completed following the methods described in *Field Guide to the Substrates of Ontario* (MNRF, 2015[d]).

2.2.3.2 Botanical Assessment

A botanical assessment was conducted by field biologists with knowledge of local flora. A plant species inventory was compiled in each 28 m^2 plot by identifying tree, shrub, and herbaceous plants. Surveyors systematically walked through the survey plots in a meandering fashion and recorded lists of the plant species encountered. The botanical assessment focused on identifying SAR, rare species and invasive plants. Accordingly, sites with higher potential to support these species (based on information from the background review) were preferentially selected for surveying, where possible.

Species nomenclature for plants recorded were based on the *Flora Ontario – Integrated Botanical Information System* (FOIBIS; Newmaster and Ragupathy, 2012). Recorded plants were compiled into a comprehensive list, along with the season of documentation (e.g., spring, summer and fall), S-Rank, provincial and federal status, the Co-efficient of Conservatism (CC) values (i.e., indicator to a species'/vegetation community's sensitivity or native dominance) and the wetness index (i.e., reflects a species' moisture preference). Plant SAR or rare (S1-S3) species identified during vegetation surveys were photographed and their GPS coordinates recorded. Invasive species were also documented when encountered as part of the vegetation surveys.

2.2.4 Wildlife

Habitat for wildlife does not include areas used exclusively for foraging or travelling between dwelling places. To determine whether a species' habitat exists in an area expected to be affected by an activity, it will often be necessary to both:

A. conduct a desktop analysis to assess the likelihood of species presence in the area based on:
    a. existing species observation records (e.g., available through the NHIC or other sources);
    b. species distribution maps or habitat suitability modelling; and
    c. existing information on ecological site conditions (e.g., Ecological Land Classification, satellite imagery, etc.).
B. where species are known or likely to be present, conduct appropriate site assessments and field surveys, as necessary, to determine whether areas that meet the definition of habitat are present.

2.2.4.1 Amphibian Call Counts

Amphibian breeding habitat is a category of SWH (see Sections 2.1.4 and 3.1.4). As amphibians are dependent on both aquatic and terrestrial habitats, they can serve as indicators of ecological health, which can be valuable in collecting baseline information and monitoring changes post-construction.

Amphibians were surveyed using spring roadside surveys following the *Amphibian Road Call Count* methodology (Konze and McLaren, 1997). Given the scale and limited access along the PSA, ARUs were also deployed within the LSA to record amphibian species present and amphibian choruses (following guidance from Canadian Wildlife Service, 2022).

Preliminary survey locations were selected in advance of conducting field surveys through an analysis of available land cover mapping (e.g., FRI, LIO, conservation authority mapping) and the screening of candidate *Amphibian Breeding SWH* (Sections 2.1.4., 3.1.4, 3.2.4). These areas included mapped wetlands (from LIO) and wetland ecosites (from FRI; Table 2.1.1-2):

- B142-144: Meadow Marshes
- B145: Floating Marshes
- B148-149: Shallow Marshes
- B150-152: Open Water Marshes
- B127-129, B222-224: Coniferous Swamps
- B130-133: Hardwood Swamps
- B134-135, B216: Thicket Swamps
- B136, B139-141: Fens
- B146-147: Shore Fens
- B126, B137-138: Bogs

The survey locations were distributed throughout the PSA and LSA to capture ideal survey locations, including:

- Wetlands in proximity to roads for health and safety reasons due to nighttime surveys;
- Selected wetland stations according to proportional representation in the PSA and LSA (e.g., 50% marsh, 30% swamp, 10% fen, 5% bog, 5% unknown); and
- Aim to achieve equal number of stations along alternate route groupings at the time of assessment.

ARU recordings were collected at night from early-April to mid-July (as suitable for the Project latitude) during the 2025 field season. Recordings were collected from sunset to midnight, when calling intensity is typically at its highest. Chorus intensity was defined into four Categories:

- CI0: No amphibians were recorded calling;
- CI1: Individuals could be counted, but calls did not overlap;
- CI2: Calls overlapped where the number of individuals could not be counted precisely; and
- CI3: A continuous chorus, unable to count individual calling males.

Chorus direction and approximate distance were also estimated for all stations, when possible.

2.2.4.2 Basking Turtle Surveys

Turtle species are known to occur in the Project region. Specifically, several turtle SAR including Blanding's Turtle (*Emydoidea blandingii*; listed as *Threatened* provincially and federally), Snapping Turtle (*Chelydra serpentina;* listed as *Special Concern* provincially and federally), and Midland Painted Turtle (*Chrysemys picta marginata;* listed as *Special Concern* federally) were identified during the background review (see Section 3.1.3).

Blanding's Turtles nest in open, sunny areas with low vegetation and sandy-well drained or gravelly soil such as forest clearings, meadows, shorelines, beaches, and rock outcrops. For overwintering they utilize bogs, fens, marshes or ponds with free (unfrozen) water depths of at least 7 cm (MECP, 2021[b]). Other turtle species also use similar habitat for overwintering. Both turtle nesting and wintering habitats are considered SWH (see Sections 3.1.4 and 3.2.4).

Detection of basking turtles at wetlands/waterbodies in early spring provides a strong indication as to whether these sites are used by turtles to overwinter. As such, turtle basking surveys were completed in the PSA, with a focus on areas with potential habitat suitability for Blanding's Turtle. Visual encounter surveys for basking turtles following the *Survey Protocol for Blanding's Turtle* (MNRF, 2015[e]).

Field crews conducted surveys in suitable habitats and in sites where historical records indicated presence of Blanding's Turtle. Surveys were conducted from mid-to-late spring/early summer (after ice cover has melted) until the water temperature becomes warmer than the air temperature. These conditions are when turtles are actively basking to increase their body temperatures following the hibernation period. Surveys were conducted during daylight hours between 8am and 5pm when air temperatures were above 5° C in full sunlight, or above 15° C in full cloud cover. Surveys were not conducted when the air temperature rose above 25° C. While the protocol does not specify a set observation period per survey site, field crews spent a minimum of 30 minutes per survey site. Field crews surveyed wetlands, shorelines, and other available basking sites (such as floating logs or hummocks) using binoculars (with a minimum magnification of 10x) and high-power spotting scopes.

Basking surveys were conducted so that the sun was behind the surveyors when trying to locate turtles (where possible). Turtles generally bask close to the water on logs, rocks, vegetation hummocks, sedge/grass tussocks, floating mats of aquatic vegetation, and muskrat mounds and lodges. Crews looked for dark shapes (e.g., edge of shell) against the vegetation, as well as shiny areas among vegetation, as this could also indicate a recently emerged wet turtle. In addition to recording observed turtles, potential basking sites, nesting sites and suitable summer and winter habitats were also documented. This information, particularly potential nesting sites, can help inform subsequent survey efforts to evaluate turtle presence and habitat use, if needed.

2.2.4.3 Breeding Bird Point Counts

Songbirds comprise a complex group of animals that include many migratory bird species (protected under the *MBCA*) and SAR (as defined in Section 2.1.2). Further, songbird community assemblages can serve as indicators of ecosystem health through species abundance and diversity. Point-count survey stations were established across the route alternatives to sample the various upland and wetland communities, and habitat types (as per Table 2.1.1-2) in proportion to their availability in the LSA.

Breeding bird point-count surveys were used to:

- Assess breeding bird species distribution and composition throughout the LSA. This is achieved by creating a broad and equal distribution of survey stations along alternative routes; and
- Identify SAR bird species occurring within the PSA.

Breeding bird point-count surveys were conducted by qualified avian biologists during the active breeding season (i.e., June 1 – July 10 in accordance with methods outlined in the *Canadian Breeding Bird Survey* (Sauer et al., 2017) and the *Ontario Breeding Bird Atlas* (*Instructions For Point Counts 2021*). The Ontario Breeding Bird Atlas protocol requires five-minute observations periods, however this was extended to ten minutes to improve detection. The protocol modification was consistent with recommendations from other protocol guidelines, including the Forest Bird Monitoring Programs in *Wildlife Monitoring Programs and Inventory Techniques for Ontario* (Konze and McLaren, 1997). During the observation period, bird species seen or heard were recorded. Each point-count survey station was surveyed once to maximize survey coverage across the PSA and improve the likelihood of capturing a comprehensive list of breeding birds across the extent of the Project.

Surveys were conducted between sunrise and 10 am under conditions where the wind did not exceed 15 km/h and there was no continuous or heavy rain. Survey stations consisted of 50-m radius circular plots with additional 50-m buffer (i.e., 100-m total radius surveyed). Birds observed outside of 100 m, including flyovers, were also recorded. Environmental conditions were recorded at the start of each survey, including time, temperature and precipitation since these conditions are known to influence bird activity and probability of detection.

Efforts were made to ensure there were equal numbers of point-count stations across route alternatives. Survey stations were distributed across the various habitat types (as defined in Table 2.1.1-2) in relative proportion to their abundance within the PSA. Survey stations were spaced a minimum of 250 m apart to avoid double counting individuals. Survey stations were also established at least 150 m from habitat edges to reduce the influence of "edge effects" and allow for improved evaluation of species habitat associations. Final survey location placement was left to the discretion of the field leads, with a suite of alternate

locations (identified in advance using FRI mapping information) already prepared as a contingency to reduce lost time during the survey window should targeted sites be inaccessible.

Point-count surveys were supplemented with ARU recordings (following guidance from Canadian Wildlife Service, 2022). ARU's were programmed to record 10 minutes each hour (to simulate an in-person point-count survey) from sunrise to 10 am throughout the breeding bird window (June 1 to July 10). A subset of these recordings was analyzed, choosing recordings with good weather (i.e., no wind or precipitation).

2.2.4.4 Marsh Bird Surveys

Marsh birds represent a sensitive group of animals, largely owing to their dependence on wetland habitats. Marsh bird communities are often secretive and may contain several SAR (as defined in Section 2.1.2). Targeted surveys employing alternate survey techniques were required to detect these species.

Marsh bird call-playback surveys were conducted following the Ontario Breeding Bird Atlas Marshbird Survey protocol (Tozer, 2023). Wetlands characterized by a mix of open water and emergent vegetation (i.e., a marsh) within the PSA were specifically targeted because they provide suitable habitat for marsh birds. Suitable ecosites included:

- B142-144: Meadow Marshes
- B145: Floating Marshes
- B148-149: Shallow Marshes
- B150-152: Open Water Marshes
- B146-147: Shore Fens

Marsh bird surveys were conducted between June 1 and July 10, beginning either:

- 30 minutes before sunrise, ending no later than 10 am; or
- four (4) hours before sunset, ending before dark.

Each call-playback survey is 11 minutes in duration, consisting of five (5) minutes of silent listening followed by six (6) minutes of call-playback. Call from six (6) target species were played in sequence during the call-playback, with each call played for 30 seconds followed by 30 seconds of silent listening. Calls were broadcast for the following species:

- Yellow Rail (*Coturnicops noveboracensis*; *SARA*: *Special Concern*);
- Sora (*Porzana carolina*);
- Virginia Rail (*Rallus limicola*);
- American Bittern (*Botaurus lentiginosus*);
- Pied-billed Grebe (*Podilymbus podiceps*); and
- Least Bittern (*Ixobrychus exilis*; *SARA: Threatened*).

Observers recorded all birds detected within a 100-m radius of the station center point, including fly-overs and non-target species. Birds observed outside of 100 m were also noted.

ARUs were also used to bolster the marsh bird surveys and were deployed in wetland ecosites selected as per in-person surveys. The units were programmed to record 10 minutes each hour from three (3) hours before sunset to one (1) hour after sunset throughout the breeding bird window (June 1 to July 10). Subsets of these recordings were analyzed, choosing recordings with good weather (i.e., no wind or precipitation).

2.2.4.5 Owl Surveys

The abundance and diversity of owl species can serve as indicators of forest health. The ranges of several species of owl overlap with the LSA, including Northern Boreal Owl (*Aegolius funereus*) and Great Gray Owl (*Strix nebulosa*) that have both been identified as priority species in Bird Conservation Regions 8 and 12 (ECCC, 2017) with which the LSA overlaps.

A nocturnal owl call-playback survey was conducted following the recently updated *Ontario Breeding Bird Atlas Protocol* (Shonfield, 2021). The objective of the owl surveys was to assess owl presence and habitat use. The surveys were completed in April since this is when owls are most territorial and most likely to respond to the recordings. Access within the LSA was limited during this time of year, so survey stations were established along the road network throughout the RISA with a minimum spacing distance of 1.6 km. The survey method involved playing a standardized recording issued by Bird Studies Canada and listening for owl callback. The recording consisted of Northern Boreal Owl and Great Gray Owl calls. The call-playback survey begins with two (2) minutes of silent listening, followed by a 20-second Boreal Owl call broadcast, another one (1) minute of silent listening, a 20-second Great Grey Owl call broadcast and a final minute of silent listening, for a total survey time of roughly 4.5 minutes.

Roadside surveys were supplemented by data from analyzed ARU recordings as per guidance from Canadian Wildlife Service (CWS, 2022). ARUs were deployed in roadside locations with suitable habitats for Great Gray and Boreal Owls. Great Gray Owls are found in coniferous forests and will hunt in meadows, bogs and other open areas with a few scattered trees. Boreal owls are found mainly in areas of extensive mature coniferous forest intermixed with small openings and patches of younger forest. In the winter, they forage in spruce-fir forests where uncrusted snow under the trees facilitates access to prey. In spring, they often forage in clearcuts and agricultural fields where small mammals are easier to locate. ARUs were deployed in April and programmed to record 5 minutes of each hour from sunset for five (5) hours to align with OBBA call-playback protocol timing and a subset of recordings analyzed that had minimal interference from ambient noise (e.g., from wind or rain).

2.2.4.6 Nightjar Surveys

Nightjars represent a family of cryptic birds that primarily forage for insects during the nights. There are two (2) nightjar species potentially present in the PSA; Eastern Whip-poor-will (*Antrostomus vociferus*; SARA: *Threatened*) and Common Nighthawk (*Chordeiles minor*; SARA: *Special Concern*). These species are particularly vulnerable to disturbance because they nest on the ground and have small clutch sizes, and are experiencing widespread population declines across North America. As such, it is important to survey for nightjar activity.

Nightjar surveys were conducted within the LSA to:

- Characterize crepuscular bird community;
- Document crepuscular SAR; and
- Identify SWH (if present).

Screening for potential nightjar nesting habitat was conducted by querying suitable conditions following a process provided by MECP through consultation efforts not related to the Project (M. Schott pers. Comm.):

- Selecting forest patches <60 years old from Forest Resource Inventory (FRI) landcover mapping;
- Identifying the subset of "dry" ecosites as defined in *Ecosites of Ontario – The Boreal* (MNRF, 2015[c]);
- Identifying a further subset of forests with ≤70% canopy closure and an understory closure of ≤20%; and
- Identifying the areas with the above characteristics that fell within 30 m of "open" habitat (e.g., clearcuts, treeless wetlands and lakes).

Nightjars were surveyed using ARUs, as recommended by Canadian Wildlife Service (CWS, 2022). ARUs allow for greater objectivity, consistency and archiving of data than roadside point counts. Nightjar calling activity is generally highest within 1 week on either side of a full moon. The full moons during the 2025 Eastern Whip-poor-will breeding window were on May 12, June 11 and July 10. ARUs were deployed in potential nesting habitat (as defined above) across the entire Eastern Whip-poor-will breeding window. ARUs were set to record six (6) minutes out of every 30 minutes from one (1) hour prior to sunset to 1.5-hours after sunset. A subset of recordings captured within one (1) week of the full moons within the nightjar breeding window were analyzed. Subsets included recordings across at least three (3) days that had minimal ambient noise interference (e.g., from wind or rain).

2.2.4.7 Bank Swallow Surveys

Bank Swallow (*Riparia riparia*) is designated as *Threatened* provincially and federally. Bank Swallows require near-vertical surfaces of loosely packed aggregate (sand/gravel) in which to build nesting burrows, and they often form large nesting colonies. They will use a variety of natural and anthropogenic habitats, including lake bluffs, stream and riverbanks, sand and gravel pits, and roadcuts. Bank Swallows were protected under the *ESA* (2007) at the time of the 2025 field program. As such, it was necessary to conduct targeted surveys for nesting sites given their unique habitat requirements since Bank Swallows were documented in the RISA (see Section 3.1.3).

Visual surveys for suitable Bank Swallow nesting habitat were conducted within the PSA in conjunction with other field surveys. Candidate habitat features were visually inspected for signs of Bank Swallow nesting activity during the peak breeding season (late-May to early-July). Surveys consisted of field crews scanning candidate habitat from a distance with binoculars to search for individuals and listening for their calls, followed by closer inspection of the area for nests or other signs (where accessible). Drone photography was used to complete the surveys in areas where ground access was difficult (e.g., sites along riverbanks). Increased survey effort focused on features with the potential to intersect the route alternatives.

2.2.4.8 Bat Maternity Roost Habitat Assessments and Acoustic Monitoring

Multiple bat SAR have ranges that overlap the RISA, including:

- Eastern Red Bat (*Lasiurus borealis*; SCA: *Endangered*);
- Hoary Bat (*Lasiurus cinereus*; SCA: *Endangered*);
- Little Brown Myotis (*Myotis lucifugus*; SCA and SARA: *Endangered*);
- Northern Myotis (*Myotis septentrionalis*; SCA and SARA: *Endangered*);
- Silver-haired Bat (*Lasionycteris noctivagans*; SCA: *Endangered*); and
- Tri-colored Bat (*Perimyotis subflavus*; SCA and SARA: *Endangered*).

Screening for bat habitat (i.e., maternal roosting habitat and hibernacula) was conducted as part of the desktop background review process). Potential resident bat (i.e., Little Brown Myotis, Northern Myotis and Tri-colored Bat) maternal roosting habitat was identified by querying suitable ecosites within the PSA. Suitable resident bat maternal roosting ecosites (identified by MECP as having higher potential of cavities in which to roost) include:

- B015-019 Very Shallow: Dry to Fresh: Mixedwood/Hardwood
- B023-028 Very Shallow: Humid: Conifer/Mixedwood
- B039-043 Dry, Sandy: Hardwood/Mixedwood
- B054-059 Dry to Fresh: Coarse: Mixedwood/Hardwood
- B069-076 Moist, Coarse: Mixedwood/Hardwood
- B087-092 Fresh, Clayey: Mixedwood/Hardwood
- B103-108 Fresh, Silty to Fine Loamy: Mixedwood/Hardwood
- B118-125 Moist. Fine: Mixedwood/Hardwood
- B130-133: Swamps.

Migratory bats (i.e., Eastern Red Bat, Hoary Bat and Silver-haired Bat) roost in deciduous, mixedwood and coniferous forests, with minor local preferences towards deciduous trees where they are abundant. Hoary Bat and Eastern Red Bat roost among the foliage of trees, while the Silver-haired Bat roost under bark and in the cavities of trees, like the habitats used by resident bat SAR. Potential roosting habitat was estimated by mapping all forested areas (both upland and lowland).

The maternity roosting period in northern Ontario is between May 31-August 31 (as per MECP guidance). Wildlife Acoustics Song Meter MiniBAT ultrasonic monitors were deployed in suitable roosting habitats or on the border between suitable roosting habitat and adjacent foraging habitat (i.e., more open areas like wetlands and transmission lines). Ultrasonic monitors were programmed in “trigger mode” to record from 30 minutes before sunset to five (5) hours after sunset for at least ten (10) days during the bat maternity roosting season.

Bat ultrasonic monitoring stations were established to achieve adequate coverage within candidate bat maternity roosting habitat throughout the PSA, with stations roughly distributed evenly across route alternatives. The objective of the sampling design was to assess bat community composition and species distribution throughout the PSA. The survey was not intended to identify individual occupied roosting sites. The acoustic monitoring stations provided sufficient sampling effort to extrapolate the trends across the PSA.

Ultrasonic recordings were analyzed by Kaleidoscope software (v. 5.4.7; recognizer [Bats of North America 5.4.0 S/A: 0]) and manually vetted by a trained bat acoustic analysis expert. The Kaleidoscope software produces a p-value for each species, which represents the confidence of correct species identification ranging from 0 (absolute confidence) to 1 (no confidence). A critical alpha value (i.e., acceptable confidence value) of 0.10 was used when interpreting the results.

2.2.4.9 Winter Aerial Surveys

Winter aerial strip transect surveys for the detection of mammals with a focus on ungulates were undertaken in the winter of 2025/2026. Additionally, TEK shared from Partner Nations indicated that the culturally significant Spirit Moose (i.e., rare Moose with a white coat) may be present near Foleyet, ON, and the winter aerial survey was conducted with this in mind. Generally east-west transects were flown along the proposed Transmission Line Alignment (TLA) right-of-way (ROW). The survey followed a transect along the route alternatives with parallel transects 1 km on either side of each route.

Provincially recognized and standardized ungulate aerial strip transect surveys require a three (3)-person crew configuration (plus pilot) with a minimum of two experienced biologists covering each side of the helicopter. A third biologist experienced in navigation, data recording and wildlife observation was present to ensure that the two main observers were free to focus on the primary observation tasks. This approach minimized bias in detection, track identification, and animal observation/classification. An accredited aerial service provider was chosen based on local proximity and safety record. These surveys typically occur between February 15 and March 31, to maximize animal detectability; however, suitable snow conditions may be present as early as December. Surveys were conducted in good visibility conditions, taking place between 10:00 am and 2:00 pm within 72 hours of a fresh snowfall, as per MNR guidelines (Ranta, 1997).

All wildlife observations and track data locations were recorded by GPS to collect occurrence and distribution information. Ungulates observed during the survey were classified with respect to sex and age categories based on physical attributes and behaviour (within group association). The number of calves, number of adult females, number of adult males, and number of unclassified were also recorded. All observations of alternate prey species occurring during the survey, including observed animals and track sets (i.e., Gray Wolf; *Canis lubus*) were also recorded by GPS (if encountered) to document distribution. In addition, raptors and stick nests were recorded if observed.

2.2.5 Watercourse Crossings

The baseline watercourse crossing characterization studies relied on information gathered during the desktop background review, which included agency mapped features (i.e., MNR, Conservation Authority mapping), and publicly available sources, as well as aerial interpretation of high-resolution imagery to identify aquatic features present in the PSA (where available). The desktop background review identified watercourses crossed by the PSA, a subset of which were surveyed in the field. Field data collection included helicopter-assisted, drone-supported and ground-based field surveys.

Field survey targeted a subset (~25%) of watercourses, prioritizing watercourses by thermal regime (i.e., cold water watercourses are less-tolerant to disturbance), permanency and size. The results of these surveys, coupled with available information from Forest Management Plans, were extrapolated to unsurveyed watercourses. Aquatic features that were adjacent to the PSA but not crossed were not surveyed. A subset of watercourse crossings was selected based on the *MNRF/DFO Protocol for the Review and Approval of Forestry Water Crossings* (MNRF, 2020).

eDNA Metabarcoding Analysis – 50 water samples were collected for eDNA (environmental deoxyribonucleic acid) metabarcoding analysis at surveyed watercourse and waterbody crossings to support the characterization of fish community composition and to augment background fish community data. Samples were collected by filtering surface water using a Smith-Root eDNA Citizen Scientist Sampler with self-preserving filters (summer sampling) or a Luer-lock syringe and adding a buffer (fall sampling). The filters were then submitted to the Agriculture and Food Laboratory at the University of Guelph for analysis through metabarcoding (fish and vertebrate primer).

The following data was recorded for each surveyed watercourse crossing:

- **Physical Characteristics** – A visual inspection completed along the full length of the study section of each watercourse to broadly define channel type and flow conditions. Visual inspections were completed in the vicinity of the proposed crossing location to assess and document the characteristic bed and bank morphology (including erosion/deposition features), channel substrate, and riparian vegetation. The observed conditions at the aquatic feature were documented via georeferenced photographs (looking upstream and downstream with full view of the channel and surrounding floodplain). A drone was used to acquire useful overhead photos for some locations, particularly for difficult to access areas.
- **Channel Geometry** – Basic measurements of channel geometry were conducted at the crossing. Measurements included estimates of bankfull width and depth, wetted width and depth, and side and channel slopes.
- **Measurements of Water Quality** – In-situ measurements of water quality conditions, including conductivity, pH, temperature, and dissolved oxygen were taken using a multiparameter water quality meter at the proposed crossings.

2.2.6 Significant Wildlife Habitat

The output from the background review was a large set of polygons covering a diverse range of cSWH features. The objectives of the cSWH field program were to:

- Identify ecosite polygons and features during desktop background review with the potential to support SWH across the proposed project routes (i.e., cSWH);
- Select an appropriate subset of identified features for ground-truthing which balances access issues while still collecting; and
- Ground-truth a subset of the identified ecosite polygons concurrently with other field surveys for efficiency.

A subset of the cSWH features was selected for ground-truthing, with site access as a main consideration (i.e., a goal of 80% road-accessible sites). cSWH ground-truthing sites were also ideally selected in locations where other survey programs were conducted to improve efficiency. Prospective sites were equally distributed across the length of the route alternatives. Field crews also documented other cSWH features (e.g., stick nests, seeps/springs, mineral licks) encountered during the 2025 field program.

3 RESULTS

3.1 BACKGROUND REVIEW RESULTS

3.1.1 Terrestrial Setting

Most of the project is situated in ecoregion 3E Lake Abitibi, and a small portion of the project in the west overlaps with ecoregion 4E Lake Temagami. Ecoregion 3E occupies 13.9% of Ontario and is characterized by mixed forest (29.5%), coniferous forest (28.1%), spare forest (10.8%), and deciduous forest (7.2%), with minor proportions of other land cover types (Crins et al., 2009). Ecoregion 3E is mostly contained within the Hudson Bay Watershed and there are a vast number of lakes and rivers systems. Climate conditions are characterized by warm short summers and long, cold, snowy winters (mean temperature range -0.5–2.5^{o}C). Mean precipitation ranges from 652–1,029 mm annually (Crins et al., 2009).

Ecoregion 3E lies within the boreal forest with the main tree species being Black Spruce (*Picea mariana*), White Spruce (*Picea glauca*), Balsam Fir (*Abies balsamea*), Jack Pine *(Pinus banksiana*), Tamarack (*Larix laricina*), White Birch (*Betula papyrifera*), Trembling Aspen (*Populus tremuloides*), and Balsam Poplar (*Populus balsamifera*; Rowe, 1972). According to Crins et al. (2008), the fauna typically found in the boreal forest includes:

- Mammals – Moose (*Alces alces*), Gray Wolf, American Marten (*Martes americana*), Canada Lynx (*Lynx canadensis*), Snowshoe Hare (*Lepus americanus*), Red Squirrel (*Sciurus vulgaris*), Beaver (*Castor canadensis*), and Eastern Redbacked Vole (*Myodes gapperi*).
- Birds - Common Loon (*Gavia immer*), Great Blue Heron (*Ardea herodias*), Bald Eagle (*Haliaeetus leucocephalus*), Osprey (*Pandion haliaetus*), Spruce Grouse (*Falcipennis canadensis*), Gray Jay (*Perisoreus canadensis*), Common Raven (*Corvus corax*), Philadelphia Vireo (*Vireo philadelphicus*), Tennessee Warbler (*Leiothlypis peregrina*), Palm Warbler (*Setophaga palmarum*), Yellow-rumped Warbler (*Setophaga coronata*), Lincoln's Sparrow (*Melospiza lincolnii*), White-throated Sparrow (*Zonotrichia albicollis*), Purple Finch (*Haemorhous purpureus*), and Pine Siskin (*Spinus pinus*).
- Amphibians - Spotted Salamander (*Ambystoma maculatum*), Boreal Chorus Frog (*Pseudacris maculata*), Wood Frog (*Lithobates sylvaticus*), Mink Frog (*Lithobates septentrionalis*), Midland Painted Turtle (*Chrysemys picta*), and Eastern Gartersnake (*Thamnophis sirtalis sirtalis*).
- Fish - Brook Trout (*Salvelinus fontinalis*), Lake Whitefish (*Coregonus clupeaformis*), Northern Pike (*Esox lucius*), Walleye (*Sander vitreus*), and Yellow Perch (*Perca flavescens*).

The LSA intersects many environmental management zones (Table 3.1.1-1) and protected areas (Table 3.1.1-2). Generally, the project area has a low human population density, although the LSA intersects a small portion of Chapleau Cree First Nation reserve land. Recreational use in the area includes canoe routes, snowmobile and ATV trails, hunting, fishing and berry picking (MNRF, 2021).

Table 3.1.1-1 Intersected Environmental Management Areas	
Bait Fish Harvest Areas	CH0037, CH0038, CH0052, CH0053, CH0054, CH0055, CH0067, CH0068, CH0069, CH0070, CH0079, CH0080, CH0081, CH0082, CH0083, CH0086, CH0087, CH0088, CH0093, CH0094, CH0095, CH0100, CH0101, CH0102, CH0103, CH0105, CH0106, CH0118, CH0119, CH0120, TI0037, TI0039, TI0054, TI0055, TI0056, TI0057, TI0069, TI0070, TI0071, TI0072, TI0073, TI0079, TI0080, TI0083, TI0084, WA0112, WA0113, WA0114, WA0117, WA0118, WA0119, WA0120, WA0121
Bear Management Areas	WA-35-001, TI-30-041, CP-31-019, CP-35-012, CP-35-010, CP-32-037, CP-35-007, CP-31-032, CP-32-034, TI-29-007, TI-30-032, CP-31-018, TI-31-001, CP-31-027, CP-32-036, TI-31-025, CP-31-030, CP-30-027, CP-30-029, TI-30-044, WA-32-031, CP-38-024, WA-32-033, WA-35-002, CP-30-028, CP-31-017, TI-30-042, CP-31-033, CP-31-022, TI-31-020, CP-35-005, CP-35-003, WA-34-008, WA-34-002
Enhanced Management Areas	Tikimaganda Recreation Access Area
Fisheries Management Zone	7, 8, 10
Forest Management Units	Algoma Forest, Gordon Cosens Forest, Martel Forest, Romeo Malette Forest, Abitibi River Forest, Pineland Forest
Ministry of Natural Resources Districts	Hearst Cochrane Kapuskasing District, Chapleau Wawa District, Timmins Kirkland Lake District
Trapline Areas	CP012, CP018, CP019, CP022, CP023, CP027, CP029, CP030, CP031, CP036, CP037, CP040, CP041, CP046, CP047, CP048, CP049, CP050, CP052, CP057, CP058, TI002, TI013, TI014, TI016, TI017, TI018, TI019, TI020, TI021, TI028, TI048, TI059, TI060, WA080, WA081, WA085, WA086, WA087, WA088
Wildlife Management Units	29, 30, 31, 32, 34, 35, 38

Table 3.1.1-2 Intersected Protected Areas	
Conservation Reserves	Vimy Lake Uplands Conservation Reserve, Tatachikapika River Plain Conservation Reserve, Windermere Goldie Lake Complex Conservation Reserve, Ivanhoe River Clay Plain Conservation Reserve
Provincial Parks	Groundhog River Waterway Provincial Park (Waterway Class), The Shoals Provincial Park (Natural Environment Class), Dana-Jowsey Lakes Provincial Park (Natural Environment Class), Ivanhoe Lake Provincial Park (Natural Environment Class)

3.1.2 Aquatic Setting

The Project spans three secondary watersheds: Northeastern Lake Superior, Missinaibi River and Mattagami River, and the Abitbi River watersheds. The Northeastern Lake Superior watershed is part of the Great Lakes – St. Lawrence Basin and encompasses the western portion of the PSA (route alternatives A1 and A2). The watercourses and waterbodies within this secondary watershed ultimately flow into Lake Superior to the west. Most of the PSA (route alternatives A1, A2, B1, B2, B3, C1, and C2) is within the Missinaibi River and Mattagami River watershed which is part of the Hudson – James Bay Basin. This secondary watershed extends from west of Chapleau to east of Timmins and water features within the watershed flow north towards James Bay. The eastern-most portion of the PSA (route alternatives C1 and C2), east of Timmins, is within the Abitibi River watershed. This secondary watershed is also part of the Hudson – James Bay Basin.

Based on a review of MNR historical fish stocking data and designated Lake Trout (*Salvelinus namaycush*) lakes, the LSA intersects waterbodies and watercourses that have been historically stocked with Brook Trout, Lake Trout and Walleye (MNRF, 2015[f]).

3.1.3 Species at Risk

The desktop background review identified records for 1,373 species across the RISA (Appendix C):

- 12 amphibian species,
- 7 reptile species,
- 5 mollusk species,
- 47 fish species,
- 16 arachnid species,
- 502 insect species,
- 28 mammal species,
- 218 bird species,
- 56 fungal, lichen or slime mold species, and
- 482 plant species.

Adopting a conservative approach, it was assumed that all identified species have the potential to occur within the LSA and PSA provided that suitable habitat and conditions exist.

Records for a total of 35 SAR were identified within the RISA (Table 3.1.3-1). Twenty-four (24) SAR are listed as *Threatened* or *Endangered* on the provincial and/or federal levels, 10 of which are migratory birds listed under Schedule 1 of *SARA* and offered protection under Sections 32 and 33/58.

A list of *Threatened* and *Endangered* SAR with the potential to occur within the LSA was developed based on historical records, known species distributions and the presence of suitable habitat (Table 3.1.3-2). This list includes several species that are known to be cosmopolitan through much of northern Ontario where suitable habitat exists (i.e. Eastern Red Bat, Hoary Bat, Silver-haired Bat) despite lacking existing records in the RISA, and species with overlapping ranges that require similar habitats to species identified through the desktop background review (i.e., Tri-colored Bat). Several potential SAR in Table 3.1.3-2 were included as they may be observed in the Project area but are unlikely to occur within the Project LSA. These include migrant species that breed farther north than the Project, species for which the Project is at the extreme northern edge of their breeding ranges or species for which suitable habitat is sparse or absent within the LSA:

- Migrants: Golden Eagle (*Aquila chrysaetos*), Lesser Yellowlegs (*Tringa flavipes*);
- Edge of Range: Least Bittern (*Ixobrychus exilis*), Gray Fox (*Urocyon cinereoargenteus*);
- Low/no suitable habitat within the LSA: Bobolink (*Dolichonyx oryzivorus*), Eastern Meadowlark (*Sturnella magna*) and Golden-winged Warbler (*Vermivora chrysoptera*).

Table 3.1.3-1 Desktop Background Review Species at Risk Records

Taxon	Common Name	Scientific Name	Observations						SCA Status	SARA Status	COSEWIC Status	Protection Jurisdiction for Project Area
			OBBA	eBird	iNaturalist	NHIC	FRI	FURMIS				
Bird	Bank Swallow	*Riparia riparia*	9	6	2	2			-	THR		SARA
Bird	Barn Swallow	*Hirundo rustica*	23	36	1				-	THR	SC	SARA
Bird	Black Tern	*Chlidonias niger*	2						END	Not at Risk		SCA
Bird	Bobolink	*Dolichonyx oryzivorus*	1	2		7			-	THR	SC	SARA
Bird	Canada Warbler	*Cardellina canadensis*	22	92		71			-	THR	SC	SARA
Bird	Chimney Swift	*Chaetura pelagica*	5	12					-	THR		SARA
Bird	Common Nighthawk	*Chordeiles minor*	16	58	1	8			-	SC		
Bird	Eastern Meadowlark	*Sturnella magna*		3					-	THR		SARA
Bird	Eastern Whip-poor-will	*Antrostomus vociferus*		2		2			-	THR	SC	SARA
Bird	Eastern Wood-pewee	*Contopus virens*	12	18	2	12			-	SC		
Bird	Evening Grosbeak	*Coccothraustes vespertinus*	43	226	4	95			-	SC		
Bird	Golden-winged Warbler	*Vermivora chrysoptera*		2					-	THR		SARA
Bird	Horned Grebe	*Podiceps auritus*		3					-	Not Listed	SC	
Bird	Lesser Yellowlegs	*Tringa flavipes*		4					THR	Not Listed	THR	SCA
Bird	Olive-sided Flycatcher	*Contopus cooperi*	19	76	3	77			-	SC		
Bird	Red-headed Woodpecker	*Melanerpes erythrocephalus*		1					END	END		SARA
Bird	Rusty Blackbird	*Euphagus carolinus*	10	36	1	24			-	SC		
Bird	Short-eared Owl	*Asio flammeus*			1				THR	SC	THR	SCA
Bird	Wood Thrush	*Hylocichla mustelina*	2	3					-	THR		SARA
Fish	Lake Sturgeon (Southern Hudson Bay – James Bay population)	*Acipenser fulvescens*				50			-	SC		
Insect	Gypsy Cuckoo Bumble Bee	*Bombus bohemicus*				2			END	END		SCA
Insect	Monarch	*Danaus Plexippus*			11				-	END		
Insect	Nine-spotted Lady Beetle	*Coccinella novemnotata*				1			END	END		SCA
Insect	Transverse Lady Beetle	*Coccinella transversalis*				1			END	SC		SCA
Insect	Yellow-banded Bumble Bee	*Bombus terricola*				7			-	SC		
Mammal	Boreal Caribou	*Rangifer tarandus caribou*				4			THR	THR		SCA
Mammal	Eastern Wolf	*Canis lupus Lycaon*			3				THR	THR		SCA
Mammal	Gray Fox	*Urocyon cinereoargenteus*						14	THR	THR		SCA
Mammal	Little Brown Myotis	*Myotis lucifugus*				3			END	END		SCA
Mammal	Northern Myotis	*Myotis septentrionalis*				2			END	END		SCA
Mammal	Wolverine	*Gulo gulo*						1	THR	SC		SCA
Plant	Black Ash	*Fraxinus nigra*			10	3	672		END	Not Listed	THR	SCA
Reptile	Blanding's Turtle	*Emydoidea blandingii*				34			THR	END		SCA
Reptile	Midland Painted Turtle	*Chrysemys picta*				35			-	SC		
Reptile	Snapping Turtle	*Chelydra serpentina*				16			-	SC		

"-": not eligible to be listed under SCA; SC: Special Concern; THR: Threatened; END: Endangered

Table 3.1.3-2 Threatened and Endangered Species at Risk with the Potential to Occur within the LSA

Common Name	Scientific Name	SCA	SARA	Protection Jurisdiction for Project Area
Bank Swallow	*Riparia riparia*	-	THR	SARA
Barn Swallow	*Hirundo rustica*	-	THR	SARA
Black Tern	*Chlidonias niger*	END	Not at Risk	SCA
Bobolink	*Dolichonyx oryzivorus*	-	THR	SARA
Canada Warbler	*Cardellina canadensis*	-	THR	SARA
Chimney Swift	*Chaetura pelagica*	-	THR	SARA
Eastern Meadowlark	*Sturnella magna*	-	THR	SARA
Eastern Whip-poor-will	*Antrostomus vociferus*	-	THR	SARA
Golden Eagle	*Aquila chrysaetos*	END	Not at Risk	SCA
Golden-winged Warbler	*Vermivora chrysoptera*	-	THR	SARA
Least Bittern	*Ixobrychus exilis*	-	THR	SARA
Lesser Yellowlegs	*Tringa flavipes*	THR	Not Listed	SCA
Red-headed Woodpecker	*Melanerpes erythrocephalus*	-	END	SARA
Short-eared Owl	*Asio flammeus*	THR	SC	SCA
Wood Thrush	*Hylocichla mustelina*	-	THR	SARA
Gypsy Cuckoo Bumble Bee	*Bombus bohemicus*	END	END	SCA
Boreal Caribou	*Rangifer tarandus caribou*	THR	THR	SCA
Eastern Red Bat	*Lasiurus borealis*	END	Not Listed	SCA
Eastern Wolf	*Canis lupus lycaon*	THR	THR	SCA
Gray Fox	*Urocyon cinereoargenteus*	THR	THR	SCA
Hoary Bat	*Lasiurus cinereus*	END	Not Listed	SCA
Little Brown Myotis	*Myotis lucifugus*	END	END	SCA
Northern Myotis	*Myotis septentrionalis*	END	END	SCA
Silver-haired Bat	*Lasionycteris noctivagans*	END	Not Listed	SCA
Tri-colored Bat	*Perimyotis subflavus*	END	END	SCA
Blanding's Turtle	*Emydoidea blandingii*	THR	END	SCA

SC: Special Concern; THR: Threatened; END: Endangered

Black Ash (*Fraxinus nigra*) is known to be present within the LSA from FRI records. Under *O.Reg. 61/26*:

17. (1) An activity that results or is likely to result in the killing, harming or taking of a member of the Black Ash species is prescribed for the purposes of paragraph 4 of subsection 16 (3) of the Act if the member affected by the activity is,
(a) a member not located in a municipality or territorial district set out in Schedule 1;
(b) an immature member located in a municipality or territorial district set out in Schedule 1; or
(c) a mature member that is,
(i) located in a municipality or territorial district set out in Schedule 1, and
(ii) identified as unhealthy by a qualified Black Ash professional in a report containing the information set out in Schedule 2.

The Project does not fall within a municipality listed under Schedule 1 of *O. Reg. 61/26*, therefore Black Ash within the LSA is not afforded protection under the *SCA*. As such, it was omitted from Table 3.1.3-2. Black Ash stands are considered a Rare Tree Type in the Project area as per the Significant Wildlife Habitat Schedule Criterial for Ecoregion 3E and several Indigenous communities have shared that Black Ash has cultural significance.

Nine-spotted Lady Beetle (*Coccinella novemnotata*) and Transverse Lady Beetle (*Coccinella transversalis*) are likely *Extirpated* from Ontario based on the lack of sightings since the 1990s, although their official provincial designation is still *Endangered*. It is highly unlikely these species will be encountered within the LSA, therefore they have been omitted from Table 3.1.3-2.

SAR observed during the 2025 field program are discussed further in Section 3.2.5.

3.1.4 Significant Wildlife Habitat

All cSWH and cRVC categories described in *Significant Wildlife Habitat Criteria Schedules for Ecoregion 3E* (MNRF, 2015[a]) were queried for within the LSA using data from FRI mapping, LIO and NHIC databases. Only cSWH/cRVC with at least candidate ecosites present within the LSA are discussed in this document. Thirty-one (31) cSWH and nine (9) cRVC were identified in the LSA. This included ten (10) candidate Seasonal Concentration Areas for Wildlife (Table 3.1.4-1), eight (8) candidate Specialized Habitats for Wildlife (Table 3.1.4-2), 13 candidate Habitats for Species of Conservation Concern (Table 3.1.4-3) and nine (9) candidate Rare Vegetation Communities (Table 3.1.4-4). Since the *SCA* does not list provincial Special Concern species, all SAR documented during the Desktop Background Review that are not protected under the *SCA* or *SARA* in the Project Area have been considered "Species of Conservation Concern". "Candidate Ecosites" represent areas identified in *Significant Wildlife Habitat Criteria Schedules for Ecoregion 3E* (MNRF, 2015[a]) with the potential of supporting SWH/RVC, while LIO, FRI stand composition, NHIC and DFO records represent confirmed observations. cSWH and cRVC have been presented as total areas across the LSA, as well as broken down by route alternatives.

Detailed assessments of cSWH/cRVC are presented in Section 3.2.4.

Table 3.1.4-1 Desktop Background Review Significant Wildlife Habitat - Seasonal Concentration Areas for Wildlife in the LSA

Seasonal Concentration Areas for Wildlife	Source	Candidate Ecosites	LSA	Route							Likelihood in LSA
				A1	A2	B1	B2	B3	C1	C2	
Moose Late Winter Habitat (Figures 38-49)	Candidate Ecosites (ha)	B036-038, B049-053, B065-068, B081-087, B098-102, B114-117	3,417.5	1,617.11	1,729.97	843.605	842.463	686.53	126.97	170.454	Confirmed
	LIO Record (ha) - Wildlife Values Areas		872.9	-	-	295.6	669.8	34.0	29.2	19.1	
Waterfowl Stopover and Staging Area - Aquatic (Figures 50-61)	Candidate Ecosites (ha)	B142-152	681.3	232.4	224.8	261.1	315.8	300.3	22.8	26.1	Unlikely
Bat Hibernacula (Figures 62-65)	Candidate Ecosites (ha)	B158-159, B164-165, B174-175, B180-181	10.0	8.1	5.1	-	-	-	-	1.5	Candidate
	AMIS (count) - Features-to-Surface		27	-	-	-	-	-	21	13	
	NHIC Restricted Records (count) - Likely Bat Hibernaculum		1	-	-	-	-	-	1	1	
Resident Bat Maternal Roosting Habitat (Figures 66-77)	Candidate Ecosites (ha)	B015-019, B023-028, B039-043, B054-059, B069-076, B087-092, B103-108, B118-125, B130-133	16,437.4	4,417.2	4,312.5	4,191.6	3,762.0	3,869.4	2,955.9	3,156.1	Candidate
Migratory Bat Maternal Roosting Habitat (Figures 78-89)	Candidate Ecosites (ha)	B011-019, B023-028, B033-043, B048-059, B064-076, B081-092, B097-108, B113-125, B127-129, B130-133, B222-224	37,964.7	8,333.0	8,333.0	11,545.9	10,876.2	10,362.0	7,185.2	8,321.2	Candidate
Turtle Wintering Area (Figures 90-101)	Candidate Ecosites (ha)	B128-142, B145-152	8,536.5	795.2	782.6	2,813.2	2,525.1	1,917.3	2,793.7	3,267.3	Candidate
Reptile Hibernaculum (Figures 102-113)	Candidate Ecosites (ha)	B008-028, B128-139, B158-159, B164-165, B167-172, B174-175, B180-181, B183-188	8,604.0	560.0	552.1	2,532.1	2225.3	1,661.3	3,290.6	3,841.0	Candidate
Colonially-nesting Bird Breeding Habitat - Ground (Figures 114-116)	Candidate Ecosites (ha)	B008, B020-021, B030-031, B045-046, B061-062, B078-079, B094-095, B110-111, B142-144, B160-165, B169-172, B176-181, B185-188	5.4	5.4	5.4	-	-	-	-	-	Candidate
	NHIC Records (count) - Colonial Waterbird Nesting Area		29	29	29	-	-	-	-	-	
Colonially-nesting Bird Breeding Habitat - Trees/Shrubs (Figures 117-128)	Candidate Ecosites (ha)	B045-059, B064-076, B081-092, B097-108, B113-137, B161-162, B177-178	19,758.6	5,148.5	5,230.5	4,955.1	4,492.5	4,504.2	3,848	4,352.3	Candidate
	NHIC Records (count) - Mixed Wader Nesting Colony		33	29	29	3	4	3	-	-	
Colonially-nesting Bird Breeding Habitat - Cliff (Figure 129)	Candidate Ecosites (ha)	B001-004, B157-159, B173-175	5.4	5.0	2.0	-	-	-	-	-	Unlikely

Table 3.1.4-2 Desktop Background Review Significant Wildlife Habitat - Specialized Habitat for Wildlife in the LSA

Specialized Habitat for Wildlife	Source	Candidate Ecosites	LSA	Route							Likelihood in LSA
				A1	A2	B1	B2	B3	C1	C2	
Waterfowl Nesting Areas (Figures 130-141)	Candidate Ecosites (ha)	B129-135, B140-152, B224	2,866.4	336.1	340.3	1,422.9	1,309.0	989.4	425.5	511.3	Candidate
Turtle Nesting Areas (Figures 142-152)	Candidate Ecosites (ha)	B003, B006-007, B031, B171-172, B187-188	82.3	9.4	7.5	55.7	1.7	0.8	14.9	14.2	Candidate
Amphibian Breeding Habitat – Wetland (Figures 153-164)	Candidate Ecosites (ha)	B128-135, B141-152, B223-224	7,756.9	551.0	534.3	2,662.6	2,380.0	1,744.6	2,665.4	3,007.3	Candidate
Amphibian Breeding Habitat – Woodland (Figures 165-168)	Candidate Ecosites (ha)	B011-019, B023-028, B033-043, B048-059, B064-076, B081-092, B097-108, B113-125	138.5	1.7	1.7	23.7	15.0	15.0	98.1	98.1	Candidate
Moose Aquatic Feeding Areas (Figures 169-180)	Candidate Ecosites (ha)	B142-145, B148-152, B219-B221	3,861.1	629.2	654.9	1,122.4	1,465.2	830.41	566.28	541.05	Confirmed
	LIO Record (ha) - Wildlife Values Areas		136.2	34.2	34.5	52.0	39.2	42.3	9.9	9.5	
Sharp-tailed Grouse Lek (Figures 181-183)	Candidate Ecosites (ha)	B029-031, B044-046, B060-062, B077-079, B093-095, B109-111, B126, B136-141	61.6	42.4	42.4	-	-	-	-	19.2	Candidate
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat (Figures 184-189)	LIO Record (count) - Wildlife Values Sites Osprey Nests		5	-	-	1	2	1	2	2	Confirmed
	LIO Record (count) - Wildlife Values Sites Unknown Raptor Nests		5	-	-	1	5	4	-	-	
Mast Producing Areas (Figures 190-200)	Candidate Ecosites (ha)	B033-035, B037, B039-040, B048-050, B052, B054-055, B065, B070, B100-101, B116, B119, B127-129	1,498.0	183.7	165.7	573.67	575.17	566.34	146.67	158.35	Candidate

Table 3.1.4-3 Desktop Background Review Significant Wildlife Habitat - Habitat for Species of Conservation Concern in the LSA

Habitat for Species of Conservation Concern	Source	Candidate Ecosites	LSA	Route							Likelihood in LSA
				A1	A2	B1	B2	B3	C1	C2	
Marsh Bird Breeding Habitat (Figures 201-212)	Candidate Ecosites (ha)	B134-B152	2,060.1	557.0	558.7	587.3	641.9	638.3	353.5	525.8	Candidate
Early Successional Bird Breeding Habitat (Figure 213)	Candidate Ecosites (ha)	B009-010, B021-022, B031-032, B046-047, B062-063, B079-080, B095-096, B111-112, B134-135	36.8	-	-	36.8	36.8	36.8	-	-	Candidate
Common Nighthawk (*Chordeiles minor*) (Figures 214-224)	Candidate Ecosites (ha)	edge habitat between forest and open habitats	*400.4	90.96	86.66	*197.0	*140.8	*160.4	*32.4	*32.4	Confirmed
Eastern Wood-pewee (*Contopus virens*) (Figures 225-236)	Candidate Ecosites (ha)	B015-019, B023-028, B039-043, B054-059, B069-076, B087-092, B103-108, B118-125, B130-133	1,6437.4	4,417.2	4,312.5	4,191.6	3,762.0	3,869.4	2,955.9	3,156.1	Confirmed
Evening Grosbeak (*Coccothraustes vespertinus*) (Figures 237-242)	Candidate Ecosites (ha)	B015, B019, B027, B028, B039, B043, B054, B059, B069, B076, B087, B092, B103, B108, B118, B125	1,438.4	13.4	13.4	54.7	189.3	189.3	883.0	1,071.2	Confirmed
Horned Grebe (*Podiceps auritus*) (Figures 243-254)	Candidate Ecosites (ha)	Marsh wetlands <20 ha, or areas with open water and abundant emergent vegetation. Potential ecosites: B134-B152	2,060.1	557.0	558.7	587.3	641.9	638.3	353.5	525.8	Candidate
Olive-sided Flycatcher (*Contopus cooperi*) (Figures 255-266)	Candidate Ecosites (ha)	B011-014, B023-026, B033-038, B048-053, B064-068, B081-086, B097-102, B113-117	14,244.5	3,551.0	3,664.8	4,745.6	4,856.3	5,005.5	1,655.2	2,219.9	Confirmed
Rusty Blackbird (*Euphagus carolinus*) (Figures 243-254)	Candidate Ecosites (ha)	B134-B152	2,060.1	557.0	558.7	587.3	641.9	638.3	353.5	525.8	Candidate
Lake Sturgeon (*Acipenser fulvescens*) (Southern Hudson Bay – James Bay population) (Figures 267-271)	NHIC Records (count) DFO Records (ha)	Large lakes and rivers	2 199.7	-	-	- 24.6	2 76	2 87.2	- 26.7	- 28	Confirmed
Monarch (*Danaus plexippus*) (Figures 272-283)	Candidate Ecosites (ha)	B006, B008, B020-021, B029-030, B044-045, B126-156, B170-172, B222-224	8,887.3	839.7	827.1	3025.2	2731	1,945.0	2,816.5	3,321.1	Candidate
Yellow-banded Bumble Bee (*Bombus terricola*)	Habitat generalist: occurs in a diverse range of habitats, including mixed woodlands, farmlands, urban areas, montane meadows, prairie grasslands and boreal habitats.										Candidate
Midland Painted Turtle (*Chrysemys picta*) (Figures 90-101, 142-152)	See *Turtle Wintering Area* on Table 3.1.4-1 and *Turtle Nesting Areas* Table 3.1.4-2										Candidate
Snapping Turtle (*Chelydra serpentina*) (Figures 90-101, 142-152)	See *Turtle Wintering Area* on Table 3.1.4-1 and *Turtle Nesting Areas* Table 3.1.4-2										Candidate

* habitat calculation incomplete because FRI mapping data was not available for the Romeo Malette Forest

Table 3.1.4-4 Desktop Background Review Rare Vegetation Communities in the LSA

Rare Vegetation Community	Source	Candidate Ecosites	LSA	Route							Likelihood in LSA
				A1	A2	B1	B2	B3	C1	C2	
Cliff and Talus Slopes (Figure 284)	Candidate Ecosites (ha)	B157-159, B166-168, B173-175, B182-184, B201-203	5.4	5.0	2.0	-	-	-	-	-	Confirmed
Hardwood Swamp (Figures 285-288)	Candidate Ecosites (ha)	B130, B131, B132, B133	*166.4	-	-	*1.3	*2.3	*2.3	*82.5	*133.1	Unlikely
Sand Dune (Figures 289-300)	Candidate Ecosites (ha)	B005, B006, B142	526.2	214.5	210.1	223.3	207.4	203.1	21.5	24.8	Unlikely
Rare Tree Type - Red and Sugar Maple (Figures 301-312)	Candidate Ecosites (ha)	B018, B019, B028, B042, B043, B058, B059, B073, B074, B075, B076, B091, B092, B107, B108, B122, B123, B124, B125	1,781.4	203.4	273.4	60.0	194.5	194.5	883.0	1,071.2	Confirmed
	FRI Record - ≥35% overstory composition (ha)		327.6	198.9	244.7	5.2	5.2	5.2	-	-	
Rare Tree Type – Elm (Figures 313-317)	Candidate Ecosites (ha)	B019, B043, B056, B059, B071, B076, B089, B092, B105, B108, B120, B125	1,450.0	-	-	79.7	189.3	189.3	883.0	1,071.2	Unlikely
Rare Tree Type – Oak (Figures 318-322)	Candidate Ecosites (ha)	B017, B019, B028, B041, B043, B057, B059, B072, B076, B090, B092, B106, B108, B121, B125	1,425.0	-	-	54.7	189.3	189.3	883.0	1,071.2	Unlikely
Rare Tree Type - Black Ash (Figures 323-332)	Candidate Ecosites (ha)	B019, B028, B056, B059, B071, B076, B089, B092, B105, B108, B120, B125	1,450.0	-	-	79.7	189.3	189.3	883.0	1,071.2	Confirmed
	FRI Record - ≥35% overstory composition (ha)		20.6	-	-	20.6	-	-	-	-	
	NHIC Record (count)		-	-	-	-	-	-	1	1	
Rare Tree Type - Red and White Pine (Figures 333-341)	Candidate Ecosites (ha)	B011, B015, B023, B027, B033, B039, B048, B054, B064, B069, B081, B087, B097, B103, B113, B118	85.5	13.4	13.4	72.1	57.8	26.4	-	-	Confirmed
	FRI Record - ≥35% overstory composition (ha)		77.4	13.4	13.4	64.0	31.5	0.6	-	-	
Rare Tree Type - Yellow Birch (Figures 342-353)	Candidate Ecosites (ha)	B019, B028, B040, B043, B055, B059, B070, B076, B088, B092, B104, B108, B119, B125	7,220.7	2,844.4	2,707.5	1,166.6	953.9	1,065.2	1,444.2	1,628.2	Candidate

* RVC only present in Rome Malette Forest, likely reflecting imperfect conversion from Ontario Landcover Mapping into ecosite codes

3.2 FIELD DATA COLLECTION

The desktop background review helped guide the Field Program Methodology (Appendix A). The field program was designed to describe general wildlife and habitat presence within the LSA, but also included surveys specifically targeting natural features and species identified during the desktop background review, such as SWH and SAR/SAR habitat. A full summary of surveys conducted during the 2025 field program is provided in Table 3.2.

Table 3.2 2025 Field Program Survey Summary

Survey Type	Dates
In-person Surveys	
Vegetation	June 3 - October 1, 2025
Amphibian Roadside	May 28 - May 29, 2025
Basking Turtle	May 26 - 30, 2025
Breeding Bird Point Count	June 3 - 13 and June 20 - 29, 2025
Marsh Bird	June 6 - 25, 2025
Owl	April 21 - 25, 2025
Bank Swallow	16-Aug-25
Winter Aerial	February 3 - 4, 2026
Aquatic Habitat Assessment	May 27 - October 1, 2025
ARU Surveys	
Amphibian	April 12 - July 10, 2025
Breeding Bird	June 1 - July 10, 2025
Marsh Bird	June 1 - July 10, 2025
Owl	April 21 - April 30, 2025
Nightjar	June 3 - July 10, 2025
Bat Maternity Roost Habitat	May 27 - June 28, 2025

As discussed in Section 2.2, several field survey locations fall outside of the current LSA due to refinements to the route alternatives between the onset of the 2025 field program and the writing of this report. These data have still been included in this report as they contribute to providing a broader understanding of existing natural environmental conditions in the Project region.

3.2.1 Vegetation and Wetlands

Vegetation surveys were conducted at 163 locations from June 3 - October 1, 2025 (Figures 354-365, Table 3.2.1). Since the vegetation surveys were completed before route alternatives were refined, 38 vegetation survey stations were completed outside of the refined route alternatives (Table 3.2.1).

Vegetation survey locations were selected proportionately to the relative abundance of their ecosites within the LSA. However, some ecosites were surveyed at lower proportions. For instance, despite being the most abundant, ecosites B055 and B050 were surveyed within 11% and 3% of their abundance due to their prevalence within the LSA. However, these ecosites were still the most widely surveyed in the study.

A list of all the vegetation species identified in field surveys has been included in Appendix D.

Table 3.2.1 Summary of Vegetation Plots by Route Alternatives

Survey ID	Route Alternatives	FRI Ecosite	Field Ecosite	Survey ID	Route Alternatives	FRI Ecosite	Field Ecosite	Survey ID	Route Alternatives	FRI Ecosite	Field Ecosite
V001	A1	B058	B055	V056	B1, B2	B139	B144	V111	C1, C2	B050	B127
V002	A1, A2	B034	B034	V057	B1, B2	B146	B146	V112	A1, A2	B055	B055
V003	A1	B055	B055	V058	B1, B2	B128	B128	V113	C1, C2	B128	B128
V004	A1, A2	B128	B037	V059	B1, B2	B035	B050	V114	C1, C2	B128	B128
V005	A1, A2	B049	B034	V060	B1, B2	B055	B055	V115		B050	B050
V006	A1, A2	B128	B037	V061	B1, B2	B050	B037	V116		B055	B055
V007	A1, A2	B136	B126	V062	B1, B2	B129	B129	V117		B040	B040
V008	A1, A2	B034	B098	V063	B1, B2	B055	B099	V118		B055	B055
V009	A1, A2	B040	B050	V064	B1, B2	B128	B128	V119		B035	B035
V010	A1, A2	B007	B007	V065	B1, B2	B129	B055	V120		B034	B034
V011	A1, A2	B035	B050	V066	B1, B2	B065	B116	V121	A1, A2	B101	B101
V012	A1, A2	B101	B055	V067	B1, B2	B055	B055	V122		B034	B034
V013	A1, A2	B142	B146	V068	B1, B2	B146	B146	V123		B049	B049
V014	A1, A2	B055	B055	V069	B1, B2	B055	B055	V124	B3	B050	B050
V015	A1, A2	B128	B128	V070		B146	B146	V125	B3	B035	B035
V016	A1, A2	B052	B034	V071	B1, B2	B128	B128	V126	B3	B049	B148
V017	A1, A2	B127	B127	V072	B1, B2	B055	B055	V127	B3	B049	B035
V018	A1, A2	B142	B147	V073	B1, B2	B067	B116	V128	B3	B139	B144
V019	A1, A2	B052	B052	V074		B050	B116	V129	B3	B055	B055
V020	A1, A2	B139	B0139	V075	C1, C2	B050	B040	V130	B3	B040	B040
V021	A1, A2	B065	B052	V076		B052	B052	V131	B3	B040	B040
V022	A1, A2	B052	B052	V077		B055	B104	V132	B3	B067	B128
V023	A1, A2	B055	B040	V078	B1	B128	B128	V133	B3	B065	B129
V024	A1, A2	B037	B037	V079	B1	B142	B137	V134	B3	B012	B012
V025	A1, A2	B128	B0127	V080	B1	B050	B114	V135	B3	B055	B055
V026	A1, A2	B055	B055	V081	B1	B012	B012	V136	B3	B055	B052
V027	A1, A2	B065	B034	V082		B128	B128	V137	B3	B055	B104
V028	A1, A2	B055	B055	V083	B1	B129	B085	V138	B3	B050	B050
V029	A1, A2	B052	B052	V084		B070	B055	V139	B3	B128	B129
V030	A1, A2	B049	B049	V085	B2, B3	B059	B055	V140	B3	B129	B129
V031		B055	B040	V086	B2, B3	B136	B139	V141	B3	B055	B055
V032		B042	B0144	V087	C1, C2	B059	B119	V142	B3	B128	B129
V033	B3	B065	B114	V088	C1, C2	U997-U999	B194	V143	B3	B129	B049
V034		B055	B040	V089	C1, C2	B050	B035	V144	B3	B065	B037
V035	B1	B050	B034	V090	C2	B070	B035	V145	B3	B035	B035
V036		B055	B040	V091	C1, C2	B128	B128	V146	A1, A2	B055	B040
V037		B067	B052	V092	C1, C2	B114	B114	V147	A1	B055	B055
V038	B1, B2	B035	B050	V093	C1, C2	B114	B128	V148	A1, A2	B052	B052
V039		B007	B007	V094	C1, C2	B114	B148	V150		B139	B055
V040	B1	B042	B147	V095	B1	B114	B116	V151		B055	B049
V041		B042	B142	V096	C1, C2	B049	B049	V152		B049	B127

Table 3.2.1 Summary of Vegetation Plots by Route Alternatives

Survey ID	Route Alternatives	FRI Ecosite	Field Ecosite	Survey ID	Route Alternatives	FRI Ecosite	Field Ecosite	Survey ID	Route Alternatives	FRI Ecosite	Field Ecosite
V042		B0139	B144	V097	C1, C2	B070	B088	V153		B142	B148
V043	B1	B070	B053	V098	C1, C2	B070	B055	V156		B055	B040
V044		B0127	B082	V099	C1, C2	B128	B129	V157		B055	B055
V045		B055	B104	V100	C1, C2	B135	B144	V158	A1, A2	B070	B128
V046		B0139	B135	V101	C1, C2	B049	B035	V159	A1, A2	B070	B070
V047		B040	B052	V102	C1, C2	B040	B040	V160		B065	B052
V048	B1, B2	B193	B193	V103	C1, C2	B050	B052	V161		B070	B070
V049	B1, B2	B127	B037	V104	C1, C2	B055	B040	V162		B135	B142
V050	B1, B2	B065	B035	V105	C1, C2	B128	B055	V163		B050	B070
V051	B1, B2	B049	B049	V106	C1, C2	B059	B055	V164		B135	B104
V052	B1, B2	B129	B129	V107	C1, C2	B128	B013	V165	B1	B050	B052
V053	B1, B2	B055	B040	V108	C1, C2	B034	B196	V166		B040	B040
V054	B1, B2	B224	B055	V109	C1, C2	B128	B050				
V055	B1, B2	B055	B055	V110	C1, C2	B047	B148				

3.2.1.1 Forest Resource Inventory Ecosite Validation

From the 61 ecosites identified within the LSA through FRI mapping, a total of 165 vegetation surveys were conducted across 29 ecosites to validate the information obtained from the Missinaibi Forest, Pineland Forest, Gordon Cosens Forest, Romeo-Malette Forest and Abitibi River Forest FRI databases. The survey effort ranged between 1-30 survey sites per ecosite. The remaining 32 ecosites were not surveyed because they were inaccessible, disturbed, or represented less than 0.05% of the total LSA (Table 2.2.3).

During the vegetation surveys, 98 of the 163 sites were classified as a different ecosite than what was identified by the FRI data (Table 3.2.1.1). Eight (8) new ecosites not described in the FRI data for the LSA were also identified, bringing the final number of unique ecosites ground-truthed within the LSA to 37. The soil characteristics were the most frequent differential factor between the FRI-based ecosites and the field-based classification. For instance, the frequency of "dry, sandy" soils seems to be consistently underestimated in the FRI data. This is not unexpected since FRI ecosite mapping is primarily conducted through remote sensing supported by limited ground-truthing, but ecosites primarily reflect soil conditions and moisture regimes rather than vegetation cover.

Overall, the ecosite validation surveys showed a high error rate in the classification derived from the FRI data for the sampling units (Table 3.2.1.1). However, considering the sampling limitations, this information was interpreted conservatively, as the full extent of the PSA could not be surveyed during the 2025 field program. The sampling sizes for most of the ecosites ranged from one (1) to 12 vegetation plots in most cases.

Table 3.2.1.1 Estimated reclassification rates and assignment errors in the Forest Resource Inventory dataset

Original Ecosite	Sampling Units	Frequency of Ecosite Reclassification	Ecosite Error Rate (%)
B007	2	0	0
B012	2	0	0
B034	5	2	40
B035	6	3	50
B037	1	1	100
B040	7	2	30
B047	1	1	100
B049	10	6	60
B050	12	10	80
B052	7	2	30
B055	31	14	50
B058	1	1	100
B059	3	3	100
B065	8	8	100
B067	3	2	70
B070	7	6	90
B101	2	1	50
B114	4	3	80
B127	4	3	80
B128	19	9	50
B129	6	2	30
B135	2	2	100
B136	2	2	100
B139	6	5	80
B142	7	6	90
B146	3	3	100
B224	1	0	0
U997-U999	1	1	100

Two exceptions are ecosites B055 and B128, with sample sizes of 31 and 19, respectively. The results of the field surveys reclassified these two ecosites into several different ecosites. However, most new ecosites differed from the original ecosites only in their soil characteristics, containing the same vegetation composition for canopy, understory, and ground layer.

Despite a significant error rate in the FRI ecosite classification, the vegetation surveys conducted in this study demonstrated that the FRI dataset accurately describes the tree species communities in the LSA. While some of the discrepancies between the FRI and field ecosite classification of the sampling units may reflect meaningful ecological differences, the accuracy of the FRI ecosite classification can be considered suitable to evaluate large-scale patterns in the tree species communities.

3.2.1.2 Vegetation Communities/Botanical Assessment

A total of 314 plant species were recorded in the PSA during the vegetation surveys (Table 3.2.1, Appendix D). The CC provides additional information on the nature of the botanical communities within the PSA. The CC value ranges from 0 to 10 and represents an estimated probability that a plant is likely to occur in a landscape that is relatively unaltered or is in a "pre-settlement" condition. Of the 314 species identified to the species level, 115 have a CC value of 7 or greater, indicating these species are sensitive to disturbance or are an indicator of a system with high ecosystem value.

The results of the vegetation survey show that upland tree communities dominate the LSA. Those communities include jack pine–black spruce dominated, pine-black spruce conifer, and aspen–birch hardwood stands. Together these communities represent roughly 62% of the land cover of the LSA. Wetland ecosites represent less than 4% of the total composition on average, and the remaining 34% of the LSA is comprised of various upland ecosites.

The description of the vegetation communities shows that the LSA is representative of the overall composition of the northern Boreal Forest, where ecosites B050, B055 and B128 represent nearly 50% of the total composition. Further, the LSA reflects the conditions typical of Ecoregion 3E (Lake Abitibi).

During the vegetation surveys, the species observed were found to be representative of the boreal forest. Overstory species included Balsam Fir (*Abies balsamea*), Black Spruce (*Picea mariana*), Jack Pine (*Pinus banksiana*), White Spruce (*Picea glauca*), Tamarack (*Larix laricina*), Trembling Aspen (*Populus tremuloides*), and White Birch (*Betula papyrifera*). Shrubs and herbs dominated the understory of the sampling units. Shrubs observed include Labrador Tea (*Rhododendron groenlandicum*), Leatherleaf (*Chamaedaphne calyculata*), Mountain Maple (*Acer spicatum*), Northern Bush-honeysuckle (*Diervilla lonicera*), Speckled Alder (*Alnus incana*), willow species (*Salix* spp.). Some herbs observed include Blue Bead-lily (*Clintonia borealis*), Bunchberry (*Cornus canadensis*), Wild Lily-of-the-valley (*Maianthemum canadense*), horsetails (*Equisetum* spp.), ferns, grasses and sedges.

Species observed in wetland areas were also typical of the boreal forest. Overstory species typically included Black Spruce and Tamarack. Tall and low shrubs dominated the understory with species such as Labrador Tea, Leatherleaf, Northern Bog Rosemary (*Andromeda polifolia*), Speckled Alder, and Red-osier Dogwood (*Cornus sericea ssp. sericea*). Ground cover included herbs such as Marsh Cinquefoil (*Comarum palustre*) and various grasses and sedges such as Bluejoint Reedgrass (*Calamagrostis canadensis*) and Tussock Sedge (*Carex stricta*).

3.2.1.3 Invasive and Noxious Plants

One plant species listed in the *Invasive Species Act* (2015) was observed during the vegetation surveys: Spotted Knapweed (*Centaurea stoebe*).

Three plants listed as noxious weeds in Ontario's *Weed Control Act* (1990) were observed during the surveys, including Bull Thistle (*Cirsium vulgare*), Canada Thistle (*Cirsium arvense*), and Spotted Knapweed (*Centaurea stoebe*).

3.2.1.4 Species at Risk (SAR) and Provincially Rare/Tracked Species

The vegetation surveys and desktop background review documented the presence of Black Ash (*Fraxinus nigra*) in the overstory of several stands within the LSA. One provincially tracked species, the Slender Spikerush (*Eleocharis nitida;* S-Rank- S2?: Imperiled) was observed during the field surveys (Figure 366). No other SAR or provincially tracked plant species were observed in the LSA.

3.2.2 Wildlife

3.2.2.1 Amphibians

In-person amphibian surveys were conducted at 22 locations from May 28 - May 29, 2025, and ARUs were installed at 26 locations to survey amphibians from May 12-July 15, 2025 (Table 3.2.2.1, Figures 367-378). The locations of each amphibian survey station and ARU and corresponding route segments are provided in Appendix E.

Table 3.2.2.1 Amphibian Survey Summary

Survey Point	Route Alternatives	American Toad	Green Frog	Mink Frog	Spring Peeper	Wood Frog
Amp_01	A1, A2		Cl1			
Amp_02	A1, A2				CL2	
Amp_03			Cl1			
Amp_04			Cl1			
Amp_05	A1, A2		Cl1			
Amp_06	C2				Cl2	
Amp_06	C2		Cl1			
Amp_07					Cl2	
Amp_08	B3				Cl3	
Amp_09	B3				Cl2	
Amp_10	B3				Cl2	
Amp_11	B3				Cl2	
Amp_12	B3				Cl2	
Amp_13	C1, C2			Cl1		
Amp_14	A1, A2				Cl2	
Amp_15	A1, A2				Cl1	
Amp_16	A1, A2				Cl3	
Amp_17	A1, A2		Cl1			
Amp_18	A1, A2				Cl2	
Amp_18	A1, A2		Cl1			
Amp_19	A1, A2				Cl2	
Amp_20	A1, A2				Cl3	
Amp_21	A1, A2				Cl1	
Amp_22	A1, A2		Cl1			
ARU_02		Cl1	Cl2		Cl3	
ARU_03	B1, B2, B3, C1, C2				Cl1	
ARU_06		Cl1	Cl1		Cl3	
ARU_07			Cl1		Cl3	
ARU_08	A1	Cl1			Cl3	

Table 3.2.2.1 Amphibian Survey Summary

Survey Point	Route Alternatives	American Toad	Green Frog	Mink Frog	Spring Peeper	Wood Frog
ARU_10	A1, A2				Cl1	
ARU_11	A1, A2	Cl1			Cl3	
ARU_12					Cl3	
ARU_14			Cl2		Cl2	
ARU_16	B1, B2				Cl3	
ARU_17		Cl1				
BAT_01	A1	CL2	Cl1		Cl3	
BAT_02					Cl3	
BAT_04	C1, C2				Cl1	
BAT_07	C1, C2		Cl2		Cl1	
BAT_08		Cl2			Cl3	
BAT_09	B3	Cl1	Cl1	Cl1	Cl3	
BAT_11			Cl1		Cl1	
BAT_12			Cl1			
OWL_04	A1, A2	Cl1			Cl3	
OWL_05	A1, A2				Cl3	
OWL_06					Cl3	Cl3
OWL_07	A1, A2				Cl3	
OWL_08	A1, A2	Cl1	Cl1		Cl2	
OWL_10	A1, A2				Cl2	
OWL_25	C1, C2				Cl1	

Notes: Max Call Codes: Cl1 – Individuals can be counted, calls do not overlap; Cl2 – Calls overlap but individuals can still be counted; Cl3 - Full chorus; individuals cannot be counted

3.2.2.2 Basking Turtle Surveys

Eight (8) turtle visual encounter surveys were performed from May 26-30, 2025 (Figures 379-384). Surveys were conducted by trained observers who systematically searched along shorelines, wetlands, and hummocks adjacent to waterbodies focused on basking individuals. These surveys followed standardized protocols set in *Survey Protocol for Blanding's Turtle* (MNRF, 2015[c]) to maintain consistency in data quality, with survey times adjusted to coincide with peak turtle activity periods during daylight hours.

Surveys were conducted under favorable conditions and with thorough coverage of potentially suitable habitat, but no turtles were observed during the survey period. The absence of detections may be attributed to low turtle abundance in the surveyed area, temporary avoidance of basking sites due to temperature fluctuations, or the timing of the survey relative to nesting or aquatic activity cycles. It is unlikely the survey locations reporesent *Turtle Nesting* or *Turtle Wintering* SWH (see Sections 3.2.4.1 and 3.2.4.2 for more information).

3.2.2.3 Breeding Bird Point Counts

Point-count survey stations were established such that the various habitat types were assessed in rough proportion to their abundance in the PSA (Table 3.2.2.3-1). A total of 165 point-count survey stations were established in the PSA, and surveyed from June 3-13 and June 20-29, 2025 (Table 3.2.2.3-2, Figures 385-

396). ARUs were also deployed at 39 locations to survey for breeding bird activity within the breeding bird timing window of June 1 to July 10 (Figures 385-396).

A total of 102 bird species were observed during the 2025 field surveys and incidental observations (Appendix F, Section 3.2.2.10, Appendix J). Most of these observations were derived from a combined 204 point-count surveys and ARU deployments, where 2,326 individuals across 96 species were observed. Species density by habitat type was derived from the point-count program observations to facilitate the upcoming Class EA for the Project (Appendix F).

The overall bird community was dominated by warblers and thrushes, typical of the southern boreal forest Table 3.2.2.3-2 (full species list is presented in Appendix F). There were six SAR documented during the breeding bird surveys, including Canada Warbler (*Cardellina canadensis*), Common Nighthawk (*Chordeiles minor*), Eastern Whip-poor-will (*Antrostomus vociferus*), Eastern Wood-pewee (*Contopus virens*), Evening Grosbeak (*Hesperiphona vespertina)* and Olive-sided Flycatcher (*Contopus cooperi*).

Table 3.2.2.3-1 WTPL Project Point-count Station PSA Habitat Summary

Habitat Type	PSA (ha)	PSA Proportion (%)	Surveyed Area (ha)	Survey Proportion (%)	Difference (%)
Barren	30.1	0.24	6.3	0.98	0.74
Bog	21.1	0.17	0	0.00	-0.17
Coniferous	4,217.0	33.11	219.6	34.31	1.2
Deciduous	4,830.4	37.93	163.1	25.48	-12.45
Disturbed	824.4	6.47	40.8	6.38	-0.09
Fen	251.4	1.97	43.9	6.86	4.89
Marsh	183.6	1.44	37.6	5.88	4.44
Mixedwood	370.8	2.91	50.2	7.84	4.93
Shrubland	167.9	1.32	15.7	2.45	1.13
Successional	129.6	1.02	0	0.00	-1.02
Swamp - Coniferous	1,566.5	12.30	56.5	8.83	-3.47
Swamp - Deciduous	141.7	1.11	6.3	0.98	-0.13
Total	**12,734.5**	**100**	**640**	**100**	

The 2025 field program was conducted during a period of significant Spruce Budworm (*Choristoneura spp.*) infestation in Northern Ontario. The outbreak cycle in the boreal forest drives significant population increases in specialized bird species, particularly the Tennessee Warbler (*Leiothlypis peregrina*), Cape May Warbler (*Setophaga tigrina*), and Bay-breasted Warbler (*Setophaga castanea*). These "budworm-linked" warblers, especially the Bay-breasted, are voracious predators that consume vast amounts of larvae, often nesting in higher densities to exploit the food boom.

Table 3.2.2.3-2 Top 15 Species by Abundance

Species	Abundance
White-throated Sparrow	241
Nashville Warbler	215
Red-eyed Vireo	203
Ovenbird	134
Swainson's Thrush	128
Magnolia Warbler	119
Tennessee Warbler	85
American Robin	80
Hermit Thrush	79
Yellow-rumped Warbler	70
Northern Parula	69
Cedar Waxwing	62
Canada Goose	53
Bay-breasted Warbler	51
Chestnut-sided Warbler	49

Although several species are associated with *Open Country Bird Breeding Habitat*—Vesper Sparrow (*Pooecetes gramineus*) and Savannah Sparrow (*Passerculus sandwichensis*)—and Shrub/Early Successional Bird Breeding Habitat—Ruffed Grouse (*Bonasa umbellus*) and American Woodcock (*Scolopax minor*)—SWH were observed during the breeding bird survey, observations were insufficient to confirm the presence of these SWHs (see Section 3.2.4.3 for more information). The potential for SWH within the Project area remains since suitable habitat and indicator bird species were noted in the area, and a conservative approach has been taken to assume candidacy.

3.2.2.4 Marsh Bird Surveys

In-person marsh bird surveys were conducted at ten (10) locations from June 6-25, 2025 (Figures 397-407). ARUs were also deployed at a further ten (10) locations in marsh habitat from April 15-June 28, 2025 (Figures 397-407; Appendix G).

Two marsh bird species were observed during the surveys in 2025, including, American Bittern (*Botaurus lentiginosus*) and Sora (*Porzana Carolina*; Table 3.2.2.4). In addition, songbird SAR were observed during these surveys, including singing Canada Warbler (*Cardellina canadensis*), Olive-sided Flycatcher (*Contopus cooperi*) and Evening Grosbeak (*Coccothraustes vespertinus*). Table 3.2.2.4 summarizes the observations of marsh bird species during the field surveys. American Bittern and Sora were also visually observed incidentally while conducting the 2025 field program (see Section 3.2.2.10 and Appendix J for more information).

Although several species listed in the SWH criteria schedule necessary for confirming the presence of Marsh Bird Breeding Habitat were observed, field observations were not sufficient to confirm the presence of this SWH (see Section 3.2.4.3 for more information). The potential for SWH within the Project area remains.

Table 3.2.2.4 Marsh Bird Survey Summary

Survey Location	Route(s)	Species Observed			
		Target	Other Wetland	Aerial Insectivore	SAR
2025_MB01	A1, A2		Common Yellowthroat		
2025_MB02	A1, A2	Sora	Common Goldeneye, Common Loon, Common Yellowthroat, Red-winged Blackbird		
2025_MB03					Evening Grosbeak
2025_MB04			American Bittern, Common Yellowthroat		
2025_MB05	B1, B2				
2025_MB06	B1		Belted Kingfisher, Bonapartes Gull, Ring-necked Duck		
2025_MB07	B1		Common Grackle, Common Yellowthroat, Red-winged Blackbird, Sandhill Crane		
2025_MB08			Common Yellowthroat		
2025_MB98	C1, C2		Common Goldeneye, Common Grackle, Red-winged Blackbird		
2025_MB99	A1, A2		Common yellowthroat		Olive-sided Flycatcher
ARU_02					
ARU_06			Belted Kingfisher, Red-winged Blackbird	Tree Swallow	
ARU_14	A1, A2		Belted Kingfisher, Common Yellowthroat, Common Loon		
ARU_15			Common Loon, Red-winged Blackbird, Sandhill Crane		Canada Warbler
BAT_04			Common Yellowthroat		
BAT_06	C1, C2				
BAT_07	C1, C2	Sora	Common Yellowthroat		
BAT_08			Common Loon, Canada Goose, Common Yellowthroat		
BAT_09	B3				
BAT_12			Common Loon, Wilson's Snipe		

3.2.2.5 Owl Surveys

Twenty-three (23) owl survey stations were established along the road network throughout the LSA, with a minimum spacing distance of 1.6 km (Figures 408-418; Survey Points with Owl observations in Table 3.2.2.5-1; Full list including route intersects in Appendix H). Surveys were conducted from April 21 - 25, 2025. ARUs were also deployed at 13 locations during this survey period. An additional six (6) ARUs deployed later during the 2025 field program recorded owls incidentally outside the typical April breeding window (Figures 408-418, Table 3.2.2.5-1, Appendix J).

Table 3.2.2.5-1 Nocturnal Owl Survey Field Observations

Name	Lat	Long	Species
OWL-11	47.778	-83.377	Boreal Owl
OWL-13	47.826	-83.356	Great Horned Owl
OWL-16	47.874	-83.289	Northern Saw-whet Owl
OWL-17	47.925	-83.136	Barred Owl
OWL-18	47.941	-83.069	Boreal Owl
OWL-28	48.313	-81.748	Barred Owl
ARU_04	47.8932	-83.025	Barred Owl
ARU_06	47.7788	-83.261	Long-eared Owl
ARU_07	47.9254	-84.248	Northern Saw-whet Owl, Great Horned Owl
ARU_14	47.8729	-83.916	Boreal Owl
BAT_01	47.9474	-83.035	Great Horned Owl
BAT_03	47.9074	-84.12	Great Horned Owl
BAT_08	47.9113	-83.15	Barred Owl
OWL_04	47.8854	-83.997	Boreal Owl, Northern Saw-whet Owl

Northern Saw-whet Owl (*Aegolius acadicus*), Great Horned Owl (*Bubo virginianus*), Boreal Owl, Long-eared Owl (*Asio otus*) and Barred Owl (*Strix varia*) were documented during this survey (Table 3.2.2.5-2; Appendix H).

Table 3.2.2.5-2 Owl Survey Observation Summary

Common Name	Scientific Name	Total Observations	Route Alternative						
			A1	A2	B1	B2	B3	C1	C2
Barred Owl	*Strix varia*	4			2	2	1	1	1
Boreal Owl	*Aegolius funereus*	4	2	2	2	2	1		
Great Horned Owl	*Bubo virginianus*	4	2	2	2	2			
Long-eared Owl	*Asio otus*	1					1		
Northern Saw-whet Owl	*Aegolius acadicus*	3	2	2	1	1			

Several crepuscular bird species were also documented, including American Woodcock (*Scolopax minor*) and Wilson's Snipe (*Gallinago delicata*; Appendix G). In addition, howling Gray Wolves (*Canis lupus*) and several calling amphibian species were also documented (Appendix G).

3.2.2.6 Nightjar Surveys

ARUs were deployed at 32 locations to survey for nightjar activity from June 3 to July 10, 2025 (Figures 419-429; Table 3.2.2.6-1; Appendix I).

Table 3.2.2.6-1 Summary of Nightjar Observations

Name	American Woodcock	Barred Owl	Black-billed Cuckoo	Eastern Whip-poor-Will	Great Horned Owl	Long-eared Owl	Northern Saw-whet Owl	Wilson's Snipe	Gray Wolf
ARU_02									
ARU_03									
ARU_04		1	1						
ARU_06						1			
ARU_07					1		1		
ARU_08	2								
ARU_10									
ARU_11								1	
ARU_12	1								1
ARU_14									
ARU_16									
ARU_17			1						
BAT_01					1				
BAT_02									
BAT_03				1	1				
BAT_04									
BAT_05									
BAT_06									
BAT_07									
BAT_08		1							
BAT_09									
BAT_10								1	
BAT_11									
BAT_12								1	
OWL_01									
OWL_04							1		
OWL_05									
OWL_07									
OWL_08									
OWL_09									
OWL_10									
OWL_25									

One (1) Eastern Whip-poor-will was detected singing on multiple nights at location BAT_03. This was the only nightjar species detected during this survey program, although Common Nighthawk were also documented during the breeding bird survey program (see Section 3.2.2.3 and Appendix F). Several other crepuscular species were also documented, including American Woodcock, Barred Owl, Black-billed Cuckoo (*Coccyzus erythropthalmus*), Great Horned Owl, Long-eared Owl, Northern Saw-whet Owl and Wilson's Snipe (Appendix I). Several amphibian species and a howling wolf were also recorded (Appendix J).

Candidate nightjar nesting habitat was mapped as part of the background review (Table 3.2.2.6-2; Figures 214-224), as described in Section 2.2.4.6. A total of 400 ha of candidate nightjar nesting habitat was identified across the LSA, concentrated primarily along route alternatives C1 and C2. Refer to the discussion of Common Nighthawk in Section 3.2.4.3 for more information on the limitations of nightjar habitat mapping.

Table 3.2.2.6-2 Desktop Background Review Candidate Nightjar Nesting Habitat Summary

NHIC Records	Source	LSA	Route						
			A1	A2	B1	B2	B3	C1	C2
Candidate Nightjar Nesting Habitat	Candidate Habitat (ha)	*400.4	90.96	86.66	*197.0	*140.8	*160.4	*32.4	*32.4

*habitat calculation incomplete because FRI mapping data was not available for the Romeo Malette Forest, discussed further in Sections 3.1.4 and 3.2.4.3

3.2.2.7 Bank Swallow Surveys

A Bank Swallow nesting colony including approximately 30 nest cavities was encountered during field surveys (Figure 430; Photo 1). The colony was located within the LSA along route alternative C1, although it does not fall within the PSA. Under *SCA* regulations, Bank Swallow falls under federal protection on all provincial lands. This nesting colony is protected under *SARA* Sections 33 and 58 as it represents the residence of one or more individuals and critical habitat of a wildlife species that is listed as *Threatened*. Project activities that could result in the damage or destruction of this established nesting colony (Section 33 of SARA), or killing, harming or harassing of Bank Swallows (Section 32 of SARA) would require an authorization under the *SARA*. Refer to Section 3.2.5.1.1 for more information on Bank Swallow.



Photo 1. Bank Swallow (*Riparia riparia*) Nesting Colony (48.425301, -81.457596)

3.2.2.8 Bat Maternity Roost Habitat Assessment

Bat maternal roosting habitat is characterized under a category of SWH, both for non-migratory species and migratory species alike. Refer to Section 3.1.4, 3.2.4 and Appendix N for bat maternal roosting habitat mapping criteria. Candidate resident and migratory bat roosting habitat was found to be abundant throughout the LSA (Table 3.1.4-1, Figures 66-77 and 78-89).

Twelve (12) bat acoustic monitoring stations were installed across the PSA from May 27-June 28, 2025 (Figures 431-440). Ultrasonic recorders documented the presence of five (5) bat species in the PSA (Table 3.2.2.8), including Little Brown Myotis, and Tri-colored Bat which are listed as *Endangered* at both the federal and provincial levels, and Eastern Red Bat, Hoary Bat and Silver-haired Bat which are listed as *Endangered* at the provincial level.

Table 3.2.2.8 WTPL Project 2025 Bat Observations

Recorder	Route(s)	Eastern Red Bat		Hoary Bat		Silver-haired Bat		Little Brown Myotis		Tri-colored Bat	
		n	P-value	n	P-value	n	P-value	n	P-value	n	P-value
Bat_01		2	0.51	253	<0.001	3,783	<0.001	22	<0.001	0	-
Bat_02	A1	0	-	30	<0.001	11	0.38	0	-	0	-
Bat_03	A1, A2	0	-	319	<0.001	105	<0.01	0	-	0	-
Bat_04		0	-	147	<0.001	148	<0.001	1	0.11	0	-
Bat_05	C1, C2	1	0.14	142	<0.001	166	<0.001	1	0.43	2	0.07
Bat_06	C1, C2	2	0.01	106	<0.001	364	<0.001	2	0.15	1	0.7
Bat_07	C1, C2	2	0.06	119	<0.001	352	<0.001	5	<0.01	0	-
Bat_08		3	0.02	76	<0.001	349	<0.001	9	<0.01	0	-
Bat_09	B3	0	-	37	<0.001	171	<0.001	5	<0.01	0	-
Bat_10	C1, C2	0	-	51	<0.001	442	<0.001	6	<0.01	0	-
Bat_11		1	1	86	<0.001	283	<0.001	37	<0.001	4	<0.01
Bat_12		2	0.03	407	<0.001	263	<0.001	3	0.03	0	-
Confirmed Observations		**9**		**1,773**		**6,426**		**87**		**6**	

* Red Text indicates where species identification could not be confidently determined

Observations during field surveys did not identify any natural features (e.g., cliffs, caves) that could provide overwintering habitat (i.e., hibernacula) within the LSA. However, 21 existing mine "features-to-surface" were identified within the LSA from the AMIS database, two (2) of which fell within 25 m of the proposed Route C1 and C2 centerlines (Figure 65). Further, there is one NHIC "restricted record" intersecting with the Route C1 and C2 LSA, likely representing a nearby documented bat hibernaculum representing SWH (Table 3.1.4-1, Figure 65). Further study to assess potential for bat hibernacula is discussed in Section 3.2.4.1.

Field observations of five (5) SAR bat species suggest the presence of active bat roosting SWH in the LSA (see Section 3.2.4.1 for more information).

3.2.2.9 Winter Aerial Surveys

A winter aerial survey was conducted on February 3rd and 4th, 2026, with a focus on ungulates, stick nests and SWH features. The survey was conducted 24-48 hours after recent snowfall under sun/cloud conditions and an average snow depth of 70 cm. The survey followed a transect along the route and route alternatives with parallel transects 1 km. either side of each route (Figures 441-452). The survey crew consisted of the pilot and three (3) experienced field staff. Total flight time for the survey was 14.3 hours.

A total of 24 Moose (*Alces alces*) were observed in the LSA. The observations of adult bulls (12) was higher than cows (6), resulting in an adult sex ratio of 200 bulls per 100 cows. Calves (4) were less abundant than cows, resulting in the calf-cow (productivity) ratio of 67 calves per 100 cows. Signs of the presence of Moose activity were abundant (126 observations of tracks) and frequently seen without direct observation of an animal. This contrast suggests that the detectability of Moose may have been lower than typical due to above-average snow depth restricting animal activity and keeping them deeper in thick forests with lower snowpacks.

Gray Wolf (*Canis lupus*) presence was notable during the survey with 67 observations of tracks (Figures 441-452).

One observation of a stick nest (unknown species) was recorded at (lat: 47.811908992007375, long: 83.57442297; Figure 443).

3.2.2.10 Incidental Observations

A total of 18 non-target species were incidentally observed during the 2025 field program (Appendix J). Incidental observations included:

- Eight (8) bird species;
- Four (4) amphibian species;
- Five (5) mammal species; and
- One (1) insect species.

Incidental observations included a sighting of Monarch (*Danaus plexippus*), which is listed as *Endangered* federally (discussed further in Sections 3.1.4 and 3.2.4).

3.2.3 Watercourse Crossings

A total of 52 aquatic survey locations were identified for the 2025 field program (Figures 453-464). A total of 46 aquatic habitat assessments were conducted by Dillon and NWES biologists from August 12 to August 14, 2025; four additional aquatic habitat assessments were conducted by NWES biologists from September 30 to October 1, 2025. Surveys were accompanied by Indigenous Environmental Monitors. The survey locations were selected based on accessibility from existing trails, logging roads and highways. Two aquatic survey locations (WTX_05 and WTX_13; Figure 459 and 454, respectively) could not be accessed during the August surveys; however, their downstream reaches (eDNA_11 and eDNA_28; Figure 454 and 459, respectively) were assessed instead as they could be accessed safely. In lieu of a physical assessment, aerial photos were taken at these two locations.

Nine aquatic habitat assessments were completed within the Northeastern Lake Superior watershed. Thirty-nine (39) aquatic habitat assessments were completed within the Missinaibi River and Mattagami River watershed. Two aquatic habitat assessments were completed within the Abitibi watershed. The assessed

survey locations were determined to be direct fish habitat based on the lack of physical barriers, presence of flow and results of the eDNA metabarcoding analysis.

Watercourse crossing data and photos can be found in Appendix K and L, respectively.

3.2.3.1 eDNA Metabarcoding Analysis - Fish

Fifty samples were collected for eDNA metabarcoding analysis from August 12 to August 14, 2025, and from September 30 to October 1, 2025 (Figures 453-464). Two aquatic survey locations (WTX_05 and WTX_13; Figure 459 and 454, respectively) were not sampled due to access restrictions but samples were taken within the same watercourses downstream (eDNA_11 and eDNA_28; Figure 454 and 459, respectively).

eDNA metabarcoding detected a total of 28 unique fish species native to Ontario. Two (2) additional species were identified to the genus-level. Of these species, the conservation status of 26 species was identified as 'Apparently Secure' (S-Rank of S4) or 'Secure' (S-Rank of S5) in Ontario. One (1) species, Atlantic Salmon (*Salmo salar*), is not a suitable target for conservation activities (S-Rank of SNA). One (1) species of conservation concern, Lake Sturgeon (*Acipenser fulvescens*), is assigned a provincial ranking of 'Vulnerable' (S-Rank of S3). The Lake Sturgeon population within the PSA is part of the Southern Hudson Bay- James Bay population, listed as Special Concern under the federal *SARA*. The list of fish identified through eDNA analysis is presented in Table 3.2.3.1.

Positive detections (i.e., 10 reads or greater) for Lake Sturgeon were documented at WTX_10 (18,610 reads accounting for 51.9% of the sample; Figure 464) and WTX_02 (10 reads accounting for 0.1% of the sample; Figure 456). The results for WTX_10 confirmed the presence of Lake Sturgeon within Department of Fisheries and Oceans (DFO) mapped habitat (i.e., Mattagami River). WTX_02 was sampled in Wangoon Lake which was not identified as Lake Sturgeon habitat nor was it directly connected to Lake Sturgeon habitat based on DFO mapping. Given the low number of reads, WTX_02 has been identified as potential Lake Sturgeon habitat and it is recommended that further sampling be completed at this location in 2026 to increase the replicates and minimize the potential of false positive results (Section 3.2.3.1.1).

Table 3.2.3.1 Fish species identified through eDNA metabarcoding analysis within the PSA

Common Name	Scientific Name	SARA[1]	SCA[2]	S-Rank[3]
Lake Sturgeon	*Acipenser fulvescens*	SC	---	S3
Rock Bass	*Ambloplites rupestris*	---	---	S5
Longnose Sucker	*Catostomus catostomus*	---	---	S5
White Sucker	*Catostomus commersonii*	---	---	S5
Northern Redbelly Dace	*Chrosomus eos*	---	---	S5
Finescale Dace	*Chrosomus neogaeus*	---	---	S5
Slimy Sculpin	*Cottus cognatus*	---	---	S5
Lake Chub	*Couesius plumbeus*	---	---	S5
Brook Stickleback	*Culaea inconstans*	---	---	S5
Northern Pike	*Esox lucius*	---	---	S5
Johnny Darter	*Etheostoma nigrum*	---	---	S5
Pumpkinseed	*Lepomis gibbosus*	---	---	S5
Burbot	*Lota lota*	---	---	S5
Striped Shiner	*Luxilus chrysocephalus*	---	---	S4
Northern Pearl Dace	*Margariscus margarita*	---	---	S5
Smallmouth Bass	*Micropterus dolomieu*	---	---	S5
Golden Shiner	*Notemigonus crysoleucas*	---	---	S5
Blacknose Shiner	*Notropis heterolepis*	---	---	S5
Spottail Shiner	*Notropis hudsonius*	---	---	S5
Yellow Perch	*Perca flavescens*	---	---	S5
Trout-perch	*Percopsis omiscomaycus*	---	---	S5
Fathead Minnow	*Pimephales promelas*	---	---	S5
Minnow species	*Pimephales* sp.	---	---	---
Stickleback species	*Pungitius* sp.	---	---	---
Longnose Dace	*Rhinichthys cataractae*	---	---	S5
Atlantic Salmon	*Salmo salar*	---	---	SNA
Walleye	*Sander vitreus*	---	---	S5
Creek Chub	*Semotilus atromaculatus*	---	---	S5
Central Mudminnow	*Umbra limi*	---	---	S5

[1]Federal Species at risk Act, 2002 where SC = special concern.

[2]Provincial Species Conservation Act, 2025.

[3]Provincial Conservation Ranking (S-Rank) where S5 = secure, S4 = apparently secure, S3 = vulnerable, SNA = A conservation status rank is not applicable because the species is not a suitable target for conservation activities.

3.2.3.1.1 False Positive Results

Due to the high sensitivity of eDNA metabarcoding analysis, it is vulnerable to false positive errors which are detection of taxa that are not likely to be present at the point of collection. These errors can occur because of contamination, tag-jumping, sample misassignment, PCR and sequencing errors or errors in the reference database (Drake et al., 2021). To mitigate false positive results, the following combination of post-bioinformatic filtering methods have been applied to the eDNA results:

- Removal of taxa that occur in another geographic locations and are not known to be within Ontario such as Reticulate Sculpin (*Cottus perplexus*) which occur only in the Pacific Northwest but are related to Ontario's native Slimy Sculpin (*Cottus cognatus*);
- Removal of read counts that are less than 10; and,
- Removal of read counts within samples that are lower than the highest read count within a blank control for that sample.

Two genus-level and seven species-level identifications were determined for fish species that do not occur within Ontario. These species are listed in Table 3.2.3.1.1 below. These species were not treated as non-native or invasive occurrences but have been separated as an anomalous result. It was possible that a native relative was present within the fish community at the sampling point but since the exact relative was not determined, the species have been omitted from the fish community results.

Based on the read count filtering (i.e., < 10 reads), one native species, Brown Bullhead (*Ameiurus nebulosus*), was removed from the species list. This species is provincially ranked as 'Secure' (S-Rank of S5) in Ontario and is not listed as a SAR. No samples collected in 2025 had 10 or more reads for Brown Bullhead. In addition, eDNA_05 (Figure 464), eDNA_10 and WTX_01 (Figure 459), WTX_15 (Figure 455) and WTX_19 (Figure 460) were not identified as Lake Sturgeon habitat since the read counts were less than 10. However, it is recommended that further sampling be completed at these locations in 2026.

No species were removed based on the blank controls.

Table 3.2.3.1.1 False positive fish species identified through eDNA metabarcoding analysis within the PSA that were excluded from the species list

Common Name	Scientific Name
Brown Bullhead	*Ameiurus nebulosus*
Anglerfish species	*Antennarius* sp.
African Rivuline species	*Aphyosemion* sp.
Baikal Oilfish	*Comephorus dybowskii*
Bering Cisco	*Coregonus laurettae*
Maraena Whitefish	*Coregonus maraena*
Reticulate Sculpin	*Cottus perplexus*
Mississippi Silvery Minnow	*Hybognathus nuchalis*
Chesapeake Logperch	*Percina bimaculata*
Whitespotted Char	*Salvelinus leucomaenis*

3.2.3.2 eDNA Metabarcoding Analysis – Wildlife

In addition to fish species, eDNA metabarcoding detected a total of 13 terrestrial wildlife species. With the exception of Domestic Swine (*Sus scrofa*), the species were identified as 'Apparently Secure' (S-Rank of S4) or 'Secure' (S-Rank of S5) in Ontario. Detections included:

- Eight (8) bird species;
- Two (2) amphibian species; and
- Three (3) mammal species.

The detected species are listed are summarized in Table 3.2.3.2 below.

Table 3.2.3.2 Terrestrial species identified through eDNA metabarcoding analysis within the PSA

Common Name	Scientific Name	SARA[1]	SCA[2]	S-Rank[3]
Birds				
Mallard	*Anas platyrhynchos*	-	-	S5
Ring-necked Duck	*Aythya collaris*	-	-	S5B, S4N
Cedar Waxwing	*Bombycilla cedrorum*	-	-	S5
Canada Goose	*Branta canadensis*	-	-	S5
Common Loon	*Gavia immer*	-	-	S5
Wild Turkey	*Meleagris gallopavo*	-	-	S5
Swamp Sparrow	*Melospiza georgiana*	-	-	S5B, S4N
Common Merganser	*Mergus merganser*	-	-	S5
Herptiles				
Eastern Newt	*Notophthalmus viridescens*	-	-	S5
Green Frog	*Rana clamitans*	-	-	S5
Mammals				
North American Beaver	*Castor canadensis*	-	-	S5
Common Muskrat	*Ondatra zibethicus*	-	-	S4
Swine	*Sus scrofa*	-	-	-

[1]Federal Species at risk Act, 2002

[2]Provincial Species Conservation Act, 2025

[3]Provincial Conservation Ranking (S-Rank) where S5 = secure, S4 = apparently secure, B = breeding, N = non-breeding

3.2.4 Significant Wildlife Habitat

Ecosites associated with 31 cSWH and nine (9) cRVC were identified in the LSA (Section 3.1.4). Detailed descriptions and confirmation requirements for each of the identified cSWH/cRVC are outlined below (taken directly from *Significant Wildlife Habitat Criteria Schedules for Ecoregion 3E;* MNRF, 2015[a]). Ecosites associated with cSWH/cRVC are outlined in Section 3.1.4 (see Tables 3.1.4-1 to 3.1.4-4). Likewise, a summary of which cSWH/cRVC are considered *Confirmed*, *Candidate* or *Unlikely* within the LSA is presented in Section 3.1.4 (see Tables 3.1.4-1 to 3.1.4-4).

3.2.4.1 Seasonal Concentration Areas for Wildlife

3.2.4.1.1 Moose Late Winter Areas

Ecosites associated with *Moose Late Winter Areas* are present within all routes of the LSA (Table 3.1.4-1; Figures 38-49). Several documented Moose Late Winter Areas from the LIO database ("Wildlife Values Areas") were also identified associated with Routes B1, B2, B3, C1 and C2 of the LSA. As such, this SWH is considered *Confirmed*.

3.2.4.1.2 Aquatic Waterfowl Stopover or Staging Area

Ecosites associated with *Aquatic Waterfowl Stopover or Staging Area* activity are present in all routes of the LSA (Table 3.1.4-1, Figures 50-61). The Project does not intersect large open-water wetlands or waterbodies, so it is unlikely that this SWH occurs within the LSA. Targeted waterfowl surveys necessary to rule out the presence of this SWH were not conducted as part of the 2025 field season. As such, this SWH is conservatively considered *Unlikely*.

3.2.4.1.3 Bat Hibernacula

Based on FRI ecosite mapping, the LSA includes some candidate ecosites with the potential of containing naturally occurring Bat Hibernacula SWH associated with Routes A1 and A2. Further, a review of the Ontario Abandoned Mine Information System (AMIS) identified 21 existing abandoned mine "features-to-surface" (e.g., adits, portals, shafts) associated with Route C1 and C2 of the LSA that may also provide overwintering habitat for bats (i.e., anthropogenically created hibernacula; Table 3.1.4-1, Figures 62-65). There is also one (1) "Restricted Record" from the NHIC database overlapping the LSA that may reflect a documented bat hibernaculum[2]. However, NHIC records are only presented in a 1 km^2 grid, so it is unknown if the record falls directly within the LSA or merely within 1 km.

It is unlikely that active naturally occurring hibernacula occur in the candidate ecosites within the LSA. However, the potential of abandoned mine features being used as hibernacula remains. Targeted hibernaculum surveys are required to further assess the potential for bat hibernacula within the abandoned mine features. Targeted hibernaculum surveys were not conducted as part of the 2025 field program. As such, this SWH is conservatively considered *Candidate* until hibernaculum surveys are conducted to rule out this SWH. Future bat hibernaculum assessments are further discussed in Section 4.

3.2.4.1.4 Bat Maternal Roosting Habitat

The MECP considers all deciduous-dominant or mixedwood forested stands (including forested wetlands like deciduous swamps) as candidate resident bat maternal roosting habitat, regardless of age class or density of snags. Likewise, all forested areas can be considered candidate migratory bat maternal roosting habitat. Suitable *Bat Maternal Roosting* habitat is abundant within all routes of the LSA (Table 3.1.4-1, Figures 66-77 and 78-89). However, the occupancy of these areas is unknown, and as such these SWH are considered *Candidate*.

3.2.4.1.5 Turtle Wintering Area

Suitable habitat capable of supporting *Turtle Wintering Area* SWH is present throughout all routes of the LSA (Table 3.1.4-1, Figures 90-101). Turtle basking surveys (see Section 3.2.2.2) and eDNA screening (Section 3.2.3) were conducted as part of the 2025 field program. No evidence of turtle presence/activity

[2] NHIC guards the specific locations of bat hibernacula in Ontario because of their sensitivity to disturbance.

was documented despite historical records for three (3) turtle SAR in the RISA (see Section 3.1.4). This SWH is considered *Candidate* as suitable habitat across the LSA is present but occupancy could not be confirmed due to limited coverage for detection/non-detection surveys.

3.2.4.1.6 Reptile Hibernaculum

Snakes hibernate in sites located below frost lines like burrows and rock fissures/crevices. Candidate *Reptile Hibernaculum* SWH ecosites were identified throughout all routes of the LSA (Table 3.1.4-1, Figures 102-113). However, there is no broad method to survey for hibernacula as part of a baseline environmental field program for a project of this magnitude. This SWH is conservatively considered *Candidate* for the full extent of the Project.

3.2.4.1.7 Colonially-nesting Bird Breeding Habitat – Ground

Limited suitable *Colonially-nesting Bird Breeding Habitat – Ground* habitat was identified within Routes A1 and A2 of the LSA (Table 3.1.4-1, Figures 114-116). In addition to the ecosite query, sites must also represent any rocky island or peninsula within a lake or large river with >25 active Herring Gull (*Larus argentatus*) or Ring-billed Gull (*Larus delawarensis*) nests, or >five (5) Common Tern (*Sterna hirundo*) nests or ≥five (5) pairs of Brewer's Blackbird (*Euphagus cyanocephalus*), which are found loosely aggregated on the ground or in low bushes in close proximity to streams and irrigation ditches within farmlands. There are 29 records of Colonial Waterbird Nesting Areas from the NHIC database associated with Routes A1 and A2 of the LSA, which reflect the nesting activity of the same species. It is unknown if the NHIC records fall directly within the LSA or adjacent to it because of the 1-km^2 grid in which the data are presented. However, the presence of the NHIC records suggest that there are likely active ground-nesting bird breeding colonies in the vicinity of the LSA. No active nesting colonies were observed during the 2025 field program. However, this SWH category could not be fully assessed across the Project. As such, this SWH is considered *Candidate*.

3.2.4.1.8 Colonially-nesting Bird Breeding Habitat - Trees/Shrubs

The *Colonially-nesting Bird Breeding Habitat - Trees/Shrubs* SWH is intended to capture nesting colonies for Great Blue Heron (*Ardea herodias*), Bonaparte's Gull (*Chroicocephalus philadelphia*) and Double-crested Cormorant (*Nannopterum auritum*). Candidate ecosites were abundant within all routes of the LSA (Table 3.1.4-1, Figures 117-128), but confirming SWH requires ≥four (4) Great Blue Herons or ≥ten (10) Bonaparte's Gull nests (Double-crested Cormorant colonies' significance is determined by MNR on a case-by-case basis). Further, there are 33 records of Mixed Wader Nesting Colony from the NHIC database associated with Routes A1, A2, B1, B2 and B3 of the LSA, reflecting the nesting activity of the same species. It is unknown if the NHIC records fall directly within the LSA or adjacent to it, however this does suggest there are active tree/shrub nesting colonies in the vicinity of the LSA. No active nesting colonies were observed during the 2025 field program. However, this SWH category could not be fully assessed across the Project. As such, this SWH is considered *Candidate*.

3.2.4.1.9 Colonially-nesting Bird Breeding Habitat – Cliff

Limited suitable *Colonially-nesting Bird Breeding Habitat – Cliff* habitat was identified within Routes A1 and A2 of the LSA (Table 3.1.4-1, Figure 129). This includes any site or areas with exposed soil banks (undisturbed or naturally eroding) but excludes any man-made features like aggregate pits. Confirmed sites require 8+ Cliff Swallow (*Petrochelidon pyrrhonota*) pairs during the breeding season. Although targeted Cliff Swallow surveys were not conducted during the 2025 field program, there were 41 records identified within the RISA (Appendix C), six (6) observations from the breeding bird point-count survey (Appendix F) and a further six (6) incidental observations while conducted other field surveys (Appendix J). These

observations confirm that the species is present within the Project region, but this SWH is considered *Unlikely* within the LSA based on the limited suitable habitat.

3.2.4.2 Specialized Habitat for Wildlife

3.2.4.2.1 Waterfowl Nesting Areas

Waterfowl Nesting Areas extends 120 m from a wetland (>0.5 ha) or a cluster of three (3) or more small wetlands (<0.5 ha) within 120 m of each other where waterfowl nesting is known to occur. Suitable habitat is present within all routes of the LSA (Table 3.1.4-2, Figures 130-141). However, confirming this SWH requires ≥three (3) duck nesting pairs excluding Mallards (*Anas platyrhynchos*), and ≥ten (10) nesting Mallard pairs. Targeted waterfowl surveys necessary to rule out the presence of this SWH were not conducted as part of the 2025 field season. As such, the SWH is conservatively considered *Candidate*.

3.2.4.2.2 Turtle Nesting Area

Limited suitable *Turtle Nesting Area* ecosites was identified within all routes of the LSA (Table 3.1.4-2, Figures 142-152), although FRI mapping likely under-represents suitable. Turtle nesting areas are open, sunny areas with sand or gravel substrates in which turtles are able to dig. Suitable nesting substrate associated with the sides of municipal or provincial road embankments and shoulders are not considered SWH. No turtles were observed during the 2025 field program (Basking Survey: Section 3.2.2.2; eDNA Monitoring: Section 3.2.3). However, due to the anticipated underrepresentation of the FRI mapping for suitable micro-nesting sites, SWH for Turtle Nesting Areas are conservatively considered *Candidate*.

3.2.4.2.3 Amphibian Breeding Habitat – Wetland

Amphibian Breeding Habitat – Wetland include wetlands and pools (including vernal pools) >500 m^2 (about 25 m diameter) supporting high species diversity. Suitable habitat is abundant within the LSA (Table 3.1.4-2, Figures 153-164). Confirming this SWH requires:

1) Documenting breeding activity of at least one of the following species: Eastern Newt (*Notophthalmus viridescens*), Spotted Salamander (*Ambystoma maculatum*), Four-toed Salamander (*Hemidactylium scutatum*) or Blue-spotted Salamander (*Ambystoma laterale*); or
2) Documenting breeding activity of ≥three (3) of the following species with choruses including ≥20 individuals: American Toad (*Anaxyrus americanus*), Gray Treefrog (*Dryophytes versicolor*), Boreal Chorus Frog (*Pseudacris maculata*), Northern Leopard Frog (*Lithobates pipiens*), Green Frog (*Aquarana clamitans*), Mink Frog (*Lithobates septentrionalis*), Wood Frog (*Lithobates sylvaticus*) or Spring Peeper (*Pseudacris crucifer*).

An Eastern Newt was observed during the 2025 field program, and there were several locations with large amphibian choruses that did not meet the confirming criteria (Appendix E). As such, this SWH could not be confirmed. However, with the presence of requisite species and suitable habitat, the SWH is conservatively considered *Candidate*.

3.2.4.2.4 Amphibian Breeding Habitat – Woodland

Amphibian Breeding Habitat – Woodland can include areas with wetlands, lakes and pools with >500 m^2 (about 25 m diameter) within 120 m from a woodland. Limited suitable habitat was present within all routes of the LSA (Table 3.1.4-2, Figures 165-168). Confirming this SWH requires breeding of ≥one (1) of the listed salamander species or ≥two (2) of the listed frog species. The requisite amphibian species were present in the LSA, however sufficient breeding activity was not documented in woodland habitats. As such, this SWH

could not be confirm, but is conservatively considered *Candidate* since the species and habitat are present in the LSA.

3.2.4.2.5 Moose Aquatic Feeding Areas

Moose Aquatic Feeding Areas (MAFA) include wetlands and isolated embayments in rivers or lakes which provide an abundance of submerged aquatic vegetation. Candidate ecosites are abundant within all routes of the LSA (Table 3.1.4-2, Figures 169-180). Likewise, areas of confirmed MAFA from provincial databases (LIO: "Wildlife Values Areas") are present within all routes of the LSA. This SWH is considered *Confirmed*.

3.2.4.2.6 Sharp-tailed Grouse Lek

A *Sharp-tailed Grouse Lek* is a dancing ground consisting of bare, grassy area as the core of the lekking area, and may contain some sparse shrubland. There are often knolls or slightly elevated rises in topography associated with these sites. Candidate ecosites capable of supporting a lek are present in Routes A1, A2 and C2 LSA at low densities (Table 3.1.4-2, Figures 181-183). However, only suitable sites actively used by Sharp-tailed Grouse for their breeding activity are considered SWH. A targeted survey was not conducted in the 2025 field program, so this SWH is conservatively considered *Candidate*.

3.2.4.2.7 Bald Eagle and Osprey Nesting Habitat

Bald Eagle and Osprey Nesting Habitat are associated with lakes, ponds, rivers or wetlands along treed shorelines, islands, or on structures over water. Osprey (*Pandion haliaetus*) nests are usually at the top of a tree whereas Bald Eagle (*Haliaeetus leucocephalus*) nests are typically in super canopy trees in a notch within the tree's canopy. There are ten (10) documented raptor nests within Routes B1, B2, B3, C1 and C2 LSA (Table 3.1.4-2, Figures 184-189); this SWH is considered *Confirmed*.

3.2.4.2.8 Mast Producing Areas

Mast Producing Areas contain a substantial fruit and nut-bearing shrub cover, including Mountain Ash (*Sorbus spp.*), Chokecherry (*Prunus virginiana*), Blueberries (*Vaccinium spp.*), Raspberries (*Rubus spp.*) and Beaked Hazel (*Corylus cornuta*). Confirmed SWH are natural, open sites with abundant (>50% ground cover) mast producing shrubs. Candidate ecosites capable of supporting mast production are present within all routes of the LSA (Table 3.1.4-2, Figures 190-200). This SWH is very difficult to ground-truth, and has been conservatively considered *Candidate*.

3.2.4.3 Habitat for Species of Conservation Concern

3.2.4.3.1 Marsh Bird Breeding Habitat

Marsh Bird Breeding Habitat includes all wetland habitat if there is shallow water with emergent aquatic vegetation present. Suitable ecosites are present in all routes of the LSA (Table 3.1.4-3, Figures 201-212). Confirming this SWH requires:

1) One (1) breeding pair of Trumpeter Swan (*Cygnus buccinator*), Yellow Rail (*Coturnicops noveboracensis*) or Black Tern (*Chlidonias niger*); or
2) Five (5) breeding pairs of American Bittern (*Botaurus lentiginosus*), Sora (*Porzana carolina*), Red-necked Grebe (*Podiceps grisegena*), Pied-billed Grebe (*Podilymbus podiceps*), Ring-necked Duck (*Aythya collaris*), Lesser Scaup (*Aythya affinis*), Ruddy Duck (*Oxyura jamaicensis*), American Coot (*Fulica americana*), Sandhill Crane (*Grus canadensis*) or Virginia Rail (*Rallus limicola*).

Several of these species were identified within the RISA during the background review (Appendix C) or observed the 2025 field program (Appendix F). However, breeding activity was not confirmed to the extent necessary to confirm SWH. As such, it is conservatively considered *Candidate*.

3.2.4.3.2 Early Successional Bird Breeding Habitat

Early Successional Bird Breeding Habitat consists of large natural field areas succeeding to shrub and thicket habitats >30 ha in size, natural shrub land or early successional fields or larger shrub thicket habitats (>30 ha). Limited suitable habitat is present in Routes B1, B2 and B3 of the LSA (Table 3.1.4-3, Figure 213). Confirming this SWH requires ≥two (2) breeding pairs of Clay-coloured Sparrow (*Spizella pallida*), Field Sparrow (*Spizella pusilla*), Ruffed Grouse (*Bonasa umbellus*), Eastern Kingbird (*Tyrannus tyrannus*) or American Woodcock (*Scolopax minor*). Several of these species were identified within the RISA during the background review (Appendix C) or observed the 2025 field program (Appendix F). However, breeding activity was not confirmed to the extent necessary to confirm SWH. As such, it is conservatively considered *Candidate*.

3.2.4.3.3 Special Concern and Rare Wildlife: Common Nighthawk

Common Nighthawk (*Chordeiles minor*), like other nightjars, nest in edge habitat between forested and open areas (COSEWIC, 2018[a]). Candidate nightjar nesting habitat can be mapped with the following query (*pers. comm.* Michelle Schott, MECP):

- Selecting forest patches <60 years old from Forest Resource Inventory (FRI) landcover mapping;
- Identifying the subset of "dry" ecosites as defined in Ecosites of Ontario – The Boreal (MNRF, 2015[b]);
- Identifying a further subset of forests with ≤ 70% canopy closure and an understory closure of ≤20%; and
- Identifying the areas with the above characteristics that fell within 30 m of "open" habitat (e.g., clearcuts, treeless wetlands, and lakes).

It was not possible to conduct this query for the portion of the LSA that passes through the Romeo Malette Forest (i.e., portions of Routes B1, B2, B3, C1 and C2) because FRI landcover mapping (that includes information on overstory age and crown closure) was not available. As such, the assessment of candidate habitat presented in this report is likely an underrepresentation. However, this species was documented within the LSA during the 2025 field program (Appendix F) and suitable nesting habitat was identified in all routes of the LSA (Table 3.1.4-3, Figures 214-224). As such, this SWH is conservatively considered *Confirmed*.

3.2.4.3.4 Special Concern and Rare Wildlife: Eastern Wood-pewee

Eastern Wood-pewee (*Contopus virens*) nest on horizontal branches >2 m high in mature-intermediate deciduous and mixedwood forests with open understory, near forest clearings or edges (COSEWIC, 2012[b]). Suitable nesting habitat is abundant within all routes of the LSA (Table 3.1.4-3, Figures 225-236), and this species was observed during the 2025 field program (Appendix F). As such, this SWH is conservatively considered *Confirmed*.

3.2.4.3.5 Special Concern and Rare Wildlife: Evening Grosbeak

Evening Grosbeak (*Coccothraustes vespertinus*) breeding habitat generally includes open, mature mixedwood forests where fir species and/or White Spruce are dominant, and Spruce Budworm is abundant (COSEWIC, 2016[a]). Suitable habitat was identified in all routes of the LSA, but was particularly abundant in the eastern portion of the LSA (i.e., Routes C1 and C2; Table 3.1.4-3, Figures 237-242). However, this area falls within the Romeo Malette Forest for which FRI landcover mapping was not available, so ecosite queries

should be viewed with a degree of scrutiny. Regardless, suitable habitat was identified in the LSA and this species was observed during the 2025 field program (Appendix F), so this SWH is conservatively considered *Confirmed*.

3.2.4.3.6 Special Concern and Rare Wildlife: Horned Grebe

Horned Grebe (*Podiceps auritus*) generally nests in freshwater and occasionally in brackish water on small ponds, marshes and shallow bays on lake borders (COSEWIC, 2023[b]). They will use a broad range of pond sizes (0.24 to 18.2 ha) but generally prefer ponds ranging from 0.30 to 2 ha. Ponds must contain areas of open water (over 40%) and beds of emergent vegetation. Horned Grebes were not observed during the 2025 field program, so this SWH could not be confirmed. However, records were identified within the RISA (Appendix C) and suitable habitat was present in all routes of the LSA (Table 3.1.4-3, Figures 243-254). As such, the potential for this species to breed within the LSA is present, so this SWH is conservatively considered *Candidate*.

3.2.4.3.7 Special Concern and Rare Wildlife: Olive-sided Flycatcher

Olive-sided Flycatcher (*Contopus cooperi*) are generally associated with open areas containing tall trees/snags, forest edges near natural or man-made openings, burned forests or semi-open mature coniferous or mixedwood forest stands, and are more likely to occur near wetlands (COSEWIC, 2018[c]). Suitable habitat was abundant in all routes of the LSA (Table 3.1.4-3, Figures 255-266) and the species was observed during the 2025 field program (Appendix F). As such, this SWH is conservatively considered *Confirmed*.

3.2.4.3.8 Special Concern and Rare Wildlife: Rusty Blackbird

Rusty Blackbird (*Euphagus carolinus*) habitat characterized by forest wetlands (slow-moving streams, peatbogs, sedge meadows, marshes, swamps and beaver ponds; COSEWIC, 2006). Breeding habitat closely corresponds to the boreal forest. Suitable habitat is present within all routes of the LSA (Table 3.1.4-3, Figures 243-254). Although this species was not documented during the 2025 field program, this SWH is conservatively considered *Candidate*.

3.2.4.3.9 Special Concern and Rare Wildlife: Lake Sturgeon

Lake Sturgeon (*Acipenser fulvescens*; Southern Hudson Bay – James Bay population) are generally found in the shallow areas of lakes or larger rivers, moving into smaller rivers to spawn (COSEWIC, 2017[a]). There are two (2) records overlapping the LSA from the NHIC database associated with the Gullystone Lake that overlaps portions of Routes B2 and B3 (Table 3.1.4-3, Figures 267-271). There are also Lake Sturgeon records from the DFO database Ivanhoe Lake (Routes B1, B2 and B3), Tom Smith Lake (Routes B2, B3), Gullystone Lake (Routes B2, B3), Singed Tree Lake (Route B1), tributary of Palomar Lake (Routes B2, B3), Groundhog River (Routes C1, C2) and Mattagami Lake (Routes C1, C2; Figures 267-271). Further, Lake Sturgeon eDNA was documented in Wangoon Lake (Routes A1 and A2) and Mattagami River (Routes C1 and C2) during the 2025 field program (Section 3.2.3.2). As such, this SWH is considered *Confirmed*.

3.2.4.3.10 Special Concern and Rare Wildlife: Monarch Butterfly

Monarchs (*Danaus Plexippus*) require four distinct habitats for different parts of their life history, including overwintering, breeding, staging and nectar (feeding) habitats (COSEWIC, 2016[b]). Monarchs overwinter in Mexico. Breeding habitat is confined to where Milkweed (*Asclepias* sp.) grows, since this serves as the sole food for their caterpillars. Breeding habitat overlaps with nectar habitat. Staging habitat is extremely limited and provides roosting and feeding opportunities before mass migrations. Ecosites commonly associated

with Milkweed were identified in all routes of the LSA (Table 3.1.4-3, Figures 272-283). Further, there was an incidental Monarch observation during the 2025 field program. The SWH is conservatively considered *Candidate*.

3.2.4.3.11 Special Concern and Rare Wildlife: Yellow-banded Bumble Bee

Yellow-banded Bumble Bee (*Bombus terricola*) occurs in a diverse range of habitats, including mixed woodlands, farmlands, urban areas, montane meadows, prairie grasslands and boreal habitats (COSEWIC, 2015). This species usually nests underground in pre-existing cavities such as abandoned rodent burrows and rotten logs. It is not possible to map suitable habitat in a meaningful way given that the species is a habitat generalist. Since all areas are potential suitable habitat, this SWH is conservatively considered *Candidate*.

3.2.4.3.12 Special Concern and Rare Wildlife: Midland Painted Turtle and *Snapping Turtle*

Both *Midland Painted Turtle* (*Chrysemys picta*) and *Snapping Turtle* (*Chelydra serpentina*) occupy slow moving, relatively shallow and well-vegetated wetlands and water bodies with abundant basking sites and organic substrate (COSEWIC, 2018[b]; COSEWIC, 2008). Found primarily in swamps, marshes, ponds, fens, and bogs. Both turtle wintering habitat and nesting habitat have been previously discussed in Sections 3.2.4.1 (Table 3.1.4-1, Figures 90-101) and 3.2.4.2 (Table 3.1.4-2, Figures 142-152), respectively. There were no turtle observations during the 2025 field program despite suitable habitat being present in the LSA; however, these SWH are conservatively considered *Candidate*.

3.2.4.4 Rare Vegetation Communities

3.2.4.4.1 Cliff and Talus Slopes

The vegetation communities associated with *Cliff and Talus Slopes* are considered rare in Ecoregion 3E (MNRF, 2015[a]). Cliffs are defined vertical consolidate bedrock communities with a minimum height of 3 m and a slope of >60° or 173%. Talus is defined as rock accumulations at the base of cliffs, or former cobble beaches left behind after lake levels drop. All cliff and talus slope ecosites are considered significant. This habitat was identified in Routes A1 and A2 of the LSA (Table 3.1.4-4, Figure 284). As such, this RVC is considered *Confirmed*.

3.2.4.4.2 Hardwood Swamps

Hardwood Swamps have a dominant hardwood canopy that is located within lower topographic positions and subject to flooding (MNRF, 2015[a]). Candidate ecosites were identified within the LSA (Table 3.1.4-4, Figures 285-288). However, these ecosites are associated with the Romeo Malette Forest where FRI landcover information was not information (i.e., Routes B1, B2, B3, C1 and C2). This suggests that the presence of candidate ecosites are more likely an artefact of the crude conversion between OLC codes to ecosites rather than reflecting actual conditions on the ground. As such, this RVC is considered *Unlikely*.

3.2.4.4.3 Sand Dunes

Sand Dunes are exposed mineral material community often associated with shorelines of lakes or exposed inland mineral material that has been shaped by wind processes (MNRF, 2015[a]). Although ecosites capable of supporting sand dunes are present within all routes of the LSA (Table 3.1.4-4, Figures 289-300), there was no evidence of sand dunes from field surveys. As such, this RVC is considered *Unlikely*.

3.2.4.4.4 Rare Tree Type - Red and Sugar Maple

Rare Tree Type - Red and Sugar Maple are forests with hardwood canopy containing Red and/or Sugar Maple (*Acer rubrum* and *Acer saccharum*, respectively; MNRF, 2015[a]). Confirming this rare tree type requires stands with >35% relative cover of Red and/or Sugar Maple. Candidate ecosites were abundant in all routes of the LSA, and roughly 328 ha of stands with >35% Red and/or Sugar Maple relative cover were identified associated with Routes A1, A2, B1, B2 and B3 (Table 3.1.4-4, Figures 301-312). As such, the RVC is considered *Confirmed*.

3.2.4.4.5 Rare Tree Type - Elm

Rare Tree Type - Elm are found within low lying, predominantly alluvial material throughout the Clay Belt (MNRF, 2015[a]). Confirming this rare tree type requires stands with >35% Elm (*Ulmus spp.*) relative cover. Candidate ecosites were identified in Routes B1, B2, B3, C1 and C2 of the LSA (Table 3.1.4-4, Figures 313-317), however FRI data did not identify stands with >35% Elm relative cover. As such, this RVC is considered *Unlikely*.

3.2.4.4.6 Rare Tree Type - Oak

Rare Tree Type - Oak are found in hardwood canopies within lower topographic positions with fresh-to-moist moisture regimes with variable substrate textures (MNRF, 2015[a]). Confirming this rare tree type requires stands with >35% Oak (*Quercus spp.*) relative cover. Candidate ecosites were identified in Routes B1, B2, B3, C1 and C2 of the LSA (Table 3.1.4-4, Figures 318-322), however FRI data did not identify stands with >35% Oak relative cover. As such, this RVC is considered *Unlikely*.

3.2.4.4.7 Rare Tree Type - Black Ash

Rare Tree Type - Black Ash are found within low lying, predominantly alluvial material throughout the Clay Belt (MNRF, 2015[a]). Confirming this rare tree type requires stands with >35% Black Ash relative cover. Candidate ecosites were abundant in Routes B1, B2, B3, C1 and C2 of the LSA, and roughly 20 ha of stands with >35% Black Ash relative cover was identified in Route B1 (Table 3.1.4-4, Figures 323-332). Further, there is one (1) Black Ash record in the LSA from the NHIC database and there were several field observations during the 2025 field program. As such, this RVC is considered *Confirmed*.

3.2.4.4.8 Rare Tree Type - Red and White Pine

Rare Tree Type - Red and White Pine occur as sporadic, small stands and are generally found on dry, often exposed, and rocky sites (MNRF, 2015[a]). Confirming this rare tree type requires stands with >35% Red and/or White Pine (*Pinus resinosa* and *Pinus strobus*, respectively) relative cover. Candidate ecosites were identified in Routes A1, A2, B1, B2 and B3 of the LSA, and roughly 77 ha of stands with >35% Red and/or White Pine were identified in the same routes (Table 3.1.4-4, Figures 333-341). As such, the RVC is considered *Confirmed*.

3.2.4.4.9 Rare Tree Type - Yellow Birch

Rare Tree Type - Yellow Birch are generally on warmer-than-normal sites with a higher nutrient regime (MNRF, 2015[a]). Confirming this rare tree type requires stands with >35% Yellow Birch (*Betula alleghaniensis*) relative cover. Candidate ecosites were identified within all routes of the LSA (Table 3.1.4-4, Figures 342-353), however there were no stands with >35% Yellow Birch relative cover. As such, this RVC could not be confirmed but is conservatively considered *Candidate* because of the presence of candidate ecosites.

3.2.5 Species at Risk

A total of 13 SAR were observed during the 2025 field program, including nine (9) species listed as *Threatened* or *Endangered* at the provincial or federal level (Table 3.2.5, Figures 465-476).

Table 3.2.5 Summary of WTPL Project 2025 Species At Risk Observations

Taxon	Common Name	Scientific Name	SARA	SCA	Protection within Project LSA
Bird	Bank Swallow	*Riparia riparia*	THR	-	SARA
Bird	Canada Warbler	*Cardellina canadensis*	THR	-	SARA
Bird	Common Nighthawk	*Chordeiles minor*	SC	-	
Bird	Eastern Whip-poor-will	*Antrostomus vociferus*	THR	-	SARA
Bird	Eastern Wood Pewee	*Contopus virens*	SC	-	
Bird	Evening Grosbeak	*Coccothraustes vespertinus*	SC	-	
Bird	Olive-sided Flycatcher	*Contopus cooperi*	SC	-	
Mammal	Eastern Red Bat	*Lasiurus borealis*	Not Listed	END	SCA
Mammal	Hoary Bat	*Lasiurus cinereus*	Not Listed	END	SCA
Mammal	Little Brown Bat	*Myotis lucifugus*	END	END	SCA
Mammal	Silver-haired Bat	*Lasionycteris noctivagans*	Not Listed	END	SCA
Mammal	Tri-colored Bat	*Perimyotis subflavus*	END	END	SCA
Insect	Monarch Butterfly	*Danaus plexippus*	END	-	

Species provincially listed as *Special Concern* (including Monarch) were previously discussed in Sections 3.1.4 and 3.2.4. Refer to Appendix N for detailed descriptions of the natural history and life history of all SAR discussed in this report, including in Sections 3.1.3, 3.1.4 and 3.2.5. Species descriptions and suggested mitigation strategies for observed SAR listed as *Threatened* or *Endangered* provincially, or migratory birds listed as *Threatened* or *Endangered* federally are included below in Section 3.2.5.1.

3.2.5.1 Species Descriptions and Suggested Mitigation

3.2.5.1.1 Bank Swallow

Critical life process timing: May 1 – July 31 (nesting)

Habitat: Bank Swallows require near-vertical banks with sand-silt substrates in which they can excavate burrows to use as nests. These sites can be either natural (e.g., riverbanks, lake and ocean bluffs) or artificial (e.g., aggregate pits) in nature. Bank Swallows breed in colonies, sometimes numbering several thousand pairs (COSEWIC, 2012[a]). Breeding sites are generally situated near open terrestrial foraging habitat (e.g., grasslands, meadows, pastures and croplands). Large wetlands are used as communal nocturnal roosts during the post-breeding and migration periods.

One (1) Bank Swallow nesting colony site was observed in the Route C1 LSA during the 2025 field program (Section 3.2.2.7; Figure 430). The site was discovered after breeding activity had concluded for the season, so occupancy could not be confirmed. However, Bank Swallows display a high degree of fidelity towards nesting colonies, and a colony site must be documented as unused for five (5) consecutive breeding seasons to no longer be considered SAR habitat (MNRF, 2010). A follow-up survey of this site is recommended during the 2026 breeding bird survey window.

Potential Impacts: Loss of established nests due to vegetation removal or aggregate extraction, risk of direct mortality.

Protection: Bank Swallow falls under federal jurisdiction on all provincial lands as per the *SCA*. Bank Swallow and their nesting colonies are protected under *SARA* Sections 32 and 33/58, respectively. The Project may require a permit issued under *SARA*, which can be accessed through the *Species at Risk Permit System*.

Mitigation (as per *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales*; MNRF, 2010; *General Habitat Description for the Bank Swallow*; MECP, 2015; *Best Management Practices for the Protection, Creation and Maintenance of Bank Swallow Habitat in Ontario*; MNRF, 2017):
For colonies known or suspected to have been occupied within the last 5 years:

- Establish AOCs around nest sites with 3 habitat categories:
    - Category 1 (breeding colony, including the congregation of burrows and the substrate around them),
    - Category 2 (area 0–50 m in front of the breeding colony bank face to allow Bank Swallows to enter and exit burrows), and
    - Category 3 (area of suitable foraging habitat within 50–500 m of the outer edge of the breeding colony).
- Activities in general habitat can continue if the function of these areas for the species is maintained and individuals of the species are not killed, harmed, or harassed. Compatible activities include:
    - General recreational use of existing trails such as hiking and cycling.
    - General recreational lake, river, and beach use such as boating and fishing.
    - Normal use of existing roads.
    - Removal or disturbance of substrate that does not result in soil instability and/or collapse of Bank Swallow burrows.
    - In anthropogenic sites such as sand and gravel pits, activities (for example, excavation) in the non-breeding season that maintain the function of the breeding colony bank face as suitable Bank Swallow nesting habitat for future breeding seasons (for example, maintain features such as slope, height and substrate composition).
- Incompatible activities include:
    - Recreational activities such as climbing in sensitive habitat areas (for example, in or adjacent to Category 1 habitat)
    - Removal or disturbance of substrate in the breeding season that is likely to result in soil instability and/or collapse of Bank Swallow burrows
    - Development activities that result in removal of large tracts of suitable foraging habitat
    - Obstruction of the open space within 50 m in front of a breeding colony bank face that results in insufficient flying space for Bank Swallows to enter and exit burrows

3.2.5.1.2 Canada Warbler

Critical life process timing: May 1 – July 31 (nesting)

Habitat: Canada Warblers occur in moist deciduous, coniferous or mixedwood forests with well-developed shrub layers and a structurally complex forest floor (COSEWIC, 2020). They nest in wet forested areas, often in dense ferns or fallen logs.

All forested ecosites (including forested wetlands) serve as potential nesting habitat. Potential Canada Warbler nesting habitat is abundant in all routes of the LSA, and Canada Warblers were observed in Routes A1 and A2 (as well as outside of the LSA; Section 3.2.2.3 and 3.2.2.4).

Potential Impacts: Loss of established nests due to vegetation removal, risk of direct mortality.

Protection: Canada Warbler falls under federal jurisdiction on all provincial lands as per the *SCA*. Canada Warbler and their nests are protected under *SARA* Sections 32 and 33, respectively. The Project may require a permit issued under *SARA*, which can be accessed through the *Species at Risk Permit System*.

Mitigation (as per *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales*; MNRF, 2010):
For occupied nests:

- 10 m AOC established around occupied nest
- No vegetation clearing activities within AOC during critical nesting period (May 1 – July 31)

3.2.5.1.3 Eastern Whip-poor-will

Critical life process timing: April 24 – August 5 (nesting)

Habitat: Eastern Whip-Poor-Wills are usually found in areas with a mix of open and forested habitats, such as savannahs, open woodlands and mature forest stands (COSEWIC, 2022). They nest on the ground, depositing their eggs directly on the forest floor. As ground-nesters, they are particularly susceptible to nest-site disturbance.

Potential nightjar nesting habitat (including Eastern Whip-poor-will) was previously modeled for Common Nighthawk (Section 3.2.4.3.3, Table 3.1.4-3, Figures 214-224). Potential nightjar nesting habitat was identified in all routes of the LSA, and a calling Eastern Whip-poor-will was documented in Route A1 and A2 during the 2025 field program (Section 3.2.2.6).

Potential Impacts: Loss of established nests due to vegetation removal, risk of direct mortality.

Protection: Eastern Whip-poor-will falls under federal jurisdiction on all provincial lands as per the *SCA*. Eastern Whip-poor-will and their nests are protected under *SARA* Sections 32 and 33, respectively. The Project may require a permit issued under *SARA*, which can be accessed through the *Species at Risk Permit System*.

Mitigation (as per the *General Habitat Description for the Eastern Whip-poor-will*; MECP, 2021[a]):
For occupied nests:

- Establish AOCs around nest sites with 3 habitat categories:
  - Category 1 (0–20 m of area surrounding the nest),
  - Category 2 (21–170 m of nest or approximated defended territory), and
  - Category 3 (170–500 m of the nest, or approximated center of defended territory).
- Activities in general habitat can continue if the function of these areas for the species is maintained and individuals of the species are not killed, harmed, or harassed. Compatible activities include:
  - Hiking and non-motorized vehicle use of existing recreational trails.
  - Normal use of existing roadways including access roads.
  - Small-scale selective removal of individual trees.
- Incompatible activities include:
  - Large scale development or other activities that result in significant alteration or clearing of vegetation.
  - Indiscriminate application of pesticides within habitat

3.2.5.1.4 Migratory Bats: Eastern Red Bat, Hoary Bat and Silver-haired Bat

Critical life process timing: April 15 – August 31 (maternal colony sites, roosting sites).

Habitat: All three (3) migratory bat species will roost in deciduous, mixedwood and coniferous forests, with minor local preferences towards deciduous trees where they are abundant (COSEWIC, 2023[a]). Hoary Bat and Eastern Red Bat roost among the foliage of trees, while the Silver-haired Bat roost under bark and in the cavities of trees like the habitats used by Myotis species.

Potential migratory bat roosting habitat was previously mapped when discussing SWH, which can be used as a surrogate for considering Canada Warbler (see Section 3.2.4.1.4, Table 3.1.4-1, Figures 78-89). Potential maternal roosting habitat is abundant in all routes of the LSA, and migratory bat SAR were documented in Routes A1, A2, B3, C1 and C2 (as well as outside of the LSA; Section 3.2.2.8).

Potential Impacts: Loss habitat due to vegetation removal (i.e., maternal roosting habitat), risk of direct mortality.

Protection: Migratory Bats fall under provincial jurisdiction on all provincial lands as per the *SCA*. Migratory Bats and occupied roosts are protected under *SCA* Section 16. The Project constitutes a "registrable" activity for the purposes of SAR permitting, and will be subject to *O.Reg. 75/26: REGISTRABLE ACTIVITIES*.

Mitigation (Roosts: as per *Bats and bat habitats: guidelines for wind power projects,* MNR, 2011):
For maternal roosting sites and migratory stopover areas:

- 120 m AOC centered on the occupied site.
- No High Impact Activities from April 15 – August 31.
- Medium and Low Impact Activities can occur within the 120 m AOC provided that any maternal and roosting sites are left standing centered within a 10 m buffer of undisturbed vegetation.

3.2.5.1.5 Resident Bats: Little Brown Myotis, Northern Myotis and Tri-colored Bat

Critical life process timing: September 1 – May 31 (hibernacula), April 15 – August 31 (maternal colony sites, roosting sites).

Habitat: These species are generally associated with the Boreal Forest, and will roost in tree cavities, under loose bark and in human-made structures (COSEWIC, 2013). They will hibernate in large colonies in areas that remain humid and above freezing throughout the winter (e.g., caves and abandoned mines).

Potential hibernation habitat (Section 3.2.4.1.3, Table 3.1.4-1, Figures 62-65) and maternal roosting habitat (Section 3.2.4.1.4, Table 3.1.4-1, Figures 66-77) were previously mapped when discussing SWH. Potential hibernation habitat was identified in the Route C1 and C2 LSA, and potential roosting habitat is abundant in all routes of the LSA. Resident Bat SAR were observed in Routes B3, C1 and C2 (as well as outside of the LSA; Section 3.2.2.8).

Potential Impacts: Loss habitat due to vegetation removal (i.e., maternal roosting habitat) or bedrock disturbance (i.e., hibernacula), risk of direct mortality.

Protection: Resident Bats fall under provincial jurisdiction on all provincial lands as per the *SCA*. Resident Bats, hibernacula and occupied roosts are protected under *SCA* Section 16. The Project constitutes a "registrable" activity for the purposes of SAR permitting, and will be subject to *O.Reg. 75/26: REGISTRABLE ACTIVITIES*.

Mitigation (Hibernacula: as per *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales*, MNR, 2010; Roosts: as per *Bats and bat habitats: guidelines for wind power projects,* MNR, 2011):

For hibernacula that have been used in the last 20 years by ≥50 Little Brown Myotis, ≥30 Big Brown Bat, ≥20 Tri-colored Bat, ≥20 Northern Myotis, or ≥1 Eastern Small-footed Myotis, or as otherwise identified as significant by MECP:

- 200 m radius AOC centered on the entrance to the hibernaculum
- No High Impact Activity with the inner 100 m of AOC
- High Impact Activities are permitted within the outer 100 m AOC outside the critical hibernation dates from September 1 – May 31.

For maternal roosting sites and migratory stopover areas:

- 120 m AOC centered on the occupied site.
- No High Impact Activities from April 15 – August 31.
  Medium and Low Impact Activities can occur within the 120 m AOC provided that any maternal and roosting sites are left standing centered within a 10-m buffer of undisturbed vegetation.

4 2026 FIELD PLAN

As updates have been made to the route alternatives since the initiation of the field program, some of the 2025 survey points fall outside the PSA or LSA. A 2026 fieldwork plan to further assess SAR and their habitats along the preferred route alternatives is currently being developed in collaboration with Dillon and Hydro One. The results from the surveys completed in 2026 will assist in identifying potential impacts associated with the proposed Project. The following surveys are proposed as part of the 2026 field program:

Breeding Bird Surveys: Deciduous habitat is underrepresented in the 2025 point-count surveys due to changes in the Project layout. Surveys in 2026 will focus on this habitat type and filling geographic gaps in the current route alternatives using point-count surveys, marsh bird surveys and ARU deployments.

Bank Swallows: A Bank Swallow nesting colony was located within the LSA. However, the colony was discovered outside of the typical breeding bird nesting period, so it was not possible to confirm breeding activity during the 2025 field program. A follow-up survey in the spring of 2026 will be conducted to confirm occupation of this nest site.

Bats Surveys: Data from the 2025 surveys serve as a good foundation for describing the local bat community. However, targeted confirmatory surveys are necessary for features that may serve as hibernacula. Namely, spring emergent and/or fall swarming surveys will occur for abandoned mine "features-to-surface" falling within the LSA.

Turtle Surveys: There was no evidence of turtle presence within the LSA from data collected in the 2025 field program. This likely reflects low survey effort when compared to the size of the LSA. Additional surveys will be conducted in 2026 at 11 sites with a focus on areas intersecting NHIC grid squares with Blanding's Turtle records. These surveys will be supplemented with data gathered by the eDNA program.

eDNA and Watercourse Surveys: The 2025 eDNA survey identified waterbodies where Lake Sturgeon are likely present. As such, an expanded eDNA survey is recommended in 2026 to identify the extent of Lake Sturgeon distribution within the PSA of the preferred route, if available.

5 FINDINGS FROM THE 2026 FIELD PROGRAM WILL BE SUMMARIZED IN AN ADDENDUM TO THIS REPORT. SUMMARY

NWES is pleased to provide this report and trusts that it meets your current needs. Please contact the undersigned if you have any questions about this report or require clarification regarding the work described in this report.

Sincerely,



Terry Honsberger	James Barber	Zachary Long	Jody Heerema	Jake O'Flaherty
Principal / Senior Biologist	Environmental Specialist	Biologist	Environmental Specialist	Environmental Specialist

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APPENDIX A: FIELD PROGRAM METHODOLOGY

DILLON CONSULTING

NWES NorthWinds Environmental Services

HYDRO ONE NETWORKS INC.

Wawa to Porcupine Transmission Line Project

Class Environmental Assessment

Preliminary Natural Environment Field Program Methodology



DRAFT

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1.0 Project Overview

Hydro One Networks Inc. (Hydro One) is committed to energizing life in northeast Ontario. Under directive of the Ontario Energy Board (OEB), Hydro One has initiated a Class Environmental Assessment (Class EA) in support of the development and construction of a new priority transmission line project to address the surging electricity demands in northeast Ontario. This initiative is in response to the rapid electrification of communities, businesses, and industrial sectors, as well as the anticipated population growth and economic development activities in the region. The Project is designated as a priority by the province and is crucial for meeting the infrastructure needs by the end of 2030 (i.e., planned in-service Project date).

The proposed project involves the construction of a new, approximately 260 km long, single-circuit 500 kV transmission line extending from Hydro One's Wawa Transformer Station (TS) near Wawa, Ontario to the Porcupine TS near Timmins, Ontario (the Project). A new 500 kV TS near Wawa is also under consideration. The construction plan will include associated temporary and/or permanent access, laydown areas, construction camps, and potentially new aggregate pits or quarries as required.

The Project will be completed in accordance with Hydro One's Class Environmental Assessment for Transmission Facilities (2024), in accordance with the *Ontario Environmental Assessment Act*. The Class EA is a streamlined planning process that has proven effective in ensuring transmission projects with predictable range of effects have feasible environmental mitigation and/or protection measures in place. The Project will require OEB approval under Section 92 (Leave to Construct) of the *Ontario Energy Board Act*.

The purpose of this Natural Environment Field Program Methodology (Field Program Methodology) is to summarize the preliminary natural environment field program approach prior to the commencement of the field program to facilitate a streamlined and timely review process by Hydro One, agencies and Indigenous communities. This Field Program Methodology will be updated once the route alternatives have been confirmed to include:

- Results of the natural environment background review;
- Designated survey areas; and
- Comments from Hydro One, agencies and/or Indigenous communities

For the purposes of this preliminary Field Program Methodology, we have assumed that two route alternatives will be carried forward as part of the Class EA and that each alternative will have up to two additional variations, each approximately 200 km in length.

2.0 Field Program Study Area

Lands within 120 m of each route alternative centerline (including variations) as well as the Wawa TS and Porcupine TS will be carried forward and considered as the Project Study Area (PSA). The PSA is where field studies are proposed to occur in 2025 and 2026.

The Local Study Area (LSA) consists of the lands within 500 m of each route alternative centreline (including variations). Available natural environment background data will be collected within the LSA as a mechanism to better inform the proposed field program included herein, as well as potential construction access, laydown sites, construction camps, etc.

3.0 Background Review

A thorough desktop background review of environmental data within the LSA will be completed prior to fieldwork. Preliminary data sources to be included in our review are provided below in **Table 1.**

Table 1: Preliminary Background Review Data Sources

Data Source	Comments
Indigenous communities	Traditional Ecological Knowledge (TEK), as provided
Land Information Ontario (LIO)	At a minimum, queries of: • Aquatic Resource Areas • Wildlife Values Areas • Wildlife Values Sites
Natural Heritage Information Centre (NHIC)	Species records and wildlife concentration areas
Forest Resource Inventory (FRI)	Used to frame field data collection study designs, ecosite landcover will be used to map Significant Wildlife Habitat (SWH), Rare Vegetation Communities, wildlife and Species at Risk (SAR) habitat.
Abandoned Mine Information System (AMIS)	Feature-to-surface locations (potential bat hibernacula)
Northern Ontario Engineering Geology Terrain Study (NOEGTS)	Understanding of geological and terrain related challenges and features.
Local Forest Management Plans	Review of detailed mapping, including access points.
Significant Wildlife Habitat Criteria Schedules for Ecoregion 3E	Map potential SWH and Rare Vegetation Communities.
Ontario Breeding Bird Atlas (OBBA)	Compile list of observations overlapping study area.
iNaturalist	Compile list of observations overlapping study area.
eBird	Compile list of observations overlapping study area.
Ontario Reptile and Amphibian Atlas	Compile list of observations overlapping study area.
Fur Management Information System (FURMIS)	Compile trapping records from traplines overlapping study area.
DFO Aquatic Species at Risk	Compile list of observations overlapping study area.
Fish ON-Line website	Compile list of observations overlapping study area.
Satellite Imagery	To aid in habitat delineations.
Ontario Digital Terrain and Digital Surface Models	Understand local topography and its ecological implications.

This section will be updated upon completion of the background review.

3.1 Habitat Mapping

Habitat types are broader groupings of similar ecosites, which captures a wider range of conditions that wildlife will exploit. Our ecosite to habitat type conversion was developed with the guidance of Environment and Climate Change Canada (ECCC) for use on similar projects in northern Ontario (**Table 2**). Most habitat types will be defined by ecosite landcover information. However, the study area includes managed forest with active forestry, so it may be necessary to manually map "Successional" habitat, which represent disturbed areas in various stages of regrowth. In this case, successional areas consist of clearings associated with timber harvesting activities. Although manual mapping from aerial and satellite imagery is a good preliminary tool, it will be necessary to request the depletion mapping from forest management companies (where applicable) when finalizing the field program.

Table 2: Ecosite and Habitat Type Correlation

Habitat Type	Habitat Class	Ecosites
Upland	Coniferous	B011, B012, B013, B014, B023, B024, B025, B026, B033, B034, B035, B036, B037, B038, B048, B049, B050, B051, B052, B053, B064, B065, B066, B067, B068, B081, B082, B083, B084, B085, B086, B097, B098, B099, B100, B101, B102, B113, B114, B115, B116, B117
	Deciduous	B016, B017, B018, B040, B041, B042, B055, B056, B057, B058, B070, B071, B072, B073, B074, B075, B088, B089, B090, B091, B104, B105, B106, B107, B119, B120, B121, B122, B123, B124
	Mixedwood	B015, B019, B027, B028, B039, B043, B054, B059, B069, B076, B087, B092, B103, B108, B118, B125
	Shrubland	B009, B010, B021, B022, B031, B032, B046, B047, B062, B063, B079, B080, B095, B096, B111, B112
	Grassland	B008, B020, B029, B030, B044, B045, B060, B061, B077, B078, B093, B094, B109, B110
	Barren	B001, B002, B003, B004, B005, B006, B007, B154, B155, B156, B157, B158, B159, B160, B161, B162, B163, B164, B165, B166, B167, B168, B170, B171, B172, B173, B174, B175, B176, B177, B178, B179, B180, B181, B182, B183, B184, B186, B187, B188, B189, B201, B202, B203, B204, B205, B206, B207, B208, B209, B210, B211, B212, B213, B214, B215
	Disturbed	B169, B185, B190, B191, B192, B193, B194, B195, B196, B197, B198, B199, B200
Wetland	Marsh	B142, B143, B144, B145, B148, B149, B150, B151, B152, B219, B220, B221
	Swamp Coniferous	B127, B128, B129, B222, B223, B224
	Swamp Deciduous	B130, B131, B132, B133, B134, B135, B216
	Fen	B136, B139, B140, B141, B146, B147, B217, B218
	Bog	B126, B137, B138

Habitat Type	Habitat Class	Ecosites
Other	constructed water collection	B153

3.1.1 Species at Risk Habitat Mapping

Species at Risk (SAR) in Ontario are protected under the *Endangered Species Act, 2007 (*ESA*)* and federally under the *Species at Risk Act, 2002 (*SARA*)*. The ESA applies to species listed as extirpated, endangered, or threatened under *Ontario Regulation 242/08* on private and/or public lands and provides both species protection (Section 9) and habitat protection (Section 10). The SARA applies to species listed as endangered or threatened under Schedule 1 on federal lands and/or aquatic species, as well as migratory birds listed under both the *Migratory Birds Convention Act, 1994* (MBCA) and Schedule 1 as endangered and/or threatened of the Act. Under SARA, species listed as endangered and/or threatened receive species protection (Section 32), residence protection (Section 33) and critical habitat protection (Section 58). As extirpated species are no longer considered to exist in the wild in Ontario, they will not be included as having the potential to occur within the general vicinity of the LSA.

Potential SAR habitat will be mapped across the study area using ecosite information derived from FRI landcover mapping. Habitat mapping criteria are derived from provincial or federal SAR documents (i.e., Committee on the Status of Species at Risk in Ontario (COSSARO) or Committee on the Status of Endangered Wildlife in Canada (COSEWIC) reports) or through discussion with the Ministry of the Environment, Conservation and Parks (MECP; e.g.. Myotis maternal roosting habitat).

3.1.2 Significant Wildlife Habitat Screening

The desktop screening exercise will identify areas with the potential to contain SWH or Rare Vegetation Communities described in *Significant Wildlife Habitat (SWH) Criteria Schedules for Ecoregion 3E* (MNRF 2015). Assessment of SAR habitat will also be included with SWH. The results of the desktop review will guide the planning of field programs, including selecting survey stations and assessing appropriate studies are undertaken to account for the presence of potential SAR or other natural heritage features. Field programs will be designed to 'ground-truth' these areas to supplement the desktop screening where possible.

4.0 Field Program Approach

The results of the background review will guide the field program development, further clarifying the scope of the studies and focal species. The field program will include summaries of the methods that will be used. Indigenous communities and agencies will have opportunities to comment on the Field Program Methodology in advance of the 2025 field season. This document will be revised to address comments from Indigenous communities and agencies subsequent to their collective reviews.

The following approach for field surveys has been developed to assess the natural environment existing conditions associated with the route alternatives and their variations, as well as to identify potential impacts associated with the proposed Project. The results from the surveys outlined below will assist in meeting the requirements of the Class EA process.

4.1 Indigenous Knowledge and Participation

Our commitment to engaging Indigenous communities and building capacity is fundamental to the success of this Project. Indigenous communities possess invaluable local and traditional ecological knowledge (TEK) which will help the Project better understand environmental changes, guide Project development, and support critical decision making. Additionally, insights from communities are important when interpreting field data within the context of their local and traditional ecosystems.

We are dedicated and fully committed to planning the field program in close collaboration with Indigenous communities. This approach aims to integrate TEK throughout the Class EA process. We will actively incorporate TEK, as provided by the communities, into both our field program and subsequent reporting. This integration not only enriches our understanding but also reinforces our respect for the profound connection between Indigenous communities and their traditional lands.

4.2 Early Access Requirements

To commence field assessments within the PSA in the spring of 2025, Hydro One will make attempts to obtain Early Access Agreements with property owners within the PSA, as applicable.

4.3 Schedule and Overview

An overview of the proposed field schedule for the terrestrial environmental program is provided below (**Table 3**). Time-sensitive and seasonal surveys are described in more detail in their respective sections below. The intent of the field program is to gather sufficient data in the 2025 field season to adequately inform aspects of the Class EA. Certain components of the proposed program, and the potential for data gap filling may facilitate the need for additional surveys in 2026.

Table 3: Proposed 2025 Field Schedule

Study Component	2025								
	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Amphibians & Reptiles									
Breeding Birds									
Marsh Birds									
Bank Swallows									
Bats									
Vegetation /Wetlands									
Watercourses									

Table 4: Detailed 2025 Field Schedule

Section	Study Component	Start	Finish	Field Days anticipated
	Terrestrial			
4.4.3	**Wildlife**			
	Herptofauna			**20**
4.4.2.1	Anuran (Frog and Toad) Acoustic Monitoring			
4.4.2.2	Turtle Basking Survey	02-May	31-May	
	Round 1	18-May	21-May	5
	Round 2	01-Jun	15-Jun	10
	Round 3	01-Jul	15-Jul	5
	Migratory Birds			
4.4.2.3	Breeding Bird Surveys (1 round)	01-Jun	10-Jul	20
4.4.2.4	Marsh Bird Surveys	20-May	05-Jul	12
4.4.2.5	Bank Swallow Surveys	01-Jun	10-Jul	9
	Mammals			
4.4.2.6	Bat Maternity Roost Habitat Assessment and Acoustic Monitoring	01-Jun	30-Jun	6
4.4.2.7	Bat Hibernacula Visual Assessment and Bat Hibernacula Swarming	01-Aug	30-Sep	*Pending Background Review*
4.4.2.8	Candidate Significant Wildlife Habitat (e.g., moose aquatic feeding areas)	15-May	30-Sep	
4.4.2.9	**Vegetation and Wetlands**			**28**
4.4.2.10	Early Blooming and Ecological Land Classification	25-May	30-Jun	14
4.4.2.11	Late Blooming and Ecological Land Classification	20-Jul	31-Aug	14
	Watercrossings			
4.4.3	Surface water, fish and fish habitat field surveys			9

4.4 Field Data Collection

4.4.1 Digital Data Collection

We intend to implement the use of digital data collection wherever possible to make data collection as efficient and accurate as possible while creating a permanent record that is more reliable than field notes. Digital data collection will include the use of Tablets/Digital Data sheets, Autonomous Recording Units, Drones, GPS, Georeferencing digital cameras and Trail Cameras. Their use is described in detail below.

4.4.1.1 Digital Data Sheets

Field tablets loaded with data sheets (created with Survey 123 software) appropriate to each survey will allow for efficient data collection. Digital data sheets eliminate most field data entry errors by using drop-down and forced entry fields. Collecting data digitally in the field also means efficiencies in downstream data management as data can be quickly (and regularly) uploaded, backed up, easily shared for subsequent QA/QC.

4.4.1.2 Autonomous Recording Units (ARUs)

ARUs will be used to supplement surveys for bird and amphibian surveys as per guidance from Canadian Wildlife Service (CWS 2022). These deployments can be particularly efficient at surveying hard to access areas, surveying for secretive species, and can survey a range of time windows and dates in accordance with a variety of survey protocols to maximize appropriate weather or other survey conditions. Ultrasonic ARUs (Wildlife Acoustics Song Meter MiniBAT) can be deployed in potential bat maternal roosting or potential hibernacula areas and programmed in 'trigger' mode and set to record within specific timing windows. Species identification will be conducted through an analysis of recordings using Kaleidoscope software (Wildlife Acoustics) and manually vetted by staff experienced in acoustic call analysis.

4.4.1.3 Drones

The use of drones in environmental monitoring is beneficial because of its speed, cost-effectiveness and the ability to generate high-quality imagery and data, particularly in remote, hard to reach areas. Often, the data collected can be utilized without extensive processing, making drones a practical and efficient choice to supplement data collection in hard to access areas. We will incorporate licenced, registered and insured drones to enhance data collection at water crossings, wetlands, and other areas that benefit from high resolution aerial imagery. Aerial imagery obtained with the drone has the added advantage of being georeferenced allowing for efficient photo review and organization.

4.4.1.4 Trail Cameras

Reconyx HP2X Professional Infrared Trail cameras can be deployed in suitable locations (e.g., game trails, clearings or potential den sites) in all habitat types at any time during the field program. These

cameras have the advantage of providing observations over long periods of time, in all weather, day or night.

4.4.2 Wildlife

4.4.2.1 Amphibian Call Counts

Amphibian breeding habitat is a form of significant wildlife habitat. As they are dependent on aquatic habitats, amphibians can serve as indicators of wetlands and water quality, which can be valuable in collecting baseline information and monitoring changes post-construction.

We propose to describe amphibian community structure and relative abundance within the PSA by conducting a spring roadside survey following the Amphibian Road Call Count methodology (Konze and McLaren 1997). The Amphibian Road Call Count is based on a road transect with unlimited distance point-counts at regular intervals. These surveys are conducted at night, ideally three times no fewer than 15 days apart during the breeding season to detect early and late breeding species. Surveys will be conducted from early-April to mid-July (as suitable for the latitude) during the 2025 field season, with the first survey corresponding to ambient nightly temperatures of at least 5 °C. Listening periods will be a minimum of 3 minutes, with no mandatory silent period before. Chorus intensity, direction and estimated distance will be recorded for each species at all stations. Survey timing will be between 30 min before sunset and midnight, when calling intensity is at its highest.

Preliminary survey locations will be selected in advance of the field program through a desktop analysis of available land cover mapping (e.g., FRI, LIO) and the screening of candidate Amphibian Breeding SWH. Features where survey effort will be focused will include mapped wetlands and land cover polygons identified as suitable wetland types (i.e., marsh, bog, fen, swamp, shallow open water). The Anuran Call Count stations will be distributed throughout the PSA with a random distribution while screening for:

- Wetlands in proximity to roads for health and safety reasons due to nighttime surveys;
- Selected wetland stations according to proportional representation in the PSA (e.g., 50% marsh, 30% swamp, 10% fen, 5% bog, 5% unknown); and
- Aim to achieve equal number of stations along alternate route groupings.

4.4.2.2 Turtle Basking Surveys

The Project area is known to be inhabited by three species of turtles: Blanding's Turtle (*Emydoidea blandingii*; Threatened), the Snapping turtle (*Chelydra serpentina;* Special Concern), and Midland Painted Turtle (*Chrysemys picta marginata;* Special Concern federally). Blanding's Turtles use bogs, fens, marshes or ponds with free (unfrozen) water depths of at least 7 cm (MECP 2021).

We understand that, for many Indigenous communities, turtles are a culturally significant species. As such, our approach for surveying turtles will include a turtle visual encounter survey as well as provisional turtle

nesting surveys, if requested. A turtle visual encounter program will be completed spring/early summer 2025 during which crews will visit wetlands and waterbodies that have potential to support overwintering turtles and visually assess them to determine the abundance and diversity of turtles using these features for basking. The presence of basking turtles early in the spring gives an indication that they use the wetlands/waterbodies for overwintering.

Turtle visual encounter surveys will follow the Survey Protocol for Blanding's Turtle (MNRF 2015) and performed in wetlands and waterbodies that have the potential to support overwintering turtles. These surveys will be supplemented with environmental DNA (eDNA) sampling, discussed further in the Aquatic Monitoring workplan. Survey locations will be selected based on suitable aquatic features (e.g., ponds, wetlands with open water) that occur in the PSA. These locations will be pre-selected using GIS base maps. The main considerations when choosing survey locations will be access, area coverage, and habitat suitability. Each survey station will also be selected based on land access and a clear line of sight from a publicly accessible road(s) or trail(s). Note that survey stations selected through pre-field mapping may be adjusted in the field by up to 100 m from the target sampling point, provided the station remains in the same wetland and within the appropriate boundary (i.e., PSA).

The purpose of turtle visual encounter surveys is to determine presence/absence and habitat use of various turtle species that bask out of the water. Turtle visual encounter surveys are performed by searching favorable habitats during the spring and early summer when turtles are actively basking to increase their body temperatures following the hibernation period. Surveys will occur after the ice cover has melted up to the time at which the water temperature becomes warmer than the air temperature. When wetland vegetation does not obstruct the view of the shoreline and other available basking sites (such as floating logs or hummocks), use of binoculars with a minimum magnification of 10x from a distance to scan the entire perimeter of the shoreline and potential basking sites (a high-power spotting scope may be required to accurately identify the species in some situations). A drone may be used to obtain useful aerial photographs of suitable waterbodies, especially in difficult to access areas. Care should be taken when approaching wetlands and ponds so as not to disturb any basking turtles. This will usually require the surveyor to access the wetland or pond from several different locations or walk part of the shoreline.

Basking sites, including hummocks, should be accessed, and viewed from the sunlit side where possible so the sun is behind the surveyor when trying to locate turtles. Turtles generally bask close to the water on logs, rocks, vegetation hummocks, sedge/grass tussocks, floating mats of aquatic vegetation, muskrat mounds and lodges. Crews will look for dark shapes (edge of shell) against the vegetation; shiny areas among vegetation could indicate a recently emerged wet turtle. Snapping turtles rarely bask on land and will float on the water surface or bury itself in soft substrate. In addition to recording turtles observed, potential basking sites, nesting sites and suitable summer and winter habitat will be described and mapped. This information, particularly potential nesting sites, can help inform subsequent survey effort (i.e., nesting survey locations)

4.4.2.3 Breeding Bird Point Counts

Songbirds comprise a complex group of animals that includes migratory birds, protected under the *Migratory Birds Convention Act* (1994), and species at risk. Further, songbird community assemblages can serve as excellent indicators of ecosystem health. This proposal presents the plan for conducting a songbird point-count survey program for the 2025 field season. 200 Point-count survey stations will be established across all route options to sample the various habitat types in proportion to their availability in the RISA.

The objective breeding bird point count program is the following:

- To assess breeding bird species distribution and composition throughout the PSA, which will be achieved by creating a broad distribution of survey stations throughout the PSA and equal distribution along alternative routes.
- To collect sufficient breeding bird data to support the alternative route evaluation, EA, and other permitting requirements given the single breeding season to maintain Project timelines.

Breeding bird surveys will be conducted by qualified avian field biologists during the active breeding season.

The surveys will be conducted in accordance with methods outlined in the Canadian Breeding Bird Survey (Sauer et al. 2017) and the Ontario Breeding Bird Atlas (Cadman et al. 2007). The Ontario Breeding Bird Atlas protocol requires five-minute point counts; however, the observation period will be extended to ten minutes to improve detection, consistent with recommendations in other guidelines, including the Forest Bird Monitoring Programs in Wildlife Monitoring Programs and Inventory Techniques for Ontario (Konze and McLaren 1997). Each plot will be surveyed once to maximize survey coverage in a manner that is both cost effective and sufficient for an assessment of potential effects of the Project on breeding birds.

Breeding bird surveys will be performed using point count surveys. Point-count surveys consist of a ten-minute listening period during which bird species seen or heard are recorded. As per the Ontario Breeding Bird Atlas protocol (Cadman et al. 2007), all surveys will be conducted between sunrise and 10 am under conditions where the wind does not exceed 15 km/h and there is no continuous rain. The breeding bird survey window for northern Ontario is between June 1st and July 10th, with two rounds of surveys completed separated by a minimum of 10 days.

Survey stations will consist of a 50 m radius circular plot with an additional 50 m radius buffer (i.e., a total 100 m radius surveyed). Birds observed outside of 100 m, including flyovers, will also be noted where possible. Environmental conditions will be recorded for each survey including time, temperature, and precipitation, as they are known to influence the activity levels of birds and their probability of detection. Target locations for breeding bird surveys will be identified using FRI ecosite data compiled during the desktop analysis. Survey stations will be distributed throughout the PSA in representative habitats that

are likely to support breeding birds, with an emphasis on SAR, such as Bobolink (*Dolichonyx oryzivorus*), Canada Warbler (*Cardellina canadensis*) and Olive-sided Flycatcher (*Contopus cooperi*). Survey stations will be spaced a minimum of 250 m apart to avoid double counting individuals. Effort will be made to make sure there are equal numbers of stations across route alternatives to allow for a comparison of bird data for the evaluation of a preferred route.

Sensitive avian features identified from provincial mapping and community science databases (e.g., Ontario Breeding Bird Atlas, eBird) will also be incorporated into survey site selection. Examples include documented nesting sites and element occurrence records that imply nesting habitat of SAR.

Survey stations will be selected based on the percent composition of various habitat types as identified in the desktop mapping. For example, 30% of point count stations will be placed in coniferous habitat if 30% of the PSA is coniferous, and the stations will be distributed across each route option proportionally. To avoid the influence of "edge" effects and allow for evaluating habitat associations of select species, stations will be placed wholly within habitat polygons, at least 150 metres from the edge of different habitat types. Station locations will be refined if needed in the field based on access and other logistical constraints, with alternate stations pre identified to allow for contingency and reduce lost time during the survey window.

4.4.2.4 Marsh Bird Surveys

Marsh bird surveys will be conducted between May 20 and July 5, either at dawn (beginning approximately 30 minutes before sunrise and will end no later than 10:00 a.m.) or dusk (beginning no earlier than four hours before sunset and completed before dark) each day of survey (Bird Studies Canada 2009). At each identified station, call playback surveys will be conducted to detect secretive marsh birds, using protocols for surveying marsh birds as per the Marsh Monitoring Program (Bird Studies Canada 2009). At a subset of marsh bird breeding surveys, a minimum of three site visits will be completed to maximize detection of Least Bittern (*Ixobrychus exilis;* threatened provincially and federally). Each survey will be 11 minutes in duration, consisting of 5 minutes of listening followed by 6 minutes of call playback for targeted species. During the call playback period, the calls of six species will be played in sequence, with each call played for 30 seconds, followed by 30 seconds of listening. Calls will be broadcast for the following species:

- Yellow rail (*Coturnicops noveboracensis*);
- Sora (*Porzana carolina*);
- Virginia rail (*Rallus limicola*);
- American bittern (*Botaurus lentiginosus*);
- Pied-billed grebe (*Podilymbus podiceps*); and
- Least bittern.

Observers will record the birds detected within a 100 m radius of the station centre point, including fly-throughs, with the latter recorded as such. Any birds observed outside of 100 m will also be noted where possible.

Due to their secretive nature, we propose bolstering the data collection of marsh bird occurrences by placing ARUs at candidate survey stations. The units will be programmed to record for five minute intervals every hour within the survey timing window. Crews will collect the units after the survey period concurrent with vegetation or maternal roosting work for efficiency.

4.4.2.5 Bank Swallow Surveys

Bank Swallow (*Riparia riparia*) is designated as threatened provincially and federally and has potential to occur in the PSA. Bank swallows breed in a variety of natural and anthropogenic habitats, including lake bluffs, stream and riverbanks, sand, and gravel pits, and roadcuts. Nests are generally built in a vertical or near-vertical bank, and are often colonial. Lake bluffs, stream banks, aggregate stockpiles, and roadcuts within the PSA may provide suitable nesting habitat.

The objectives of the bank swallow survey program are to:

- Identify the presence and use of suitable nesting habitat which may be impacted by the Project in support of the EA and route selection process.
- Complete surveys of identified suitable nesting habitat within the 2025 survey window to maintain Project timelines.

Candidate nesting habitat will be determined through the desktop analysis with focus on available aerial imagery, LIO data on aggregate sites, and LiDAR data if it is available. Ground-based visual surveys of features determined to be candidate bank swallow nesting habitat will be conducted within the PSA. These features, as well as other candidate habitats identified in the field, will be visually inspected for the presence of nesting bank swallows during the peak breeding season (late May to early July). Surveys will consist of the surveyor scanning the habitat from a distance with binoculars to search for individuals and listening for their calls, followed by closer inspection of the area for nests or other signs, where accessible. For efficiency, drone photography may be used to complete the survey in areas where access presents an issue (i.e. on riverbanks). Survey effort will focus on features with the potential to intersect the preliminary Project footprint for each alternative route where highest impacts would be anticipated. The rationale for this effort is due to the specificity of the habitat of the species (nest on banks of rivers or anthropogenic features in aggregate pits) and the unlikelihood of impact to these nesting features by the Project works and activities unless the Project footprint was proposed in close proximity to the feature.

4.4.2.6 Bat Maternity Roost Habitat Assessments and Acoustic Monitoring

There are several endangered bat species with ranges that will overlap the LSA. These include migratory bat species (i.e., Migratory Bats) such as Eastern Red Bat (*Lasiurus borealis*), Hoary Bat (*Lasiurus cinereus*)

and Silver-haired Bat (*Lasionycteris noctivagans*), and resident species that hibernate in Ontario (i.e., Resident Bats) including Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), Tricolored Bat (*Perimyotis subflavus*), and possibly Eastern Small-footed Bat (*Myotis leibii*).

Screening for bat habitat (i.e., maternal roosting habitat and hibernacula) will be conducted as part of the desktop review process. Potential bat maternal roosting habitat will be identified by querying suitable ecosites within the PSA. Suitable Resident Bat maternal roosting ecosites (as identified by MECP) include:

- G/B015-019 Very Shallow: Dry to Fresh: Mixedwood/hardwood
- G/B023-028 Very Shallow: Humid: Conifer/Mixedwood
- G/B039-043 Dry, Sandy: Hardwood/Mixedwood
- G/B054-059 Dry to Fresh: Coarse: Mixedwood/Hardwood
- G/B069-076 Moist, Coarse: Mixedwood/Hardwood
- G/B087-092 Fresh, Clayey: Mixedwood/hardwood
- B103-108 Fresh, Silty to Fine Loamy: Mixedwood/Hardwood
- B118-125 Moist. Fine: Mixedwood/Hardwood
- B130-133: Swamps.

Migratory Bat species roost in deciduous, mixedwood and coniferous forests, with minor local preferences towards deciduous trees where they are abundant. Hoary Bat and Eastern Red Bat roost among the foliage of trees, while the Silver-haired Bat roost under bark and in the cavities of trees like the habitats used by Myotis species. Potential roosting habitat will be estimated by mapping all forested areas (both upland and lowland).

The commonly accepted maternity roosting period in Ontario is between June 1 and June 30 (MNR 2011a). Wildlife Acoustics Song Meter MiniBAT ultrasonic monitors will be deployed and programmed in trigger mode to record from 30 minutes before sunset to 5 hours after sunset for a period of at least 10 days during the bat maternity roosting season. Ultrasonic monitoring stations will be set up to record at select suitable field survey locations/candidate bat maternity roost habitat along the alternative routes.

Bat acoustic monitoring stations will be selected to achieve adequate coverage within candidate bat habitat throughout the PSA. A sub-sample of bat stations will be evenly distributed throughout the PSA in the ecosites screened as candidate maternity roost habitat for SAR bats, making sure that stations are distributed evenly across route alternatives. The subsample selection of ultrasonic monitoring stations will be based on the prevalence of candidate maternity roost habitat for SAR bats based on the pre-field mapping. The acoustic monitoring stations will provide enough sampling effort to cover the study area and provide for the collection of data that can then be extrapolated to other candidate maternity roost habitat mapped in the PSA. The objective of the sampling design is to assess bat species distribution and composition throughout the PSA and the intent of the baseline data collection is not to determine individual roost occupancy. The information collected will be analyzed by Kaleidoscope software and then manually vetted by a trained bat acoustic analysis expert. Analysis will include species identification,

composition, and relative bat activity per night at each of the stations. Through this analysis, adequate baseline data for bats shall be achieved.

4.4.2.7 Bat Hibernacula Visual Assessment and Monitoring (if required)

Resident Bats are particularly vulnerable during winter hibernation when they congregate in large numbers and are inactive. Features used as hibernacula, such as caves, adits and other mine features, and rock overhangs, are also far less common on the landscape than those that support other life requisites (e.g., roosting, foraging) and, therefore are considered limiting factors for the distribution of bat species that hibernate. Hibernacula that support SAR bats are protected under the ESA. At this stage, it is unknown if any potential hibernacula fall withing the potential PSA; however, if present the following survey will be used to assess use.

Spatial information from the Abandoned Mines Information System (AMIS) database (NDM 2024) will be reviewed to identify mine features that may support bat hibernacula. Abandoned "features-to-surface" (e.g., adit or shaft) will be considered potential hibernacula if the depth/length of the feature is ≥15 m. Additionally, the AMIS data will be overlayed with SAR bat element occurrence data and bat hibernacula data provided by the MNRF and MECP to identify which mine features had been previously confirmed as bat hibernacula.

Natural features in the PSA identified as potential bat hibernacula through desktop analysis will be investigated in the field to assess their suitability. Initially, a visual inspection will be conducted from the exterior of the feature. If a mine feature meets any of the following criteria, the habitat will be re-classified as low or nil potential to support hibernating bats:

- There is one horizontal opening, less than 15 centimeters (cm) in diameter, and no or very little airflow is detected;
- The opening is a vertical shaft less than 30 cm in diameter; the passage terminates at a distance for which the observer can clearly ascertain by visual inspection from the opening that there are no fissures that bats can access; the opening/feature is prone to flooding, collapsed shut and completely sealed, or otherwise inaccessible to bats; or
- It is a "new" opening, which has formed recently (less than 1 year old) due to subsidence.

Ultrasonic monitoring stations will be set up during the swarming period (approximately August 1 to late September) at natural features assessed as potential hibernacula during the visual assessment. Wildlife Acoustics miniBAT ARUs will be deployed. The dates each monitor is deployed and retrieved will be recorded. The ARUs will be programmed to record in trigger mode from 30 mins before sunset to 5 hours after sunset. Photographs will also be taken to record habitat conditions at each location. Photographs will be taken of each potential hibernaculum to support the ranking assessment (i.e., nil, low, moderate, high).

4.4.2.8 Significant Wildlife Habitat

Significant wildlife habitat is habitat which meets the criteria in the *Significant Wildlife Habitat Technical Guide (2000)*, with additional region-specific parameters for Ecoregion 3E (which most of the Project will fall under) provided in the Significant Wildlife Habitat Criteria Schedule for Ecoregion 3E (2015). There are presently no criteria schedules for Ecoregion 4W, which the remainder of the Project area overlaps. SWH is protected under the Provincial Planning Statement (2024). SWH at a broad scale includes habitats for seasonal concentrations of animals, rare vegetation communities, specialized wildlife habitats, animal movement corridors, and habitats of species of conservation concern (including, but not limited to SAR). The objectives of the Candidate Significant Wildlife Habitat program are:

- Identify all ecosite polygons and features during desktop analysis with the potential to support SWH across the proposed project routes
- Select an appropriate subset of identified features for ground-truthing which balances access issues while still collecting
- Ground-truth a subset of the identified ecosite polygons concurrently with other field programs for efficiency.

From previous experience, the output from the desktop screening will likely be a large set of polygons covering a diverse range of features and taxa. A subset of these identified features will be selected for field investigations and verification. This will be done in part to accommodate Project timelines and recognizing prohibitive access issues but will still be conducted in a way that ensures enough information is collected to reliably draw conclusions about the results of the desktop screening. The subset will be filtered to allow for reasonable access to each site (i.e., 80% road-accessible), and if helicopter access is necessary, it will be conducted in areas which are slated to receive other surveys such as bat maternal roosting or vegetation surveys for efficiency. Prospective sites will also be equally distributed across the length of the route alternatives. During the assessment of all baseline surveys, field crews will also document any other potential SWH features (e.g., stick nests, seeps/springs, mineral licks) which are encountered through the course of fieldwork.

4.4.2.9 Vegetation and Wetlands

The purpose of the vegetation and wetlands field surveys is to characterize the existing environment for vegetation and wetlands. Baseline characterization will consist of combining and summarizing available information from the desktop analysis with data collected from field surveys within the PSA. Vegetation community mapping is required to identify potential habitat for SAR, rare plants, rare vegetation communities, and traditionally used/culturally significant plants identified through consultation with Indigenous communities. Results from the field surveys will be used to refine desktop vegetation community mapping.

The main objectives of the vegetation and wetlands field surveys are to:

- Survey and confirm upland, wetland, and riparian plant community types and ecosites across the proposed route alternatives;
- Collect a detailed botanical inventory of the plant communities sampled, highlighting culturally significant plants identified by local Indigenous communities (e.g., blueberries and wild rice);
- Characterize plant communities and associated wildlife habitat in the PSA; and
- Identify plant SAR (e.g. black ash) and rare plants within unique plant communities in the PSA.

Data collected in the field will also be used to inform the selection of appropriate vegetation and wetlands criteria and indicators. The data will also be used to support future permitting and/or approval requirements, where feasible.

Results from the desktop review, and additional information collected by Hydro One (e.g. LiDAR data) will be used to first determine the proportion of ecosites and vegetation communities across the proposed routes. NHIC information will be used to identify a prospective list of rare plants and vegetation communities that may be present in the PSA, and surveys will target suitable habitat for these identified species. 120 Survey locations will be spaced along the length of the PSA (60 on each route) to obtain adequate spatial distribution in addition to proportional coverage with a focus on the preliminary footprint impact areas (e.g., rights-of-way). The following variables will be factored into survey location selection:

- Size and distribution of each plant community type;
- Unique plant communities;
- Surveys for rare plants and critical landform/vegetation associations; and
- Access constraints.

Surveys to characterize baseline conditions for vegetation and wetlands will be completed in the PSA. The following surveys are planned:

- Field verification surveys to confirm plant community classifications available from desktop mapping;
- Meanders for plant SAR, rare plants and traditional use/culturally significant plants between field verification plots;
- Re-visitation of historical occurrences of plant SAR to confirm population; and
- Surveys for noxious weeds and invasive plants in disturbed areas within the preliminary Project footprints.

4.4.2.10 Ecological Land Classification

Plant communities will be classified using the Ecosites of Ontario (Banton et al. 2009). At each survey location, plant species will be inventoried, and the percent cover of each vegetation stratum (tree, shrub, emergent, groundcover, and moss) will be estimated. Plant communities will be characterized based on

species composition, abundance, and cover within the various strata. Three representative soil samples will be taken to determine the substrate composition, which aids in deriving the ecosite. Substrate identification will be completed following the methods described in Field Guide to the Substrates of Ontario (Ministry of Natural Resources 2015). Uncommon plant species will be documented during the plant community surveys and, where required, samples collected for later taxonomical identification. General site conditions (e.g., slope, aspect, percent surface substrate, and surface expression) will also be recorded at each survey location.

4.4.2.11 Botanical Assessment

The botanical assessment will be concurrent with the Ecological Land Classification. The inventory will be conducted by systematically walking through the survey plots in a meandering fashion, conducted by field biologists with knowledge of local flora. Lists of the plant species identified during the botanical inventory will be compiled at site, route, and project scales. The botanical survey will focus on SAR, rare species, invasive plants, and traditional use plants. Accordingly, habitats with higher potential to support these species will be targeted. This may include multiple visits to the same vegetation community to capture early and late season flowering plants of concern (rare plants, SAR, traditional use plants), if warranted.

4.4.2.12 Data Analysis

Data collected through field surveys will be digitally tabulated as each field program is completed. Data from field surveys will be used, as appropriate, to refine the pre-field vegetation mapping layers. As well, the ELC program has been designed to confirm the accuracy of the FRI ecosite classification data in the PSA; thus, this verification program will help to understand the level of error in the FRI data being used.

4.4.3 Watercourse Crossings

The baseline watercourse crossing characterization studies will rely on a desktop analysis, compilation of data from previous investigations and publicly available sources, and the review and interpretation of high-resolution imagery of the study area (as available). The desktop review will identify watercourses crossed by the preliminary footprint, a subset of which will be targeted in the field program. The field program will include helicopter-assisted, drone-supported and ground-based field surveys. These data will also be used to support future permitting and/or approval requirements. There are efficiencies to be found in this component of the field program as identified watercourse crossings may be visited by terrestrial or aquatics field crews concurrently conducting surveys in similar areas of the Project.

We have used the existing highway corridor between Wawa and Porcupine as a proxy for a potential route. Examining provincial hydrology data shows that there are 139 watercourses that intersect the proxy route. We have assumed that the route alternatives will span an additional 70%, thereby adding an anticipated 97 crossings for each route, bringing a total estimated number of crossings to 333.

The field survey will target a subset (25%; 84) of watercourses crossed by each alternative route, prioritizing or 'de-risking' watercourses by thermal regime (i.e., cold water), permanency and size.

Waterbodies that are adjacent to the preliminary Project footprint (e.g., right-of-way) but are not crossed will not be surveyed as it is anticipated that temporary workspaces included in the Project design will incorporate a 30 m setback around adjacent water features. Mitigation measures will still be identified for sites beyond 30 m that have the potential to be indirectly affected. A subset of watercourse crossings will be selected based on the MNRF/DFO Protocol for the Review and Approval of Forestry Water Crossings (MNRF 2017) and coupled with the scaled approach. For example, field results at a particular crossing location will be extrapolated to other waterbody crossing locations in the same watershed category. The 2026 field program will provide an opportunity to complete remaining crossings or expand the program to capture areas that may be used for access, laydown areas, construction camps, etc.

The following data will be recorded for each watercourse crossing surveyed to support existing conditions and/or potential permitting requirements in support of construction:

- **Physical Characteristics –** A visual inspection will be completed along the full length of the study section to broadly define channel type and flow conditions. Visual inspections will be completed in the vicinity of the proposed crossing location to assess and document the characteristic bed and bank morphology (including erosion/deposition features), channel substrate, and riparian vegetation. The observed conditions at the waterbody will be documented via georeferenced photographs (looking upstream and downstream with full view of the channel and surrounding floodplain). A drone may be utilized to acquire useful overhead photos, especially in difficult to access sections.
- **Channel Geometry –** Basic measurements of channel geometry will be conducted at the crossing. The measurements will include estimates of bankfull width and depth, wetted width and depth, and side and channel slopes.
- **Measurements of Streamflow –** Current velocities will be recorded with a flow meter.
- **Measurements of Water Quality –** In-situ measurements of water quality conditions, including conductivity, pH, temperature, and dissolved oxygen, will be taken using a multiparameter water quality meter at the proposed crossings.

5.0 Existing Conditions Reporting

Subsequent to the completion of the field program, a Natural Environment Existing Conditions Report detailing the survey methodologies and results of the 2025 surveys will be prepared in accordance with the Class EA. Information summarized within the report will be used to inform the comparative route evaluation in support of the preliminary preferred alternative, the effects assessment as well as potential permitting and/or approvals to support the Project.

Indigenous communities will be provided the opportunity to review the draft Report for input/comment prior to finalizing.

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APPENDIX B: ECOSITE AND HABITAT SUMMARY BY ROUTE

Ecosite Summary by Route Alternative

	LSA								PSA							
Ecosite	Total Area (ha)	Area by Route (ha)							Total Area (ha)	Area by Route (ha)						
		A1	A2	B1	B2	B3	C1	C2		A1	A2	B1	B2	B3	C1	C2
B007	82.3	9.4	7.5	55.6	1.7	0.8	14.9	14.2	15.1	1.1	1.1	8.9	0.7		5.0	4.8
B010	722.0			0.2	7.8	7.8	522.4	595.6	278.2				2.4	2.4	215.2	230.1
B012	40.3	0.6	0.6	1.2	24.7	38.4			10.8				9.5	10.8		
B016	33.7					13.9	19.9	19.9	10.1					5.7	4.4	4.4
B034	971.3	407.9	407.9	446.5	440.5	358.1	24.5	42.0	204.7	85.8	85.8	84.1	80.5	67.3	8.8	12.2
B035	1512.0	156.1	156.1	855.1	1053.5	1012.0	28.5	33.2	406.9	22.8	22.8	219.3	283.5	290.4	5.7	5.6
B036	0.2	0.2	0.2													
B037	215.8	82.4	82.4	13.2	88.9	106.1	14.1	14.1	53.8	18.9	18.9	0.3	30.2	32.4	2.3	2.3
B040	845.5	41.1	39.9	439.6	501.0	545.8	50.0	50.0	202.1	12.5	12.5	113.1	118.2	127.0	13.8	13.8
B048	66.7			66.7	57.8	26.4			24.1			24.1	23.7	6.9		
B049	1618.9	562.5	586.2	446.6	447.1	653.3	105.2	113.3	402.7	114.6	114.6	96.3	120.5	188.2	44.8	46.5
B050	4694.8	1227.5	1236.1	972.2	1139.6	1259.1	1188.8	1617.9	1170.1	313.7	318.2	214.5	273.4	308.1	290.4	389.1
B051	93.9			56.5	39.6	3.0			26.2			17.3	12.3			
B052	1536.3	719.0	679.1	369.7	388.1	284.2	5.2	2.5	384.5	162.8	161.6	99.0	113.4	61.0	0.1	
B053	3.2			3.2					2.8			2.8				
B054	13.4	13.4	13.4						6.0	6.0	6.0					
B055	11781.2	3902.2	3723.8	2992.3	2799.3	2781.1	1408.8	1374.2	2960.2	852.0	825.7	801.4	758.6	801.4	323.6	287.6
B058	330.4	177.3	247.3	5.2	5.2	5.2			66.5	32.7	57.9	0.0	0.0	0.0		
B059	1425.0			54.7	189.0	189.0	882.5	1070.6	294.5			7.9	34.6	34.6	183.7	221.9
B065	2275.6	290.4	412.0	976.9	675.8	756.0	152.3	257.9	463.5	61.4	93.7	216.9	116.4	133.8	36.3	35.2
B066	241.8	26.0	26.0	117.7	96.7	81.3		2.0	68.1	1.4	1.4	36.7	41.8	19.6		
B067	259.5	51.9	51.7	123.4	126.9	123.3			60.9	14.6	11.1	31.5	36.8	24.2		
B068	72.8			45.2	49.2	71.6			21.0			20.1	19.0	19.9		
B070	1063.1	253.0	257.7	218.4	171.4	237.8	330.6	326.4	154.4	53.4	46.3	26.4	13.5	35.7	45.1	43.5
B071	25.0			24.9					3.0			3.0				
B074	26.0	26.0	26.0						6.2	6.2	6.2					
B097	5.4			5.4												
B098	7.6			7.2	0.3	0.3			2.0			2.0				
B099	111.2	4.8	4.8	60.4	45.9	45.9			19.6	0.2	0.2	12.9	6.5	6.5		
B100	57.1			22.0	35.0	35.0			4.4				4.4	4.4		
B101	175.8	20.3	20.3	100.0	55.4	55.4			59.7	9.5	9.5	34.8	15.3	15.3		
B104	589.1			429.7	76.8	76.8	82.5	82.5	125.9			92.9	10.2	10.2	22.8	22.8
B114	182.3			42.9	5.5	5.5	133.9	133.9	41.6			6.6			34.9	34.9
B115	12.8			1.2	7.2	11.5										
B116	89.0			10.3	76.3	76.3	2.3	2.3	26.4				26.4	26.4		
B119	138.5	1.7	1.7	23.7	15.0	15.0	98.1	98.1	50.4			9.9	4.6	4.6	35.9	35.9
B126	66.8				11.7	13.9	19.7	52.8	12.9				4.1	4.1	3.8	8.8
B127	245.8	37.7	37.7	187.6	176.4	19.3	12.7	12.7	72.5	15.6	15.6	52.6	52.6	4.8	3.6	3.6

Ecosite Summary by Route Alternative

Ecosite	LSA Total Area (ha)	LSA Area by Route (ha)							PSA Total Area (ha)	PSA Area by Route (ha)						
		A1	A2	B1	B2	B3	C1	C2		A1	A2	B1	B2	B3	C1	C2
B128	4918.9	218.3	197.4	1239.8	1071.4	770.0	2261.3	2511.9	1171.2	31.8	29.1	326.3	257.8	165.2	521.6	593.1
B129	1391.1	19.6	26.2	983.9	807.5	504.8	95.1	95.1	318.0	4.6	4.6	250.4	177.8	103.9	16.6	16.6
B133	166.4			1.3	2.2	2.2	82.5	133.1	34.5			0.9	1.2	1.2	19.1	29.9
B134	216.8			2.9	8.4	8.4	148.6	163.9	41.9				0.8	0.8	23.1	32.5
B135	344.3	72.5	77.8	142.2	147.8	156.7	53.7	75.7	75.2	18.8	20.6	32.3	33.0	36.6	11.0	11.3
B136	577.9	135.1	139.2	117.1	111.7	119.0	103.5	234.9	151.2	41.8	40.6	20.9	24.4	28.2	21.7	65.5
B137	7.2	1.0	1.0			6.1										
B138	1.6							1.6								
B139	174.0	104.4	104.4	42.3	41.5	31.7	2.0	6.2	35.1	17.7	17.7	11.2	10.9	7.3	1.3	1.3
B140	57.2	11.4	11.4	21.4	16.5	15.7	22.7	17.3	14.5	6.8	4.4	5.9	4.9	3.9	0.2	0.2
B142	526.2	214.3	210.0	223.2	207.4	203.0	21.5	24.8	99.2	41.0	45.0	37.8	27.1	28.8	3.8	3.9
B146	154.7	17.9	14.6	37.9	107.9	96.8	1.3	1.3	31.5	2.4	0.3	9.5	25.0	19.7		
B147	0.4				0.3	0.3										
B158	5.4	5.0	2.0													
B164	3.1	3.1	3.1						1.1	1.1	1.1					
B165	1.5							1.5	0.3							0.3
B189	1.9	1.9														
B191	13.1			13.1	13.1	13.1										
B193	73.2			6.9	6.9		66.3	55.0	15.8			2.0	2.0		13.9	13.9
B197	724.6	140.5	140.1	160.5	84.1	63.0	358.1	208.5	199.9	78.8	77.3	18.2	15.2	26.7	77.0	41.7
B223	28.8	7.8	7.8	21.0	15.2				11.2	7.3	7.3	4.0				
B224	9.4			9.4	9.4				5.5			5.5	5.5			
U997-999	533.1	334.8	299.2	12.5	12.5	20.6	127.0	144.9	356.5	258.6	227.0	1.8	1.8	5.0	40.4	88.5
Water	1551.6	596.9	581.7	380.5	347.7	342.5	209.7	214.5	181.7	60.7	58.3	47.0	26.0	20.1	36.2	41.8
Total	**43114.5**	**9896.0**	**9834.4**	**12591.7**	**11820.9**	**11263.2**	**8650.2**	**9806.2**	**10456.1**	**2356.5**	**2342.3**	**3009.1**	**2826.7**	**2693.1**	**2066.2**	**2343.5**

Habitat Summary by Route Alternative

Habitat	LSA								PSA							
	Total Area (ha)	Area by Route (ha)							Total Area (ha)	Area by Route (ha)						
		A1	A2	B1	B2	B3	C1	C2		A1	A2	B1	B2	B3	C1	C2
Barren	94.3	19.4	12.6	55.6	1.7	0.8	14.9	15.7	16.4	2.1	2.1	8.9	0.7	4.1	5.0	5.1
Bog	75.5	1.0	1.0		11.7	20.1	19.7	54.4	12.9				4.1	1215.1	3.8	8.8
Coniferous	14244.5	3549.6	3663.3	4743.8	4854.0	5002.8	1654.7	2219.1	3453.8	805.7	837.9	1119.4	1213.7	984.6	423.4	525.8
Deciduous	14832.7	4401.3	4296.5	4133.8	3568.7	3675.6	1989.8	1951.0	3578.7	956.7	948.6	1046.6	905.1	31.7	445.7	408.1
Disturbance	1343.9	475.3	439.3	193.0	116.7	96.6	551.4	408.5	572.2	337.5	304.2	22.0	19.0	59.1	131.2	144.1
Fen	964.1	268.7	269.6	218.8	277.8	263.5	129.6	259.6	232.3	68.7	63.0	47.4	65.3	28.8	23.3	67.0
Marsh	526.2	214.3	210.0	223.2	207.4	203.0	21.5	24.8	99.2	41.0	45.0	37.8	27.1	34.6	3.8	3.9
Mixedwood	1438.4	13.4	13.4	54.7	189.0	189.0	882.5	1070.6	300.6	6.0	6.0	7.9	34.6	2.4	183.7	221.9
Shrubland	722.0			0.2	7.8	7.8	522.4	595.6	278.2				2.4		215.2	230.1
Swamp - Coniferous	6594.0	283.5	269.2	2441.7	2079.9	1294.2	2369.1	2619.7	1578.4	59.3	56.6	638.9	493.8	274.0	541.8	613.2
Swamp - Deciduous	727.4	72.5	77.8	146.4	158.5	167.3	284.8	372.6	151.6	18.8	20.6	33.2	35.1	38.7	53.2	73.8
Water	1551.6	596.9	581.7	380.5	347.7	342.5	209.7	214.5	181.7	60.7	58.3	47.0	26.0	20.1	36.2	41.8
Total	**43114.5**	**9896.0**	**9834.4**	**12591.7**	**11820.9**	**11263.2**	**8650.2**	**9806.2**	**10456.1**	**2356.5**	**2342.3**	**3009.1**	**2826.7**	**2693.1**	**2066.2**	**2343.5**

APPENDIX C: BACKGROUND REVIEW SUMMARY

Amphibian Background Review Records		
Common Name	Scientific Name	Records
American Toad	*Anaxyrus americanus*	71
Blue-spotted Salamander	*Ambystoma laterale*	20
Boreal Chorus Frog	*Pseudacris maculata*	5
Eastern Newt	*Notophthalmus viridescens*	5
Eastern Red-backed Salamander	*Plethodon cinereus*	7
Green Frog	*Rana clamitans*	43
Mink Frog	*Lithobates septentrionalis*	15
Northern Leopard Frog	*Lithobates pipiens*	3
Red-spotted Newt	*Notophthalmus viridescens*	1
Spotted Salamander	*Ambystoma maculatum*	1
Spring Peeper	*Pseudacris crucifer*	58
Wood Frog	*Lithobates sylvaticus*	116

Reptile Background Review Records		
Common Name	Scientific Name	Records
Blanding's Turtle	*Emydoidea blandingii*	1
Common Garter Snake	*Thamnophis sirtalis*	5
Eastern Garter Snake	*Thamnophis sirtalis sirtalis*	34
Midland Painted Turtle	*Chrysemys picta marginata*	32
Northern Ringneck Snake	*Diadophis punctatus edwardsii*	1
Painted Turtle	*Chrysemys picta*	4
Snapping Turtle	*Chelydra serpentina*	2

Mollusk Background Review Records		
Common Name	Scientific Name	Records
Cylindrical Papershell	*Anodontoides ferussacianus*	1
Fatmucket	*Lampsilis powellii*	1
Great Pond Snail	*Lymnaea stagnalis*	4
Lake Floater	*Pyganodon lacustris*	1
Milky Slug	*Deroceras reticulatum*	1

Fish Background Review Records		
Common Name	Scientific Name	Records
Blacknose Dace	*Rhinichthys atratulus*	11
Blacknose Shiner	*Notropis heterolepis*	16
Bluntnose Minnow	*Pimephales notatus*	2
Brassy Minnow	*Hybognathus hankinsoni*	2
Brook Stickleback	*Culaea inconstans*	23
Brook Trout	*Salvelinus fontinalis*	69
Burbot	*Lota lota*	17
Central Mudminnow	*Umbra limi*	1
Channel Catfish	*Ictalurus punctatus*	1
Chinook Salmon	*Oncorhynchus tshawytscha*	2
Cisco	*Coregonus artedi*	5
Common Shiner	*Luxilus cornutus*	9
Emerald Shiner	*Notropis atherinoides*	12
Fathead Minnow	*Pimephales promelas*	28
Finescale Dace	*Chrosomus neogaeus*	16
Golden Shiner	*Notemigonus crysoleucas*	14
Hornyhead Chub	*Nocomis biguttatus*	1
Iowa Darter	*Etheostoma exile*	27
Johnny Darter	*Etheostoma nigrum*	11
Johnny Darter x Tesselated Darter	*Etheostoma nigrum x Etheostoma olmstedi*	1
Lake Chub	*Couesius plumbeus*	6
Lake Sturgeon	*Acipenser fulvescens*	7
Lake Trout	*Salvelinus namaycush*	12
Lake Whitefish	*Coregonus clupeaformis*	22
Logperch	*Percina caprodes*	8
Longnose Dace	*Rhinichthys cataractae*	17
Longnose Sucker	*Catostomus catostomus*	6
Mottled Sculpin	*Cottus bairdii*	6
Ninespine Stickleback	*Pungitius pungitius*	7
Northern Hog Sucker	*Hypentelium nigricans*	1
Northern Pearl Dace	*Margariscus margarita*	15
Northern Pike	*Esox lucius*	76
Northern Redbelly Dace	*Chrosomus eos*	46
Pumpkinseed	*Lepomis gibbosus*	1
Quillback	*Carpiodes cyprinus*	1
Rainbow Trout	*Oncorhynchus mykiss*	1
Rock Bass	*Ambloplites rupestris*	1
Round Whitefish	*Prosopium cylindraceum*	2
Shorthead Redhorse	*Moxostoma macrolepidotum*	3
Slimy Sculpin	*Cottus cognatus*	7
Smallmouth Bass	*Micropterus dolomieu*	21
Splake	*Salvelinus fontinalis × Salvelinus namaycush*	4

Fish Background Review Records		
Common Name	Scientific Name	Records
Spottail Shiner	*Notropis hudsonius*	3
Trout-Perch	*Percopsis omiscomaycus*	2
Walleye	*Sander vitreus*	62
White Sucker	*Catostomus commersonii*	54
Yellow Perch	*Perca flavescens*	56

Arachnid Background Review Records		
Common Name	Scientific Name	Records
Arabesque Orbweaver	*Neoscona arabesca*	1
Boreal Tufted Jumping Spider	*Phidippus borealis*	1
Bronze Jumping Spider	*Eris militaris*	1
Dark Fishing Spider	*Dolomedes tenebrosus*	1
Eastern Black-legged Tick	*Ixodes scapularis*	1
Eastern Harvestman	*Leiobunum vittatum*	1
Fierce Orbweaver	*Araneus saevus*	3
Filmy Dome Spider	*Argyrodes trigonum*	1
Furrow Orbweaver	*Larinioides cornutus*	1
Goldenrod Crab Spider	*Misumena vatia*	9
Marbled Orbweaver	*Araneus marmoreus*	2
Nordmann's Orbweaver	*Araneus nordmanni*	1
Ornamental Orbweaver	*Larinioides patagiatus*	2
Shamrock Orbweaver	*Araneus trifolium*	1
Six-spotted Fishing Spider	*Dolomedes triton*	1
Striped Fishing Spider	*Dolomedes scriptus*	9

Insect Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Aerial Yellowjackets	*Dolichovespula arenaria*	3	Large Lace-border Moth	*Scopula limboundata*	2
Ailanthus Webworm Moth	*Atteva punctella*	1	Large Maple Spanworm Moth	*Prochoerodes lineola*	5
Alaska Yellowjacket	*Vespula alascensis*	4	Large Mossy Glyph	*Protodeltote muscosula*	2
Alder Leafroller	*Caloptilia alnivorella*	2	Large Purplish Gray	*Iridopsis vellivolata*	1
Alder Tubemaker Moth	*Acrobasis rubrifasciella*	2	Laurel Sphinx	*Sphinx kalmiae*	4
American Bird's-wing	*Dypterygia rozmani*	1	Leach's Grass-veneer	*Crambus leachellus*	3
American Carrion Beetle	*Necrophila americana*	5	Leconte's Haploa Moth	*Haploa lecontei*	1
American Emerald	*Cordulia shurtleffii*	8	Lettered Habrosyne Moth	*Habrosyne scripta*	2
American Giant Water Bug	*Lethocerus americanus*	4	Lined Black Aspen Woodling	*Egira dolosa*	2
American Idia Moth	*Idia americalis*	2	Little Virgin Tiger Moth	*Apantesis virguncula*	1
American Lady	*Harmonia axyridis*	9	Lobed Mason Wasp	*Ancistrocerus antilope*	1
American Lappet Moth	*Phyllodesma americana*	2	Long Dash	*Polites mystic*	2
American Round Sand Beetle	*Omophron americanum*	1	Luna Moth	*Actias luna*	15
Aphrodite Fritillary	*Speyeria aphrodite*	14	MacCulloch's Forester Moth	*Androloma maccullochii*	2
Apical Prominent	*Clostera apicalis*	1	Many-lined Carpet Moth	*Anticlea multiferata*	1
Apple Sphinxes	*Sphinx gordius*	4	Many-spotted Scoparia Moth	*Scoparia basalis*	1
Arched Hooktip Moth	*Drepana arcuata*	2	Maple Spanworm Moth	*Ennomos magnaria*	4
Arctic Fritillary	*Boloria chariclea*	2	Maple-Basswood Leafroller Moth	*Sparganothis pettitana*	1
Arctic Skipper	*Carterocephalus palaemon*	5	Margined Calligrapher	*Toxomerus marginatus*	1
Ashy Clubtail	*Phanogomphus lividus*	6	Margined Carrion Beetle	*Oiceoptoma noveboracense*	1
Asian Lady Beetle	*Harmonia axyridis*	1	Marsh Bluet	*Enallagma ebrium*	1
Aspen Serpentine Leafminer Moth	*Phyllocnistis populiella*	5	Masked Parahypenodes	*Parahypenodes quadralis*	2
Atlantis Fritillary	*Speyeria atlantis*	21	Milbert's Tortoiseshell	*Aglais milberti*	3
Attentive Dart	*Eueretagrotis attenta*	2	Miller Dagger	*Acronicta vulpina*	2
Aurora Damsel	*Chromagrion conditum*	1	Mixed-spotted Flatface Sawyer	*Pogonocherus mixtus*	2
Autumn Meadowhawk	*Sympetrum vicinum*	2	Modest Sphinx	*Pachysphinx modesta*	10
Bald-faced Hornet	*Dolichovespula maculata*	3	Monarch	*Danaus plexippus*	11
Bald-faced Hornet Fly	*Spilomyia fusca*	1	Morbid Owlet	*Chytolita morbidalis*	1
Banded Sexton Beetle	*Nicrophorus investigator*	3	Morning-glory Prominent	*Schizura ipomoeae*	1
Banded Tussock Moth	*Halysidota tessellaris*	1	Morrison's Pero Moth	*Pero morrisonaria*	1

Insect Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Band-winged Meadowhawk	*Sympetrum semicinctum*	2	Mosaic Round Sand Beetle	*Omophron tessellatum*	1
Bare-winged Aphideater	*Eupeodes perplexus*	1	Mottled Gray Carpet	*Cladara limitaria*	6
Barred Umber	*Plagodis pulveraria*	2	Mountain Deer Fly	*Chrysops montanus*	3
Beaverpond Baskettail	*Epitheca canis*	2	Mountain Lady Beetle	*Coccinella monticola*	1
Bee-mimic Beetle	*Trichiotinus assimilis*	6	Mourning Cloak	*Nymphalis antiopa*	22
Beggartick Leaffolder Moth	*Agonopterix atrodorsella*	1	Mustached Clubtail	*Gomphus adelphus*	5
Belted Whiteface	*Leucorrhinia proxima*	4	Mustard White	*Sinapis alba*	2
Bent-line Gray	*Iridopsis larvaria*	1	Narrow-banded Pond Fly	*Sericomyia militaria*	2
Bent-lined Carpet	*Costaconvexa centrostrigaria*	1	Narrow-headed Marsh Fly	*Helophilus fasciatus*	1
Bent-winged Owlet	*Bleptina caradrinalis*	1	Nessus Sphinx	*Amphion floridensis*	1
Bicolored Moth	*Manulea bicolor*	1	Noble Click Beetle	*Selatosomus pulcher*	1
Bicolored Woodgrain Moth	*Morrisonia evicta*	2	North American Black-headed Birch Leaffolder Moth	*Acleris placidana*	3
Bilobed Dichomeris Moth	*Dichomeris bilobella*	4	Northeastern Pine Sawyer	*Monochamus notatus*	8
Birch Leafroller Moth	*Ancylis discigerana*	3	Northern Amber Bumble Bee	*Bombus borealis*	2
Black Arches	*Lymantria monacha*	1	Northern Azure	*Celastrina lucia*	12
Black Firefly	*Lucidota atra*	3	Northern Carpet	*Xanthorhoe abrasaria*	1
Black Swallowtail	*Papilio polyxenes*	1	Northern Cloudywing	*Thorybes pylades*	2
Black Zigzag Moth	*Panthea acronyctoides*	3	Northern Crescent	*Phyciodes cocyta*	7
Black-banded Orange Moth	*Epelis truncataria*	1	Northern Dog-day Cicada	*Tibicen canicularis*	2
Black-horned Smoothtail	*Epistrophe grossulariae*	2	Northern Finned Prominent	*Notodonta torva*	1
Blackjacket	*Vespula consobrina*	1	Northern Pearly-eye	*Lethe anthedon*	3
Black-patched Clepsis Moth	*Clepsis melaleucana*	1	Northern Petrophora Moth	*Petrophora subaequaria*	3
Black-rimmed Prominent	*Pheosia rimosa*	2	Northern Pine Sphinx	*Lapara bombycoides*	2
Black-shouldered Spinyleg	*Dromogomphus spinosus*	1	Northern Spreadwing	*Lestes disjunctus*	2
Blinded Sphinx	*Paonias excaecata*	5	Northern Walkingstick	*Diapheromera femorata*	1
Blueberry Leaftier Moth	*Acleris curvalana*	2	Nymphula Moth	*Elophila ekthlipsis*	1
Blueberry Sallow	*Sympistis dentata*	2	Oak Leaftier Moth	*Psilocorsis quercicella*	1
Blueberry Stem Gall Wasp	*Hemadas nubilipennis*	4	Oblique-banded Leafroller Moth	*Choristoneura rosaceana*	1
Bluets	*Enallagma sp.*	2	Oblique-banded Pond Fly	*Sericomyia chrysotoxoides*	3
Bluish Spring Moth	*Lomographa semiclarata*	2	Oblique-lined Tiger Beetle	*Cicindela tranquebarica*	5

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Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Bog Copper	*Lycaena epixanthe*	1	Ocellated Darner	*Boyeria grafian*	2
Bog Lygropia Moth	*Lygropia rivulalis*	1	Ocellated Emerald	*Somatochlora minor*	2
Boreal Burying Beetle	*Nicrophorus defodiens*	1	Olive Angle Shades	*Phlogophora iris*	2
Boreal Long-lipped Tiger Beetle	*Cicindela longilabris*	11	Olive Arches Moth	*Lacinipolia olivacea*	1
Boreal Snaketail	*Ophiogomphus colubrinus*	11	Olive-and-black Carpet Moth	*Acasis viridata*	1
Bothersome Deer Fly	*Chrysops excitans*	1	One-eyed Sphinx	*Smerinthus cerisyi*	7
Bridgham's Brocade Moth	*Oligia bridghamii*	4	One-lined Zale Moth	*Zale unilineata*	1
Bridled Arches Moth	*Lacinipolia lorea*	1	Orange-legged Drone Fly	*Eristalis flavipes*	1
Bristly Cutworm Moth	*Lacinipolia renigera*	1	Orange-legged Furrow Bee	*Halictus rubicundus*	1
Broken-lined Brocade Moth	*Mesapamea fractilinea*	1	Otter Spiramater Moth	*Spiramater lutra*	1
Bronze Darkling Beetle	*Helops laetus*	1	Owl-eyed Bird Dropping Moth	*Cerma cora*	1
Bronzed Cutworm Moth	*Nephelodes minians*	1	Painted Lady	*Vanessa cardui*	3
Bronzed Tiger Beetle	*Cicindela repanda*	2	Pale Alder Moth	*Tacparia detersata*	3
Brother Moth	*Raphia frater*	3	Pale Beauty	*Campaea perlata*	1
Brown Angle Shades	*Phlogophora periculosa*	1	Pale Enargia	*Enargia paleacea*	2
Brown Elfin	*Callophrys augustinus*	2	Pale Metanema Moth	*Pale metanema*	1
Brown Waterscorpion	*Ranatra fusca*	2	Pale Phalaenostola Moth	*Phalaenostola metonalis*	1
Brown-blotched Amydria Moth	*Amydria effrentella*	1	Pale-winged Gray	*Iridopsis ephyraria*	3
Brown-bordered Geometer Moth	*Eumacaria madopata*	1	Pale-winged Midget	*Elaphria alapallida*	2
Brown-shaded Carpet Moth	*Venusia comptaria*	2	Parthenice Tiger Moth	*Apantesis parthenice*	3
Brown-tipped Thorn	*Selenia alciphearia*	1	Peck's Skipper	*Polites peckius*	1
Brush-tipped Emerald	*Somatochlora walshii*	1	Peppered Moth	*Biston betularia*	4
Cabbage White	*Pieris rapae*	1	Perplexing Bumble Bee	*Bombus perplexus*	9
Canada Darner	*Aeshna canadensis*	8	Petit Acanthosome	*Calosoma sycophanta*	4
Canadian Tiger Swallowtail	*Papilio canadensis*	13	Pilose Checkered Beetle	*Chariessa pilosa*	1
Carolina Grasshopper	*Dissosteira carolina*	1	Pink-edged Sulphur	*Colias interior*	11
Cattail Borer Moth	*Bellura obliqua*	1	Pink-striped Oakworm Moth	*Anisota virginiensis*	1
Cecropia Moth	*Hyalophora cecropia*	5	Pink-washed Aristotelia Moth	*Aristotelia roseosuffusella*	1
Chain-dotted Geometer	*Cingilia catenaria*	2	Polymorphic Pondweed Moth	*Parapoynx maculalis*	1
Chalk-fronted Corporal	*Ladona julia*	27	Polyphemus Moth	*Antheraea polyphemus*	17

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Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Charming Underwing	*Catocala blandula*	1	Poplar Carpenterworm Moth	*Acossus centerensis*	1
Cherry Shoot Borer Moth	*Argyresthia oreasella*	1	Porcelain Gray	*Protoboarmia porcelaria*	1
Chestnut-footed Click Beetle	*Melanotus castanipes*	2	Potato Leafhopper	*Empoasca fabae*	1
Chestnut-marked Pondweed Moth	*Parapoynx badiusalis*	3	Powdered Bigwing Moth	*Lobophora nivigerata*	3
Chocolate Prominent	*Peridea ferruginea*	2	Powdered Dagger	*Acronicta impleta*	1
Clemens' Clepsis Moth	*Clepsis clemensiana*	1	Powdered Dancer	*Argia moesta*	2
Cloaked Marvel	*Chytonix palliatricula*	1	Praevia Dart	*Xestia praevia*	1
Close-banded Yellowhorn	*Colocasia propinquilinea*	1	Primrose Moth	*Schinia florida*	2
Clouded Sulphur	*Colias philodice*	1	Purple Arches Moth	*Polia purpurissata*	2
Cloudy Arches Moth	*Polia imbrifera*	1	Purple Lesser Fritillary	*Boloria dia*	1
Cloudy Darkling Beetle	*Iphthiminus opacus*	2	Purple-lined Sallow	*Pyrrhia exprimens*	1
Cold-country Caterpillar Hunter	*Calosoma frigidum*	3	Pygmy Bee Fly	*Bombylius pygmaeus*	3
Colorful Zale Moth	*Zale minerea*	5	Quadrate Dagger	*Acronicta quadrata*	2
Columbia Silk Moth	*Hyalophora columbia*	2	Racket-tailed Emerald	*Dorocordulia libera*	3
Common Baskettail	*Epitheca cynosura*	4	Red Admiral	*Vanessa atalanta*	1
Common Branded Skipper	*Hesperia comma*	4	Red-footed Snout	*Hypena eductalis*	1
Common Claybank Tiger Beetle	*Cicindela limbalis*	4	Red-headed flea beetle	*Systena frontalis*	1
Common Eastern Bumble Bee	*Bombus impatiens*	1	Red-lined Carrion Beetle	*Necrodes surinamensis*	1
Common Gluphisia Moth	*Gluphisia septentrionis*	4	Red-spotted Glyph	*Maliattha concinnimacula*	1
Common Grass-veneer	*Crambus praefectellus*	1	Reticulated Fruitworm Moth	*Sparganothis reticulatana*	4
Common Green Darner	*Anax junius*	1	Rhode Island Tiger Beetle	*Cicindela patruela*	1
Common Grey	*Anavitrinella pampinaria*	1	Rhododendron Leafhopper	*Graphocephala fennahi*	1
Common Ringlet	*Coenonympha tullia*	2	Ring-clawed Deer Fly	*Chrysops cincticornis*	1
Common Roadside-Skipper	*Amblyscirtes vialis*	3	River Jewelwing	*Calopteryx aequabilis*	15
Common Wood-Nymph	*Cercyonis pegala*	1	Rosewing Moth	*Sideridis rosea*	1
Complex Fan-foot	*Zanclognatha protumnusalis*	1	Rosy Maple Moth	*Dryocampa rubicunda*	3
Comstock's Sallow	*Feralia comstocki*	2	Rotund-collared Soldier Beetle	*Pacificanthia rotundicollis*	1
Conifer Swift Moth	*Korscheltellus gracilis*	2	Roughened Darkling Beetle	*Upis ceramboides*	2
Coral-winged Grasshopper	*Pardalophora apiculata*	4	Round-headed Apple Tree Borer	*Saperda candida*	2
Cottonwood Dagger	*Acronicta lepusculina*	3	Round-necked Longhorn Beetle	*Clytus ruricola*	1

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Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Crackling Forest Grasshopper	*Trimerotropis verruculata*	4	Ruby Tiger Moth	*Phragmatobia fuliginosa*	1
Cranberry Spanworm Moth	*Ematurga amitaria*	1	Ruddy Metarranthis Moth	*Metarranthis duaria*	1
Cream-edged Dichomeris Moth	*Dichomeris flavocostella*	1	Rusty Snaketail	*Ophiogomphus rupinsulensis*	1
Crimson-ringed Whiteface	*Leucorrhinia glacialis*	3	Rusty Tussock Moth	*Orgyia antiqua*	2
Crocus Geometer Moths	*Xanthotype urticaria*	7	Rusty Virbia Moth	*Virbia ferruginosa*	3
Curved-toothed Geometer Moth	*Eutrapela clemataria*	4	Saddled Prominent	*Heterocampa guttivitta*	1
Dark Blister Beetle	*Epicauta pensylvanica*	1	Saddled Yellowhorn	*Colocasia flavicornis*	1
Dark Marbled Carpet	*Dysstroma citrata*	3	Saffron-winged Meadowhawk	*Sympetrum costiferum*	2
Dark-banded Owlet	*Phalaenophana pyramusalis*	3	Salt-and-pepper Looper Moth	*Syngrapha rectangula*	3
Dark-bordered Granite	*Digrammia neptaria*	4	Say's Blister Beetle	*Lytta nuttalli*	2
Dark-spotted Palthis Moth	*Palthis angulalis*	2	Say's Burying Beetle	*Nicrophorus orbicollis*	2
Decorated Owlet	*Pangrapta decoralis*	1	Scallop Shell Moths	*Rheumaptera undulata*	2
Delicate Emerald	*Somatochlora franklini*	1	Seven-spotted Lady Beetle	*Coccinella septempunctata*	1
Delta-spotted Spiketail	*Cordulegaster diastatops*	1	Shadow Darner	*Aeshna umbrosa*	1
Diamond Northern Caddisfly	*Limnephilus rhombicus*	1	Shadowy Arches	*Drasteria adumbrata*	4
Diervilla Clearwing	*Hemaris aethra*	1	Sharp-headed Sharpshooter	*Draeculacephala robinsoni*	1
Discus Riverbank Ground Beetle	*Blemus discus*	1	Sharp-lined Yellow	*Sicya macularia*	2
Divided Olethreutes Moth	*Olethreutes bipartitana*	1	Sharp-winged Drill	*Dichrorampha acuminatana*	1
Dogbane Leaf Beetle	*Chrysochus auratus*	2	Sigmoid Prominent	*Clostera albosigma*	5
Dogwood Spittlebug	*Clastoptera proteus*	1	Silver-bordered Fritillary	*Boloria selene*	2
Dogwood Thyatirid Moth	*Euthyatira pudens*	1	Silver-spotted Fern Moth	*Callopistria cordata*	4
Dorcas Copper	*Lycaena dorcas*	6	Silvery Blue	*Glaucopsyche lygdamus*	9
Double-banded Grass-veneer	*Crambus agitatellus*	1	Silvery Checkerspot	*Chlosyne nycteis*	3
Doubleday's Baileya Moth	*Baileya doubledayi*	1	Simple Prominent Moth	*Notodonta torva simplaria*	1
Double-striped Scoparia Moth	*Scoparia biplagialis*	3	Six-spotted Gray	*Spargaloma sexpunctata*	1
Dragonhunter	*Hagenius brevistylus*	20	Ski-tipped Emerald	*Somatochlora elongata*	3
Dreamy Duskywing	*Erynnis icelus*	8	Slender Clearwing	*Hemaris gracilis*	1
Dubious Tiger Moth	*Spilosoma dubia*	1	Small Engrailed	*Ectropis crepuscularia*	3
Dun Skipper	*Euphyes vestris*	10	Small-eyed Sphinx	*Paonias myops*	2
Dusky Clubtail	*Phanogomphus spicatus*	10	Smeared Dagger	*Acronicta oblinita*	1

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Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Early Button Slug Moth	*Tortricidia testacea*	1	Soothsayer Dart	*Graphiphora augur*	1
Eastern Black Carpenter Ant	*Camponotus pennsylvanicus*	1	Spear-marked and White-banded Black Moths	*Rheumaptera sp.*	5
Eastern Calligrapher	*Toxomerus geminatus*	2	Spiny Baskettail	*Epitheca spinigera*	9
Eastern Elderberry Borer	*Desmocerus palliatus*	1	Split-lined Angle	*Angle trisection*	3
Eastern Forktail	*Ischnura verticalis*	8	Spotted Cucumber Beetle	*Diabrotica undecimpunctata*	1
Eastern Least Clubtail	*Stylogomphus albistylus*	3	Spotted Grass Moth	*Rivula propinqualis*	2
Eastern Panthea Moth	*Eastern panthea*	1	Spotted Spreadwing	*Lestes tridens*	2
Eastern Phantom Crane Fly	*Bittacomorpha clavipes*	1	Spotted Tussock Moth	*Lophocampa maculata*	14
Eastern Pine Elfin	*Callophrys niphon*	10	Spotted-belly Buprestid Beetle	*Buprestis maculativentris*	4
Eastern White-blotched Prominent	*Heterocampa umbrata*	3	Spring Fishfly	*Chauliodes pectinicornis*	2
Ebony Boghaunter	*Williamsonia fletcheri*	2	Springtime Darner	*Basiaeschna janata*	3
Ebony Jewelwing	*Calopteryx maculata*	6	Spruce Budworm Moth	*Choristoneura fumiferana*	1
Elder Shoot Borer Moth	*Achatodes zeae*	2	Spruce Needleworm Moth	*Archips packardianus*	1
Elegant Prominent	*Odontosia elegans*	4	St. Lawrence Tiger Moth	*Arctia parthenos*	13
Elm Sawfly	*Cimbex americanus*	5	Stormy Arches	*Polia nimbosa*	1
Emerald Spreadwing	*Lestes dryas*	1	Straight-lined Plagodis Moth	*Plagodis phlogosaria*	4
Epigaea Looper Moth	*Syngrapha epigaea*	1	Stream Cruiser	*Didymops transversa*	2
European Earwig Complex	*Forficula auricularia*	1	Striated Tortrix Moth	*Archips strianus*	1
European Skipper	*Thymelicus lineola*	15	Striped Deer Fly	*Chrysops vittatus*	6
Eyed Baileya Moth	*Baileya ophthalmica*	3	Striped Garden Caterpillar Moth	*Trichordestra legitima*	2
Fall Field Cricket	*Gryllus pennsylvanicus*	2	Striped Hairstreak	*Satyrium liparops*	8
Fall Webworm Moth	*Hyphantria cunea*	1	Subarctic Bluet	*Coenagrion interrogatum*	2
False bruce spanworm	*Macaria loricaria*	1	Subarctic Darner	*Aeshna subarctica*	1
Fawn Darner	*Boyeria vinosa*	3	Subdued Quaker	*Orthosia revicta*	4
Fernald's Helcystogramma Moth	*Helcystogramma fernaldella*	1	Sulphur Angle	*Macaria sulphurea*	2
Fiery Hunter	*Calosoma scrutator*	1	Sweetfern Geometer Moth	*Cyclophora pendulinaria*	1
Finnish Dart	*Actebia fennica*	1	Tawny Eupithecia Moth	*Eupithecia ravocostaliata*	1
Fish's Dart	*Cerastis fishii*	2	Tawny-edged Skipper	*Polites themistocles*	2
Fluid Arches	*Morrisonia latex*	1	Tawny-tailed Bee Fly	*Villa fulviana*	1
Forest Tent Caterpillar Moth	*Malacosoma disstria*	13	Tessellate Dart	*Euxoa tessellata*	1

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Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Forked Grass-veneer	*Crambus bidens*	2	The Scribbler	*Cladara atroliturata*	1
Forked Scorpionfly	*Panorpa subfurcata*	2	Three-streaked Sparganothis Moth	*Sparganothis tristriata*	2
Formosa Looper Moth	*Chrysanympha formosa*	2	Tissue Moth	*Triphosa dubitata*	1
Four-barred Gray	*Aethalura intertexta*	2	Tomentose Burying Beetle	*Nicrophorus tomentosus*	1
Four-lined Leafroller Moth	*Argyrotaenia quadrifasciana*	1	Topiary Grass-veneer	*Chrysoteuchia topiarius*	2
Four-lined Plant Bug	*Poecilocapsus lineatus*	1	Transverse-banded Flower Fly	*Eristalis transversa*	1
Four-spotted Fungus Moth	*Metalectra quadrisignata*	1	Tricolored Bumble Bee	*Bombus ternarius*	22
Four-spotted Ghost Moth	*Sthenopis purpurascens*	5	Twelve-spotted Tiger Beetle	*Cicindela duodecimguttata*	4
Four-spotted Skimmer	*Libellula quadrimaculata*	16	Twenty-spotted Lady Beetle	*Psyllobora vigintimaculata*	1
Fragile Dagger	*Acronicta fragilis*	4	Twice-stabbed Stink Bug	*Cosmopepla lintneriana*	1
Freija Fritillary	*Boloria freija*	7	Twin-spotted Sphinx	*Smerinthus jamaicensis*	5
Friendly Flesh Fly	*Sarcophaga aldrichi*	1	Twin-spotted Spiketail	*Cordulegaster maculata*	4
Frigid Owlet	*Nycteola metaspilella*	2	Two-banded Catoptria Moth	*Catoptria latiradiellus*	6
Fruit-tree Leafroller Moth	*Archips argyrospila*	1	Two-lined Hooktip	*Falcaria bilineata*	5
Funerary Dagger	*Acronicta funeralis*	1	Two-spotted Dart	*Eueretagrotis perattentus*	2
George's Carpet Moth	*Plemyria georgii*	2	Two-spotted Looper Moth	*Autographa bimaculata*	2
George's Midget	*Elaphria georgei*	1	Two-striped Grasshopper	*Melanoplus bivittatus*	4
Girard's Grass-veneer	*Crambus girardellus*	1	Uhler's Sundragon	*Helocordulia uhleri*	5
Globetails	*Genus Sphaerophoria*	2	Unarmed Leafcutter Bee	*Megachile inermis*	1
Glorious Habrosyne Moth	*Habrosyne gloriosa*	1	Unicorn Prominent	*Coelodasys unicornis*	1
Glossy Black Idia Moth	*Idia lubricalis*	4	Unmarked Dagger	*Acronicta innotata*	1
Gold-and-brown Rove Beetle	*Ontholestes cingulatus*	3	Variable Carpet Moth	*Anticlea vasiliata*	3
Golden Net-winged Beetle	*Dictyoptera aurora*	1	Variable Darner	*Aeshna interrupta*	4
Golden-backed Snipe Fly	*Chrysopilus thoracicus*	1	Variegated Midget	*Elaphria versicolor*	1
Goldenrod Leaf Beetle	*Trirhabda canadensis*	1	Vertical Diving Beetle	*Dytiscus verticalis*	1
Gooseberry Fruitworm Moth	*Zophodia grossulariella*	1	Virginia Giant Hover Fly	*Milesia virginiensis*	1
Grand Arches Moth	*Lacanobia grandis*	2	Virginian Tiger Moth	*Spilosoma virginica*	1
Grapevine Looper Moths	*Eulithis gracilineata*	1	Watermilfoil Leafcutter Moth	*Parapoynx allionealis*	1
Gray Dagger	*Acronicta insita*	1	Waved Sphinx	*Ceratomia undulosa*	4
Gray Half-Spot	*Nedra ramosula*	1	Wavy-lined Fan-foot	*Zanclognatha jacchusalis*	1

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Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Gray Spring Moth	*Lomographa glomeraria*	3	Welsh Wave Moth	*Venusia cambrica*	3
Gray Spruce Looper Moth	*Gray Spruce Looper Moth*	1	Western Bean Cutworm Moth	*Striacosta albicosta*	1
Great Brown Dart	*Eurois astricta*	1	Western Furcula Moth	*Furcula occidentalis*	1
Great Spangled Fritillary	*Speyeria cybele*	8	Western Grape Rootworm	*Bromius obscurus*	1
Green Comma	*Polygonia faunus*	20	Western Honey Bee	*Apis mellifera*	1
Green Immigrant Leaf Weevil	*Polydrusus formosus*	23	Western Pine Elfin	*Callophrys eryphon*	2
Green Leuconycta Moth	*Leuconycta diphteroides*	1	White Admiral	*Limenitis arthemis*	13
Green-dusted Zale Moth	*Zale aeruginosa*	2	White Eulithis Moth	*Eulithis explanata*	2
Greenish Apple Moth	*Chloroclystis filicata*	2	White Slant-line	*Tetracis cachexiata*	2
Greenish Blue	*Icaricia saepiolus*	1	White Spring Moth	*Lomographa vestaliata*	1
Grey Comma	*Polygonia progne*	3	White Triangle Tortrix	*Clepsis persicana*	2
Hagen's Bluet	*Enallagma hageni*	5	White Underwing	*Catocala relicta*	2
Hairy Euxoa Moth	*Euxoa comosa*	6	White-dotted Prominent	*Nadata gibbosa*	5
Half-black Bumble Bee	*Bombus vagans*	1	White-faced Meadowhawk	*Sympetrum obtrusum*	3
Heath Knot-horn	*Apomyelois bistriatella*	1	White-Pine Shoot Borer Moth	*Eucosma gloriola*	1
Hercules Carpenter Ant	*Camponotus herculeanus*	1	White-spotted Sable	*Anania funebris*	1
Hickory Tussock Moth	*Lophocampa caryae*	1	White-spotted Sawyer	*Monochamus scutellatus*	26
Hoary Comma	*Polygonia gracilis*	2	White-streaked Prominent	*Ianassa lignicolor*	1
Hoary Elfin	*Callophrys polios*	1	White-striped Black	*Trichodezia albovittata*	1
Hobomok Skipper	*Lon hobomok*	6	Wide-striped Grass-veneer	*Crambus unistriatellus*	1
Hollow-spotted Plagodis Moth	*Plagodis alcoolaria*	1	Wild Cherry Sphinx	*Sphinx drupiferarum*	1
Honeysuckle Budworm	*Hyadaphis tataricae*	1	Williamson's Emerald	*Somatochlora williamsoni*	1
Hudsonian Whiteface	*Leucorrhinia hudsonica*	5	Willow Dart	*Cerastis salicarum*	2
Impressive Dagger	*Acronicta impressa*	2	Willow Pinecone Gall Midge	*Rabdophaga strobiloides*	7
Infant Moth	*Archiearis infans*	1	Wingless Mountain Grasshopper	*Booneacris glacialis*	3
Introduced Pine Sawfly	*Diprion similis*	1	Woolly Alder Aphid	*Prociphilus tessellatus*	2
Ipsilon Dart	*Agrotis ipsilon*	1	Yarrow Plume Moth	*Gillmeria pallidactyla*	1
Isabella Tiger Moth	*Pyrrharctia isabella*	2	Yellow Satin Veneer	*Crambus perlella*	4
Jack Pine Budworm Moth	*Choristoneura pinus*	2	Yellow Slant-line	*Tetracis crocallata*	1
July Highflyer Moth	*Hydriomena furcata*	2	Yellow Spruce Budworm Moth	*Choristoneura fumiferana*	1

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Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Jutta Arctic	*Oeneis jutta*	1	Yellow Velvet Beetle	*Lepturobosca chrysocoma*	7
Kentish Cosmet	*Mompha sturnipennella*	2	Yellow-banded Bumble Bee	*Bombus terricola*	7
Kent's Geometer Moth	*Selenia kentaria*	2	Yellow-banded Day Sphinx	*Proserpinus flavofasciata*	1
Labrador Tea Leaf Miner	*Phyllonorycter ledella*	2	Yellow-dusted Cream Moth	*Cabera erythemaria*	1
Lake Darner	*Aeshna eremita*	7	Yellow-headed Aspen Leaftier	*Epinotia nisella*	1
Lake Emerald	*Somatochlora cingulata*	4	Yellow-headed Cutworm Moth	*Apamea amputatrix*	1
Lancet Clubtail	*Phanogomphus exilis*	4	Yellow-necked Caterpillar Moth	*Datana ministra*	2
Larch Tolype Moth	*Tolype laricis*	1	Yellow-spotted Webworm Moth	*Anageshna primordialis*	1
Large Aspen Tortrix	*Choristoneura conflictana*	2	Yellow-waisted Laphria	*Laphria sacrator*	2
Large Clover Casebearer Moth	*Coleophora trifolii*	1	Zebra Clubtail	*Stylurus scudderi*	6
Large Gray Dagger	*Acronicta insita*	1	Zimmerman Pine Moth	*Dioryctria zimmermani*	1

Breeding Bird Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Alder Flycatcher	*Empidonax alnorum*	780	Indigo Bunting	*Passerina cyanea*	69
American Bittern	*Botaurus lentiginosus*	70	Killdeer	*Charadrius vociferus*	131
American Black Duck	*Anas rubripes*	247	Lapland Longspur	*Calcarius lapponicus*	31
American Coot	*Fulica americana*	1	Least Flycatcher	*Empidonax minimus*	766
American Crow	*Corvus brachyrhynchos*	2,063	Least Sandpiper	*Calidris minutilla*	9
American Goldfinch	*Spinus tristis*	464	LeConte's Sparrow	*Ammospiza leconteii*	9
American Goshawk	*Accipiter gentilis*	4	Lesser Black-backed Gull	*Larus fuscus*	2
American Herring Gull	*Larus smithsonianus*	3,102	Lesser Scaup	*Aythya affinis*	88
American Kestrel	*Falco sparverius*	265	Lesser Yellowlegs	*Tringa flavipes*	10
American Pipit	*Anthus rubescens*	458	Lewis's Woodpecker	*Melanerpes lewis*	1
American Redstart	*Setophaga ruticilla*	1,230	Lincoln's Sparrow	*Melospiza lincolnii*	240
American Robin	*Turdus migratorius*	2,993	Long-eared Owl	*Asio otus*	5
American Three-toed Woodpecker	*Picoides dorsalis*	139	Long-tailed Duck	*Clangula hyemalis*	10
American Tree Sparrow	*Spizelloides arborea*	193	Magnolia Warbler	*Setophaga magnolia*	2,758
American Wigeon	*Mareca americana*	108	Mallard	*Anas platyrhynchos*	1,141
American Woodcock	*Scolopax minor*	168	Merlin	*Falco columbarius*	151
Bald Eagle	*Haliaeetus leucocephalus*	918	Mourning Dove	*Zenaida macroura*	35
Baltimore Oriole	*Icterus galbula*	4	Mourning Warbler	*Geothlypis philadelphia*	1,471
Bank Swallow	*Riparia riparia*	30	Myrtle Warbler	*Setophaga coronata*	1
Barn Swallow	*Hirundo rustica*	92	Nashville Warbler	*Leiothlypis ruficapilla*	4,481
Barred Owl	*Strix varia*	32	Northern Cardinal	*Cardinalis cardinalis*	149
Bay-breasted Warbler	*Setophaga castanea*	469	Northern Flicker	*Colaptes auratus*	1,003
Belted Kingfisher	*Megaceryle alcyon*	291	Northern Goshawk	*Accipiter gentilis*	7
Black Tern	*Chlidonias niger*	2	Northern Harrier	*Circus hudsonius*	69
Black-and-white Warbler	*Mniotilta varia*	606	Northern Hawk Owl	*Surnia ulula*	2
Black-backed Woodpecker	*Picoides arcticus*	1,489	Northern Mockingbird	*Mimus polyglottos*	3
Black-bellied Plover	*Pluvialis squatarola*	1	Northern Parula	*Setophaga americana*	1,343
Black-billed Cuckoo	*Coccyzus erythropthalmus*	56	Northern Pintail	*Anas acuta*	87
Blackburnian Warbler	*Setophaga fusca*	955	Northern Saw-whet Owl	*Aegolius acadicus*	20
Black-capped Chickadee	*Poecile atricapillus*	2,863	Northern Shoveler	*Spatula clypeata*	11

Breeding Bird Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Blackpoll Warbler	*Setophaga striata*	4	Northern Shrike	*Lanius borealis*	10
Black-throated Blue Warbler	*Setophaga caerulescens*	628	Northern Waterthrush	*Parkesia noveboracensis*	323
Black-throated Green Warbler	*Setophaga virens*	264	Olive-sided Flycatcher	*Contopus cooperi*	107
Blue Jay	*Cyanocitta cristata*	1,169	Orange-crowned Warbler	*Leiothlypis celata*	4
Blue-headed Vireo	*Vireo solitarius*	619	Osprey	*Pandion haliaetus*	72
Blue-winged Teal	*Spatula discors*	30	Ovenbird	*Seiurus aurocapilla*	2,771
Bobolink	*Dolichonyx oryzivorus*	5	Palm Warbler	*Setophaga palmarum*	89
Bohemian Waxwing	*Bombycilla garrulus*	20	Peregrine Falcon	*Falco peregrinus*	8
Bonaparte's Gull	*Chroicocephalus philadelphia*	415	Philadelphia Vireo	*Vireo philadelphicus*	190
Boreal Chickadee	*Poecile hudsonicus*	228	Pied-billed Grebe	*Podilymbus podiceps*	77
Boreal Owl	*Aegolius funereus*	34	Pileated Woodpecker	*Dryocopus pileatus*	586
Brant	*Branta bernicla*	71	Pine Grosbeak	*Pinicola enucleator*	787
Brewer's Blackbird	*Euphagus cyanocephalus*	3	Pine Siskin	*Spinus pinus*	4,743
Broad-winged Hawk	*Buteo platypterus*	310	Pine Warbler	*Setophaga pinus*	23
Brown Creeper	*Certhia americana*	199	Purple Finch	*Haemorhous purpureus*	1,378
Brown Thrasher	*Toxostoma rufum*	5	Red Crossbill	*Loxia curvirostra*	236
Brown-headed Cowbird	*Molothrus ater*	26	Red-bellied Woodpecker	*Melanerpes carolinus*	3
Bufflehead	*Bucephala albeola*	245	Red-breasted Merganser	*Mergus serrator*	18
Canada goose	*Branta canadensis*	3,748	Red-breasted Nuthatch	*Sitta canadensis*	1,556
Canada Jay	*Perisoreus canadensis*	572	Red-eyed Vireo	*Vireo olivaceus*	6,622
Canada Warbler	*Cardellina canadensis*	122	Red-headed Woodpecker	*Melanerpes erythrocephalus*	2
Cape May Warbler	*Setophaga tigrina*	343	Red-necked Grebe	*Podiceps grisegena*	14
Caspian Tern	*Hydroprogne caspia*	1	Redpoll	*Acanthis flammea*	1,765
Cassin's Kingbird	*Tyrannus vociferans*	1	Red-shouldered Hawk	*Buteo lineatus*	3
Cedar Waxwing	*Bombycilla cedrorum*	1,945	Red-tailed Hawk	*Buteo jamaicensis*	126
Chestnut-sided Warbler	*Setophaga pensylvanica*	1,919	Red-winged Blackbird	*Agelaius phoeniceus*	928
Chimney Swift	*Chaetura pelagica*	35	Ring-billed Gull	*Larus delawarensis*	809
Chipping Sparrow	*Spizella passerina*	856	Ring-necked Duck	*Aythya collaris*	911
Clay-colored Sparrow	*Spizella pallida*	8	Rock Pigeon	*Columba livia*	406
Cliff Swallow	*Petrochelidon pyrrhonota*	41	Rose-breasted Grosbeak	*Pheucticus ludovicianus*	77

Breeding Bird Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Common Gallinule	*Gallinula galeata*	2	Rough-legged Hawk	*Buteo lagopus*	21
Common Goldeneye	*Bucephala clangula*	1,177	Ruby-crowned Kinglet	*Regulus calendula*	1,644
Common Grackle	*Quiscalus quiscula*	1,130	Ruby-throated Hummingbird	*Archilochus colubris*	107
Common Loon	*Gavia immer*	1,078	Ruffed Grouse	*Bonasa umbellus*	821
Common Merganser	*Mergus merganser*	508	Rusty Blackbird	*Euphagus carolinus*	229
Common Nighthawk	*Chordeiles minor*	125	Sandhill Crane	*Grus canadensis*	479
Common Raven	*Corvus corax*	6,663	Savannah Sparrow	*Passerculus sandwichensis*	100
Common Snipe	*Gallinago gallinago*	29	Scarlet Tanager	*Piranga olivacea*	45
Common Tern	*Sterna hirundo*	148	Sedge Wren	*Cistothorus stellaris*	1
Common Yellowthroat	*Geothlypis trichas*	823	Semipalmated Plover	*Charadrius semipalmatus*	4
Connecticut Warbler	*Oporornis agilis*	3	Semipalmated Sandpiper	*Calidris pusilla*	2
Cooper's Hawk	*Astur cooperii*	8	Sharp-shinned Hawk	*Accipiter striatus*	63
Dark-eyed Junco	*Junco hyemalis*	1,442	Sharp-tailed Grouse	*Tympanuchus phasianellus*	2
Double-crested Cormorant	*Nannopterum auritum*	15	Short-eared Owl	*Asio flammeus*	1
Downy Woodpecker	*Picoides pubescens*	436	Snow Bunting	*Plectrophenax nivalis*	385
Eastern Bluebird	*Sialia sialis*	95	Snow Goose	*Anser caerulescens*	1
Eastern Kingbird	*Tyrannus tyrannus*	39	Snowy Owl	*Bubo scandiacus*	1
Eastern Meadowlark	*Sturnella magna*	1	Solitary Sandpiper	*Tringa solitaria*	46
Eastern Phoebe	*Sayornis phoebe*	19	Song Sparrow	*Melospiza melodia*	681
Eastern Whip-poor-will	*Antrostomus vociferus*	1	Sora	*Porzana carolina*	26
Eastern Wood-Pewee	*Contopus virens*	32	Spotted Sandpiper	*Actitis macularius*	269
European Starling	*Sturnus vulgaris*	1,136	Spruce Grouse	*Canachites canadensis*	247
Evening Grosbeak	*Coccothraustes vespertinus*	1,248	Swainson's Thrush	*Catharus ustulatus*	2,361
Field Sparrow	*Spizella pusilla*	5	Swamp Sparrow	*Melospiza georgiana*	638
Fox Sparrow	*Passerella iliaca*	9	Tennessee Warbler	*Leiothlypis peregrina*	603
Gadwall	*Mareca strepera*	1	Three-toed Woodpecker	*Picoides dorsalis*	6
Glaucous Gull	*Larus hyperboreus*	5	Tree Swallow	*Tachycineta bicolor*	569
Golden-crowned Kinglet	*Regulus satrapa*	1,806	Trumpeter Swan	*Cygnus buccinator*	17
Golden-winged Warbler	*Vermivora chrysoptera*	2	Tundra Swan	*Cygnus columbianus*	46
Gray Catbird	*Dumetella carolinensis*	21	Turkey Vulture	*Cathartes aura*	445

Breeding Bird Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Gray-cheeked Thrush	*Catharus minimus*	1	Upland Sandpiper	*Bartramia longicauda*	2
Great Black-backed Gull	*Larus marinus*	13	Veery	*Catharus fuscescens*	736
Great Blue Heron	*Ardea herodias*	83	Vesper Sparrow	*Pooecetes gramineus*	39
Great Crested Flycatcher	*Myiarchus crinitus*	12	Virginia Rail	*Rallus limicola*	13
Great Gray Owl	*Strix nebulosa*	13	Warbling Vireo	*Vireo gilvus*	11
Great Horned Owl	*Bubo virginianus*	26	White-breasted Nuthatch	*Sitta carolinensis*	18
Greater Scaup	*Aythya marila*	110	White-crowned Sparrow	*Zonotrichia leucophrys*	249
Greater Yellowlegs	*Tringa melanoleuca*	99	White-throated Sparrow	*Zonotrichia albicollis*	6,593
Green-winged Teal	*Anas carolinensis*	92	White-winged Crossbill	*Loxia leucoptera*	1,062
Grey Catbird	*Dumetella carolinensis*	1	White-winged Scoter	*Melanitta deglandi*	3
Hairy Woodpecker	*Leuconotopicus villosus*	506	Wilson's Snipe	*Gallinago delicata*	147
Hermit Thrush	*Catharus guttatus*	2,810	Wilson's Warbler	*Cardellina pusilla*	57
Herring Gull	*Larus argentatus*	36	Winter Wren	*Troglodytes hiemalis*	1,646
Hooded Merganser	*Lophodytes cucullatus*	289	Wood Duck	*Aix sponsa*	57
Horned Grebe	*Podiceps auritus*	2	Wood Thrush	*Hylocichla mustelina*	7
Horned Lark	*Eremophila alpestris*	156	Yellow Warbler	*Setophaga petechia*	178
House Sparrow	*Passer domesticus*	29	Yellow-bellied Flycatcher	*Empidonax flaviventris*	565
House Wren	*Troglodytes aedon*	12	Yellow-bellied Sapsucker	*Sphyrapicus varius*	906
Iceland Gull	*Larus glaucoides*	3	Yellow-rumped Warbler	*Setophaga coronata*	2,344

Mammal Background Review Records		
Common Name	Scientific Name	Records
American Black Bear	*Ursus americanus*	169
American Marten	*Martes americana*	35,891
American Red Squirrel	*Tamiasciurus hudsonicus*	1,978
Bobcat	*Lynx rufus*	24
Boreal Caribou	*Rangifer tarandus caribou*	1
Canada Lynx	*Lynx canadensis*	3,285
Common Raccoon	*Procyon lotor*	534
Coyote	*Canis latrans*	177
Eastern Chipmunk	*Tamias striatus*	4
Eastern Grey Squirrel	*Sciurus carolinensis*	1
Eastern Wolf	*Canis lupus lycaon*	3
Ermine	*Mustela nivalis, Mustela erminea, Mustela frenata*	9,197
Fisher	*Pekania pennanti*	3,383
Gray Fox	*Urocyon cinereoargenteus*	14
Gray Wolf	*Canis lupus*	988
Groundhog	*Marmota monax*	6
Least Chipmunk	*Neotamias minimus*	5
Little Brown Bat	*Myotis lucifugus*	3
Mink	*Neogale vison*	9,796
Moose	*Alces alces*	56
Muskrat	*Ondatra zibethicus*	10,573
North American River Otter	*Lontra canadensis*	4,305
North American Beaver	*Castor canadensis*	64,180
Northern Myotis	*Myotis septentrionalis*	2
Red Fox	*Vulpes vulpes*	2,711
Snowshoe Hare	*Lepus americanus*	20
Striped Skunk	*Mephitis mephitis*	85
White-tailed Deer	*Odocoileus virginianus*	6
Wolverine	*Gulo gulo*	1

Fungi, Lichens and Slime Mold Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
American Yellow Fly Agaric	*Amanita muscaria var. guessowii*	6	Ladder Lichen	*Cladonia cervicornis*	2
Aspen Oyster Mushroom	*Pleurotus populinus*	1	Lesser Rocktripe	*Umbilicaria muhlenbergii*	5
Birch Polypore	*Fomitopsis betulina*	2	Lobster Mushroom	*Hypomyces lactifluorum*	28
Black Knot	*Dibotryon morbosum*	7	Lynx Paw Oyster	*Lentinus levis*	1
Black Morel	*Morchella elata*	1	Netted Shield Lichen	*Parmelia sulcata*	1
Boreal Oakmoss	*Evernia prunastri*	3	Northern Red Belt	*Fomitopsis pinicola*	3
British Soldier Lichen	*Cladonia cristatella*	1	Orange Jelly Spot	*Dacrymyces chrysospermus*	2
Brown Beret Lichen	*Baeomyces rufus*	1	Orange Peel Fungus	*Aleuria aurantia*	2
Burred Horsehair Lichen	*Bryoria furcellata*	1	Pink Earth Lichen	*Dibaeis baeomyces*	2
Chaga	*Inonotus obliquus*	2	Powdered Sunshine Lichen	*Vulpicida pinastri*	8
Common Ink Cap	*Coprinopsis atramentaria*	1	Powder-headed Tube Lichen	*Hypogymnia tubulosa*	1
Common Puffball	*Lycoperdon perlatum*	1	Red Tree Brain Fungus	*Peniophora rufa*	1
Concentric Ring Lichen	*Arctoparmelia centrifuga*	1	Red-capped Scaber Stalk	*Leccinum aurantiacum*	1
Conifer Mazegill	*Gloeophyllum sepiarium*	1	Red-juice Tooth	*Hydnellum peckii*	1
Crown-tipped Coral Fungus	*Artomyces pyxidatus*	2	Shaggy Mane	*Coprinus comatus*	7
Crumpled Rag Lichen	*Platismatia tuckermanii*	1	Shield Dapperling	*Lepiota clypeolaria*	1
Dead Man's Fingers	*Xylaria polymorpha*	1	Spring Orange Peel Fungus	*Caloscypha fulgens*	1
Dog Vomit Slime Mold	*Fuligo septica*	3	Star-tipped Reindeer Lichen	*Cladonia stellaris*	3
Dryad's Saddle	*Polyporus squamosus*	1	Thorn Lichen	*Cladonia uncialis*	1
Fairy Ring Marasmius	*Marasmius oreades*	1	Tree Lungwort	*Lobaria pulmonaria*	2
False Morel	*Morchella sp.*	1	Varied Rag Lichen	*Platismatia glauca*	2
Fishbone Beard Lichen	*Usnea filipendula*	1	Violet Webcap	*Cortinarius violaceus*	1
Fly Agaric	*Amanita muscaria*	4	White Coral Fungus	*Clavulina cristata*	1
Golden Moonglow Lichen	*Dimelaena oreina*	1	White Dapperling	*Leucoagaricus leucothites*	1
Grey Reindeer Lichen	*Cladonia rangiferina*	6	Witch's Butter	*Tremella mesenterica*	1
Handsome Club	*Clavulinopsis laeticolo*	1	Witch's Hat	*Hygrocybe conica*	1
Hooded Tube Lichen	*Hypogymnia physodes*	1	Wolf's Milk	*Lycogala epidendrum*	5
Irregular Earth Tongue	*Neolecta irregularis*	1	Yellow Map Lichen	*Rhizocarpon geographicum*	2

Plant Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Alderleaf Buckthorn	*Rhamnus alnifolia*	6	Mountain Holly	*Ilex mucronata*	2
Allegheny Monkeyflower	*Mimulus ringens*	5	Mountain Maple	*Acer spicatum*	36
Alpine Enchanter's-Nightshade	*Circaea alpina*	1	Mountain Ricegrass	*Achnatherum richardsonii*	5
Alsike Clover	*Trifolium hybridum*	1	Mountain Woodsorrel	*Oxalis montana*	1
Alternate Water-Milfoil	*Myriophyllum alterniflorum*	1	Musk Mallow	*Malva moschata*	2
American Brooklime	*Veronica americana*	1	Naked Bishop's Cap	*Mitella nuda*	7
American Bugleweed	*Lycopus americanus*	2	Narrow Mushroom-Headed Liverwort	*Marchantia quadrata*	2
American Common Reed	*Phragmites australis*	4	Narrowleaf Cow Wheat	*Melampyrum lineare*	14
American Cranberry	*Viburnum trilobum*	1	Narrow-Leaved Everlasting-Pea	*Lathyrus sylvestris*	1
American Fly-Honeysuckle	*Lonicera canadensis*	6	Necklace Sedge	*Carex projecta*	1
American Mountain Ash	*Sorbus americana*	17	Necklace Spike Sedge	*Carex ormostachya*	1
American Pussy Willow	*Salix discolor*	1	Needle Spikerush	*Eleocharis acicularis*	1
American Red Raspberry	*Rubus strigosus*	2	Nerveless Woodland Sedge	*Carex leptonervia*	2
American Royal Fern	*Osmunda regalis*	3	Nodding Beggarticks	*Bidens cernua*	1
American White Waterlily	*Nymphaea odorata*	2	Nodding Trillium	*Trillium cernuum*	16
Aniseroot	*Osmorhiza longistylis*	1	Northeastern Sedge	*Carex cryptolepis*	2
Arctic Butterbur	*Petasites frigidus*	3	Northern Blue Flag	*Iris versicolor*	15
Arumleaf Arrowhead	*Sagittaria cuneata*	1	Northern Bugleweed	*Lycopus uniflorus*	2
Balsam Fir	*Abies balsamea*	24	Northern Bush Honeysuckle	*Diervilla lonicera*	43
Balsam Poplar	*Populus balsamifera*	23	Northern Comandra	*Geocaulon lividum*	2
Balsam Willow	*Salix pyrifolia*	1	Northern Coralroot	*Corallorhiza trifida*	7
Baltic Rush	*Juncus balticus*	2	Northern Evening-Primrose	*Oenothera biennis*	1
Bartram Shadbush	*Amelanchier bartramiana*	1	Northern Firmoss	*Huperzia selago*	1
Beaked Hazelnut	*Corylus cornuta*	15	Northern Ground-Cedar	*Diphasiastrum complanatum*	1
Bearberry	*Arctostaphylos sp.*	5	Northern Lady Fern	*Athyrium filix-femina*	8
Bebb's Willow	*Salix bebbiana*	5	Northern Oak Fern	*Gymnocarpium dryopteris*	8
Bird's-Foot Trefoil	*Lotus corniculatus*	12	Northern Purple Pitcher Plant	*Sarracenia purpurea*	18
Black Ash	*Fraxinus nigra*	10	Northern Redcurrant	*Ribes triste*	4
Black Medick	*Medicago lupulina*	5	Northern Sedge	*Carex deflexa*	2
Black Spruce	*Picea mariana*	17	Northern Starflower	*Lysimachia borealis*	38

Plant Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Black-Eyed Susan	*Rudbeckia hirta*	3	Northern White Violet	*Viola minuscula*	1
Bladder Campion	*Silene vulgaris*	4	Northern Wild Comfrey	*Andersonglossum boreale*	1
Bladder Sedge	*Carex intumescens*	4	Northern Wild Rice	*Zizania sp.*	1
Bloodroot	*Sanguinaria canadensis*	7	Northern Yarrow	*Achillea borealis var. borealis*	1
Bluebead Lily	*Clintonia borealis*	59	Northern Yellow-Eyed Grass	*Xyris montana*	1
Bluntleaf Sandwort	*Moehringia lateriflora*	2	Northwest Territory Sedge	*Carex utriculata*	3
Blunt-Leaved Rein Orchid	*Platanthera obtusata*	5	One-Cone Clubmoss	*Lycopodium lagopus*	2
Bog Cranberry	*Vaccinium oxycoccos*	6	One-Flowered Wintergreen	*Moneses uniflora*	16
Bog Goldenrod	*Solidago uliginosa*	6	One-Sided Wintergreen	*Orthilia secunda*	9
Bog Labrador Tea	*Rhododendron groenlandicum*	54	Ontario Rhodobryum Moss	*Rhodobryum ontariense*	1
Bog Rosemary	*Andromeda polifolia*	2	Orange Hawkweed	*Pilosella aurantiaca*	17
Bog Sedge	*Carex magellanica*	8	Orchard Grass	*Dactylis glomerata*	1
Bog Wintergreen	*Pyrola asarifolia*	3	Orpine	*Hylotelephium telephium*	2
Bogbean	*Menyanthes trifoliata*	3	Ostrich Fern	*Matteuccia struthiopteris*	3
Boreal Bog Sedge	*Carex magellanica subsp. irrigua*	3	Ostrich-Plume Moss	*Ptilium crista-castrensis*	4
Bristly Haircap Moss	*Polytrichum piliferum*	1	Oxeye Daisy	*Leucanthemum vulgare*	15
Bristly Sarsaparilla	*Aralia hispida*	7	Panicled Aster	*Symphyotrichum lanceolatum*	2
Broadleaf Arrowhead	*Sagittaria latifolia*	1	Panicled Bulrush	*Scirpus microcarpus*	1
Broadleaf Cattail	*Typha latifolia*	9	Paper Birch	*Betula papyrifera*	24
Broad-Leaved Helleborine	*Epipactis helleborine*	3	Pearly Everlasting	*Anaphalis margaritacea*	38
Broad-Leaved Pondweed	*Potamogeton natans*	2	Perennial Sow Thistle	*Sonchus arvensis*	4
Brown Peatmoss	*Sphagnum fuscum*	1	Philadelphia Fleabane	*Erigeron philadelphicus*	3
Bulblet-Bearing Water Hemlock	*Cicuta bulbifera*	2	Pin Cherry	*Prunus pensylvanica*	19
Bull Thistle	*Cirsium vulgare*	1	Pineapple-Weed	*Matricaria discoidea*	7
Bunchberry	*Creeping dogwood*	117	Pinesap	*Hypopitys monotropa*	16
Butter-And-Eggs	*Linaria vulgaris*	3	Pink Lady's Slipper	*Cypripedium acaule*	42
Canada Mayflower	*Maianthemum canadense*	42	Pipsissewa	*Chimaphila umbellata*	16
Canada Mint	*Mentha canadensis*	3	Poverty Oatgrass	*Danthonia spicata*	2
Canada Thistle	*Cirsium arvense*	2	Prairie Willow	*Salix humilis*	4
Canada Yew	*Taxus canadensis*	9	Prickly Tree-Clubmoss	*Dendrolycopodium dendroideum*	8

Plant Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Canadian Bluejoint	*Calamagrostis canadensis*	1	Prickly Wild Rose	*Rosa acicularis*	12
Canadian Buffalo-Berry	*Shepherdia canadensis*	1	Proso Millet	*Panicum miliaceum L.*	1
Carolina Springbeauty	*Claytonia caroliniana*	1	Purple Clematis	*Clematis viticella*	1
Checkered Rattlesnake Plantain	*Goodyera tesselata*	3	Purple Loosestrife	*Lythrum salicaria*	3
Chestnut Sedge	*Carex castanea*	1	Purple Meadow-Rue	*Thalictrum dasycarpum*	2
Chicory	*Cichorium intybus*	2	Rannoch-Rush	*Scheuchzeria palustris*	1
Choke Cherry	*Prunus virginiana*	3	Rattlesnake Fern	*Botrypus virginianus*	6
Closed Gentian	*Gentiana andrewsii*	1	Red Baneberry	*Actaea rubra*	12
Club-Spur Orchid	*Platanthera clavellata*	8	Red Clover	*Trifolium pratense*	16
Common Arrowgrass	*Triglochin maritima*	1	Red Columbine	*Aquilegia canadensis*	6
Common Bladderwort	*Utricularia vulgaris*	1	Red Maple	*Acer rubrum*	23
Common Blue Violet	*Viola sororia*	1	Red Osier Dogwood	*Cornus sericea*	7
Common Boneset	*Eupatorium perfoliatum*	2	Red Pine	*Pinus resinosa*	13
Common Bracken	*Pteridium aquilinum*	18	Red Raspberry	*Rubus idaeus*	11
Common Columbine	*Aquilegia vulgaris*	1	Red-Berried Elder	*Sambucus racemosa*	25
Common Cowparsnip	*Heracleum maximum*	11	Red-Seeded Dandelion	*Taraxacum erythrospermum*	2
Common Dandelion	*Taraxacum officinale*	2	Red-Stemmed Feather Moss	*Pleurozium schreberi*	7
Common Evening-Primrose	*Oenothera biennis*	2	Reed Canary Grass	*Phalaris arundinacea*	1
Common Eyebright	*Euphrasia nemorosa*	4	Retrorse Sedge	*Carex retrorsa*	2
Common Haircap Moss	*Polytrichum commune*	2	Richardson's Pondweed	*Potamogeton richardsonii*	1
Common Hairy Goldenrod	*Solidago hispida*	1	Rock Harlequin	*Capnoides sempervirens*	12
Common Hemp-Nettle	*Galeopsis tetrahit*	1	Rock Polypody	*Polypodium virginianum*	1
Common Lilac	*Syringa vulgaris*	1	Rose Pogonia	*Pogonia ophioglossoides*	3
Common Liverwort	*Marchantia polymorpha*	2	Rose Twisted-Stalk	*Streptopus lanceolatus*	7
Common Mare's Tail	*Common Mare's Tail*	1	Rough Cinquefoil	*Potentilla norvegica*	6
Common Milkweed	*Asclepias syriaca*	5	Rough Goose Neck Moss	*Rhytidiadelphus triquetrus*	1
Common Mullein	*Verbascum thapsus*	9	Rough Horsetail	*Equisetum hyemale*	3
Common Ninebark	*Physocarpus opulifolius*	1	Rough-Stemmed Goldenrod	*Solidago rugosa*	4
Common Selfheal	*Prunella vulgaris*	20	Round-Leaved Bog Orchid	*Platanthera orbiculata*	4
Common Soapwort	*Saponaria officinalis*	1	Round-Leaved Sundew	*Drosera rotundifolia*	14

Plant Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Common Spikerush	*Eleocharis palustris*	1	Rugosa Rose	*Rosa rugosa*	1
Common St. John's Wort	*Hypericum perforatum*	15	Russow's Peatmoss	*Sphagnum russowii*	1
Common Viper's Bugloss	*Echium vulgare*	8	Rusty Woodsia	*Woodsia ilvensis*	1
Common Yarrow	*Achillea millefolium*	39	Saskatoon	*Amelanchier alnifolia*	1
Cotton Deergrass	*Trichophorum alpinum*	3	Seaside Pea	*Lathyrus japonicus*	1
Crawford's Sedge	*Carex crawfordii*	1	Sensitive Fern	*Onoclea sensibilis*	5
Creeping Bellflower	*Campanula rapunculoides*	3	Serviceberries	*Amelanchier sp.*	2
Creeping Snowberry	*Gaultheria hispidula*	18	Sheathed Cotton-Grass	*Eriophorum vaginatum*	2
Creeping Spearwort	*Ranunculus flammula*	2	Sheep Laurel	*Kalmia angustifolia*	19
Crome Sphagnum	*Sphagnum squarrosum*	2	Sheep's Sorrel	*Rumex acetosella*	2
Cyperus Sedge	*Carex pseudocyperus*	1	Shingle Moss	*Neckera pennata*	1
Delicate Stonewort	*Chara virgata*	1	Shining Firmoss	*Huperzia lucidula*	4
Dotted Loosestrife	*Lysimachia punctata*	1	Shining Willow	*Salix lucida*	1
Drooping Woodland Sedge	*Carex arctata*	2	Shinleaf	*Pyrola elliptica*	18
Drug Eyebright	*Euphrasia stricta*	1	Showy Lady's Slipper	*Cypripedium reginae*	2
Dwarf Raspberry	*Rubus pubescens*	9	Showy Mountain-Ash	*Sorbus decora*	8
Dwarf Water-Lily	*Nymphaea leibergii*	1	Siberian Peashrub	*Siberian Peashrub*	5
Eagle Fern	*Pteridium aquilinum*	14	Silvery Cinquefoil	*Potentilla argentea*	2
Early Goldenrod	*Solidago juncea*	5	Skunk Currant	*Ribes glandulosum*	4
Early Meadow-Rue	*Thalictrum dioicum*	1	Small Bur-Reed	*Sparganium natans*	1
Eastern Black Nightshade	*Solanum ptycanthum*	1	Small Pussytoes	*Antennaria howellii*	3
Eastern Red Elder	*Sambucus racemosa*	6	Small Sundrops	*Oenothera perennis*	2
Eastern White Cedar	*Thuja occidentalis*	43	Smooth Hawkweed	*Hieracium laevigatum*	1
Eastern White Pine	*Pinus strobus*	28	Smooth Rose	*Rosa blanda*	1
Ebony Sedge	*Carex eburnea*	1	Smooth Saw-Grass	*Cladium mariscoides*	2
Eel-Grass Pondweed	*Potamogeton compressus*	1	Smooth Yellow Violet	*Viola eriocarpa*	1
Elders	*Sambucus sp.*	1	Sneezewort	*Achillea ptarmica*	1
Elk Sedge	*Carex geyeri*	1	Speckled Alder	*Alnus incana*	9
European Lily Of The Valley	*Convallaria majalis*	1	Spiny-Spored Quillwort	*Isoetes echinospora*	1
European Reed	*Phragmites australis*	3	Spoonleaf Sundew	*Drosera intermedia*	2

Plant Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Fan Clubmoss	*Diphasiastrum digitatum*	1	Spotted Coralroot	*Corallorhiza maculata*	18
Fen Orchid	*Liparis loeselii*	2	Spotted Jewelweed	*Impatiens capensis*	10
Field Horsetail	*Equisetum arvense*	6	Spotted Joe-Pye Weed	*Eutrochium maculatum*	16
Field Sagewort	*Artemisia campestris*	2	Spotted Knapweed	*Centaurea stoebe*	9
Fireweed	*Chamaenerion angustifolium*	66	Spreading Dogbane	*Apocynum androsaemifolium*	24
Flanged Smartweed	*Polygonum amphibium*	1	Squashberry	*Viburnum edule*	1
Flat-Top White Aster	*Doellingeria umbellata*	6	Stag's-Horn Clubmoss	*Lycopodium clavatum*	7
Flat-Topped Goldenrod	*Euthamia graminifolia*	13	Stairstep Moss	*Hylocomium splendens*	3
Floating Bur-Reed	*Sparganium angustifolium*	1	Stalked Bulrush	*Scirpus pedicellatus*	1
Floating-Leaved Pondweed	*Potamogeton natans*	3	Star Sedge	*Carex echinata*	1
Foxtail Barley	*Hordeum jubatum*	1	Starry False Solomon's-Seal	*Maianthemum stellatum*	2
Fragrant Bedstraw	*Galium triflorum*	3	Starved Witchgrass	*Dichanthelium depauperatum*	1
Fragrant Wood Fern	*Dryopteris fragrans*	1	Straw Sedge	*Carex normalis*	3
Fraser's Marsh St. John's-Wort	*Triadenum fraseri*	6	Straw Spear-Moss	*Straminergon stramineum*	1
Fringed Black Bindweed	*Fallopia cilinodis*	11	Strict Blue-Eyed Grass	*Sisyrinchium montanum*	3
Fringed Polygala	*Polygaloides paucifolia*	9	Striped Coralroot	*Corallorhiza striata*	2
Ghost Pipe	*Monotropa uniflora*	24	Sulphur Cinquefoil	*Potentilla recta*	1
Golden Sedge	*Carex aurea*	2	Swamp Aster	*Symphyotrichum puniceum*	3
Goutweed	*Aegopodium podagraria*	1	Swamp Birch	*Betula alleghaniensis*	4
Graceful Sedge	*Carex gracillima*	1	Swamp Candles	*Lysimachia terrestris*	8
Grass-Leaved Pondweed	*Potamogeton gramineus*	2	Swamp Currant	*Ribes lacustre*	2
Greater Plantain	*Plantago major*	5	Swamp Laurel	*Kalmia polifolia*	8
Great-Spurred Violet	*Viola selkirkii*	1	Swamp Milkweed	*Asclepias incarnata*	5
Green Alder	*Alnus alnobetula*	32	Swamp Thistle	*Cirsium muticum*	1
Green Bog Orchid	*Platanthera huronensis*	2	Swarthy Sedge	*Carex adusta*	1
Green Carpetweed	*Mollugo verticillata*	3	Sweet Gale	*Myrica gale*	11
Green-Flowered Wintergreen	*Pyrola chlorantha*	10	Sweet-Fern	*Comptonia peregrina*	53
Green-Keeled Cottongrass	*Eriophorum viridicarinatum*	1	Sweet-William	*Dianthus barbatus*	2
Grey Rock-Moss	*Grimmia pulvinata*	1	Tall Blue Lettuce	*Lactuca biennis*	2
Guelder-Rose	*Viburnum opulus*	3	Tall Bluebells	*Mertensia paniculata*	16

Plant Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Hairy Goldenrod	*Solidago hispida*	4	Tall Bog-Sedge	*Carex magellanica*	1
Hairy Honeysuckle	*Lonicera hispidula*	4	Tamarack	*Larix laricina*	23
Hairy Rocket	*Erucastrum gallicum*	1	Tansy	*Tanacetum vulgare*	3
Hairy Rosette-Panicgrass	*Dichanthelium acuminatum*	1	Tawny Cotton-Grass	*Eriophorum virginicum*	3
Hard Fescue	*Festuca ovina*	3	Tea-Leafed Willow	*Salix phylicifolia*	1
Heartleaf Paper Birch	*Betula cordifolia*	2	Threeleaf Goldthread	*Coptis trifolia*	16
Heartleaf Twayblade	*Neottia cordata*	1	Three-Leaved False Solomon's Seal	*Maianthemum trifolium*	8
Heath Speedwell	*Veronica officinalis*	1	Three-Square Bulrush	*Schoenoplectus americanus*	1
Hickey's Tree-Clubmoss	*Dendrolycopodium hickeyi*	1	Three-Way Sedge	*Dulichium arundinaceum*	2
Himalayan Balsam	*Impatiens glandulifera*	1	Thyme-Leaved Speedwell	*Veronica serpyllifolia*	2
Hoary Fringe-Moss	*Racomitrium canescens*	1	Timothy Grass	*Phleum pratense*	3
Hoary Sedge	*Carex canescens*	3	Trailing Arbutus	*Epigaea repens*	28
Hookedspur Violet	*Viola adunca*	8	Tree Climacium Moss	*Climacium dendroides*	1
Horned Bladderwort	*Utricularia cornuta*	2	Trembling Aspen	*Populus tremuloides*	104
Horseweed	*Erigeron canadensis*	2	Triploid Wood Fern	*Dryopteris intermedia*	1
Houghton's Sedge	*Carex houghtoniana*	5	Tuberous Grasspink	*Calopogon tuberosus*	3
Inflated Sedge	*Carex vesicaria*	1	Tufted Loosestrife	*Lysimachia thyrsiflora*	2
Intermediate Bladderwort	*Utricularia intermedia*	1	Tufted Vetch	*Vicia cracca*	22
Intermediate Wood Fern	*Dryopteris intermedia*	19	Tussock Cottongrass	*Eriophorum vaginatum*	6
Interrupted Clubmoss	*Lycopodium annotinum*	11	Twinflower	*Linnaea borealis*	42
Interrupted Fern	*Osmunda claytoniana*	24	Two-Seeded Sedge	*Carex disperma*	2
Inundated Bog Clubmoss	*Lycopodiella inundata*	1	Variegated Horsetail	*Equisetum variegatum*	2
Jack Pine	*Pinus banksiana*	52	Variegated Yellow Pond-Lily	*Nuphar variegata*	7
Juniper Haircap Moss	*Polytrichum juniperinum*	2	Velvetleaf Blueberry	*Vaccinium myrtilloides*	22
Kalm's Lobelia	*Lobelia kalmii*	5	Viper's Bugloss	*Echium vulgare*	1
Kidneyleaf White Violet	*Viola renifolia*	1	Virginia Strawberry	*Fragaria virginiana*	8
Knotted Rush	*Juncus nodosus*	1	Water Avens	*Geum rivale*	1
Large Hop Clover	*Trifolium aureum*	4	Water Horsetail	*Equisetum fluviatile*	3
Large-Leaved Aster	*Eurybia macrophylla*	22	Water Parsnip	*Sium suave*	4
Large-Leaved Goldenrod	*Solidago macrophylla*	1	Water Sedge	*Carex aquatilis*	1

Plant Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Large-Leaved Lupine	*Lupinus polyphyllus*	10	Water Smartweed	*Persicaria amphibia*	3
Leatherleaf	*Chamaedaphne calyculata*	14	Watershield	*Brasenia schreberi*	1
Lesser Purple Fringed Orchid	*Platanthera psycodes*	9	Wavy Hair-Grass	*Avenella flexuosa*	1
Lesser Rattlesnake Plantain	*Goodyera repens*	13	Waxyleaf Moss	*Dicranum polysetum*	3
Lesser Wintergreen	*Pyrola minor*	1	Western Poison Ivy	*Toxicodendron rydbergii*	1
Lindley's Aster	*Symphyotrichum ciliolatum*	2	Western Scouringrush	*Equisetum hyemale*	1
Little Green Sedge	*Carex serotina*	2	White Beak-Sedge	*Rhynchospora alba*	2
Long Beech Fern	*Phegopteris connectilis*	5	White Clover	*Trifolium repens*	7
Longtube Twinflower	*Linnaea borealis ssp. Longiflora*	2	White Meadowsweet	*Spiraea alba*	13
Lowbush Blueberry	*Vaccinium angustifolium*	30	White Poplar	*Populus alba*	1
Manitoba Maple	*Acer negundo*	1	White Spruce	*Picea glauca*	9
Marsh Bellflower	*Campanula aparinoides*	1	White Sweet-Clover	*Melilotus albus*	10
Marsh Calla	*Calla palustris*	1	White-Fruited Red Baneberry	*Actaea rubra*	1
Marsh Cinquefoil	*Comarum palustre*	6	White-Grained Mountain-Ricegrass	*Oryzopsis asperifolia*	4
Marsh Cudweed	*Gnaphalium uliginosum*	1	Wild Asparagus	*Asparagus acutifolius*	1
Marsh Fern	*Thelypteris palustris*	1	Wild Carrot	*Daucus carota*	2
Marsh Grass-Of-Parnassus	*Parnassia palustris*	8	Wild Parsnip	*Pastinaca sativa*	2
Marsh Marigold	*Caltha palustris*	11	Wild Rosemary	*Andromeda polifolia*	16
Marsh Mermaidweed	*Proserpinaca palustris*	1	Wild Sarsaparilla	*Aralia nudicaulis*	40
Marsh Skullcap	*Scutellaria galericulata*	16	Winterberry Holly	*Ilex verticillata*	1
Marsh Speedwell	*Veronica scutellata*	1	Wintergreen	*Gaultheria procumbens*	14
Marsh Thistle	*Cirsium palustre*	5	Wolf Willow	*Elaeagnus commutata*	2
Meadow Anemone	*Anemonastrum canadense*	8	Wood Anemone	*Anemonoides nemorosa*	13
Meadow Buttercup	*Ranunculus acris*	10	Wood Forget-Me-Not	*Myosotis sylvatica*	1
Meadow Foxtail	*Alopecurus pratensis*	2	Wood Horsetail	*Equisetum sylvaticum*	7
Meadow Hawkweed	*Pilosella caespitosa*	2	Woolgrass	*Scirpus cyperinus*	1
Meadow Horsetail	*Equisetum pratense*	2	Woolly Sedge	*Carex pellita*	1
Meadow Salsify	*Tragopogon pratensis*	1	Wulf's Peatmoss	*Sphagnum wulfianum*	1
Meadow Willow	*Salix petiolaris*	1	Yellow Archangel	*Lamium galeobdolon*	1
Michaux's Sedge	*Carex michauxiana*	2	Yellow Birch	*Betula alleghaniensis*	2

Plant Background Review Records

Common Name	Scientific Name	Records	Common Name	Scientific Name	Records
Moss Phlox	*Phlox subulata*	2	Yellow Lady's Slipper	*Cypripedium parviflorum*	1
Mountain Alder	*Alnus incana*	1	Yellow Salsify	*Tragopogon dubius*	3
Mountain Fly-Honeysuckle	*Lonicera caerulea*	2	Yellow-Green Sedge	*Carex flava*	1

APPENDIX D: PLANT SPECIES ENCOUNTERED DURING THE FIELD STUDY

Family	Common Name	Scientific Name	S-Rank	Conservatism Coefficient	Wetness Coefficient
Lycopodiaceae - Clubmoss Family	Flat-branched Tree-clubmoss	*Dendrolycopodium obscurum {L.) A. Haines*	*S4*	6	*3*
	Shining Firmoss	*Huperzia lucidula (Michx.) Trevis.*	*S5*	5	*0*
	One-cone Clubmoss	*Lycopodium lagopus (Laest. ex C. Hartm.) G. Zinserl. ex Kuzen.*	*S4*	5	*3*
	Stiff Clubmoss	*Spinulum annotinum (L.) A. Haines*	*S5*	6	*0*
Equisetaceae - Horsetail Family	Field Horsetail	*Equisetum arvense L.*	*S5*	0	*0*
	Water Horsetail	*Equisetum fluviatile L.*	*S5*	7	*-5*
	Common Scouring-rush	*Equisetum hyemale L.*	*S5*	2	*0*
	Dwarf Scouring-rush	*Equisetum scirpoides Michx.*	*S5*	7	*0*
	Woodland Horsetail	*Equisetum sylvaticum L.*	*S5*	7	*-3*
Athyriaceae - Lady Fern Family	Northeastern Lady Fern	*Athyrium filix-femina var. angustum (Willdenow) G. Lawson*	*S5*	4	*0*
Cystopteridaceae - Bladder Fern Family	Common Oak Fern	*Gymnocarpium dryopteris (L.) Newman*	*S5*	7	*3*
Dennstaedtiaceae - Bracken Fern Family	Bracken Fern	*Pteridium aquilinum ssp. latiusculum (Desvaux) Hulten ex Clausen*	*S5*	2	*3*
Dryopteridaceae - Wood Fern Family	Spinulose Wood Fern	*Dryopteris carthusiana (Villars) H.P. Fuchs*	*S5*	5	*-3*
	Crested Wood Fern	*Dryopteris cristata (L.) A. Gray*	*S5*	7	*-5*
Onocleaceae - Sensitive Fern Family	Ostrich Fern	*Matteuccia struthiopteris (L.) Todaro*	*S5*	5	*0*
	Sensitive Fern	*Onoclea sensibilis L.*	*S5*	4	*-3*
Osmundaceae - Royal Fern Family	Interrupted Fern	*Claytosmunda claytoniana (L.) Metzger & Rouha*	*S5*	7	*0*
	Royal Fern	*Osmunda regalis L.*	*S5*	7	*-3*
Polypodiaceae - Polypody Family	Rock Polypody	*Polypodium virginianum L.*	*S5*	7	*5*
Thelypteridaceae - Marsh Fern Family	Northern Beech Fern	*Phegopteris connectilis (Michx.) Watt*	*S5*	8	*3*
	Marsh Fern	*Thelypteris palustris Schott*	*S5*	5	*-3*
Cupressaceae - Juniper Family	Eastern White Cedar	*Thuja occidentalis L.*	*S5*	4	*-3*
Pinaceae - Pine Family	Balsam Fir	*Abies balsamea (L.) Miller*	*S5*	5	*-3*
	Tamarack	*Larix laricina (DuRoi) K. Koch*	*S5*	7	*-3*
	White Spruce	*Picea glauca (Moench) Voss*	*S5*	6	*3*

Family	Common Name	Scientific Name	S-Rank	Conservatism Coefficient	Wetness Coefficient
	Black Spruce	*Picea mariana (Miller) BSP.*	*S5*	8	*-3*
	Jack Pine	*Pinus banksiana Lambert*	*S5*	5	*3*
	Red Pine	*Pinus resinosa Aiton*	*S5*	8	*3*
	Eastern White Pine	*Pinus strobus L.*	*S5*	4	*3*
Taxaceae - Yew Family	Canada Yew	*Taxus canadensis Marshall*	*S5*	7	*3*
Alismataceae - Water-Plantain Family	Northern Arrowhead	*Sagittaria cuneata E. Sheldon*	*S5*	7	*-5*
Araceae -Arum Family	Wild Calla	*Calla palustris L.*	*S5*	8	*-5*
Asparagaceae - Asparagus Family	Wild Lily-of-the-valley	*Maianthemum canadense Desf.*	*S5*	5	*3*
	Star-flowered False Solomon's Seal	*Maianthemum stellatum (L.) Link*	*S5*	6	*0*
	Three-leaved False Solomon's Seal	*Maianthemum trifolium (L.) Sloboda*	*S5*	10	*-5*
Cyperaceae - Sedge Family	Water Sedge	*Carex aquatilis Wahlenb.*	*S5*	7	*-5*
	Bebb's Sedge	*Carex bebbii (L. Bailey) Olney ex Fern.*	*S5*	3	*-5*
	Buxbaum's Sedge	*Carex buxbaumii Wahlenb.*	*S5*	10	*-5*
	Hoary Sedge	*Carex canescens L.*	*S5*	7	*-5*
	Hair-like Sedge	*Carex capillaris L.*	*S5*	10	*-5*
	Chestnut Sedge	*Carex castanea Wahlenb.*	*S5*	7	*-3*
	Creeping Sedge	*Carex chordorrhiza L.f.*	*S5*	10	*-5*
	Northeastern Sedge	*Carex cryptolepis Mackenzie*	*S4*	7	*-5*
	Bent Northern Sedge	*Carex deflexa Hornemann*	*S5*	8	*3*
	Two-seeded Sedge	*Carex disperma Dewey*	*S5*	8	*-5*
	Star Sedge	*Carex echinata Murray*	*S5*	7	*-5*
	Yellow Sedge	*Carex flava L.*	*S5*	5	*-5*
	Graceful Sedge	*Carex gracillima Schwein.*	*S5*	4	*3*
	Houghton's Sedge	*Carex houghtoniana Torrey ex Dewey*	*S5*	6	*5*
	Inland Sedge	*Carex interior L. Bailey*	*S5*	6	*-5*
	Bladder Sedge	*Carex intumescens Rudge*	*S5*	6	*-3*
	Lake Sedge	*Carex lacustris Willd.*	*S5*	5	*-5*
	Woolly-fruit Sedge	*Carex lasiocarpa Ehrh.*	*S5*	8	*-5*

Family	Common Name	Scientific Name	S-Rank	Conservatism Coefficient	Wetness Coefficient
	Bristle-stalked Sedge	*Carex leptalea Wahlenb.*	*S5*	8	*-5*
	Mud Sedge	*Carex limosa L.*	*S5*	10	*-5*
	Necklace Spike Sedge	*Carex ormostachya Wieg.*	*S4*	8	*5*
	Long-stalked Sedge	*Carex pedunculata Muhlenb. ex Willd.*	*S5*	5	*3*
	Woolly Sedge	*Carex pellita Willd.*	*S5*	2	*-5*
	Three-seeded Sedge	*Carex trisperma Dewey*	*S5*	9	*-5*
	Northern Beaked Sedge	*Carex utriculata Boott*	*S5*	7	*-5*
	Sheathed Sedge	*Carex vaginata Tausch*	*S5*	10	*-5*
	Greenish Sedge	*Carex viridula Michx.*	*S5*	5	*-5*
	Quill Spikerush	***Eleocharis nitida Fern.***	***S2?***	**10**	***-5***
	Common Spikerush	*Eleocharis palustris (L.) Roemer & Schultes*	*S5*	6	*-5*
	Narrow-leaved Cottongrass	*Eriophorum angustifolium Hanek.*	*S5*	9	*-5*
	Tussock Cottongrass	*Eriophorum vaginatum ssp. spissum (Fernald) Hulten*	*S5*	10	*-5*
	Tawny Cottongrass	*Eriophorum virginicum L.*	*S5*	8	*-5*
	Green-keeled Cottongrass	*Eriophorum viridicarinatum (Engelm.) Fern.*	*S5*	9	*-5*
	Hard-stemmed Bulrush	*Schoenoplectus acutus (Muhl. ex Bigelow) A. Love & D. Love*	*S5*	5	*-5*
	Dark-green Bulrush	*Scirpus atrovirens Willd.*	*S5*	3	*-5*
	Common Woolly Bulrush	*Scirpus cyperinus (L.) Knuth*	*S5*	4	*-5*
	Red-tinged Bulrush	*Scirpus microcarpus J.& K. Presl*	*S5*	4	*-5*
	Alpine Clubrush	*Trichophorum alpinum (L.) Pers.*	*S5*	9	*-5*
Iridaceae - Iris Family	Harlequin Blue Flag	*Iris versicolor L.*	*S5*	5	*-5*
	Strict Blue-eyed-grass	*Sisyrinchium montanum Greene var. montanum*	*S5*	4	*0*
Juncaceae - Rush Family	Hairy Woodrush	*Luzula acuminata Raf.*	*S5*	6	*3*
	Thread Rush	*Juncus filiformis L.*	*S5*	8	*-3*
	Soft Rush	*Juncus effusus L.*	*S5*	4	*-5*
	Many-flowered Woodrush	*Luzula multiflora (Ehrh.) Lejeune*	*S5*	6	*3*
Juncaginaceae - Arrowgrass Family	Seaside Arrowgrass	*Triglochin maritima L.*	*S5*	8	*-5*
Liliaceae - Lily Family	Yellow Clintonia	*Clintonia borealis (Aiton) Raf.*	*S5*	7	*0*

Family	Common Name	Scientific Name	S-Rank	Conservatism Coefficient	Wetness Coefficient
	Yellow Trout Lily	*Erythronium americanum Ker Gawler*	*S5*	5	*5*
	Eastern Rose Twisted-stalk	*Streptopus lanceolatus (Aiton) Reveal var. lanceolatus*	*S5*	7	*3*
Melanthiaceae - Trillium Family	Nodding Trillium	*Trillium cernuum L.*	*S5*	8	*0*
Orchidaceae - Orchid Family	Dragon's-mouth	*Arethusa bulbosa L.*	*S4S5*	10	*-5*
	Frog Orchid	*Coeloglossum viride (L.) Hartman*	*S4*	8	*0*
	Spotted Coralroot	*Corallorhiza maculata (Rafinesque) Rafinesque var. maculata*	*S5*	7	*3*
	Early Coralroot	*Corallorhiza trifida Chatel*	*S5*	7	*-3*
	Pink Lady's-slipper	*Cypripedium acaule Aiton*	*S5*	7	*-3*
	Northern Yellow Lady's-slipper	*Cypripedium parviflorum var. makasin (Farwell) Sheviak*	*S4S5*	5	*0*
	Large Yellow Lady's-slipper	*Cypripedium parviflorum var. pubescens (Willd.) Knight*	*S5*	5	*0*
	Broad-leaved Helleborine	*Epipactis helleborine (L.) Crantz*	*SNA*	-	*3*
	Dwarf Rattlesnake-plantain	*Goodyera repens (L.) R. Br.*	*S5*	8	*0*
	Checkered Rattlesnake-plantain	*Goodyera tesselata Ladd.*	*S5*	7	*3*
	Heart-leaved Twayblade	*Neottia cordata (L.) Richard*	*S5*	8	*-3*
	Tall Northern Green Orchid	*Platanthera aquilonis Sheviak*	*S5*	5	*-3*
	Lake Huron Green Orchid	*Platanthera huronensis (Nuttall) Lindley*	*SU*	5	*-3*
	Rose Pogonia	*Pogonia ophioglossoides (L.) Ker Gawler*	*S4S5*	10	*-5*
Poaceae - Grass Family	Bluejoint Reedgrass	*Calamagrostis canadensis (Michx.) P. Beauv.*	*S5*	4	*-5*
	Drooping Woodreed	*Cinna lotifolia (Trevir. ex Goeppinger) Griseb.*	*S5*	7	*-3*
	Canada Mannagrass	*Glyceria canadensis (Michx.) Trin.*	*S5*	7	*-5*
	Fowl Mannagrass	*Glyceria striata (Lam.) A. Hitchc.*	*S5*	3	*3*
	Reed Canarygrass	*Phalaris arundinacea L.*	*S5*	0	*3*
	Common Timothy	*Phleum pratense L.*	*SNA*	-	*3*
	Canada Bluegrass	*Poa compressa L.*	*SNA*	-	*3*
Potamogetonaceae - Pondweed Family	Richardson's Pondweed	*Potamogeton richardsonii (A. Bennett) Rydb.*	*S5*	5	*5*
Scheuchzeriaceae - Pod-grass Family	Marsh Scheuchzeria	*Scheuchzeria palustris L.*	*S5*	10	*-5*
Typhaceae - Cattail Family	Narrow-leaved Cattail	*Typha angustifolia L.*	*SNA*	-	*-5*
	Broad-leaved Cattail	*Typha latifolia L.*	*S5*	1	*-5*

Family	Common Name	Scientific Name	S-Rank	Conservatism Coefficient	Wetness Coefficient
Adoxaceae - Moschatel Family	Red Elderberry	*Sambucus racemosa L.*	*S5*	5	*5*
Apiaceae - Parsley Family	Wild Carrot	*Daucus carota L.*	*SNA*	-	*5*
	American Cow Parsnip	*Heracleum maximum W. Bartram*	*S5*	3	*-3*
	Common Water-parsnip	*Sium suave Walter*	*S5*	4	*-5*
Apocynaceae - Dogbane Family	Spreading Dogbane	*Apocynum androsaemifolium L.*	*S5*	3	*5*
Araliaceae - Ginseng Family	Bristly Sarsaparilla	*Aralia hispida Vent.*	*S5*	8	*5*
	Wild Sarsaparilla	*Aralia nudicaulis L.*	*S5*	4	*3*
Asteraceae - Sunflower Family	Achillea borealis	*Achillea borealis Bong.*	*S5*	0	*3*
	Common Yarrow	*Achillea millefolium L.*	*SNA*	-	*3*
	Pearly Everlasting	*Anaphalis margaritacea (L.) Benth. & Hook. f.*	*S5*	3	*3*
	Spotted Knapweed	*Centaurea stoebe L.*	*SNA*	-	*5*
	Canada Thistle	*Cirsium arvense (L.) Scop.*	*SNA*	-	*3*
	Marsh Thistle	*Cirsium palustre (L.) Scop.*	*SNA*	-	*-3*
	Bull Thistle	*Cirsium vulgare (Savi) Ten.*	*SNA*	-	*3*
	Rough Fleabane	*Erigeron strigosus Muhlenb. ex Willd.*	*S5*	4	*3*
	Large-leaved Aster	*Eurybia macrophylla (L.) Cassini*	*S5*	5	*5*
	Grass-leaved Goldenrod	*Euthamia graminifolia (L.) Nutt.*	*S5*	2	*0*
	Spotted Joe Pye Weed	*Eutrochium maculatum (L.) Lamont var. maculatum*	*S5*	3	*-5*
	Tall Blue Lettuce	*Lactuca biennis (Moench) Fern.*	*S5*	6	*0*
	Oxeye Daisy	*Leucanthemum vulgare Lamarck*	*SNA*	-	*5*
	Palmate Coltsfoot	*Petasites frigidus var. palmatus (Aiton) Cronquist*	*S5*	8	*-5*
	Arrow-leaved Coltsfoot	*Petasites frigidus var. sagittatus (Pursh) Chemiasky*	*S4?*	8	*-3*
	Orange Hawkweed	*Pilosella aurantiaca (L.) Schultz & Schultz Bipontinus*	*SNA*	-	*5*
	Meadow Hawkweed	*Pilosella piloselloides (Villars) Soják)*	*SNA*	-	*5*
	Black-eyed Susan	*Rudbeckia hirta L.*	*S5*	0	*5*
	Canada Goldenrod	*Solidago canadensis L. var. canadensis*	*S5*	1	*3*
	Bog Goldenrod	*Solidago uliginosa Nutt.*	*S5*	9	*-5*
	Panicled Aster	*Symphyotrichum lanceolatum (Willd.) Nesom*	*S5*	3	*-3*
	Purple-stemmed Aster	*Symphyotrichum puniceum (L.) Love & Love*	*S5*	6	*-5*

Family	Common Name	Scientific Name	S-Rank	Conservatism Coefficient	Wetness Coefficient
	Common Tansy	*Tanacetum vulgare L.*	*S5*	-	*5*
	Common Dandelion	*Taraxacum officinale F.H. Wiggers*	*SNA*	-	*3*
	Yellow Goatsbeard	*Tragopogon dubius Scop.*	*SNA*	-	*5*
Balsaminaceae - Jewelweed Family	Spotted Jewelweed	*Impatiens capensis Meerb.*	*S5*	4	*-3*
Betulaceae - Birch Family	Green Alder	*Alnus alnobetula ssp. crispa (Aiton) Raus*	*S5*	8	*0*
	Speckled Alder	*Alnus incana ssp. rugosa (Du Roi) R.T. Clausen*	*S5*	6	*-3*
	Yellow Birch	*Betula alleghaniensis Britton*	*S5*	6	*0*
	Paper Birch	*Betula papyrifera Marshall*	*S5*	2	*3*
	Bog Birch	*Betula pumila L.*	*S5*	9	*-5*
	Beaked Hazelnut	*Corylus cornuta Marshall*	*S5*	5	*3*
Boraginaceae - Borage Family	Common Viper's Bugloss	*Echium vulgare L.*	*SNA*	-	*5*
	Tall Bluebells	*Mertensia paniculata (Aiton) G. Don*	*S5*	-	*0*
	True Forget-me-not	*Myosotis scorpioides L.*	*SNA*	-	*-5*
Brassicaceae - Mustard Family	Small-flowered Wallflower	*Erysimum inconspicuum (5. Watson) MacMillan*	*SU*	-	*5*
Campanulaceae - Harebell Family	Kalm's Lobelia	*Lobelia kalmii L.*	*S5*	9	*-5*
	Marsh Bellflower	*Palustricodon aparinoides (Pursh) Morin*	*S5*	7	*-5*
Caprifoliaceae - Honeysuckle Family	Northern Bush-honeysuckle	*Diervilla lonicera Miller*	*S5*	5	*5*
	Twinflower	*Linnaea borealis L.*	*S5*	7	*0*
	Canada Fly-honeysuckle	*Lonicera canadensis Bartram ex Marshall*	*S5*	6	*3*
	Limber Honeysuckle	*Lonicera dioica L.*	*S5*	5	*3*
	Hairy Honeysuckle	*Lonicera hirsuta Eaton*	*S5*	7	*0*
	Bracted Honeysuckle	*Lonicera involucrata (Richardson) Banks ex Sprengel*	*S5*	-	*3*
	Swamp Fly-honeysuckle	*Lonicera oblongifolia (Goldie) Hook.*	*S5*	8	*-5*
	Mountain Fly-honeysuckle	*Lonicera villosa (Michx.) Roemer & Schultes*	*S5*	10	*-3*
Celastraceae - Bittersweet Family	Marsh Grass-of-Parnassus	*Parnassia palustris L.*	*S5*	10	*-5*
Cornaceae - Dogwood Family	Alternate-leaved Dogwood	*Cornus alternifolia L.f.*	*S5*	6	*3*
	Bunchberry	*Cornus canadensis L.*	*S5*	7	*0*
	Round-leaved Dogwood	*Cornus rugosa Lam.*	*S5*	6	*5*

Family	Common Name	Scientific Name	S-Rank	Conservatism Coefficient	Wetness Coefficient
	Red-osier Dogwood	*Cornus sericea L.*	*S5*	2	*-3*
Crassulaceae - Stonecrop Family	Garden Stonecrop	*Hylotelephium telephium (L.) Ohba*	*SNA*	-	*5*
Droseraceae - Sundew Family	Spoon-leaved Sundew	*Drosera intermedia Hayne*	*S5*	9	*-5*
	Round-leaved Sundew	*Drosera rotundifolia L.*	*S5*	10	*-5*
Ericaceae - Heath Family	Bog Rosemary	*Andromeda polifolia L.*	*S5*	10	*-5*
	Common Bearberry	*Arctostaphylos uva-ursi (L.) Sprengel*	*S5*	8	*5*
	Leatherleaf	*Chamaedaphne calyculata (L.) Moench*	*S5*	9	*-5*
	Trailing Arbutus	*Epigaea repens L.*	*S5*	9	*3*
	Creeping Snowberry	*Gaultheria hispidula (L.) Muhlenb. ex Bigelow*	*S5*	8	*-3*
	Eastern Teaberry	*Gaultheria procumbens L.*	*S5*	6	*3*
	Pinesap	*Hypopitys monotropa Crantz*	*S4*	6	*5*
	Sheep Laurel	*Kalmia angustifolia L.*	*S5*	9	*0*
	Pale Bog Laurel	*Kalmia polifolia Wangenh.*	*S5*	10	*-5*
	One-flowered Wintergreen	*Moneses uniflora (L.) A. Gray*	*S5*	10	*0*
	Ghost Pipe	*Monotropa uniflora L.*	*S5*	6	*3*
	One-sided Wintergreen	*Orthilia secunda (L.) House*	*S5*	5	*0*
	Green-flowered Pyrola	*Pyrola chlorantha Sw.*	*S4S5*	6	*3*
	Shinleaf	*Pyrola elliptica Nutt.*	*S5*	5	*5*
	Common Labrador Tea	*Rhododendron groenlandicum (Oeder) Kron & Judd*	*S5*	9	*-5*
	Early Lowbush Blueberry	*Vaccinium angustifolium Aiton*	*S5*	6	*3*
	Velvet-leaved Blueberry	*Vaccinium myrtilloides Michx.*	*S5*	7	*-3*
	Small Cranberry	*Vaccinium oxycoccos L.*	*S5*	10	*-5*
	Mountain Cranberry	*Vaccinium vitis-idaea L.*	*S5*	7	*0*
Fabaceae - Pea Family	Cream-coloured Vetchling	*Lathyrus ochroleucus Hook.*	*S4S5*	8	*5*
	Garden Bird's-foot Trefoil	*Lotus corniculatus L.*	*SNA*	-	*3*
	Large-leaved Lupine	*Lupinus polyphyllus Lindley*	*SNA*	-	*5*
	White Sweet-clover	*Melilotus albus Medikus*	*SNA*	-	*3*
	Red Clover	*Trifolium pratense L.*	*SNA*	-	*3*

Family	Common Name	Scientific Name	S-Rank	Conservatism Coefficient	Wetness Coefficient
	American Vetch	*Vicia americana Muhlenb. ex Willd.*	*S5*	5	*3*
Geraniaceae - Geranium Family	Bicknell's Geranium	*Geranium bicknellii Britton*	*S5*	5	*5*
Grossulariaceae - Currant Family	Skunk Currant	*Ribes glandulosum Grauer*	*S5*	6	*-3*
	Swamp Gooseberry	*Ribes hirtellum Michx.*	*S5*	6	*-3*
	Bristly Black Currant	*Ribes lacustre (Pers.) Poiret*	*S5*	7	*-3*
	Swamp Red Currant	*Ribes triste Pall.*	*S5*	6	*-5*
Hypericaceae - St. John's-wort Family	Canada St. John's-wort	*Hypericum canadense L.*	*S4?*	8	*-3*
	Pale St. John's-wort	*Hypericum ellipticum Hook.*	*S5*	9	*-5*
	Large St. John's-wort	*Hypericum majus (A. Gray) Britton*	*S5*	5	*-3*
	Common St. John's-wort	*Hypericum perforatum L.*	*SNA*	-	*5*
	Fraser's St. John's-wort	*Triadenum fraseri (Spach) Gleason*	*S5*	7	*-5*
Lamiaceae - Mint Family	American Water-horehound	*Lycopus americanus Muhlenb. ex W.P.C. Barton*	*S5*	4	*-5*
	Northern Water-horehound	*Lycopus uniflorus Michx.*	*S5*	5	*-5*
	Canada Mint	*Mentha canadensis L.*	*S5*	3	*-3*
	Common Self-heal	*Prunella vulgaris L. ssp. vulgaris*	*S5*	0	*0*
	Marsh Skullcap	*Scutellaria galericulata L.*	*S5*	6	*-5*
Lentibulariaceae - Bladderwort Family	Common Bladderwort	*Utricularia vulgaris L.*	*S5*	10	*-5*
Linaceae - Flax Family	Fairy Flax	*Linum catharticum L.*	*SNA*	-	*3*
Malvaceae - Mallow Family	Musk Mallow	*Malva moschata L.*	*SNA*	-	*5*
Menyanthaceae - Bogbean Family	Bog Buckbean	*Menyanthes trifoliata L.*	*S5*	9	*-5*
Myricaceae - Bayberry Family	Sweet Gale	*Myrica gale L.*	*S5*	6	*-5*
	Sweet-fern	*Comptonia peregrina (L.) Coulter*	*S5*	7	*5*
Oleaceae Family	Black Ash	*Fraxinus nigra Marshall*	*S4*	7	*-3*
Onagraceae - Evening Primrose Family	Fireweed	*Chamaenerion angustifolium (L.) Scopoli*	*S5*	3	*0*
	Bog Willowherb	*Epilobium leptophyllum Raf.*	*S5*	7	*-5*
	Marsh Willowherb	*Epilobium palustre L.*	*S5*	10	*-5*
	Small-flowered Evening-primrose	*Oenothera parviflora L.*	*S5*	1	*3*
Orobanchaceae - Broomrape Family	Common Eyebright	*Euphrasia nemorosa (Persoon) Wallroth*	*SU*	-	*0*

Family	Common Name	Scientific Name	S-Rank	Conservatism Coefficient	Wetness Coefficient
	Stiff Eyebright	*Euphrasia stricta D. Wolff ex J. Lehm*	*SNA*	-	*0*
	American Cow-wheat	*Melampyrum lineare Desr.*	*S5*	6	*3*
	Little Yellow Rattle	*Rhinanthus minor L. ssp. minor*	*SU*	-	*0*
Oxalidaceae - Wood-sorrel Family	White Wood-sorrel	*Oxalis montana Raf.*		7	
	Butter-and-eggs	*Linaria vulgaris Miller*	*SNA*	-	*5*
	English Plantain	*Plantago lanceolata L.*	*SNA*	-	*3*
Plantaginaceae - Plantain Family	Common Plantain	*Plantago major L.*	*SNA*	-	*3*
	American Speedwell	*Veronica americana (Raf.) Schwein. ex Benth.*	*S5*	6	*-5*
	Common Speedwell	*Veronica officinalis L.*	*SNA*	-	*5*
Polygalaceae - Milkwort Family	Seneca Snakeroot	*Polygala senega L.*	*S4*	7	*3*
Polygonaceae - Buckwheat Family	Fringed Black Bindweed	*Fallopia cilinodis (Michx.) Holub*	*S5*	2	*5*
Primulaceae - Primrose Family	Northern Starflower	*Lysimachia borealis (Raf.) U. Manns & Anderberg*	*S5*	6	*0*
	Swamp Yellow Loosestrife	*Lysimachia terrestris (L.) BSP.*	*S5*	6	*-5*
Ranunculaceae - Buttercup Family	Red Baneberry	*Actaea rubra (Aiton) Willd.*	*S5*	6	*3*
	White Baneberry	*Actaea pachypoda Elliot*	*S5*	6	*5*
	Canada Anemone	*Anemonastrum canadensis (L.) Mosyakin*	*S5*	3	*-3*
	Wood Anemone	*Anemone quinquefolia L.*	*S5*	7	*0*
	Tall Anemone	*Anemone virginiana L.*	*S5*	4	*3*
	Red Columbine	*Aquilegia canadensis L.*	*S5*	5	*3*
	Yellow Marsh Marigold	*Caltha palustris L.*	*S5*	5	*-5*
	Purple Clematis	*Clematis occidentalis (Hornem.) DC.*	*S4*	8	*5*
	Goldthread	*Coptis trifolia (L.) Salisb.*	*S5*	7	*-3*
	Common Buttercup	*Ranunculus acris L.*	*SNA*	-	*0*
	Purple Meadow-rue	*Thalictrum dasycarpum Fischer & Ave-Lall.*	*S4?*	5	*-3*
Rhamnaceae - Buckthorn Family	Alder-leaved Buckthorn	*Endotropis alnifolia (L'Heritier) Hauenschild*	*S5*	7	*-5*
Rosaceae - Rose Family	Saskatoon	*Amelanchier alnifolia (Nutt.) Nutt. ex R. Roemer*	*S5*	8	*3*
	Downy Serviceberry	*Amelanchier arborea (F. Michx.) Fern.*	*S5*	5	*3*
	Marsh Cinquefoil	*Comarum palustre L.*	*S5*	7	*-5*

Family	Common Name	Scientific Name	S-Rank	Conservatism Coefficient	Wetness Coefficient
	Woodland Strawberry	*Fragaria vesca L.*	*S5*	4	*3*
	Wild Strawberry	*Fragaria virginiana Miller*	*S5*	2	*3*
	Yellow Avens	*Geum aleppicum Jacq.*	*S5*	2	*0*
	Water Avens	*Geum rivale L.*	*S5*	7	*-5*
	Eastern Ninebark	*Physocarpus opulifolius (L.) Maxim.*	*S5*	5	*-3*
	Rough Cinquefoil	*Potentilla norvegica L.*	*S5*	0	*0*
	Pin Cherry	*Prunus pensylvanica L.f.*	*S5*	3	*3*
	Chokecherry	*Prunus virginiana L.*	*S5*	2	*3*
	Prickly Rose	*Rosa acicularis Lindley*	*S5*	5	*3*
	Stemless Raspberry	*Rubus arcticus ssp. acaulis (Michx.) Focke*	*S5*	-	*-3*
	North American Red Raspberry	*Rubus ideaus ssp. strigosus (Michaux) Focke*	*S5*	2	*3*
	Dwarf Raspberry	*Rubus pubescens Raf.*	*S5*	4	*-3*
	Three-toothed Cinquefoil	*Sibbaldia tridentata (Aiton) Paule & Sojak*	*S5*	10	*3*
	American Mountain-ash	*Sorbus americana Marshall*	*S5*	8	*0*
	Showy Mountain-ash	*Sorbus decora (Sarg.) C. Schneider*	*S5*	8	*3*
	White Meadowsweet	*Spiraea alba Du Roi*	*S5*	3	*-3*
Rubiaceae - Bedstraw Family	Rough Bedstraw	*Galium asprellum Michx.*	*S5*	6	*-5*
	Northern Bedstraw	*Galium boreale L.*	*S5*	7	*3*
	Labrador Bedstraw	*Galium labradoricum (Wieg.) Wieg.*	*S5*	9	*-5*
	Common Marsh Bedstraw	*Galium palustre L.*	*S5*	5	*-5*
	Three-flowered Bedstraw	*Galium triflorum Michx.*	*S5*	4	*3*
Salicaceae - Willow Family	Balsam Poplar	*Populus balsamifera L.*	*S5*	4	*-3*
	Trembling Aspen	*Populus tremuloides Michx.*	*S5*	2	*0*
	Bebb's Willow	*Salix bebbiana Sarg.*	*S5*	4	*-3*
	Sage Willow	*Salix candida Fluegge ex Willd.*	*S5*	10	*-5*
	Pussy Willow	*Salix discolor Muhl.*	*S5*	3	*-3*
	Prairie Willow	*Salix humilis Marshall*	*S5*	7	*3*
	Bog Willow	*Salix pedicellaris Pursh*	*S5*	9	*-5*

Family	Common Name	Scientific Name	S-Rank	Conservatism Coefficient	Wetness Coefficient
	Meadow Willow	*Salix petiolaris Sm.*	*S5*	3	*-3*
	Autumn Willow	*Salix serissima (Bailey) Fern.*	*S5*	6	*-5*
Santalaceae - Sandalwood Family	Northern Comandra	*Geocaulon lividum (Richardson) Fern.*	*S5*	9	*0*
Sapindaceae - Soapberry Family	Red Maple	*Acer rubrum L.*	*S5*	4	*0*
	Sugar Maple	*Acer saccharum Marshall*	*S5*	4	*3*
	Mountain Maple	*Acer spicatum Lam.*	*S5*	6	*3*
Sarraceniaceae - Pitcher Plant Family	Northern Pitcher Plant	*Sarracenia purpurea L.*	*S5*	10	*-5*
Saxifragaceae - Saxifrage Family	Naked Mitrewort	*Mitella nuda L.*	*S5*	6	*-3*
Scrophulariaceae - Figwort Family	Common Mullein	*Verbascum thapsus L.*	*SNA*	-	*5*
Viburnaceae Family	Squashberry	*Viburnum edule (Michx.) Raf.*	*S5*	8	*-3*
	Highbush Cranberry	*Viburnum opulus ssp. americanum Ait.*	*S5*	5	*-3*
Violaceae - Violet Family	Canada Violet	*Viola canadensis L.*	*S5*	6	*3*
	Macloskey's Violet	*Viola macloskeyi F. Lloyd*	*S5*	6	*-5*
BRYOPHYTES					
Sphagnidae - Sphagnum Moss Family	Small Red Peat Moss	*Sphagnum capillifolium (Ehrh.) Hedw.*	*S5*	-	-
	Midway Peat Moss	*Sphagnum divinum Flatberg & Hassel*	*SU*	-	-
	Fringed Bogmoss	*Sphagnum fimbriatum Wils. in Wils. & Hook. f. in Hook. f.*	*S4*	-	-
	Common Green Peat Moss	*Sphagnum girgensohnii Russ.*	*S5*	-	-
	Shaggy Peat Moss	*Sphagnum squarrosum Crome*	*S5*	-	-
	Wulf's Peatmoss	*Sphagnum wulfianum Girg.*	*S5*	-	-
Pylaisiaceae - Feather mosses	Ostrich-plume Feathermoss	*Ptilium crista-castrensis (Hedw.) De Not.*	*S5*	-	-
Hylocomiaceae - Feather mosses	Schreber's Big Red Stem Moss	*Pleurozium schreberi (Brid.) Mitt.*	*S5*	-	-
	Splendid Feather Moss	*Hylocomium splendens (Hedw.) Schimp. in B.S.G.*	*S5*	-	-
	Shaggy Gooseneck Moss	*Rhytidiadelphus triquetrus (Hedw.) Warnst.*	*S5*	-	-
Dicranaceae - Fork Moss Family	Crispy Broom Moss	*Dicranum montanum Hedw.*	*S5*	-	-
	Cushion Moss	*Dicranum ontariense Peters.*	*S5*	-	-
	Rugose Fork-moss	*Dicranum polysetum Sw.*	*S5*	-	-
	Common Broom Moss	*Dicranum scoparium Hedw.*	*S5*	-	-

Family	Common Name	Scientific Name	S-Rank	Conservatism Coefficient	Wetness Coefficient
Lepidoziaceae - Leafy Liverworts	Three-lobed Whipwort	*Bazzania trilobata (L.) S. Gray*	*S5*	-	-
Amblystegiaceae	Sickle Moss	*Sanionia uncinata (Hedw.) Loeske*	*S5*	-	-
	Yellow Star Moss	*Campylium stellatum (Hedw.) C. Jens.*	*S5*	-	-
Thuidiaceae	Common Fern Moss	*Thuidium delicatulum (Hedw.) Schimp. in B.S.G.*	*S5*	-	-
Ditrichaceae	Fire Moss	*Ceratodon purpureus (Hedw.) Brid.*	*S5*	-	-
Polytrichaceae	Common Haircap	*Polytrichum commune Hedw.*	*S5*	-	-
	Juniper Haircap	*Polytrichum juniperinum Hedw.*	*S5*	-	-
	Bristly Haircap	*Polytrichum piliferum Hedw.*	*S5*	-	-
Mniaceae	Dotted Thyme-moss	*Rhizomnium punctatum (Hedw.) T. Kop.*	*S5*	-	-

APPENDIX E: AMPHIBIAN FIELD SURVEY OBSERVATIONS

Name	Lat	Long	Route Alternative(s)	Lat	Long	Temp (ºC)	Species	Max. Call Code
Amp_01	47.87111	-83.8958	A1, A2	47.87111	-83.8958	6	Green Frog	Cl1
Amp_02	47.79237	-83.1591	A1, A2	47.79237	-83.1591	12	Spring Peeper	CL2
Amp_03	48.16303	-82.2634		48.16303	-82.2634	9	Green Frog	Cl1
Amp_04	48.11849	-82.3531		48.11849	-82.3531	15	Green Frog	Cl1
Amp_05	47.86626	-83.8317	A1, A2	47.86626	-83.8317	8	Green Frog	Cl1
Amp_06	48.33589	-81.3332	C2	48.33589	-81.3332	12	Spring Peeper	Cl2
Amp_06	48.33589	-81.3332	C2	48.33589	-81.3332	12	Green Frog	Cl1
Amp_07	47.79891	-83.1453		47.79891	-83.1453	5	Spring Peeper	Cl2
Amp_08	47.92624	-82.843	B3	47.92624	-82.8430	6	Spring Peeper	Cl3
Amp_09	47.92802	-82.8401	B3	47.92802	-82.8401	14	Spring Peeper	Cl2
Amp_10	47.93799	-82.8284	B3	47.93799	-82.8284	14	Spring Peeper	Cl2
Amp_11	47.94077	-82.8253	B3	47.94077	-82.8253	14	Spring Peeper	Cl2
Amp_12	47.94441	-82.8205	B3	47.94441	-82.8205	14	Spring Peeper	Cl2
Amp_13	48.24966	-81.9364	C1, C2	48.24966	-81.9364	14	Mink Frog	Cl1
Amp_14	47.81985	-83.6063	A1, A2	47.81985	-83.6063	10	Spring Peeper	Cl2
Amp_15	47.82023	-83.6100	A1, A2	47.82023	-83.6100	10	Spring Peeper	Cl1
Amp_16	47.82476	-83.6392	A1, A2	47.82476	-83.6392	10	Spring Peeper	Cl3
Amp_17	47.86628	-83.8339	A1, A2	47.86628	-83.8339	7	Green Frog	Cl1
Amp_18	47.86639	-83.8368	A1, A2	47.86639	-83.8368	7	Spring Peeper	Cl2
Amp_18	47.86639	-83.8368	A1, A2	47.86639	-83.8368	7	Green Frog	Cl1
Amp_19	47.88486	-84.0014	A1, A2	47.88486	-84.0014	9	Spring Peeper	Cl2
Amp_20	47.89026	-84.0275	A1, A2	47.89026	-84.0275	9	Spring Peeper	Cl3
Amp_21	47.89259	-84.0355	A1, A2	47.89259	-84.0355	9	Spring Peeper	Cl1
Amp_22	47.86532	-83.8316	A1, A2	47.86532	-83.8316	7	Green Frog	Cl1

Notes

Max Call Codes

Cl1 – Individuals can be counted, calls do not overlap; Cl2 – Calls overlap but individuals can still be counted

Cl3 - Full chorus; individuals cannot be counted

ARU Location	Lat	Long	Route Segment(s)	American Toad	Green Frog	Mink Frog	Spring Peeper	Wood Frog
ARU_02	47.94736	-83.03475		Cl1	Cl2		Cl3	
ARU_03	48.18225	-82.24370	B1, B2, B3, C1, C2				Cl1	
ARU_06	47.77878	-83.26105		Cl1	Cl1		Cl3	
ARU_07	47.92540	-84.24773			Cl1		Cl3	
ARU_08	48.45614	-81.39061	A1	Cl1			Cl3	
ARU_10	47.79900	-83.15068	A1, A2				Cl1	
ARU_11	47.93761	-84.53196	A1, A2	Cl1			Cl3	
ARU_12	47.91054	-84.53912					Cl3	
ARU_14	47.87290	-83.91617			Cl2		Cl2	
ARU_16	47.79462	-83.30794	B1, B2				Cl3	
ARU_17	47.91437	-83.00747		Cl1				
BAT_01	47.94741	-83.03473	A1	CL2	Cl1		Cl3	
BAT_02	47.95027	-84.43049					Cl3	
BAT_04	47.99448	-82.90416	C1, C2				Cl1	
BAT_07	48.21853	-82.12934	C1, C2		Cl2		Cl1	
BAT_08	47.91127	-83.15042		Cl2			Cl3	
BAT_09	47.94626	-82.82113	B3	Cl1	Cl1	Cl1	Cl3	
BAT_11	47.78637	-83.32200			Cl1		Cl1	
BAT_12	47.77484	-83.33794			Cl1			
OWL_04	47.88542	-83.99687	A1, A2	Cl1			Cl3	
OWL_05	47.87598	-83.95785	A1, A2				Cl3	
OWL_06	47.86354	-83.90605					Cl3	Cl3
OWL_07	47.86592	-83.84147	A1, A2				Cl3	
OWL_08	47.84891	-83.75658	A1, A2	Cl1	Cl1		Cl2	
OWL_10	47.82043	-83.58431	A1, A2				Cl2	
OWL_25	48.19420	-82.21697	C1, C2				Cl1	

Notes

Max Call Codes

Cl1 – Individuals can be counted, calls do not overlap; Cl2 – Calls overlap but individuals can still be counted

Cl3 - Full chorus; individuals cannot be counted

APPENDIX F: BREEDING BIRD FIELD OBSERVATIONS AND DENSITY ESTIMATES

Field Survey and ARU Location Summary				
Name	Latitude	Longitude	Route List	Habitat
ARU_02	47.94736499	-83.034746		Fen
ARU_03	48.182254	-82.243696	B1, B2, B3, C1, C2	Mixedwood
ARU_04	47.89318303	-83.025052	B1, B2	Deciduous
ARU_06	47.778775	-83.261047		Marsh
ARU_07	47.925397	-84.247731	A1, A2	Deciduous
ARU_10	47.799004	-83.150684		Coniferous
ARU_11	47.93761	-84.53196	A1	Disturbed
ARU_12	47.91054	-84.53912	A1, A2	Disturbed
ARU_13	47.951787	-84.502889	A1	Deciduous
ARU_14	47.872899	-83.916173	A1, A2	Fen
ARU_15	47.80857903	-83.281613		Marsh
ARU_16	47.79461503	-83.30793796		Coniferous
ARU_17	47.91437499	-83.00747196	B1, B2	Deciduous
BAT_01	47.94741201	-83.03473201		Marsh
BAT_02	47.950272	-84.43049097	A1	Deciduous
BAT_03	47.90734702	-84.12034102	A1, A2	Coniferous
BAT_04	47.99447799	-82.90415897		Fen
BAT_05	48.468599	-81.27340916	C1, C2	Disturbed
BAT_06	48.38182601	-81.57087117	C1, C2	Marsh
BAT_07	48.21853497	-82.12934313	C1, C2	Fen
BAT_08	47.91127	-83.15042297		Marsh
BAT_09	47.94626	-82.82113496	B3	Fen
BAT_10	48.444554	-81.29273716	C1, C2	Coniferous
BAT_11	47.78637101	-83.32200296		Deciduous
BAT_12	47.77484497	-83.33794098		Marsh
OWL_01	47.944728	-84.529775	A1	Disturbed
OWL_03	47.897832	-84.05479	A1, A2	Coniferous

Field Survey and ARU Location Summary				
Name	Latitude	Longitude	Route List	Habitat
OWL_04	47.885423	-83.99687	A1, A2	Disturbed
OWL_05	47.875981	-83.957852	A1, A2	Deciduous
OWL_07	47.865915	-83.841471	A1, A2	Disturbed
OWL_08	47.848908	-83.756579	A1, A2	Coniferous
OWL_09	47.824978	-83.62903	A1, A2	Coniferous
OWL_10	47.820433	-83.584305	A1, A2	Coniferous
OWL_25	48.1942	-82.216972	C1, C2	Shrubland
MB_01	47.87101151	-83.90294	A1, A2	Marsh
MB_02	47.88426056	-83.98204051	A1, A2	Coniferous
MB_03	48.162657138	-82.263323522		Marsh
MB_04	47.79260445	-83.15976107		Coniferous
MB_05	47.9779026	-82.95633533	B1, B2	Fen
MB_06	48.09934775	-82.65548696	B1	Marsh
MB_07	48.20549748	-82.28027148	B1	Fen
MB_08	48.11857256	-82.35316343		Deciduous Swamp
PC_001	48.33588929	-81.33322621	C2	Bog
PC_002	47.7770867	-83.34253056		Coniferous
PC_003	47.7775202	-83.26142537		Coniferous
PC_004	47.79400436	-83.15809404		Coniferous
PC_005	47.79543295	-83.15572172		Coniferous
PC_006	47.79691174	-83.15274029		Coniferous
PC_007	47.7988858	-83.14952376		Coniferous
PC_008	48.45042213	-81.29109519	C1, C2	Shrubland
PC_009	47.7989089	-83.14532445		Coniferous
PC_010	47.79973439	-83.14113014		Coniferous
PC_011	47.79161602	-83.16319136		Coniferous
PC_012	47.81878531	-83.57972939	A1, A2	Successional
PC_013	47.89959039	-82.91842067	B3	Deciduous
PC_014	47.89814605	-82.92322301	B3	Deciduous
PC_015	47.90210787	-82.91439627	B3	Deciduous

Field Survey and ARU Location Summary				
Name	Latitude	Longitude	Route List	Habitat
PC_016	47.90408366	-82.91004274	B3	Coniferous
PC_017	47.90577732	-82.90176186	B3	Swamp-Deciduous
PC_018	47.90701607	-82.89759683	B3	Coniferous
PC_019	47.90743967	-82.89348925	B3	Deciduous
PC_020	47.90906347	-82.88650925	B3	Deciduous
PC_021	47.91013019	-82.88222992	B3	Deciduous
PC_022	47.91098256	-82.87666459	B3	Deciduous
PC_023	47.91152005	-82.86935485	B3	Coniferous
PC_024	47.91364589	-82.86411266	B3	Swamp-Coniferous
PC_025	47.91456839	-82.85983992	B3	Deciduous
PC_026	47.91607646	-82.85591426	B3	Swamp-Coniferous
PC_027	47.91916129	-82.85362988	B3	Deciduous
PC_028	47.92234453	-82.85018895	B3	Deciduous
PC_029	47.92624185	-82.84297047	B3	Swamp-Coniferous
PC_030	47.92801628	-82.84006594	B3	Coniferous
PC_031	47.93102356	-82.83619489	B3	Deciduous
PC_032	47.93485758	-82.83243604	B3	Deciduous
PC_033	47.93798974	-82.82841539	B3	Deciduous
PC_034	47.94076953	-82.82527451	B3	Deciduous
PC_035	47.94441493	-82.82054323	B3	Deciduous
PC_036	48.33826532	-81.67911255	C1, C2	Mixedwood
PC_037	48.22123329	-82.35723763	B1	Deciduous
PC_038	48.22058353	-82.36084768	B1	Deciduous
PC_039	48.40599974	-81.51584978	C1	Mixedwood
PC_040	48.39898933	-81.5325727	C1	Mixedwood
PC_041	48.3834569	-81.57285472	C1, C2	Mixedwood
PC_042	48.3666636	-81.61132325	C1, C2	Mixedwood
PC_043	48.35326213	-81.64275076	C1, C2	Mixedwood
PC_044	48.33790568	-81.68331994	C1, C2	Disturbed
PC_045	48.30980155	-81.76319476	C1, C2	Mixedwood

Field Survey and ARU Location Summary				
Name	Latitude	Longitude	Route List	Habitat
PC_046	48.31110003	-81.7593673	C1, C2	Mixedwood
PC_047	48.22298859	-82.43401708	B1	Successional
PC_048	48.31403874	-81.75157341	C1, C2	Mixedwood
PC_049	48.31523589	-81.74817612	C1, C2	Mixedwood
PC_050	48.2212826	-82.44275203	B1	Successional
PC_051	48.22698825	-82.43415749	B1	Successional
PC_052	48.25825352	-81.92434303	C1, C2	Successional
PC_053	48.25715712	-81.92873448	C1, C2	Successional
PC_054	48.24965544	-81.93636777	C1, C2	Disturbed
PC_055	48.24658998	-81.93526103	C1, C2	Disturbed
PC_056	48.21962415	-82.12962524	C1, C2	Fen
PC_057	48.19268683	-82.25934434	B1	Deciduous
PC_058	48.19429194	-82.26178759	B1	Deciduous
PC_059	48.17012061	-82.2692011	B2, B3	Coniferous
PC_060	48.19948366	-82.27178157	B1	Coniferous
PC_061	48.20858145	-82.28588758	B1	Deciduous
PC_062	48.20600265	-82.28863868	B1	Deciduous
PC_063	48.20856149	-82.29256763	B1	Coniferous
PC_064	48.2100113	-82.29762579	B1	Successional
PC_065	48.22391201	-82.35340516	B1	Coniferous
PC_066	48.2247441	-82.35728896	B1	Coniferous
PC_067	48.12094289	-82.36310785		Swamp-Coniferous
PC_068	48.16277547	-82.26357648		Marsh
PC_069	48.12328965	-82.35472243		Coniferous
PC_070	48.12060792	-82.36764726		Deciduous
PC_071	48.12037421	-82.37113642		Deciduous
PC_072	48.12040537	-82.37588588		Deciduous
PC_073	48.12057676	-82.38222238		Swamp-Coniferous
PC_074	48.12049131	-82.38765396		Swamp-Coniferous
PC_075	48.12036959	-82.39410406		Swamp-Coniferous

Field Survey and ARU Location Summary				
Name	Latitude	Longitude	Route List	Habitat
PC_076	48.120823	-82.3980197		Fen
PC_077	48.00691348	-82.85686816	B1, B2	Deciduous
PC_078	47.81912256	-83.59625166	A1, A2	Deciduous
PC_079	48.00281582	-82.86502824		Coniferous
PC_080	48.00159183	-82.87035429		Coniferous
PC_081	47.99916541	-82.88077976		Deciduous
PC_082	47.99619939	-82.88722282		Swamp-Coniferous
PC_083	47.99611002	-82.9029881	B1, B2	Coniferous
PC_084	47.99127677	-82.92120386	B1, B2	Successional
PC_085	47.98902864	-82.92508913	B1, B2	Successional
PC_086	48.43129976	-81.33511427	C1	Disturbed
PC_087	48.35988002	-81.45877438	C2	Shrubland
PC_088	47.97803437	-82.95605559	B1, B2	Fen
PC_089	47.96284055	-83.00008909	B1, B2	Coniferous
PC_090	47.96262784	-83.01128748	B1, B2	Deciduous
PC_091	47.96117888	-83.01619739	B1, B2	Disturbed
PC_093	47.9382691	-83.08859058		Swamp-Coniferous
PC_094	47.93781932	-83.09476722		Deciduous
PC_095	47.93016742	-83.12787436		Deciduous
PC_096	48.20743205	-82.4978267	B1	Successional
PC_097	48.20665729	-82.48996143	B1	Successional
PC_098	48.20480508	-82.48901687	B1	Successional
PC_099	48.20682677	-82.48611054	B1	Deciduous
PC_100	48.21037582	-82.4870754	B1	Deciduous
PC_101	48.43124302	-81.45803487	C1	Barren
PC_102	47.81985328	-83.60631779	A1, A2	Coniferous
PC_103	47.82022565	-83.61004288	A1, A2	Coniferous
PC_104	47.82408546	-83.63444247	A1, A2	Successional
PC_105	47.82476439	-83.63919692	A1, A2	Fen
PC_106	47.82533611	-83.64586733	A1, A2	Fen

Field Survey and ARU Location Summary				
Name	Latitude	Longitude	Route List	Habitat
PC_107	47.84277284	-83.71737462	A1, A2	Deciduous
PC_108	47.8444531	-83.72422102	A1, A2	Coniferous
PC_109	47.84973685	-83.74823682	A1, A2	Deciduous
PC_110	47.85029306	-83.75432251	A1, A2	Coniferous
PC_111	47.85115153	-83.76353787	A1, A2	Deciduous
PC_112	47.97617559	-82.95981652	B1, B2	Deciduous
PC_113	47.85178717	-83.77422262	A1, A2	Fen
PC_114	47.86072214	-83.81122848	A1, A2	Coniferous
PC_115	47.86356342	-83.82173878	A1, A2	Coniferous
PC_116	47.86620297	-83.83163892	A1, A2	Marsh
PC_117	47.86627702	-83.83393335	A1, A2	Swamp-Coniferous
PC_118	47.86639339	-83.83681913	A1, A2	Swamp-Coniferous
PC_119	48.35605198	-81.44944665	C2	Shrubland
PC_120	47.88319455	-83.9746741	A1, A2	Barren
PC_121	47.8837367	-83.97853443	A1, A2	Coniferous
PC_122	47.88313364	-83.98759029	A1, A2	Deciduous
PC_123	47.88356623	-83.99169233	A1, A2	Deciduous
PC_124	47.88427358	-83.99767425	A1, A2	Coniferous
PC_125	47.88485966	-84.00141106	A1, A2	Coniferous
PC_126	47.89026087	-84.02745697	A1, A2	Swamp-Deciduous
PC_127	47.8925871	-84.03553572	A1, A2	Coniferous
PC_128	47.89569737	-84.05611486	A1, A2	Coniferous
PC_129	47.89636075	-84.05955176	A1, A2	Coniferous
PC_130	47.91514134	-84.1645047	A1, A2	Swamp-Coniferous
PC_131	47.91562598	-84.168176	A1, A2	Coniferous
PC_132	47.9163589	-84.17300156	A1, A2	Coniferous
PC_133	47.91678935	-84.175883	A1, A2	Swamp-Coniferous
PC_134	47.91755716	-84.18093421	A1, A2	Coniferous
PC_135	48.1993382	-82.54172451	B1	Coniferous
PC_136	48.19824852	-82.54256462	B1	Coniferous

Field Survey and ARU Location Summary				
Name	Latitude	Longitude	Route List	Habitat
PC_137	48.19640207	-82.54349556	B1	Coniferous
PC_138	47.86531822	-83.83160941	A1, A2	Marsh
PC_139	48.35071156	-81.43651864	C2	Shrubland
PC_140	47.86604788	-83.83118531	A1, A2	Creek
PC_141	48.12227497	-82.35862679		Coniferous
PC_142	47.77802074	-83.25765305		Coniferous
PC_143	48.00465718	-82.86075444	B1, B2	Coniferous
PC_143	47.8615358	-83.81434692	A1, A2	Coniferous
PC_144	47.86243984	-83.81758086	A1, A2	Coniferous
PC_145	47.93335761	-84.48324809	A2	Deciduous
PC_146	47.9333165	-84.4794534	A2	Deciduous
PC_147	48.17631537	-82.259925	B2, B3	Deciduous
PC_148	48.11930625	-82.3561451		Deciduous
PC_149	48.12594603	-82.34821069		Deciduous
PC_150	48.12661649	-82.35147812		Coniferous
PC_151	48.17915393	-82.25576763	B2, B3	Deciduous
PC_152	48.12886391	-82.3473633		Coniferous
PC_153	48.12468405	-82.35087168		Coniferous
PC_154	48.19684933	-82.20834053	C1, C2	Coniferous
PC_155	48.20067814	-82.20271028	C1, C2	Coniferous
PC_156	48.21663021	-82.1266179	C1, C2	Coniferous
PC_157	48.1787232	-82.25221412	B2, B3	Deciduous
PC_158	48.14475829	-82.60106683	B1	Swamp - Coniferous
PC_159	48.14712789	-82.59880687	B1	Swamp - Coniferous
PC_160	48.14883681	-82.59652538	B1	Swamp -Coniferous
PC_161	48.35137575	-81.28450998	C2	Mixedwood
PC_162	48.34819315	-81.28549895	C2	Mixedwood
PC_163	48.34566462	-81.28620533	C2	Mixedwood

Breeding Bird 2025 Survey Field Observation Summary					
Common Name	Scientific Name	Observations	Common Name	Scientific Name	Observations
Alder Flycatcher	*Empidonax alnorum*	47	Herring Gull	*Larus argentatus*	1
American Bittern	*Botaurus lentiginosus*	5	Killdeer	*Charadrius vociferus*	1
American Crow	*Corvus brachyrhynchos*	39	Least Flycatcher	*Empidonax minimus*	27
American Goldfinch	*Spinus tristis*	1	Lincoln's Sparrow	*Melospiza lincolnii*	9
American Redstart	*Setophaga ruticilla*	39	Long-eared Owl	*Asio otus*	1
American Robin	*Turdus migratorius*	80	Magnolia Warbler	*Setophaga magnolia*	119
American Woodcock	*Scolopax minor*	3	Merlin	*Falco columbarius*	1
Bald Eagle	*Haliaeetus leucocephalus*	1	Mourning Warbler	*Geothlypis philadelphia*	42
Bank Swallow	*Riparia riparia*	1	Nashville Warbler	*Leiothlypis ruficapilla*	215
Barred Owl	*Strix varia*	2	Northern Flicker	*Colaptes auratus*	28
Bay-breasted Warbler	*Setophaga castanea*	51	Northern Parula	*Setophaga americana*	69
Belted Kingfisher	*Megaceryle alcyon*	5	Northern Saw-whet Owl	*Aegolius acadicus*	2
Black-and-white Warbler	*Mniotilta varia*	46	Northern Waterthrush	*Parkesia noveboracensis*	6
Black-backed Woodpecker	*Picoides arcticus*	3	Olive-sided Flycatcher	*Contopus cooperi*	6
Black-billed Cuckoo	*Coccyzus erythropthalmus*	5	Osprey	*Pandion haliaetus*	1
Blackburnian Warbler	*Setophaga fusca*	48	Ovenbird	*Seiurus aurocapilla*	134
Black-capped Chickadee	*Poecile atricapillus*	23	Palm Warbler	*Setophaga palmarum*	1
Black-throated Blue Warbler	*Setophaga caerulescens*	25	Philadelphia Warbler	*Vireo philadelphicus*	4
Black-throated Green Warbler	*Setophaga virens*	12	Pileated Woodpecker	*Dryocopus pileatus*	20
Blue Jay	*Cyanocitta cristata*	29	Pine Siskin	*Spinus pinus*	28
Blue-headed Vireo	*Vireo solitarius*	14	Purple Finch	*Haemorhous purpureus*	21
Bonaparte's Gull	*Chroicocephalus philadelphia*	3	Red-breasted Nuthatch	*Sitta canadensis*	33
Boreal Chickadee	*Poecile hudsonicus*	1	Red-eyed Vireo	*Vireo olivaceus*	203
Boreal Owl	*Aegolius funereus*	1	Red-winged Blackbird	*Agelaius phoeniceus*	9
Broad-winged Hawk	*Buteo platypterus*	7	Red tailed Hawk	*Buteo jamaicensis*	1
Brown Creeper	*Certhia americana*	8	Ring-necked Duck	*Aythya collaris*	3
Canada Goose	*Branta canadensis*	53	Rose-breasted Grosbeak	*Pheucticus ludovicianus*	4
Canada Jay	*Perisoreus canadensis*	3	Ruby-crowned Kinglet	*Regulus calendula*	48
Canada Warbler	*Cardellina canadensis*	5	Ruby-throated Hummingbird	*Archilochus colubris*	1
Cape May Warbler	*Setophaga tigrina*	30	Ruffed Grouse	*Bonasa umbellus*	12

Breeding Bird 2025 Survey Field Observation Summary

Common Name	Scientific Name	Observations	Common Name	Scientific Name	Observations
Cedar Waxwing	*Bombycilla cedrorum*	62	Sandhill Crane	*Antigone canadensis*	13
Chestnut-sided Warbler	*Setophaga pensylvanica*	49	Savannah Sparrow	*Passerculus sandwichensis*	1
Chipping Sparrow	*Spizella passerina*	30	Scarlet Tanager	*Piranga olivacea*	1
Cliff Swallow	*Petrochelidon pyrrhonota*	6	Sharp-shinned Hawk	*Accipiter striatus*	1
Common Goldeneye	*Bucephala clangula*	6	Song Sparrow	*Melospiza melodia*	8
Common Grackle	*Quiscalus quiscula*	5	Sora	*Porzana carolina*	2
Common Loon	*Gavia immer*	26	Spruce Grouse	*Falcipennis canadensis*	1
Common Merganser	*Mergus merganser*	1	Swainson's Thrush	*Catharus ustulatus*	128
Common Nighthawk	*Chordeiles minor*	4	Swamp Sparrow	*Melospiza georgiana*	25
Common Raven	*Corvus corax*	28	Tennessee Warbler	*Leiothlypis peregrina*	85
Common Yellowthroat	*Geothlypis trichas*	43	Tree Swallow	*Tachycineta bicolor*	2
Dark-eyed Junco	*Junco hyemalis*	29	Turkey Vulture	*Cathartes aura*	3
Downy Woodpecker	*Dryobates pubescens*	21	Veery	*Catharus fuscescens*	47
Eastern Phoebe	*Sayornis phoebe*	1	Vesper Sparrow	*Pooecetes gramineus*	3
Eastern Whip-poor-will	*Antrostomus vociferus*	1	White-throated Sparrow	*Zonotrichia albicollis*	241
Eastern Wood-pewee	*Contopus virens*	1	White-winged Crossbill	*Loxia leucoptera*	16
Evening Grosbeak	*Coccothraustes vespertinus*	12	Wilson's Snipe	*Gallinago delicata*	4
Golden-crowned kinglet	*Regulus satrapa*	38	Winter Wren	*Troglodytes hiemalis*	36
Great Horned Owl	*Bubo virginianus*	3	Yellow-bellied Flycatcher	*Empidonax flaviventris*	42
Hairy Woodpecker	*Dryobates villosus*	3	Yellow-bellied Sapsucker	*Sphyrapicus varius*	38
Hermit Thrush	*Catharus guttatus*	79	Yellow-rumped Warbler	*Setophaga coronata*	70

Breeding Bird Densities by Habitat Type Based on 2025 Field Observations

Common Name	Scientific Name	Birds per Hectare									
		Coniferous	Deciduous	Coniferous Swamp	Deciduous Swamp	Fen	Marsh	Disturbed	Barren	Shrubland	Mixedwood
Alder Flycatcher	*Empidonax alnorum*	0.059	0.037	0.071	0.319	0.159	0.239	0.074			0.060
American Bittern	*Botaurus lentiginosus*	0.005	0.012				0.027				
American Crow	*Corvus brachyrhynchos*	0.032	0.018	0.071		0.068	0.133	0.221	0.159	0.128	0.100
American Goldfinch	*Spinus tristis*							0.025			
American Redstart	*Setophaga ruticilla*	0.046	0.116	0.018			0.080	0.098	0.159		0.020
American Robin	*Turdus migratorius*	0.123	0.116	0.089		0.114	0.080	0.172	0.319	0.128	0.199
American Woodcock	*Scolopax minor*	0.009						0.025			
Barred Owl	*Strix varia*		0.006				0.027				
Bay-breasted Warbler	*Setophaga castanea*	0.087	0.067	0.089	0.159	0.023	0.080	0.123		0.064	0.100
Belted Kingfisher	*Megaceryle alcyon*	0.009				0.023	0.053				
Black-and-white Warbler	*Mniotilta varia*	0.073	0.110	0.053		0.068	0.027	0.074		0.064	0.020
Black-backed Woodpecker	*Picoides arcticus*	0.005		0.035							
Black-billed Cuckoo	*Coccyzus erythropthalmus*	0.009	0.012			0.023					
Blackburnian Warbler	*Setophaga fusca*	0.068	0.129	0.035		0.023	0.080			0.064	0.100
Black-capped Chickadee	*Poecile atricapillus*	0.041	0.043				0.027	0.025	0.159	0.128	0.040
Black-throated Blue Warbler	*Setophaga caerulescens*	0.036	0.074				0.027	0.049		0.064	0.020
Black-throated Green Warbler	*Setophaga virens*	0.023	0.031	0.018							0.020
Blue Jay	*Cyanocitta cristata*	0.050	0.055	0.035		0.046	0.080	0.025			0.020
Blue-headed Vireo	*Vireo solitarius*	0.032	0.018	0.053		0.023					
Bonaparte's Gull	*Chroicocephalus philadelphia*					0.046	0.027				
Boreal Chickadee	*Poecile hudsonicus*	0.005									
Broad-winged Hawk	*Buteo platypterus*	0.009	0.006								0.020
Brown Creeper	*Certhia americana*	0.009					0.053	0.025			0.060
Canada Goose	*Branta canadensis*	0.123	0.147				0.027	0.025			
Canada Jay	*Perisoreus canadensis*	0.005	0.012								
Canada Warbler	*Cardellina canadensis*		0.018				0.053				
Cape May Warbler	*Setophaga tigrina*	0.050	0.055	0.035		0.068	0.027	0.025	0.159		0.040

Breeding Bird Densities by Habitat Type Based on 2025 Field Observations

Common Name	Scientific Name	Birds per Hectare									
		Coniferous	Deciduous	Coniferous Swamp	Deciduous Swamp	Fen	Marsh	Disturbed	Barren	Shrubland	Mixedwood
Cedar Waxwing	*Bombycilla cedrorum*	0.137	0.116	0.106		0.046	0.027		0.159		0.060
Chestnut-sided Warbler	*Setophaga pensylvanica*	0.046	0.141	0.035	0.159	0.023	0.053	0.123	0.159	0.064	0.060
Chipping Sparrow	*Spizella passerina*	0.068	0.006	0.018		0.023	0.053	0.123		0.191	0.040
Common Goldeneye	*Bucephala clangula*					0.091	0.053				
Common Grackle	*Quiscalus quiscula*	0.009				0.068					
Common Loon	*Gavia immer*	0.023	0.037	0.053		0.023	0.186	0.074			0.020
Common Merganser	*Mergus merganser*							0.025			
Common Nighthawk	*Chordeiles minor*	0.014		0.018							
Common Raven	*Corvus corax*	0.055	0.037	0.035		0.046		0.098		0.064	0.020
Common Yellowthroat	*Geothlypis trichas*	0.032	0.018	0.071	0.478	0.182	0.239	0.098	0.319		0.060
Dark-eyed Junco	*Junco hyemalis*	0.064	0.006	0.106		0.091	0.027	0.025	0.159		0.020
Downy Woodpecker	*Dryobates pubescens*	0.023	0.049	0.035		0.000	0.053	0.074			0.020
Eastern Phoebe	*Sayornis phoebe*							0.025			
Eastern Whip-poor-will	*Antrostomus vociferus*	0.005									
Eastern Wood-pewee	*Contopus virens*		0.006								
Evening Grosbeak	*Coccothraustes vespertinus*	0.014	0.037	0.035				0.025			
Golden-crowned kinglet	*Regulus satrapa*	0.068	0.031	0.071	0.159	0.091	0.106	0.025		0.064	0.060
Great Horned Owl	*Bubo virginianus*	0.005	0.006				0.027				
Hairy Woodpecker	*Dryobates villosus*	0.005	0.006					0.025			
Hermit Thrush	*Catharus guttatus*	0.182	0.067	0.142		0.114	0.080	0.123	0.159	0.191	0.060
Herring Gull	*Larus argentatus*						0.027				
Killdeer	*Charadrius vociferus*							0.025			
Least Flycatcher	*Empidonax minimus*	0.023	0.104	0.018	0.159		0.053		0.159		
Lincoln's Sparrow	*Melospiza lincolnii*	0.014	0.006			0.023	0.027	0.025		0.064	0.020
Long-eared Owl	*Asio otus*						0.027				
Magnolia Warbler	*Setophaga magnolia*	0.164	0.196	0.195	0.478	0.091	0.292	0.270	0.159	0.128	0.159
Merlin	*Falco columbarius*			0.018							

Breeding Bird Densities by Habitat Type Based on 2025 Field Observations

Common Name	Scientific Name	Birds per Hectare									
		Coniferous	Deciduous	Coniferous Swamp	Deciduous Swamp	Fen	Marsh	Disturbed	Barren	Shrubland	Mixedwood
Mourning Warbler	*Geothlypis philadelphia*	0.059	0.110	0.018		0.046	0.027	0.025		0.128	0.080
Nashville Warbler	*Leiothlypis ruficapilla*	0.396	0.276	0.514	0.319	0.319	0.319	0.245	0.319	0.255	0.199
Northern Flicker	*Colaptes auratus*	0.027	0.031	0.071	0.319	0.046	0.027	0.049	0.159	0.064	0.080
Northern Parula	*Setophaga americana*	0.109	0.147	0.035		0.046	0.106	0.172	0.159	0.128	0.060
Northern Saw-whet Owl	*Aegolius acadicus*		0.006					0.025			
Northern Waterthrush	*Parkesia noveboracensis*	0.009		0.035			0.027				0.020
Olive-sided Flycatcher	*Contopus cooperi*	0.005		0.018			0.053	0.025		0.064	
Ovenbird	*Seiurus aurocapilla*	0.191	0.337	0.071	0.159	0.137	0.106	0.147	0.159	0.255	0.219
Palm Warbler	*Setophaga palmarum*					0.023					
Philadelphia Warbler	*Vireo philadelphicus*	0.005					0.027	0.025			0.020
Pileated Woodpecker	*Dryocopus pileatus*	0.036	0.025		0.159	0.023	0.080		0.159	0.128	
Pine Siskin	*Spinus pinus*	0.073	0.025	0.053	0.159		0.053	0.025		0.064	
Purple Finch	*Haemorhous purpureus*	0.036	0.037	0.035	0.159	0.023	0.027	0.025			0.020
Red-breasted Nuthatch	*Sitta canadensis*	0.059	0.049	0.071			0.133	0.049	0.159		
Red-eyed Vireo	*Vireo olivaceus*	0.296	0.405	0.195	0.319	0.182	0.213	0.343	0.478	0.255	0.438
Red-winged Blackbird	*Agelaius phoeniceus*					0.797	0.068	0.027			
Ring-necked Duck	*Aythya collaris*						0.053	0.025			
Rose-breasted Grosbeak	*Pheucticus ludovicianus*		0.012	0.018			0.027				
Ruby-crowned Kinglet	*Regulus calendula*	0.087	0.031	0.089	0.478	0.159	0.133	0.025			0.060
Ruby-throated Hummingbird	*Archilochus colubris*		0.006								
Ruffed Grouse	*Bonasa umbellus*	0.009	0.055					0.025			
Sandhill Crane	*Antigone canadensis*	0.009	0.018	0.053		0.046	0.027				
Savannah Sparrow	*Passerculus sandwichensis*								0.159		
Scarlet Tanager	*Piranga olivacea*		0.006								
Sharp-shinned Hawk	*Accipiter striatus*		0.006								
Song Sparrow	*Melospiza melodia*	0.009	0.012				0.027		0.478		
Sora	*Porzana carolina*					0.023	0.027				

Breeding Bird Densities by Habitat Type Based on 2025 Field Observations

Common Name	Scientific Name	Birds per Hectare									
		Coniferous	Deciduous	Coniferous Swamp	Deciduous Swamp	Fen	Marsh	Disturbed	Barren	Shrubland	Mixedwood
Spruce Grouse	*Falcipennis canadensis*	0.005									
Swainson's Thrush	*Catharus ustulatus*	0.205	0.166	0.213	0.478	0.205	0.186	0.294		0.255	0.179
Swamp Sparrow	*Melospiza georgiana*					0.250	0.292	0.049		0.064	
Tennessee Warbler	*Leiothlypis peregrina*	0.150	0.080	0.230	0.159	0.296	0.106	0.098			0.080
Tree Swallow	*Tachycineta bicolor*						0.027				
Turkey Vulture	*Cathartes aura*	0.005				0.046					
Veery	*Catharus fuscescens*	0.036	0.123	0.071		0.046	0.080	0.098		0.128	0.080
Vesper Sparrow	*Pooecetes gramineus*	0.009		0.018							
White-throated Sparrow	*Zonotrichia albicollis*	0.360	0.319	0.514	0.478	0.364	0.345	0.270	0.319	0.574	0.538
White-winged Crossbill	*Loxia leucoptera*	0.023	0.067								
Wilson's Snipe	*Gallinago delicata*	0.005	0.006				0.027	0.025			
Winter Wren	*Troglodytes hiemalis*	0.055	0.049	0.053		0.046	0.080	0.074	0.159	0.064	0.060
Yellow-bellied Flycatcher	*Empidonax flaviventris*	0.096	0.037	0.106		0.068	0.053				0.080
Yellow-bellied Sapsucker	*Sphyrapicus varius*	0.036	0.074	0.018		0.068	0.080	0.025		0.064	0.179
Yellow-rumped Warbler	*Setophaga coronata*	0.155	0.092	0.089	0.159	0.068	0.133	0.074	0.159	0.064	0.040
Total Hectares Surveyed		**219.565**	**163.156**	**56.46**	**6.273**	**43.913**	**37.64**	**4.776**	**6.273**	**15.683**	**5.186**

APPENDIX G: MARSH BIRD SURVEY SUMMARY

Marsh Bird Survey Summary

Survey Location	Latitude	Longitude	Route(s)	Species Observed			
				Target	Other Wetland	Aerial Insectivore	SAR
2025_MB01	47.87110526	-83.89578036	A1, A2		Common Yellowthroat		
2025_MB02	47.79236583	-83.1591197	A1, A2	Sora	Common Goldeneye, Common Loon, Common Yellowthroat, Red-winged Blackbird		
2025_MB03	48.16302767	-82.26342852					Evening Grosbeak
2025_MB04	47.79236583	-83.1591197			American Bittern, Common Yellowthroat		
2025_MB05	47.97782219	-82.95670738	B1, B2		NIL		
2025_MB06	48.10101751	-82.65173242	B1		Belted Kingfisher, Bonapartes Gull, Ring-necked Duck		
2025_MB07	48.20543515	-82.28069172	B1		Common Grackle, Common Yellowthroat, Red-winged Blackbird, Sandhill Crane		
2025_MB08	48.1184885	-82.35305202			Common Yellowthroat		
2025_MB98	48.21963209	-82.12964254	C1, C2		Common Goldeneye, Common Grackle, Red-winged Blackbird		
2025_MB99	47.86626392	-83.83166014	A1, A2		Common yellowthroat		Olive-sided Flycatcher
ARU_02	47.94736499	-83.034746			NIL		
ARU_06	47.778775	-83.261047			Belted Kingfisher, Red-winged Blackbird	Tree swallow	
ARU_14	47.872899	-83.916173	A1, A2		Belted Kingfisher, Common Yellowthroat, Common Loon		
ARU_15	47.80857903	-83.281613			Common Loon, Red-winged Blackbird, Sandhill Crane		Canada Warbler
BAT_04	47.99447799	-82.90415897			Common Yellowthroat		
BAT_06	48.38182601	-81.57087117	C1, C2		NIL		
BAT_07	48.21853497	-82.12934313	C1, C2	Sora	Common Yellowthroat		
BAT_08	47.91127	-83.15042297			Common Loon, Canada Goose, Common Yellowthroat		
BAT_09	47.94626	-82.82113496	B3		NIL		
BAT_12	47.77484497	-83.33794098			Common Loon, Wilson's Snipe		

APPENDIX H: OWL SURVEY SUMMARY

Nocturnal Owl Survey Field Observations

Name	Lat	Long	Route(s)	Owl	Other Species	Survey Type
OWL-11	47.778	-83.377		Boreal Owl	American Woodcock	Roadside
OWL-12	47.806	-83.389			American Woodcock	Roadside
OWL-13	47.826	-83.356		Great Horned Owl		Roadside
OWL-14	47.848	-83.333		nil		Roadside
OWL-15	47.863	-83.315		nil		Roadside
OWL-16	47.874	-83.289		Northern Saw-whet Owl		Roadside
OWL-17	47.925	-83.136		Barred Owl		Roadside
OWL-18	47.941	-83.069		Boreal Owl		Roadside
OWL-19	47.959	-83.021	B1, B2	nil		Roadside
OWL-20	47.975	-82.961	B1, B2	nil		Roadside
OWL-21	47.986	-82.934	B1, B2	nil		Roadside
OWL-22	47.995	-82.905		nil		Roadside
OWL-23	48.002	-82.866			Mallard	Roadside
OWL-24	48.014	-82.788	B1, B2		Wilson's Snipe	Roadside
OWL-26	48.23189	-82.01626	C1, C2	nil		Roadside
OWL-27	48.239	-81.941	C1, C2	nil		Roadside
OWL-28	48.313	-81.748	C1, C2	Barred Owl		Roadside
OWL-34	48.33916	-81.68375	C1, C2	nil		Roadside
OWL-29	48.329	-81.717	C1, C2	nil		Roadside
OWL-30	48.388	-81.557	C1, C2	nil		Roadside
OWL-31	48.405	-81.514	C1	nil		Roadside
OWL-32	48.431	-81.457	C1	nil		Roadside
OWL-33	48.464	-81.307		nil		Roadside
ARU_04	47.89318	-83.0251	B1, B2	Barred Owl		ARU (Incidental)
ARU_06	47.77878	-83.261		Long-eared Owl		ARU (Incidental)

Nocturnal Owl Survey Field Observations

Name	Lat	Long	Route(s)	Owl	Other Species	Survey Type
ARU_07	47.9254	-84.2477	A1, A2	Northern Saw-whet Owl, Great Horned Owl		ARU (Incidental)
ARU_11	47.93761	-84.532	A1		American Woodcock,	ARU
ARU_14	47.8729	-83.9162	A1, A2	Boreal Owl	Wilson's Snipe, Ring-necked Duck, Bald Eagle	ARU
BAT_01	47.94741	-83.0347		Great Horned Owl		ARU (Incidental)
BAT_03	47.90735	-84.1203	A1, A2	Great Horned Owl		ARU (Incidental)
BAT_08	47.91127	-83.1504		Barred Owl		ARU (Incidental)
OWL_01	47.94473	-84.5298	A1	nil		ARU
OWL_02	47.93952	-84.4888		nil		ARU
OWL_03	47.89783	-84.0548	A1, A2	nil		ARU
OWL_04	47.88542	-83.9969	A1, A2	Boreal Owl, Northern Saw-whet Owl		ARU
OWL_05	47.87598	-83.9579	A1, A2		American Robin	ARU
OWL_06	47.86354	-83.9061		nil		ARU
OWL_07	47.86592	-83.8415	A1, A2			ARU
OWL_08	47.84891	-83.7566	A1, A2		Wilson's Snipe, American Woodcock	ARU
OWL_09	47.82498	-83.629	A1, A2	nil		ARU
OWL_10	47.82043	-83.5843	A1, A2		American Woodcock	ARU
OWL_25	48.1942	-82.217	C1, C2	nil		ARU

APPENDIX I: NIGHTJAR SURVEY SUMMARY

Summary of Nightjar Observations

Name	Lat	Long	Route Alternatives	American Woodcock	Barred Owl	Black-billed Cuckoo	Eastern Whip-poor-Will	Great Horned Owl	Long-eared Owl	Northern Saw-whet Owl	Wilson's Snipe	Wolf
ARU_02	47.947365	-83.034746										
ARU_03	48.182254	-82.243696	B1, B2, B3, C1, C2									
ARU_04	47.893183	-83.025052	B1, B2		1	1						
ARU_06	47.778775	-83.261047							1			
ARU_07	47.925397	-84.247731	A1, A2					1		1		
ARU_08	48.456136	-81.390615		2								
ARU_10	47.799004	-83.150684										
ARU_11	47.93761	-84.53196	A1								1	
ARU_12	47.91054	-84.53912	A1, A2	1								1
ARU_14	47.872899	-83.916173	A1, A2									
ARU_16	47.794615	-83.307938										
ARU_17	47.914375	-83.007472	B1, B2			1						
BAT_01	47.947412	-83.034732						1				
BAT_02	47.950272	-84.430491	A1									
BAT_03	47.907347	-84.120341	A1, A2				1	1				
BAT_04	47.994478	-82.904159										
BAT_05	48.468599	-81.2734092	C1, C2									
BAT_06	48.381826	-81.5708712	C1, C2									
BAT_07	48.218535	-82.1293431	C1, C2									
BAT_08	47.91127	-83.150423			1							
BAT_09	47.94626	-82.821135	B3									
BAT_10	48.444554	-81.2927372	C1, C2								1	
BAT_11	47.786371	-83.322003										
BAT_12	47.774845	-83.337941									1	
OWL_01	47.944728	-84.529775	A1									
OWL_04	47.885423	-83.99687	A1, A2							1		

Summary of Nightjar Observations

Name	Lat	Long	Route Alternatives	American Woodcock	Barred Owl	Black-billed Cuckoo	Eastern Whip-poor-Will	Great Horned Owl	Long-eared Owl	Northern Saw-whet Owl	Wilson's Snipe	Wolf
OWL_05	47.875981	-83.957852	A1, A2									
OWL_07	47.865915	-83.841471	A1, A2									
OWL_08	47.848908	-83.756579	A1, A2									
OWL_09	47.824978	-83.62903	A1, A2									
OWL_10	47.820433	-83.584305	A1, A2									
OWL_25	48.1942	-82.216972	C1, C2									

APPENDIX J: INCIDENTAL OBSERVATIONS

WTPL Project 2025 Incidental Observations

Taxon	Common Name	Scientific Name	Count	Lat	Long	Date
Bird	American Bittern	*Botaurus lentiginosus*	1	47.922617	-83.008383	14-Aug
Bird	Bald Eagle	*Haliaeetus leucocephalus*	1	48.31765	-81.739031	23-Jun
Bird	Broad-winged Hawk	*Buteo platypterus*	1	48.840990	-86.674266	24-Jun
			1	48.806805	-86.505979	25-Jun
			1	47.922617	-83.008383	14-Aug
Bird	Cliff Swallow	*Petrochelidon pyrrhonota*	6	47.776400	-83.489250	12-Aug
Bird	Osprey	*Pandion haliaetus*	1	48.317283	-81.740200	13-Aug
Bird	Red-tailed Hawk	*Buteo jamaicensis*	1	48.843143	-86.496354	28-Jun
Bird	Sandhill Crane	*Antigone canadensis*	2	47.922617	-83.008383	14-Aug
Bird	Tree Swallow	*Tachycineta bicolor*	1	47.799	-83.150684	25-Jun
Amphibian	American Toad	*Anaxyrus americanus*	1	48.825129	-86.669663	24-Jun
Amphibian	Mink Frog	*Lithobates septentrionalis*	1	48.847917	-86.672411	24-Jun
			1	48.835512	-86.670500	24-Jun
			2	48.798172	-86.506990	25-Jun
			2	48.835589	-86.502113	28-Jun
Amphibian	Spring Peeper	*Pseudacris crucifer*	1	48.829838	-86.671545	24-Jun
			1	48.798172	-86.506990	25-Jun
			1	48.824235	-86.498946	28-Jun
			1	48.833785	-86.500752	28-Jun
			1	48.837738	-86.505269	28-Jun
Amphibian	Wood Frog	*Lithobates sylvaticus*	2	48.825628	-86.657907	24-Jun
Amphibian	Eastern Newt	*Notophthalmus viridescens*	1	47.780048	-83.354584	10-Jun
Amphibian	Eastern Red-backed Salamander	*Plethodon cinereus*	1	47.945816	-82.813127	20-Jul
Mammal	Great Grey Wolf	*Canis lupus*	1	48.811380	-86.506806	25-Jun
Mammal	Moose	*Alces alces*	1	48.815907	-86.561786	26-Jun
			1	48.816742	-86.563844	26-Jun
Mammal	Northern Flying Squirrel	*Glaucomys sabrinus*	1	47.860426	-83.435850	1-Oct
Mammal	Red Squirrel	*Sciurus vulgaris*	1	48.824551	-86.667840	24-Jun
			1	48.804224	-86.505280	25-Jun
			1	48.783665	-86.512680	25-Jun
			2	48.798251	-86.432053	25-Jun
			1	48.831821	-86.497966	28-Jun
			1	48.839070	-86.504748	28-Jun
			1	48.843143	-86.496354	28-Jun
Mammal	Snowshoe Hare	*Lepus americanus*	3	48.844363	-86.673646	23-Jun
Insect	Monarch Butterfly	*Danaus plexippus*	1	-82.65438	48.10124	23-Jun

APPENDIX K: WATERCROSSING DATA

Water Crossing Physical Characteristics

Names	Route(s)	Location		Physical Characteristics								
		Longitude	Latitude	Waterbody Name	Watercourse Type	Substrate Type	Associated Wetland	Existing Structure	Floodplain Width (m)	Section Length (m)	Right Bank	Left Bank
eDNA_01	C1, C2	48.317322	-81.740951	Unknown	Permanent	Silt/Clay/Mud	yes	no	267.9	393	stable	stable
eDNA_03		47.779528	-83.260860	Kilpatrick Creek	Permanent	Cobbles, Gravel, Sand	yes	yes	20	30	stable	stable
eDNA_05		48.371565	-81.437891	Grassy River	Permanent	Gravel, Sand	yes	yes	35	216	stable	stable
eDNA_06	B1	48.093896	-82.663719	Unknown	Intermittent	Silt/Clay/Mud	yes	no	70	N/A	unstable	unstable
eDNA_07	C1, C2	48.202868	-82.172404	Groundhog River	Permanent	Sand	no	yes	50	N/A	stable	stable
eDNA_08		47.797498	-83.151931	Kilpatrick Creek	Permanent	Sand, Cobbles, Gravel	yes	yes	N/A	N/A	stable	stable
eDNA_09	C1	48.427614	-81.369545	Mountjoy River	Permanent	Cobbles	no	yes	8	138	stable	stable
eDNA_10	B3	47.946609	-82.820944	Unknown	Permanent	Silt/Clay/Mud	yes	yes	100	N/A	stable	slightly unstable
eDNA_11		47.944702	-84.152991	Jackpine River	Permanent	Silt/Clay/Mud	yes	yes	20	N/A	stable	stable
eDNA_12	A1	47.944465	-84.526957	Michipocoten River	Permanent	Cobbles	yes	no	N/A	N/A	slightly unstable	slightly unstable
eDNA_13	C1, C2	48.218914	-82.129417	Unknown	Permanent	Silt/Clay/Mud	yes	yes	400	400	moderately unstable	moderately unstable
eDNA_14		47.911582	-83.150812	Westover Lake	Permanent	Silt/Clay/Mud	yes	yes	N/A	N/A	stable	stable
eDNA_16	C1, C2	48.190546	-82.219393	Unknown Pond	Permanent	Silt/Clay/Mud	yes	no	N/A	N/A	unstable	unstable
eDNA_17		48.162950	-82.263583	Palomar Lake	Permanent	Silt/Clay/Mud	yes	no	N/A	N/A	unstable	unstable
eDNA_19	B1, B2	47.977826	-82.956253	Tributary from Sandy Lake	Permanent	Silt/Clay/Mud	yes	no	200	20	unstable	unstable
eDNA_20		47.780258	-83.331700	Unknown	Permanent	Silt/Clay/Mud	yes	yes	1	10	stable	stable
eDNA_21	C1, C2	48.468903	-81.265982	Porcupine River	Permanent	Silt/Clay/Mud	yes	yes	N/A	N/A	stable	stable
eDNA_22	C1, C2	48.463812	-81.267109	Unknown	Permanent	Silt/Clay/Mud	yes	yes	1.2	15	stable	stable
eDNA_23		47.776327	-83.489907	Sideburned Lake	Permanent	Silt/Clay/Mud	no	yes	N/A	N/A	stable	stable
eDNA_24		48.243672	-82.362429	Moonshine Creek	Permanent	Silt/Clay/Mud	yes	no	10	30	unstable	unstable
eDNA_25	C1	48.435005	-81.312995	Skynner Lake	Permanent	Silt/Clay/Mud	yes	no	N/A	N/A	stable	stable
eDNA_26	A1, A2	47.834443	-83.709574	Tributary from Knife Lake	Permanent	Boulders	yes	yes	5	20	stable	stable

Water Crossing Physical Characteristics

Names	Route(s)	Location		Physical Characteristics								
		Longitude	Latitude	Waterbody Name	Watercourse Type	Substrate Type	Associated Wetland	Existing Structure	Floodplain Width (m)	Section Length (m)	Right Bank	Left Bank
eDNA_27	C1, C2	48.2231372	-82.05923	West Crawford River	Permanent	Sand	yes	yes	N/A	N/A	moderately unstable	moderately unstable
eDNA_28		48.0587385	-82.67546	Ivanhoe Lake	Permanent	Silt/Clay/Mud	yes	no	500	N/A	moderately unstable	moderately unstable
eDNA_29	B1, B2	48.0305561	-82.74009	Tributary from Birch Lake	Permanent	Gravel	yes	yes	10	N/A	slightly unstable	slightly unstable
eDNA_31	B1, B2	47.9846307	-82.93700	Unknown	Permanent	Silt/Clay/Mud	yes	no	60	N/A	unstable	unstable
eDNA_30	B1, B2	47.9225968	-83.00842	Unknown	Permanent	Boulders, Cobbles, Gravel, Sand	no	yes	1.1	30	stable	stable
WTX_01	B1, B2	48.015132	-82.81480	Jackpine Creek	Permanent	Silt/Clay/Mud	yes	no	100	200	unstable	unstable
WTX_02	A1, A2	47.819082	-83.56346	Wangoon Lake	Permanent	Sand	no	no	51.1	25.1	stable	stable
WTX_03		47.777103	-83.34414	Borden Lake	Permanent	Sand	no	no	92.3	1205	stable	stable
WTX_04	A1, A2	47.851603	-83.76880	Grazing River	Permanent	Silt/Clay/Mud	yes	yes	68.1	26.6	slightly unstable	slightly unstable
WTX_05		47.947017	-82.80688	Ivanhoe Lake	Permanent	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WTX_06	C1, C2	48.33692	-81.68377	Unknown	Permanent	Silt/Clay/Mud	yes	no	68.5	N/A	stable	stable
WTX_07	A1, A2	47.821964	-83.53176	Fife Lake	Permanent	Cobbles	no	no	N/A	121.3	stable	stable
WTX_08	C1, C2	48.298684	-81.79213	Boom Lake	Permanent	Silt/Clay/Mud	no	yes	200	220	stable	stable
WTX_09	C2	48.36094	-81.46117	Mattagami River	Permanent	Boulders, Silt/Clay/Mud	yes	no	47	695	stable	stable
WTX_10	C1	48.440581	-81.42878	Mattagami River	Permanent	Silt/Clay/Mud	no	no	64	822	slightly unstable	slightly unstable
WTX_11	B1, B2	47.994821	-82.90328	Shawmere River	Permanent	Cobbles, Gravel, Sand	yes	yes	10	30	stable	stable
WTX_12		47.797401	-83.15196	Kilpatrick Creek	Permanent	Gravel, sand	no	yes	25.5	10.4	slightly unstable	stable
WTX_13	A1, A2	47.911323	-84.14805	Jackpine River	Permanent	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WTX_14	A1, A2	47.855872	-83.79427	Grazing River	Permanent	Silt/Clay/Mud	No	yes	160.2	129.3	stable	stable
WTX_15	A1, A2	47.870813	-83.90326	Prairie Bee Lake	Permanent	Cobbles	yes	yes	N/A	N/A	stable	stable
WTX_16	A2	47.934744	-84.47771	Kinniwabi River	Permanent	Boulders, Silt/Clay/Mud	yes	no	23	50	stable	stable
WTX_17	A1, A2	47.947682	-84.38824	Kinniwabi River	Permanent	Silt/Clay/Mud	yes	no	50.3	50	stable	stable
WTX_18	B1	48.225137	-82.426196	Ivanhoe River	Permanent	Sand	no	no	20	50	unstable	unstable
WTX_19	B1	48.196989	-82.538673	Ivanhoe River	Permanent	Silt/Clay/Mud	yes	no	50	50	slightly unstable	slightly unstable

Water Crossing Physical Characteristics

Names	Route(s)	Location		Physical Characteristics								
		Longitude	Latitude	Waterbody Name	Watercourse Type	Substrate Type	Associated Wetland	Existing Structure	Floodplain Width (m)	Section Length (m)	Right Bank	Left Bank
WTX_20	A1, A2	47.865213	-83.831564	Little Wawa Creek	Permanent	Silt/Clay/Mud	yes	yes	50	20	moderately unstable	moderately unstable
WTX_21	C1	48.404679	-81.520888	Bristol Lake	Permanent	Sand	yes	yes	192.5	471	stable	stable
WTX_22		47.940515	-83.057337	Unnamed River	Permanent	Silt/Clay/Mud	yes	no	138	295	stable	stable
WTX_24		47.897542	-83.239296	Chapleau Lake	Permanent	Gravel	yes	no	294	280	stable	stable
WTX_26	A1, A2	47.824332	-83.512102	Chapleau River	Permanent	Gravel	no	yes	9.2	8.9	stable	stable
WTX_27	A1, A2	47.807730	-83.424082	Nebskwashi River	Permanent	Boulders	yes	no	25	140	stable	stable

Water Crossing Water Quality Summary

Names	Route(s)	Water Quality					Migratory Obstructions	Potential Critical Habitat
		Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	pH	Water Temperature	Colour		
eDNA_01	C1, C2	0.187	9.17	7.85	23.9	NTU:0	no	no
eDNA_03		0.155	5.41	7.34	19.2	NTU:0	yes	yes
eDNA_05		0.084	8.45	7.8	22.2	NTU: 0	no	no
eDNA_06	B1	0.11	7.44	9.32	17.85	Turbidity 0.6, marsh, muck,brown	no	no
eDNA_07	C1, C2	0.079	6.91	8.19	22.64	tea colour, turbidity 0.3	no	no
eDNA_08		0.177	8.79	8.16	21.1	Clear	no	yes
eDNA_09	C1	0.16	7.89	7.71	21.4	NTU: 1.87	no	no
eDNA_10	B3	0.07	5.41	7.48	21.07	Turbidity 2.9, brown, murky	no	no
eDNA_11		0.057	6.7	6.51	21.5	Tea colour/ reddish	no	no
eDNA_12	A1	0.084	7.96	7.34	17.7	Clear	no	no
eDNA_13	C1, C2	0.235	1.07	7.48	20.99	Turbidity 1.5, murky, muddy, lots of organic and stick debris, brown	yes	no
eDNA_14		0.209	8.6	8.47	21.3	NTU:0	no	no
eDNA_16	C1, C2	0.142	6.03	7.39	22.8	10.3 turbidity, muck, peat, organic	no	no
eDNA_17		0.078	3.81	7.46	21.42	0.6 turbidity, organic, brownish	yes	no
eDNA_19	B1, B2	0.024	6.97	7.69	22.05	Turb 4.4, mucky beaver dam, brown	yes	no
eDNA_20		0.123	4.33	6.91	19.8	NTU: 0	no	no
eDNA_21	C1, C2	0.377	1.75	7.13	18.6	NTU unrecorded.	no	no
eDNA_22	C1, C2	0.393	6.05	7.44	18.4	NTU 0.15, CLEAR STREAM	yes	no
eDNA_23		0.081	8.08	7.62	24	Clear	no	no
eDNA_24		0.11	5.9	7.5	18.8	Tea colour, 0 turbidity	no	no
eDNA_25	C1	0.163	8.17	7.79	23	NTU 0	no	no
eDNA_26	A1, A2	0.042	8.12	7.12	22	Clear	no	no
eDNA_27	C1, C2	0.305	6.13	8.64	16.78	Clear, turbidity 0	no	no
eDNA_28		0.119	7.83	8.4	22.4	Turb 0,clear	no	no
eDNA_29	B1, B2	0.137	7.52	7.58	20.7	Turb 0, clear	no	no
eDNA_31	B1, B2	0.138	9.75	7.17	18.91	Turb 0.6, tea colour	no	no
eDNA_30	B1, B2	0.076	7.88	7.62	14.1	NTU:0	no	no

Water Crossing Water Quality Summary

Names	Route(s)	Water Quality					Migratory Obstructions	Potential Critical Habitat
		Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	pH	Water Temperature	Colour		
WTX_01	B1, B2	0.269	8.42	7.83	23.73	Turbidity 4.1, muck, organic, brown	yes	no
WTX_02	A1, A2	0.064	12.73	8.49	17.72	Light brown to green mesotrophic	no	no
WTX_03		0.12	8.4	7.83	21.7	NTU:0	no	no
WTX_04	A1, A2	0.083	6.77	7.77	16.25	Light brown, mesotrophic.	no	no
WTX_05		N/A	N/A	N/A	N/A	N/A	N/A	N/A
WTX_06	C1, C2	0.427	1.5	6.76	21.1	NTU: 0	no	no
WTX_07	A1, A2	0.055	9.9	8.27	18.61	Brown, mesotrophic.	no	no
WTX_08	C1, C2	0.152	8.9	8.75	23.21	Clear	no	no
WTX_09	C2	0.07	8.3	7.56	22.9	NTU:0	no	no
WTX_10	C1	0.085	8.06	7.78	23.2	0.16 NTU	no	no
WTX_11	B1, B2	0.084	6.2	7.34	22.42	Turb 0, clear, slight tea colour	no	no
WTX_12		0.154	9.69	8.25	18.25	Oligotrophic, clear	no	no
WTX_13	A1, A2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WTX_14	A1, A2	0.143	8.32	7.96	16.73	Brown, mesotrophic.	no	no
WTX_15	A1, A2	0.057	8.4	7.23	22.4	Clear	no	yes
WTX_16	A2	0.047	7.93	6.84	19.4	Tea coloured	no	no
WTX_17	A1, A2	0.046	7.07	6.45	17.7	Dark, tea coloured	no	yes
WTX_18	B1	0.11	8.45	8.19	22.64	0.7 turbidity, clear	no	no
WTX_19	B1	0.168	8.37	8.33	23.56	Turbidity 1.5, muck, organic. Brown.	no	no
WTX_20	A1, A2	0.07	6.46	6.82	22.2	Clear	yes	no
WTX_21	C1	0.26	7.37	7.55	23.7	NTU: 2.3	no	no
WTX_22		0.155	6.69	7.7	20.8	NTU:0	no	no
WTX24		0.103	10.31	8.78	15.93	Clear		no
WTX26	A1, A2	0.086	14.55	Na	15.06	Clear	no	no
WTX_27	A1, A2	0.079	13.4	3.02	13.7	Clear	no	no

Water Crossing Details

Names	Route(s)	Migratory Obstructions	Potential Critical Habitat	Comment	eDNA taken
eDNA_01	C1, C2	no	no	eDNA site, survey taken to record water parameters.	yes
eDNA_03		yes	yes	Kilpatrick creek. Beaver dam & pond. Washout on road, unpassable. Rough & narrow road leading here. Hard to tell where the actual creek is with flooding associated with beaver dam.	yes
eDNA_05		no	no	eDNA site. Stream width: 20m, depth: >1m	yes
eDNA_06	B1	no	no	Marsh, flooded	yes
eDNA_07	C1, C2	no	no	Under bridge	yes
eDNA_08		no	yes	WTX_12 already complete. Additional water parameter data. Kilpatrick creek	yes
eDNA_09	C1	no	no	eDNA site, no WTX. Wetted width: 7m. >1m deep.	yes
eDNA_10	B3	no	no	Pond, marsh edge, minnow sp. , old drainage pipe under road	yes
eDNA_11		no	no	Boat launch, near bridge	yes
eDNA_12	A1	no	no		yes
eDNA_13	C1, C2	yes	no	Beaver dam, barrier to fish migration, elevated water level, cattail marsh, blocked culvert, access rd flooded	yes
eDNA_14		no	no	eDNA site. Westover Lake	yes
eDNA_16	C1, C2	no	no	Pond bordered by swamp	yes
eDNA_17		yes	no	Marsh bordering pond, Active rail nearby	yes
eDNA_19	B1, B2	yes	no	Beaver dam blocking river flow from lake, minnow sp., fen surrounding lake, sandy lake	yes
eDNA_20		no	no	eDNA site, small stream at culvert. Wetted width: 15cm. Depth: 15cm. Basically no flow.	yes
eDNA_21	C1, C2	no	no	In wetland, just eDNAsite	yes
eDNA_22	C1, C2	yes	no	Small stream near mucky road, semi permanent structure on road to cross stream. Impromptu WX assessment, not previously marked. Wetted depth 0.6m	yes
eDNA_23		no	no		yes
eDNA_24		no	no		yes
eDNA_25	C1	no	no	eDNA site, on Skynner Lk. Not WX	yes
eDNA_26	A1, A2	no	no	New edna site, width 1.5	yes

Water Crossing Details

Names	Route(s)	Migratory Obstructions	Potential Critical Habitat	Comment	eDNA taken
eDNA_27	C1, C2	no	no	New eDNA point, Crawford creek, connected to marsh	yes
eDNA_28		no	no	Lake Ivanhoe, new edna point, wetland edge	yes
eDNA_29	B1, B2	no	no	Birch creek, 2 culverts, cattail, cedar swamp upstream	yes
eDNA_31	B1, B2	no	no	Algae, floating and submerged veg, minnow sp, open water marsh, more flow downstream, new edna point	yes
eDNA_30	B1, B2	no	no	Additional WTX chosen by Bo. Small watercourse. Pool width @ eDNA site: 1.5m. Wetted width: 70cm. Avg depth: 0.2m.	yes
WTX_01	B1, B2	yes	no	Perched culvert downstream, open water marsh, water width 15m, banks flooded marsh, wetland	yes
WTX_02	A1, A2	no	no	eDNA_02 site	yes
WTX_03		no	no	Borden Lake, no stream. eDNA_04 site. >1m deep.	yes
WTX_04	A1, A2	no	no		yes
WTX_05		N/A	N/A	Inaccessible, drone photos only	no
WTX_06	C1, C2	no	no	Wetted width: 68.5m, ~1m deep. This is a wetland, no water course. eDNA_15 site	yes
WTX_07	A1, A2	no	no	Lake, no flow, no floodplain, ignore flow type.	yes
WTX_08	C1, C2	no	no	Boom lake, existing powerline over lake, 220m length, alder and black spruce	yes
WTX_09	C2	no	no	WTX already assessed, additional data w eDNA sample. Wetted width: 39m,	yes
WTX_10	C1	no	no	Mattagami river. Moved location slightly to avoid private property. LG WP0004. Stream width/wetted width: 60.4. Stream depth >1m.	yes
WTX_11	B1, B2	no	no	Depth 0.5m, minnow sp., leopard frog, channel width 7m, shawmere river, wetland upstream	yes
WTX_12		no	no	eDNA_08 site	yes
WTX_13	A1, A2	N/A	N/A	Not accessed. Drone photos only?	no
WTX_14	A1, A2	no	no		yes
WTX_15	A1, A2	no	yes	Lake. Already monitored, extra data	yes
WTX_16	A2	no	no	12.3 stream width, 1m deep	yes

Water Crossing Details

Names	Route(s)	Migratory Obstructions	Potential Critical Habitat	Comment	eDNA taken
WTX_17	A1, A2	no	yes	Stream width 49m, about the same as flood width, bank goes right to water, stream depth >1m, organic substrate on shore	yes
WTX_18	B1	no	no	Ivanhoe river, stream width 20m, sandy unstable banks, sign of erosion, bank swallow habitat, adjacent to clearcut with blueberry FN significant picking area	yes
WTX_19	B1	no	no	Stream width 30m, marsh and boulder banks, cedar	yes
WTX_20	A1, A2	yes	no	Flooded banks, marsh edges, cattail, stream 1m depth, 8m width	yes
WTX_21	C1	no	no	Bristol lake. >1m deep. Width: 172m.	yes
WTX_22		no	no	Wetted width:18.4m.	yes
WTX24			no	Ph meter seems incorrect after calibration	yes
WTX26	A1, A2	no	no	YSI not working properly	yes
WTX_27	A1, A2	no	no		yes

APPENDIX L: WATER CROSSING PHOTOS

Description	Photograph
WTX_01 August 15, 2025 Route: B1, B2 Latitude:-82.814796 Longitude: 48.015132 Photo of channel – Upstream, Jackpine Creek	
WTX_02 August 14, 2025 Route: A1, A2 Latitude:-83.563461 Longitude: 47.819082 Photo of Wangoon Lake crossing	

WTX_03

August 14, 2025

Route: N/A

Latitude:-83.344135

Longitude: 47.777103

Photo of Borden Lake crossing



WTX_04

August 14, 2025

Route: A1, A2

Latitude:-83.768798

Longitude: 47.851603

Photo of channel – Downstream, Grazing River, Highway 101



WTX_05

August 15, 2025

Route: N/A

Latitude:-82.806878

Longitude: 47.947017

Photo of Ivanhoe Lake crossing



WTX_06

August 14, 2025

Route: C1, C2

Latitude:-81.683772

Longitude: 48.33692

Photo of channel-Downstream



WTX_07

August 14, 2025

Route: A1, A2

Latitude:-83.531758

Longitude: 47.821964

Photo of Fife Lake crossing



WTX_08

August 13, 2025

Route: C1, C2

Latitude:-81.792129

Longitude: 48.298684

Photo of Boom Lake crossing



WTX_09

August 13, 2025

Route: C2

Latitude: -81.461165

Longitude: 48.36094

Photo of channel – Upstream, Mattagami River



WTX_10

August 13, 2025

Route: C1

Latitude:-81.428778

Longitude: 48.440581

Photo of channel – Upstream, Mattagami River



WTX_11

August 14, 2025

Route: B1, B2

Latitude:
-82.903284

Longitude:
47.994821

Photo of channel, Shawmere River, Highway 101



WTX_12

August 15, 2025

Route: N/A

Latitude:
-83.151955

Longitude:
47.797401

Photo of channel – Downstream, Kilpatrick Creek



WTX_13

August 15, 2025

Route: A1, A2

Latitude:
-84.148048

Longitude:
47.911323

Photo of Channel – Upstream, Jackpine River



WTX_14

August 15, 2025

Route: A1, A2

Latitude:
-83.794271

Longitude:
47.855872

Photo of channel – Grazing River, Highway 101



WTX_15

August 12, 2025

Route: A1, A2

Latitude:-83.903263

Longitude: 47.870813

Photo of Channel into Prairie Bee Lake



WTX_16

August 12, 2025

Route: A2

Latitude:-84.477712

Longitude: 47.934744

Photo of channel – Downstream, Kinniwabi River



WTX_17

August 12, 2025

Route: A1, A2

Latitude:-84.38824

Longitude: 47.947682

Photo of channel – Kinniwabi River



WTX_18

August 13, 2025

Route: B1

Latitude: -82.426196

Longitude: 48.225137

Photo of channel – Downstream, Ivanhoe River



WTX_19

August 13, 2025

Route: B1

Latitude:-82.538673

Longitude: 48.196989

Photo of channel – Upstream, Ivanhoe River



WTX_20

August 20, 2025

Route: A1, A2

Latitude:-83.8315639

Longitude: 47.86521278

Photo of channel – Upstream, Little Wawa Creek, Highway 101



WTX_21

August 13, 2025

Route: C1

Latitude: -81.5208876

Longitude: 48.40467945

Photo of Bristol Lake crossing



WTX_22

August 14, 2025

Route: N/A

Latitude:-83.0573369

Longitude: 47.94051475

Photo of channel – Upstream of tributary from Nemogosenda Lake



WTX_24

September 30, 2025

Route: N/A

Latitude: -83.239296

Longitude: 47.89754204

Photo of Chapleau Lake crossing



WTX_26

September 30, 2025

Route: A1, A2

Latitude:-83.5121018

Longitude: 47.82433236

Photo of channel – Upstream, Chapleau River



WTX_27

October 1, 2025

Route: A1, A2

Latitude:-83.4240822

Longitude: 47.80773028

Photo of channel – Nebskwashi River



APPENDIX M: SUMMARY OF SPECIES AT RISK FIELD OBSERVATIONS

Summary of Species at Risk Observed in WTPL Study Area

Species	Route(s)	Survey	Lat	Long	Federal ranking	Provincial Ranking
Bank Swallow	C2	SWH - Drone	48.35087	-81.4266	Threatened	Threatened
Canada Warbler	A2	2025_PC146	47.93314	-84.4795	Threatened	Special Concern
Canada Warbler		ARU_15	47.80858	-83.2816	Threatened	Special Concern
Canada Warbler	A1, A2	ARU_07	47.9254	-84.2477	Threatened	Special Concern
Common Nighthawk		2025_PC003	47.77762	-83.2612	Special Concern	Special Concern
Common Nighthawk	A1, A2	2025_PC133	47.91686	-84.1759	Special Concern	Special Concern
Common Nighthawk	A1, A2	2025_PC134	47.91743	-84.1812	Special Concern	Special Concern
Eastern Red Bat		BAT_08	47.91127	-83.1504	Not ranked	Endangered
Eastern Whip-poor-will	A1, A2	BAT_03	47.90735	-84.1203	Threatened	Special Concern
Eastern Wood Pewee	B1	2025_PC100	48.21018	-82.4872	Special Concern	Special Concern
Evening Grosbeak		2025_MB_02	47.79237	-83.1591	Special Concern	Special Concern
Evening Grosbeak		2025_PC067	48.1209	-82.3632	Special Concern	Special Concern
Evening Grosbeak	A1, A2	2025_PC078	47.81903	-83.5962	Special Concern	Special Concern
Evening Grosbeak	A1, A2	2025_PC107	47.84274	-83.7173	Special Concern	Special Concern
Evening Grosbeak	A1, A2	2025_PC109	47.84967	-83.7481	Special Concern	Special Concern
Evening Grosbeak	A1, A2	2025_PC111	47.85119	-83.7637	Special Concern	Special Concern
Evening Grosbeak	A1, A2	2025_PC123	47.88368	-83.9917	Special Concern	Special Concern
Evening Grosbeak		2025_PC149	48.12579	-82.3481	Special Concern	Special Concern
Evening Grosbeak	A1, A2	OWL_07	47.86592	-83.8415	Special Concern	Special Concern
Hoary Bat		BAT_01	47.94741	-83.0347	Not ranked	Endangered
Hoary Bat	A1	BAT_02	47.95027	-84.4305	Not ranked	Endangered
Hoary Bat	A1, A2	BAT_03	47.90735	-84.1203	Not ranked	Endangered
Hoary Bat		BAT_04	47.99448	-82.9042	Not ranked	Endangered
Hoary Bat	C1, C2	BAT_05	48.4686	-81.2734	Not ranked	Endangered
Hoary Bat	C1, C2	BAT_06	48.38183	-81.5709	Not ranked	Endangered
Hoary Bat	C1, C2	BAT_07	48.21853	-82.1293	Not ranked	Endangered
Hoary Bat		BAT_08	47.91127	-83.1504	Not ranked	Endangered
Hoary Bat	B3	BAT_09	47.94626	-82.8211	Not ranked	Endangered
Hoary Bat	C1, C2	BAT_10	48.44455	-81.2927	Not ranked	Endangered
Hoary Bat		BAT_11	47.78637	-83.322	Not ranked	Endangered
Hoary Bat		BAT_12	47.77484	-83.3379	Not ranked	Endangered
Little Brown Myotis		BAT_01	47.94741	-83.0347	Endangered	Endangered
Little Brown Myotis	C1, C2	BAT_07	48.21853	-82.1293	Endangered	Endangered
Little Brown Myotis		BAT_08	47.91127	-83.1504	Endangered	Endangered
Little Brown Myotis	B3	BAT_09	47.94626	-82.8211	Endangered	Endangered
Little Brown Myotis	C1, C2	BAT_10	48.44455	-81.2927	Endangered	Endangered
Little Brown Myotis		BAT_11	47.78637	-83.322	Endangered	Endangered
Monarch	B1	Incidental	48.10124	-82.6544	Endangered	Special Concern
Olive-sided Flycatcher	A1, A2	2025_MB99	47.86626	-83.8317	Special Concern	Special Concern
Olive-sided Flycatcher	C2	2025_PC001	48.33606	-81.3334	Special Concern	Special Concern

Summary of Species at Risk Observed in WTPL Study Area

Species	Route(s)	Survey	Lat	Long	Federal ranking	Provincial Ranking
Olive-sided Flycatcher	B1	2025_PC064	48.20996	-82.2976	Special Concern	Special Concern
Olive-sided Flycatcher	A1, A2	2025_PC116	47.86626	-83.8317	Special Concern	Special Concern
Olive-sided Flycatcher	A1, A2	2025_PC143	47.8617	-83.8144	Special Concern	Special Concern
Olive-sided Flycatcher	A1, A2	OWL_07	47.86592	-83.8415	Special Concern	Special Concern
Silver-haired Bat		BAT_01	47.94741	-83.0347	Not ranked	Endangered
Silver-haired Bat	A1, A2	BAT_03	47.90735	-84.1203	Not ranked	Endangered
Silver-haired Bat		BAT_04	47.99448	-82.9042	Not ranked	Endangered
Silver-haired Bat	C1, C2	BAT_05	48.4686	-81.2734	Not ranked	Endangered
Silver-haired Bat	C1, C2	BAT_06	48.38183	-81.5709	Not ranked	Endangered
Silver-haired Bat	C1, C2	BAT_07	48.21853	-82.1293	Not ranked	Endangered
Silver-haired Bat		BAT_08	47.91127	-83.1504	Not ranked	Endangered
Silver-haired Bat	B3	BAT_09	47.94626	-82.8211	Not ranked	Endangered
Silver-haired Bat	C1, C2	BAT_10	48.44455	-81.2927	Not ranked	Endangered
Silver-haired Bat		BAT_11	47.78637	-83.322	Not ranked	Endangered
Silver-haired Bat		BAT_12	47.77484	-83.3379	Not ranked	Endangered
Tri-colored Bat		BAT_11	47.78637	-83.322	Endangered	Endangered

APPENDIX N: SPECIES AT RISK DETAILED DESCRIPTIONS

Taxon	Species	Seasonal Movements	Movement Corridors	Residences	Habitat Requirements	Life History	Suitable Habitat Present in LSA	Habitat Mapping
Please note: All information in this table was derived from publicly available COSEWIC and COSSARO reports								
Bird	American White Pelican *Pelecanus erythrorhynchus*	Seasonal migration	N/A	Nesting colonies on isolated islands, away from disturbance and near an abundant food source. Eggs are deposited in a shallow depression on the ground	Marine or freshwater environments (e.g., rivers, lakes, marshes and estuaries) with suitable breeding habitat and abundant prey	Breeding birds begin returning to Ontario in April. Age of maturity is believed to be 3 years. Site fidelity towards breeding colonies remains unclear. Females lay a clutch of two eggs in May. Eggs are incubated for 31-32 days. Typically only one chick fledges, with survival rates of the younger chick resting around 15%, compared to the older chick at 88%. Young feed primarily on minnows and suckers provided by adults. Young begin to leave the nest at 17 days, and have completely left by day 25. Young gather in large crèches by day 35 as a substitute to parental care. Young fledge by 9-10 weeks and remain near the colony until late August/early September. Foraging sometimes occurs onwards of well over 100 km from colonies. Pelicans do not overwinter in Ontario. Instead they migrate south, occasionally as far as southern Mexico, and overwinter on the Pacific or Atlantic coasts.	No	Sizable waterbody that may contain suitable nesting and foraging habitat
Bird	Bank Swallow *Riparia riparia*	Seasonal migration	N/A	Nest in burrows excavated in eroding vertical bank faces, often in colonies	Natural and artificial sites with vertical banks and sand-silt substrates (e.g., riverbanks, lake and ocean bluffs and aggregate pits) are necessary for nesting burrows. Breeding sites are situated near open terrestrial foraging habitat (e.g., grasslands, meadows, pastures and croplands). Large wetlands are used as communal nocturnal roosts post-breeding and migration periods	Bank swallows generally arrive in Ontario April-May. They are colonial nesters, with colony sizes sometimes numbering in several thousand nests. Males mostly excavate the nest burrow and nest chamber, while females build most of the nest cup inside using grasses, plant stems, fibers, and feathers. Breeding pairs are socially monogamous, with breeding occurring May-August. Birds can breed in their first year, with maturity occurring at 10-11 months. There is typically only a single brood in Ontario Bank Swallow populations, with clutches averaging around 5 eggs (2-7 range). Incubation takes 14 days. Nestlings fledging at 18-22 days of age, but will continue to roost in the burrow for several weeks after fledging. They are aerial-foraging insectivorous birds characterized by their habit of feeding on insects while in flight. Migration of Ontario populations is poorly understood, but banded individuals have been recovered as far south as Peru. Southward migration occurs late July-August.	Yes	Vertical bank surfaces with sand-silt substrates. Possible ecosites: B001-004

Taxon	Species	Seasonal Movements	Movement Corridors	Residences	Habitat Requirements	Life History	Suitable Habitat Present in LSA	Habitat Mapping
Please note: All information in this table was derived from publicly available COSEWIC and COSSARO reports								
Bird	Barn Swallow *Hirundo rustica*	Seasonal migration	N/A	Build mud nests on or under artificial structures (e.g., barns, outbuildings, houses, garages, bridges and road culverts), often in colonies	Barn Swallows require areas with artificial structures to nest, adjacent to open foraging habitat (e.g., grasslands, meadows, pastures/cropland, lake and river shorelines, road right-of-ways and wetlands)	Barn Swallows are socially monogamous colonial nesters (up to ~60 nests in Ontario). Their nests are made with mud pellets and lined with vegetation and feathers, and may take 6-15 days to build. Females mature at roughly 1 year. Egg-laying occurs from May-August in Ontario, with clutch sizes averaging at 4-5 eggs. Incubation takes 13-14 days. Young fledge at 19-24 days old. Second broods are common in Ontario. Outside of the breeding season, Barn Swallows will use communal roosts, often roosting with other swallow species. They are aerial-foraging insectivorous birds characterized by their habit of feeding on insects while in flight. Southern migration in Ontario occurs in September, with some individuals travelling onwards of 8,000 km to their wintering grounds.	Possible	Potential Habitat: human structures
Bird	Black Tern *Chlidonias niger*	Seasonal migration	N/A	Semi-colonial, nest just above the waterline on floating or emergent vegetation in marshes	Limestone-based, rich, freshwater marshes with abundant emergent vegetation, typically associated with wetlands >20 ha. Less abundant on the Canadian Shield (igneous rock base)	Black terns are semi-colonial marsh nesters, typically found in densities of <20 pairs in Ontario. Nests are opportunistically placed on a variety of structures. These include floating or anchored dead vegetation, floating boards or logs, cattail rootstalk, Muskrat (*Ondatra zibethicus*) lodges or feeding platforms, abandoned bird's nests, raised mud and broken down bulrushes. The nest itself is usually a shallow depression in the substrate but may be constructed by the pair on dead vegetation, and can be wet or dry. Adults return to Ontario in early-May, with breeding occurring later the same month. Clutch sizes average at 3 eggs (range of 1-6). Incubation lasts 19-24 days, with young fledging at 20-24 days old. Black Tern diet consists of aquatic invertebrates and fish. Terns will gather in large numbers in July and August to prepare for winter migration. Southern migration in Ontario occurs in September.	Yes	Potential habitat: contiguous marsh habitat >20ha. Potential ecosites: B142-B152
Bird	Bobolink *Dolichonyx oryzivorus*	Seasonal migration	N/A	Ground nests built, often established under tall forbs, in natural grasslands, pastures and hayfields	Grasslands and tall-grass prairies, croplands (hayfields, pasture, no-till and small-grain fields), wet prairies, graminoid peatlands; generally not abundant in short-grass prairies or row crop monocultures (e.g., corn, soybean and wheat)	Bobolinks arrive in early-May with breeding in Ontario occurring later the same month, typically within 10 days after pair formation. Clutch sizes average around 5 eggs. Incubation lasts ~12 days, with young fledging by late-June. Adults and immatures form flocks for their southward migration, and will travel onwards of 10,000 to their wintering grounds. Fall migration in Ontario takes place August-September.	No	Potential ecosites: B008, B020, B029, B030, B044, B045, B060, B061, B077, B078, B093, B094, B109, B110, grasslands/ agriculture

Taxon	Species	Seasonal Movements	Movement Corridors	Residences	Habitat Requirements	Life History	Suitable Habitat Present in LSA	Habitat Mapping
Please note: All information in this table was derived from publicly available COSEWIC and COSSARO reports								
Bird	Canada Warbler *Cardellina canadensis*	Seasonal migration	N/A	Nest in wet forested areas, often in dense ferns or fallen logs	Deciduous, coniferous or mixedwood forests with well-developed shrub layers and a structurally complex forest floor. They are most abundant in moist, mixed forests	The Canada Warbler is typically monogamous, arriving at breeding ground in Mau-June. Clutch sizes average at four to five eggs. Incubation usually lasts about 12 days. The chicks remain in the nest for 10 days, and are dependent on parents for two to three weeks after they leave the nest. Canada Warbler feeds primarily on flying insects and spiders in the shrub layer. Fall migration may begin as early as July and extends through September.	Yes	Potential ecosites: all forested ecosites, included treed wetlands
Bird	Chimney Swift *Chaetura pelagica*	Seasonal migration	Mississippi Valley used for seasonal migration	Nests (half-saucer twig nest) and roosts in hollow structures, like hollow trees and chimneys	Generally associated with human development. Found in urban and rural areas where chimneys (or similar structures) are available for nesting and roosting. Often concentrated near water where prey are abundant	Chimney Swifts are monogamous and first breed at about 2 years. Pairs remain together and will return to the same nesting sites every year. Swifts arrive in Ontario in April-May, Mean clutch size is 4 eggs (range 2-6), with incubation taking 19-21 days. Fledging success varies between 70-86% with a mean of 3 young fledged per nest.	Possible	Potential Habitat: human structures
Bird	Common Nighthawk *Chordeiles minor*	Seasonal migration	N/A	Ground nests established in natural or artificial open habitat	Open habitat (e.g., sand dunes, beaches, logged and burned areas, forest clearings, winter roads and seismic lines, rock barrens, rocky outcrops, prairies, peatbogs and pasture)	Nighthawks arrive in Canada May-June with breeding occurring May-August. Clutch sizes are generally only 2 eggs, with incubation taking 16-20 days. Nestlings remain in the nest until mid-June to August, and become fully developed at 45-52 days. Migration south occurs August-September. Fall migration often coincides with the emergence of flying ants.	Yes	Potential habitat: edge habitat between forest and open habitats
Bird	Eastern Meadowlark *Sturnella magna*	Seasonal migration	N/A	Nests are constructed on the ground, well-concealed in vegetation and consist of a grass cup covered by grass woven from the surrounding vegetation.	Eastern Meadowlarks prefer grassland habitats, including native prairies and savannahs, as well as non-native pastures, hayfields, weedy meadows, herbaceous fencerows and airfields.	Eastern Meadowlarks employ a mixed reproductive strategy that includes both monogamy and polygyny. In Canada, males arrive on breeding grounds in April, with females arriving 2-4 weeks later. Nest building begins about 1 week after pair bonds are established. Clutch size is usually 4-5 eggs. Up to two broods may be raised in a breeding season. Incubation lasts 13-15 days. Nestlings fledge 10-12 days after hatching, but are still dependant on their parents for a further 2 weeks. Age of reproduction is 1 year. Generation time is likely 2-3 years.	No	Potential ecosites: B008-009, B020-021, B029-031, B044-046, B060-062, B077-079, B093-095, B109-111, B136-141
Bird	Eastern Whip-poor-will *Caprimulgus vociferous*	Seasonal migration	N/A	Nest directly on leaf litter in semi-open, patchy or regenerating forests with little ground cover	Habitat requirements are based on forest structure rather than composition. Avoid wide-open areas and closed-canopy forests. Prefer semi-open or patchy forests with clearings (e.g., barrens or	Breeding occurs in May-July, with clutches of 2 eggs laid directly on leaf litter. Incubation takes 19-21 days, with young fledging 3-4 weeks after hatching. Timing of migratory events for the Ontario population is not available, but is expected to follow the same pattern as the other migratory bird SAR.	Yes	Potential habitat: edge habitat between forest and

Taxon	Species	Seasonal Movements	Movement Corridors	Residences	Habitat Requirements	Life History	Suitable Habitat Present in LSA	Habitat Mapping
Please note: All information in this table was derived from publicly available COSEWIC and COSSARO reports								
					regenerating areas) and little ground cover			open habitats
Bird	Eastern Wood-pewee *Contopus virens*	Seasonal migration	N/A	Nest on horizontal branches >2 m high in mature-intermediate deciduous and mixedwood forests with open understory, near forest clearings or edges	Generally associated with the mid-canopy layer of deciduous and mixed wood forest clearings and edge habitat. Most abundant in intermediate-to-mature forest stands with little understory vegetation	Adults arrive to breeding ground in May-June. Pair formation and nest building start soon after arrival. Clutch size averages 3 eggs. Incubation lasts about 12 to 13 days, and nestlings fledge after about 16 to 18 days. Up to two broods can be produced per year. Generation time is estimated to be 2-3 years. Fall migration occurs August-October.	Yes	Potential ecosites: B015-019, B023-028, B039-043, B054-059, B069-076, B087-092, B103-108, B118-125, B130-133
Bird	Evening Grossbeak *Coccothraustes vespertinus*	Seasonal migration	N/A	Nest is an open cup made of twigs or rootlets located in the canopy of trees, with conifers preferred over deciduous trees	Optimal breeding habitat generally includes open, mature mixedwood forests, where fir species and/or White Spruce are dominant, and Spruce Budworm is abundant. Outside the breeding season, the species seems to depend largely on seed crops from various trees such as firs and spruces in the boreal forest, but is also attracted to ornamental trees that produce seeds or fruit, and bird feeders stocked with sunflower seeds.	Evening Grosbeak is socially monogamous and is not territorial during the breeding period. Pairs typically arrive on their breeding grounds from mid- to late May, and the nesting season can extend until early September. The nest is an open cup made of twigs or rootlets located in the canopy of trees, with conifers preferred over deciduous trees. There is one clutch per year with an average size of 3 to 4 eggs; re-nesting may occur if the initial clutch fails. Incubation typically lasts 12 to 14 days, and fledglings leave the nest at 13 to 14 days old. The age at first breeding is one year. The timing of the onset of spring migration of Evening Grosbeak is variable and can be difficult to ascertain because of the mixing of local residents and winter visitors.	Yes	Potential ecosites: B015, B019, B027, B028, B039, B043, B054, B059, B069, B076, B087, B092, B103, B108, B118, B125

Taxon	Species	Seasonal Movements	Movement Corridors	Residences	Habitat Requirements	Life History	Suitable Habitat Present in LSA	Habitat Mapping
Please note: All information in this table was derived from publicly available COSEWIC and COSSARO reports								
Bird	Golden Eagle *Aquila chrysaetos*	Seasonal migration	Avoids crossing large waterbodies during migration	Typically nest on cliffs, but may also nest in large superstory trees or artificial structures	Use a wide variety of open and semi-open habitats, but most abundant in hilly or mountainous terrain along rivers and streams in areas with sufficient prey and suitable nesting sites	Golden Eagles reach maturity around five years of age and are believed to live approximately 20 to 30 years in the wild. They typically form monogamous pair bonds that can last several years. Non-migratory populations (residents) have been found to maintain pair bonds year-round; however, little information is known about year-round pair bonds in migrants. Migratory adults arrive February-May. Pairs lay eggs in April-May, with clutch averaging at 2 eggs (range 1-4). Incubation takes 41-45 days, with young fledging around 65-75 days. Young will remain in the area around the nest after fledging for approximately two weeks, eventually following their parents away from the nest site. Fall migration generally occurs in October-December.	No	Potential ecosites: B157-159
Bird	Golden-winged Warbler *Vermivora chrysoptera*	Seasonal migration	N/A	a highly concealed cup nest on the ground or low in a bush.	On the breeding grounds, Golden-winged Warblers are found in areas of early successional scrub surrounded by mature forests. They are found in dry uplands, swamp forests and marshes. Preferred habitat areas include hydro/utility ROW, field edges, recently logged areas, beaver marshes and areas that are burned or intermittently farmed. The average territory ranges in size from 1-2 hectares. Territories tend to contain patches of herbs and low shrubs (used for nests which are placed on the ground) and scattered trees plus a forested edge used for song posts and foraging. The Golden-winged Warbler is a habitat specialist given its reliance on areas of early successional scrub (10-30 years into succession); they will not persist in an area when the stage of succession has exceeded their requirements.	Spring migration in Ontario peaks around mid-May, with males typically arriving in southern Ontario in the first few days of May and females arriving one to two weeks later. Golden-winged Warblers aggressively defend all purpose territories from neighbouring conspecifics. Breeding pairs raise only one brood per year with an average clutch size of 4.75 (range 2 – 6) in Ontario. Birds often breed at one year of age and can continue to reproduce up to nine years of age. Average generation time for this species is two to three years. Pairs are socially monogamous but exhibit high rates of extra-pair paternity. Approximately 55% of nests fledge at least one young, while 45% of nests have	No	Potential ecosites: B009-010, B021-022, B031-032, B046-047, B062-063, B079-080, B095-096, B111-112

Taxon	Species	Seasonal Movements	Movement Corridors	Residences	Habitat Requirements	Life History	Suitable Habitat Present in LSA	Habitat Mapping
Please note: All information in this table was derived from publicly available COSEWIC and COSSARO reports								
Bird	Horned Grebe *Podiceps auritus*	Seasonal migration	N/A	Nests consist of a floating or emerging mass of plant material and are constructed within the fringes of emergent vegetation and in shallow water between 0 and 140 cm. The Horned Grebe's nest is composed of plant matter and is affixed to emergent vegetation. Occasionally, the Horned Grebe builds its nest in areas devoid of vegetation, establishing it on masses of floating algae, shallowly submerged logs, floating branches, or platforms of human origin.	Horned Grebes generally nests in freshwater and occasionally in brackish water on small ponds, marshes and shallow bays on lake borders. These ponds are found both in open and forested areas. It also uses reservoirs and artificial ponds created by river damming and excavation for road construction or for retaining rain or spring water. The Horned Grebe will use a broad range of pond sizes (0.24 to 18.2 ha) but generally prefers ponds ranging from 0.30 to 2 ha. Ponds must contain areas of open water (over 40%) and beds of emergent vegetation.	The Horned Grebe generally breeds in its first year. In some areas, 75% of the population arrives on the breeding grounds in pairs. Site and mate fidelity have also been observed in Horned Grebes. The Horned Grebe is usually a solitary nester, but several breeding pairs may occasionally nest on the same pond when it is sufficiently large and there are abundant food resources. These loose colonies have a maximum of 20 breeding pairs. The Horned Grebe is known to aggressively defend its territory against conspecifics and other species. The dates of nest-building and egg-laying initiation can vary considerably from year to year depending on weather conditions. High spring temperatures favour early egg laying. The species is an indeterminate layer and both adults share incubation. It can also rebuild its nest and can lay up to four replacement clutches if previous clutches are destroyed. Hatching is asynchronous and lasts for several days, with a hatching interval of one to two days. The chicks are dependent on the adults for food for 14 days after hatching, but are normally independent at around 19 to 21 days.	No	Potential Habitat: marsh wetlands <20 ha, or areas with open water and abundant emergent vegetation. Potential ecosites: B134-B152
Bird	Least Bittern *Ixobrychus exilis*	Seasonal migration	N/A	Nest on platforms constructed on stiff emergent vegetation, within 10 m of open water, sometimes in small, loose colonies	Marshes with abundant emergent vegetation, usually cattails (*Typha spp.*), with relatively stable water levels and interspersed areas of open water	Adults arrive at breeding sites in April, with calling and nesting beginning by mid-May. Clutch sizes average 5 eggs (2-7 range), with some pairs having 2 broods a season. Incubation takes 17-20 days. Fledging time is not available for Ontario populations. Fall migration takes place in August-September. Prior to this, juveniles disperse widely from their natal areas.	Yes	Potential ecosites: B134-B152

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Bird	Lesser Yellowlegs *Tringa flavipes*	Seasonal migration	N/A	Typically nests on dry upland sites within 30-200 m of extensive wetlands, but sometimes in forest openings farther away from wetlands	Peatlands, marshes, ponds, and other wetlands in the boreal forest and taiga. In winter and during migration, the species frequents coastal salt marshes, estuaries and ponds, as well as lakes, other freshwater wetlands, and anthropogenic wetlands such as flooded rice fields and sewage lagoons.	Lesser Yellowlegs can breed in its second calendar year of life. The species is monogamous, with pair formation taking place shortly after arrival on the breeding grounds, between late April and mid-May. It is generally single-brooded, with an average clutch size of four eggs. Incubation, shared by both parents, lasts 22-23 days. Young typically hatch between mid-June and early July and are precocial, leaving the nest soon after hatching. Lesser Yellowlegs is a long-distance migrant, travelling up to 15,000 km each way between subarctic forests and southern South America. In fall, most adult females leave the breeding grounds in early July, followed by adult males in mid-July. Failed breeders may depart as early as mid-June; juveniles set off from mid-July to late September.	Yes	Potential ecosites: B134-B152
Bird	Olive-sided Flycatcher *Contopus cooperi*	Seasonal migration	N/A	Build twig nests in coniferous trees (in Ontario) near forest openings or edges, typically associated with mature forests	Generally associated with open areas containing tall trees/snags, forest edges near natural or man-made openings, burned forests or semi-open mature coniferous or mixedwood forest stands. More likely to occur near wetlands	Adults typically arrive in breeding sites in May (range April-June). Pairs are generally monogamous. Females lay an average clutch of 3 eggs. Incubation takes 15-19 days, with young fledging at 17-23 days. Fall migration begins July-August, where individuals may travel onwards of 8,000 km to their wintering grounds.	Yes	Potential ecosites: B011-014, B023-026, B033-038, B048-053, B064-068, B081-086, B097-102, B113-117
Bird	Peregrine Falcon *Falco peregrinus anatum*	Seasonal migration	Follow clearly defines landforms (e.g., beaches, shorelines and islands) during their seasonal migrations	Nest on cliff ledges or crevices, occasionally on tall buildings or bridges	Occupy a wide range of habitats (e.g., arctic tundra, sea coasts, prairies and urban areas). Generally found nesting on cliff ledges or crevices, occasionally on tall buildings or bridges in areas with abundant prey	Peregrine Falcons form long-term monogamous pair bonds. In northern Ontario, adults return to breeding sites in late March and begin laying eggs in late April. Incubation lasts around 33 days, with young fledging at 35-42 days after hatching. Young become independent at the onset of migration. Fall migration information is not available for Ontario populations, but is expected to be similar to other raptor SAR.	No	Potential ecosite: B001-004, B157-159, tall buildings

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Bird	Red-headed Woodpecker *Melanerpes erythrocephalus*	Seasonal migration	N/A	Nests are usually excavated by males in large snags (>31 cm) or in dead branches of live trees at a height typically exceeding 7 m.	Red-headed Woodpeckers are found in a variety of habitats, including oak and beech forests, grasslands, forest edges, orchards, pastures, riparian forests, roadsides, urban parks, golf courses, cemeteries, beaver ponds and burns. This woodpecker regularly winters in the United States, moving to locations where it can find sufficient acorns and beechnuts to eat. A few of these birds will stay the winter in woodlands in southern Ontario if there are adequate supplies of nuts.	Red-headed Woodpeckers are monogamous. The age of sexual maturity is 1 year, with a generation time of 3-5 years. Maximum longevity of 9 years has been reported. Clutch size varies from 3-7 eggs, with an average of 4. Both sexes incubate the eggs, with incubation occurring between May-June and generally lasting 12-14 days. Young remain in the nest for 27-30 days, and they remain dependant on their parents for a further 25 days after fledging. This species is one of the most omnivorous woodpecker species in North America, feeding on insects in summer and on acorns and beechnuts in winter.	Yes	Potential ecosites: B016-018, B040-042, B055-058, B070-075, B088-091, B104-107, B119-124
Bird	Rusty Blackbird *Euphagus carolinus*	Seasonal migration	N/A	Build twig, grass and moss nests in thickets of small conifers or deciduous shrubs, or in dead trees, overhanging or near open water	Habitat characterized by forest wetlands (slow-moving streams, peatbogs, sedge meadows, marshes, swamps and beaver ponds). Breeding habitat closely corresponds to the boreal forest.	Information on spring migration is not available for the Ontario population. Clutches range from 3-6 eggs. Incubation lasts 14 days, with young fledging at 13 days. Rust Blackbirds begin to gather in late-July to begin their southward migration, and often join mixed flocks of other blackbird species.	Yes	Potential ecosites: B134-B152
Bird	Short-eared Owl *Asio flammeus*	Seasonal migration	N/A	Ground nests established in natural or artificial open habitat	Found in wide range of unforested habitats, including: arctic tundra, grasslands, sand-sage, fallow pastures, and occasionally fields planted with row-crops. However, the primary factor influencing habitat selection is prey abundance	Clutches of 4-7 eggs are initiated from April to June. A single brood is typically raised. Incubation takes approximately 27 days. Before they can fly, nestling owls typically disperse short distances from the nest site, hiding in nearby vegetation. The timing and extent of migration for this species is unclear, but populations in the Yukon exhibit peak migration activity in late April and August-October.	Yes	Potential ecosites: B008-009, B020-021, B029-031, B044-046, B060-062, B077-079, B093-095, B109-111, B136-141
Bird	Wood Thrush *Hylocichla mustelina*	Seasonal migration	N/A	Nests mainly in second-growth and mature deciduous or mixedwood forests with well-developed understories; Red-berried Elder (*Sambucus racemosa*)	Found mainly in second-growth and mature deciduous and mixed forests, with saplings and well-developed understory layers. This species prefers large forest mosaics, but may also nest in small forest fragments	Adults arrive in breeding ground in May. Age of first reproduction is 1 year. Clutches typically have 4 eggs, and it is fairly common for a female to have two broods. Incubation lasts 10-12 days, with young fledging at 12-15 days. Fledglings remain in their natal home range for 24-33 days before departing to their winter ranges in August-September.	Yes	Potential ecosites: B015-019, B023-028, B039-043, B054-059, B069-076, B087-092, B103-108,

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				is important nesting shrub in Ontario				B118-125, B130-133
Fish	Lake Sturgeon *Acipenser fulvescens*	Spawning migration	N/A	N/A	The lake sturgeon exists, for the most part, as a freshwater species, being found rarely in brackish water in larger rivers with access to the sea. Lake sturgeon are generally found in the shallow areas of lakes or larger rivers, moving into smaller rivers to spawn. They are a benthic (bottom dwelling) species that feeds over substrates of mud, sand or gravel. Lake sturgeon usually are found at depths of 5-10 m. Lake sturgeon are found in areas where water velocity does not exceed 70 cm/sec. Spawning sites usually are fast-flowing waters of 0.6-5 m in depth over hardpan clay, sand, gravel, rubble, cobble or boulders.	The lake sturgeon is a large, long-lived, late-maturing species. Females generally are larger than males; however, there is a downward trend in size and age of both sexes wherever lake sturgeon are harvested. Age at sexual maturity varies, but generally ranges from 18-20 years for males and 20-28 years for females. On average, males spawn every second year, and females every fourth to sixth year, in the spring when water temperatures reach 10-18˚C. Fecundity depends on size of the female; the number of eggs laid ranging from 50,000 to in excess of 1,000,000. The eggs hatch in 7-10 days and the larvae are negatively buoyant until formation of the swim bladder, about 60 days post-hatch. Larval drift occurs at night and begins about 2 weeks after the first spawning activities	No	Potential habitat: large lakes and rivers

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Insect	Gypsy Cuckoo Bumblebee *Bombus bohemicus*	N/A	N/A	Host nests occur in abandoned underground rodent burrows and rotten logs	The Gypsy Cuckoo Bumble Bee has one of the largest ranges of all bumble bee species in Canada, and is a habitat generalist. It occurs in diverse habitats, including open meadows, mixed farmlands, urban areas, boreal forest and montane meadows. The species feeds on pollen and nectar from a variety of plant genera. The Gypsy Cuckoo Bumble Bee is a nest parasite of bumble bees of the subgenus Bombus in North America. Historically it occurred throughout most of Ontario in various habitat types. The species distribution is likely determined primarily by the distribution and abundance of its hosts. Host species are the Rusty-patched Bumble Bee (*B. affinis*) and the Yellow-banded Bumble Bee (*B. terricola*) in Ontario.	Gypsy Cuckoo Bumble Bee is an obligate social parasite of bumble bees of the subgenus Bombus in North America, including the Rusty-patched Bumble Bee (*B. affinis*), Yellow-banded Bumble Bee (*B. terricola*) and Western Bumble Bee (B. occidentalis). Gypsy Cuckoo Bumble Bee is a social parasite, and does not have the typical eusocial colony cycle of other bumble bees, and therefore does not produce workers. Mated females emerge in the spring and look for potential host nests. The female kills or subdues the host queen and lays eggs that the host colony workers tend. In the late summer and autumn, females and males emerge from the host nest and leave to mate with conspecifics. Mated females then select an overwintering site. Like other bumble bees, the males and the egg-laying female of that generation die at the onset of cold weather.	Possible	Gypsy Cuckoo Bumblebee habitat is based on the presence of suitable host species.

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Insect	Monarch Butterfly *Danaus plexippus*	Seasonal migration	Limited, dependant on the availability of suitable staging habitat	N/A	Monarchs require four distinct habitats for different parts of their life history, including overwintering, breeding, staging and nectar (feeding) habitats. Monarchs overwinter in Mexico. Breeding habitat is confined to where milkweed (Asclepias sp.) grows, since this serves as the sole food for their caterpillars. Breeding habitat overlaps with nectar habitat. Staging habitat is extremely limited, and provide roosting and feeding opportunities before mass migrations.	Like all butterflies, Monarchs have a life cycle composed of four stages: egg, larva (or caterpillar), pupa (or chrysalis), and imago (or adult butterfly). The first generation of the year that emerges as butterflies is immediately reproductively active and so are the following 2-3 generations of the season. Monarchs mate on their overwintering grounds (in Mexico) and the frequency of mating increases as spring arrives and temperatures increase. Mating continues until the start of migration in spring. Female Monarchs may mate up to 10 times, receiving a nuptial gift in the form of a spermatophore (sperm plus vital nutrients and salts). Female Monarchs lay up to 500 eggs on the undersides of milkweed leaves. Each egg is laid singly, and several eggs are often laid on different leaves of the same plant or on nearby plants, occasionally resulting in dense aggregations of caterpillars in stands of milkweed. The eggs hatch in 3 to 8 days and the larvae feed on the leaves for 9 to 14 days under normal summer temperatures. The caterpillar moults four times and grows to a total length of 5 cm. In preparation for the pupal stage, the caterpillar spins a pad of silk secreted from its spinnerets on a suitable substrate, backs onto the silk pad and attaches itself with its anal claspers. It hangs upside down in the "J' form for 16 – 23 hours (depending on temperature) as it transforms into a chrysalis and then undergoes metamorphosis and emerges later as a butterfly. Development from egg to adult butterfly can range from 20 to 45 days (average ~30 days) depending on factors such as temperature, day length, and availability of the foodplant. The Eastern population of the Monarch in Canada produces two to three generations each year between June and October. In the fall, the last generation that emerges is in reproductive diapause and migrates to the overwintering grounds.	Yes	Ecosites associated with Milkweed: B006, B008, B020-021, B029-030, B044-045, B126-156, B170-172, B222-224

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Insect	Nine-spotted Lady Beetle *Coccinella novemnotata*	N/A	N/A	N/A	Nine-spotted Lady Beetles are habitat generalists, known to consume a wide variety of prey across a wide range of habitats. They occur within agricultural areas, suburban gardens, parks, coniferous forests, deciduous forests, prairie grasslands, meadows, riparian areas and isolated natural areas. This broad habitat range reflects their ability to exploit seasonal changes in prey availability across different vegetation types.	Nine-spotted Lady Beetles can have two generations per year but the life history of lady beetles often depends on regional climatic conditions. Adult Nine-spotted Lady Beetles have life spans which shorten with increasing temperature. Adults of the spring generation can undergo aestivation to avoid high summer temperatures, and lay eggs in early autumn. Adults of the autumn generation congregated overwinter and undergo diapause, only becoming active and reproducing when temperatures rise in the early spring. The female pre-oviposition period for the Nine-spotted Lady Beetle female is approximately 5 days, followed by an oviposition period of approximately 31 days. During this period Nine-spotted Lady Beetles can lay upwards of 690 eggs. The eggs of Nine-spotted Lady Beetles are laid upright, in tightly packed clusters of approximately 18 eggs, on a range of plants that are likely to support subpopulations of aphids. Many females also lay unfertilized eggs, along with the fertile eggs, as another food source for young larvae.	Possible	Habitat generalist
Insect	Transverse Lady Beetle *Coccinella transversalis*	N/A	N/A	N/A	Transverse Lady Beetles are habitat generalists, primarily feeding on aphids and occurring across a wide range of habitats. This lady beetle inhabits agricultural areas, suburban gardens, parks, coniferous forests, deciduous forests, prairie grasslands, meadows, riparian areas and other natural areas. This broad habitat range reflects their ability to exploit seasonal changes in prey availability across different vegetation types.	The Transverse Lady Beetle can have two generations per year depending on regional climatic conditions. Adults of the spring generation can undergo aestivation, a type of dormancy, to avoid high summer temperatures, and lay eggs in early autumn. Adults of the autumn generation congregate overwinter and undergo another type of dormancy known as diapause, and only become active and reproduce when temperatures warm in the early spring. The eggs of lady beetles are typically tightly packed in an upright position in clusters of 20 to 30 eggs, on a range of plants that are likely to support subpopulations of aphids. Over 14 days female Transverse Lady Beetles can lay approximately 267 eggs. Many females also lay unfertilized eggs, along with the fertile eggs, as another food source for young larvae	Possible	Habitat generalist

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Insect	Yellow-banded Bumble Bee *Bombus terricola*	N/A	N/A	Usually nests underground in pre-existing cavities such as abandoned rodent burrows and rotten logs. Yellow-banded Bumble Bee queens overwinter underground and in decomposing organic material such as rotting logs.	Yellow-banded Bumble Bee occurs in a diverse range of habitats, including mixed woodlands, farmlands, urban areas, montane meadows, prairie grasslands and boreal habitats.	Yellow-banded Bumble Bee has an annual life cycle. Mating occurs in the fall, males die and only the queen overwinters. Mated queens emerge in April or May and begin to forage for pollen and nectar, and to search for suitable nest sites to begin their colonies. Once a site is chosen, the queen builds and defends this nest early on. A few weeks after the queen's initial egg laying, female workers emerge and begin foraging for the colony, tending the nest, protecting the colony and feeding the brood. The queen remains in the nest and continues to produce eggs. As summer progresses the colony reaches maximum worker production and begins producing males and potential queens. These reproductive individuals leave the nest and mate. After mating, young queens enter diapause and overwinter. The males, workers and the original queens decline as fall approaches, and ultimately die.	Possible	Habitat generalist

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Mammal	Boreal Caribou *Rangifer tarandus caribou*	Caribou may travel long distances to access predator-free areas and food. Spring and early winter season represent the periods where Caribou make these migrations. The annual movements of Caribou consist of small-scale shifts between seasonal ranges that are embedded in a larger annual home range. Home range size for female Caribou ranged from 3312-4790 km^2 in northern Ontario, although home range size varies greatly.	Caribou often use frozen waterbodies/watercourses as travel corridors during the winter. Seven migratory corridors have been described in the Newfoundland population, but similar information is sparse in Ontario	N/A	The Woodland Caribou Boreal Population habitat consists chiefly of mature or old forest (i.e., >80 years old) spruce (Picea spp.) and pine (Pinus spp.) stands intermixed with peatlands and muskegs, with abundant lichens and low predator densities. In Ontario and Québec, females used habitats which are composed primarily of mature or old coniferous forest. The Boreal Population Caribou generally do not use recent burns, perhaps due to low lichen availability. Wintering locations vary little from year to year, and typically consist of lichen-rich ranges characterized by shallow snow. Site fidelity decreased in areas disturbed by natural or anthropogenic events.	Caribou are polygynous; males gather females into harems, though not as pronounced as in other gregarious ungulates, and tend to guard several females at a time and prevent other males from approaching. The rutting period ranges from late-September to mid-October. Caribou populations are usually female-biased, with male numbers ranging from 32–76 individuals per 100 females. Females first produce young between 24-48 months, depending on quality of range. Male Caribou can be sexually active at 2 years, but usually > 4 years of age. Caribou give birth to a single offspring. Parturition is highly synchronized within a Caribou population but varies geographically. Gestation length for Caribou is 215-230 days. Females may conceive in alternate years when foraging conditions are poor, or a female's body fat and protein reserves are diminished from rearing previous offspring. Pregnancy and productivity rates are usually high (75 100%) within the Boreal Population. Maximum recorded longevity is 22 years in captivity and estimates of 19.5 and 17 years have been made for wild BP Caribou, but few males and females exceed 10 years and 15 years, respectively. Age structure within a Caribou population may change over time because survival and fertility rates within each age class change over time. Generation lengths for the Boreal Population are believed to be around 6 years.	No	All areas within a Caribou range are considered "habitat" of varying degrees of importance and sensitivity in Ontario. Habitat mapping can be provided by the Ontario Ministry of the Environment, Conservation and Parks (MECP). Habitat mapping combines dominant landcover and patterns of use/reuse over time.

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Mammal	Eastern Red Bat *Lasiurus borealis*	Seasonal migration	Riparian zones may be especially important as stopover habitat and migration corridors through otherwise inhospitable terrain	Maternal roosts - will roost in tree foliage or buildings	As habitat generalists, all three species occupy a wide diversity of habitats across their geographic range. Summer habitat for migratory bats is characterized as foraging, drinking, and roost sites, with roosts being particularly important. These bats use mostly treed habitats for roosting or foraging, with a particularly strong dependence on trees as roosting sites. Foraging habitats are less well known, but likely include the area above aquatic habitats, low-elevation meadows, grasslands, and fields, as well as open-canopied forest, the area above forest canopies, and forest edges. Drinking habitat is not well known and assumed to be the same as aquatic foraging habitats. Winter habitat requirements are not well known for any of these species.	Bats are promiscuous, with mating occurring during late summer/autumn migration and during winter. Females store sperm over the winter and ovulate in spring. Gestation lasts 80–90 days, with pups of all three species born in late June or early July. Litter size ranges from 1 to 4. Pups are weaned at approximately five to six weeks. Sexual maturity generally occurs in the first year and breeding likely occurs throughout life. Females remain solitary. Generation time is estimated at 5-6 years.	Yes	Potential ecosites: All Forested Ecosites.
Mammal	Eastern Wolf (Red Wolf) *Canis lupus lycaon*	May migrate up to 42 km annually between their non-winter territory boundary and Deer concentration areas in response to Deer leaving the area during winter	N/A	Sandy soils are often preferred for den sites, typically in conifer/hardwood-dominated landscapes near a permanent water source.	Eastern Wolf is not restricted to any particular forest type. The availability of prey and low human-related mortality stress appear to be important features influencing Eastern Wolf habitat use. Wolves are most abundant in areas with abundant prey, such as Deer, and low levels of human-related mortality	Early life stages are divided into: 1) denning (age < 6 weeks); 2) early rendezvous (age 6 – 12 weeks); 3) late rendezvous (age 12 - 17.9 weeks); and 4) rendezvous abandonment (age ≥18 weeks). Pups are born in late April to early May. At 6-8 weeks they are moved from the natal den to an initial rendezvous site. Throughout the summer, pups are moved to subsequent rendezvous sites that occur at increasing distance from the den (Mills et al. 2008) until the sites are abandoned in fall. Eastern Wolves hunt in packs but pups do not hunt until they are about 18 weeks old and when final rendezvous sites are abandoned. The average life span of wolves has been reported as 4 or 5 years with some animals reaching at least 15 years. Eastern Wolves typically have a single, unrelated breeding pair within each pack. Females do not typically breed before 2 years and therefore the generation time is likely to be approximately 3.5 years. Litters are produced annually and range between 2 - 7 pups, with an average of 4.9. Sex-ratio of 5.5 week old pups is 1:1 and mortality is not different between sexes.	Possible	Potential Habitat: based on the presence of abundant prey and low mortality stress

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Mammal	Gray Fox *Urocyon cinereoargenteus*	N/A	N/A	Gray Foxes den in many different kinds of substrates, usually located in dense brush close to a water source. Gray Foxes use dens primarily during parturition and pup rearing, although they may occasionally use dens at other times to avoid predators. Daytime resting sites are typically located in dense vegetation but they have also been observed resting in the shade of boulders.	Gray Foxes are considered habitat generalists, although their distribution is closely associated with deciduous forest cover. They use a greater proportion of wooded habitat than other North American fox species, and brush and tree cover are important habitat components. In eastern North America, Gray Foxes prefer a mix of fields and woods, rather than large tracts of homogenous forest. Old fields appear to be used for foraging, whereas woodlands, particularly dense or brushy stands, commonly are used for daytime cover. They are partially tolerant of human disturbances, although they are generally more secretive than Red Fox (Vulpes vulpes) and so are seen less often.	Gray Fox are the most omnivorous of the North American canids and will consume vegetable matter, such as fruit, year-round. Gray Foxes in Canada are thought to breed from mid-February to mid-March, as they do in the northeastern United States. Most female Gray Foxes breed in their first year and have one litter of 3 - 4 kits per year. Juveniles reach adult size and weight at approximately 210 days, and sexual maturity at 10 months. Gray Foxes are typically nocturnal or crepuscular. The basic social unit consists of an adult male and female and their offspring, and this group maintains a home range. The adult sex ratio is usually 1:1 and Gray Fox are generally assumed to be monogamous. Maximum longevity is unlikely to extend beyond 5 years.	Yes	"Potential habitat: deciduous forest stands with a mix of grasslands, shrublands and meadows. Potential ecosites: B008-010, B016-018, B020-022, B029-032, B040-042, B044-047, B055-058, B060-063, B070-075, B077-080, B088-091, B093-096, B104-107, B109-112, B119-124
Mammal	Hoary Bat *Lasiurus cinereus*	Seasonal migration	Long Point on Lake Erie is a known migratory stopover, riparian zones may be especially important as stopover habitat and migration corridors through otherwise inhospitable terrain	Maternal roosts - will roost in tree foliage or buildings	As habitat generalists, all three species occupy a wide diversity of habitats across their geographic range. Summer habitat for migratory bats is characterized as foraging, drinking, and roost sites, with roosts being particularly important. These bats use mostly treed habitats for roosting or foraging, with a particularly strong dependence on trees as roosting sites. Foraging habitats are less well known, but likely include the area above aquatic habitats, low-	Bats are promiscuous, with mating occurring during late summer/autumn migration and during winter. Females store sperm over the winter and ovulate in spring. Gestation lasts 80–90 days, with pups of all three species born in late June or early July. Litter size ranges from 1 to 2. Pups are weaned at approximately seven weeks. Sexual maturity generally occurs in the first year and breeding likely occurs throughout life. Females remain solitary. Generation time is estimated at 5-6 years.	Yes	Potential ecosites: All Forested Ecosites.

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Please note: All information in this table was derived from publicly available COSEWIC and COSSARO reports								
					elevation meadows, grasslands, and fields, as well as open-canopied forest, the area above forest canopies, and forest edges. Drinking habitat is not well known and assumed to be the same as aquatic foraging habitats. Winter habitat requirements are not well known for any of these species.			
Mammal	Little Brown Myotis *Myotis lucifugus*	Spring - migration from hibernacula to foraging habitat; Fall - return to hibernacula	N/A	Maternal roosts - cavities in large-diameter snags at a moderate state of decay, or buildings Hibernacula - caves and similar structures (e.g., abandoned mines) that expend below the frostline	Can be found in forested areas where hibernacula and roosting habitat is abundant. Hibernacula may be hundreds of kilometers away from their summer foraging areas. Foraging habitat includes waterways, forest edges, and in gaps in the forest. Large open fields or clearcuts generally are avoided.	Breeding is promiscuous. Females reach maturity at 1 year. Females store sperm and ovulate in spring with a single pup born after a 44-60 day gestation period, usually in late June or early July. Females form maternity colonies to birth and raise the pups. Pups are weaned at approximately 26 days. Generation time is estimated as 5-10 years. Maximum longevity may exceed 30 years.	Yes	Potential ecosites: B015-019, B023-028, B039-043, B054-059, B069-076, B087-092, B103-108, B118-125, B130-133
Mammal	Northern Myotis *Myotis septentrionalis*	Spring - migration from hibernacula to foraging habitat; Fall - return to hibernacula	N/A	Maternal roosts - cavities in large-diameter snags at a moderate state of decay, or buildings Hibernacula - caves and similar structures (e.g., abandoned mines) that expend below the frostline	Can be found in forested areas where hibernacula and roosting habitat is abundant. Hibernacula may be hundreds of kilometers away from their summer foraging areas. Foraging habitat includes waterways, forest edges, and in gaps in the forest. Large open fields or clearcuts generally are avoided.	Breeding is promiscuous. Females reach maturity at 1 year. Females store sperm and ovulate in spring with a single pup born after a 44-60 day gestation period, usually in late June or early July. Females form maternity colonies to birth and raise the pups. Pups are weaned at approximately 26 days. Generation time is estimated as 5-10 years.	Yes	Potential ecosites: B015-019, B023-028, B039-043, B054-059, B069-076, B087-092, B103-108, B118-125, B130-133

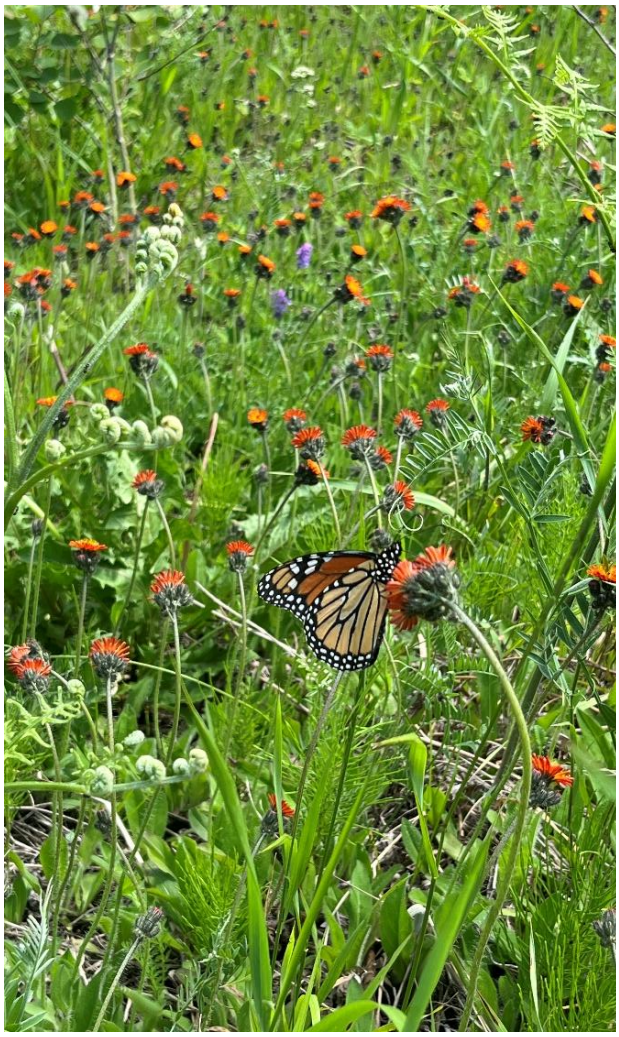
Taxon	Species	Seasonal Movements	Movement Corridors	Residences	Habitat Requirements	Life History	Suitable Habitat Present in LSA	Habitat Mapping
Please note: All information in this table was derived from publicly available COSEWIC and COSSARO reports								
Mammal	Silver-haired Bat *Lasionycteris noctivagans*	Seasonal migration	Long Point on Lake Erie and the north shore of Lake Ontario are known migratory stopovers. riparian zones may be especially important as stopover habitat and migration corridors through otherwise inhospitable terrain	Maternal roosts - cavities in large-diameter snags at a moderate state of decay, tree foliage or buildings	As habitat generalists, all three species occupy a wide diversity of habitats across their geographic range. Summer habitat for migratory bats is characterized as foraging, drinking, and roost sites, with roosts being particularly important. These bats use mostly treed habitats for roosting or foraging, with a particularly strong dependence on trees as roosting sites. Foraging habitats are less well known, but likely include the area above aquatic habitats, low-elevation meadows, grasslands, and fields, as well as open-canopied forest, the area above forest canopies, and forest edges. Drinking habitat is not well known and assumed to be the same as aquatic foraging habitats. Winter habitat requirements are not well known for any of these species.	Bats are promiscuous, with mating occurring during late summer/autumn migration and during winter. Females store sperm over the winter and ovulate in spring. Gestation lasts 50–60 days, with pups of all three species born in late June or early July. Litter size ranges from 1 to 2. Pups are weaned at approximately five to six weeks. Sexual maturity generally occurs in the first year and breeding likely occurs throughout life. Females form small maternity colonies	Yes	Potential ecosites: All Forested Ecosites.
Mammal	Tri-colored Bat *Perimyotis subflavus*	Spring - migration from hibernacula to foraging habitat; Fall - return to hibernacula	N/A	Maternal roosts - cavities in large-diameter snags at a moderate state of decay, or buildings Hibernacula - caves and similar structures (e.g., abandoned mines) that expend below the frostline	Can be found in forested areas where hibernacula and roosting habitat is abundant. Hibernacula may be hundreds of kilometers away from their summer foraging areas. Foraging habitat includes waterways, forest edges, and in gaps in the forest. Large open fields or clearcuts generally are avoided.	Breeding is promiscuous. Females reach maturity at 1 yea. Females store sperm and ovulate in spring with a single pup (occasionally 2) born after a 44-60 day gestation period, usually in late June or early July. Females form maternity colonies to birth and raise the pups. Pups are weaned at approximately 26 days. Generation time is estimated as 5-7 years. Maximum longevity is ~15 years.	Yes	Potential ecosites: B015-019, B023-028, B039-043, B054-059, B069-076, B087-092, B103-108, B118-125, B130-133

Taxon	Species	Seasonal Movements	Movement Corridors	Residences	Habitat Requirements	Life History	Suitable Habitat Present in LSA	Habitat Mapping
Please note: All information in this table was derived from publicly available COSEWIC and COSSARO reports								
Mammal	Wolverine *Gulo gulo*	N/A	Undisturbed, contiguous mature forest	Females den under snow-covered rocks and logs, or within snow tunnels	Found in a wide variety of forested and tundra habitats that provide sufficient year-round food supplies (e.g., smaller prey species and animal carcasses)	Wolverine breed from May to August, with male Wolverine generally mating with more than one female. Wolverine have been characterized as having a bet-hedging life history strategy to deal with unpredictable environments. Births generally coincide with periods of greater ungulate carrion availability and snow cover, which provides enhanced security cover for kits. Males are not sexually mature until over two years, while females reach sexual maturity at about 15 months. Females, however, do not produce litters successfully until they are an average of 3.4 years old. Average litter size is two to three kits.	Yes	Potential Habitat: Mature forest stands (>70yrs for deciduous, >80yrs for coniferous) Possible Ecosites: B011-014, B016-018, B023-026, B033-038, B040-042, B048-053, B055-058, B064-068, B070-075, B081-086, B088-091, B097-B102, B104-107, B113-117, B119-124
Plants	Black Ash *Fraxinus nigra*	N/A	N/A	N/A	It occurs most frequently in floodplain forests, basin, seepage and lacustrine swamp forests, shoreline forest margins, and fens.	Black Ash can flower at about 30 to 40 years of age when stems reach 8 cm in diameter at breast height. The small wind-pollinated flowers of Black Ash emerge in late May to early June, concurrently with or just before leaf emergence. Black Ash is generally polygamous (both unisexual and bisexual flowers borne on the same tree), but some trees may be solely male or female. The winged single-seeded samaras mature from July to September or October and are dispersed from early fall throughout the winter until early spring. Ash seed banks are relatively short lived, which may limit ability to recover from stand mortality. Black Ash and other ash seeds are reported to retain viability in the soil from three to eight years. Black Ash readily sprouts from adventitious buds on root crowns, roots and stumps, especially following fire, browsing or cutting.	Yes	Potential ecosites: B019, B028, B056, B059, B071, B076, B089, B092, B105, B108, B120, B125

Taxon	Species	Seasonal Movements	Movement Corridors	Residences	Habitat Requirements	Life History	Suitable Habitat Present in LSA	Habitat Mapping
Please note: All information in this table was derived from publicly available COSEWIC and COSSARO reports								
Reptile	Blanding's Turtle *Emydoidea blandingii*	Emergence and dispersal of young towards water in fall	Wet forest, vernal pools, Beaver ponds and shallow-water wetlands, are also often used by Blanding's Turtles when travelling between residence wetlands and during nesting foray	Nests - Suitable nesting habitat occurs in sun-exposed areas with low vegetation cover and loose soils. Known to nest in a variety of habitats including sand beaches and dunes, soil-filled crevices in rock outcrops, Muskrat lodges, Canada Goose mounds, wetland berms, gardens, yards, agricultural fields, pastures, railway embankments, gravel pits, as well as sand or gravel roads, road shoulders and trails Hibernacula - overwinter in permanent or temporary waterbodies, including bogs, fens, forest and shrub swamps, marshes, graminoid shallow meadow marshes, streams, shorelines of lakes and ponds, and flooded borrow pits or roadside ditches.	Occurs in a variety of habitats including swamps, bogs, fens, marshes, marshy meadows, lakes, ponds, Beaver-regulated wetland complexes, slow flowing creeks, river sloughs, human-made channels and coastal areas of lake bays. In the Great Lakes/St. Lawrence population, the most preferred habitats are wetlands that are eutrophic, with shallow water (typically < 100cm, range 0-200cm), an organic substrate, a high density of aquatic vegetation and slow to no flow. Swamp, pond, marsh, lake, fen and bog habitats are significantly preferred over lotic or ephemeral habitats	Blanding's Turtles emerge from hibernation sites in the early spring shortly after ice melt begins. mating activity often occurs when turtles are congregated at hibernacula but has been observed in every season. Round-trip nesting migrations may take nearly a month to complete. The nesting period begins as early as late May and continues through to early July, peaking in early to mid-June. Hatchlings emerge from early August to late October (incubation days range from 56-133 days). Some individuals may become dormant for a few days or weeks during the summer period, remaining inactive either within wetlands or buried terrestrially beneath forest litter or dead cattails. In Canada, adults typically move to hibernation sites between late August to early November.	Yes	Hibernation B128-142, B145-152 Nesting B003, B006-007, B031, B171-172, B187-188

Taxon	Species	Seasonal Movements	Movement Corridors	Residences	Habitat Requirements	Life History	Suitable Habitat Present in LSA	Habitat Mapping
Please note: All information in this table was derived from publicly available COSEWIC and COSSARO reports								
Reptile	Midland Painted Turtle *Chrysemys picta*	Emergence and dispersal of young towards water in fall	N/A	Nests - nest in areas with an open canopy, often with a southern exposure, such as the shorelines of lakes and wetlands, beaver dams, and sand dunes Hibernacula - overwinter in wetlands and the shallow bays of lakes.	Occupy slow moving, relatively shallow, and well-vegetated wetlands and water bodies with abundant basking sites and organic substrate. Found primarily in swamps, marshes, ponds, fens, and bogs.	Spring is purported to be the primary breeding period for Painted Turtles. Female Painted Turtles are capable of long-term sperm storage and clutches may demonstrate multiple paternity. Nesting phenology may be related to temperatures in the previous winter, while clutch frequency is related to previous autumn temperature. Eggs are retained in the oviduct four to five weeks prior to nesting. nesting season spans 20 to 40 days, typically from late May until early July, with peak activity in mid-June. Nesting activity typically increases during periods of rainfall. Midland have a typical clutch size of 3-17 eggs. Incubation of Painted Turtles eggs is approximately 65-80 days. Painted Turtles exhibit temperature dependent sex determination with incubation temperatures ≤26°C producing males, temperatures ≥29°C producing females. Hatchlings may emerge from nest chambers in the autumn and spend the winter aquatically or overwinter terrestrially in the natal nest chamber, or spring hatching may be synchronized following rainfall.	Yes	Hibernation B128-142, B145-152 Nesting: B003, B006-007, B031, B171-172, B187-188
Reptile	Snapping Turtle *Chelydra serpentine*	Emergence and dispersal of young towards water in fall	Uses streams to travel between waterbodies	Nests - Open, flask-shaped, in soft substrate (e.g., sand or gravel) along waterways, may use anthropogenic features Hibernacula - under cover in streams that flow continuously through winter, wedged beneath submerged logs and covered in silt along lakeshores, or buried deep in anoxic mud/under floating mats of vegetation in marshy areas	Found in slow-moving water with a soft mud bottom and dense aquatic vegetation. Established populations are most often located in ponds, sloughs, shallow bays or river edges and slow streams, or areas combining several of these wetland habitats.	Snapping Turtles have a life-history strategy characterized by high and variable mortality of embryos and hatchlings, delayed sexual maturity, extended adult longevity, and iteroparity (repeated reproductive events) with low reproductive success per reproductive event. Females, and presumably also males, in more northern populations mature later (at 15-20 years) and at a larger size than in more southern populations (~12 years). Lifespan in the wild is poorly known, but long-term mark-recapture data from Algonquin Park suggest a maximum age of over 100 years. Mating takes place in early spring. Nesting takes place in late May and June, with females laying approximately 40 eggs (range of 12-69) in a flask-shaped nest. Sex determination in Snapping Turtles is temperature-dependent, although adult sex ratios tend to remain neat 1:1. Likewise, incubation is temperature dependant and highly variable, ranging from approximately 70-100 days. The probability of a Snapping Turtle embryo surviving to sexual maturity may be less than 0.1%.	Yes	Hibernation B128-142, B145-152 Nesting B003, B006-007, B031, B171-172, B187-188

APPENDIX O: GENERAL PHOTOS



Monarch Butterfly (*Danaus Plexippus*), June 23, 2025. Coordinates: 48.100887 -82.654841



Eastern Red-backed Salamander (*Plethodon cinereus*), July 20, 2025. Coordinates: 47.945816, -82.813127



Eastern Newt (*Notophthalmus viridescens)* June 10, 2025. Coordinates: 47.780048, -83.354584



Black Ash (*Fraxinus nigra*), June 22, 2025. Coordinates: 48.123433, -82.349036

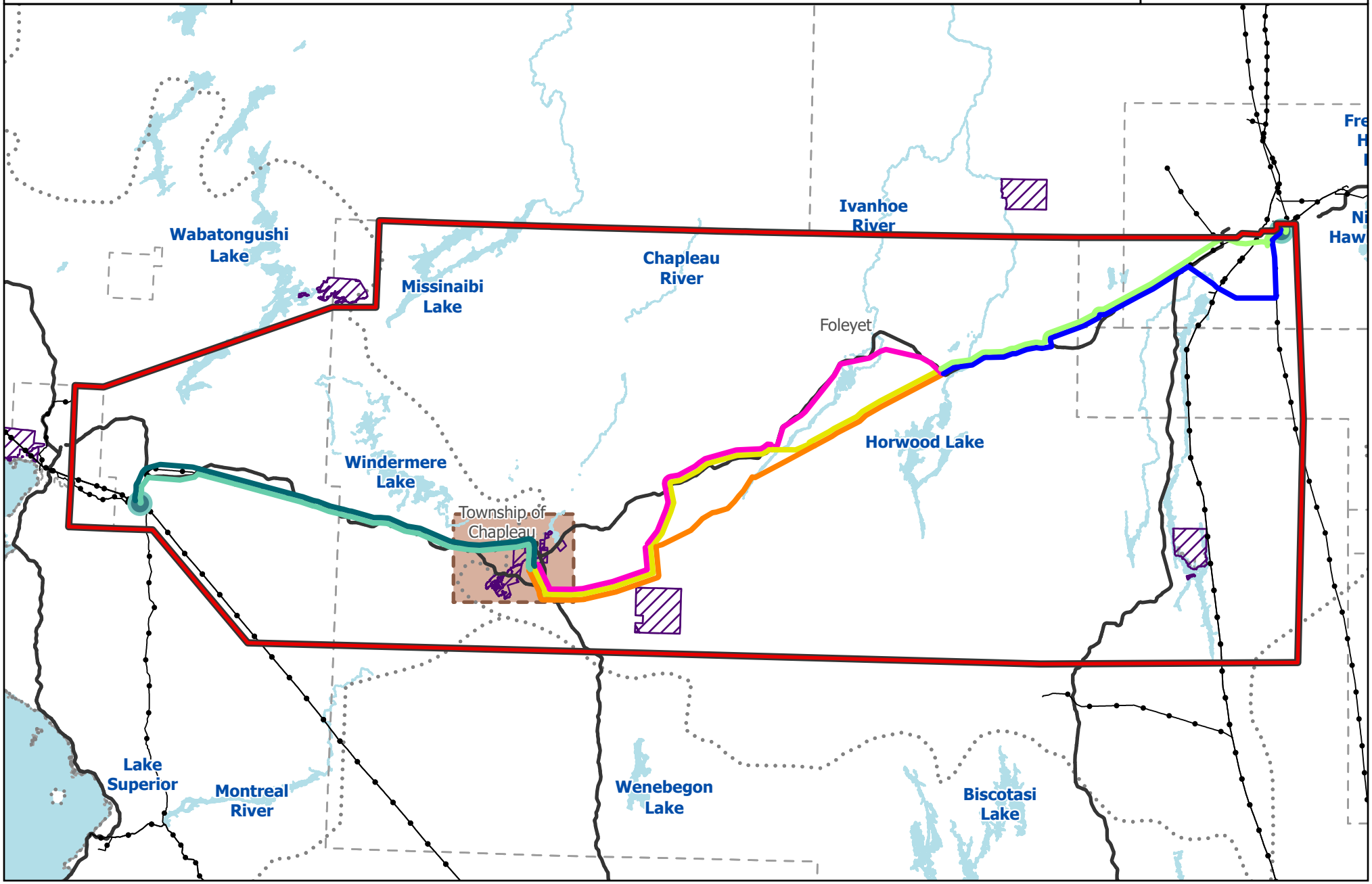


Slender Spikerush (*Eleocharis nitida*), June 26, 2025. Coordinates: 48.353211, -81.642546

FIGURE 1. ROUTE INVESTIGATION STUDY AREA

Wawa Timmins Power Line

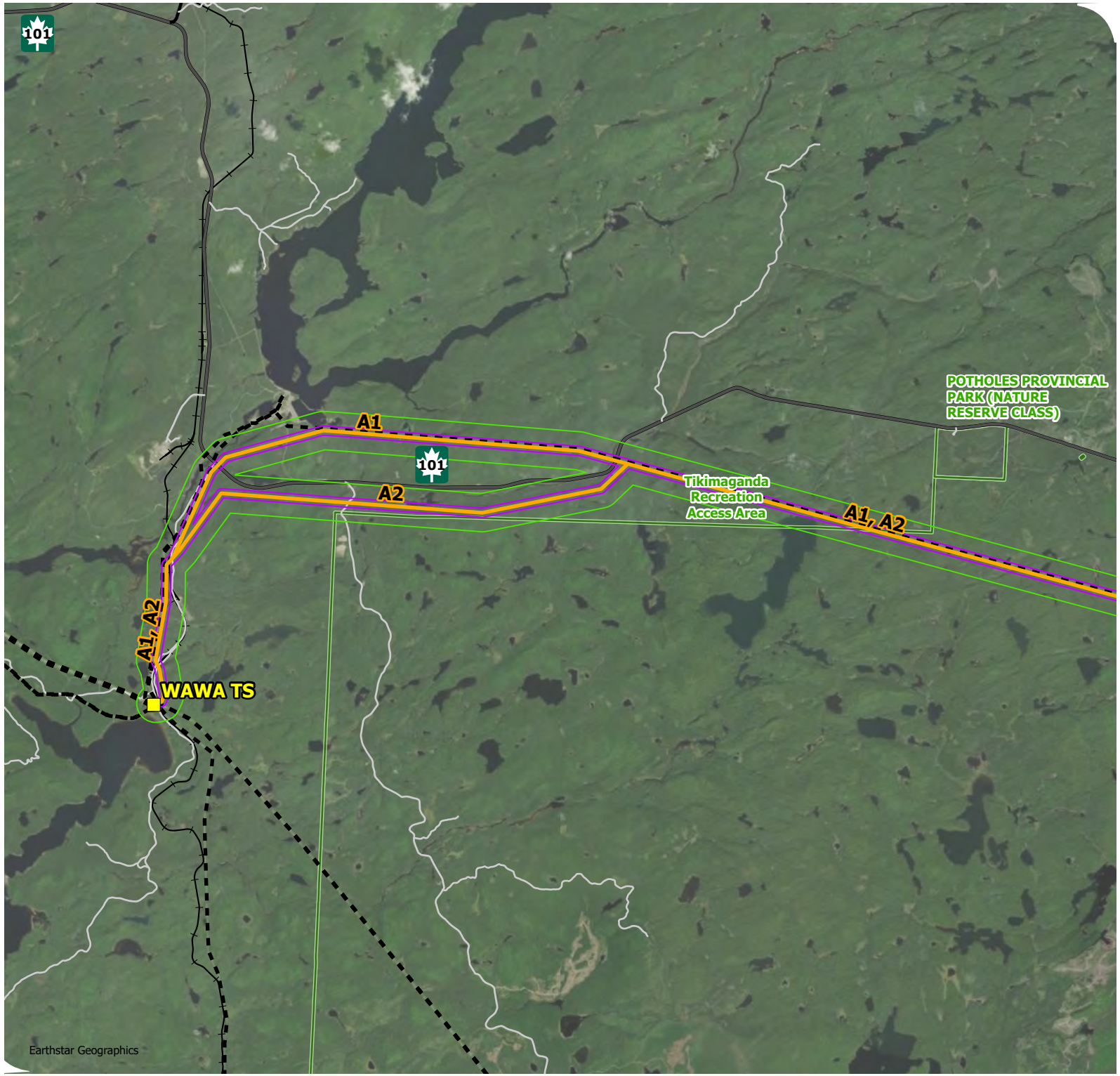
Environmental Assessment



WAWA TIMMINS POWER LINE

FIGURE 2. LOCAL STUDY AREA AND PROJECT STUDY AREA

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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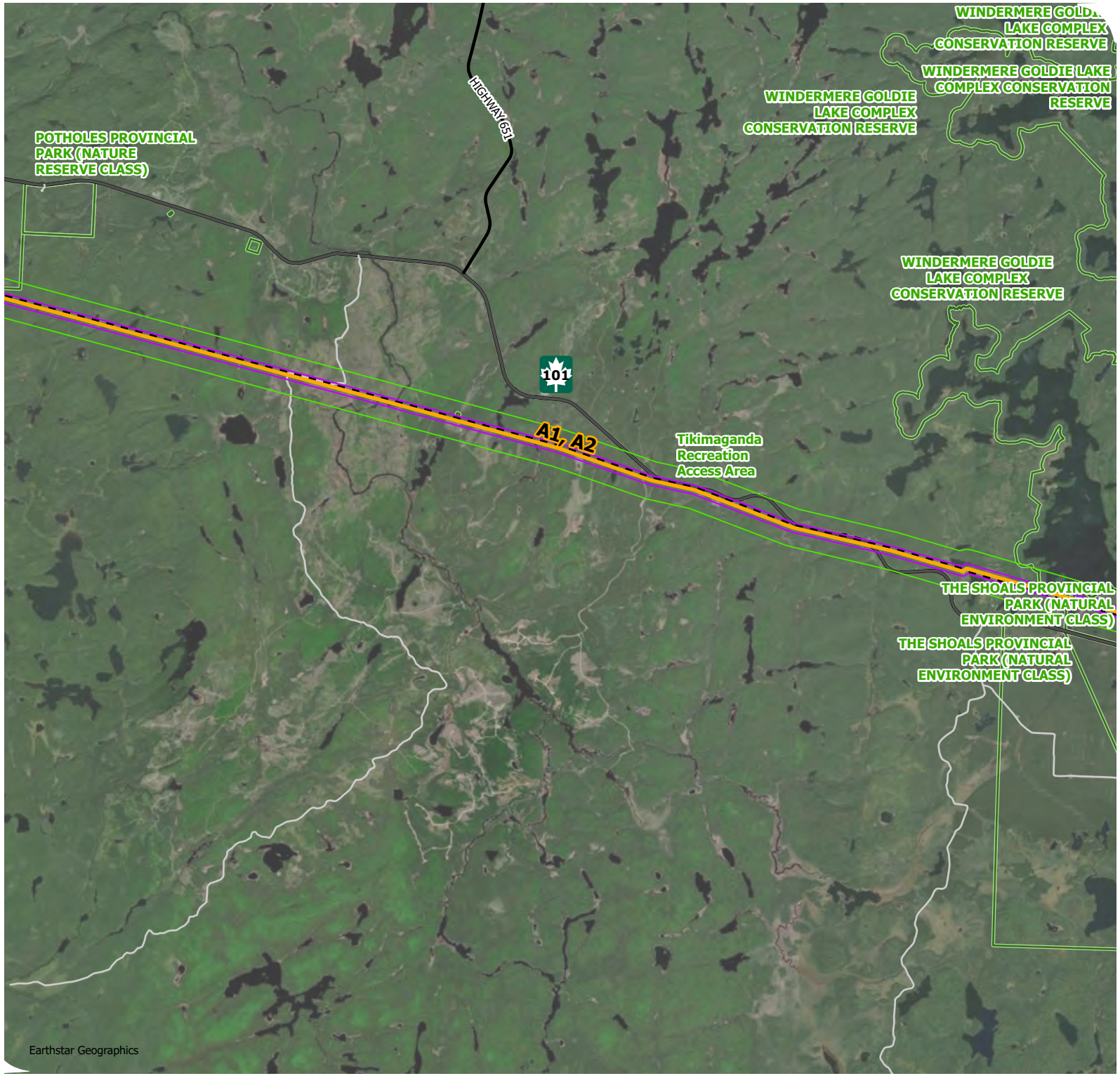
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STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 3. LOCAL STUDY AREA AND PROJECT STUDY AREA

Mapping Extent - Windermere Lake 1



- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

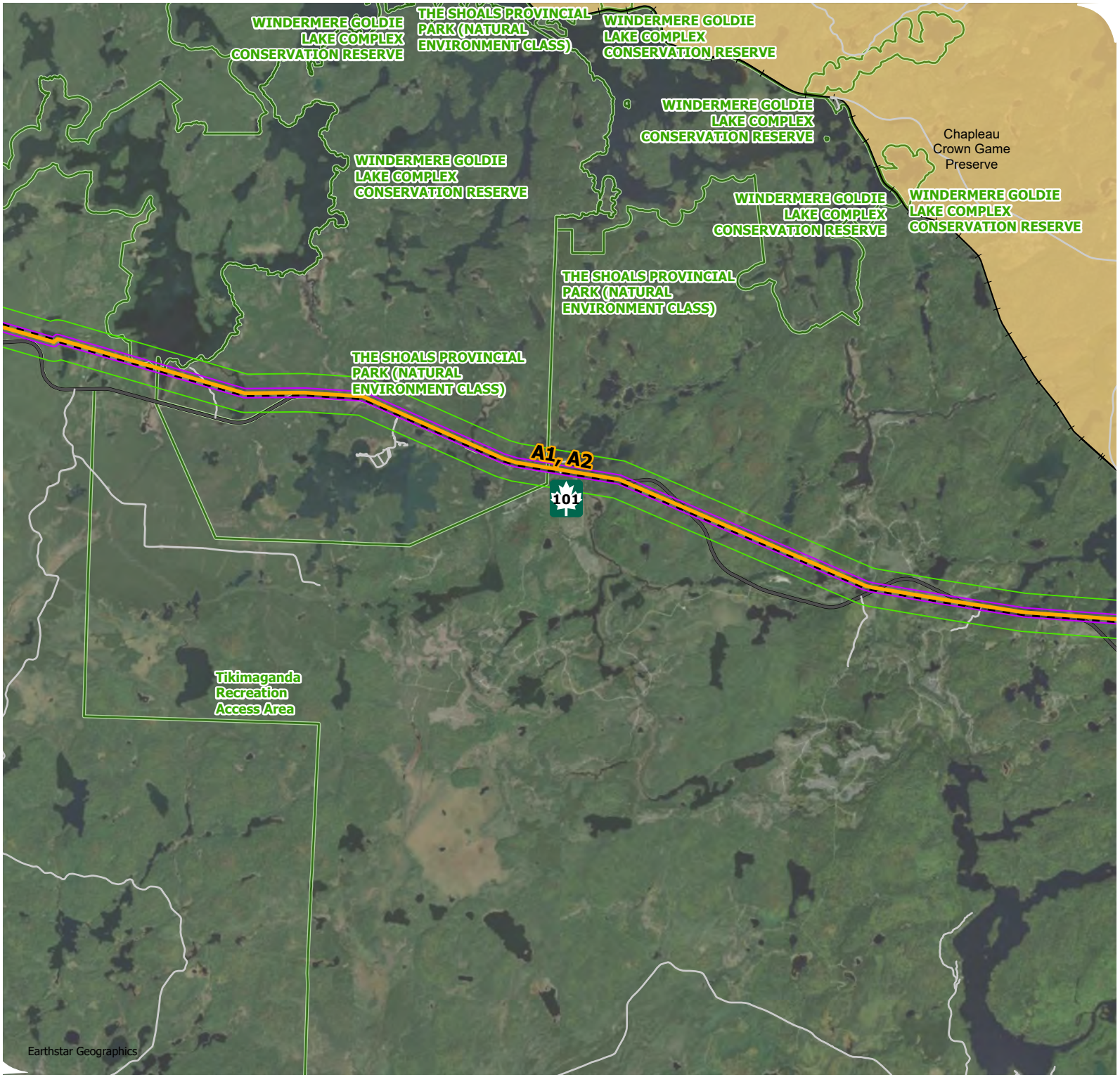
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 4. LOCAL STUDY AREA AND PROJECT STUDY AREA

Mapping Extent - Windemere Lake 2

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

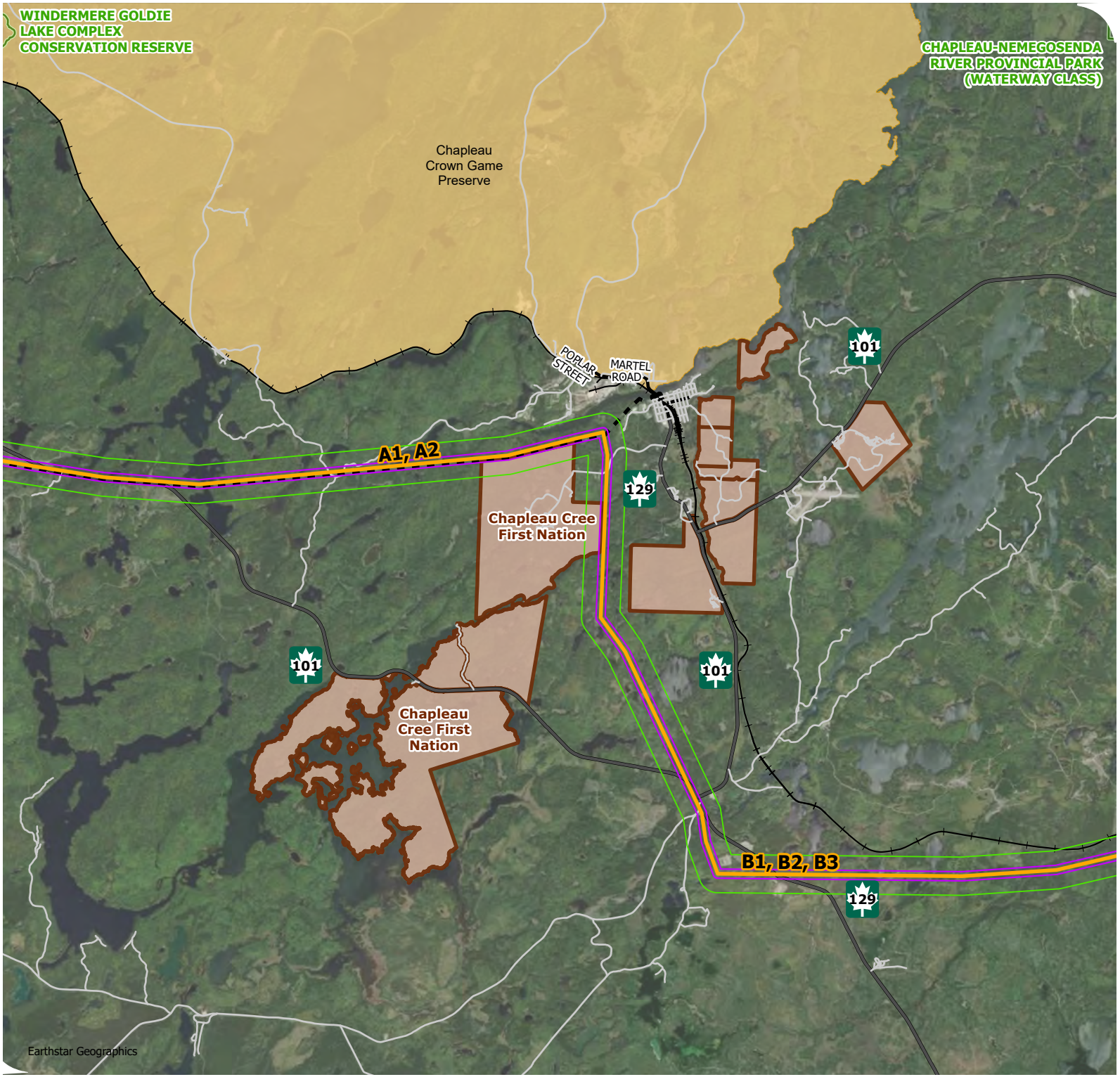
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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PROJECT: 25-1043
STATUS: DRAFT
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WAWA TIMMINS POWER LINE

FIGURE 5. LOCAL STUDY AREA AND PROJECT STUDY AREA

Mapping Extent - Chapleau

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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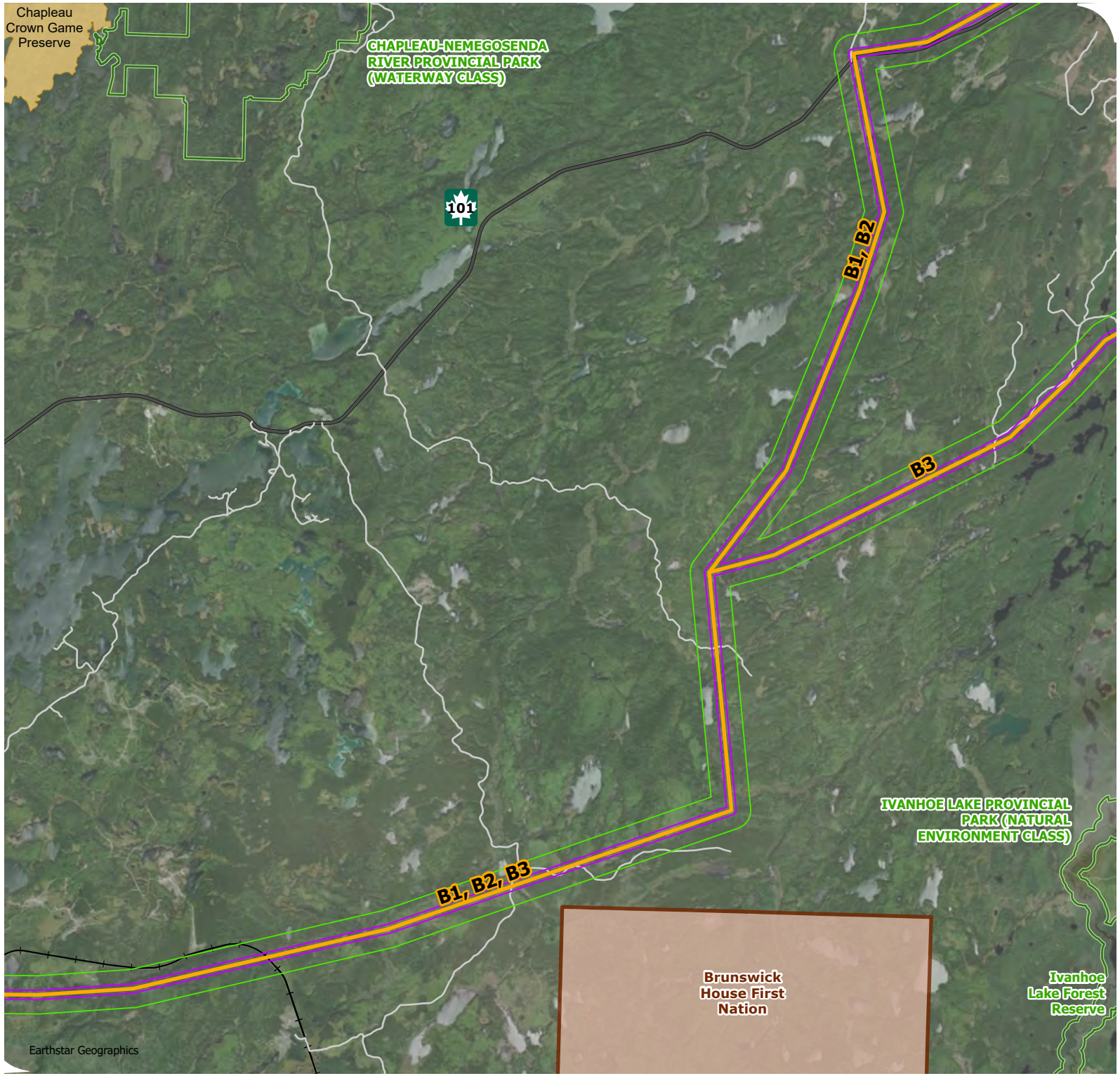
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WAWA TIMMINS POWER LINE

FIGURE 6. LOCAL STUDY AREA AND PROJECT STUDY AREA

Mapping Extent - Ivanhoe Lake 1



- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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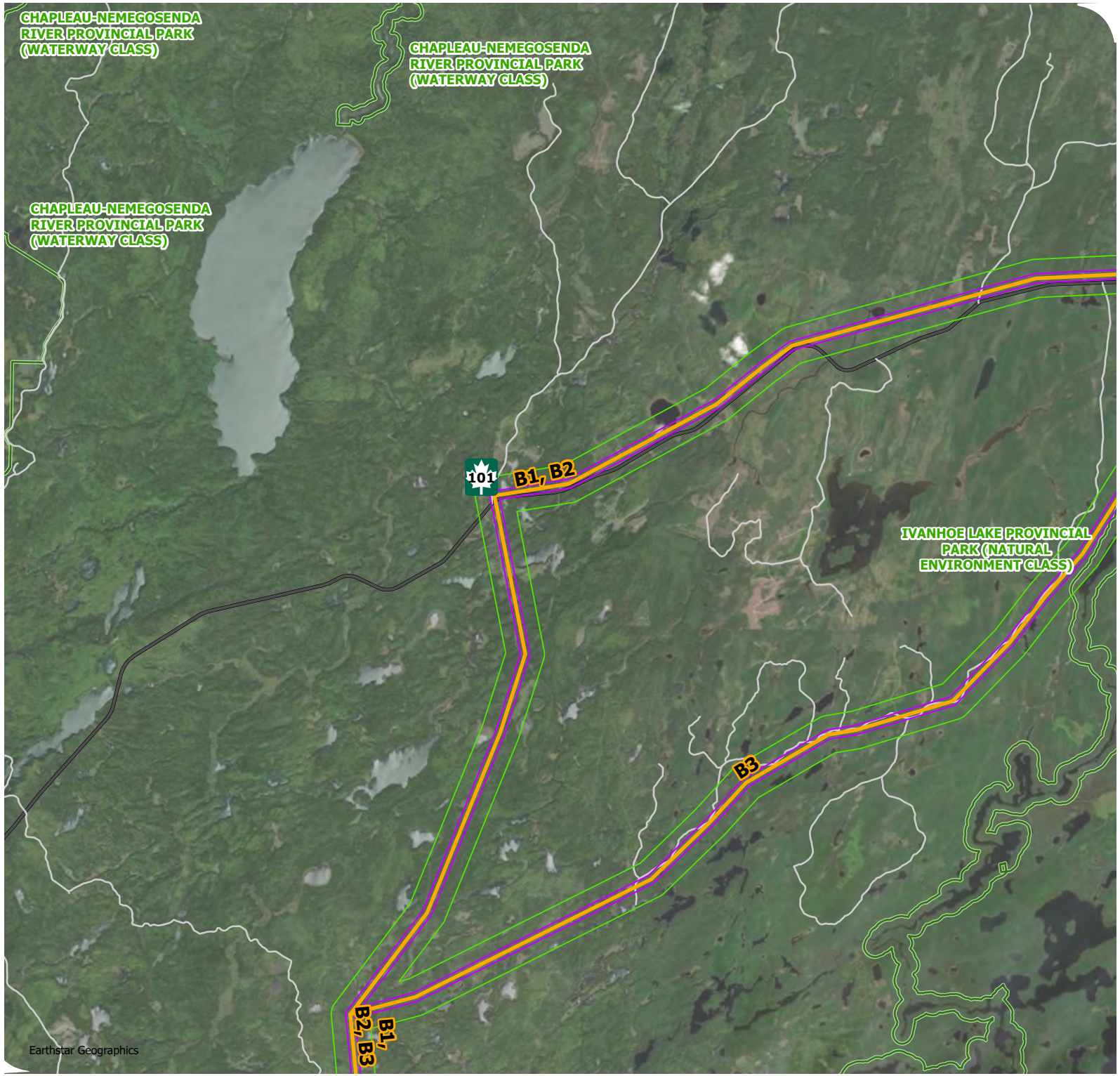
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DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 7. LOCAL STUDY AREA AND PROJECT STUDY AREA

Mapping Extent - Ivanhoe Lake 2



- Routing Centerline
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

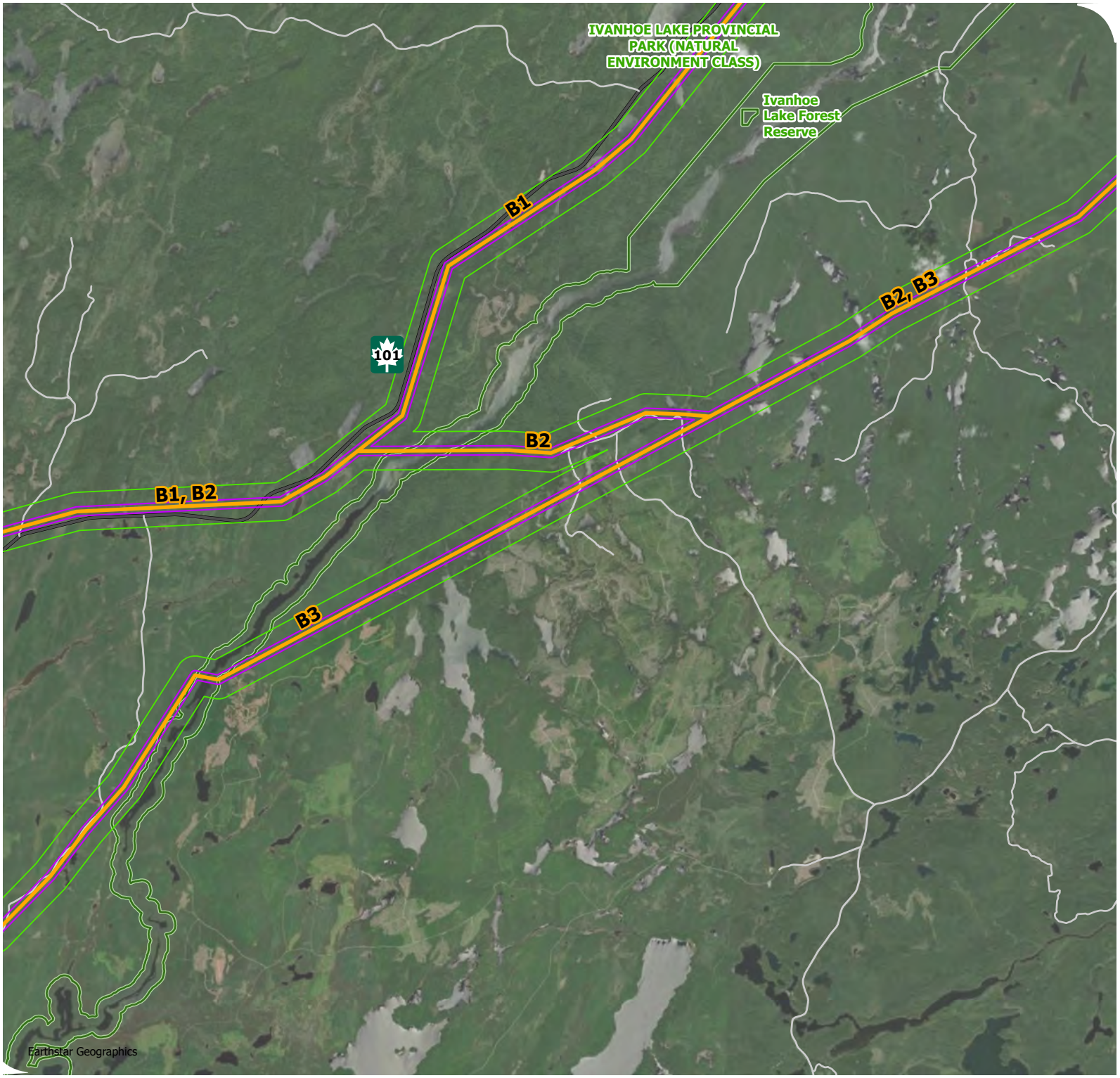


FIGURE 8. LOCAL STUDY AREA AND PROJECT STUDY AREA

Mapping Extent - Ivanhoe Lake 3

- Routing Centerline
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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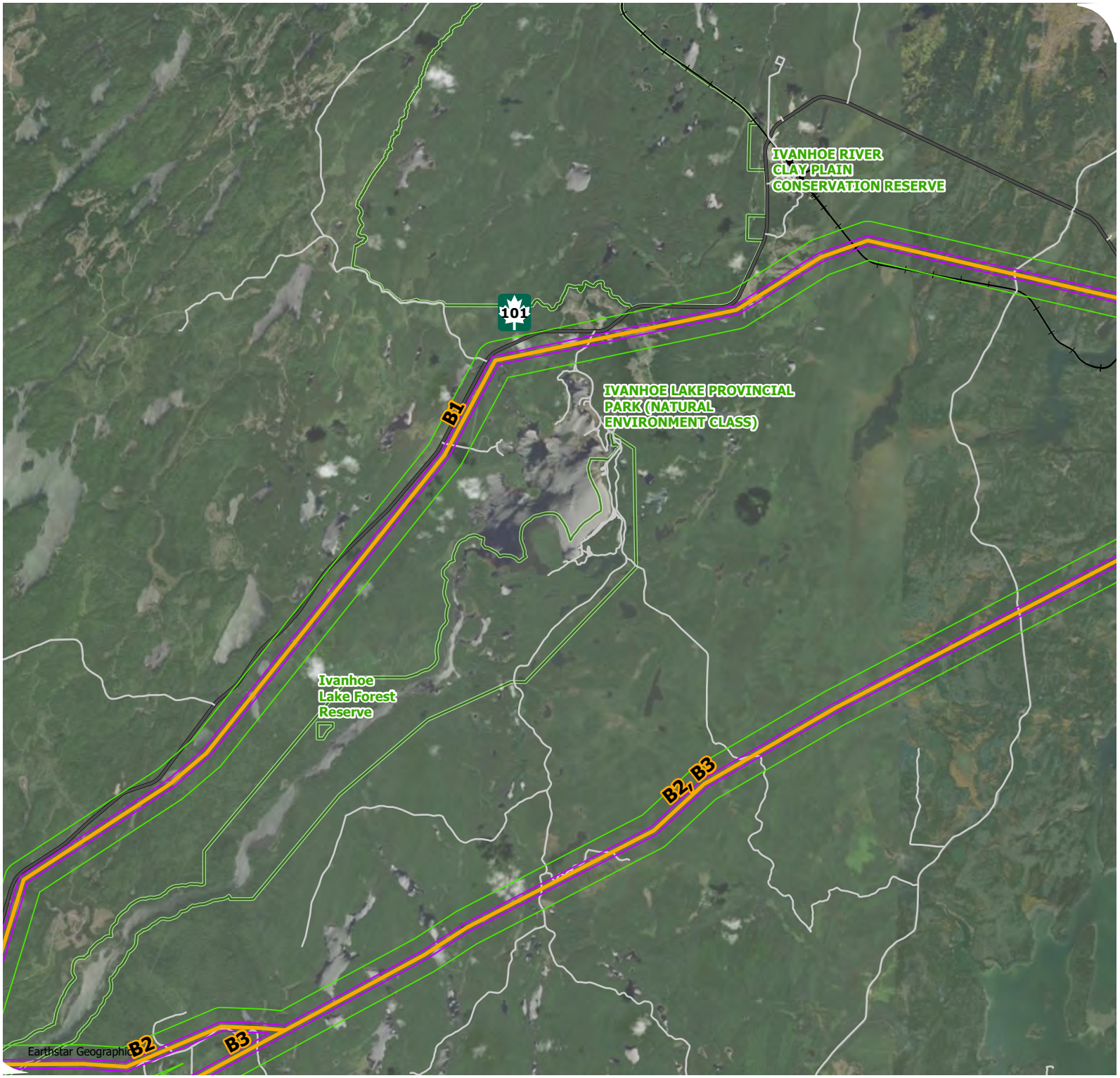
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WAWA TIMMINS POWER LINE

FIGURE 9. LOCAL STUDY AREA AND PROJECT STUDY AREA

Mapping Extent - Ivanhoe Lake 4



- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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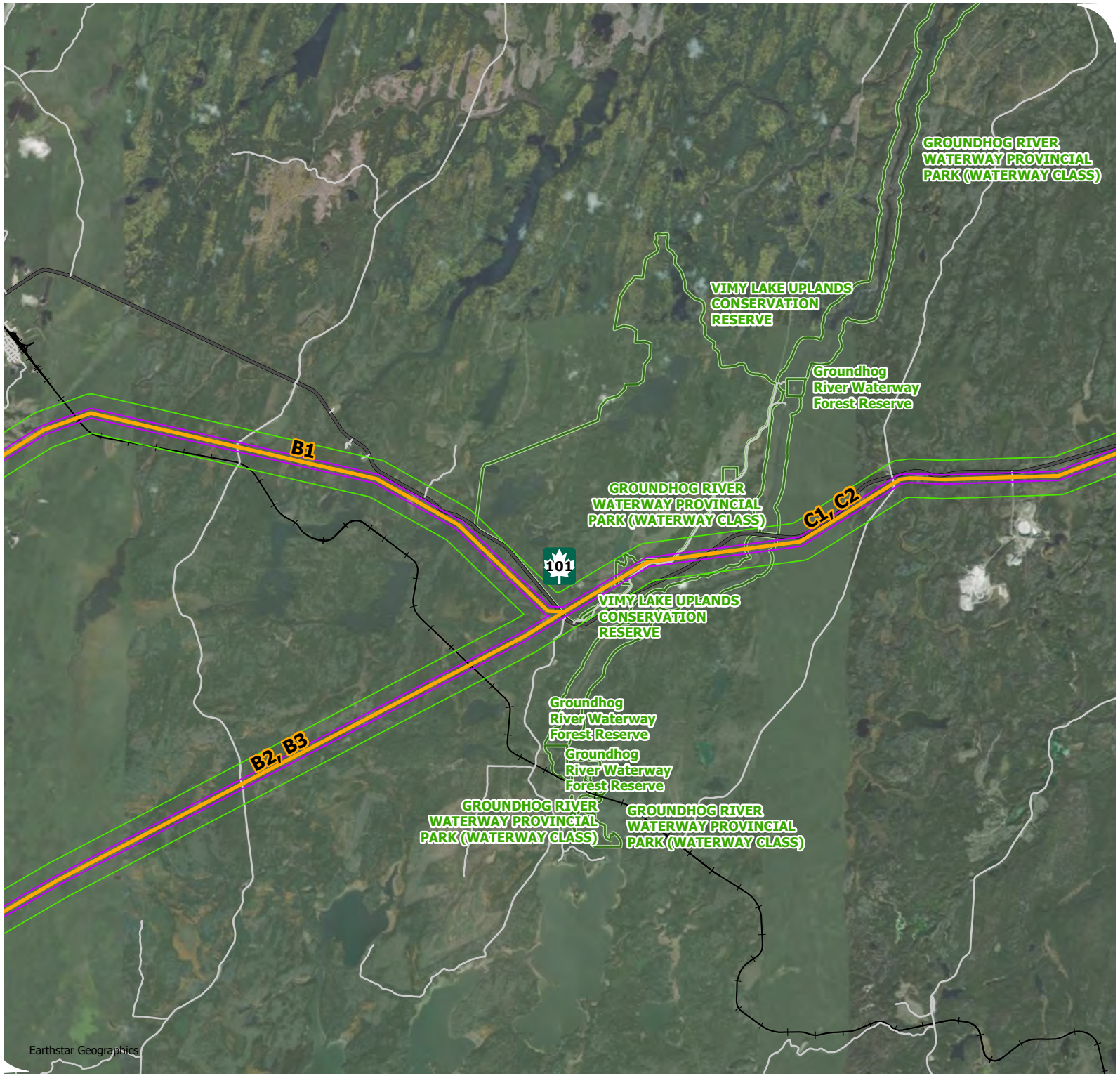
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WAWA TIMMINS POWER LINE

FIGURE 10. LOCAL STUDY AREA AND PROJECT STUDY AREA

Mapping Extent - Foleyet



- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

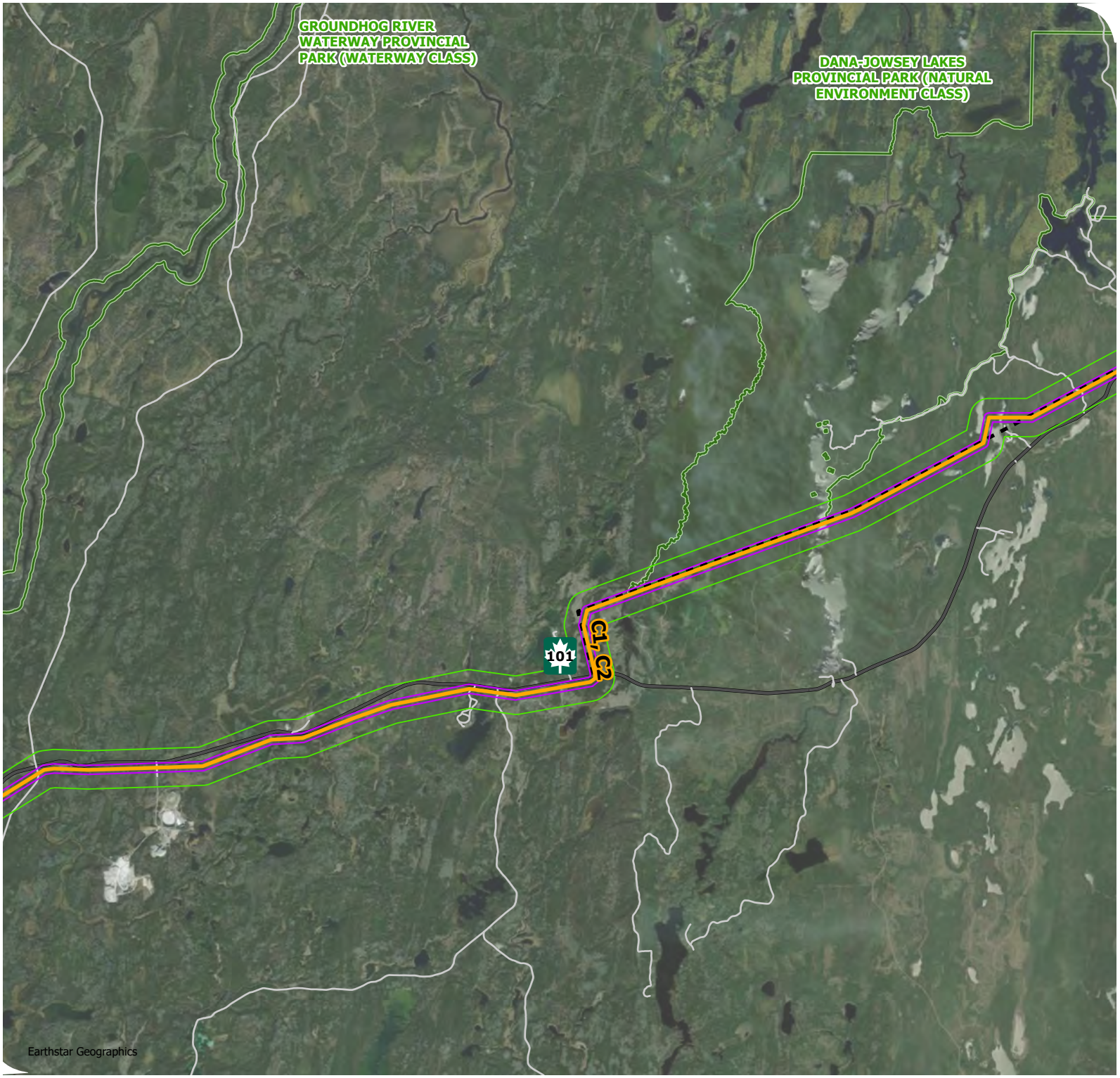
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 11. LOCAL STUDY AREA AND PROJECT STUDY AREA

Mapping Extent - Dana-Jowsey Lakes 1

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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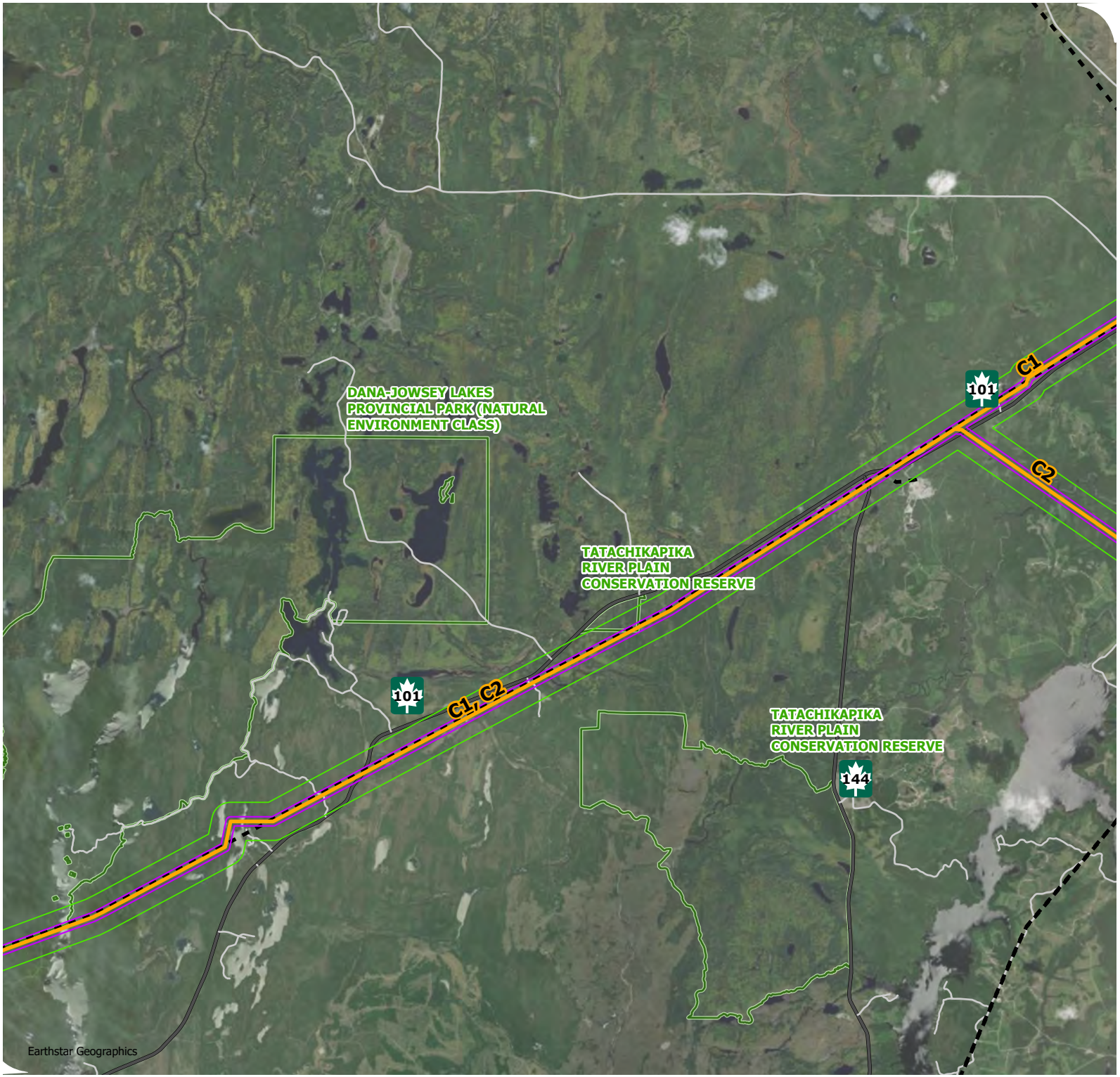
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WAWA TIMMINS POWER LINE

FIGURE 12. LOCAL STUDY AREA AND PROJECT STUDY AREA

Mapping Extent - Dana-Jowsey Lakes 2



- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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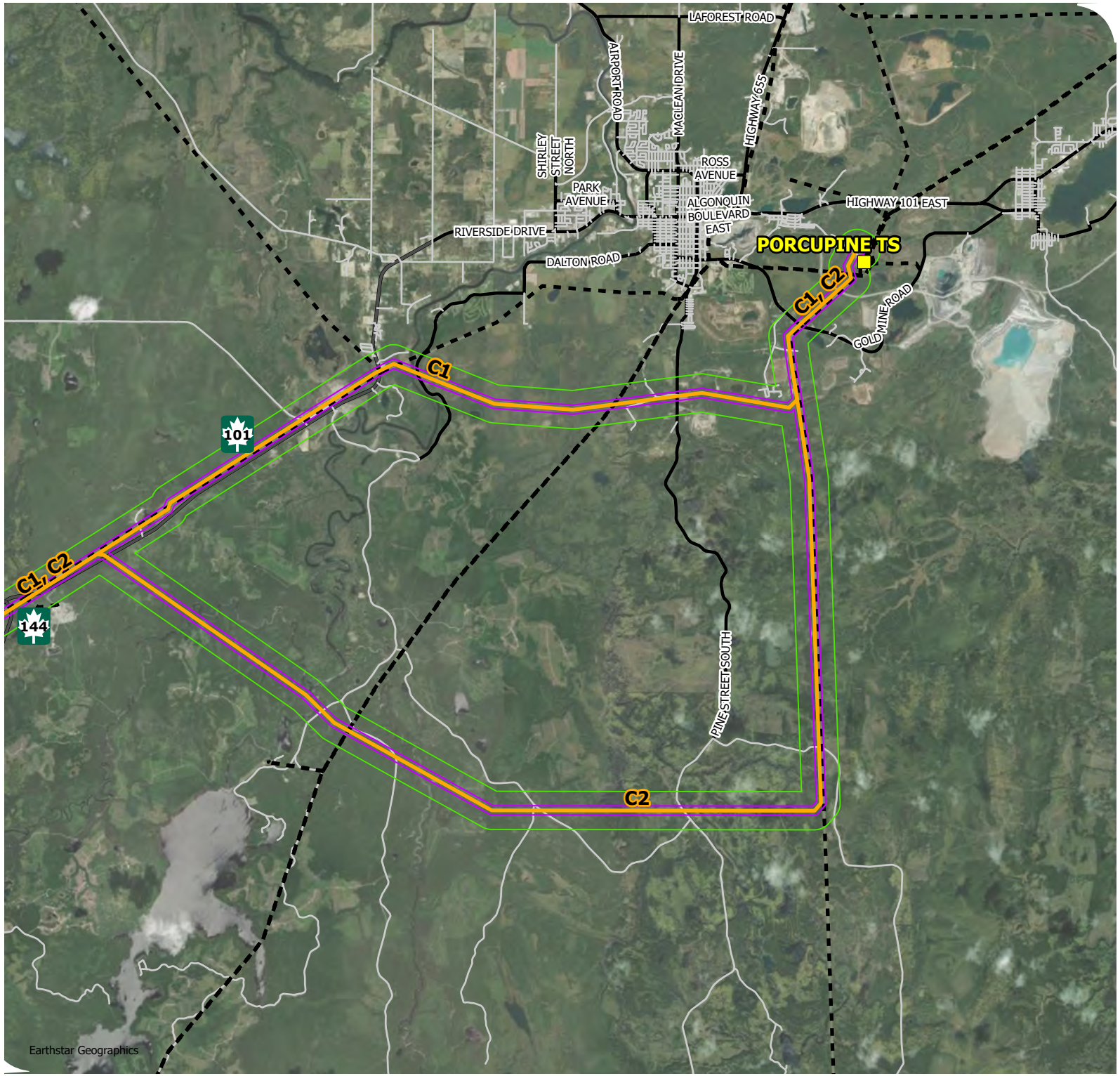
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WAWA TIMMINS POWER LINE

FIGURE 13. LOCAL STUDY AREA AND PROJECT STUDY AREA

Mapping Extent - Timmins



- Hydro One Station/Junction
- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

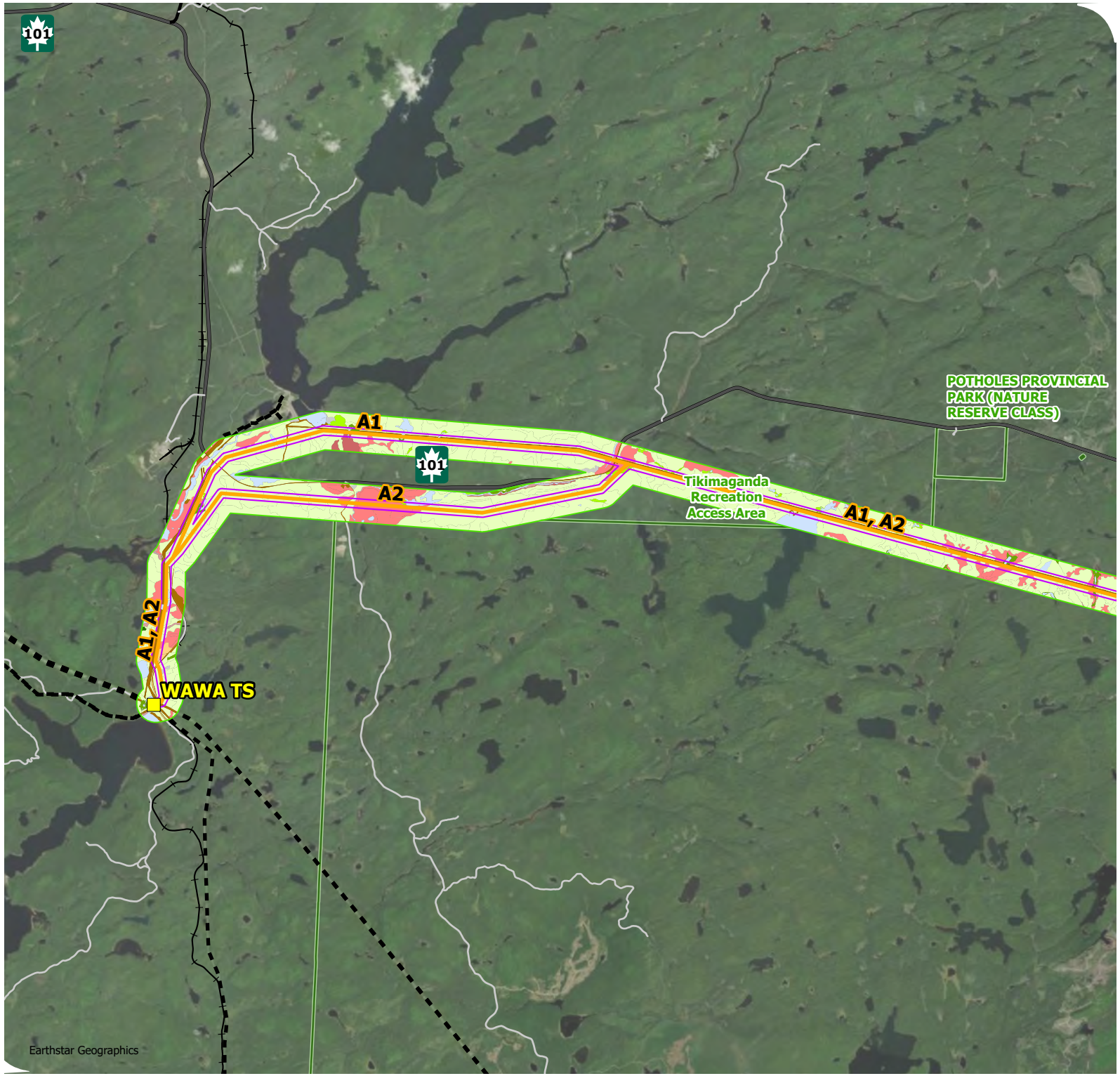
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WAWA TIMMINS POWER LINE

FIGURE 14. HABITAT TYPES WITHIN THE LSA



Mapping Extent - Wawa Station

- Hydro One Station/Junction
- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Habitat

- Barren
- Bog
- Coniferous
- Deciduous
- Disturbance
- Fen
- Marsh
- Mixedwood
- Swamp - Coniferous
- Swamp - Deciduous
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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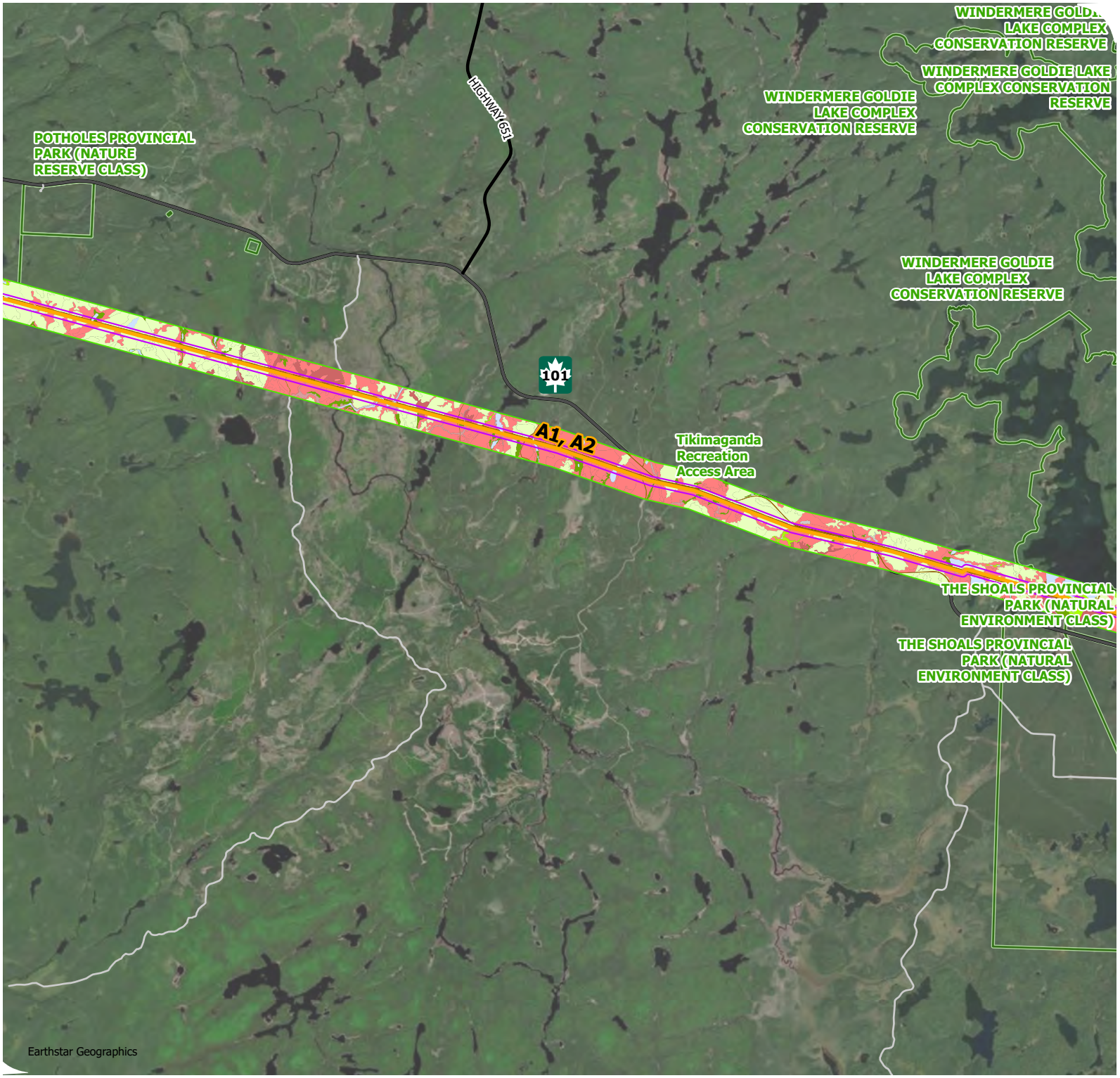
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WAWA TIMMINS POWER LINE

FIGURE 15. HABITAT TYPES WITHIN THE LSA



Mapping Extent - Windermere Lake 1

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Habitat

- Barren
- Coniferous
- Deciduous
- Disturbance
- Fen
- Marsh
- Swamp - Coniferous
- Swamp - Deciduous
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

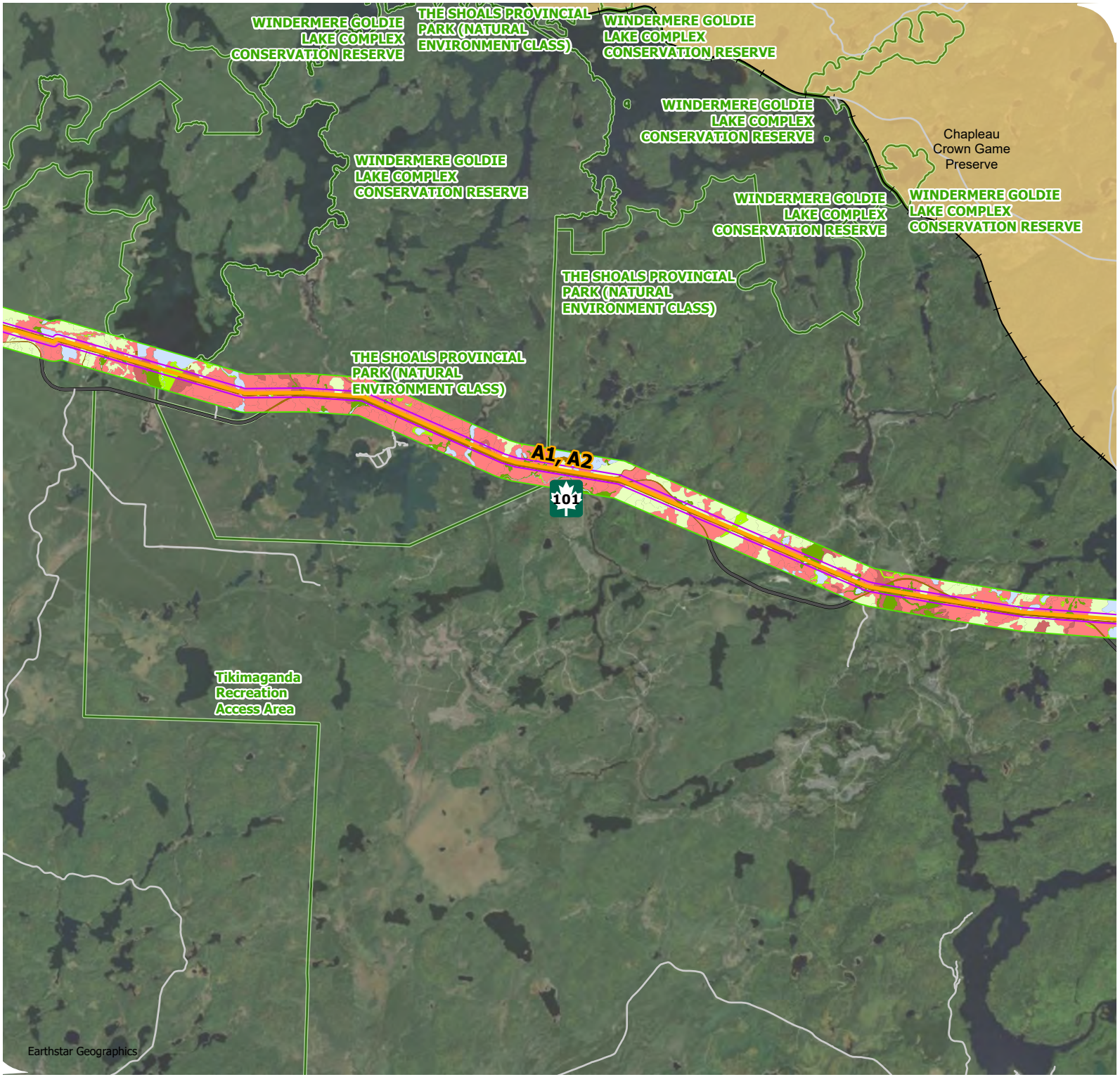
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WAWA TIMMINS POWER LINE

FIGURE 16. HABITAT TYPES WITHIN THE LSA

Mapping Extent - Windemere Lake 2

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Habitat

- Barren
- Coniferous
- Deciduous
- Disturbance
- Fen
- Marsh
- Swamp - Coniferous
- Swamp - Deciduous
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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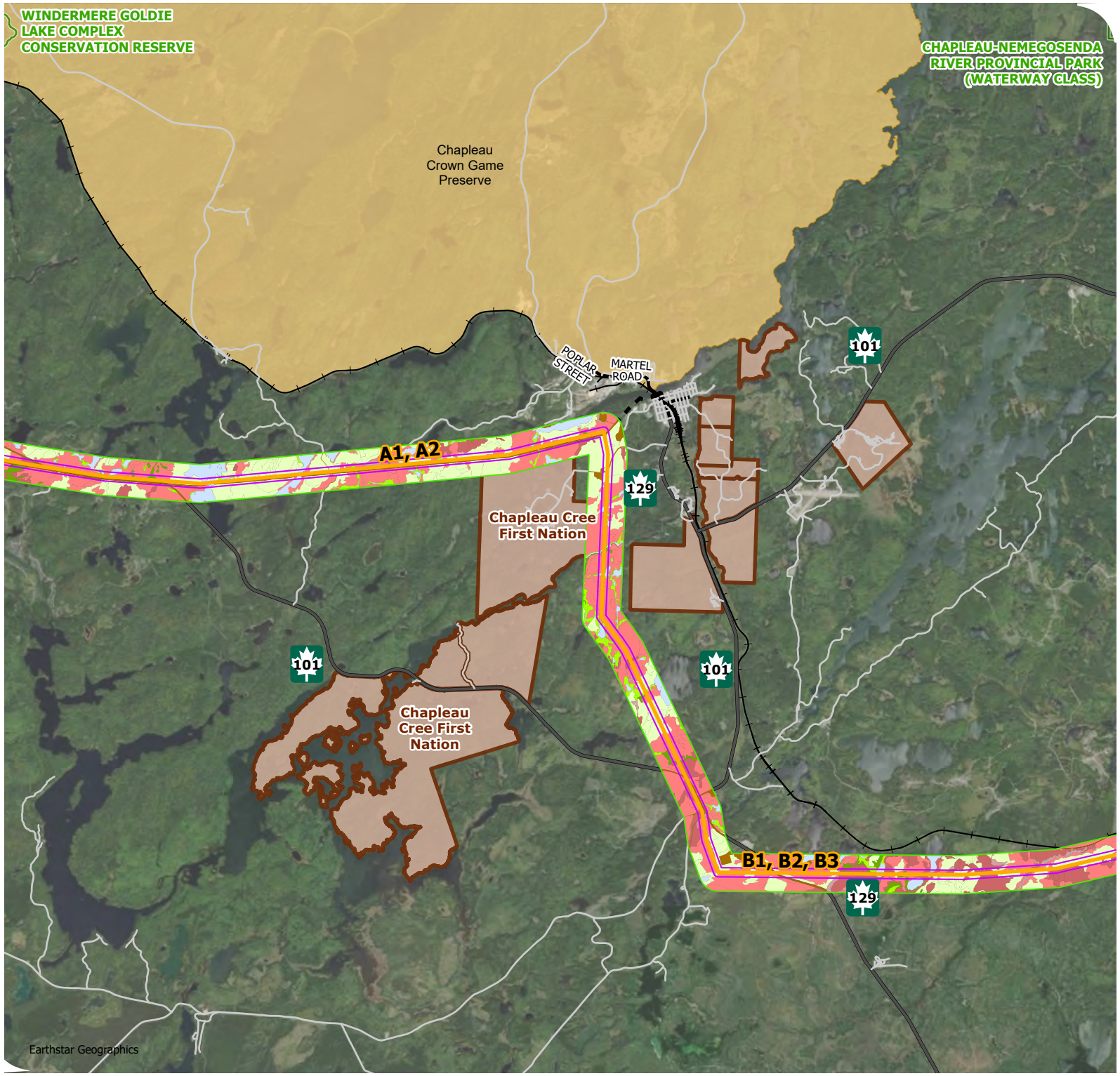
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WAWA TIMMINS POWER LINE

FIGURE 17. HABITAT TYPES WITHIN THE LSA

Mapping Extent - Chapleau



- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Habitat

- Barren
- Coniferous
- Deciduous
- Disturbance
- Fen
- Marsh
- Swamp - Coniferous
- Swamp - Deciduous
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

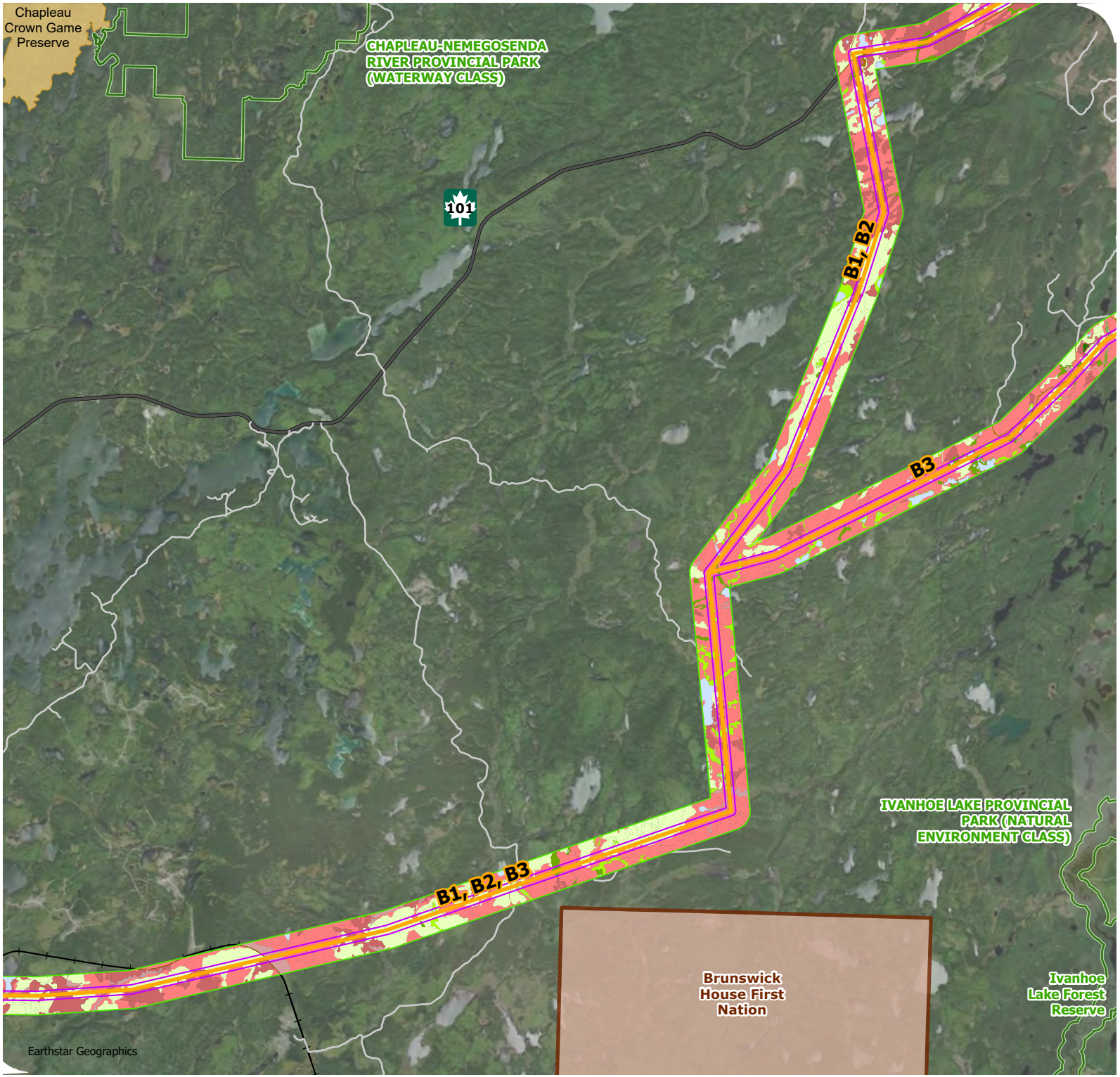
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WAWA TIMMINS POWER LINE

FIGURE 18. HABITAT TYPES WITHIN THE LSA



Mapping Extent - Ivanhoe Lake 1

- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Habitat

- Barren
- Bog
- Coniferous
- Deciduous
- Disturbance
- Fen
- Marsh
- Swamp - Coniferous
- Swamp - Deciduous
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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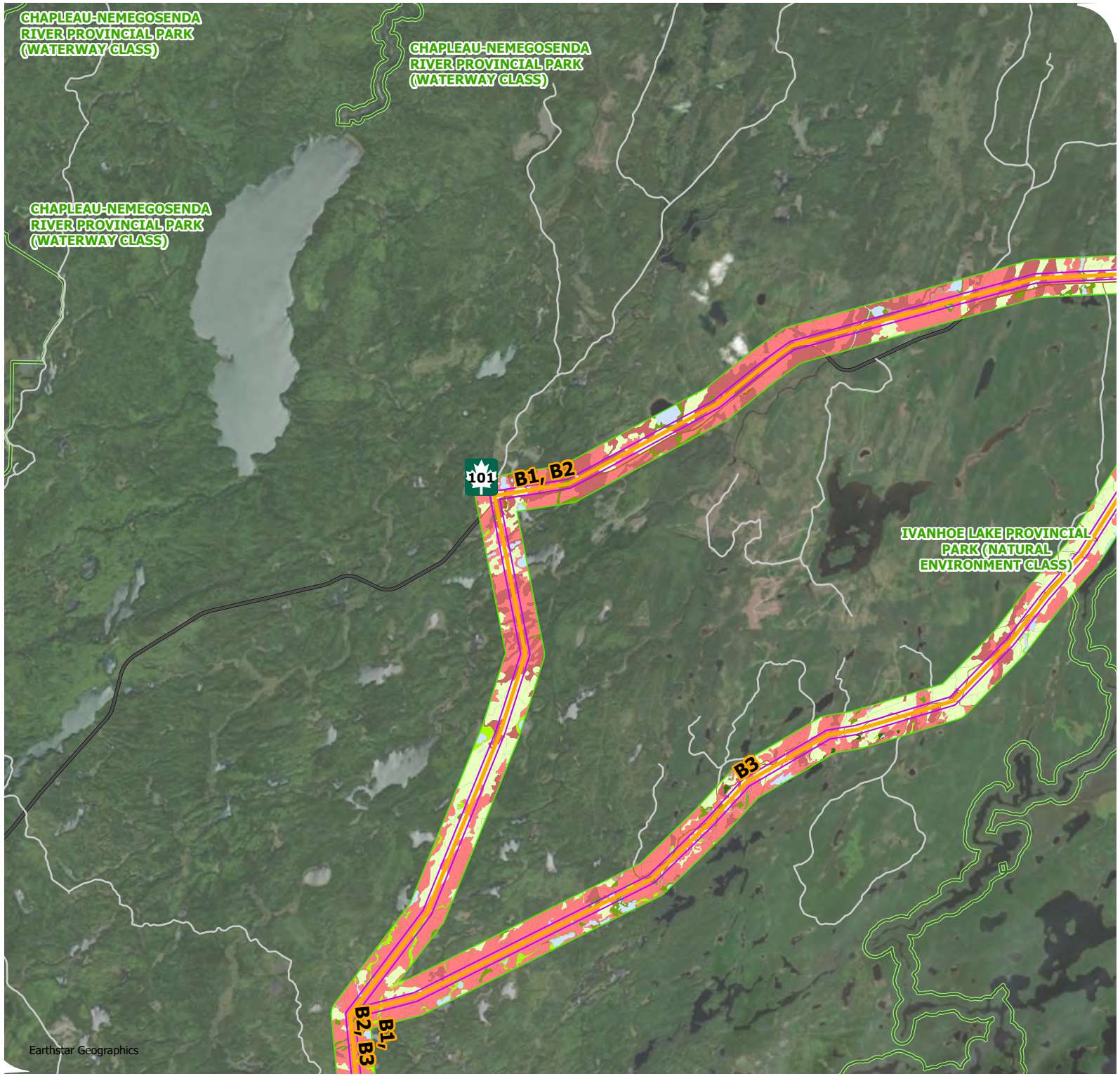
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WAWA TIMMINS POWER LINE

FIGURE 19. HABITAT TYPES WITHIN THE LSA



Mapping Extent - Ivanhoe Lake 2

- Routing Centerline
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Habitat

- Barren
- Bog
- Coniferous
- Deciduous
- Disturbance
- Fen
- Marsh
- Swamp - Coniferous
- Swamp - Deciduous
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

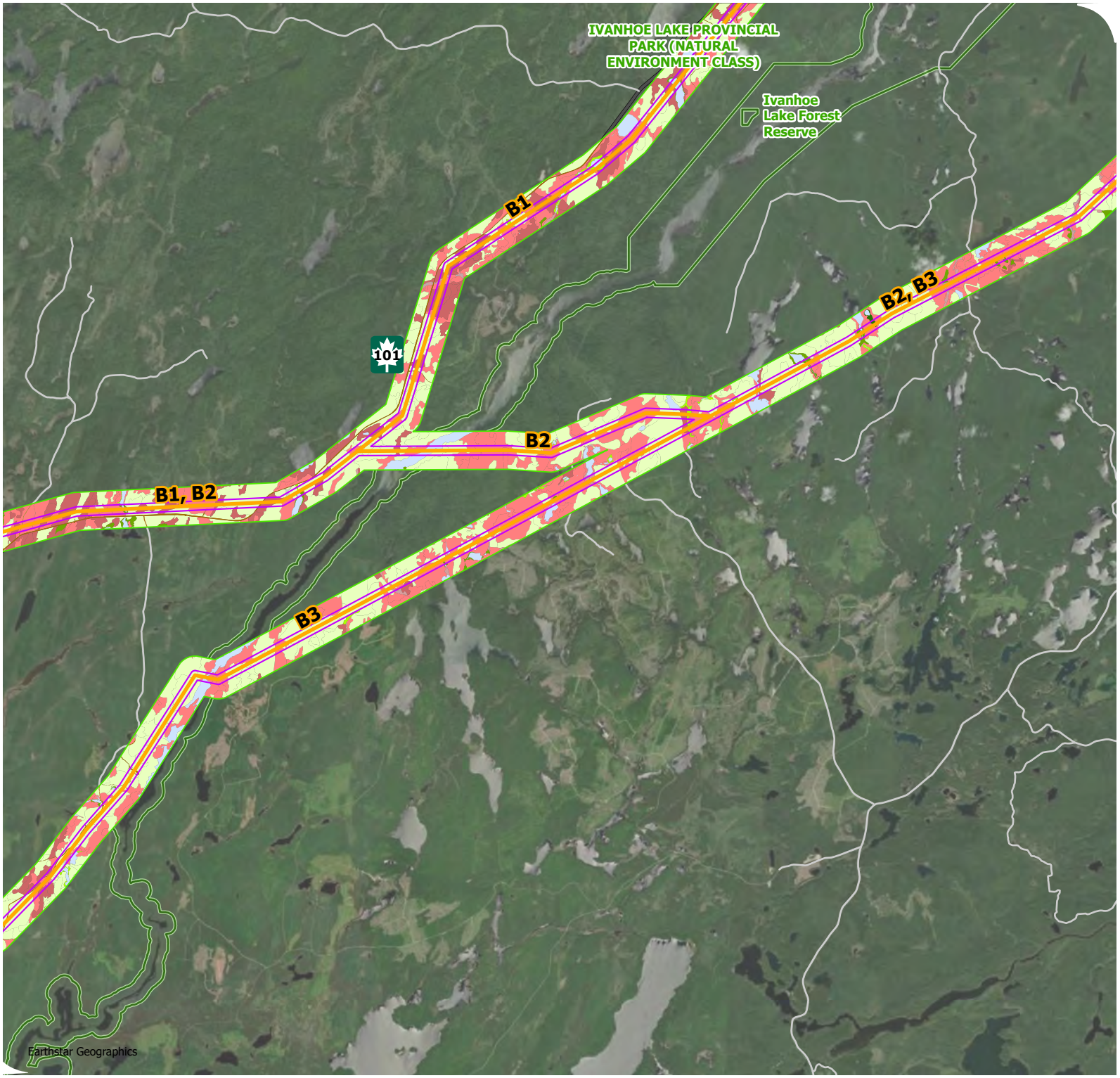
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WAWA TIMMINS POWER LINE

FIGURE 20. HABITAT TYPES WITHIN THE LSA

Mapping Extent - Ivanhoe Lake 3

- Routing Centerline
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Habitat

- Barren
- Bog
- Coniferous
- Deciduous
- Disturbance
- Fen
- Marsh
- Swamp - Coniferous
- Swamp - Deciduous
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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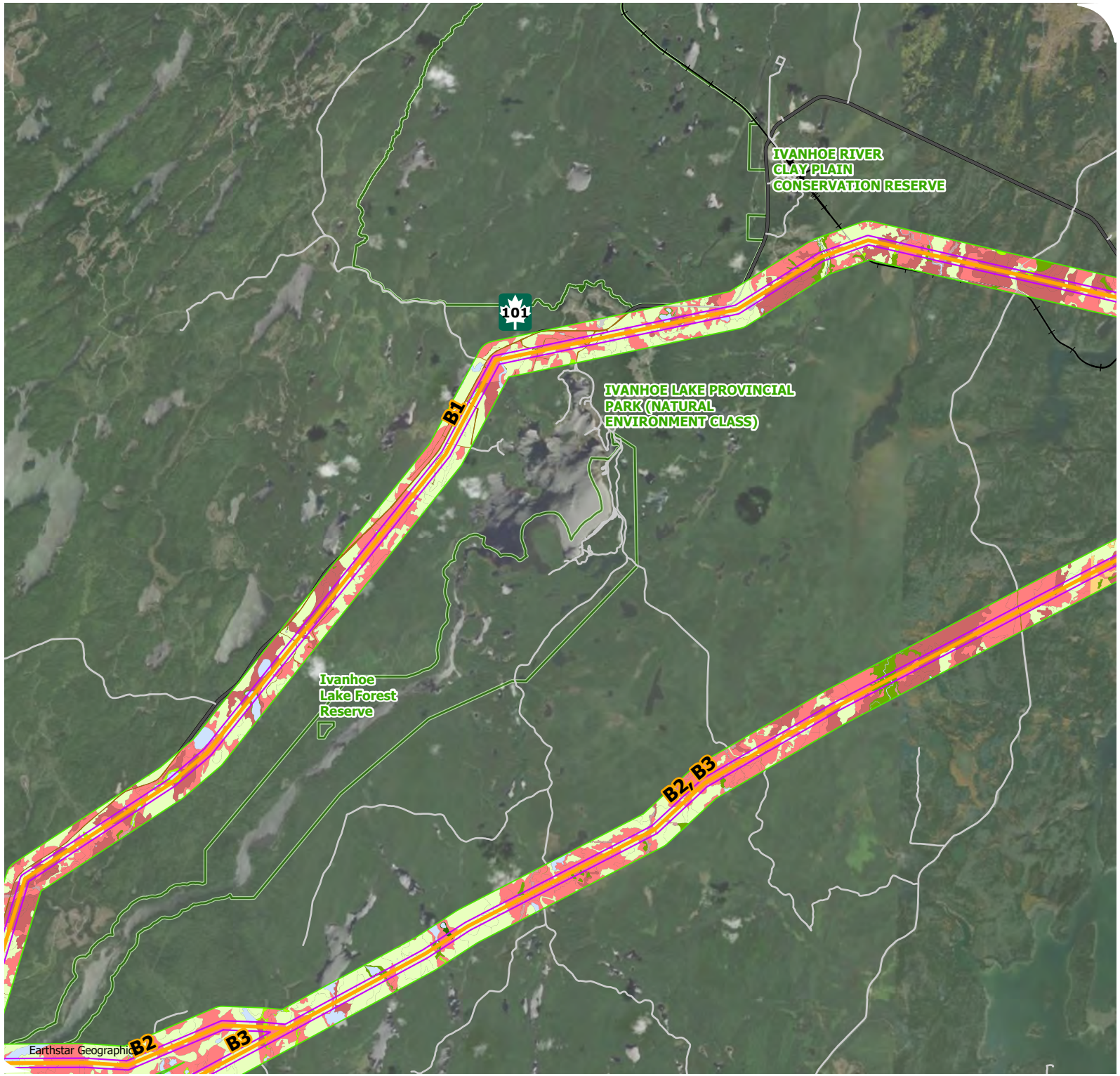
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WAWA TIMMINS POWER LINE

FIGURE 21. HABITAT TYPES WITHIN THE LSA

Mapping Extent - Ivanhoe Lake 4



- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Habitat

- Barren
- Bog
- Coniferous
- Deciduous
- Disturbance
- Fen
- Marsh
- Mixedwood
- Swamp - Coniferous
- Swamp - Deciduous
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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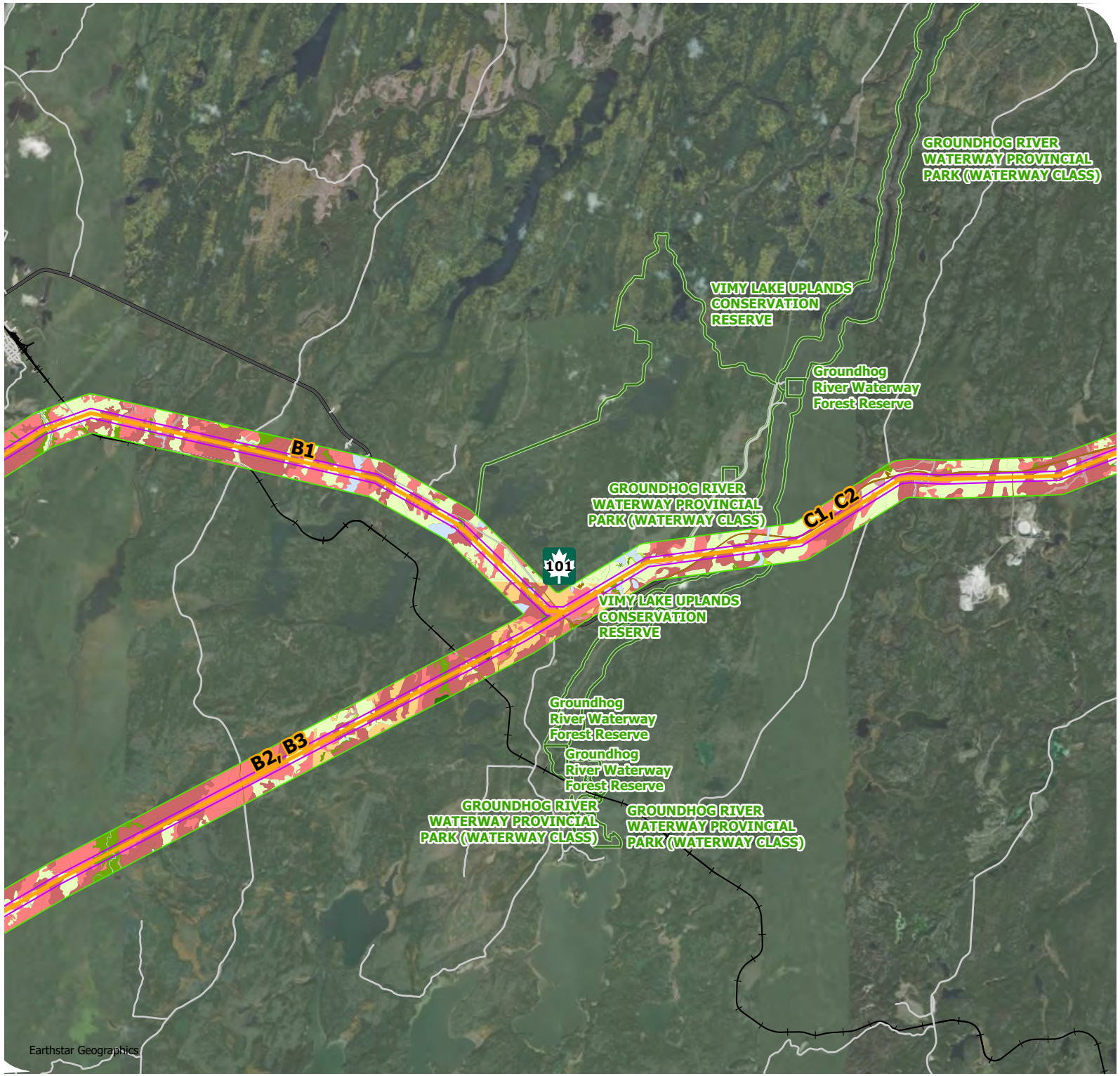
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WAWA TIMMINS POWER LINE

FIGURE 22. HABITAT TYPES WITHIN THE LSA

Mapping Extent - Foleyet



- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Habitat

- Barren
- Bog
- Coniferous
- Deciduous
- Disturbance
- Fen
- Marsh
- Mixedwood
- Shrubland
- Swamp - Coniferous
- Swamp - Deciduous
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

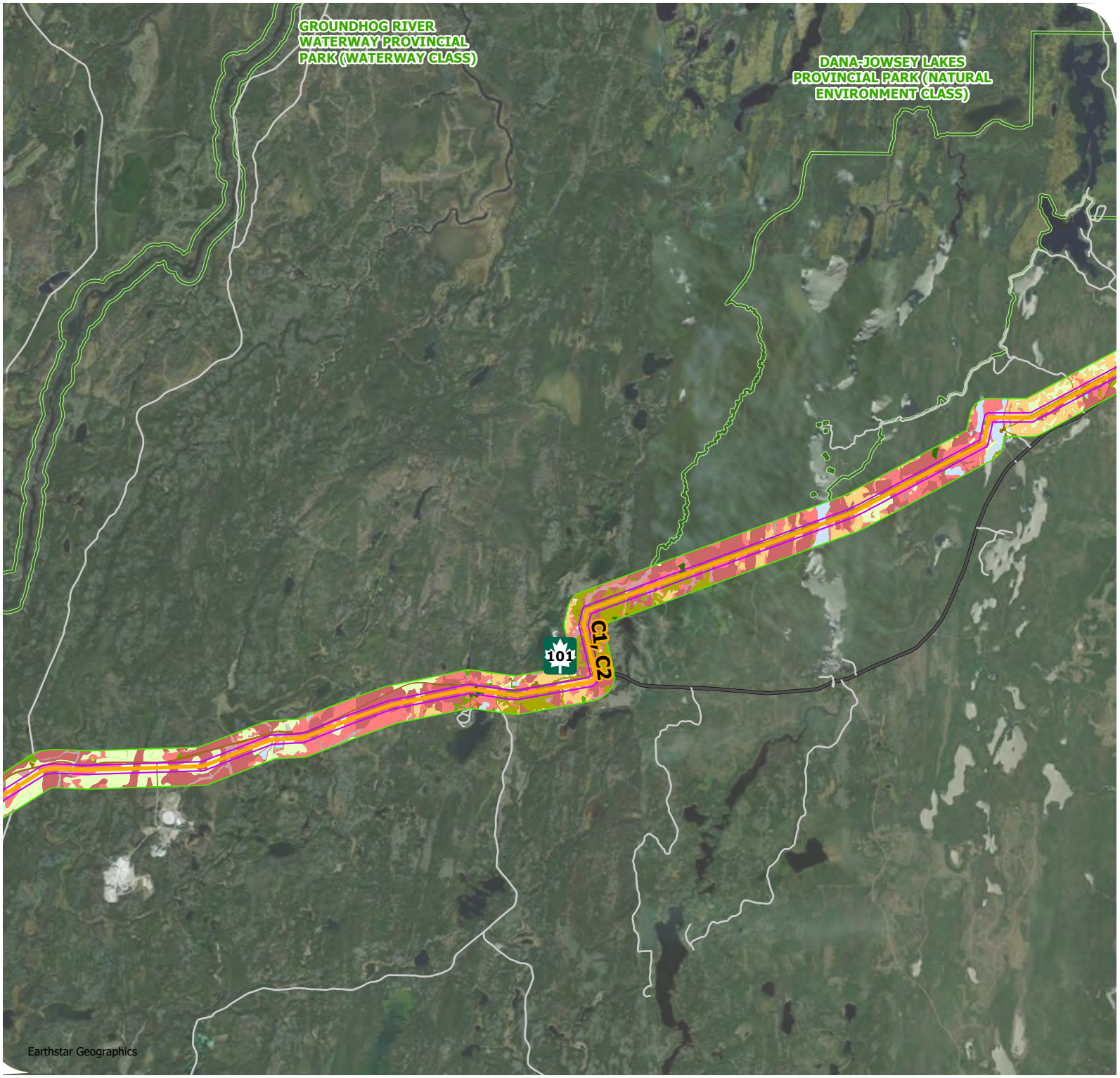
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 23. HABITAT TYPES WITHIN THE LSA

Mapping Extent - Dana-Jowsey Lakes 1

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Habitat

- Barren
- Bog
- Coniferous
- Deciduous
- Disturbance
- Fen
- Marsh
- Mixedwood
- Shrubland
- Swamp - Coniferous
- Swamp - Deciduous
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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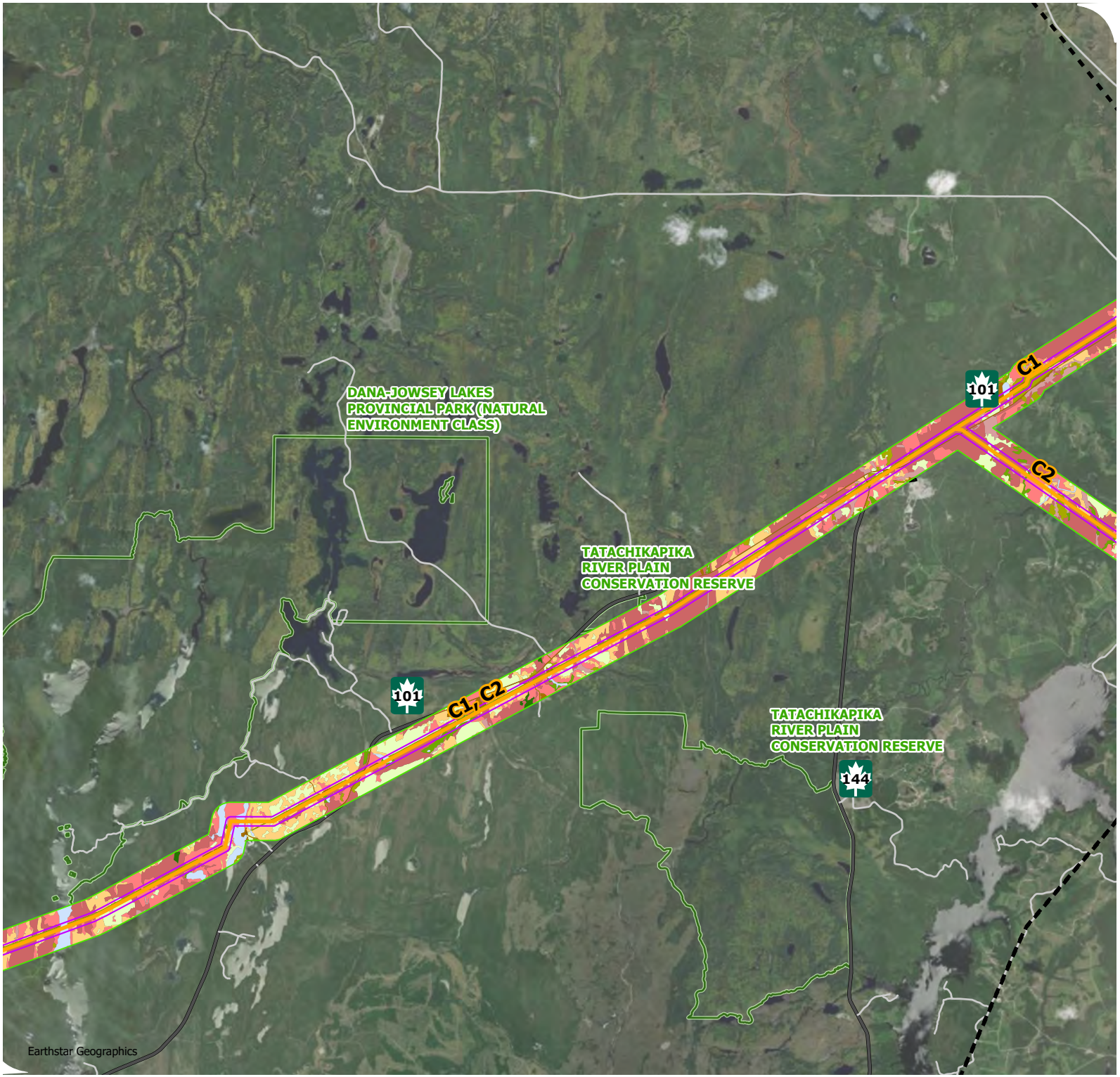
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WAWA TIMMINS POWER LINE

FIGURE 24. HABITAT TYPES WITHIN THE LSA

Mapping Extent - Dana-Jowsey Lakes 2



- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Habitat

- Bog
- Coniferous
- Deciduous
- Disturbance
- Fen
- Marsh
- Mixedwood
- Shrubland
- Swamp - Coniferous
- Swamp - Deciduous
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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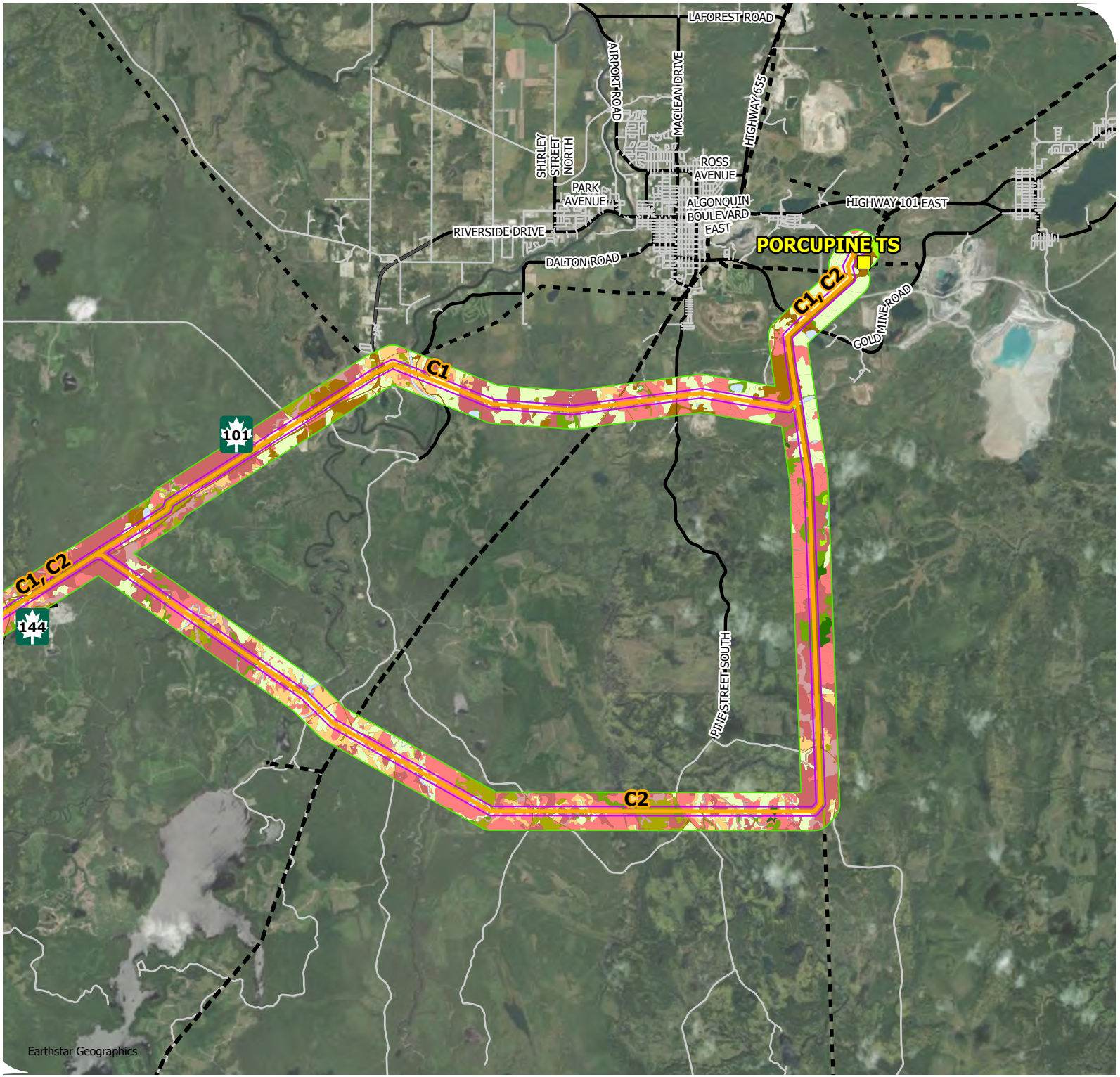
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WAWA TIMMINS POWER LINE

FIGURE 25. HABITAT TYPES WITHIN THE LSA



Mapping Extent - Timmins

- Hydro One Station/Junction
- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)

Habitat

- Barren
- Bog
- Coniferous
- Deciduous
- Disturbance
- Fen
- Marsh
- Mixedwood
- Shrubland
- Swamp - Coniferous
- Swamp - Deciduous
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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SCALE 1:139,000

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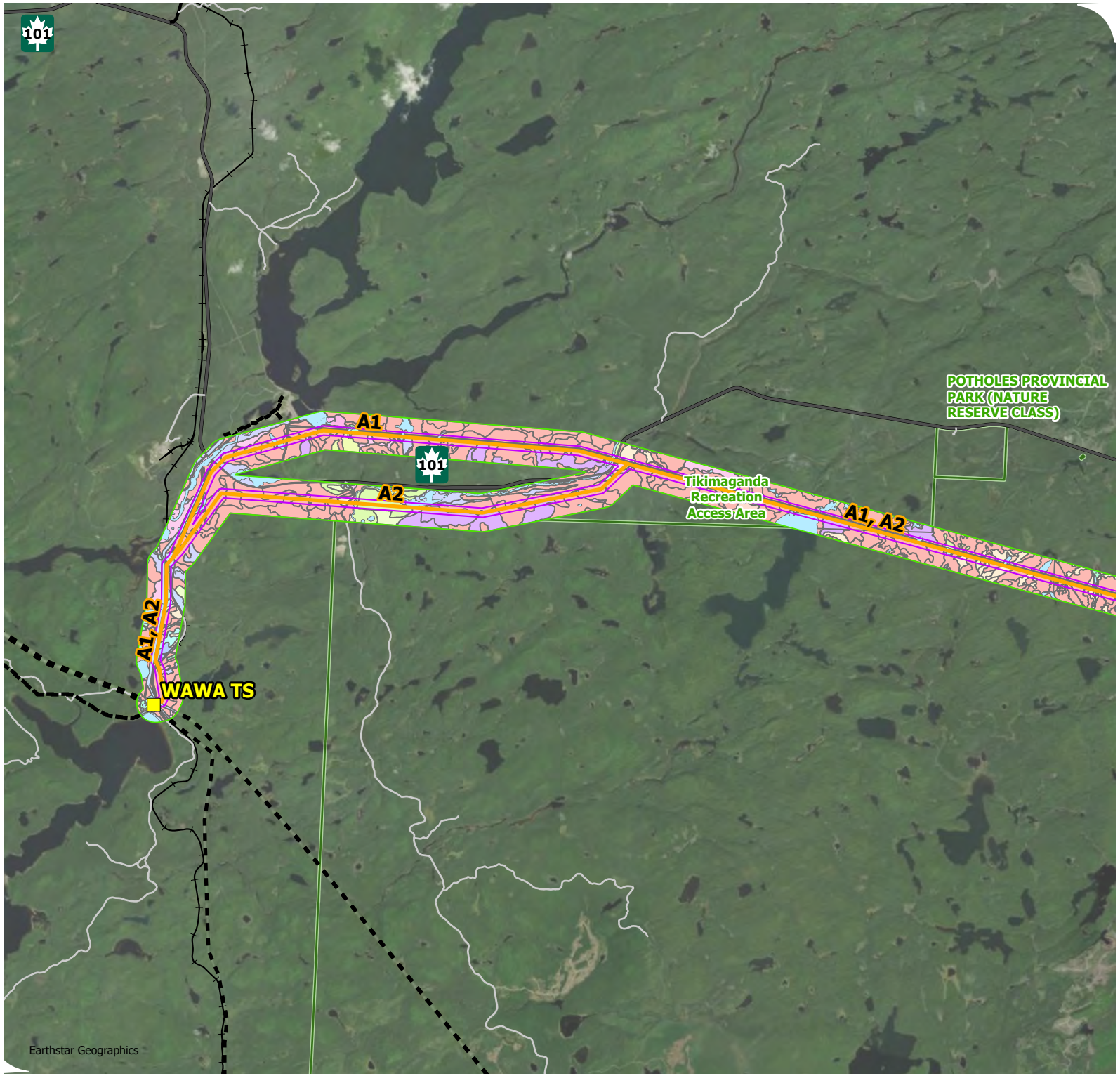
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WAWA TIMMINS POWER LINE

FIGURE 26. ECOSITES WITHIN THE LSA

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Ecosite

- B007
- B012
- B034
- B037
- B040
- B049
- B050
- B052
- B054
- B055
- B058
- B065
- B067
- B070
- B074
- B119
- B128
- B129
- B135
- B136
- B137
- B139
- B140
- B142
- B146
- B158
- B164
- B189
- B197
- U997-999
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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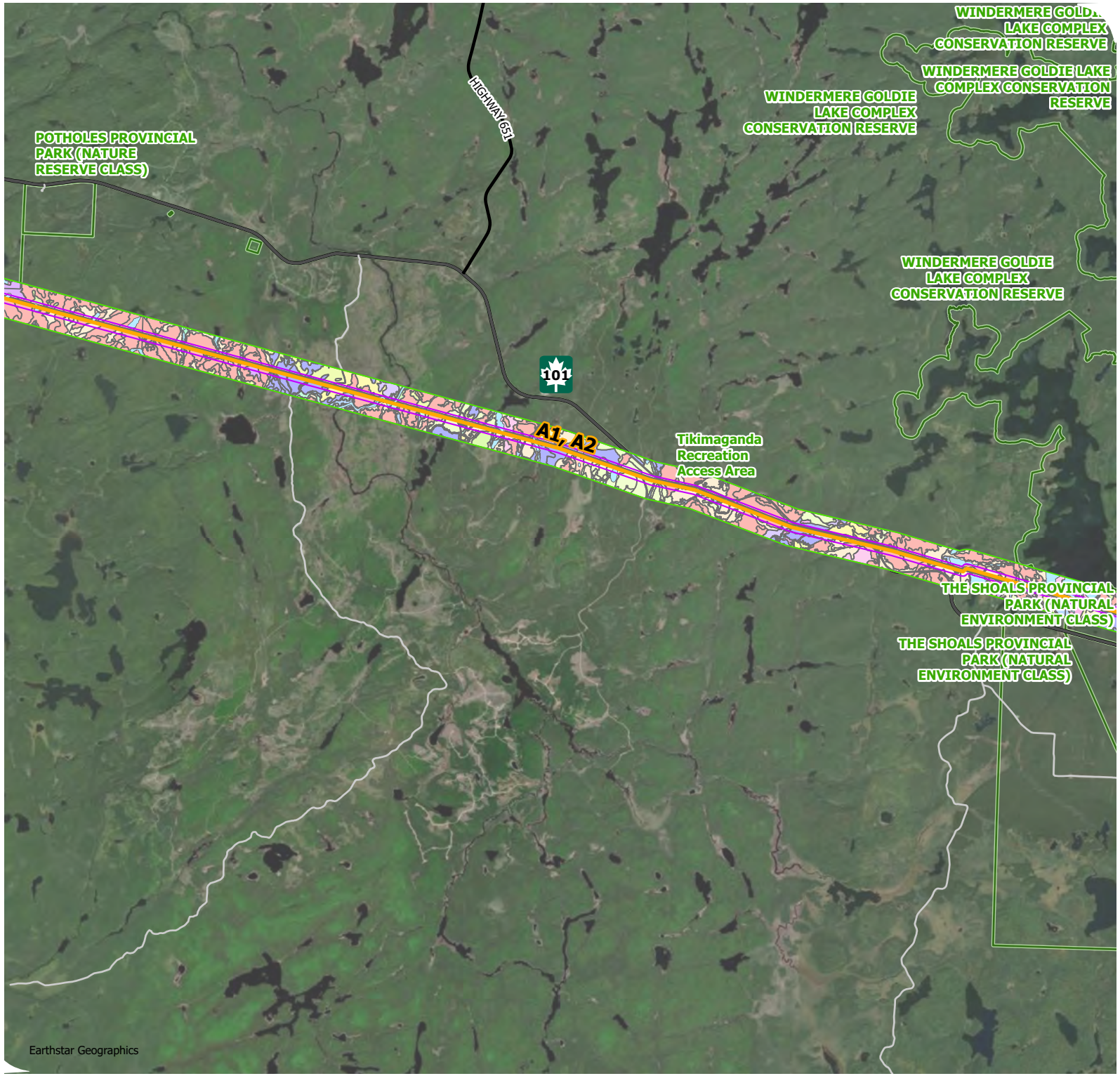
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WAWA TIMMINS POWER LINE

FIGURE 27. ECOSITES WITHIN THE LSA

Mapping Extent - Windermere Lake 1



- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Ecosite

- B007
- B012
- B034
- B035
- B036
- B040
- B049
- B050
- B052
- B055
- B058
- B065
- B067
- B099
- B101
- B127
- B128
- B129
- B135
- B136
- B139
- B140
- B142
- B146
- B164
- B197
- U997-999
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

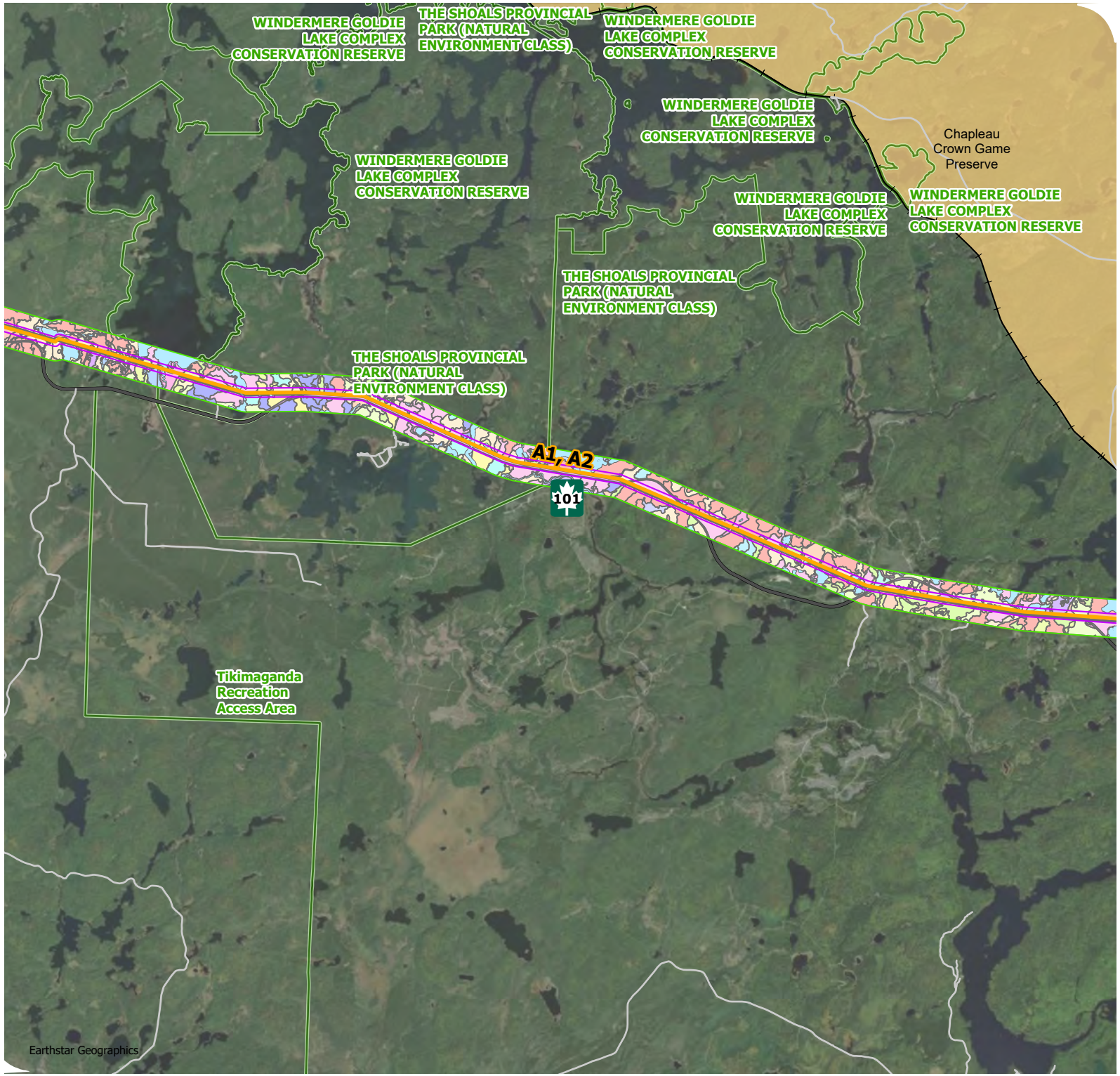
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STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 28. ECOSITES WITHIN THE LSA

Mapping Extent - Windemere Lake 2



- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Ecosite

- B007
- B034
- B035
- B037
- B049
- B050
- B052
- B055
- B058
- B065
- B066
- B067
- B070
- B101
- B127
- B128
- B129
- B135
- B136
- B139
- B140
- B142
- B146
- B197
- B223
- U997-999
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

N
W E
S

SCALE 1:139,000

0 1 2 Km

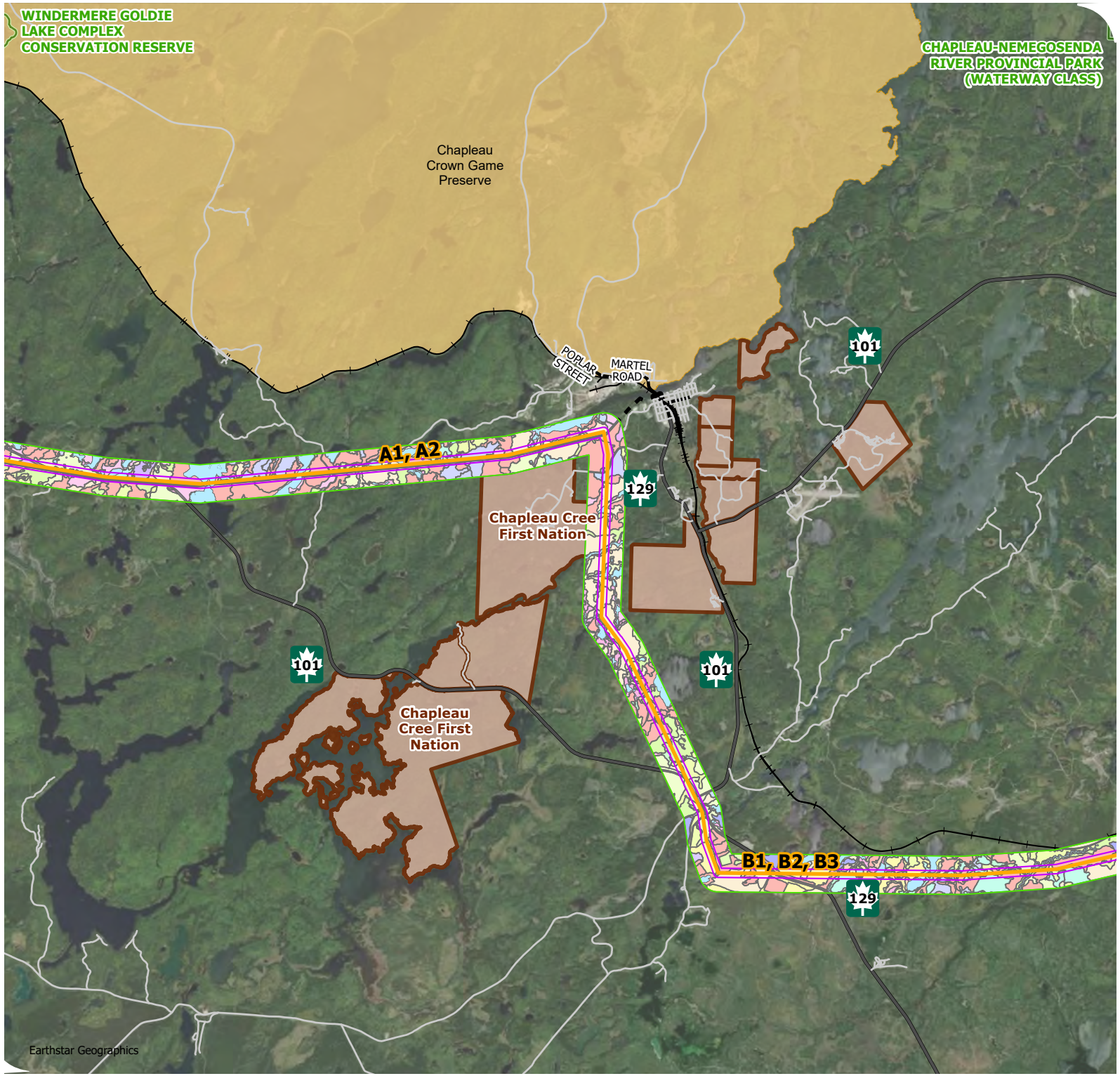
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WAWA TIMMINS POWER LINE

FIGURE 29. ECOSITES WITHIN THE LSA

Mapping Extent - Chapleau



- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Ecosite

- B007
- B034
- B035
- B037
- B040
- B049
- B050
- B052
- B055
- B065
- B066
- B067
- B070
- B127
- B128
- B129
- B135
- B136
- B139
- B140
- B142
- B191
- B197
- B223
- U997-999
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

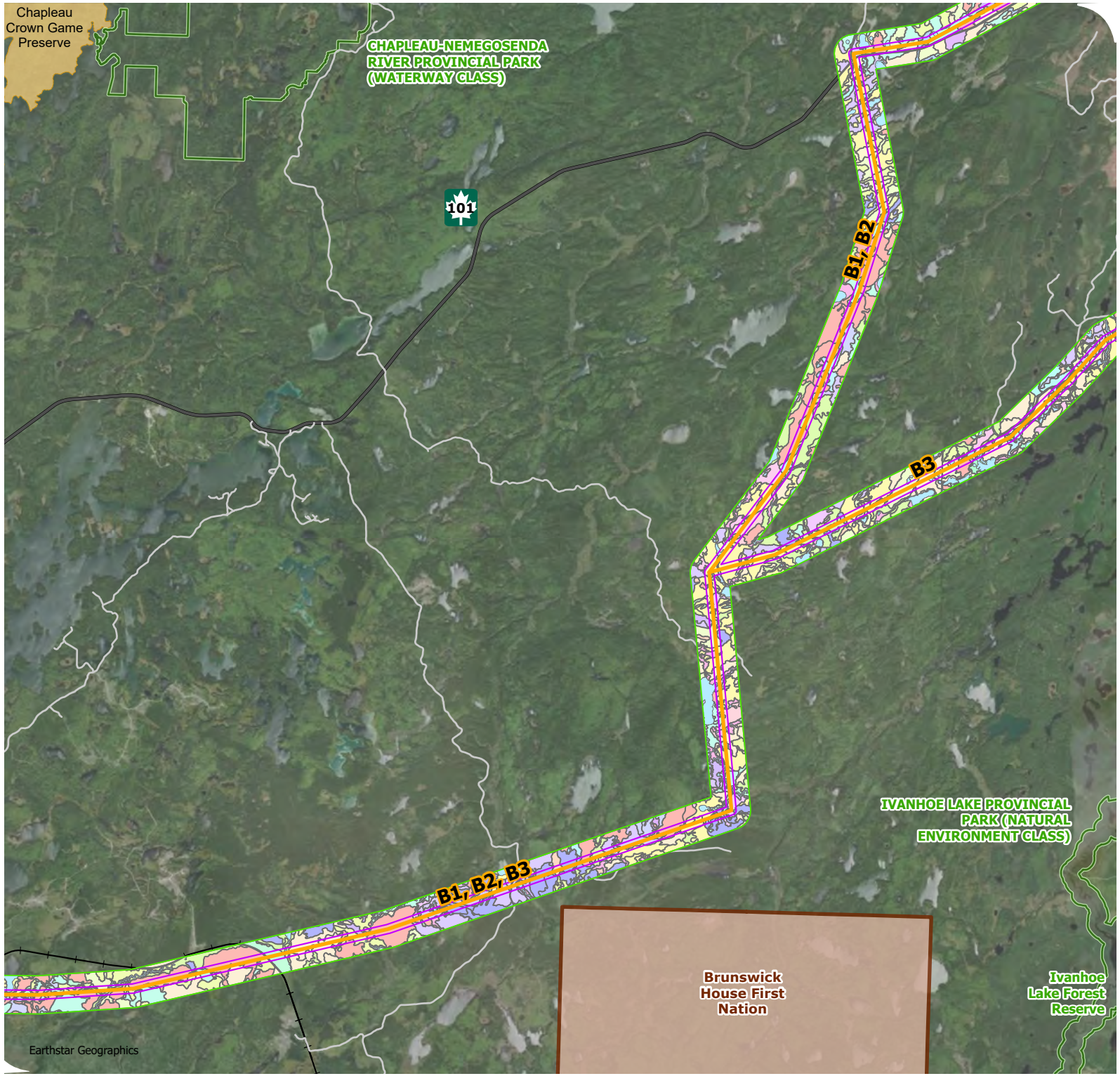
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WAWA TIMMINS POWER LINE

FIGURE 30. ECOSITES WITHIN THE LSA

Mapping Extent - Ivanhoe Lake 1



- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Ecosite

- B007
- B012
- B016
- B034
- B035
- B037
- B040
- B048
- B049
- B050
- B052
- B055
- B058
- B065
- B066
- B067
- B068
- B070
- B126
- B127
- B128
- B129
- B135
- B136
- B139
- B140
- B142
- B146
- B193
- B197
- B223
- U997-999
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
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SCALE 1:139,000

0 1 2 Km

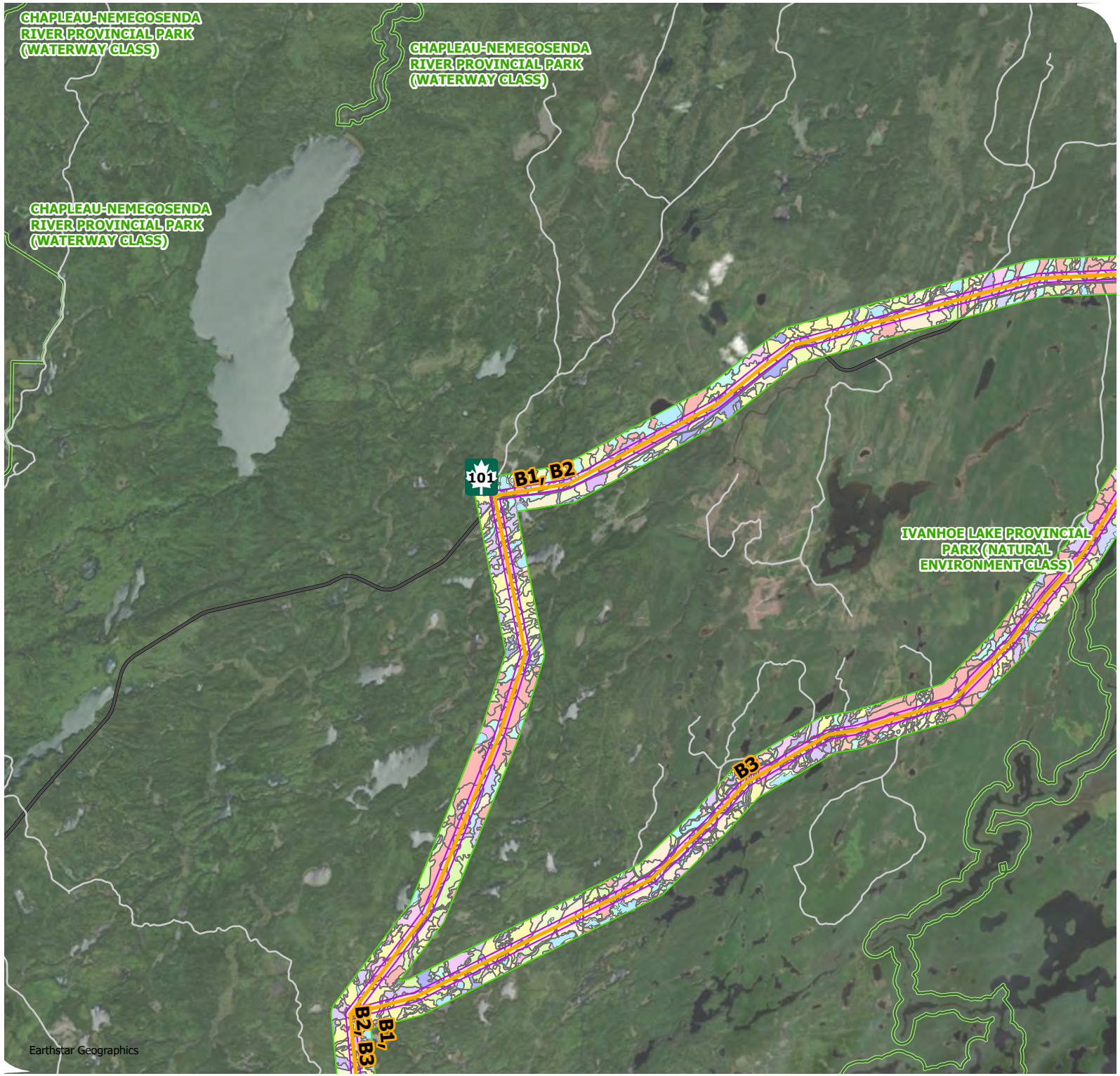
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WAWA TIMMINS POWER LINE

FIGURE 31. ECOSITES WITHIN THE LSA

Mapping Extent - Ivanhoe Lake 2



Routing Centerline
Expressway / Highway
Minor Road
Crown Land Use Policy Area
Project Study Area (PSA)
Local Study Area (LSA)

Ecosite
B007
B012
B016
B034
B035
B037
B040
B048
B049
B050
B052
B055
B065
B066
B067
B068
B070
B115
B126
B127
B128
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B135
B136
B137
B139
B140
B142
B146
B193
B197
B223
B224
U997-999
Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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S

SCALE 1:139,000

0 1 2 Km

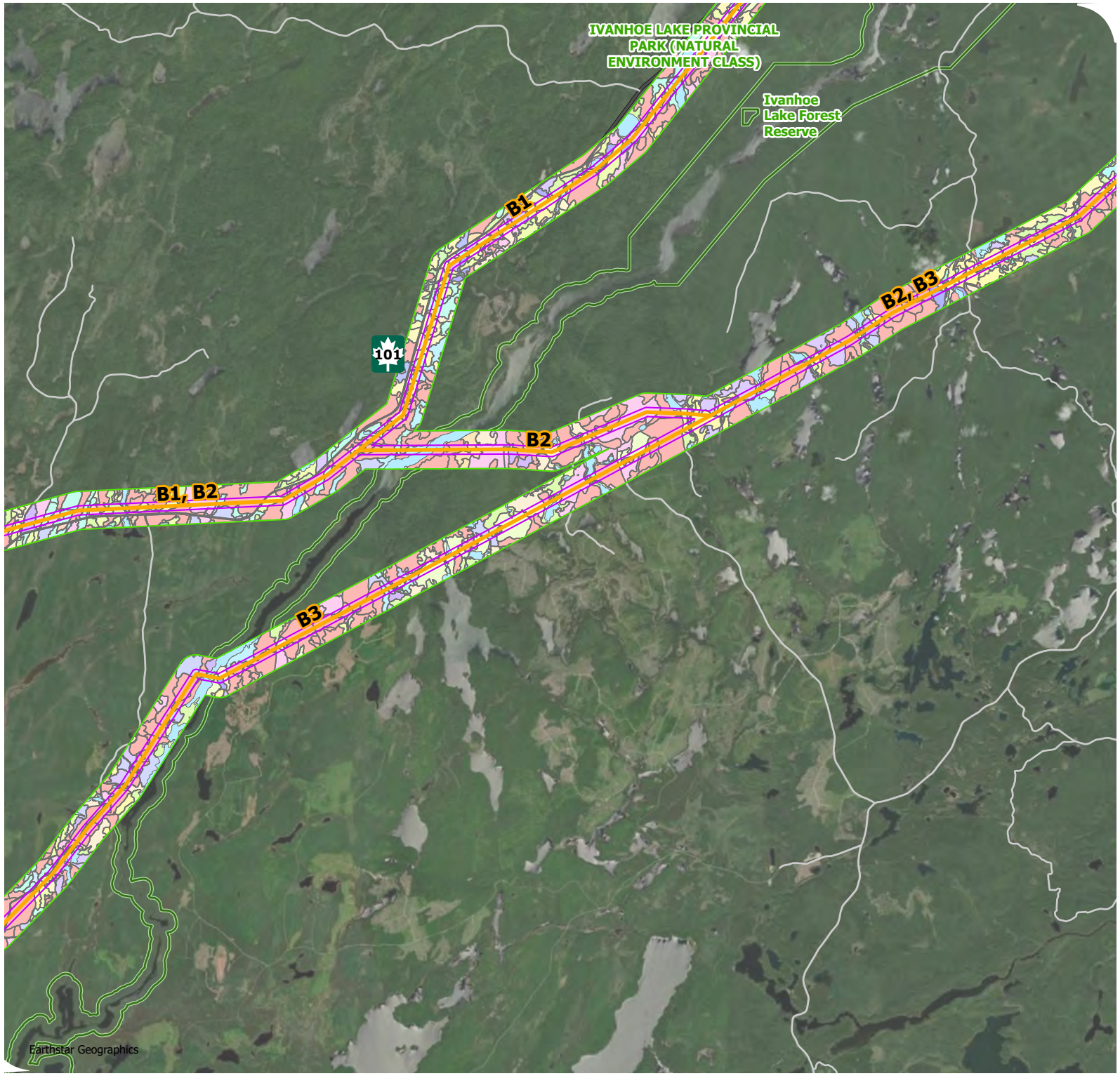
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WAWA TIMMINS POWER LINE

FIGURE 32. ECOSITES WITHIN THE LSA

Mapping Extent - Ivanhoe Lake 3



- Routing Centerline
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Ecosite

- B007
- B012
- B034
- B035
- B037
- B040
- B049
- B050
- B051
- B052
- B053
- B055
- B065
- B066
- B067
- B070
- B099
- B100
- B101
- B104
- B114
- B115
- B126
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- B128
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- B135
- B136
- B139
- B140
- B142
- B146
- B197
- B223
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

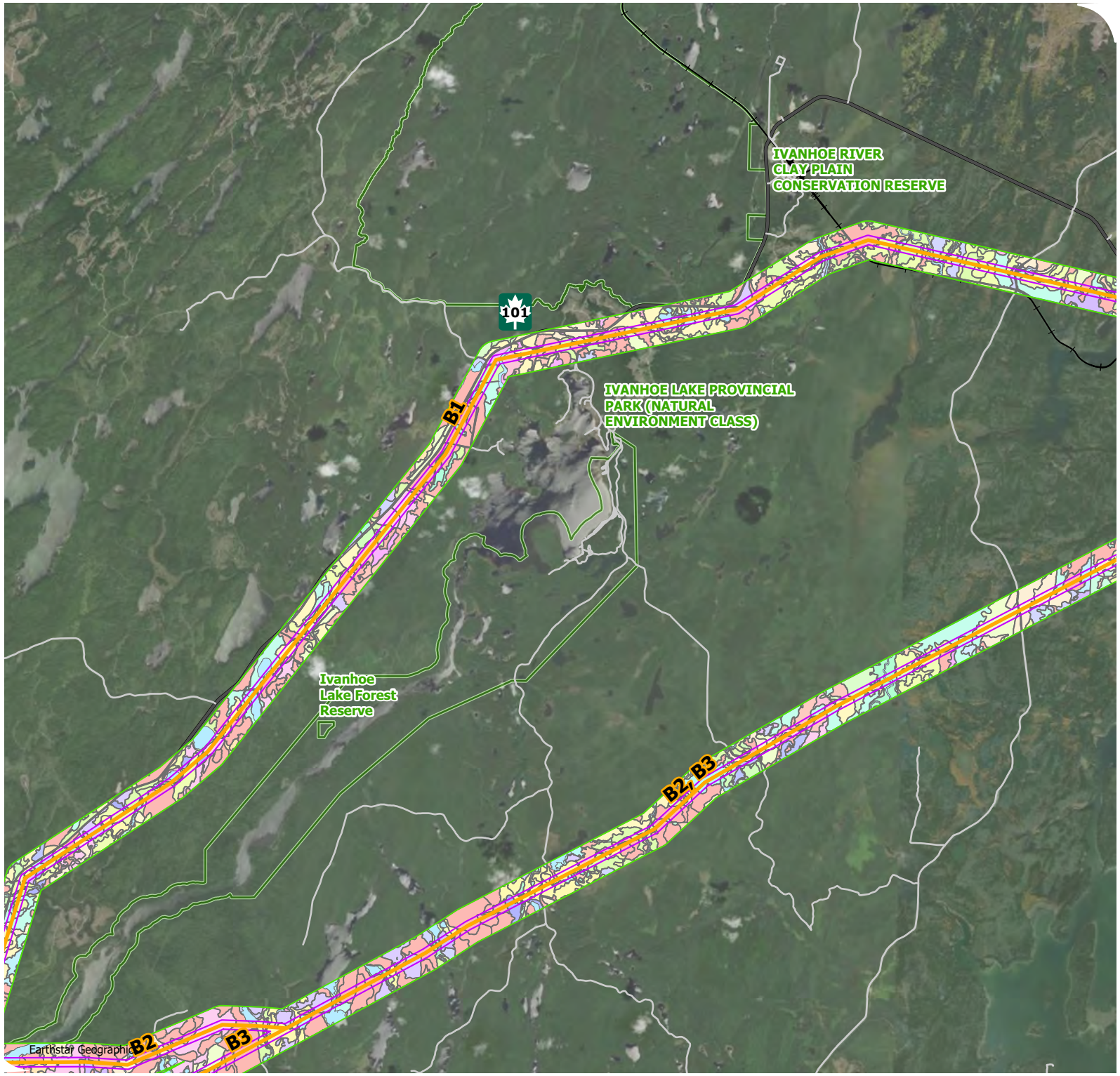
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WAWA TIMMINS POWER LINE

FIGURE 33. ECOSITES WITHIN THE LSA

Mapping Extent - Ivanhoe Lake 4



- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Ecosite

- B007
- B012
- B034
- B035
- B037
- B040
- B049
- B050
- B051
- B052
- B053
- B055
- B059
- B065
- B066
- B067
- B068
- B070
- B071
- B097
- B098
- B099
- B100
- B101
- B104
- B114
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- B127
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- B136
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- B140
- B142
- B146
- B147
- B197
- B223
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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SCALE 1:139,000

0 1 2 Km

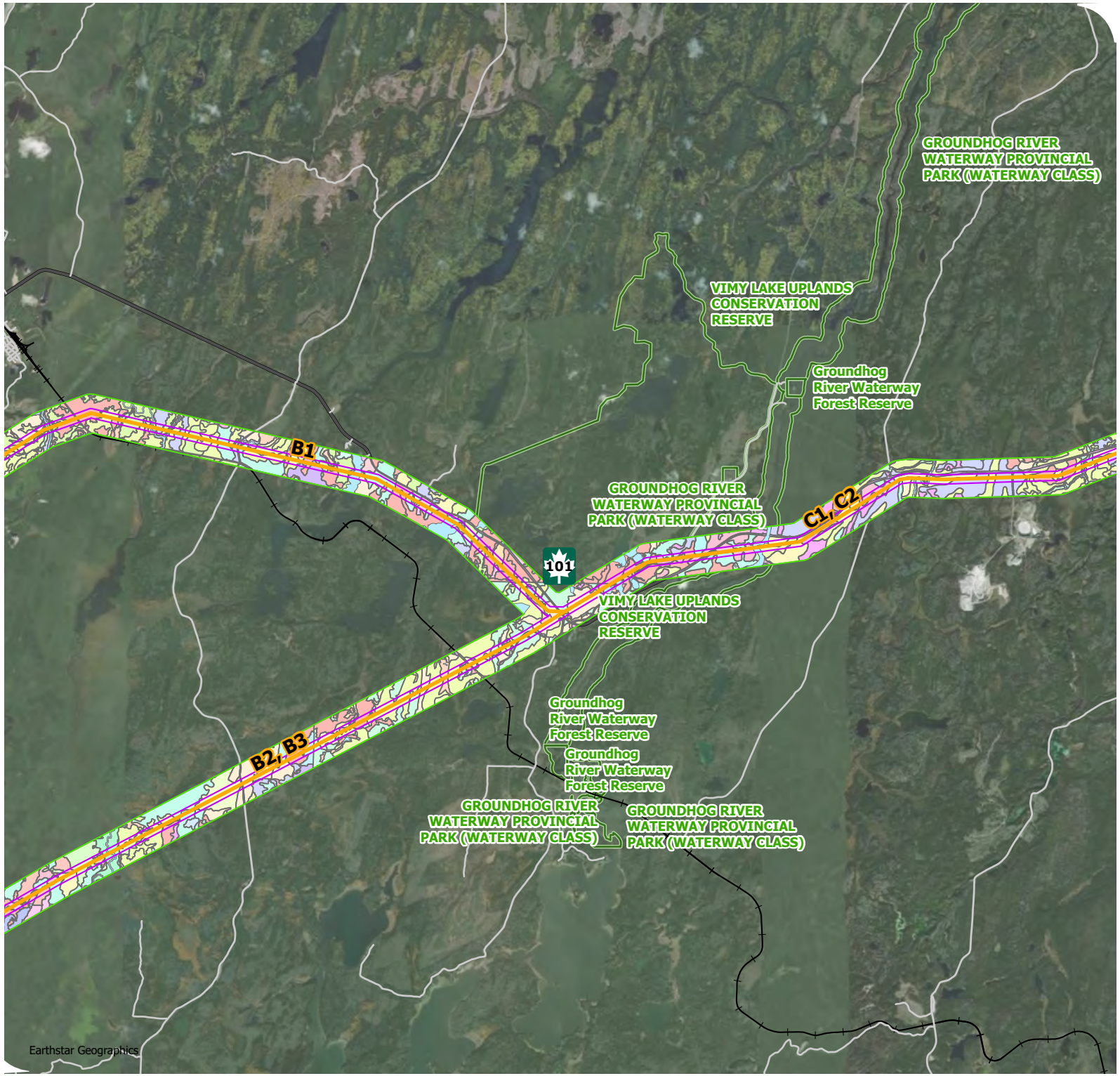
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WAWA TIMMINS POWER LINE

FIGURE 34. ECOSITES WITHIN THE LSA

Mapping Extent - Foleyet



- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Ecosite

- B007
- B010
- B035
- B037
- B040
- B048
- B049
- B050
- B051
- B052
- B055
- B059
- B065
- B066
- B067
- B068
- B070
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- B140
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- B146
- B147
- B197
- Water

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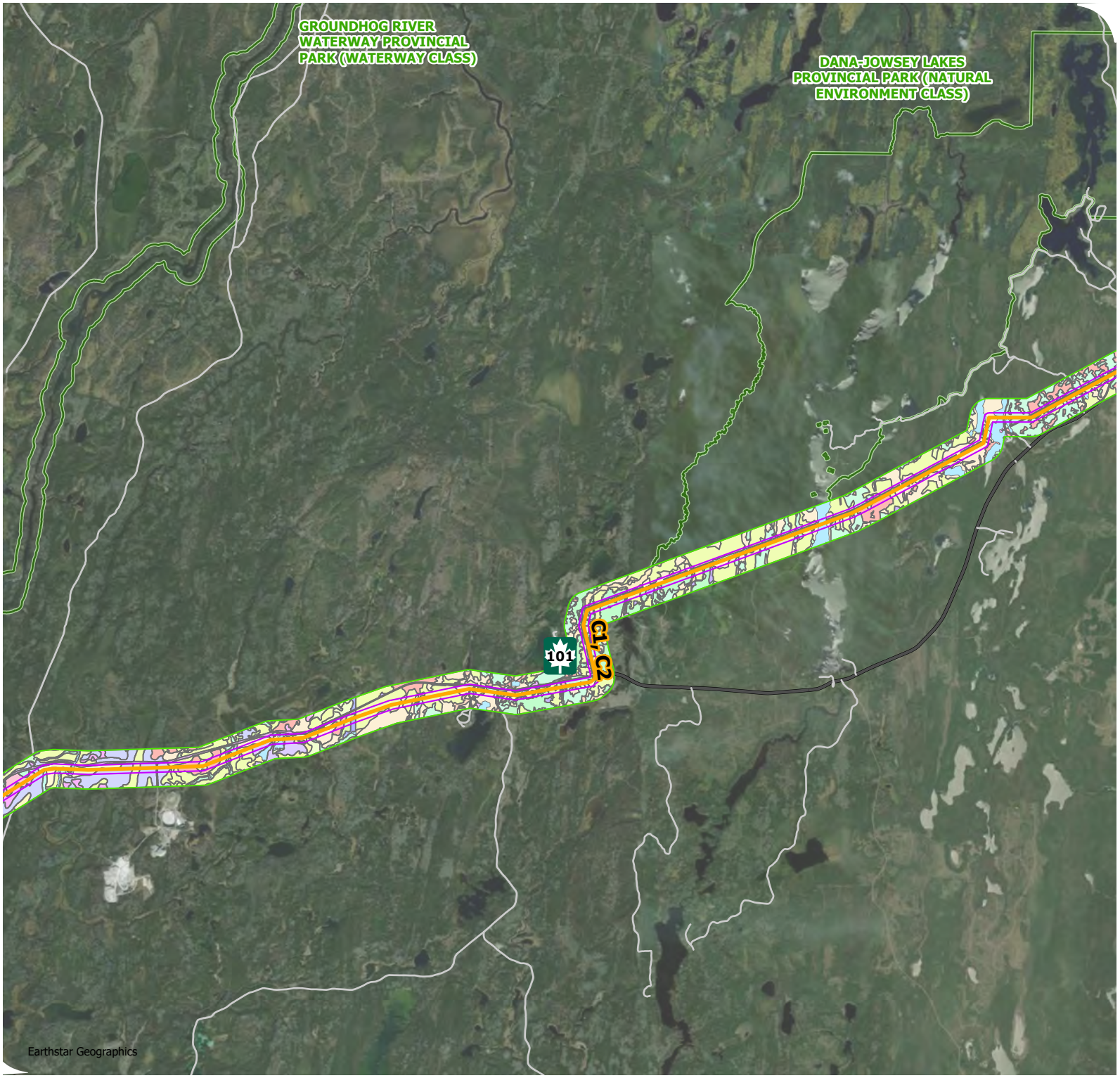
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SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 35. ECOSITES WITHIN THE LSA

Mapping Extent - Dana-Jowsey Lakes 1

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Ecosite

- B007
- B010
- B034
- B035
- B040
- B049
- B050
- B055
- B059
- B065
- B070
- B104
- B114
- B119
- B126
- B127
- B128
- B129
- B133
- B134
- B135
- B136
- B140
- B142
- B146
- B197
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

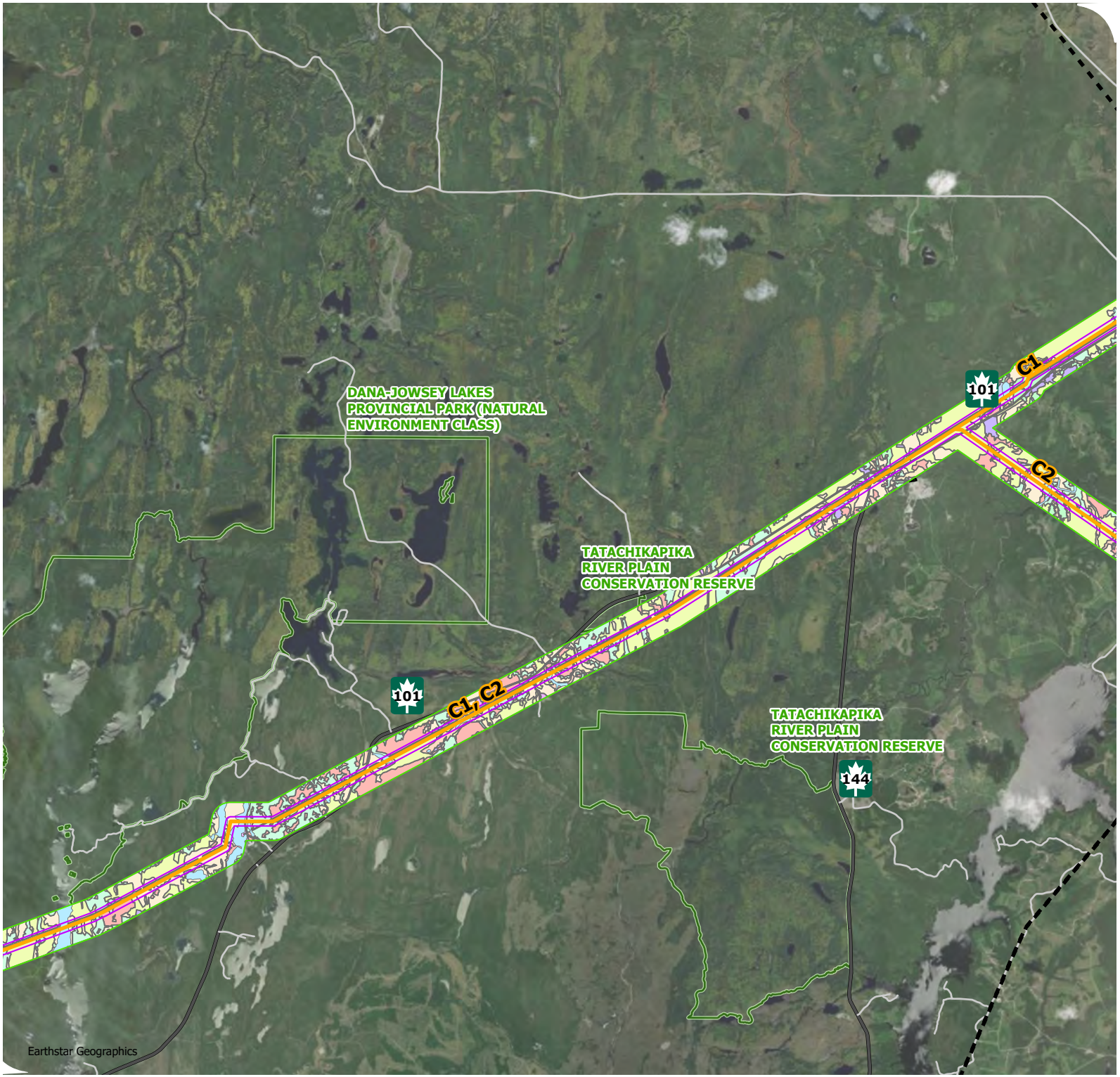
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WAWA TIMMINS POWER LINE

FIGURE 36. ECOSITES WITHIN THE LSA

Mapping Extent - Dana-Jowsey Lakes 2



- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Ecosite

- B010
- B050
- B055
- B059
- B126
- B128
- B133
- B134
- B136
- B142
- B197
- U997-999
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

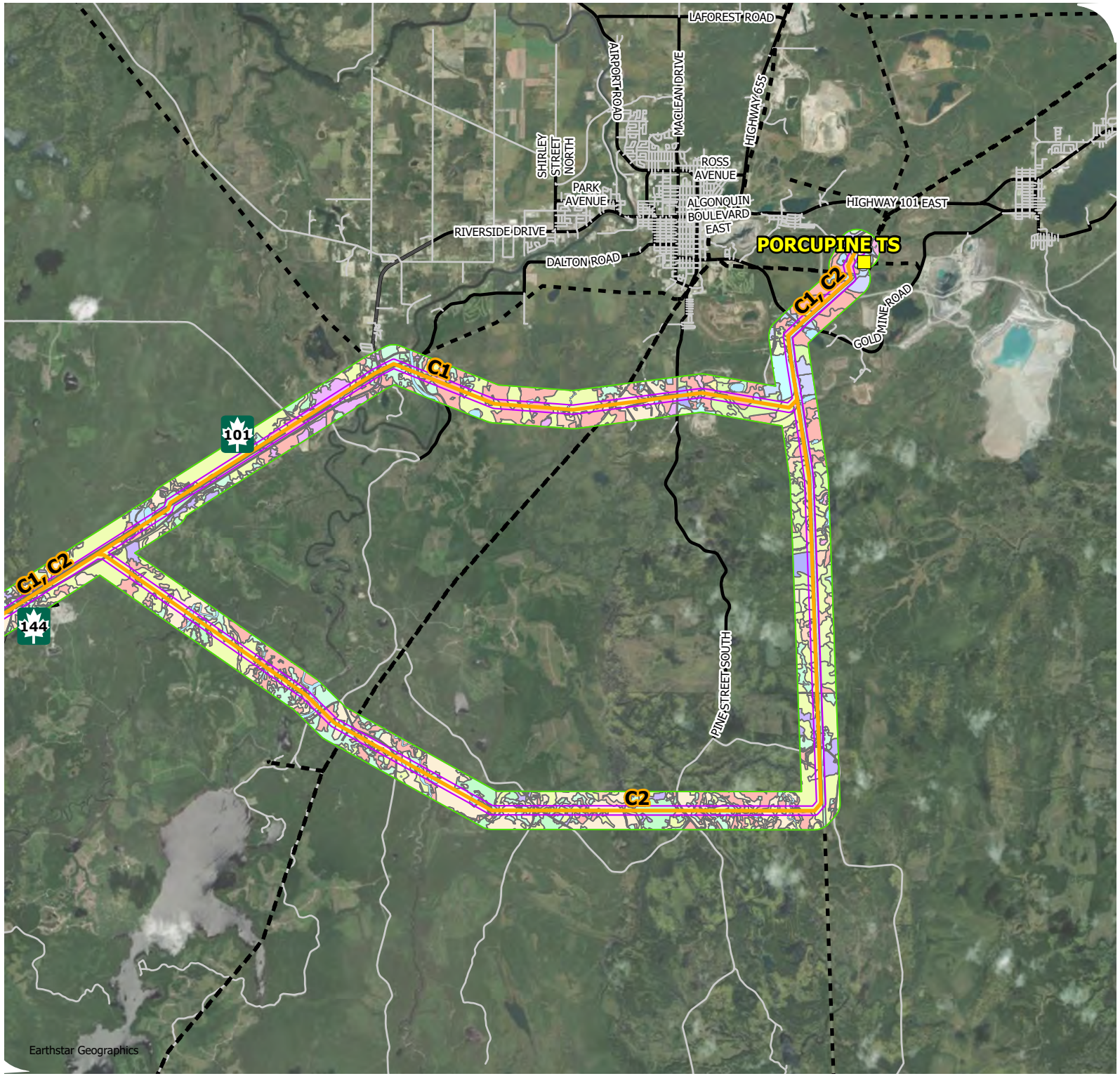
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WAWA TIMMINS POWER LINE

FIGURE 37. ECOSITES WITHIN THE LSA

Mapping Extent - Timmins



- Hydro One Station/Junction
- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)

Ecosite

- B007
- B010
- B016
- B034
- B035
- B040
- B049
- B050
- B052
- B055
- B059
- B065
- B066
- B070
- B104
- B116
- B126
- B128
- B133
- B134
- B135
- B136
- B138
- B139
- B140
- B142
- B146
- B165
- B193
- B197
- U997-999
- Water

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

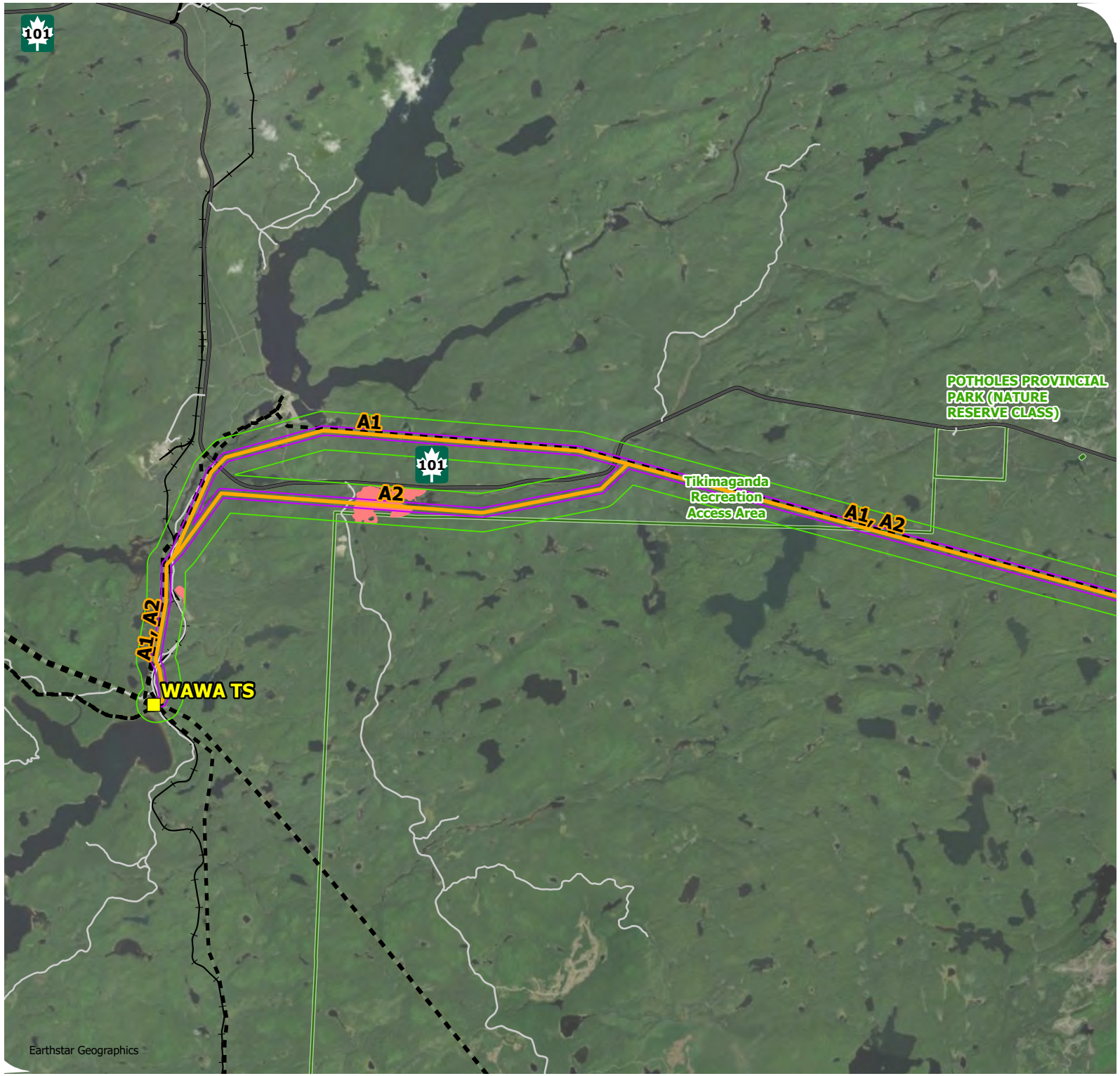
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DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 38. SWH - MOOSE LATE WINTER HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Late Winter Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

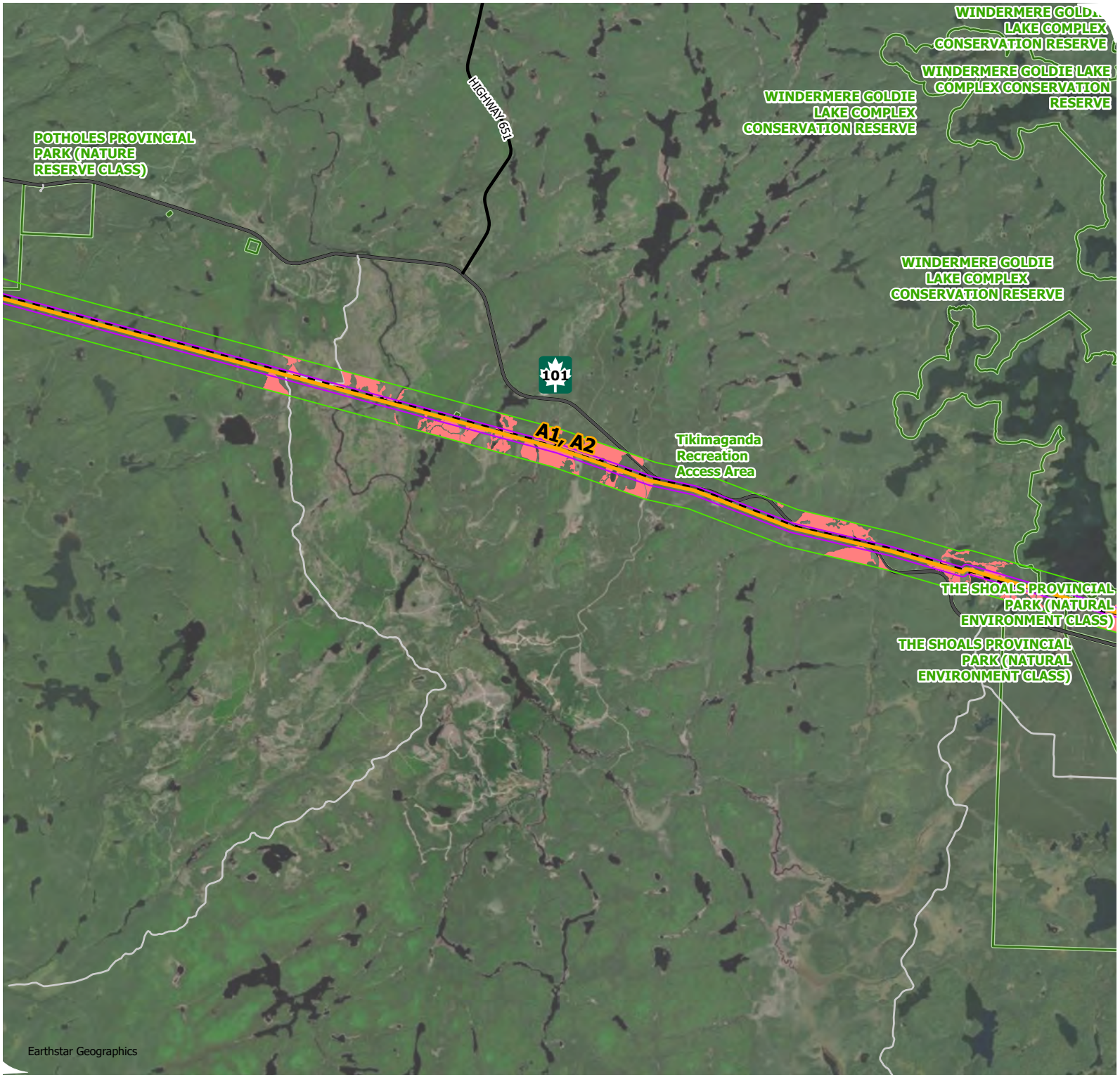
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 39. SWH - MOOSE LATE WINTER HABITAT

Mapping Extent - Windermere Lake 1

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Late Winter Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

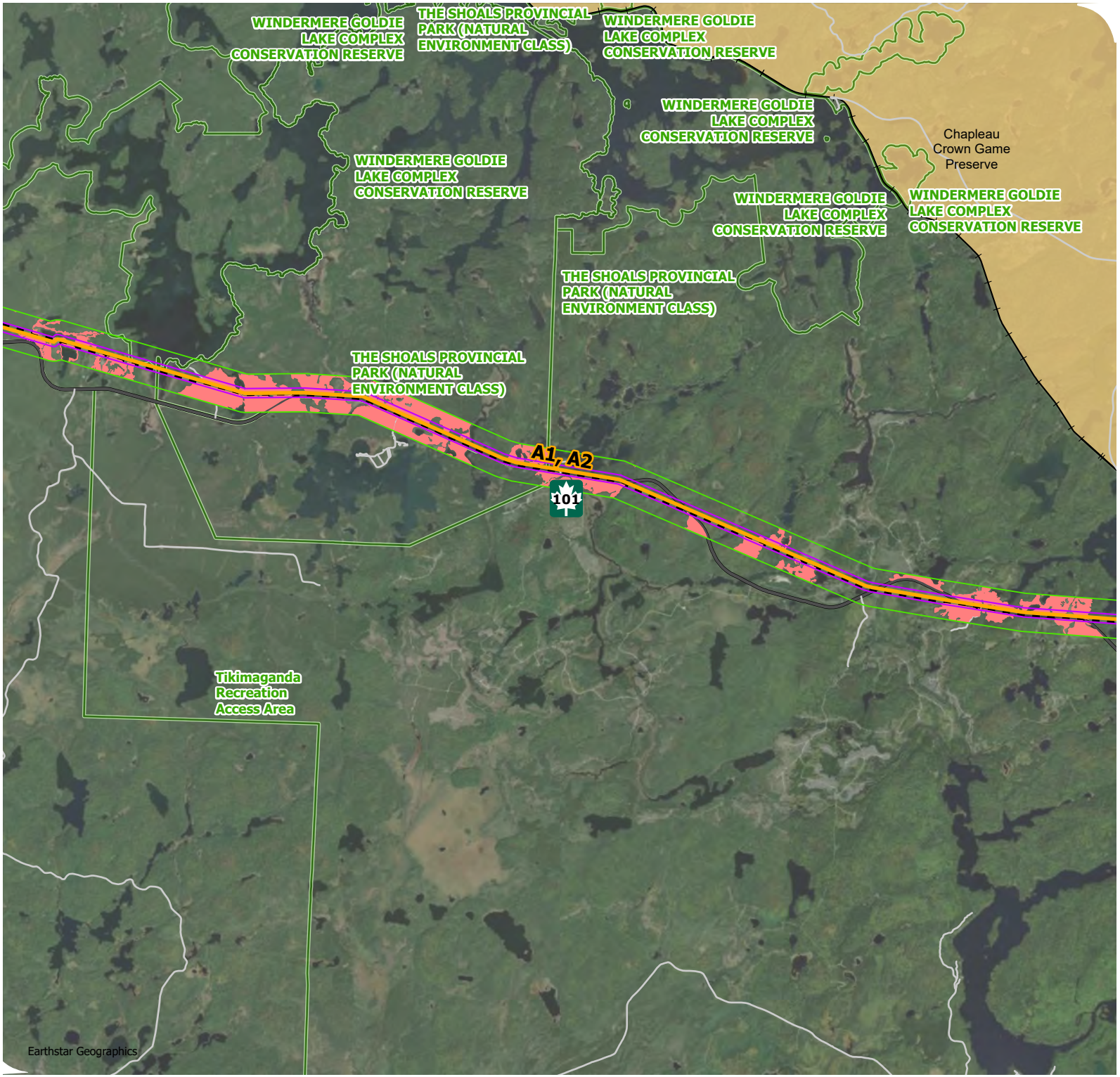
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SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 40. SWH - MOOSE LATE WINTER HABITAT

Mapping Extent - Windemere Lake 2

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Late Winter Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

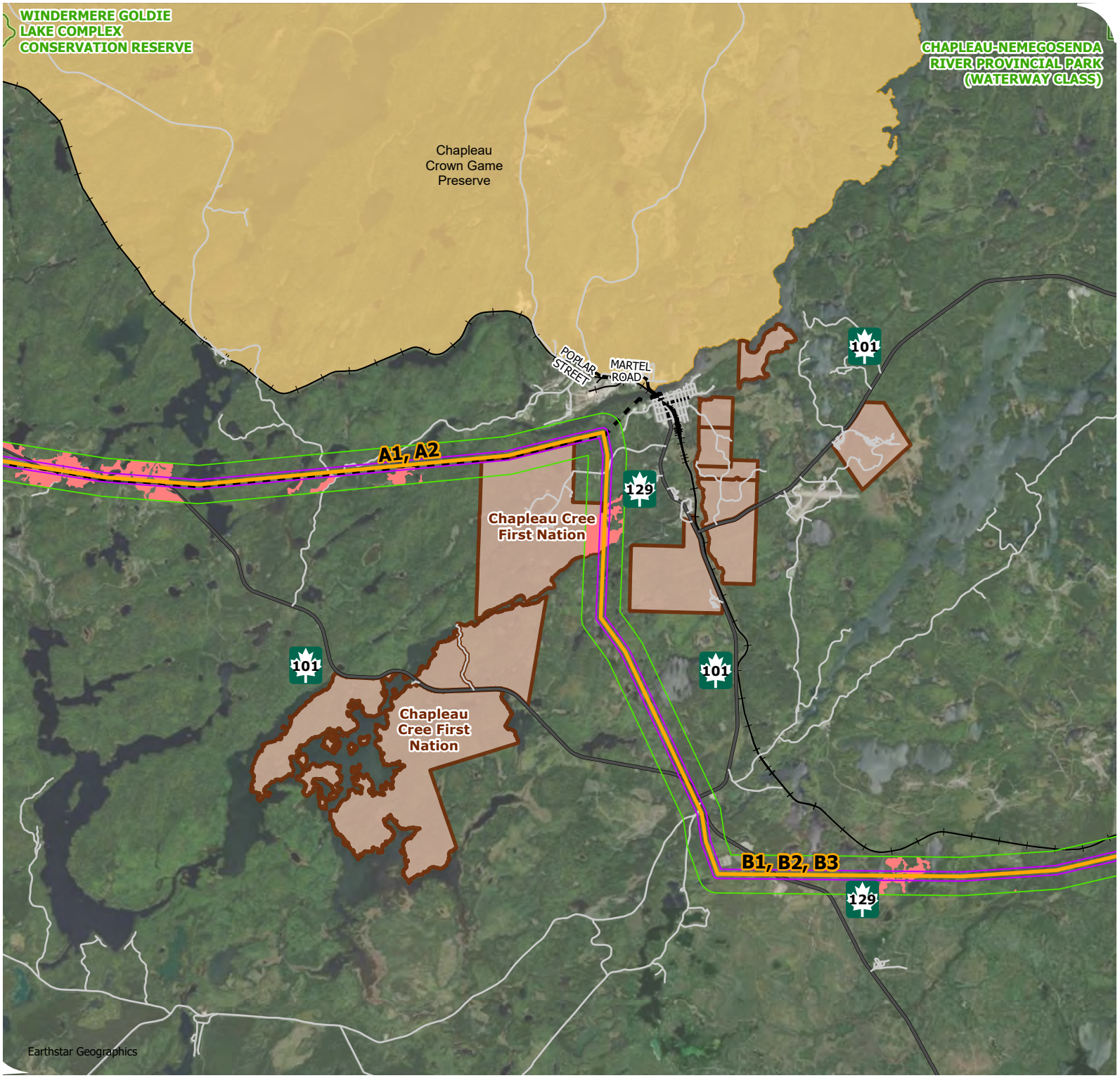
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SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 41. SWH - MOOSE LATE WINTER HABITAT

Mapping Extent - Chapleau

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Late Winter Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

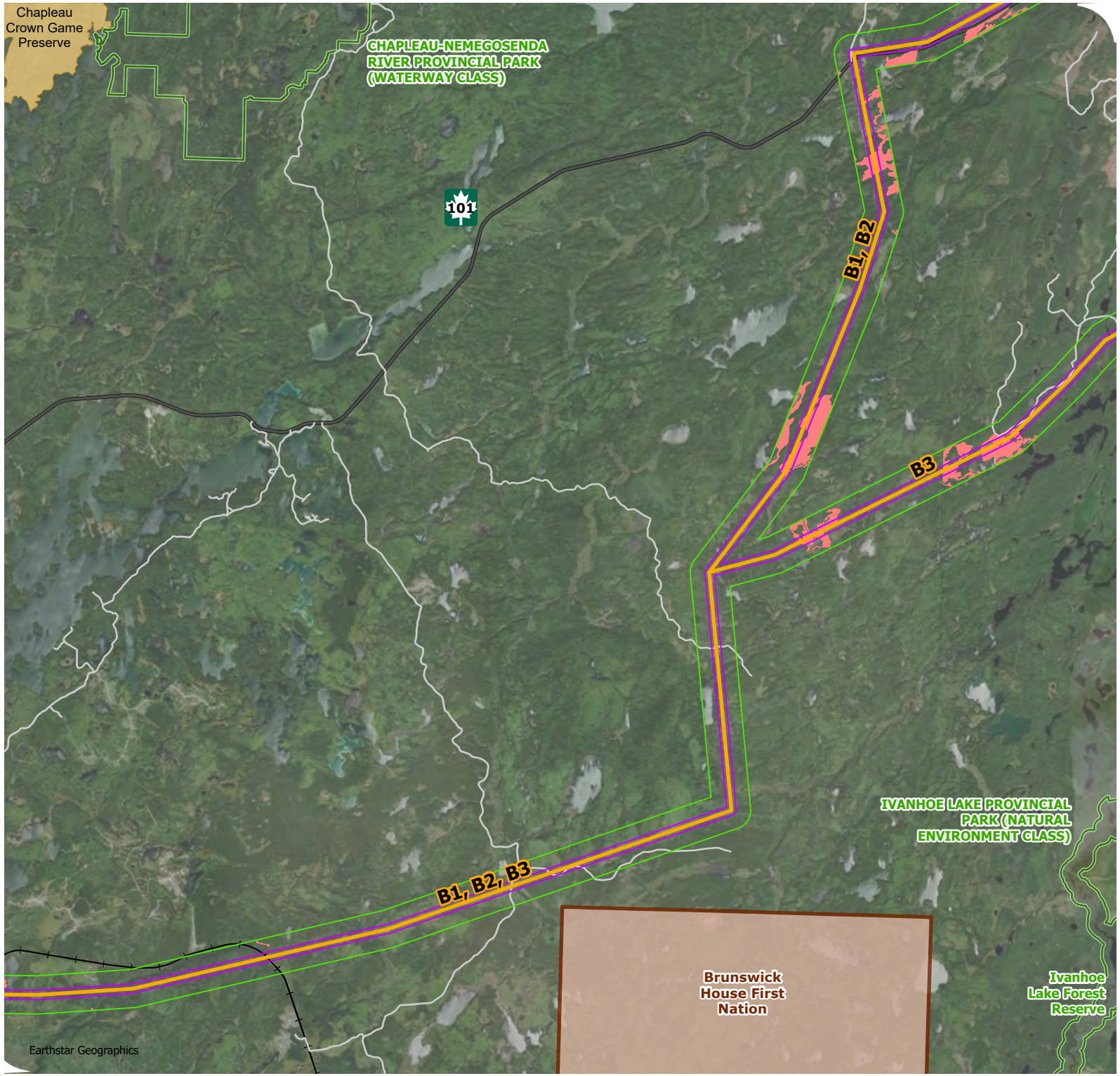
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WAWA TIMMINS POWER LINE

FIGURE 42. SWH - MOOSE LATE WINTER HABITAT

Mapping Extent - Ivanhoe Lake 1



- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Late Winter Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

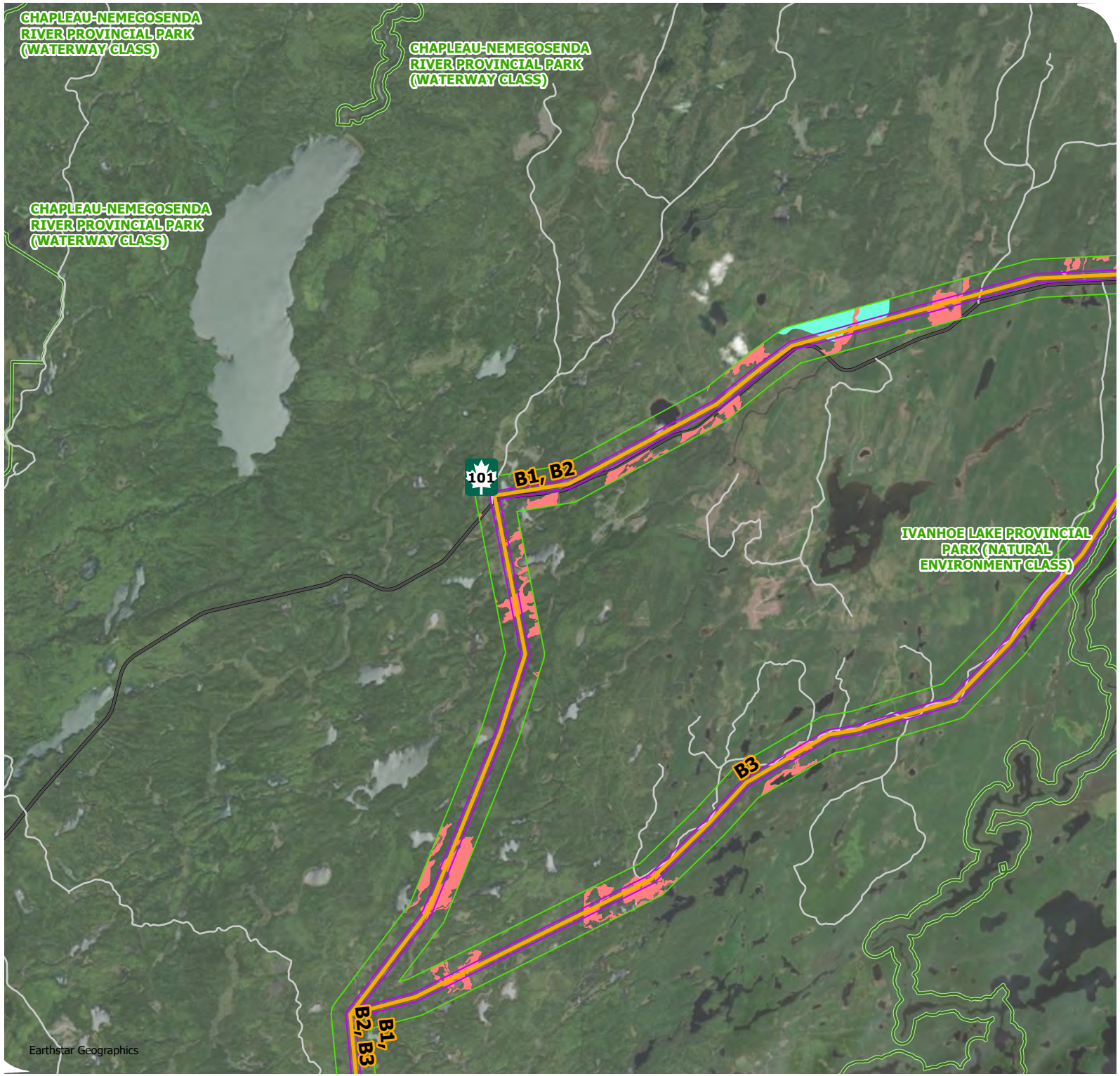
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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 43. SWH - MOOSE LATE WINTER HABITAT

Mapping Extent - Ivanhoe Lake 2

- Routing Centerline
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Late Winter Habitat
- Moose Late Winter Habitat (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

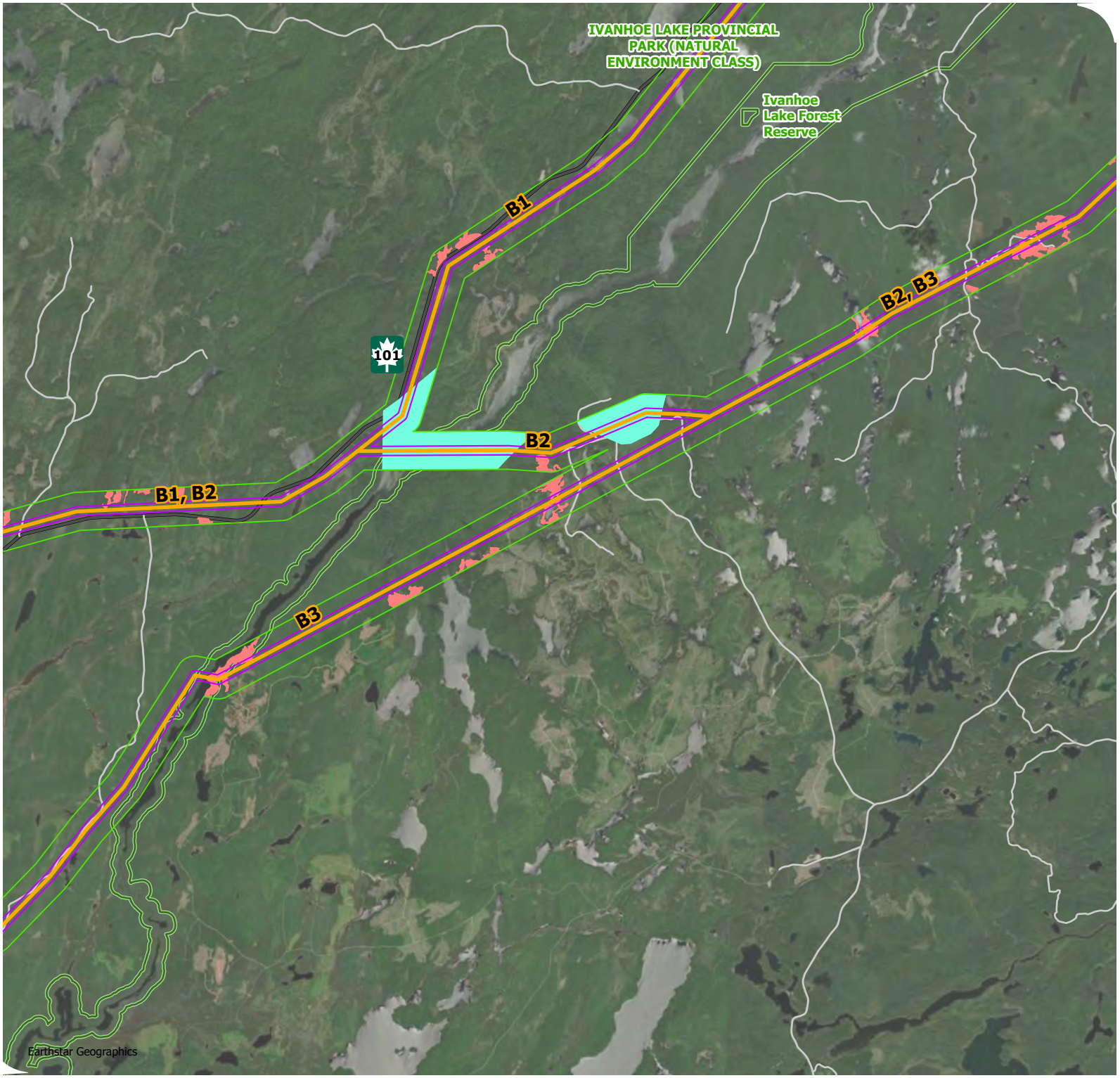
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WAWA TIMMINS POWER LINE

FIGURE 44. SWH - MOOSE LATE WINTER HABITAT

Mapping Extent - Ivanhoe Lake 3

- Routing Centerline
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Late Winter Habitat
- Moose Late Winter Habitat (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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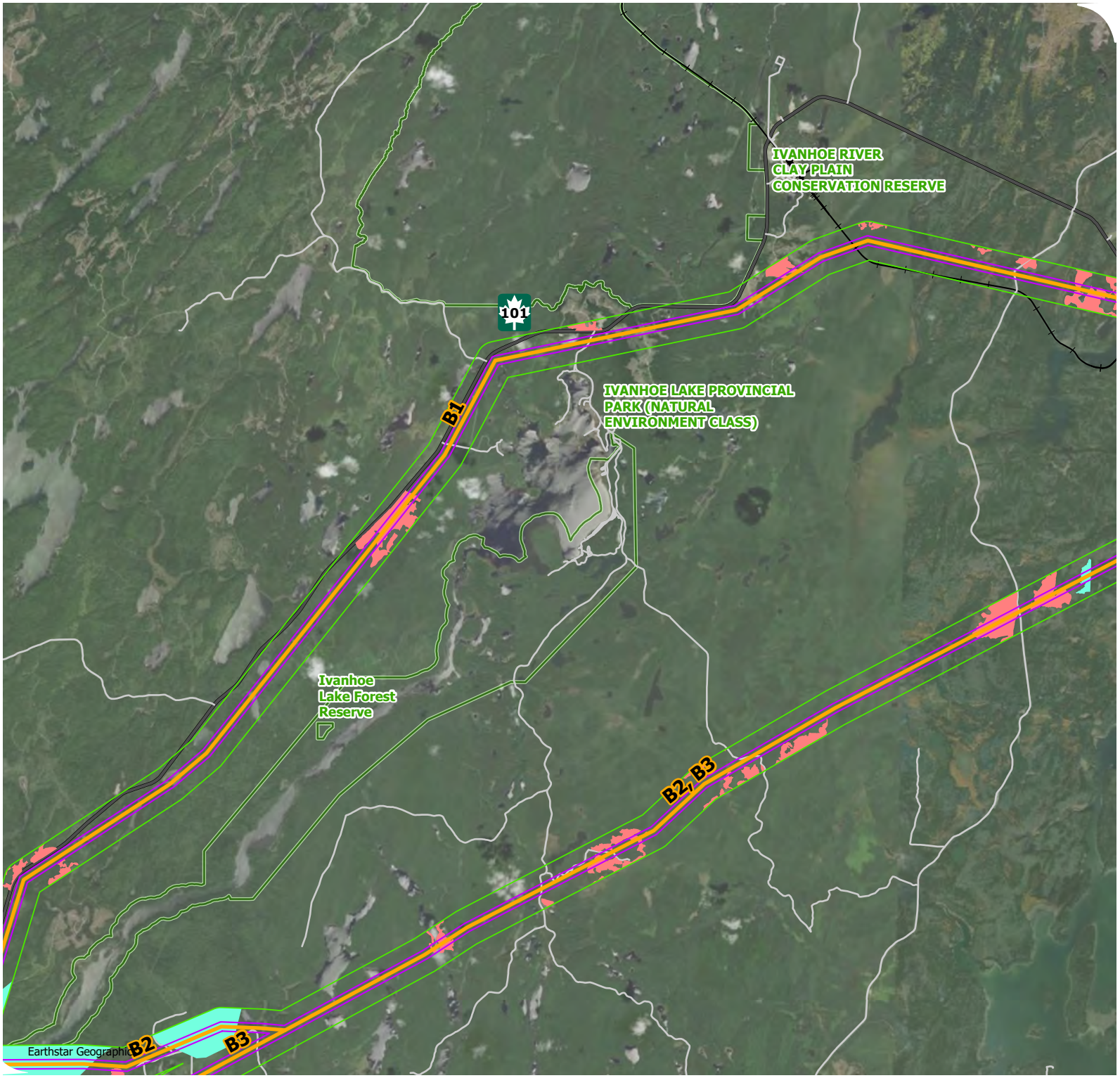
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WAWA TIMMINS POWER LINE

FIGURE 45. SWH - MOOSE LATE WINTER HABITAT

Mapping Extent - Ivanhoe Lake 4



- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Late Winter Habitat
- Moose Late Winter Habitat (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

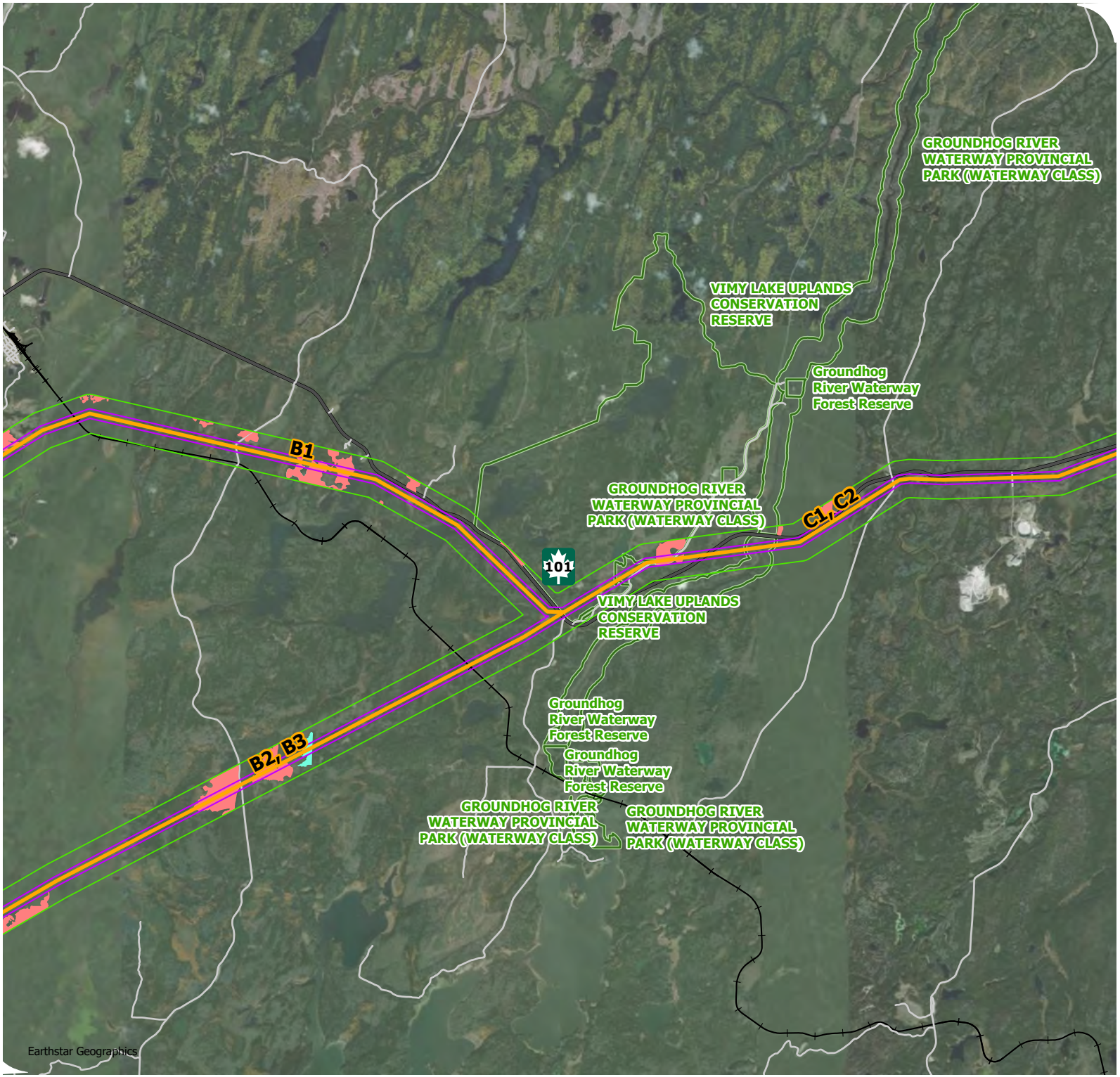
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WAWA TIMMINS POWER LINE

FIGURE 46. SWH - MOOSE LATE WINTER HABITAT

Mapping Extent - Foleyet

- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Late Winter Habitat
- Moose Late Winter Habitat (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

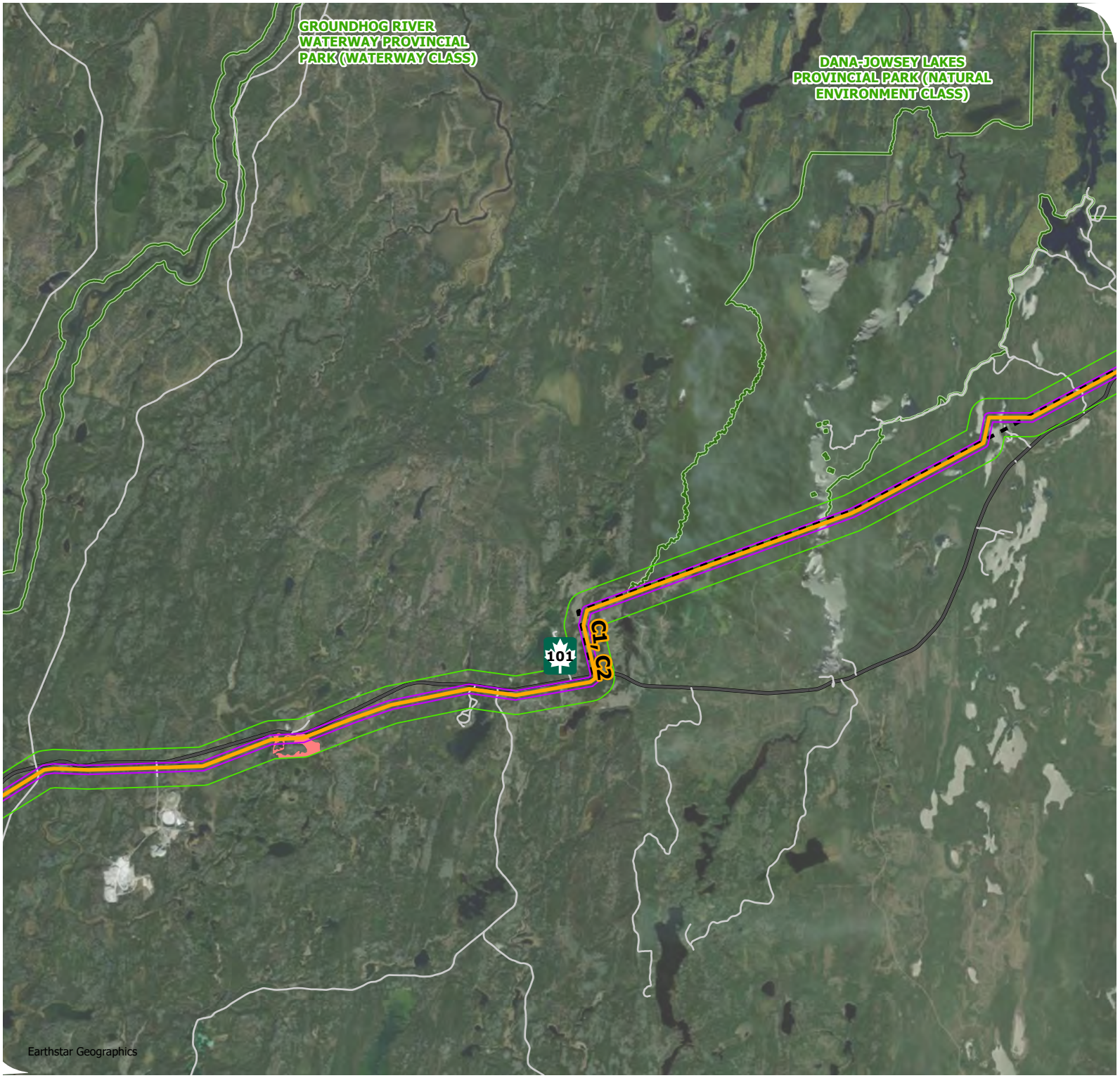
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 47. SWH - MOOSE LATE WINTER HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Late Winter Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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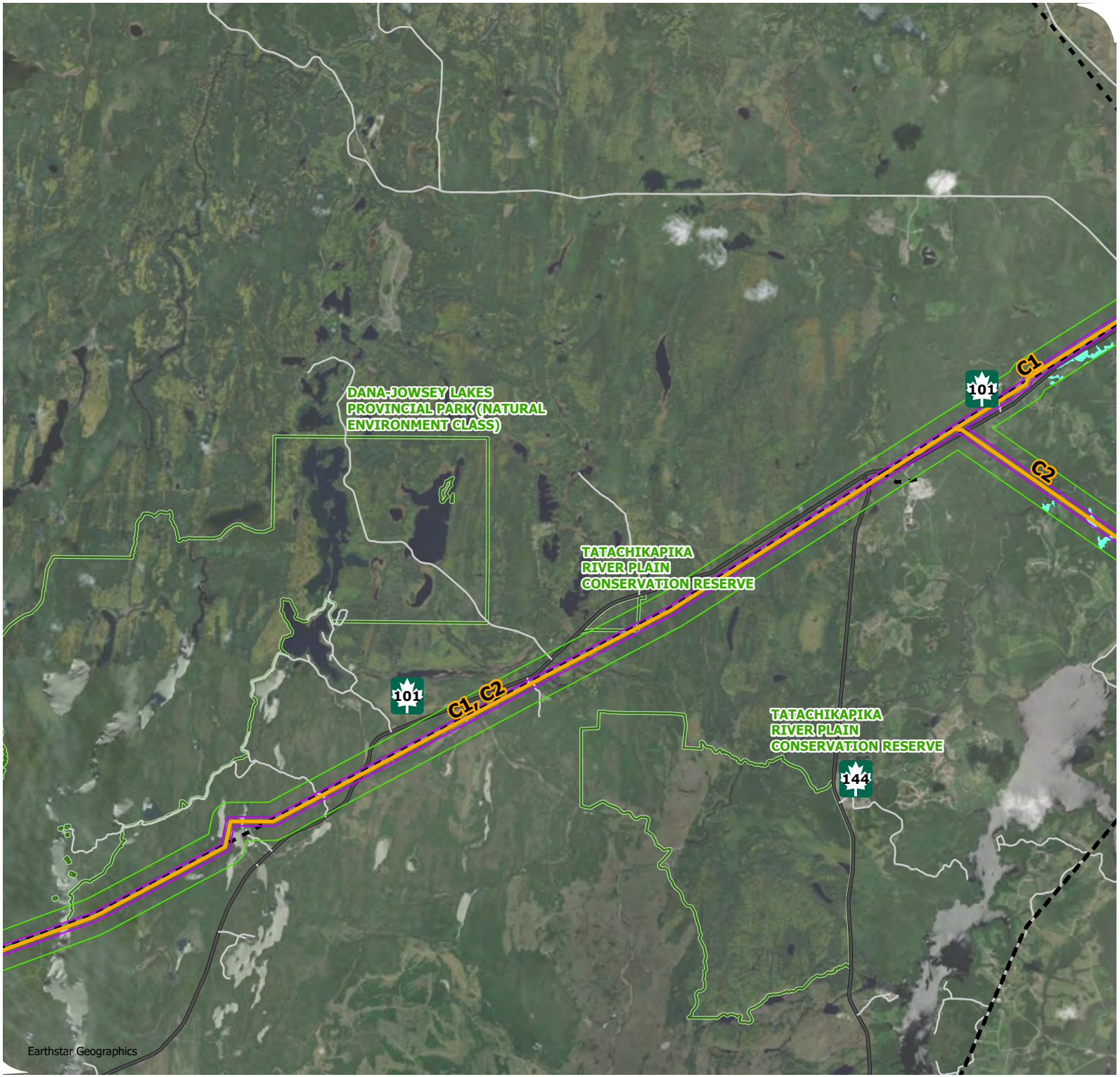
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WAWA TIMMINS POWER LINE

FIGURE 48. SWH - MOOSE LATE WINTER HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Moose Late Winter Habitat (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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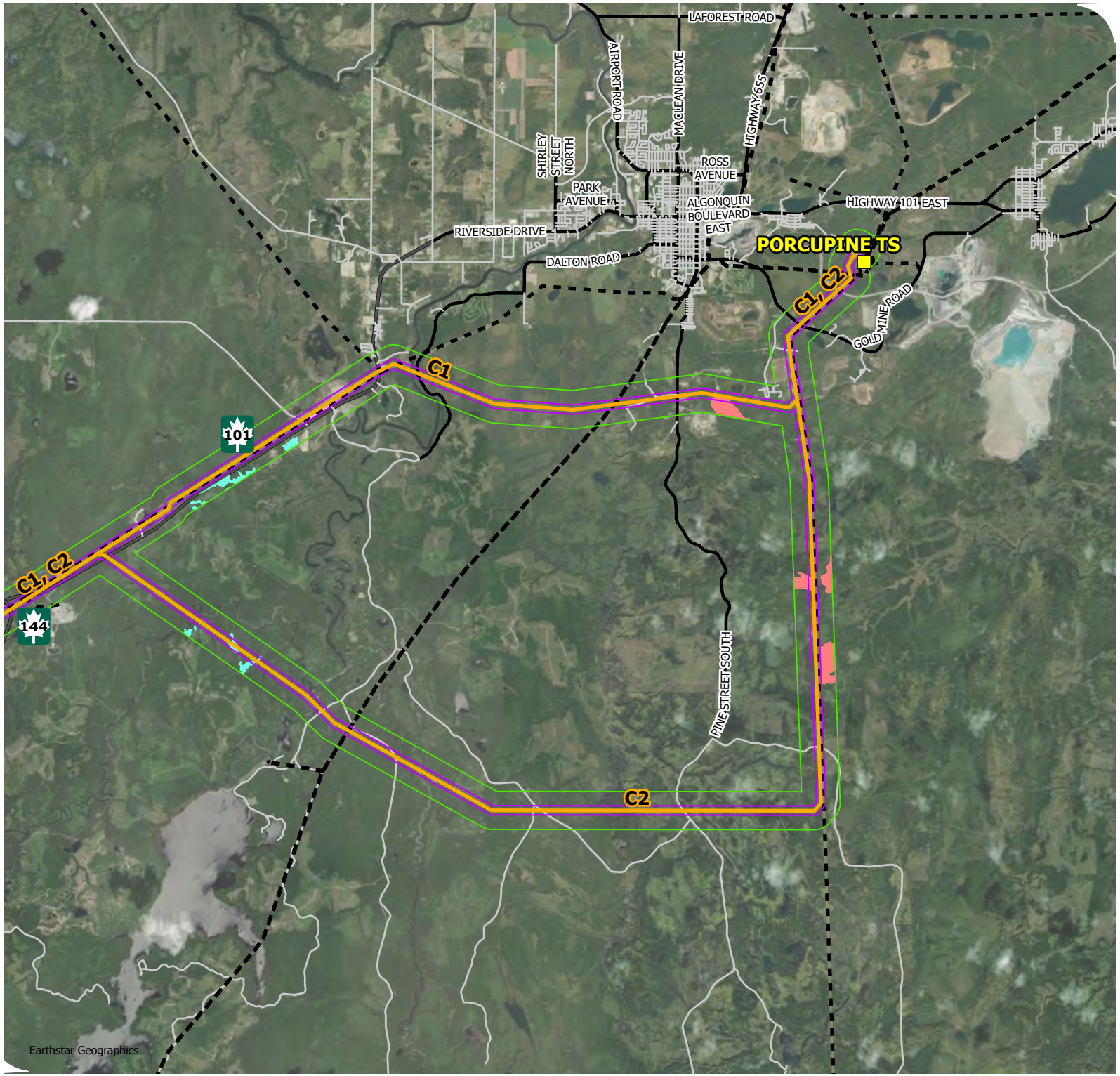
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WAWA TIMMINS POWER LINE

FIGURE 49. SWH - MOOSE LATE WINTER HABITAT

Mapping Extent - Timmins



- Hydro One Station/Junction
- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Late Winter Habitat
- Moose Late Winter Habitat (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

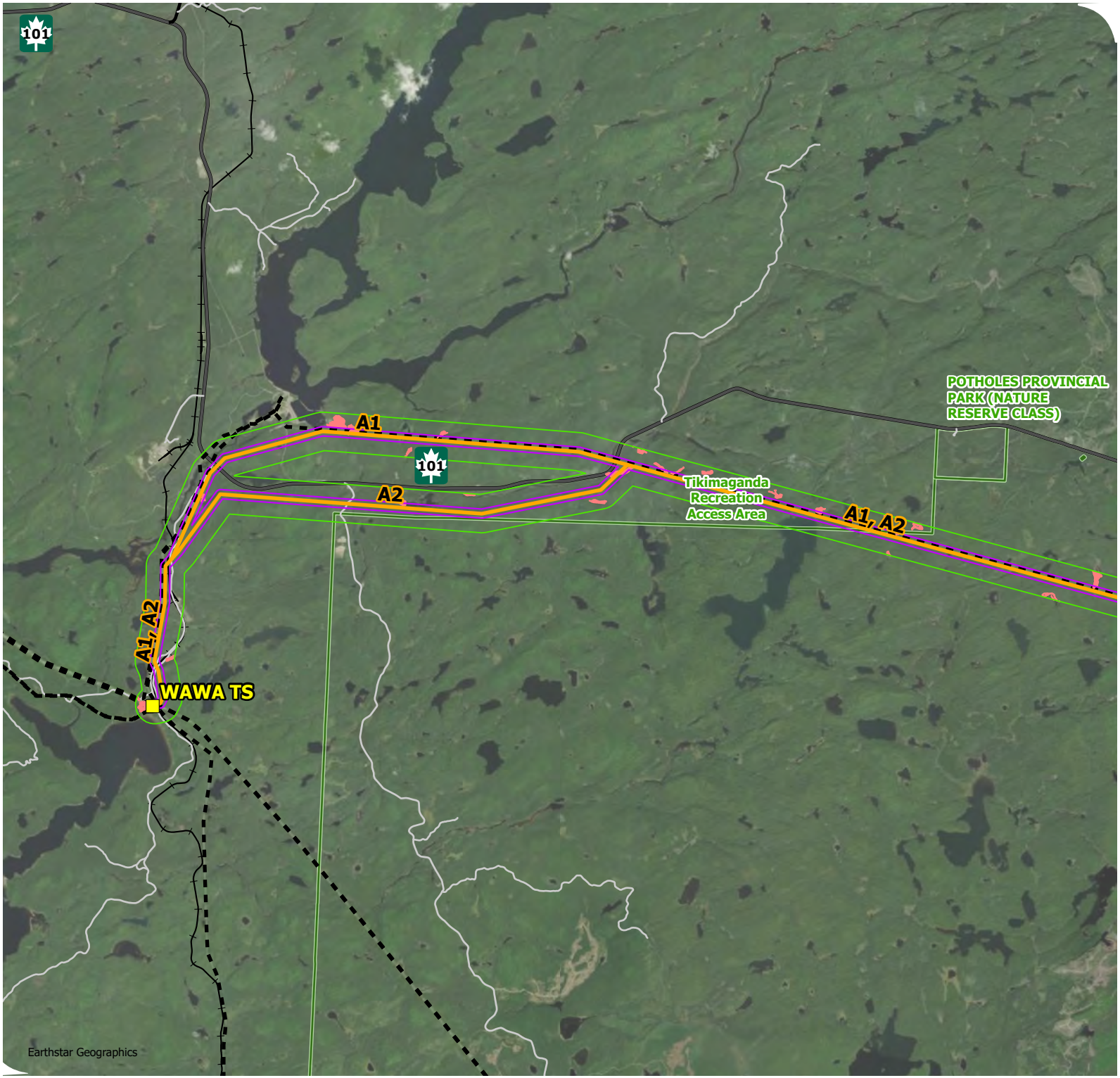


FIGURE 50. SWH - WATERFOWL STOPOVER HABITAT - AQUATIC

Mapping Extent - Wawa Station

- Hydro One Station/Junction
- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Stopover Habitat - Aquatic

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

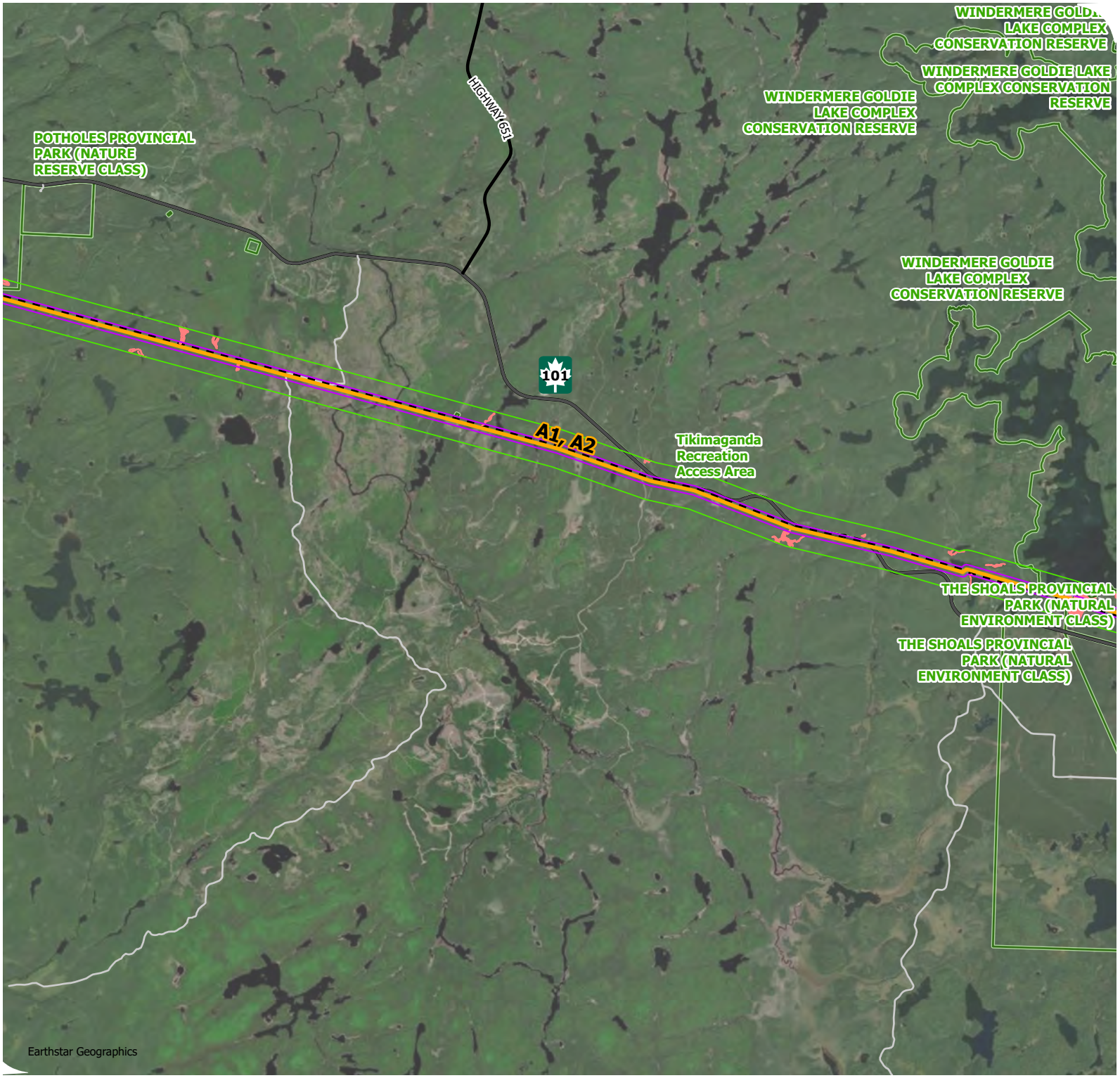


FIGURE 51. SWH - WATERFOWL STOPOVER HABITAT - AQUATIC

Mapping Extent - Windermere Lake 1

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Stopover Habitat - Aquatic

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

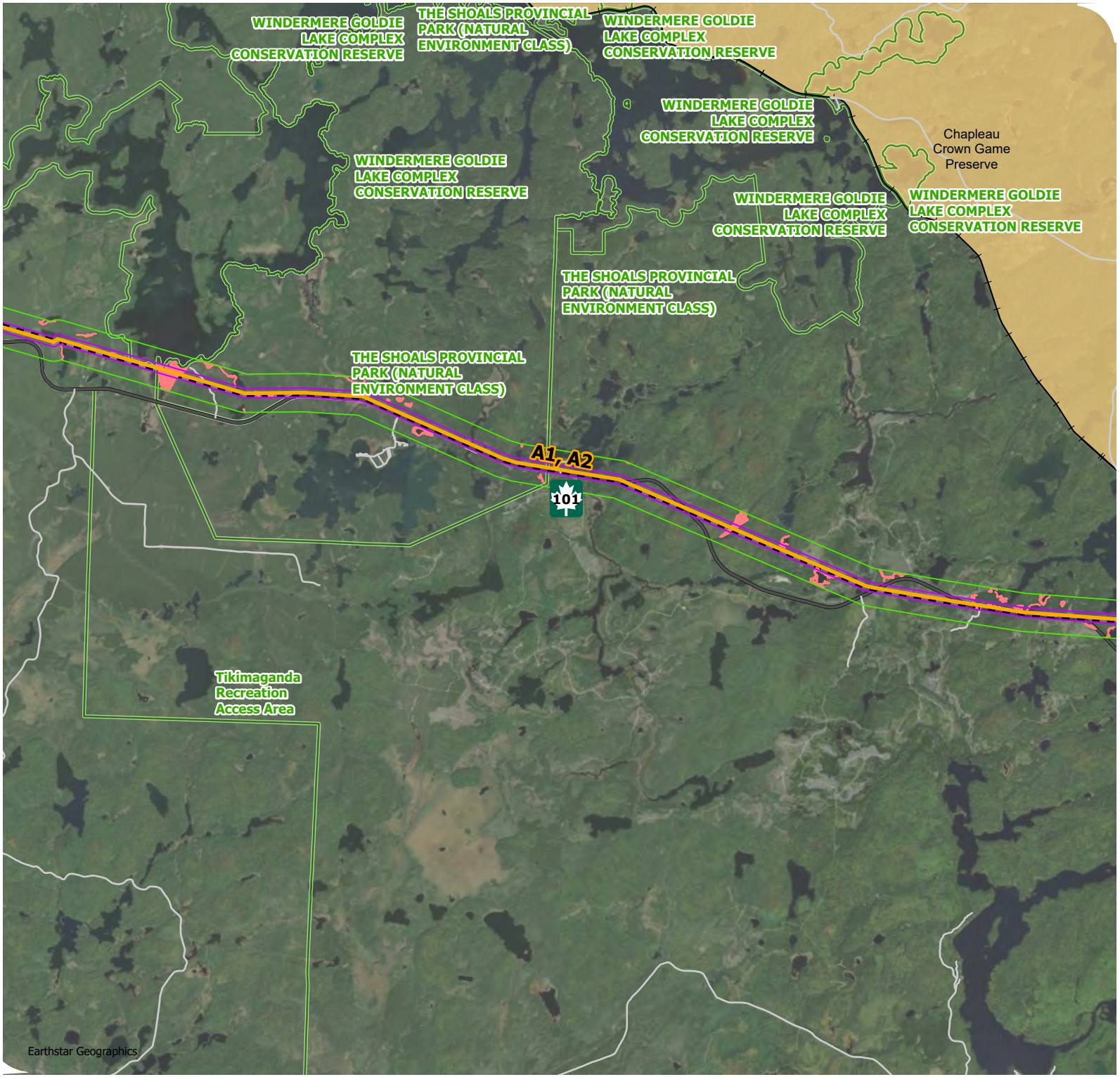


FIGURE 52. SWH - WATERFOWL STOPOVER HABITAT - AQUATIC

Mapping Extent - Windemere Lake 2

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Stopover Habitat - Aquatic

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

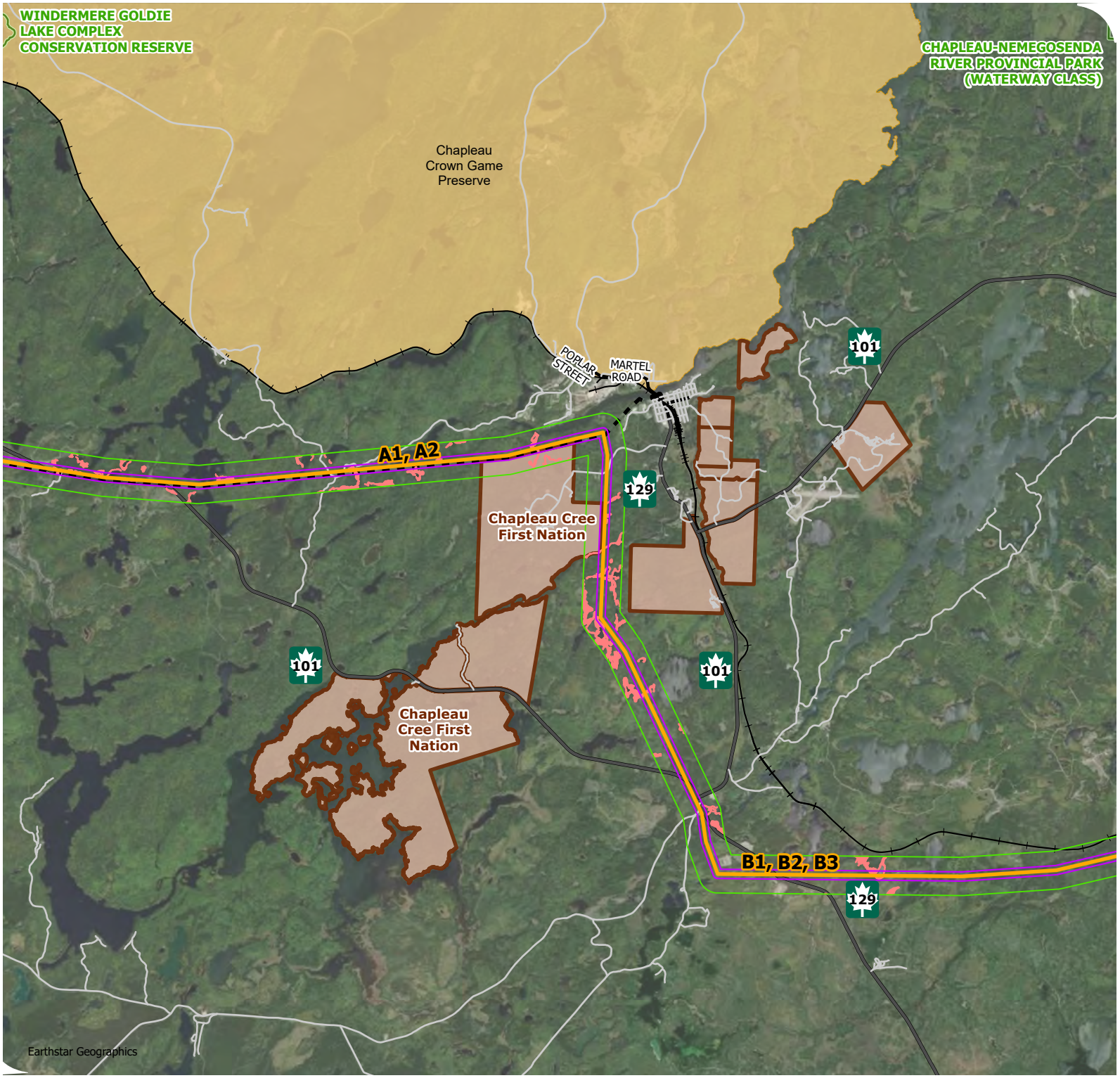
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WAWA TIMMINS POWER LINE

FIGURE 53. SWH - WATERFOWL STOPOVER HABITAT - AQUATIC

Mapping Extent - Chapleau

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Stopover Habitat - Aquatic

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

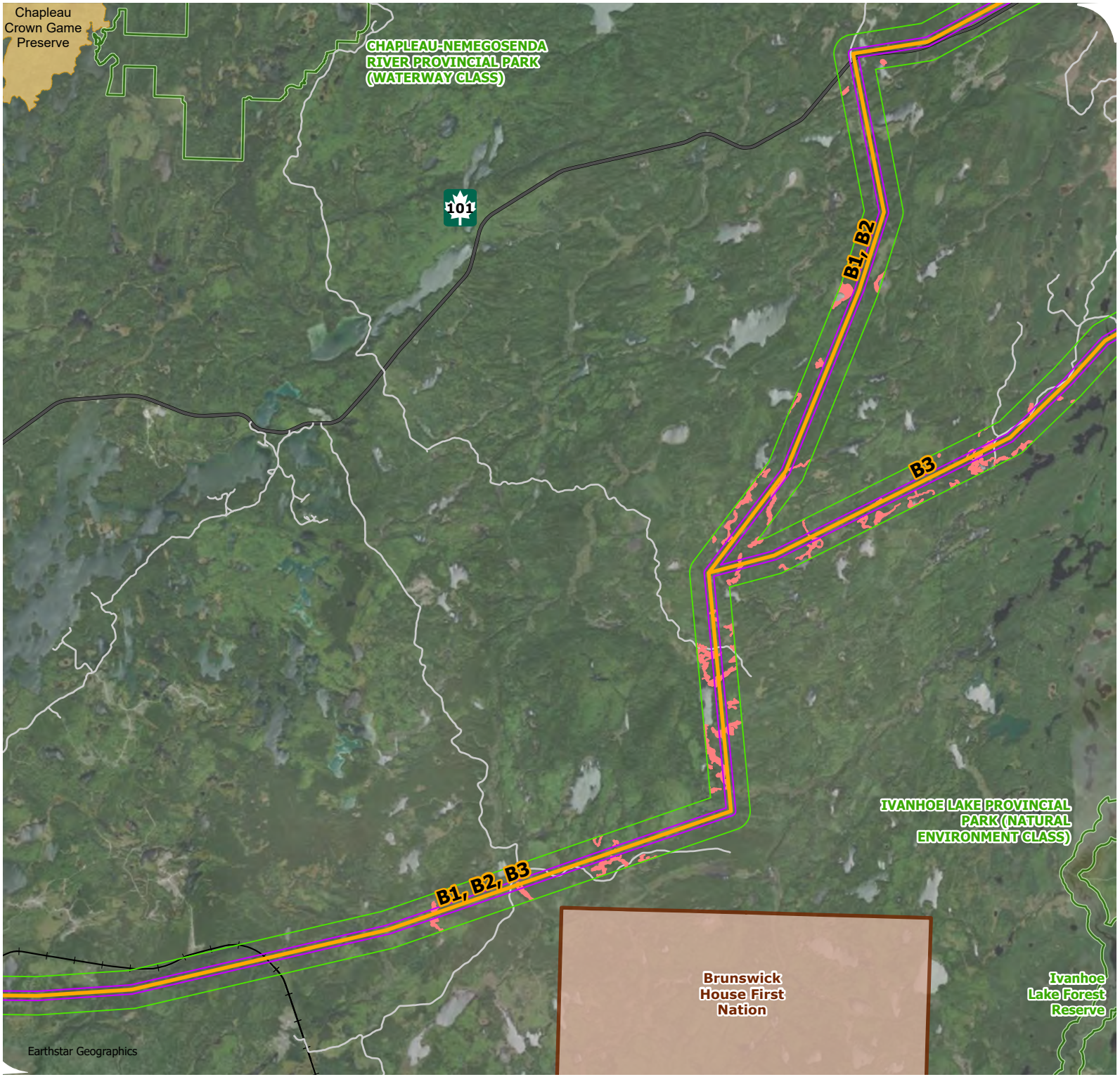
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WAWA TIMMINS POWER LINE

FIGURE 54. SWH - WATERFOWL STOPOVER HABITAT - AQUATIC

Mapping Extent - Ivanhoe Lake 1

- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Stopover Habitat - Aquatic

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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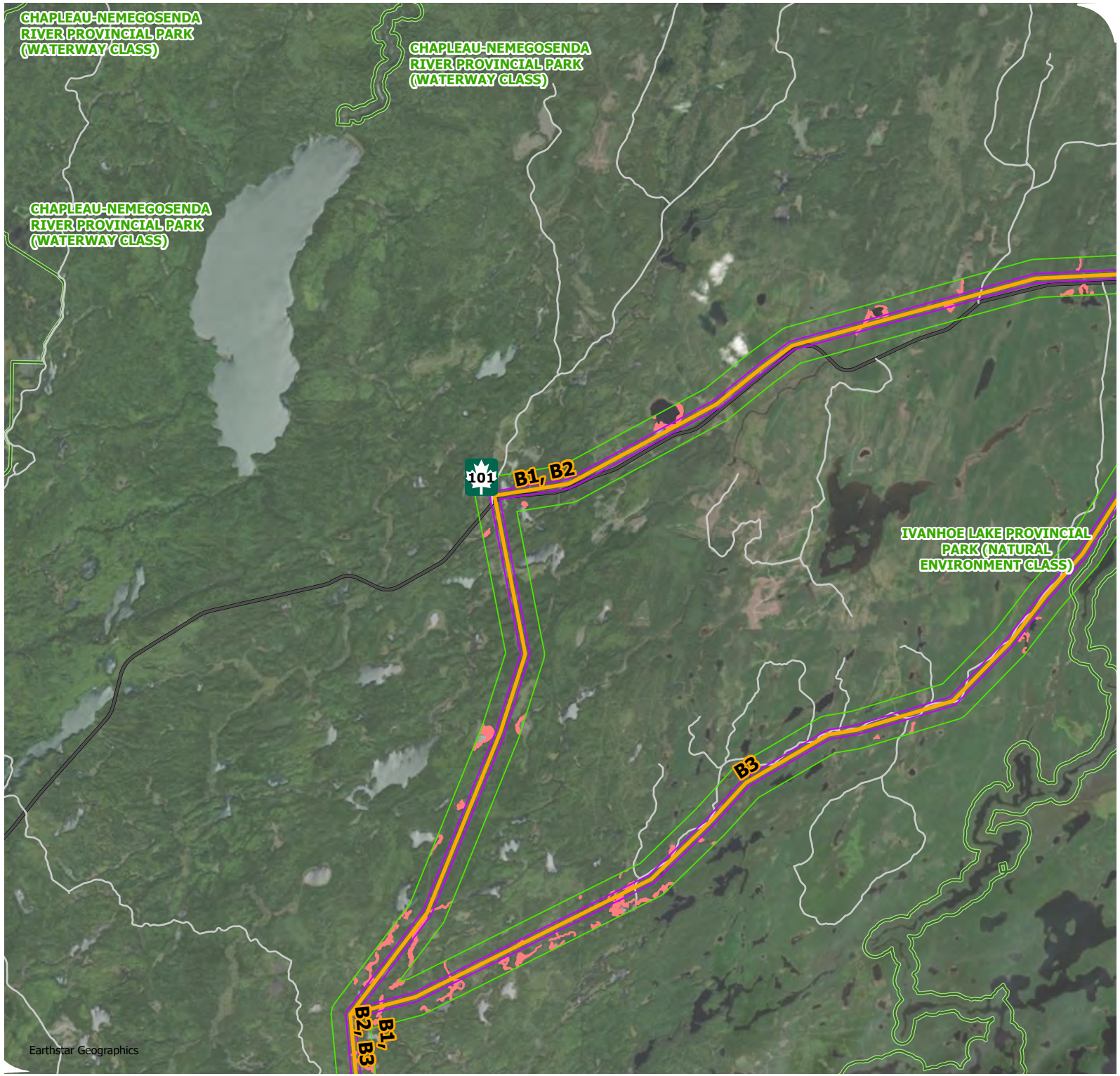
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WAWA TIMMINS POWER LINE

FIGURE 55. SWH - WATERFOWL STOPOVER HABITAT - AQUATIC

Mapping Extent - Ivanhoe Lake 2



- Routing Centerline
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Stopover Habitat - Aquatic

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

WAWA TIMMINS POWER LINE

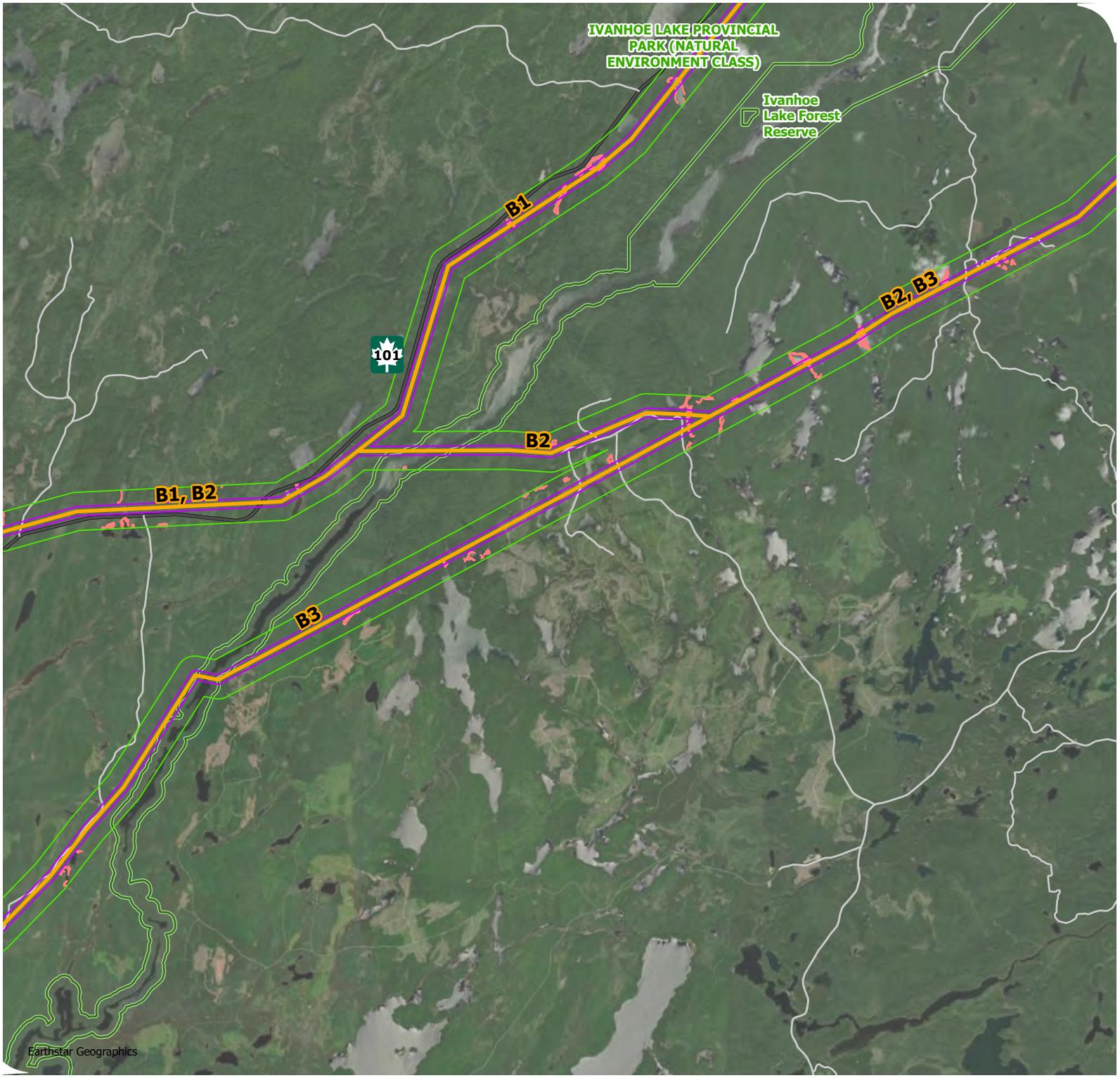


FIGURE 56. SWH - WATERFOWL STOPOVER HABITAT - AQUATIC

Mapping Extent - Ivanhoe Lake 3

- Routing Centerline
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Stopover Habitat - Aquatic

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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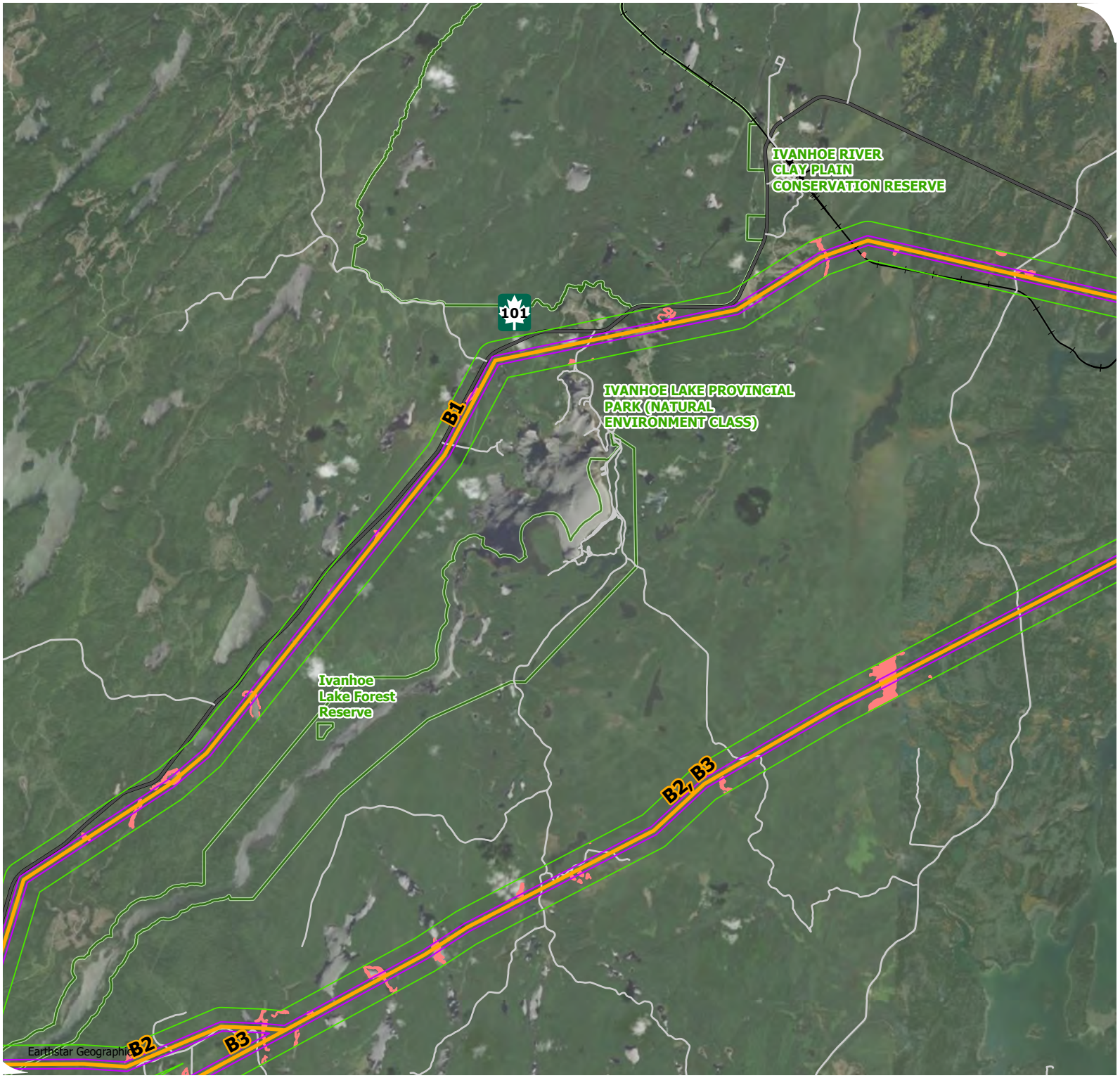
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WAWA TIMMINS POWER LINE

FIGURE 57. SWH - WATERFOWL STOPOVER HABITAT - AQUATIC

Mapping Extent - Ivanhoe Lake 4



- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Stopover Habitat - Aquatic

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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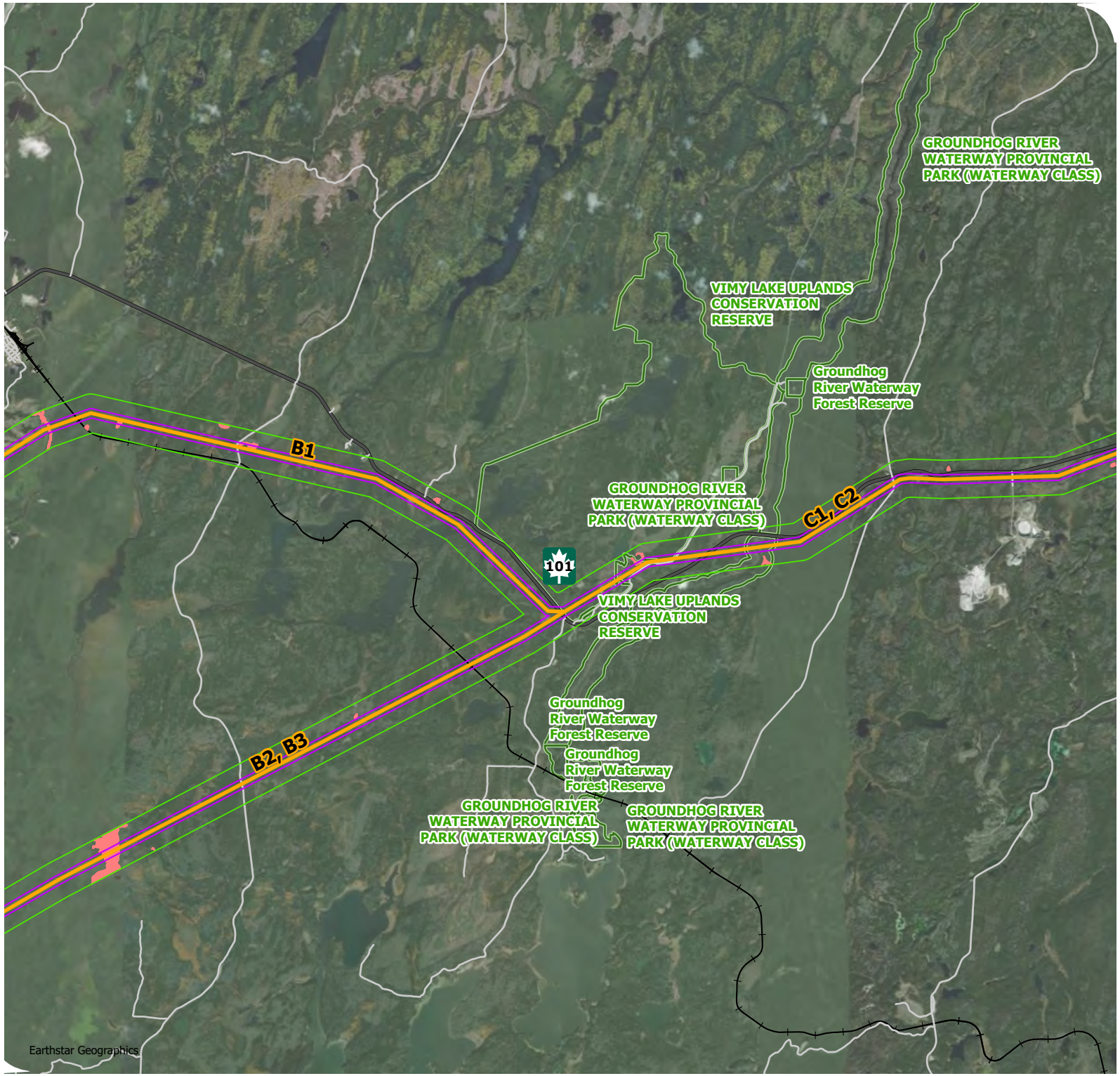
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WAWA TIMMINS POWER LINE

FIGURE 58. SWH - WATERFOWL STOPOVER HABITAT - AQUATIC

Mapping Extent - Foleyet



- Routing Centerline
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Stopover Habitat - Aquatic

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

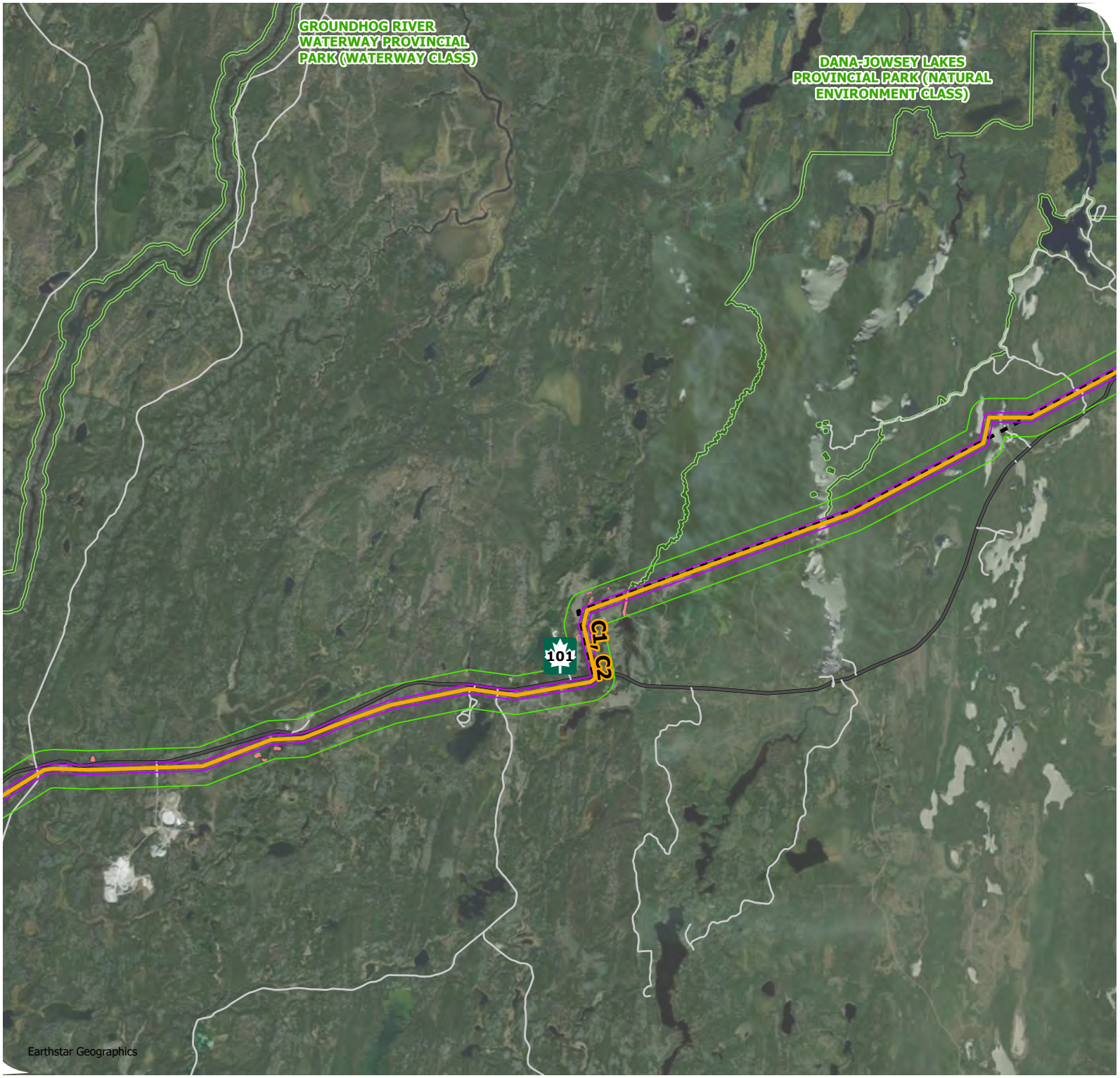
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 59. SWH - WATERFOWL STOPOVER HABITAT - AQUATIC

Mapping Extent - Dana-Jowsey Lakes 1

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Stopover Habitat - Aquatic

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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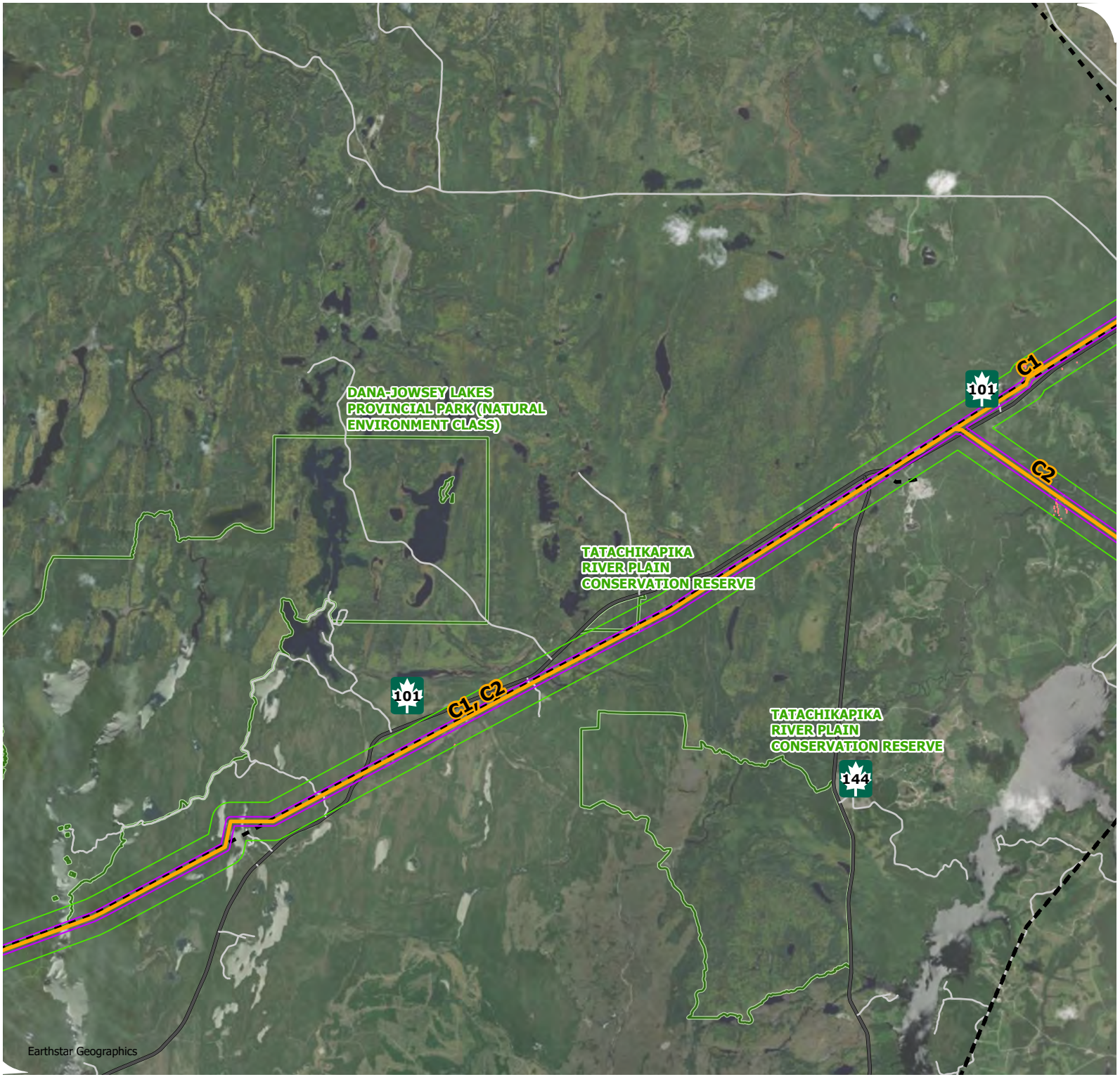
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WAWA TIMMINS POWER LINE

FIGURE 60. SWH - WATERFOWL STOPOVER HABITAT - AQUATIC

Mapping Extent - Dana-Jowsey Lakes 2



- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Stopover Habitat - Aquatic

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

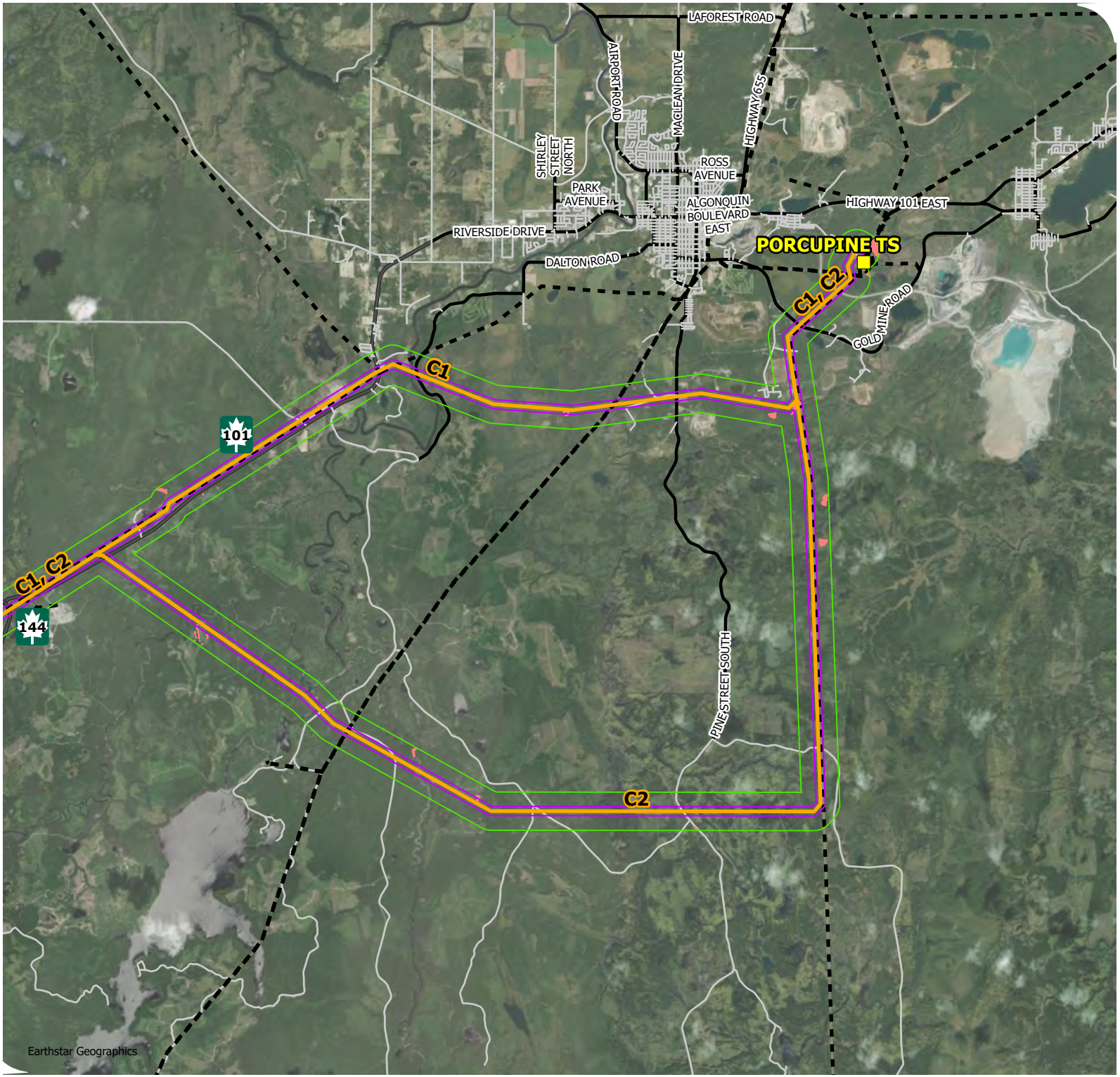


FIGURE 61. SWH - WATERFOWL STOPOVER HABITAT - AQUATIC

Mapping Extent - Timmins

- Hydro One Station/Junction
- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Stopover Habitat - Aquatic

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

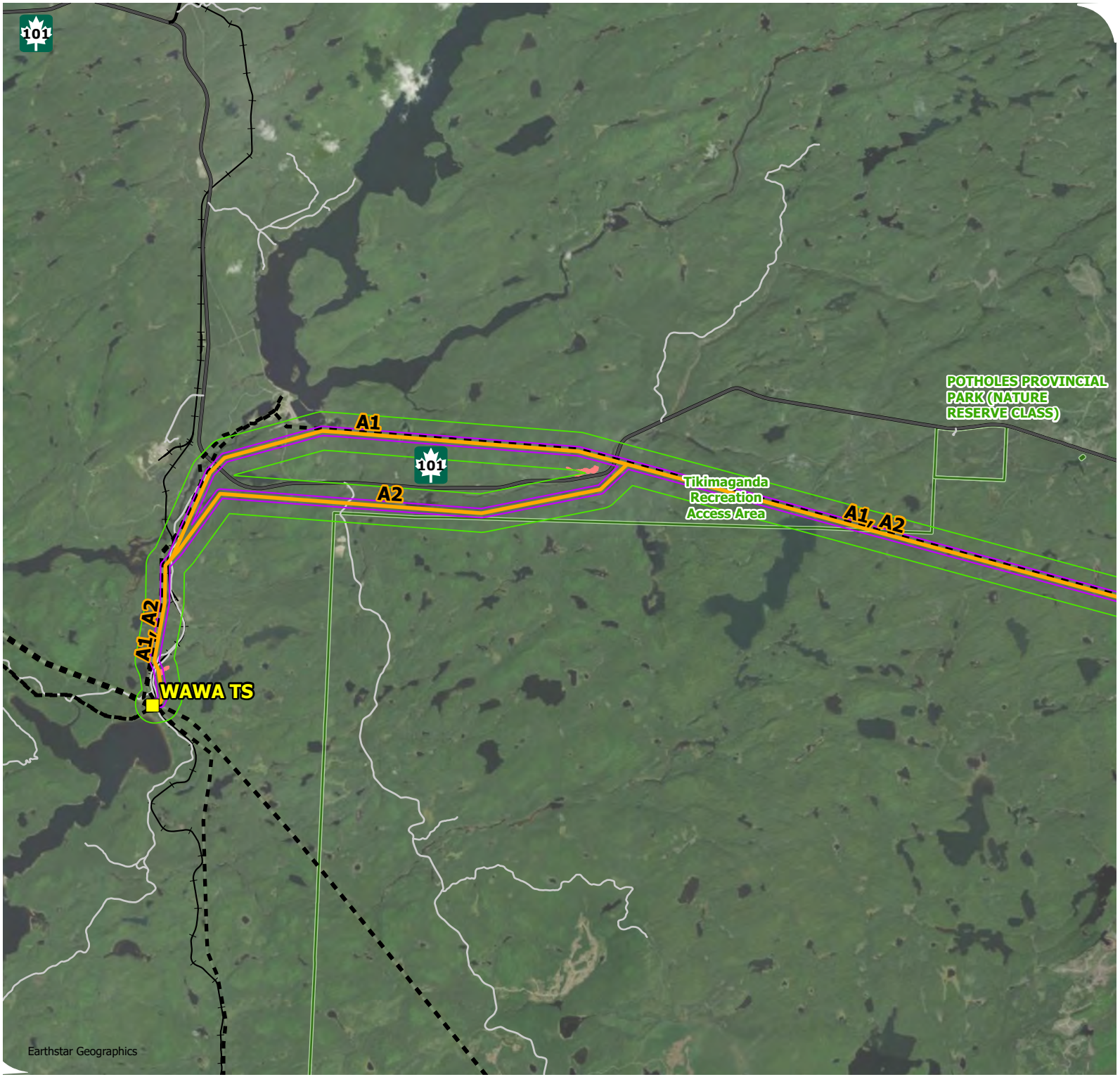
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 62. SWH - BAT HIBERNACULA

Mapping Extent - Wawa Station

- Hydro One Station/Junction
- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Bat Hibernaculum Ecosites

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

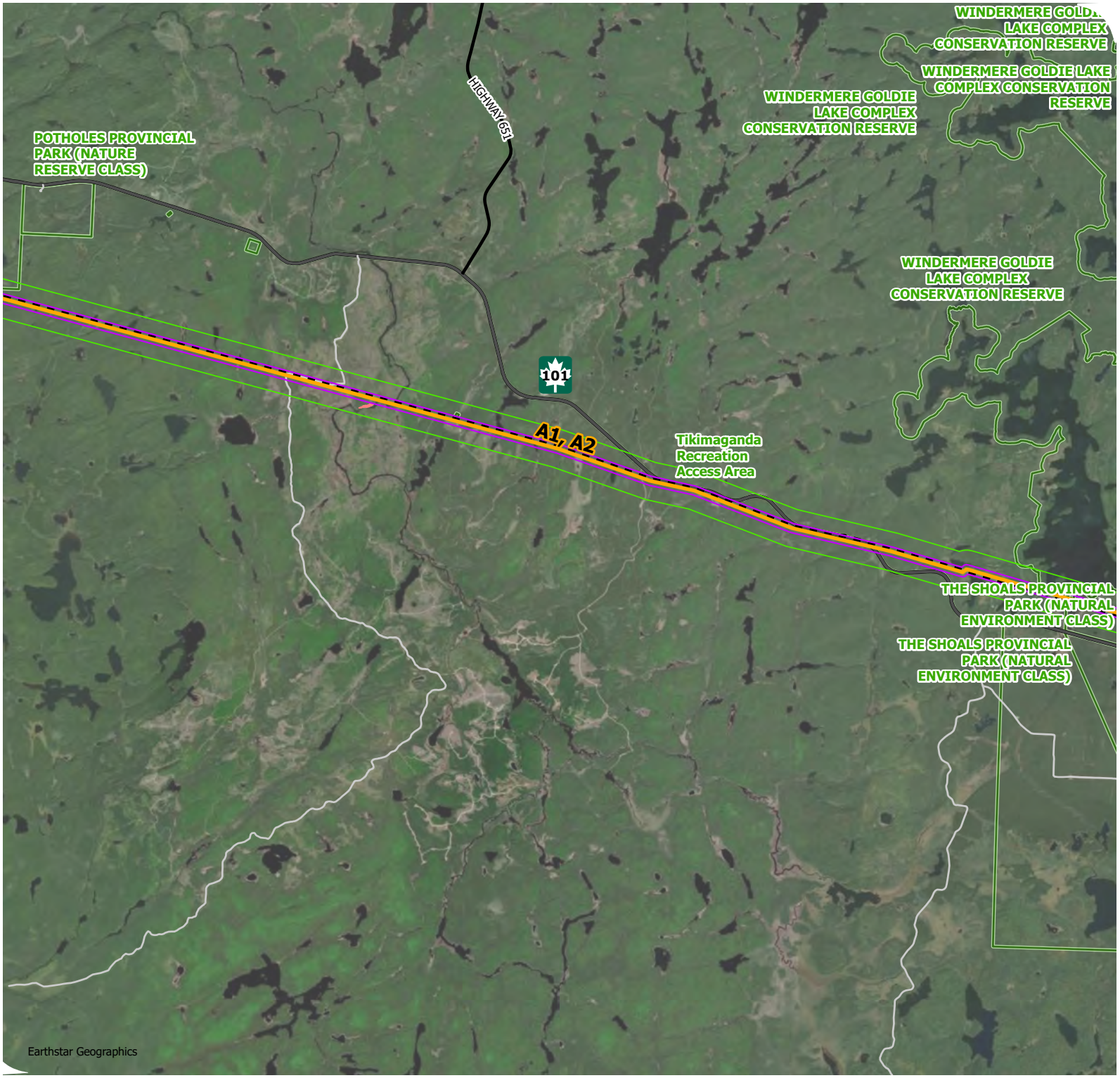
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 63. SWH - BAT HIBERNACULA

Mapping Extent - Windermere Lake 1

- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Bat Hibernaculum Ecosites

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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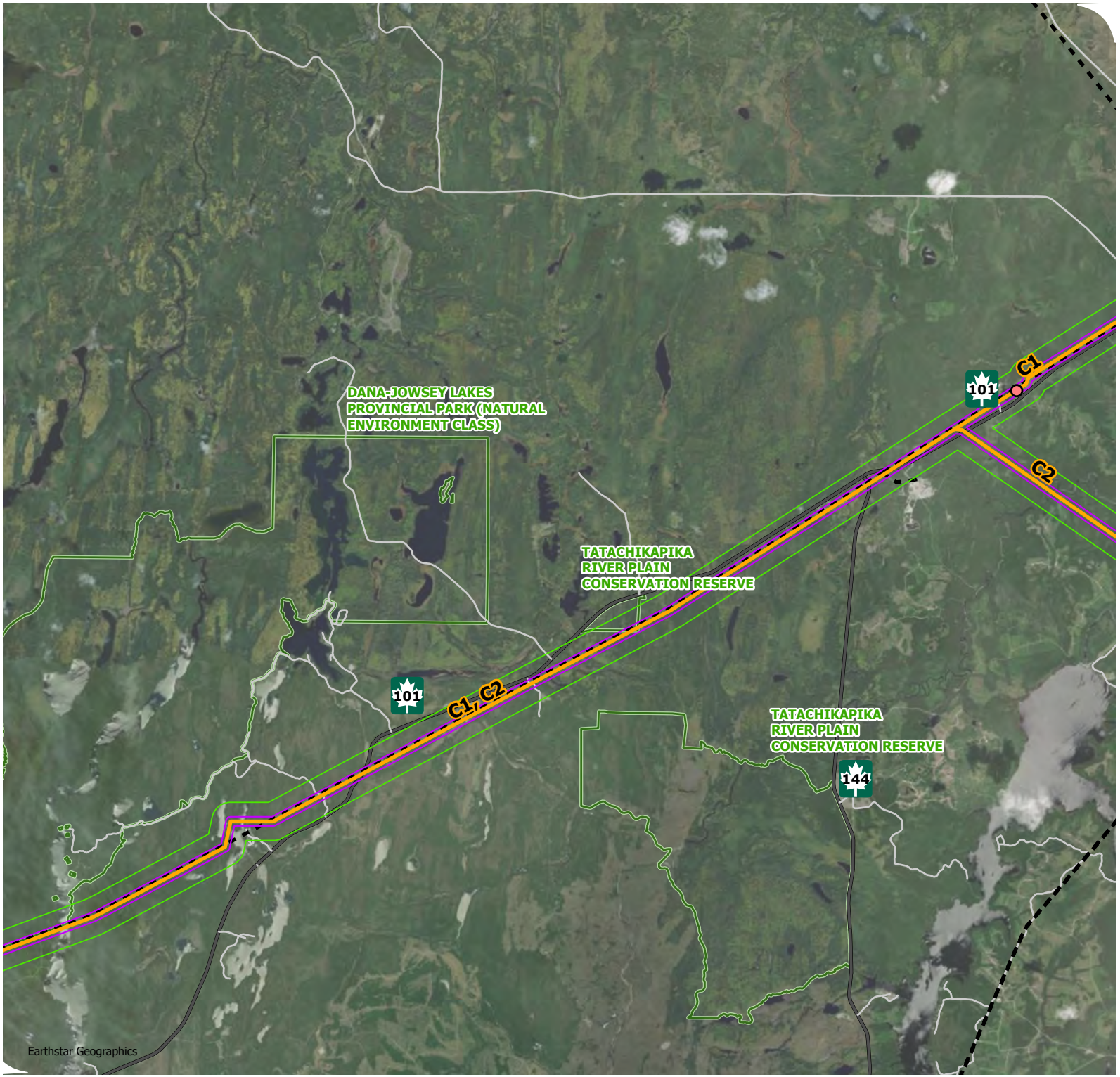
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WAWA TIMMINS POWER LINE

FIGURE 64. SWH - BAT HIBERNACULA

Mapping Extent - Dana-Jowsey Lakes 2



- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Abandoned Features-to-Surface (AMIS)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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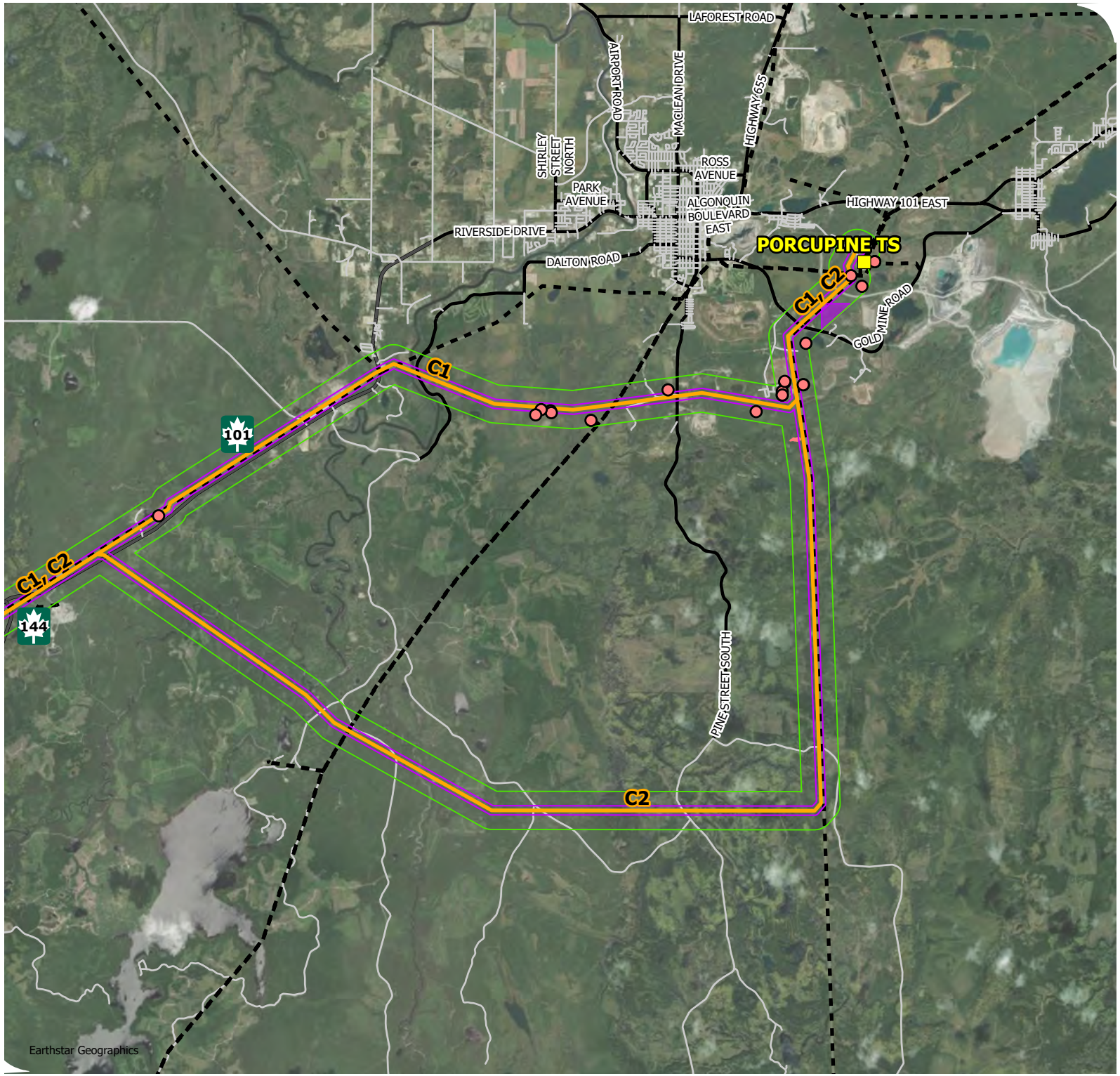
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WAWA TIMMINS POWER LINE

FIGURE 65. SWH - BAT HIBERNACULA

Mapping Extent - Timmins



- Hydro One Station/Junction
- Routing Centerline
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Bat Hibernaculum Ecosites
- Restricted Record - Likely Bat Hibernaculum (NHIC)
- Abandoned Features-to-Surface (AMIS)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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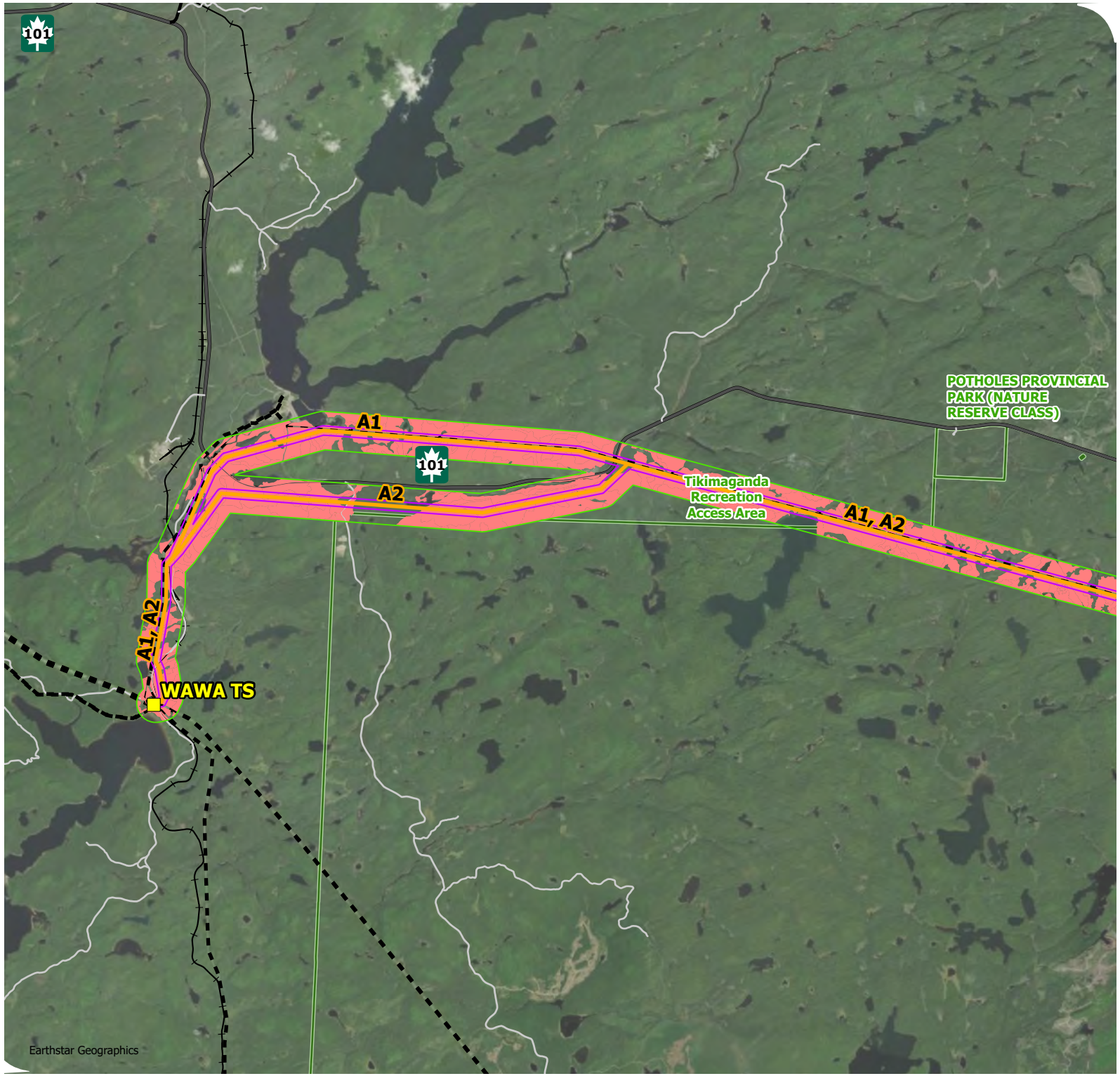
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WAWA TIMMINS POWER LINE

FIGURE 66. SWH - RESIDENT BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Resident Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 67. SWH - RESIDENT BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Resident Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

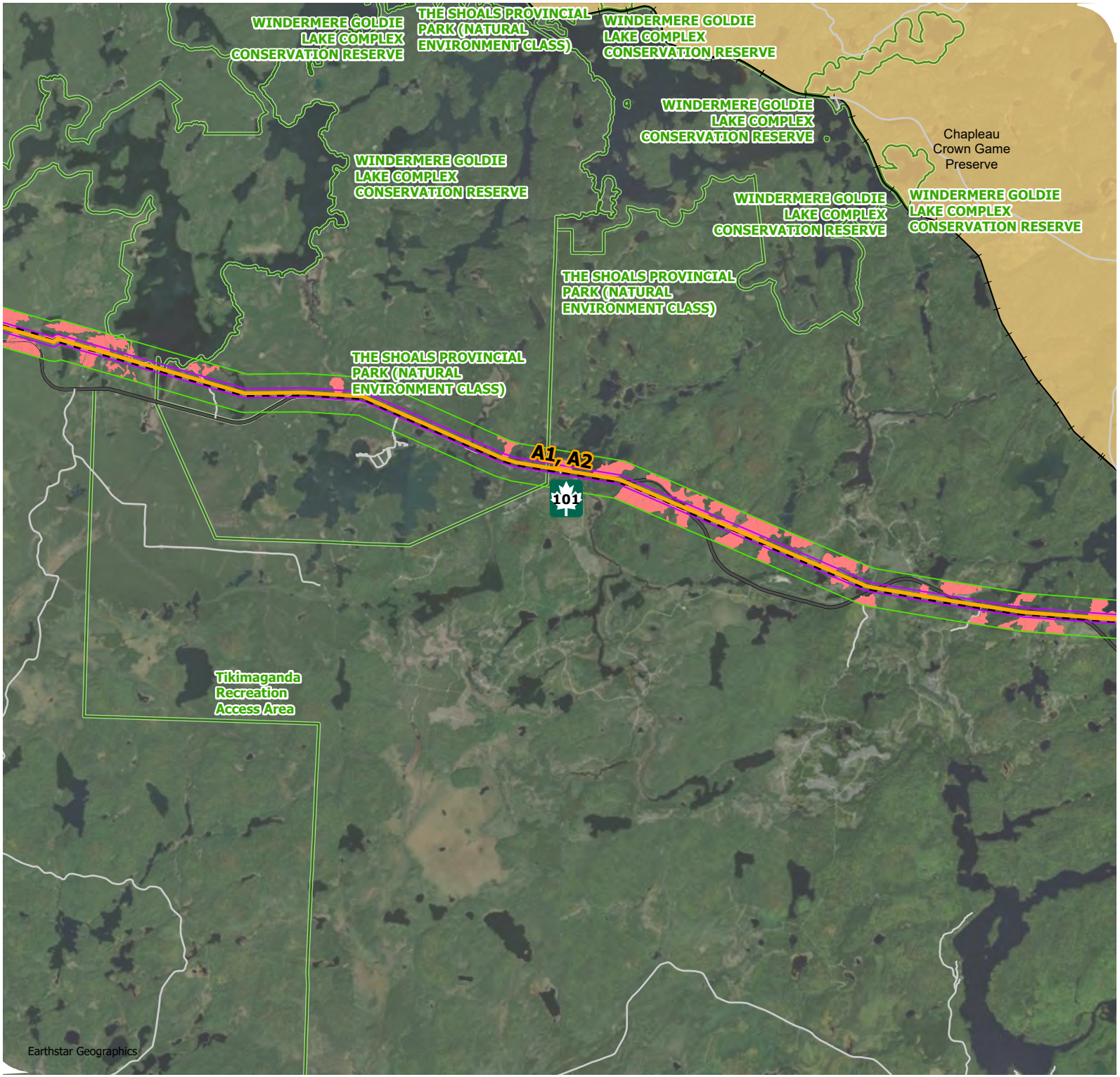
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 68. SWH - RESIDENT BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Resident Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

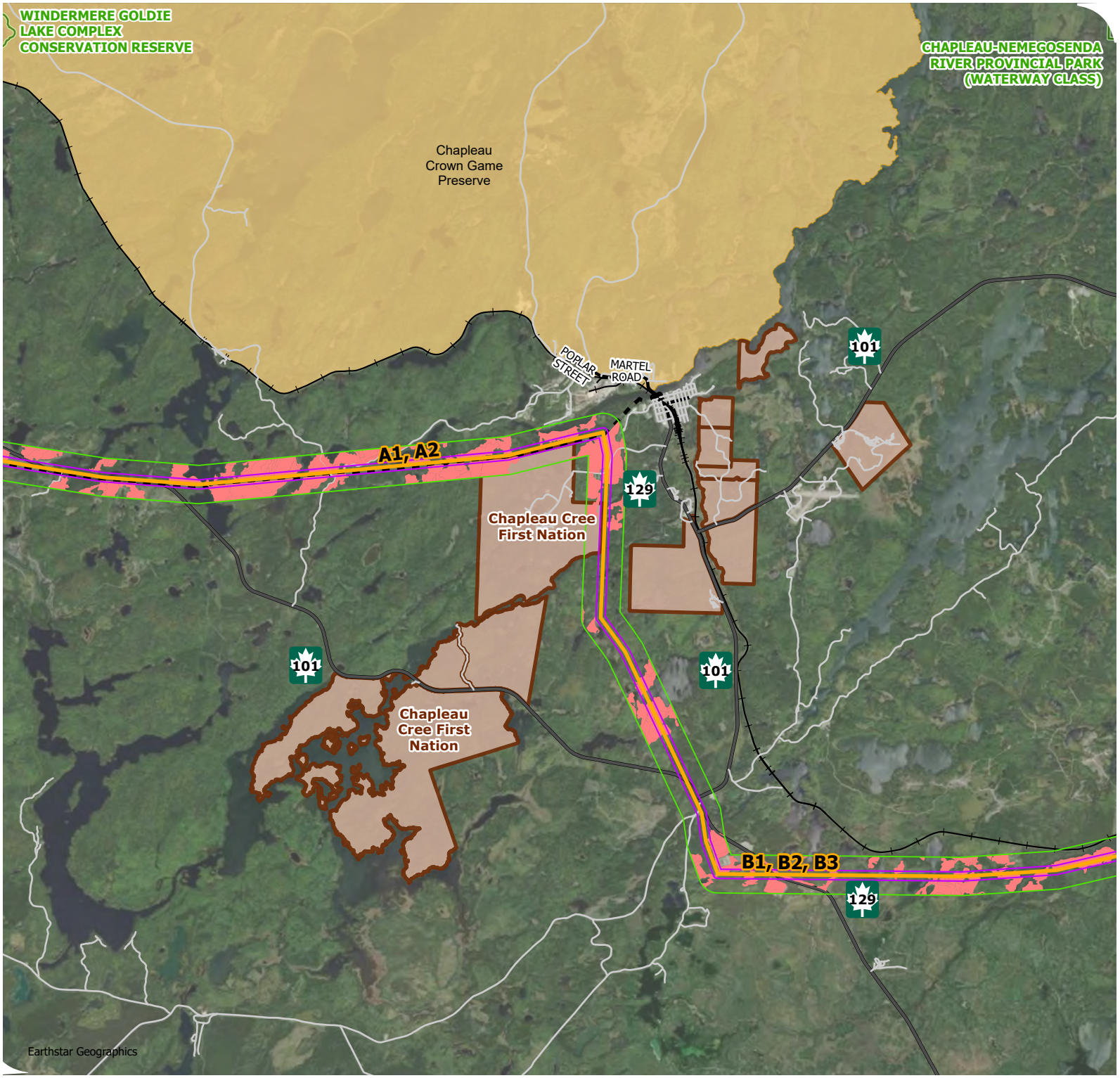
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WAWA TIMMINS POWER LINE

FIGURE 69. SWH - RESIDENT BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Resident Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

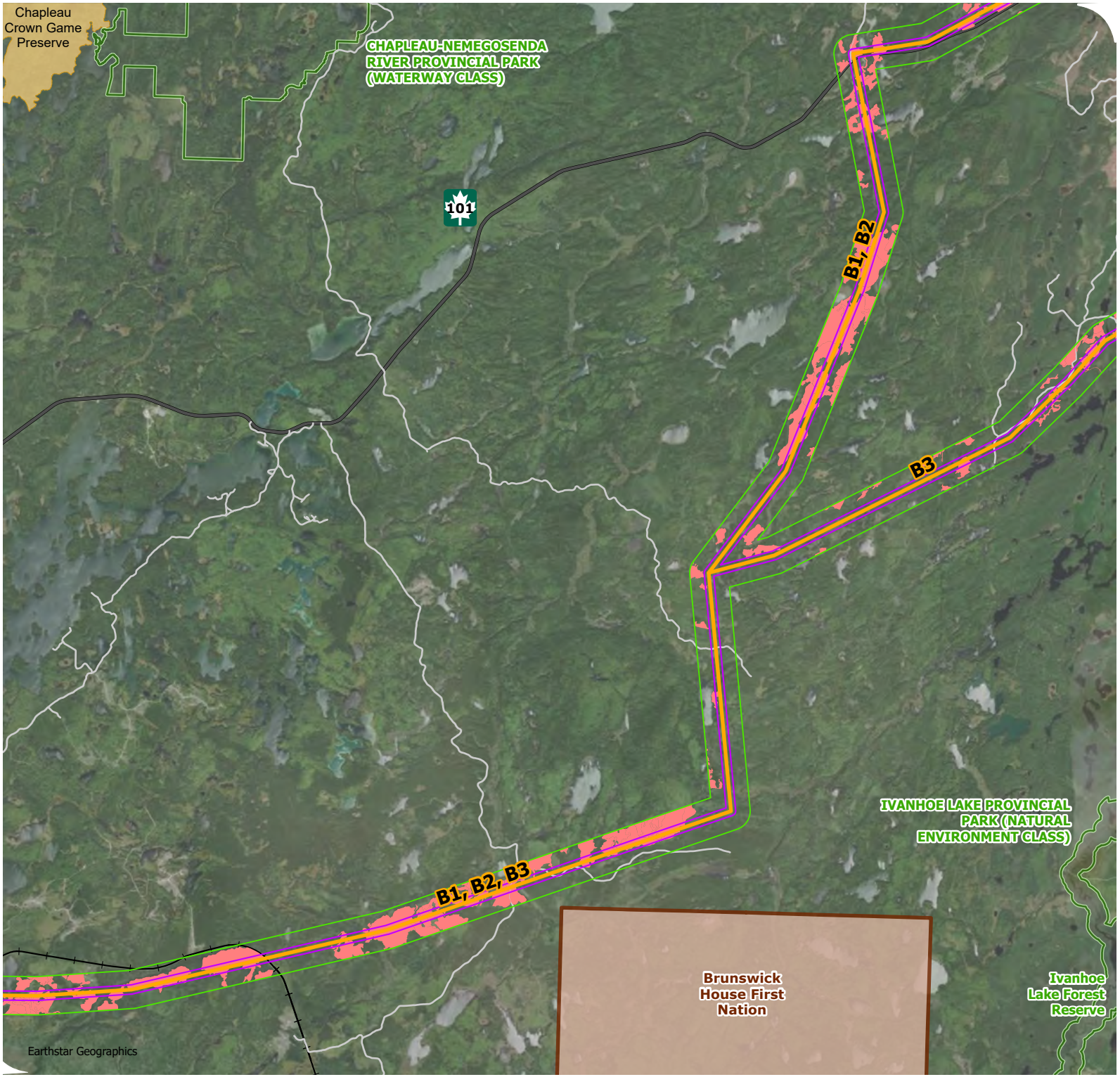
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WAWA TIMMINS POWER LINE

FIGURE 70. SWH - RESIDENT BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Ivanhoe Lake 1

- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Resident Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

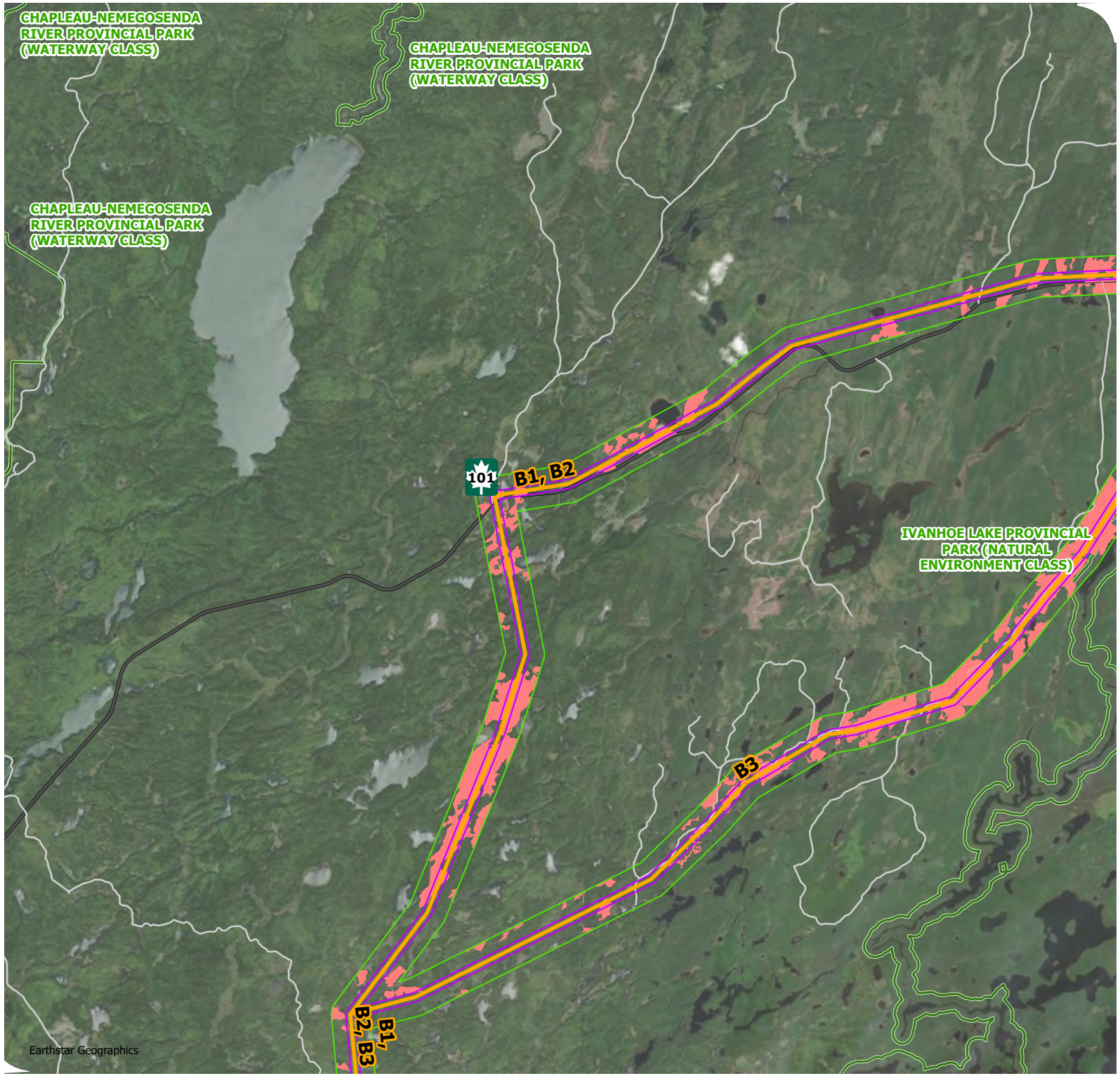
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 71. SWH - RESIDENT BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Resident Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

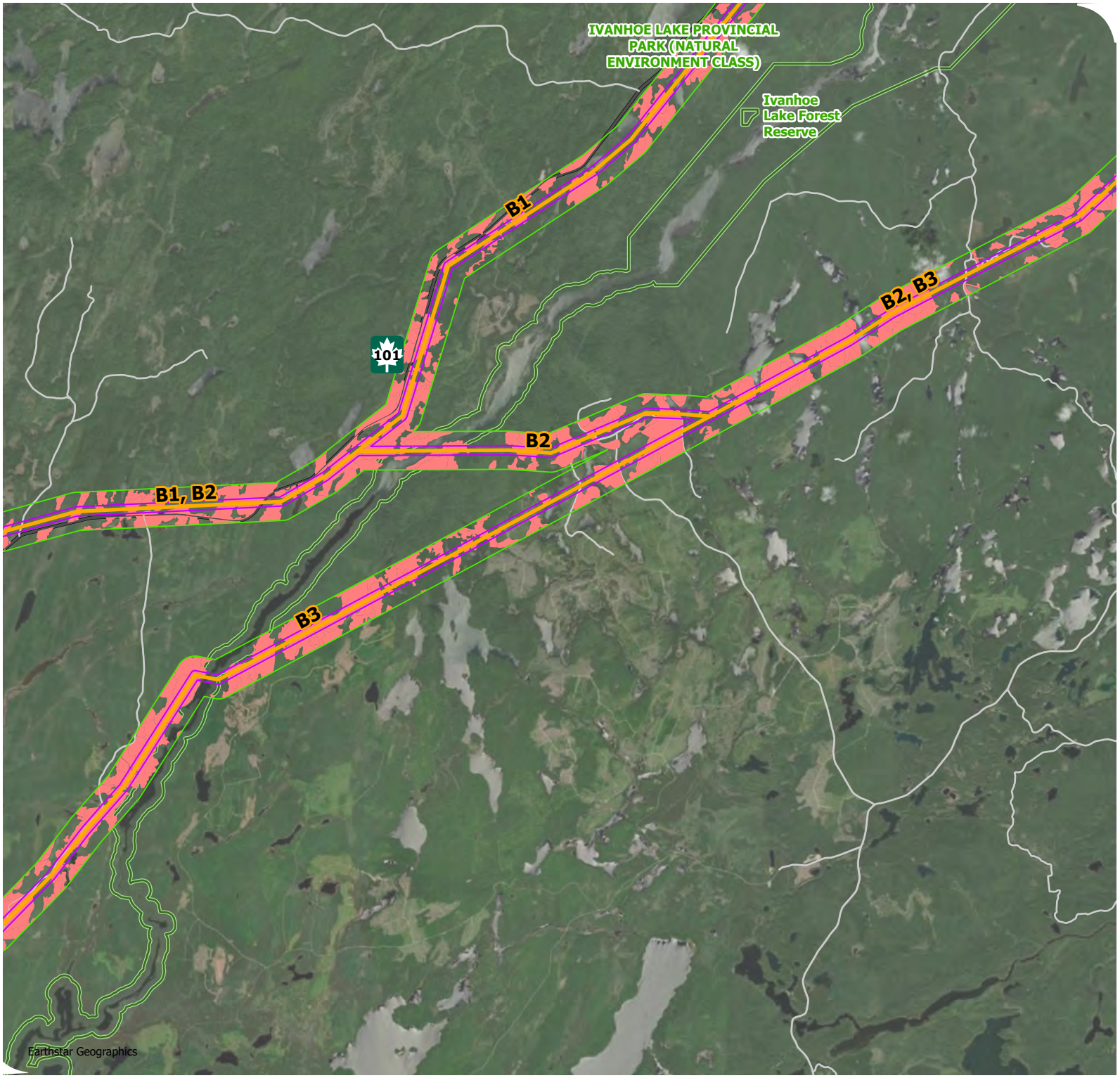


FIGURE 72. SWH - RESIDENT BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Resident Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

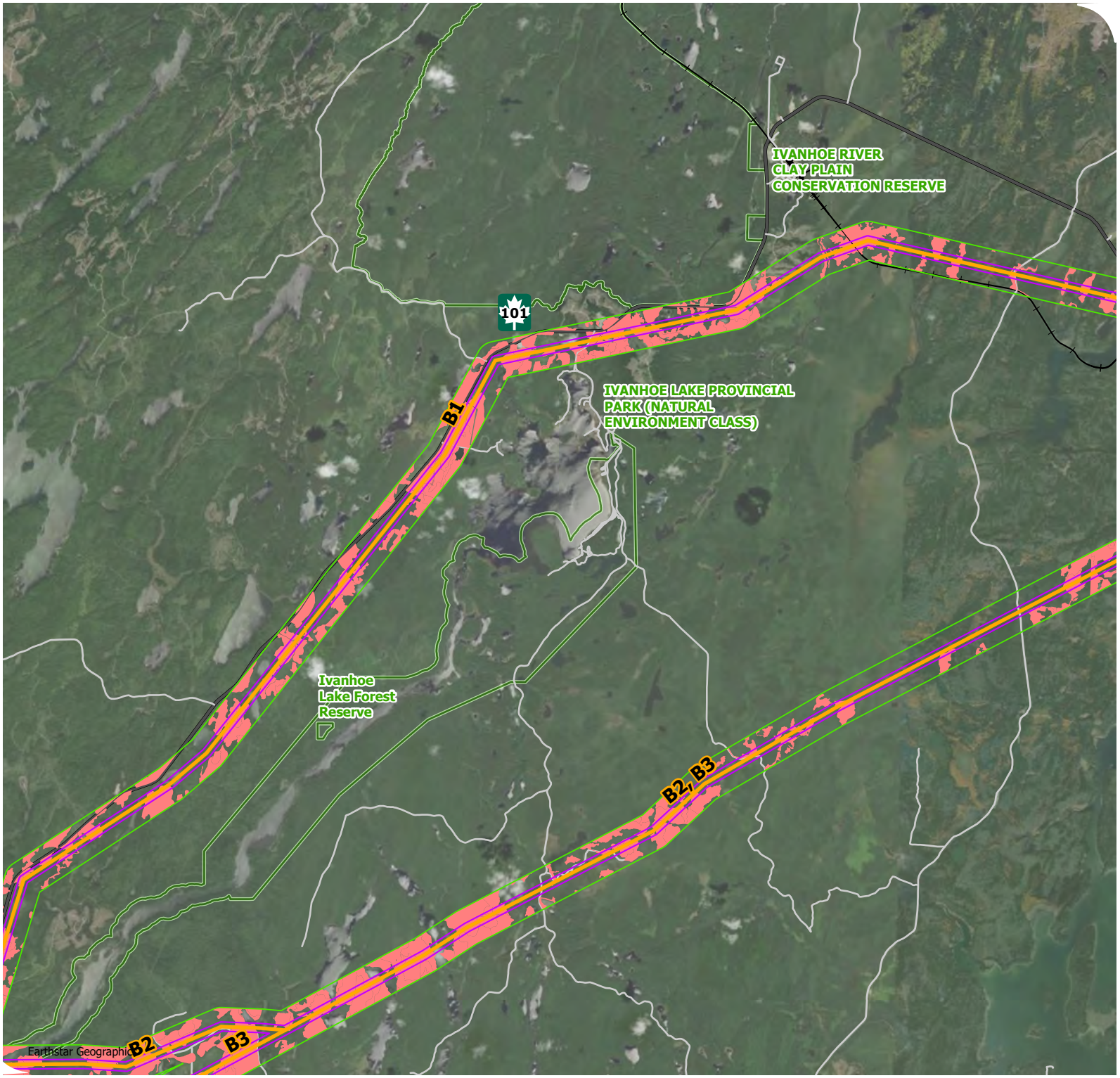
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 73. SWH - RESIDENT BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Resident Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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DATE: 2026-03-25

WAWA TIMMINS POWER LINE

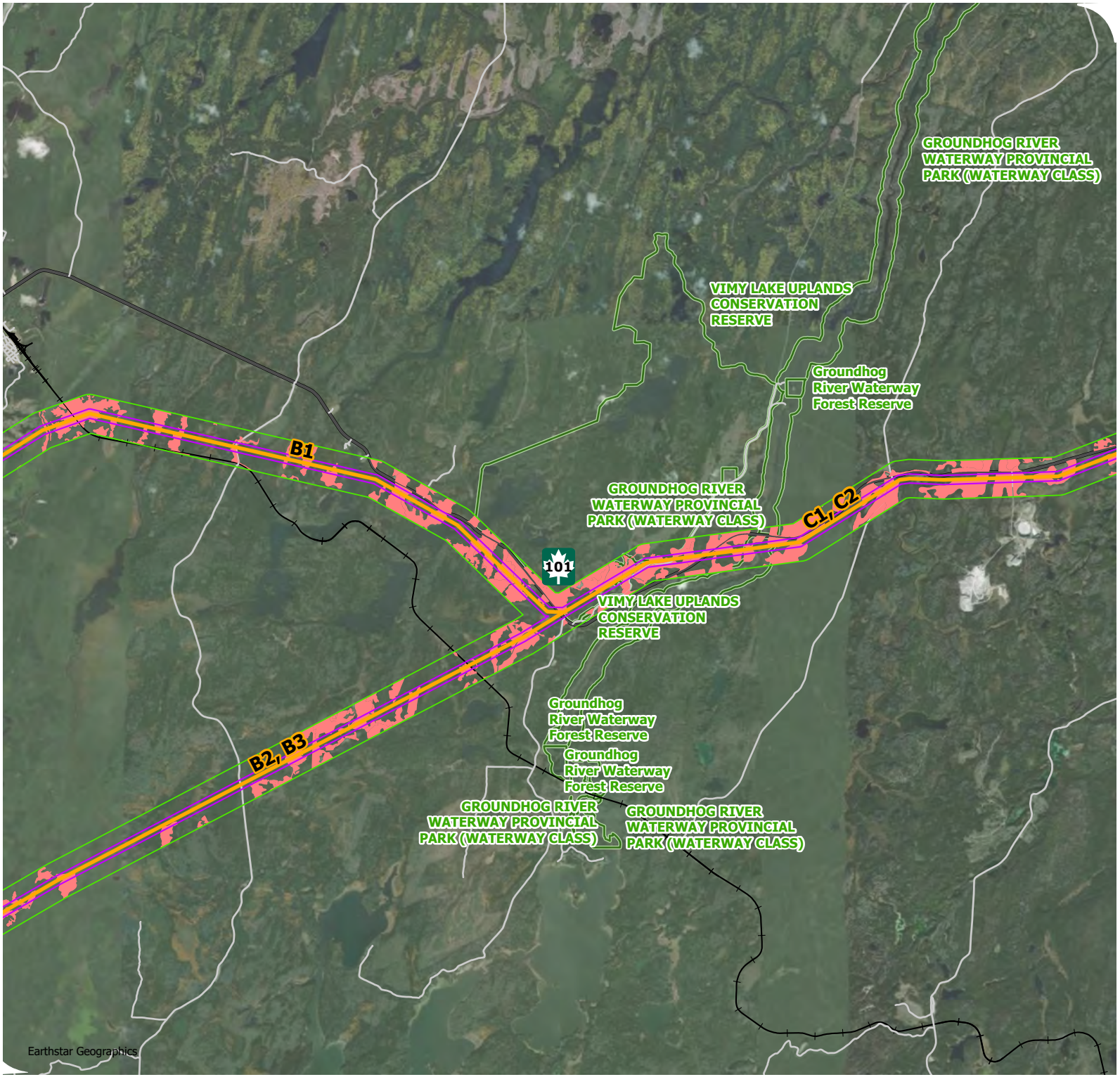


FIGURE 74. SWH - RESIDENT BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Resident Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

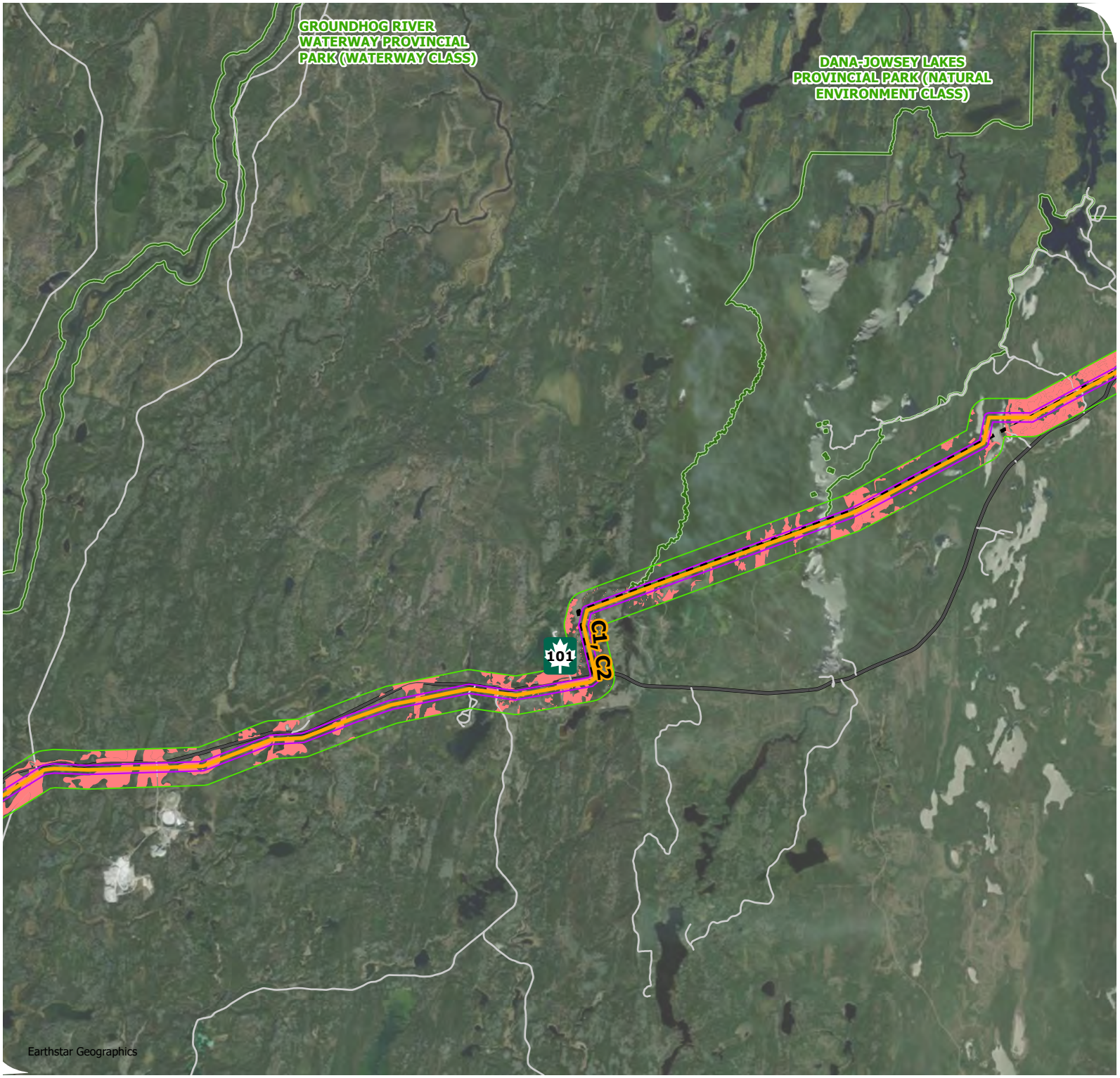
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WAWA TIMMINS POWER LINE

FIGURE 75. SWH - RESIDENT BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Resident Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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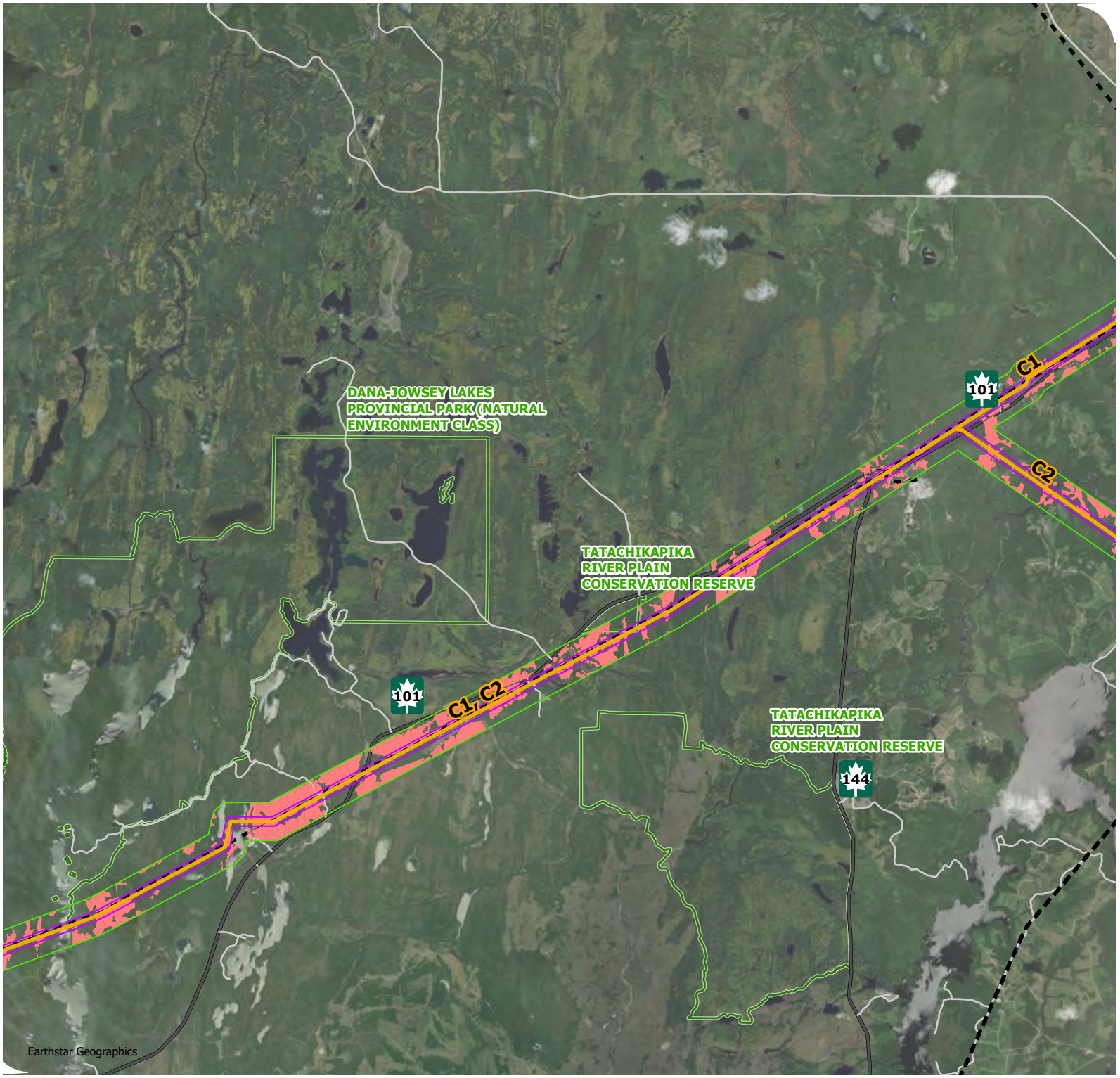
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WAWA TIMMINS POWER LINE

FIGURE 76. SWH - RESIDENT BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Resident Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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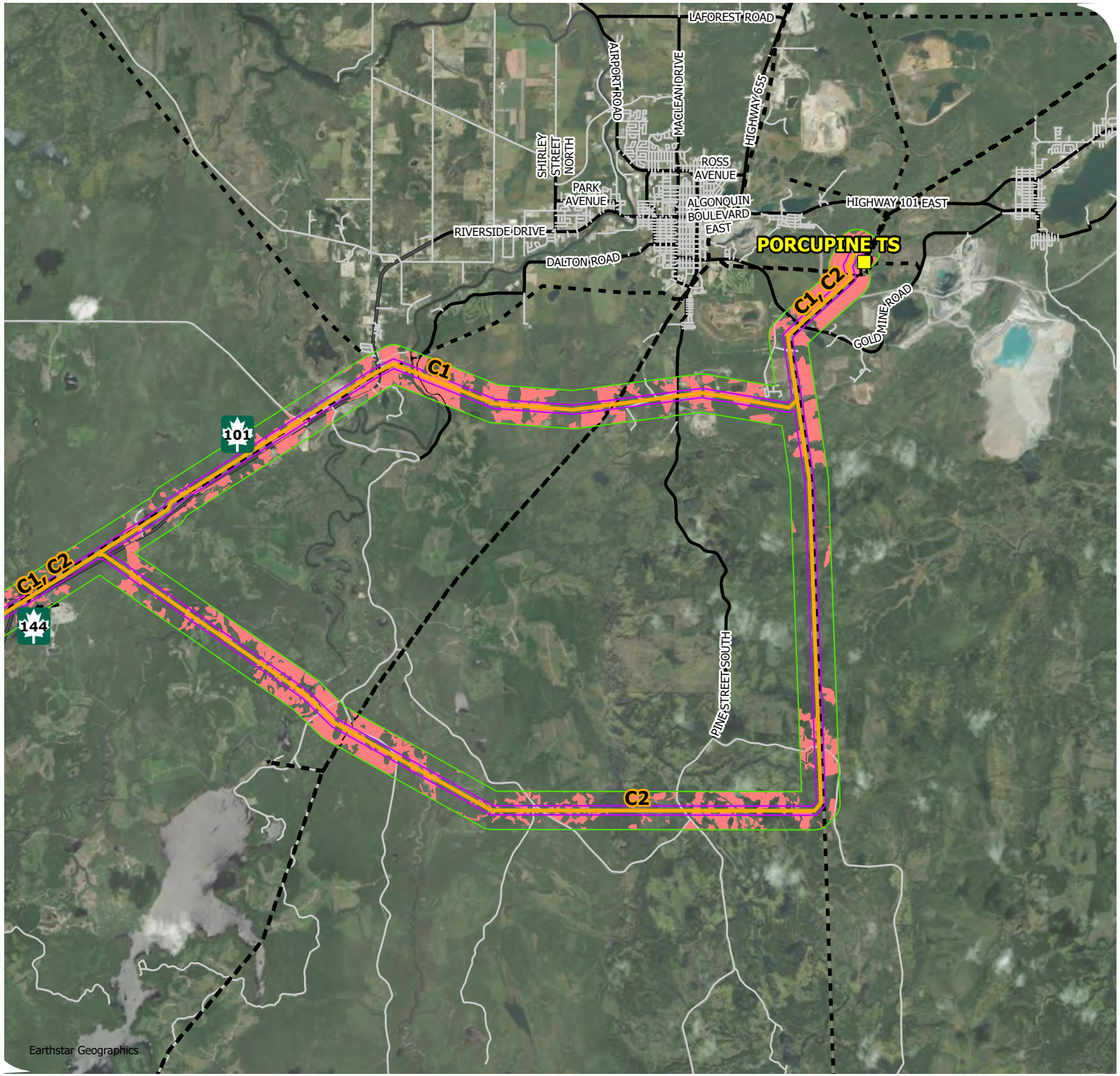
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WAWA TIMMINS POWER LINE

FIGURE 77. SWH - RESIDENT BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Resident Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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SCALE 1:139,000

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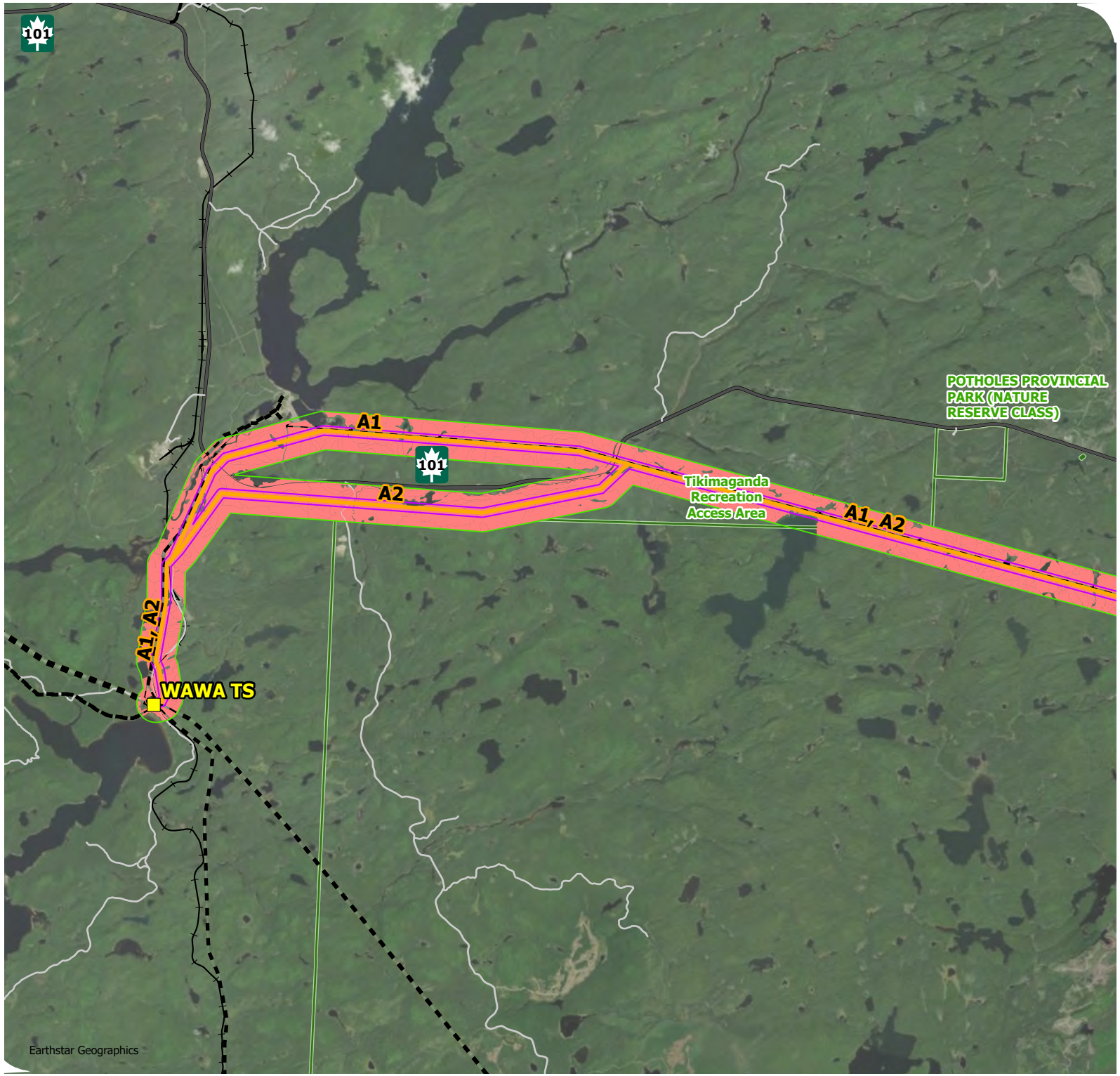
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WAWA TIMMINS POWER LINE

FIGURE 78. SWH - MIGRATORY BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Migratory Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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SCALE 1:139,000

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WAWA TIMMINS POWER LINE

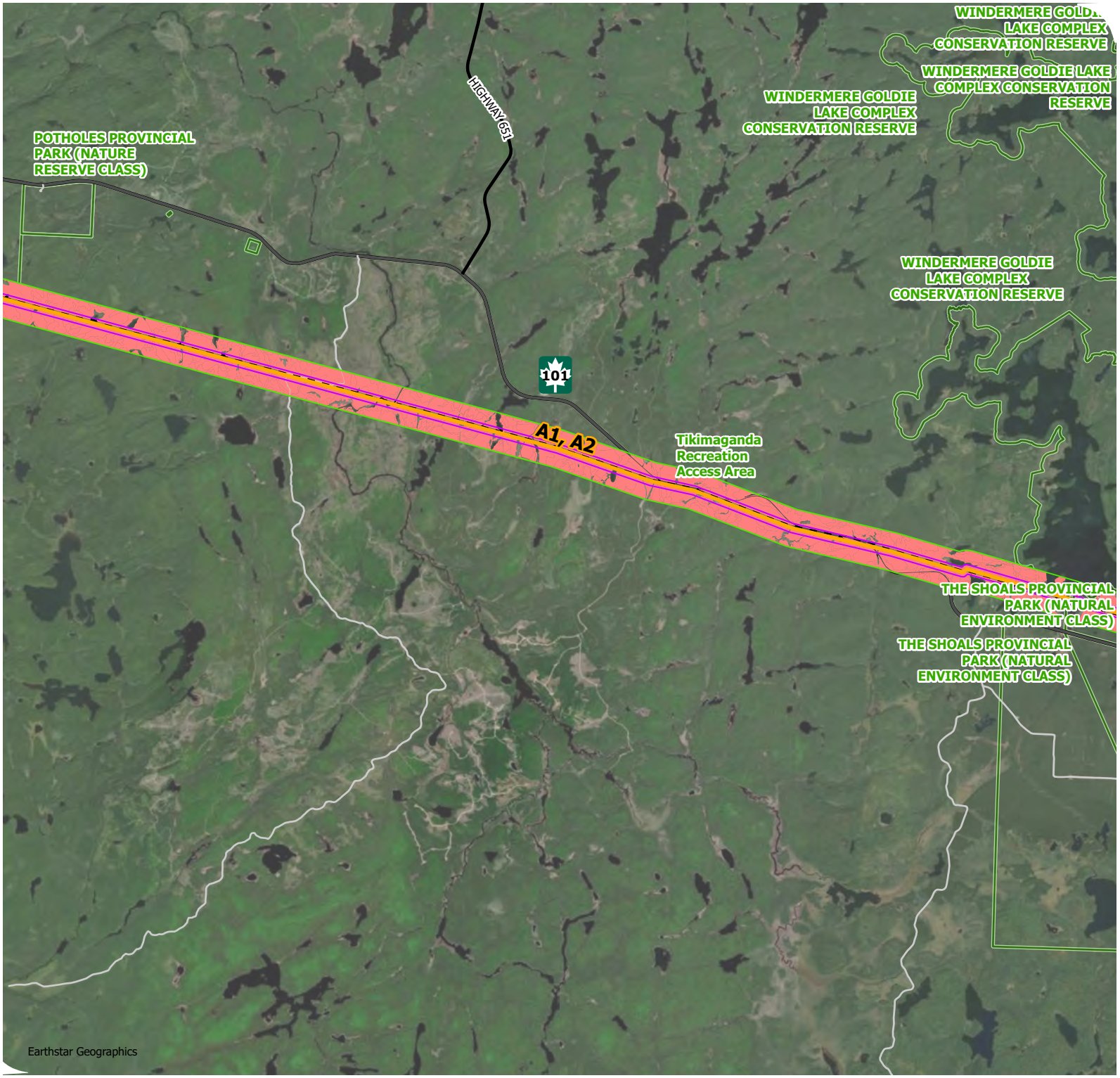


FIGURE 79. SWH - MIGRATORY BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Migratory Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

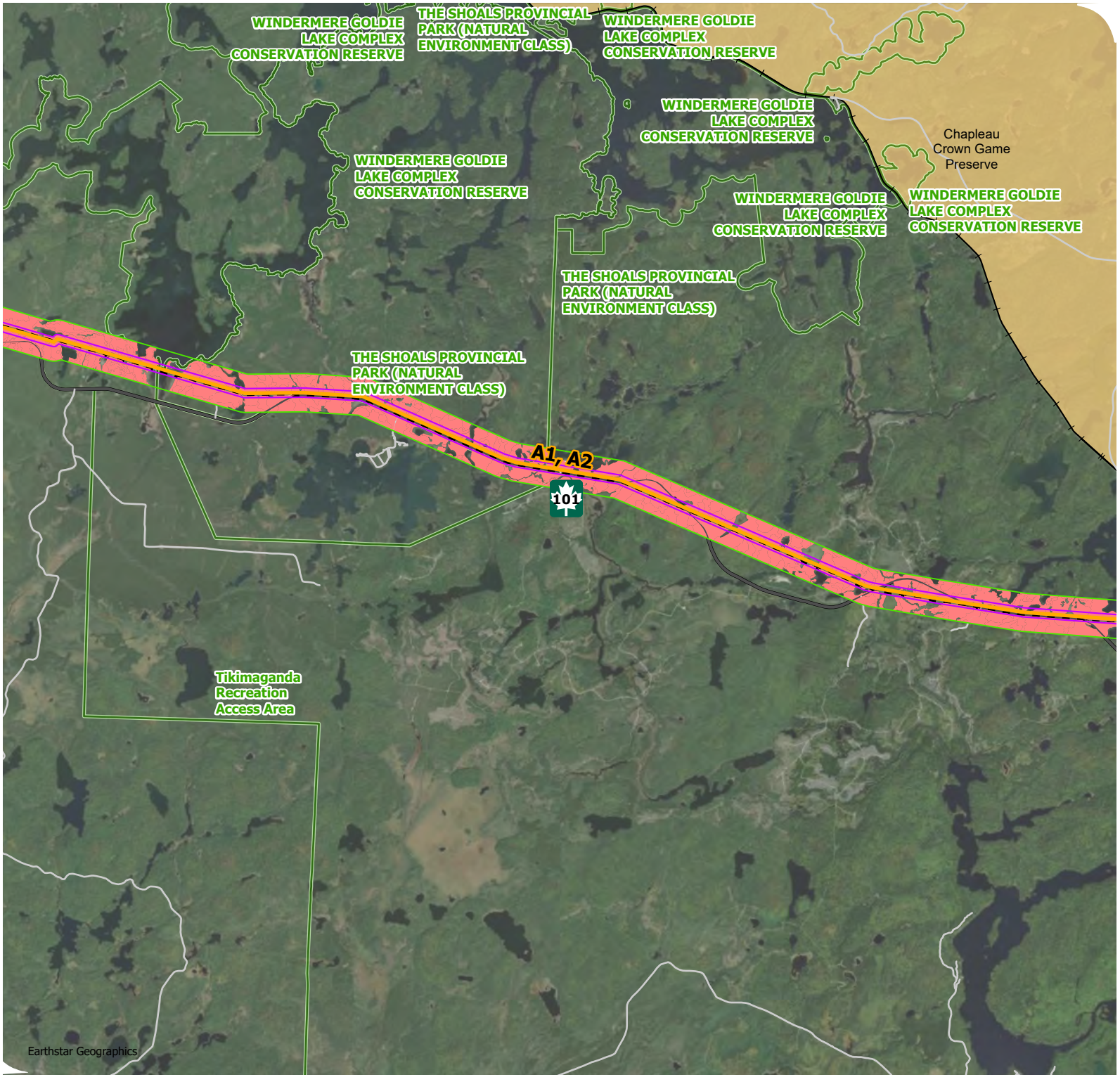
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WAWA TIMMINS POWER LINE

FIGURE 80. SWH - MIGRATORY BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Migratory Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

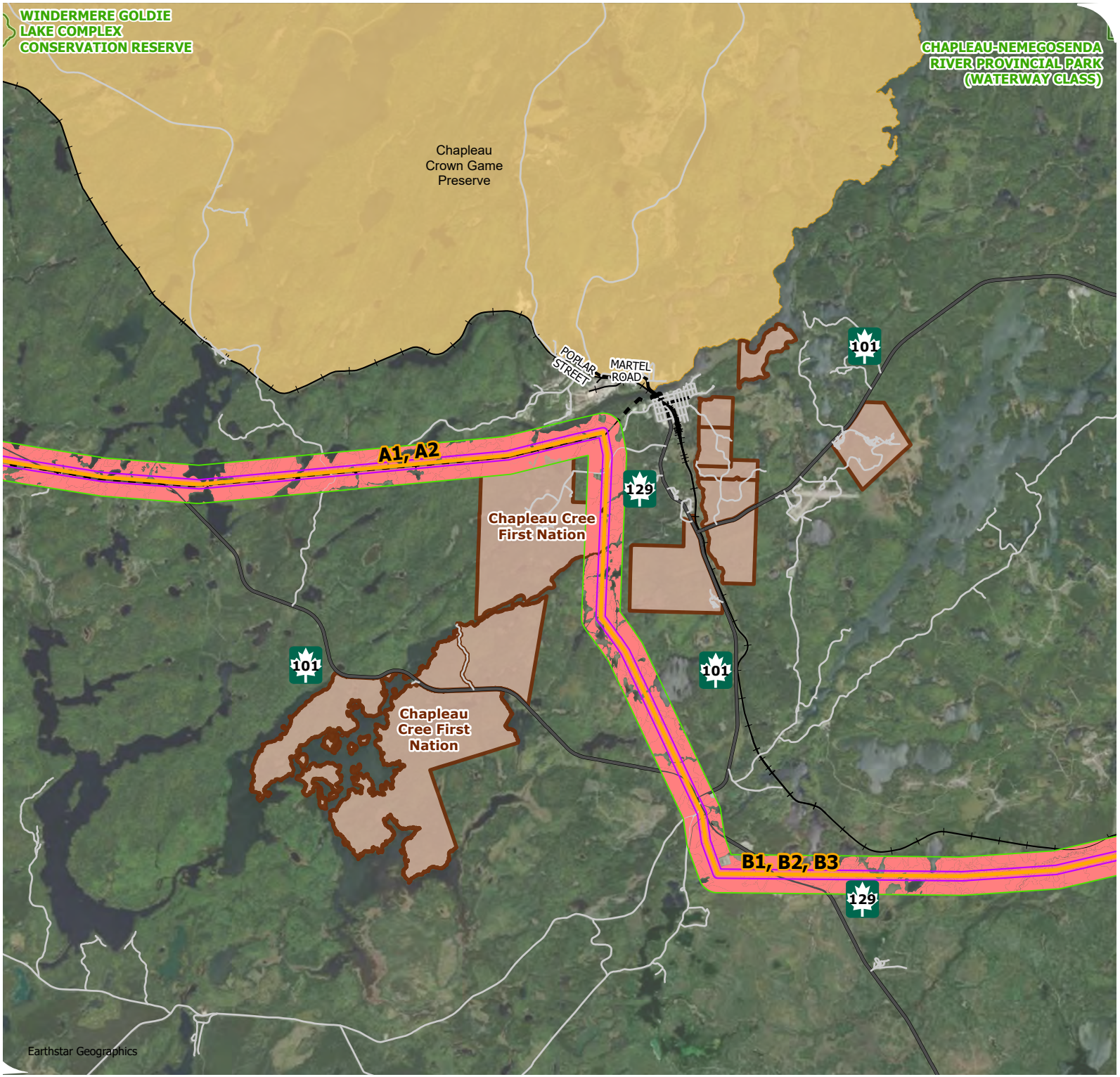
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WAWA TIMMINS POWER LINE

FIGURE 81. SWH - MIGRATORY BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Migratory Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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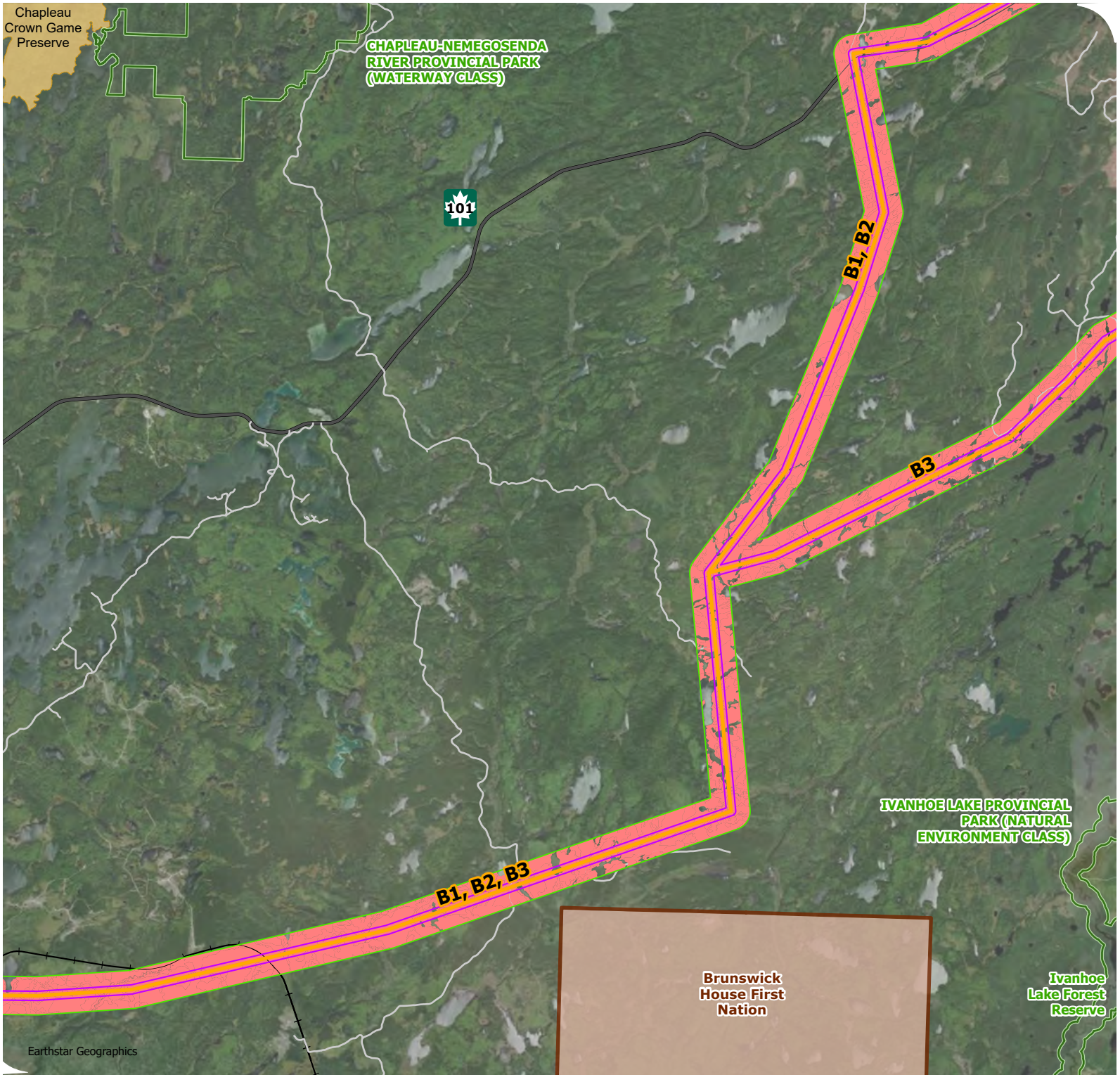
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WAWA TIMMINS POWER LINE

FIGURE 82. SWH - MIGRATORY BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Migratory Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

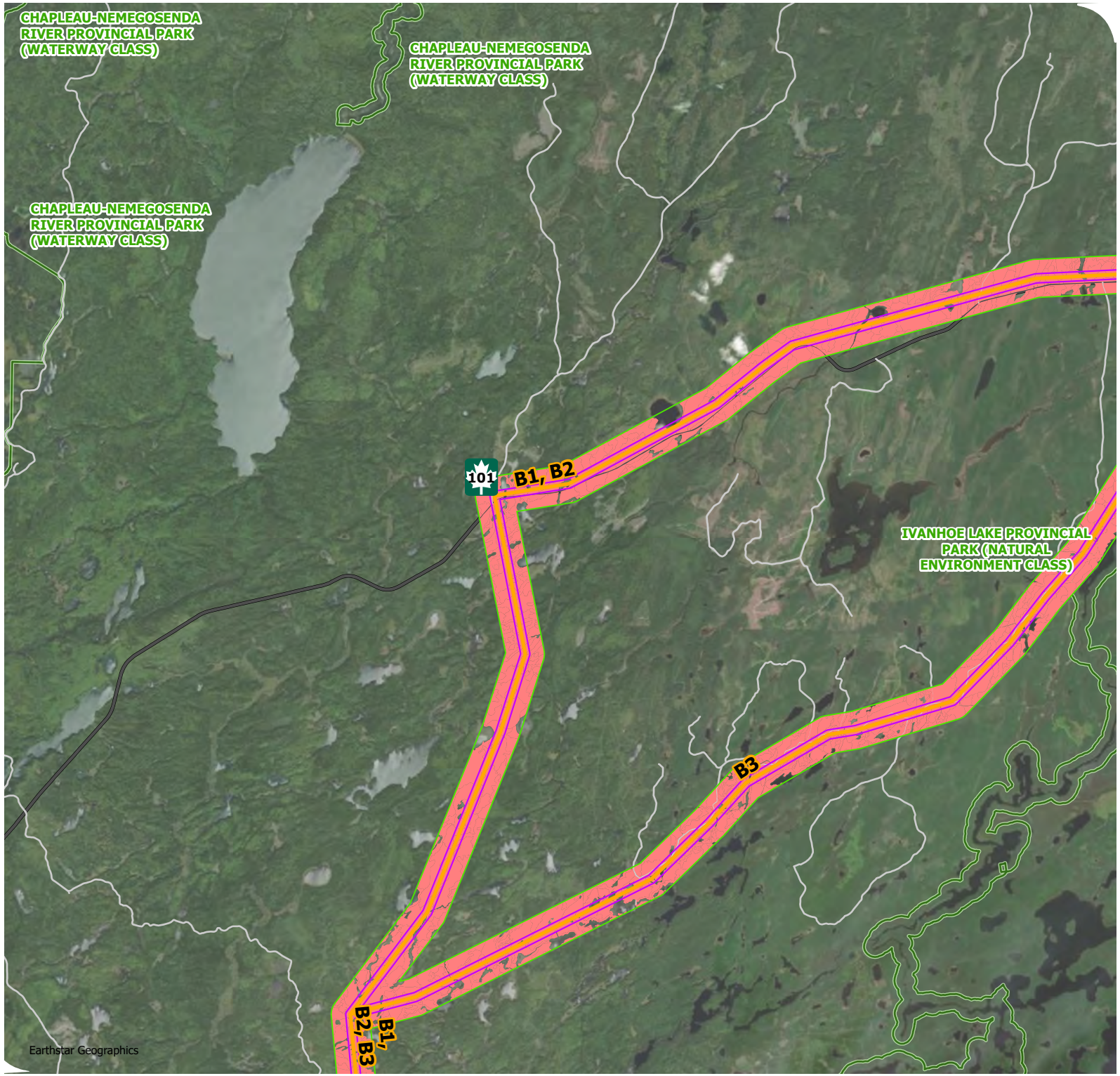
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WAWA TIMMINS POWER LINE

FIGURE 83. SWH - MIGRATORY BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Migratory Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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WAWA TIMMINS POWER LINE

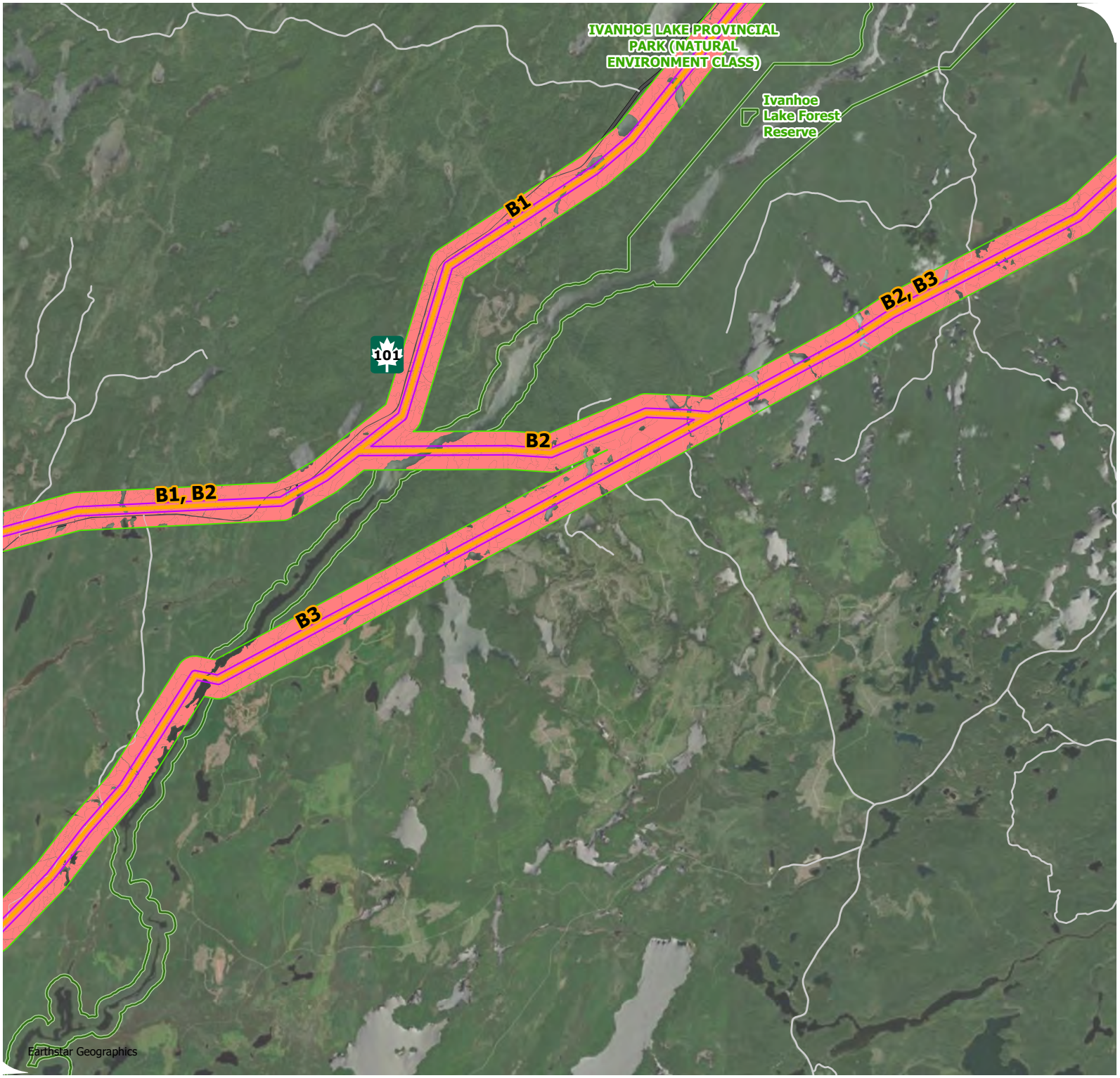


FIGURE 84. SWH - MIGRATORY BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Migratory Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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WAWA TIMMINS POWER LINE



FIGURE 85. SWH - MIGRATORY BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Migratory Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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WAWA TIMMINS POWER LINE

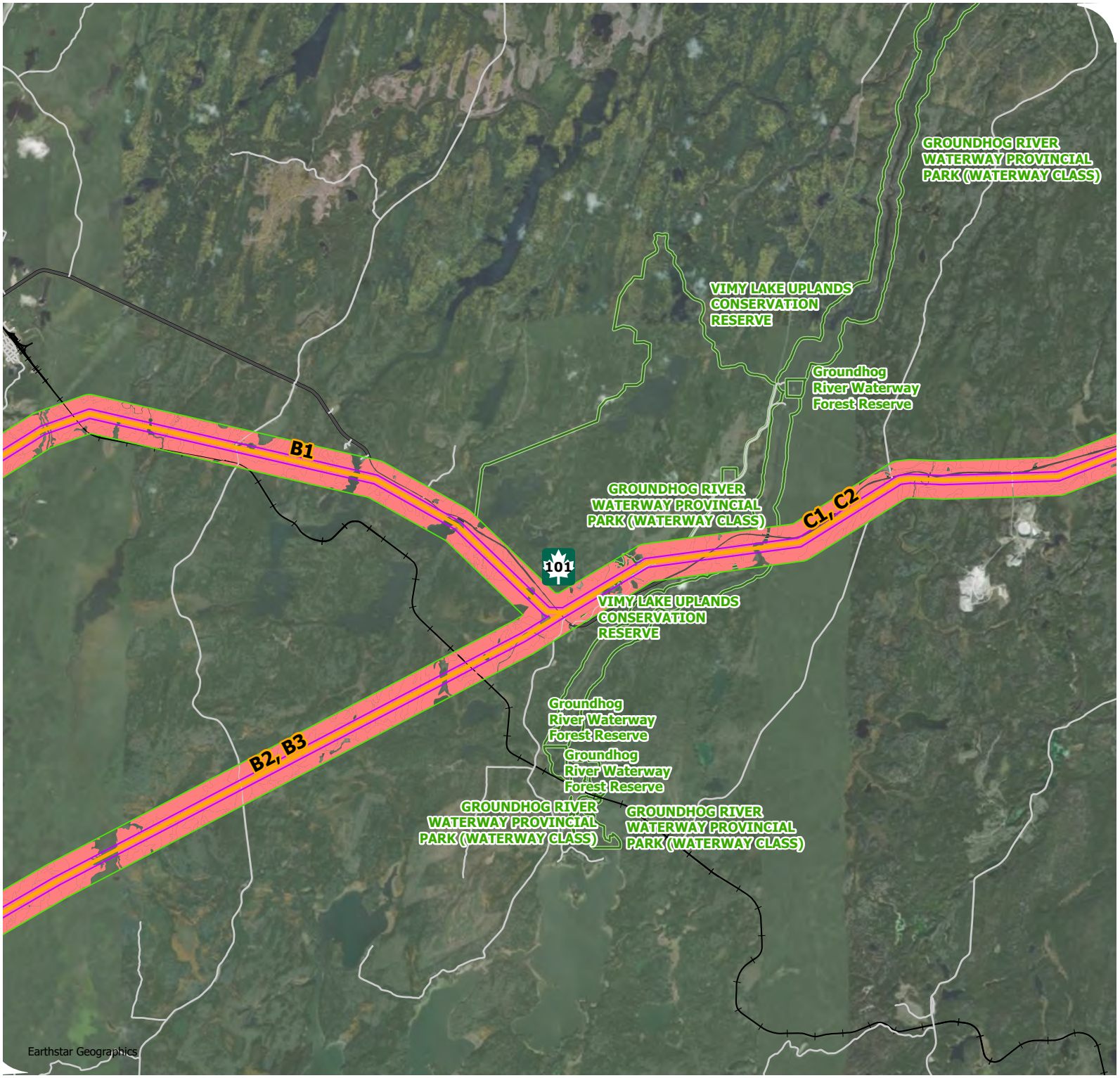


FIGURE 86. SWH - MIGRATORY BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Migratory Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
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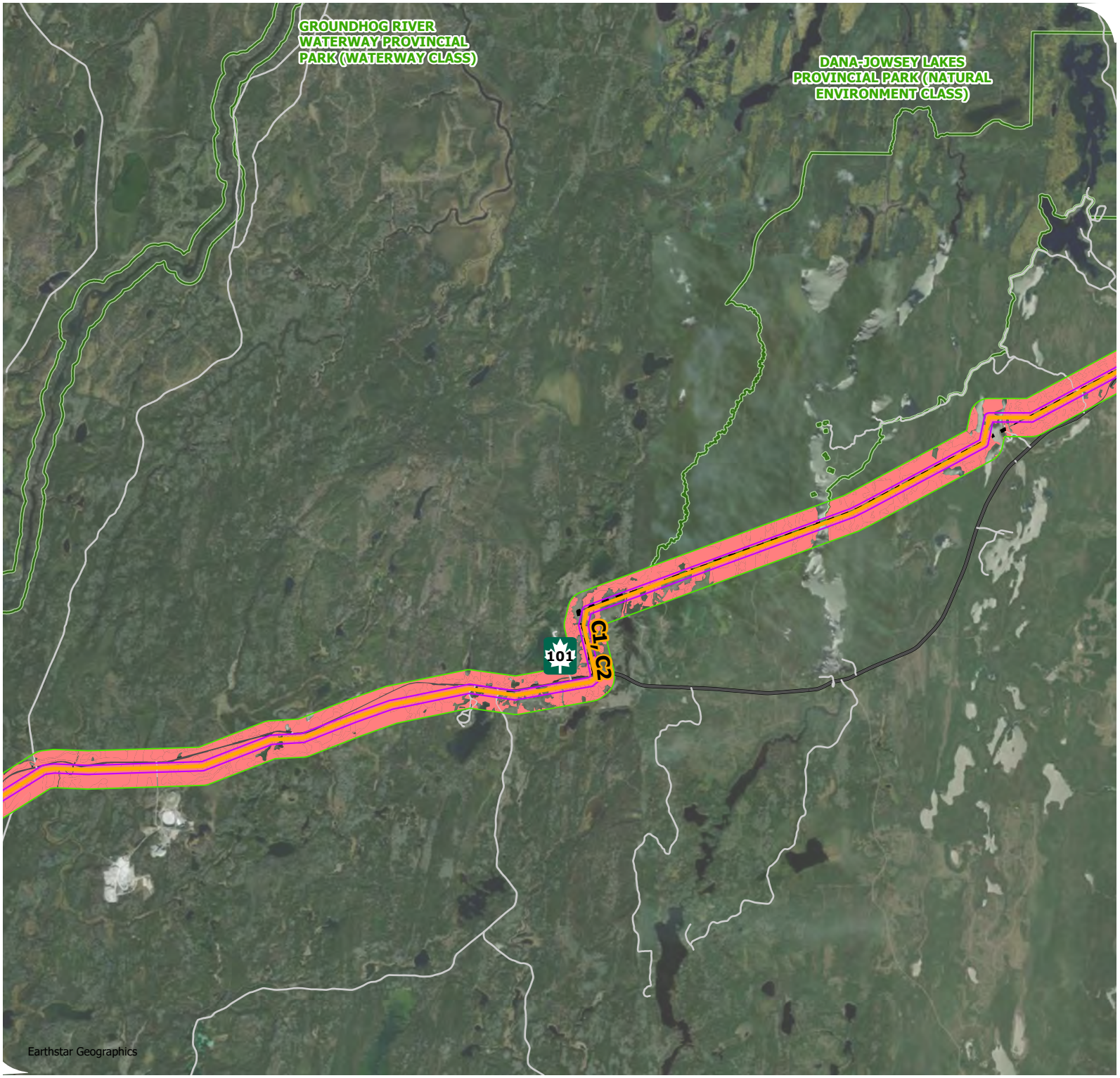
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WAWA TIMMINS POWER LINE

FIGURE 87. SWH - MIGRATORY BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Migratory Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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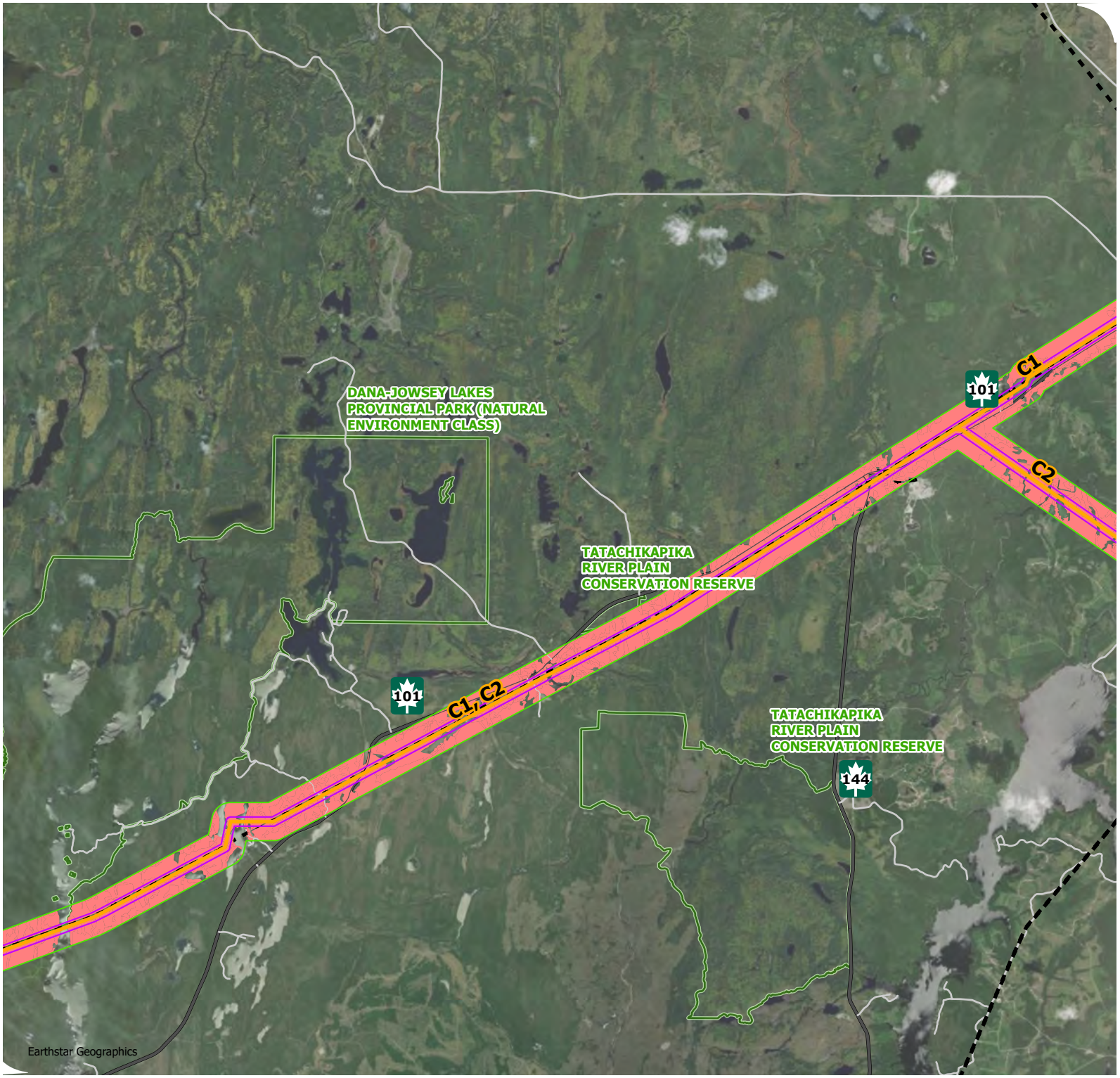
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WAWA TIMMINS POWER LINE

FIGURE 88. SWH - MIGRATORY BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Migratory Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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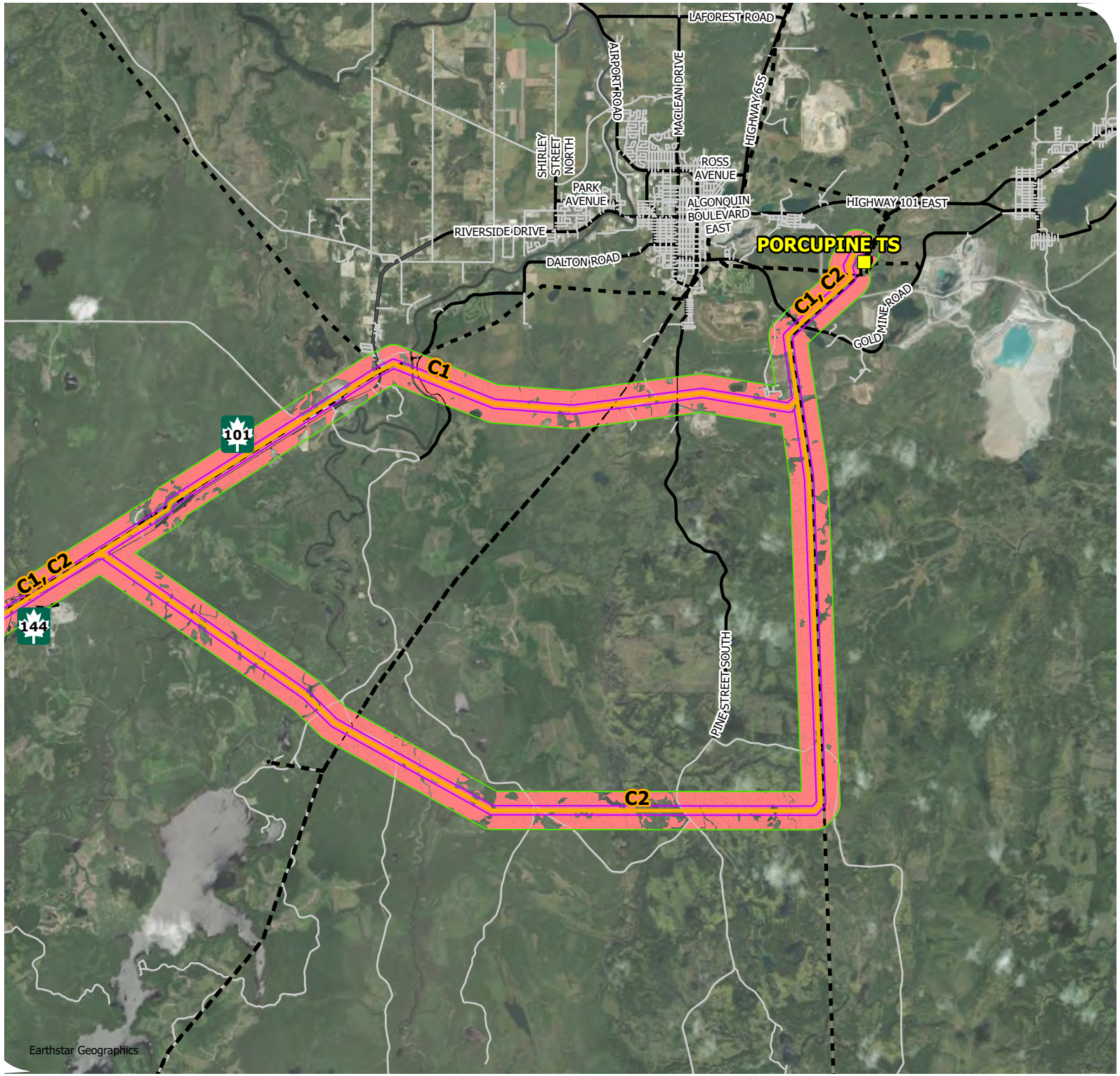
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WAWA TIMMINS POWER LINE

FIGURE 89. SWH - MIGRATORY BAT MATERNAL ROOSTING HABITAT

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Migratory Bat Maternal Roosting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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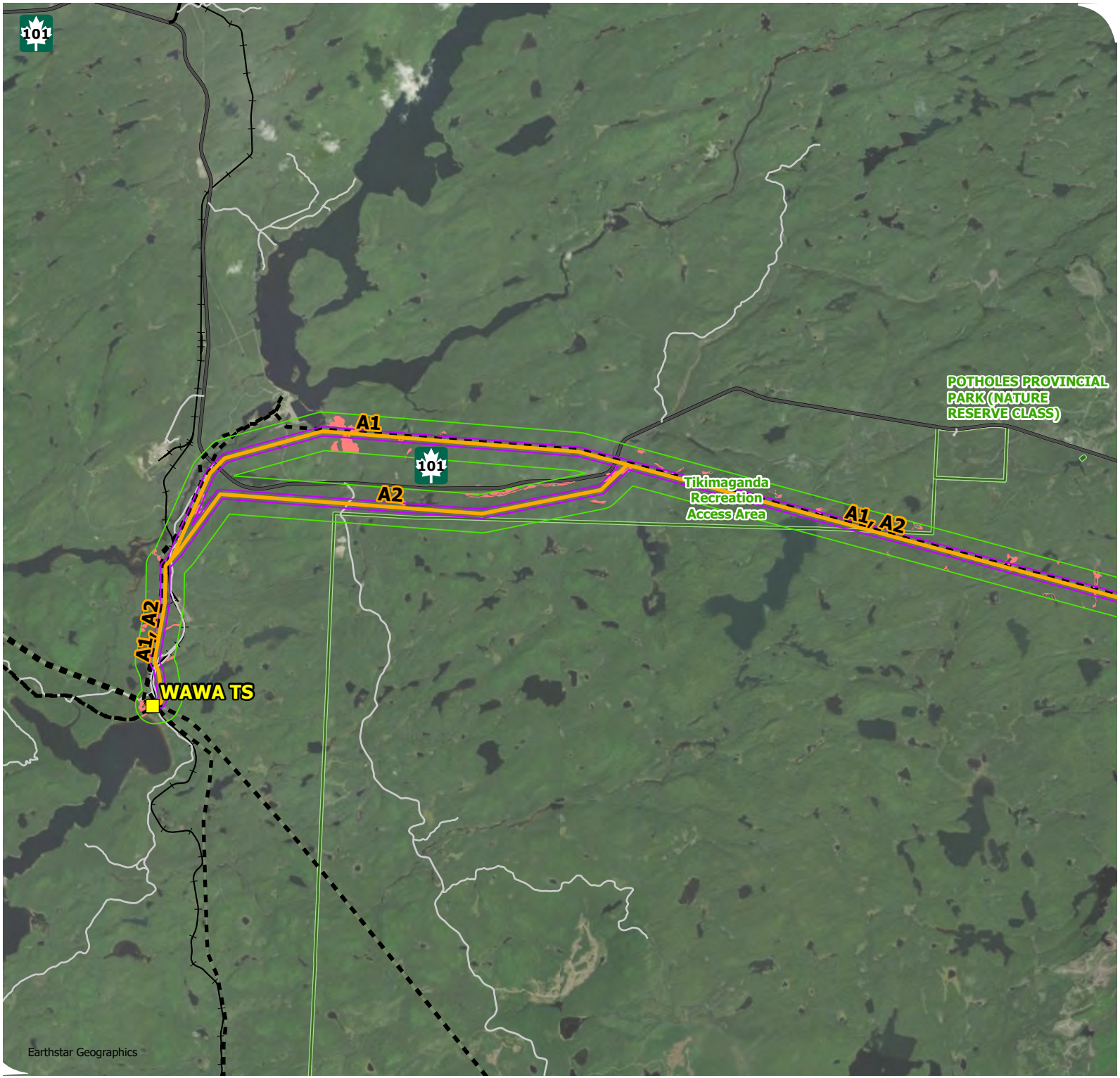
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WAWA TIMMINS POWER LINE

FIGURE 90. SWH - TURTLE WINTERING AREAS

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Wintering Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

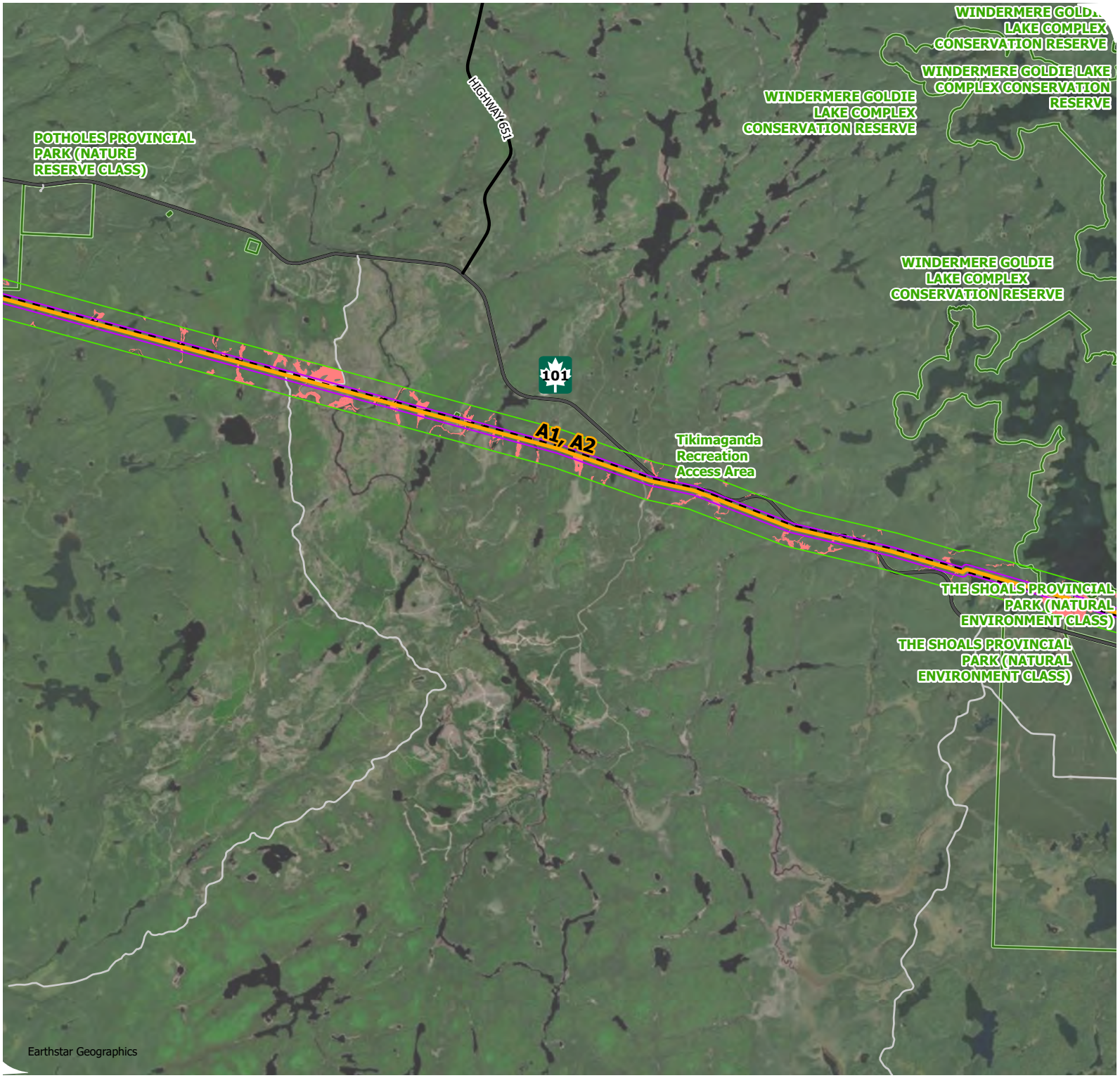
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WAWA TIMMINS POWER LINE

FIGURE 91. SWH - TURTLE WINTERING AREAS

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Wintering Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

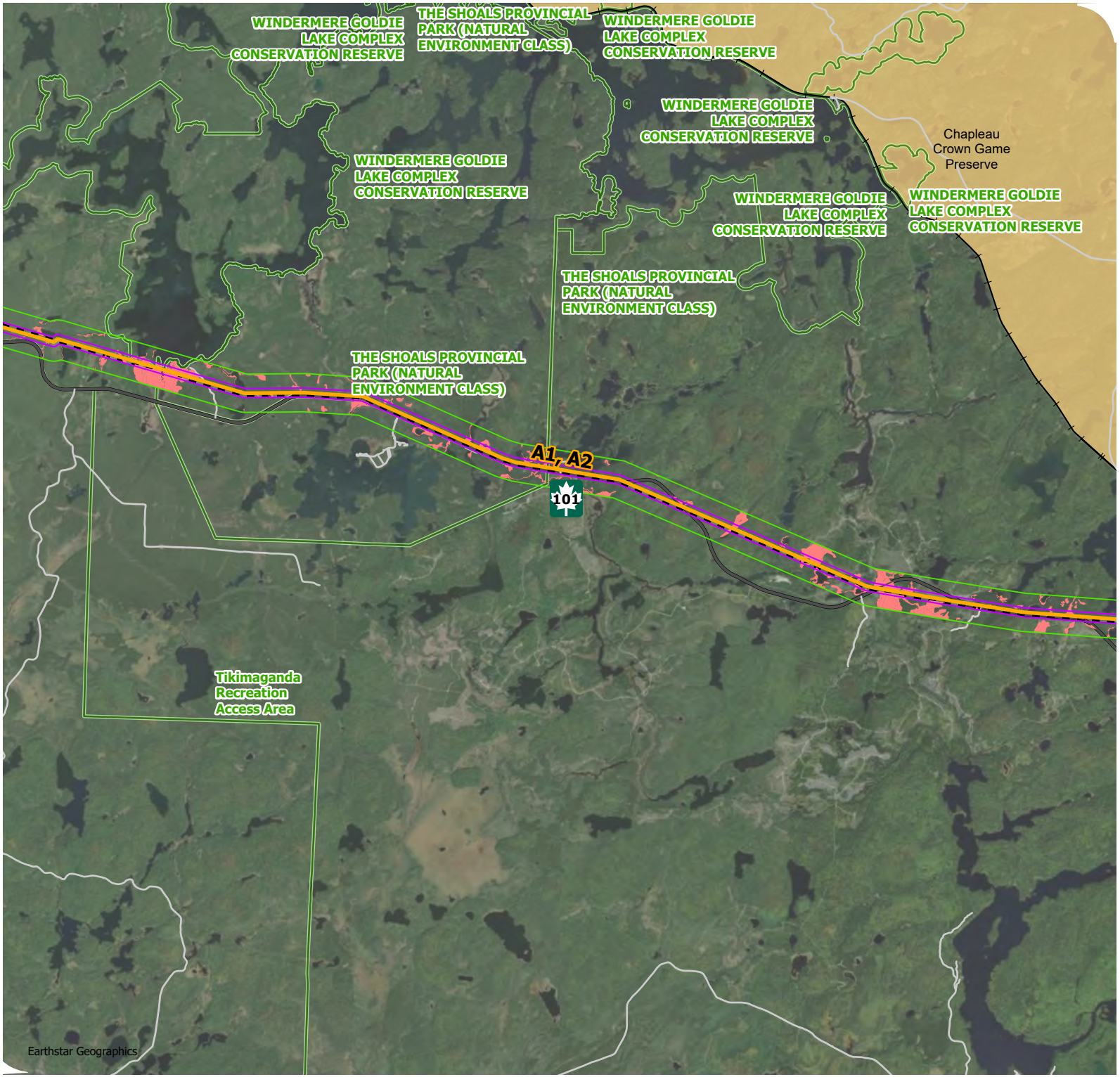
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WAWA TIMMINS POWER LINE

FIGURE 92. SWH - TURTLE WINTERING AREAS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Wintering Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

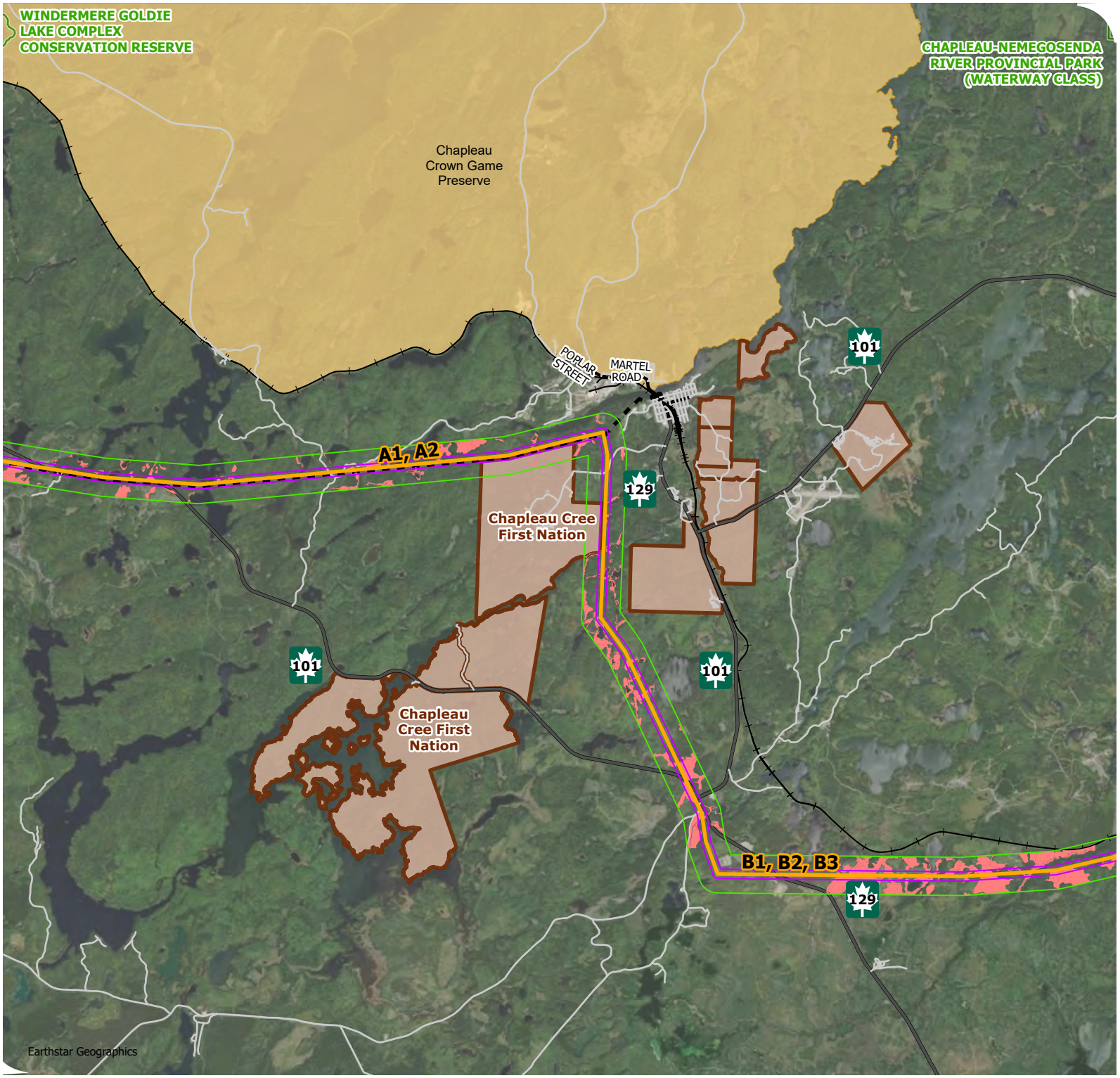
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WAWA TIMMINS POWER LINE

FIGURE 93. SWH - TURTLE WINTERING AREAS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Wintering Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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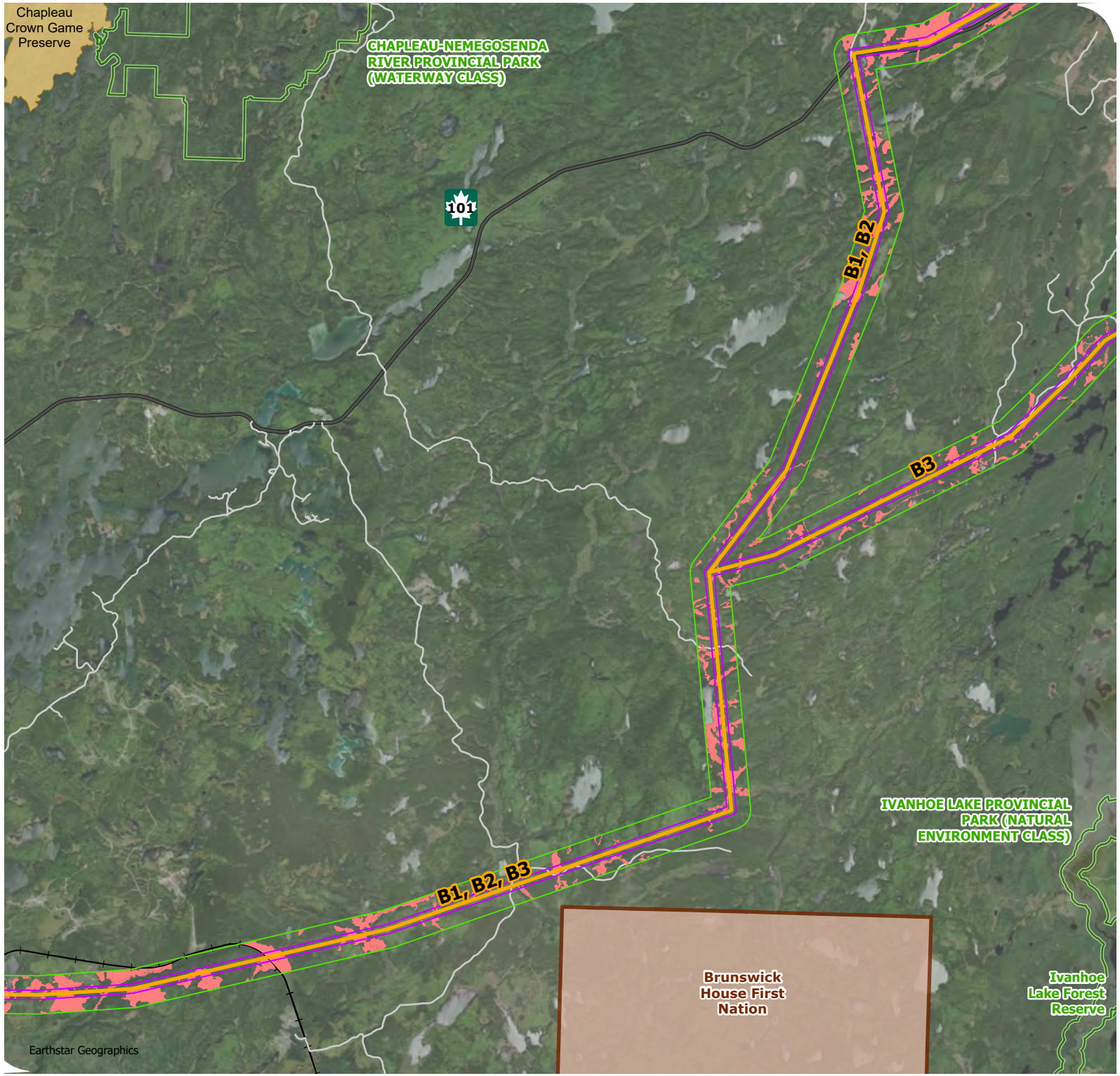
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WAWA TIMMINS POWER LINE

FIGURE 94. SWH - TURTLE WINTERING AREAS

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Wintering Habitat

MAP DRAWING INFORMATION:
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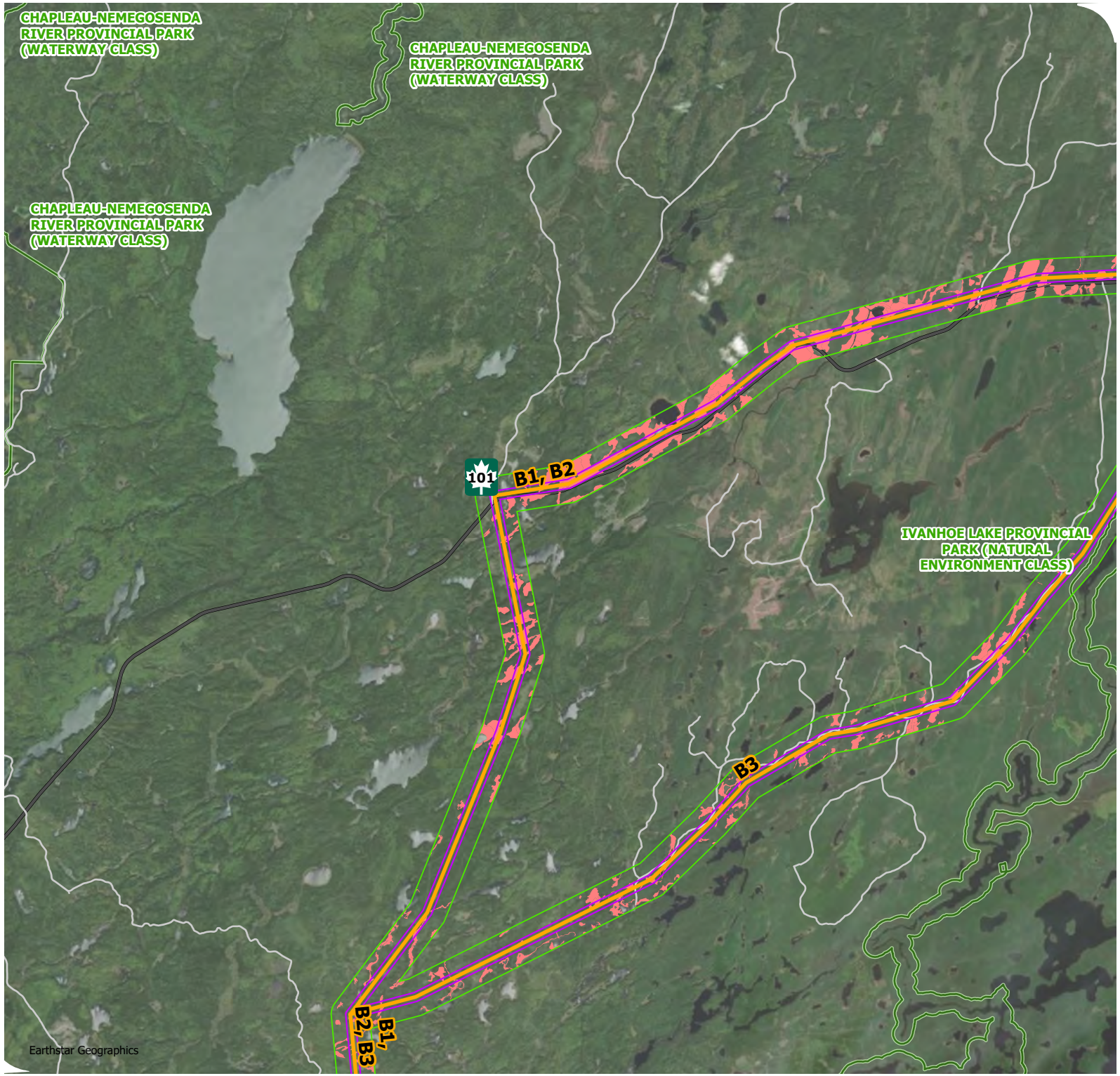
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WAWA TIMMINS POWER LINE

FIGURE 95. SWH - TURTLE WINTERING AREAS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Wintering Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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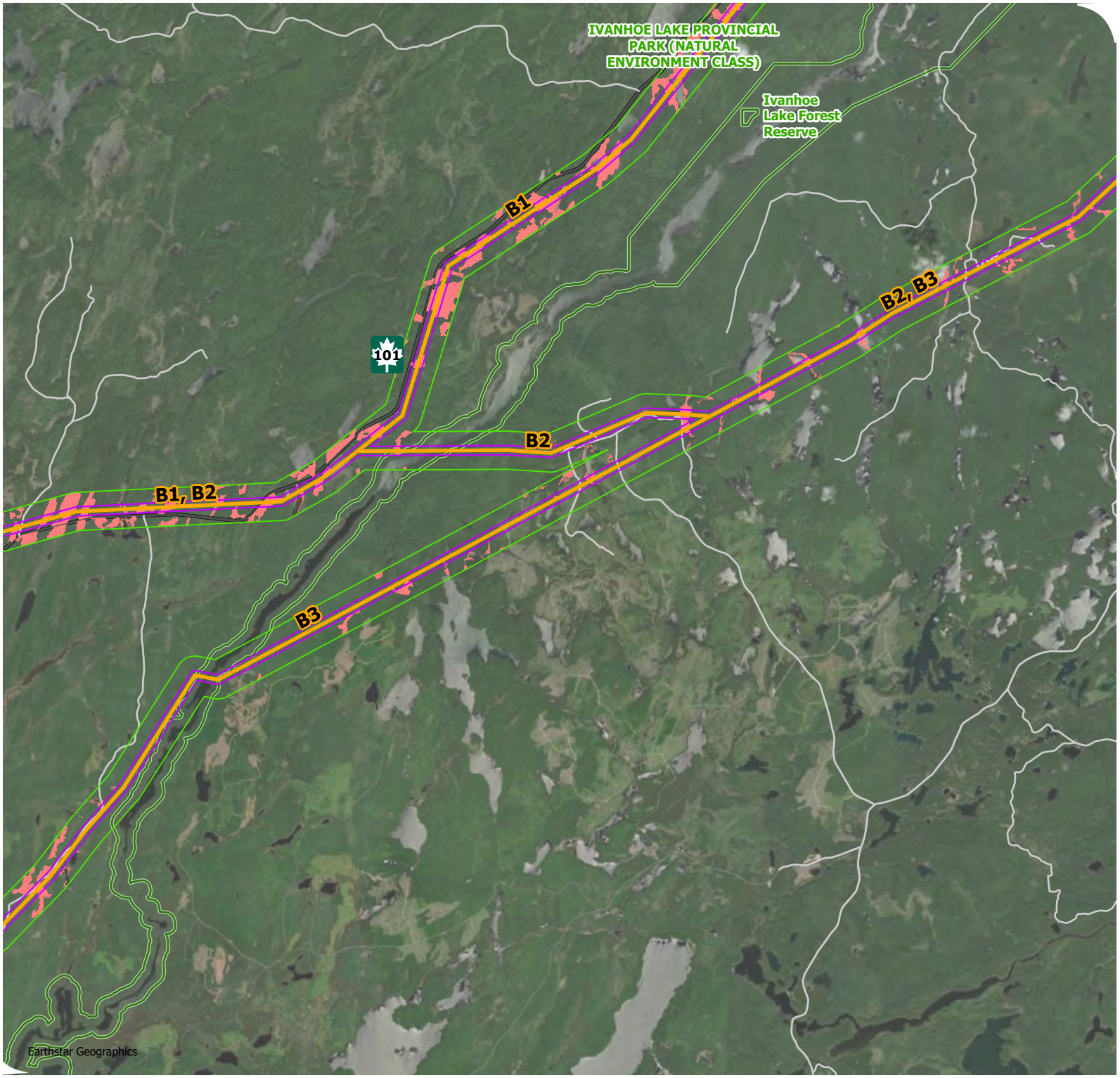
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WAWA TIMMINS POWER LINE

FIGURE 96. SWH - TURTLE WINTERING AREAS

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Wintering Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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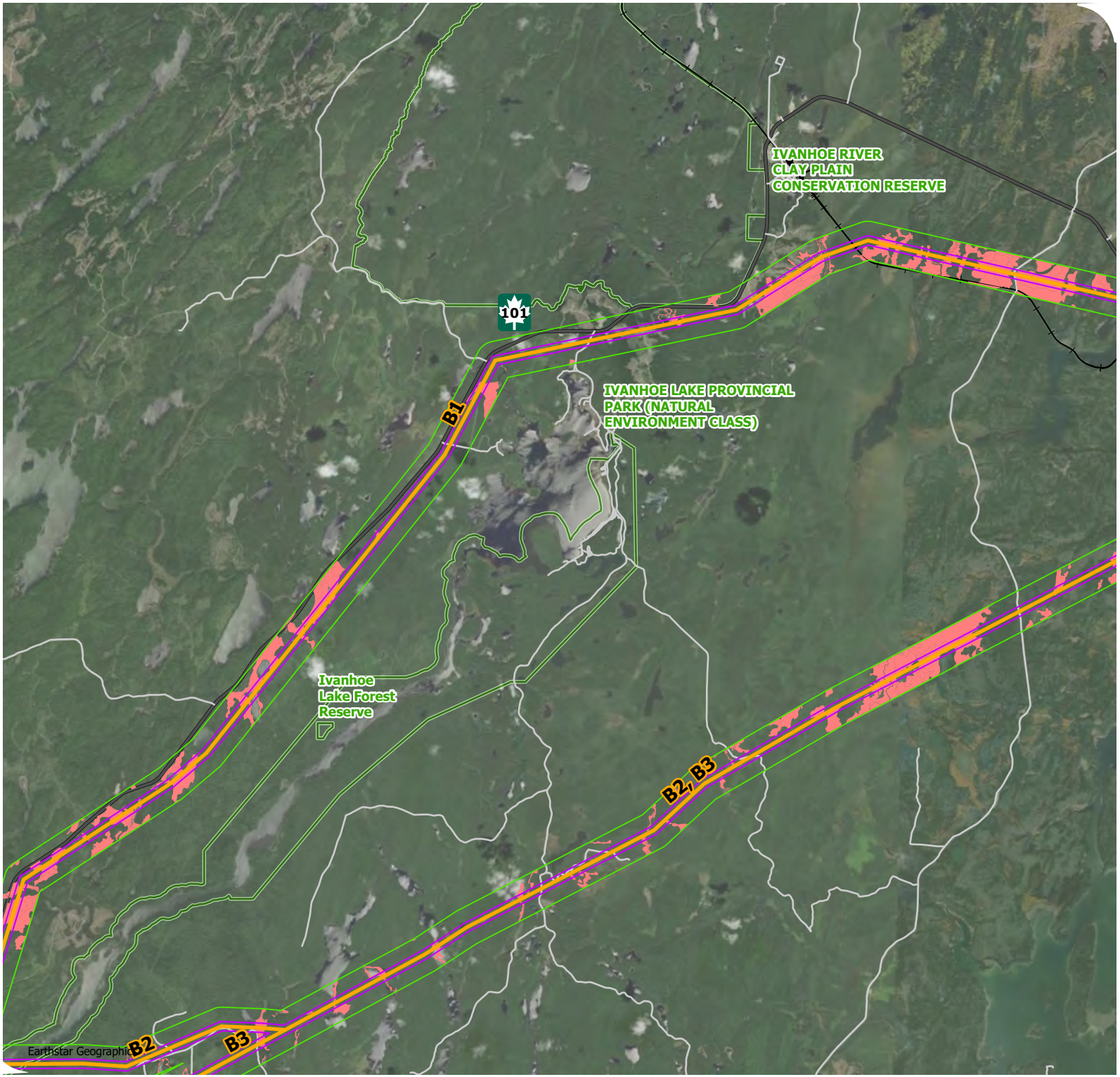
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WAWA TIMMINS POWER LINE

FIGURE 97. SWH - TURTLE WINTERING AREAS

Mapping Extent - Ivanhoe Lake 4



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Wintering Habitat

MAP DRAWING INFORMATION:
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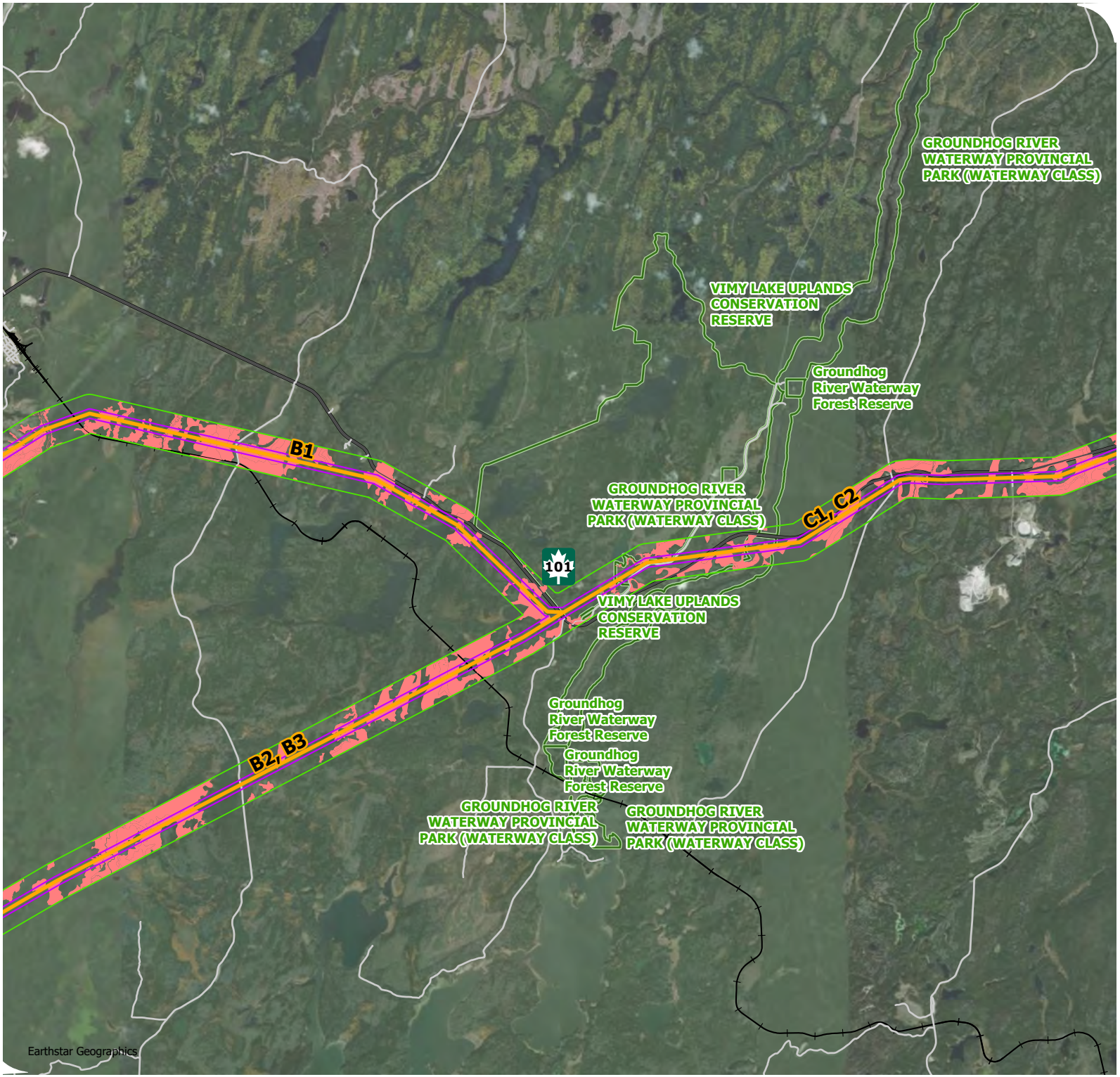
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WAWA TIMMINS POWER LINE

FIGURE 98. SWH - TURTLE WINTERING AREAS

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Wintering Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

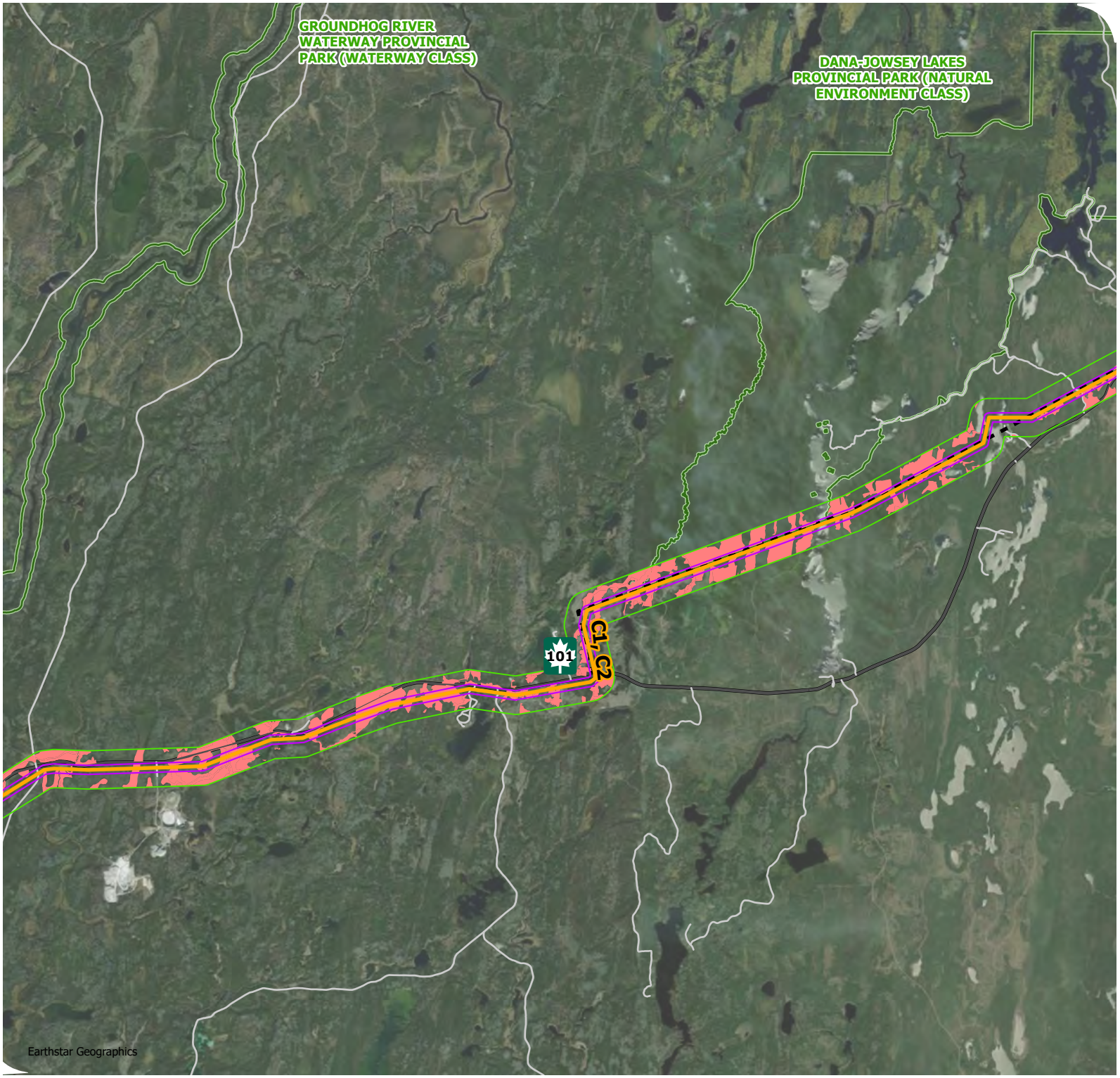
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 99. SWH - TURTLE WINTERING AREAS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Wintering Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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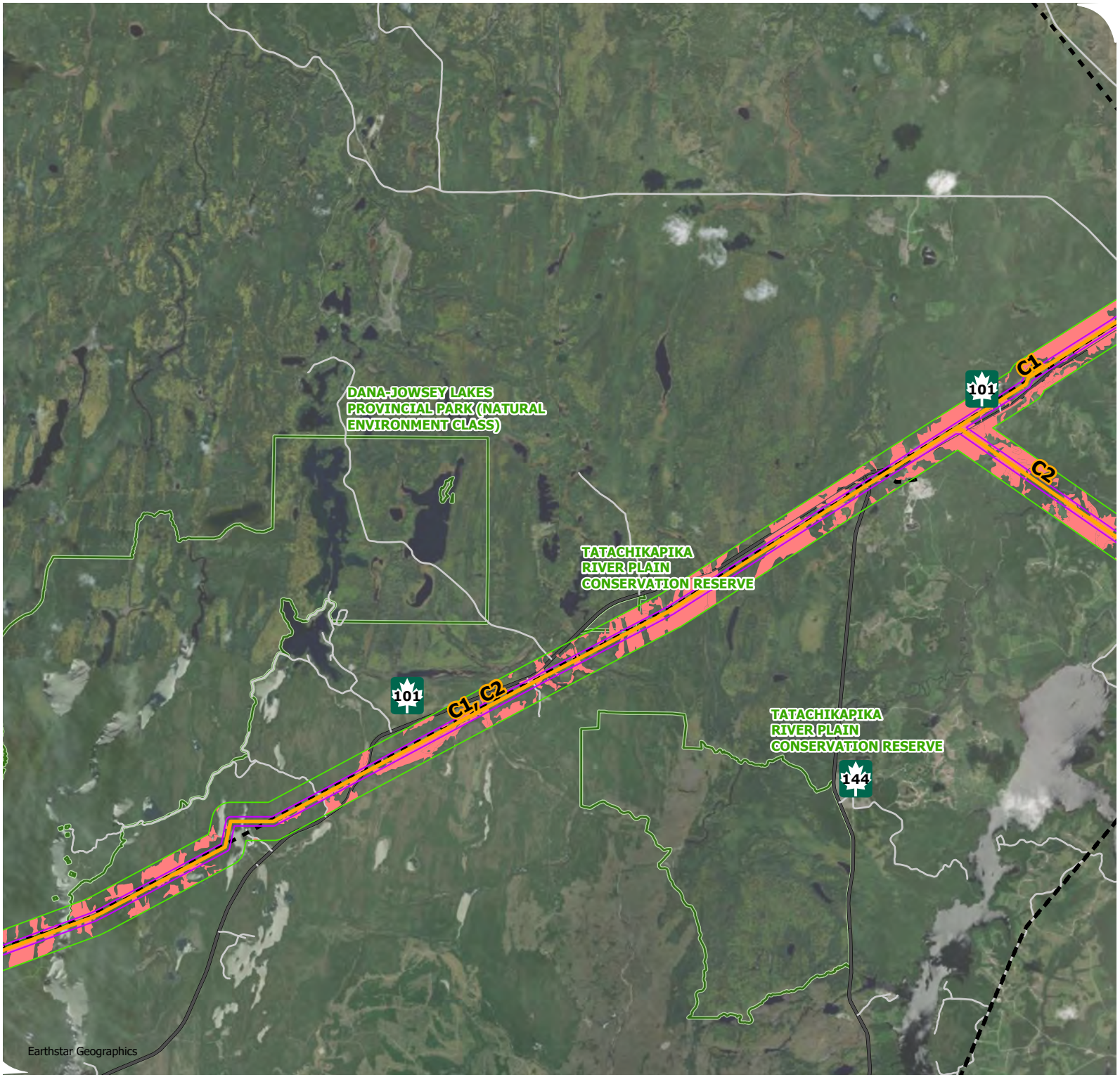
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WAWA TIMMINS POWER LINE

FIGURE 100. SWH - TURTLE WINTERING AREAS

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Wintering Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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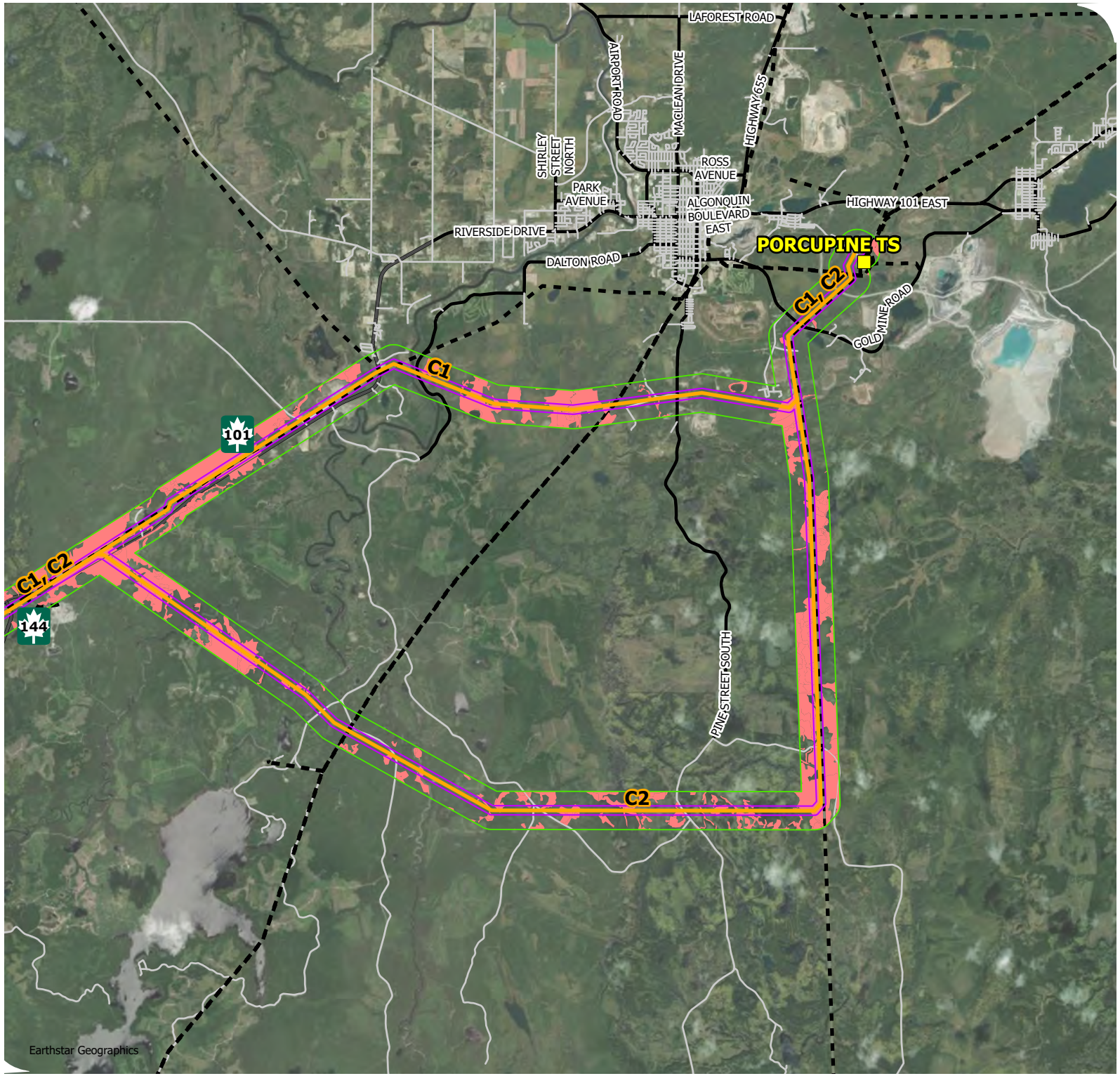
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WAWA TIMMINS POWER LINE

FIGURE 101. SWH - TURTLE WINTERING AREAS

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Wintering Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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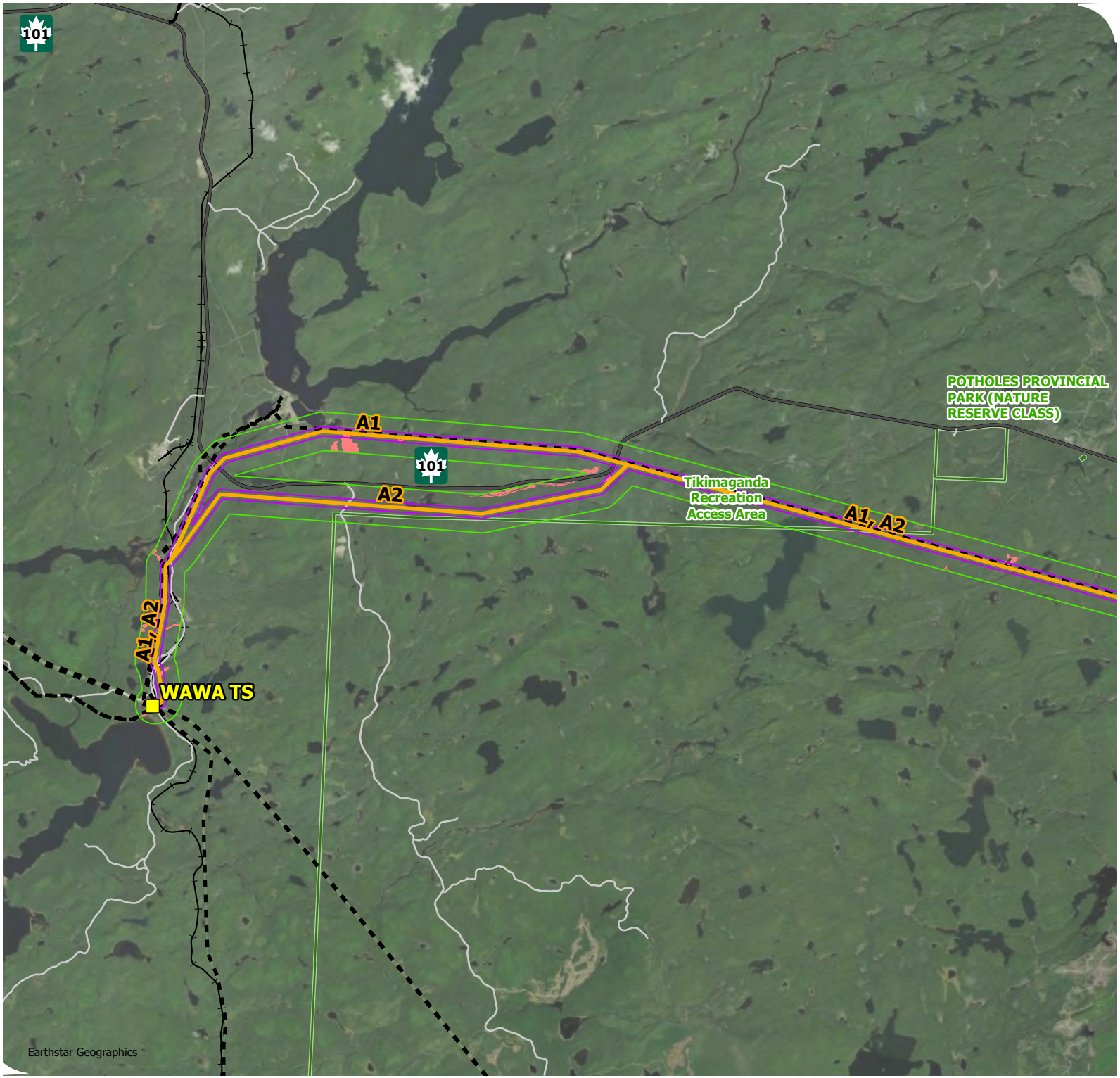
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WAWA TIMMINS POWER LINE

FIGURE 102. SWH - REPTILE HIBERNACULA

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Reptile Hibernaculum Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

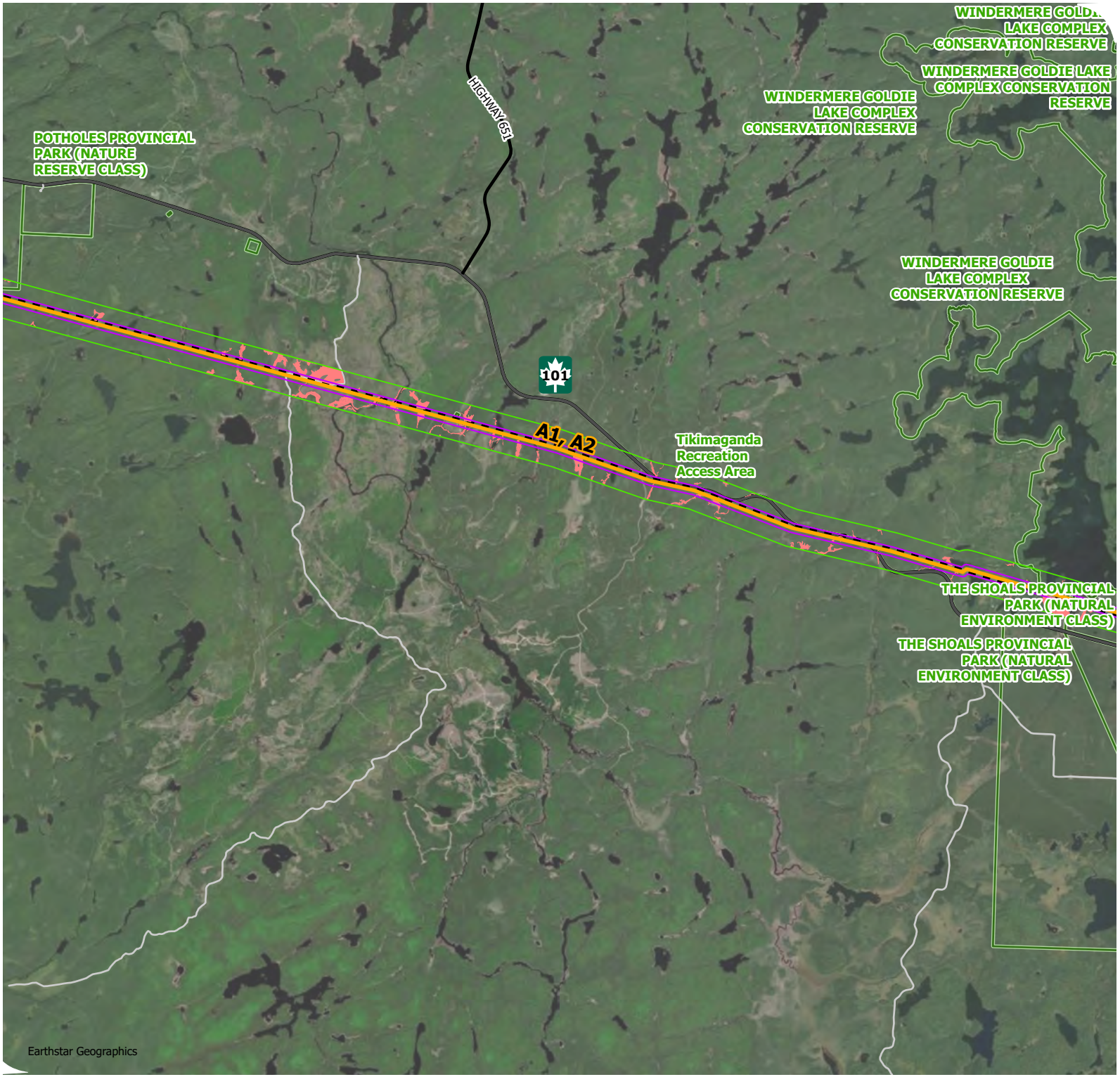
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WAWA TIMMINS POWER LINE

FIGURE 103. SWH - REPTILE HIBERNACULA

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Reptile Hibernaculum Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

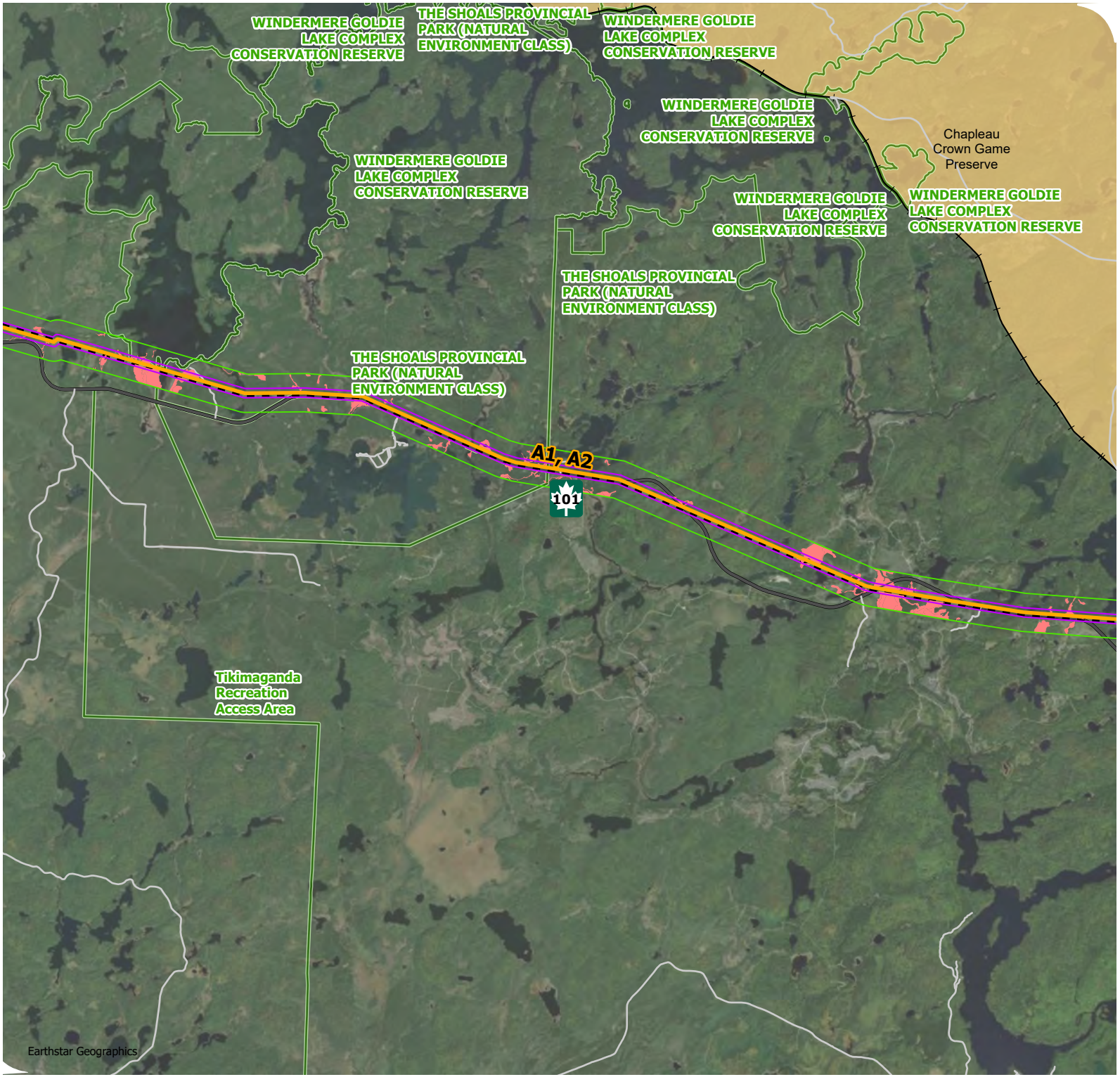
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WAWA TIMMINS POWER LINE

FIGURE 104. SWH - REPTILE HIBERNACULA

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Reptile Hibernaculum Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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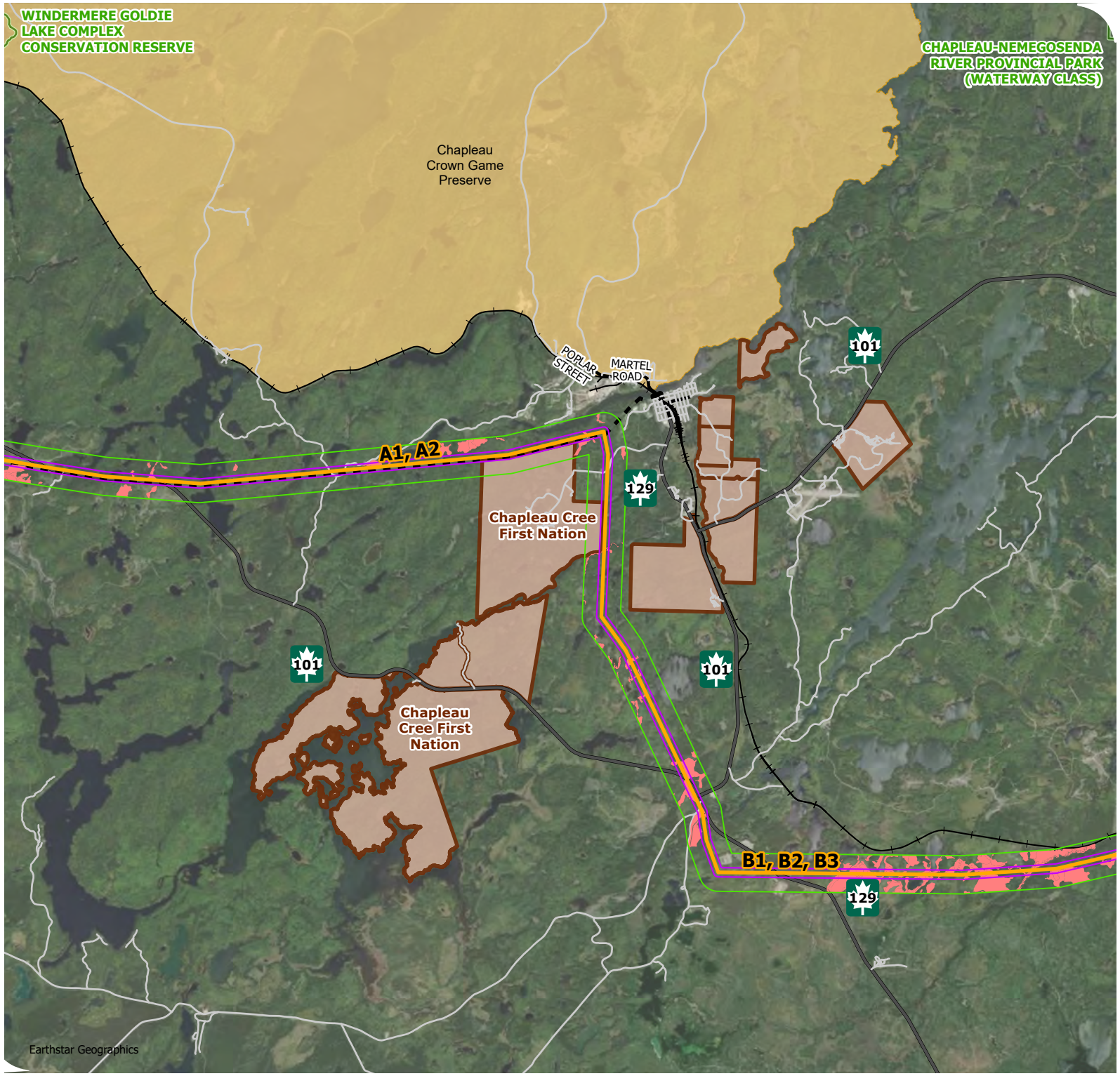
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WAWA TIMMINS POWER LINE

FIGURE 105. SWH - REPTILE HIBERNACULA



Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Reptile Hibernaculum Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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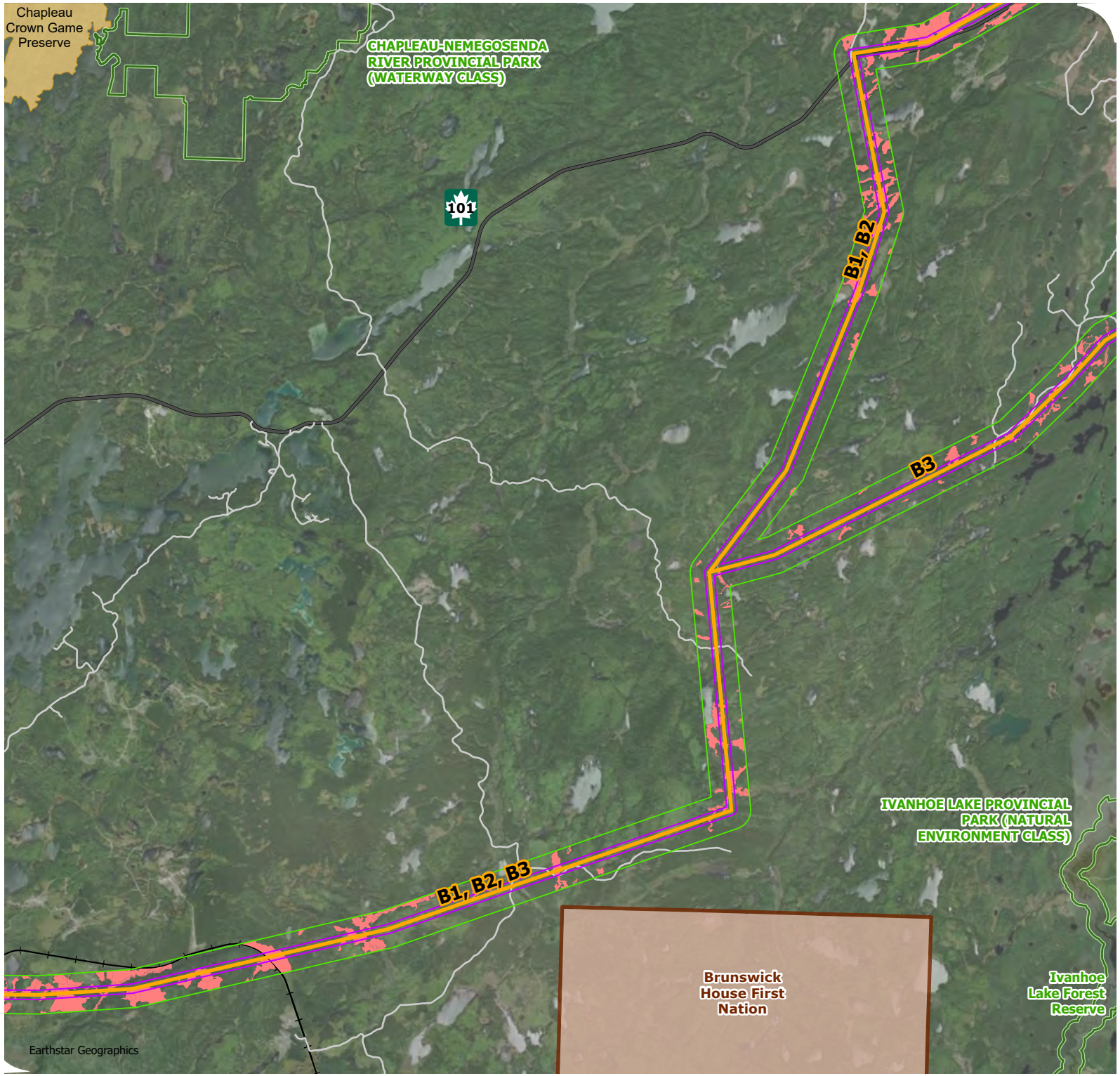
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WAWA TIMMINS POWER LINE

FIGURE 106. SWH - REPTILE HIBERNACULA

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Reptile Hibernaculum Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

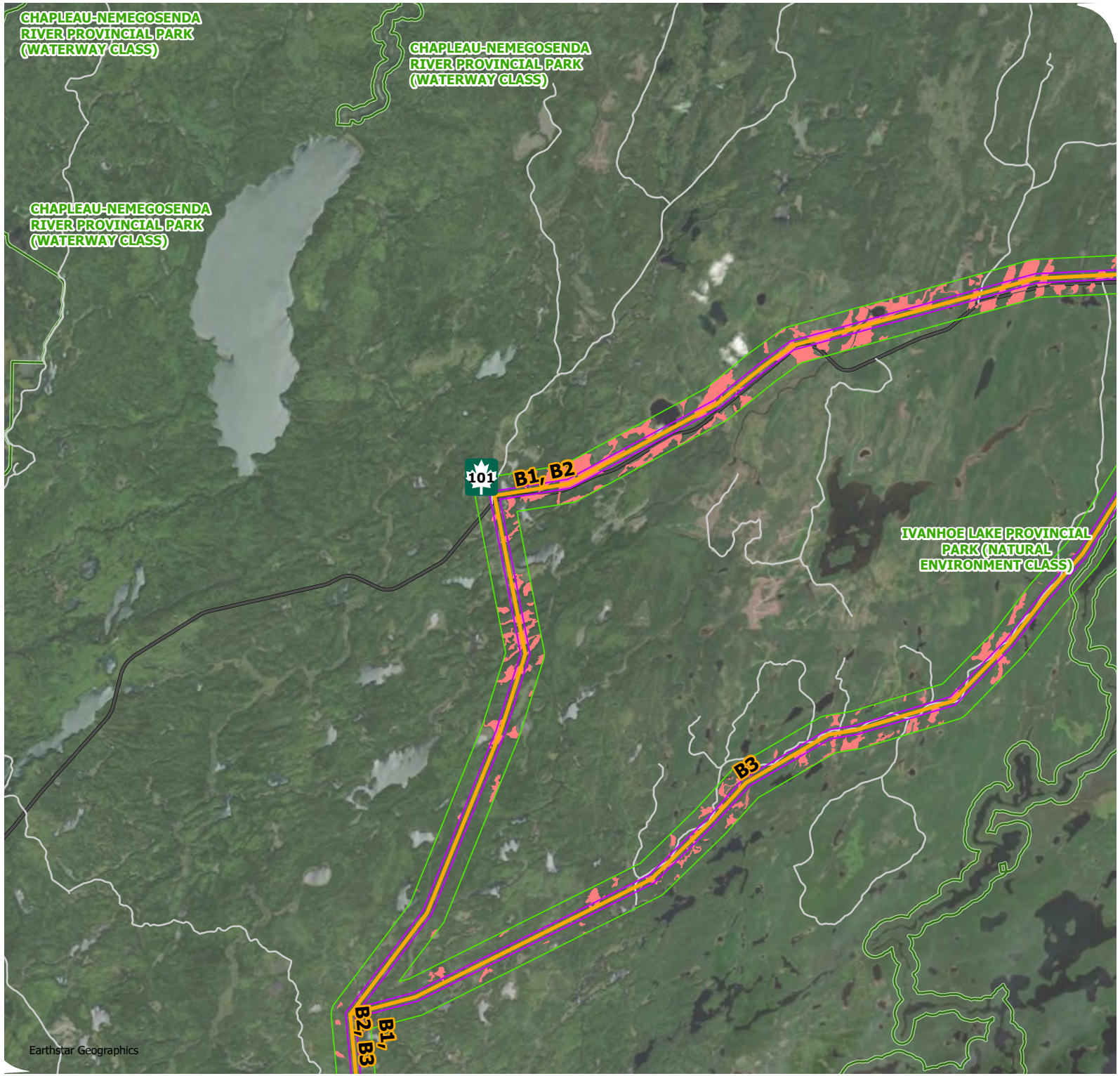
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WAWA TIMMINS POWER LINE

FIGURE 107. SWH - REPTILE HIBERNACULA

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Reptile Hibernaculum Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

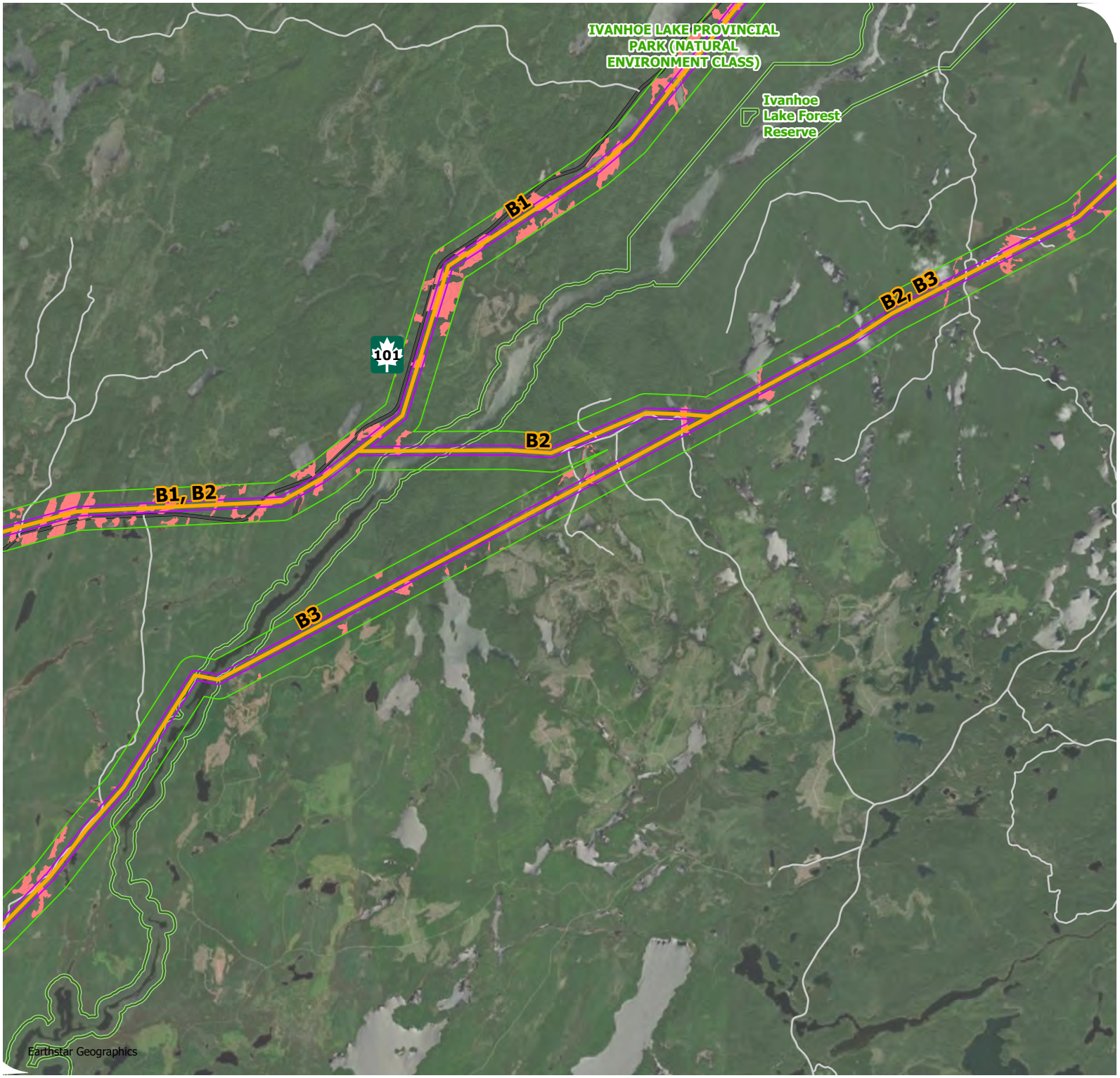
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WAWA TIMMINS POWER LINE

FIGURE 108. SWH - REPTILE HIBERNACULA

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Reptile Hibernaculum Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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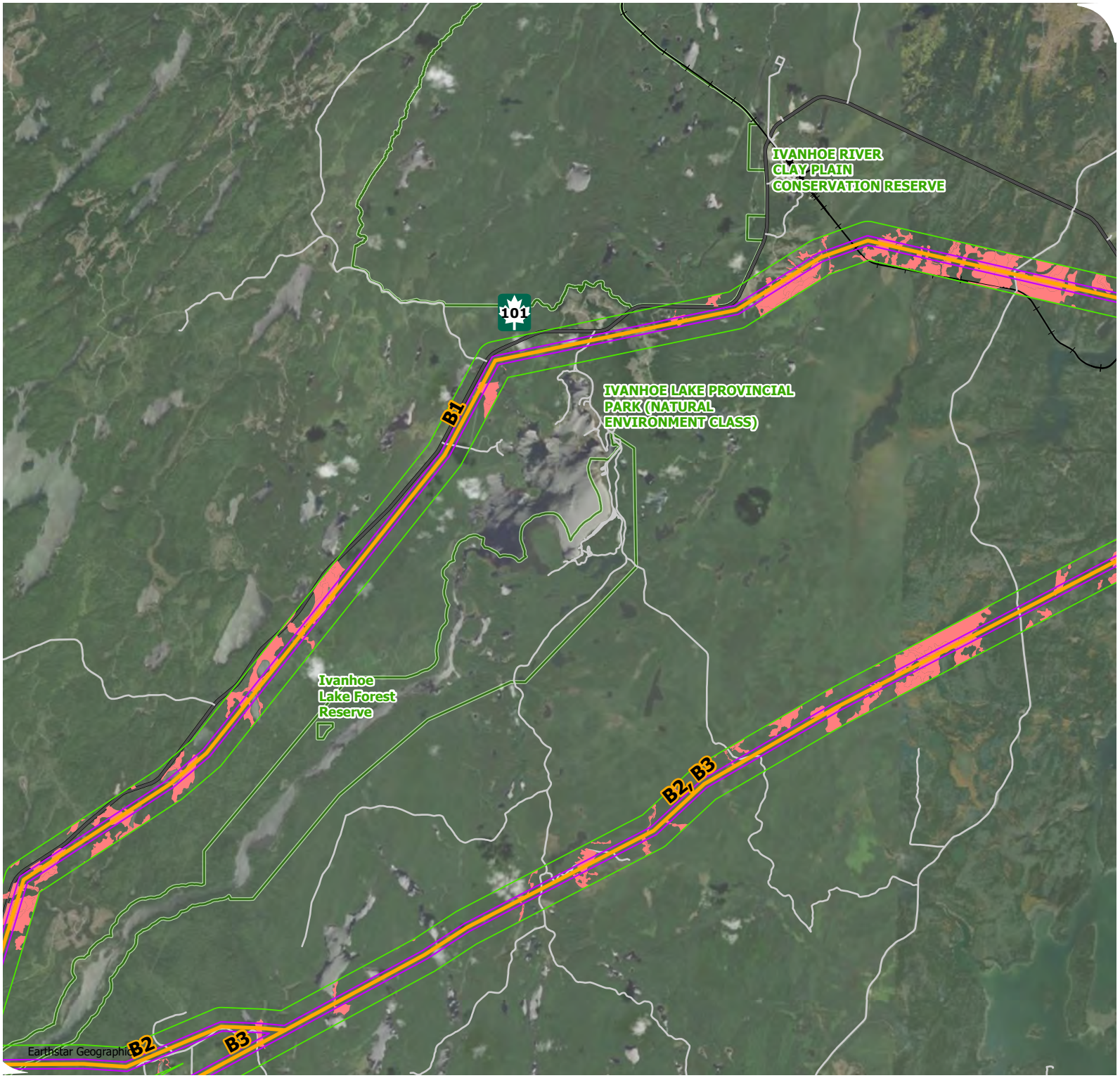
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WAWA TIMMINS POWER LINE

FIGURE 109. SWH - REPTILE HIBERNACULA

Mapping Extent - Ivanhoe Lake 4



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Reptile Hibernaculum Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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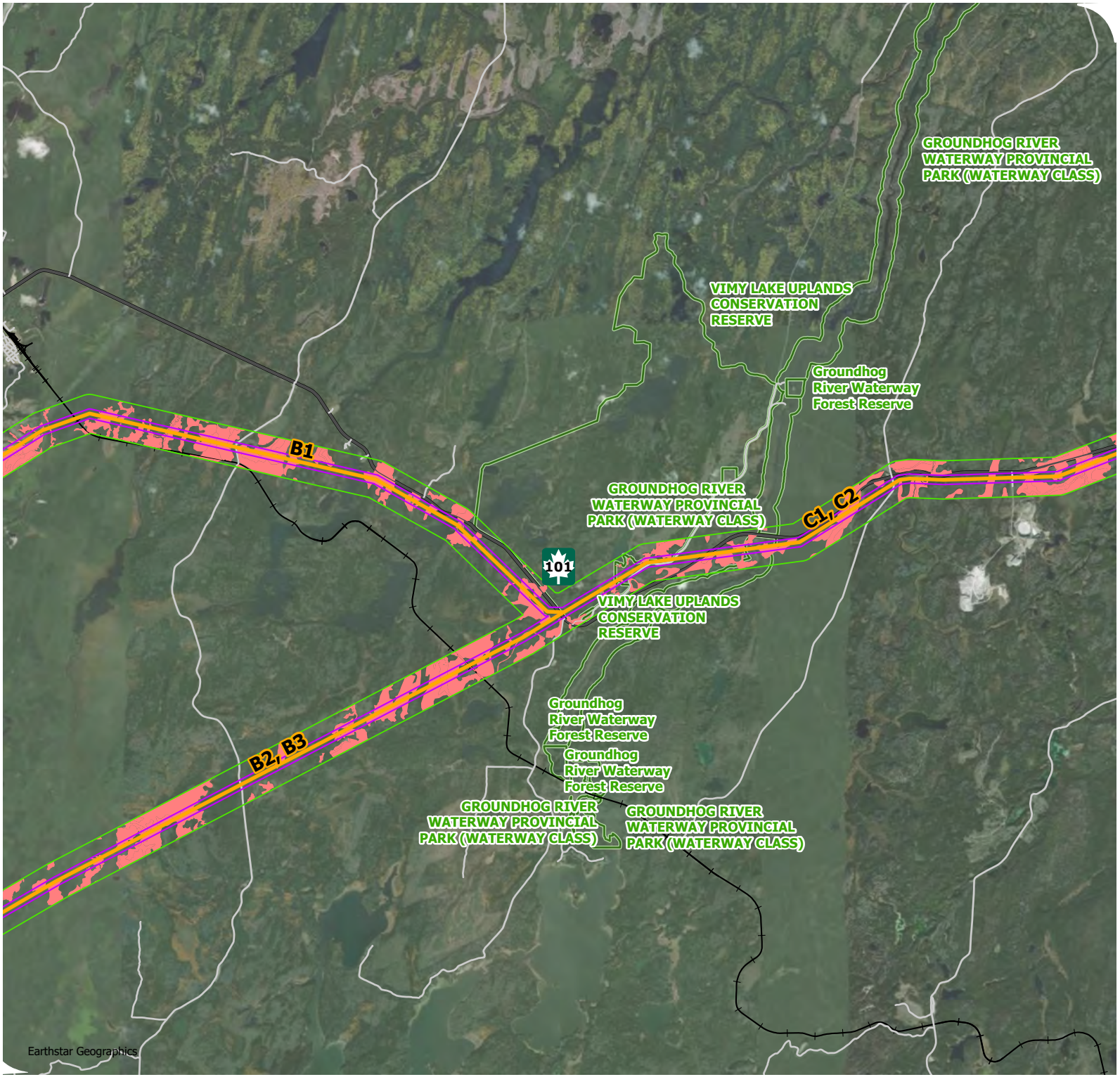
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WAWA TIMMINS POWER LINE

FIGURE 110. SWH - REPTILE HIBERNACULA

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Reptile Hibernaculum Habitat

MAP DRAWING INFORMATION:
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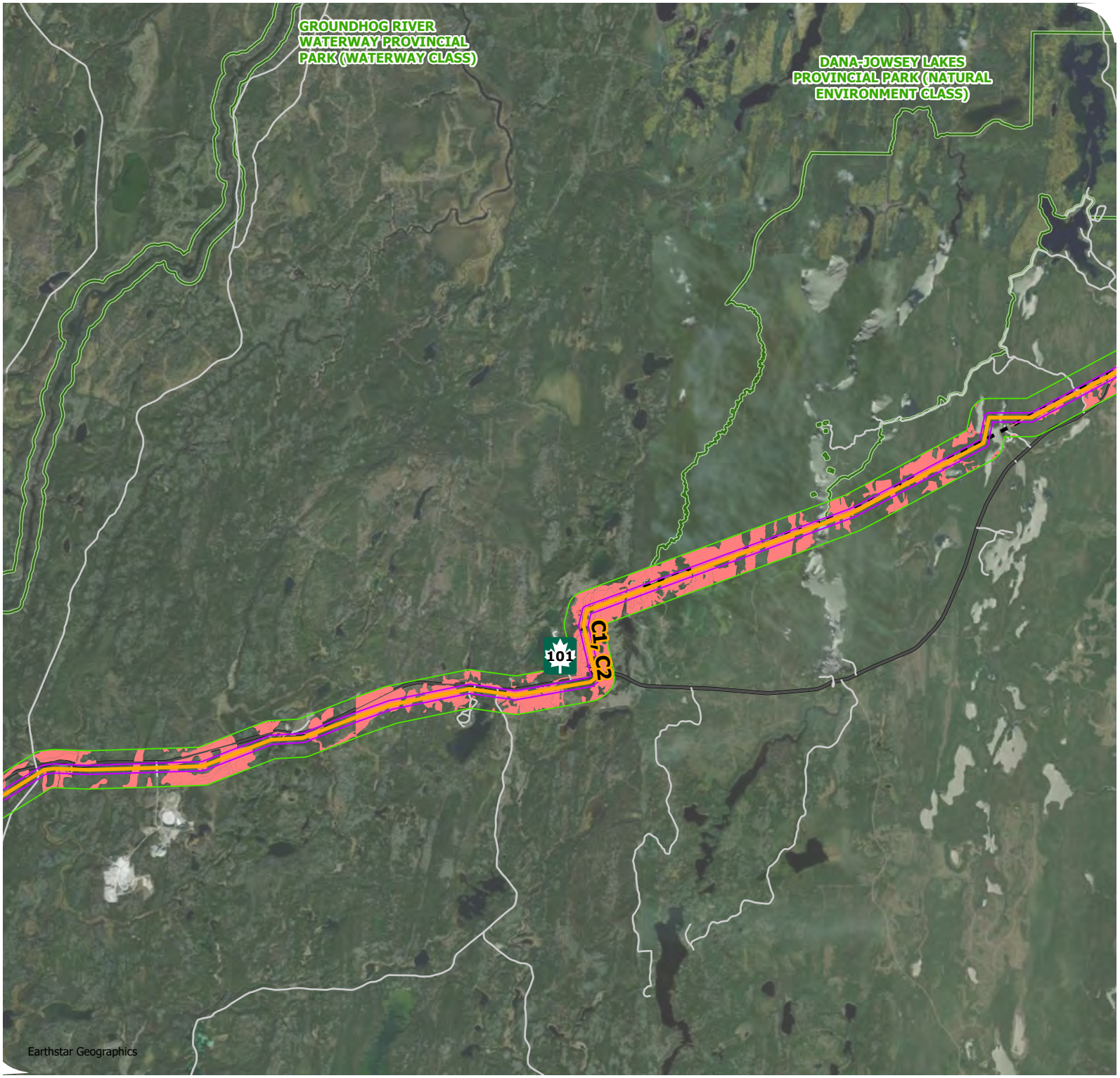
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WAWA TIMMINS POWER LINE

FIGURE 111. SWH - REPTILE HIBERNACULA

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Reptile Hibernaculum Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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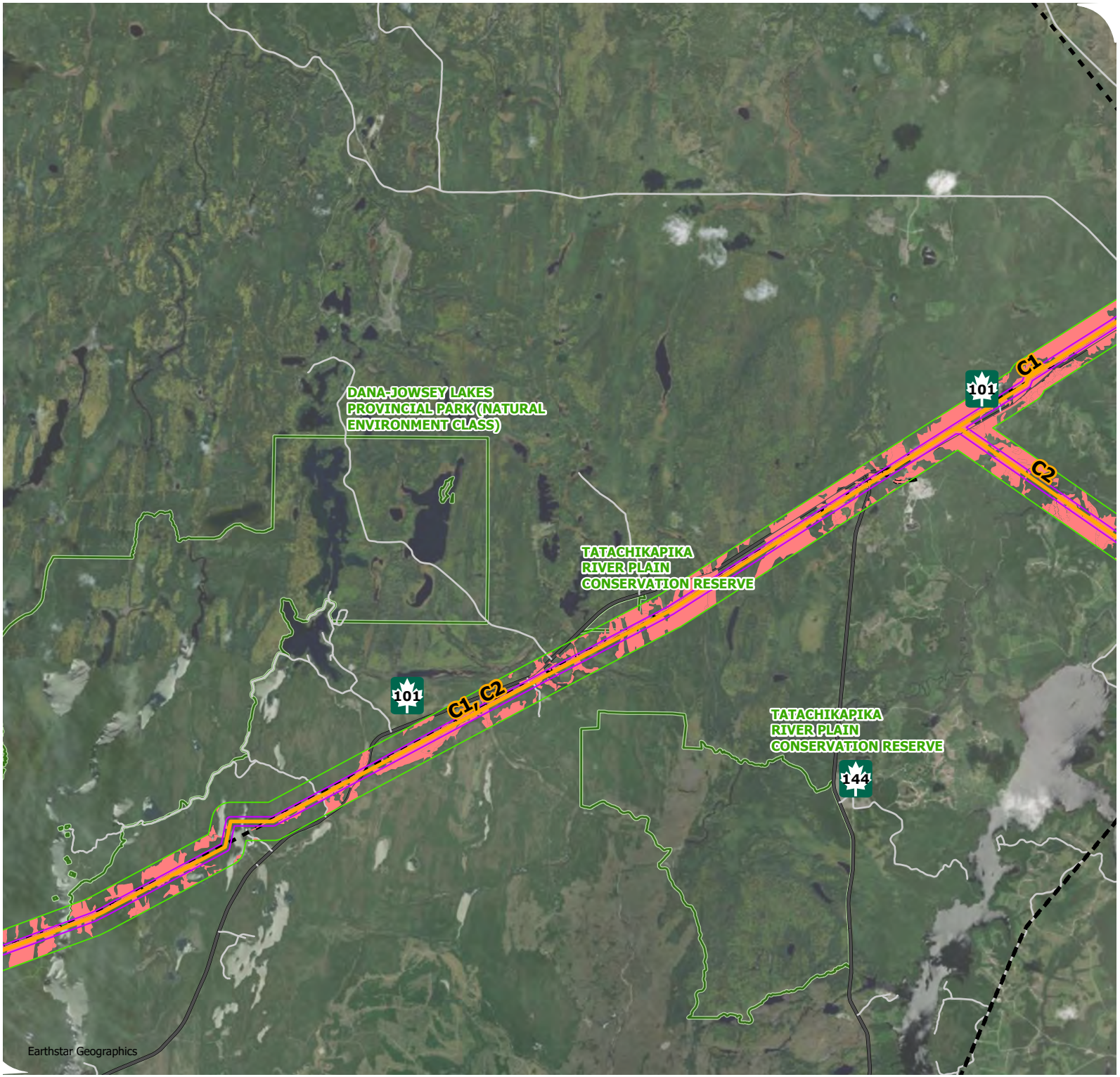
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WAWA TIMMINS POWER LINE

FIGURE 112. SWH - REPTILE HIBERNACULA

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Reptile Hibernaculum Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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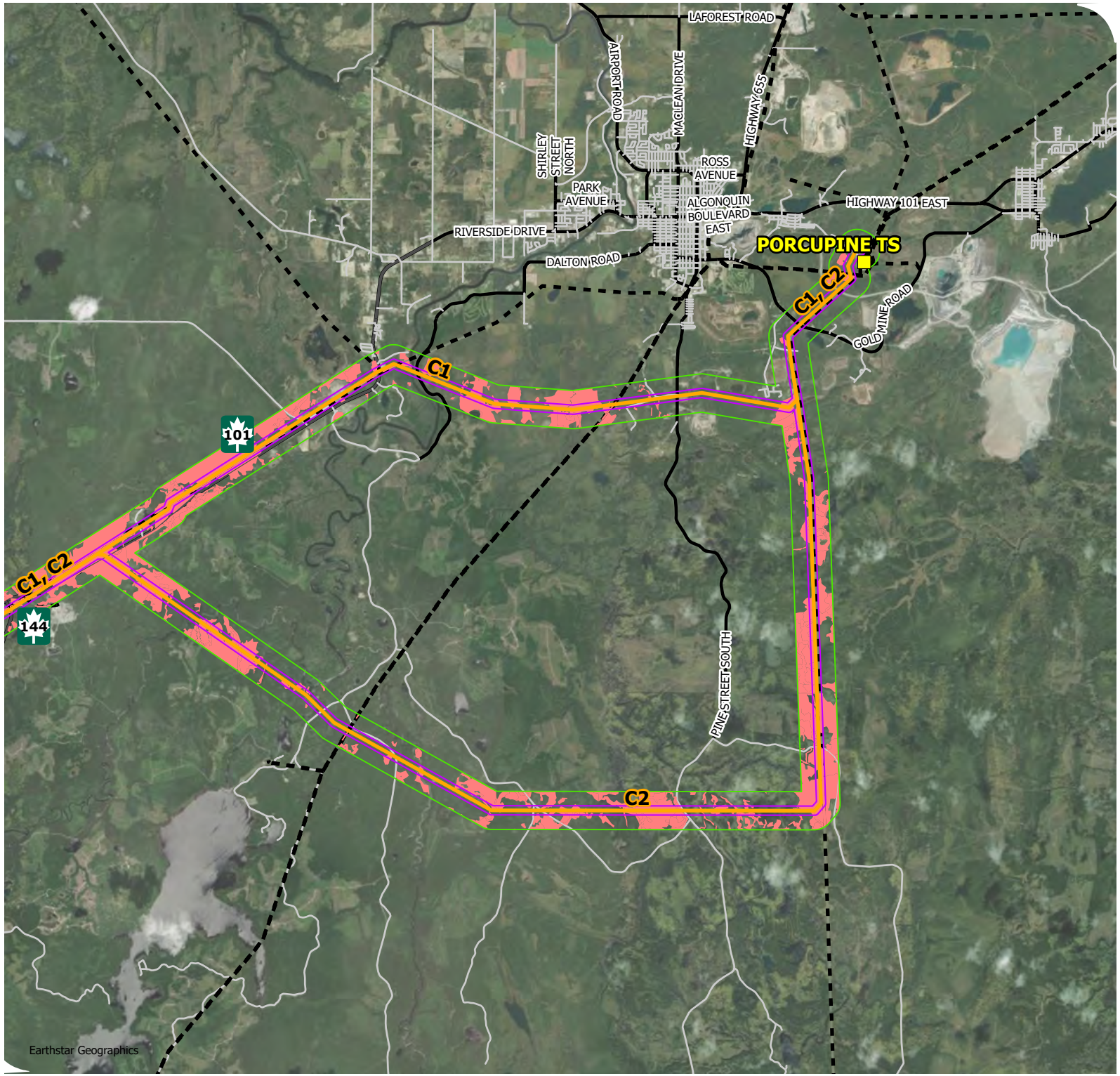
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WAWA TIMMINS POWER LINE

FIGURE 113. SWH - REPTILE HIBERNACULA

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Reptile Hibernaculum Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

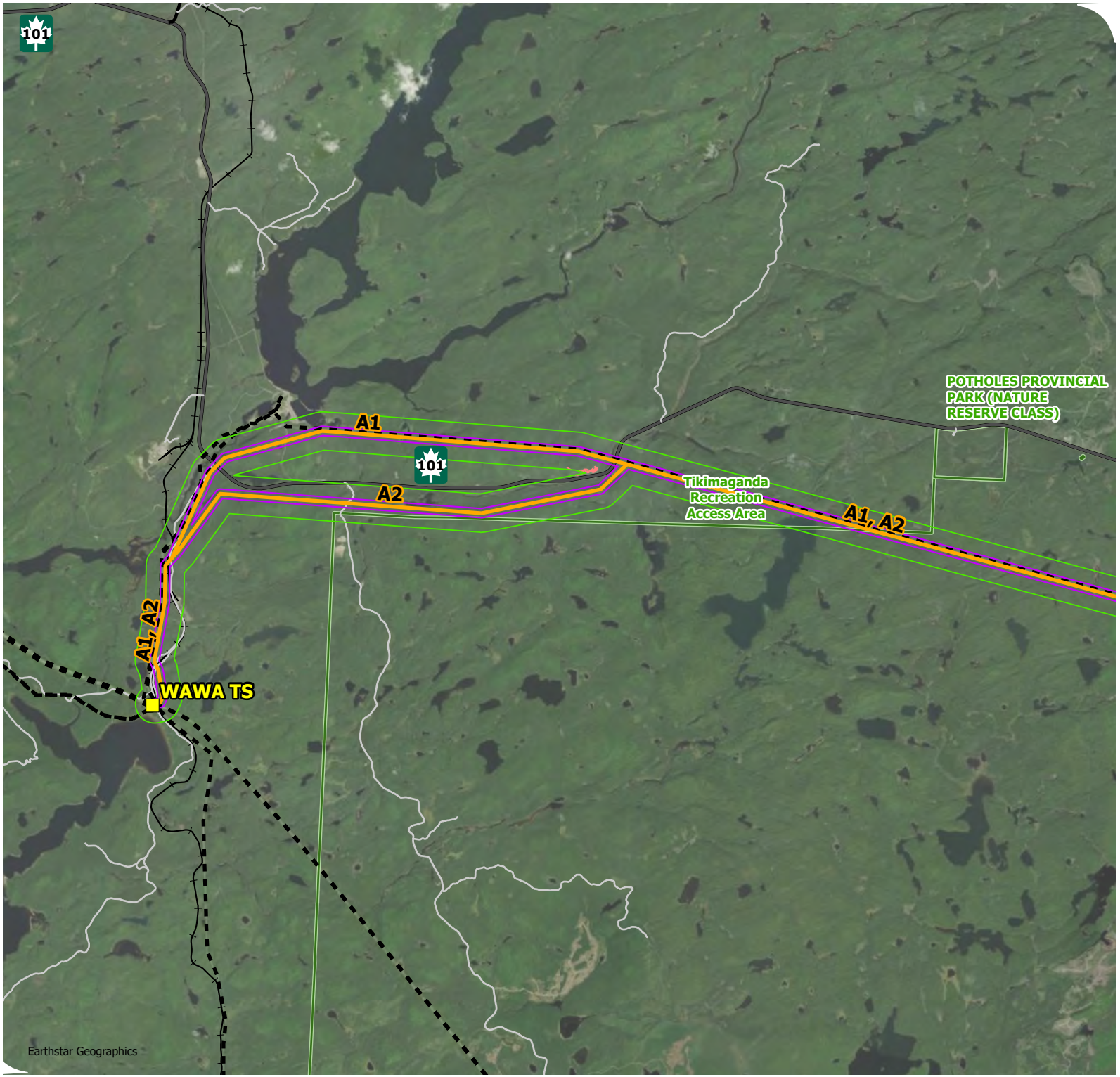
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WAWA TIMMINS POWER LINE

FIGURE 114. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - GROUND

Mapping Extent - Wawa Station

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Colonially-nesting Bird Breeding Habitat - Ground

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

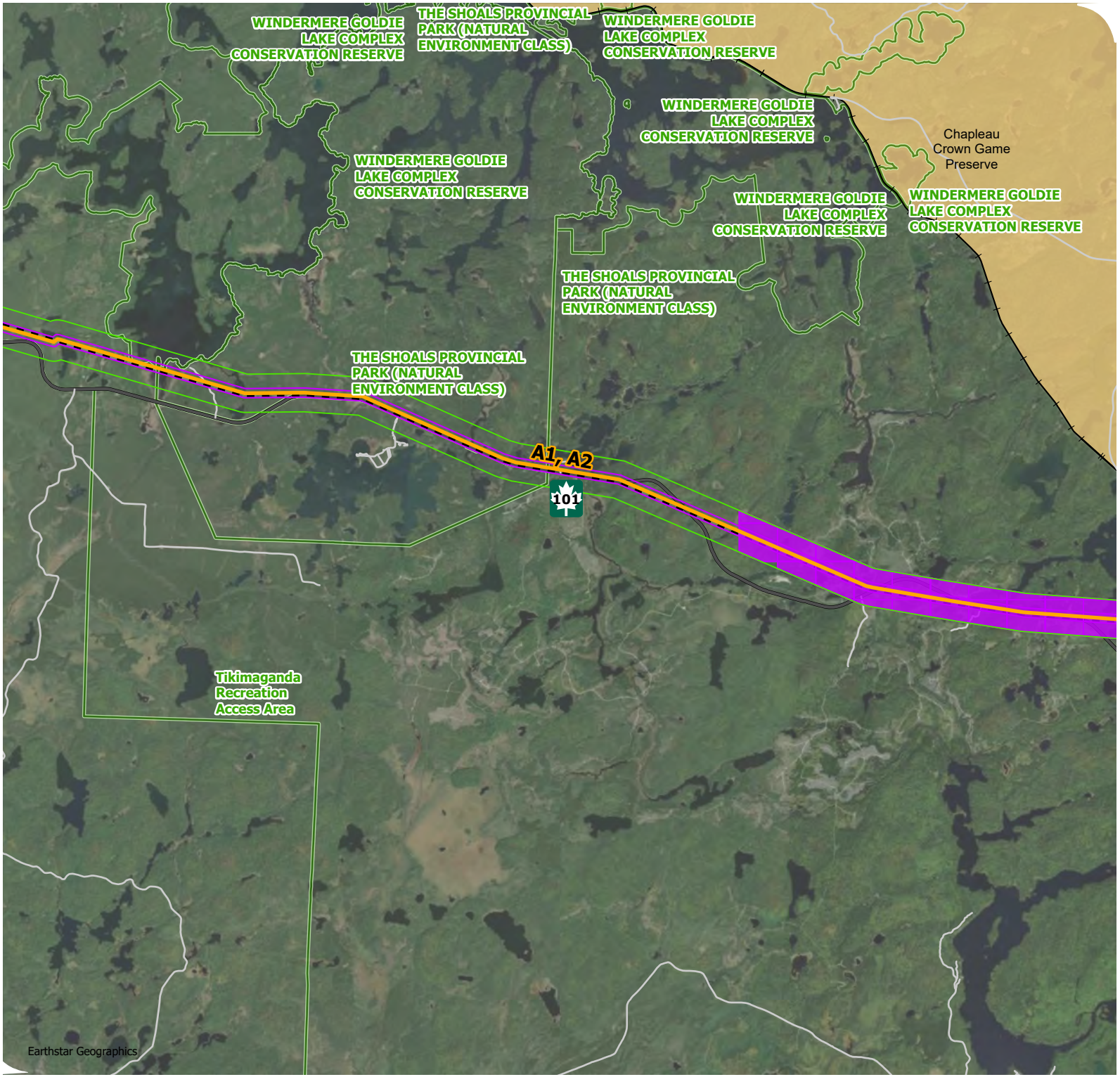
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WAWA TIMMINS POWER LINE

FIGURE 115. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - GROUND

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Colonial Waterbird Nesting Area (NHIC)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

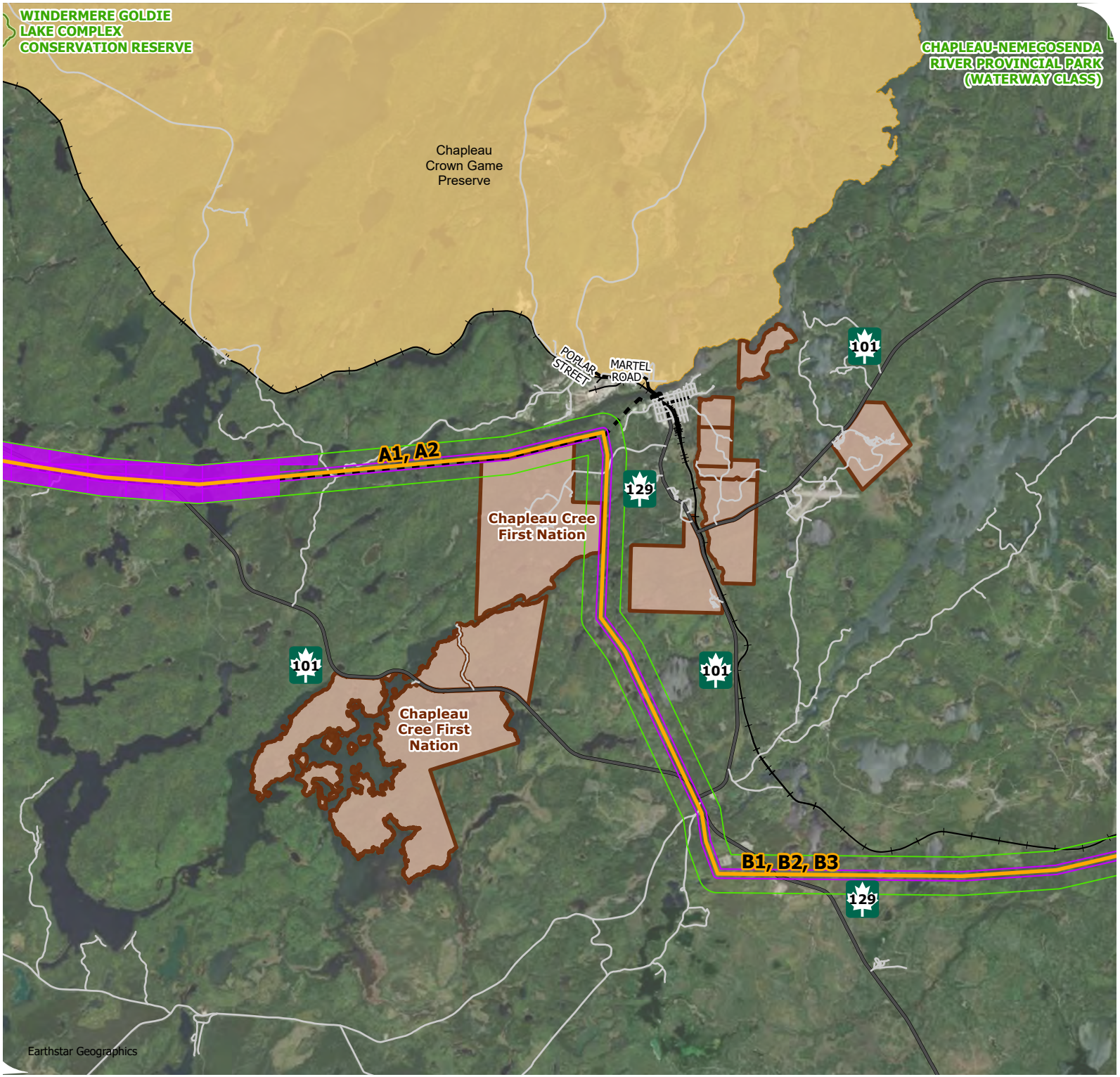
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WAWA TIMMINS POWER LINE

FIGURE 116. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - GROUND

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Colonial Waterbird Nesting Area (NHIC)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
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WAWA TIMMINS POWER LINE

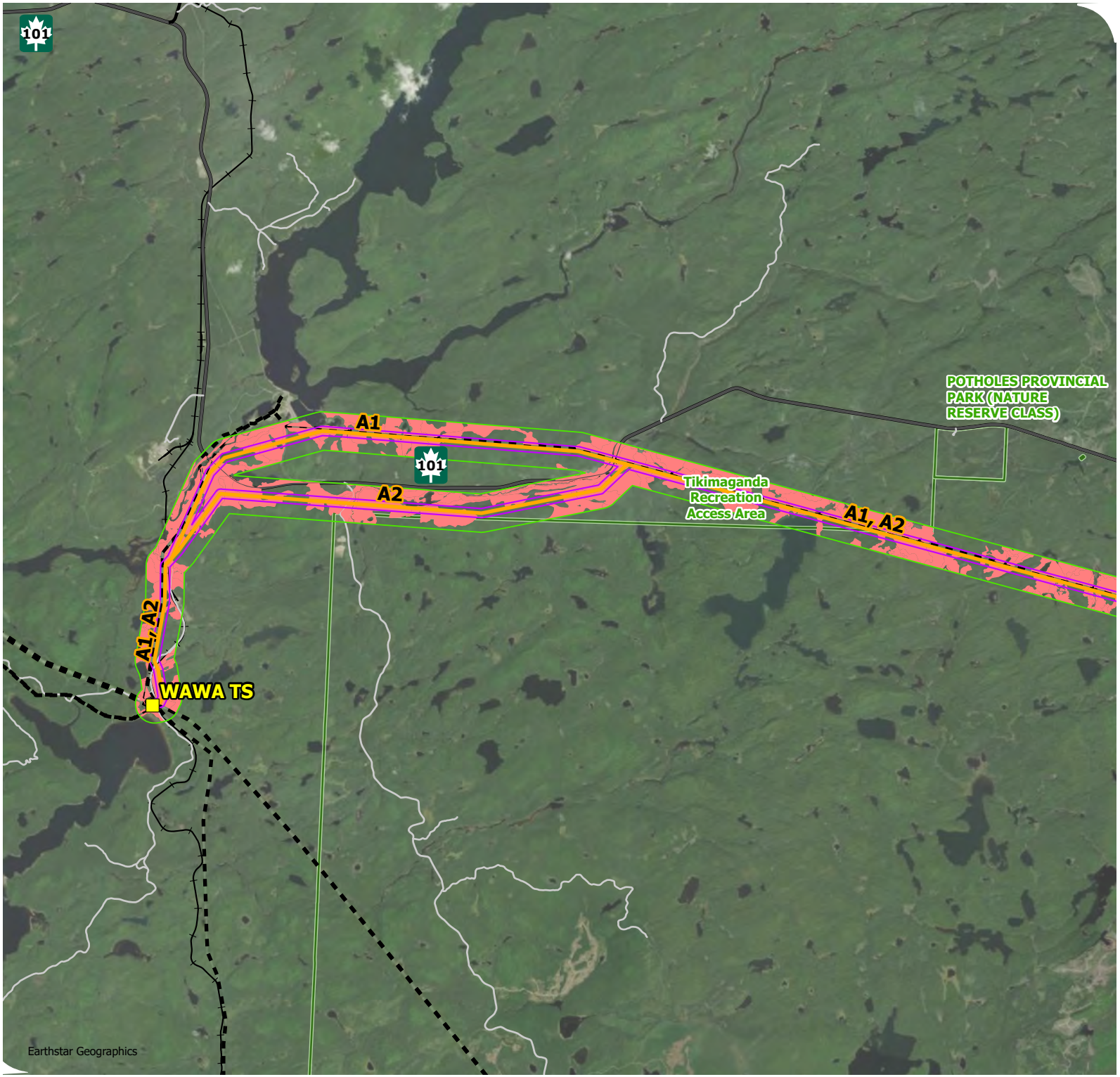


FIGURE 117. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - TREES/SHRUBS

Mapping Extent - Wawa Station

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Colonially-nesting Bird Breeding Habitat - Trees/Shrubs

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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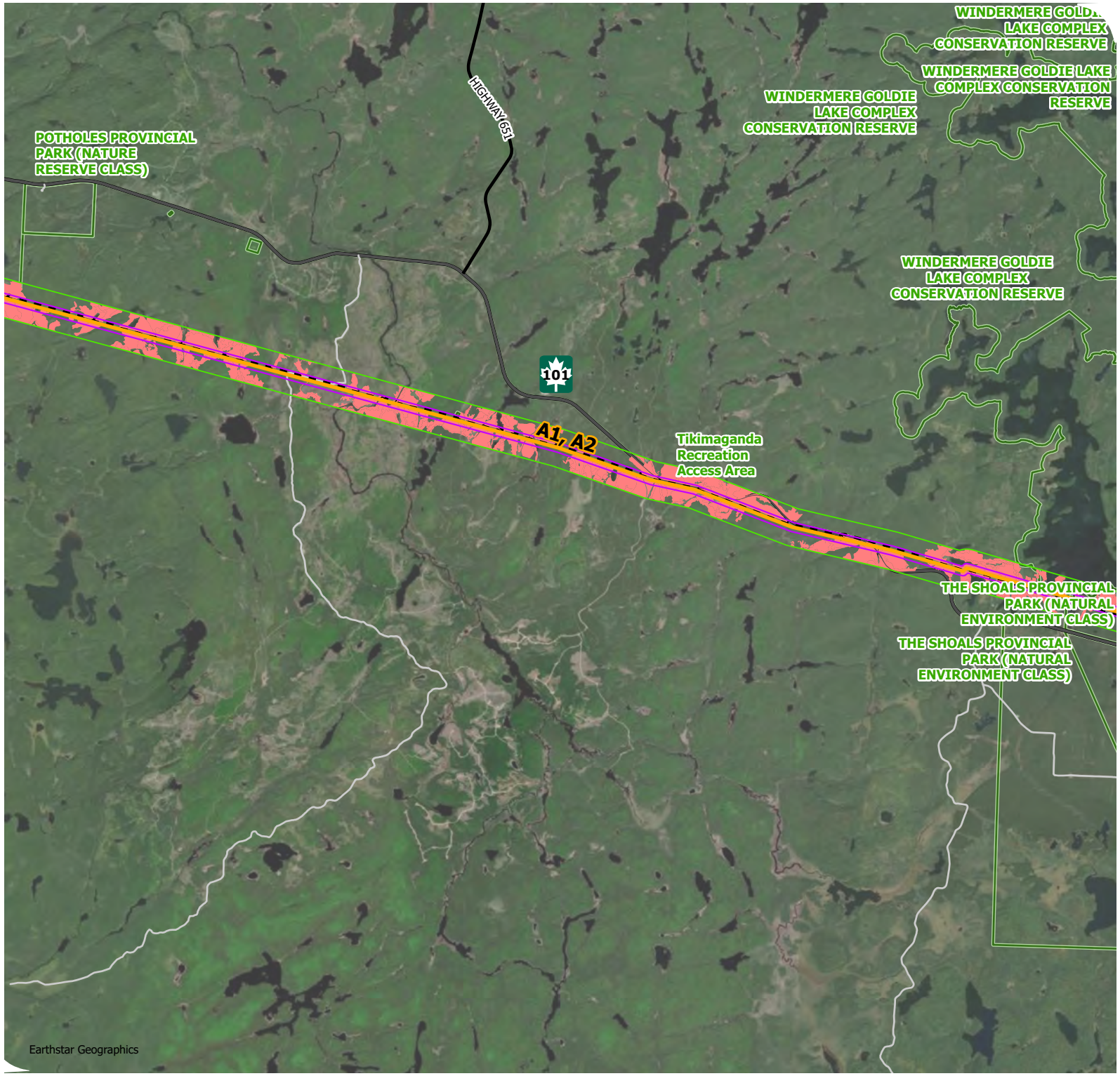
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WAWA TIMMINS POWER LINE

FIGURE 118. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - TREES/SHRUBS

Mapping Extent - Windermere Lake 1



- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Colonially-nesting Bird Breeding Habitat - Trees/Shrubs

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

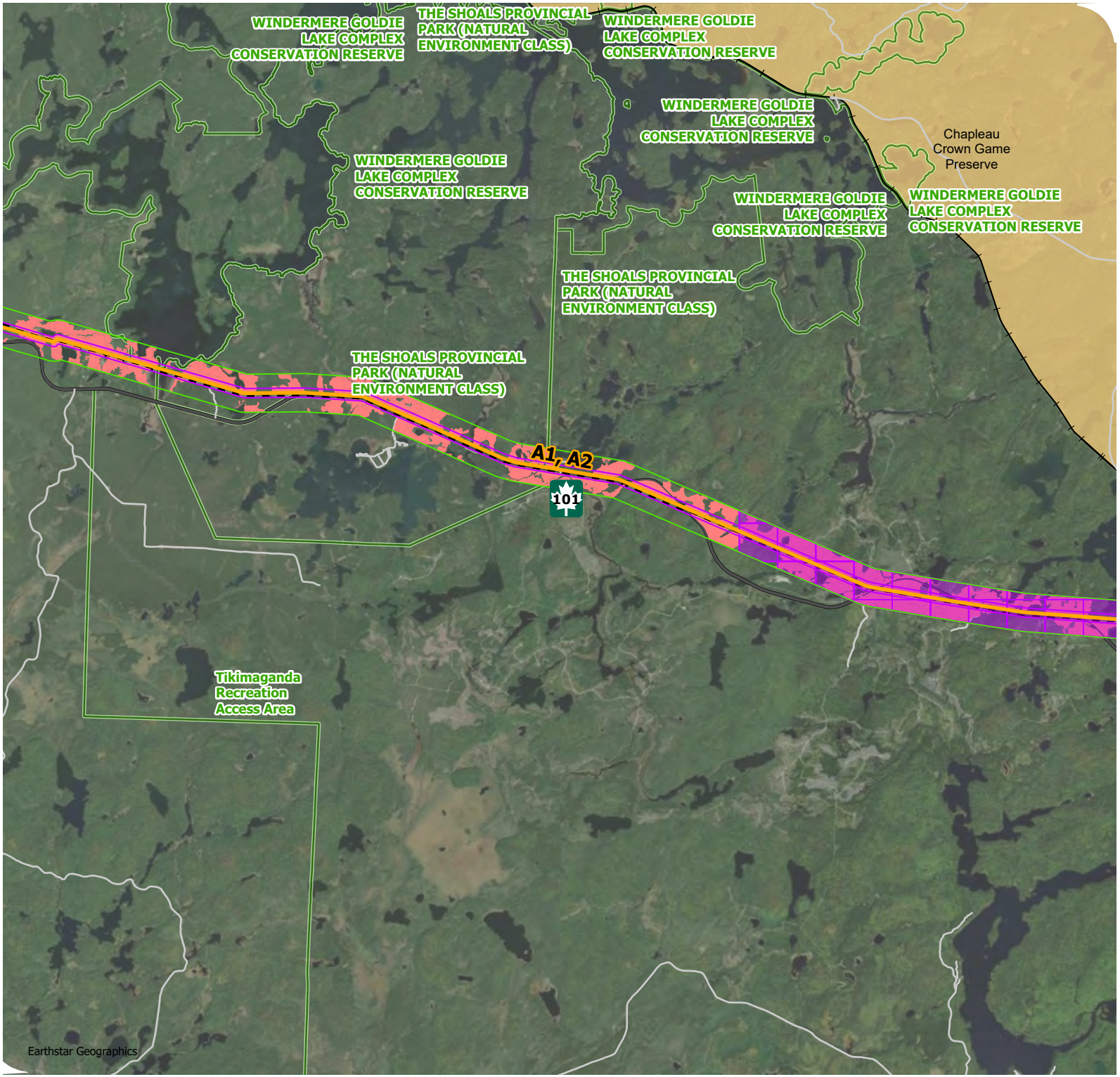
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WAWA TIMMINS POWER LINE

FIGURE 119. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - TREES/SHRUBS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Mixed Wader Nesting Colony (NHIC)
- Candidate Colonially-nesting Bird Breeding Habitat - Trees/Shrubs

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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WAWA TIMMINS POWER LINE

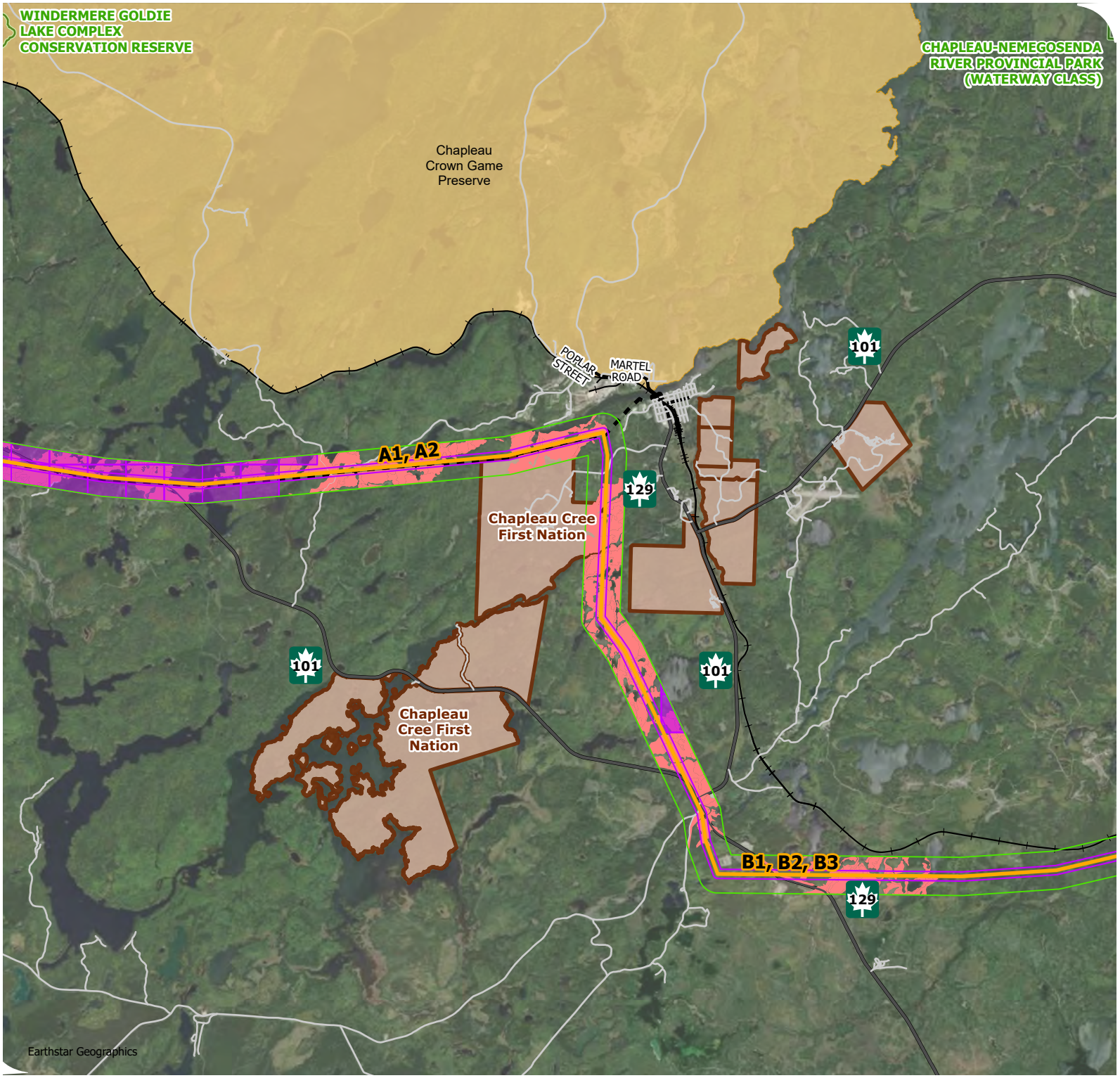


FIGURE 120. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - TREES/SHRUBS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Mixed Wader Nesting Colony (NHIC)
- Candidate Colonially-nesting Bird Breeding Habitat - Trees/Shrubs

MAP DRAWING INFORMATION:
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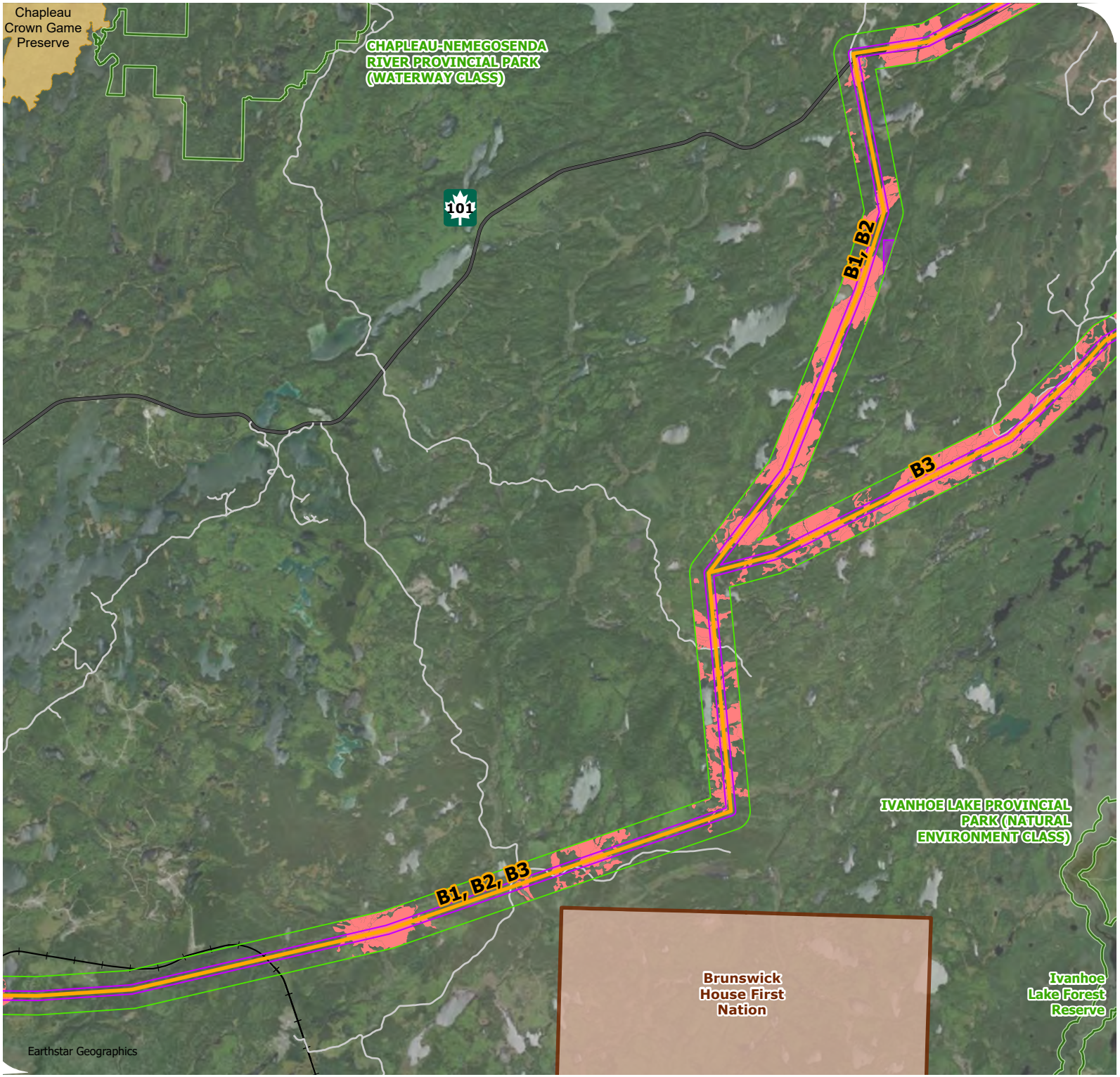


FIGURE 121. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - TREES/SHRUBS

Mapping Extent - Ivanhoe Lake 1

- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Mixed Wader Nesting Colony (NHIC)
- Candidate Colonially-nesting Bird Breeding Habitat - Trees/Shrubs

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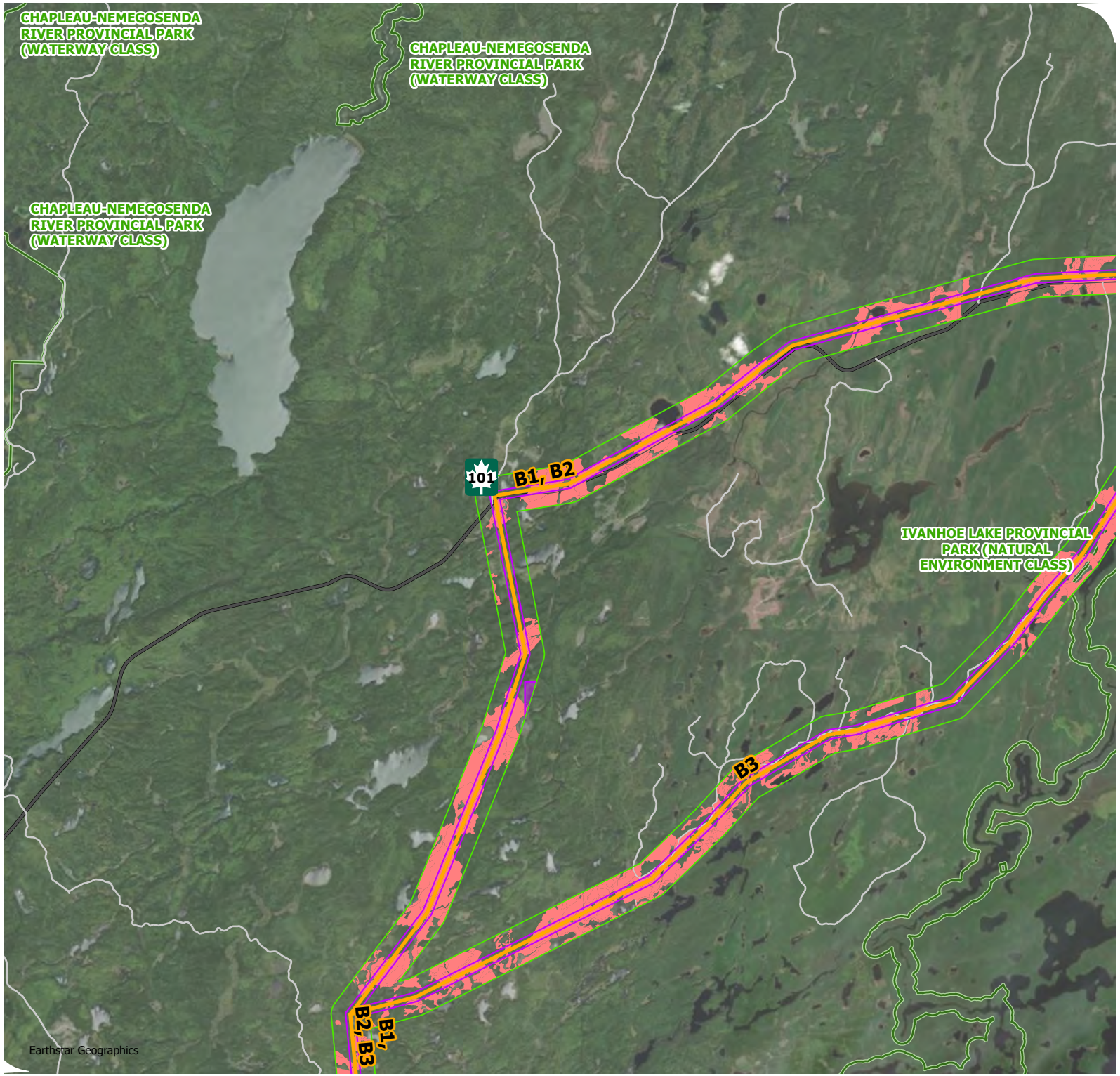
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WAWA TIMMINS POWER LINE

FIGURE 122. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - TREES/SHRUBS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Mixed Wader Nesting Colony (NHIC)
- Candidate Colonially-nesting Bird Breeding Habitat - Trees/Shrubs

MAP DRAWING INFORMATION:
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WAWA TIMMINS POWER LINE

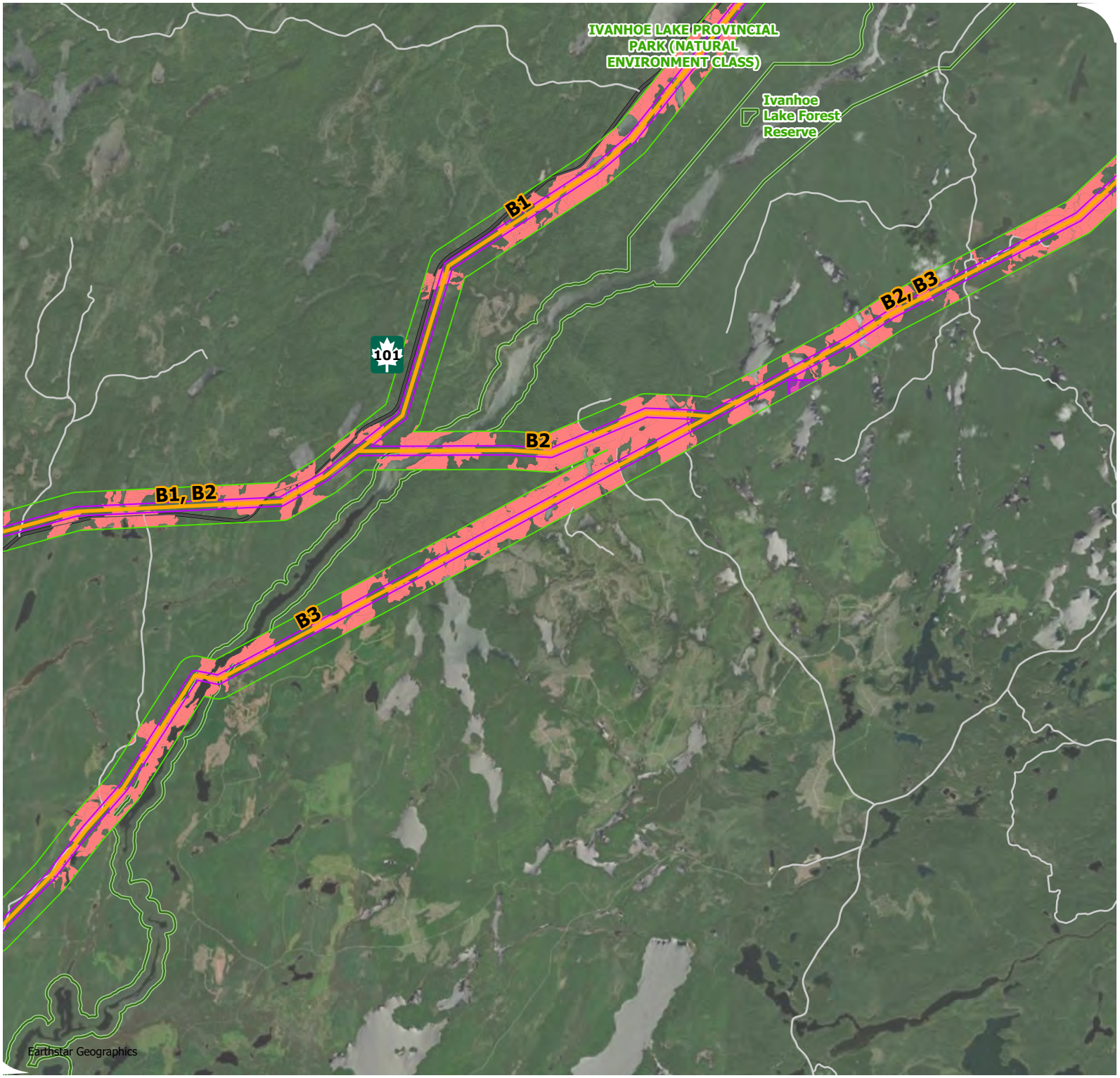


FIGURE 123. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - TREES/SHRUBS

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Mixed Wader Nesting Colony (NHIC)
- Candidate Colonially-nesting Bird Breeding Habitat - Trees/Shrubs

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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WAWA TIMMINS POWER LINE

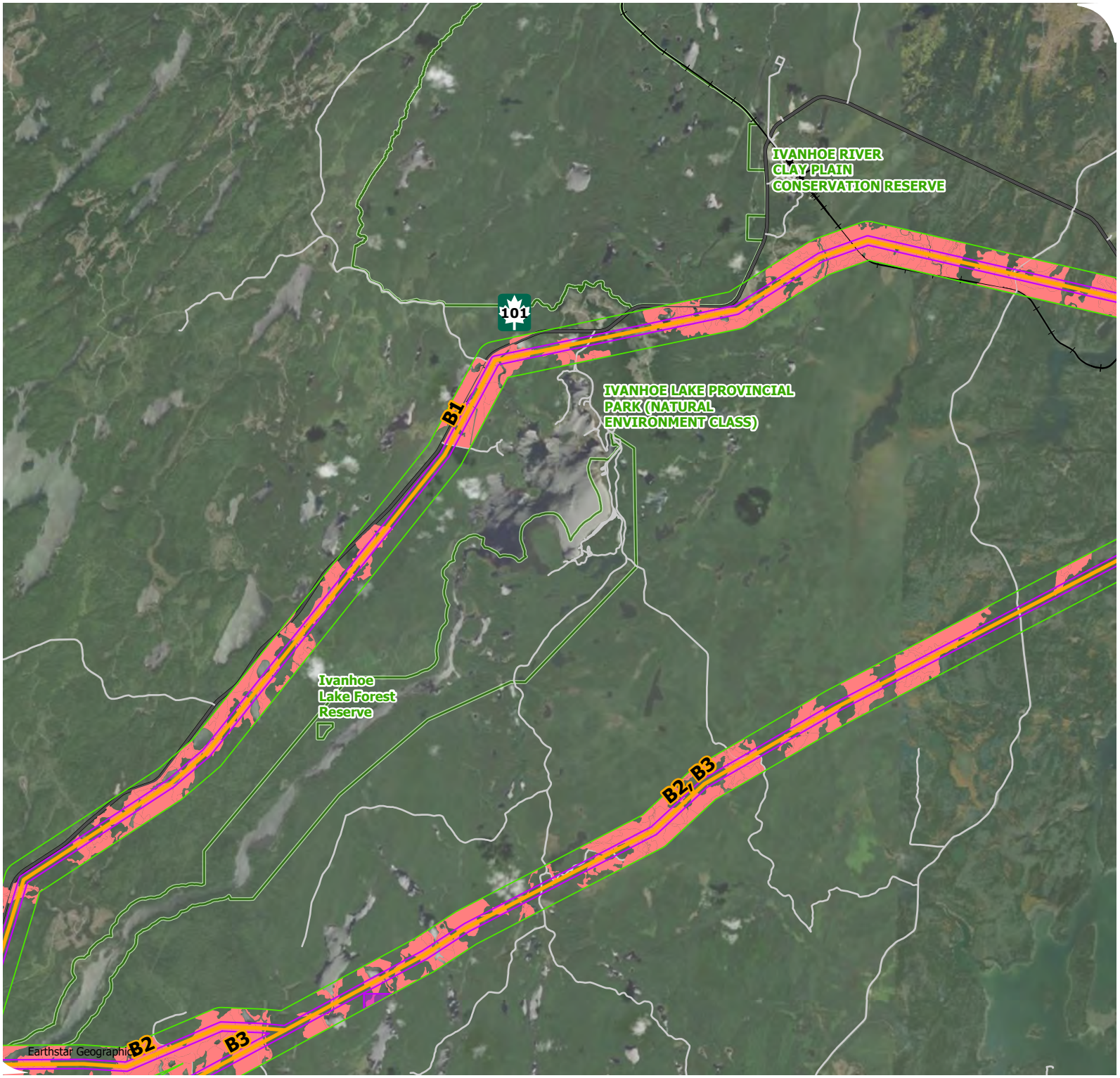


FIGURE 124. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - TREES/SHRUBS

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Mixed Wader Nesting Colony (NHIC)
- Candidate Colonially-nesting Bird Breeding Habitat - Trees/Shrubs

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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WAWA TIMMINS POWER LINE

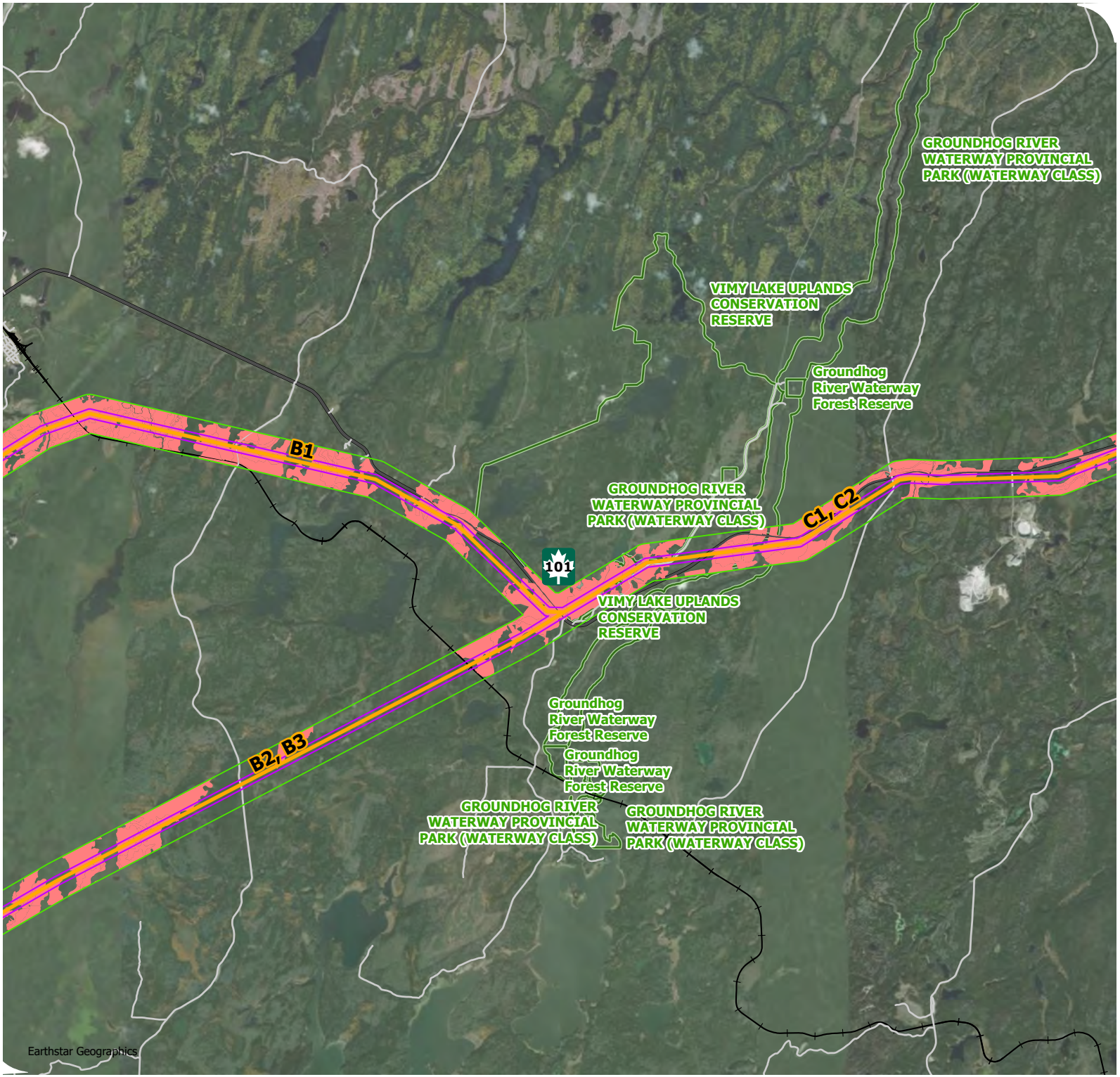


FIGURE 125. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - TREES/SHRUBS

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Colonially-nesting Bird Breeding Habitat - Trees/Shrubs

MAP DRAWING INFORMATION:
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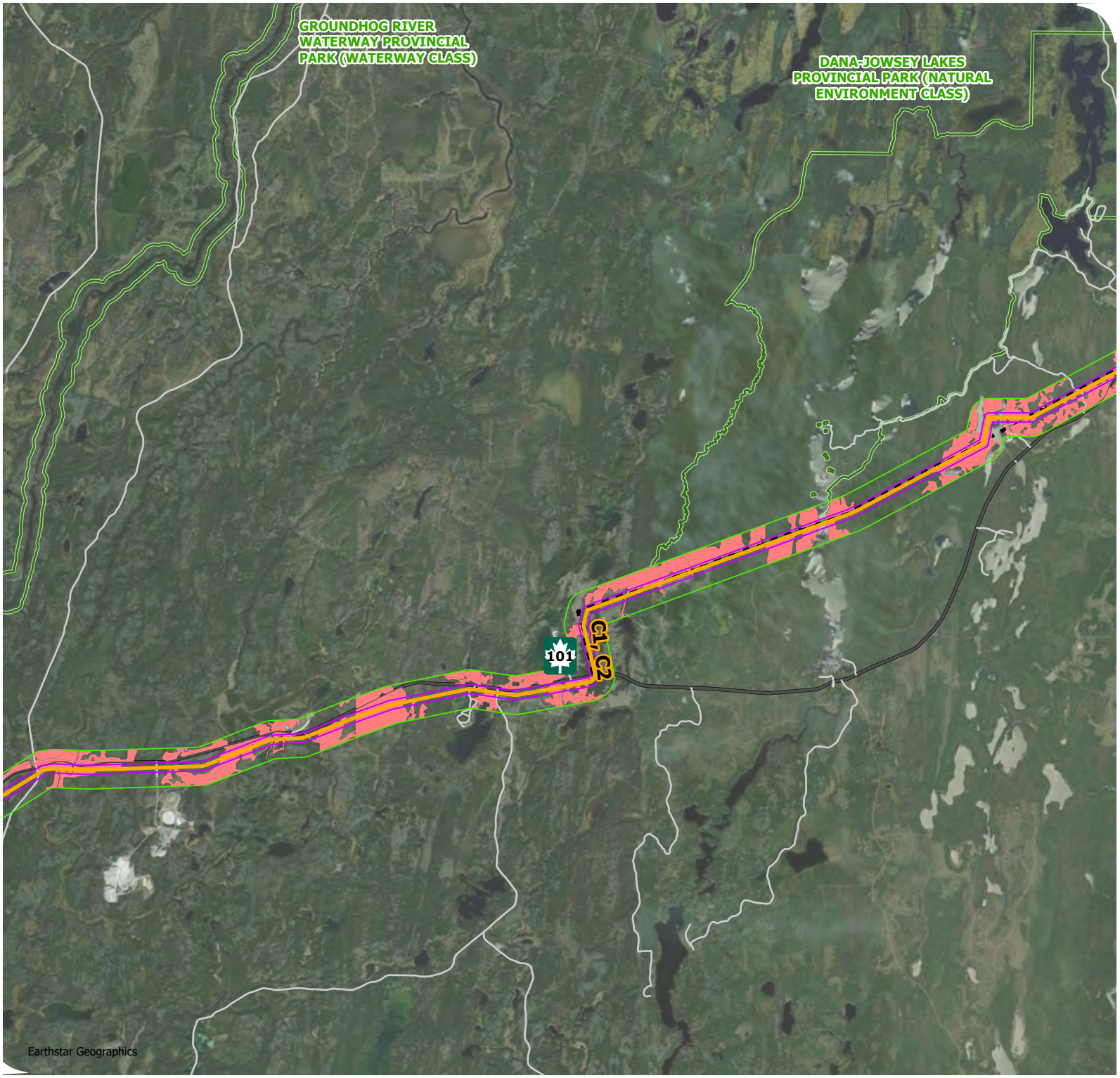
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WAWA TIMMINS POWER LINE

FIGURE 126. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - TREES/SHRUBS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Colonially-nesting Bird Breeding Habitat - Trees/Shrubs

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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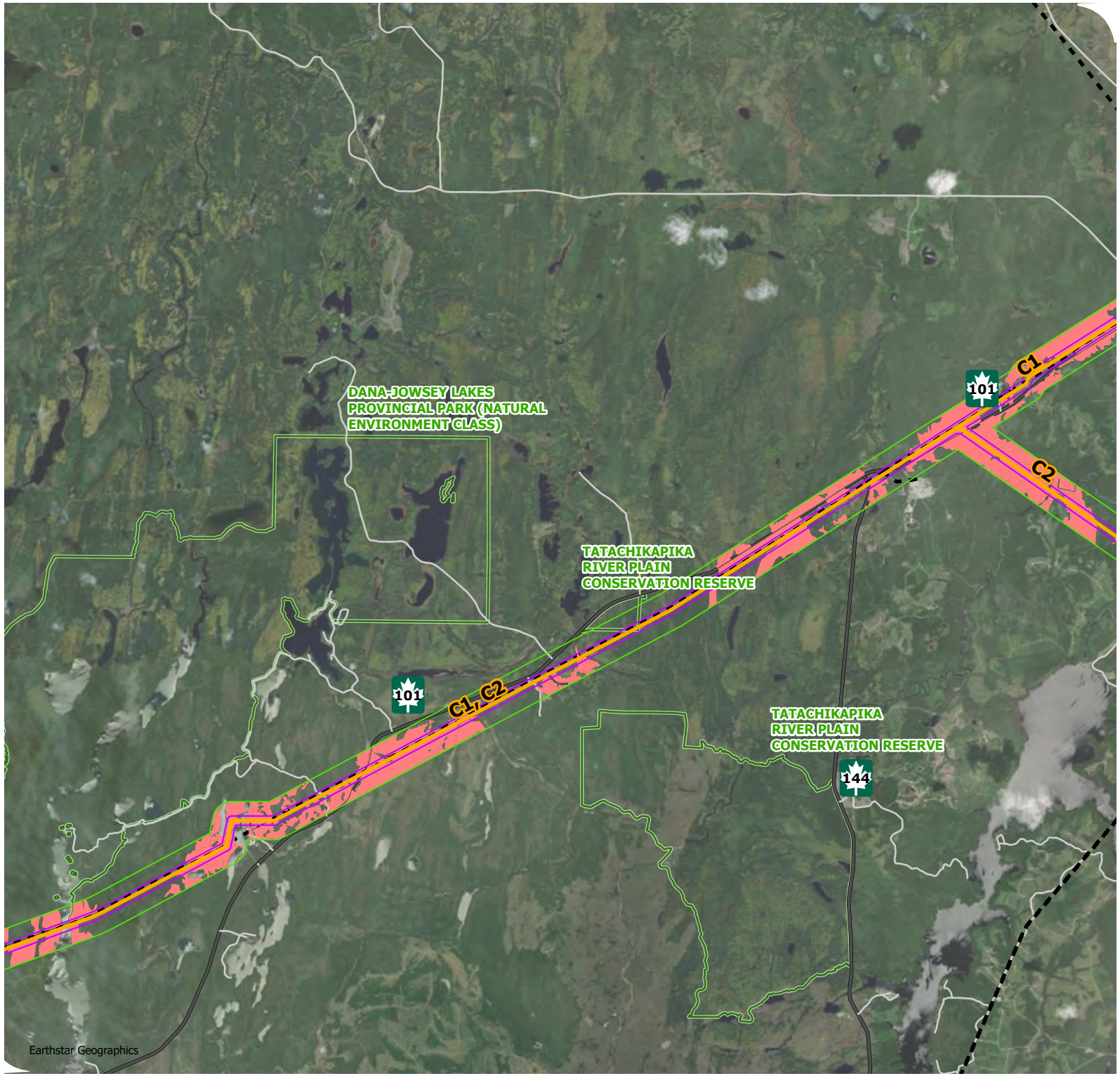
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WAWA TIMMINS POWER LINE

FIGURE 127. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - TREES/SHRUBS

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Colonially-nesting Bird Breeding Habitat - Trees/Shrubs

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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WAWA TIMMINS POWER LINE

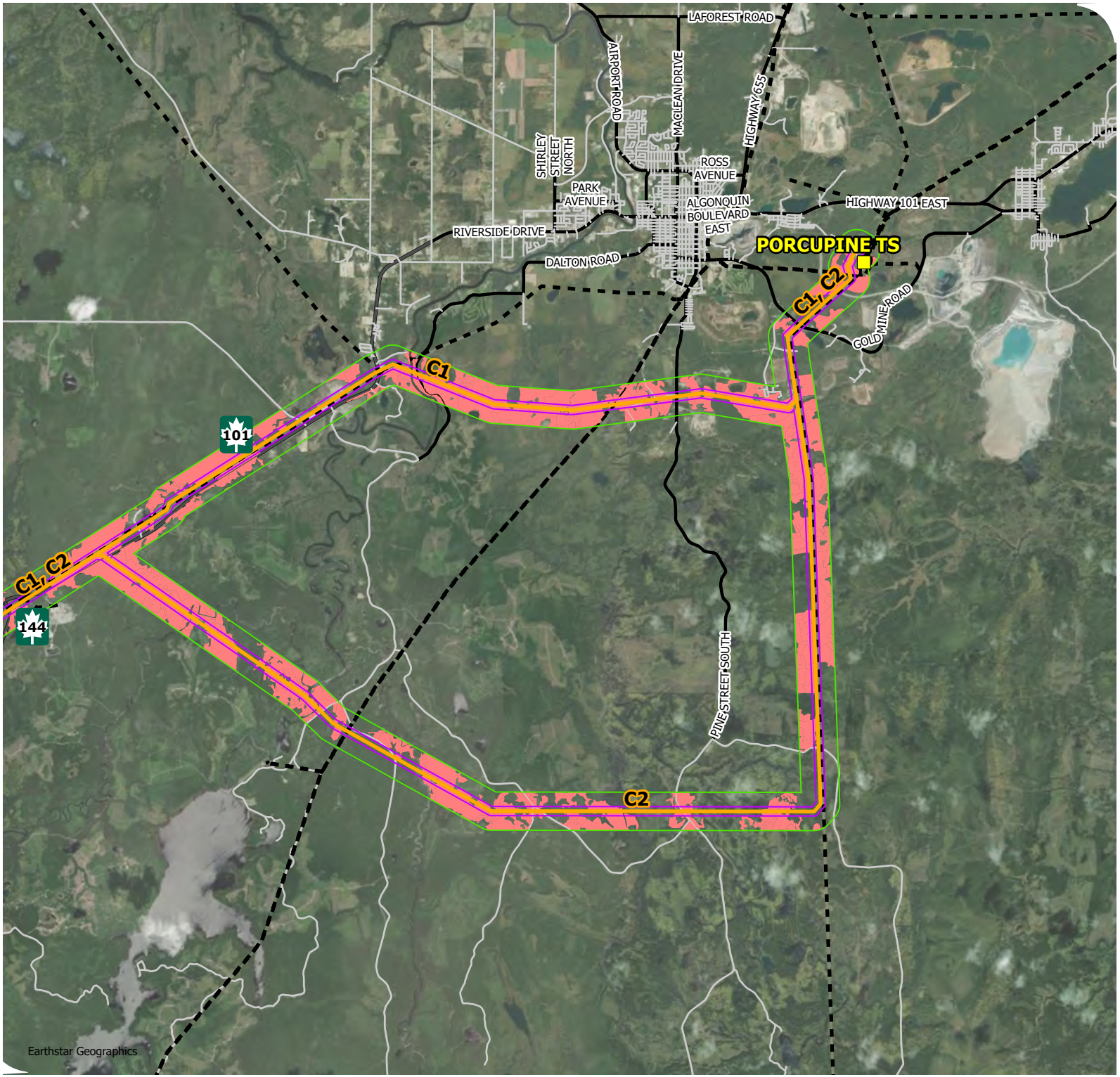


FIGURE 128. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - TREES/SHRUBS

Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Colonially-nesting Bird Breeding Habitat - Trees/Shrubs

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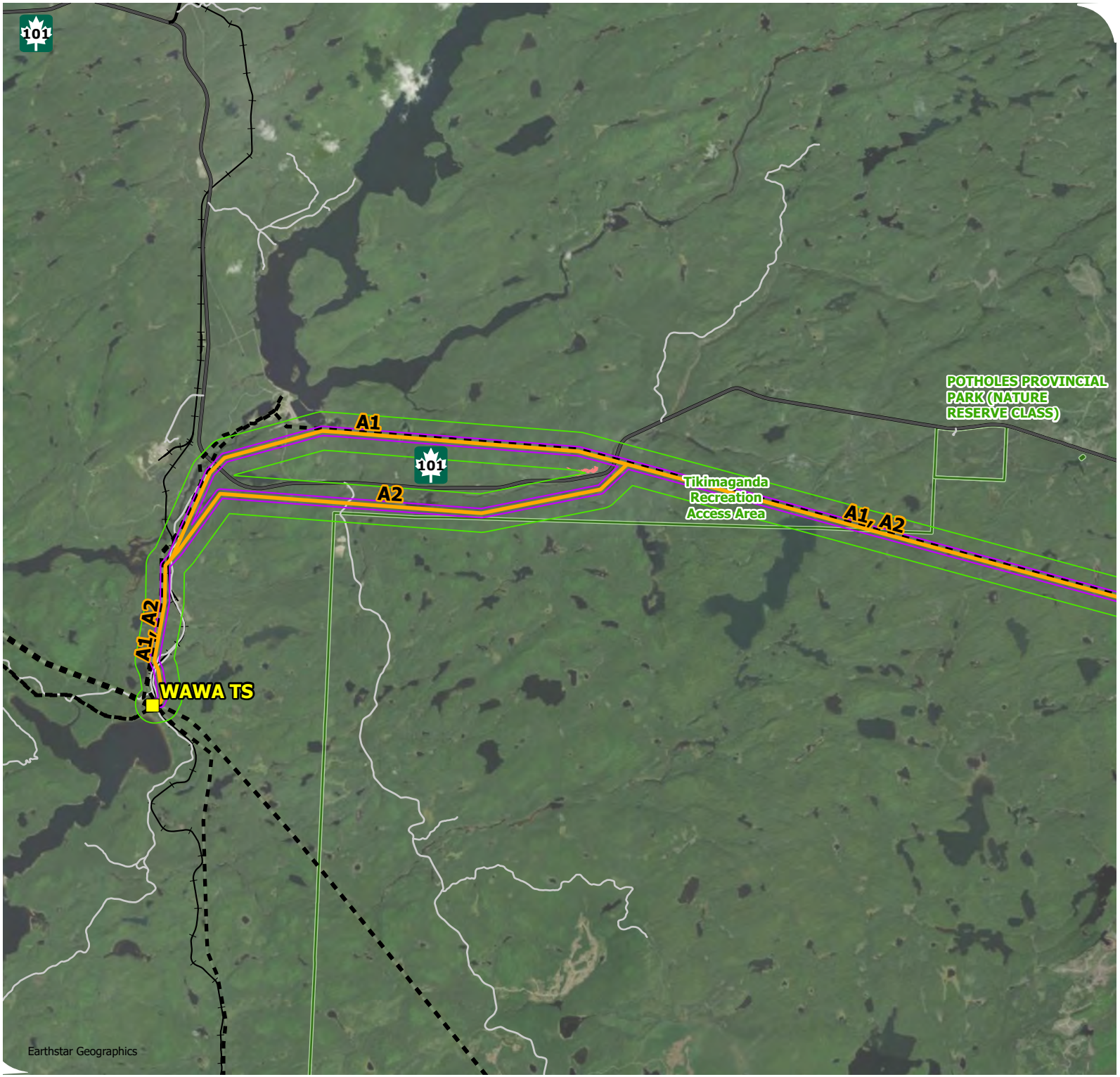
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WAWA TIMMINS POWER LINE

FIGURE 129. SWH - COLONIALLY-NESTING BIRD BREEDING HABITAT - CLIFF

Mapping Extent - Wawa Station

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Colonially-nesting Bird Breeding Habitat - Cliff

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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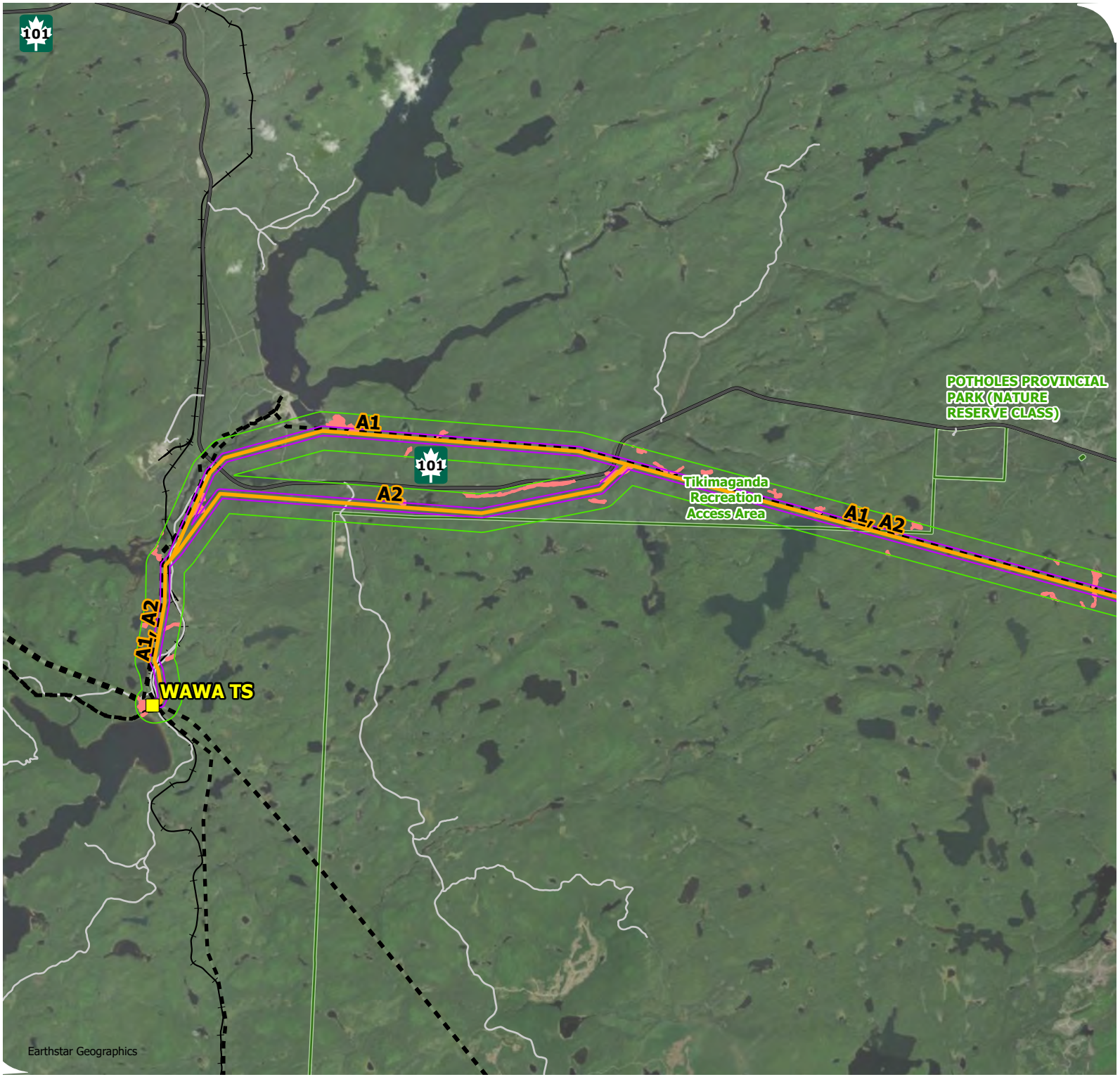
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 130. SWH - WATERFOWL NESTING AREAS

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

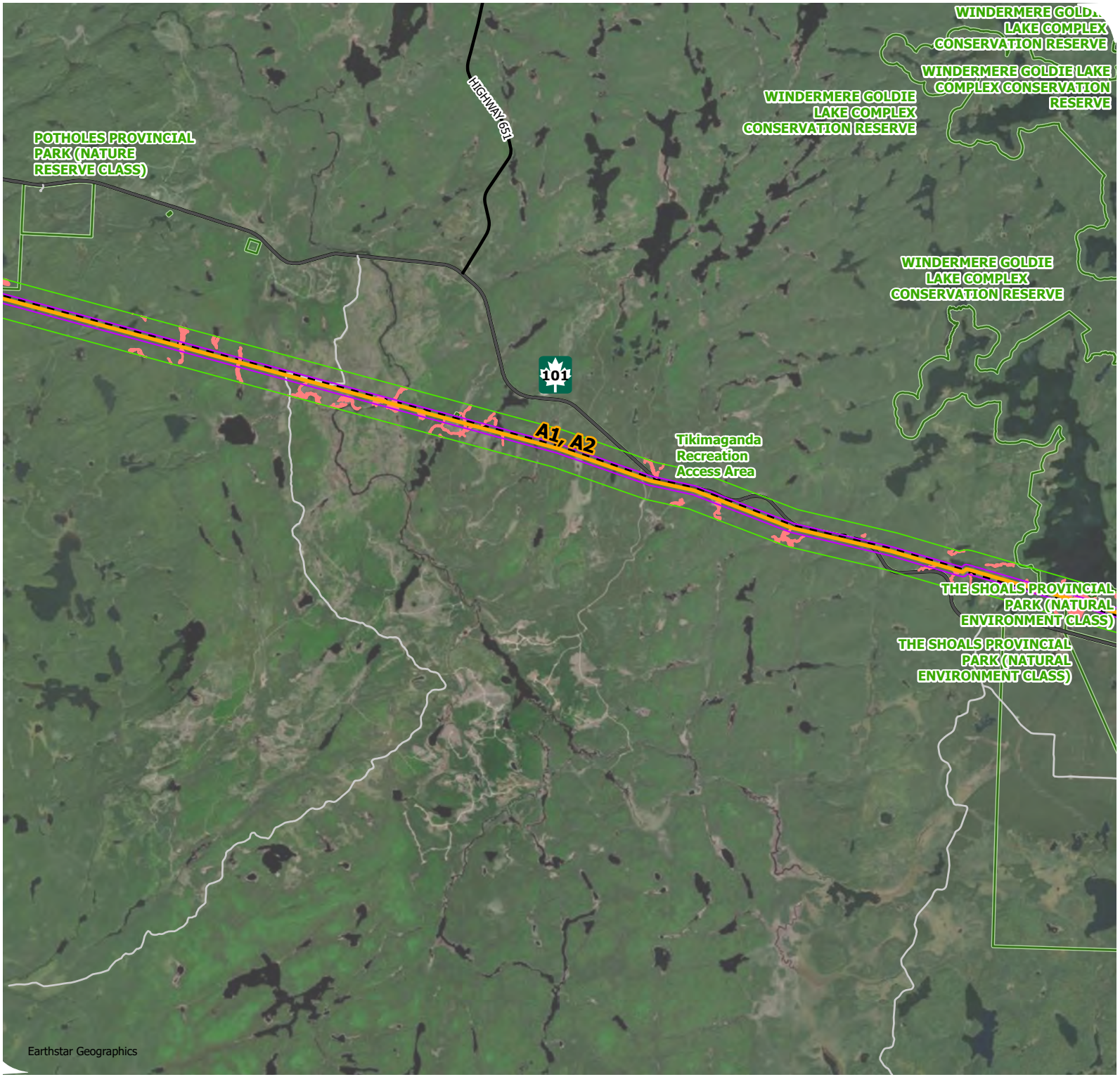
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WAWA TIMMINS POWER LINE

FIGURE 131. SWH - WATERFOWL NESTING AREAS

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Nesting Areas

MAP DRAWING INFORMATION:
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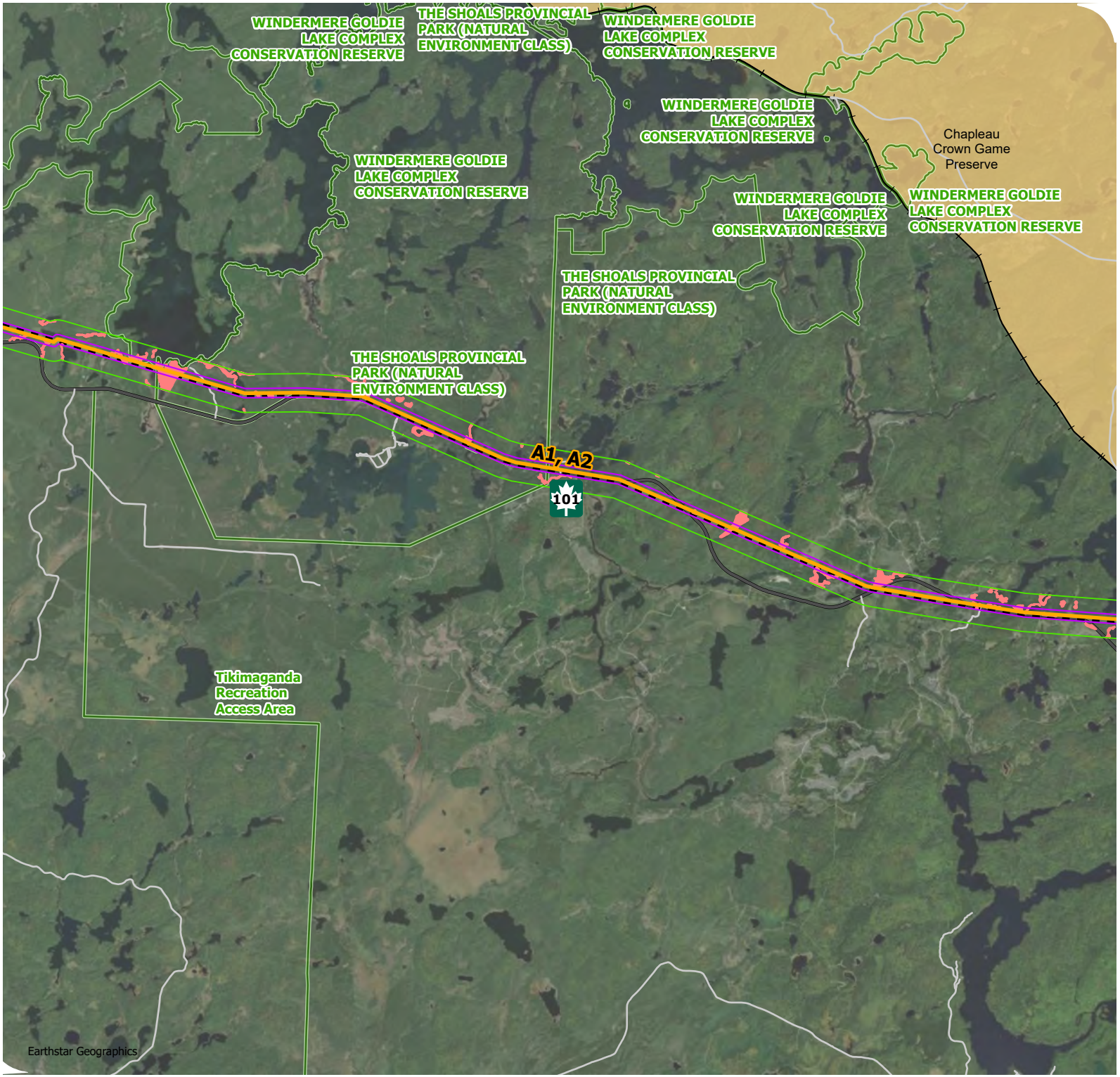
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WAWA TIMMINS POWER LINE

FIGURE 132. SWH - WATERFOWL NESTING AREAS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Nesting Areas

MAP DRAWING INFORMATION:
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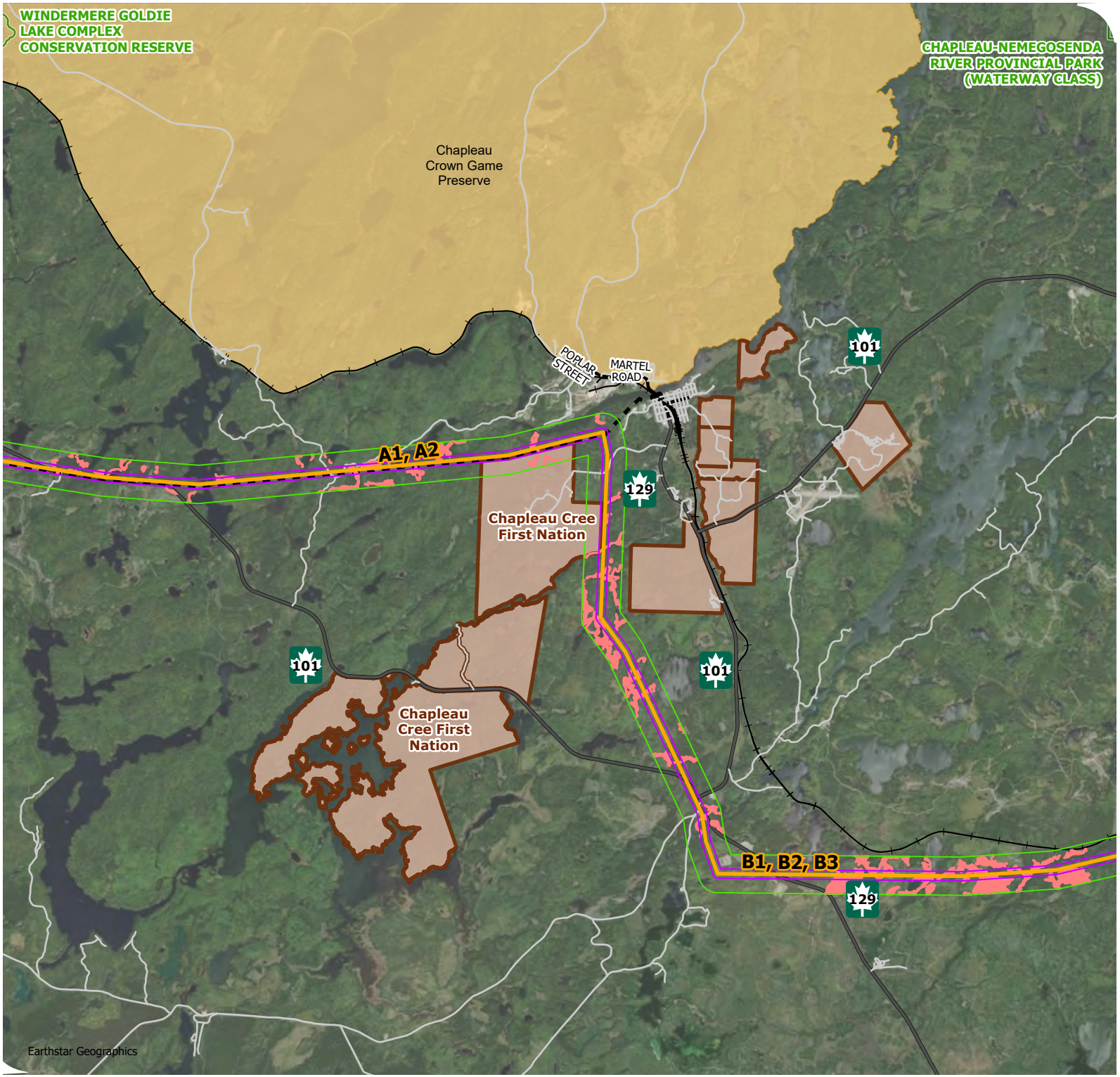
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WAWA TIMMINS POWER LINE

FIGURE 133. SWH - WATERFOWL NESTING AREAS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Nesting Areas

MAP DRAWING INFORMATION:
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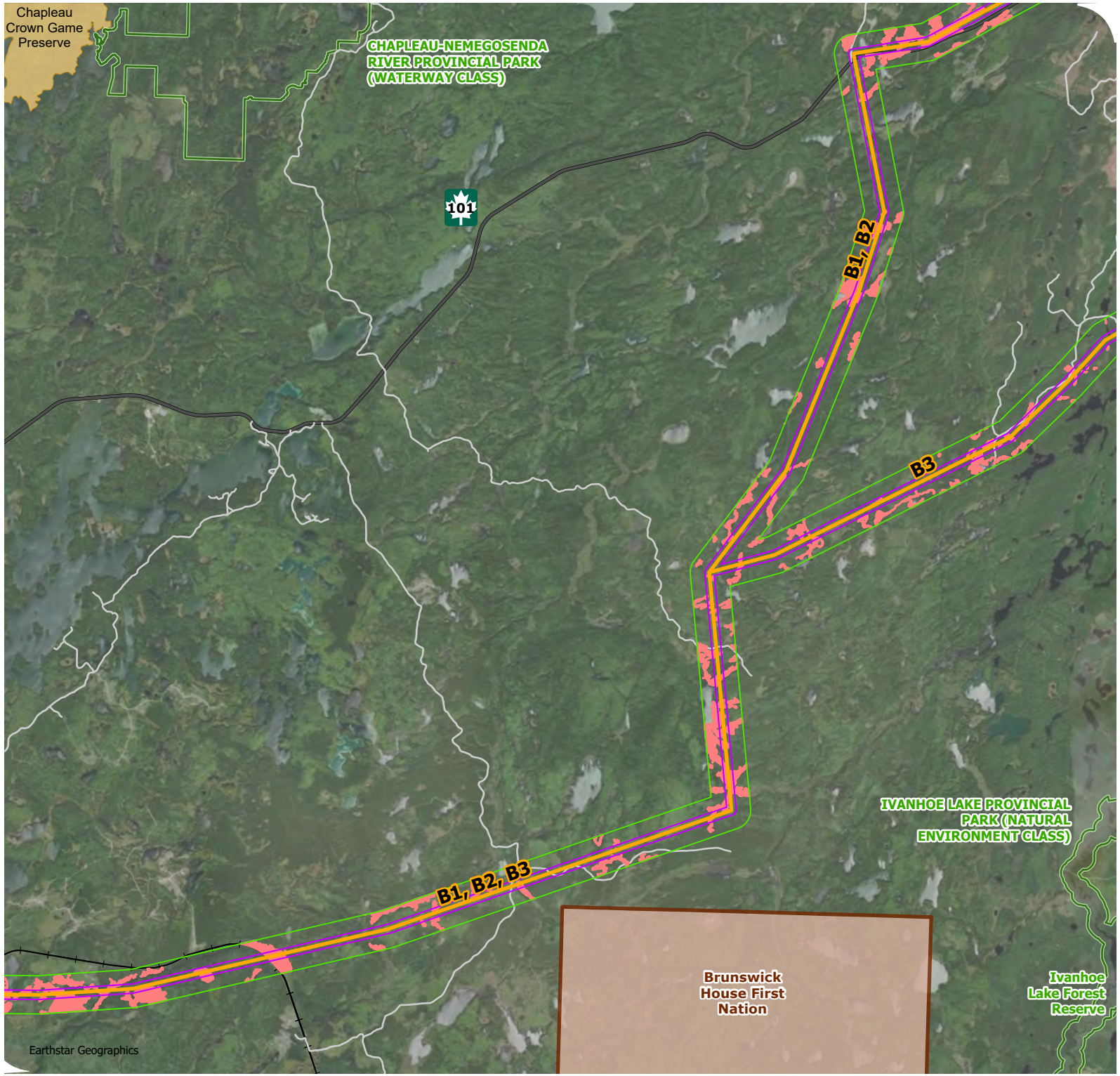
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WAWA TIMMINS POWER LINE

FIGURE 134. SWH - WATERFOWL NESTING AREAS

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

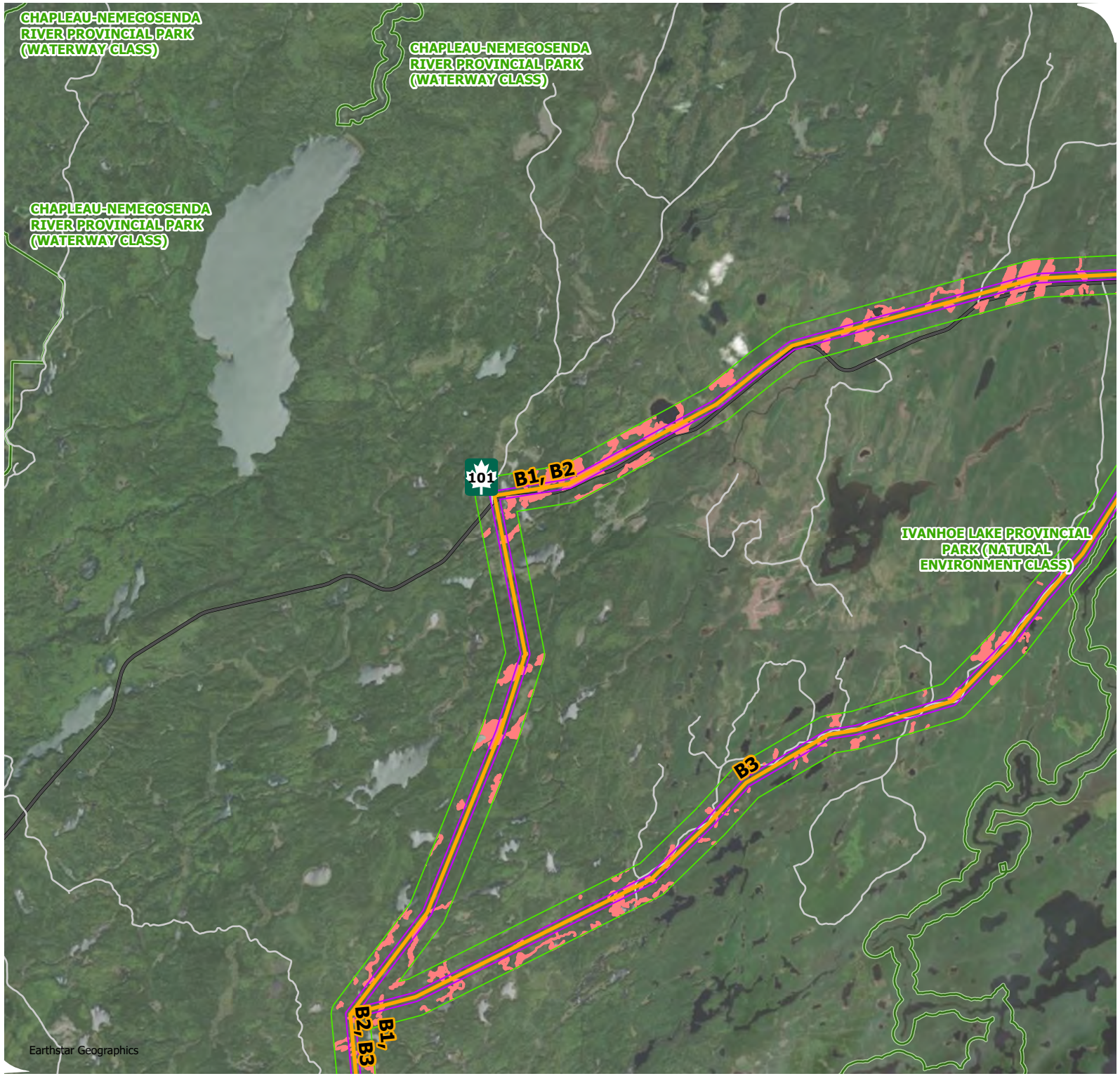
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 135. SWH - WATERFOWL NESTING AREAS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

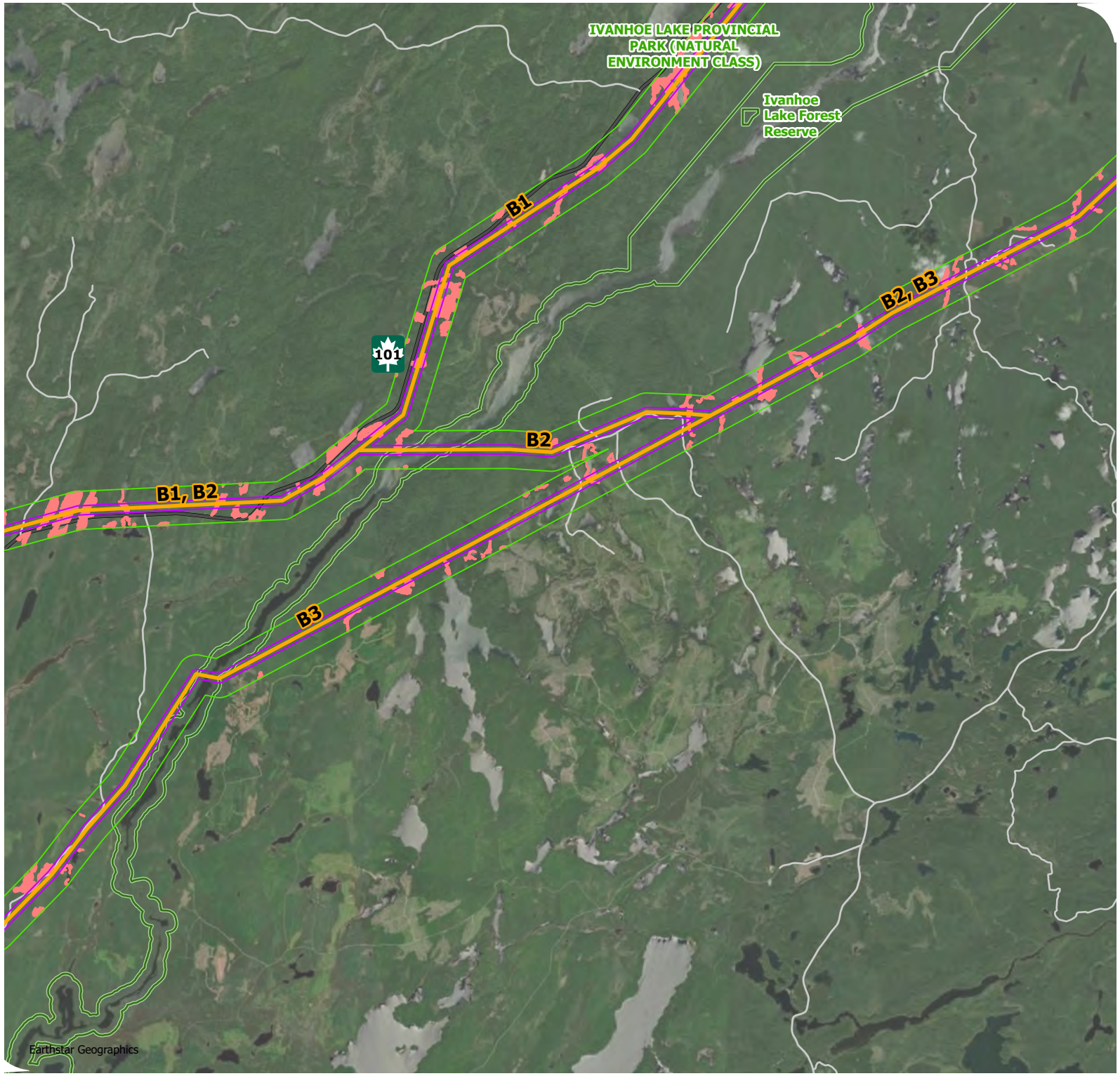


FIGURE 136. SWH - WATERFOWL NESTING AREAS

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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PROJECT: 25-1043
STATUS: DRAFT
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WAWA TIMMINS POWER LINE

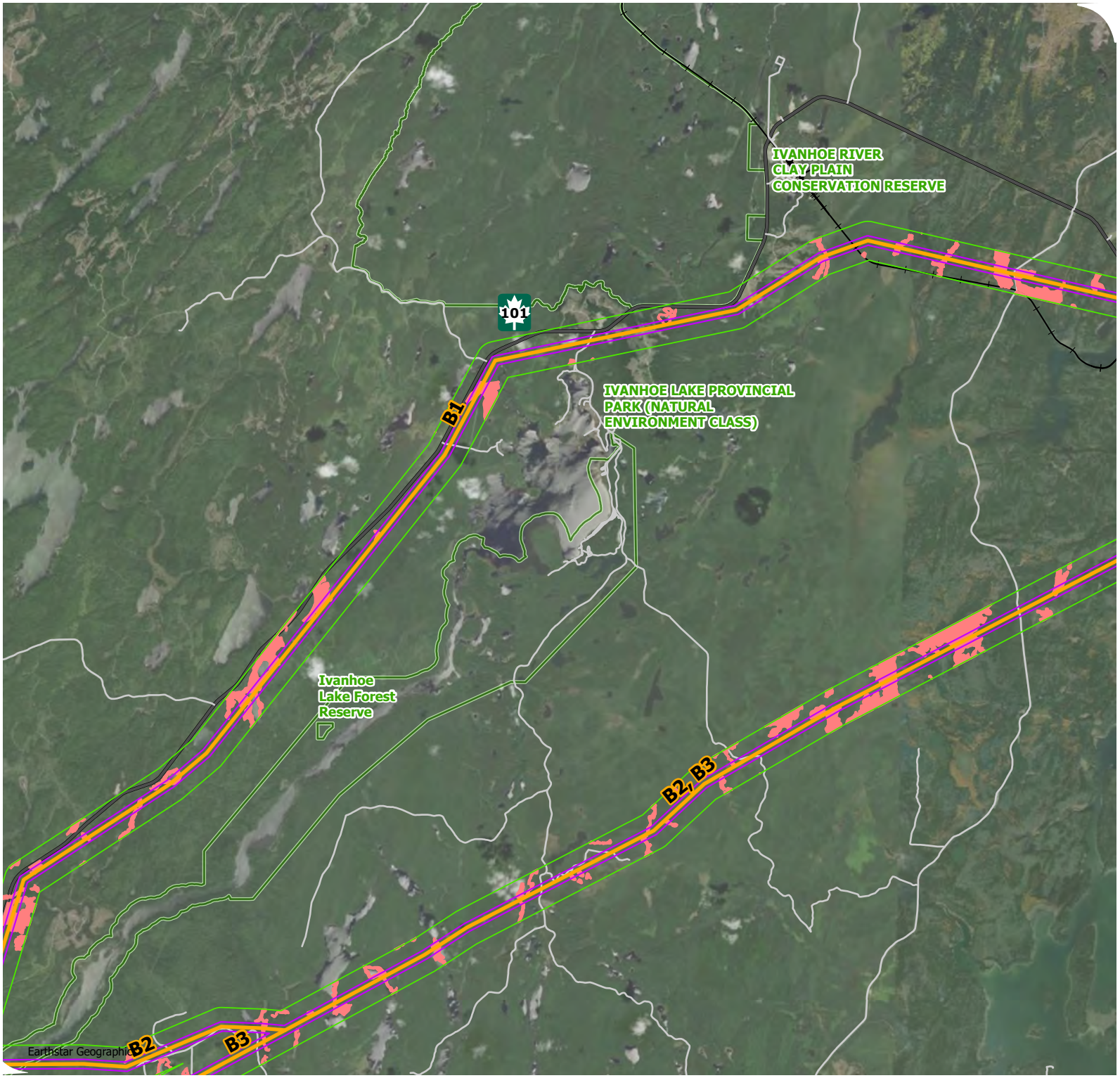


FIGURE 137. SWH - WATERFOWL NESTING AREAS

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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WAWA TIMMINS POWER LINE

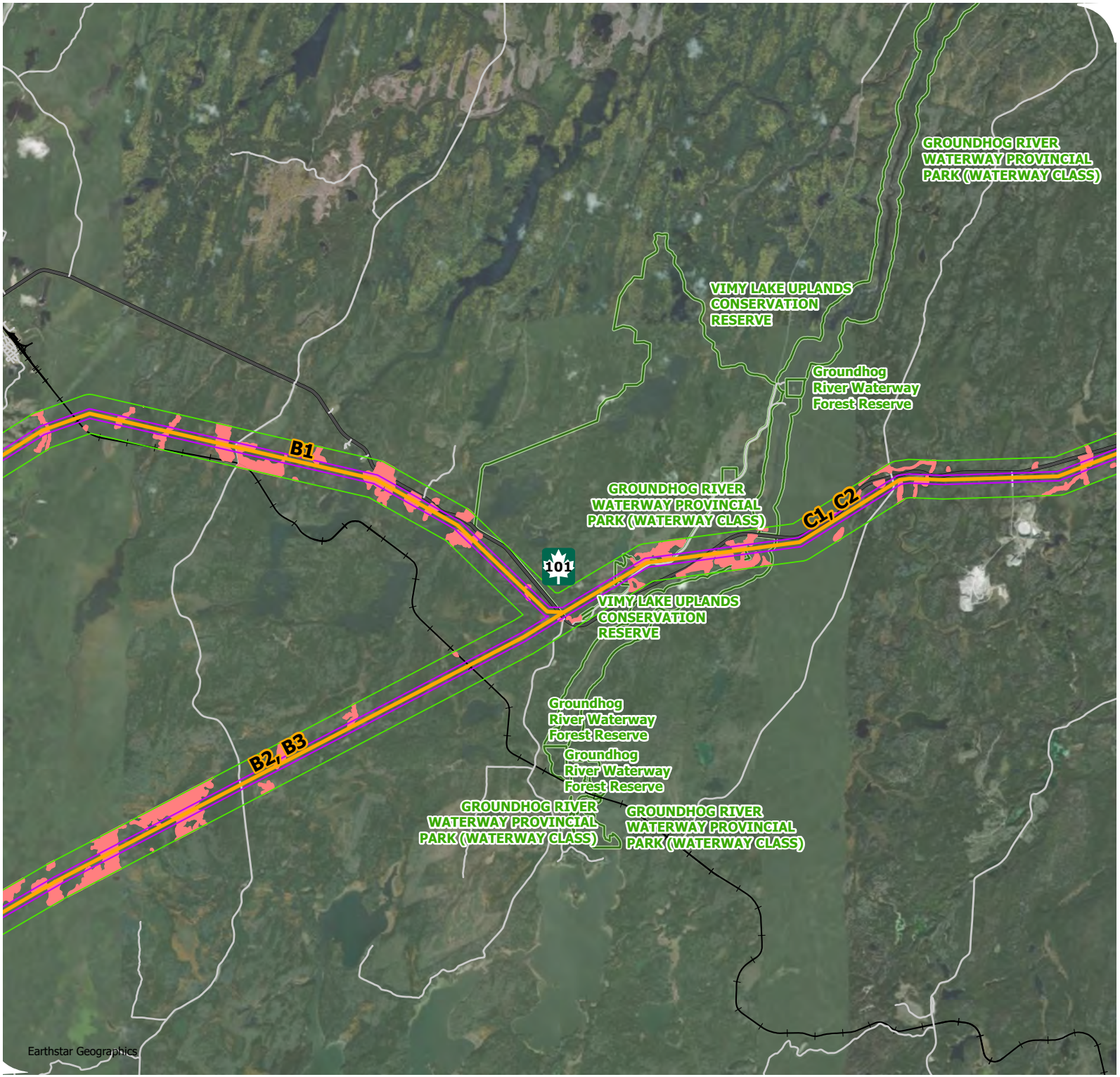


FIGURE 138. SWH - WATERFOWL NESTING AREAS

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
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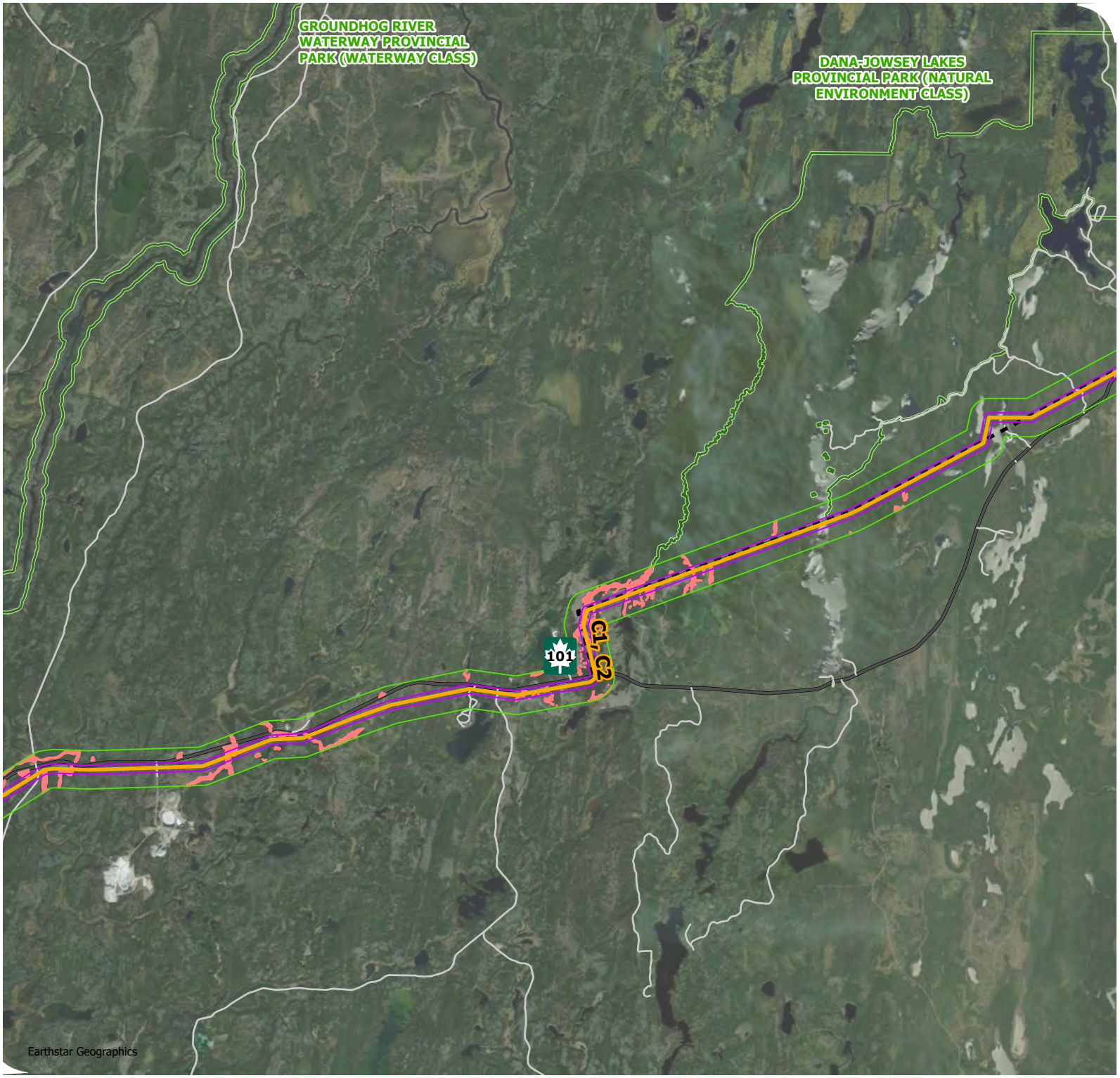
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WAWA TIMMINS POWER LINE

FIGURE 139. SWH - WATERFOWL NESTING AREAS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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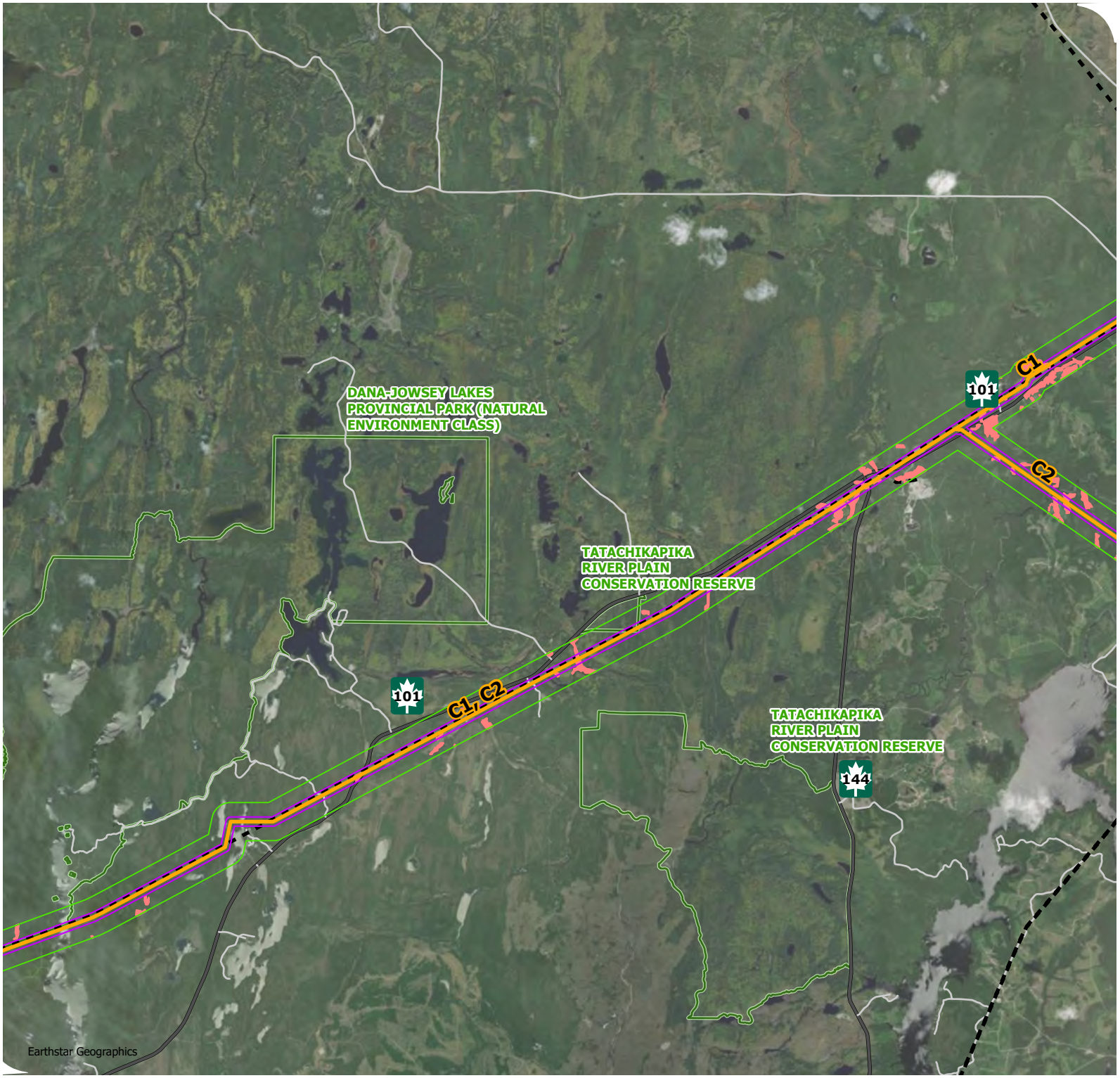
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WAWA TIMMINS POWER LINE

FIGURE 140. SWH - WATERFOWL NESTING AREAS

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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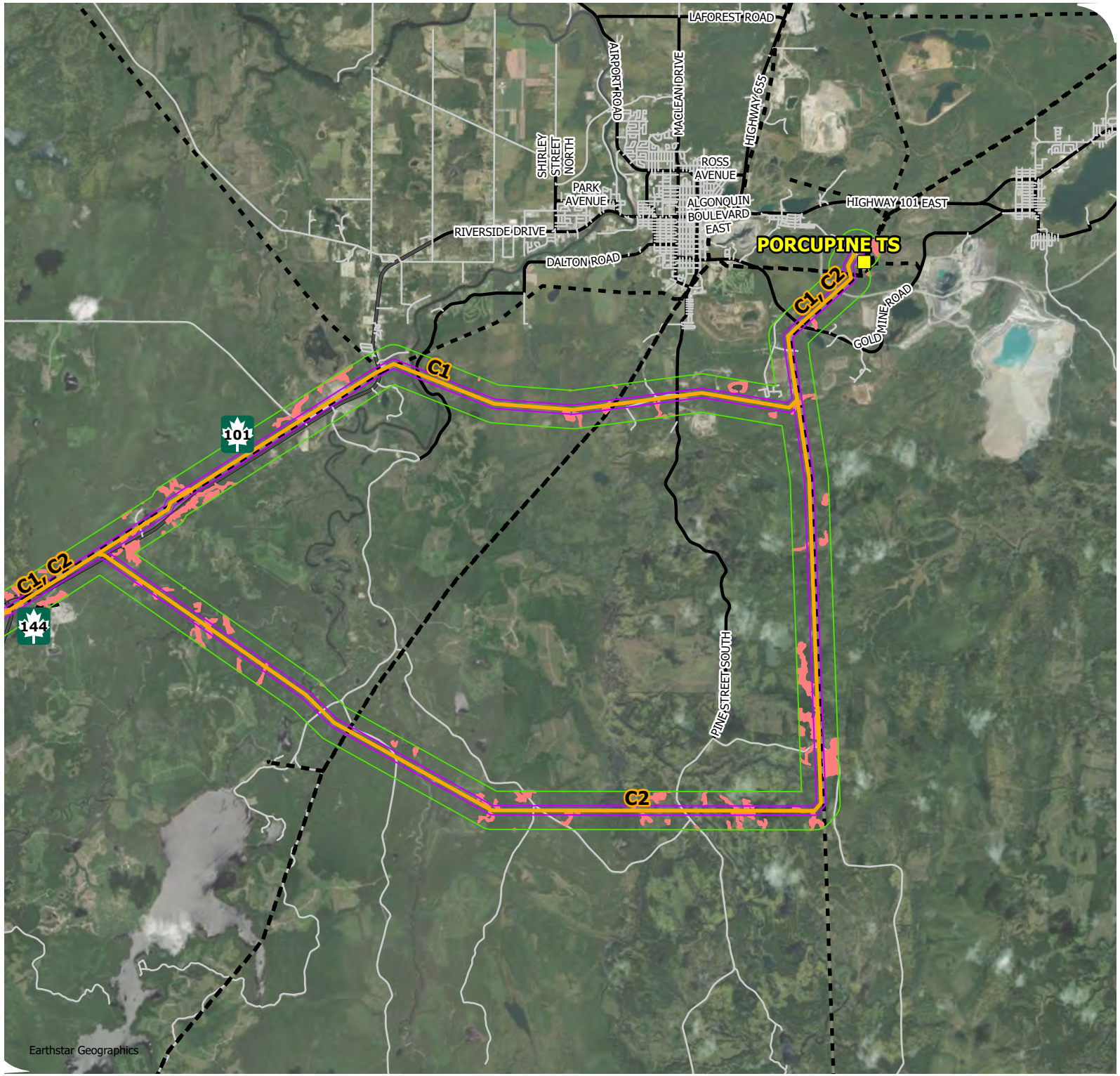
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WAWA TIMMINS POWER LINE

FIGURE 141. SWH - WATERFOWL NESTING AREAS

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Waterfowl Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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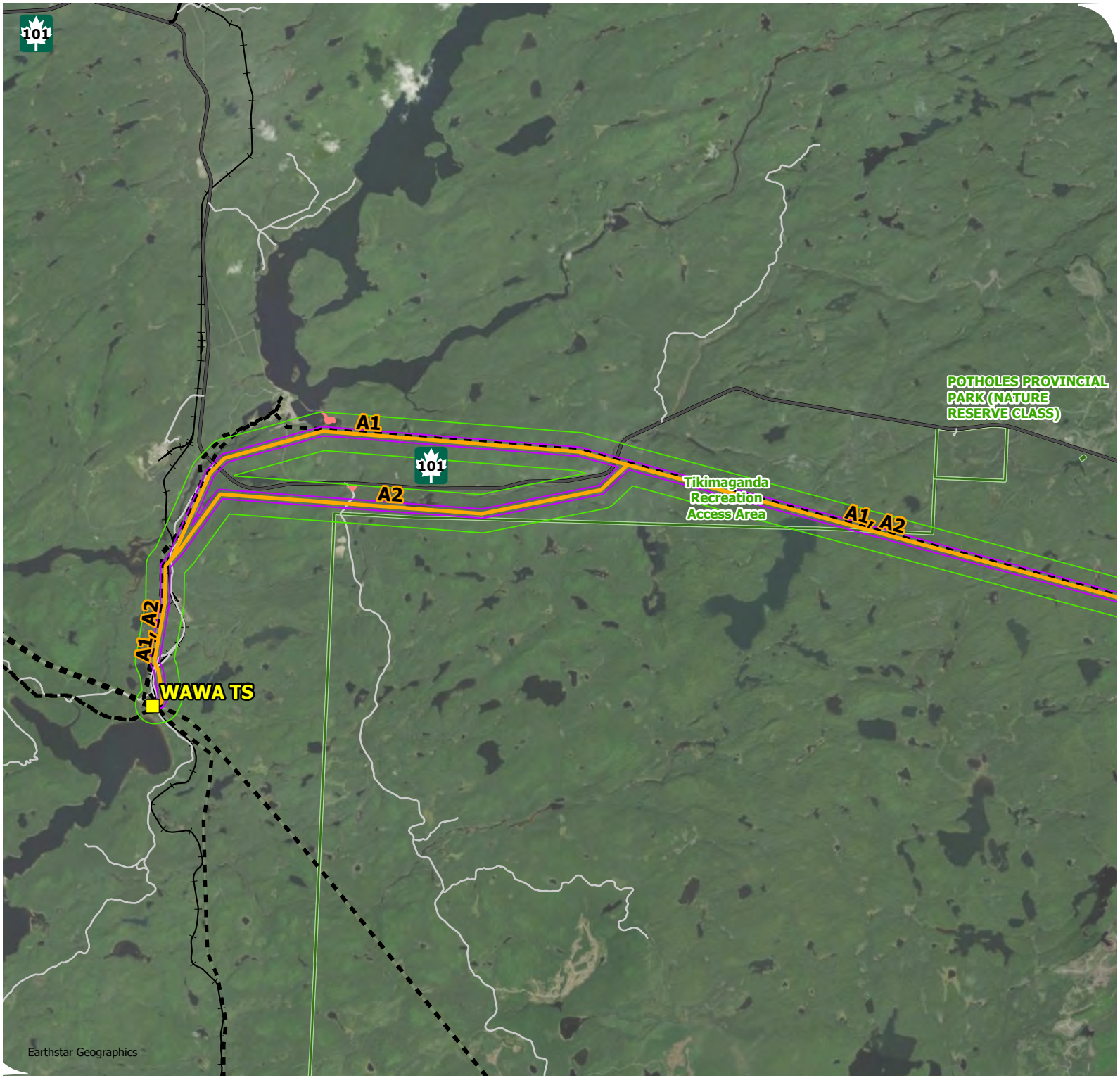
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WAWA TIMMINS POWER LINE

FIGURE 142. SWH - TURTLE NESTING AREAS

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

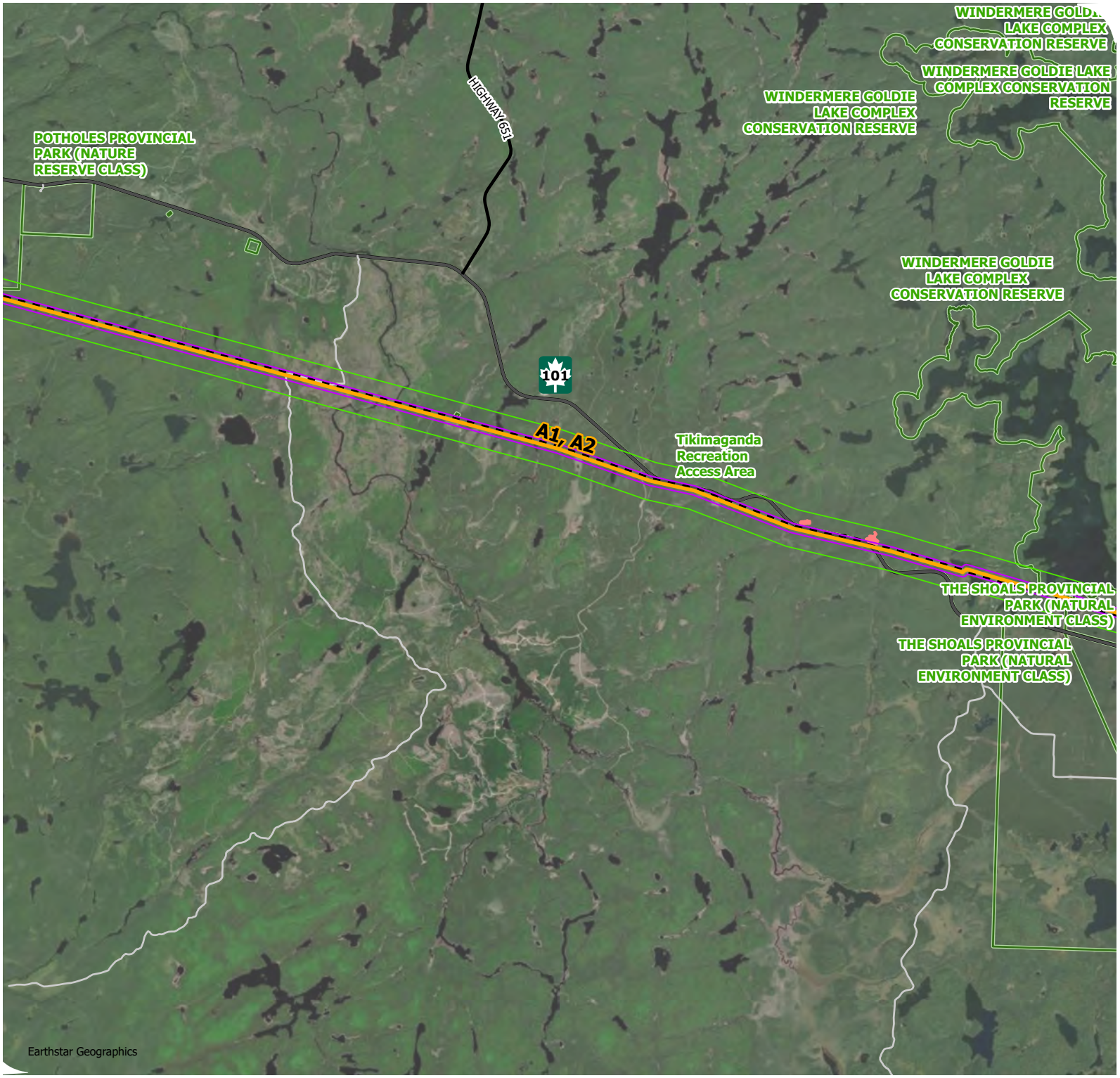
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WAWA TIMMINS POWER LINE

FIGURE 143. SWH - TURTLE NESTING AREAS

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

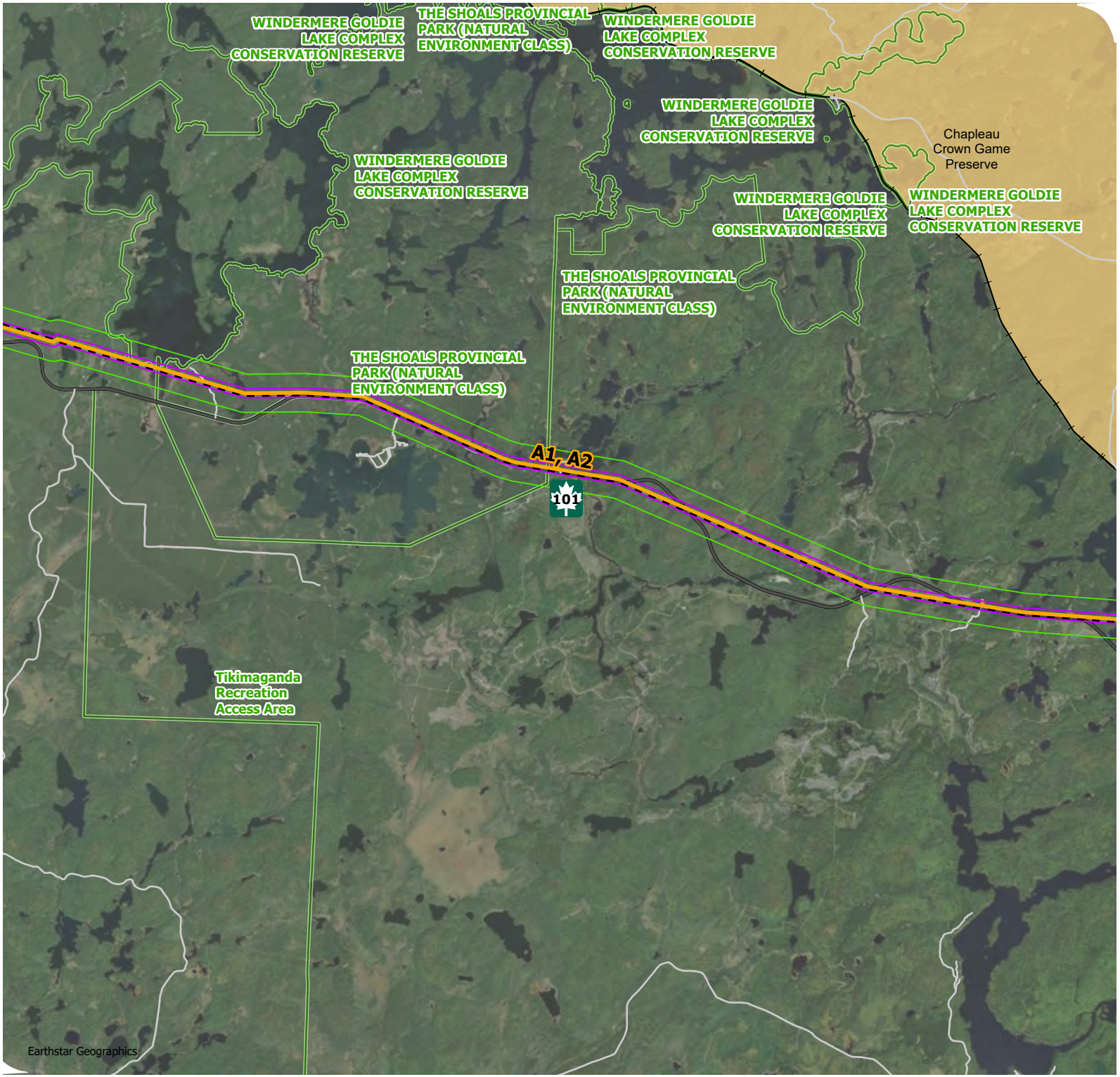
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WAWA TIMMINS POWER LINE

FIGURE 144. SWH - TURTLE NESTING AREAS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

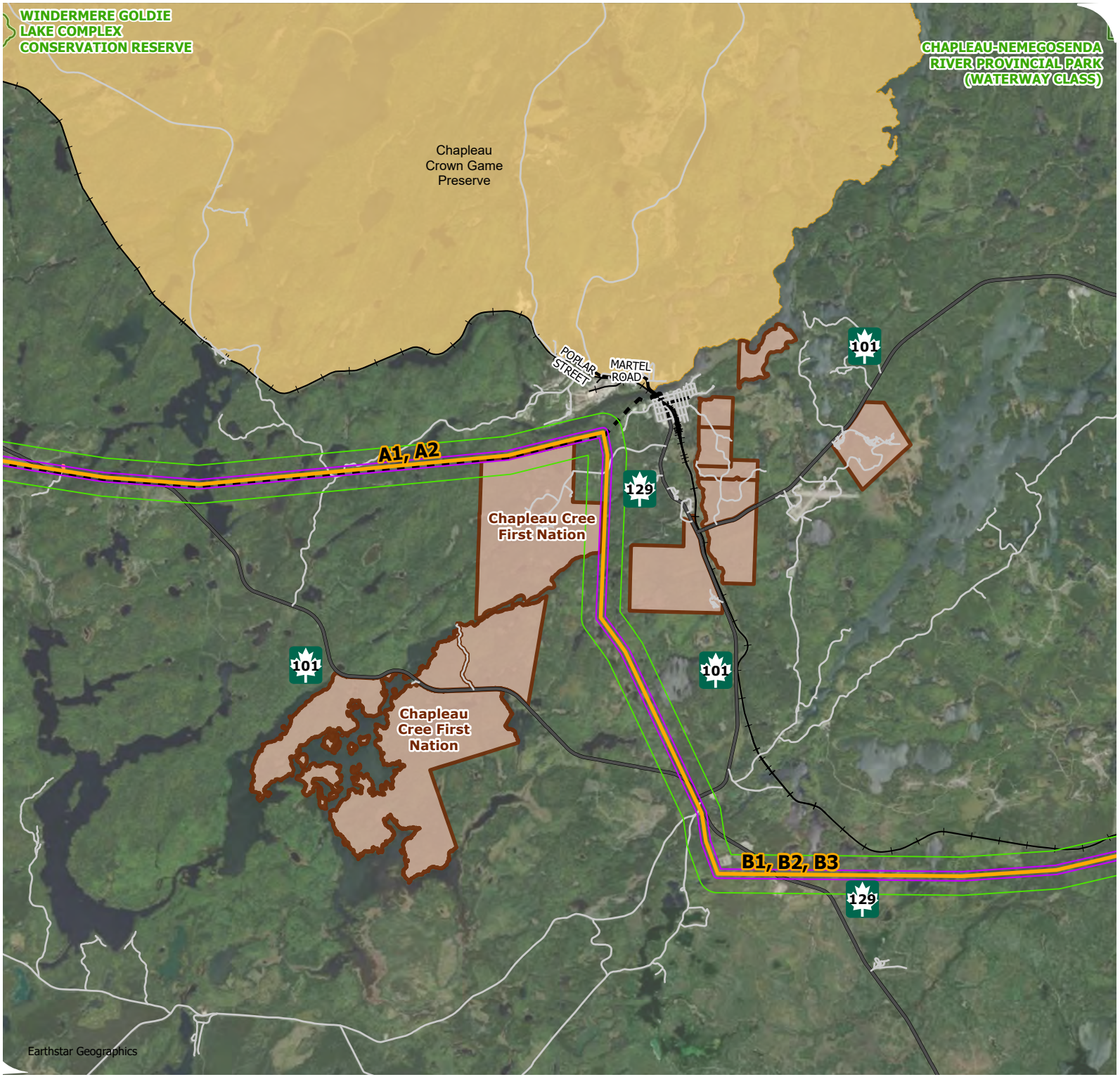
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 145. SWH - TURTLE NESTING AREAS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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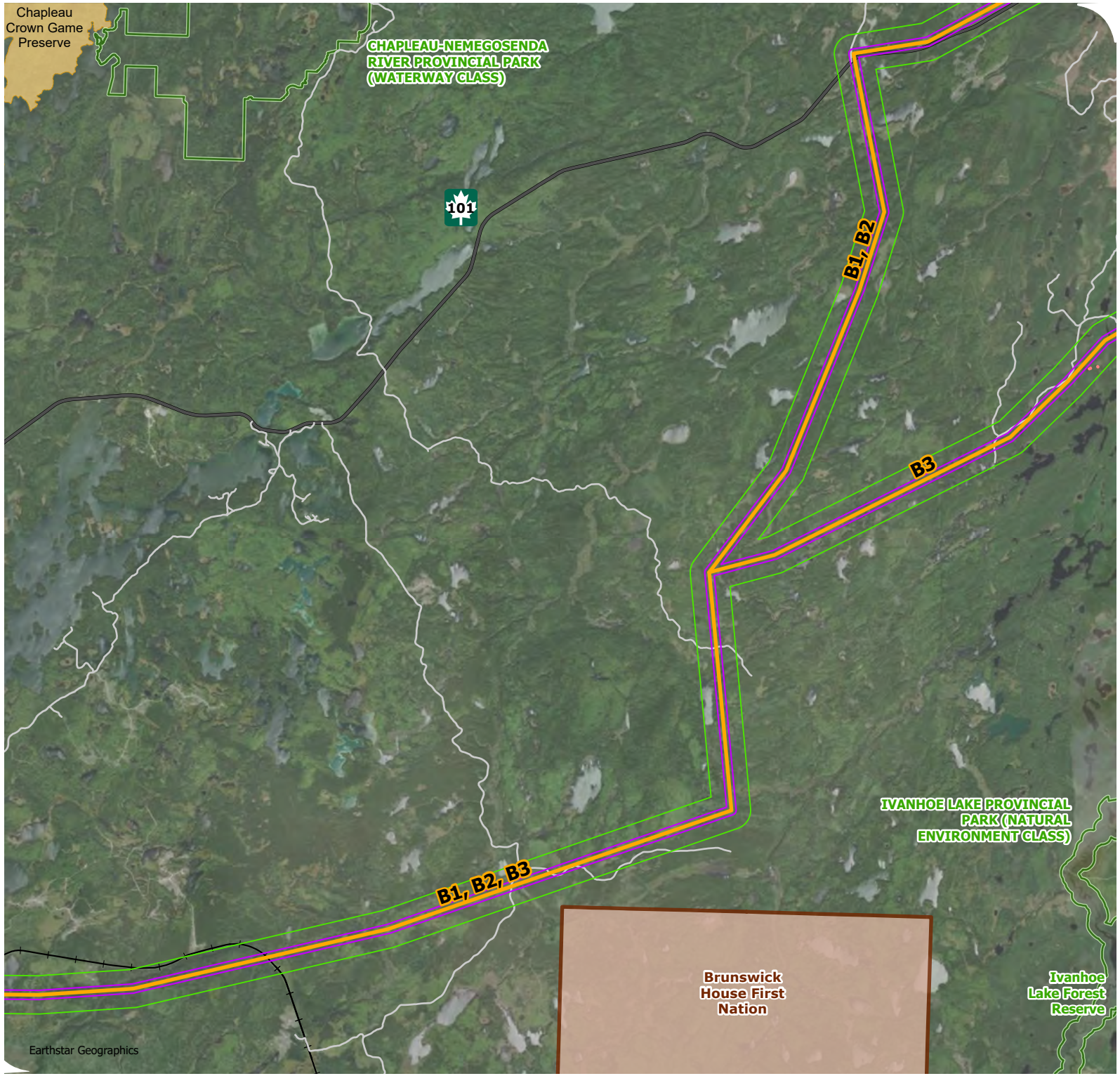
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WAWA TIMMINS POWER LINE

FIGURE 146. SWH - TURTLE NESTING AREAS

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Nesting Areas

MAP DRAWING INFORMATION:
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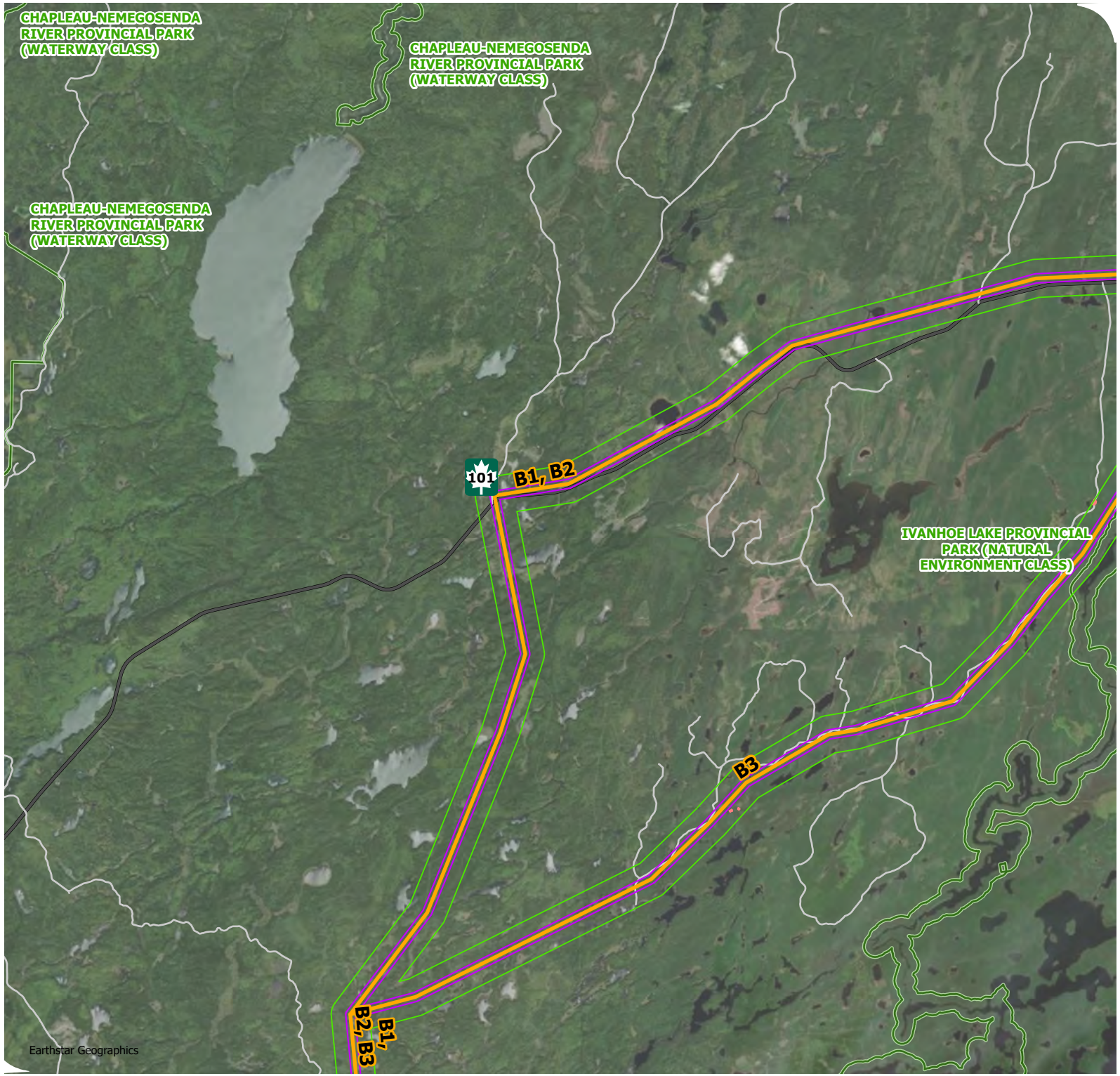
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WAWA TIMMINS POWER LINE

FIGURE 147. SWH - TURTLE NESTING AREAS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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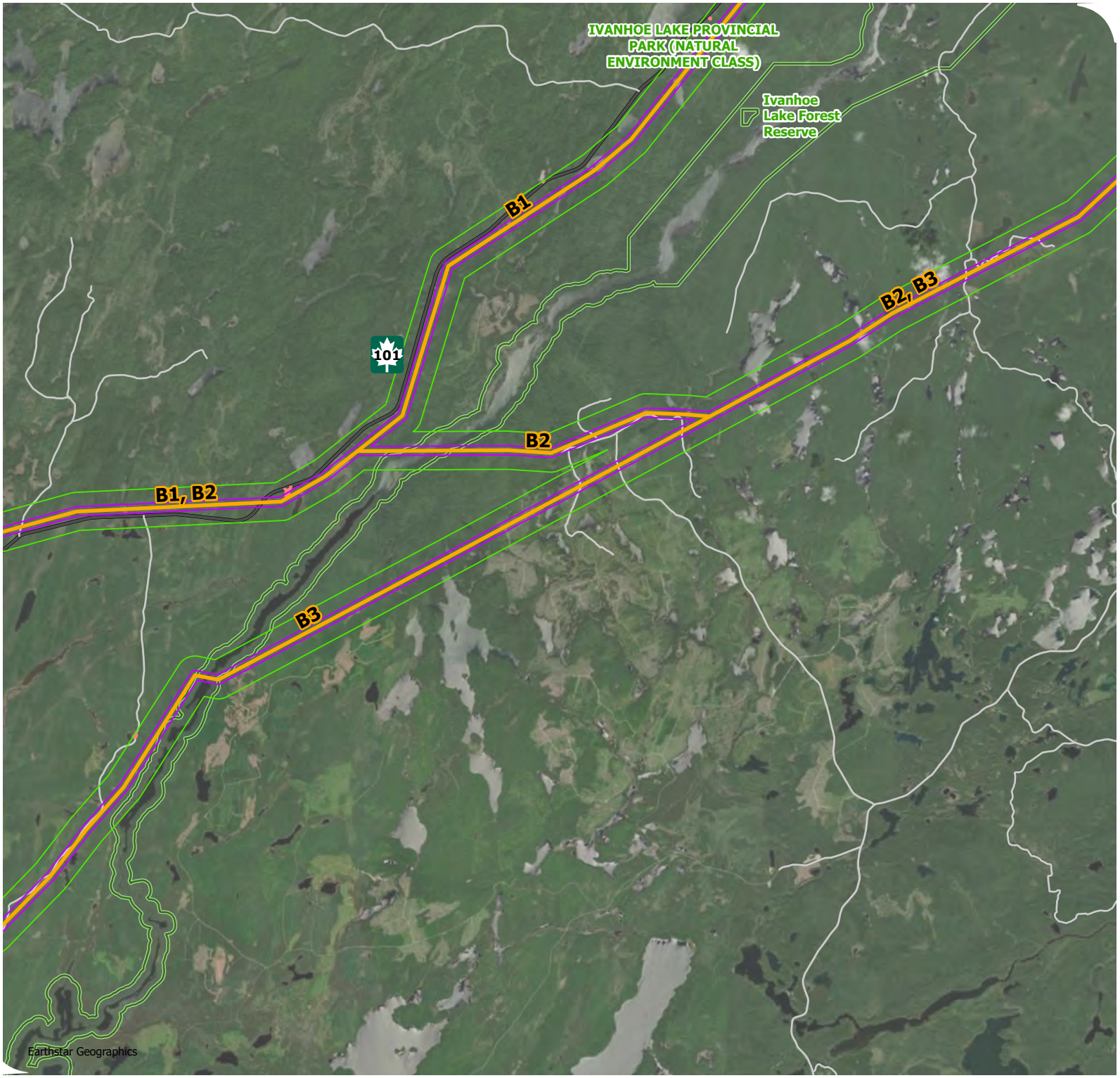
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WAWA TIMMINS POWER LINE

FIGURE 148. SWH - TURTLE NESTING AREAS

Mapping Extent - Ivanhoe Lake 3



- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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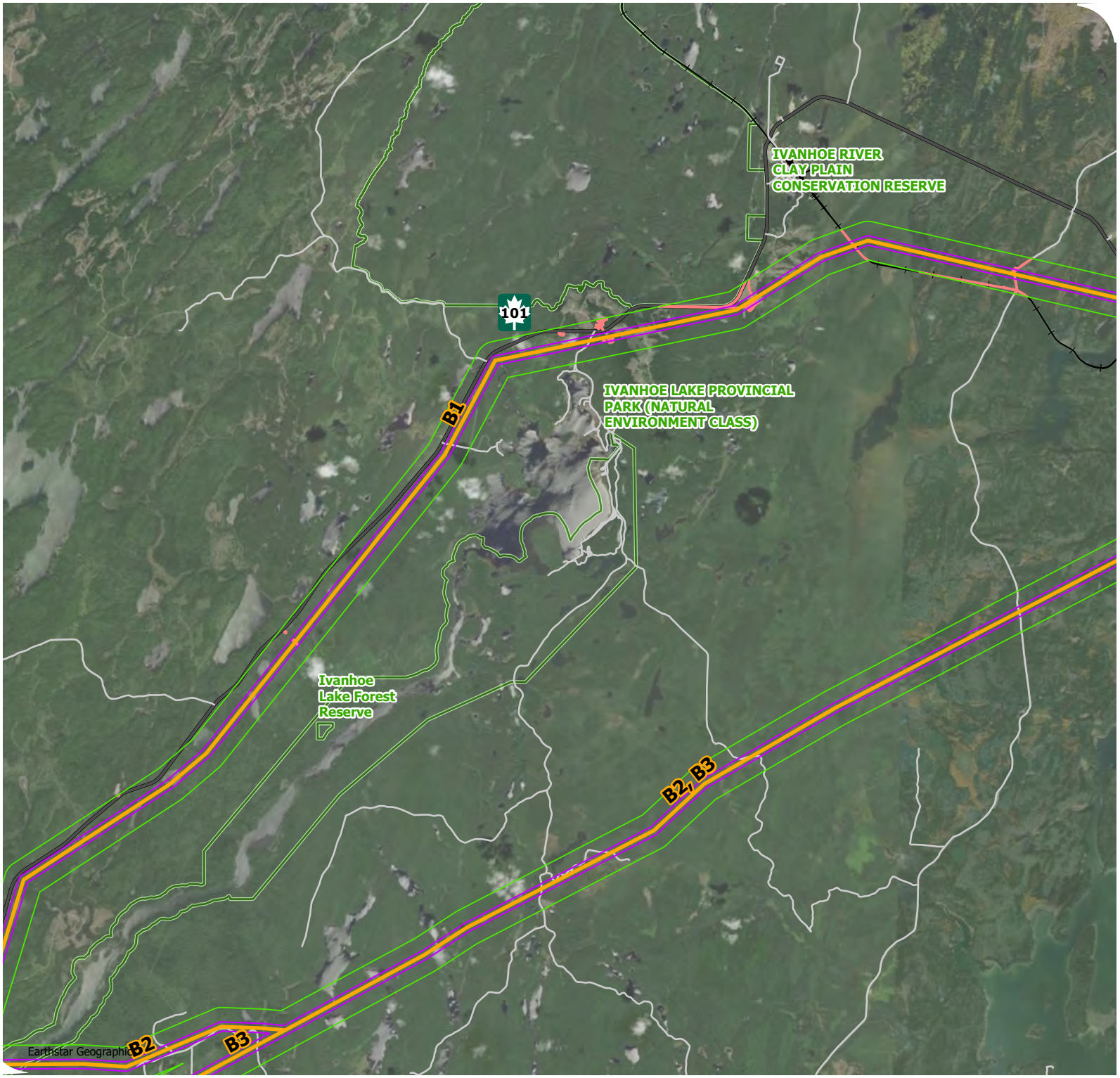
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WAWA TIMMINS POWER LINE

FIGURE 149. SWH - TURTLE NESTING AREAS

Mapping Extent - Ivanhoe Lake 4



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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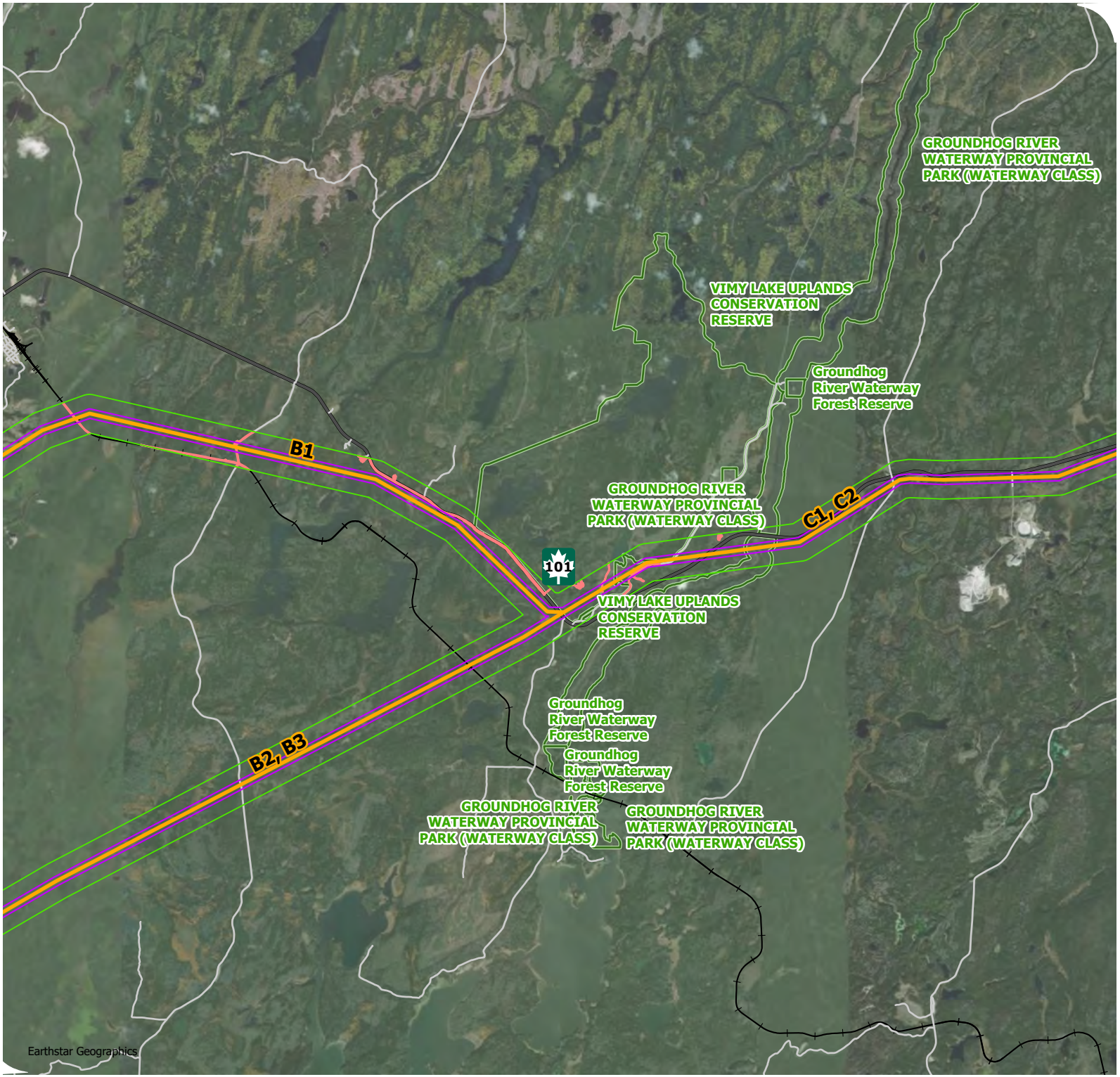
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WAWA TIMMINS POWER LINE

FIGURE 150. SWH - TURTLE NESTING AREAS

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

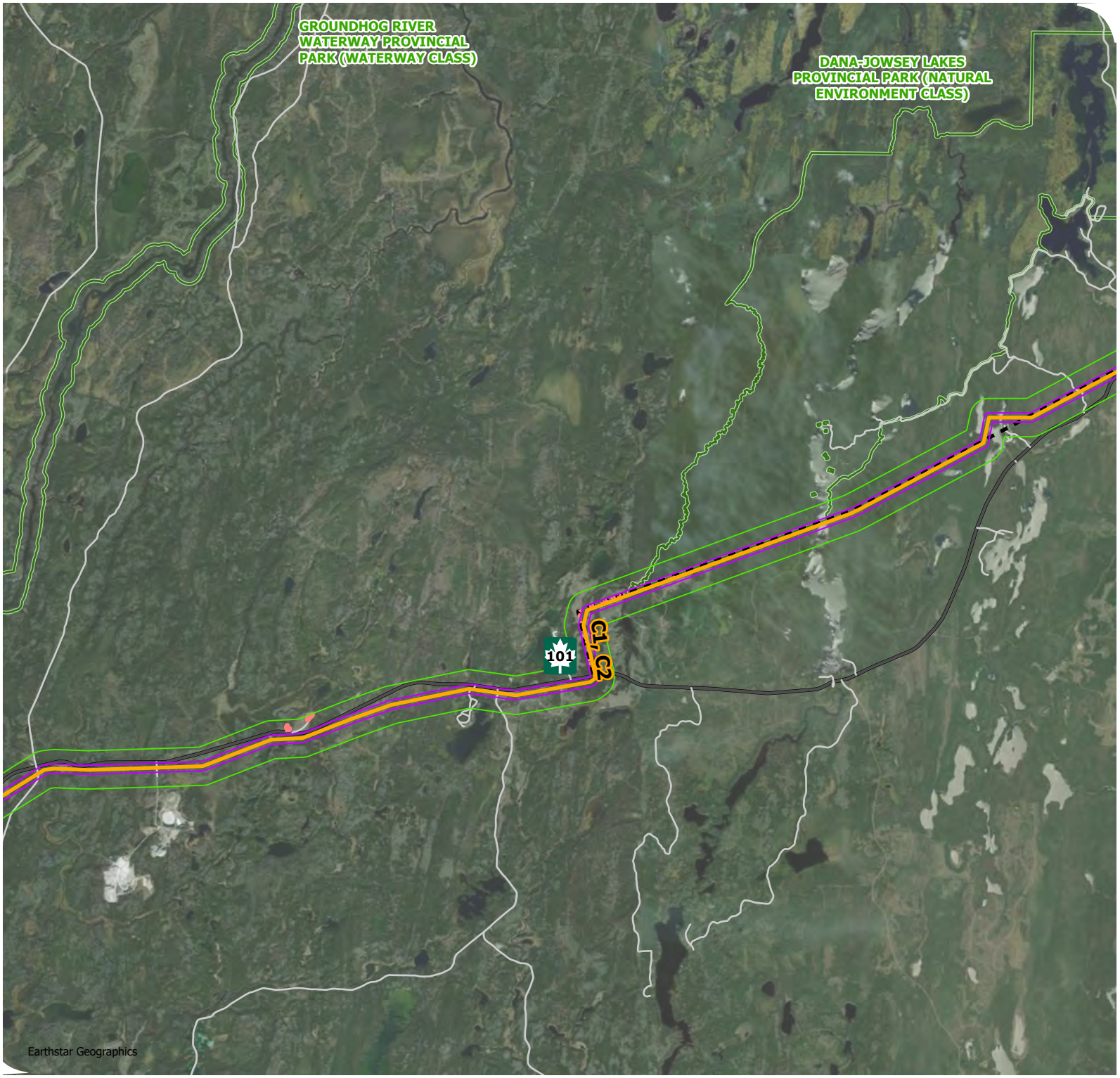
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 151. SWH - TURTLE NESTING AREAS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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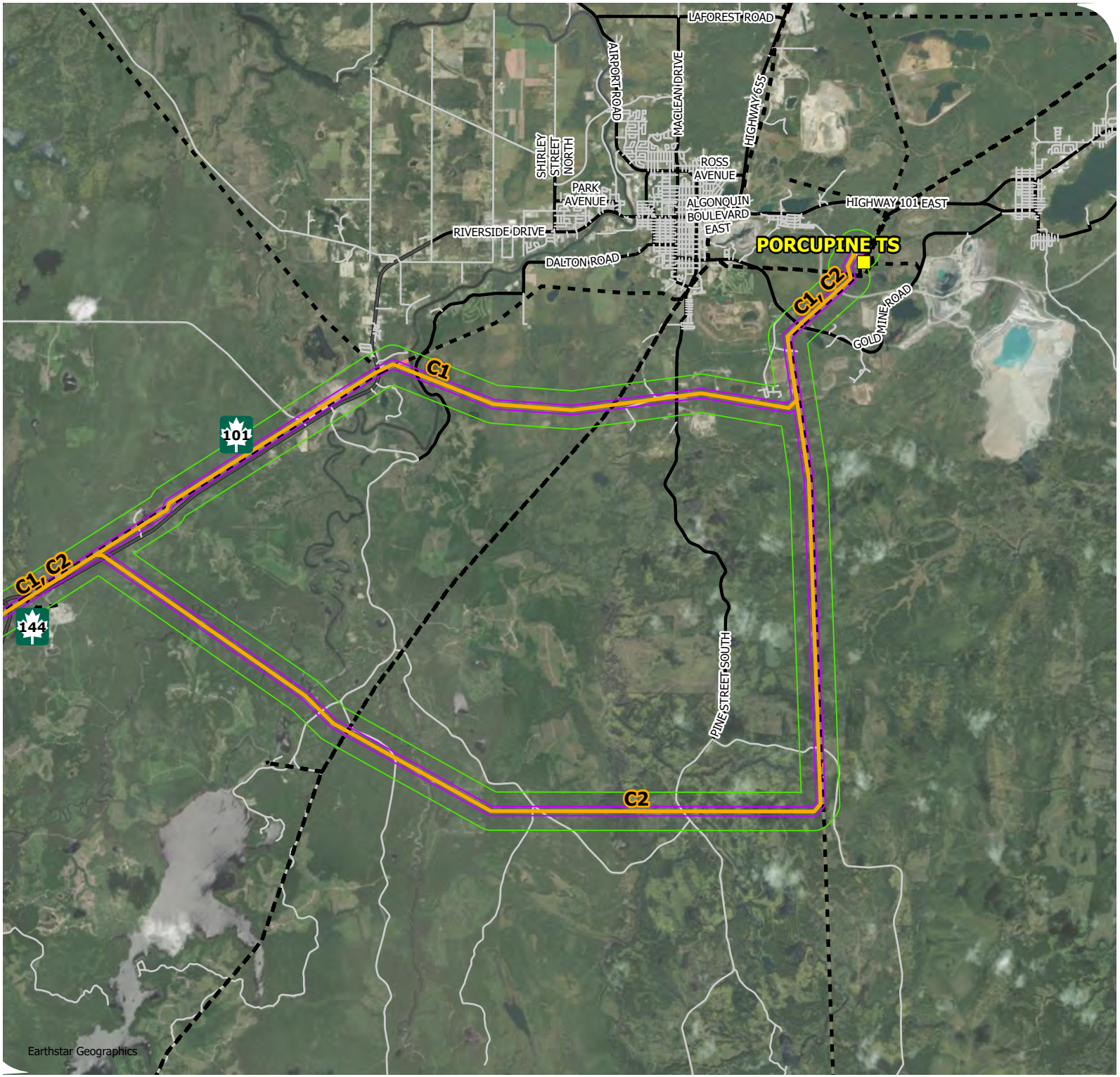
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WAWA TIMMINS POWER LINE

FIGURE 152. SWH - TURTLE NESTING AREAS

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Turtle Nesting Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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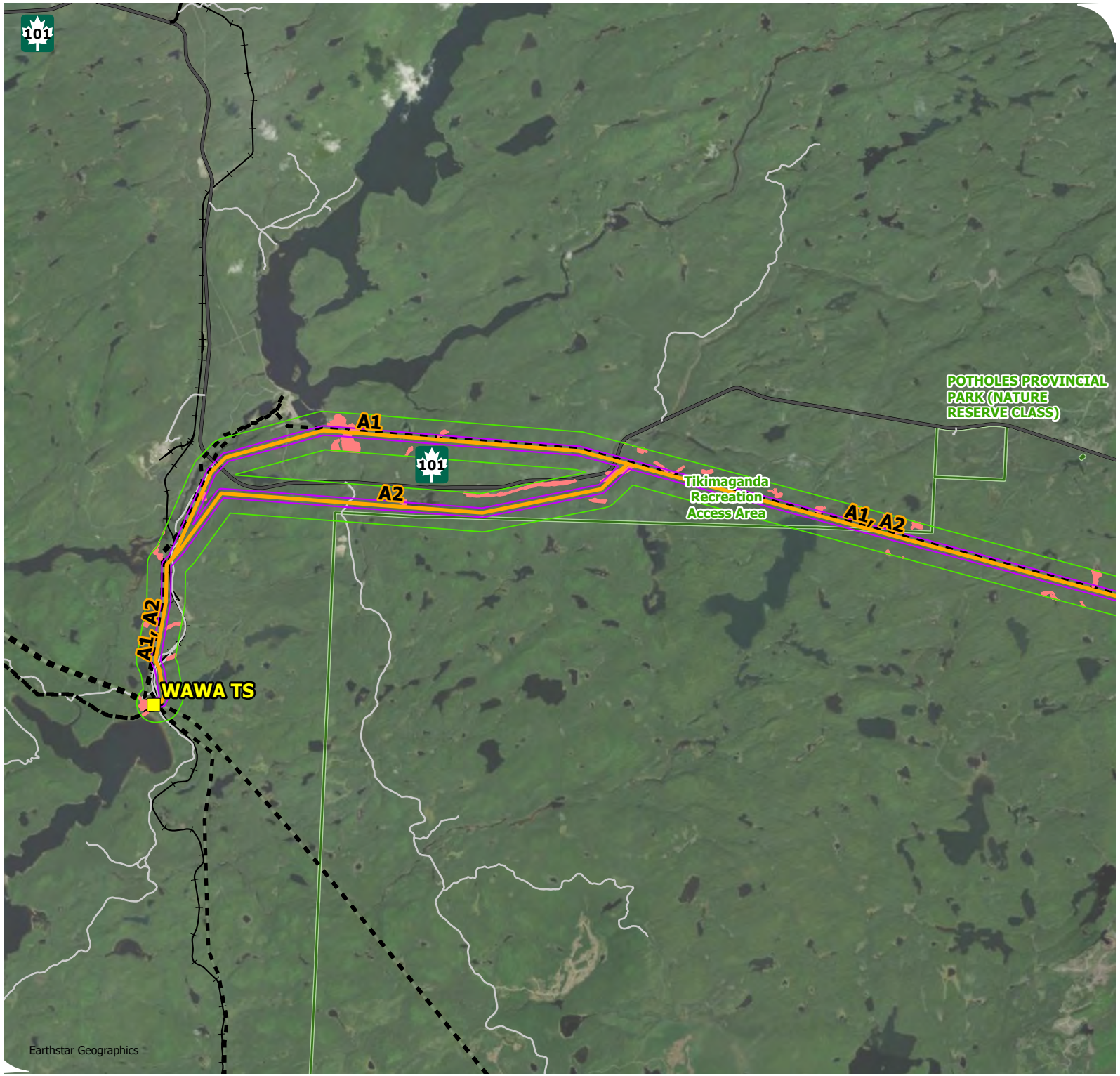
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STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 153. SWH - AMPHIBIAN BREEDING HABITAT - WETLAND

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Wetland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

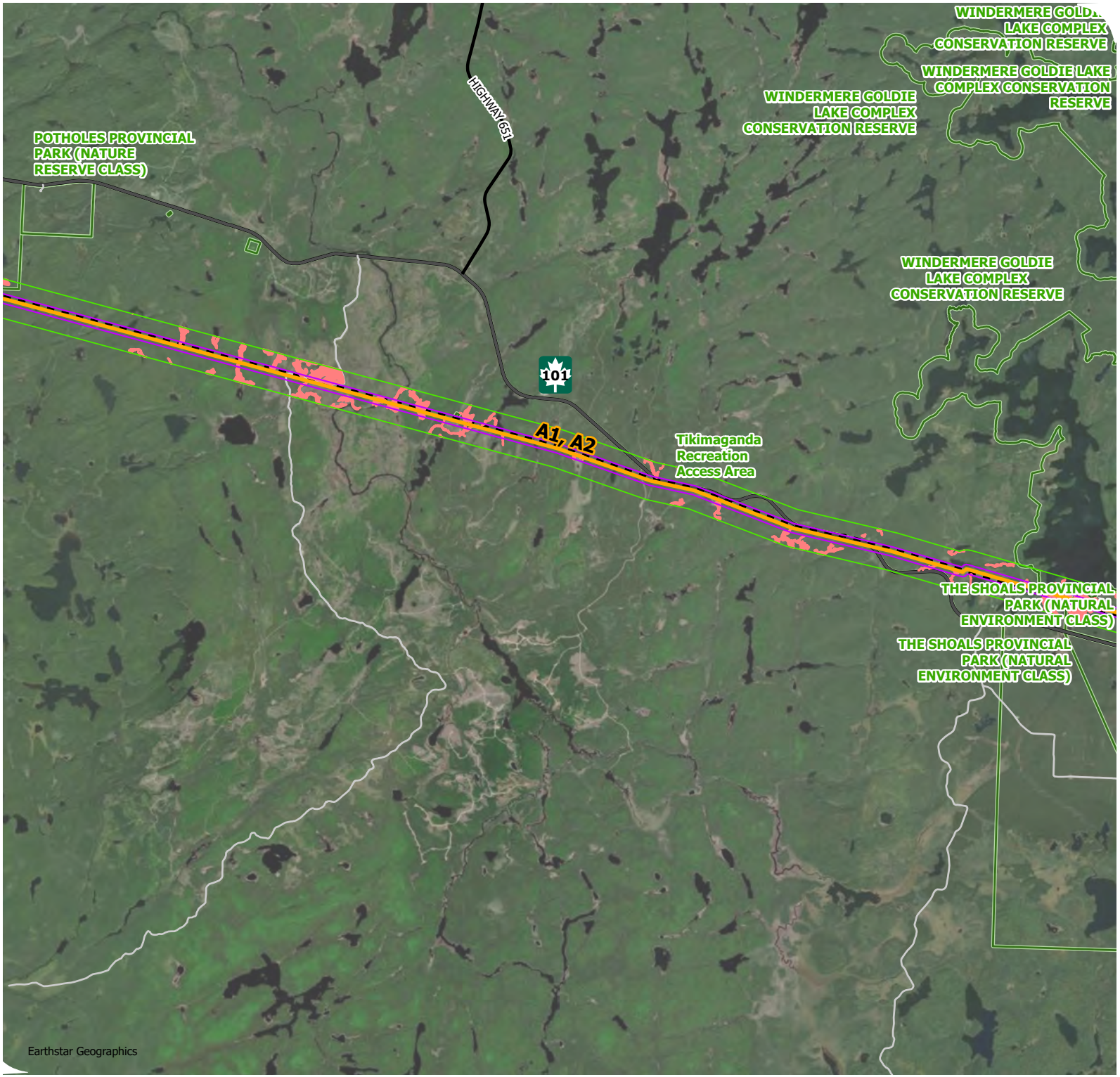
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 154. SWH - AMPHIBIAN BREEDING HABITAT - WETLAND

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Wetland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

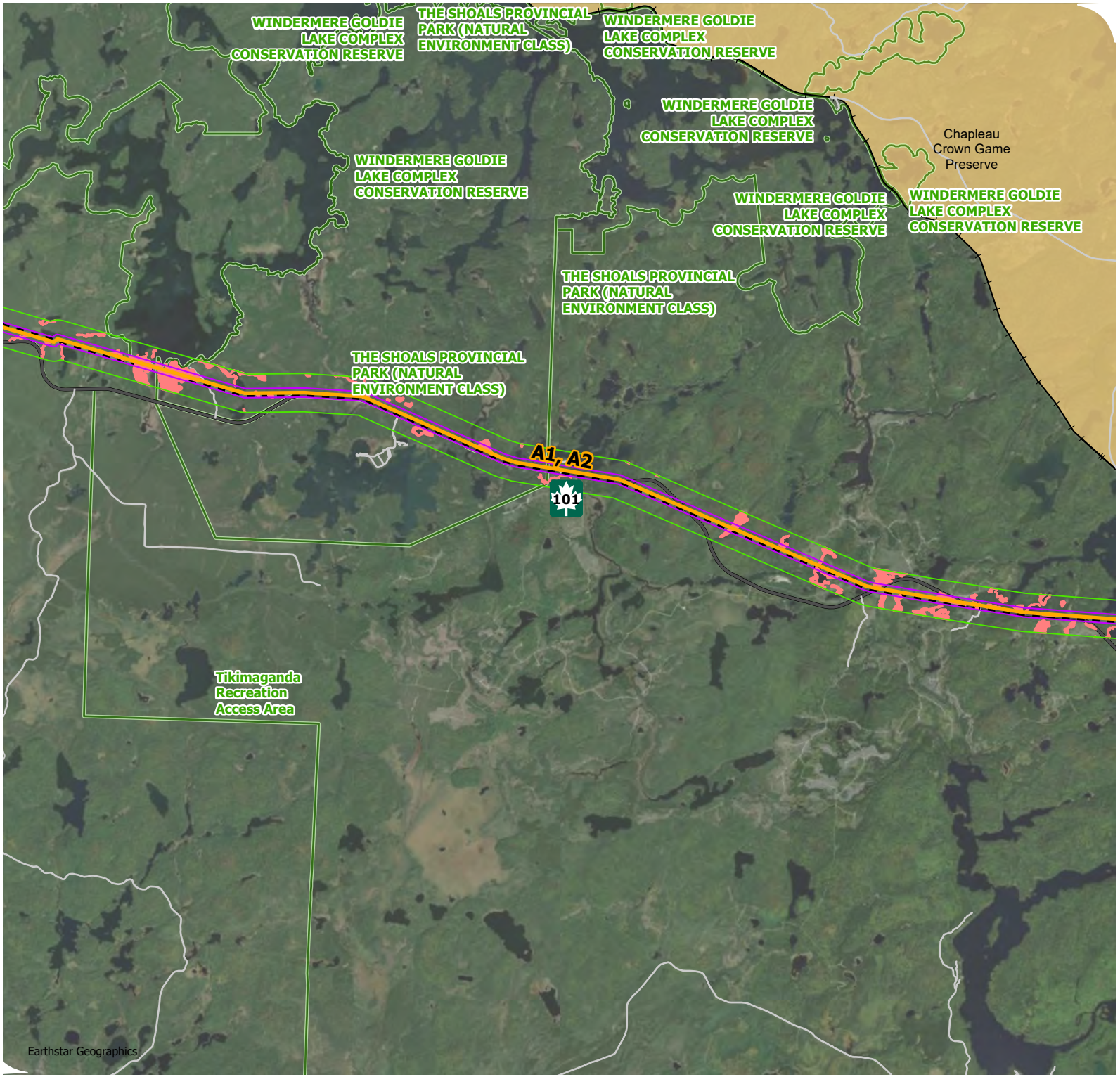
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 155. SWH - AMPHIBIAN BREEDING HABITAT - WETLAND

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Wetland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

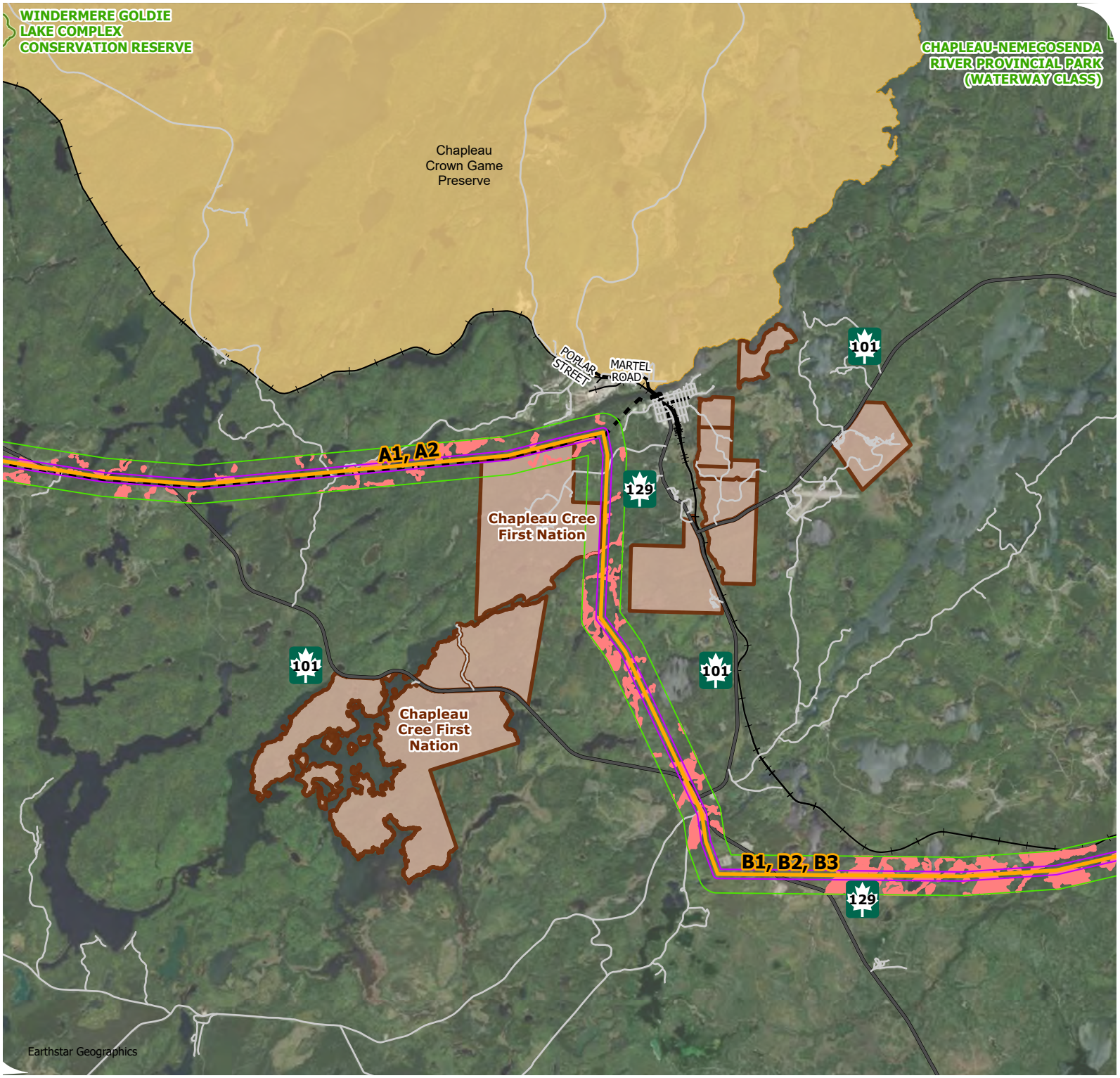
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 156. SWH - AMPHIBIAN BREEDING HABITAT - WETLAND

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Wetland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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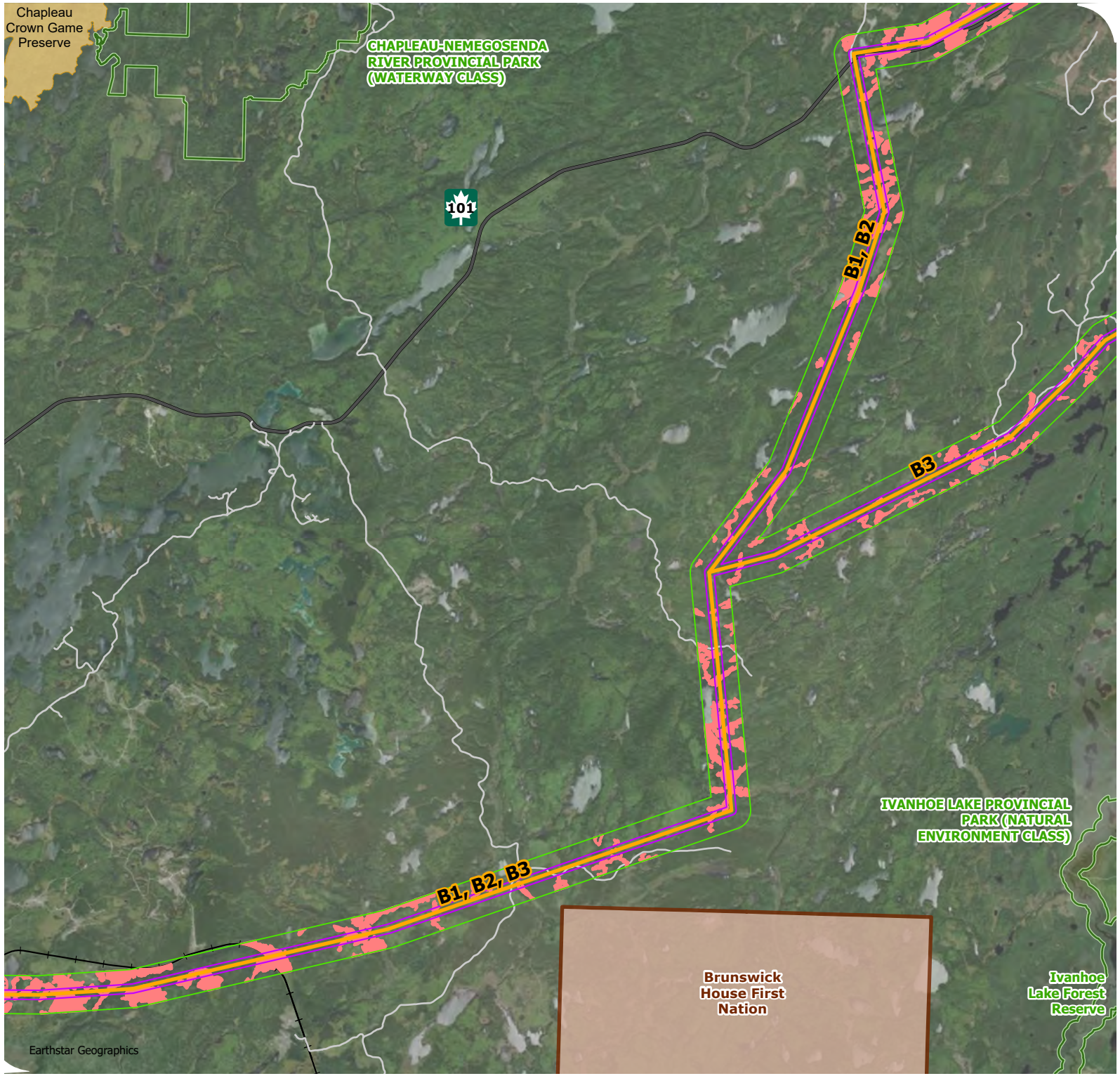
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WAWA TIMMINS POWER LINE

FIGURE 157. SWH - AMPHIBIAN BREEDING HABITAT - WETLAND

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Wetland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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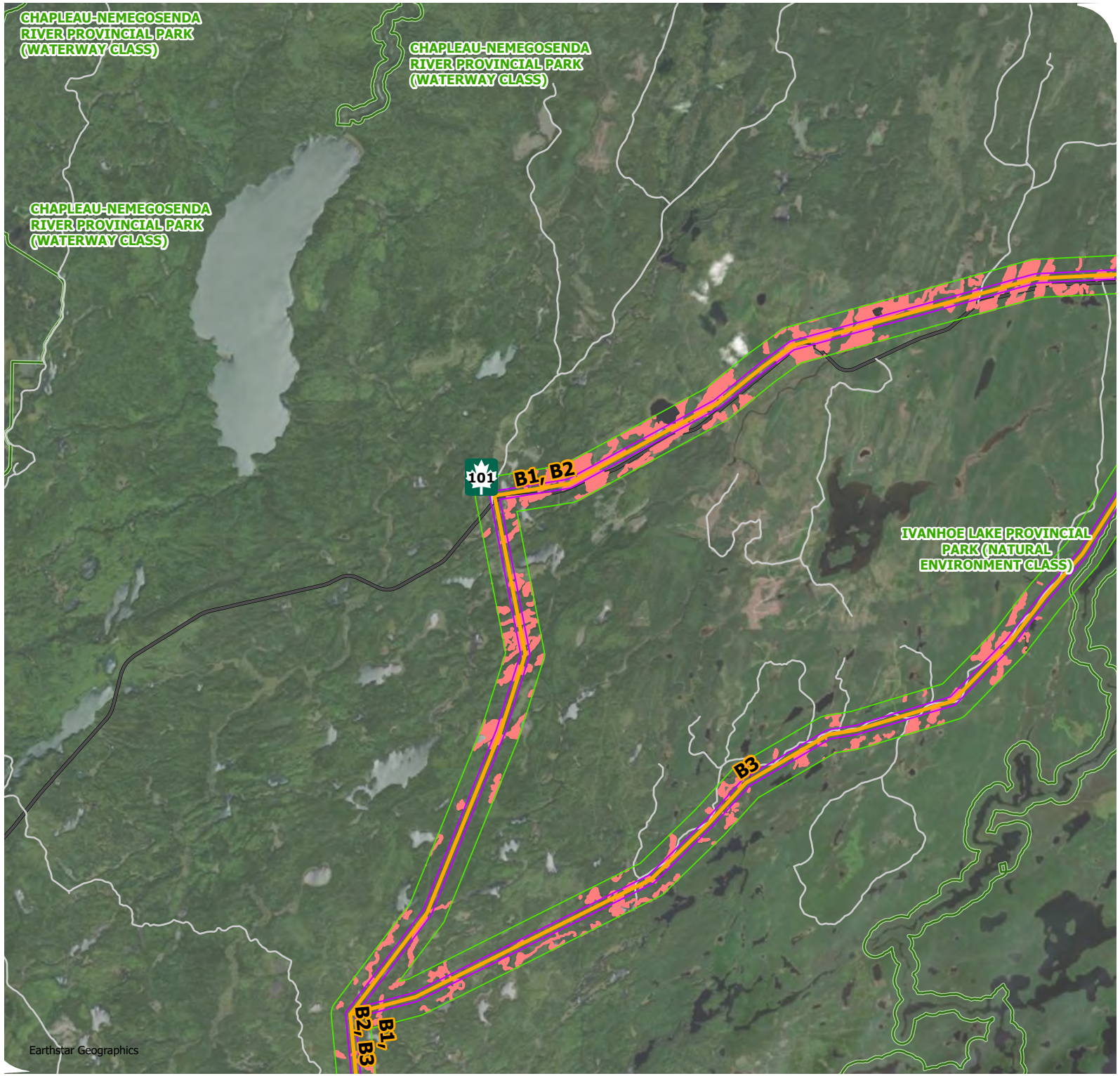
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WAWA TIMMINS POWER LINE

FIGURE 158. SWH - AMPHIBIAN BREEDING HABITAT - WETLAND

Mapping Extent - Ivanhoe Lake 2



- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Wetland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

WAWA TIMMINS POWER LINE

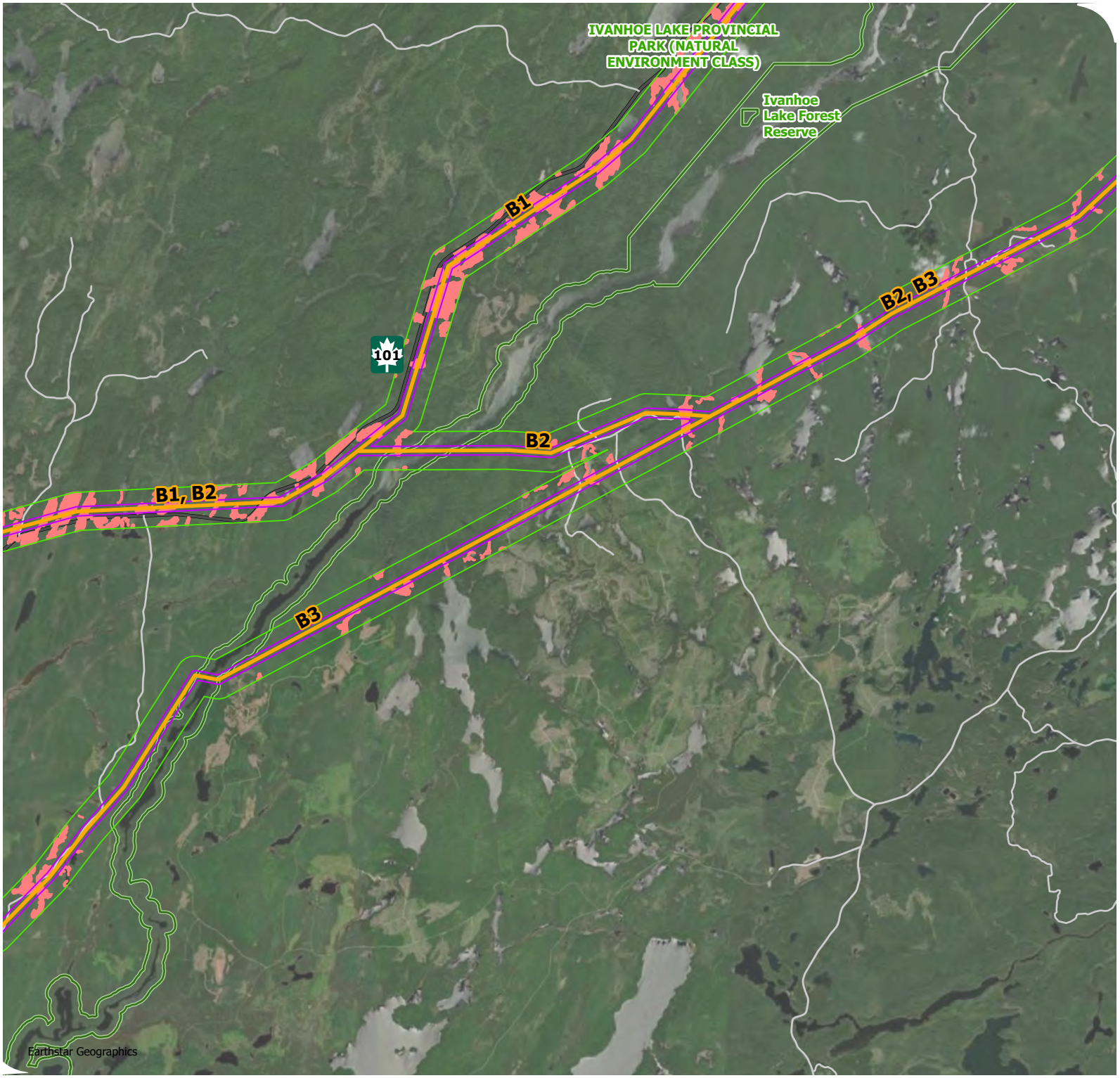


FIGURE 159. SWH - AMPHIBIAN BREEDING HABITAT - WETLAND

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Wetland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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WAWA TIMMINS POWER LINE

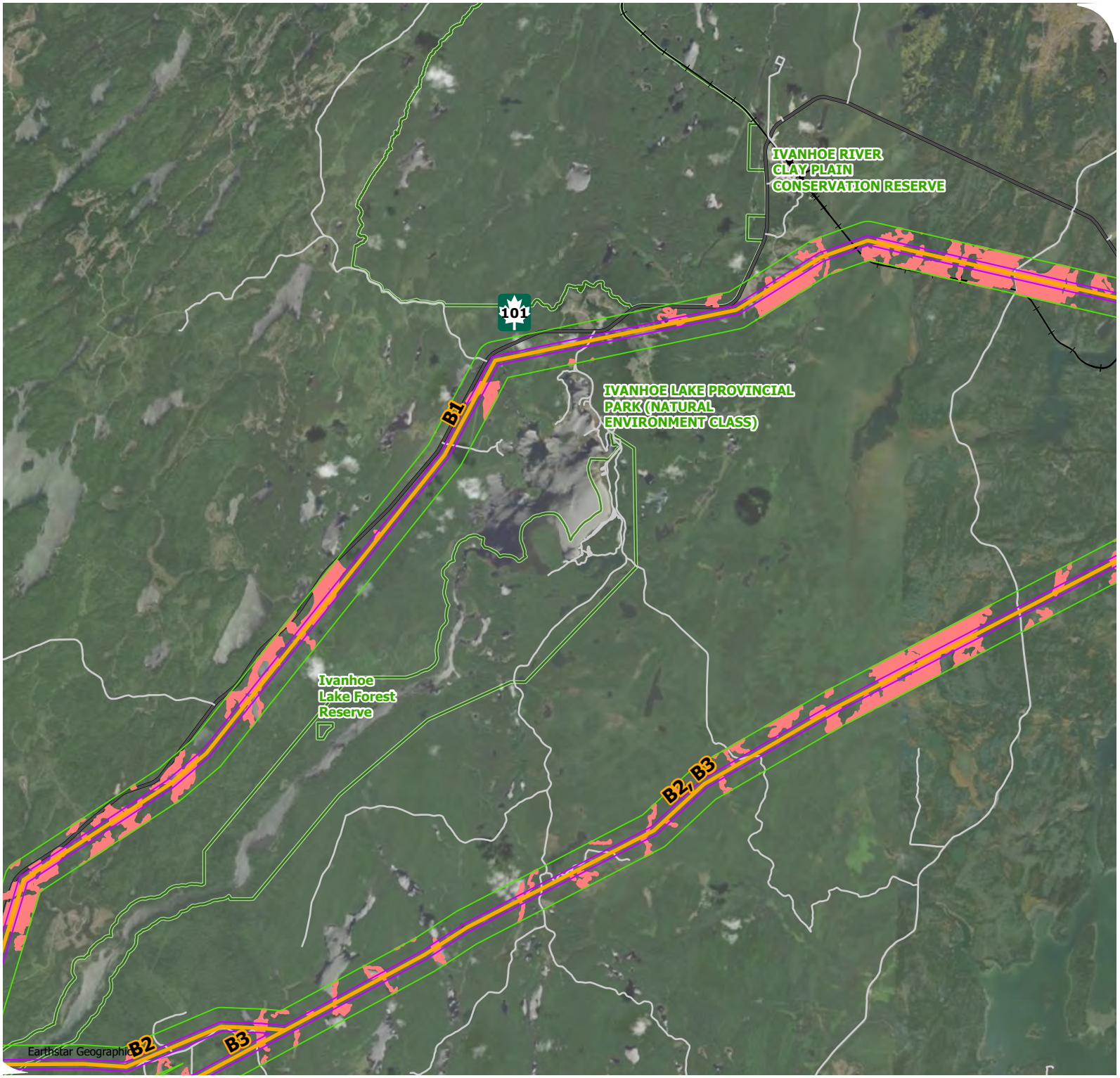


FIGURE 160. SWH - AMPHIBIAN BREEDING HABITAT - WETLAND

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Wetland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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WAWA TIMMINS POWER LINE

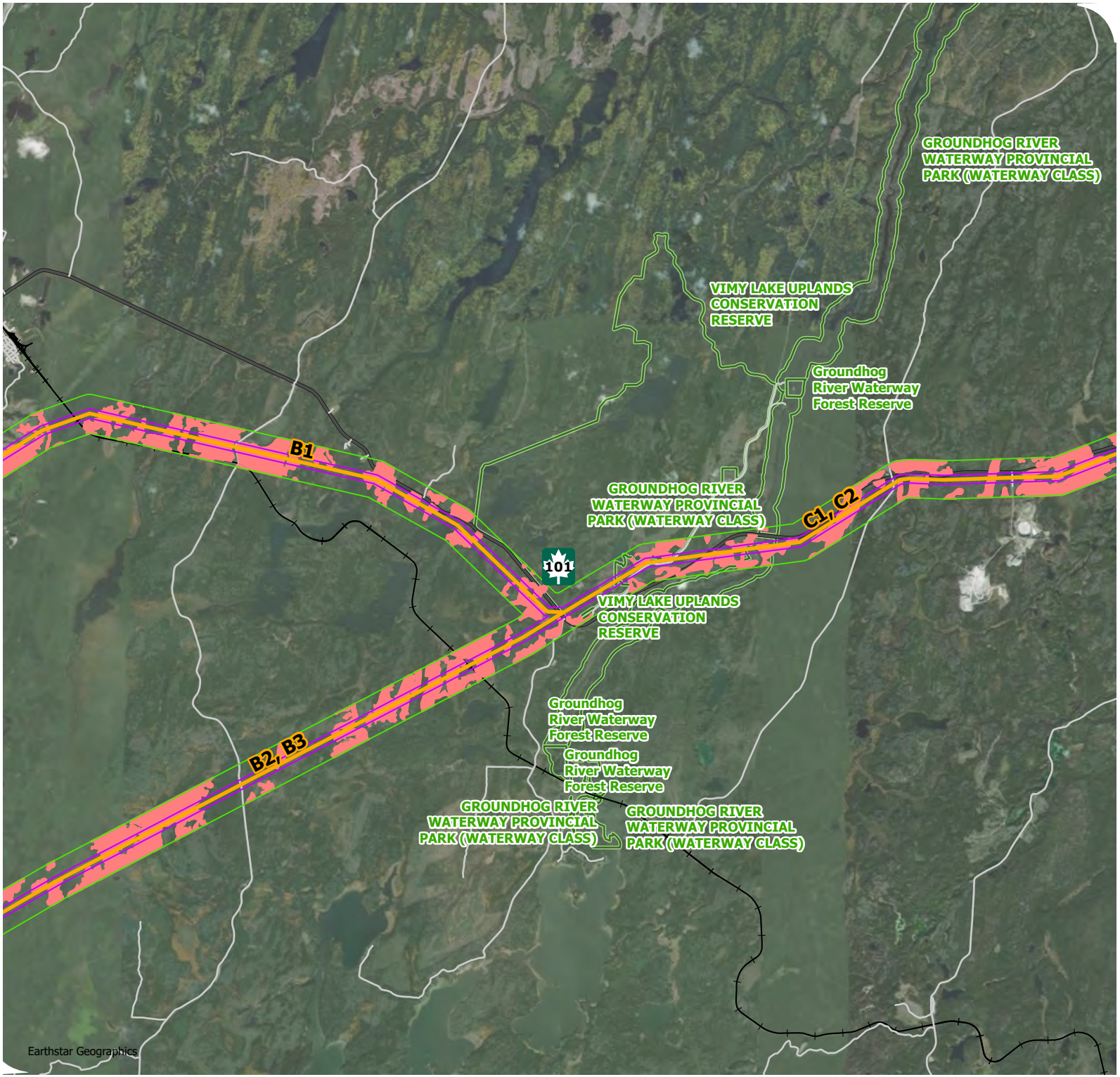


FIGURE 161. SWH - AMPHIBIAN BREEDING HABITAT - WETLAND

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Wetland

MAP DRAWING INFORMATION:
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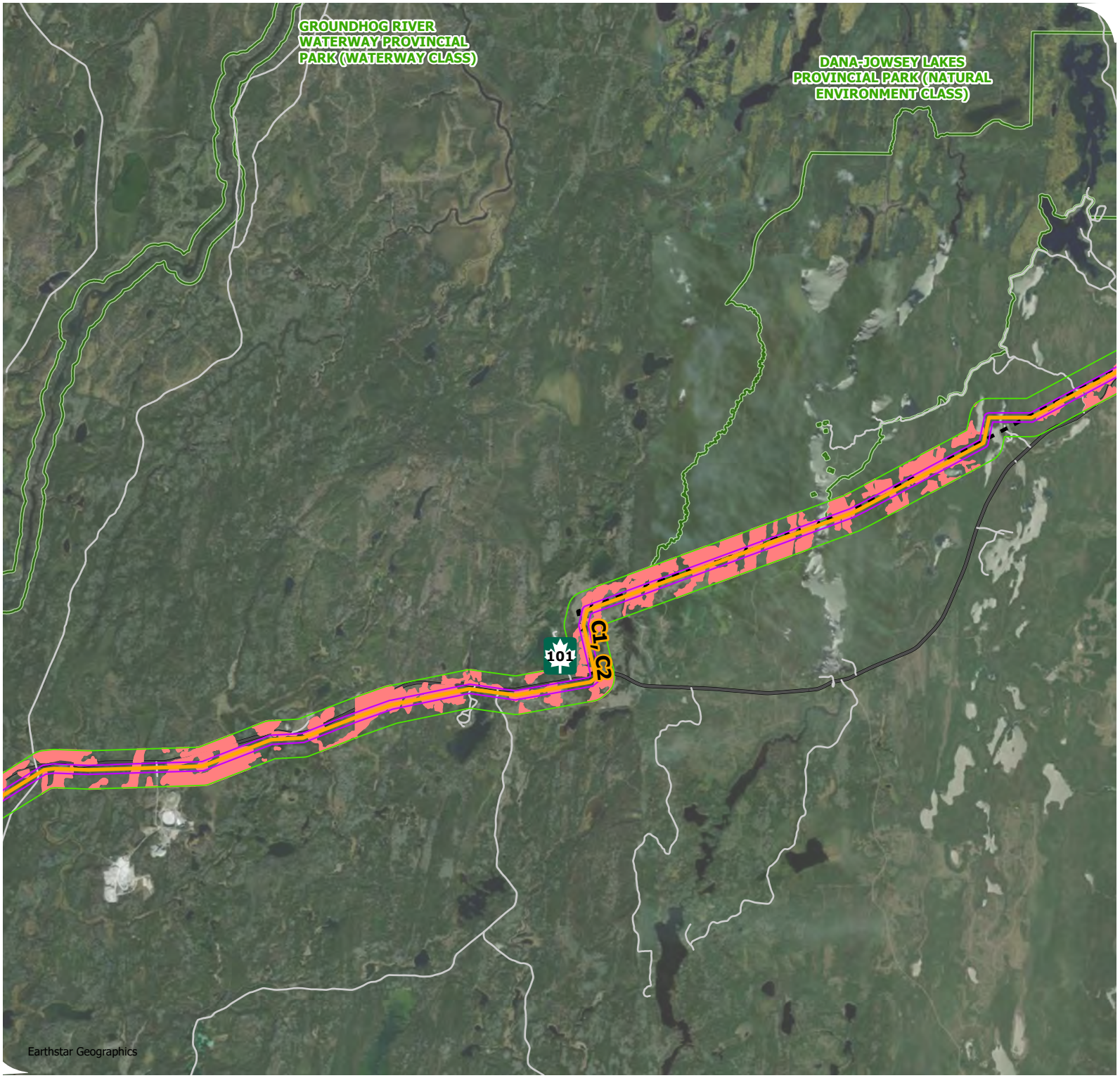
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WAWA TIMMINS POWER LINE

FIGURE 162. SWH - AMPHIBIAN BREEDING HABITAT - WETLAND

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Wetland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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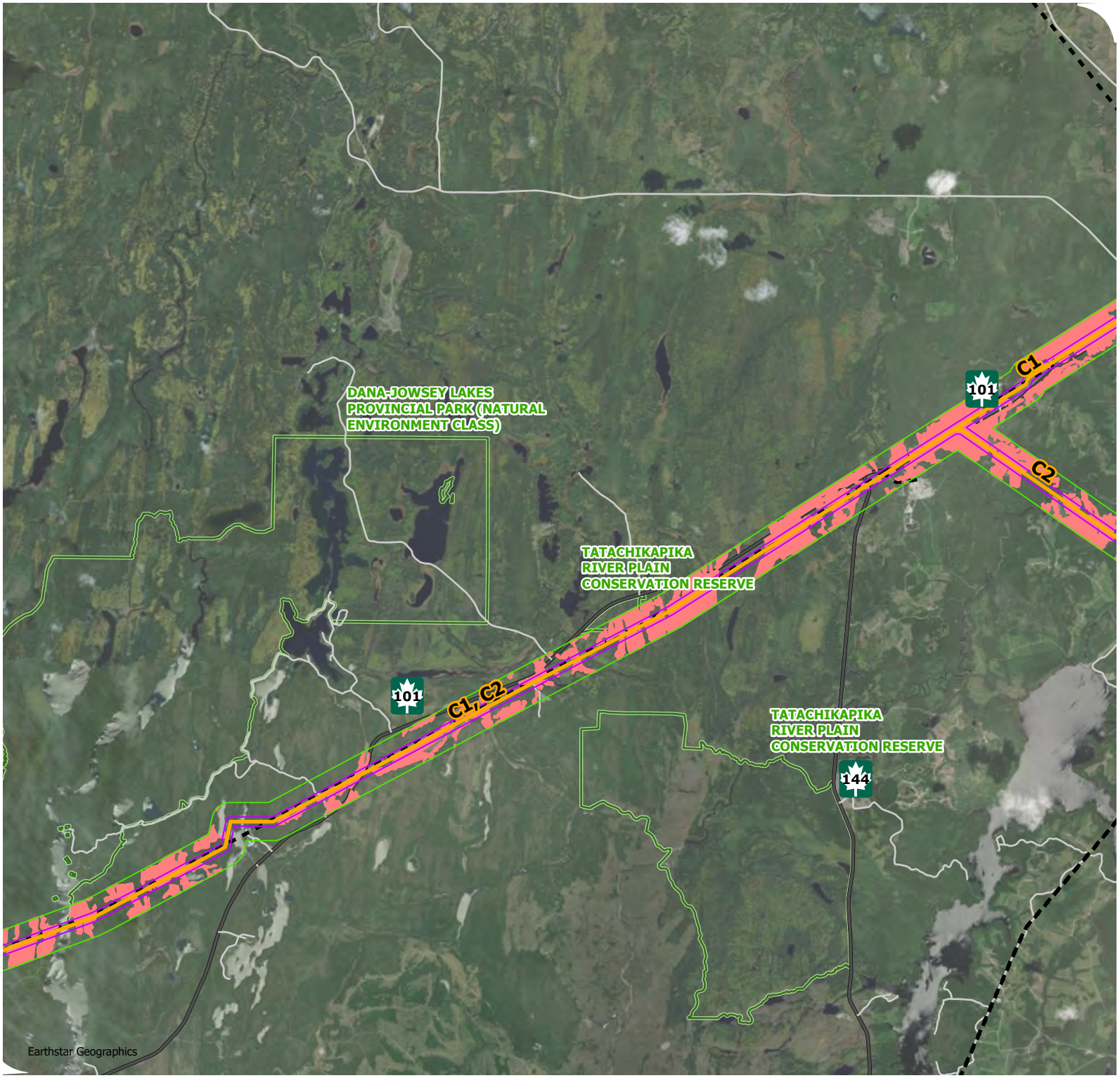
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WAWA TIMMINS POWER LINE

FIGURE 163. SWH - AMPHIBIAN BREEDING HABITAT - WETLAND

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Wetland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
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WAWA TIMMINS POWER LINE

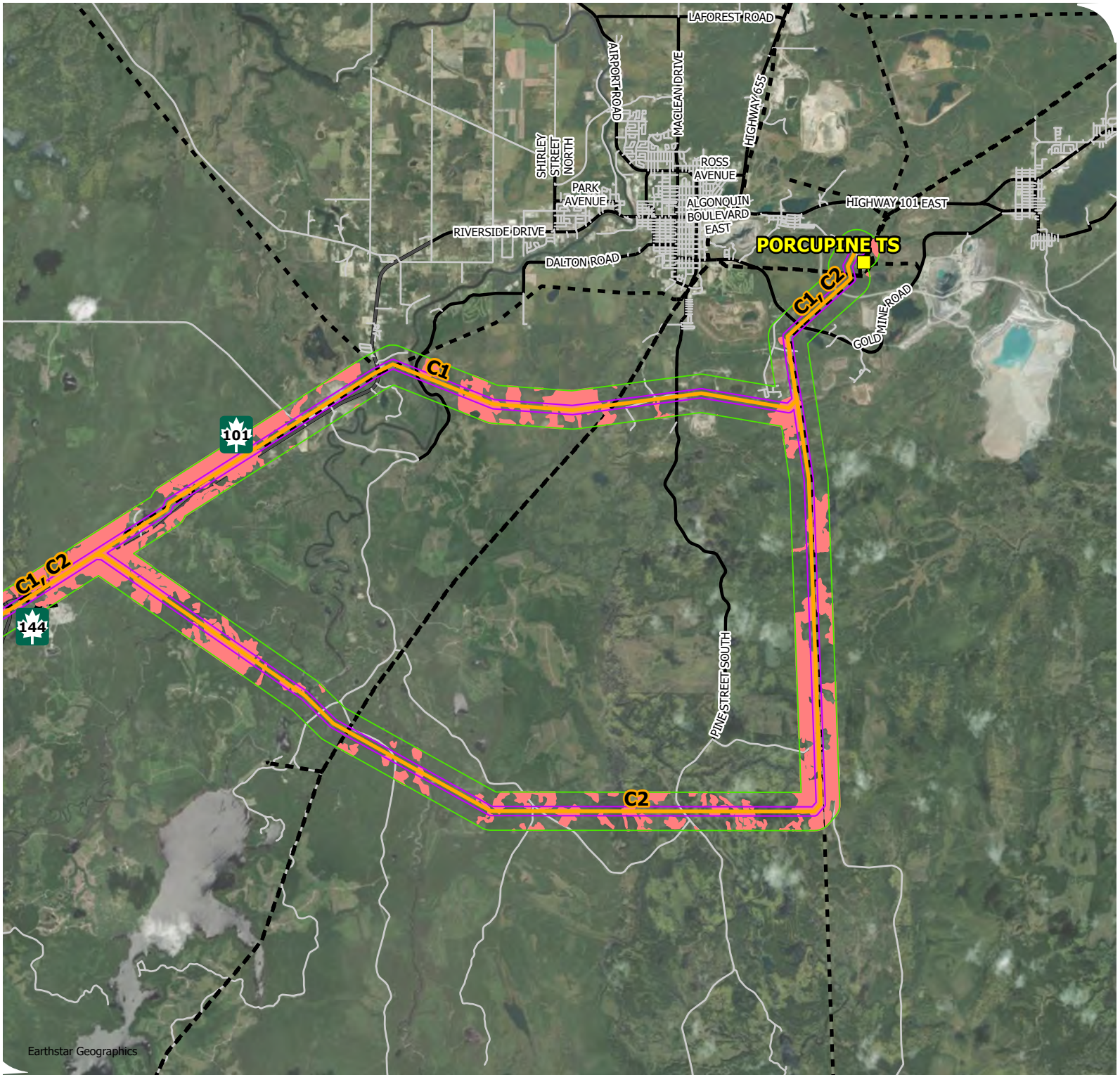


FIGURE 164. SWH - AMPHIBIAN BREEDING HABITAT - WETLAND

Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Wetland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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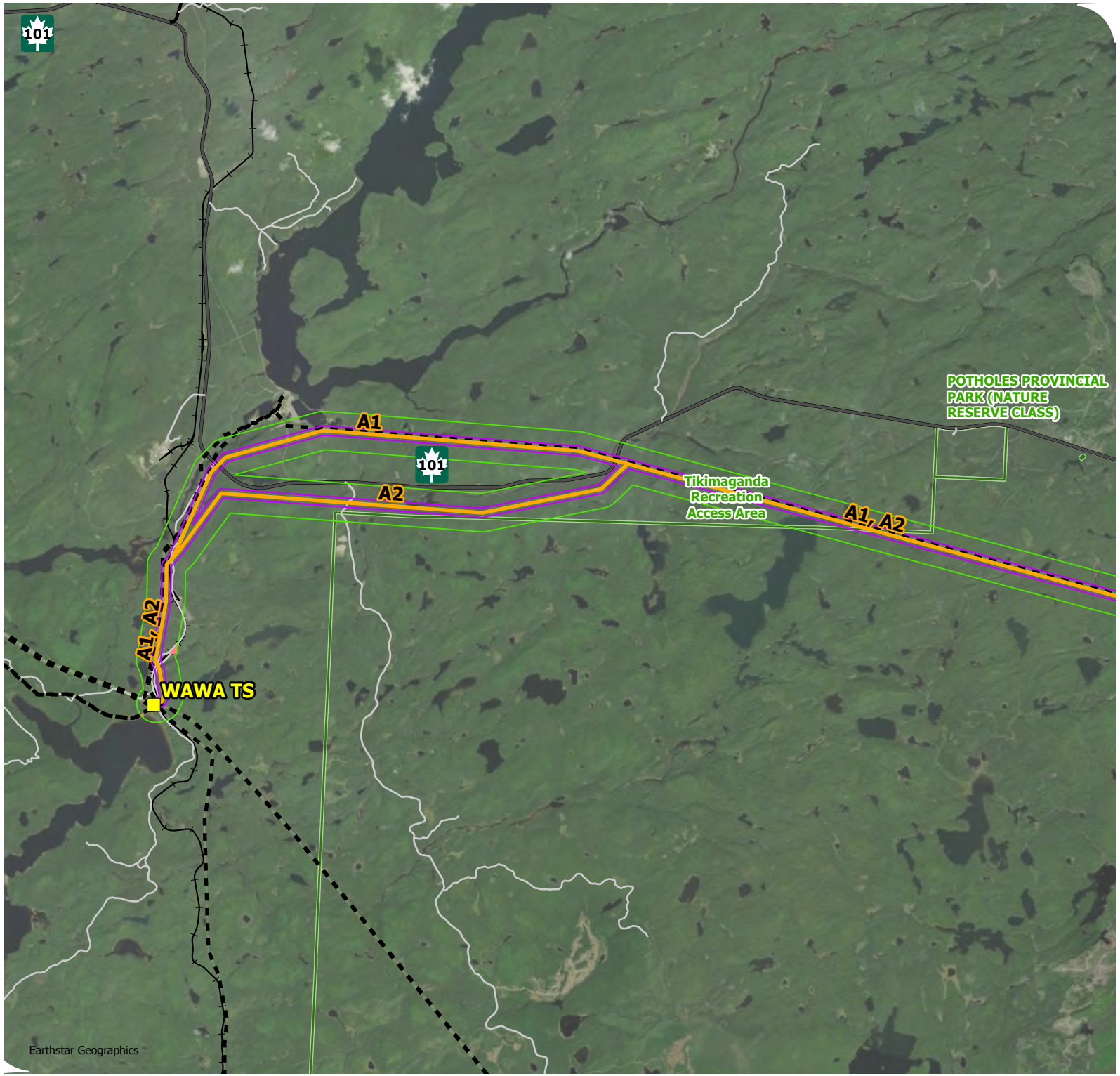
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WAWA TIMMINS POWER LINE

FIGURE 165. SWH - AMPHIBIAN BREEDING HABITAT - WOODLAND

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Woodland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

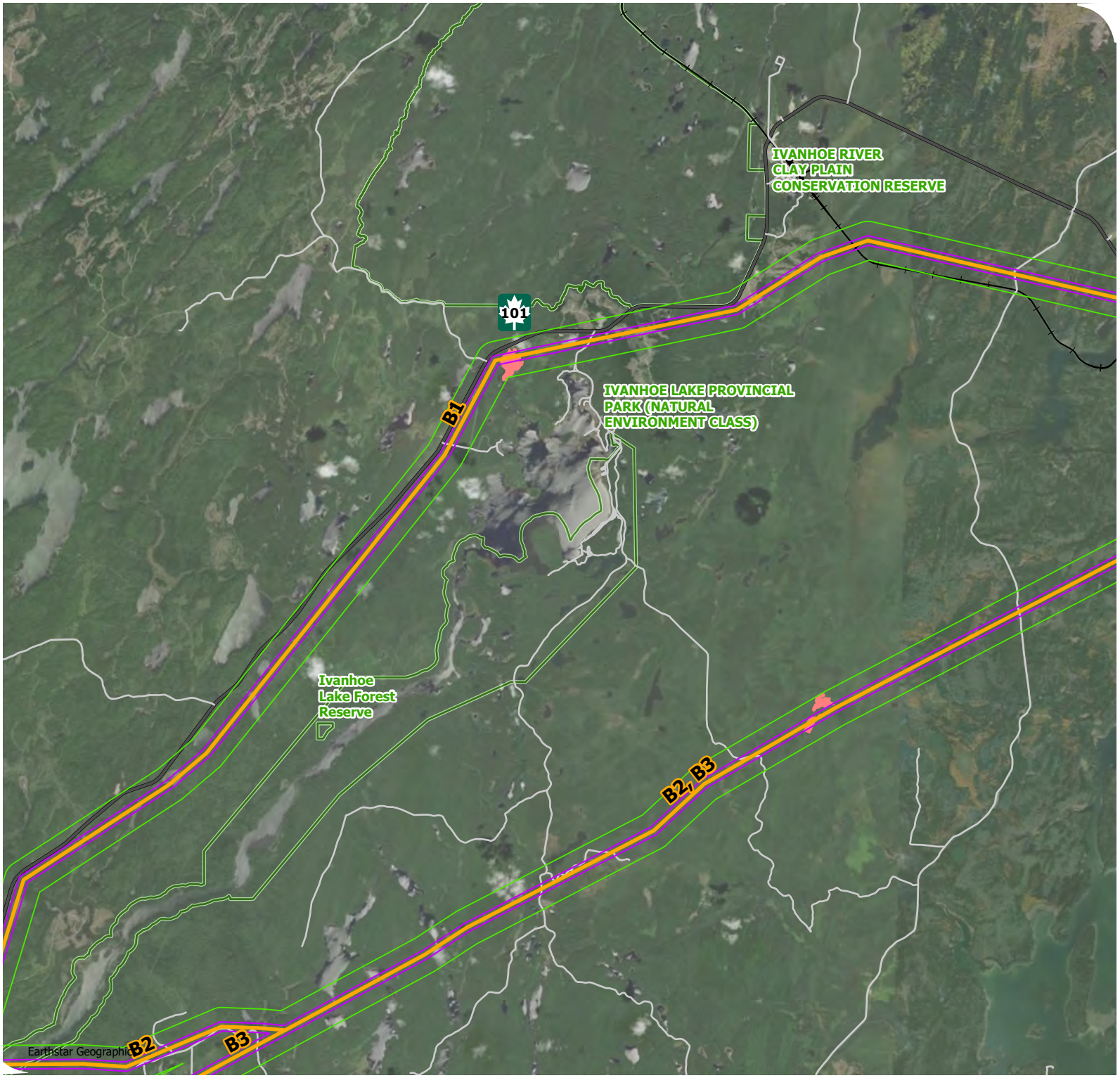


FIGURE 166. SWH - AMPHIBIAN BREEDING HABITAT - WOODLAND

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Woodland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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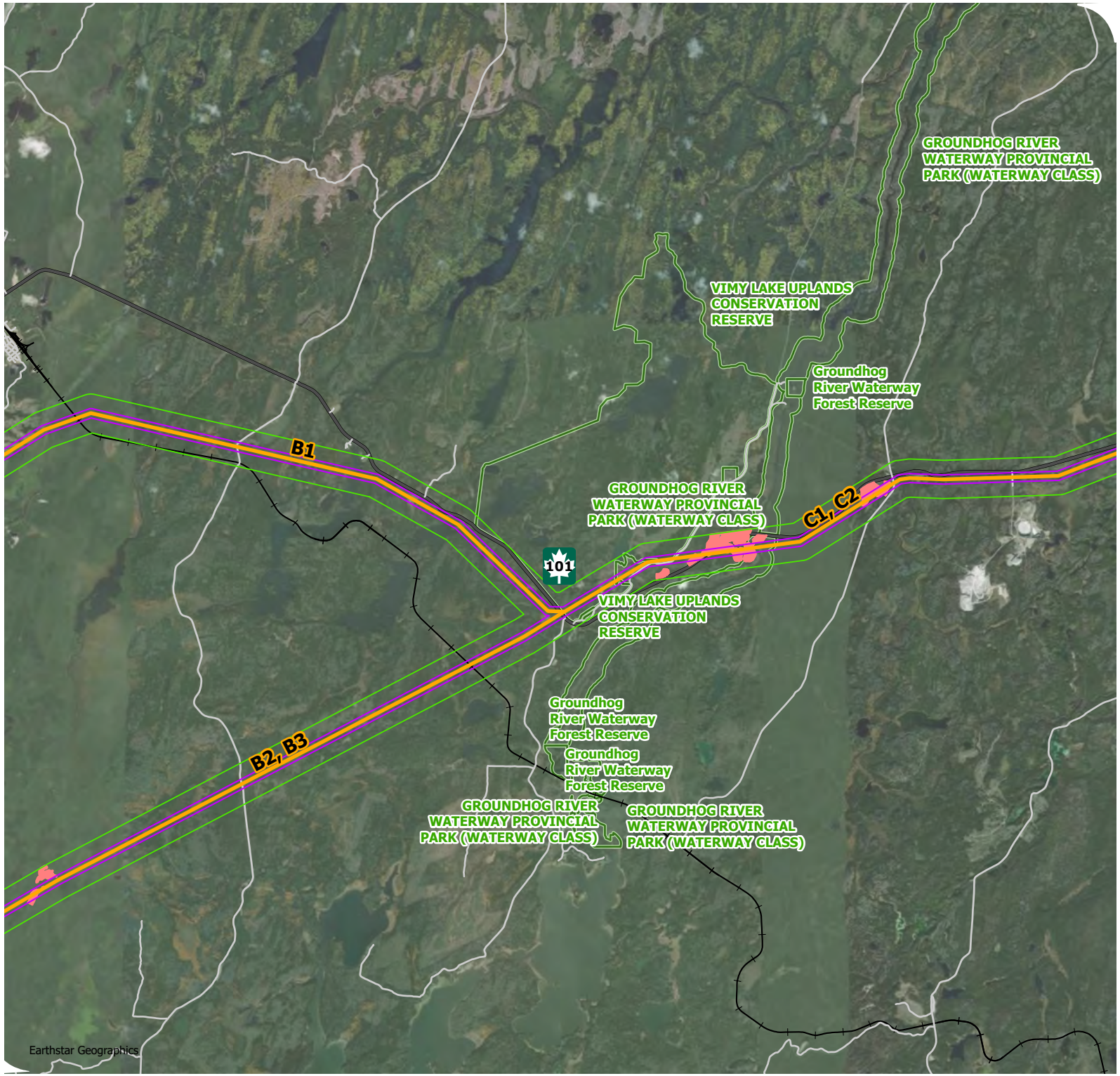
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WAWA TIMMINS POWER LINE

FIGURE 167. SWH - AMPHIBIAN BREEDING HABITAT - WOODLAND

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Woodland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

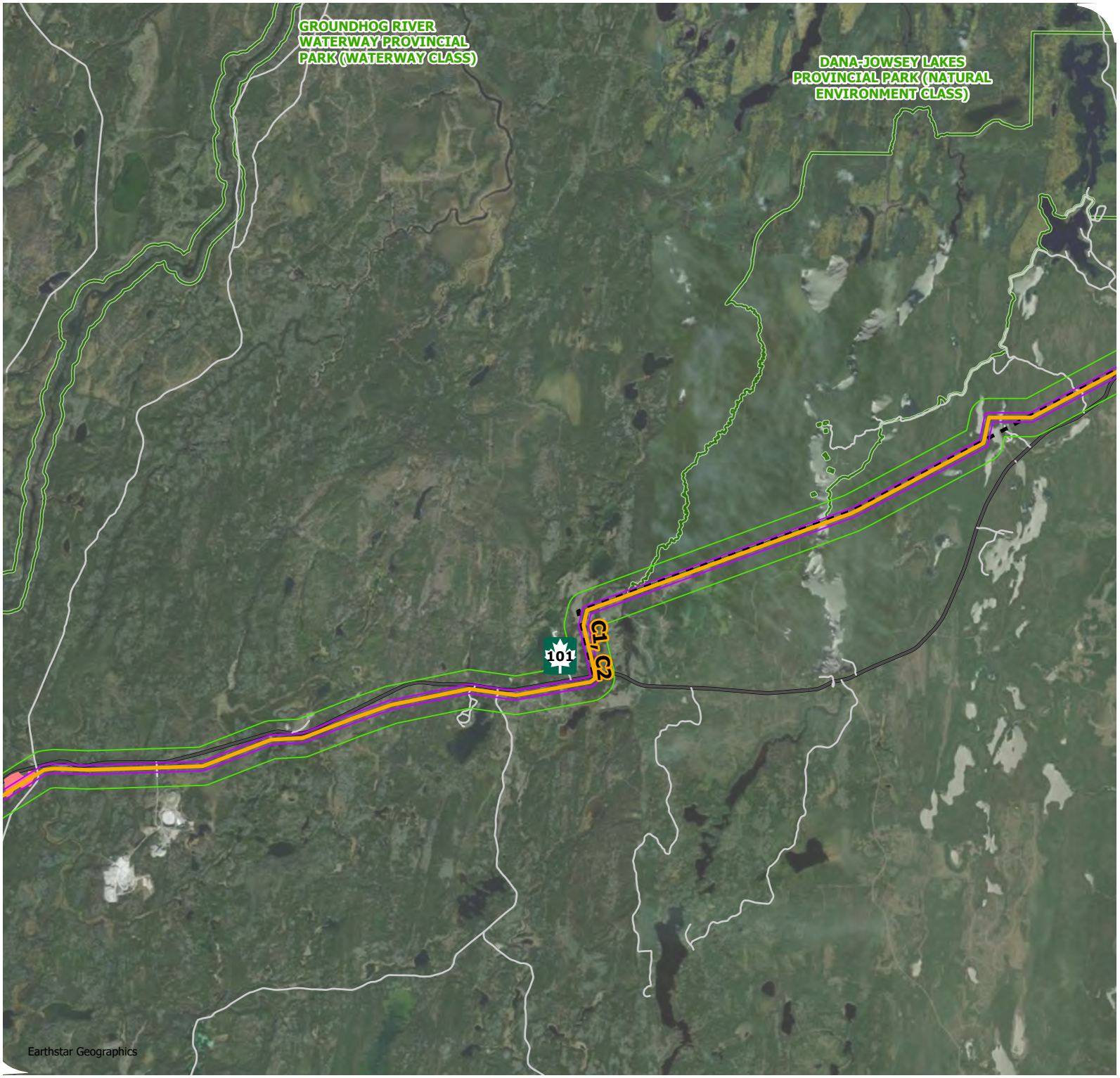
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WAWA TIMMINS POWER LINE

FIGURE 168. SWH - AMPHIBIAN BREEDING HABITAT - WOODLAND

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Amphibian Breeding Habitat – Woodland

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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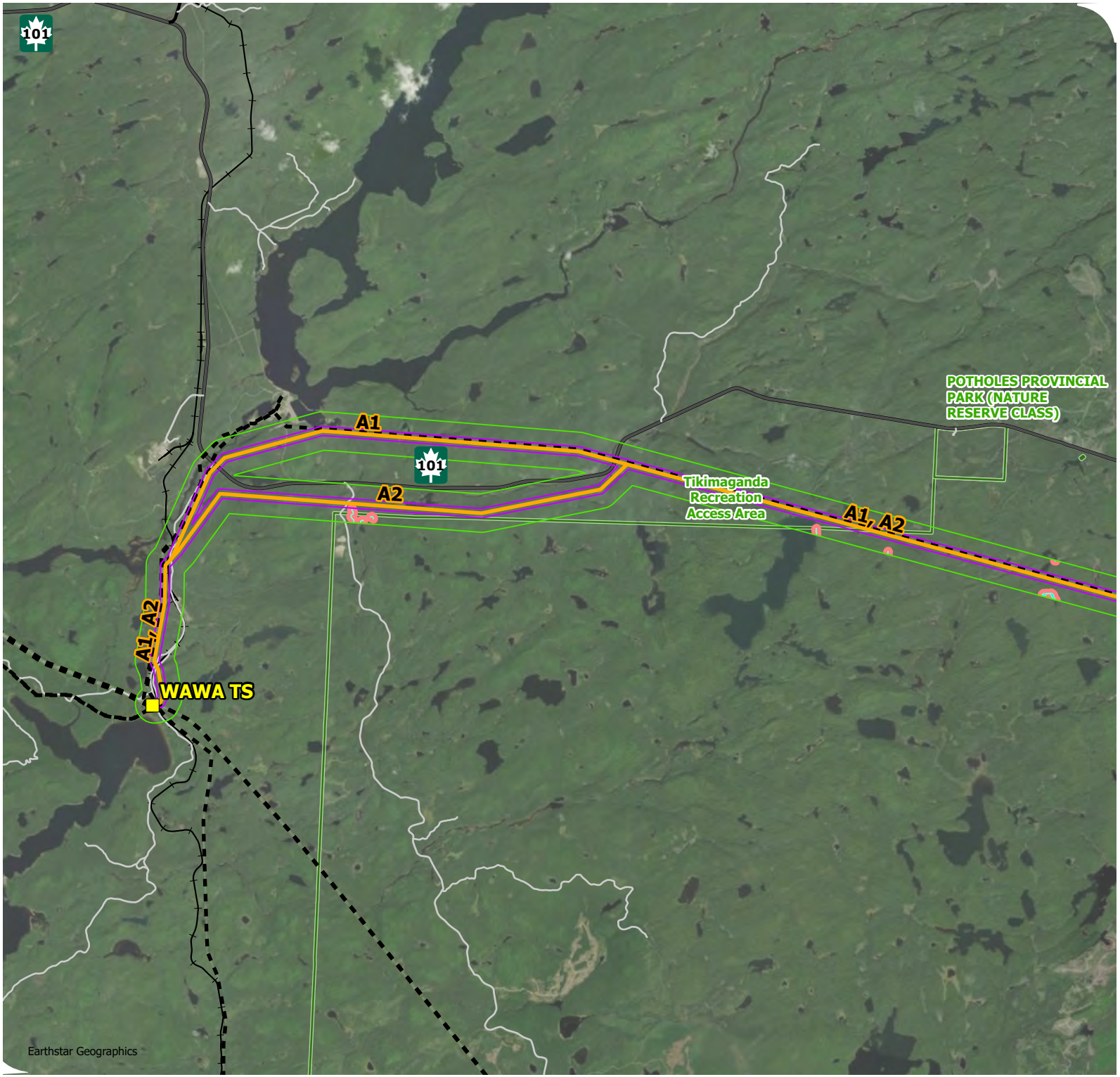
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WAWA TIMMINS POWER LINE

FIGURE 169. SWH - MOOSE AQUATIC FEEDING AREAS

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Aquatic Feeding Areas
- Moose Aquatic Feeding Areas (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

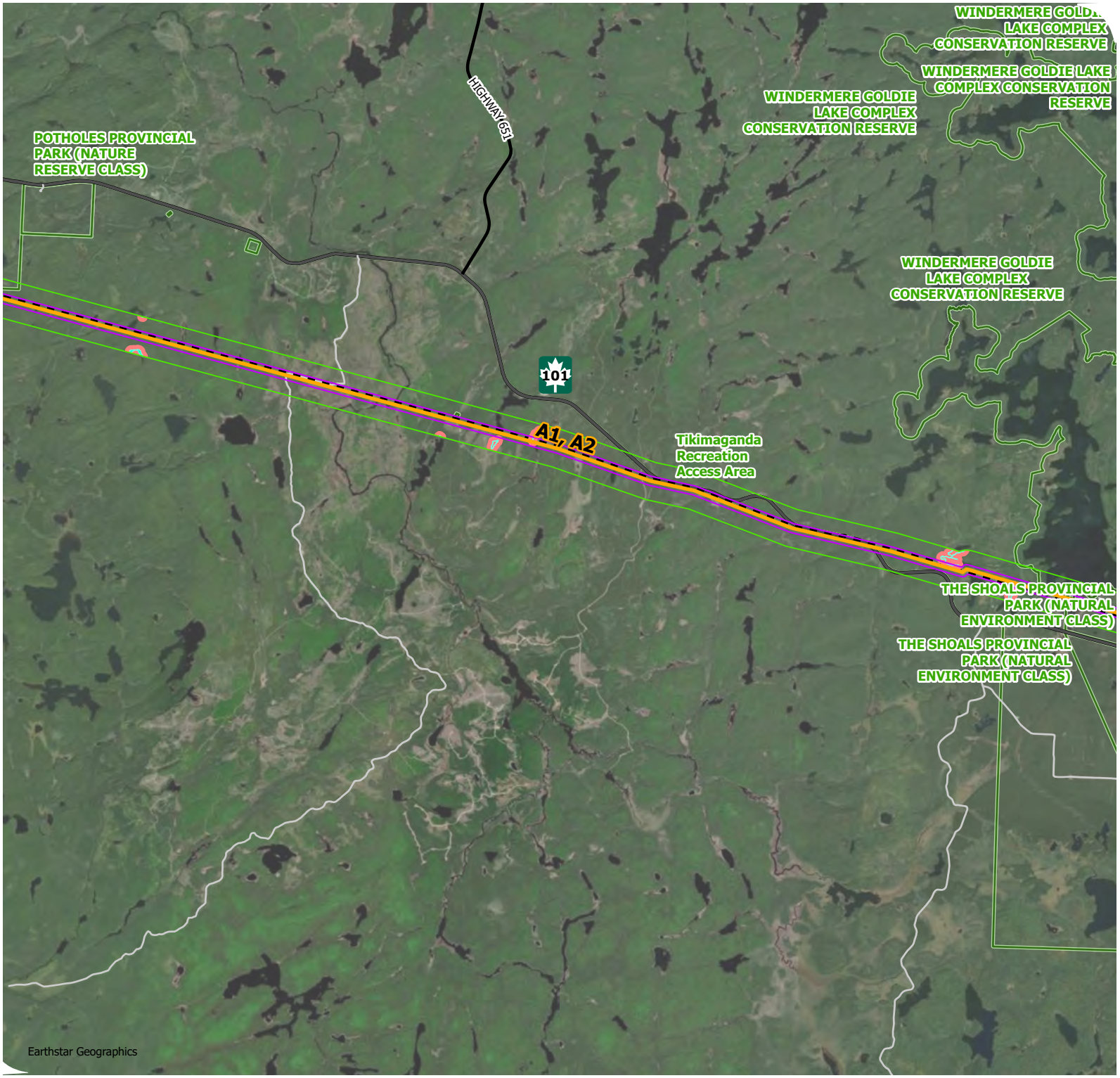
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WAWA TIMMINS POWER LINE

FIGURE 170. SWH - MOOSE AQUATIC FEEDING AREAS

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Aquatic Feeding Areas
- Moose Aquatic Feeding Areas (LIO)

MAP DRAWING INFORMATION:
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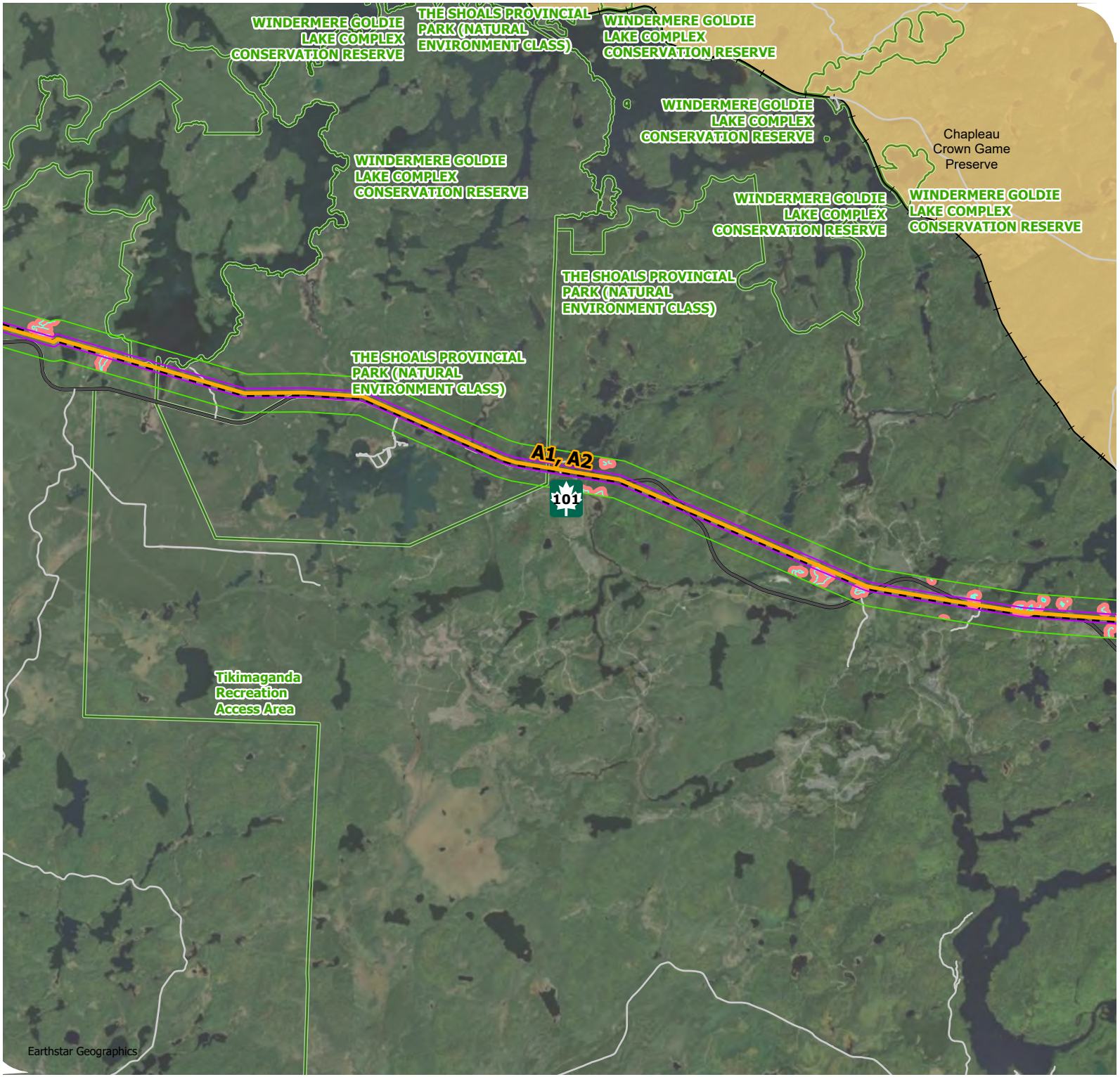
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WAWA TIMMINS POWER LINE

FIGURE 171. SWH - MOOSE AQUATIC FEEDING AREAS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Aquatic Feeding Areas
- Moose Aquatic Feeding Areas (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

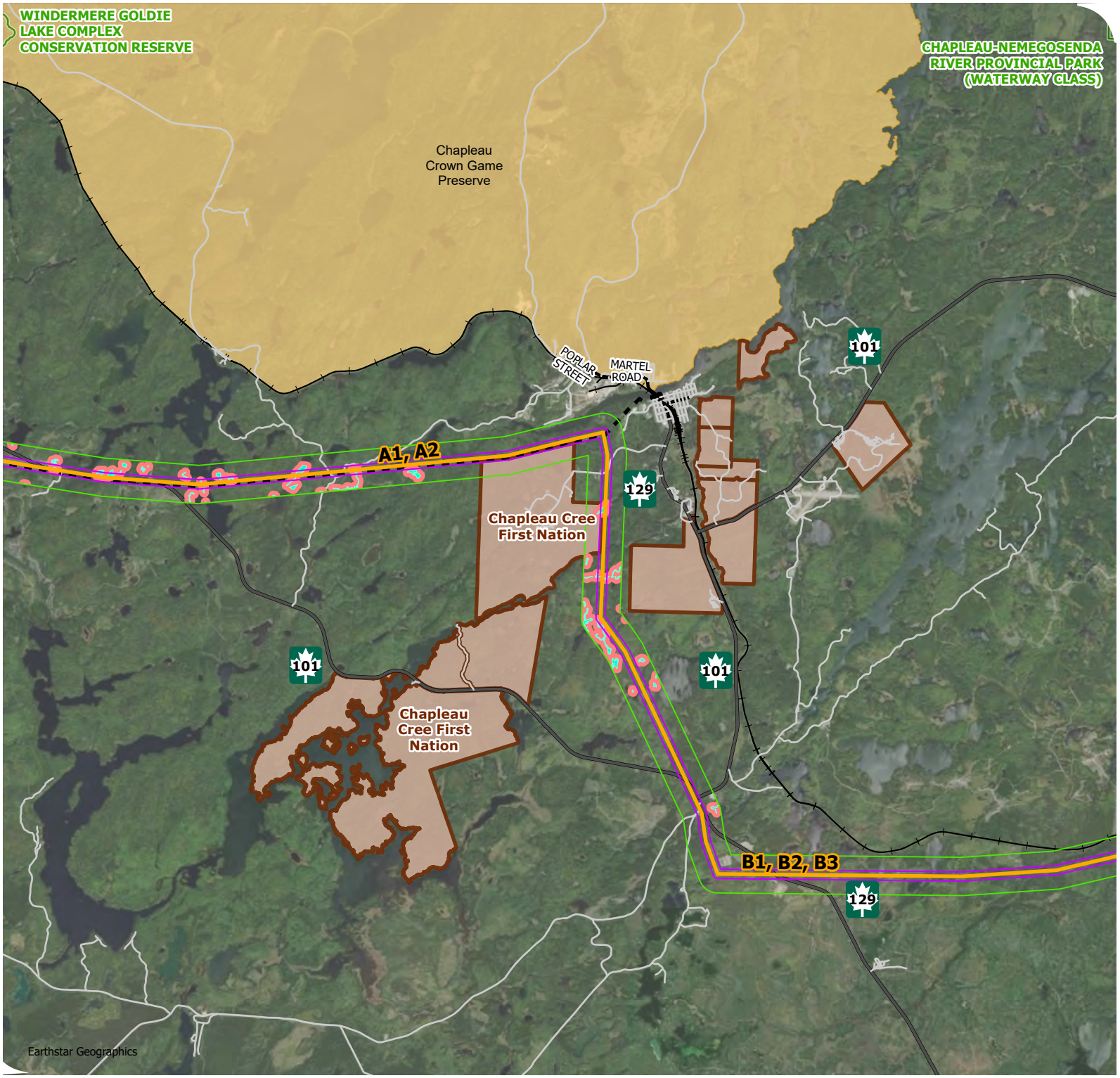
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 172. SWH - MOOSE AQUATIC FEEDING AREAS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Aquatic Feeding Areas
- Moose Aquatic Feeding Areas (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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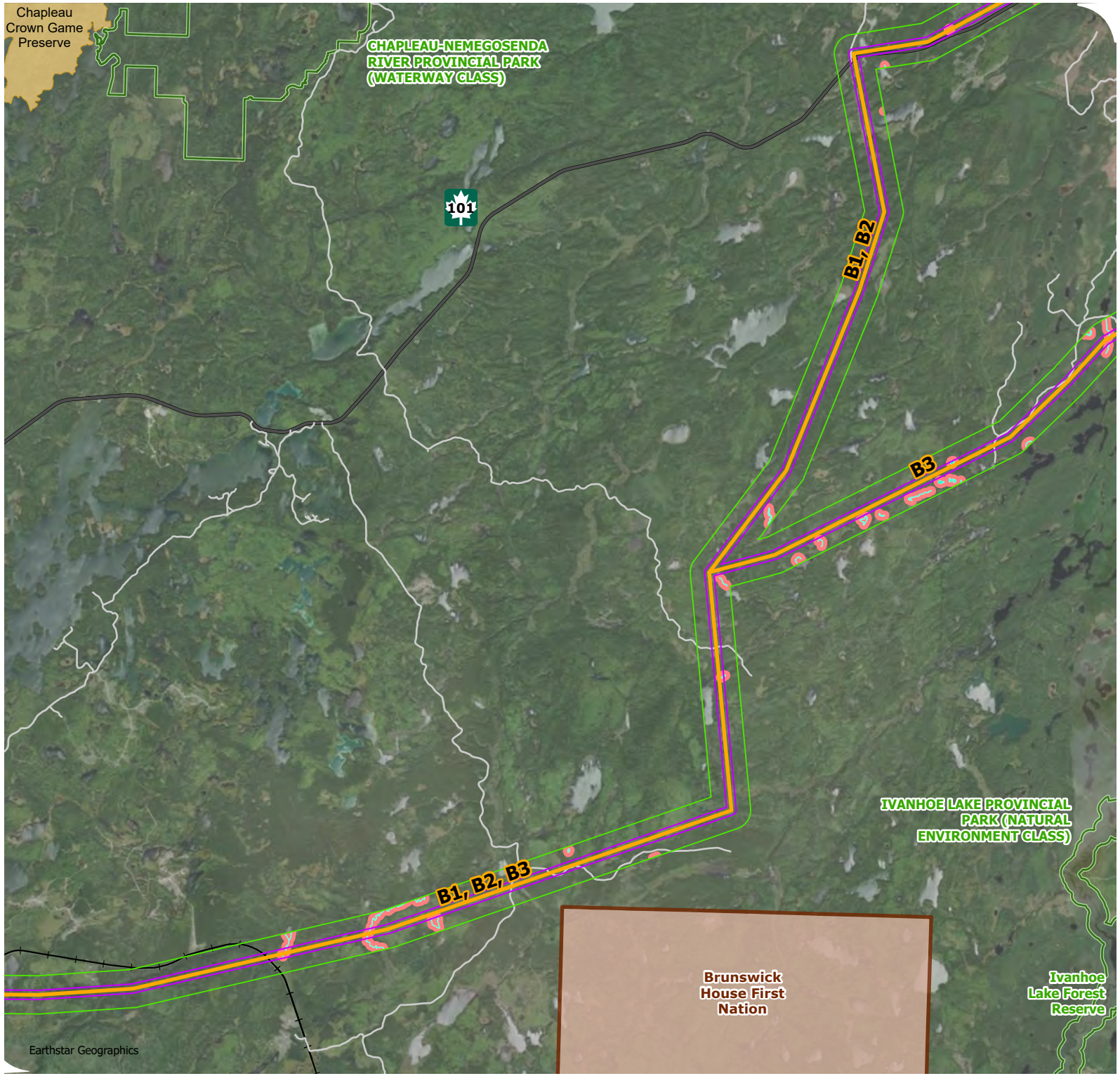
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WAWA TIMMINS POWER LINE

FIGURE 173. SWH - MOOSE AQUATIC FEEDING AREAS

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Aquatic Feeding Areas
- Moose Aquatic Feeding Areas (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

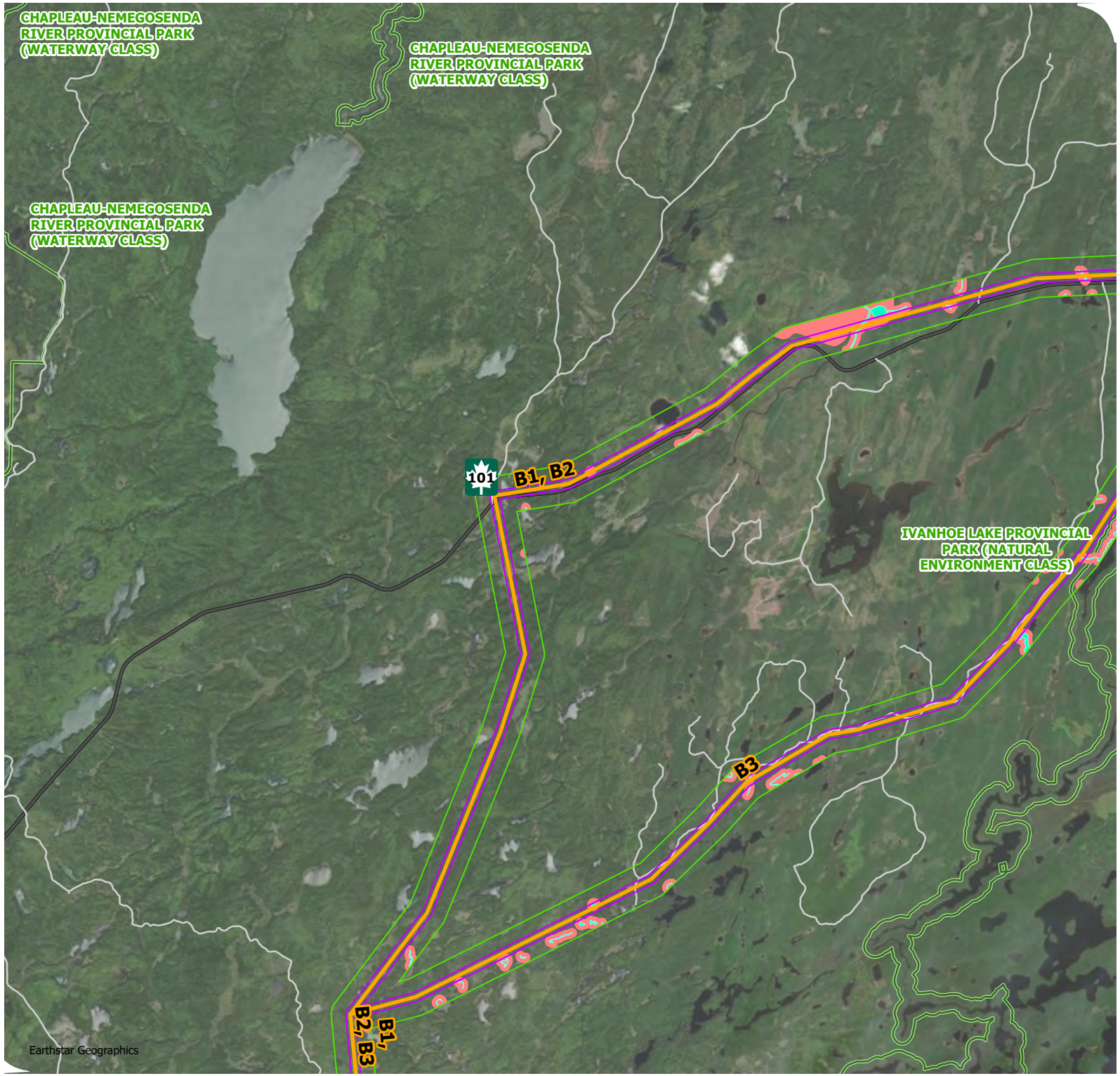
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WAWA TIMMINS POWER LINE

FIGURE 174. SWH - MOOSE AQUATIC FEEDING AREAS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Aquatic Feeding Areas
- Moose Aquatic Feeding Areas (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

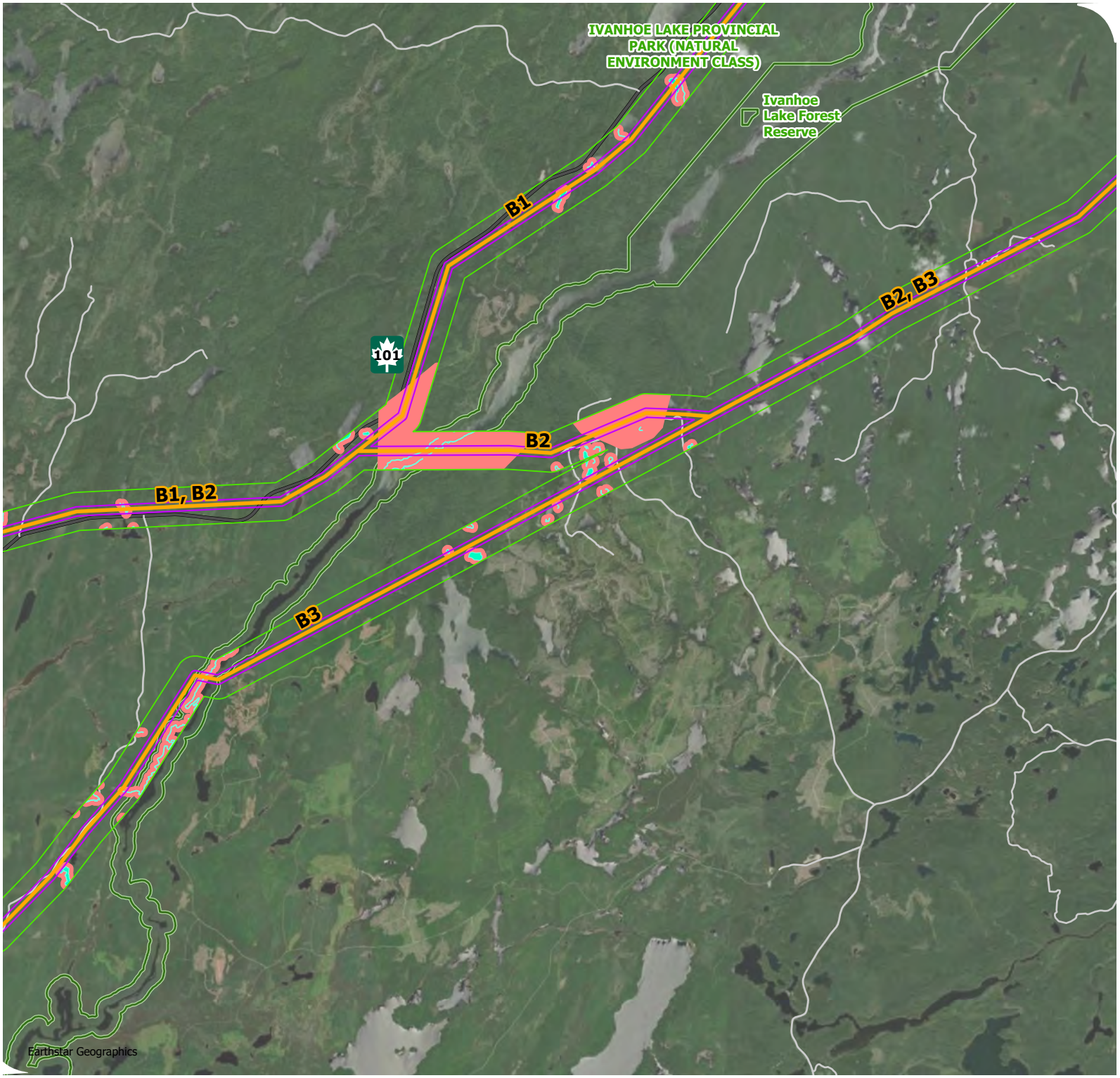
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WAWA TIMMINS POWER LINE

FIGURE 175. SWH - MOOSE AQUATIC FEEDING AREAS

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Aquatic Feeding Areas
- Moose Aquatic Feeding Areas (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

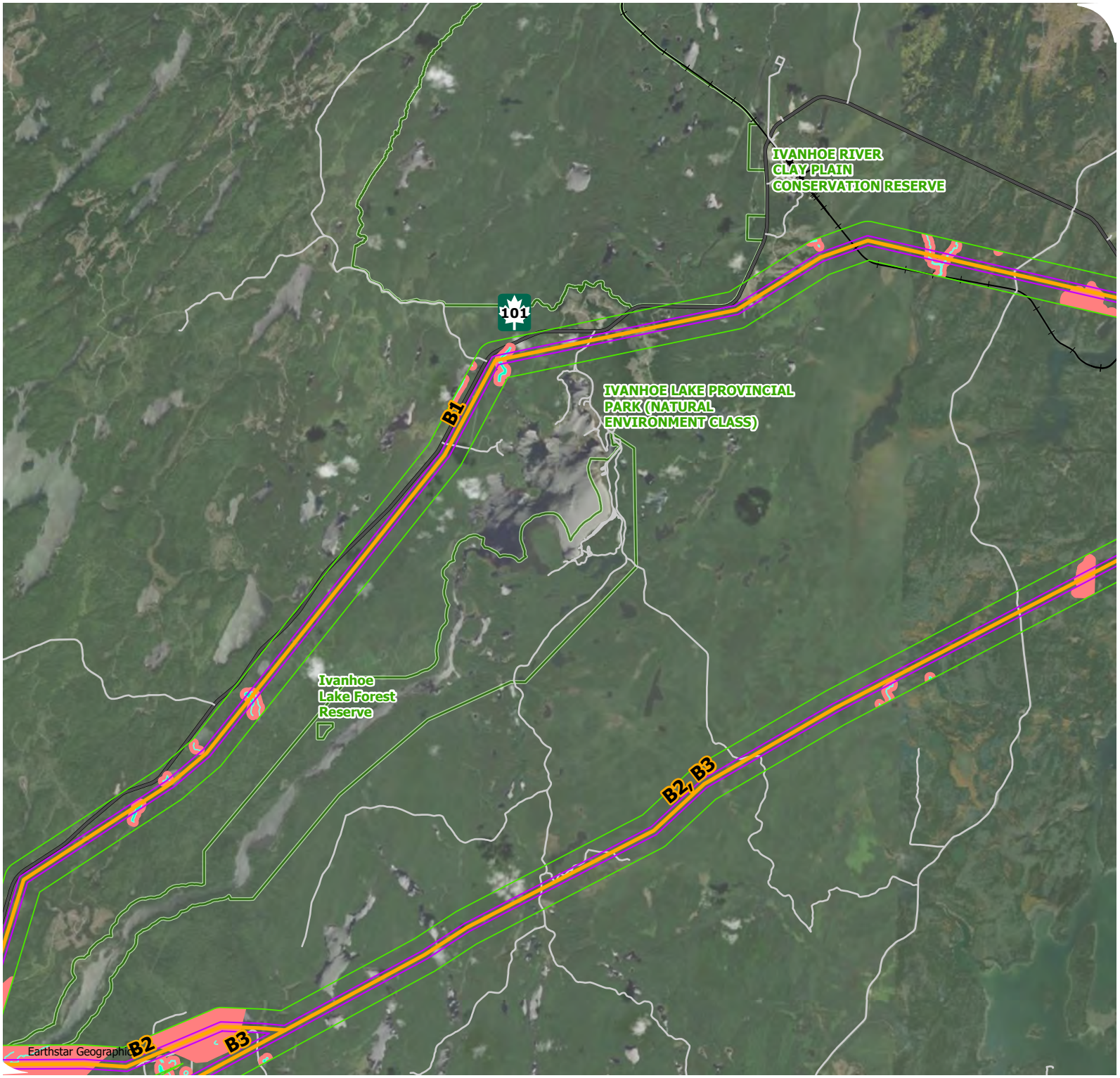
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WAWA TIMMINS POWER LINE

FIGURE 176. SWH - MOOSE AQUATIC FEEDING AREAS

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Aquatic Feeding Areas
- Moose Aquatic Feeding Areas (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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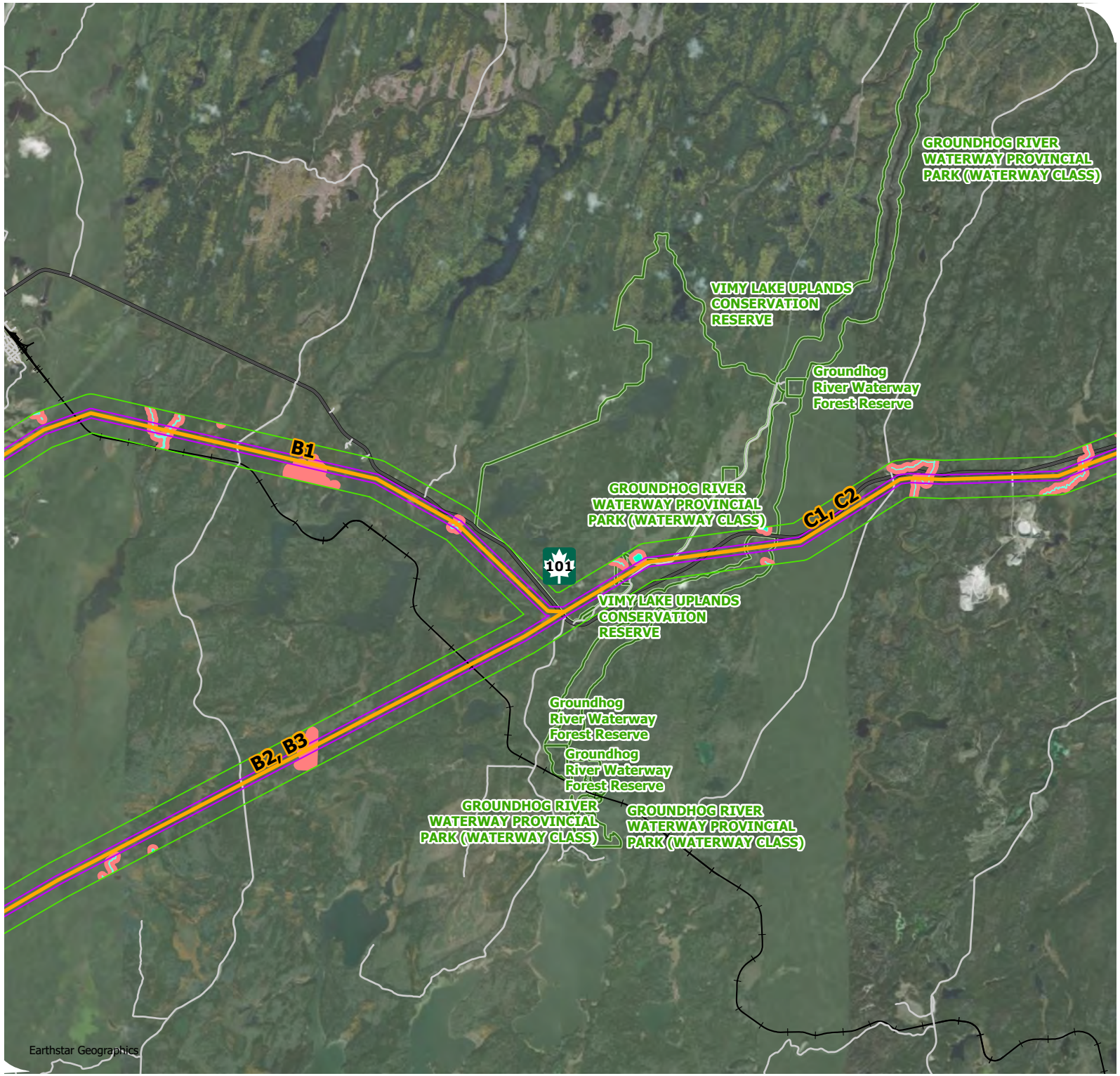
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WAWA TIMMINS POWER LINE

FIGURE 177. SWH - MOOSE AQUATIC FEEDING AREAS

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Aquatic Feeding Areas
- Moose Aquatic Feeding Areas (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

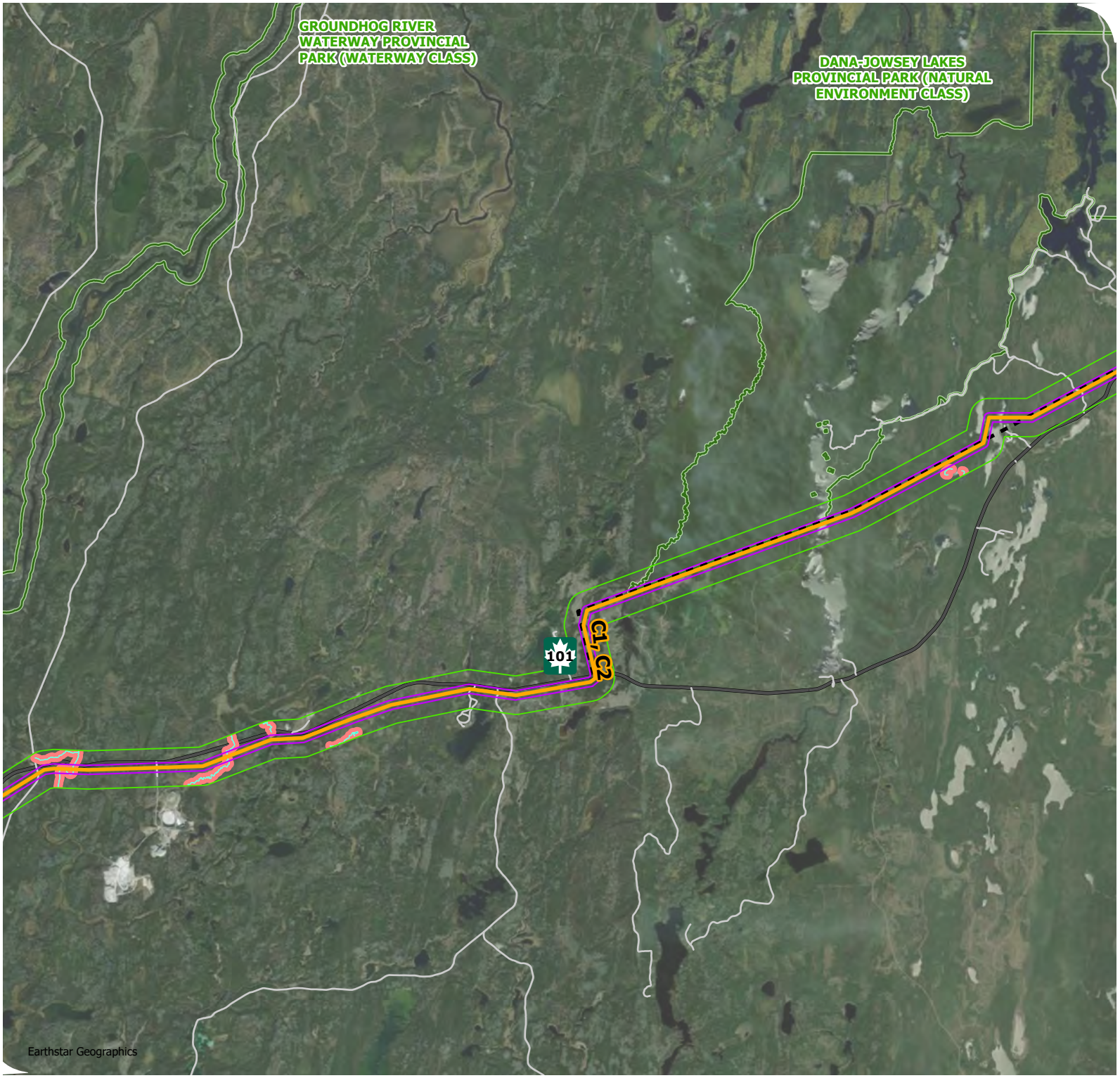
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 178. SWH - MOOSE AQUATIC FEEDING AREAS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Aquatic Feeding Areas
- Moose Aquatic Feeding Areas (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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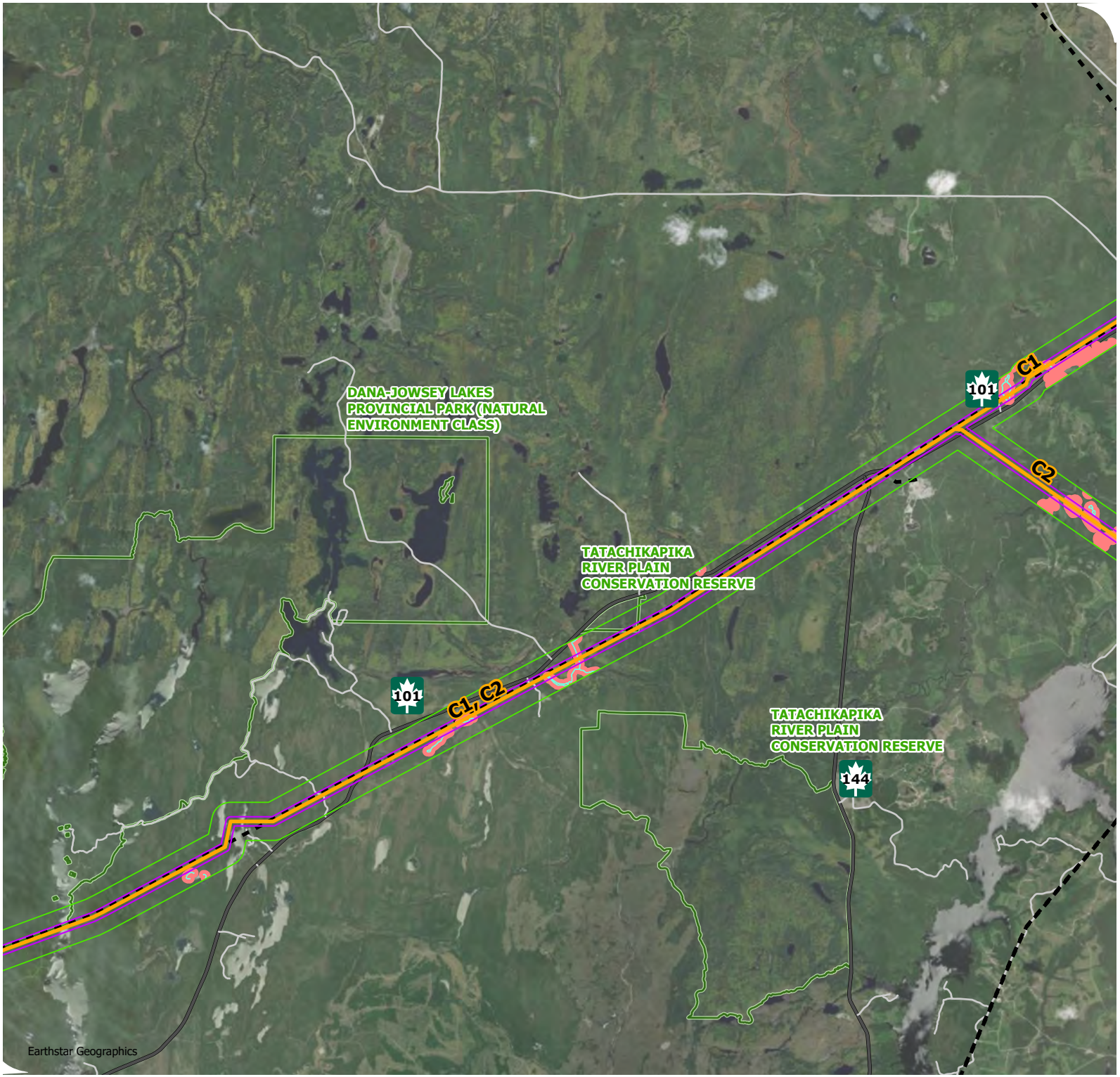
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WAWA TIMMINS POWER LINE

FIGURE 179. SWH - MOOSE AQUATIC FEEDING AREAS

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Aquatic Feeding Areas
- Moose Aquatic Feeding Areas (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

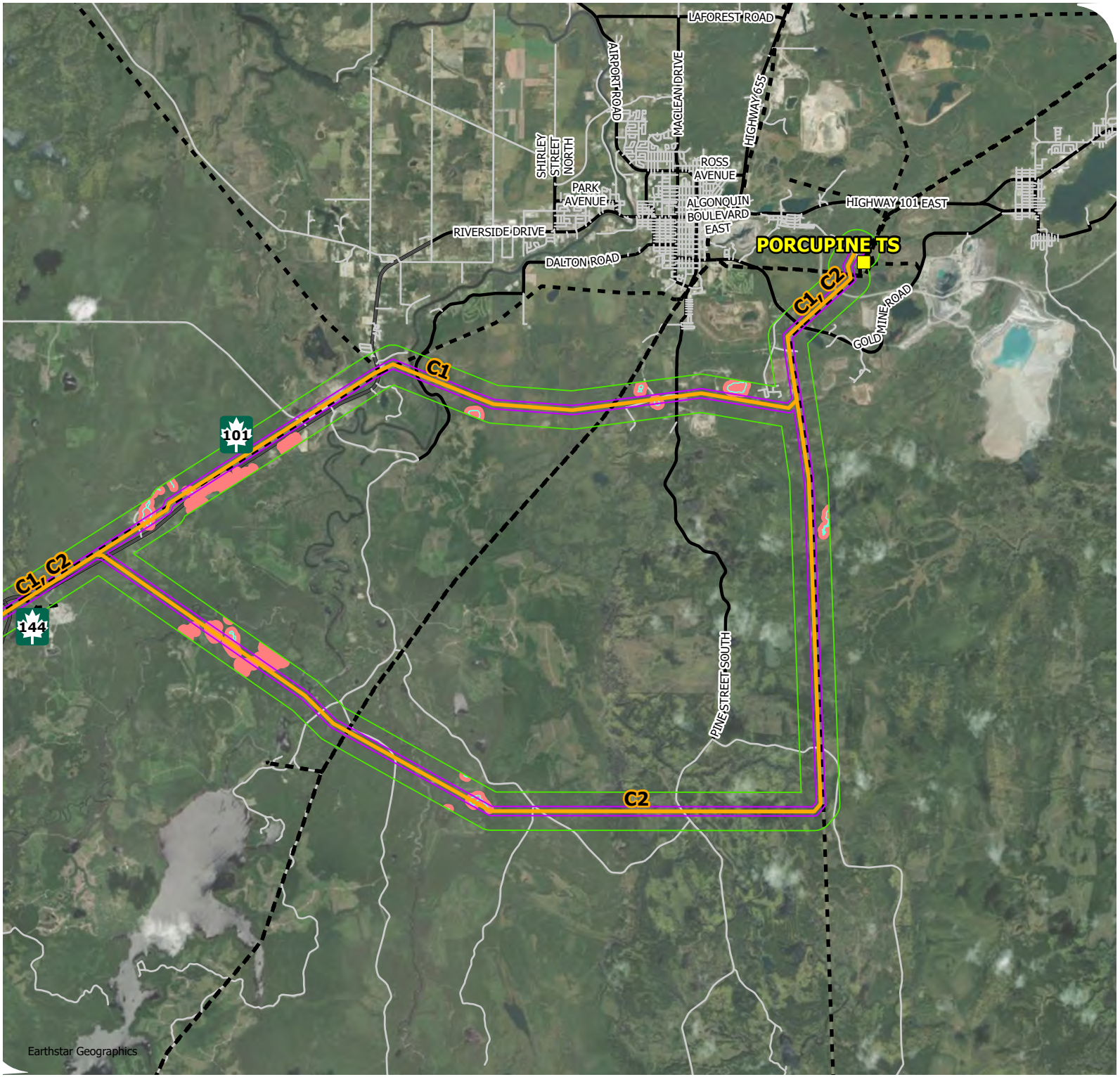


FIGURE 180. SWH - MOOSE AQUATIC FEEDING AREAS

Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Moose Aquatic Feeding Areas
- Moose Aquatic Feeding Areas (LIO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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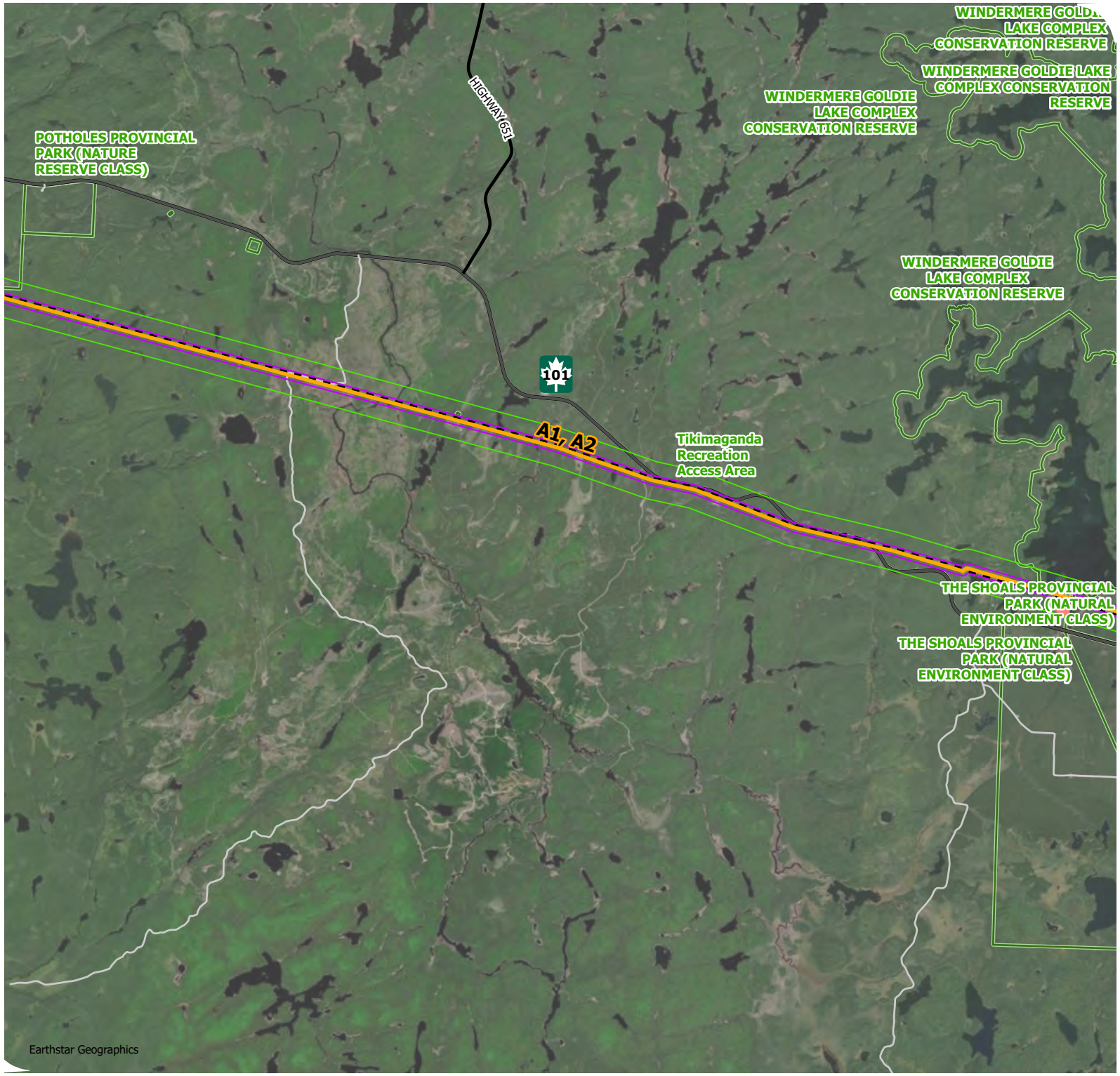
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WAWA TIMMINS POWER LINE

FIGURE 181. SWH - SHARP-TAILED GROUSE LEK

Mapping Extent - Windermere Lake 1



- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sharp-tailed Grouse Lek Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

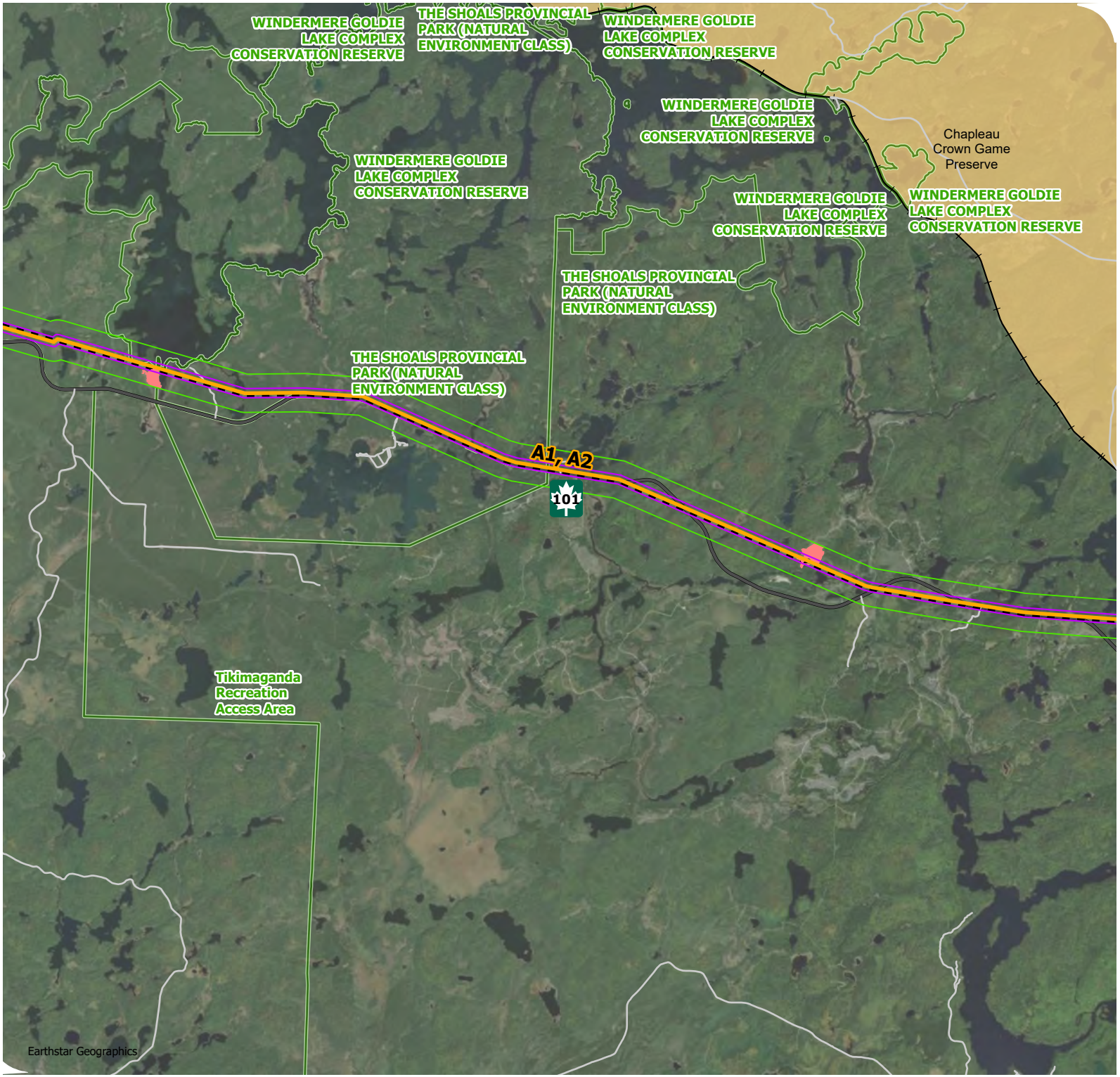
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 182. SWH - SHARP-TAILED GROUSE LEK

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sharp-tailed Grouse Lek Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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SCALE 1:139,000

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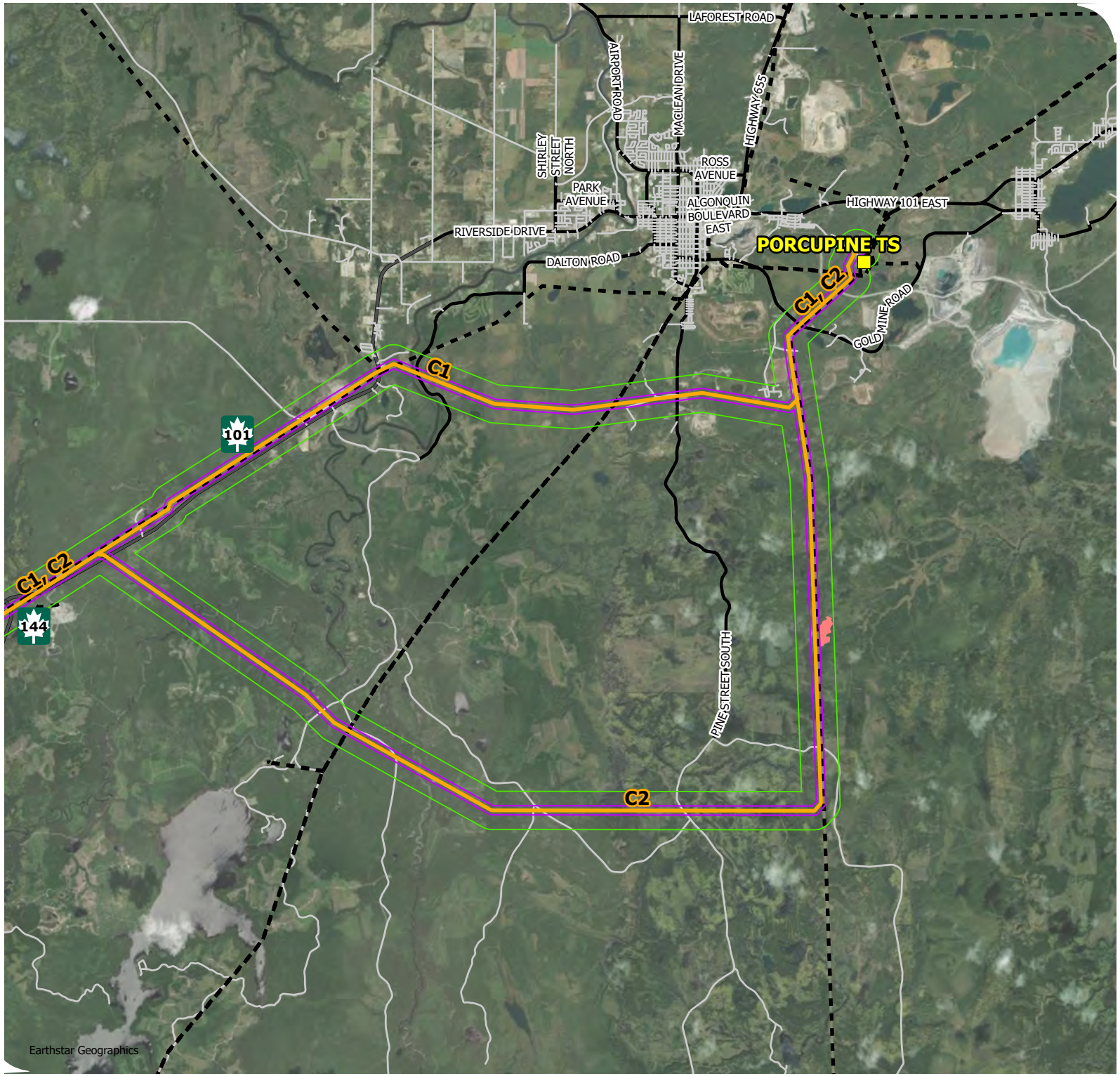
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WAWA TIMMINS POWER LINE

FIGURE 183. SWH - SHARP-TAILED GROUSE LEK

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sharp-tailed Grouse Lek Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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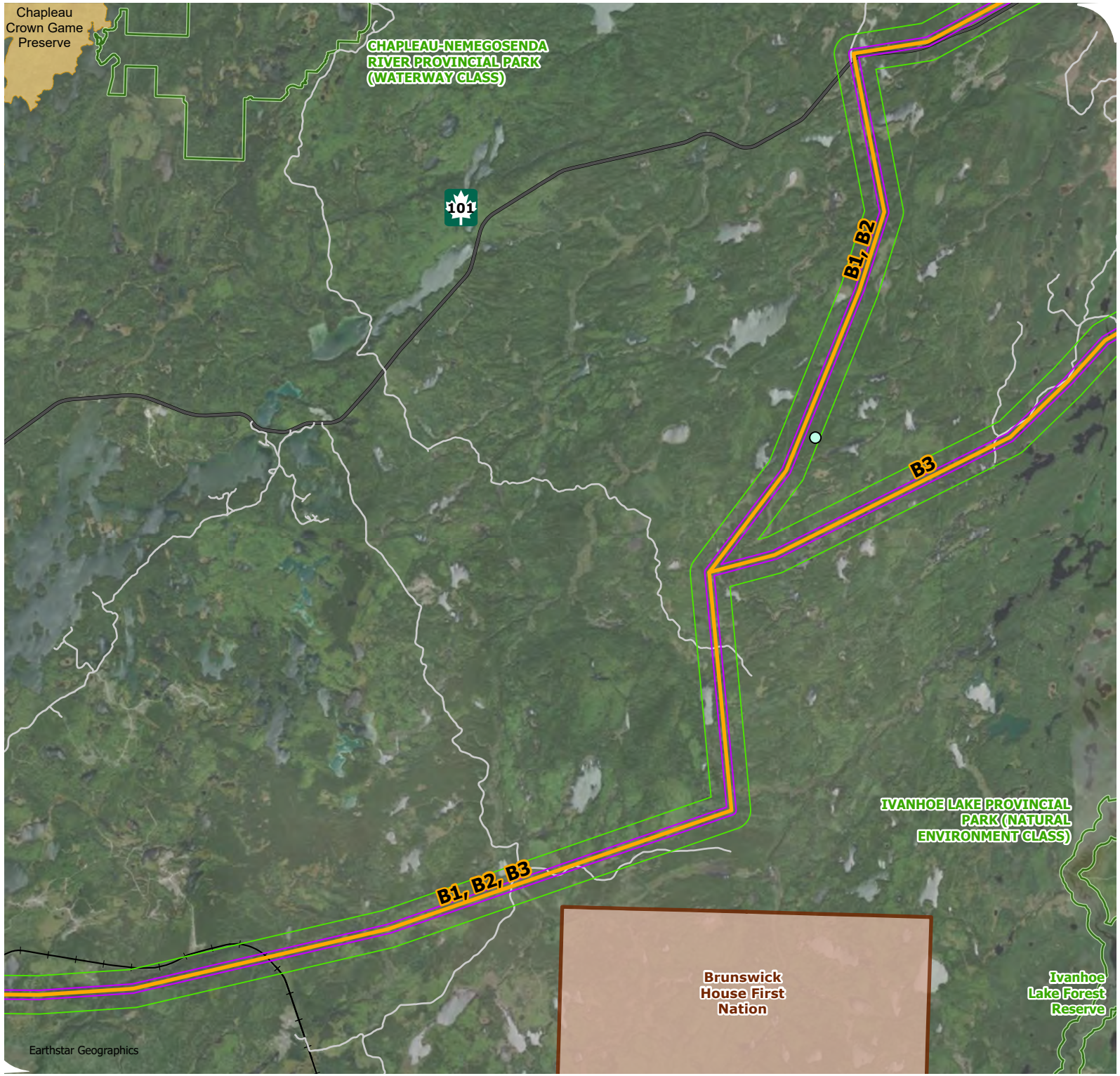
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WAWA TIMMINS POWER LINE

FIGURE 184. SWH - BALD EAGLE AND OSPREY NESTING HABITAT

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Raptor Nests (LIO)

- Osprey Nesting Site

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

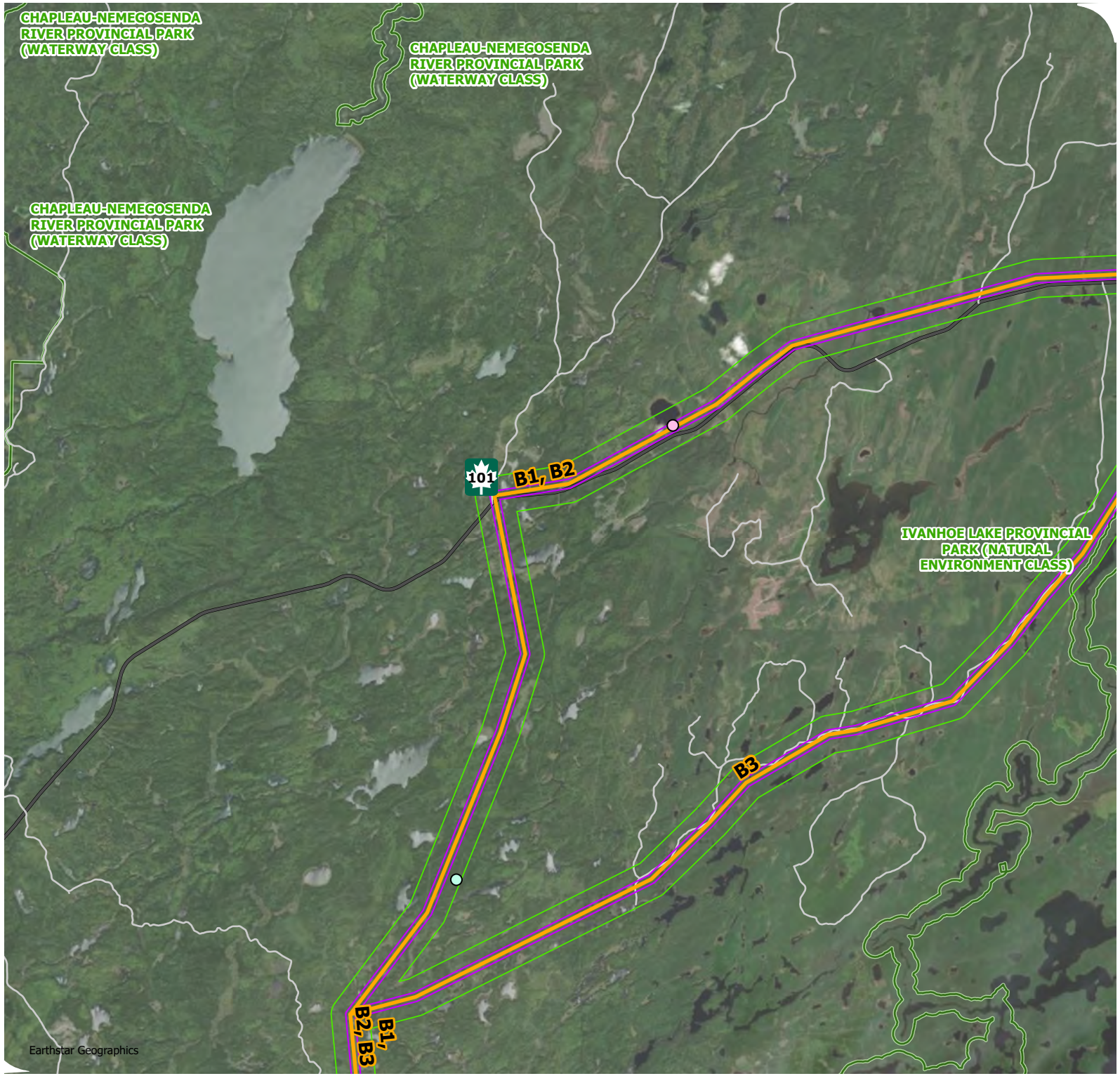


FIGURE 185. SWH - BALD EAGLE AND OSPREY NESTING HABITAT

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Raptor Nests (LIO)

- Osprey Nesting Site
- Unidentified Raptor Nesting Site

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

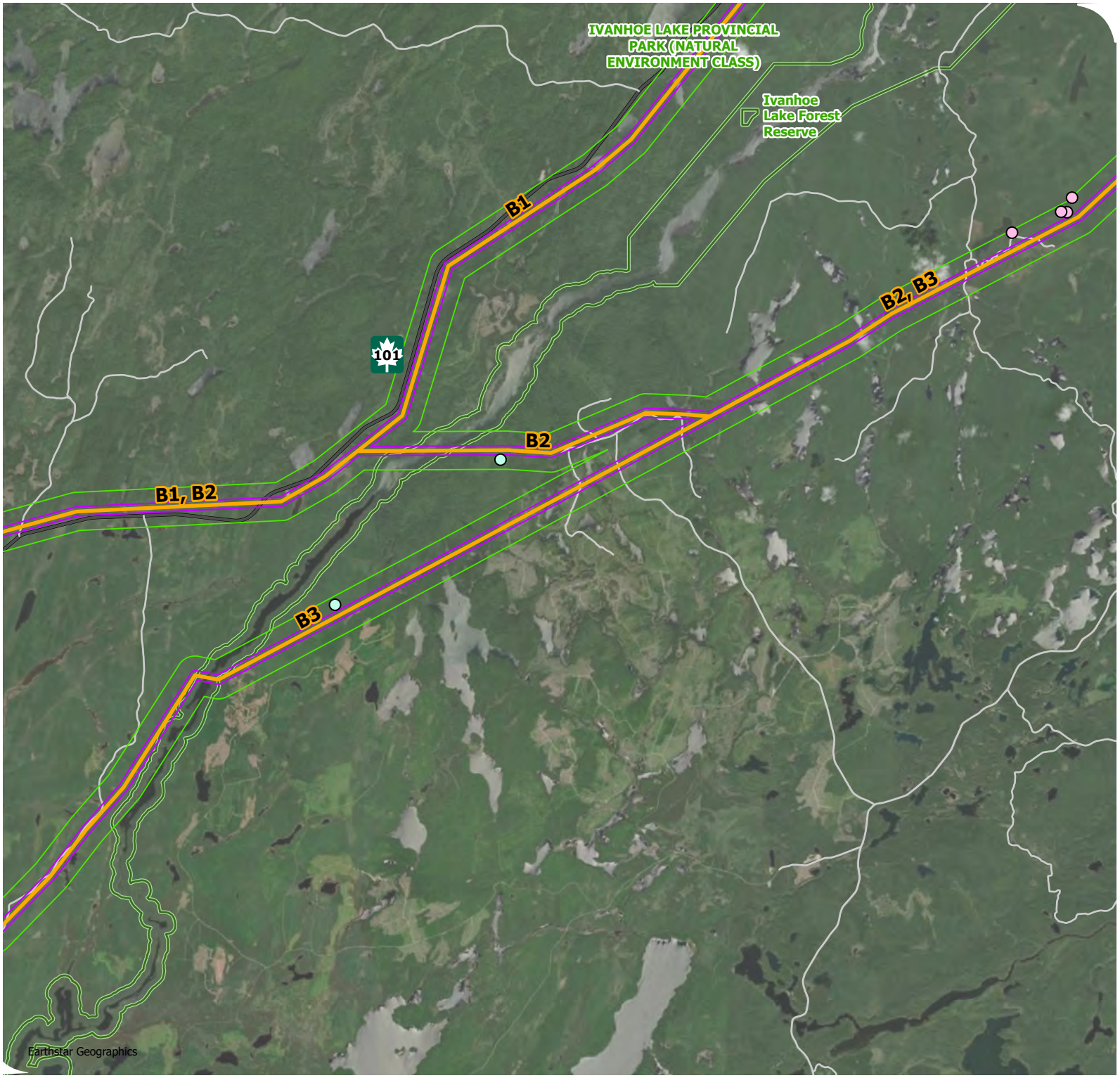
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WAWA TIMMINS POWER LINE

FIGURE 186. SWH - BALD EAGLE AND OSPREY NESTING HABITAT

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Raptor Nests (LIO)

- Osprey Nesting Site
- Unidentified Raptor Nesting Site

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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SCALE 1:139,000

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WAWA TIMMINS POWER LINE

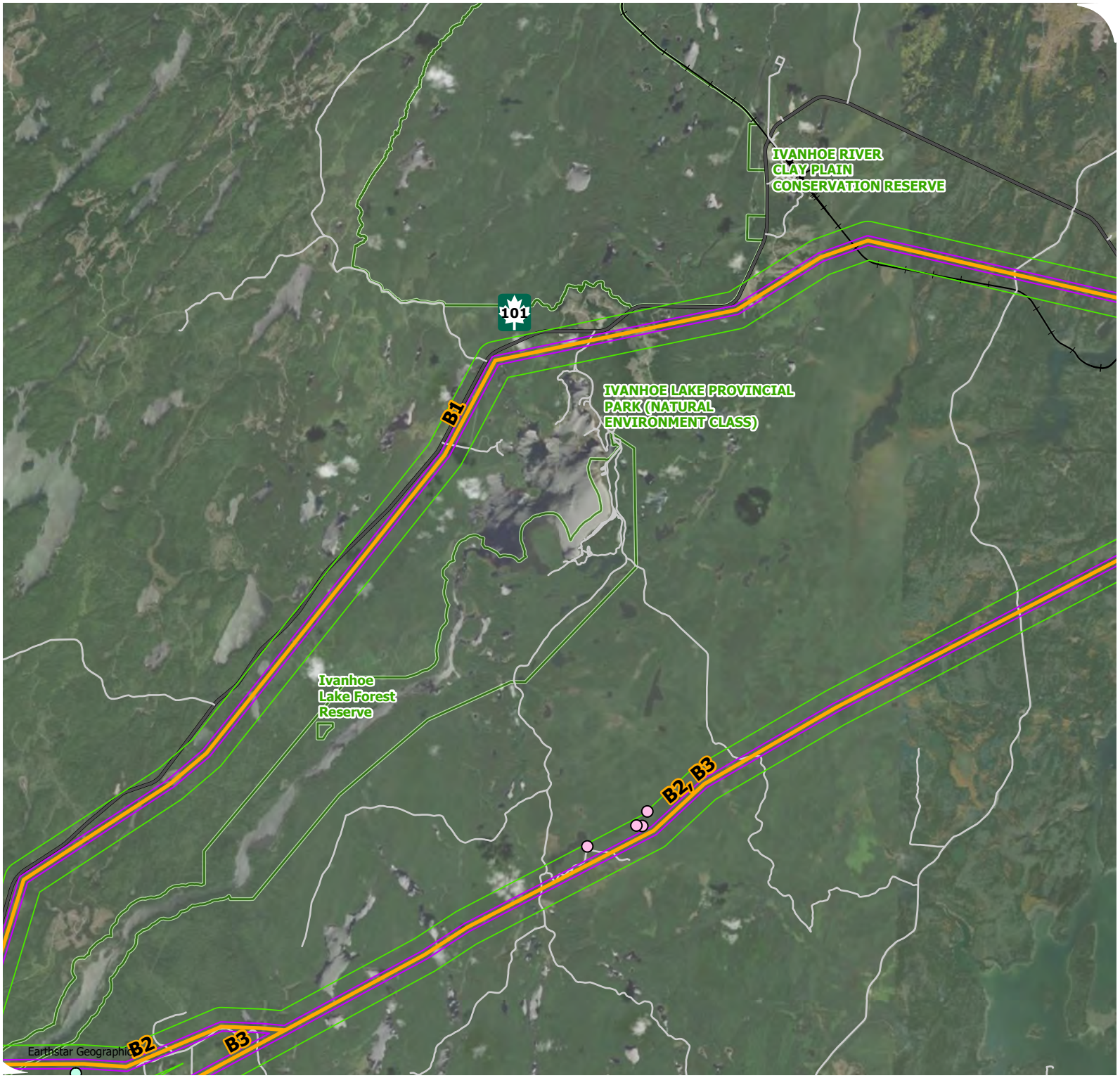


FIGURE 187. SWH - BALD EAGLE AND OSPREY NESTING HABITAT

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Raptor Nests (LIO)

- Osprey Nesting Site
- Unidentified Raptor Nesting Site

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

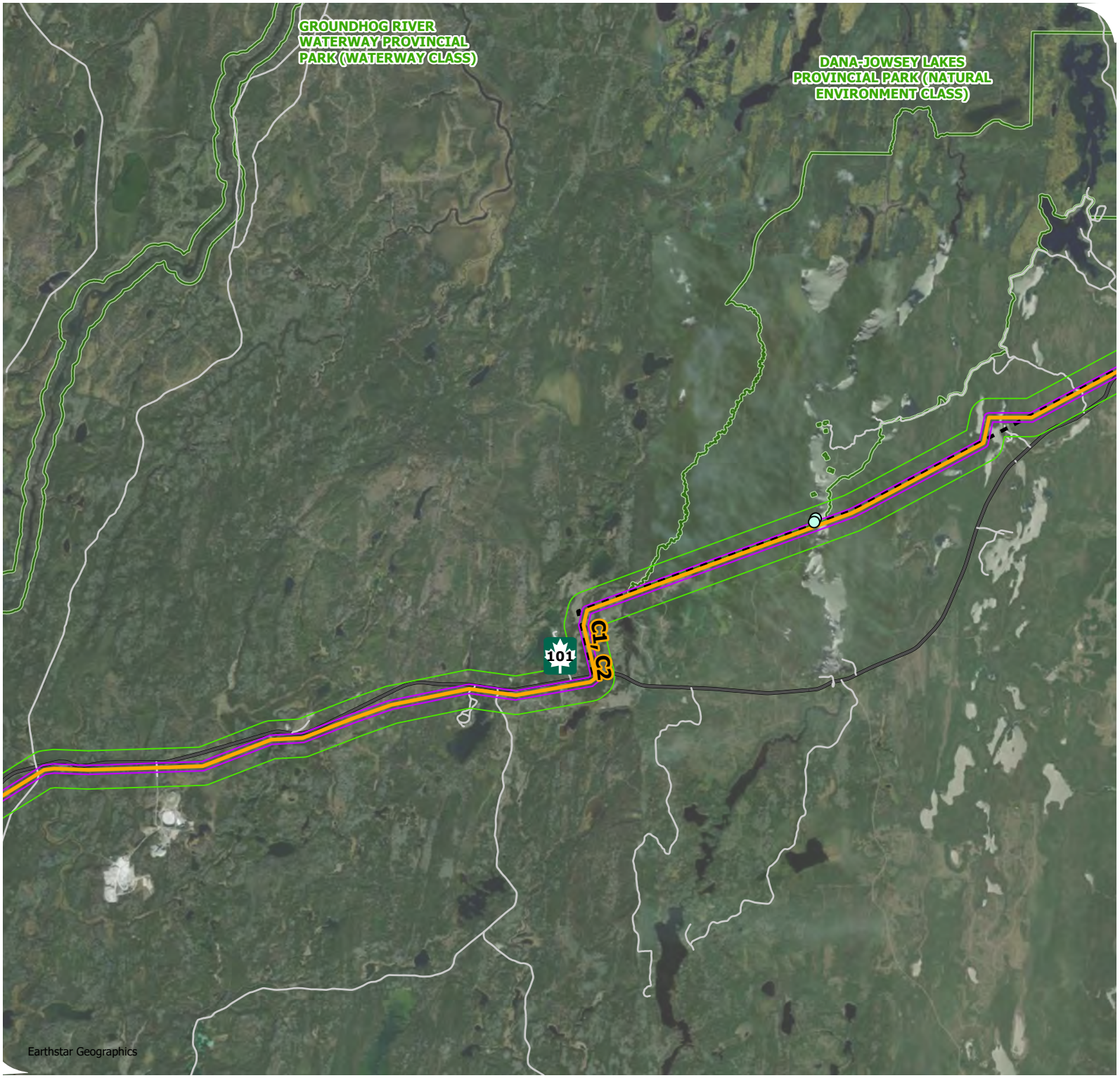
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WAWA TIMMINS POWER LINE

FIGURE 188. SWH - BALD EAGLE AND OSPREY NESTING HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Raptor Nests (LIO)

- Osprey Nesting Site

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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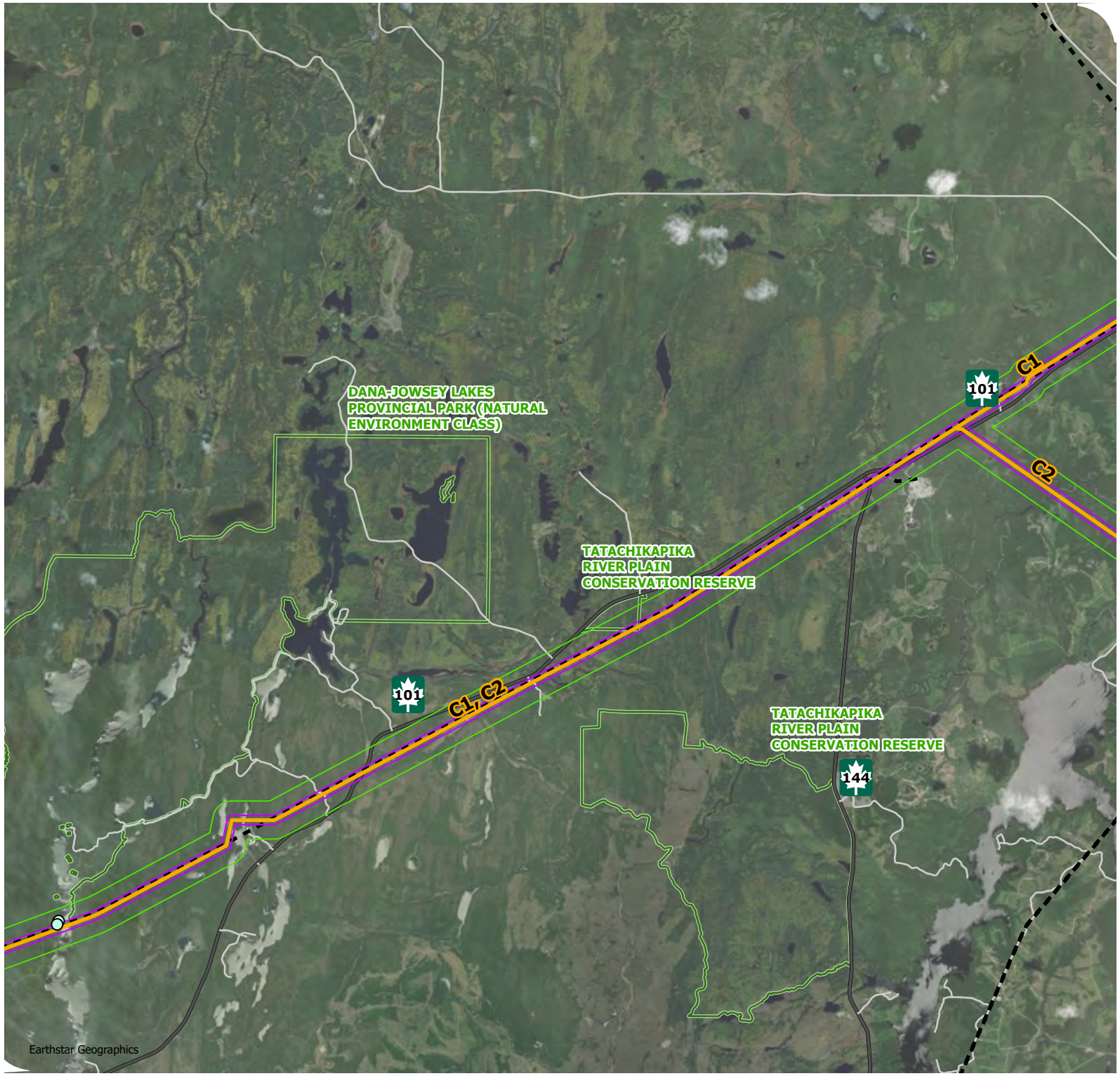
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WAWA TIMMINS POWER LINE

FIGURE 189. SWH - BALD EAGLE AND OSPREY NESTING HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Raptor Nests (LIO)

- Osprey Nesting Site

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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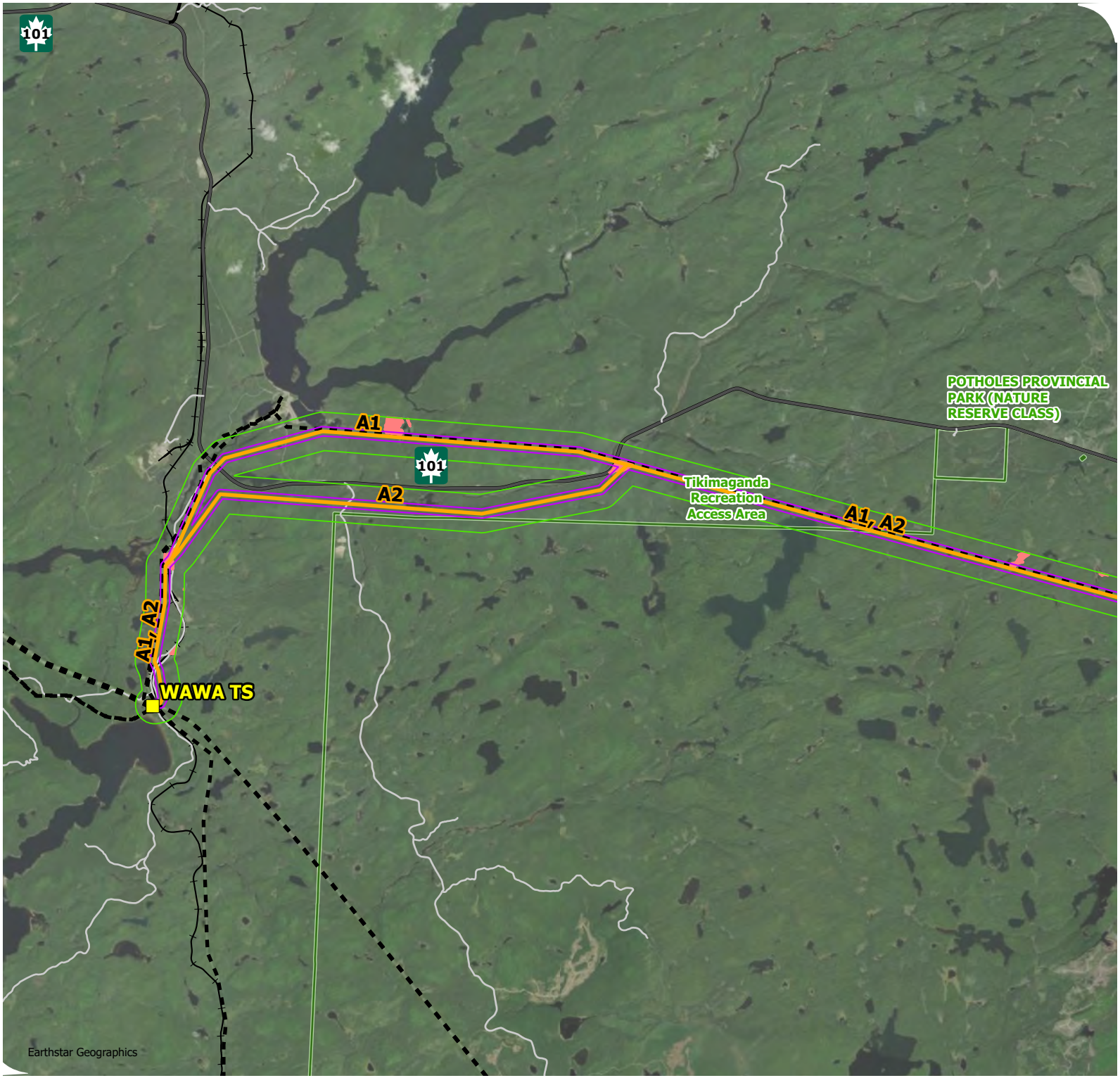
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WAWA TIMMINS POWER LINE

FIGURE 190. SWH - MAST PROCIDING AREAS

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Mast Producing Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

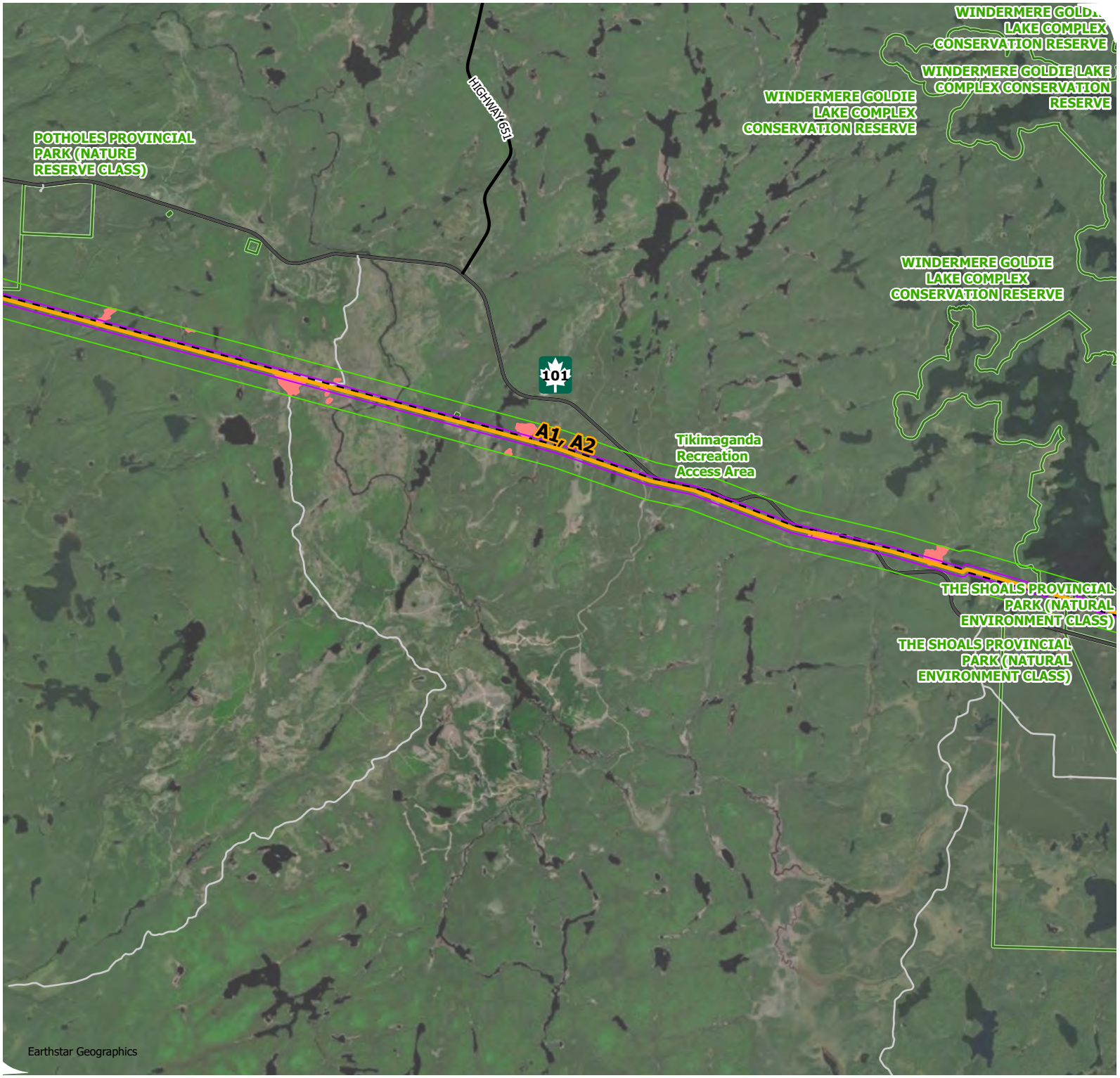
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 191. SWH - MAST PROCIDING AREAS

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Mast Producing Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

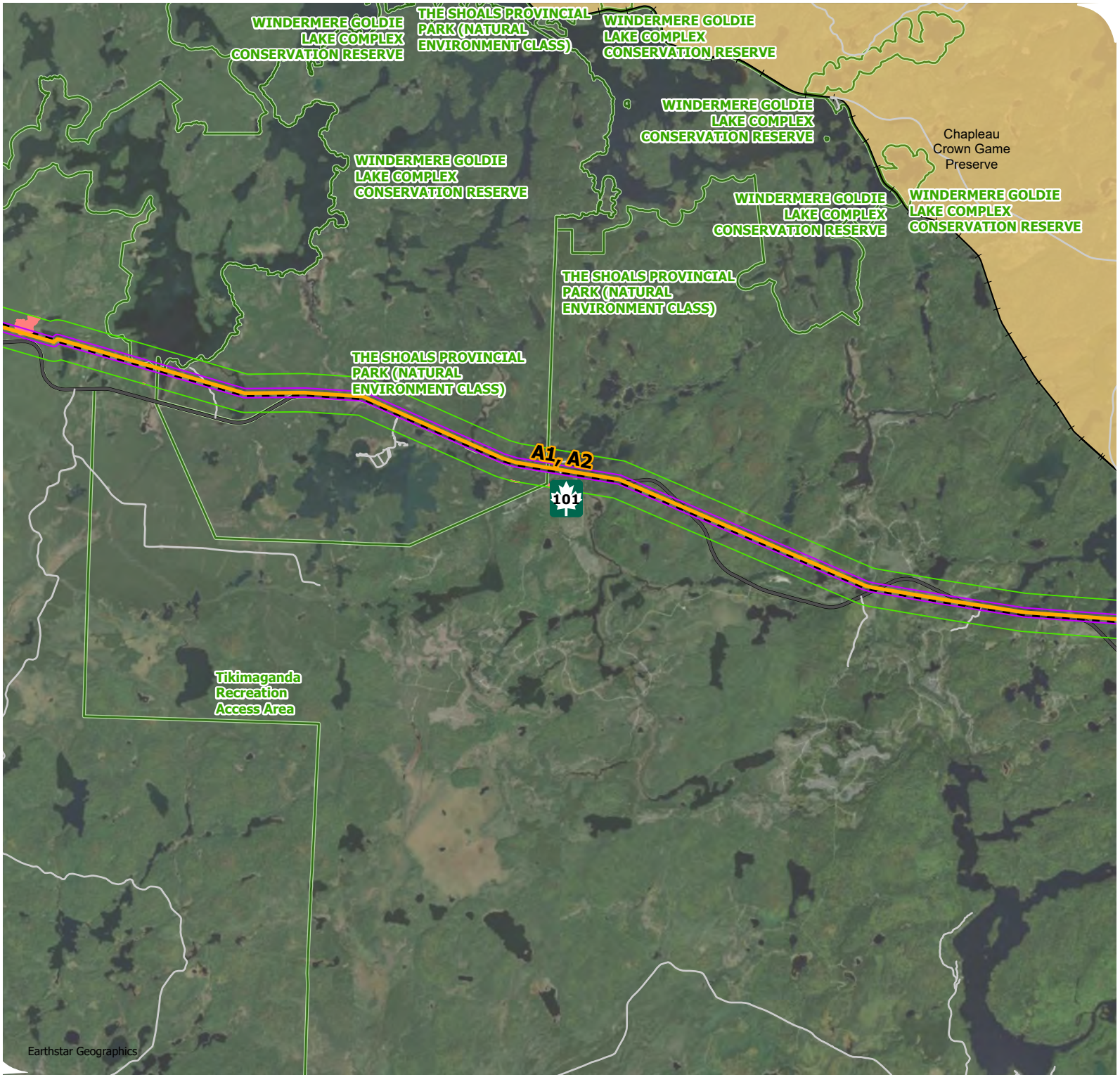
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 192. SWH -MAST PROCIDING AREAS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Mast Producing Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

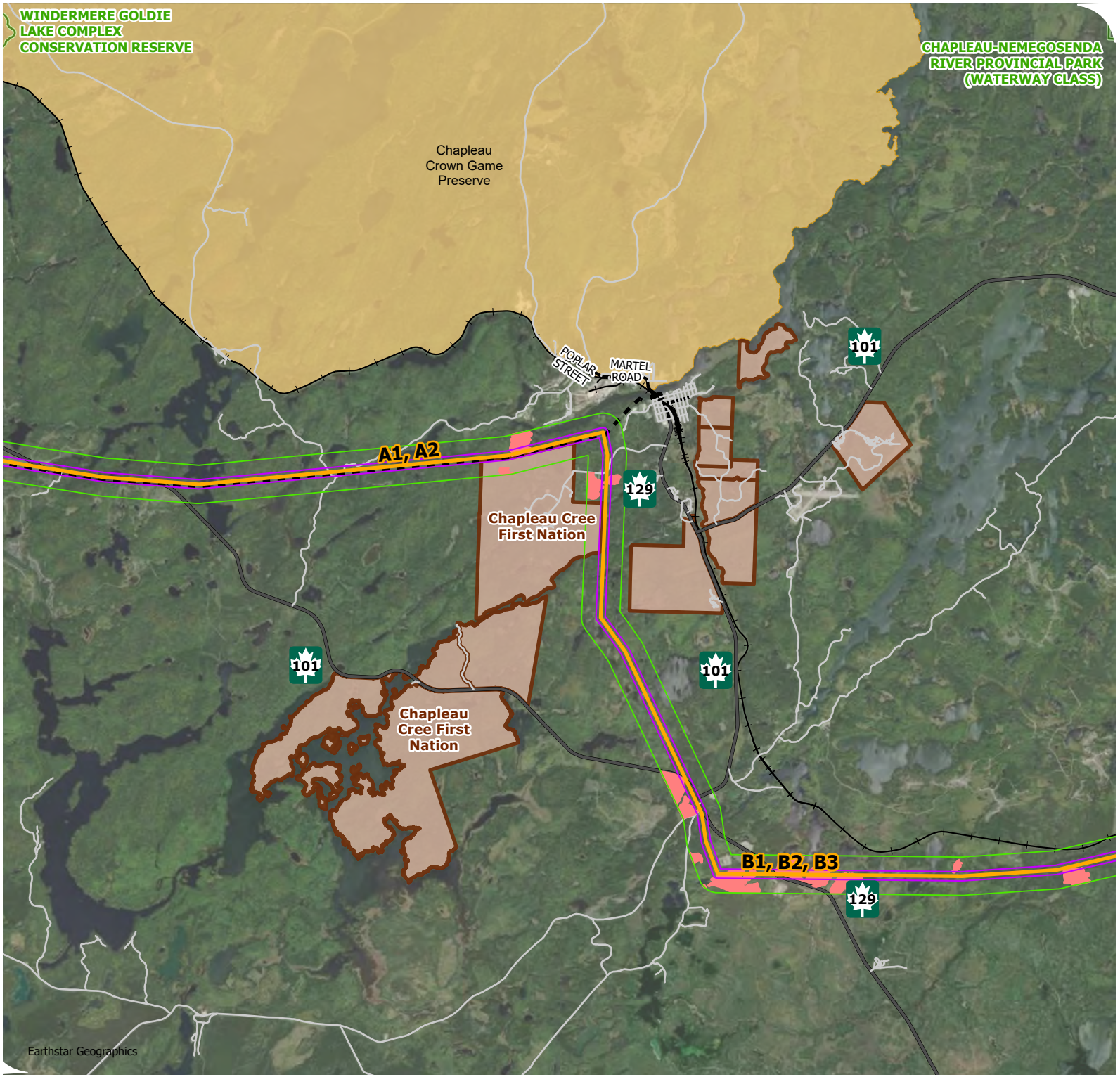
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 193. SWH - MAST PROCIDING AREAS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Mast Producing Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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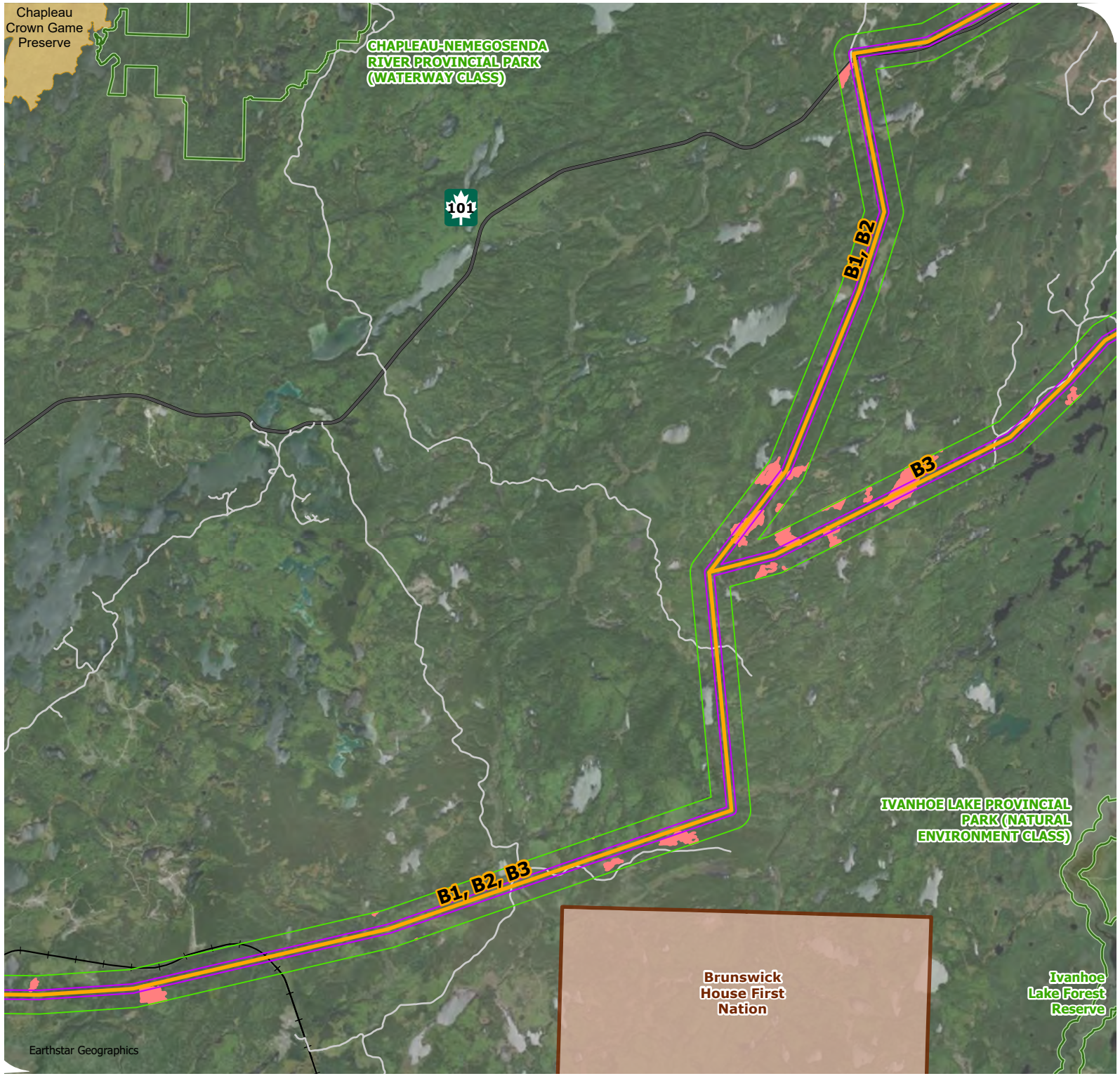
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WAWA TIMMINS POWER LINE

FIGURE 194. SWH - MAST PROCIDING AREAS

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Mast Producing Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

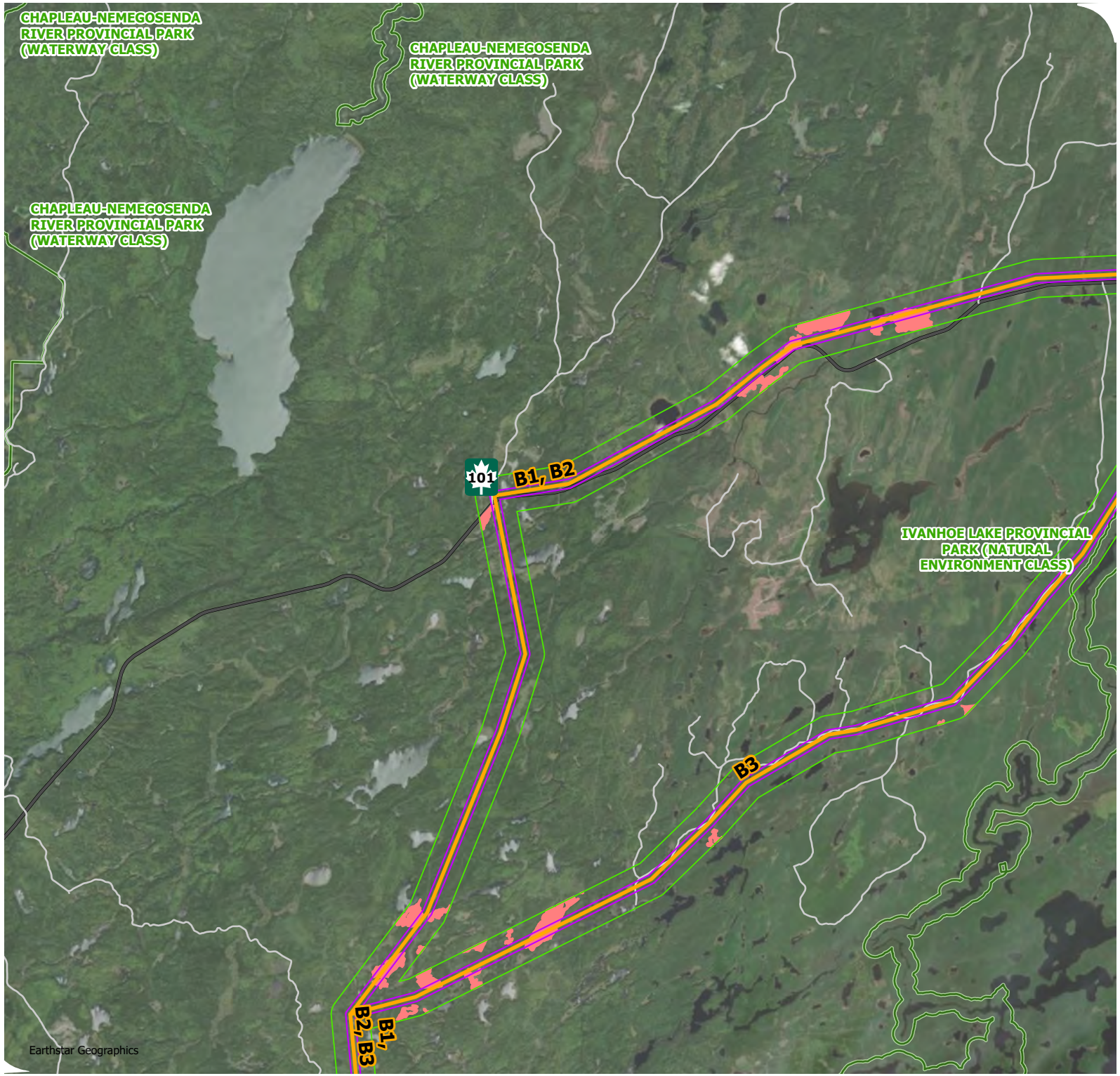
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WAWA TIMMINS POWER LINE

FIGURE 195. SWH - MAST PROCIDING AREAS

Mapping Extent - Ivanhoe Lake 2



- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Mast Producing Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
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WAWA TIMMINS POWER LINE

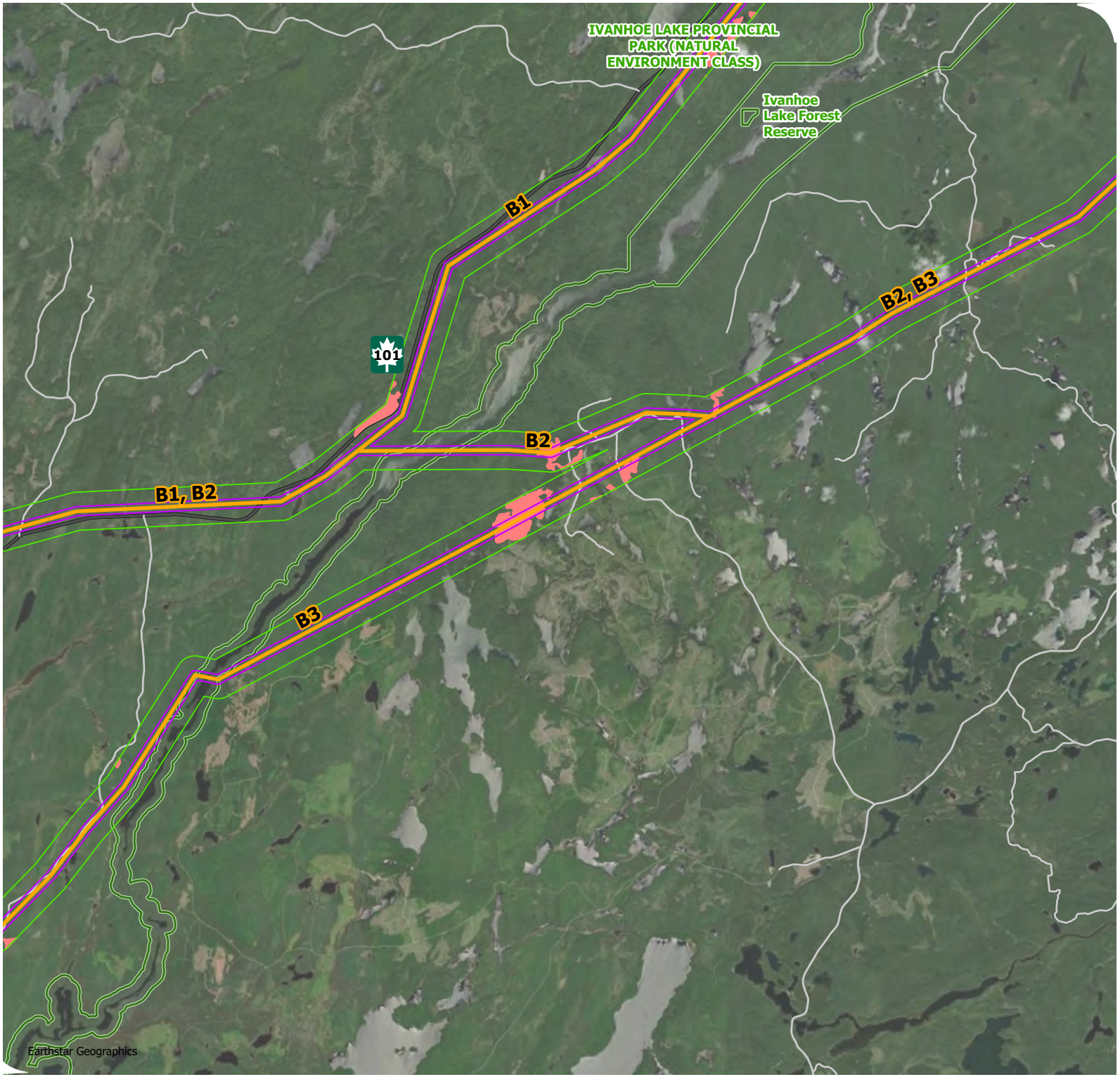


FIGURE 196. SWH - MAST PROCIDING AREAS

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Mast Producing Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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SCALE 1:139,000

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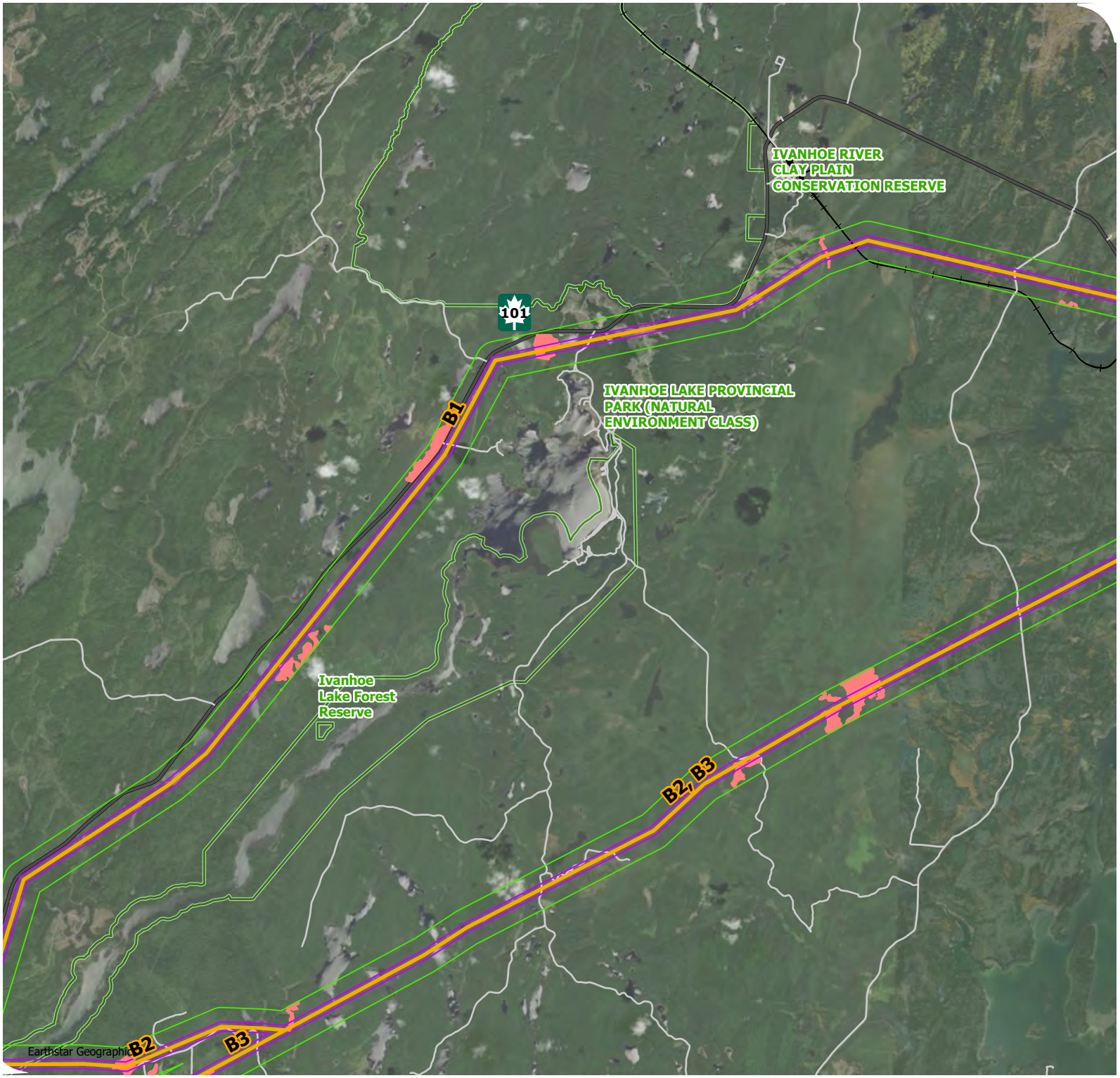
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WAWA TIMMINS POWER LINE

FIGURE 197. SWH - MAST PROCIDING AREAS

Mapping Extent - Ivanhoe Lake 4



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Mast Producing Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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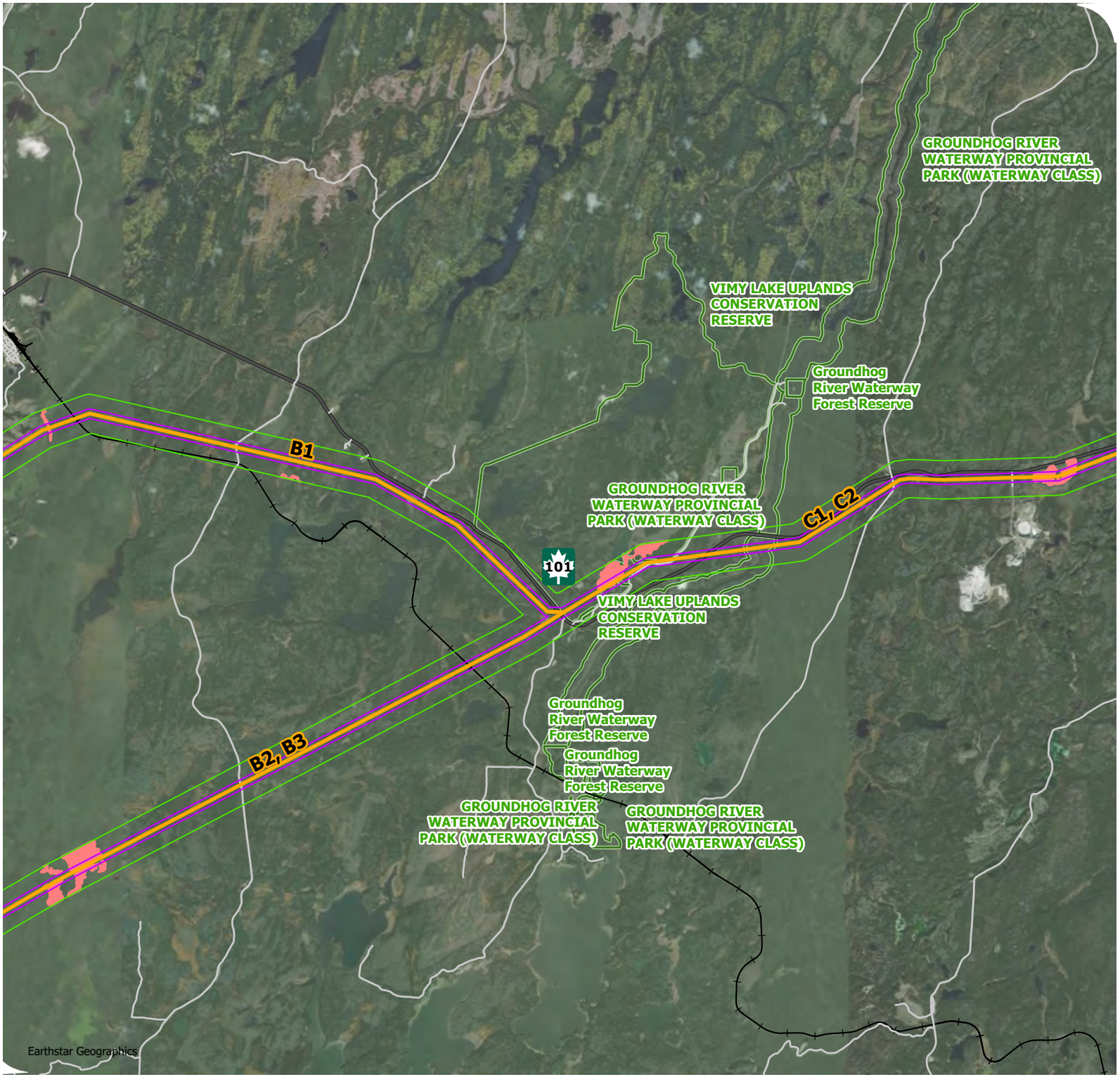
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WAWA TIMMINS POWER LINE

FIGURE 198. SWH - MAST PROCIDING AREAS

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Mast Producing Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

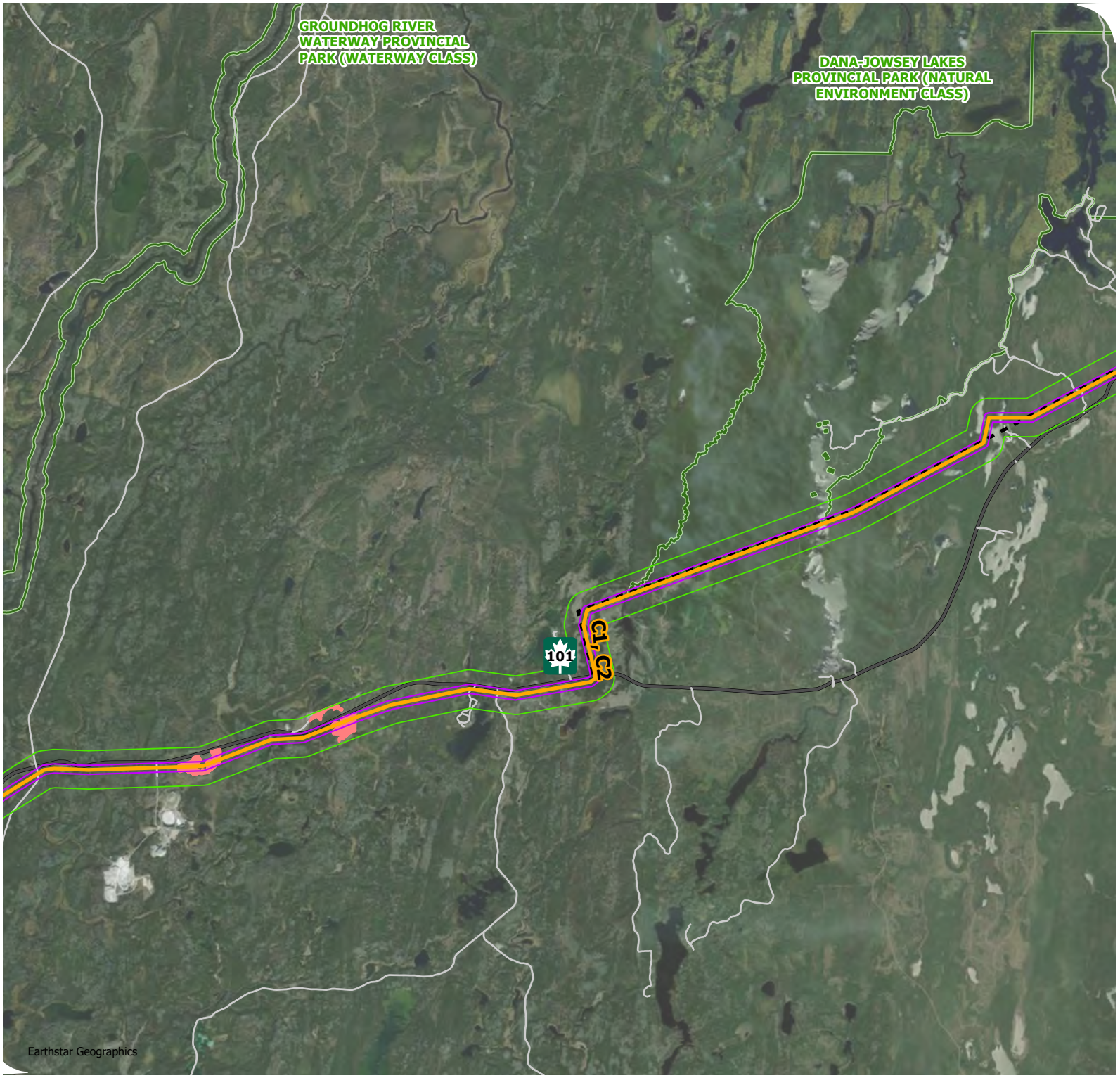
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 199. SWH - MAST PROCIDING AREAS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Mast Producing Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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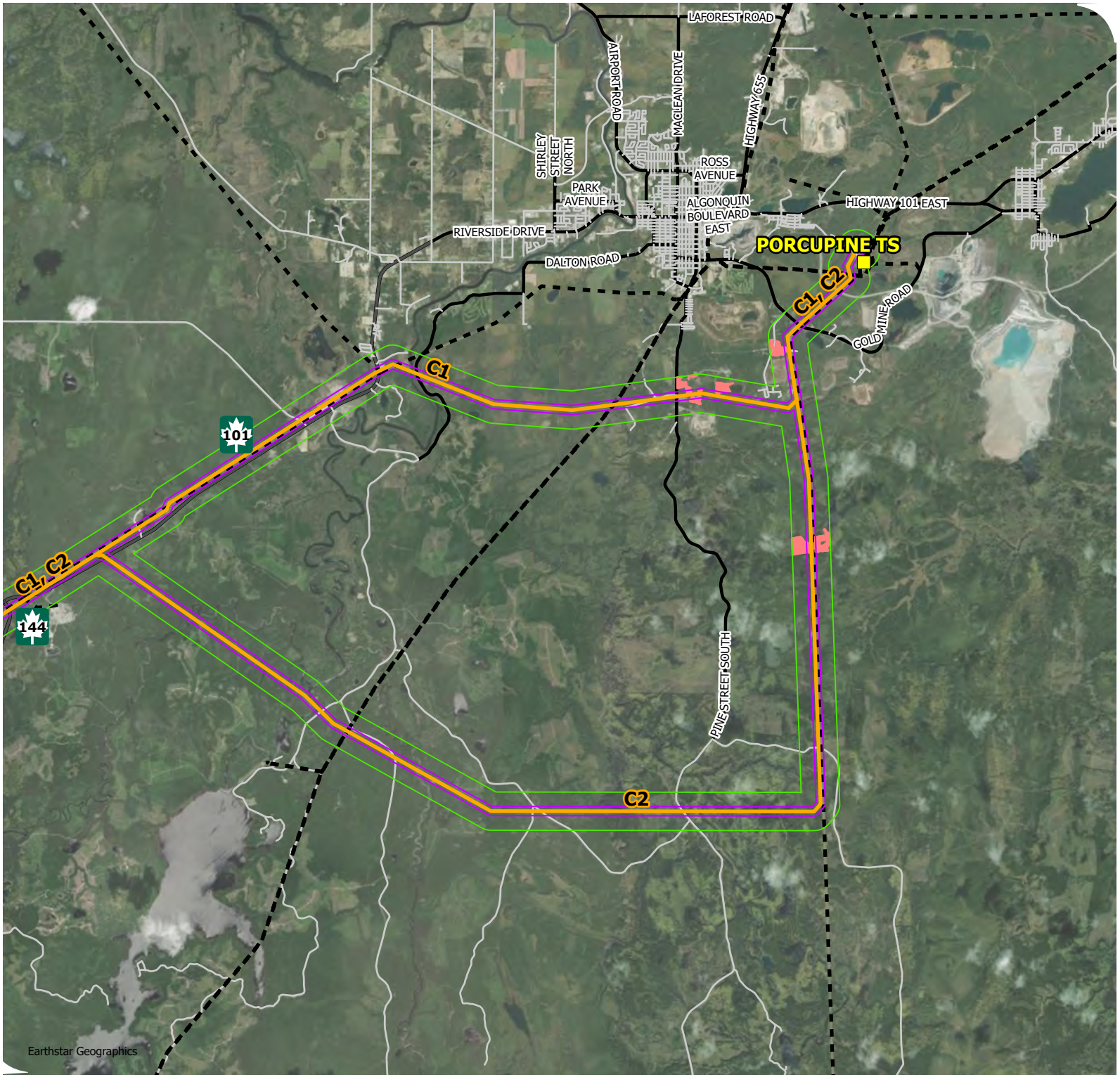
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WAWA TIMMINS POWER LINE

FIGURE 200. SWH - MAST PROCIDING AREAS

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Mast Producing Areas

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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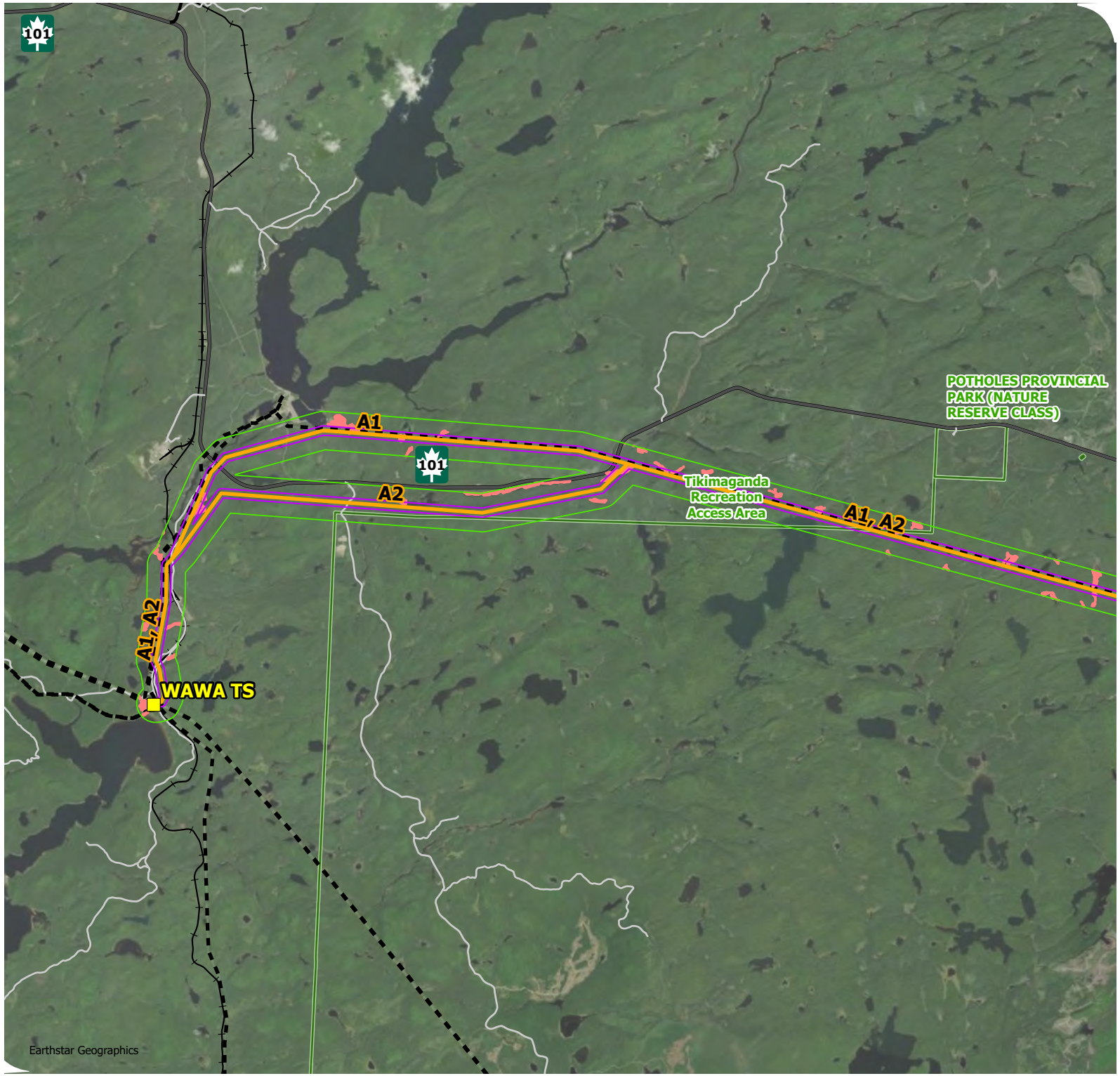
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WAWA TIMMINS POWER LINE

FIGURE 201. SWH - MARSH BIRD BREEDING HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Marsh Bird Breeding Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

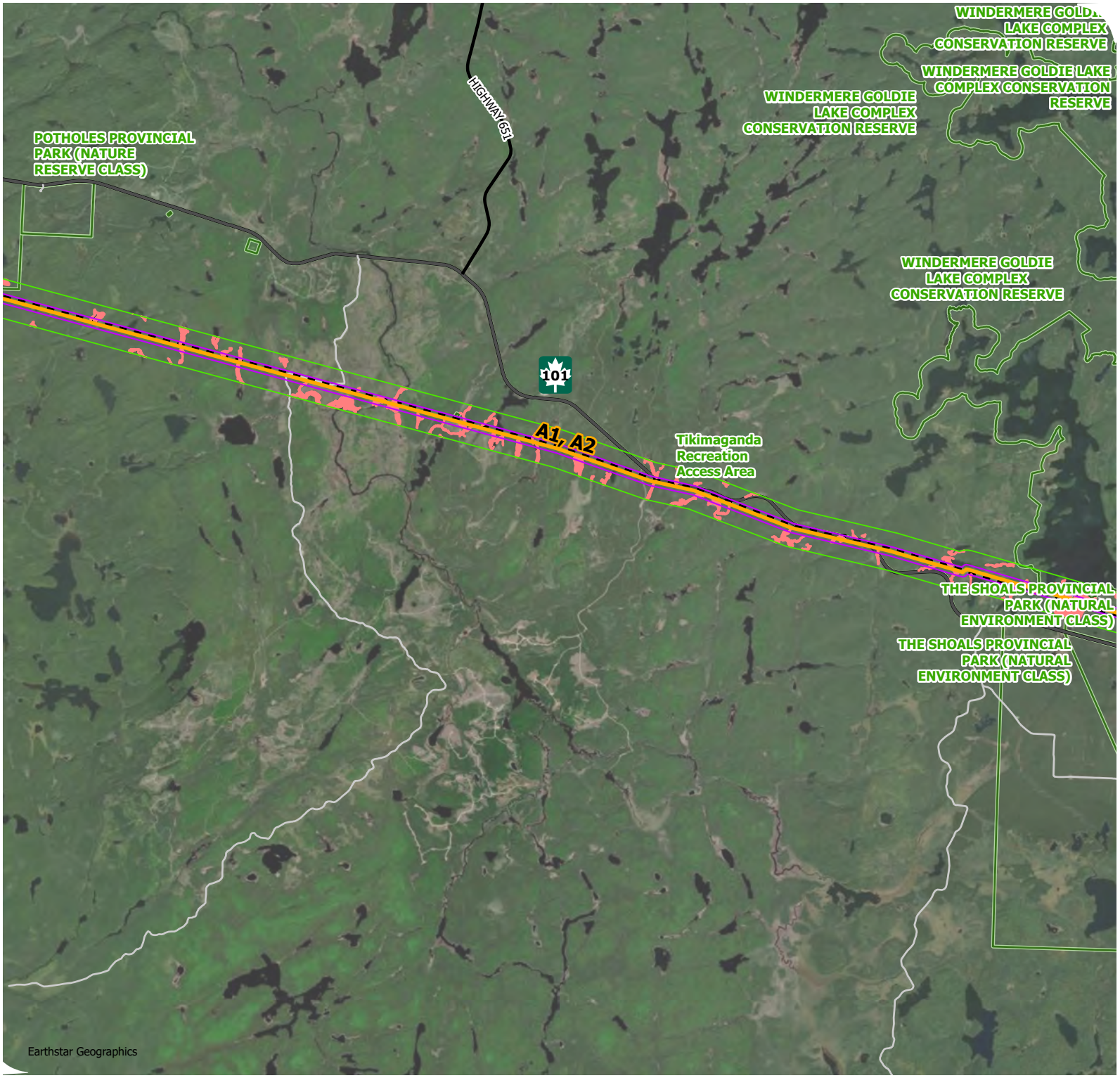
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WAWA TIMMINS POWER LINE

FIGURE 202. SWH - MARSH BIRD BREEDING HABITAT

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Marsh Bird Breeding Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

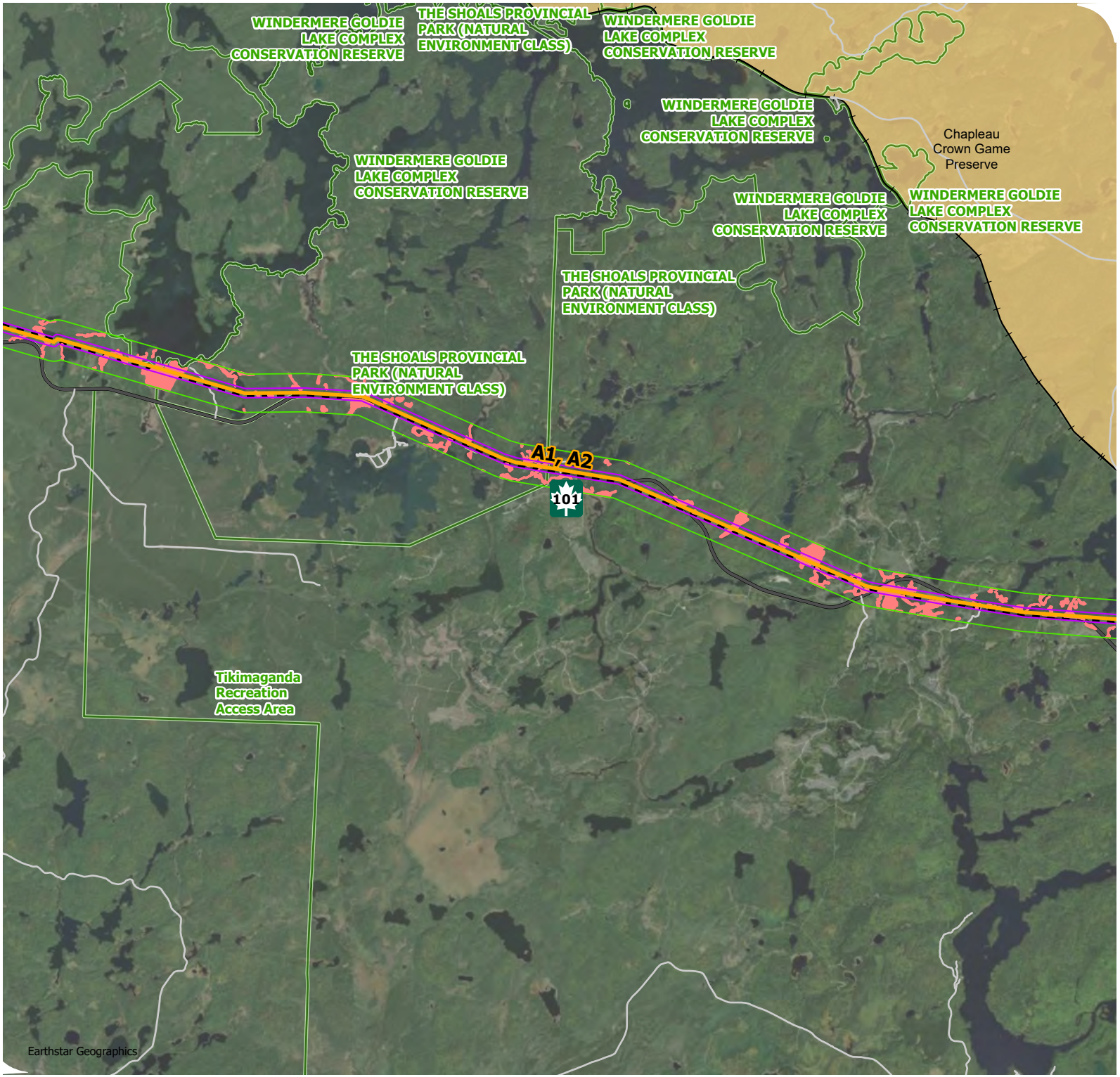
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 203. SWH - MARSH BIRD BREEDING HABITAT

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Marsh Bird Breeding Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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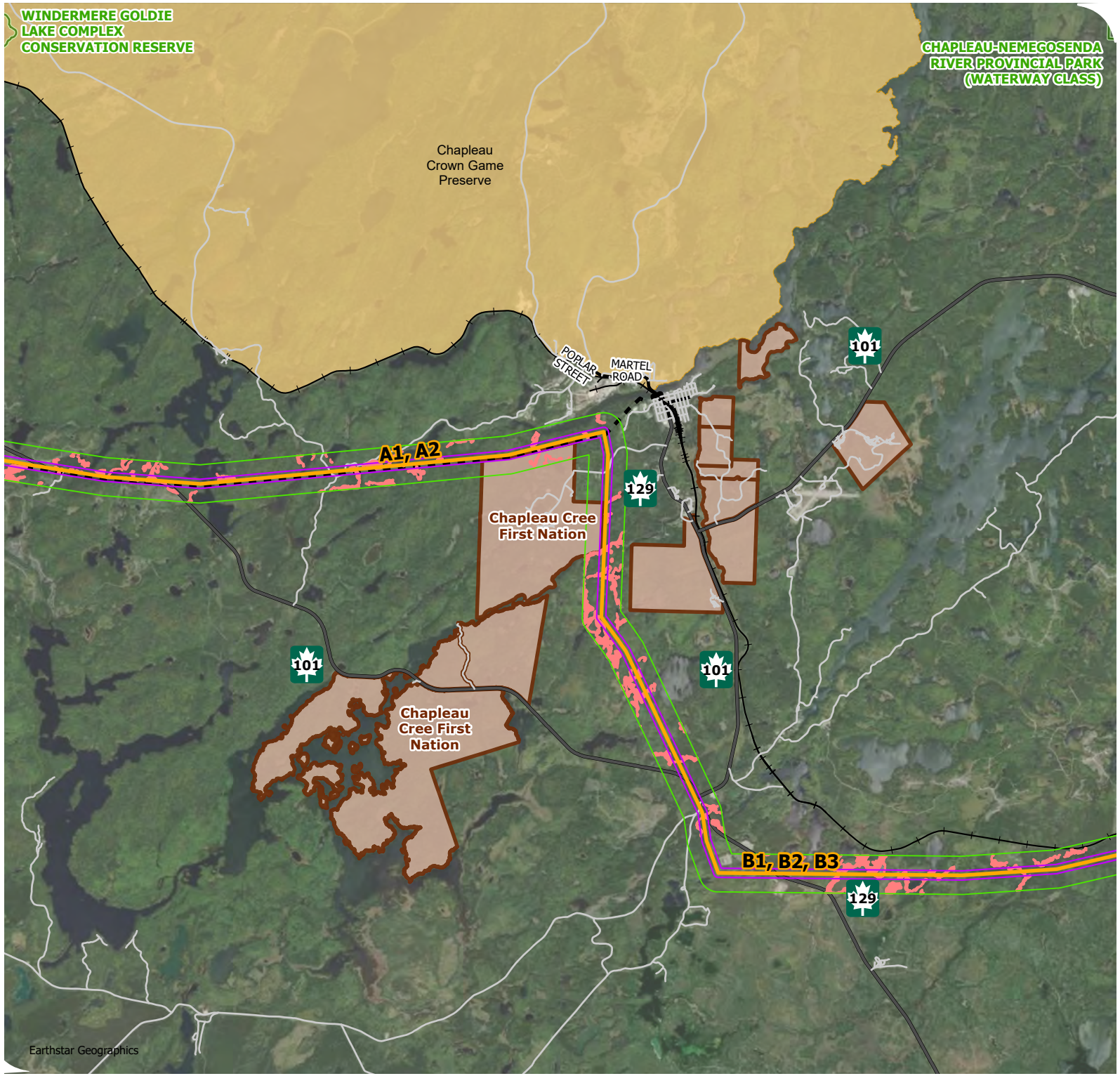
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WAWA TIMMINS POWER LINE

FIGURE 204. SWH - MARSH BIRD BREEDING HABITAT

Mapping Extent - Chapleau



- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Marsh Bird Breeding Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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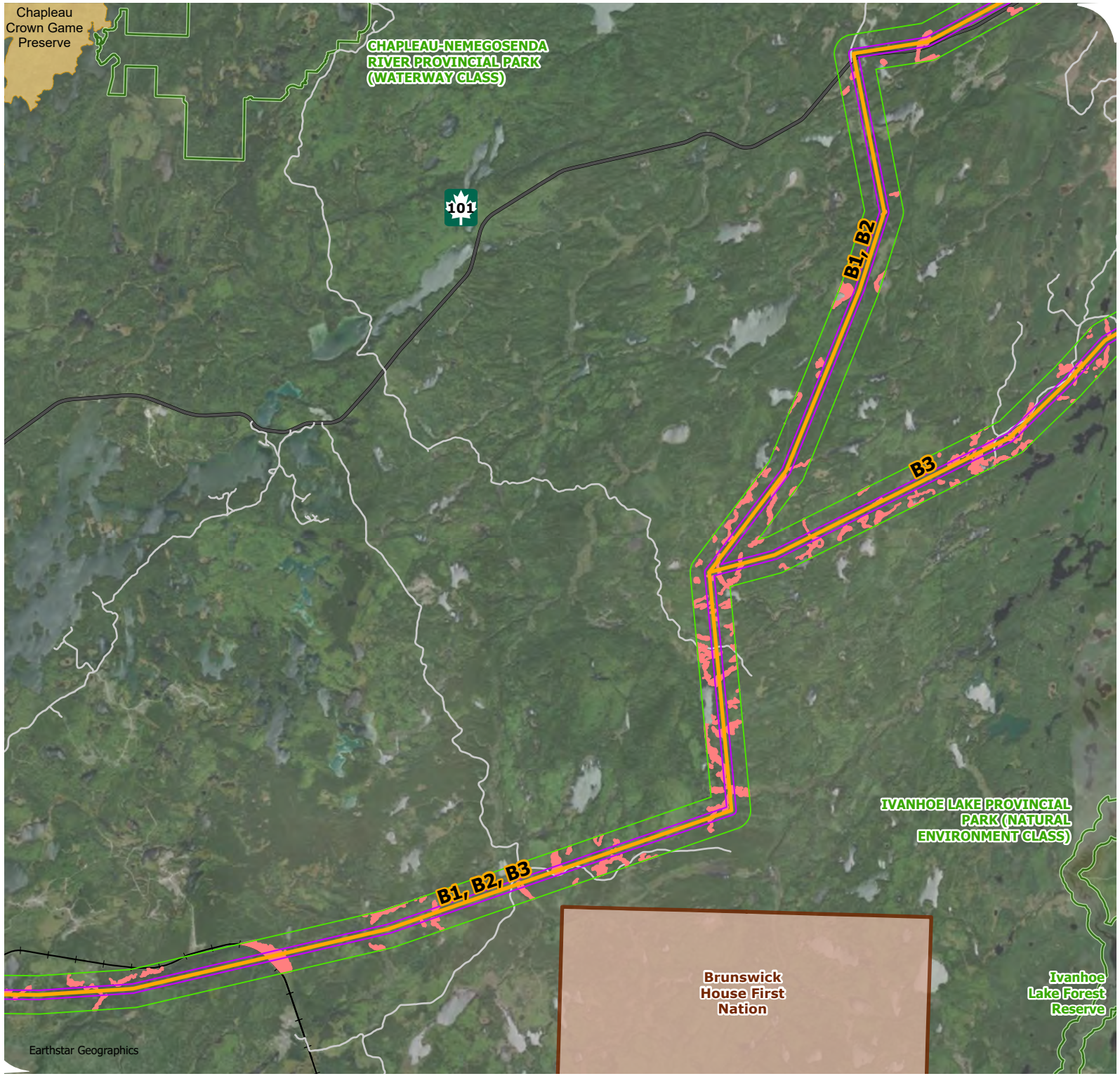
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WAWA TIMMINS POWER LINE

FIGURE 205. SWH - MARSH BIRD BREEDING HABITAT

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Marsh Bird Breeding Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

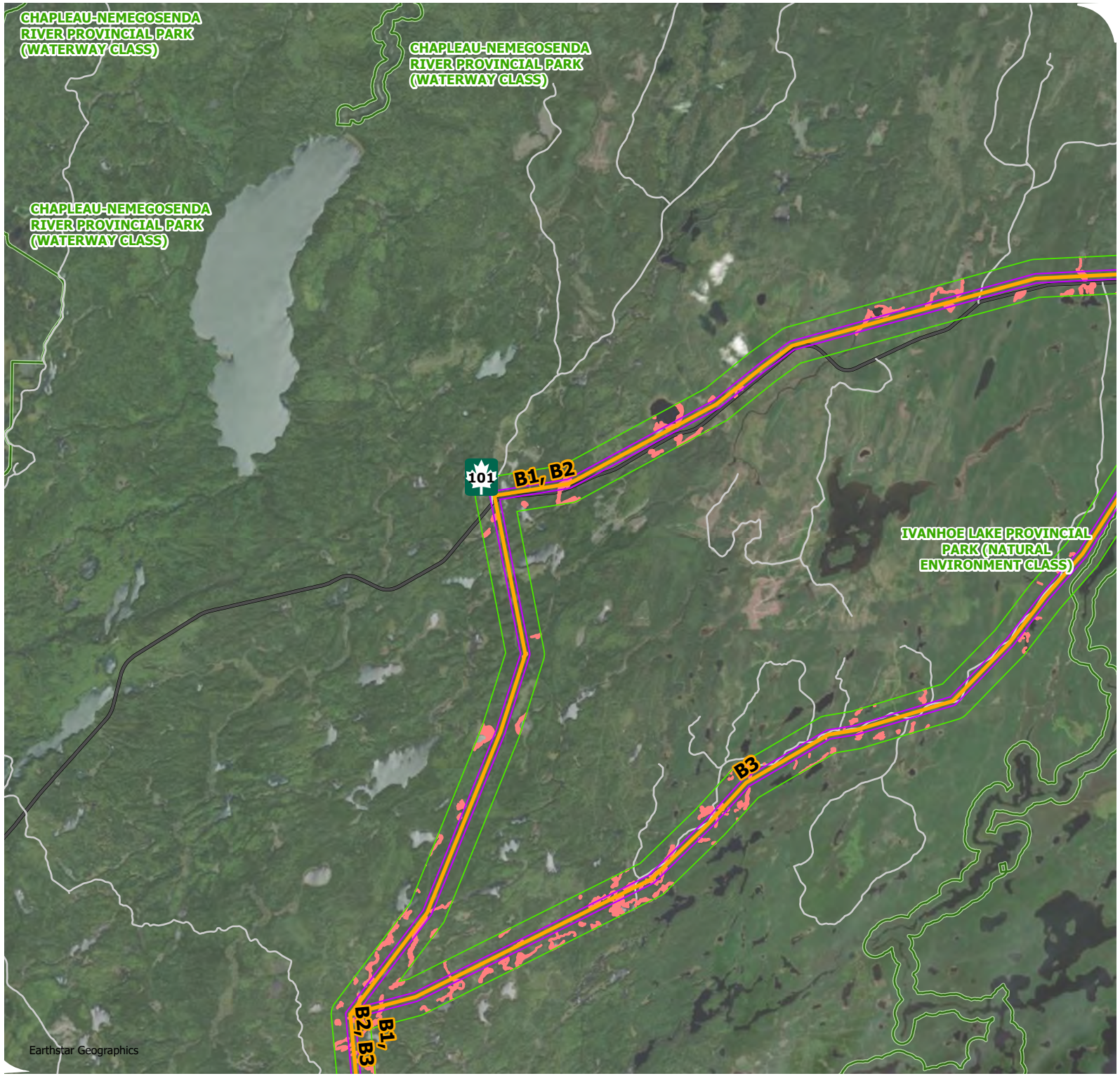
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 206. SWH - MARSH BIRD BREEDING HABITAT

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Marsh Bird Breeding Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

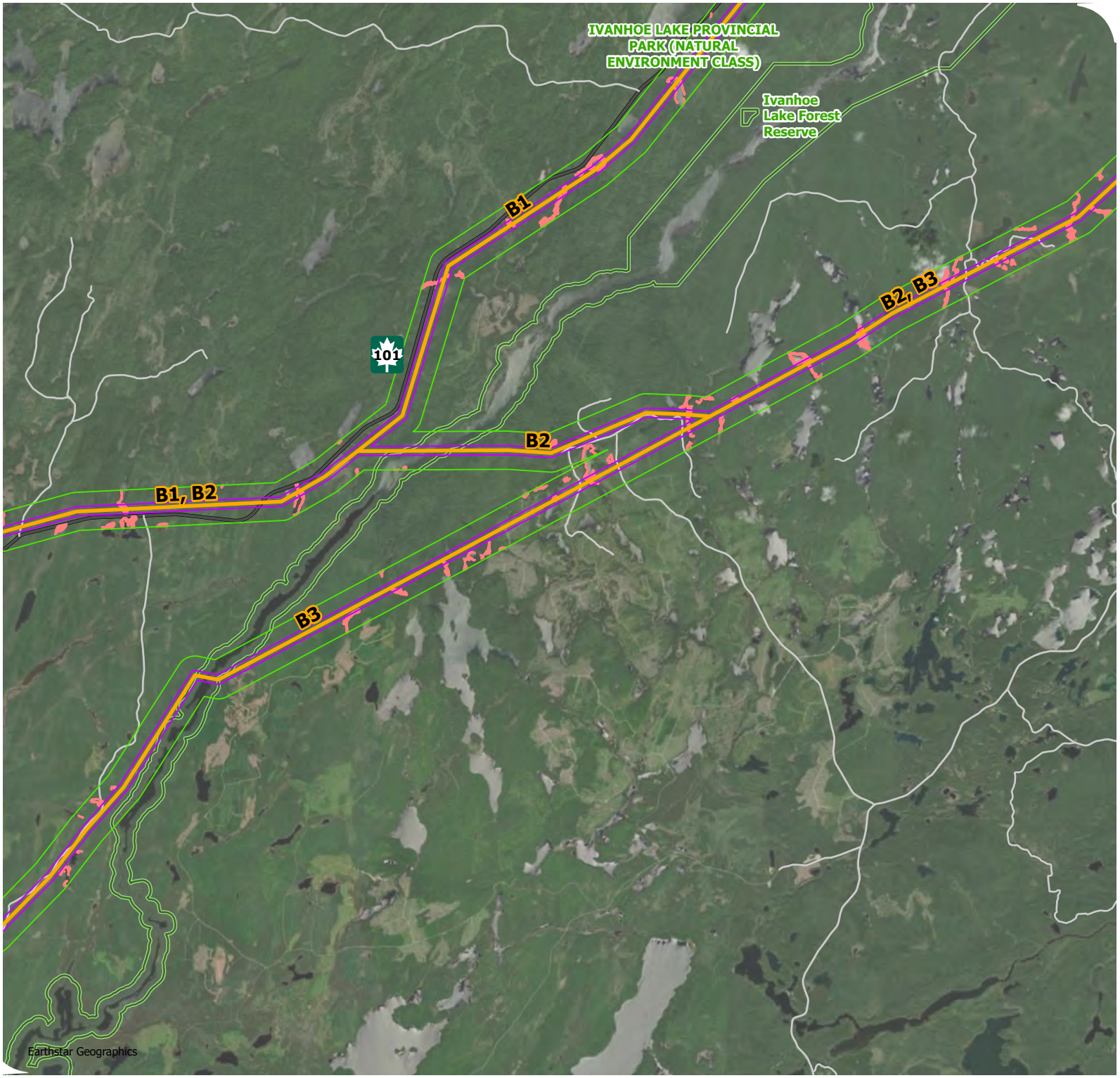


FIGURE 207. SWH - MARSH BIRD BREEDING HABITAT

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Marsh Bird Breeding Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

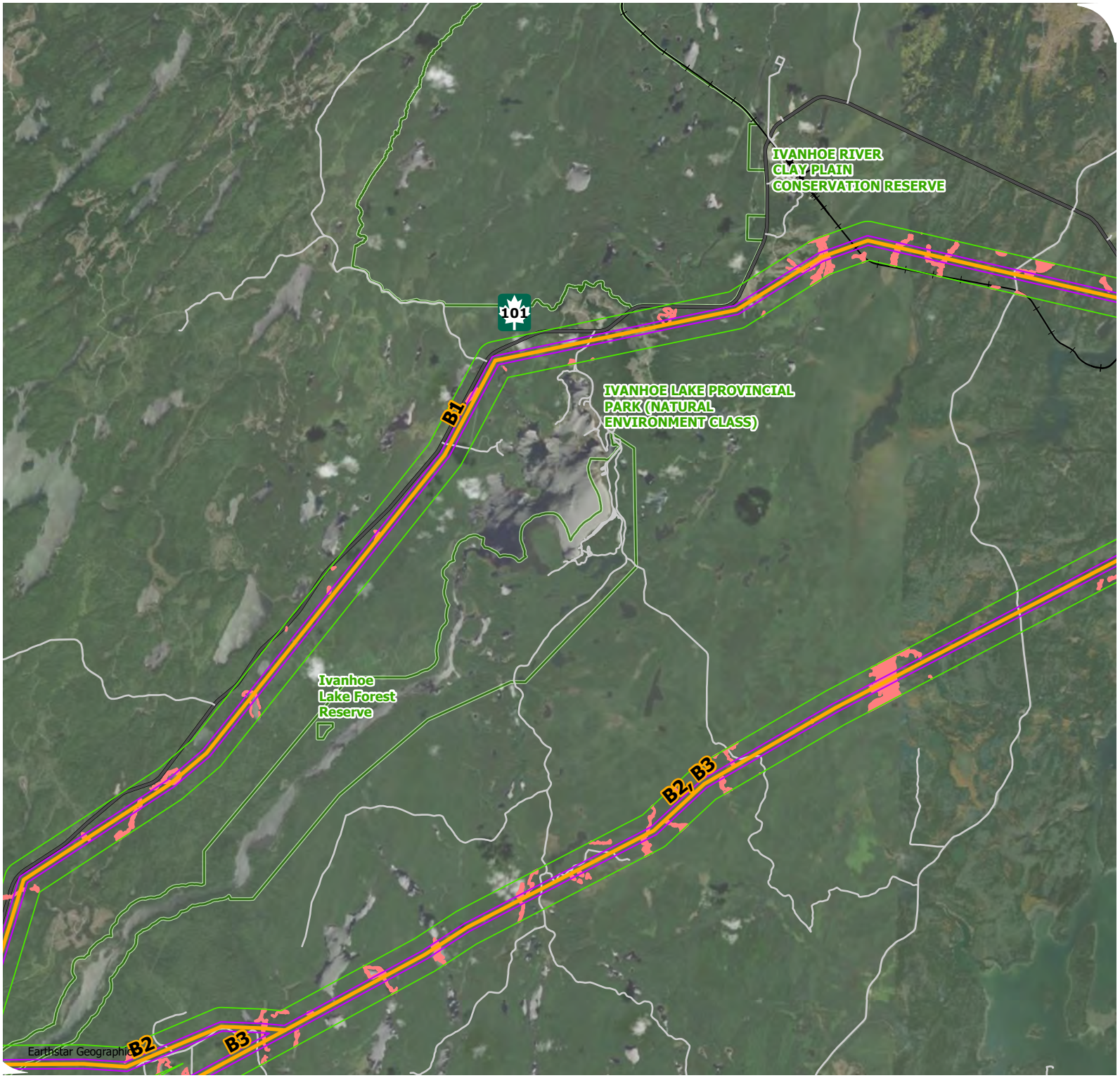


FIGURE 208. SWH - MARSH BIRD BREEDING HABITAT

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Marsh Bird Breeding Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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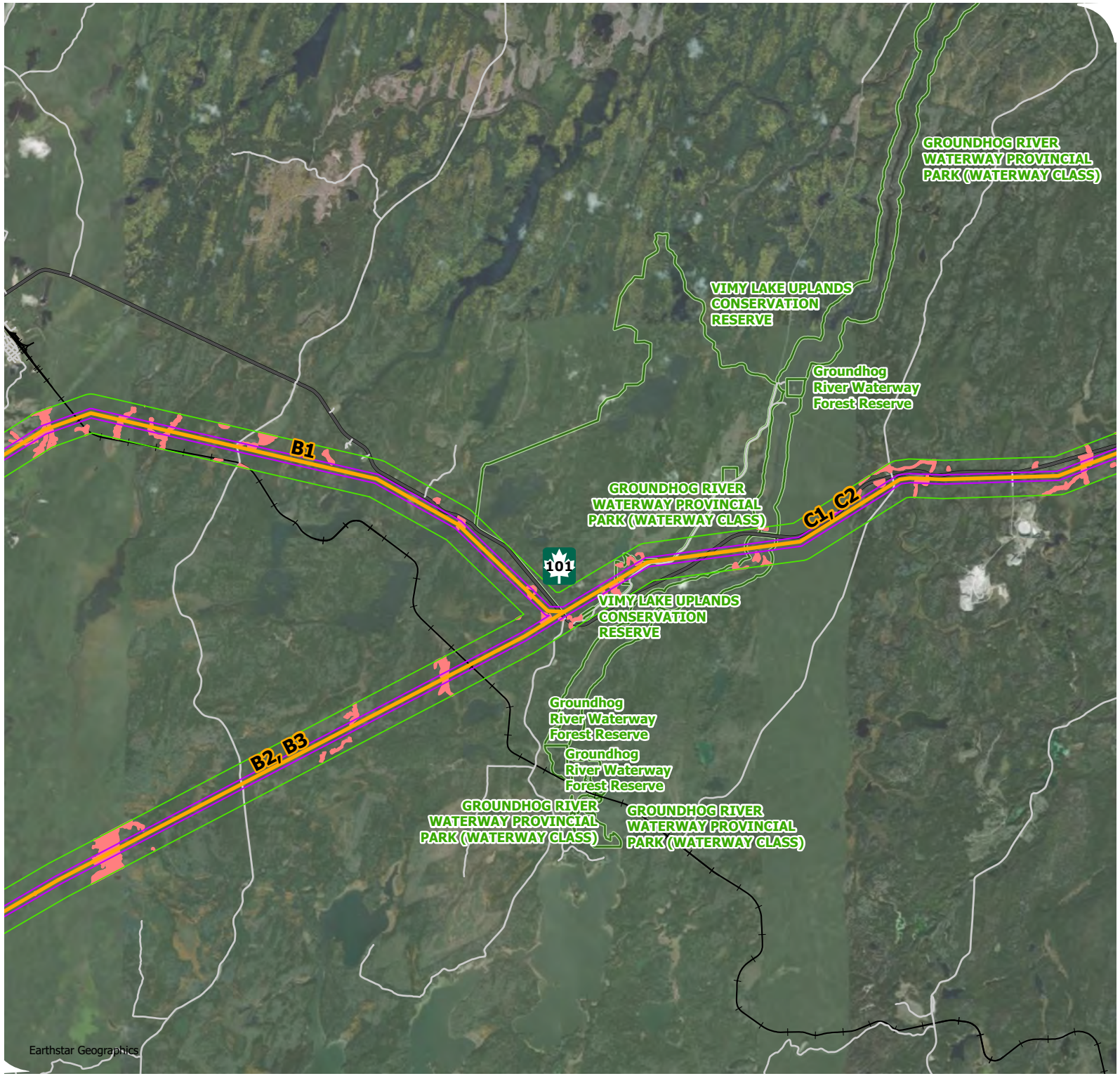
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WAWA TIMMINS POWER LINE

FIGURE 209. SWH - MARSH BIRD BREEDING HABITAT

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Marsh Bird Breeding Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

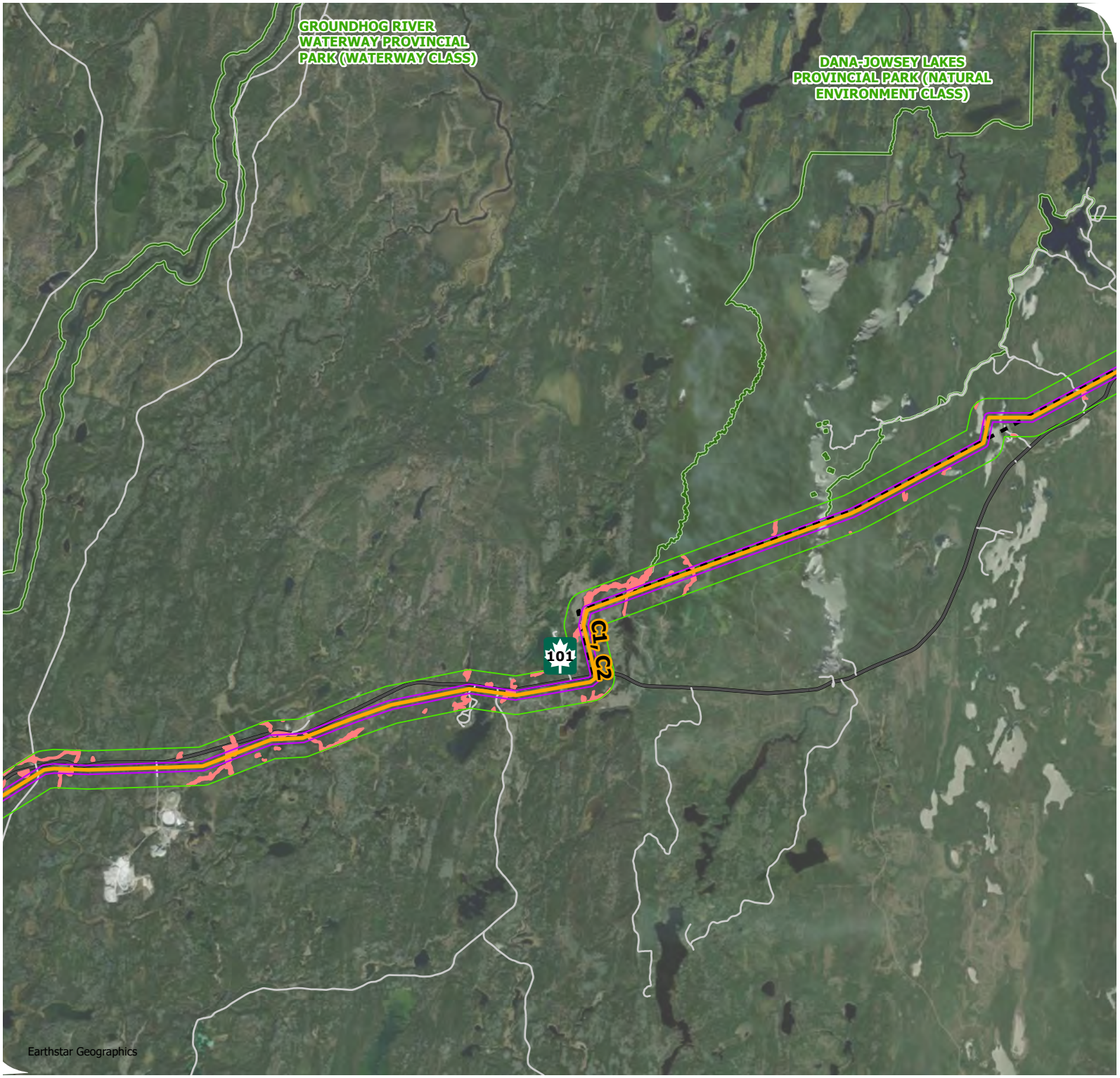
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 210. SWH - MARSH BIRD BREEDING HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Marsh Bird Breeding Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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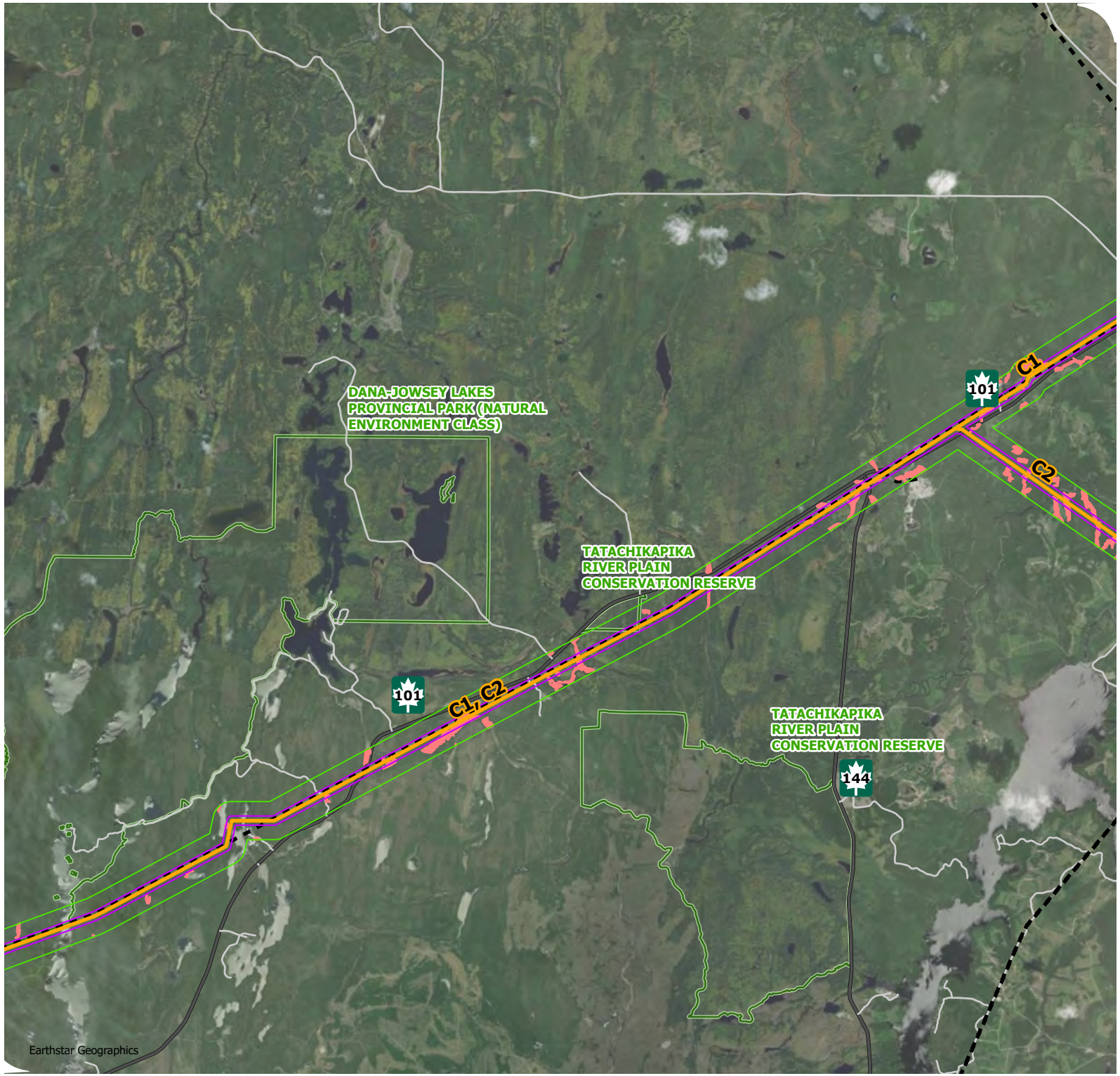
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WAWA TIMMINS POWER LINE

FIGURE 211. SWH - MARSH BIRD BREEDING HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Marsh Bird Breeding Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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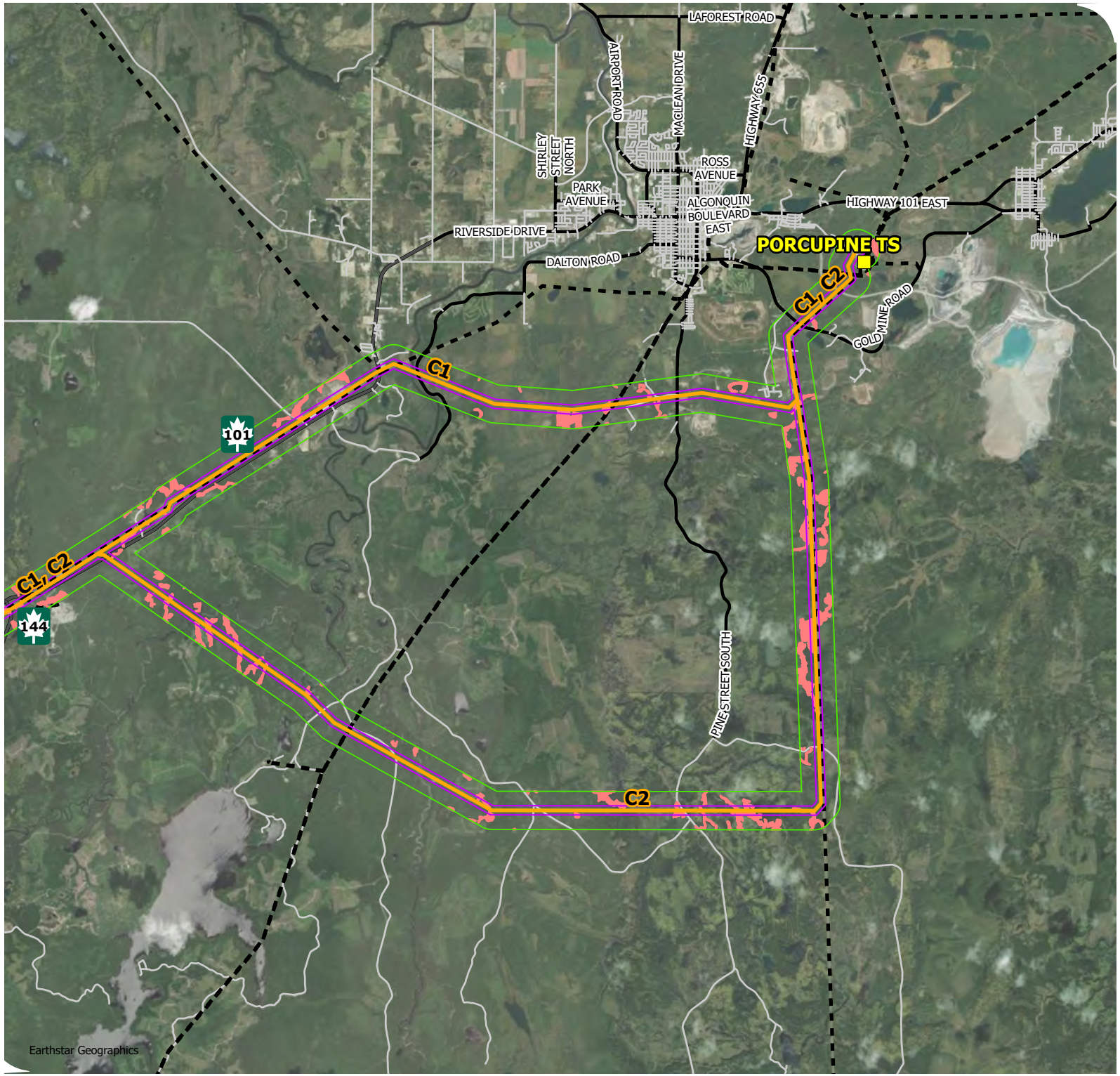
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WAWA TIMMINS POWER LINE

FIGURE 212. SWH - MARSH BIRD BREEDING HABITAT

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Marsh Bird Breeding Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

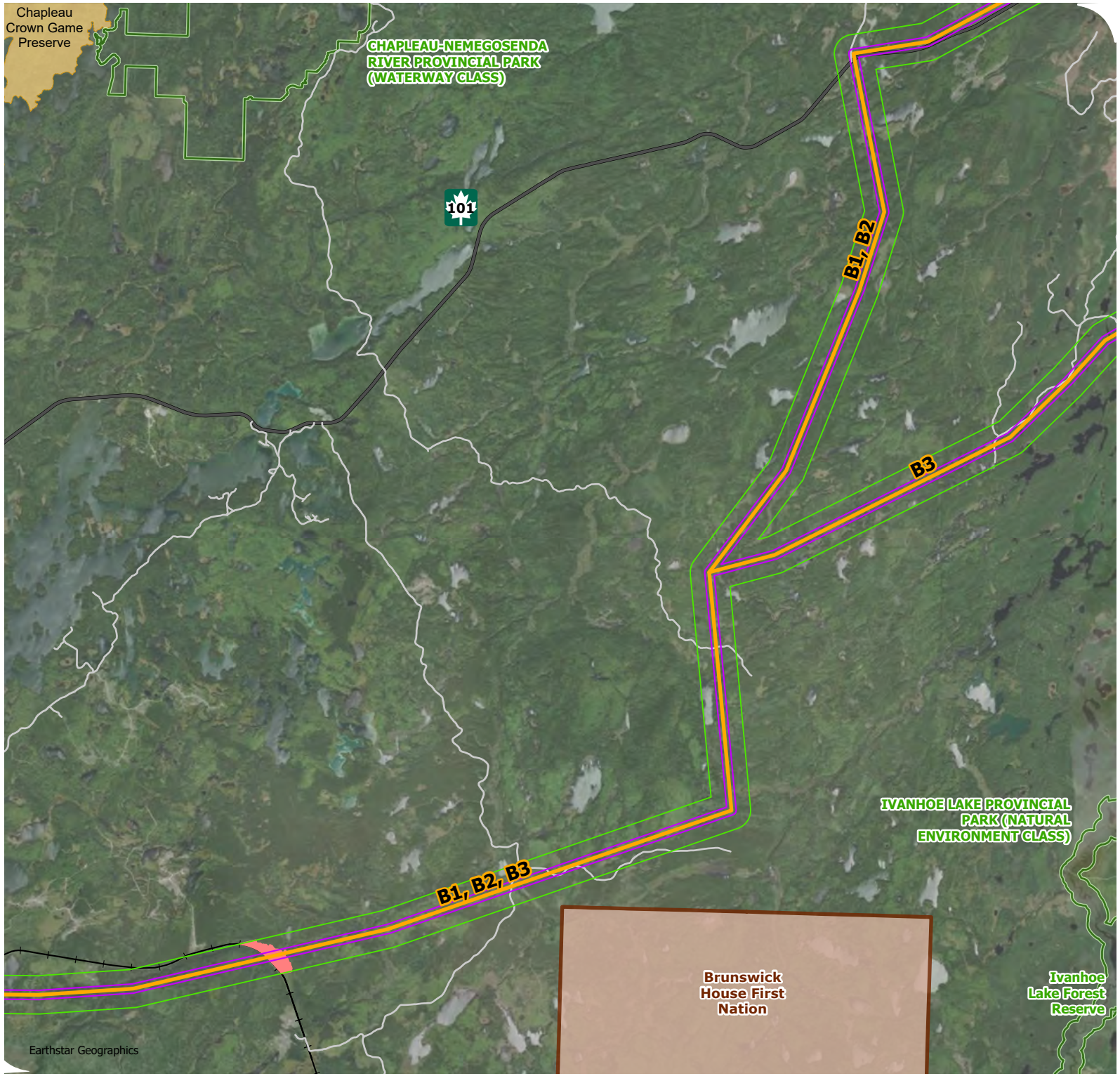
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WAWA TIMMINS POWER LINE

FIGURE 213. SWH - EARLY SUCCESSIONAL BIRD BREEDING HABITAT

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Early Successional Bird Breeding Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

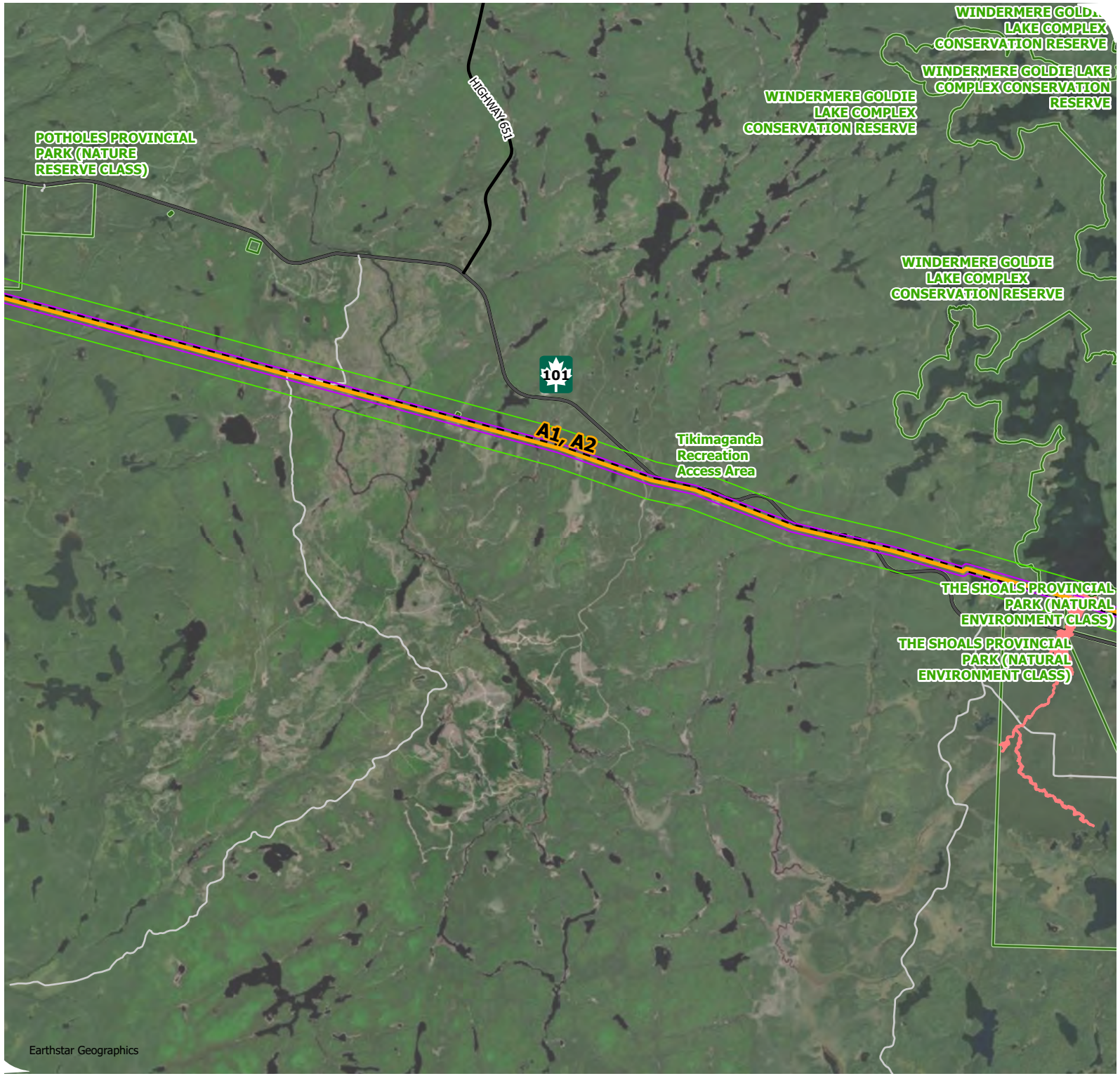
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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

WAWA TIMMINS POWER LINE

FIGURE 214. SWH - BLACK TERN HABITAT

Mapping Extent - Windermere Lake 1



- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Black Tern Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

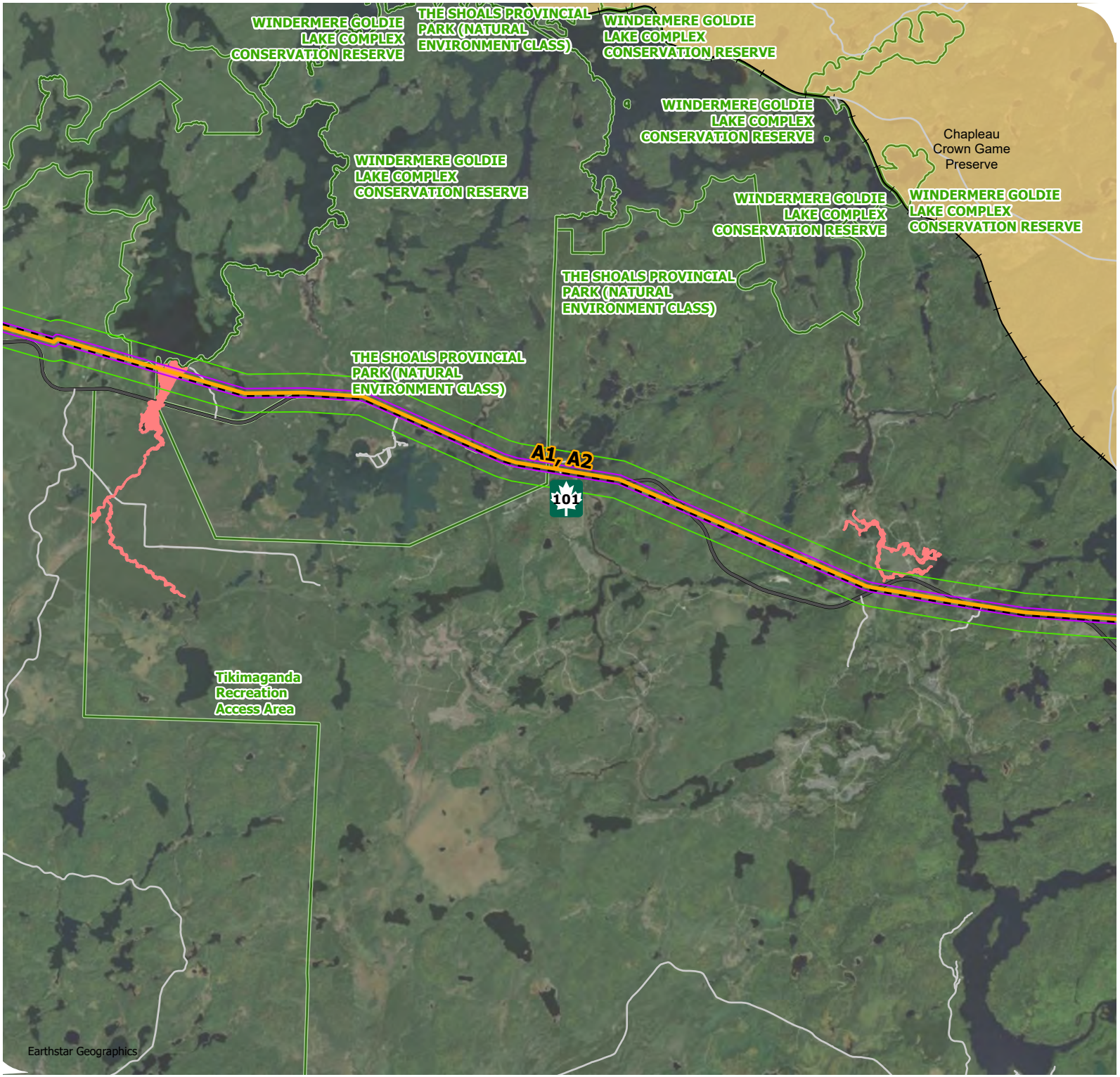
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 215. SWH - BLACK TERN HABITAT

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Black Tern Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

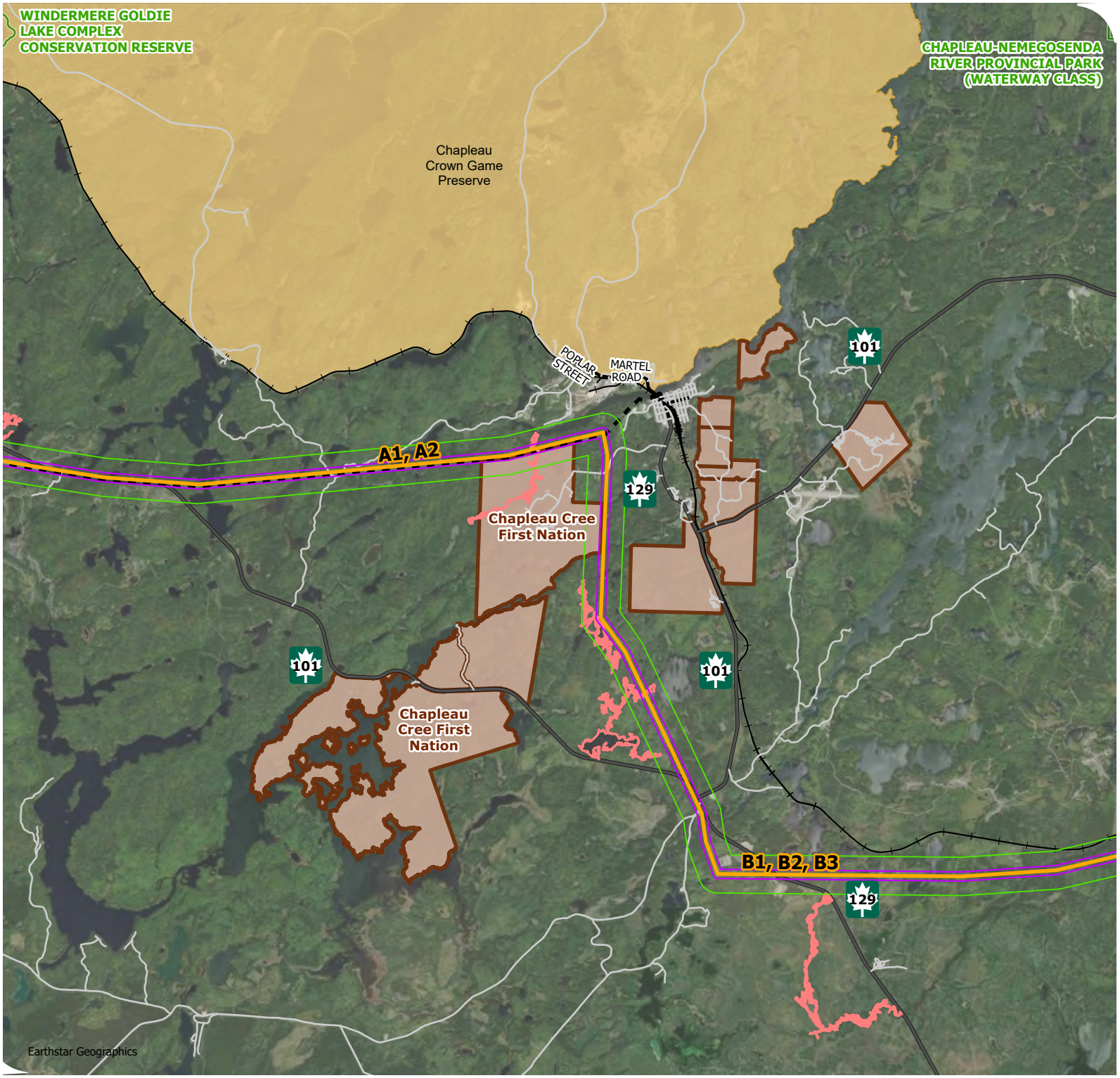
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 216. SWH - BLACK TERN HABITAT

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Black Tern Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

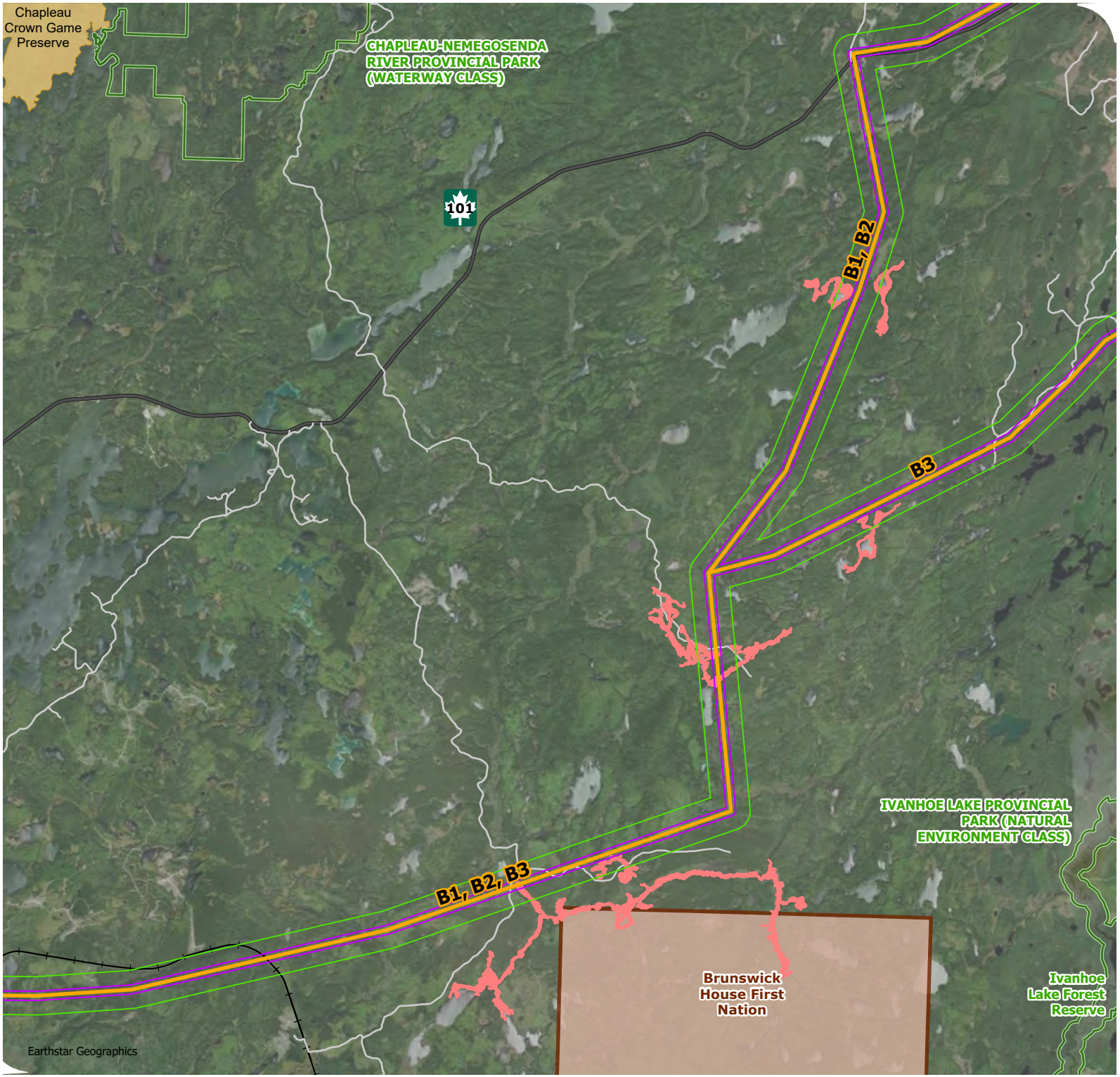
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 217. SWH - BLACK TERN HABITAT

Mapping Extent - Ivanhoe Lake 1

- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Black Tern Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

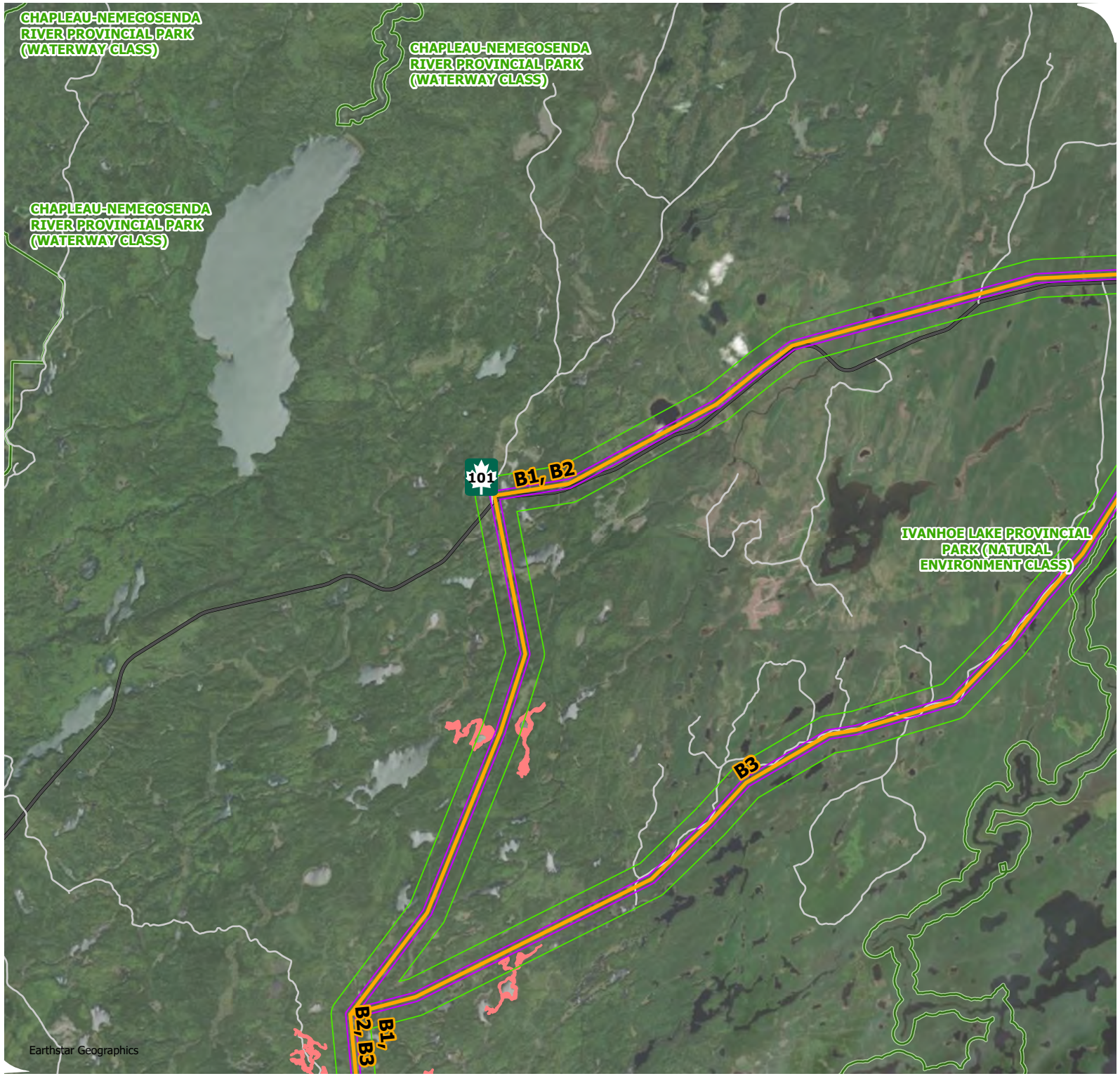
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 218. SWH - BLACK TERN HABITAT

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Black Tern Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

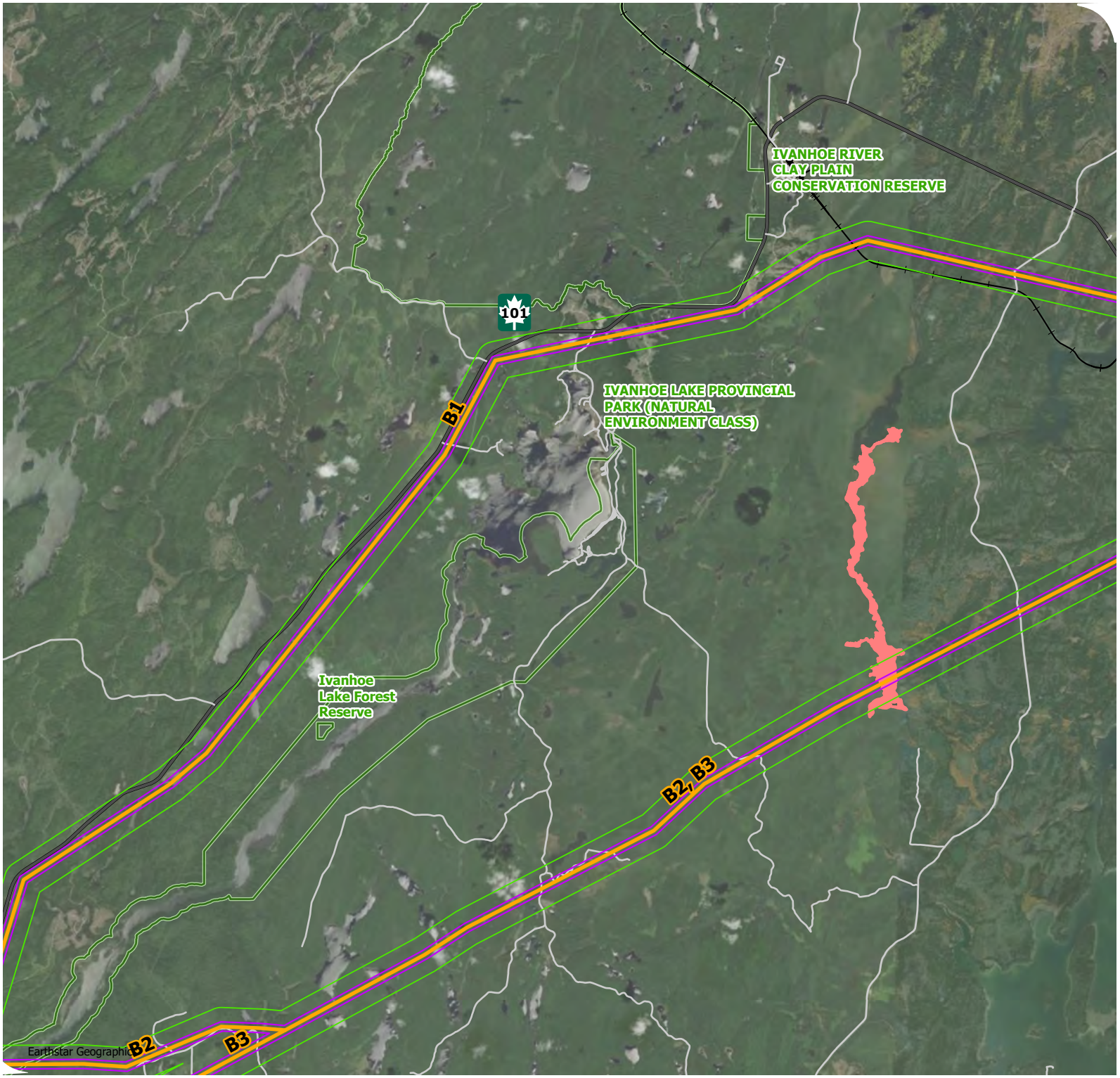
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STATUS: DRAFT
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WAWA TIMMINS POWER LINE

FIGURE 219. SWH - BLACK TERN HABITAT

Mapping Extent - Ivanhoe Lake 4



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Black Tern Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

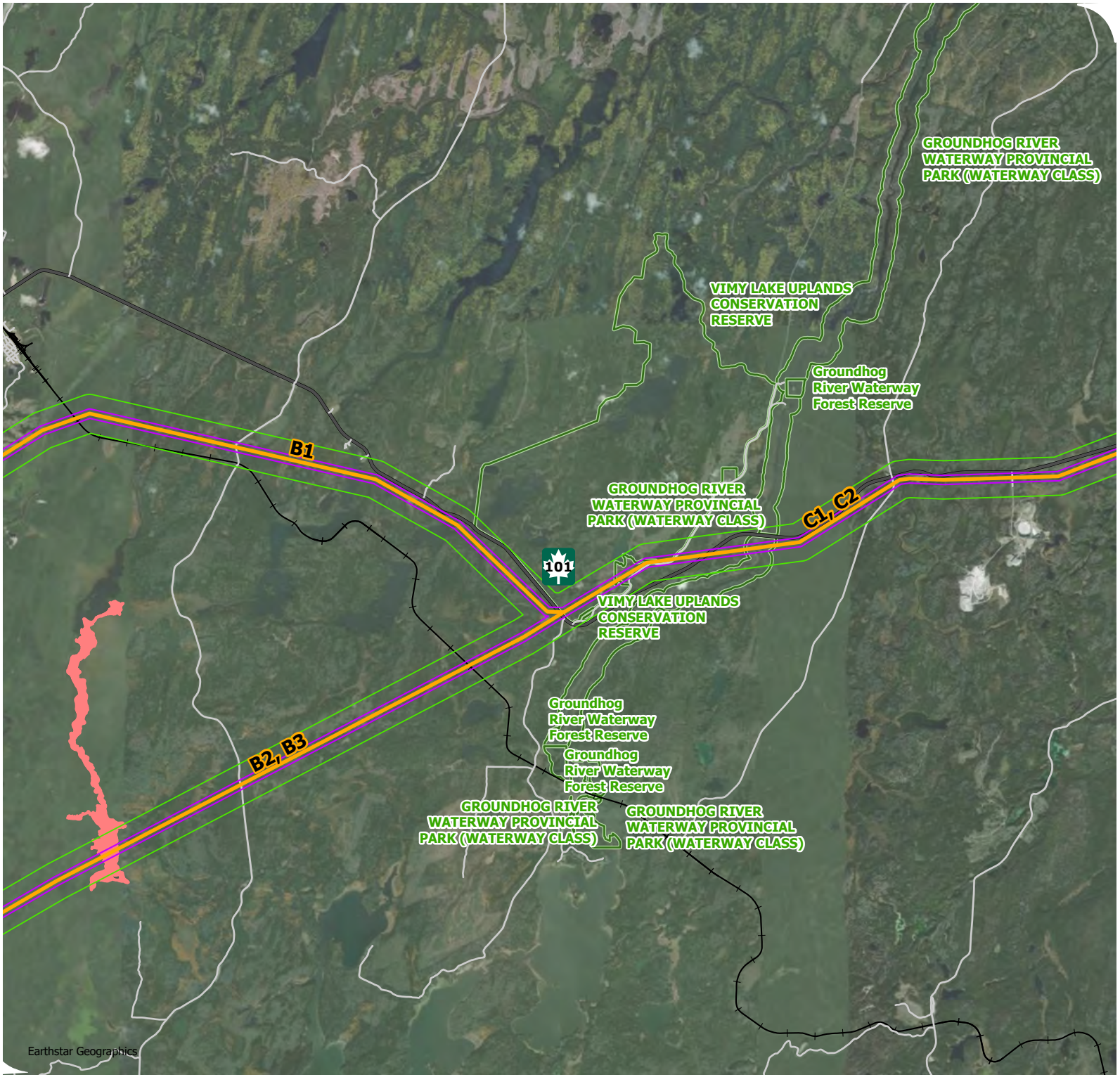
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WAWA TIMMINS POWER LINE

FIGURE 220. SWH - BLACK TERN HABITAT

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Black Tern Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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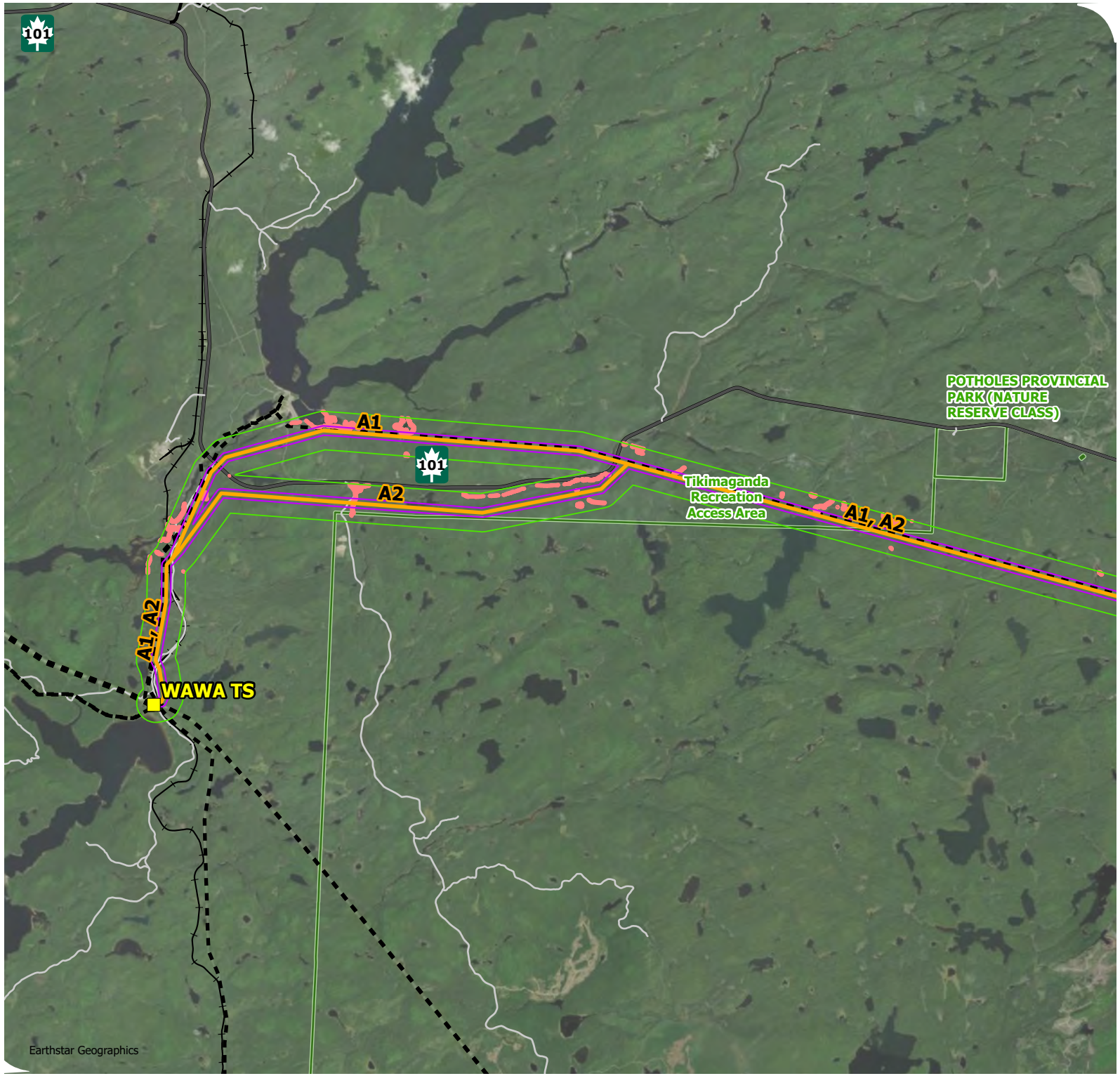
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WAWA TIMMINS POWER LINE

FIGURE 221. SWH - COMMON NIGHTHAWK HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Common Nighthawk Nesting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

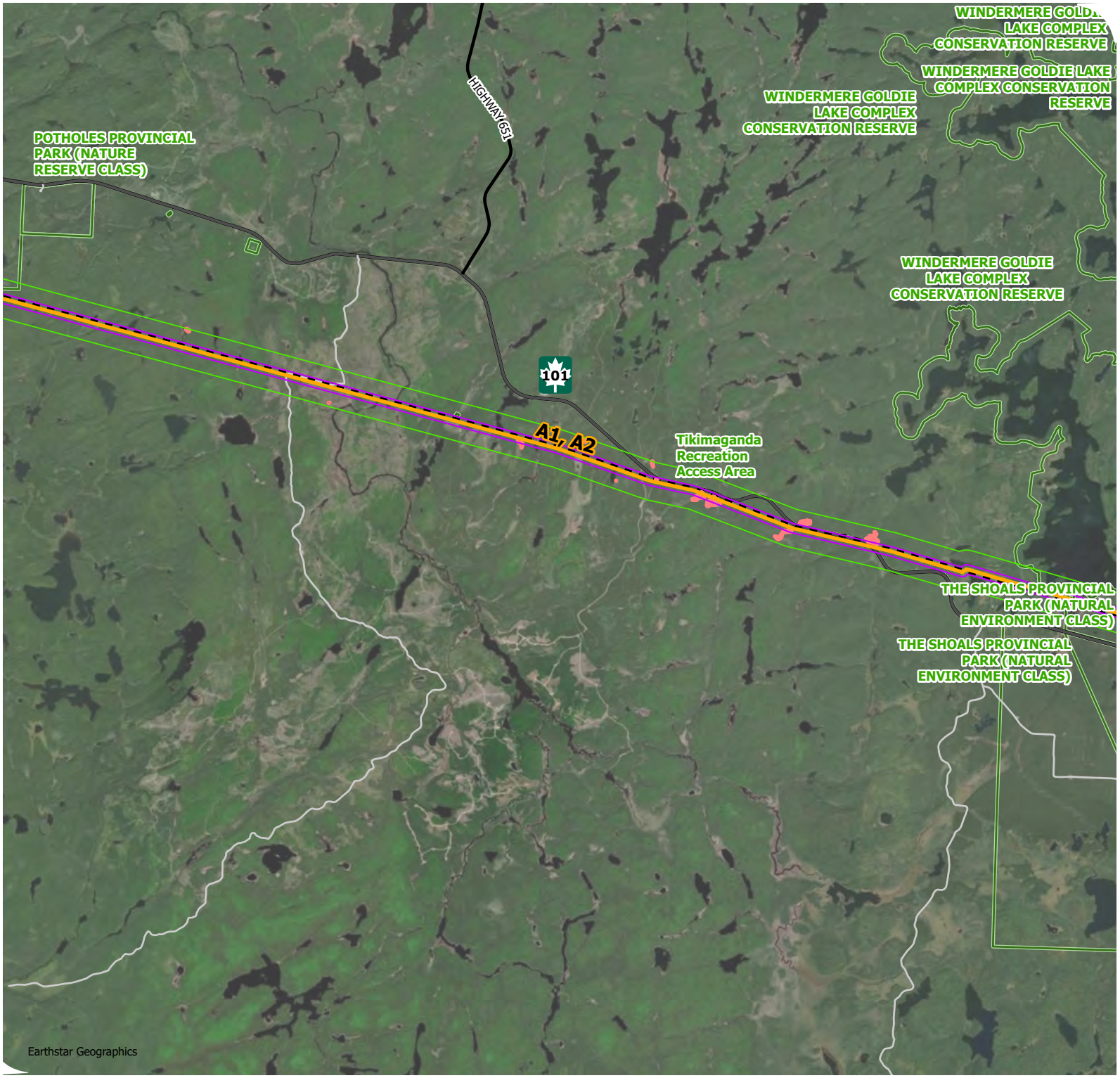
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 222. SWH - COMMON NIGHTHAWK HABITAT

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Common Nighthawk Nesting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

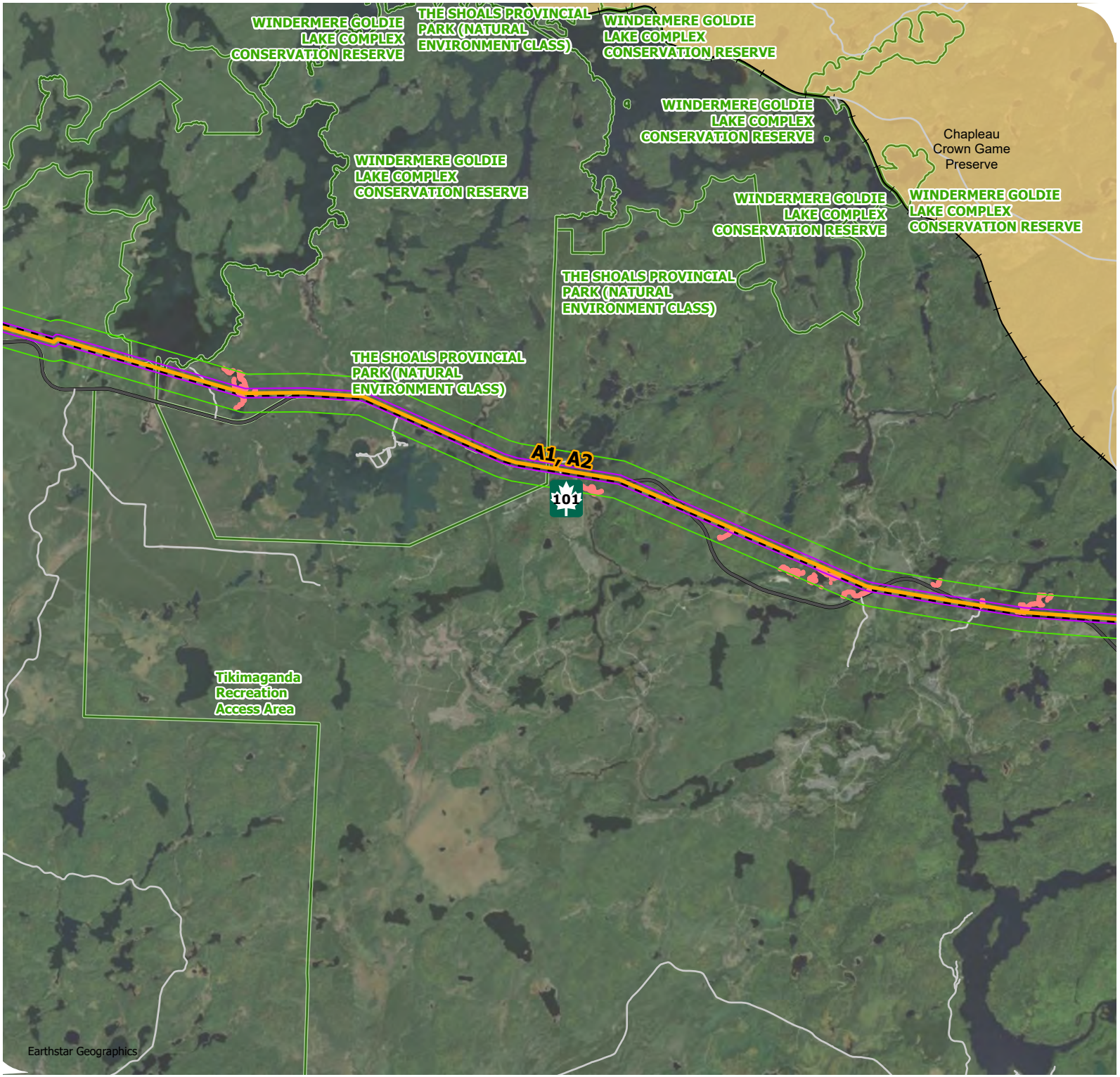
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 223. SWH - COMMON NIGHTHAWK HABITAT

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Common Nighthawk Nesting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

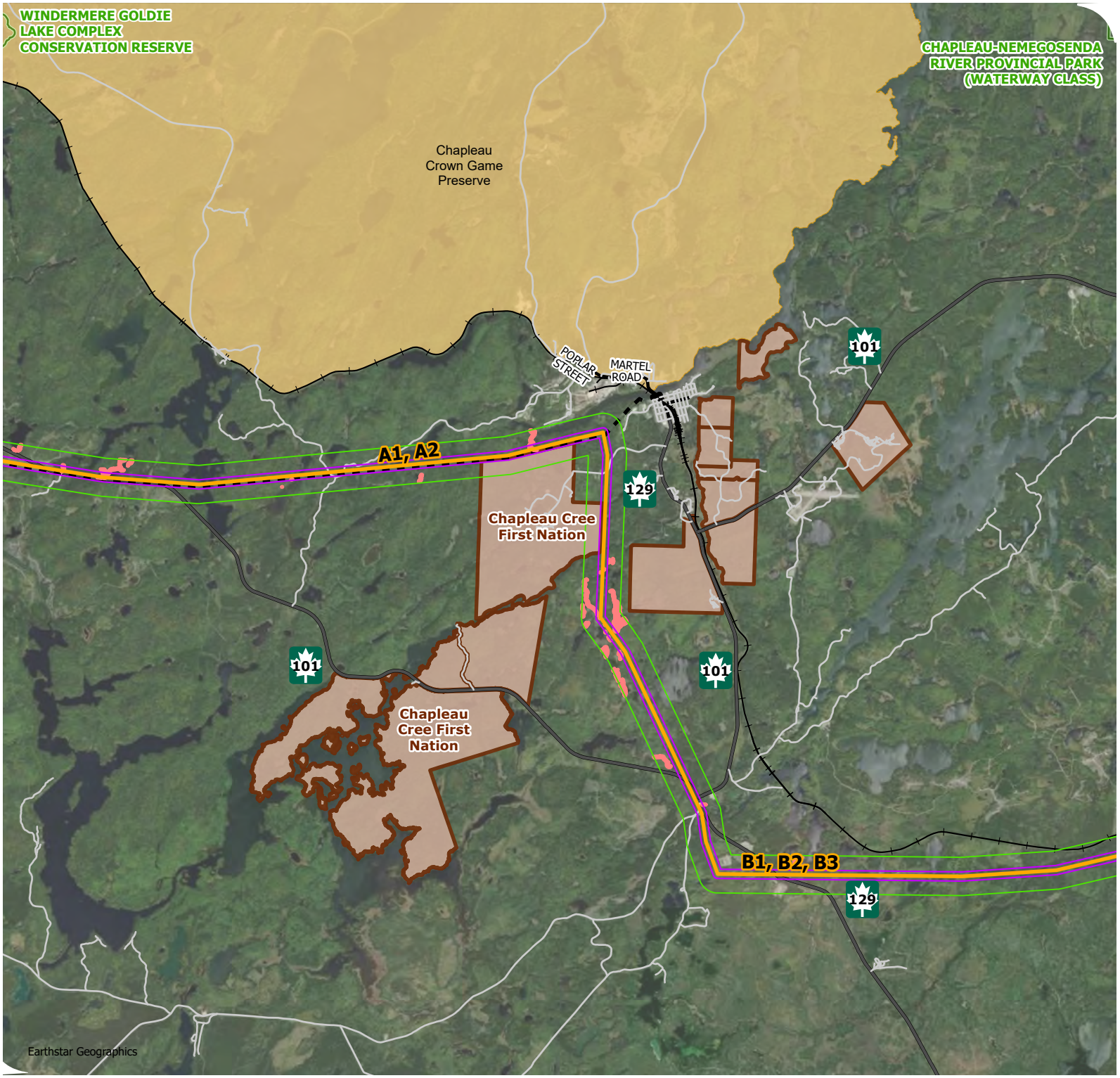
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
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WAWA TIMMINS POWER LINE

FIGURE 224. SWH - COMMON NIGHTHAWK HABITAT

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Common Nighthawk Nesting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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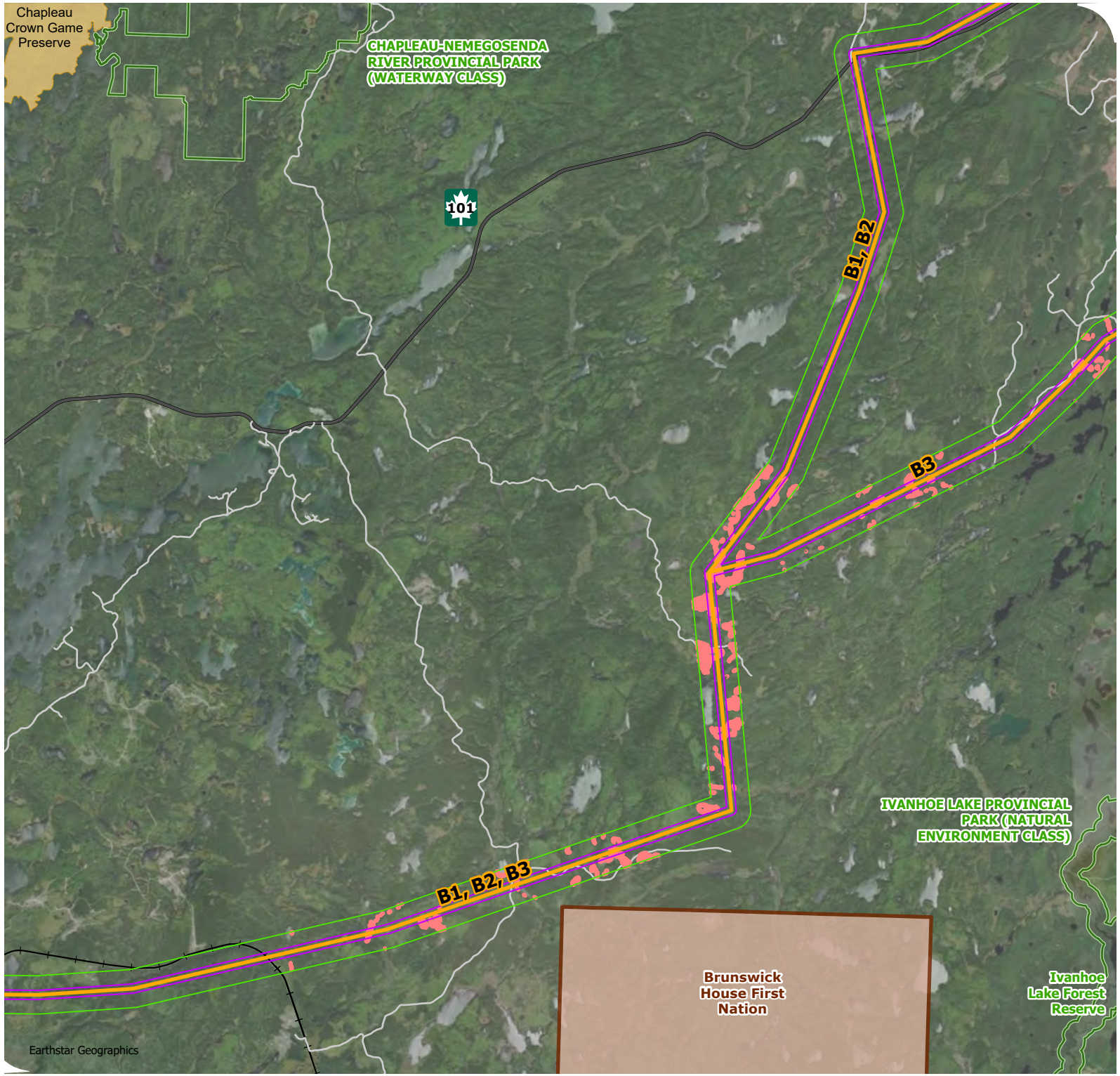
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WAWA TIMMINS POWER LINE

FIGURE 225. SWH - COMMON NIGHTHAWK HABITAT

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Common Nighthawk Nesting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

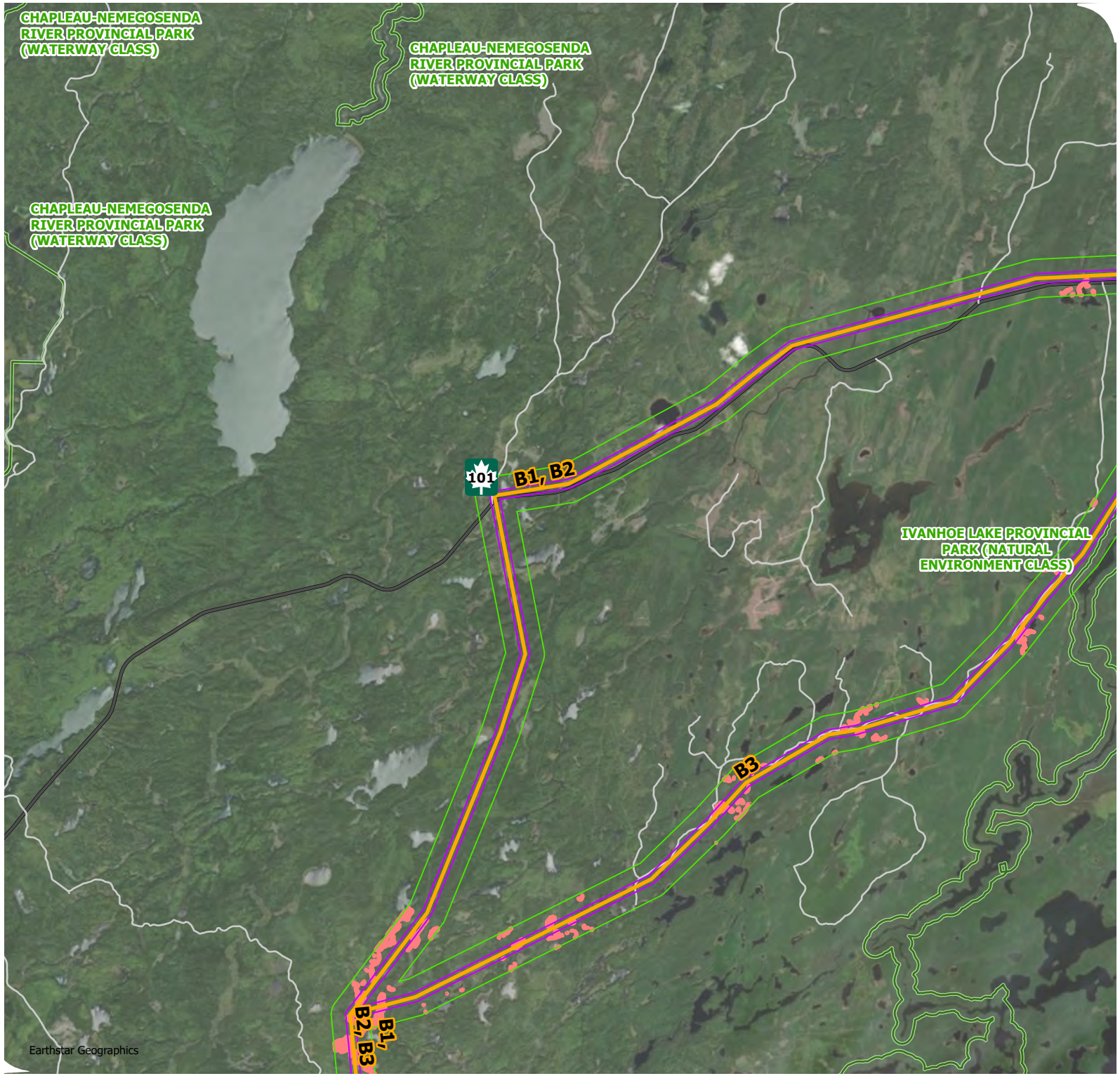
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WAWA TIMMINS POWER LINE

FIGURE 226. SWH - COMMON NIGHTHAWK HABITAT

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Common Nighthawk Nesting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

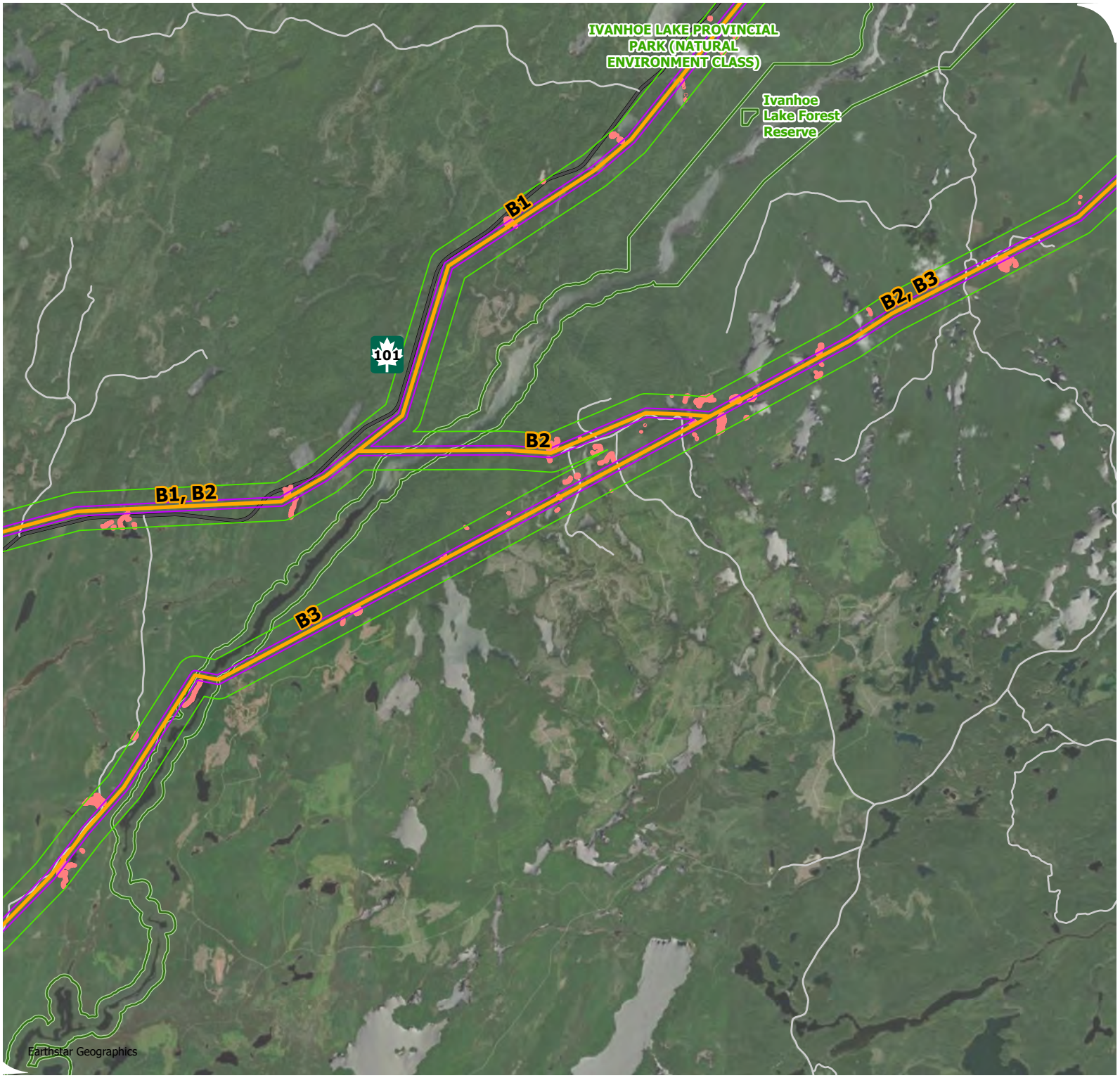
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 227. SWH - COMMON NIGHTHAWK HABITAT

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Common Nighthawk Nesting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
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WAWA TIMMINS POWER LINE

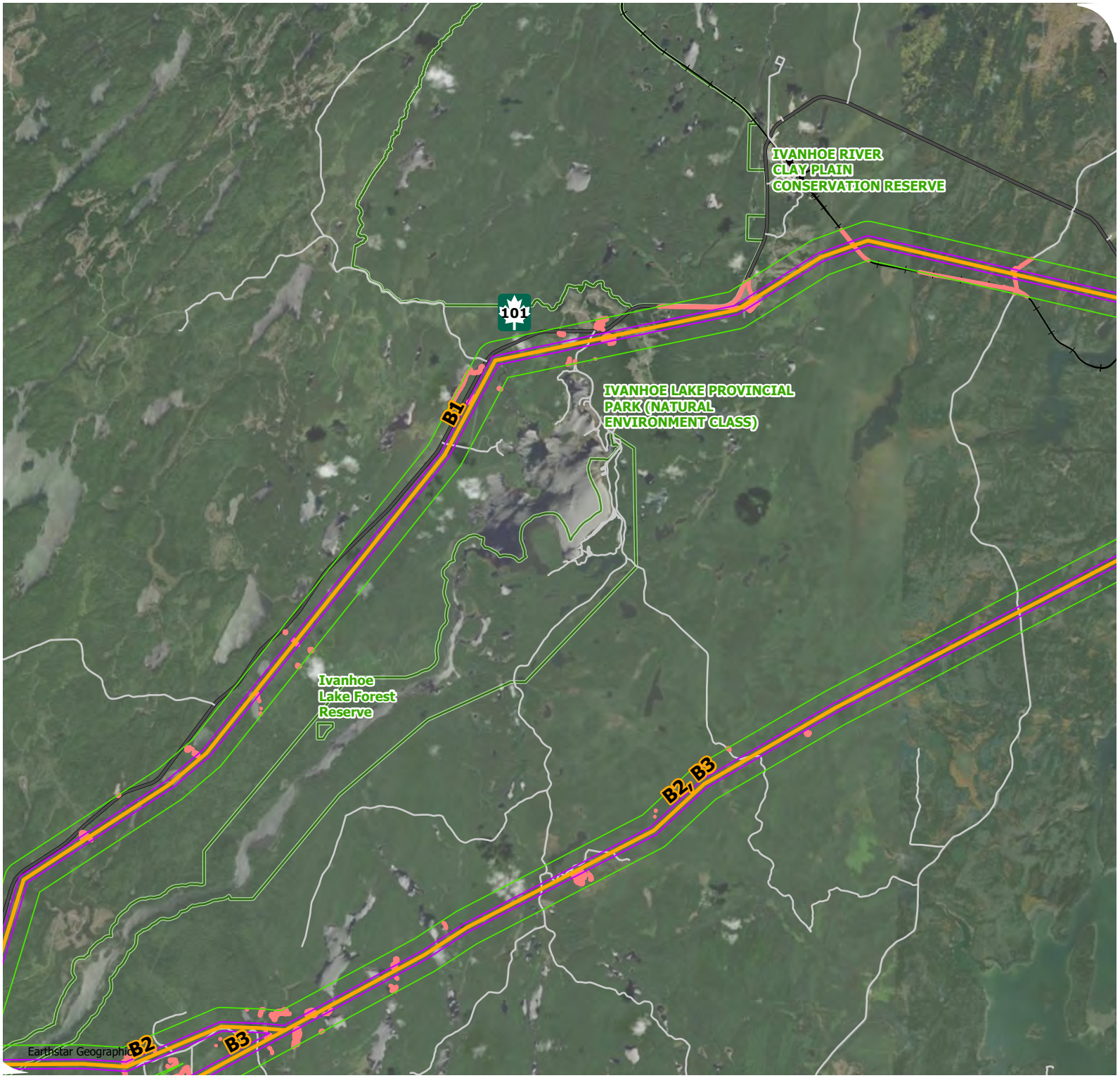


FIGURE 228. SWH - COMMON NIGHTHAWK HABITAT

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Common Nighthawk Nesting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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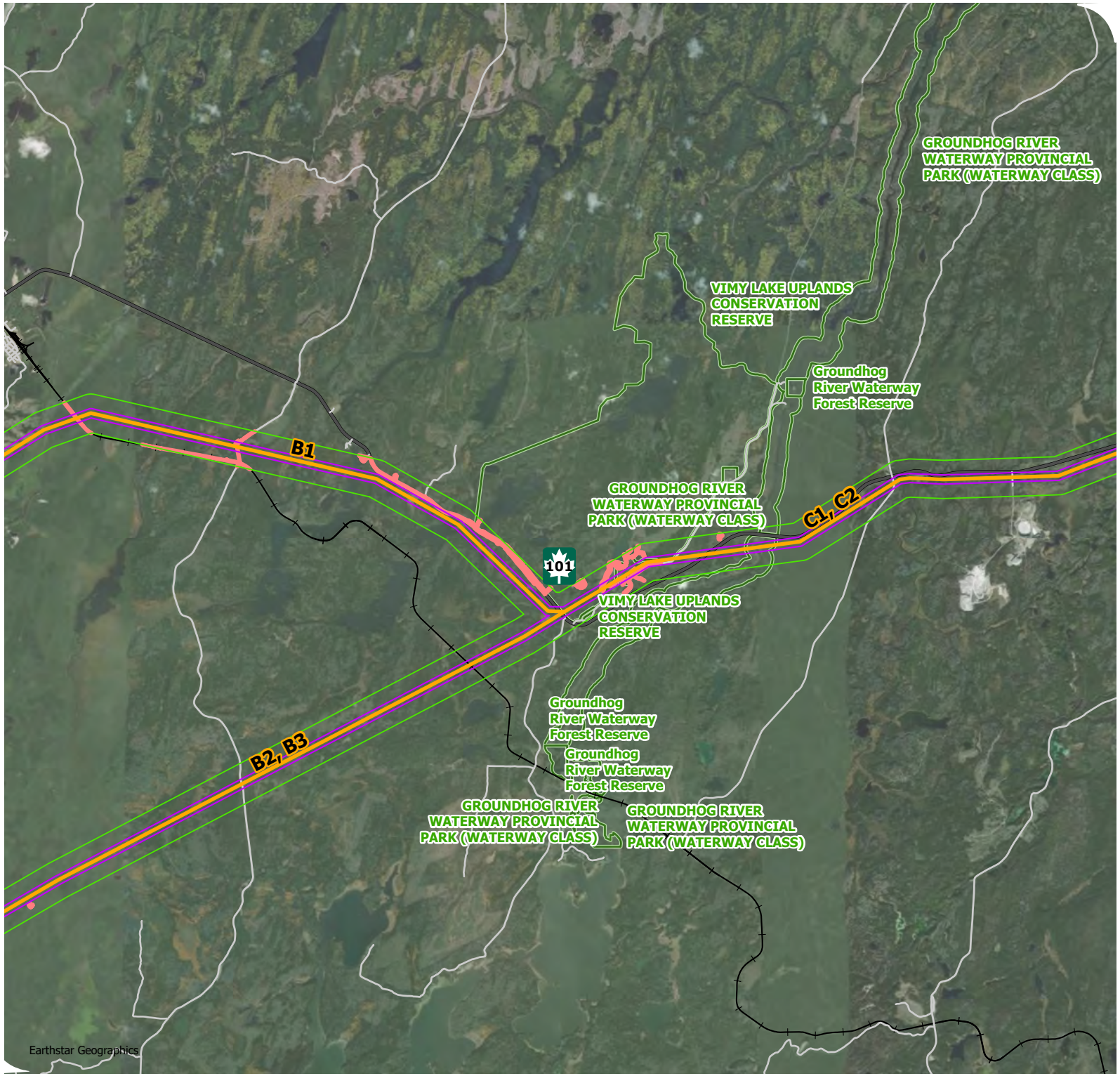
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WAWA TIMMINS POWER LINE

FIGURE 229. SWH - COMMON NIGHTHAWK HABITAT

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Common Nighthawk Nesting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

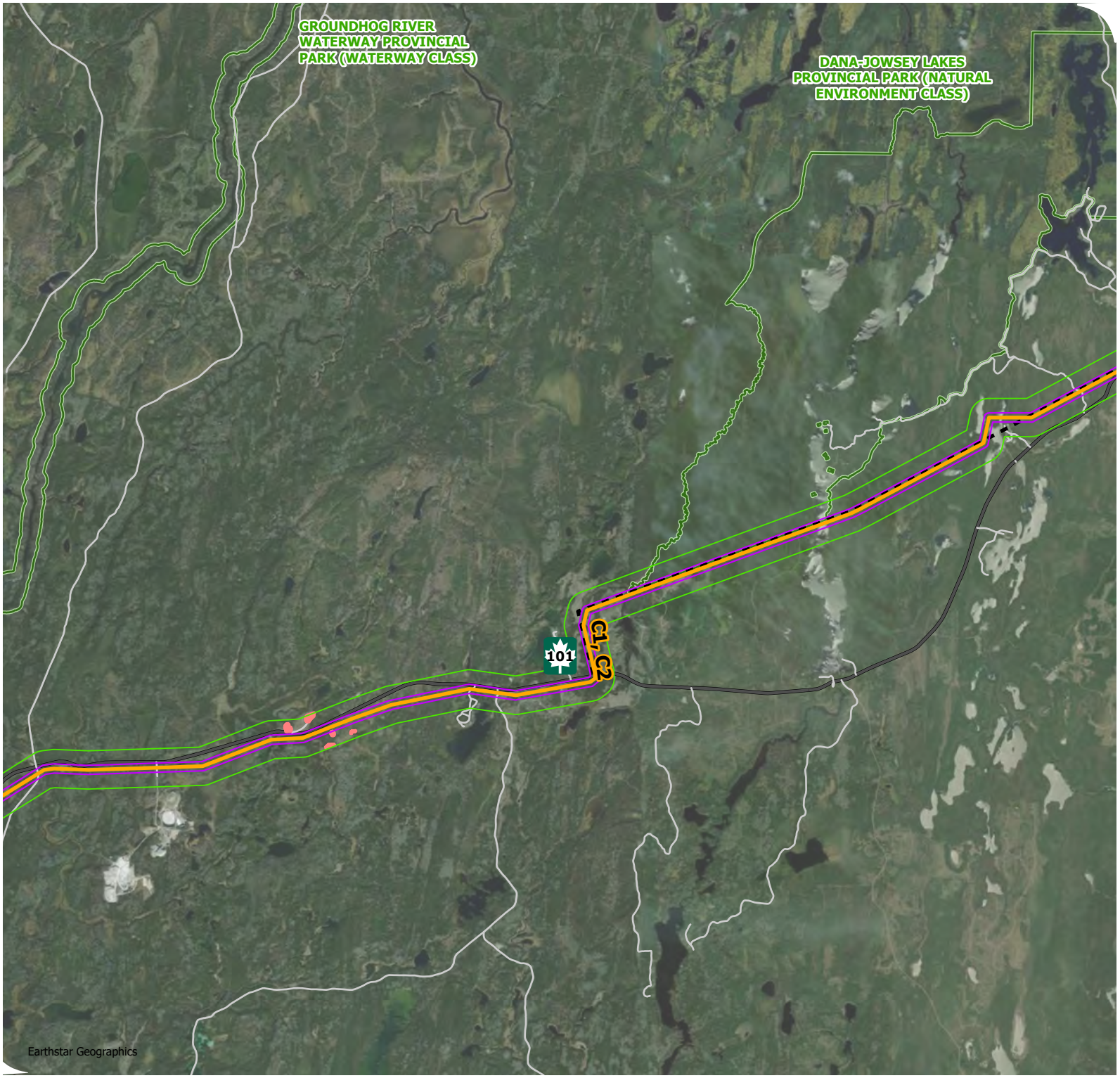
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WAWA TIMMINS POWER LINE

FIGURE 230. SWH - COMMON NIGHTHAWK HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Common Nighthawk Nesting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

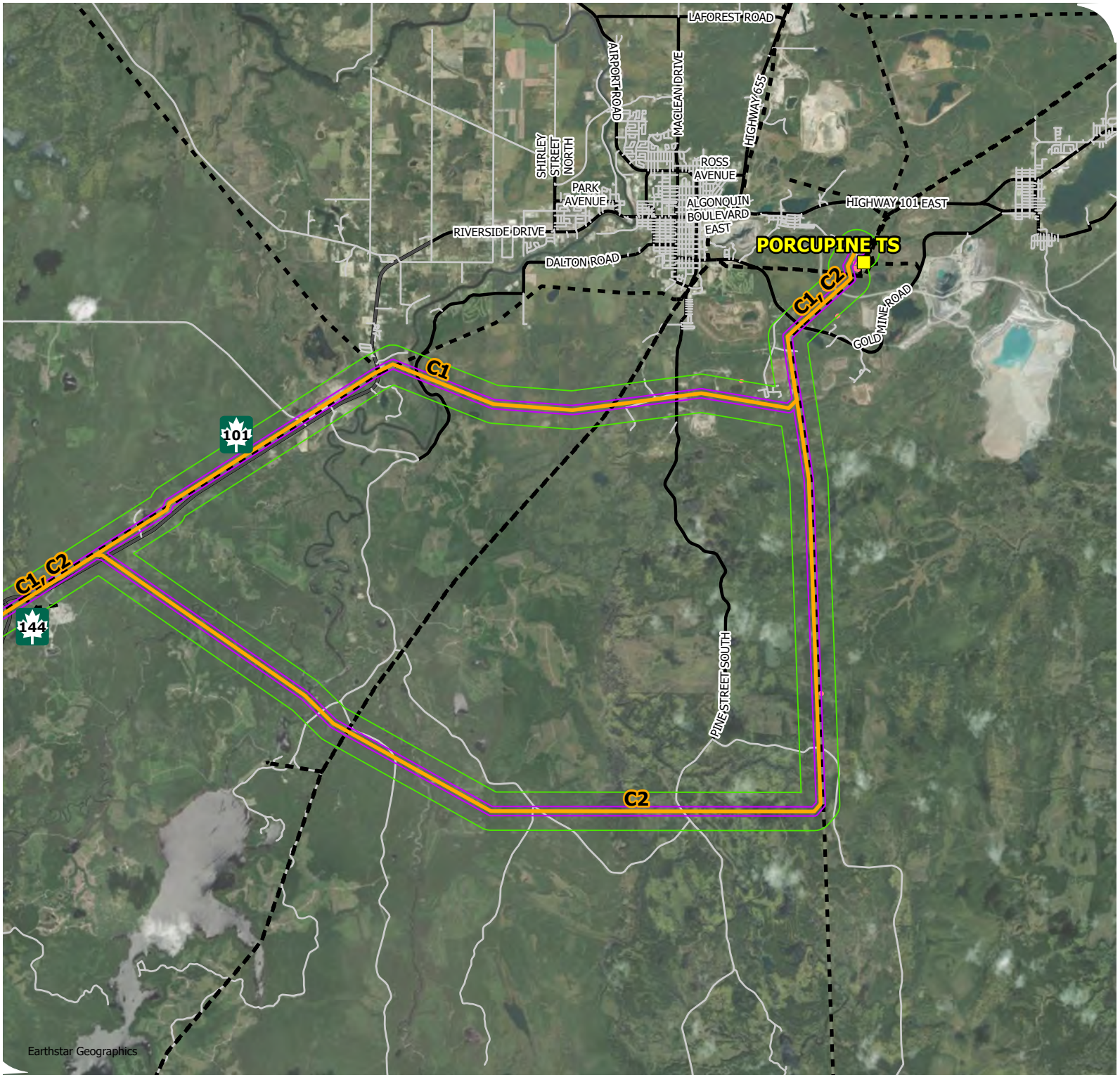


FIGURE 231. SWH - COMMON NIGHTHAWK HABITAT

Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Common Nighthawk Nesting Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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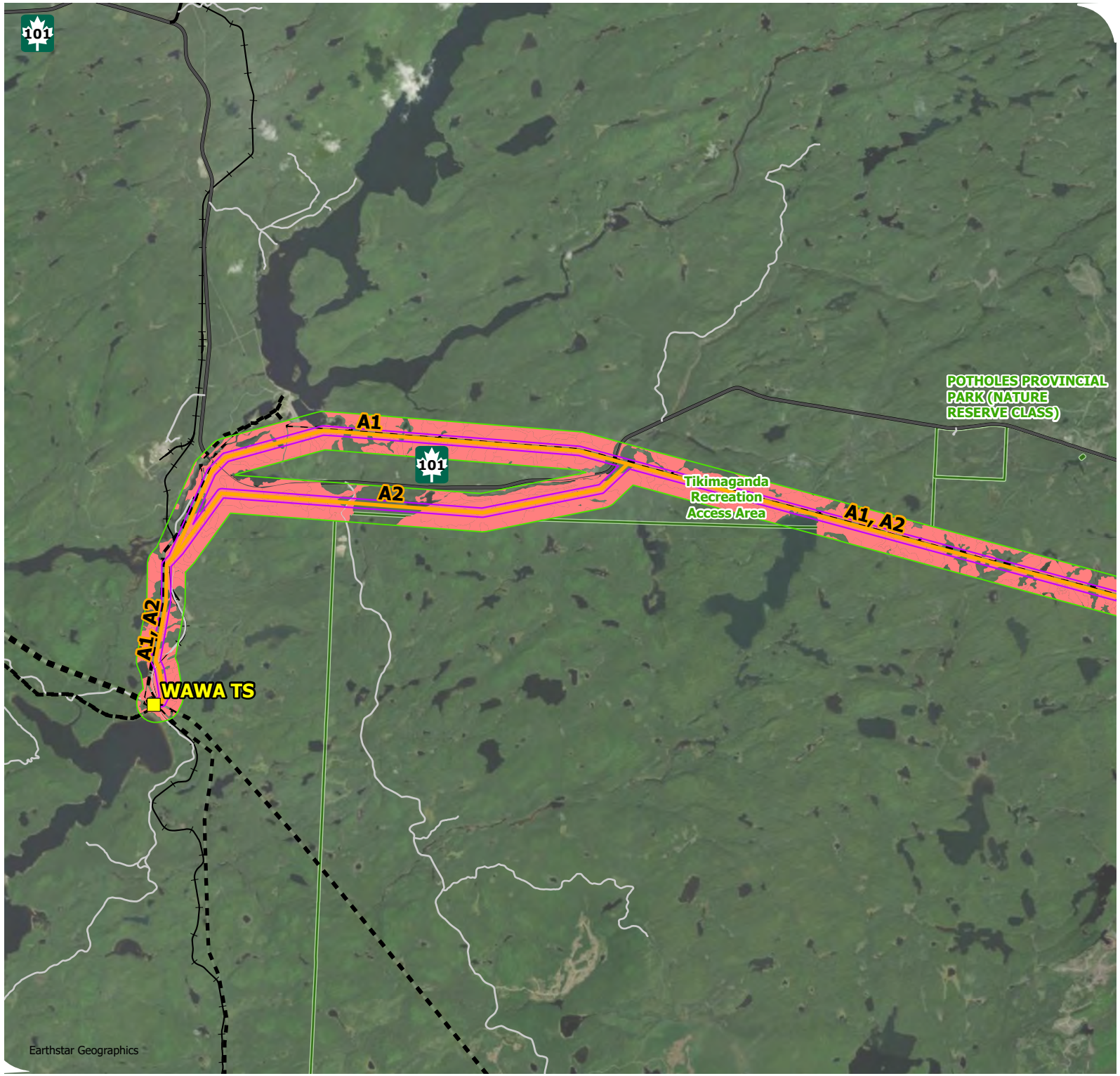
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WAWA TIMMINS POWER LINE

FIGURE 232. SWH - EASTERN WOOD-PEWEE HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Eastern Wood-pewee Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
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WAWA TIMMINS POWER LINE

FIGURE 233. SWH - EASTERN WOOD-PEWEE HABITAT

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Eastern Wood-pewee Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

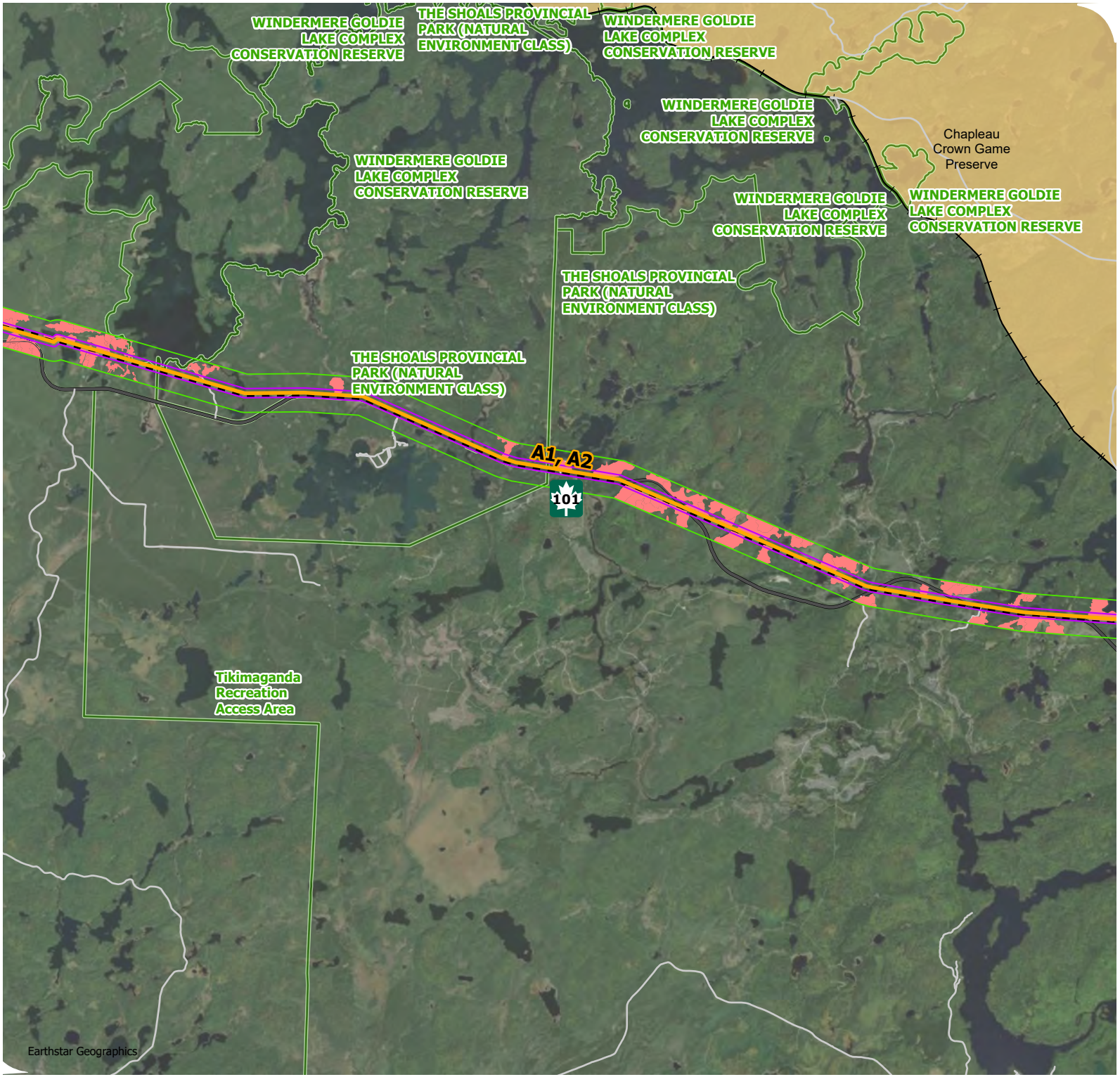
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WAWA TIMMINS POWER LINE

FIGURE 234. SWH - EASTERN WOOD-PEWEE HABITAT

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Eastern Wood-pewee Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

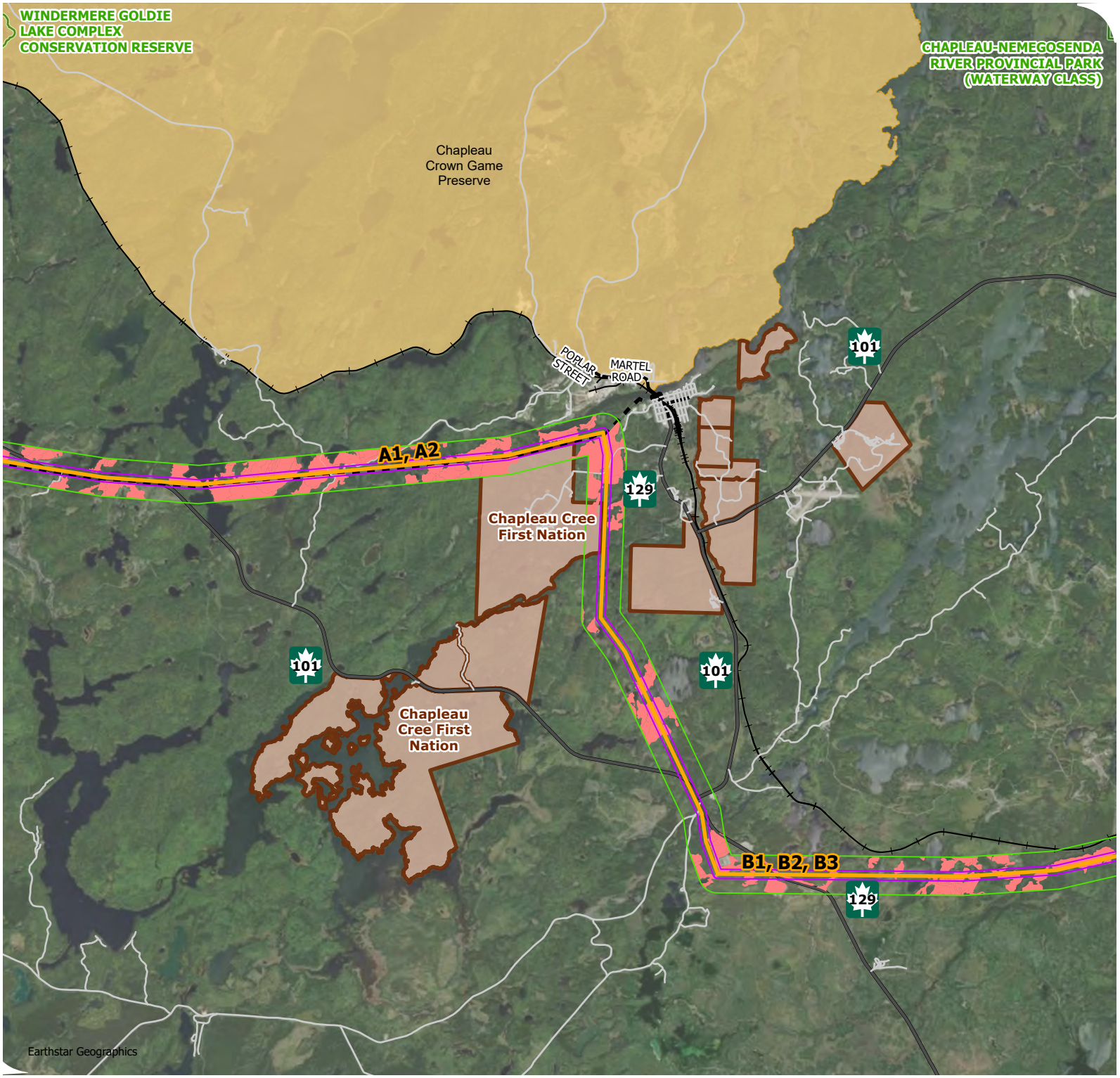
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 235. SWH - EASTERN WOOD-PEWEE HABITAT

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Eastern Wood-pewee Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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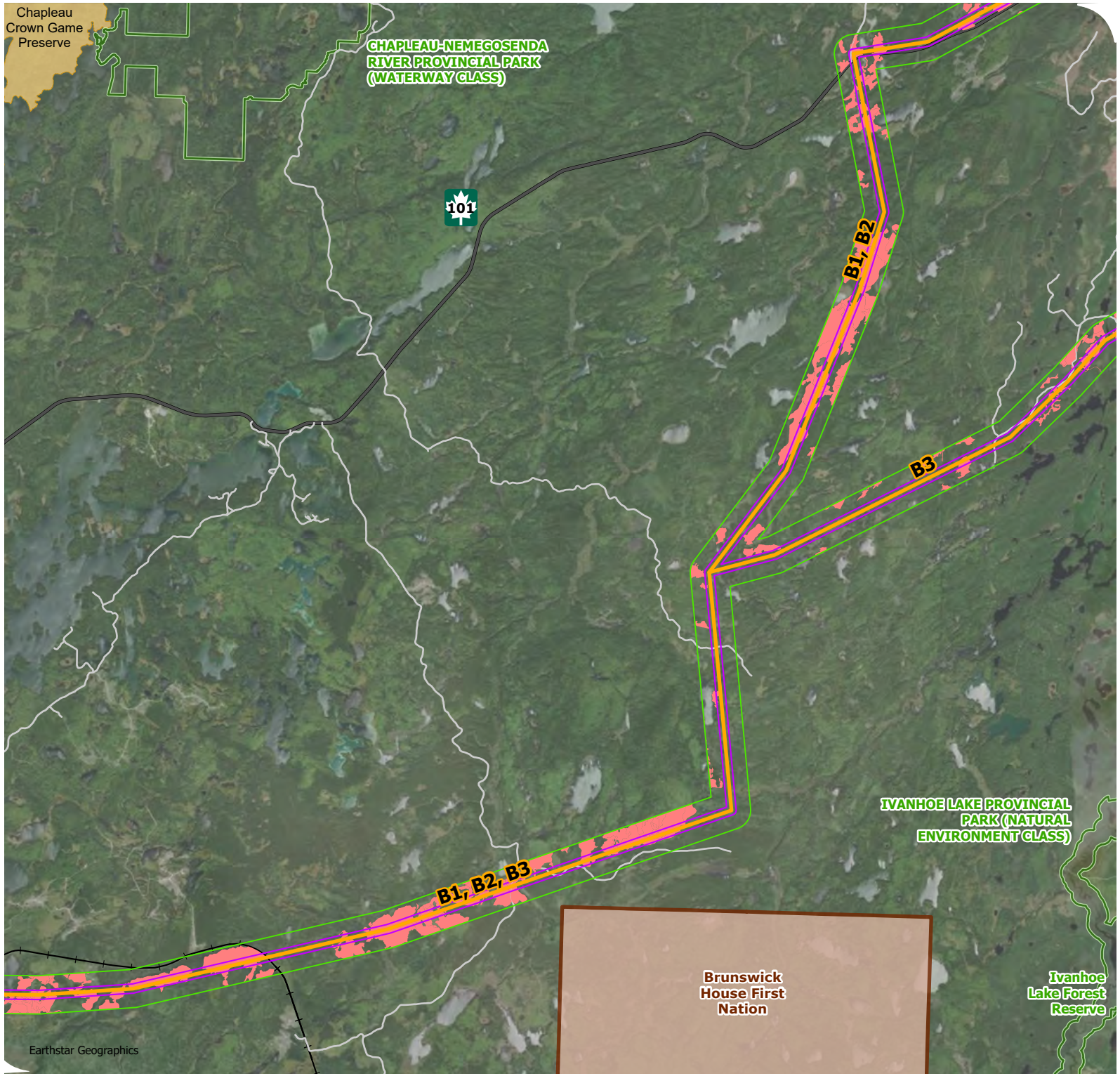
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WAWA TIMMINS POWER LINE

FIGURE 236. SWH - EASTERN WOOD-PEWEE HABITAT

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Eastern Wood-pewee Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

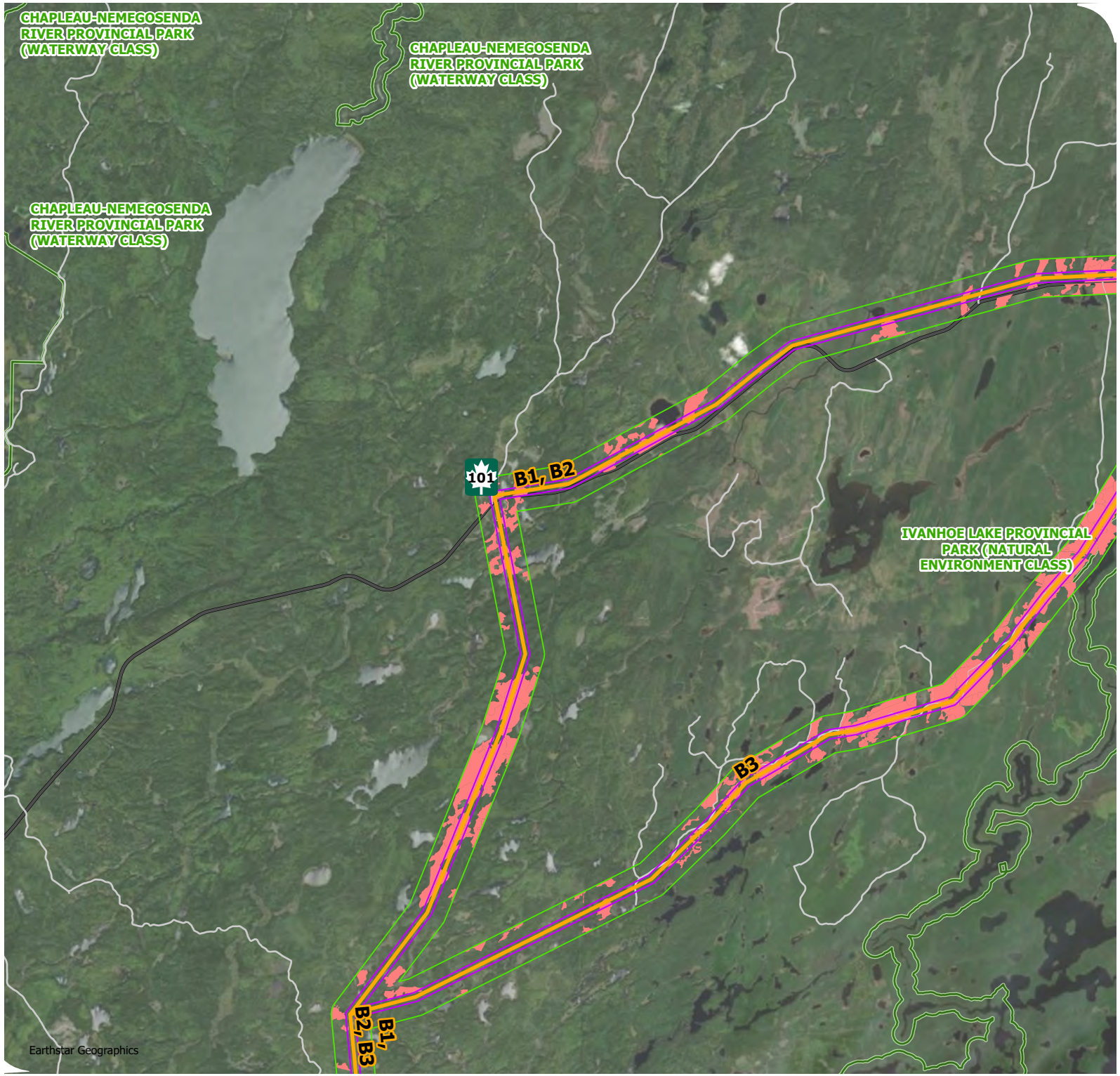
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SCALE 1:139,000

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PROJECT: 25-1043
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DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 237. SWH - EASTERN WOOD-PEWEE HABITAT

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Eastern Wood-pewee Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
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WAWA TIMMINS POWER LINE

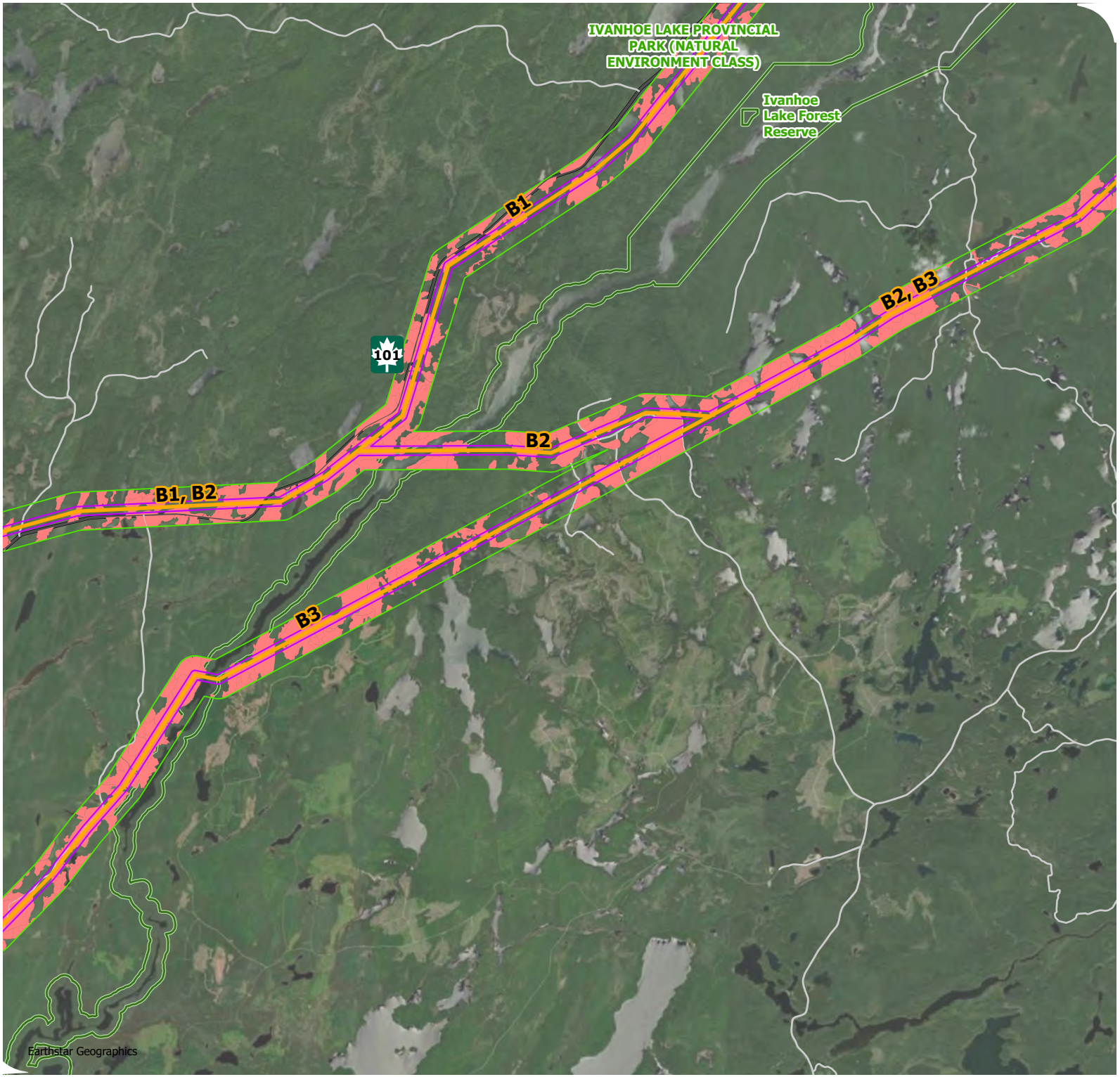


FIGURE 238. SWH - EASTERN WOOD-PEWEE HABITAT

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Eastern Wood-pewee Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

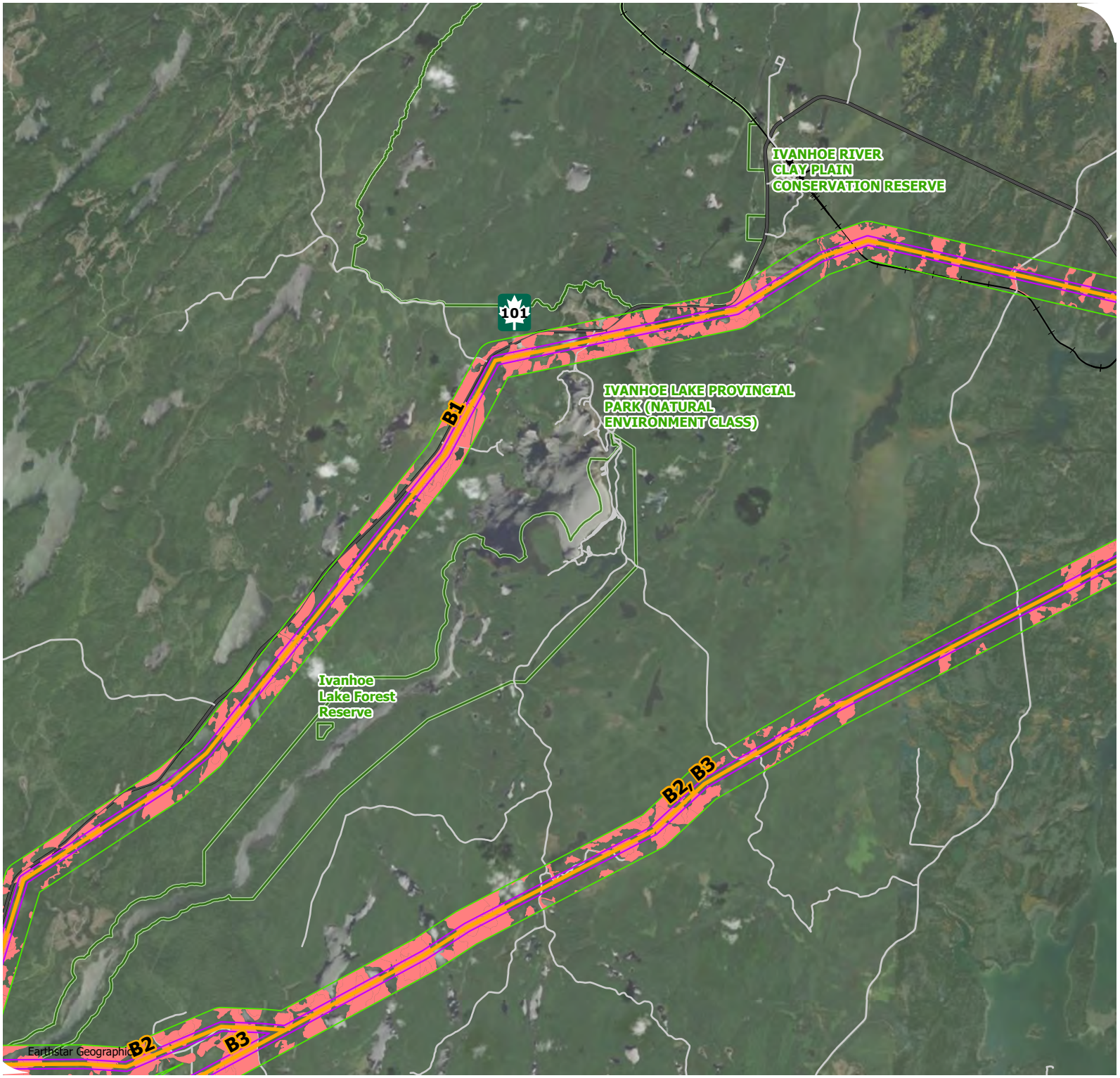


FIGURE 239. SWH - EASTERN WOOD-PEWEE HABITAT

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Eastern Wood-pewee Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

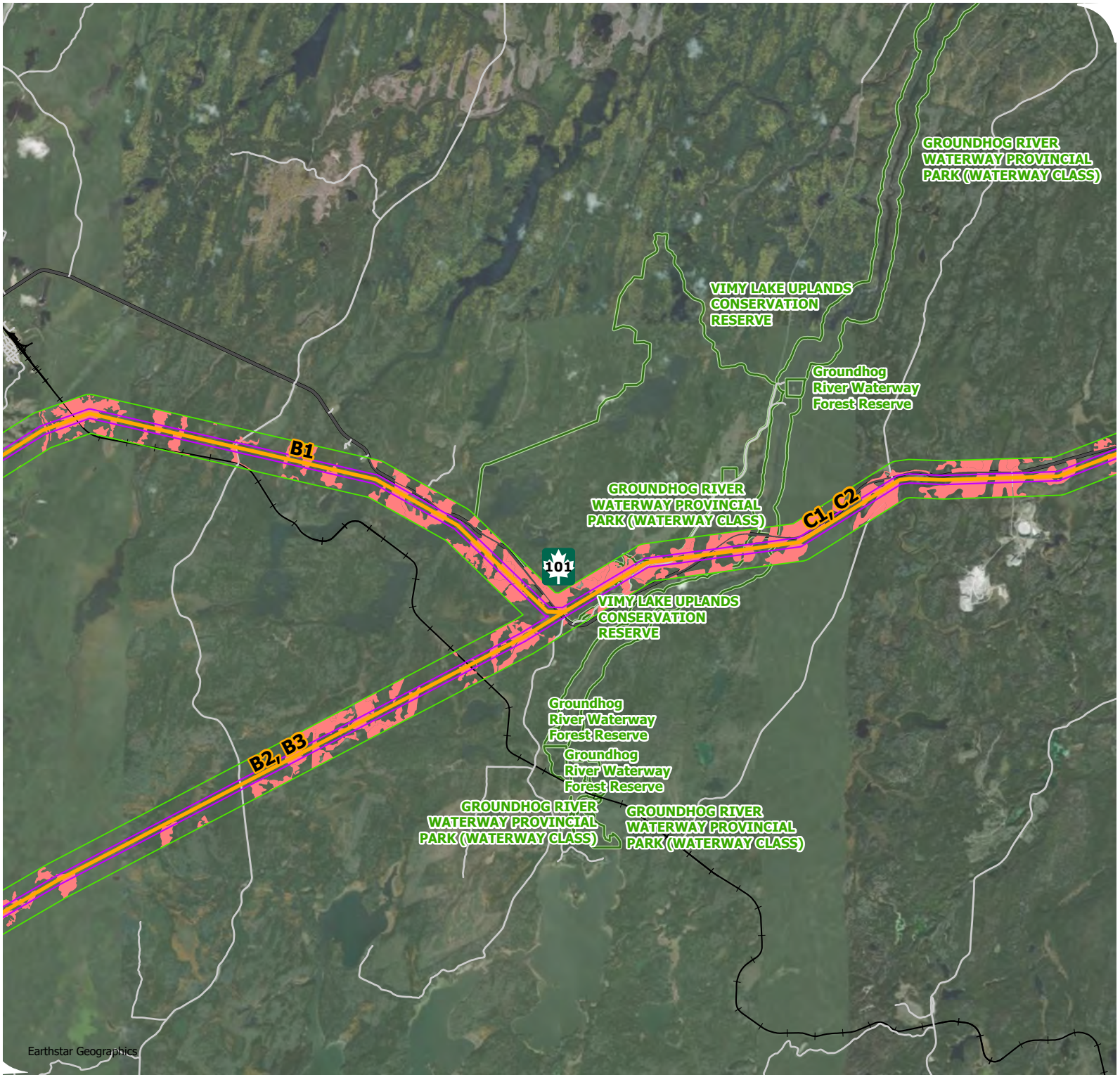


FIGURE 240. SWH - EASTERN WOOD-PEWEE HABITAT

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Eastern Wood-pewee Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

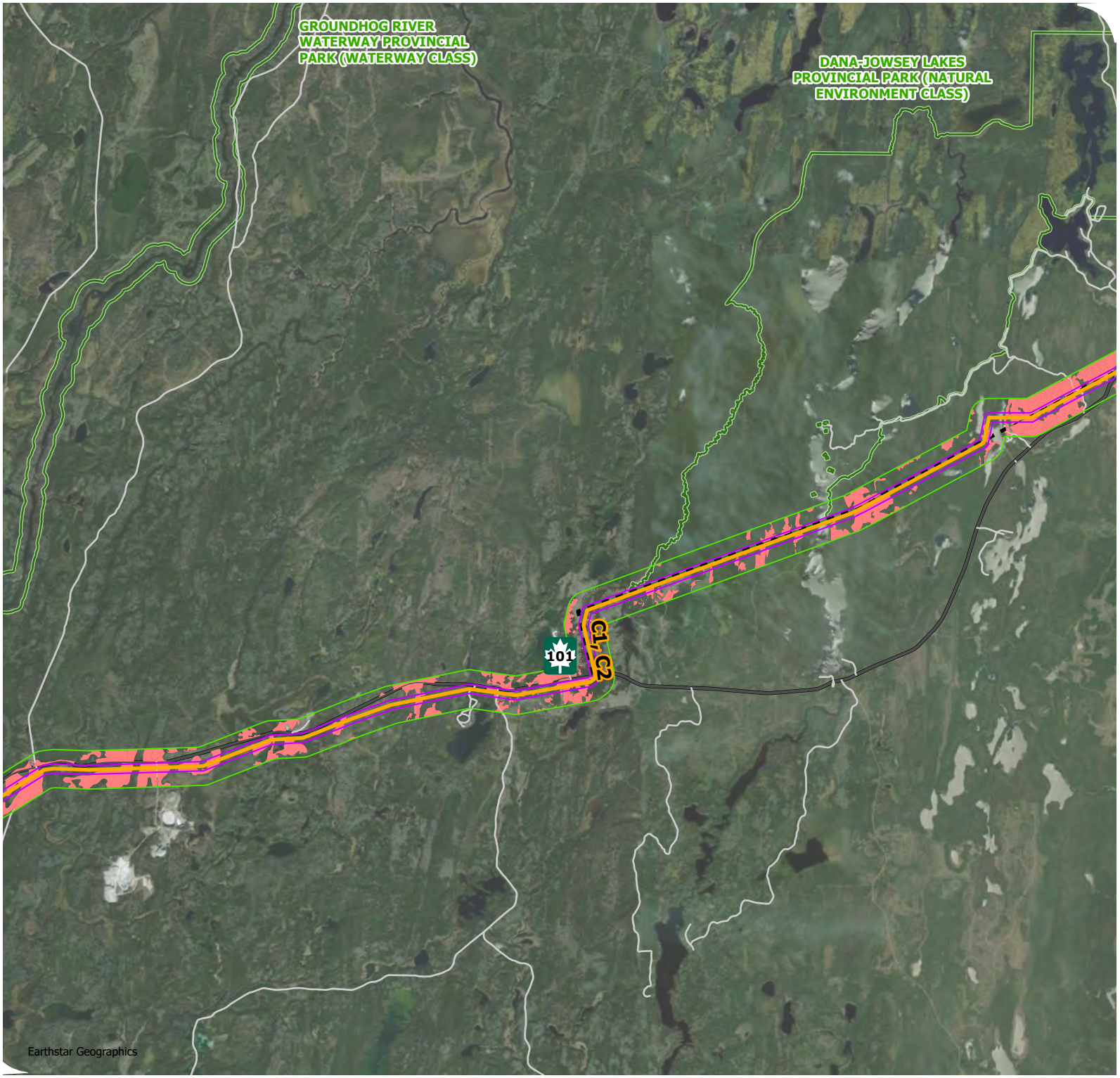
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 241 SWH - EASTERN WOOD-PEWEE HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Eastern Wood-pewee Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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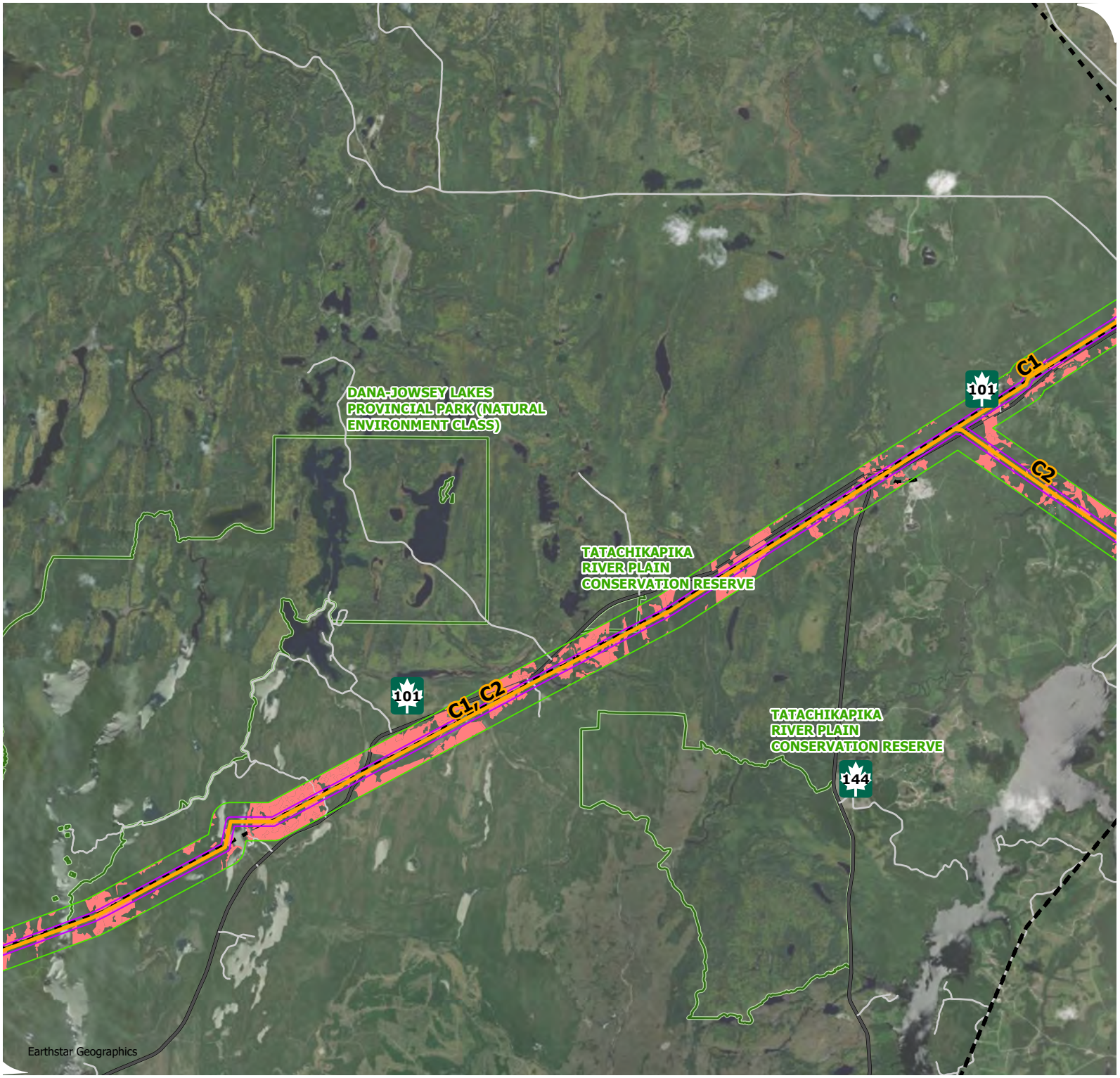
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WAWA TIMMINS POWER LINE

FIGURE 242. SWH - EASTERN WOOD-PEWEE HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Eastern Wood-pewee Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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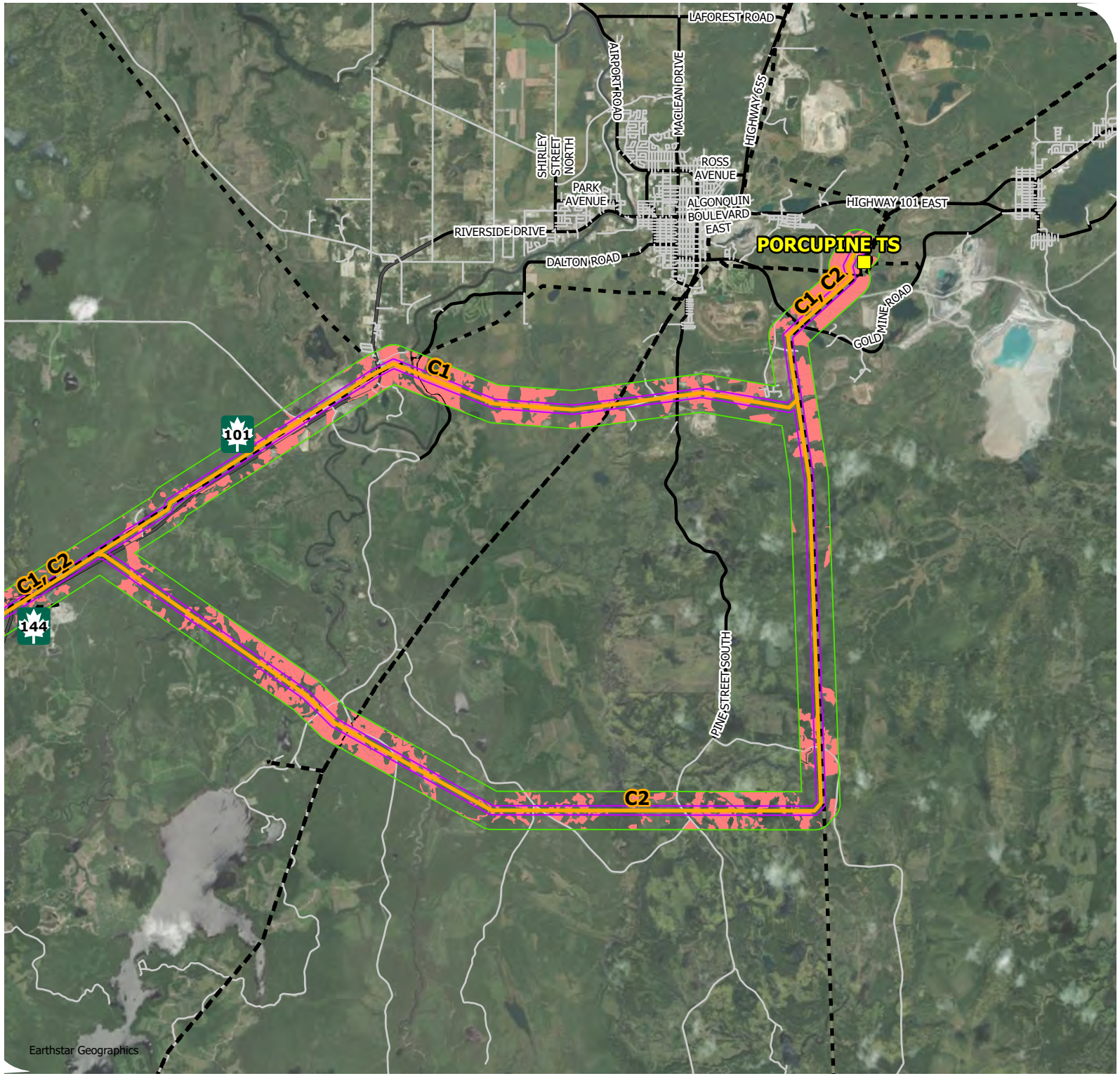
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WAWA TIMMINS POWER LINE

FIGURE 243. SWH - EASTERN WOOD-PEWEE HABITAT

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Eastern Wood-pewee Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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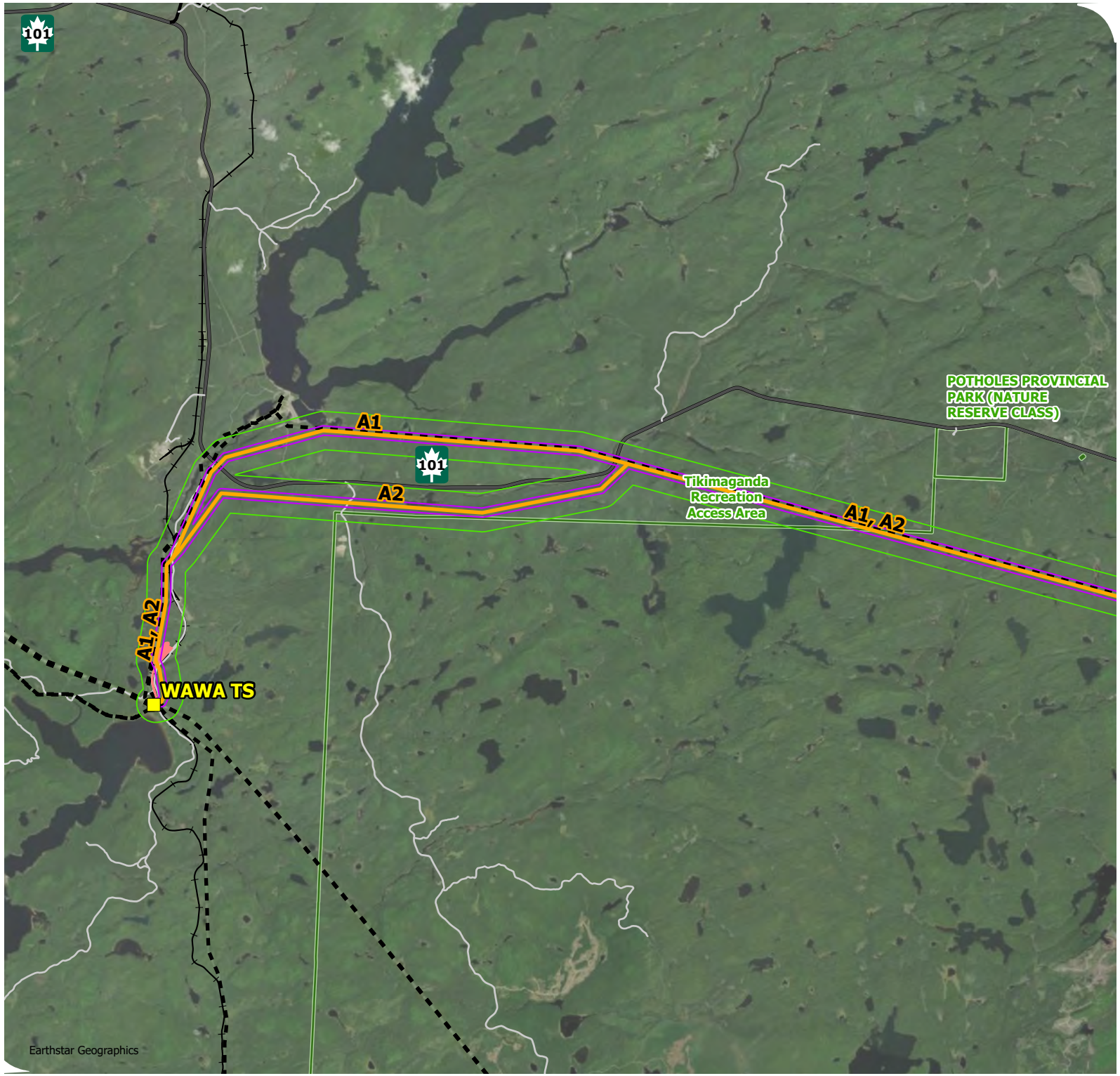
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WAWA TIMMINS POWER LINE

FIGURE 244. SWH - EVENING GROSBEAK HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Evening Grosbeak Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
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WAWA TIMMINS POWER LINE

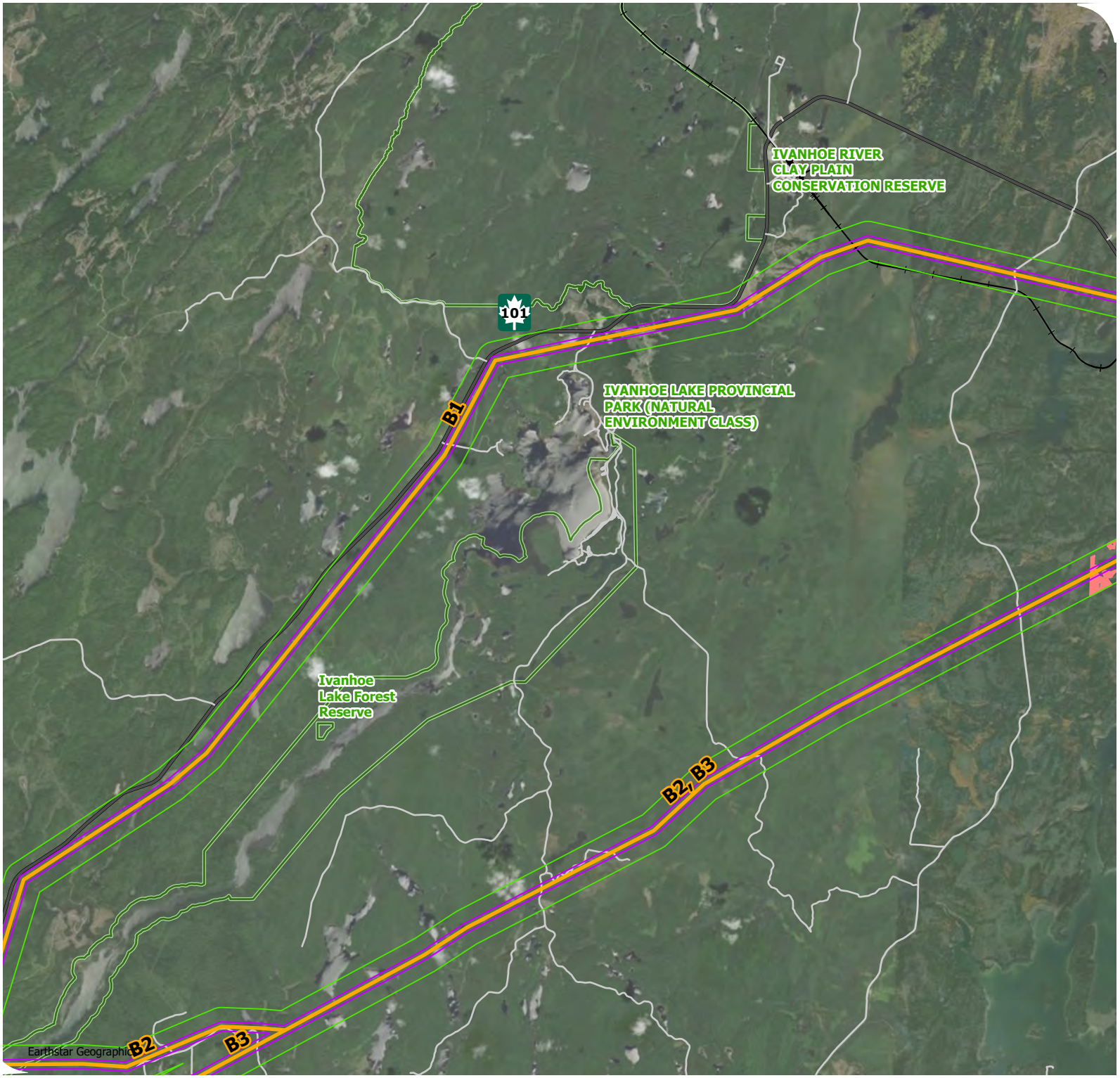


FIGURE 245. SWH - EVENING GROSBEAK HABITAT

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Evening Grosbeak Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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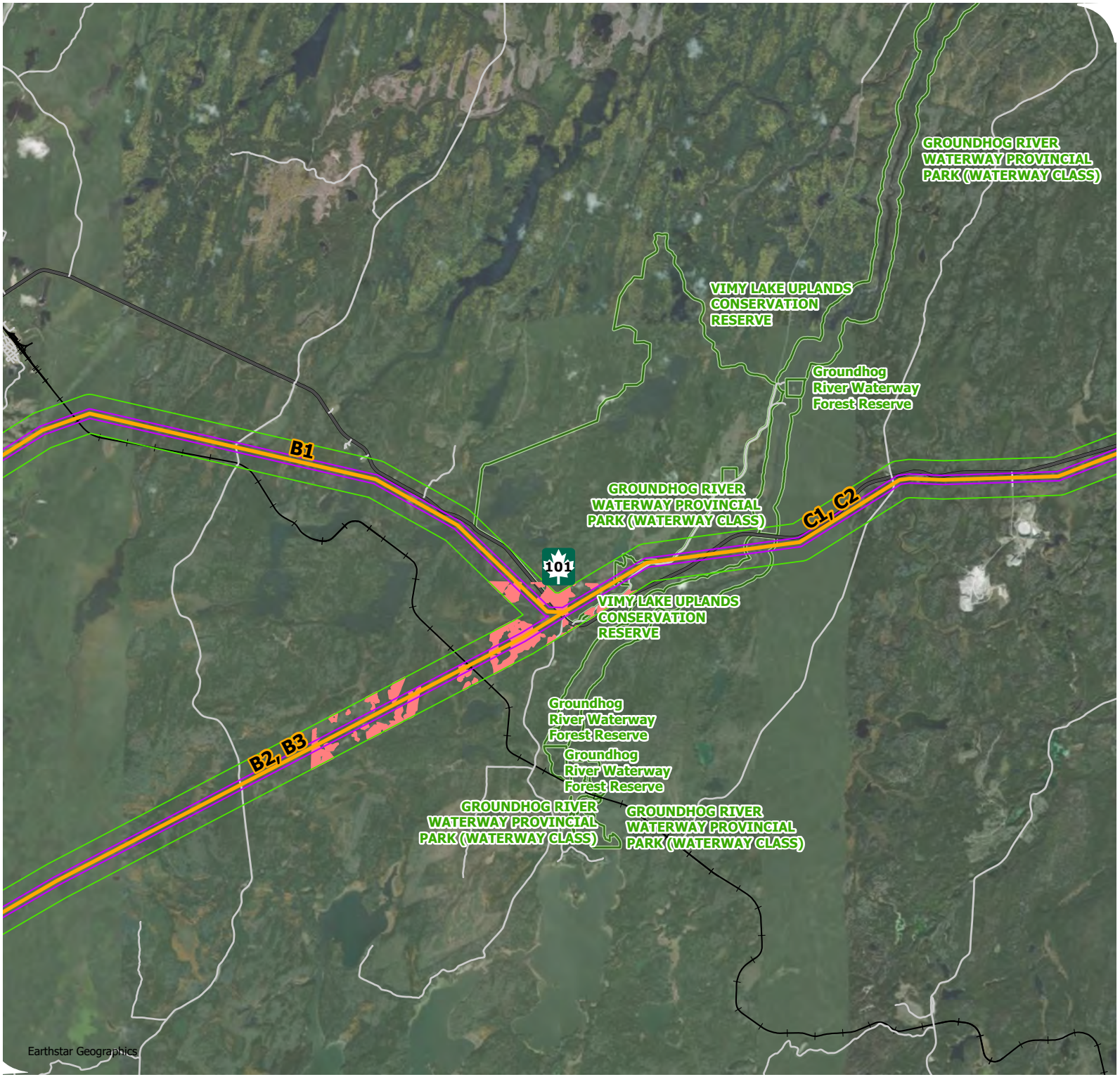
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STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 246. SWH - EVENING GROSBEAK HABITAT

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Evening Grosbeak Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

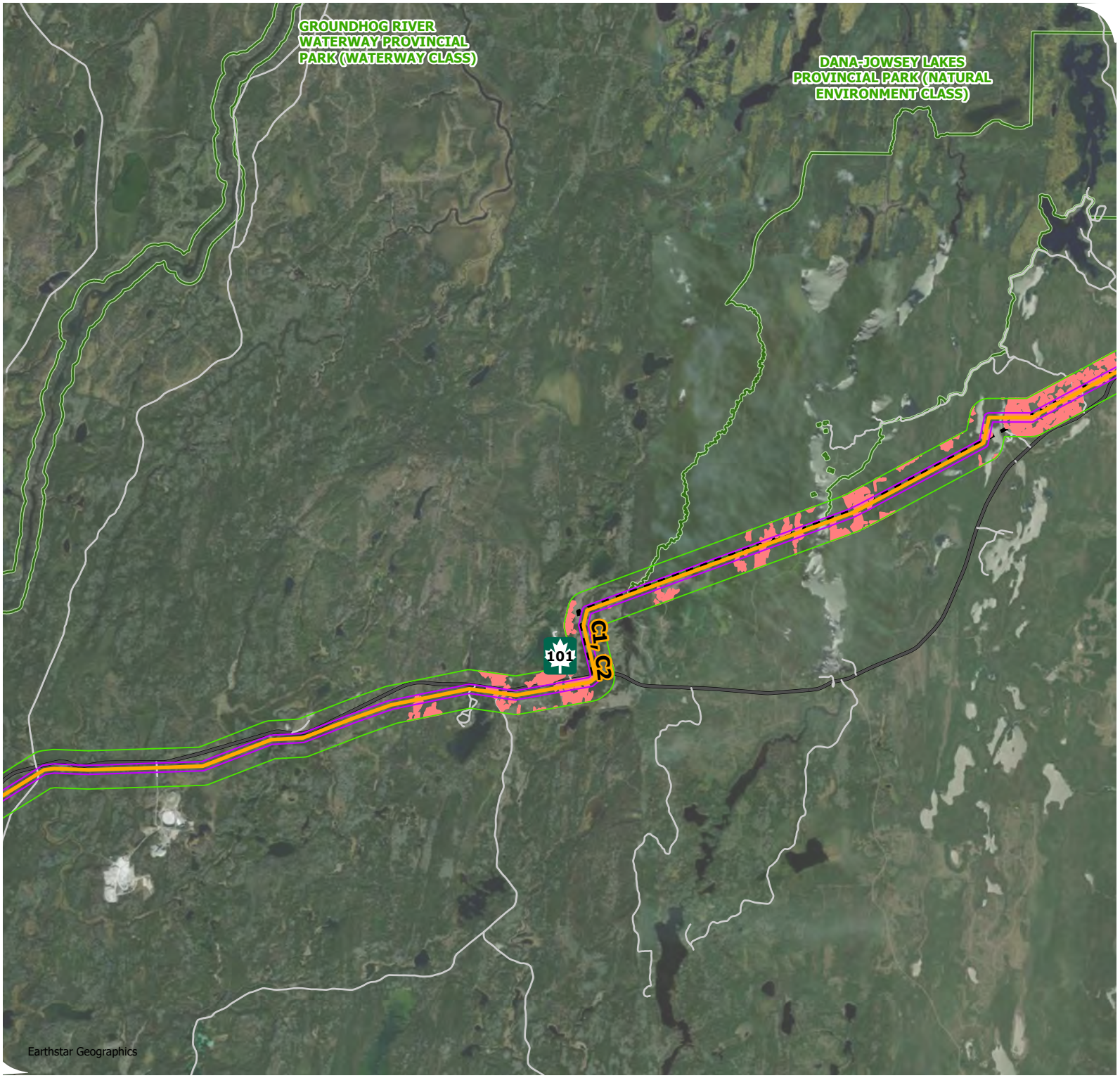
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 247. SWH - EVENING GROSBEAK HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Evening Grosbeak Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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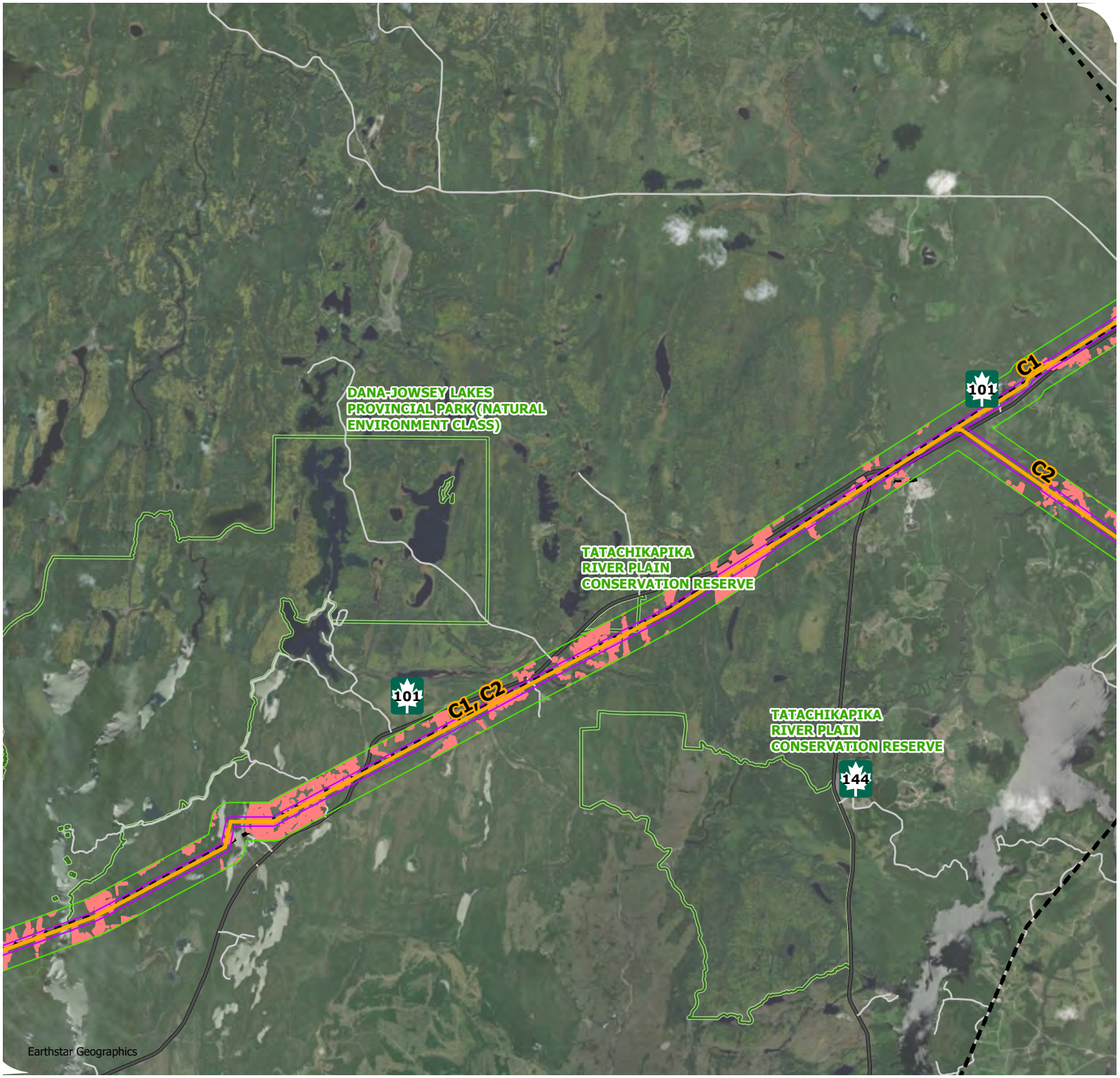
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WAWA TIMMINS POWER LINE

FIGURE 248. SWH - EVENING GROSBEAK HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Evening Grosbeak Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

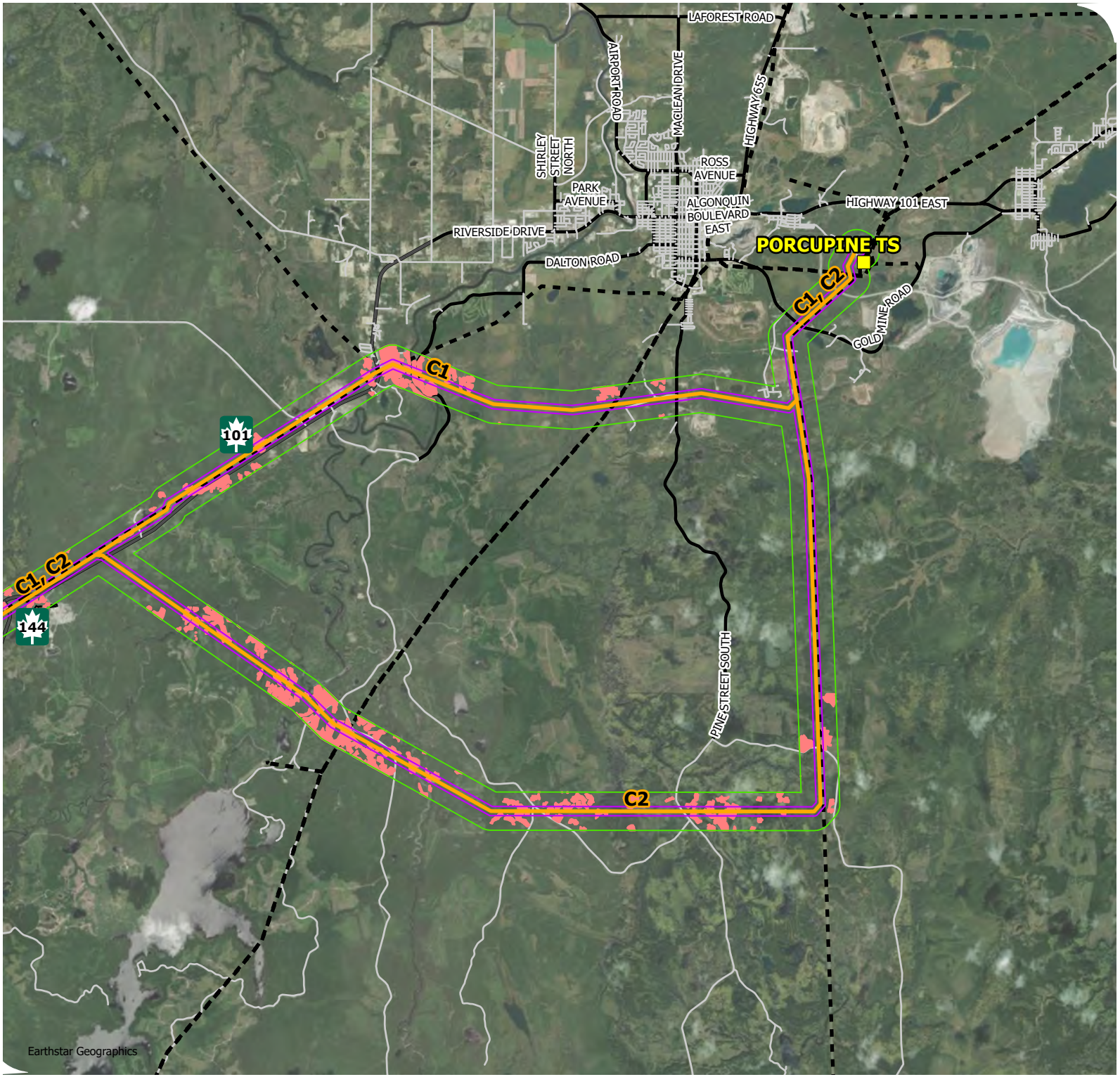


FIGURE 249. SWH - EVENING GROSBEAK HABITAT

Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Evening Grosbeak Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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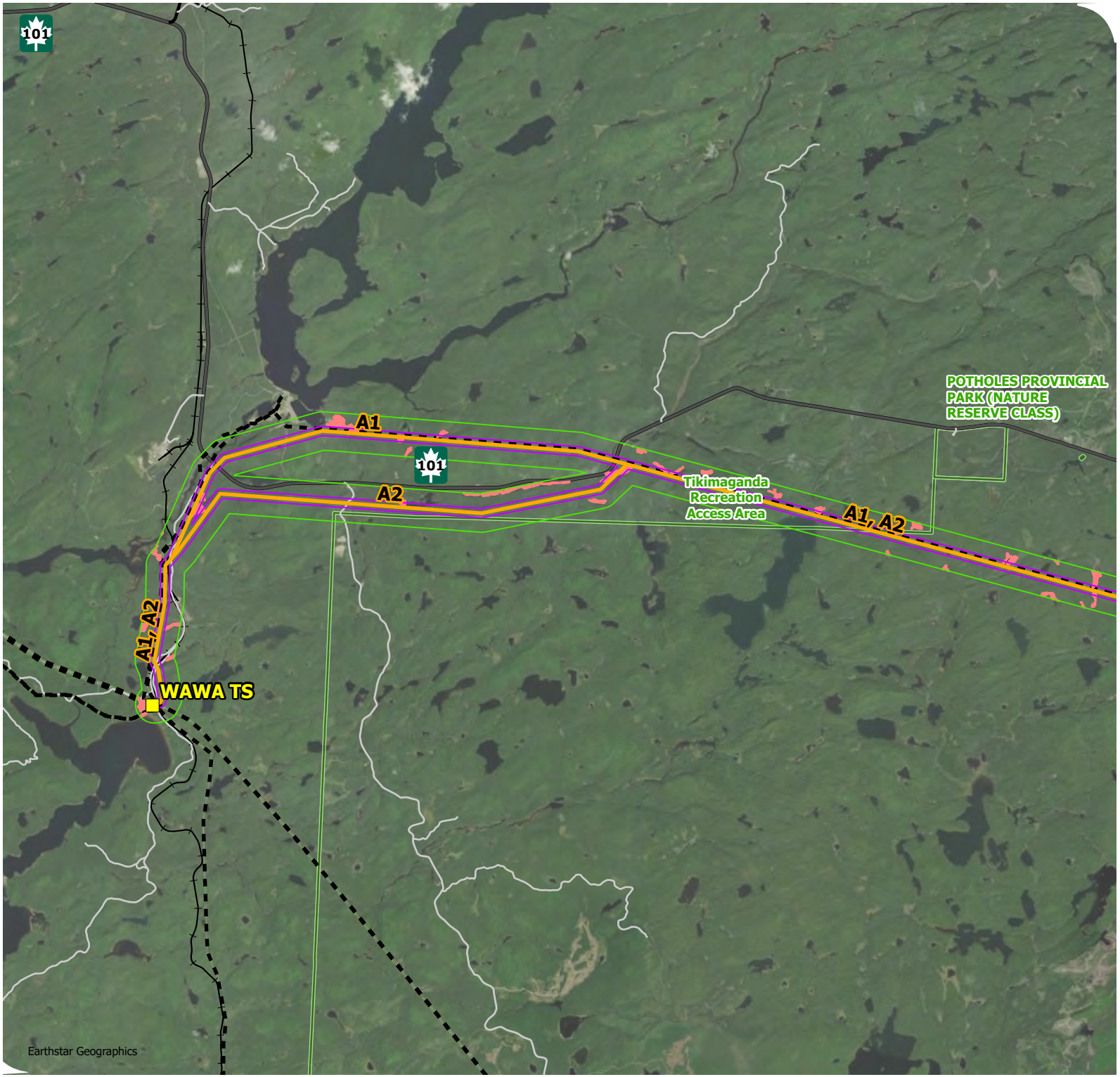
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WAWA TIMMINS POWER LINE

FIGURE 250. SWH - HORNED GREBE AND RUSTY BLACKBIRD HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Horned Grebe and Rusty Blackbird Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

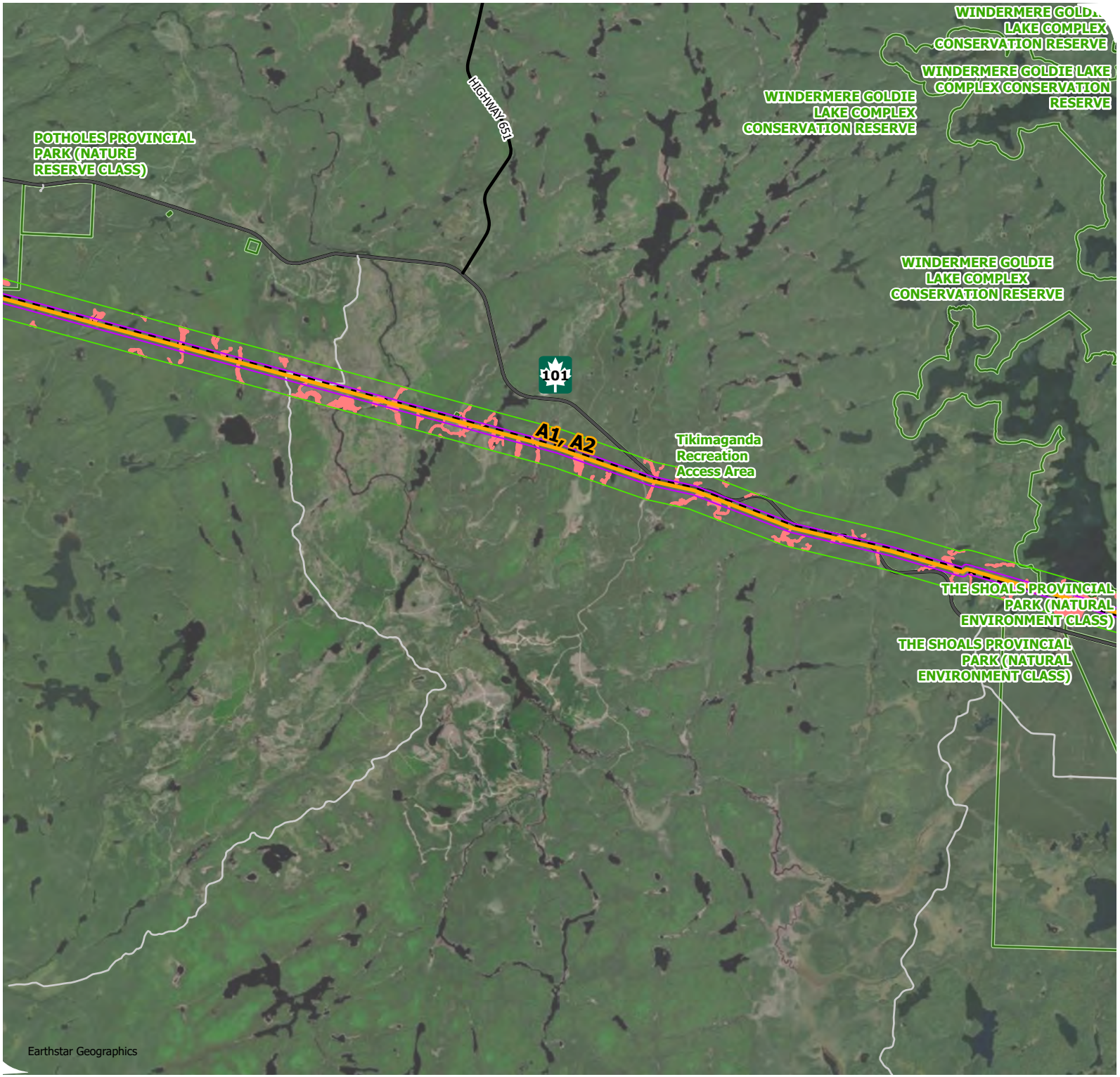


FIGURE 251. SWH - HORNED GREBE AND RUSTY BLACKBIRD HABITAT

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Horned Grebe and Rusty Blackbird Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

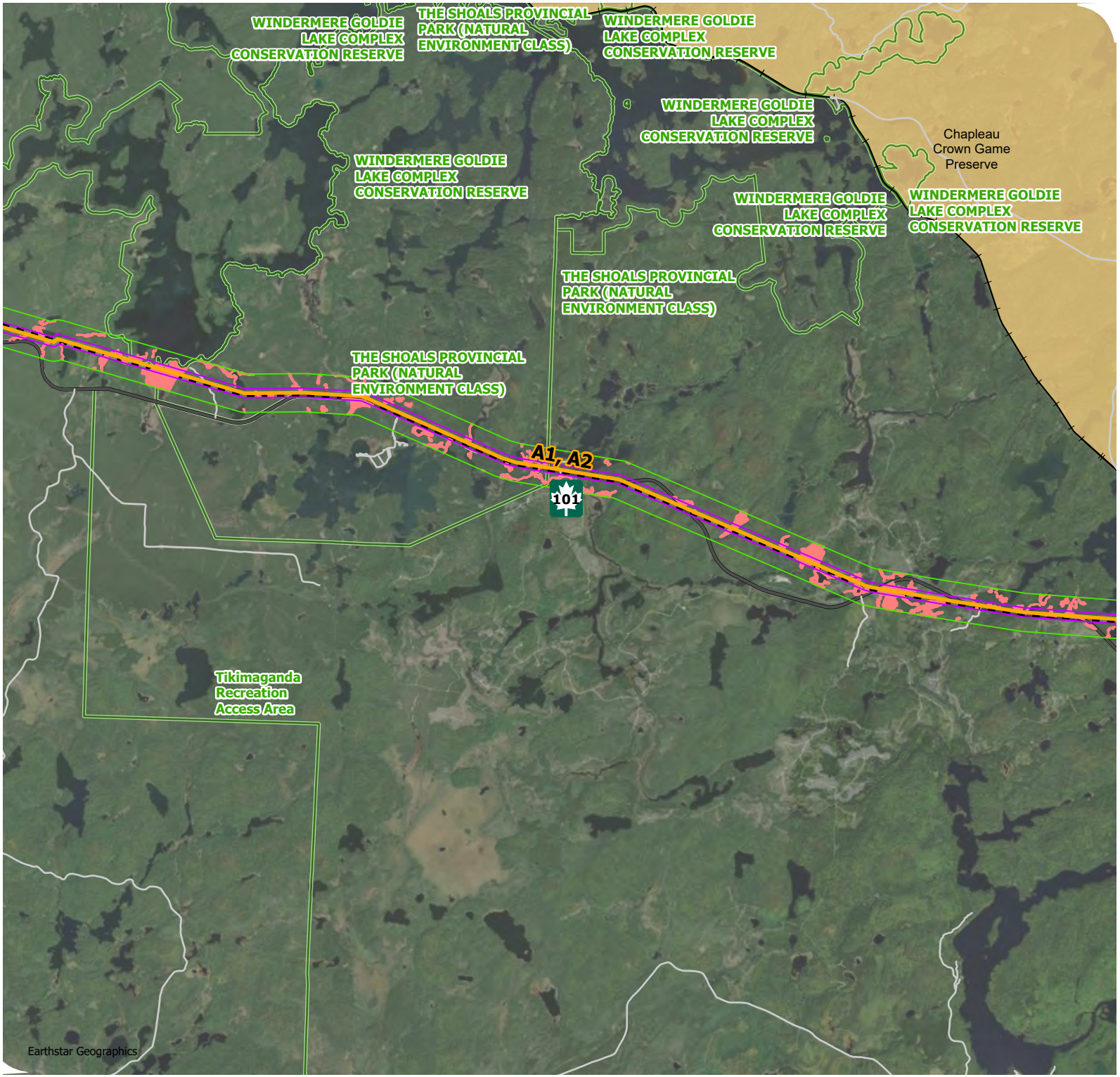
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 252. SWH - HORNED GREBE AND RUSTY BLACKBIRD HABITAT

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Horned Grebe and Rusty Blackbird Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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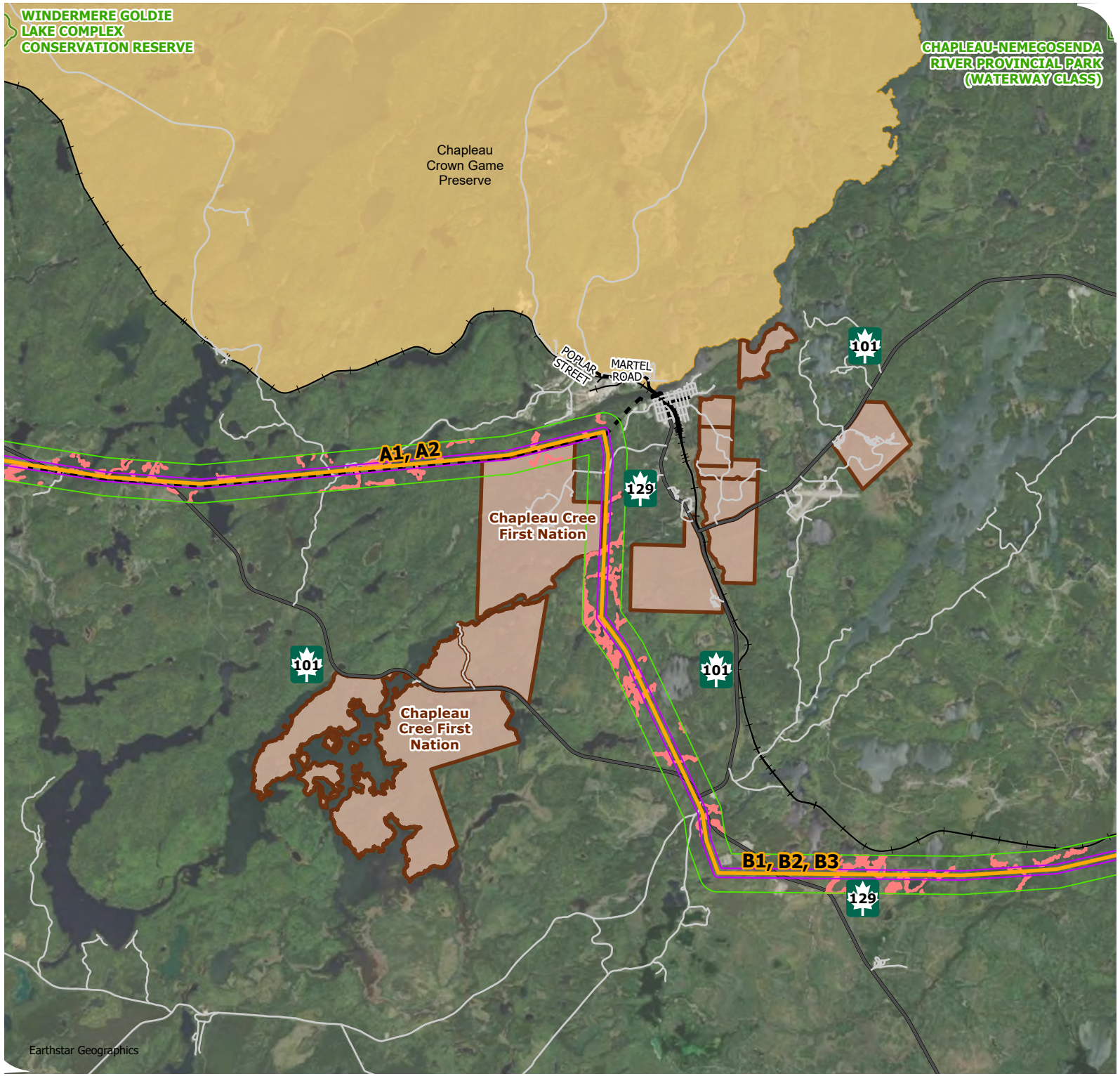
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WAWA TIMMINS POWER LINE

FIGURE 253. SWH - HORNED GREBE AND RUSTY BLACKBIRD HABITAT

Mapping Extent - Chapleau



- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Horned Grebe and Rusty Blackbird Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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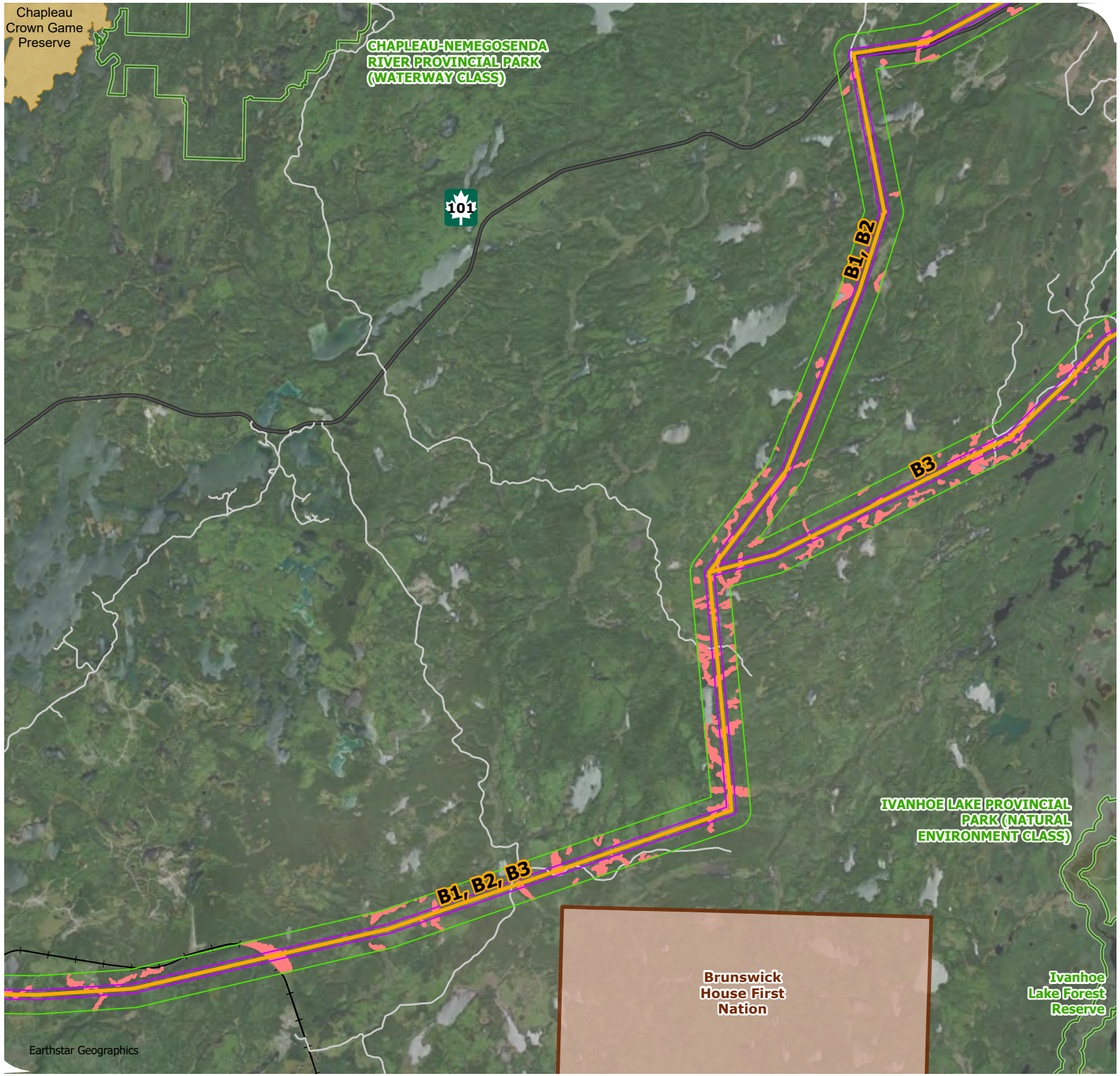
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WAWA TIMMINS POWER LINE

FIGURE 254. SWH - HORNED GREBE AND RUSTY BLACKBIRD HABITAT

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Horned Grebe and Rusty Blackbird Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

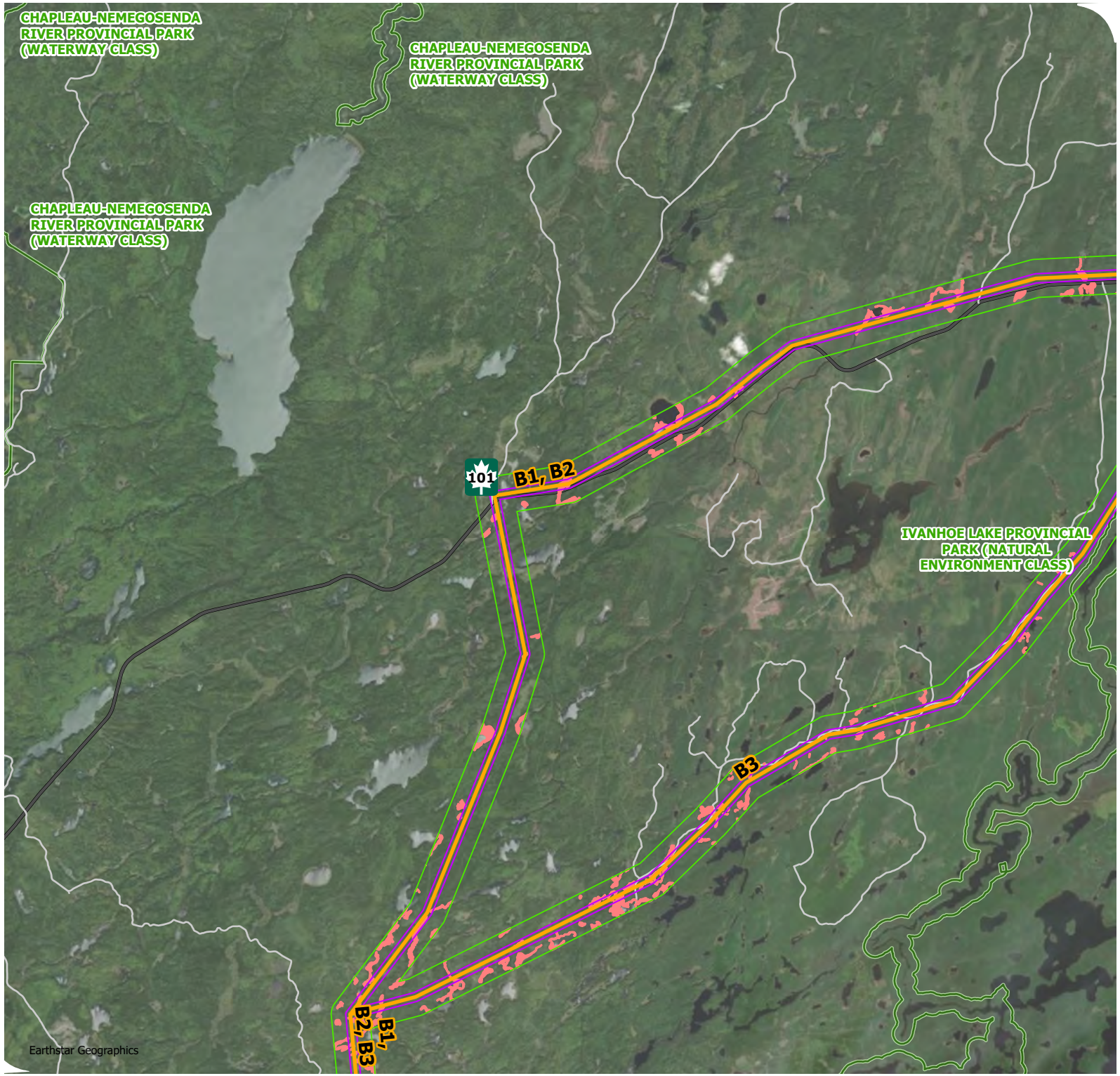
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 255. SWH - HORNED GREBE AND RUSTY BLACKBIRD HABITAT

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Horned Grebe and Rusty Blackbird Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5

WAWA TIMMINS POWER LINE

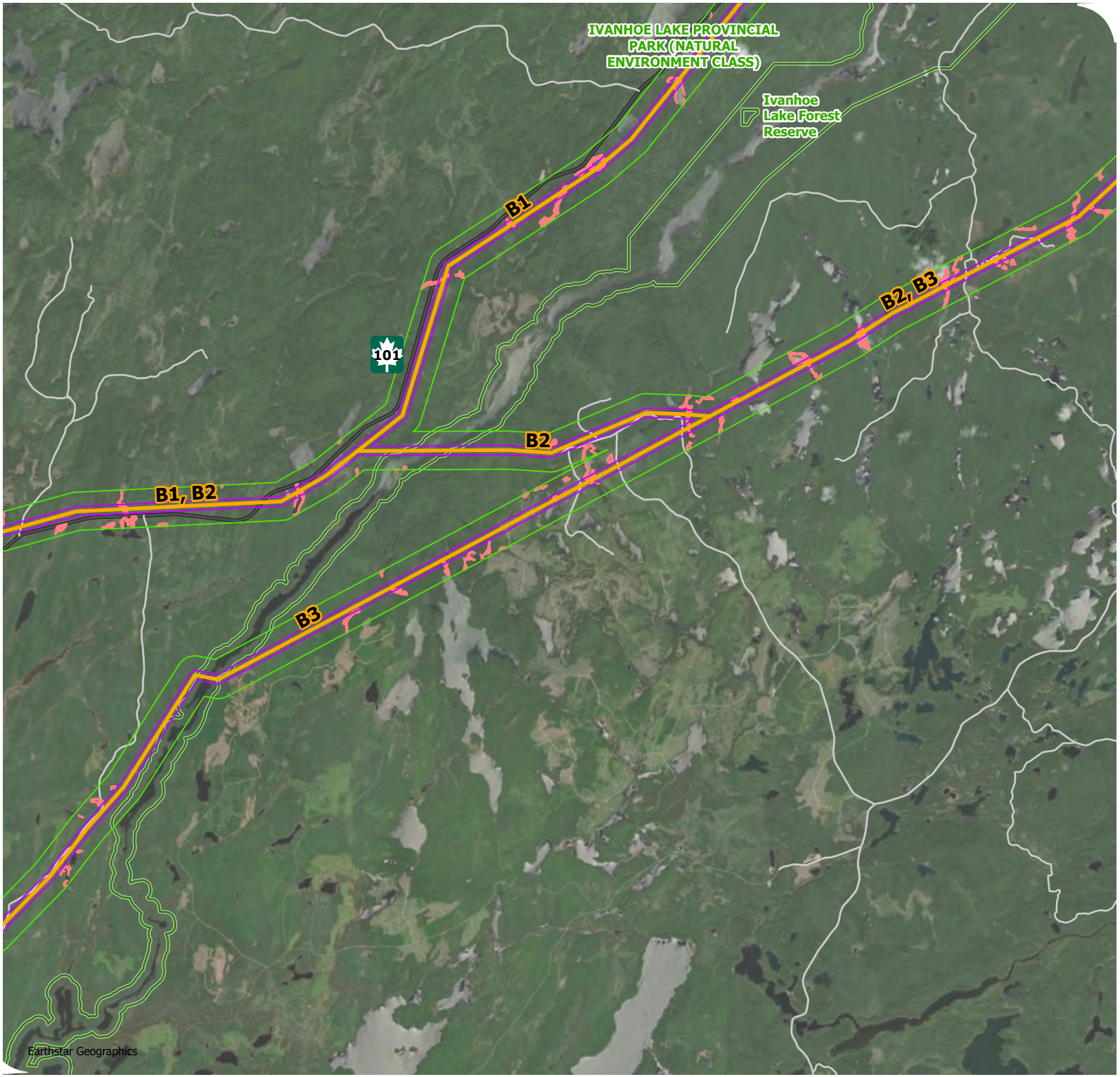


FIGURE 256. SWH - HORNED GREBE AND RUSTY BLACKBIRD HABITAT

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Horned Grebe and Rusty Blackbird Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

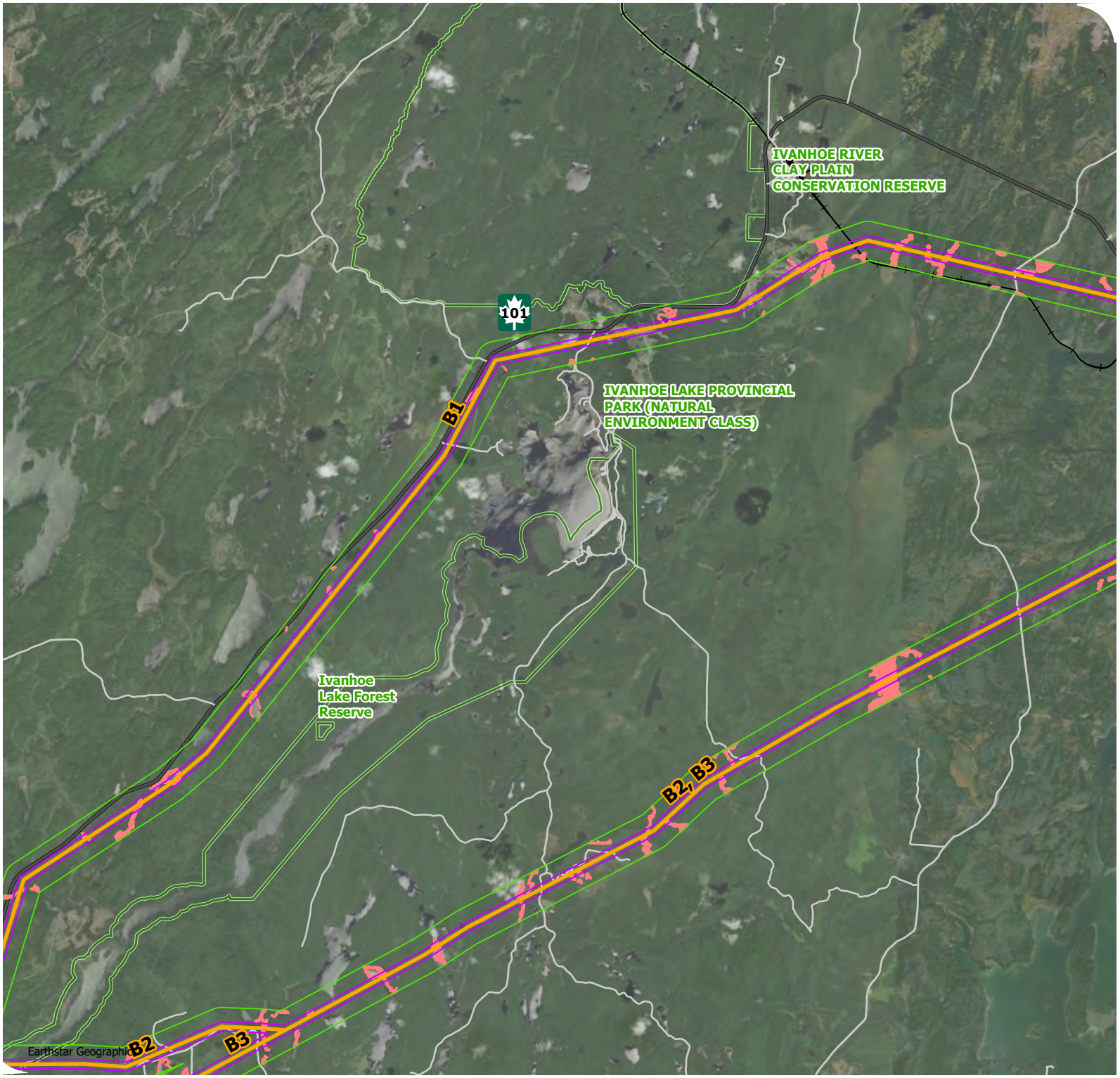


FIGURE 257. SWH - HORNED GREBE AND RUSTY BLACKBIRD HABITAT

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Horned Grebe and Rusty Blackbird Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

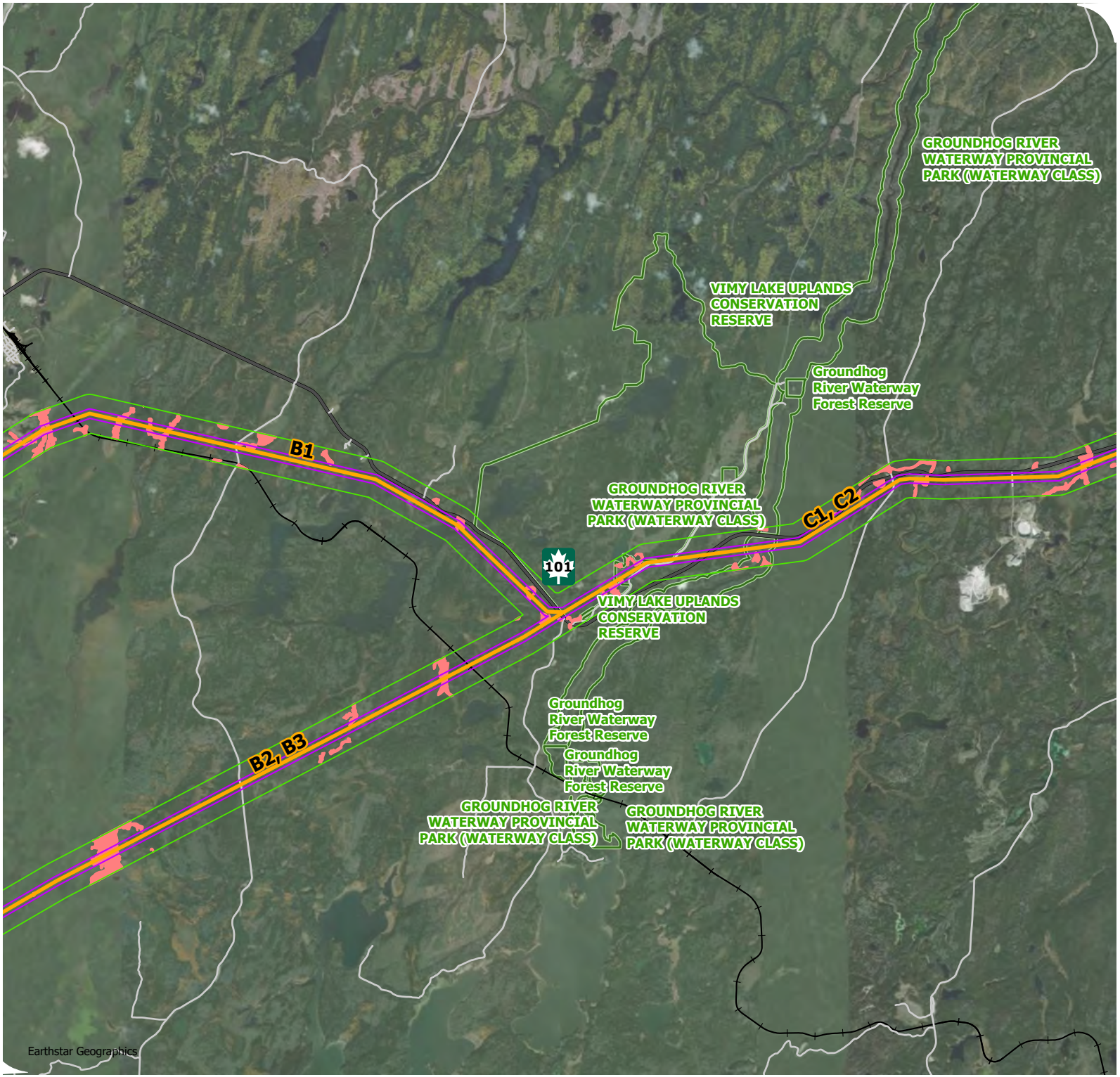
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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

WAWA TIMMINS POWER LINE

FIGURE 258. SWH - HORNED GREBE AND RUSTY BLACKBIRD HABITAT

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Horned Grebe and Rusty Blackbird Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

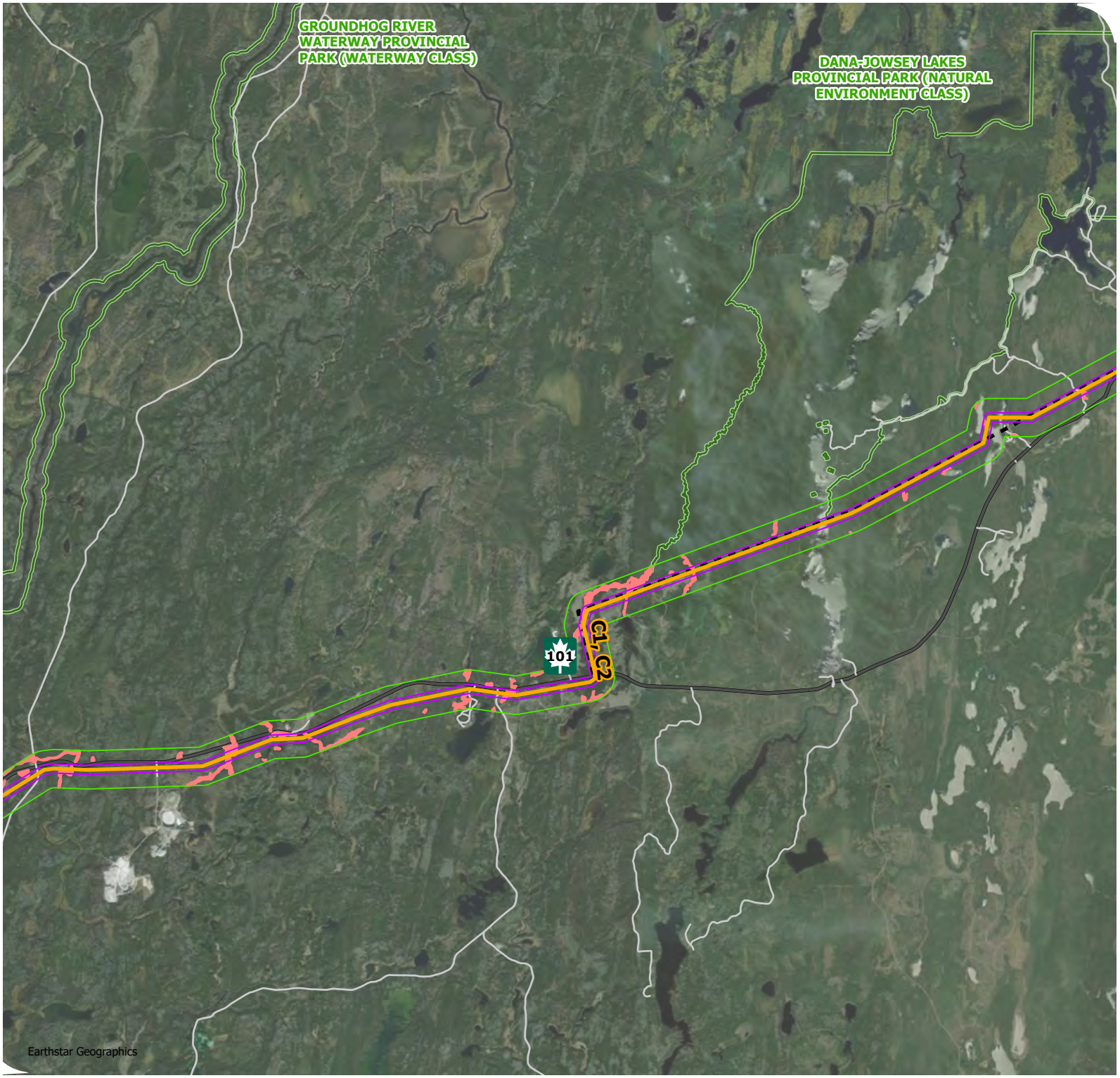
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 259. SWH - HORNED GREBE AND RUSTY BLACKBIRD HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Horned Grebe and Rusty Blackbird Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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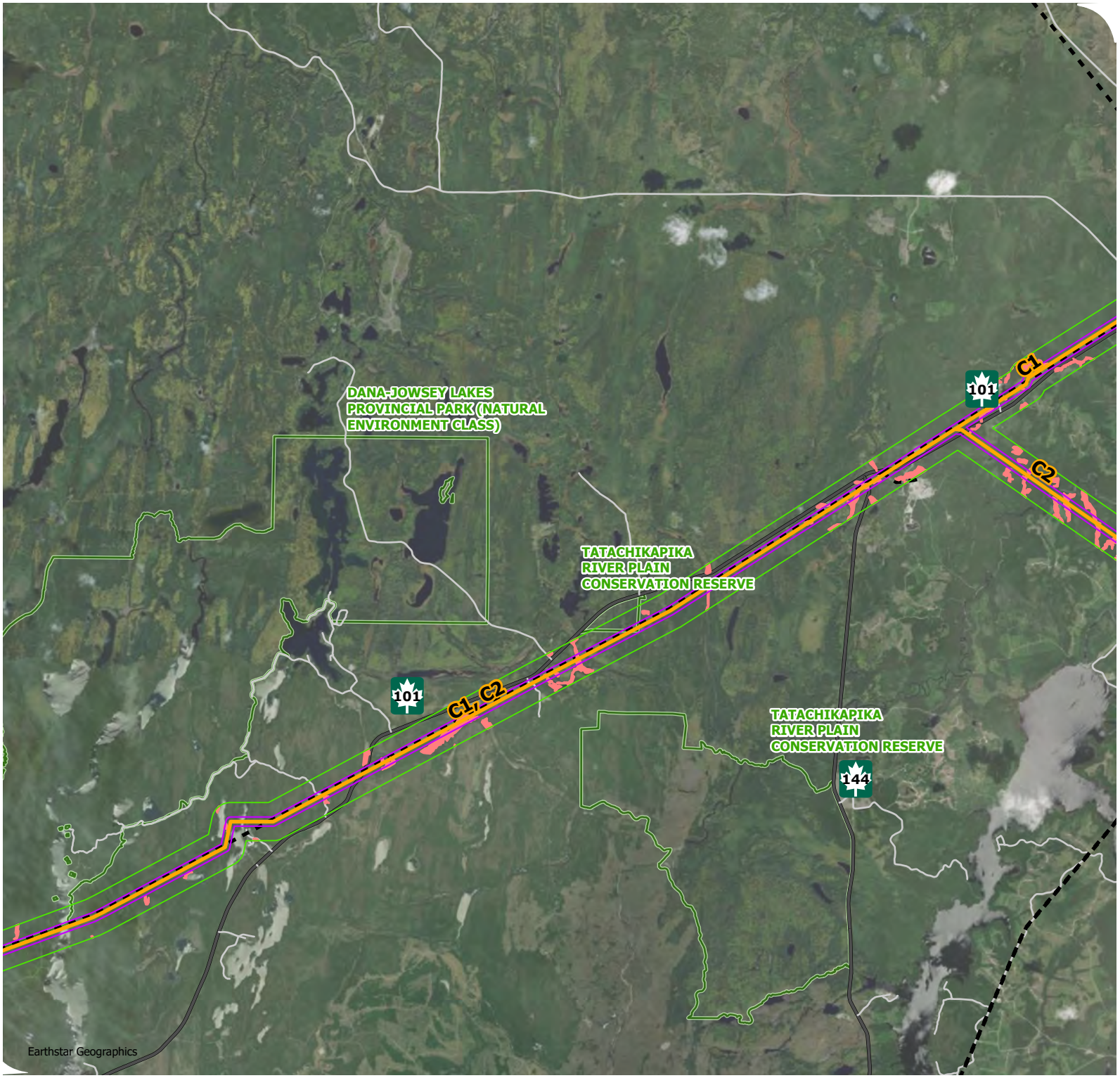
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WAWA TIMMINS POWER LINE

FIGURE 260. SWH - HORNED GREBE AND RUSTY BLACKBIRD HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Horned Grebe and Rusty Blackbird Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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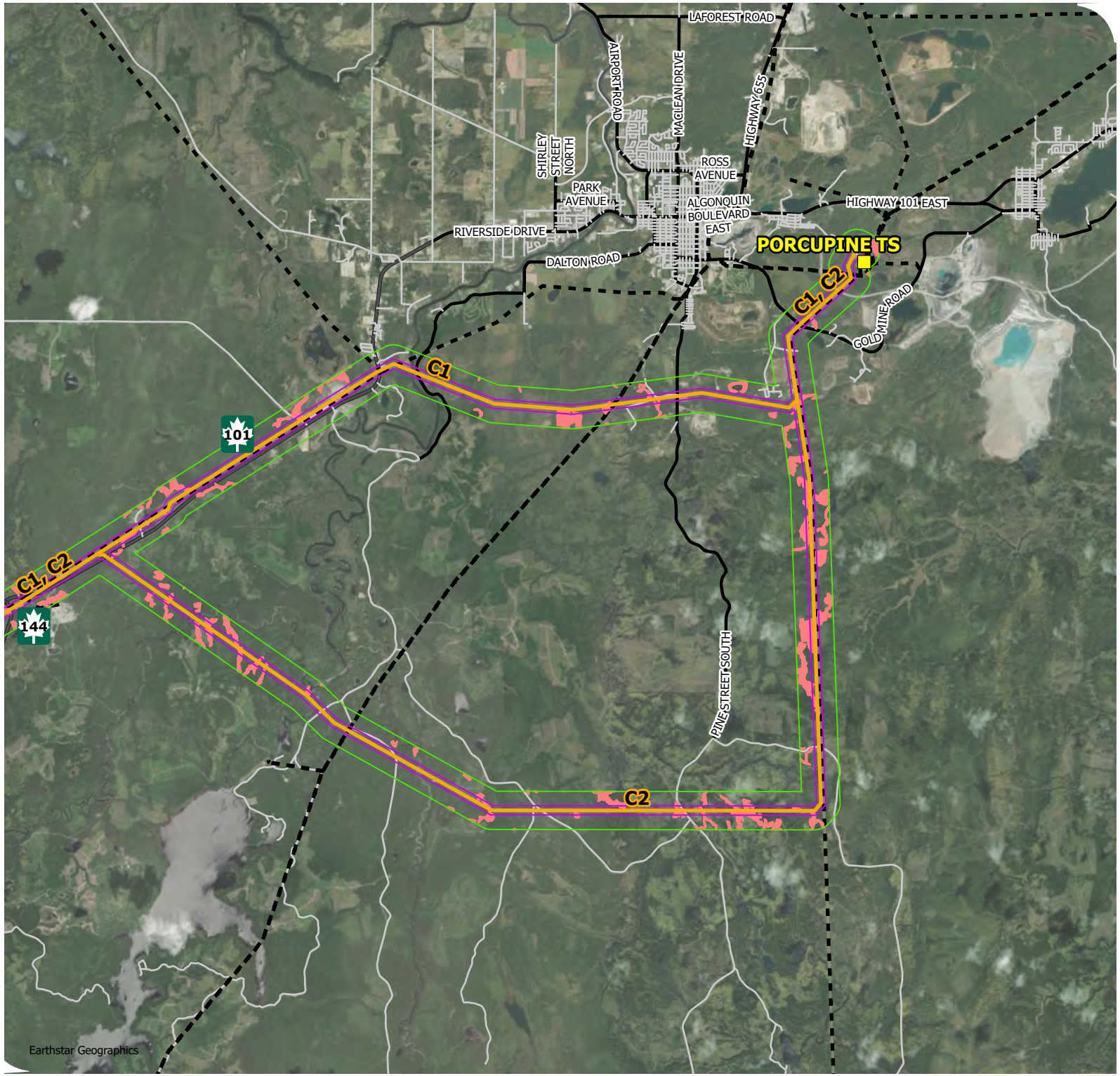
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WAWA TIMMINS POWER LINE

FIGURE 261. SWH - HORNED GREBE AND RUSTY BLACKBIRD HABITAT

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Horned Grebe and Rusty Blackbird Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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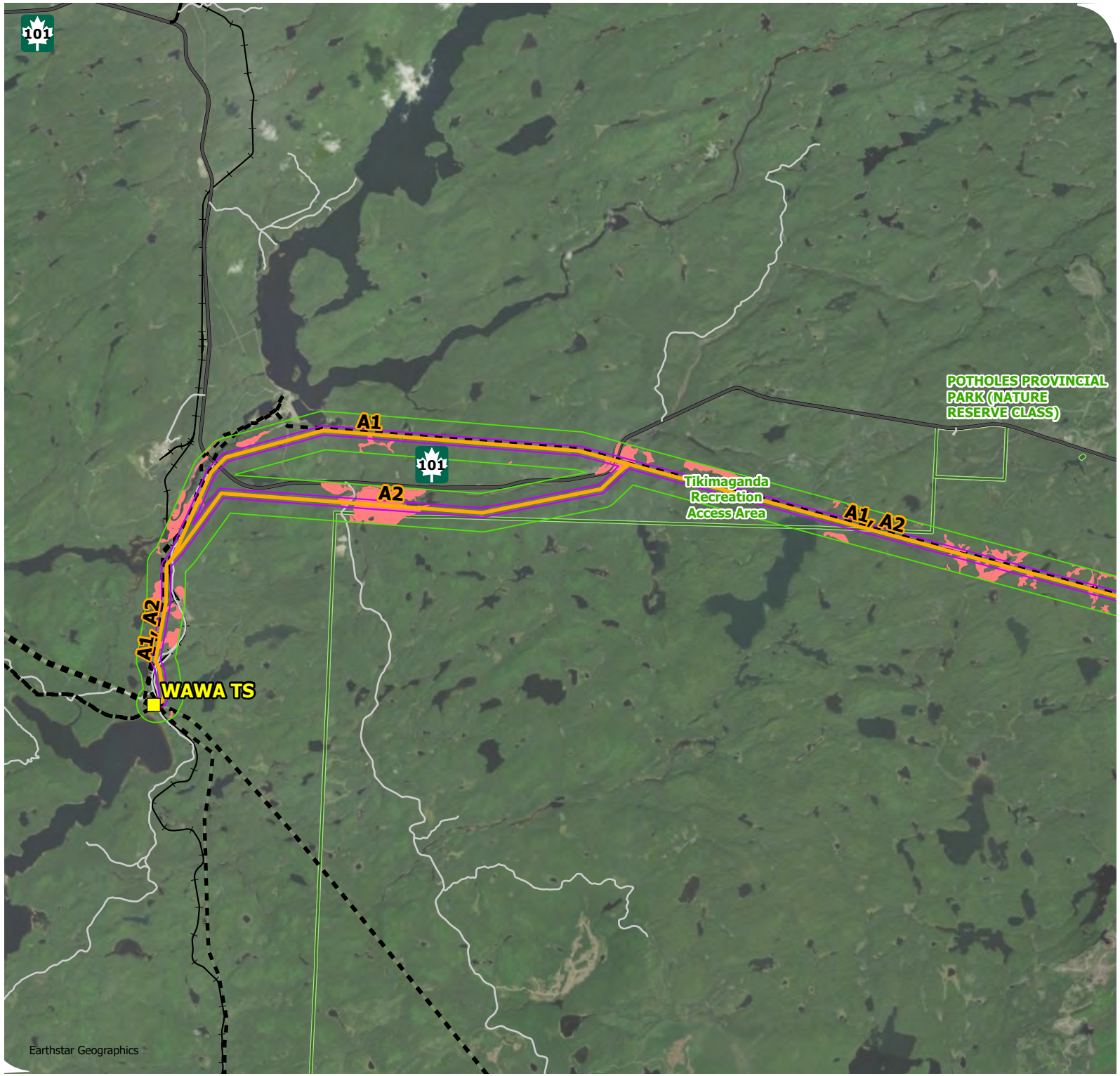
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WAWA TIMMINS POWER LINE

FIGURE 262. SWH - OLIVE-SIDED FLYCATCHER HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Olive-sided Flycatcher Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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WAWA TIMMINS POWER LINE

FIGURE 263. SWH - OLIVE-SIDED FLYCATCHER HABITAT

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Olive-sided Flycatcher Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

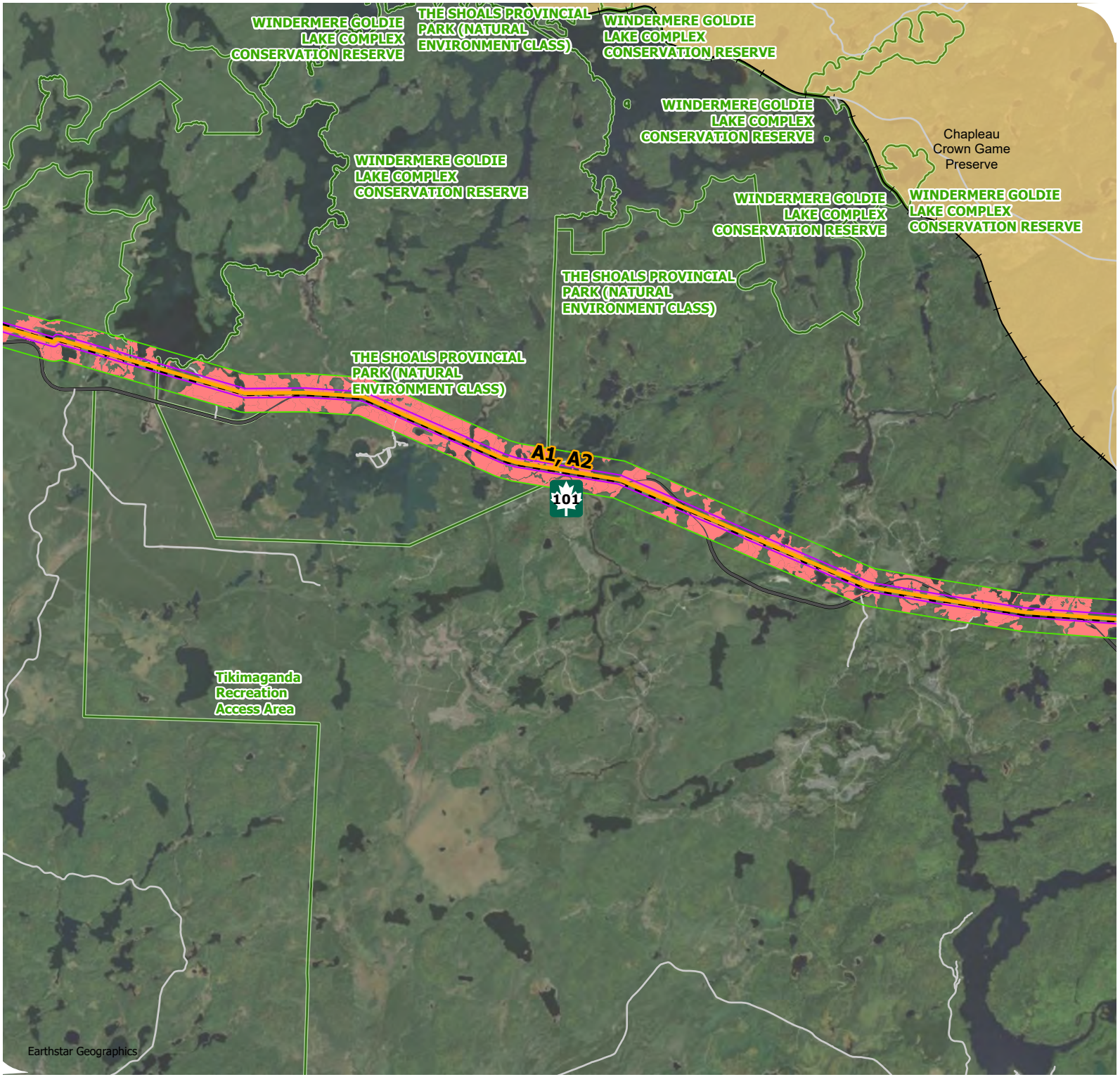


FIGURE 264. SWH - OLIVE-SIDED FLYCATCHER HABITAT

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Olive-sided Flycatcher Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

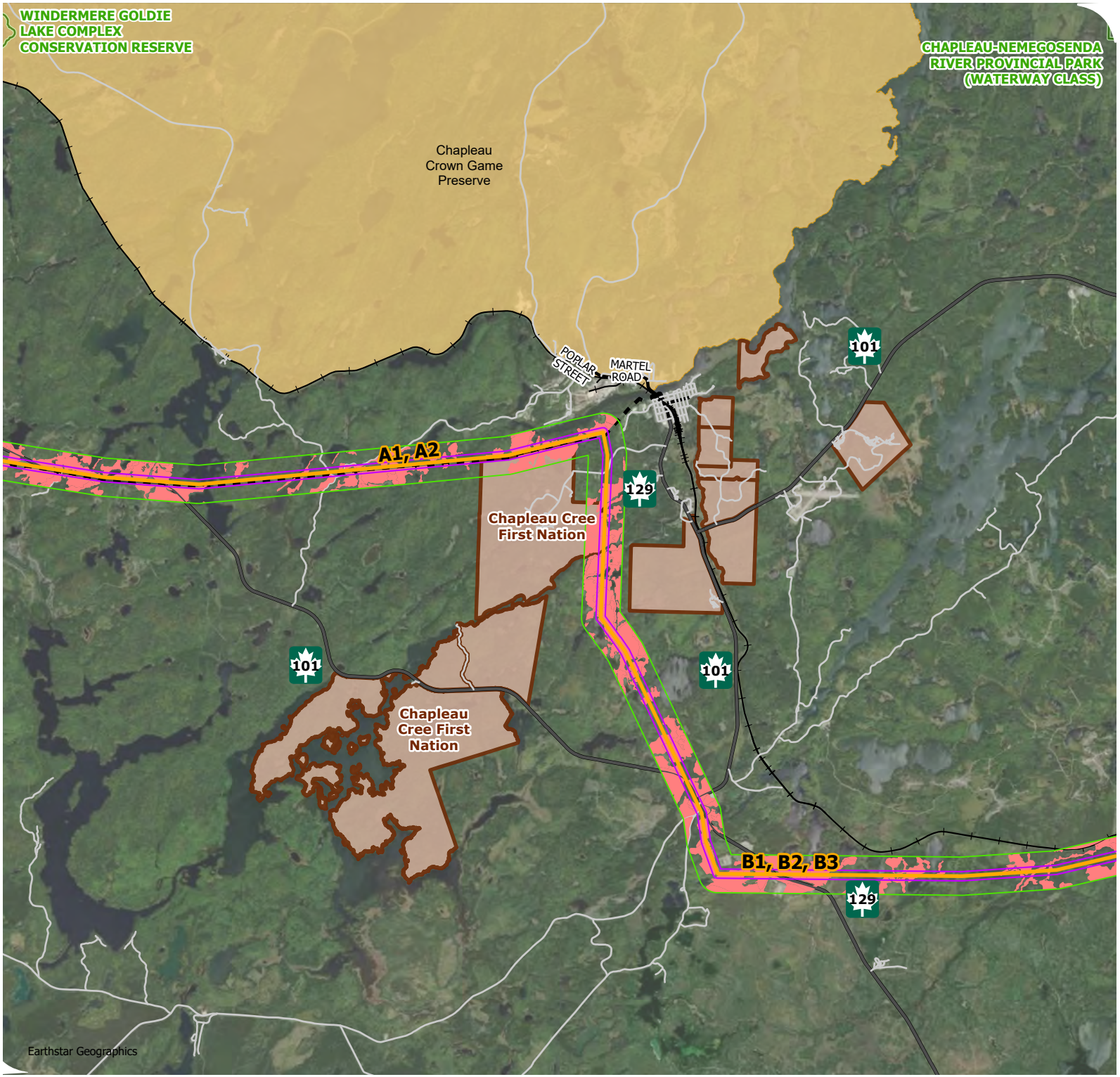
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PROJECT: 25-1043
STATUS: DRAFT
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WAWA TIMMINS POWER LINE

FIGURE 265. SWH - OLIVE-SIDED FLYCATCHER HABITAT

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Olive-sided Flycatcher Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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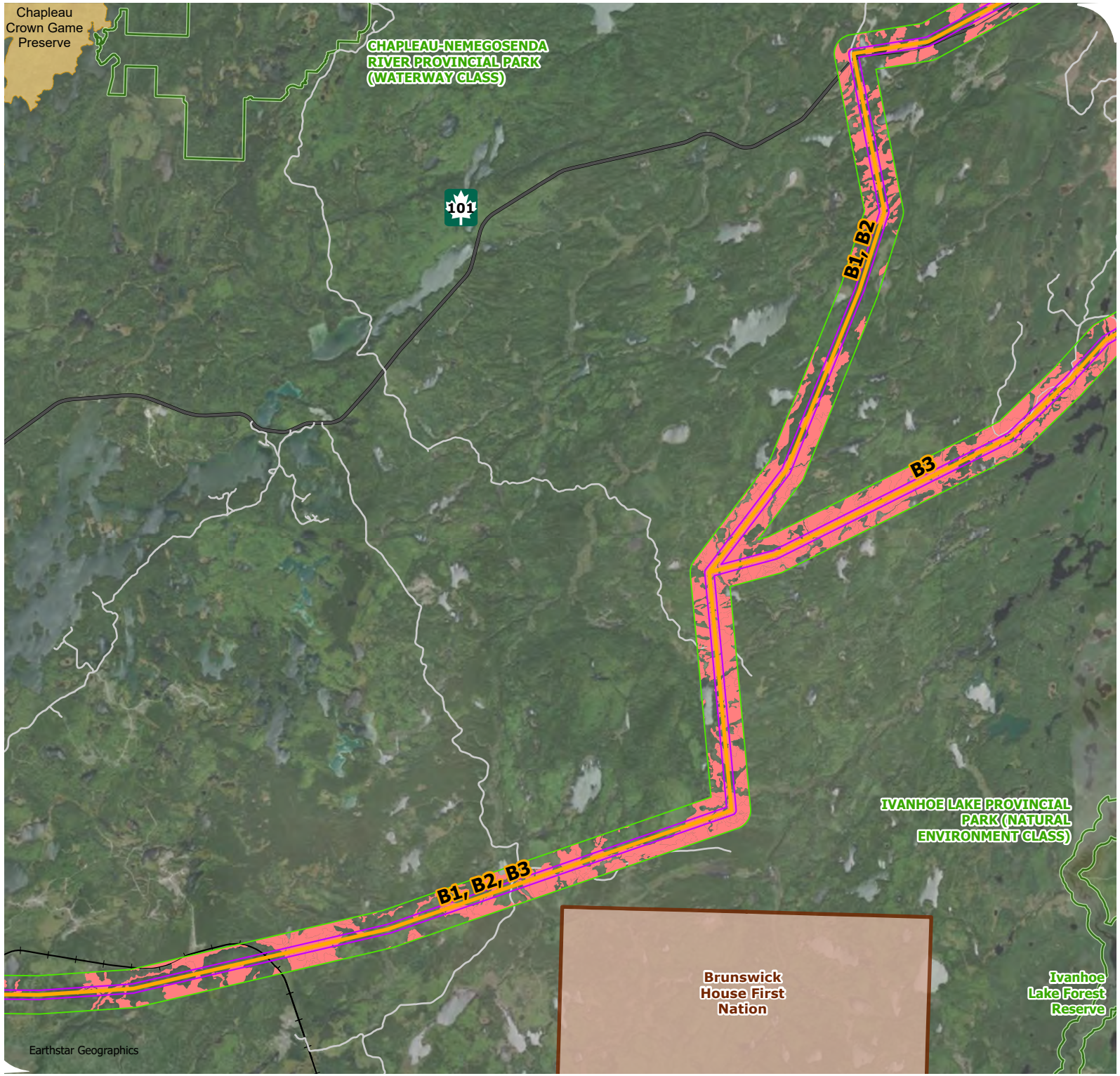
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WAWA TIMMINS POWER LINE

FIGURE 266. SWH - OLIVE-SIDED FLYCATCHER HABITAT

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Olive-sided Flycatcher Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

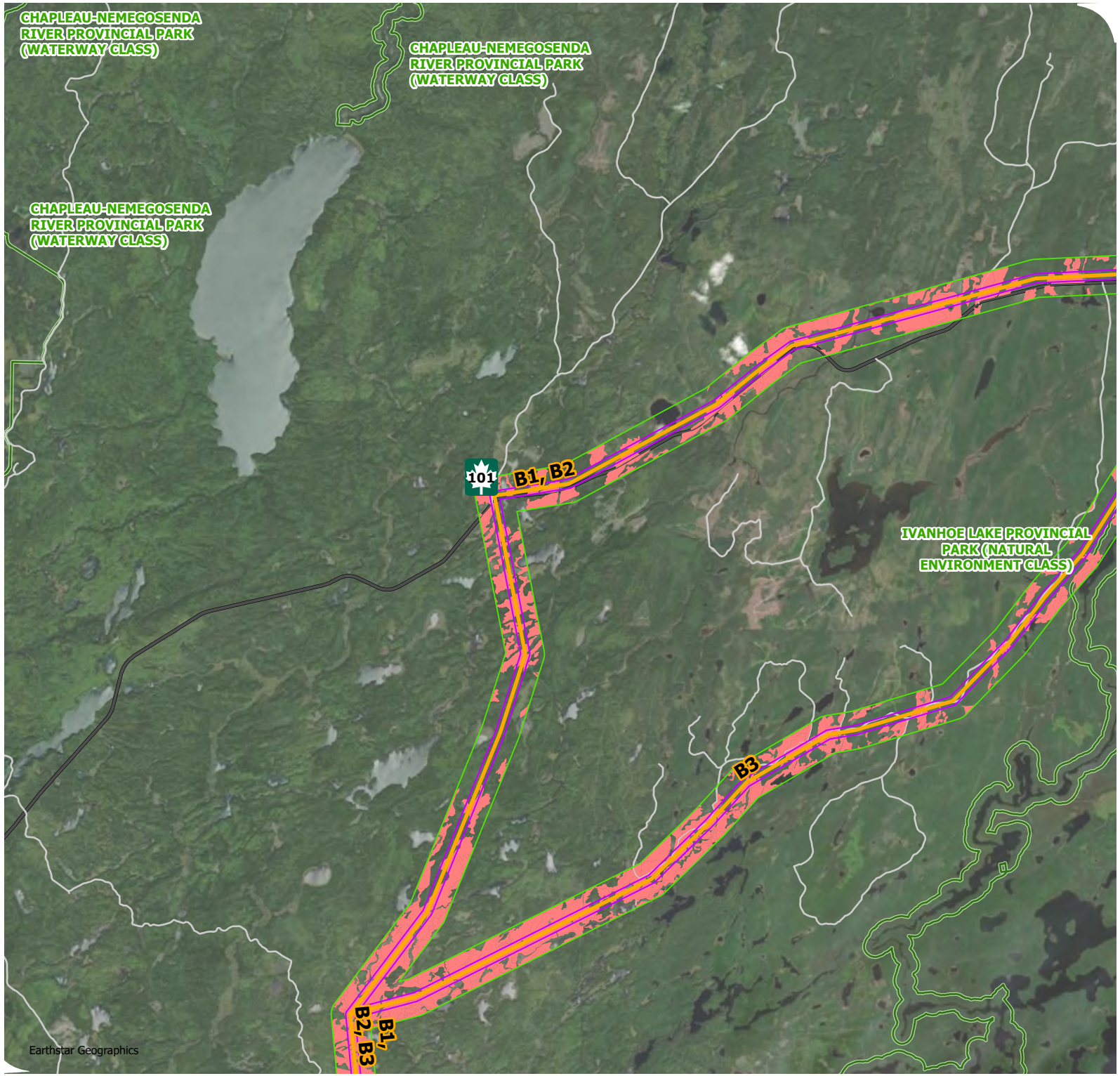
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 267. SWH - OLIVE-SIDED FLYCATCHER HABITAT

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Olive-sided Flycatcher Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

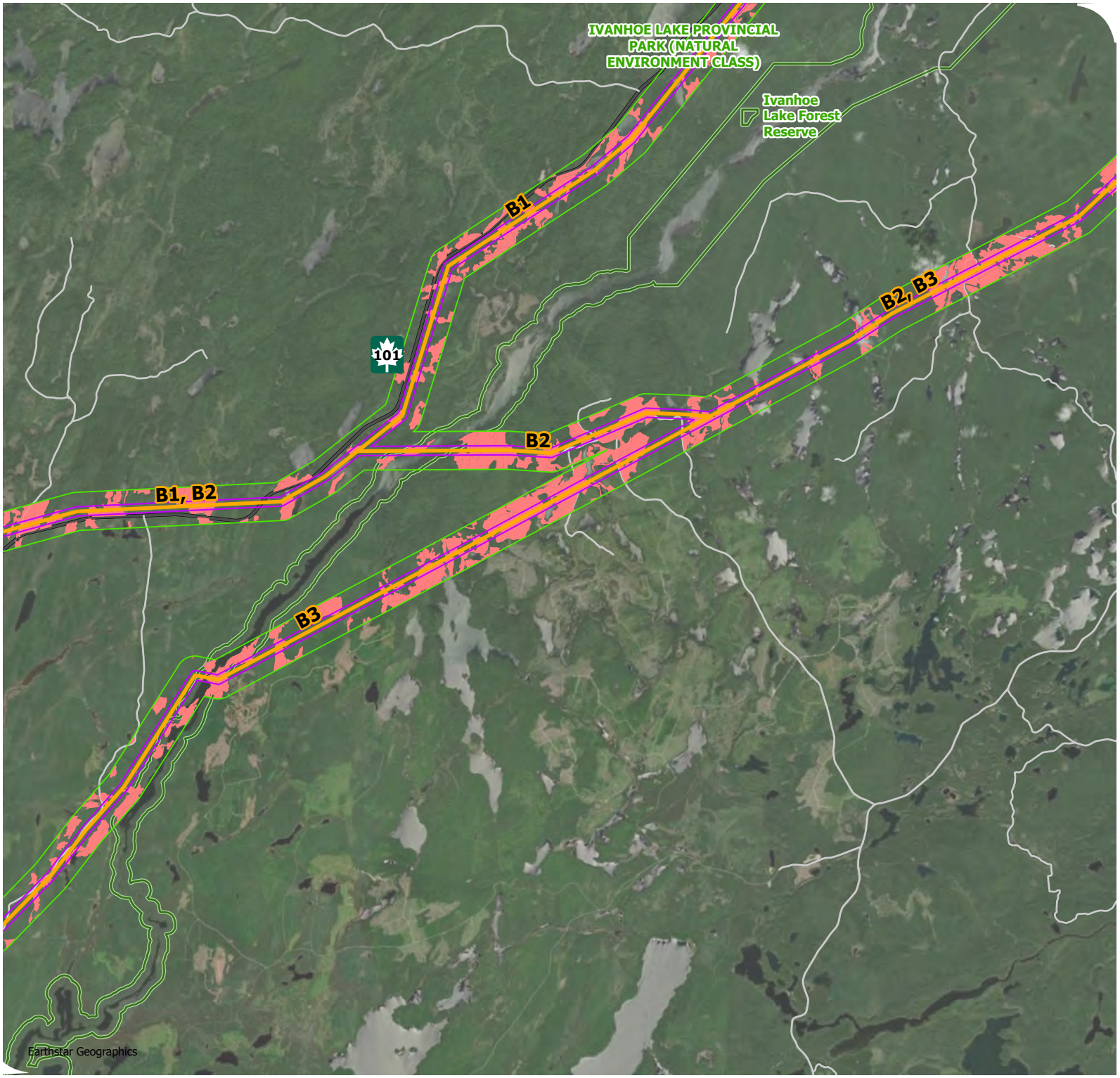


FIGURE 268. SWH - OLIVE-SIDED FLYCATCHER HABITAT

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Olive-sided Flycatcher Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
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SCALE 1:139,000

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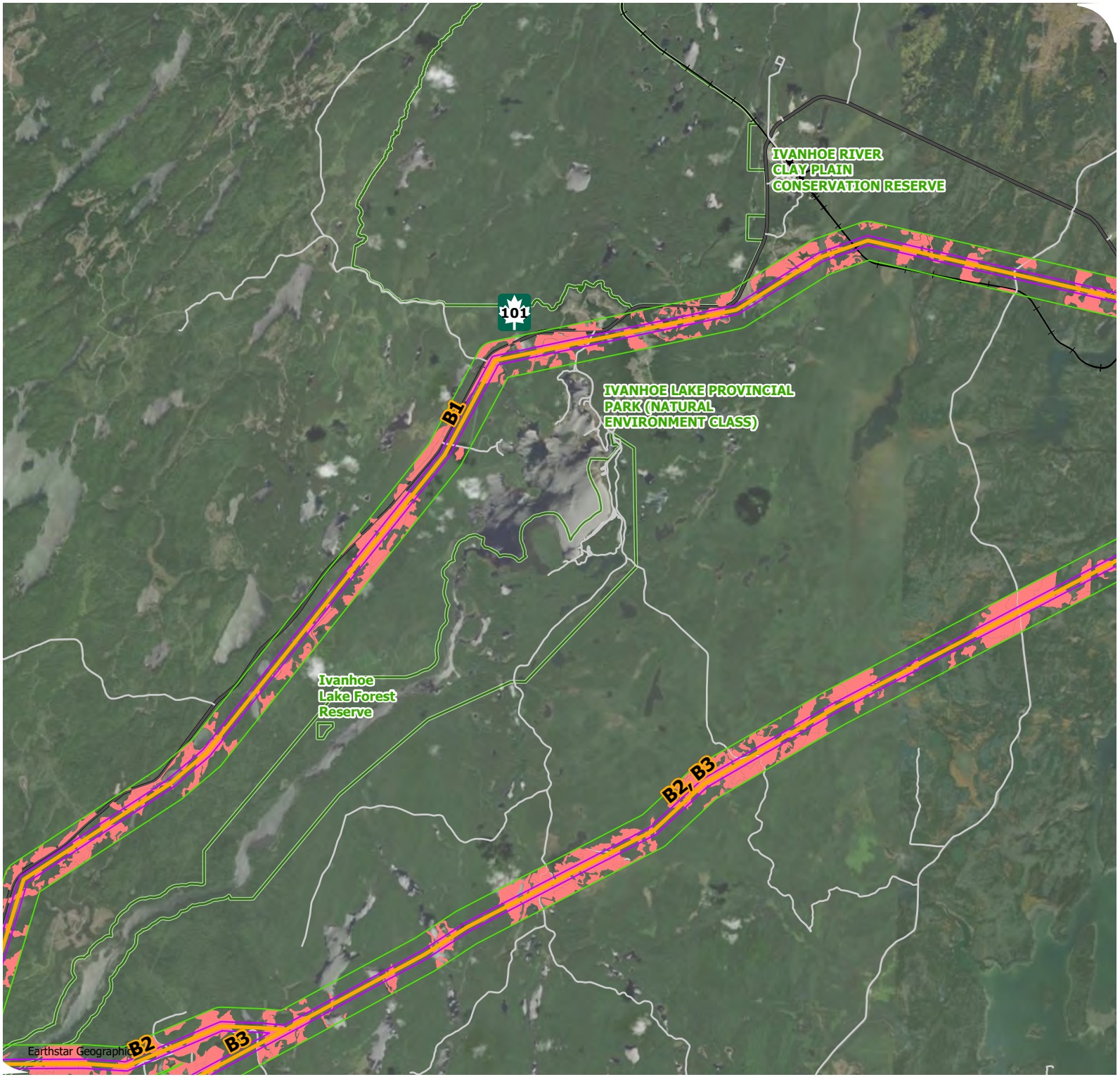
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WAWA TIMMINS POWER LINE

FIGURE 269. SWH - OLIVE-SIDED FLYCATCHER HABITAT

Mapping Extent - Ivanhoe Lake 4



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Olive-sided Flycatcher Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
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SCALE 1:139,000

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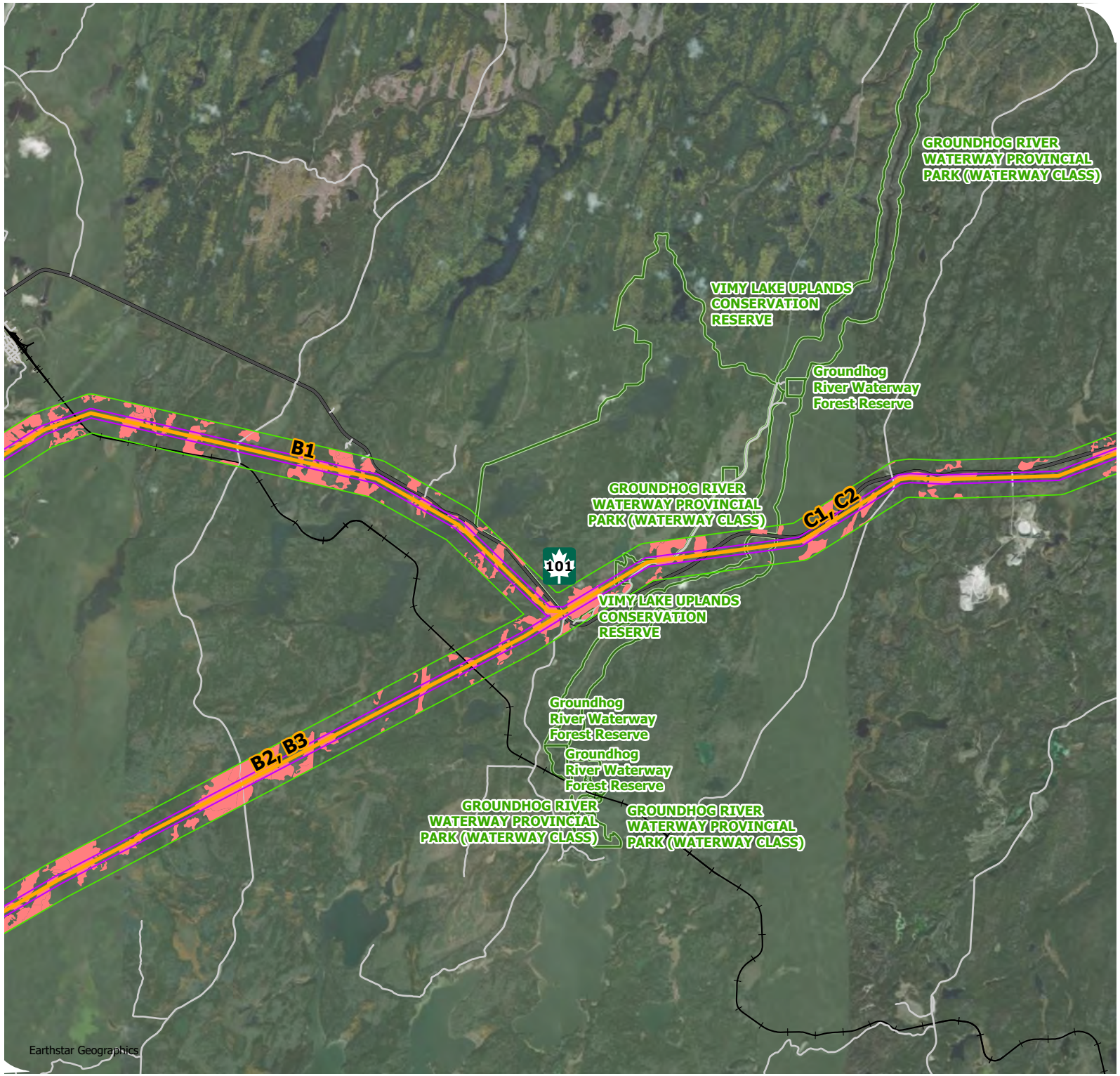
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WAWA TIMMINS POWER LINE

FIGURE 270. SWH - OLIVE-SIDED FLYCATCHER HABITAT

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Olive-sided Flycatcher Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

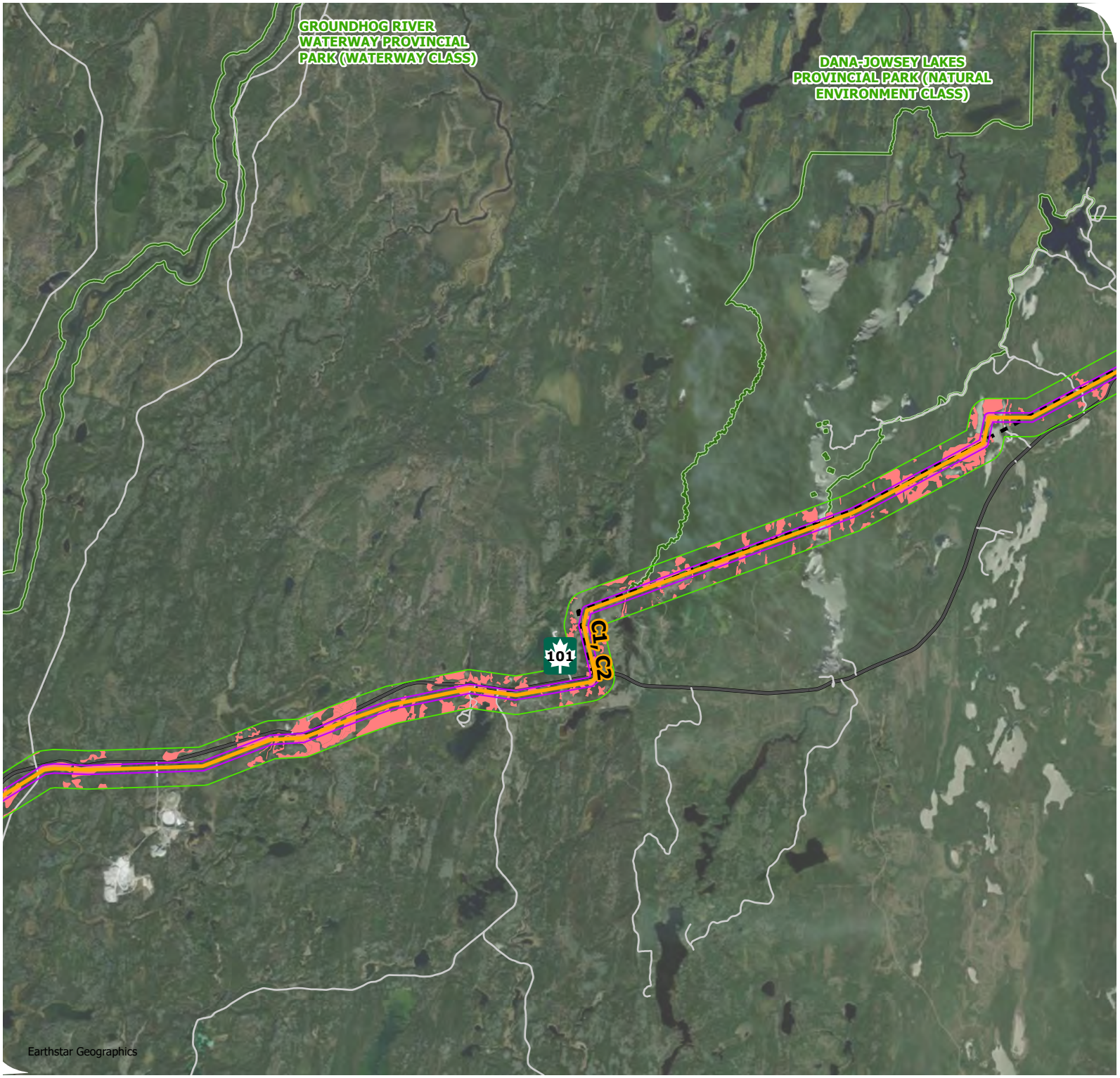
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 271. SWH - OLIVE-SIDED FLYCATCHER HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Olive-sided Flycatcher Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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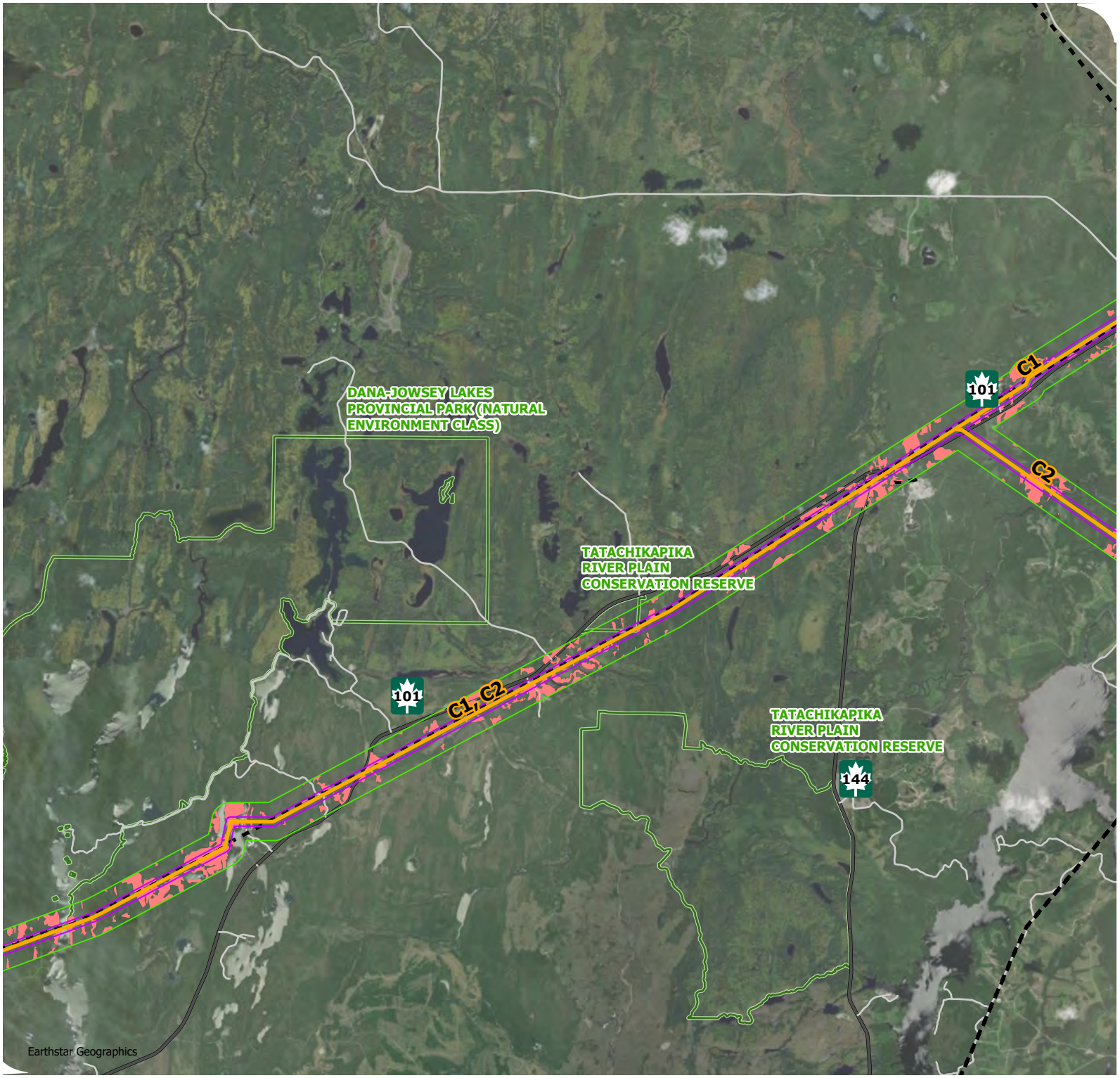
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WAWA TIMMINS POWER LINE

FIGURE 272. SWH - OLIVE-SIDED FLYCATCHER HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Olive-sided Flycatcher Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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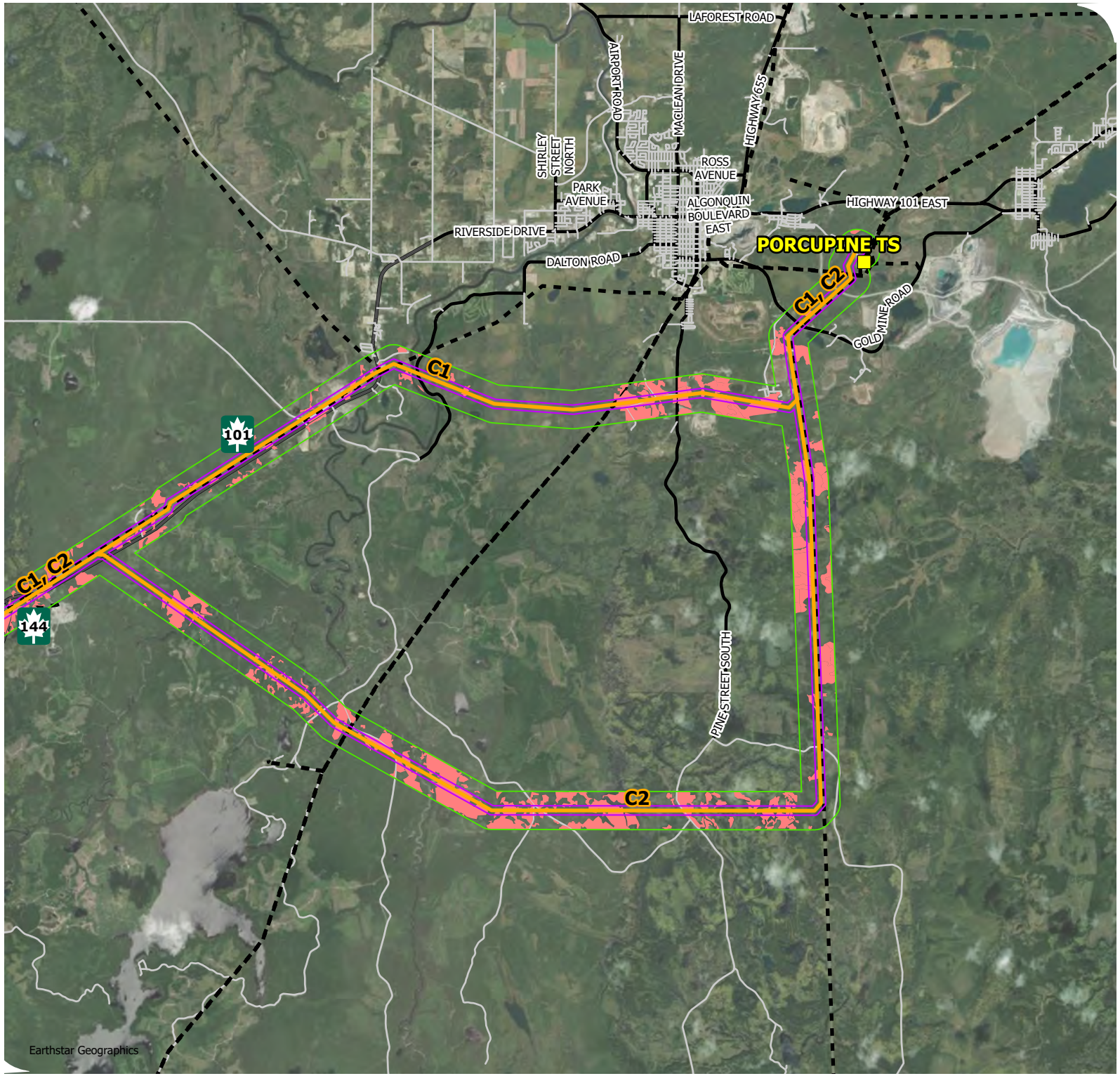
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WAWA TIMMINS POWER LINE

FIGURE 273. SWH - OLIVE-SIDED FLYCATCHER HABITAT

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Olive-sided Flycatcher Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

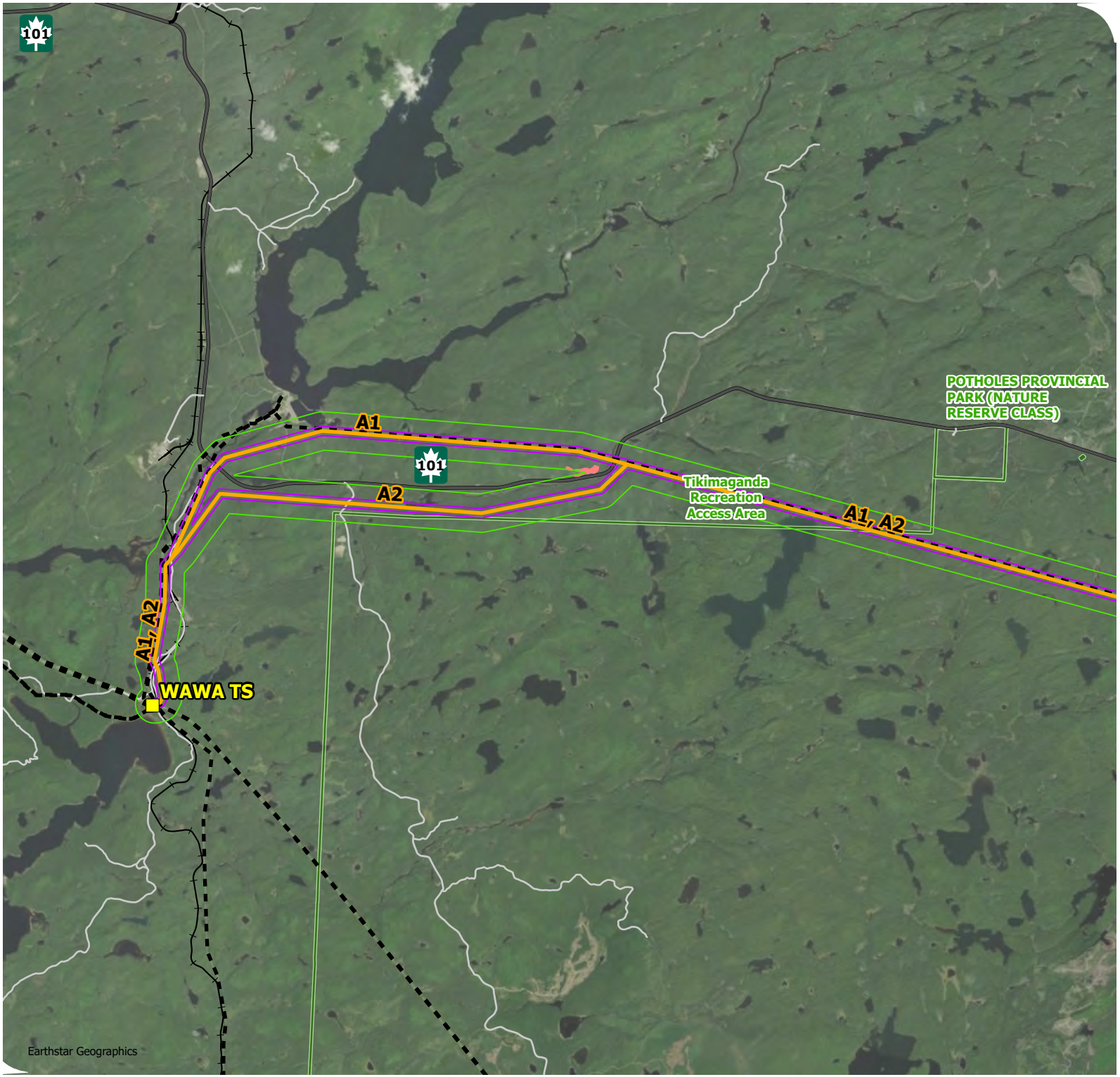
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 274. SWH - PEREGRINE FALCON HABITAT

Mapping Extent - Wawa Station

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Peregrine Falcon Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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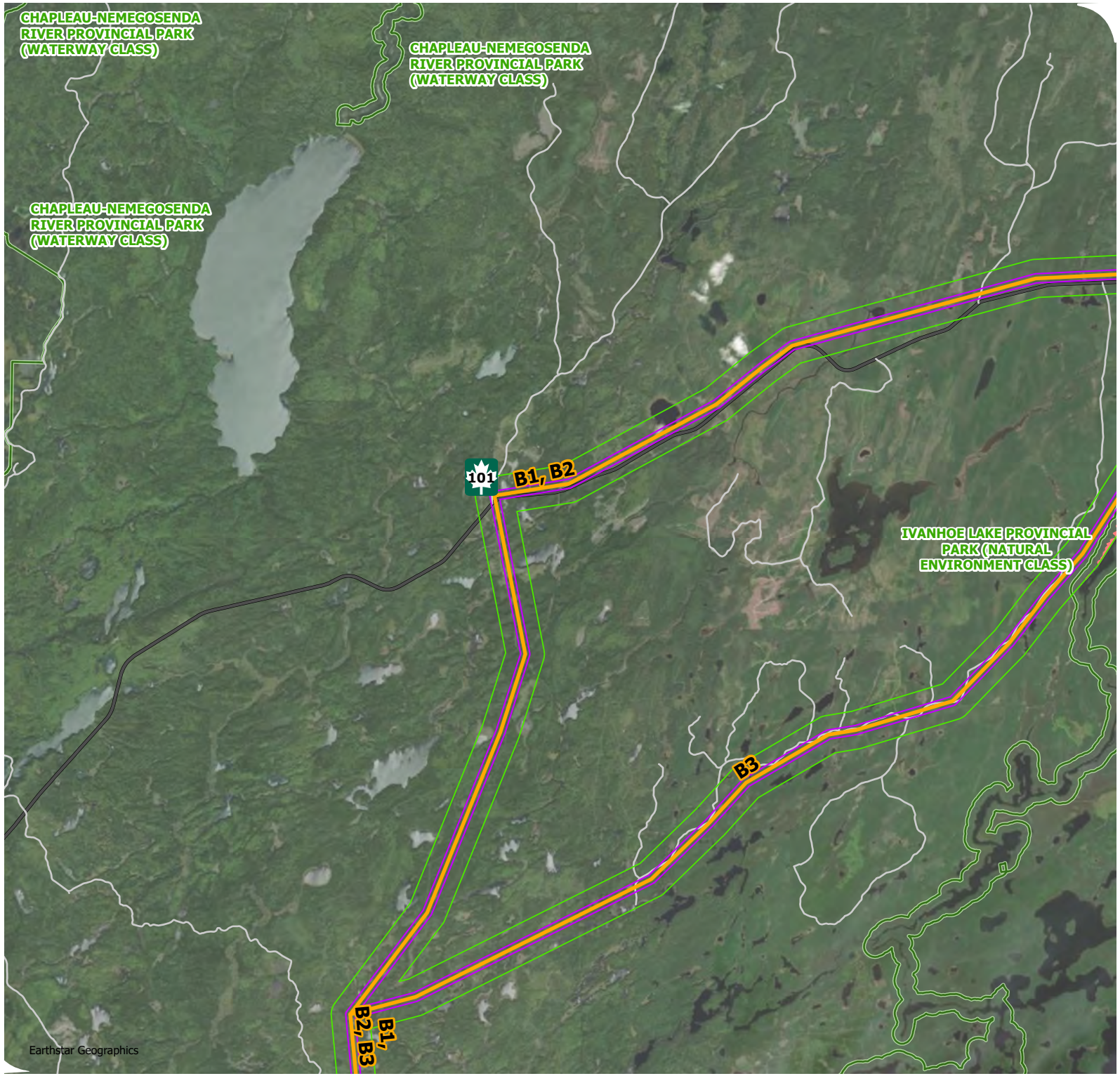
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WAWA TIMMINS POWER LINE

FIGURE 275. SWH - LAKE STURGEON RECORDS

Mapping Extent - Ivanhoe Lake 2



- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Lake Sturgeon Records (DFO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

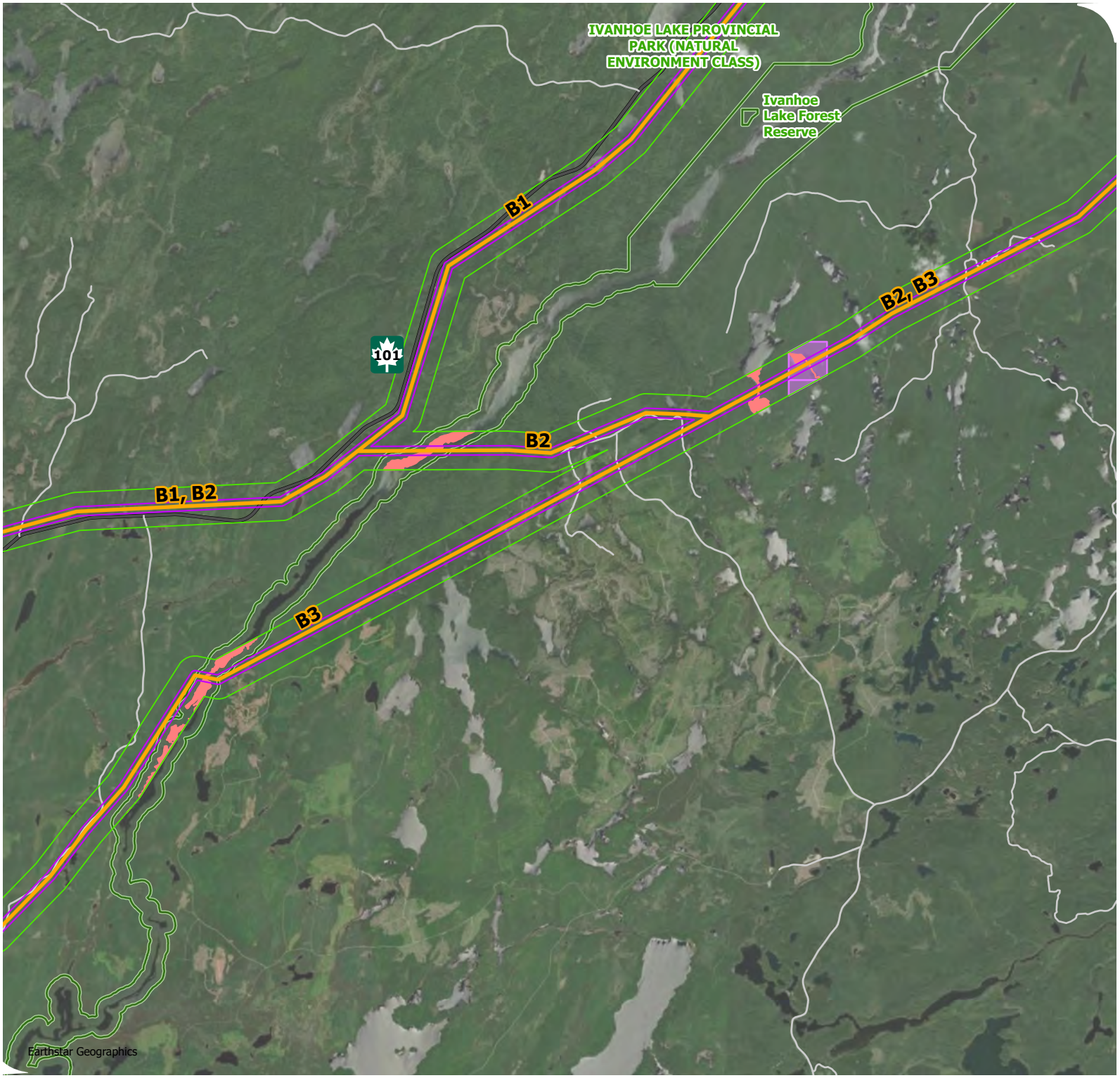
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WAWA TIMMINS POWER LINE

FIGURE 276. SWH - LAKE STURGEON RECORDS

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Lake Sturgeon Records (NHIC)
- Lake Sturgeon Records (DFO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

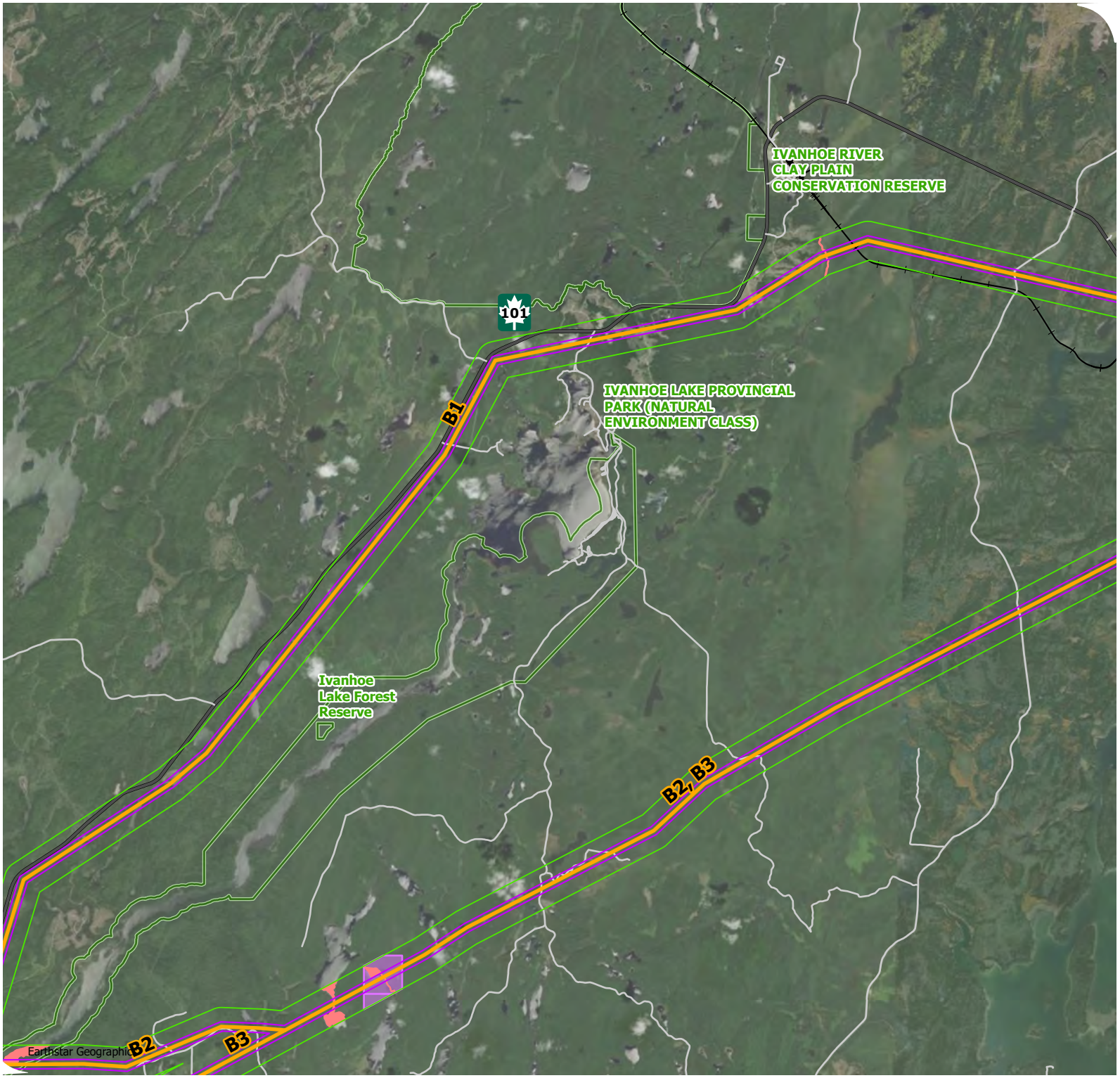
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 277. SWH - LAKE STURGEON RECORDS

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Lake Sturgeon Records (NHIC)
- Lake Sturgeon Records (DFO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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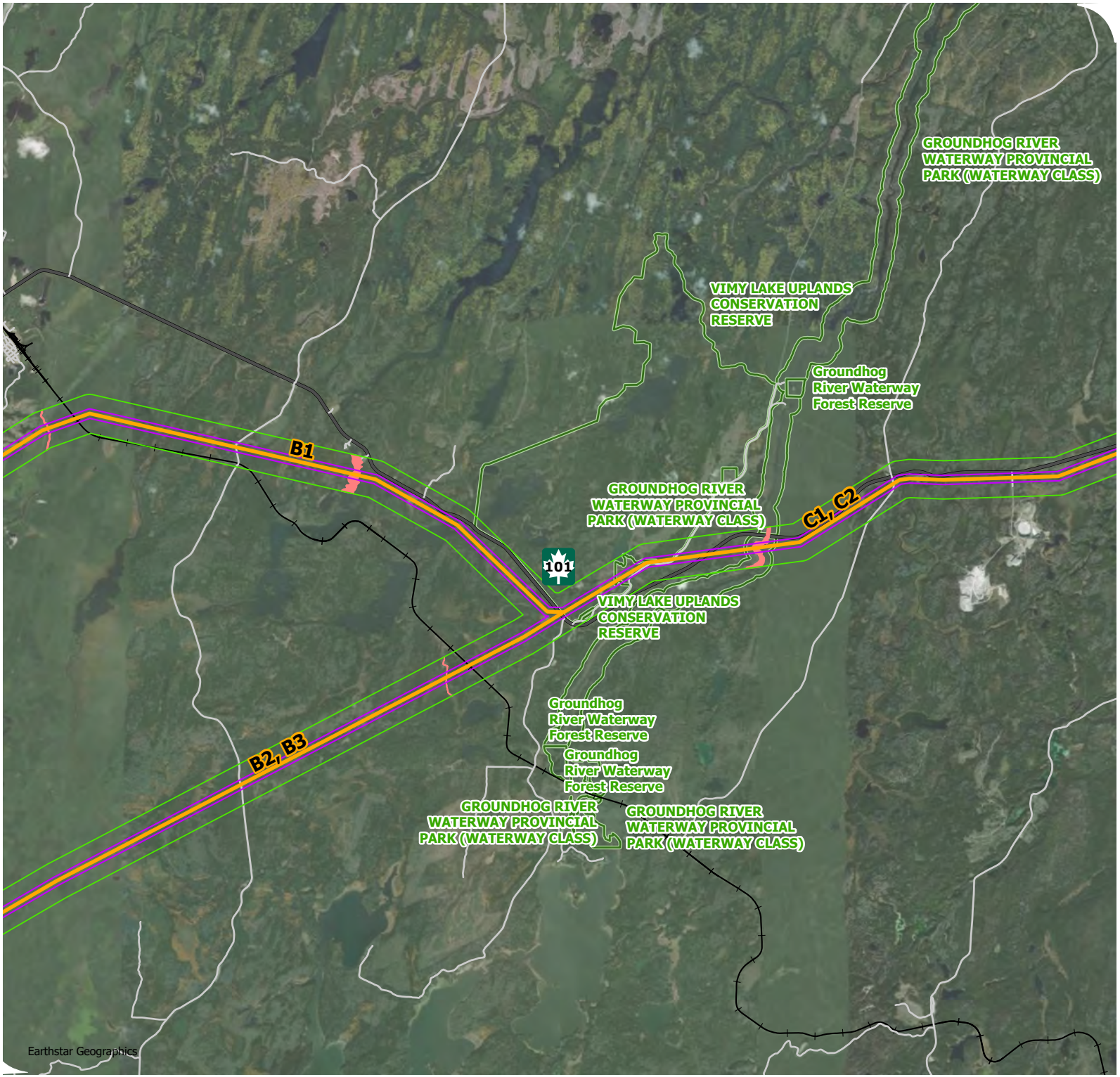
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WAWA TIMMINS POWER LINE

FIGURE 278. SWH - LAKE STURGEON RECORDS

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Lake Sturgeon Records (DFO)



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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SCALE 1:139,000

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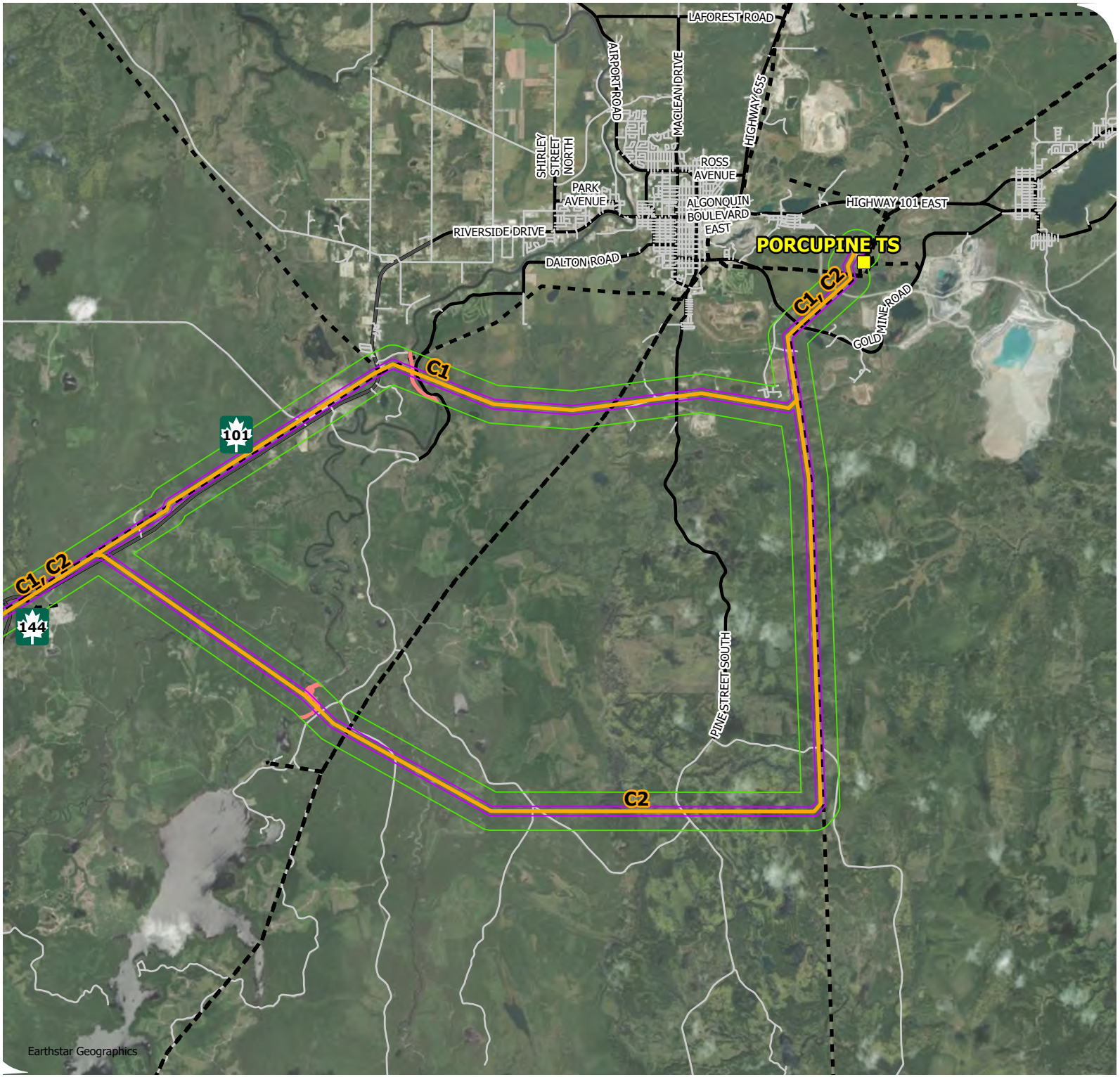
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WAWA TIMMINS POWER LINE

FIGURE 279. SWH - LAKE STURGEON RECORDS

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Lake Sturgeon Records (DFO)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

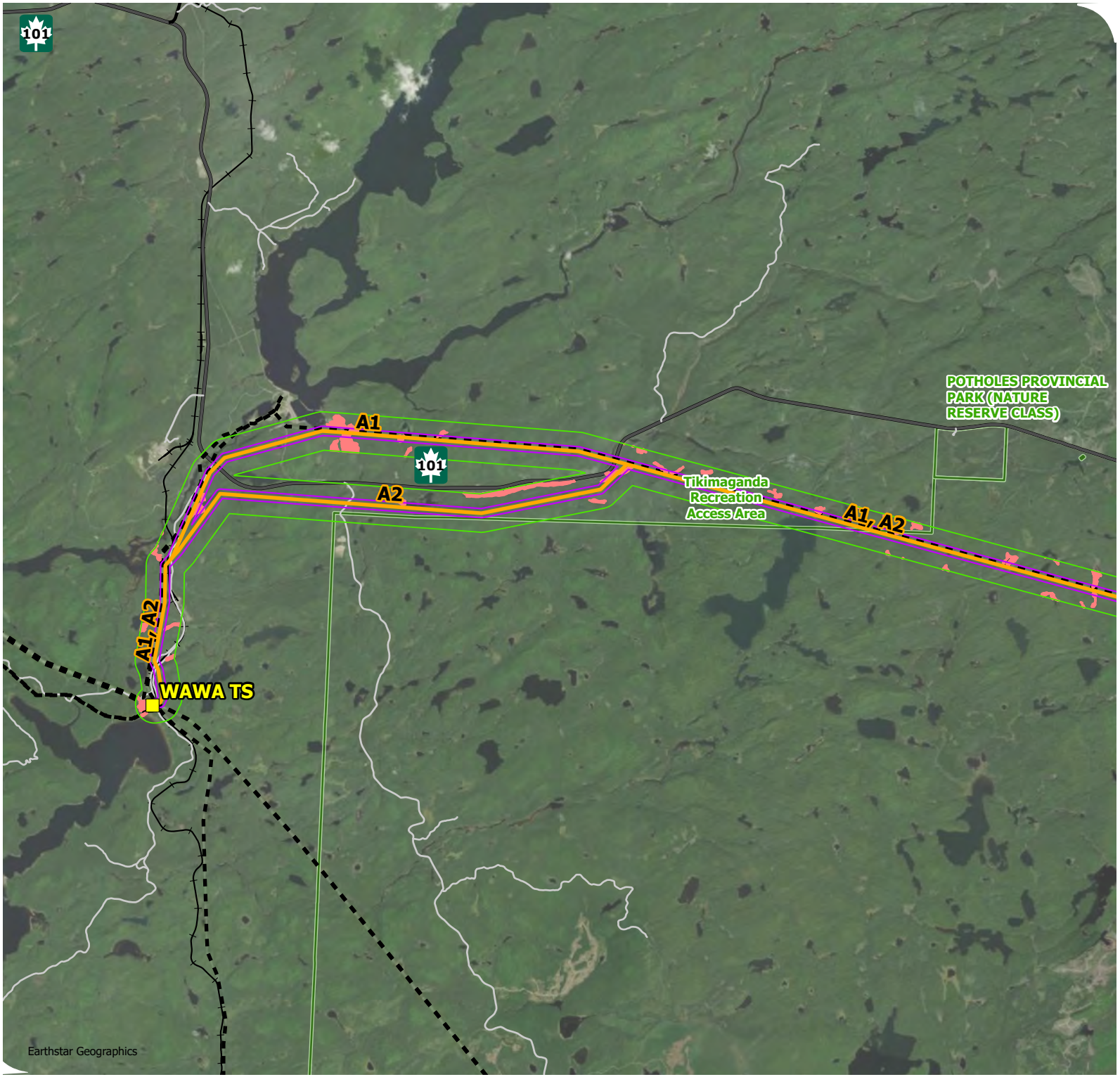


FIGURE 280. SWH - MONARCH BUTTERFLY HABITAT

Mapping Extent - Wawa Station

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Monarch Butterfly Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

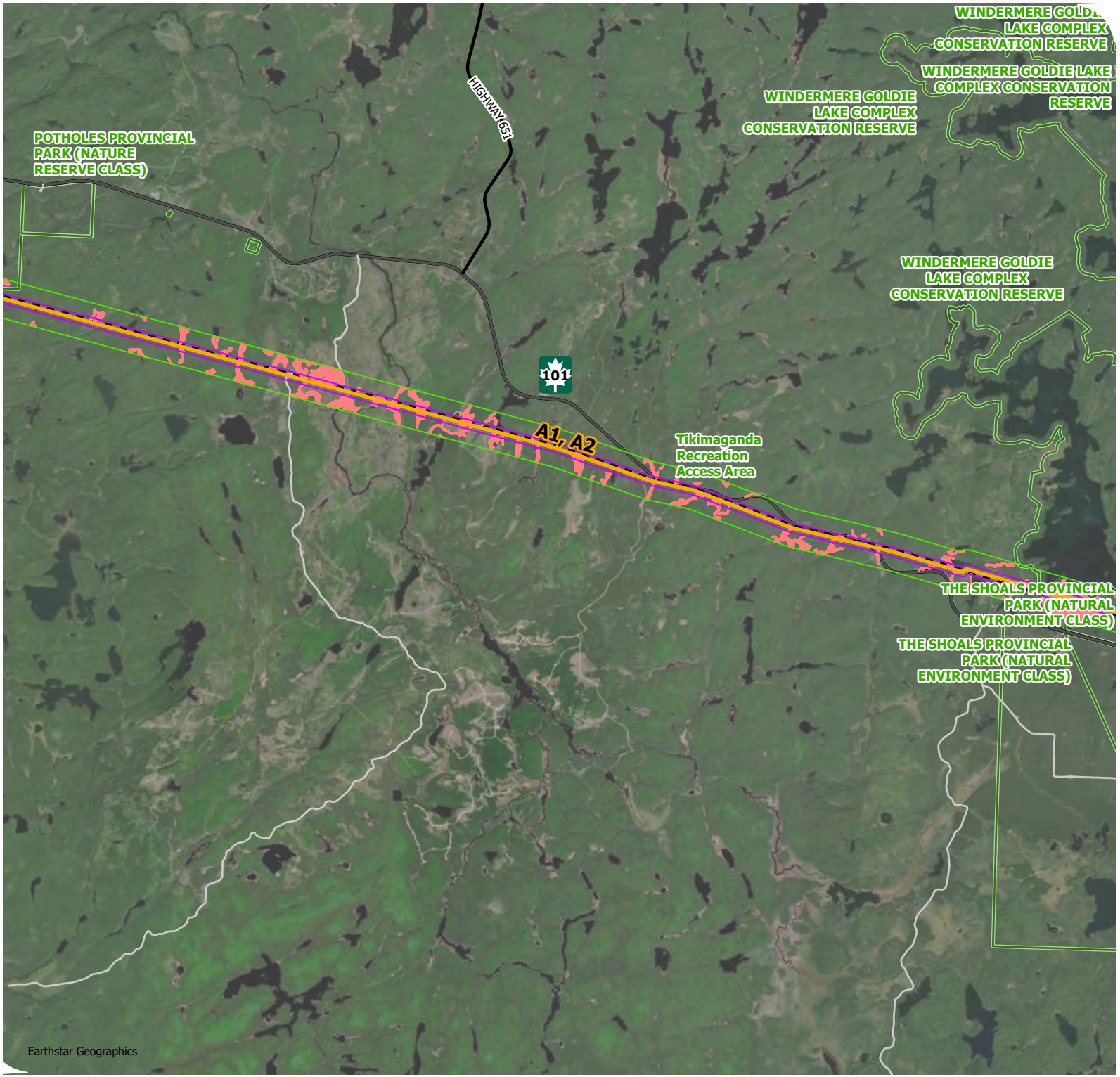
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WAWA TIMMINS POWER LINE

FIGURE 281. SWH - MONARCH BUTTERFLY HABITAT

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Monarch Butterfly Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

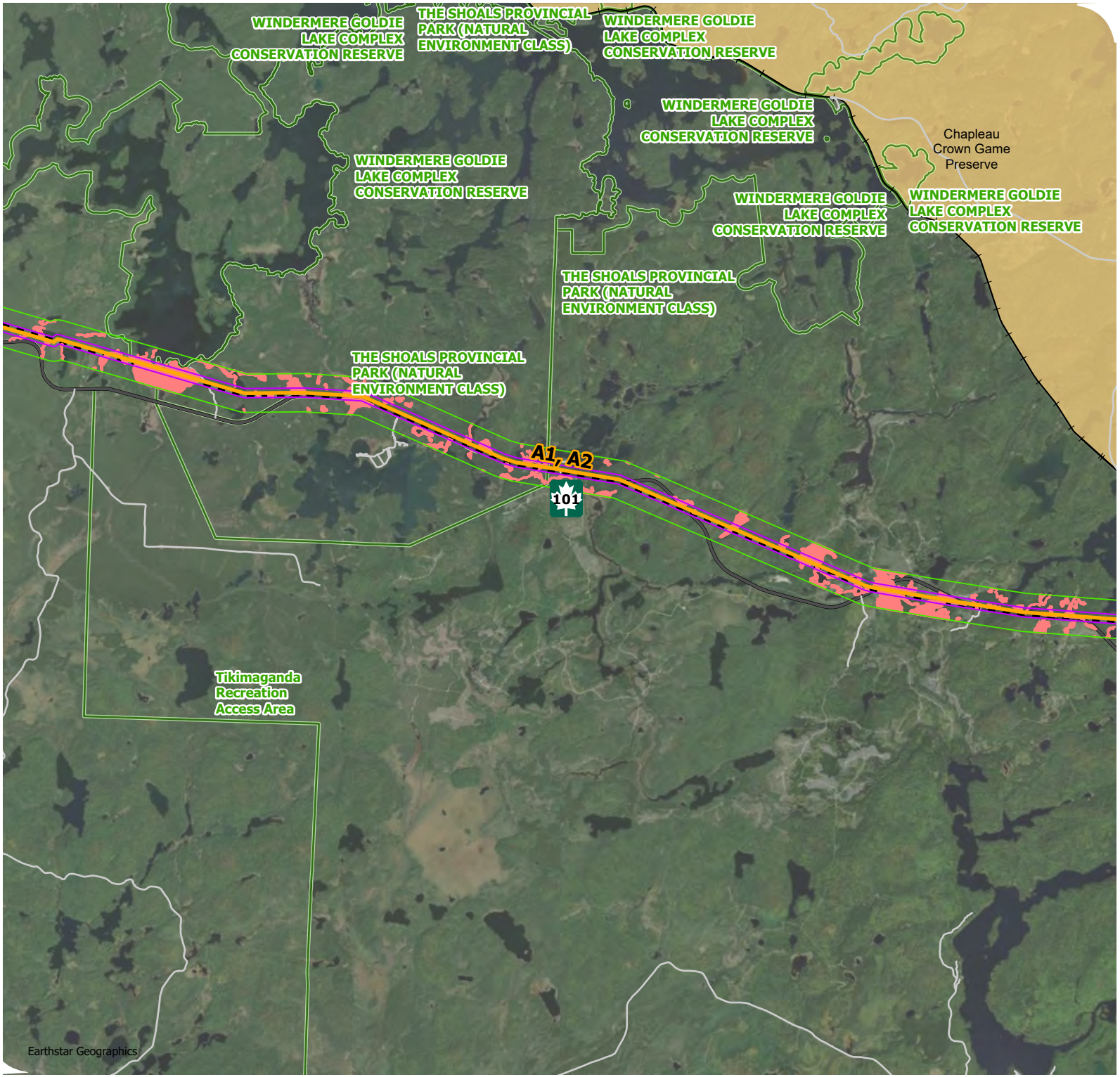
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WAWA TIMMINS POWER LINE

FIGURE 282. SWH - MONARCH BUTTERFLY HABITAT

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Monarch Butterfly Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

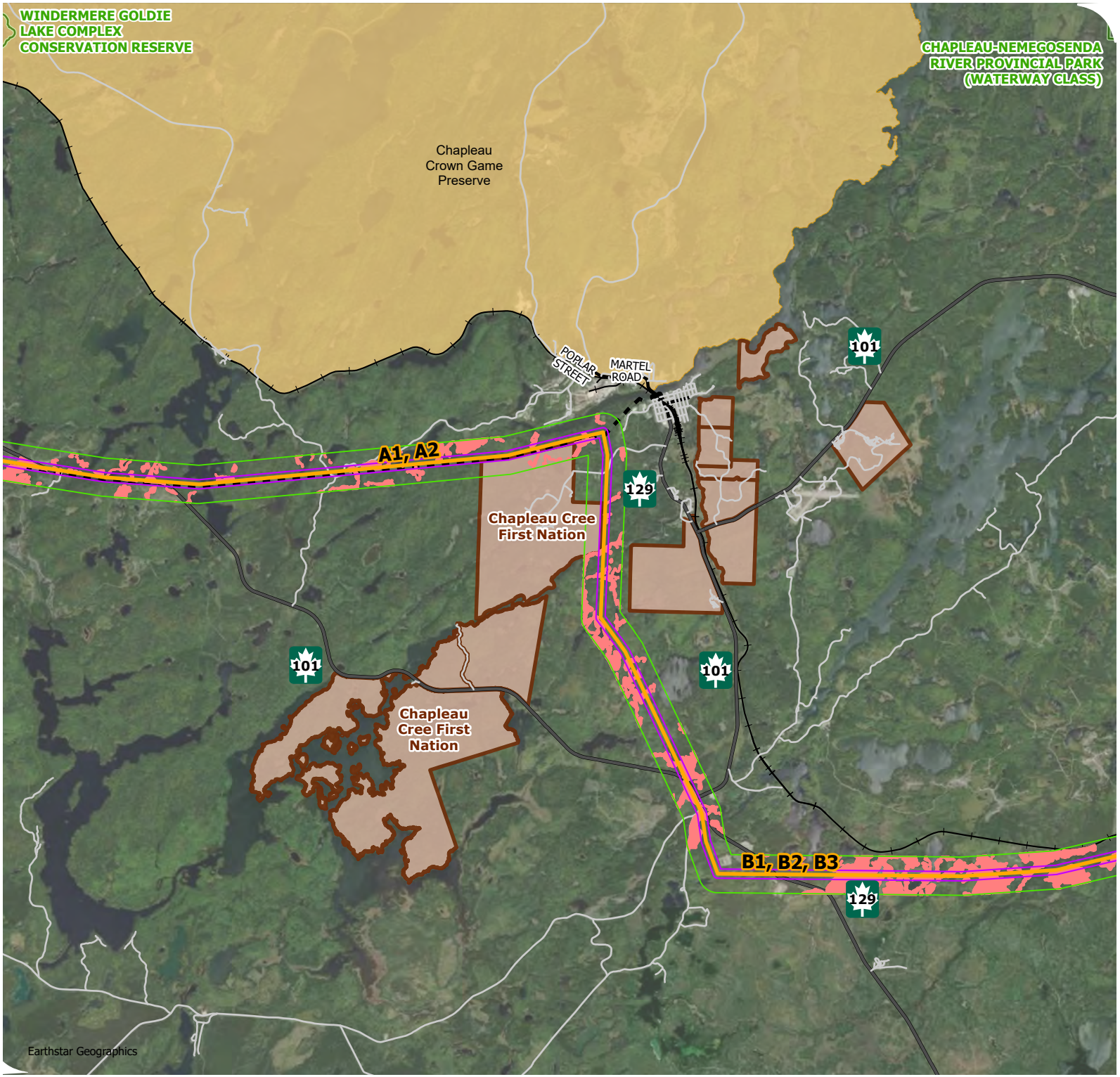
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 283. SWH - MONARCH BUTTERFLY HABITAT

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Monarch Butterfly Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

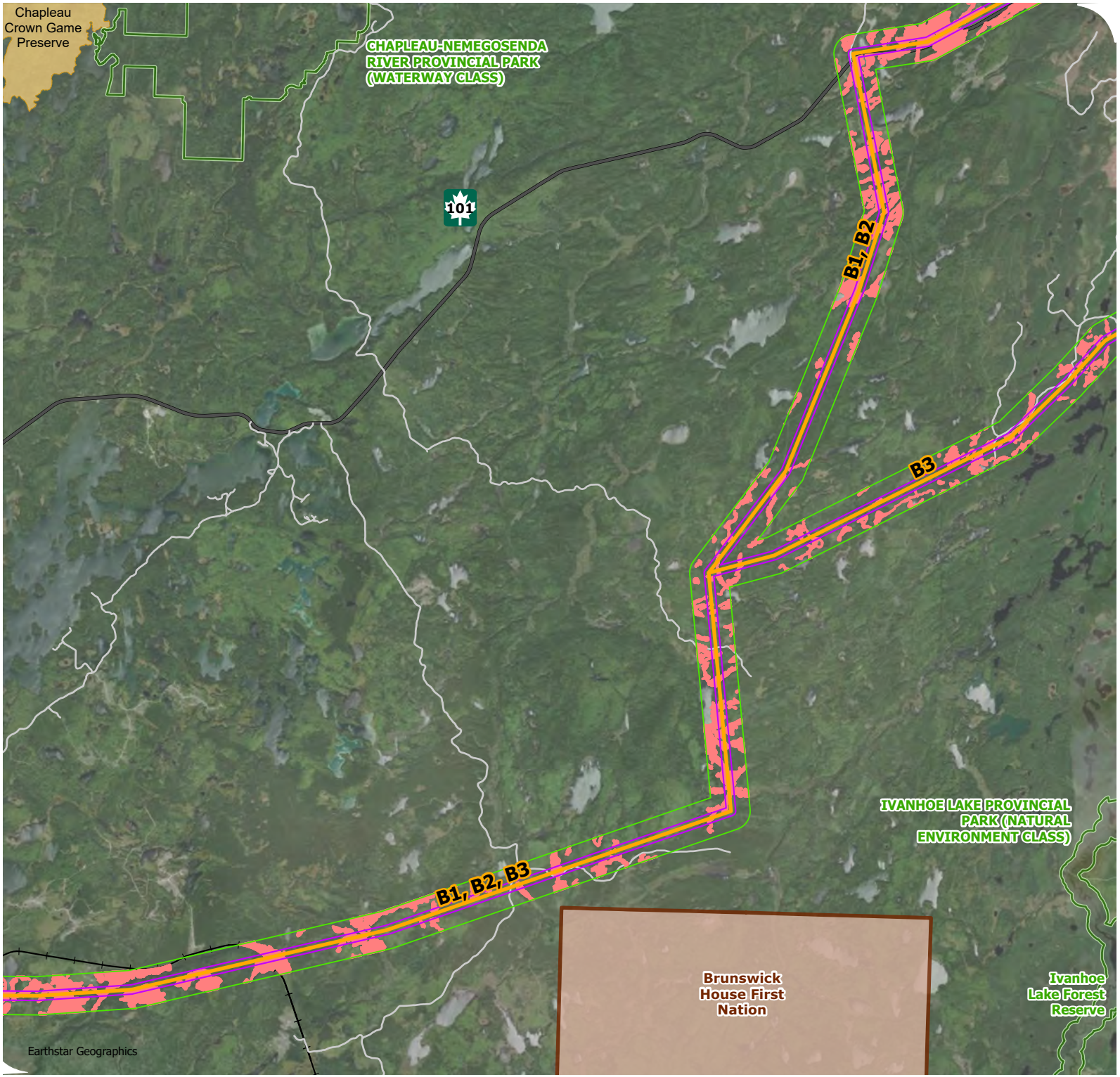
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 284. SWH - MONARCH BUTTERFLY HABITAT

Mapping Extent - Ivanhoe Lake 1

- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Monarch Butterfly Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

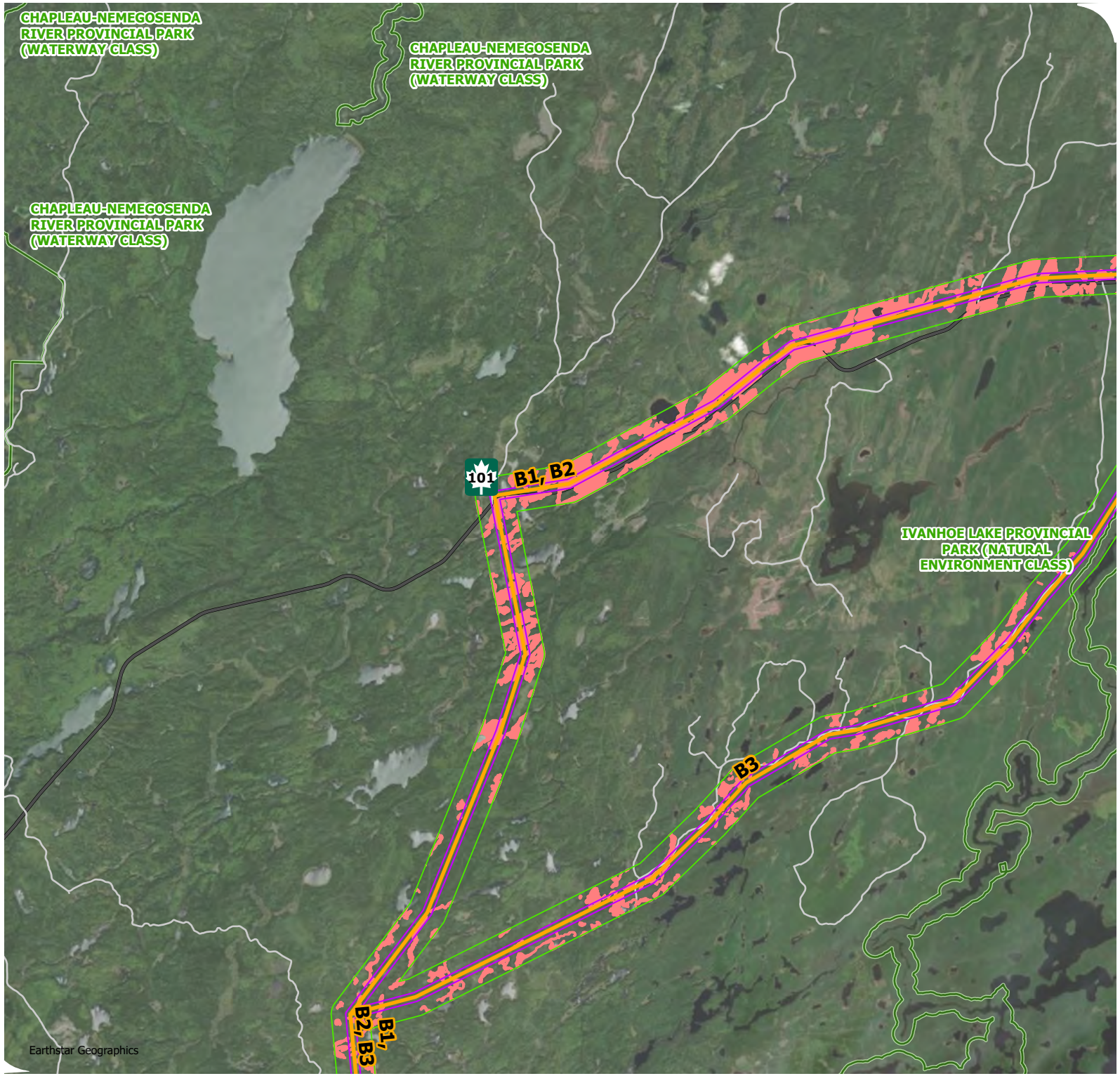
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 285. SWH - MONARCH BUTTERFLY HABITAT

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Monarch Butterfly Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

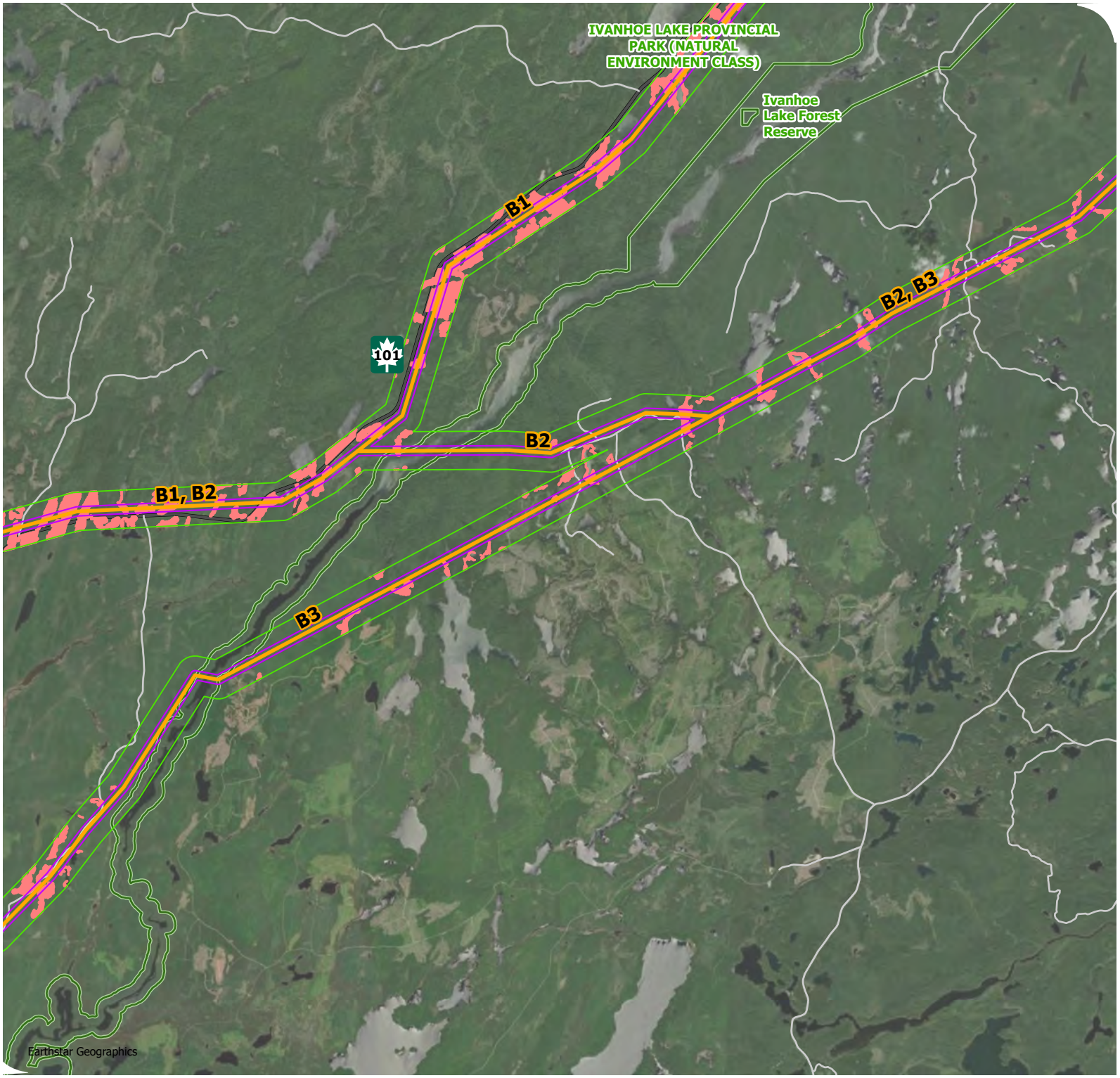
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 286. SWH - MONARCH BUTTERFLY HABITAT

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Monarch Butterfly Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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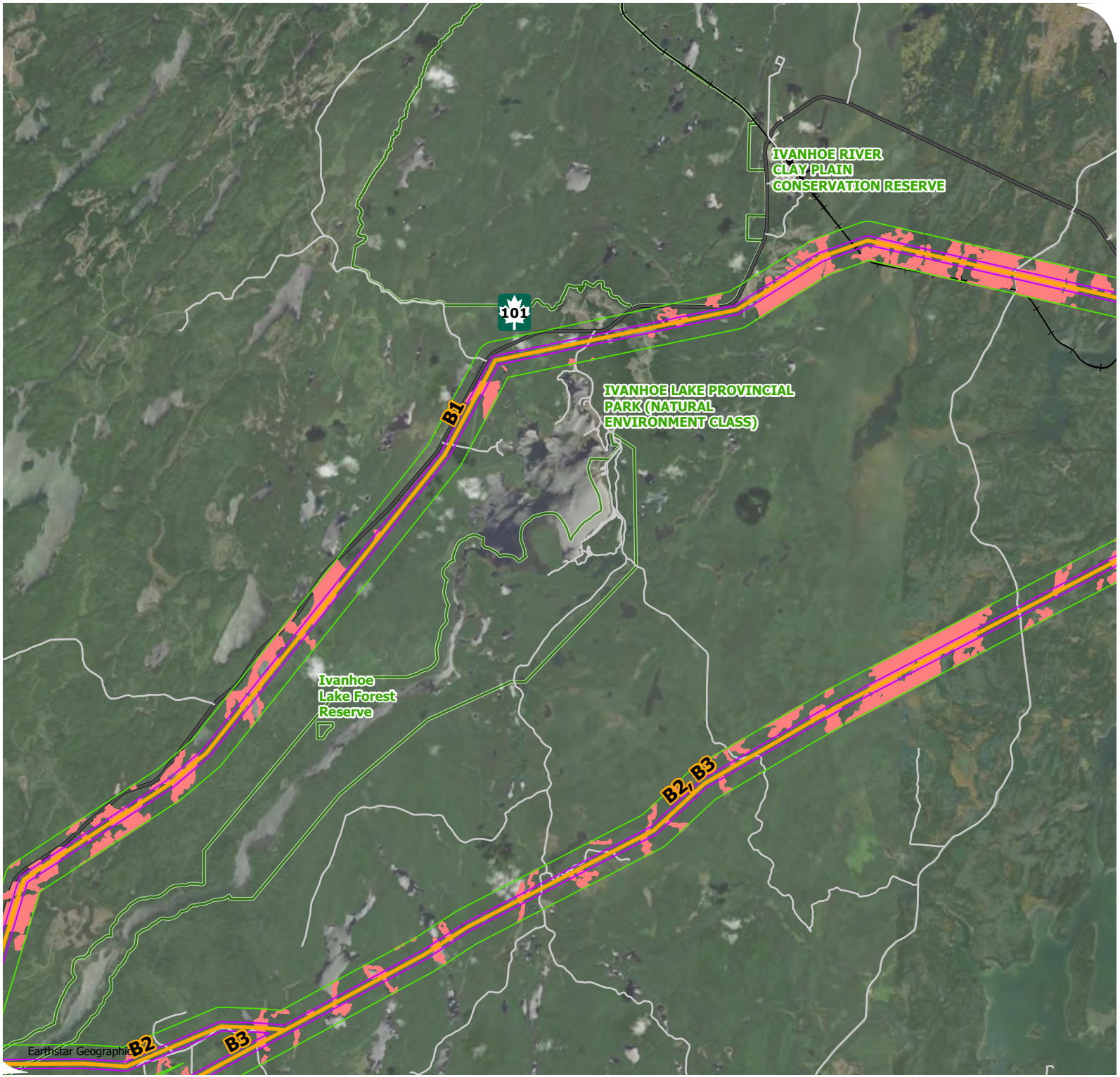
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WAWA TIMMINS POWER LINE

FIGURE 287. SWH - MONARCH BUTTERFLY HABITAT

Mapping Extent - Ivanhoe Lake 4



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Monarch Butterfly Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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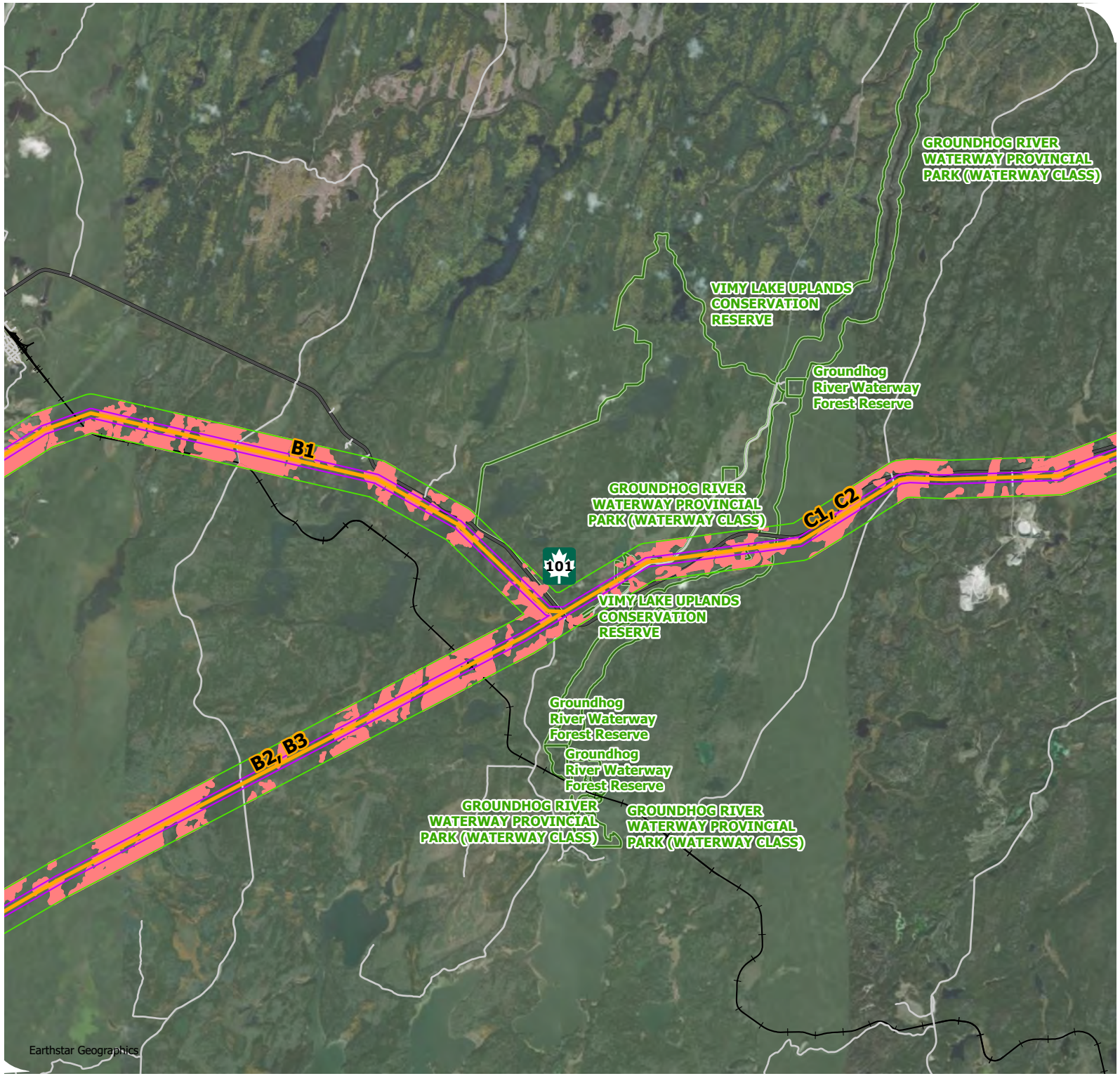
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WAWA TIMMINS POWER LINE

FIGURE 288. SWH - MONARCH BUTTERFLY HABITAT

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Monarch Butterfly Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

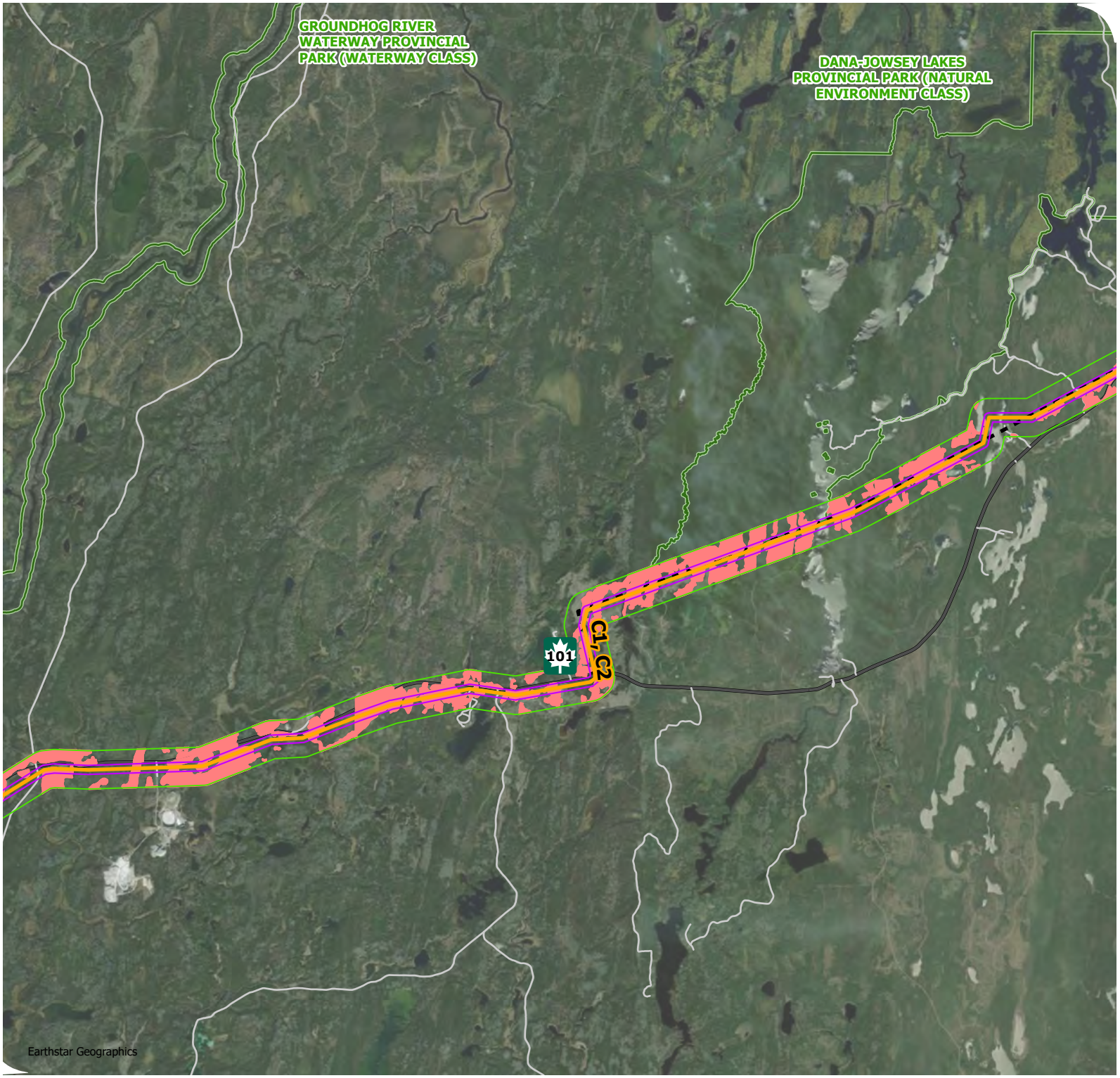
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
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WAWA TIMMINS POWER LINE

FIGURE 289. SWH - MONARCH BUTTERFLY HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Monarch Butterfly Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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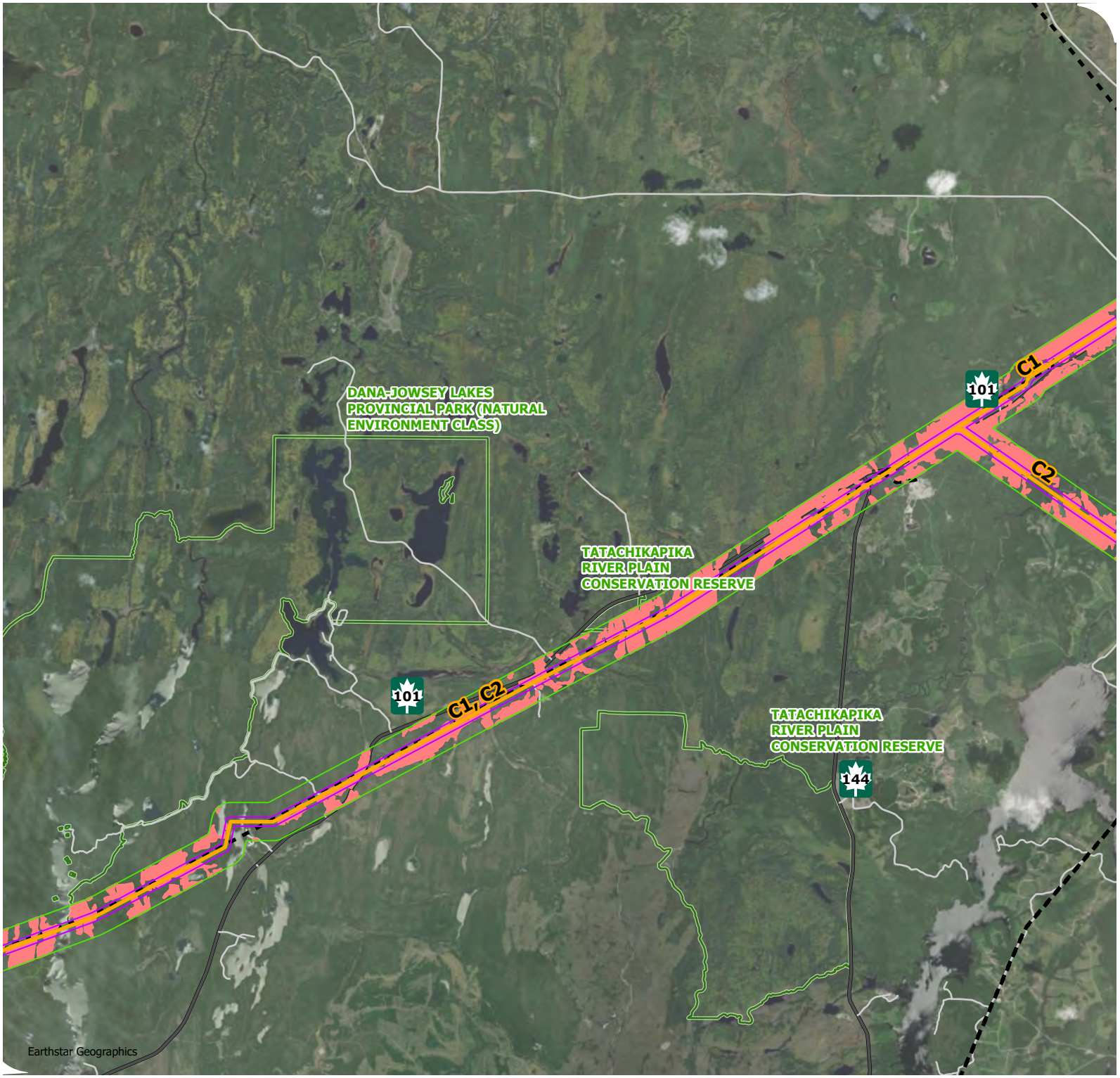
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WAWA TIMMINS POWER LINE

FIGURE 290. SWH - MONARCH BUTTERFLY HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Monarch Butterfly Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

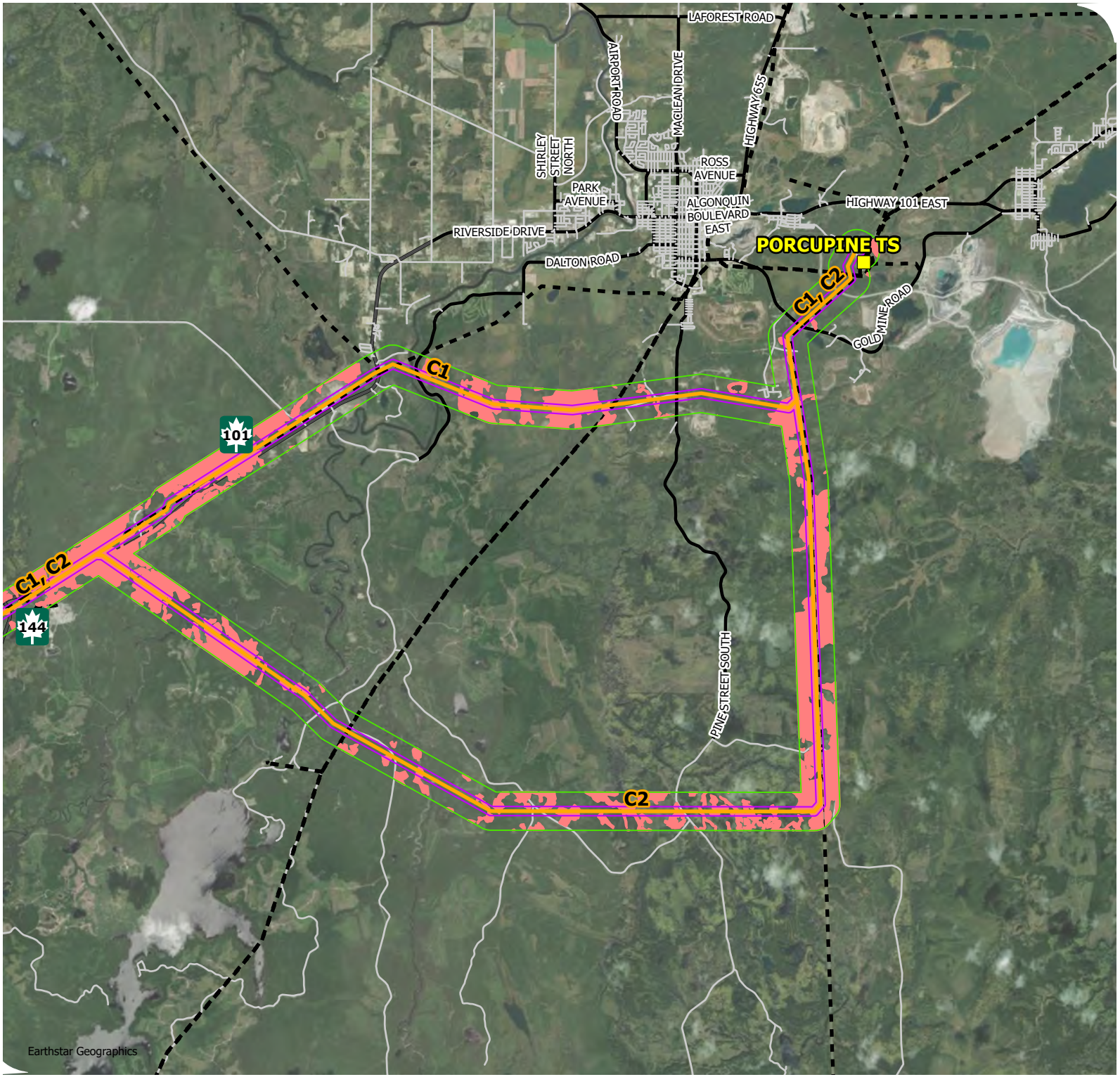


FIGURE 291. SWH - MONARCH BUTTERFLY HABITAT

Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Monarch Butterfly Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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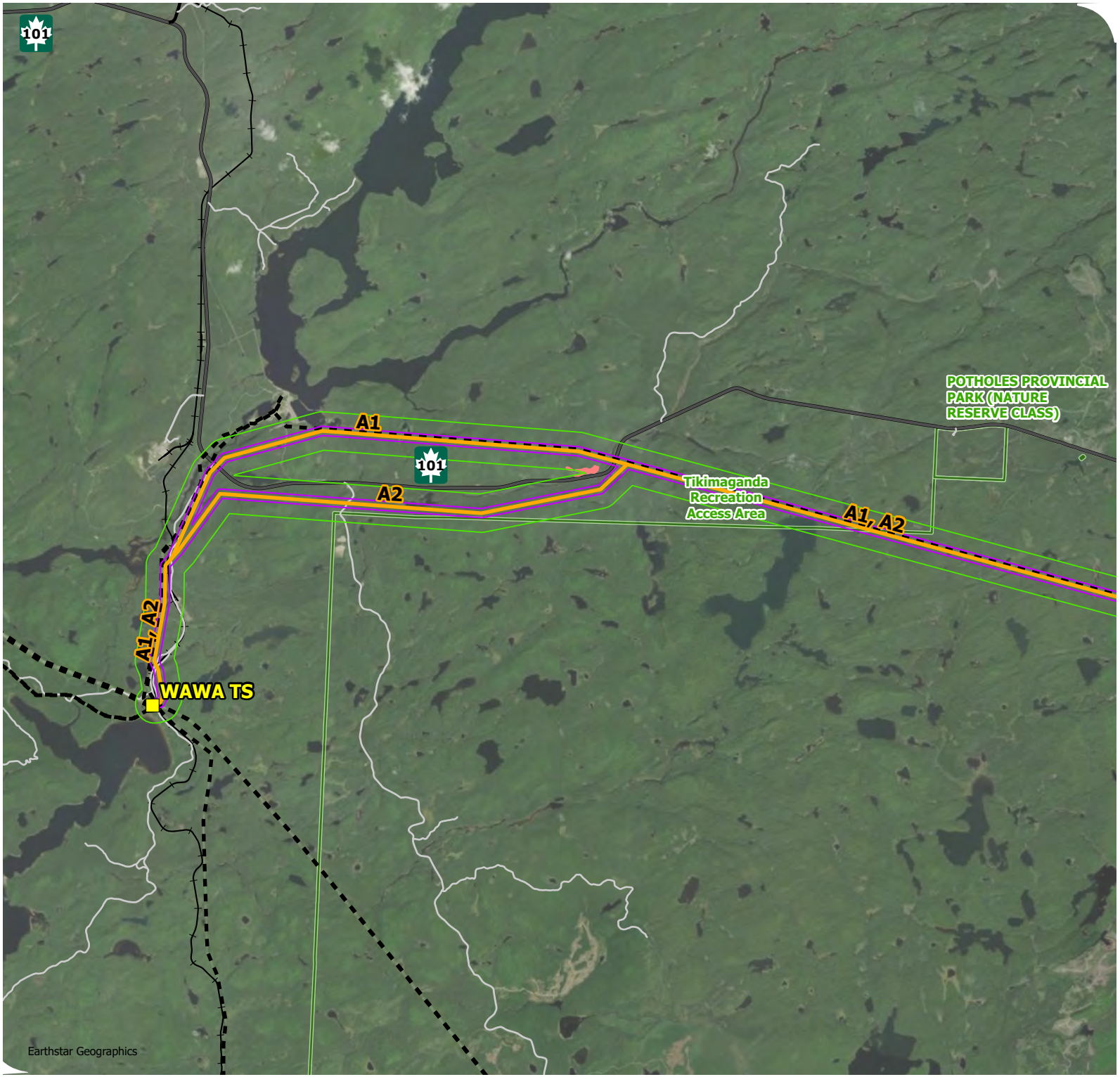
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WAWA TIMMINS POWER LINE

FIGURE 292. RVC - CLIFF AND TALUS SLOPE HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Cliff and Talus Slope Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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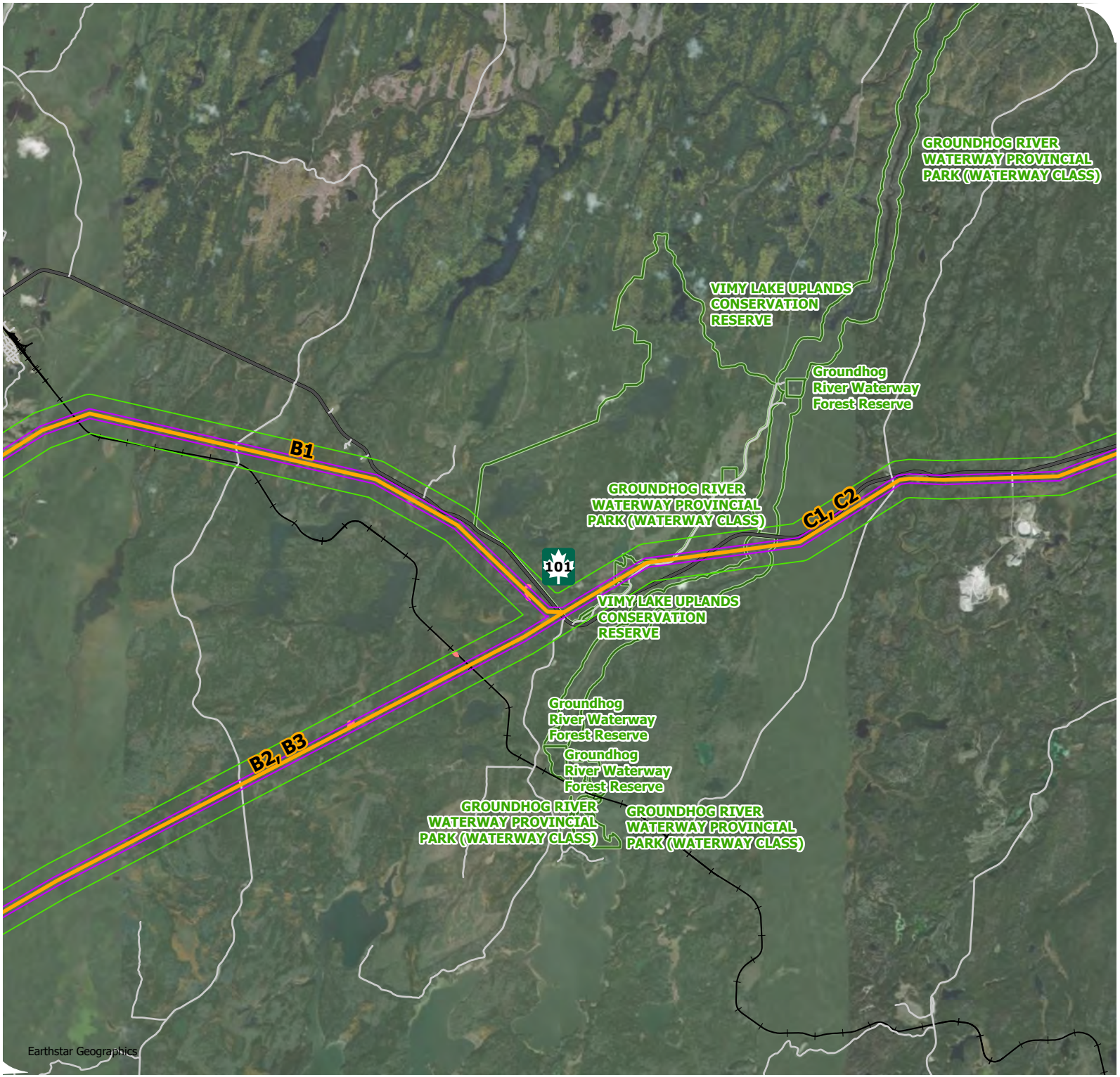
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WAWA TIMMINS POWER LINE

FIGURE 293. RVC - HARDWOOD SWAMP HABITAT

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Hardwood Swamp Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

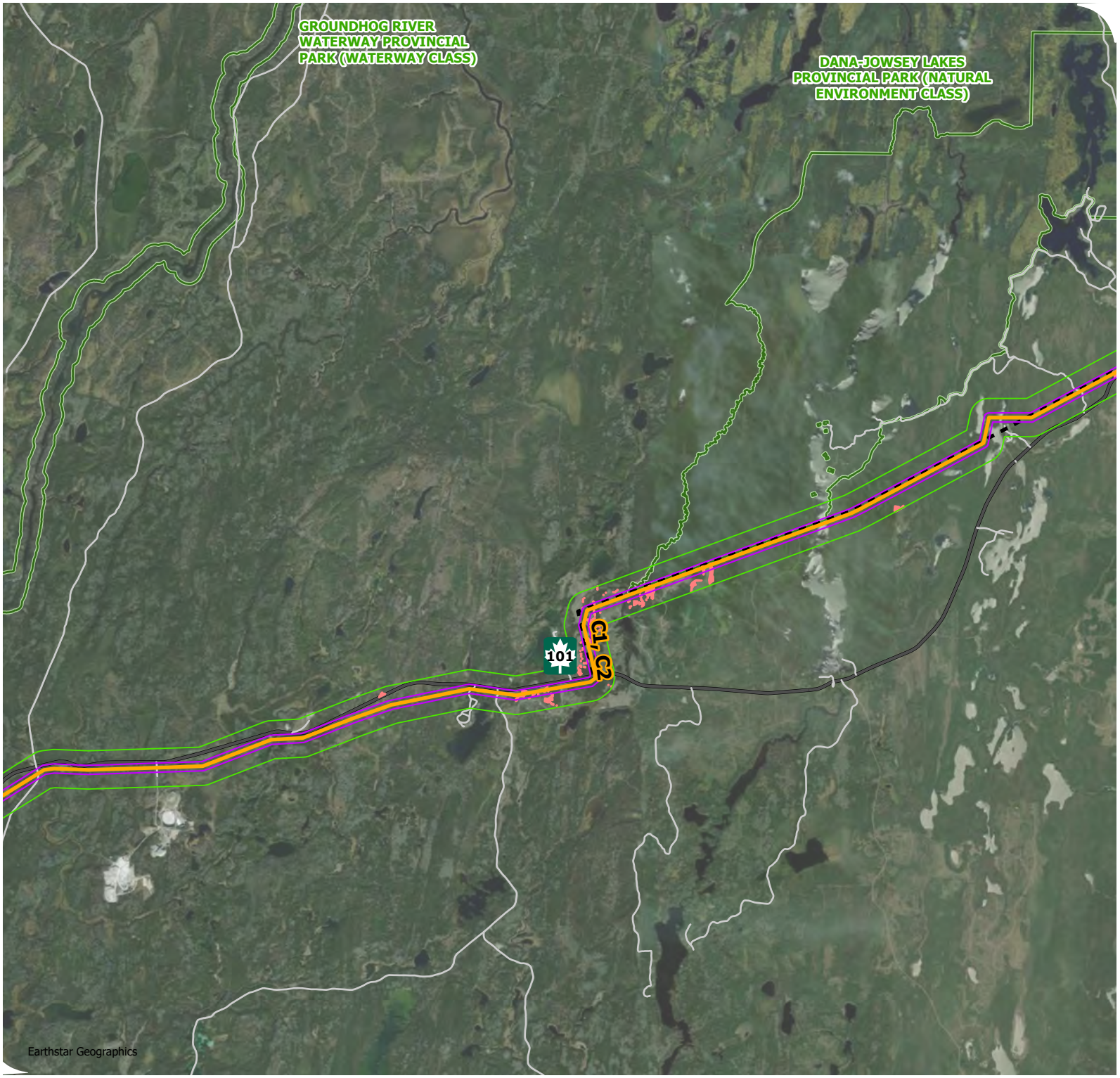
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 294. RVC - HARDWOOD SWAMP HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Hardwood Swamp Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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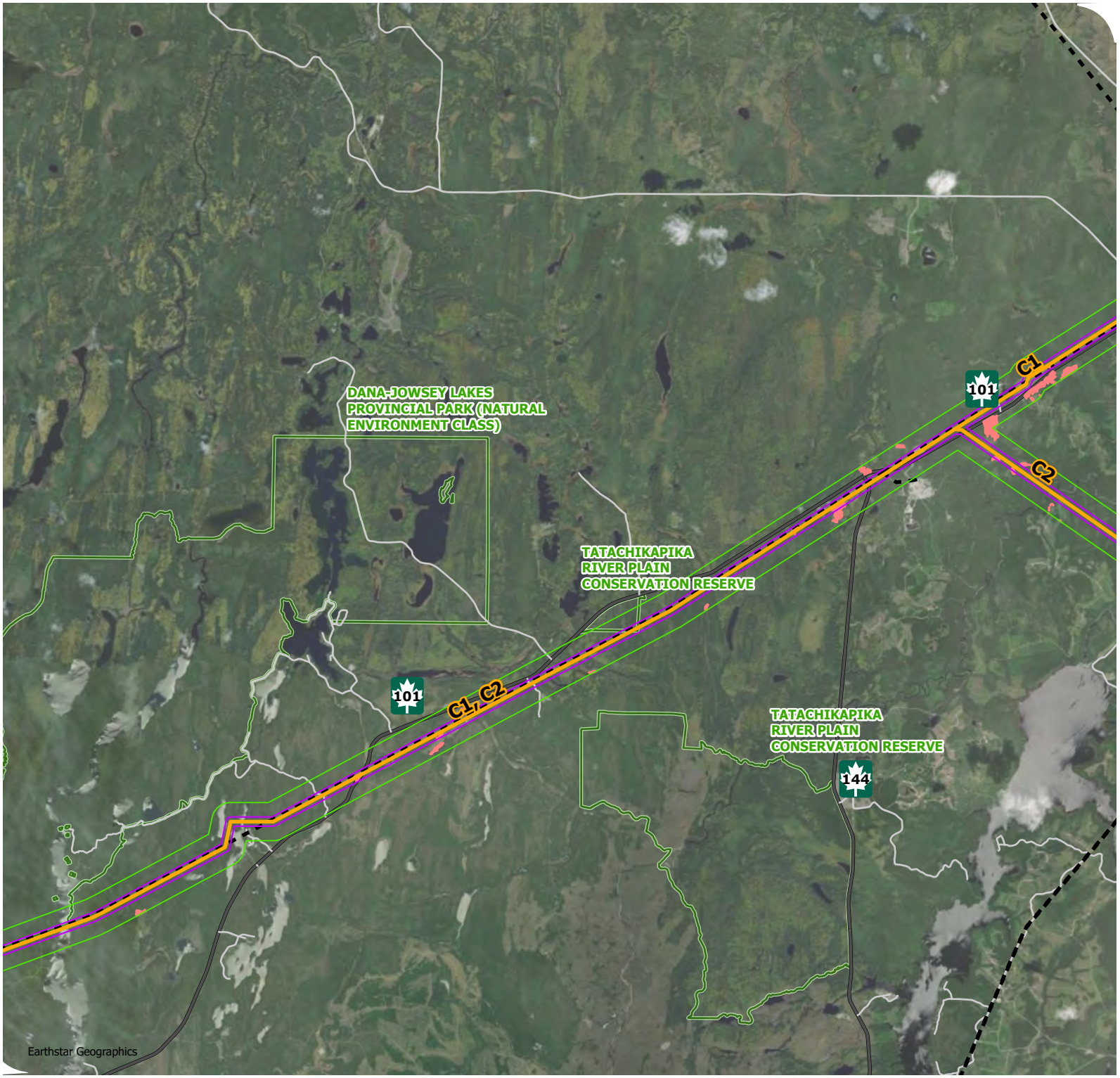
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WAWA TIMMINS POWER LINE

FIGURE 295. RVC - HARDWOOD SWAMP HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Hardwood Swamp Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

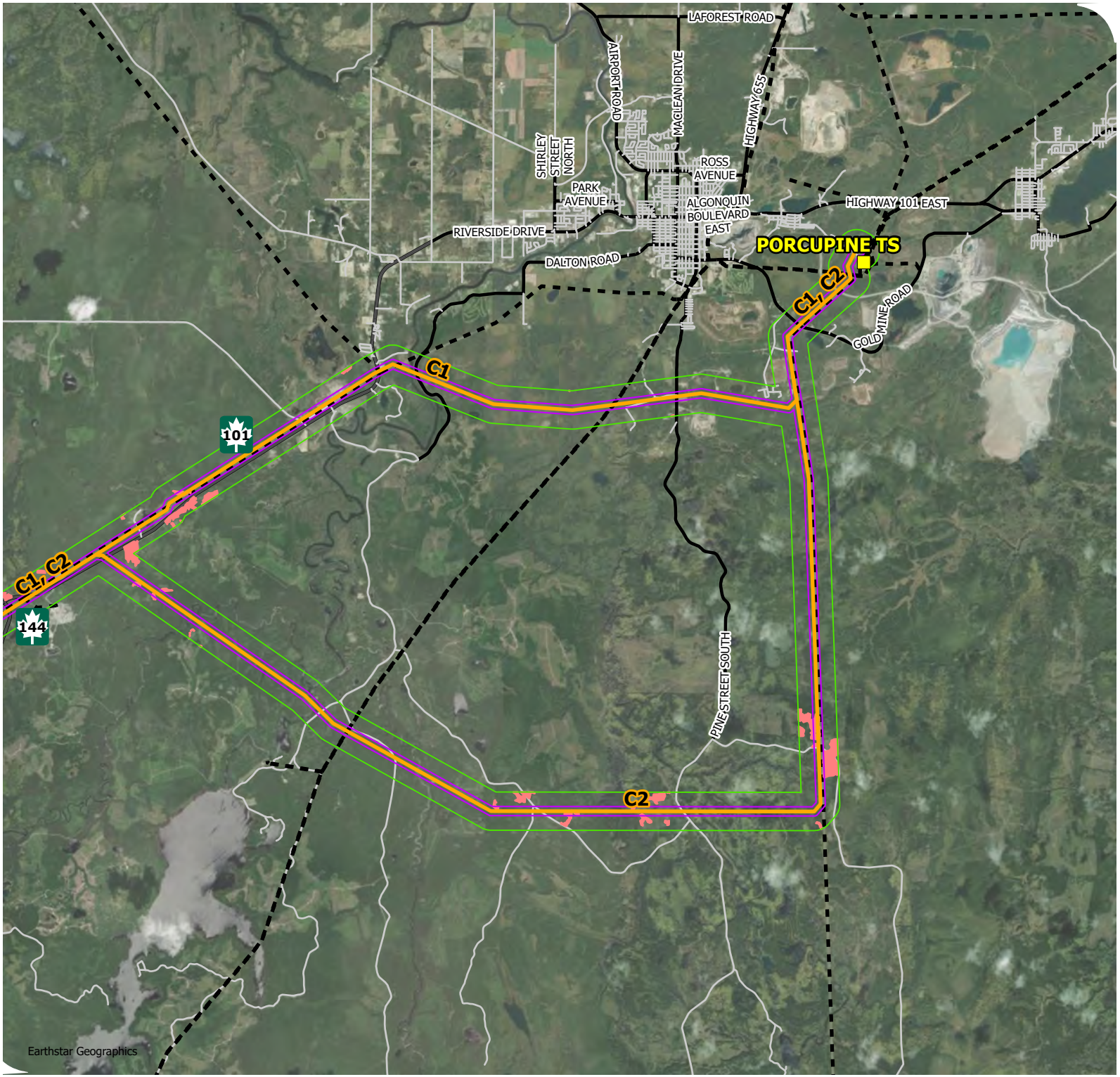


FIGURE 296. RVC - HARDWOOD SWAMP HABITAT

Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Hardwood Swamp Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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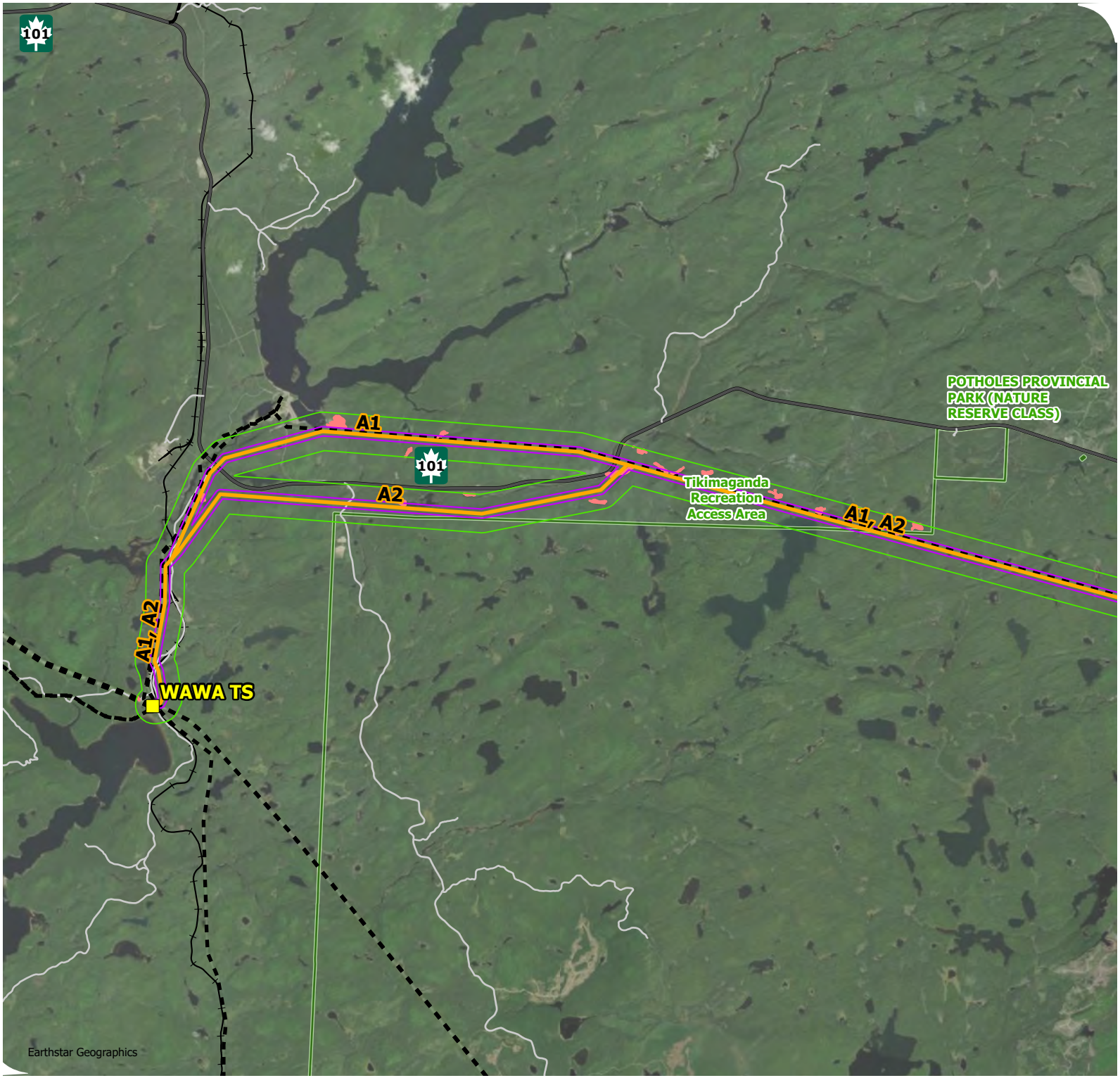
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WAWA TIMMINS POWER LINE

FIGURE 297. RVC - SAND DUNE HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sand Dune Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
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SCALE 1:139,000

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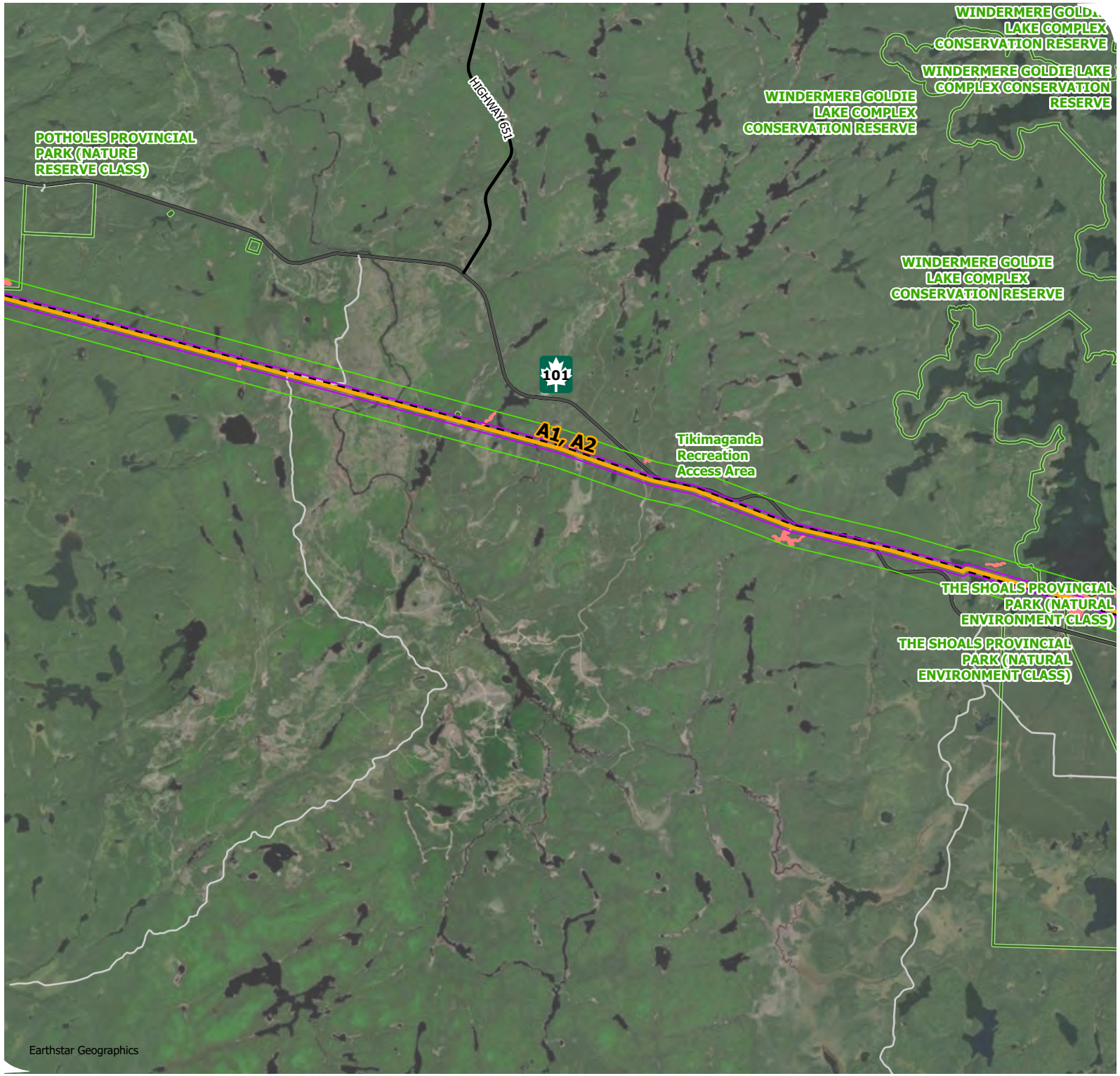
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WAWA TIMMINS POWER LINE

FIGURE 298. RVC - SAND DUNE HABITAT

Mapping Extent - Windermere Lake 1



- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sand Dune Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

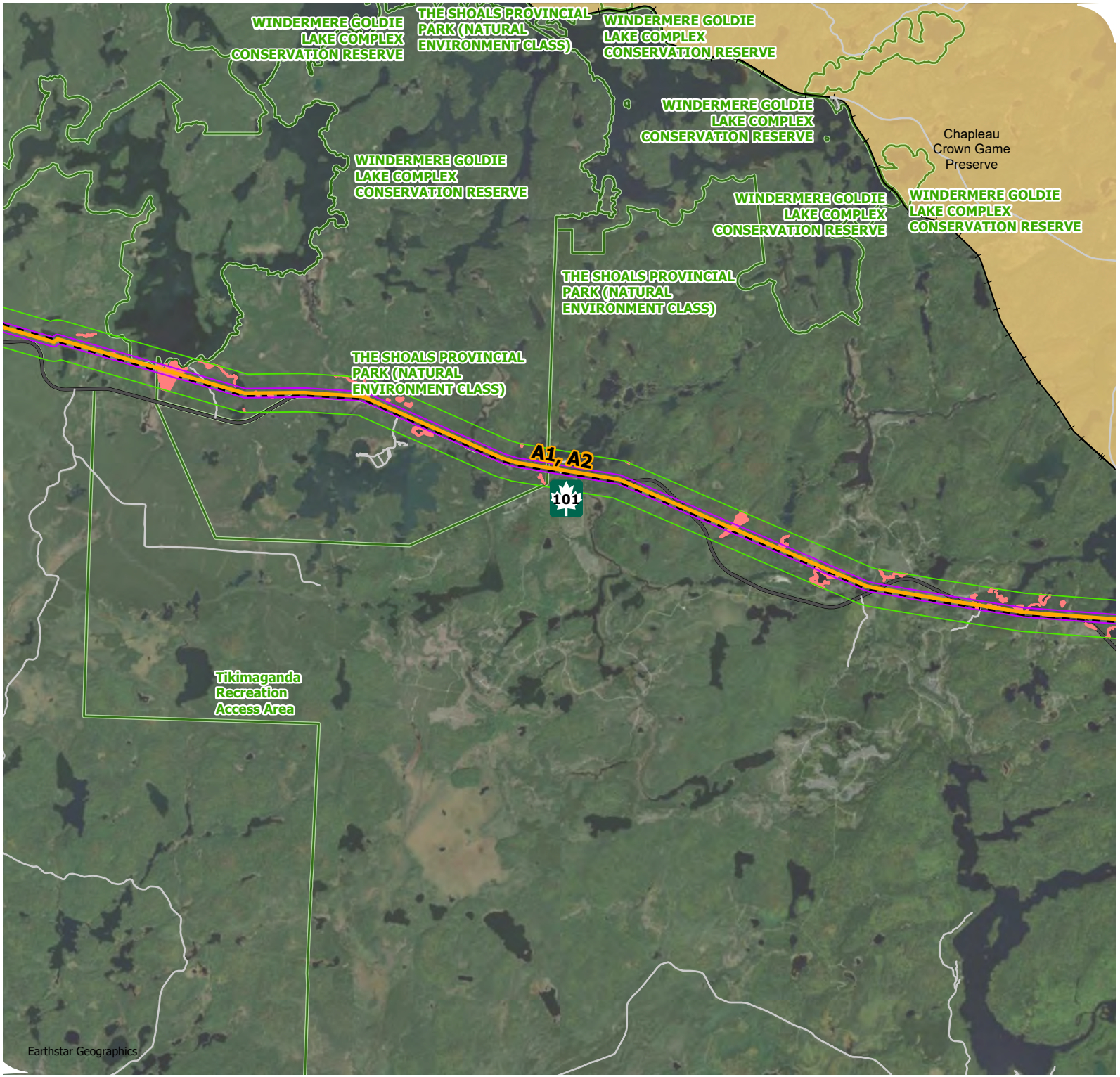
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 299. RVC - SAND DUNE HABITAT

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sand Dune Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

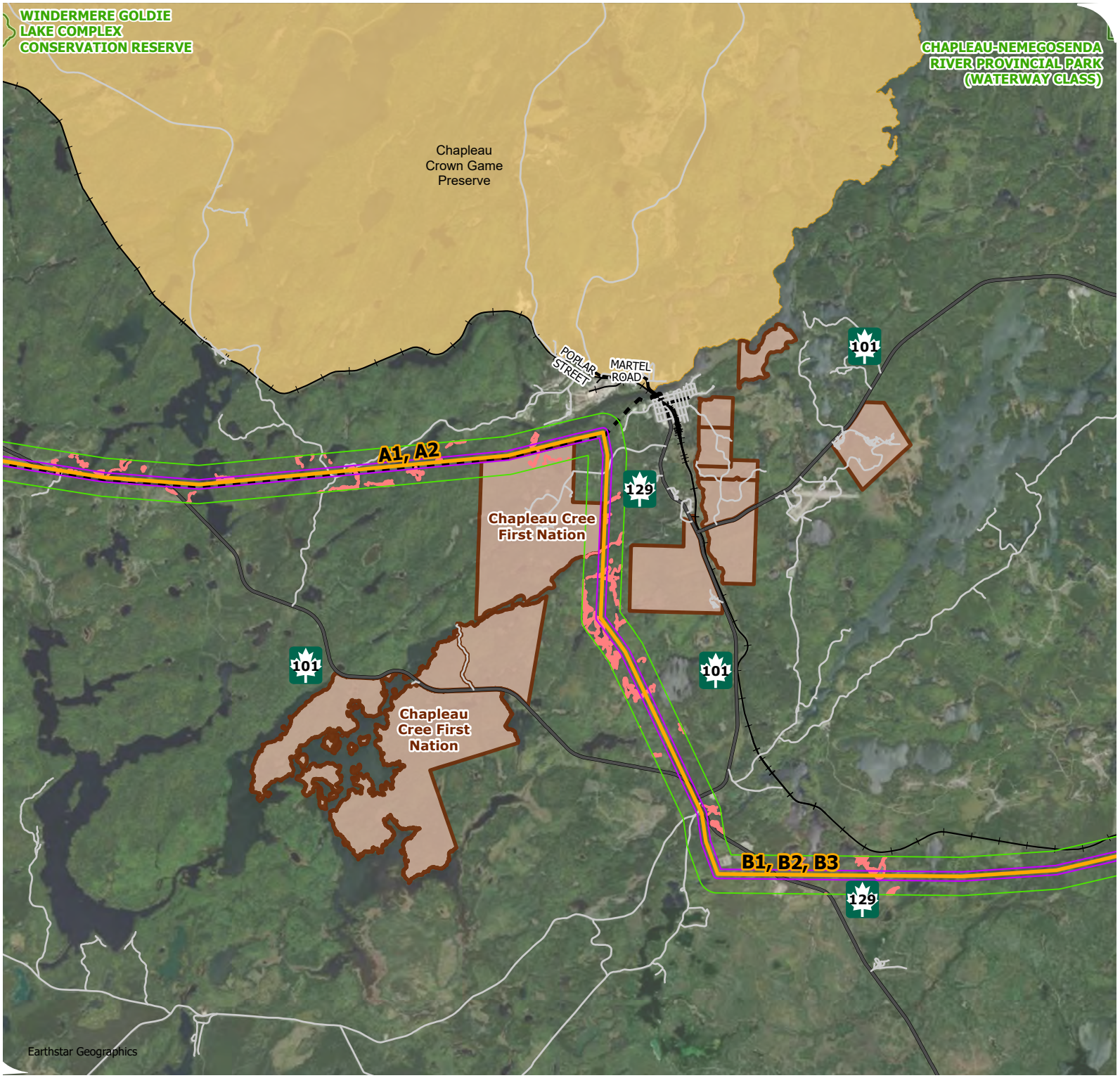
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 300. RVC - SAND DUNE HABITAT

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sand Dune Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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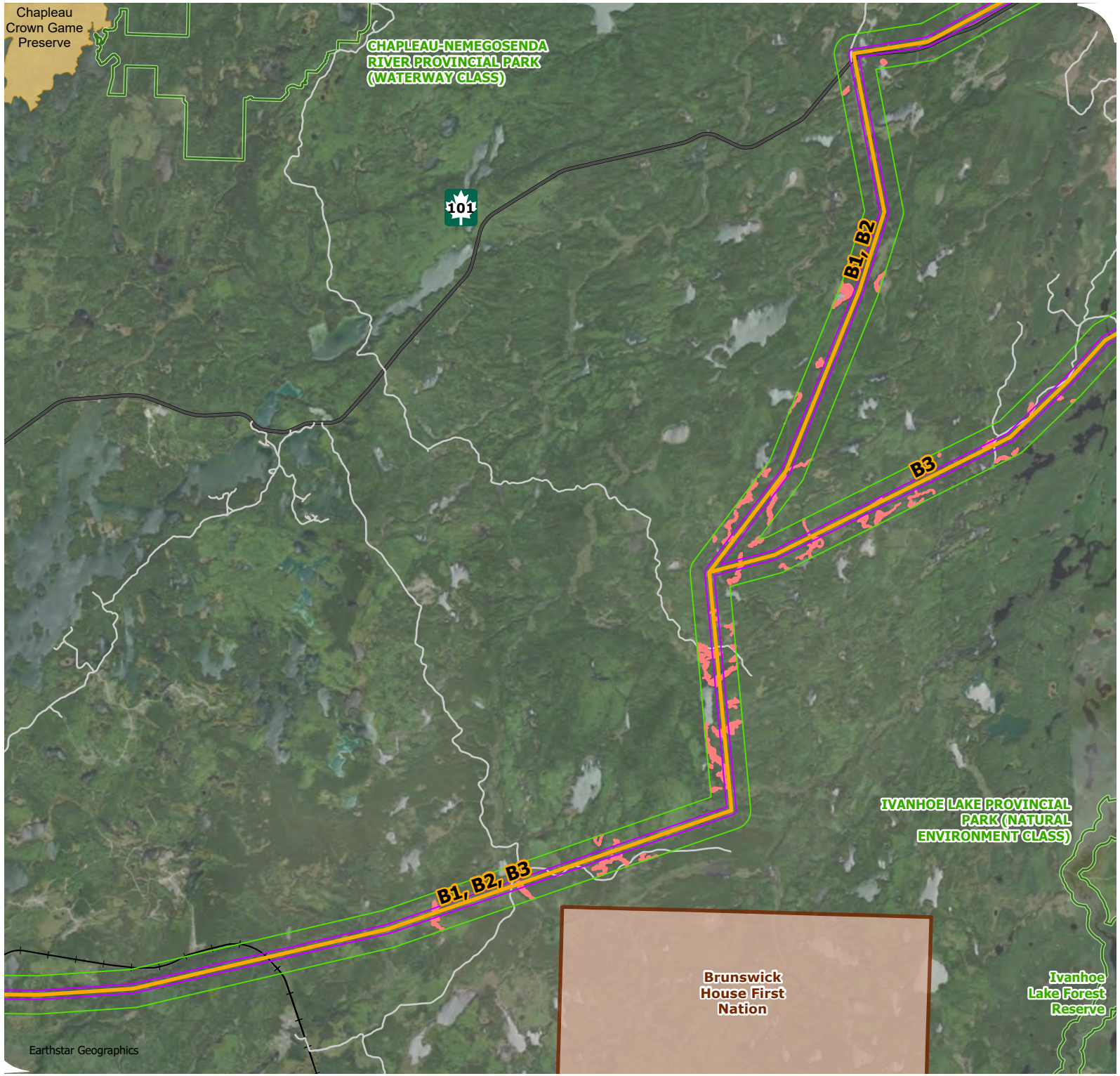
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STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 301. RVC - SAND DUNE HABITAT

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sand Dune Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

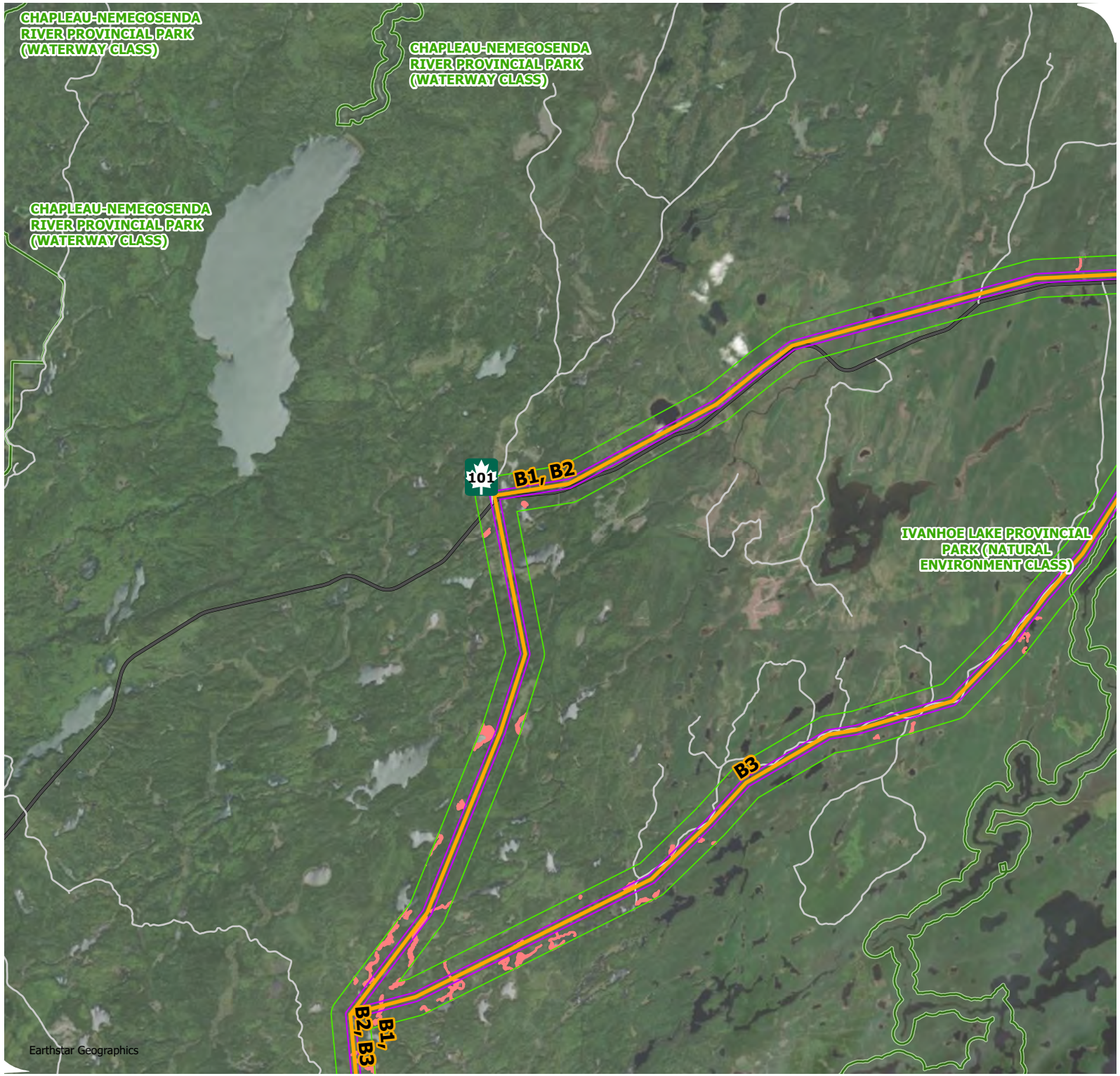
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 302. RVC - SAND DUNE HABITAT

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sand Dune Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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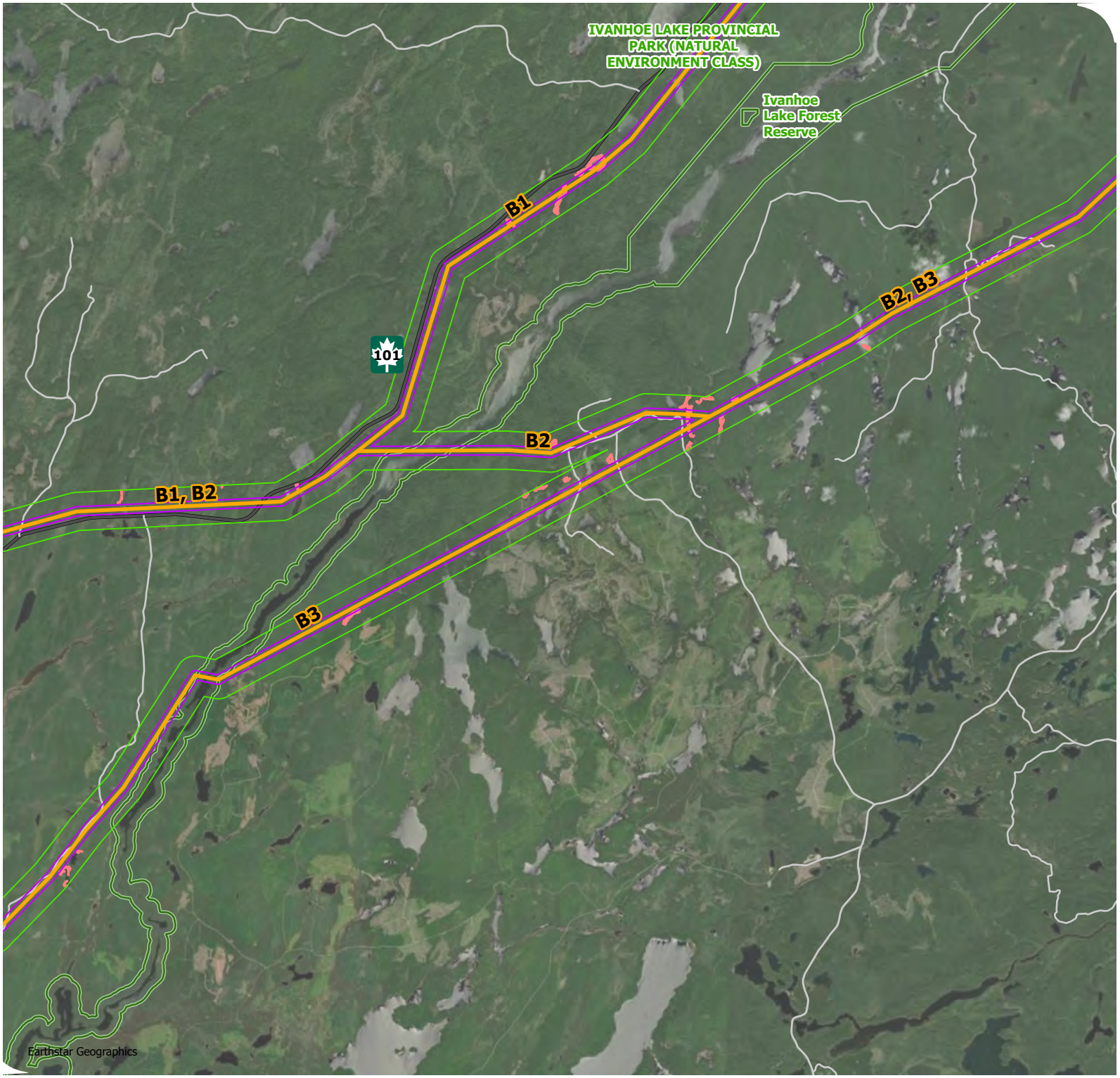
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STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 303. RVC - SAND DUNE HABITAT

Mapping Extent - Ivanhoe Lake 3



- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sand Dune Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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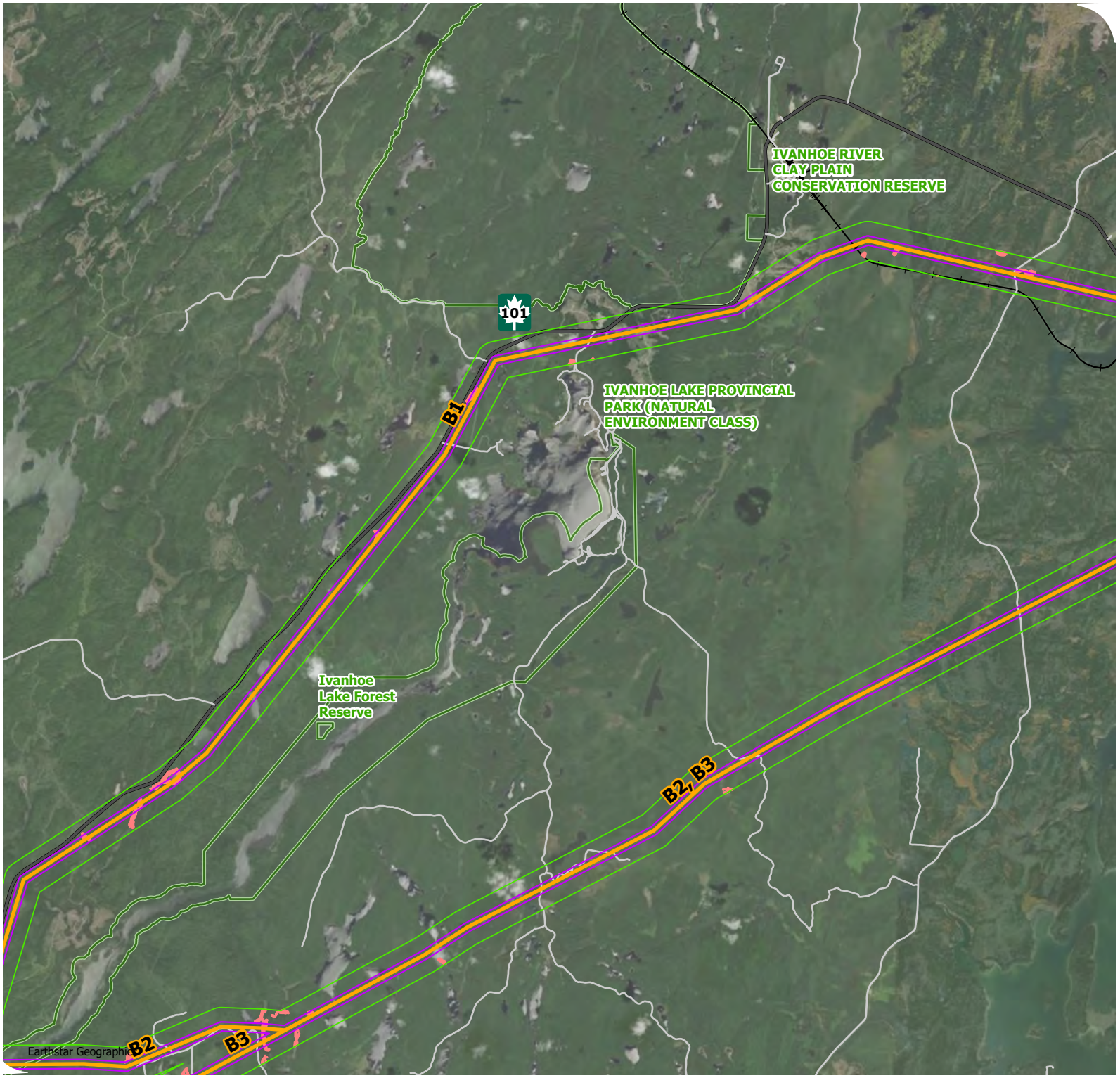
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DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 304. RVC - SAND DUNE HABITAT

Mapping Extent - Ivanhoe Lake 4



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sand Dune Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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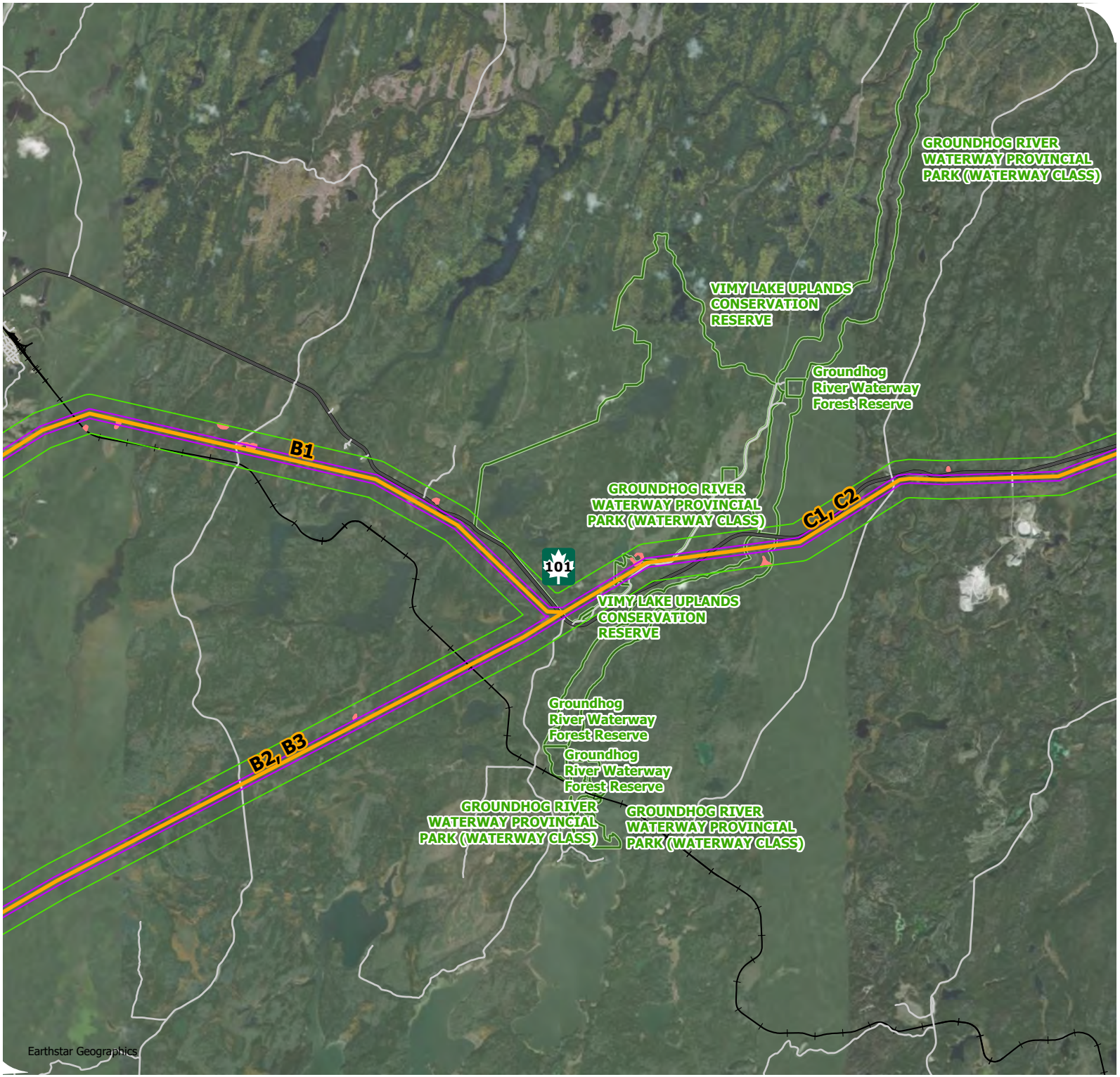
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WAWA TIMMINS POWER LINE

FIGURE 305. RVC - SAND DUNE HABITAT

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sand Dune Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

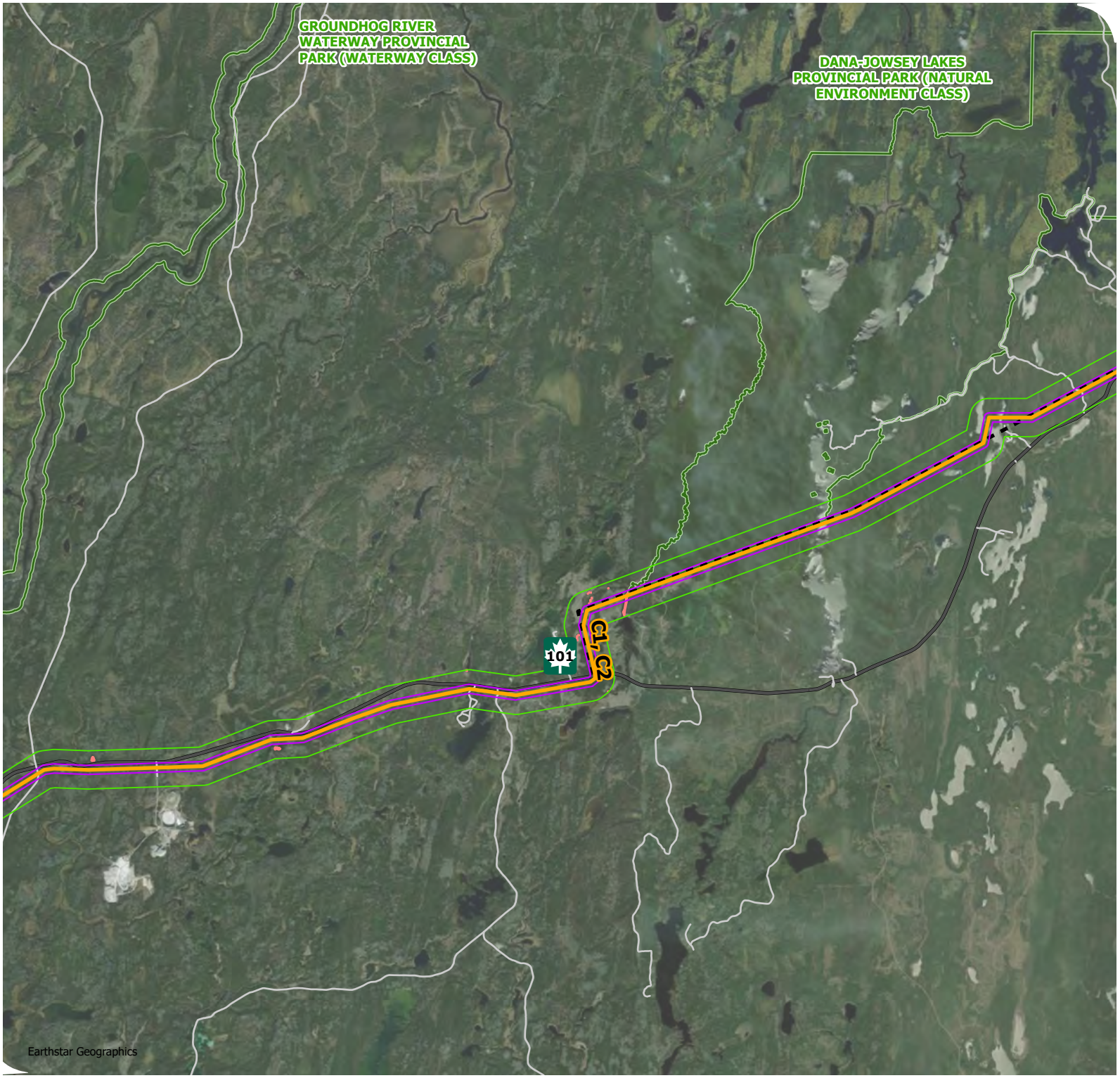
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
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WAWA TIMMINS POWER LINE

FIGURE 306. RVC - SAND DUNE HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sand Dune Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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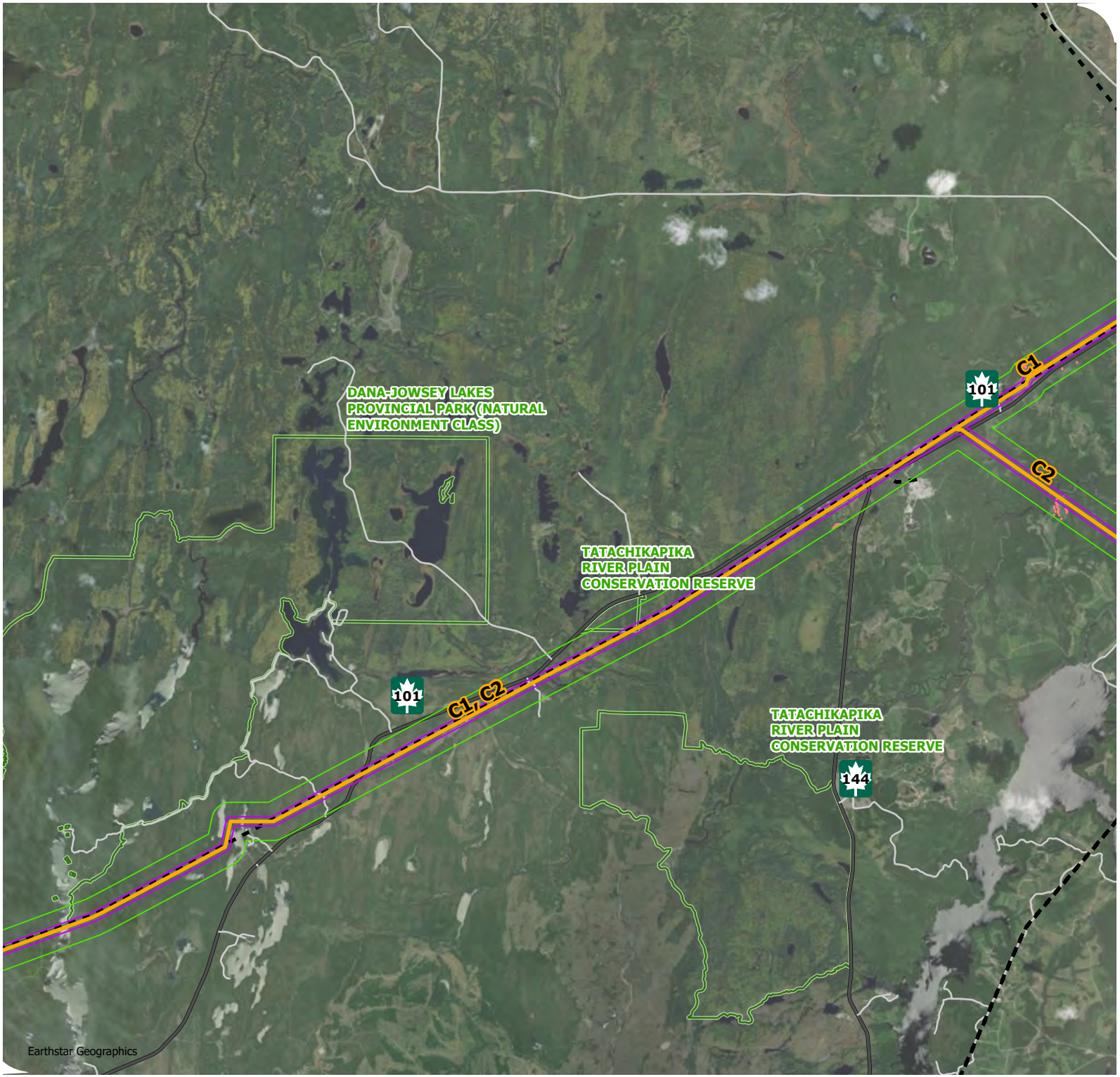
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DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 307. RVC - SAND DUNE HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sand Dune Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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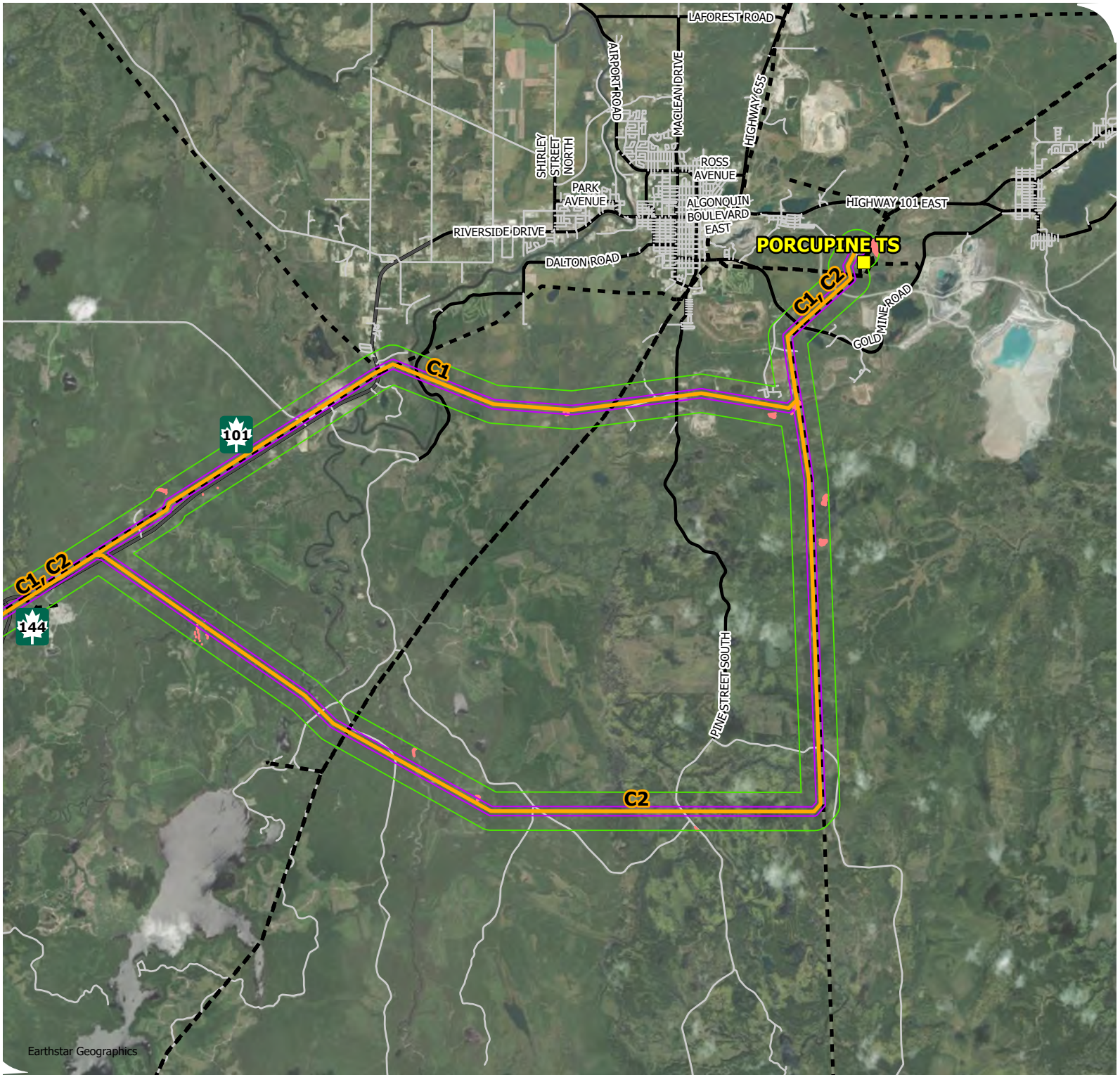
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WAWA TIMMINS POWER LINE

FIGURE 308. RVC - SAND DUNE HABITAT

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Sand Dune Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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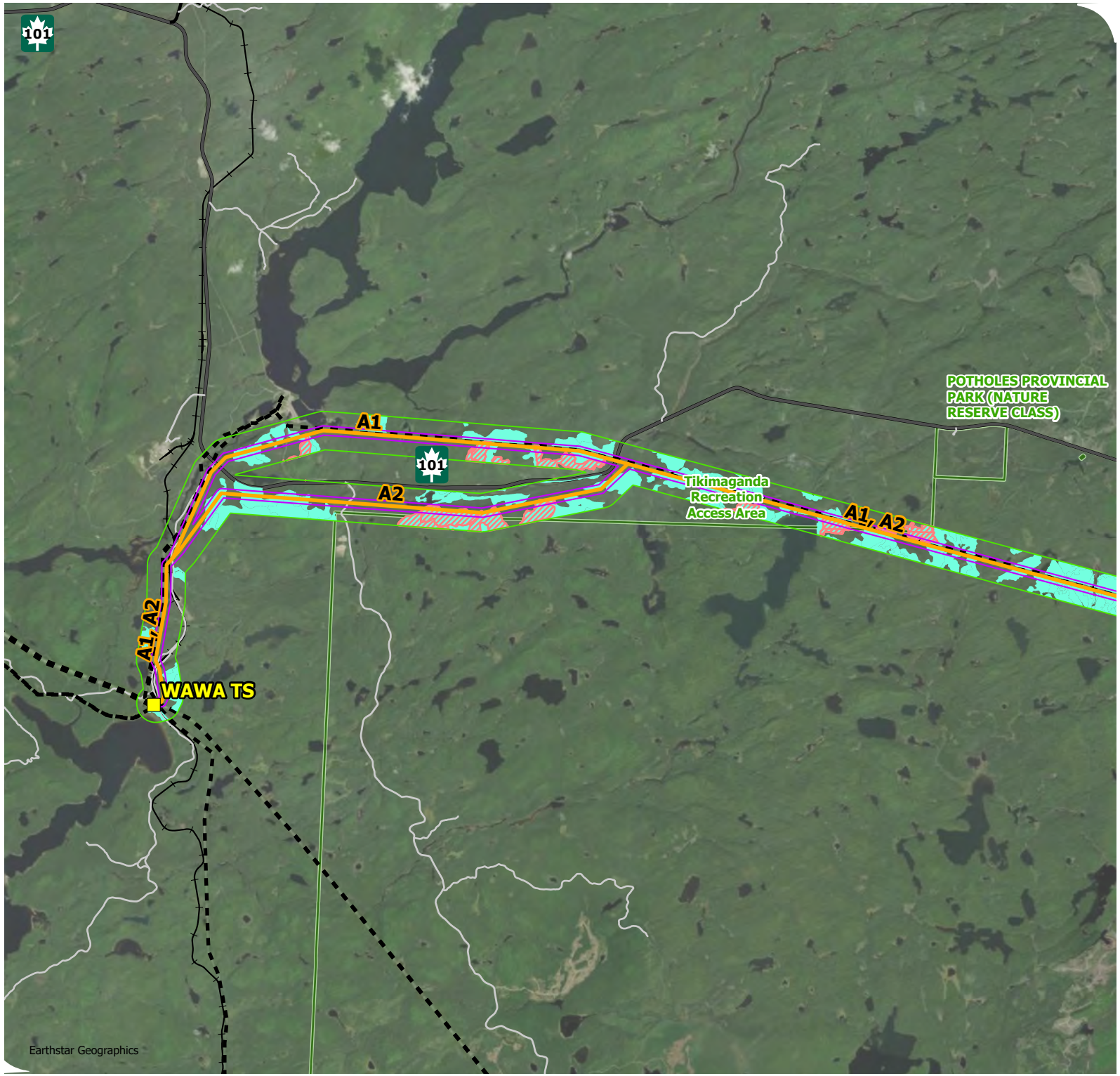
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WAWA TIMMINS POWER LINE

FIGURE 309. RVC - RED AND SUGAR MAPLE HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Red and Sugar Maple Habitat
- Red and Sugan Maple Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5

WAWA TIMMINS POWER LINE

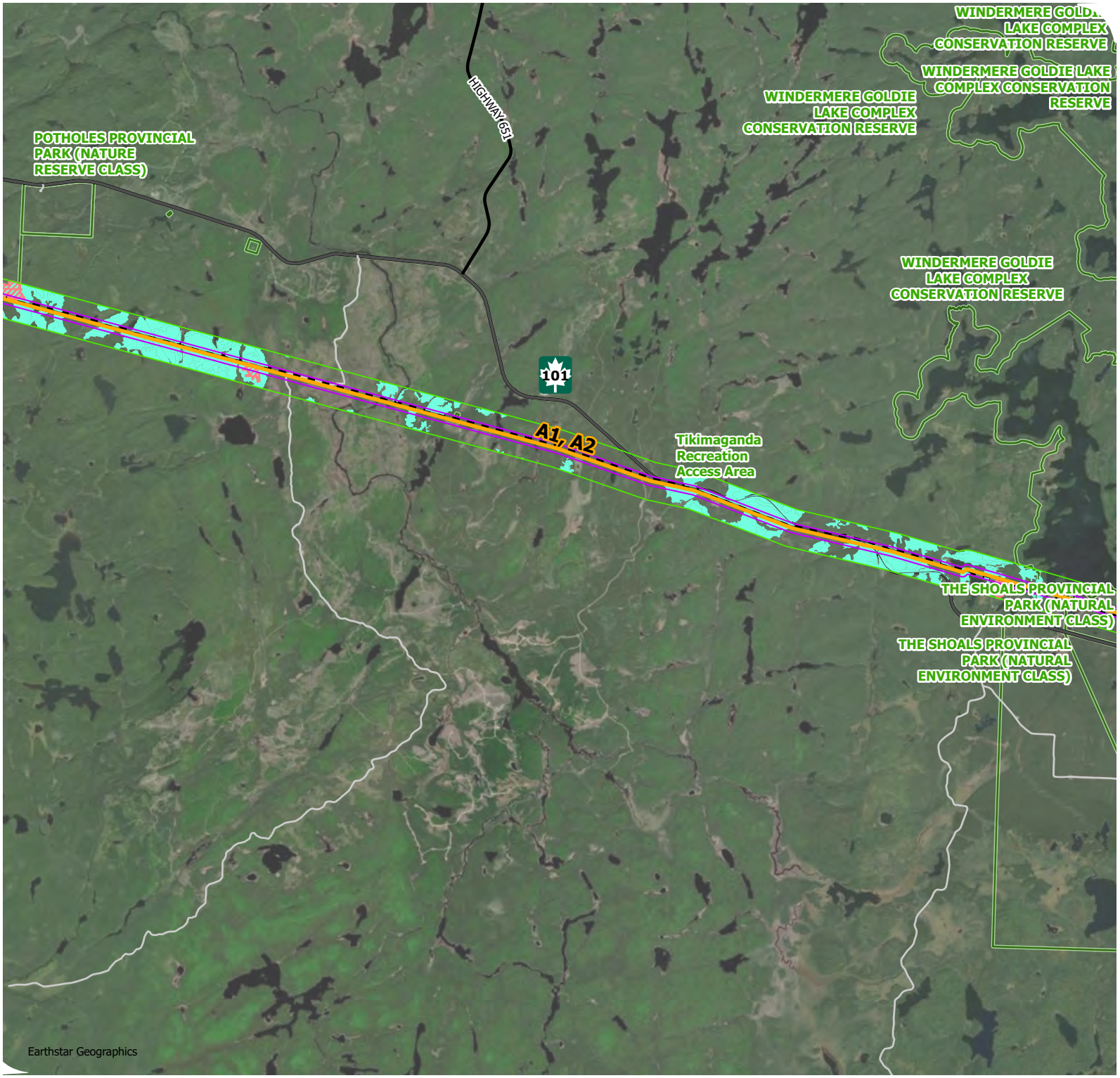


FIGURE 310. RVC - RED AND SUGAR MAPLE HABITAT

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Red and Sugar Maple Habitat
- Red and Sugan Maple Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

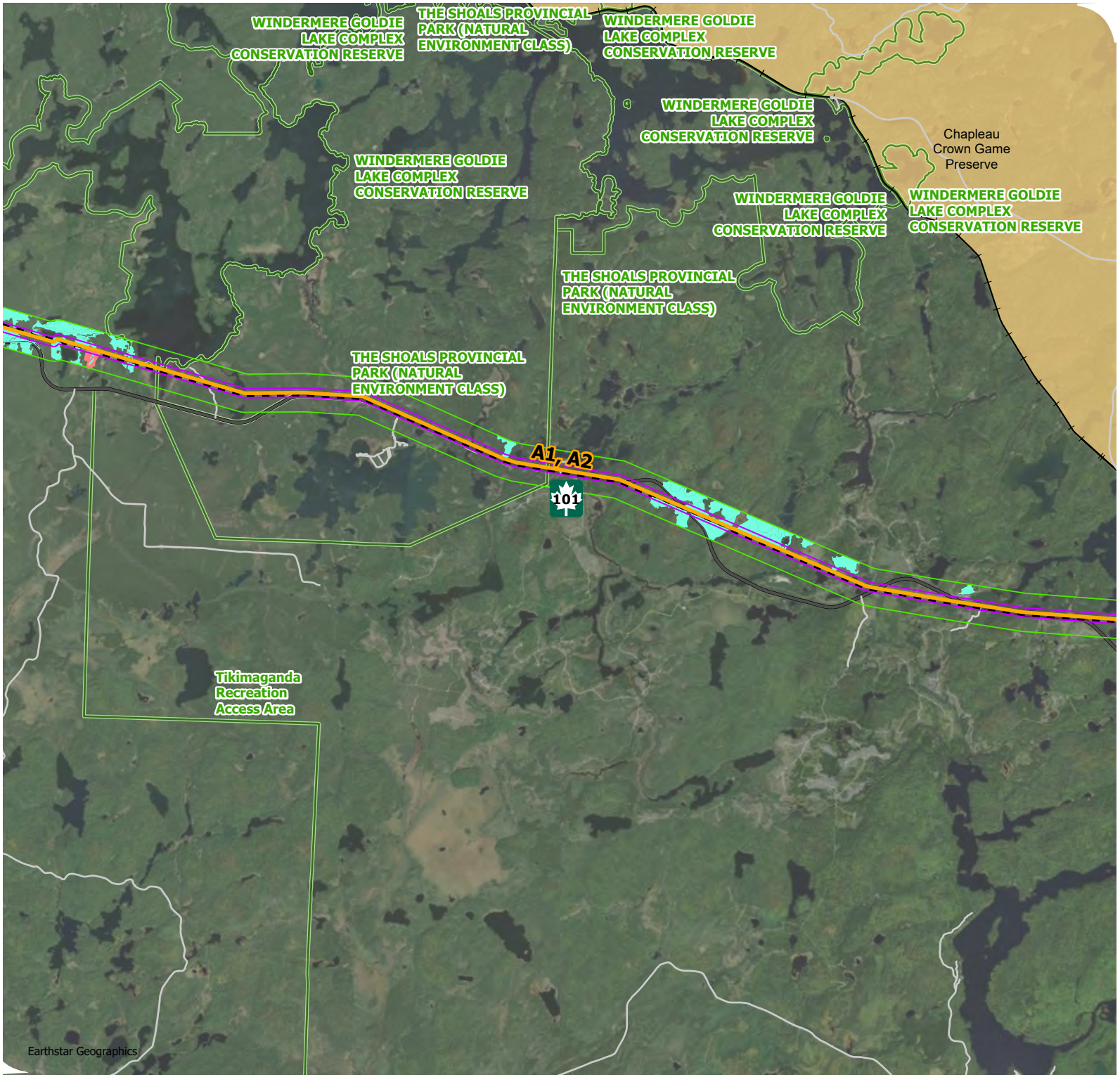
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 311. RVC - RED AND SUGAR MAPLE HABITAT

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Red and Sugar Maple Habitat
- Red and Sugan Maple Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

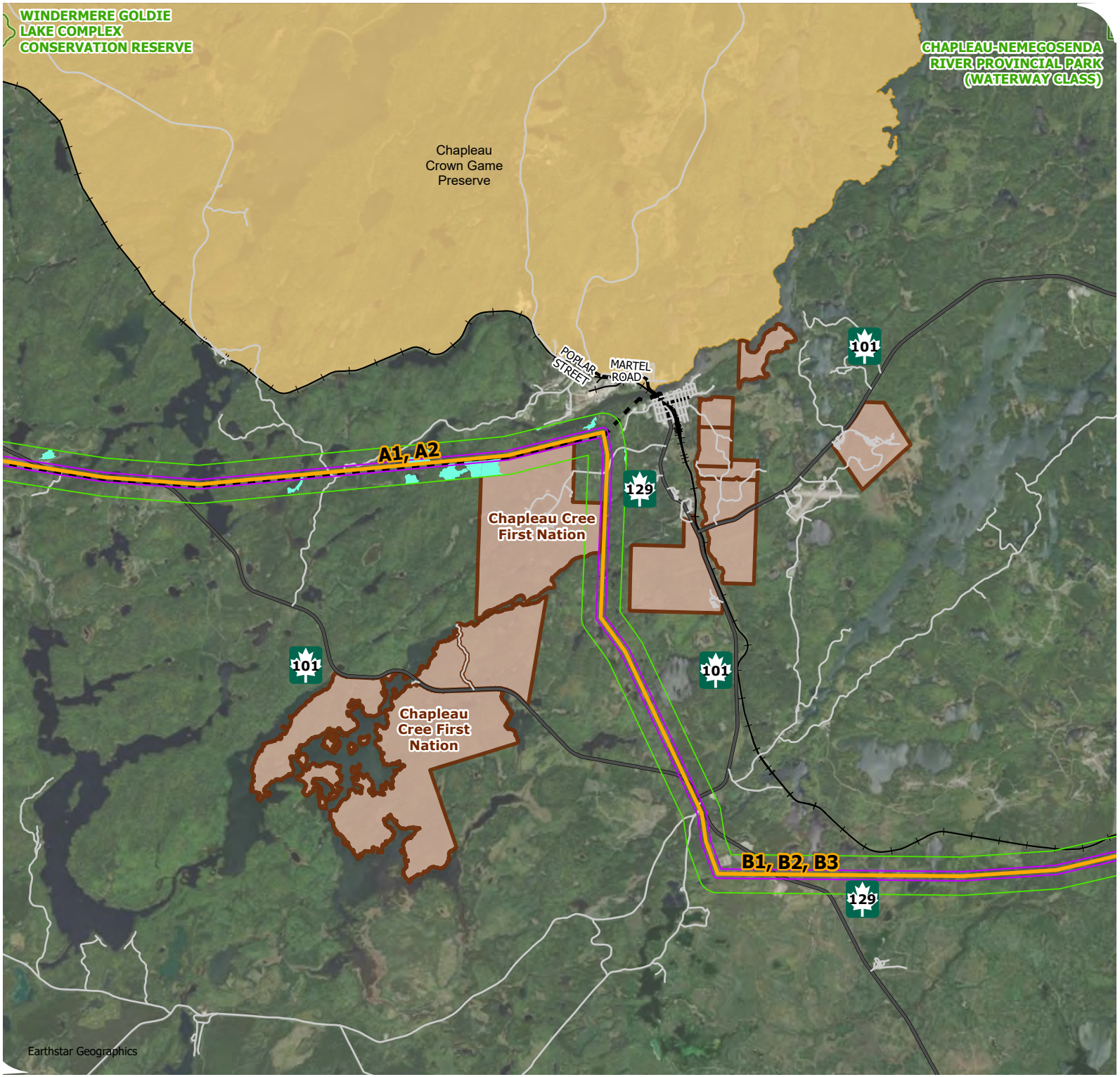
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
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WAWA TIMMINS POWER LINE

FIGURE 312. RVC - RED AND SUGAR MAPLE HABITAT

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Red and Sugan Maple Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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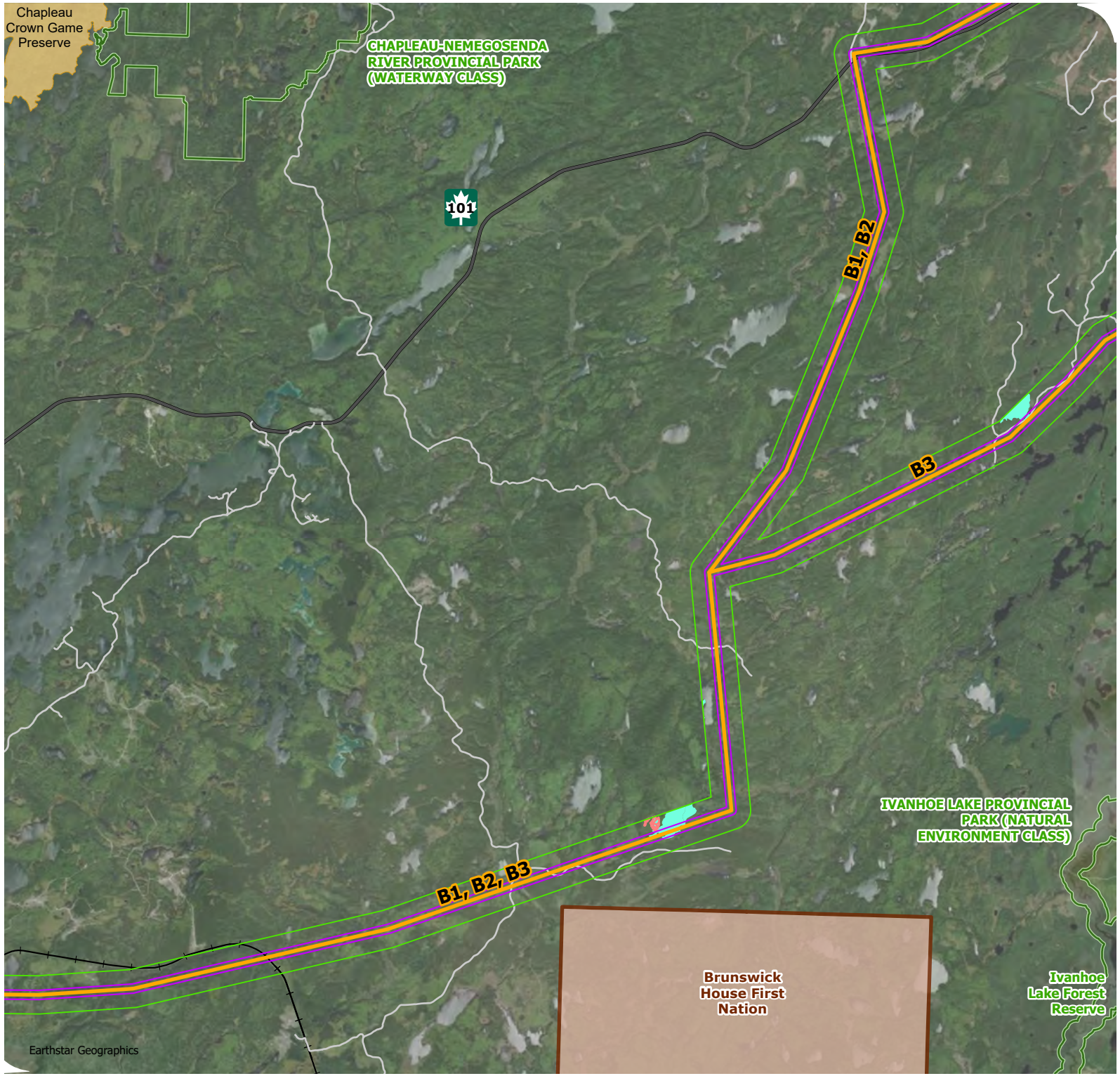
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WAWA TIMMINS POWER LINE

FIGURE 313. RVC - RED AND SUGAR MAPLE HABITAT

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Red and Sugar Maple Habitat
- Red and Sugan Maple Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

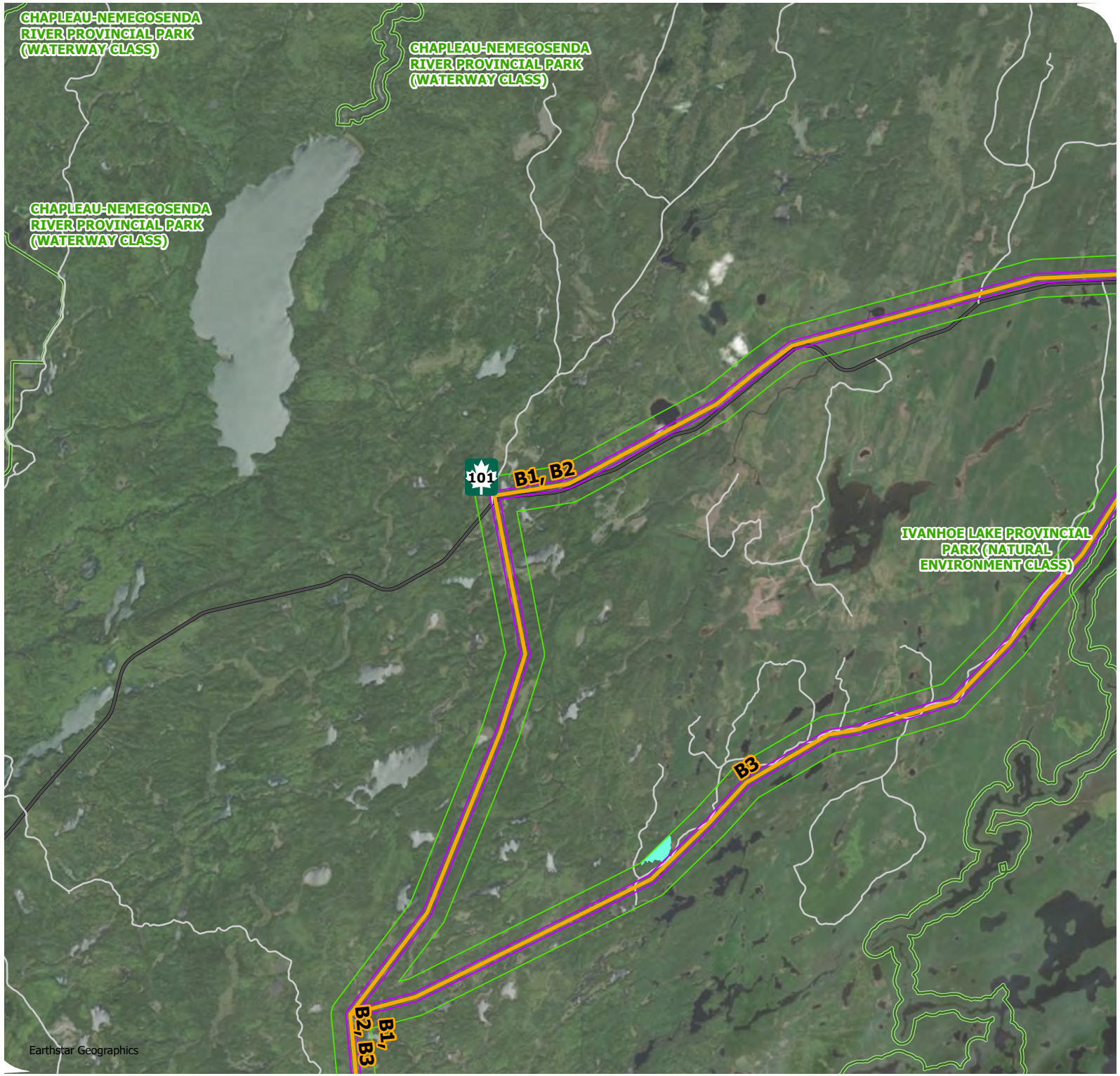
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 314. RVC - RED AND SUGAR MAPLE HABITAT

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Red and Sugan Maple Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

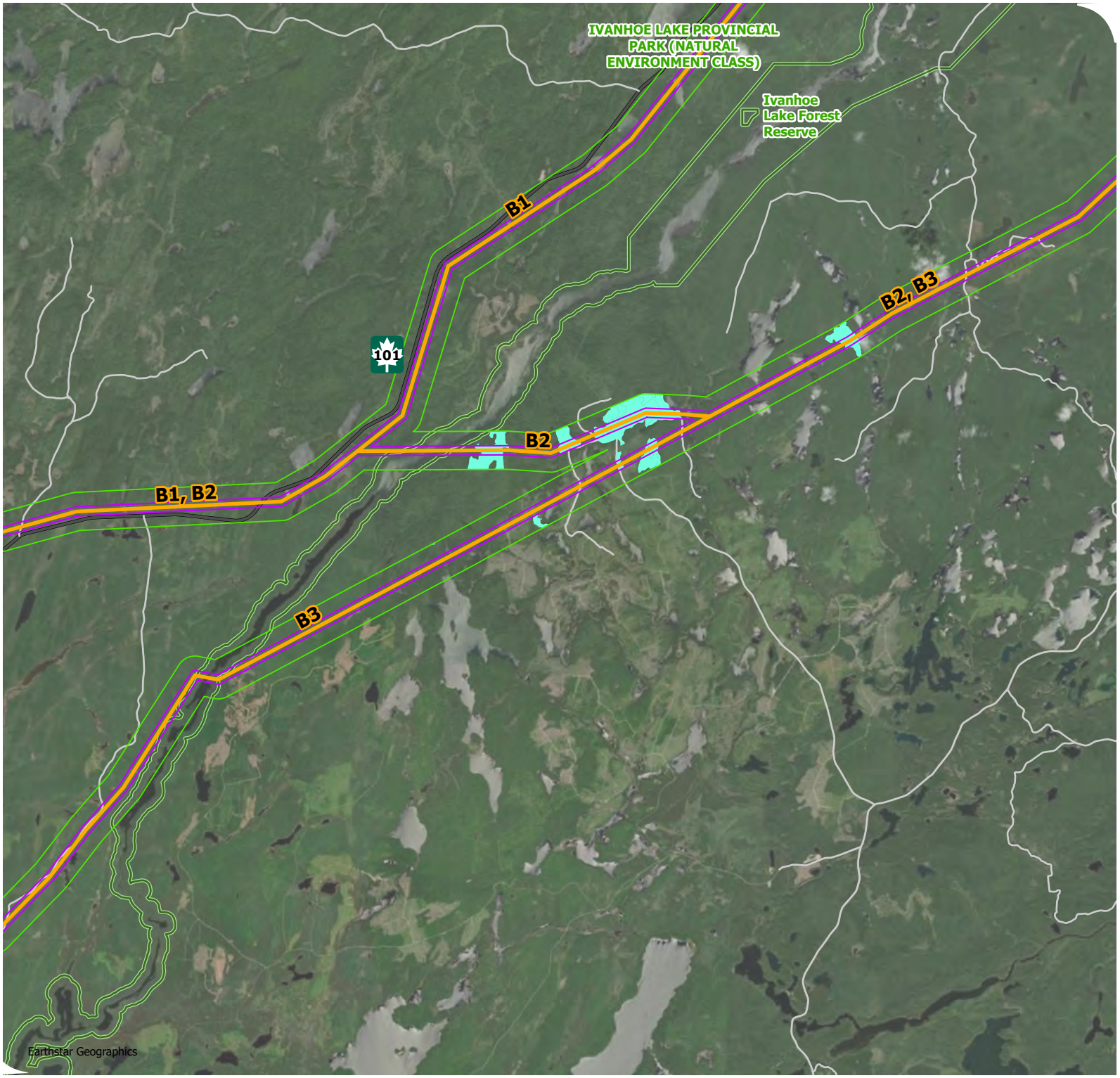


FIGURE 315. RVC - RED AND SUGAR MAPLE HABITAT

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Red and Sugan Maple Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

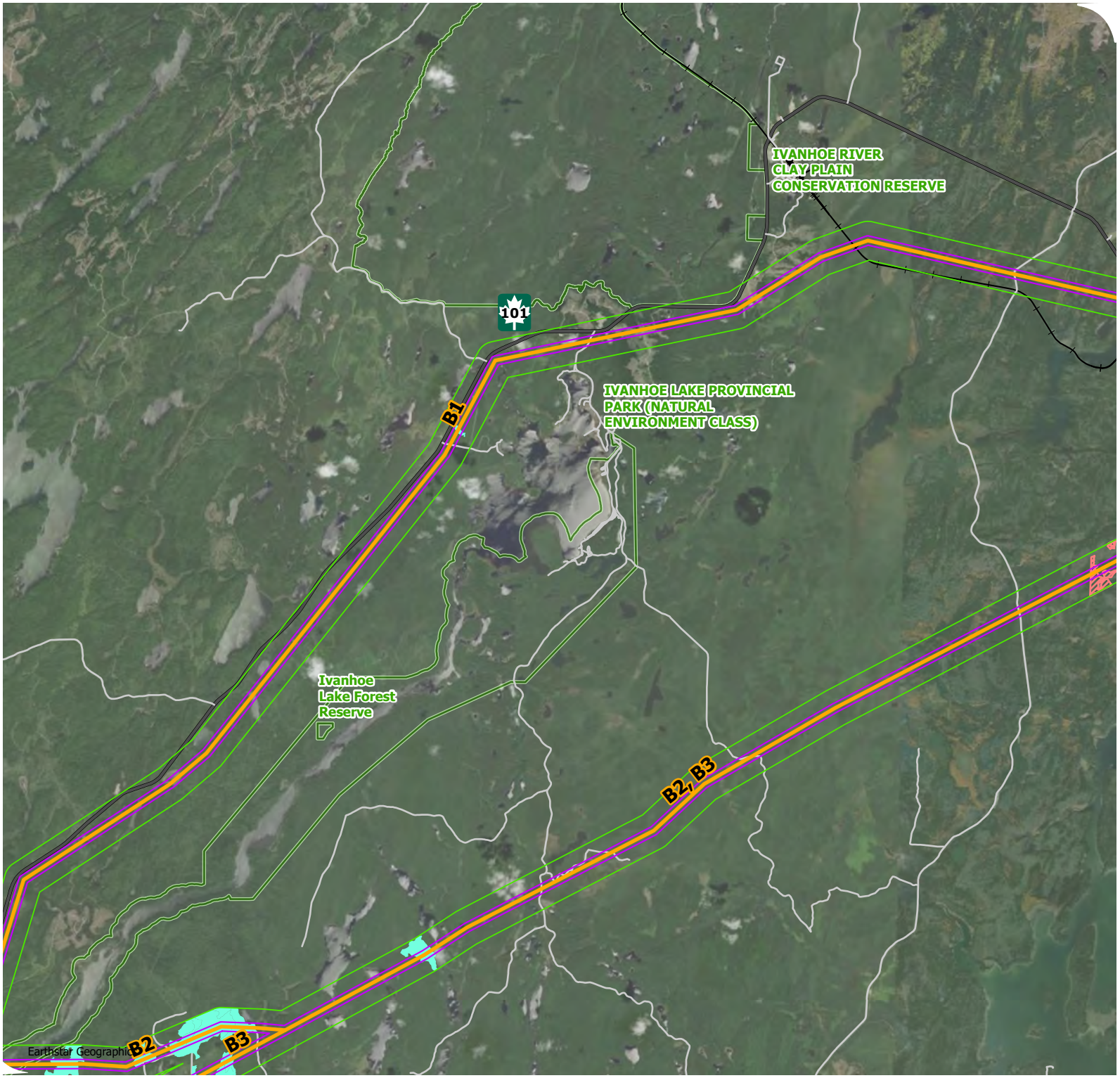


FIGURE 316. RVC - RED AND SUGAR MAPLE HABITAT

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Red and Sugar Maple Habitat
- Red and Sugan Maple Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

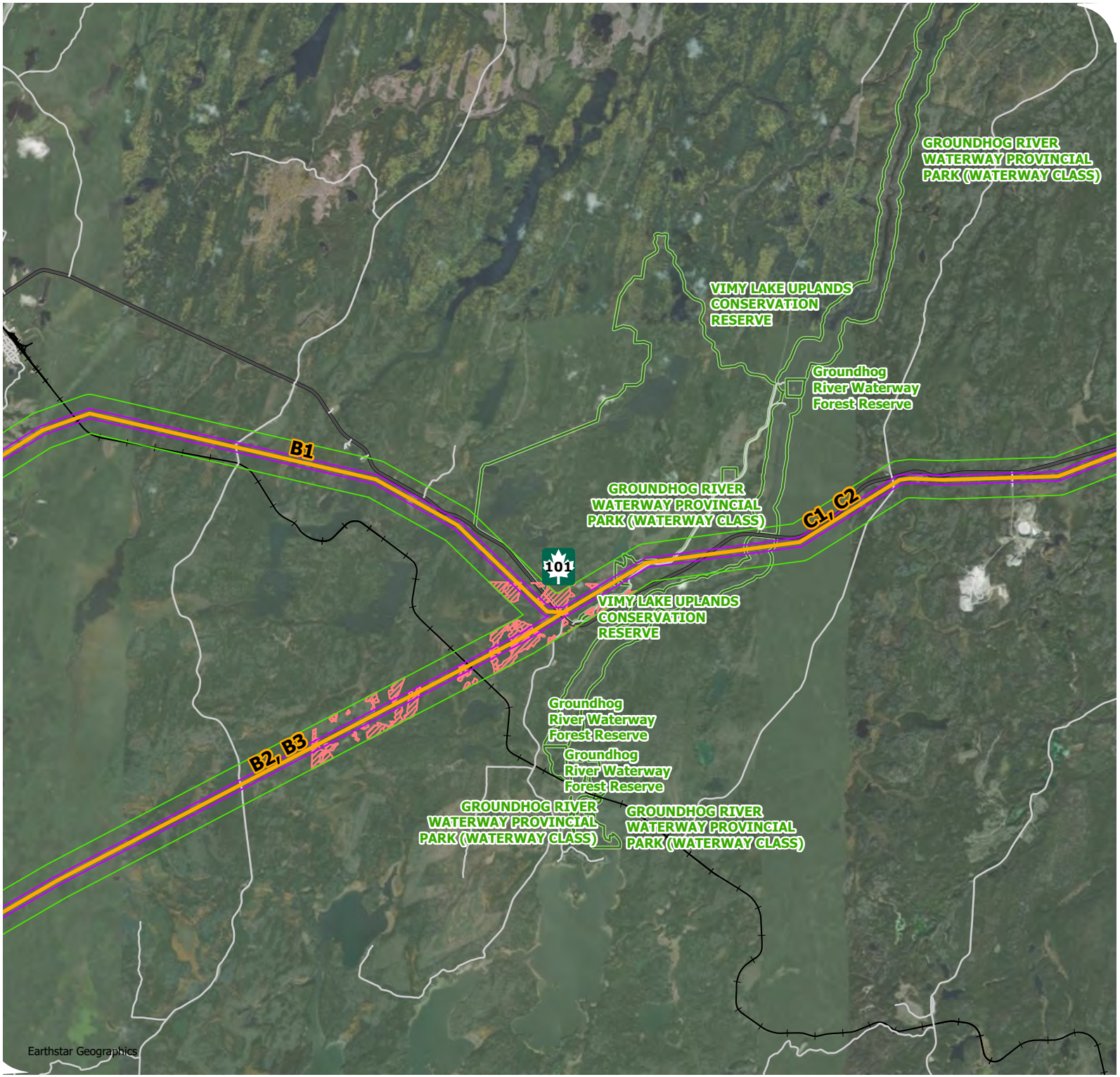


FIGURE 317. RVC - RED AND SUGAR MAPLE HABITAT

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Red and Sugar Maple Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

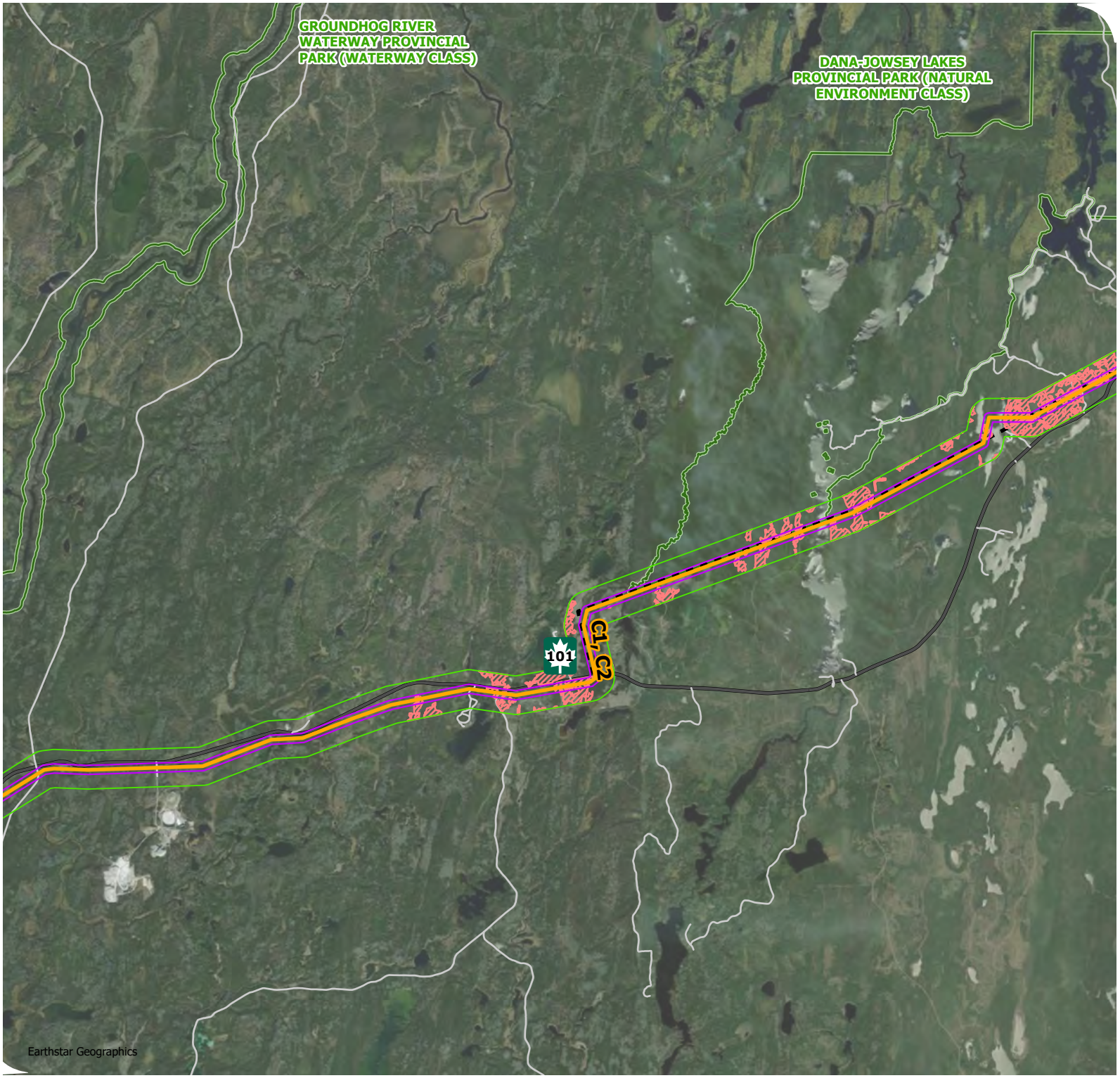
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 318. RVC - RED AND SUGAR MAPLE HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Red and Sugar Maple Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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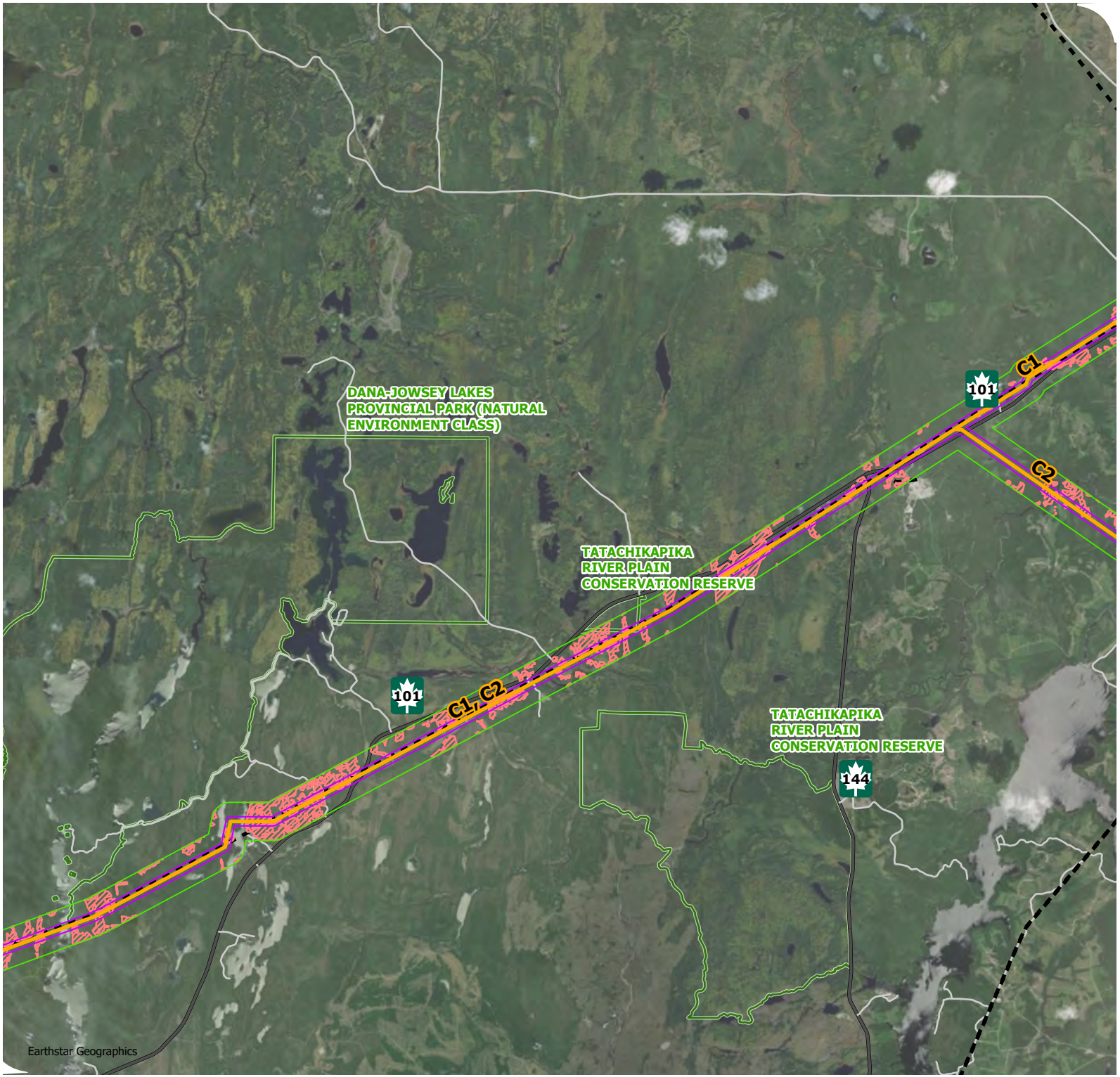
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WAWA TIMMINS POWER LINE

FIGURE 319. RVC - RED AND SUGAR MAPLE HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Red and Sugar Maple Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

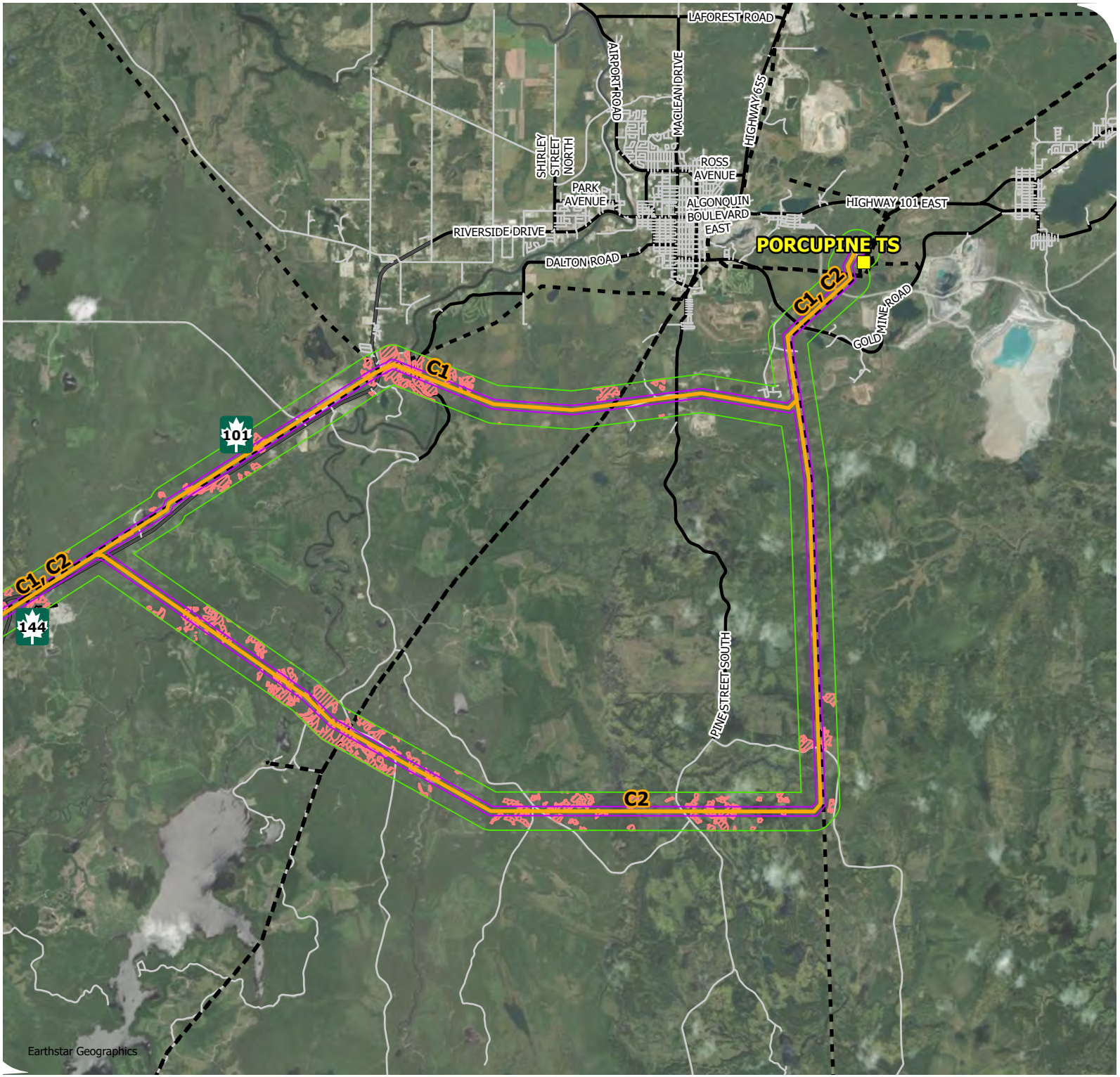


FIGURE 320. RVC - RED AND SUGAR MAPLE HABITAT

Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Red and Sugar Maple Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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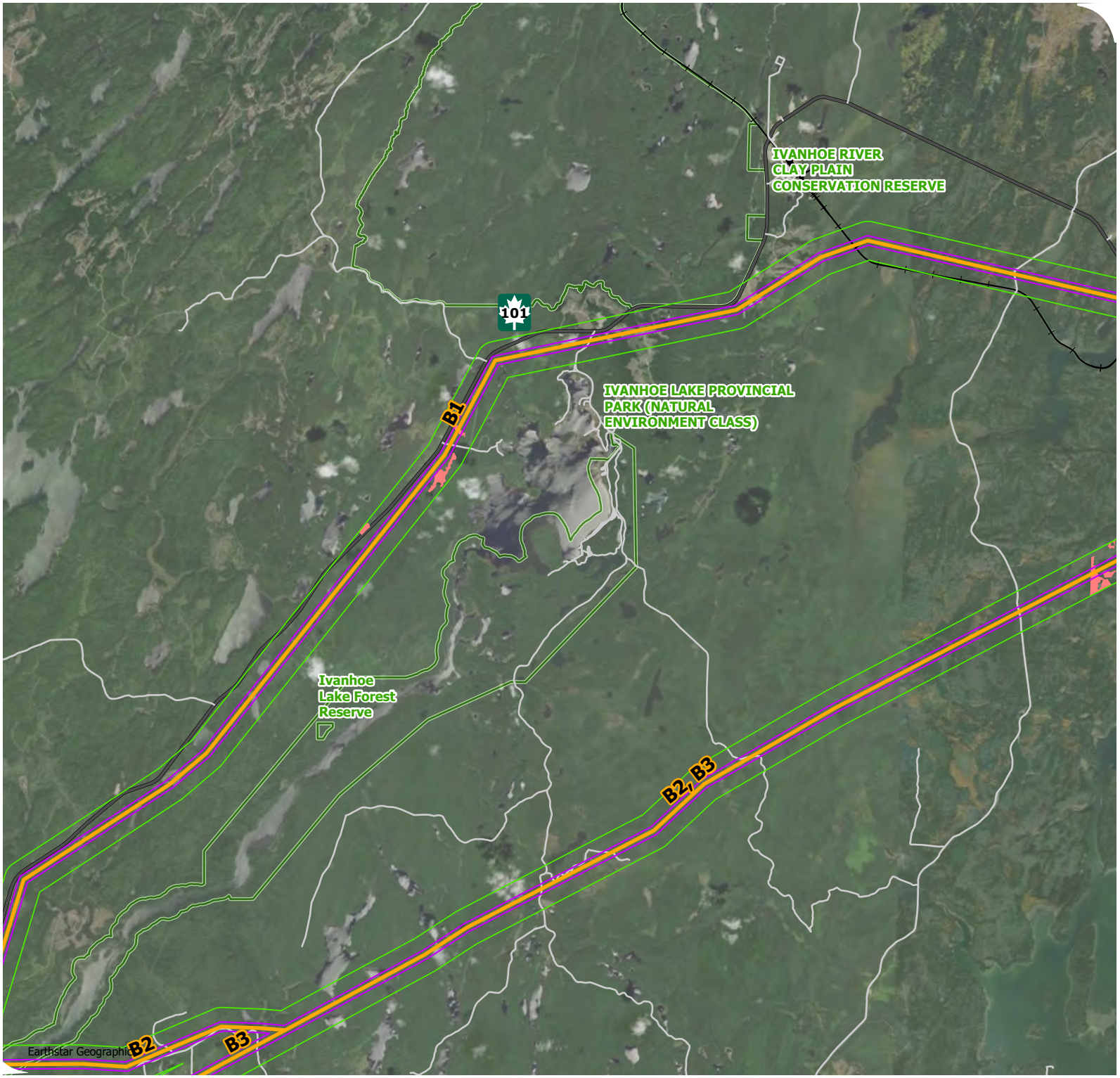
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WAWA TIMMINS POWER LINE

FIGURE 321. RVC - ELM HABITAT

Mapping Extent - Ivanhoe Lake 4



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Elm Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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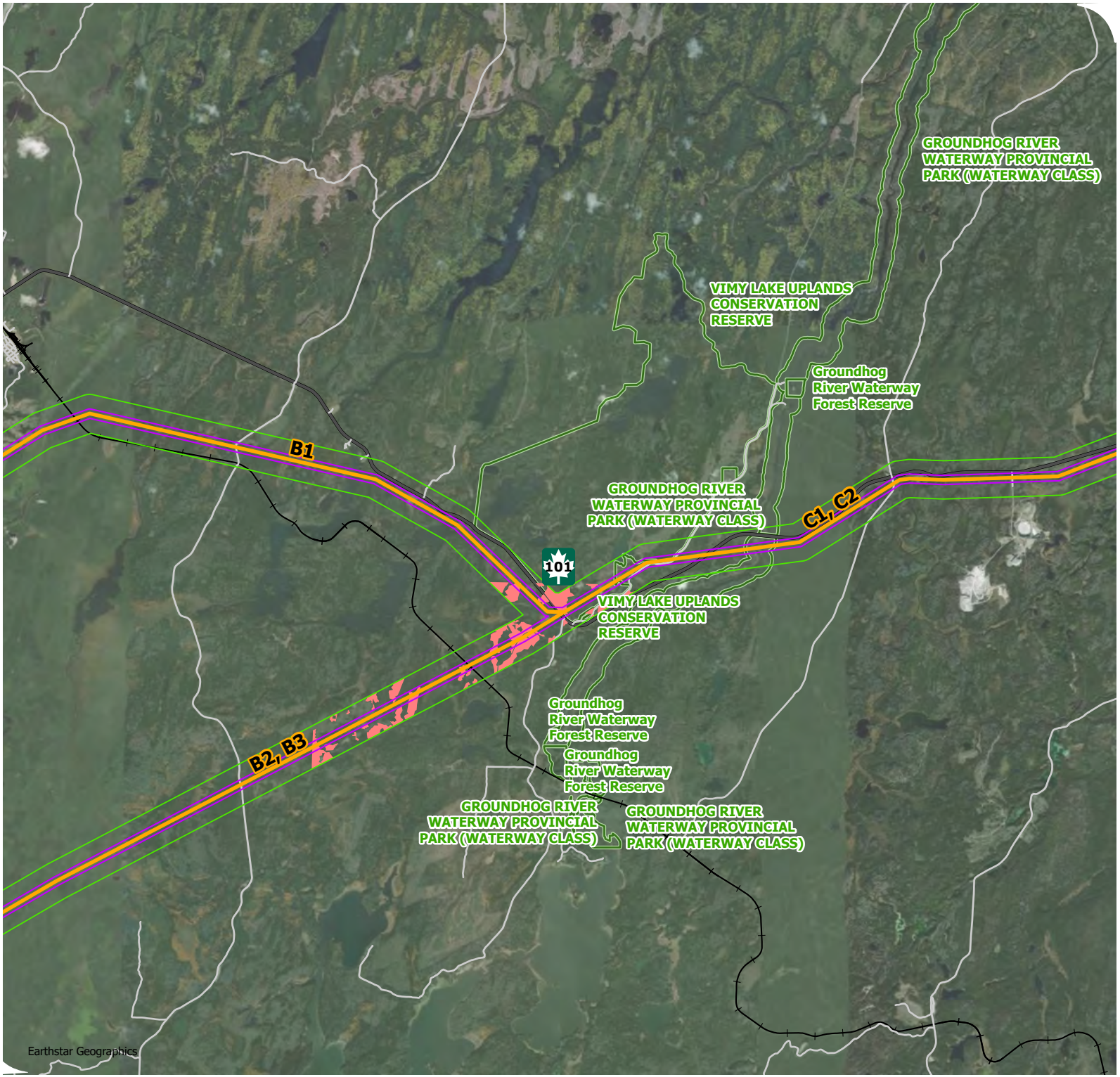
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WAWA TIMMINS POWER LINE

FIGURE 322. RVC - ELM HABITAT

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Elm Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

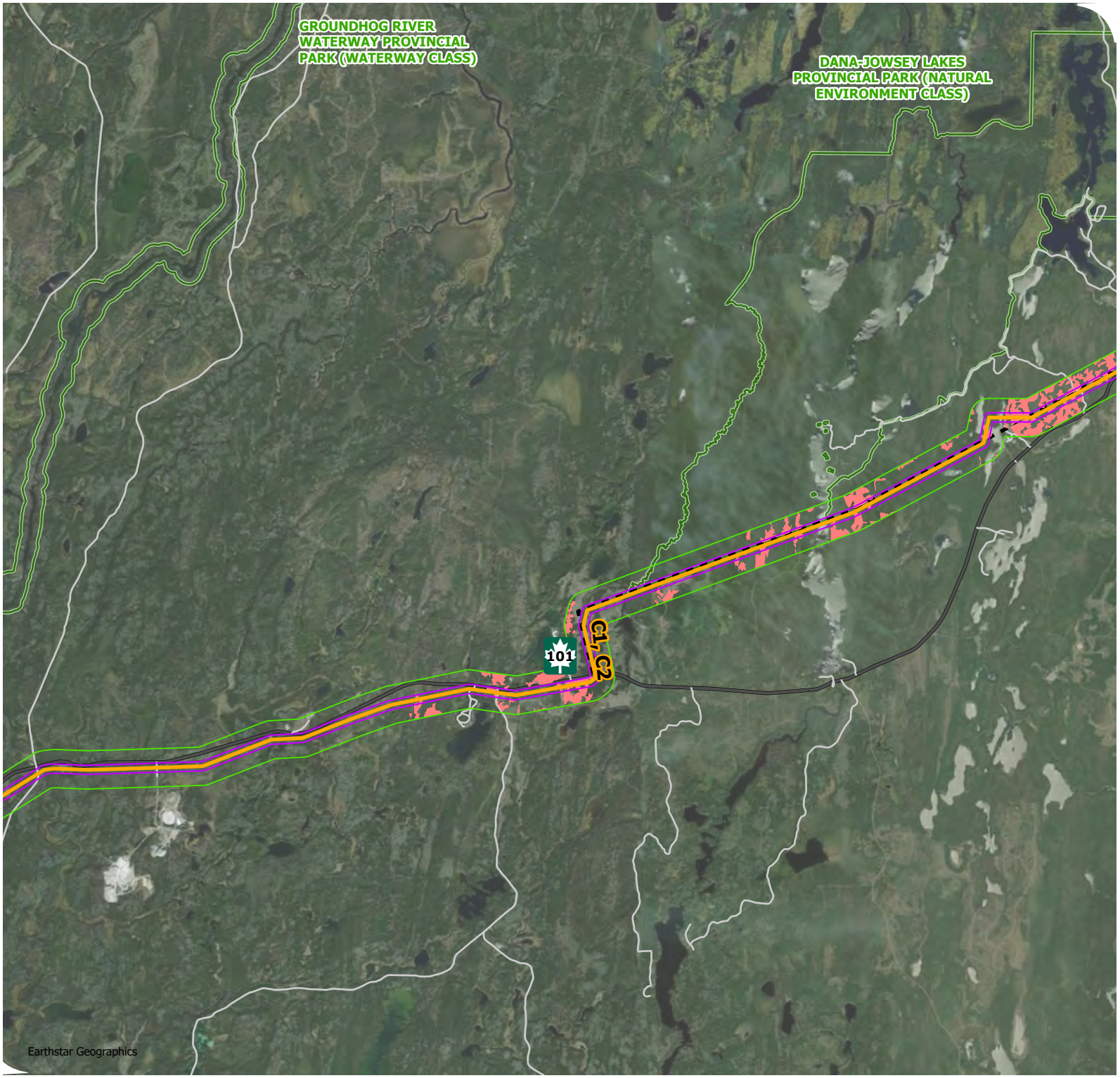
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WAWA TIMMINS POWER LINE

FIGURE 323. RVC - ELM HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Elm Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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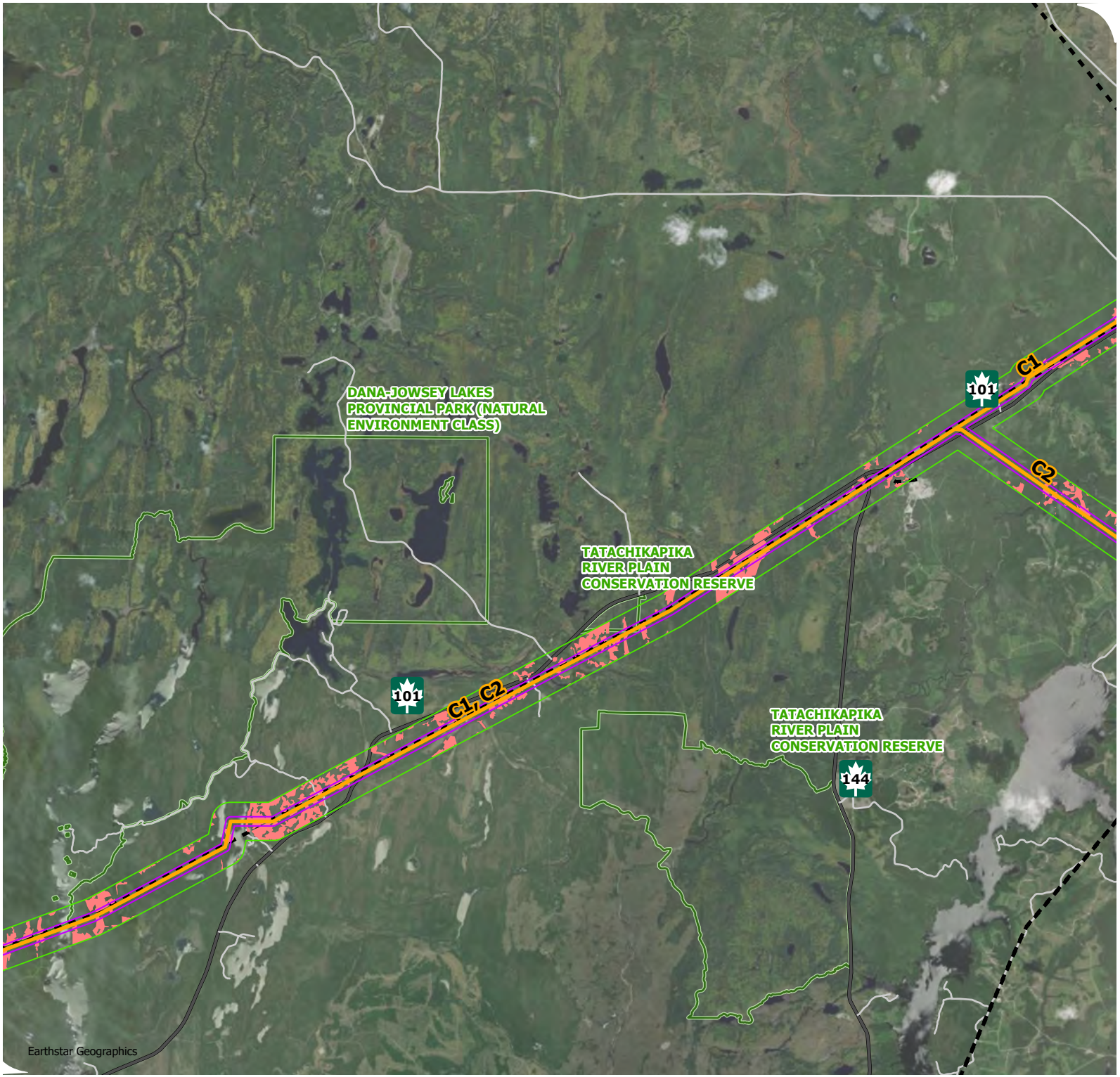
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WAWA TIMMINS POWER LINE

FIGURE 324. RVC - ELM HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Elm Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
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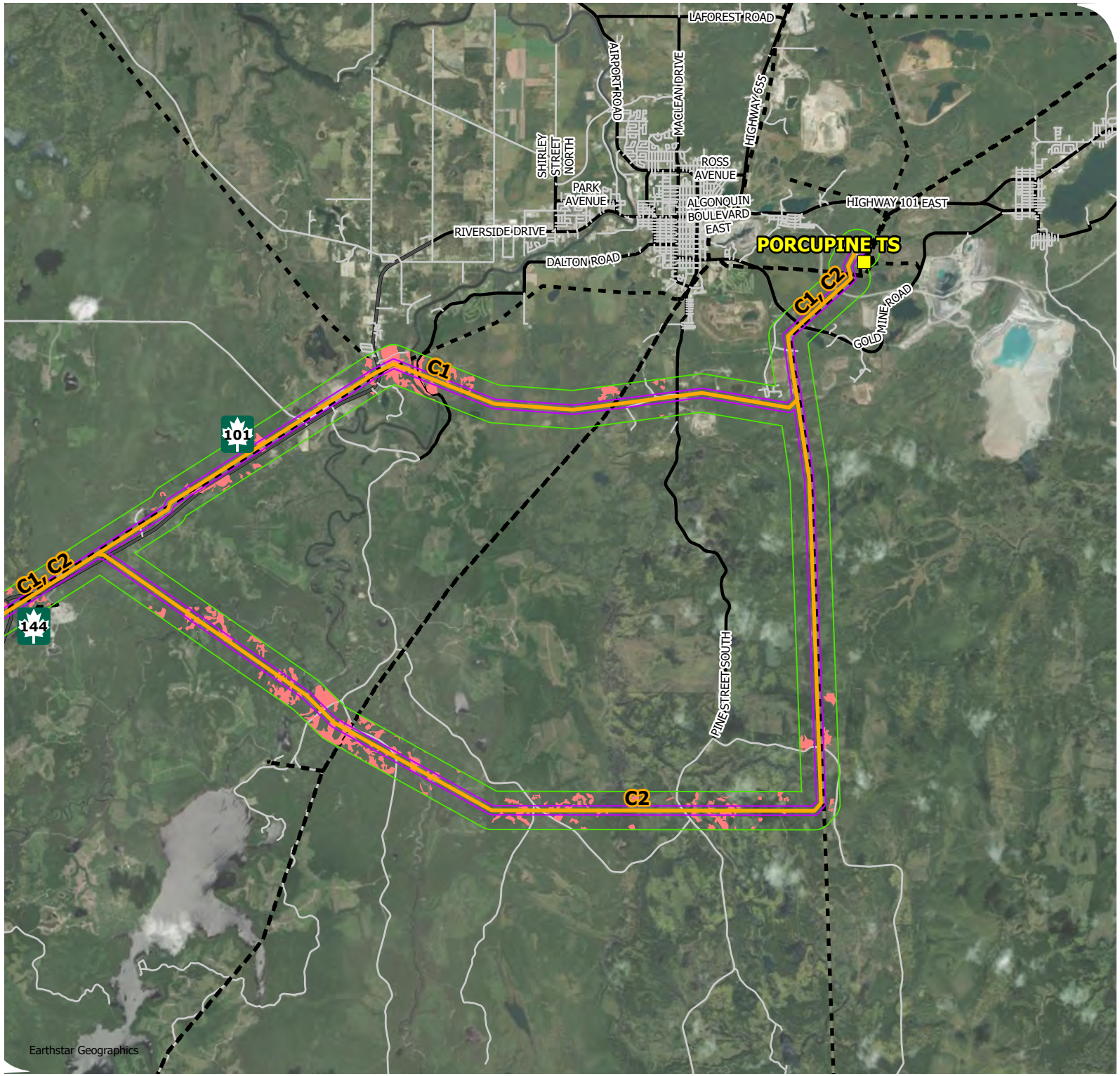
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WAWA TIMMINS POWER LINE

FIGURE 325. RVC - ELM HABITAT

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Elm Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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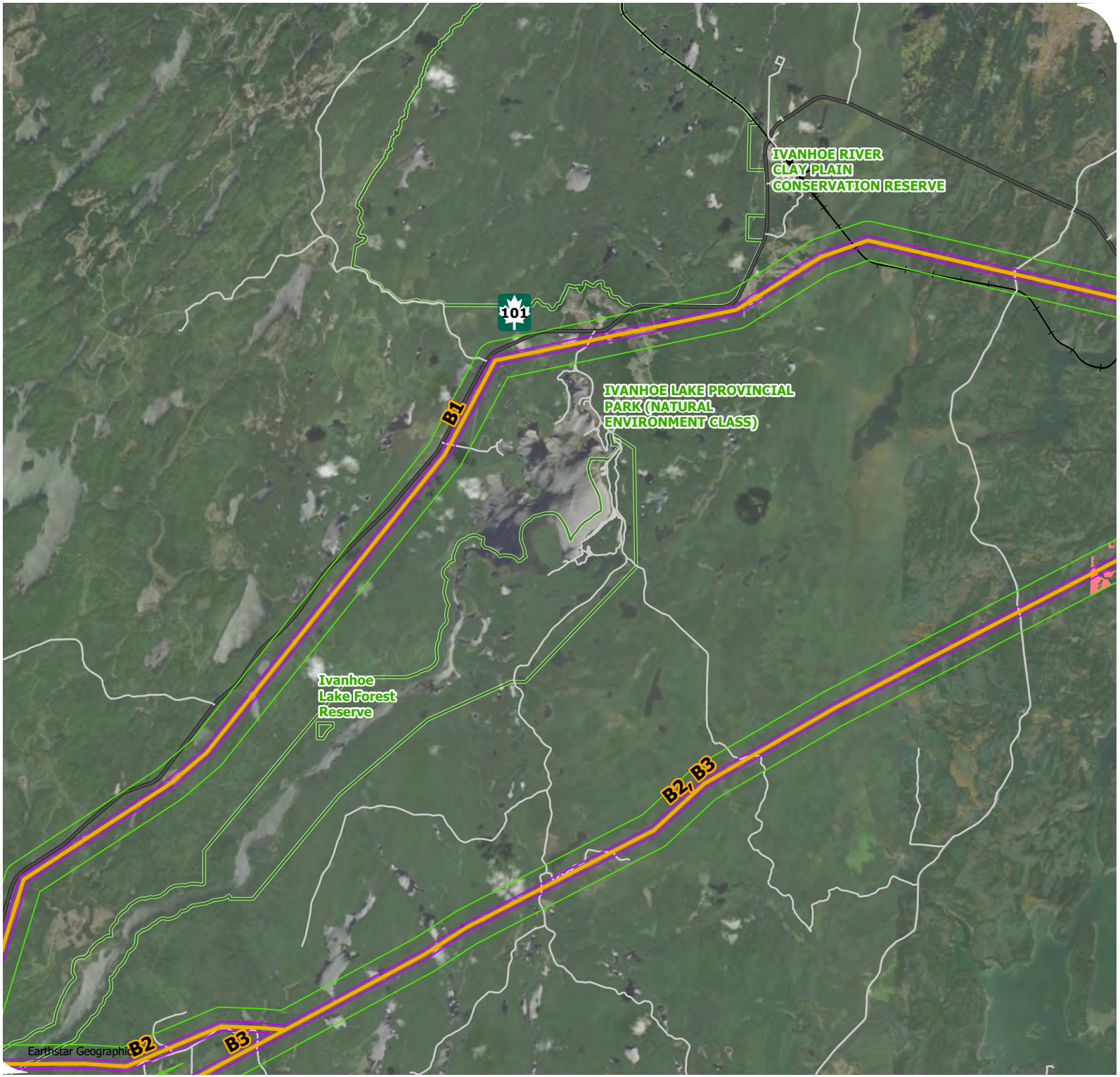
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WAWA TIMMINS POWER LINE

FIGURE 326. RVC - OAK HABITAT

Mapping Extent - Ivanhoe Lake 4



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Oak Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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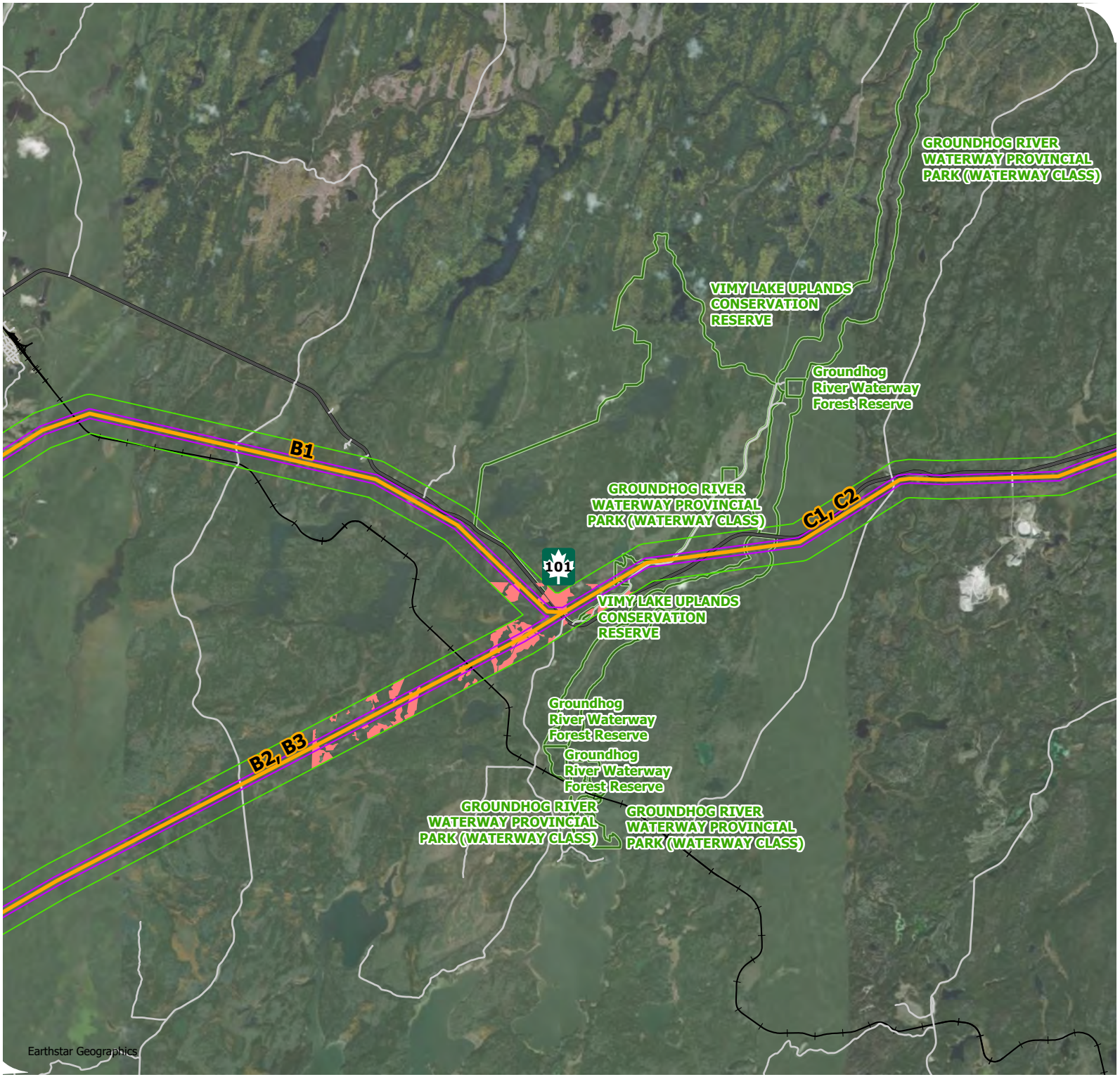
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WAWA TIMMINS POWER LINE

FIGURE 327. RVC - OAK HABITAT

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Oak Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

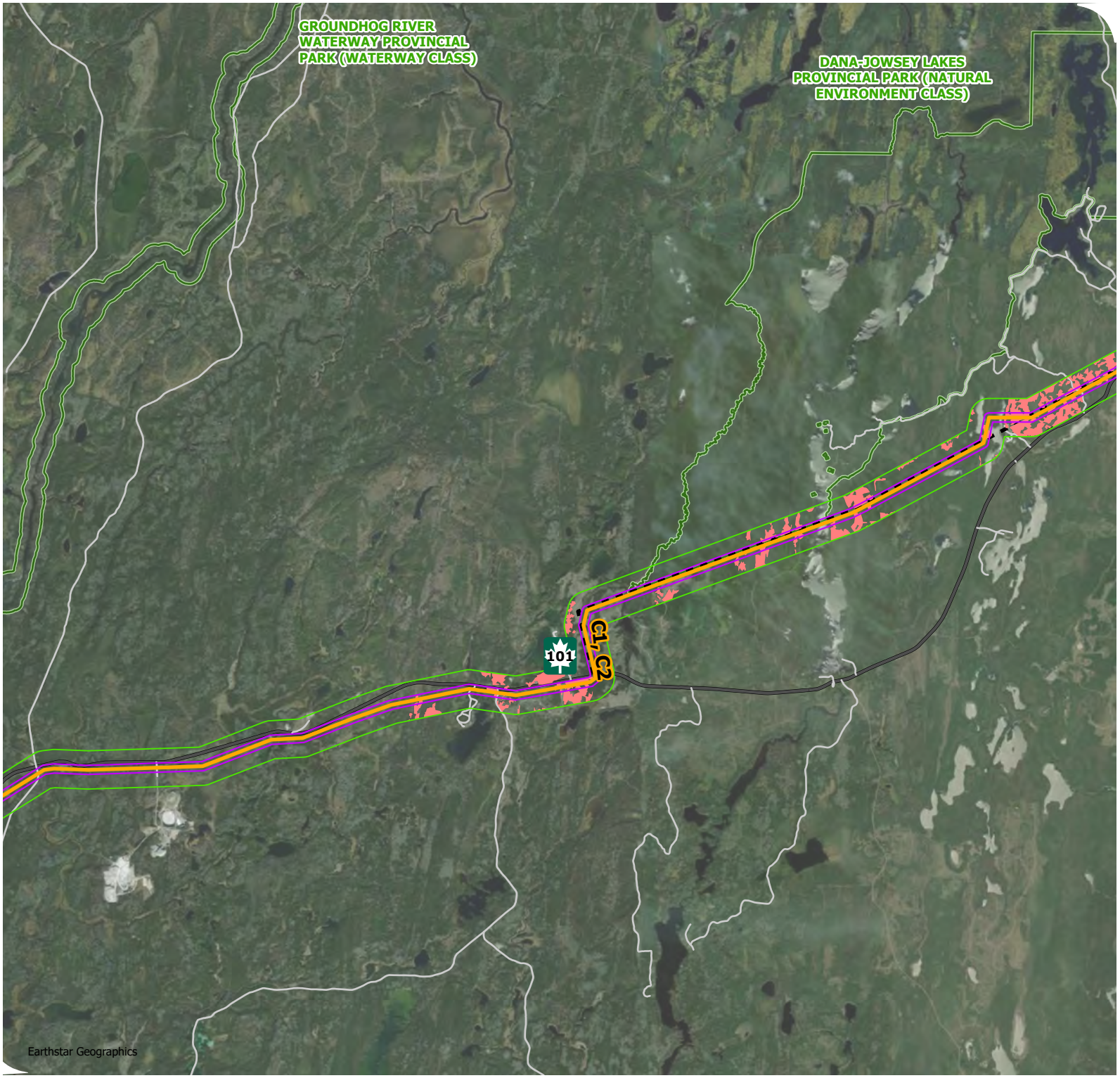
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 328. RVC - OAK HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Oak Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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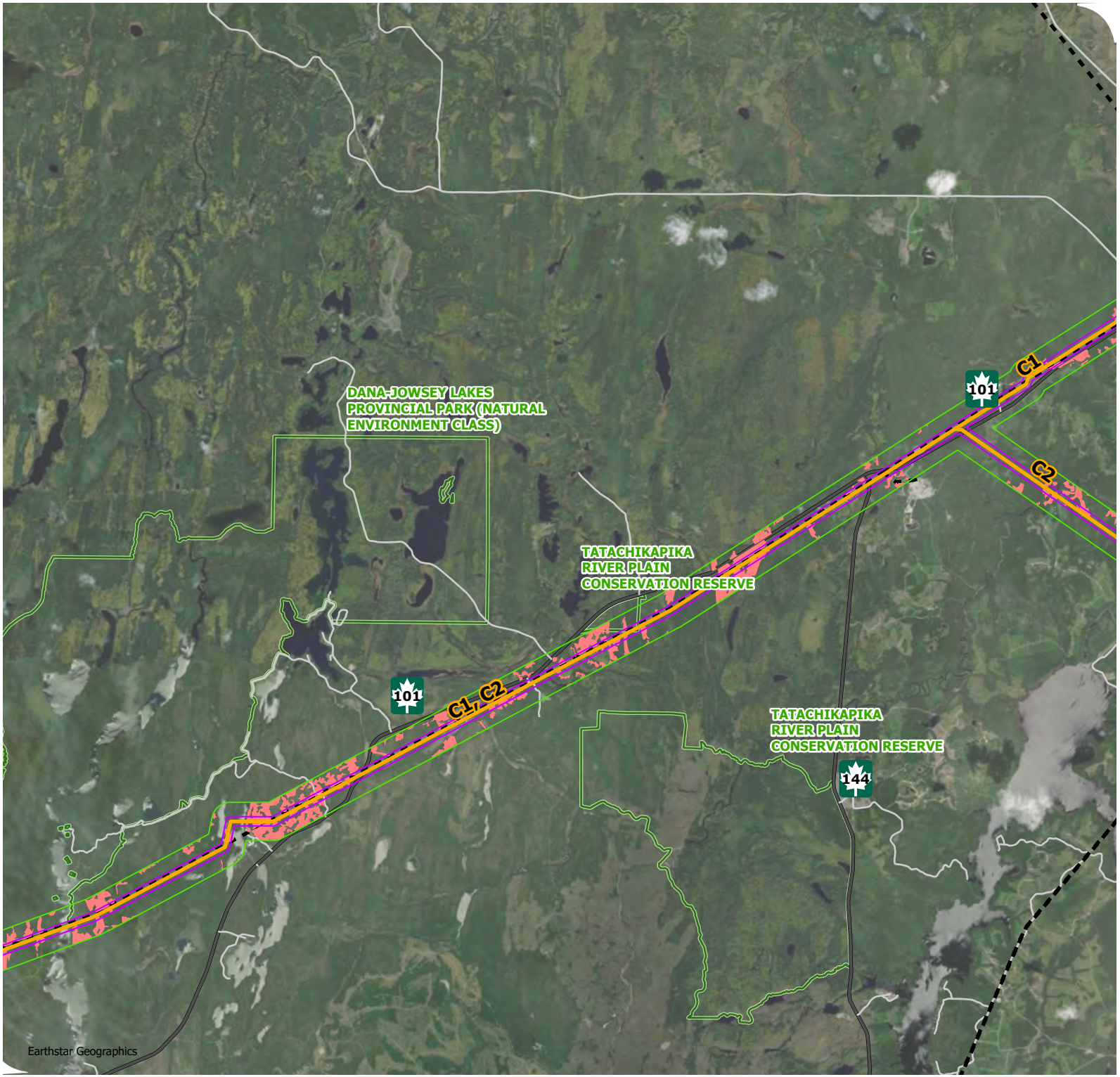
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WAWA TIMMINS POWER LINE

FIGURE 329. RVC - OAK HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Oak Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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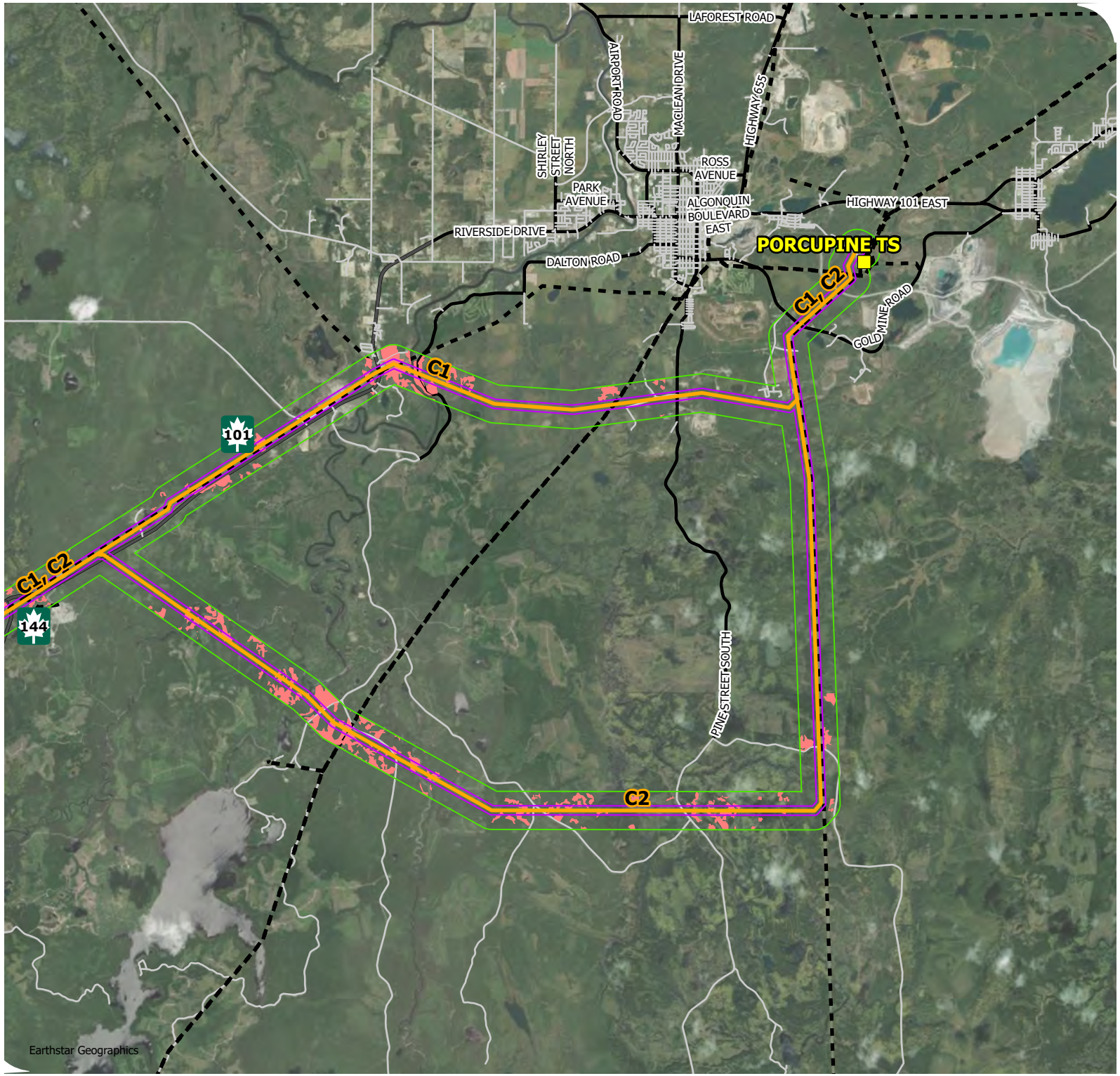
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WAWA TIMMINS POWER LINE

FIGURE 330. RVC - OAK HABITAT

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Oak Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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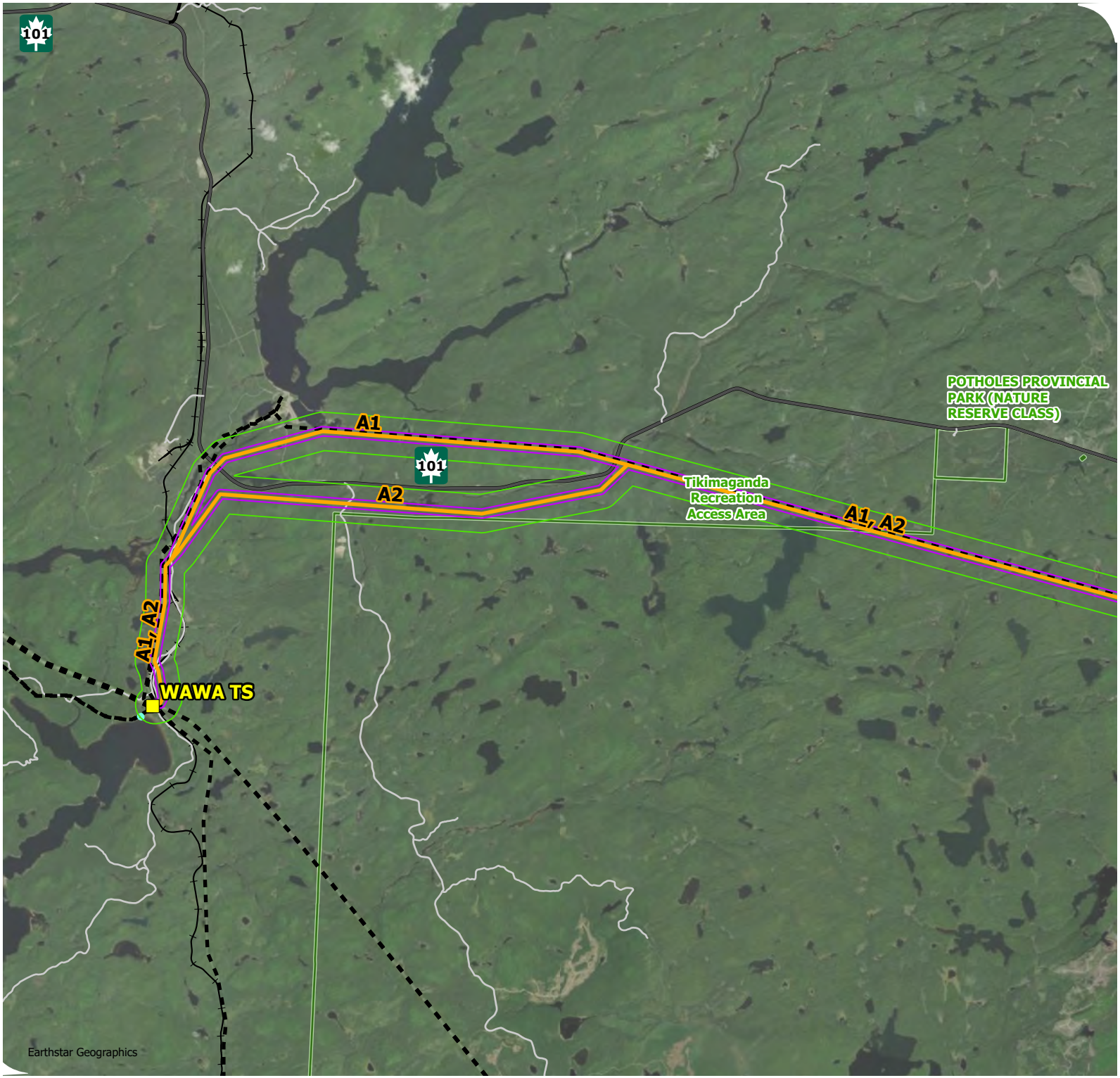
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WAWA TIMMINS POWER LINE

FIGURE 331. RVC - BLACK ASH HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Black Ash Stands (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

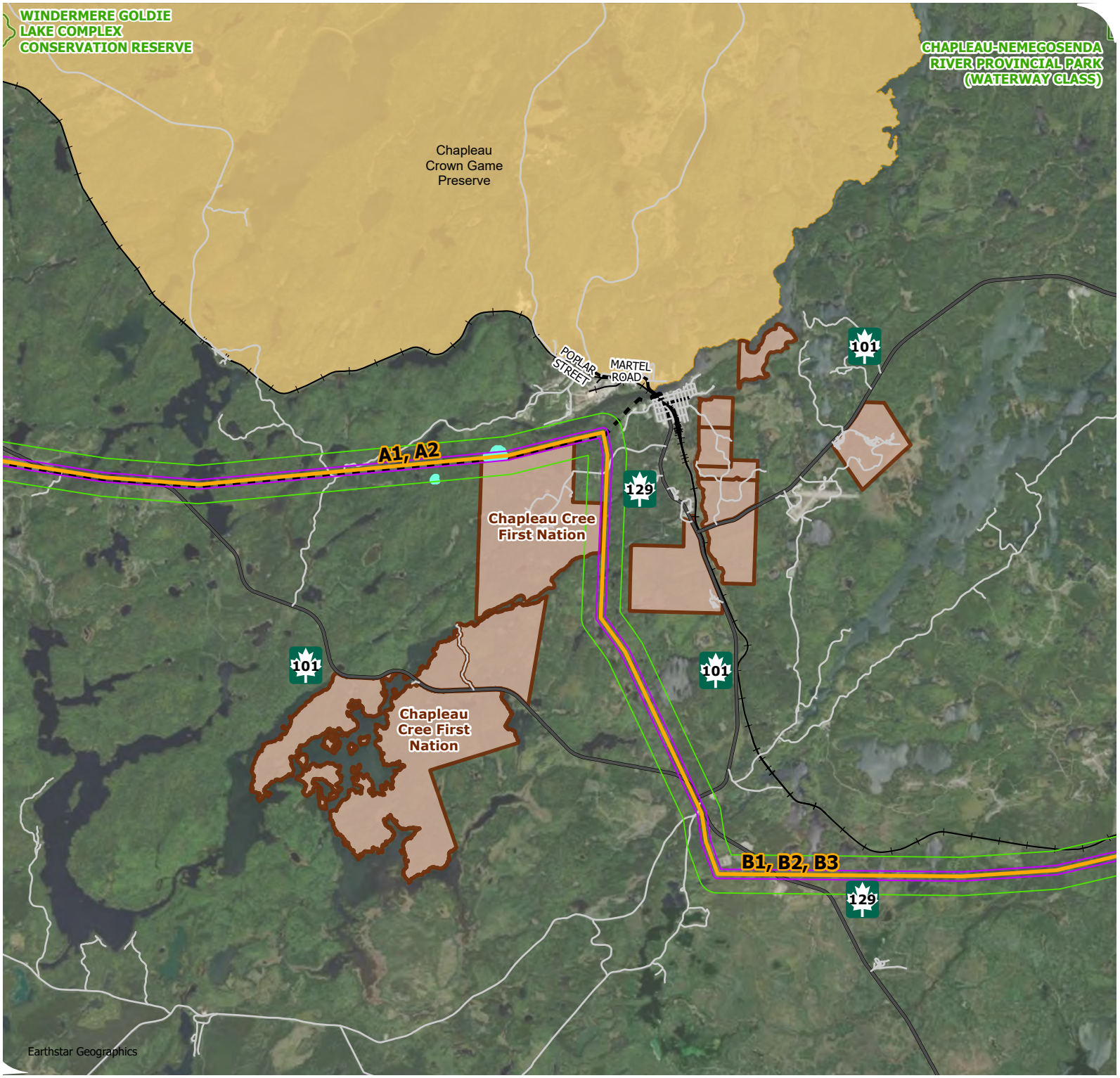
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WAWA TIMMINS POWER LINE

FIGURE 332. RVC - BLACK ASH HABITAT

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Black Ash Stands (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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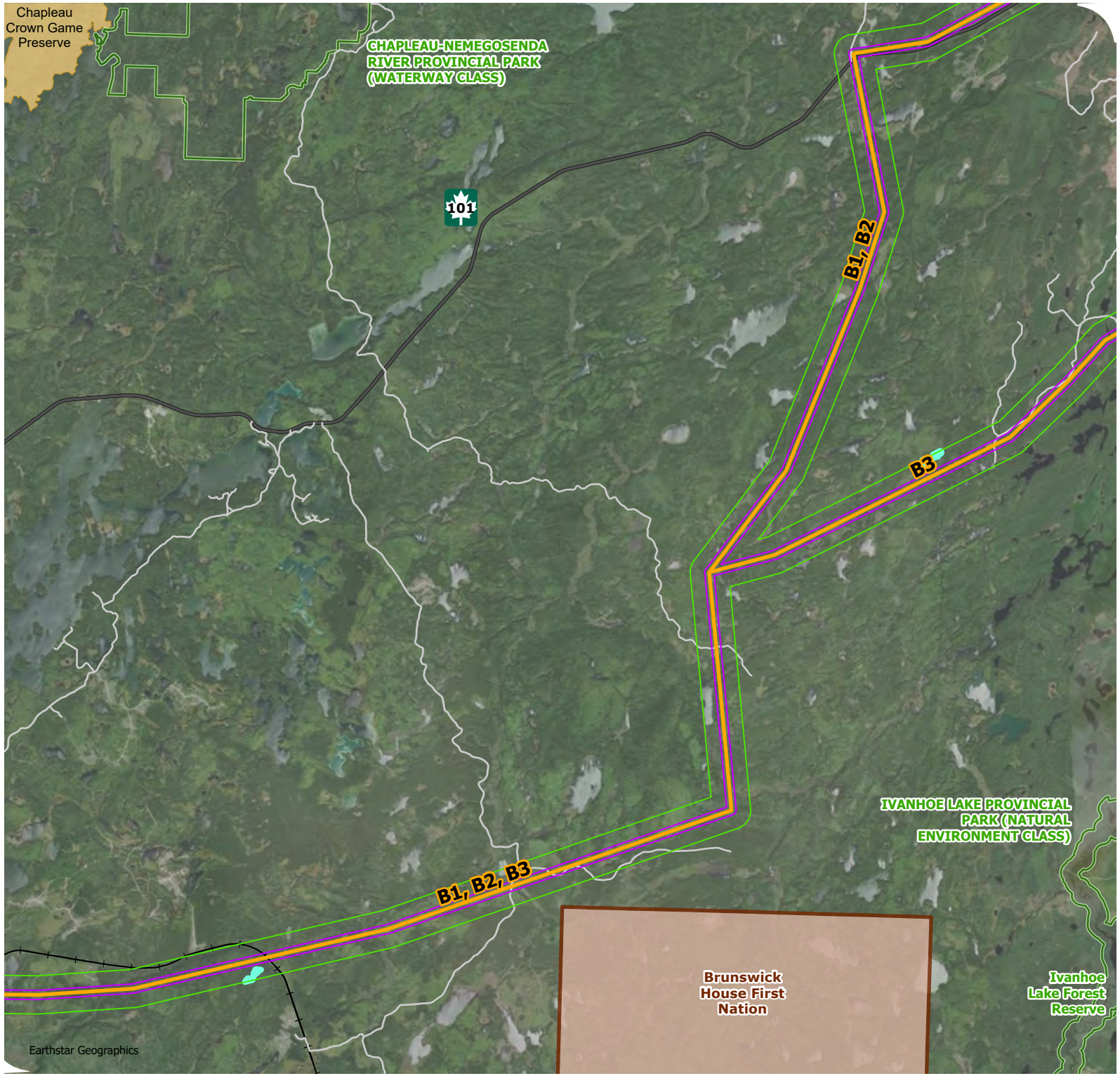
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WAWA TIMMINS POWER LINE

FIGURE 333. RVC - BLACK ASH HABITAT

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Black Ash Stands (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

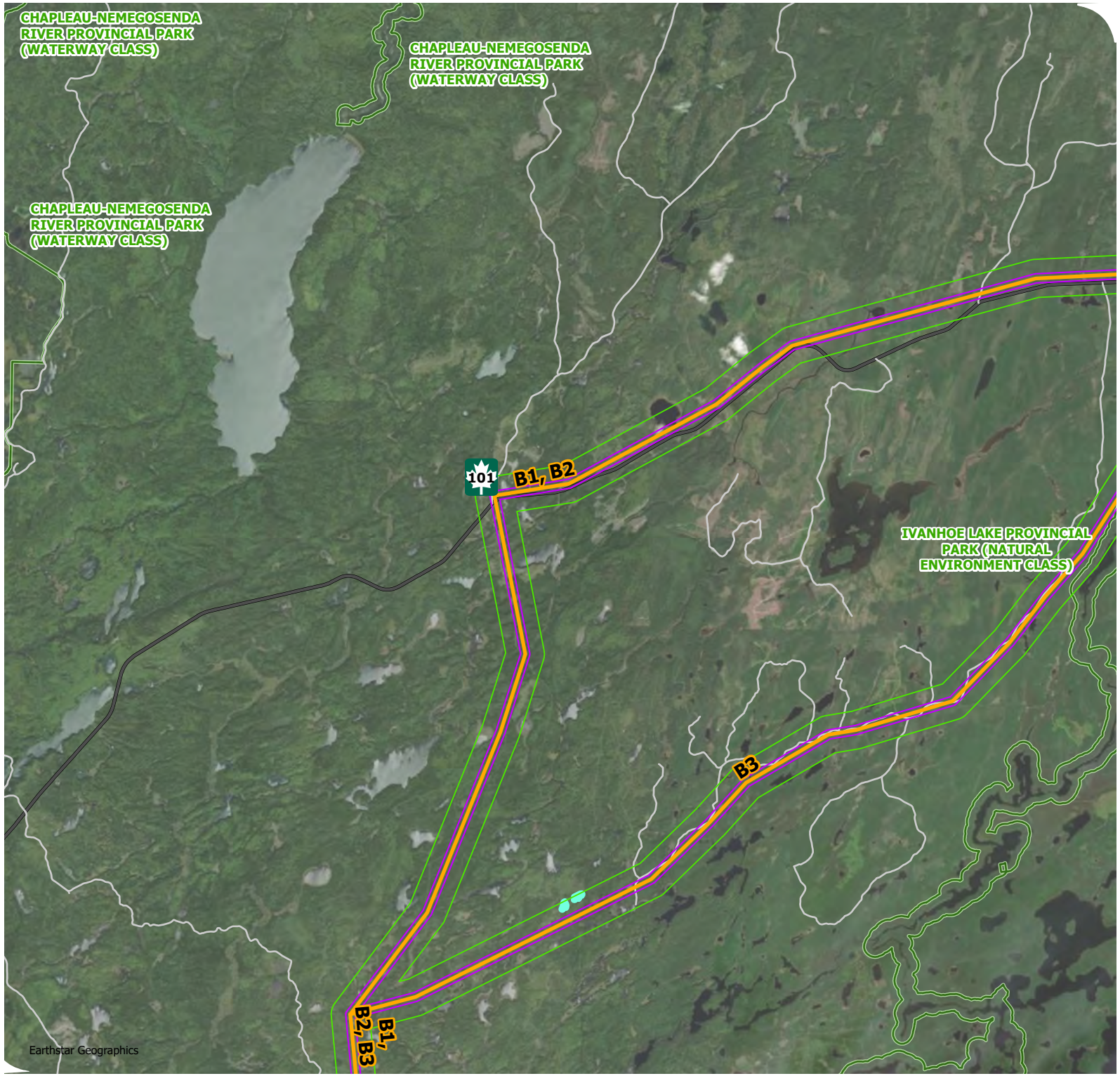
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WAWA TIMMINS POWER LINE

FIGURE 334. RVC - BLACK ASH HABITAT

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Black Ash Stands (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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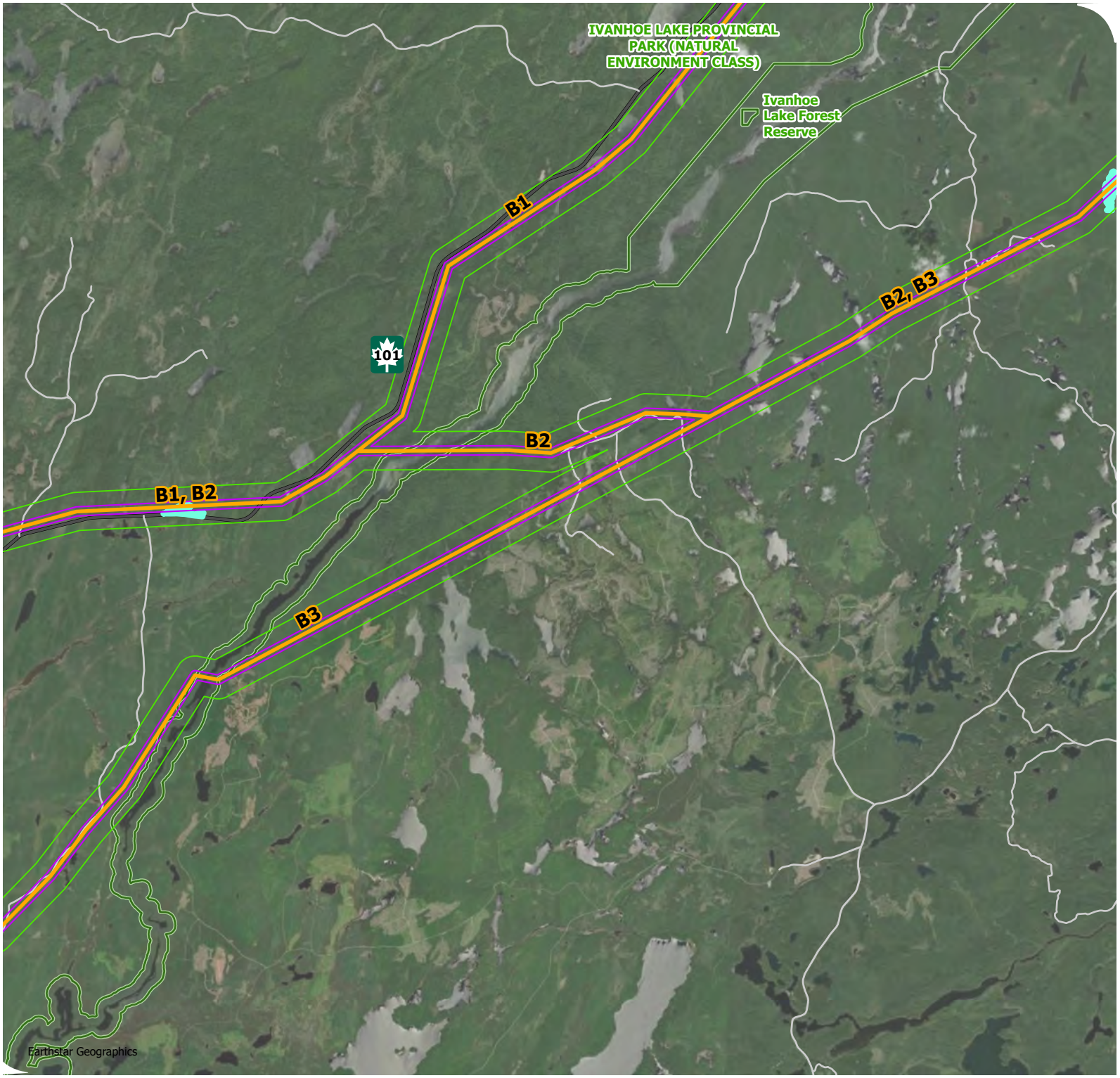
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WAWA TIMMINS POWER LINE

FIGURE 335. RVC - BLACK ASH HABITAT

Mapping Extent - Ivanhoe Lake 3



- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Black Ash Stands (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

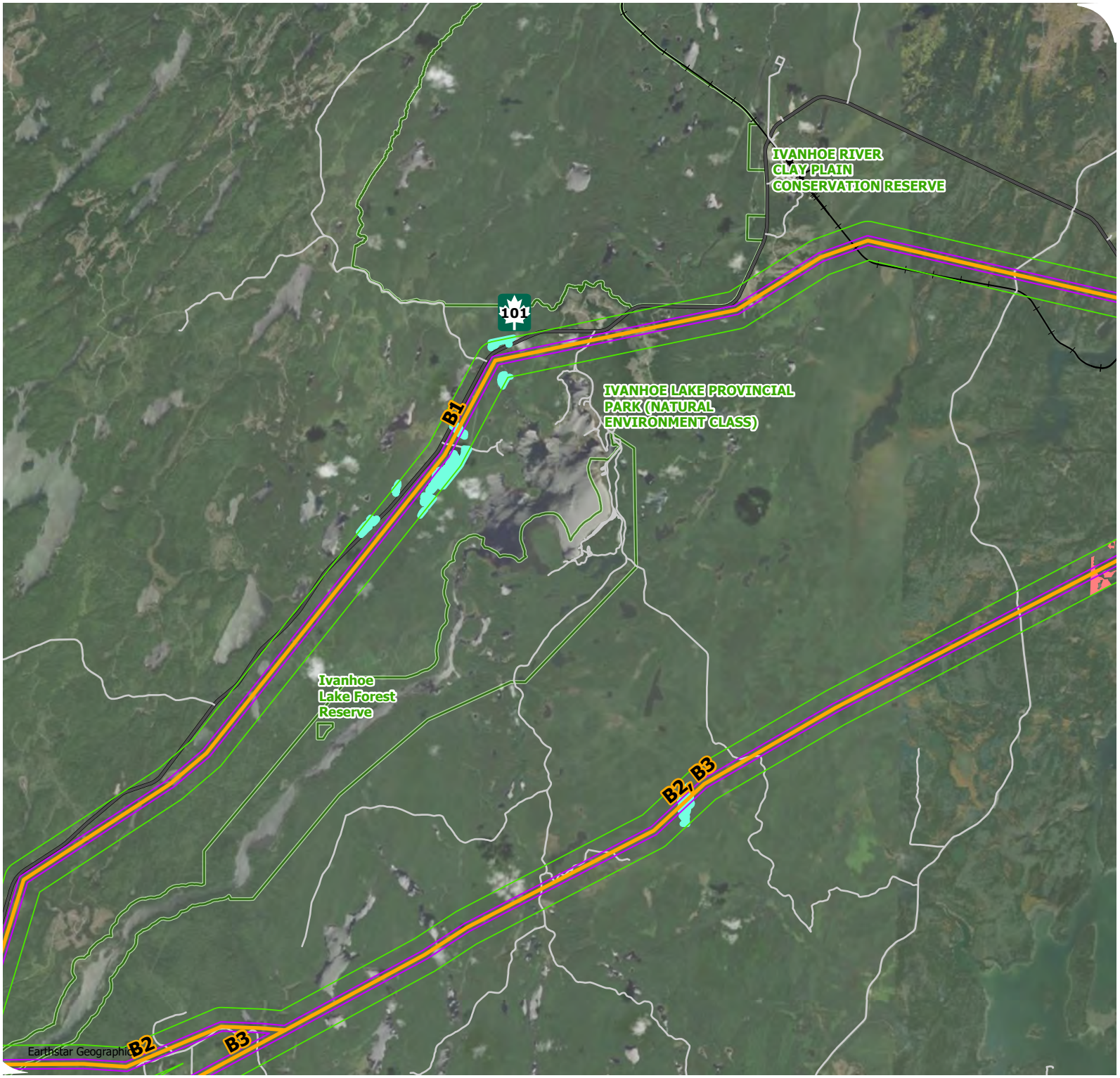
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WAWA TIMMINS POWER LINE

FIGURE 336. RVC - BLACK ASH HABITAT

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Black Ash Habitat
- Black Ash Stands (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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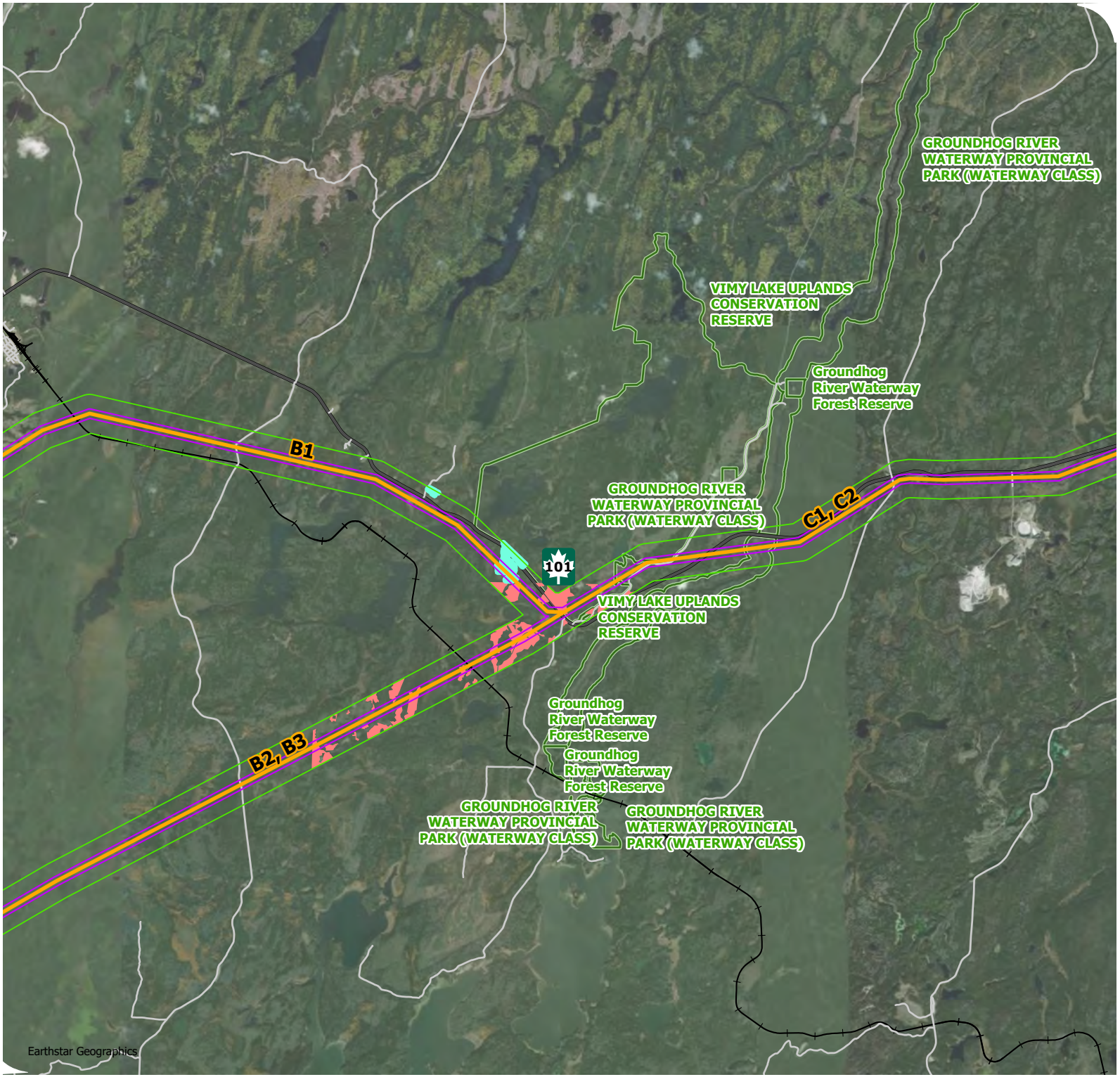
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WAWA TIMMINS POWER LINE

FIGURE 337. RVC - BLACK ASH HABITAT

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Black Ash Habitat
- Black Ash Stands (FRI)

MAP DRAWING INFORMATION:
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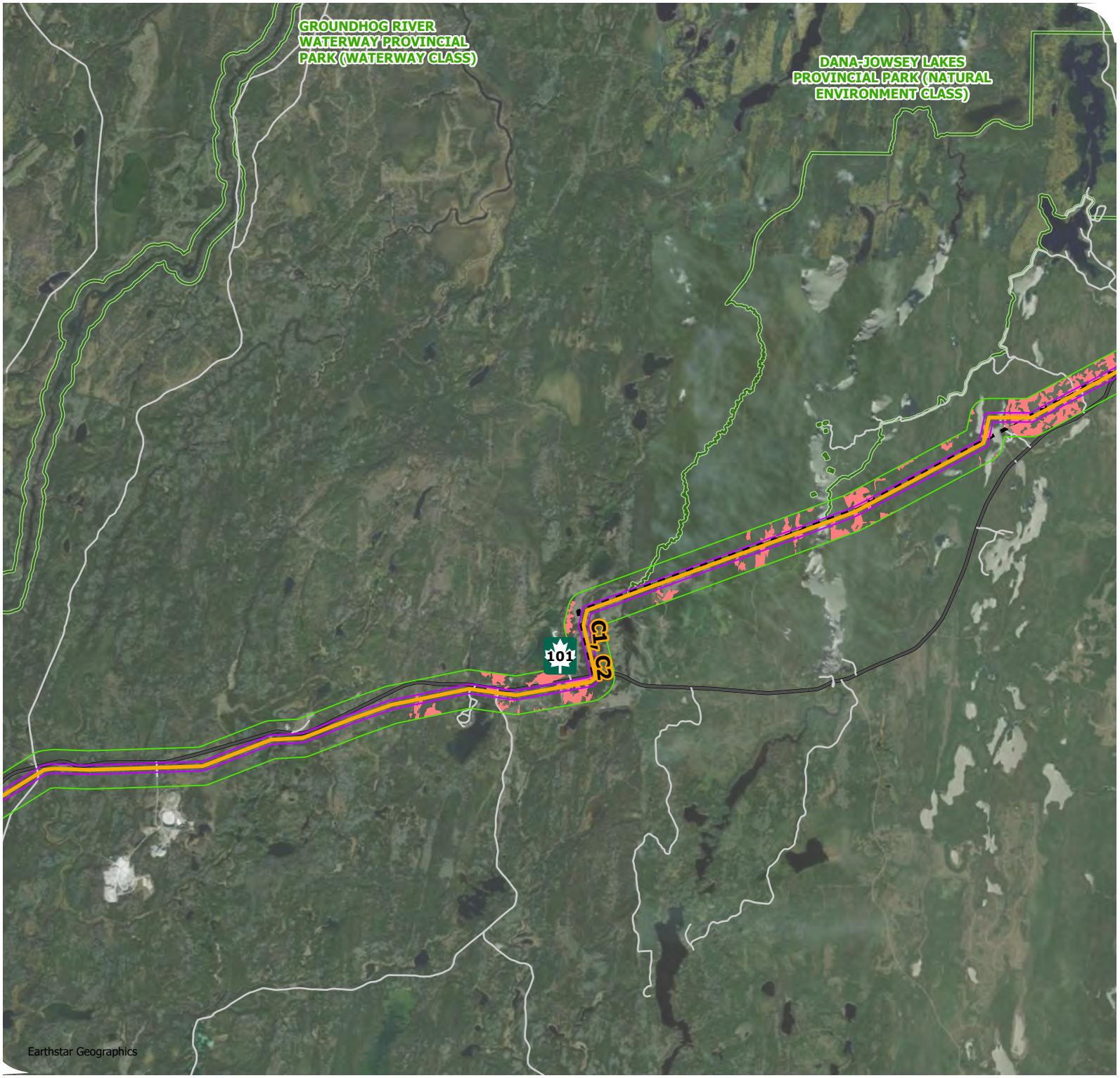
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WAWA TIMMINS POWER LINE

FIGURE 338. RVC - BLACK ASH HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Black Ash Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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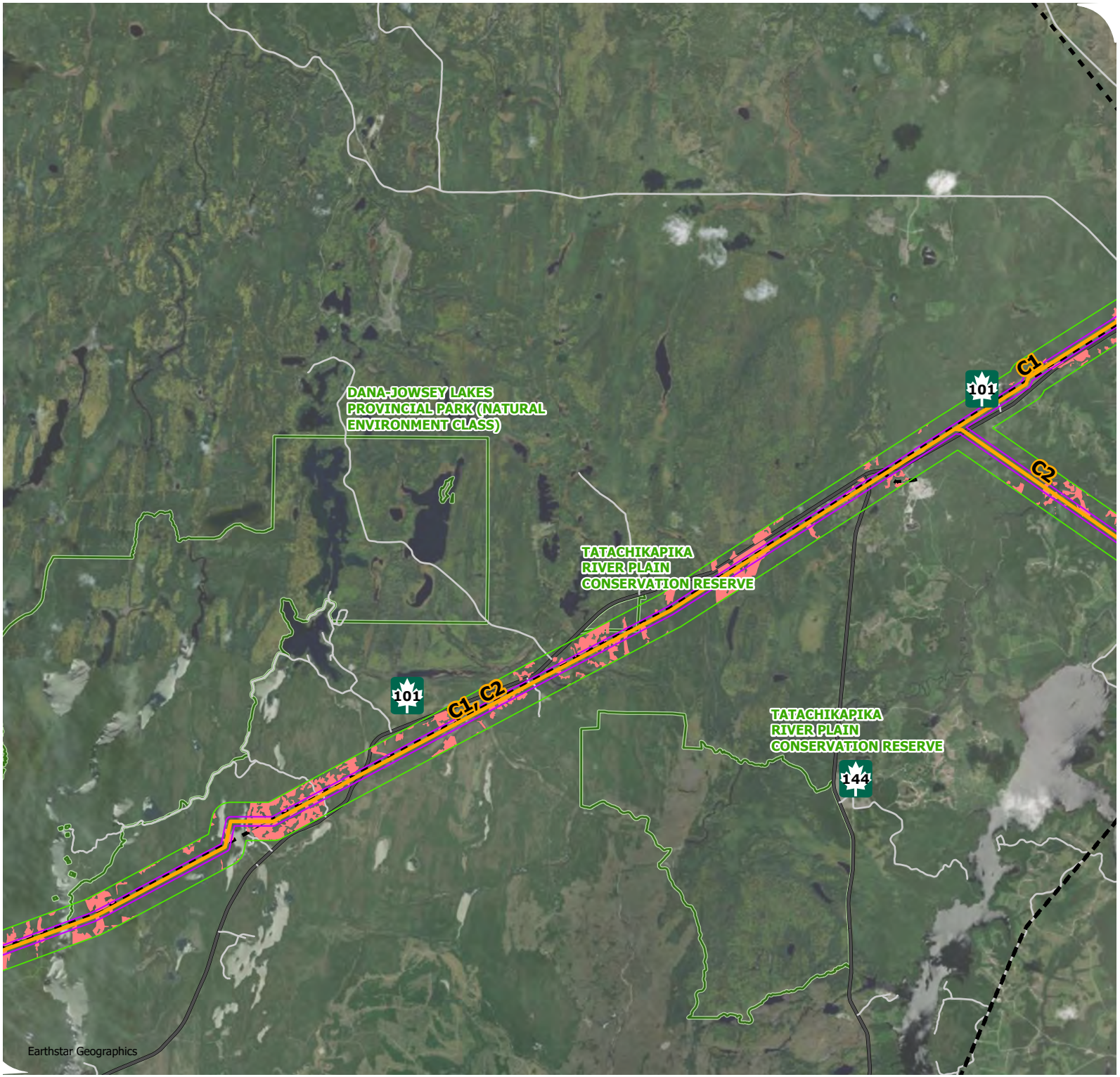
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WAWA TIMMINS POWER LINE

FIGURE 339. RVC - BLACK ASH HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Black Ash Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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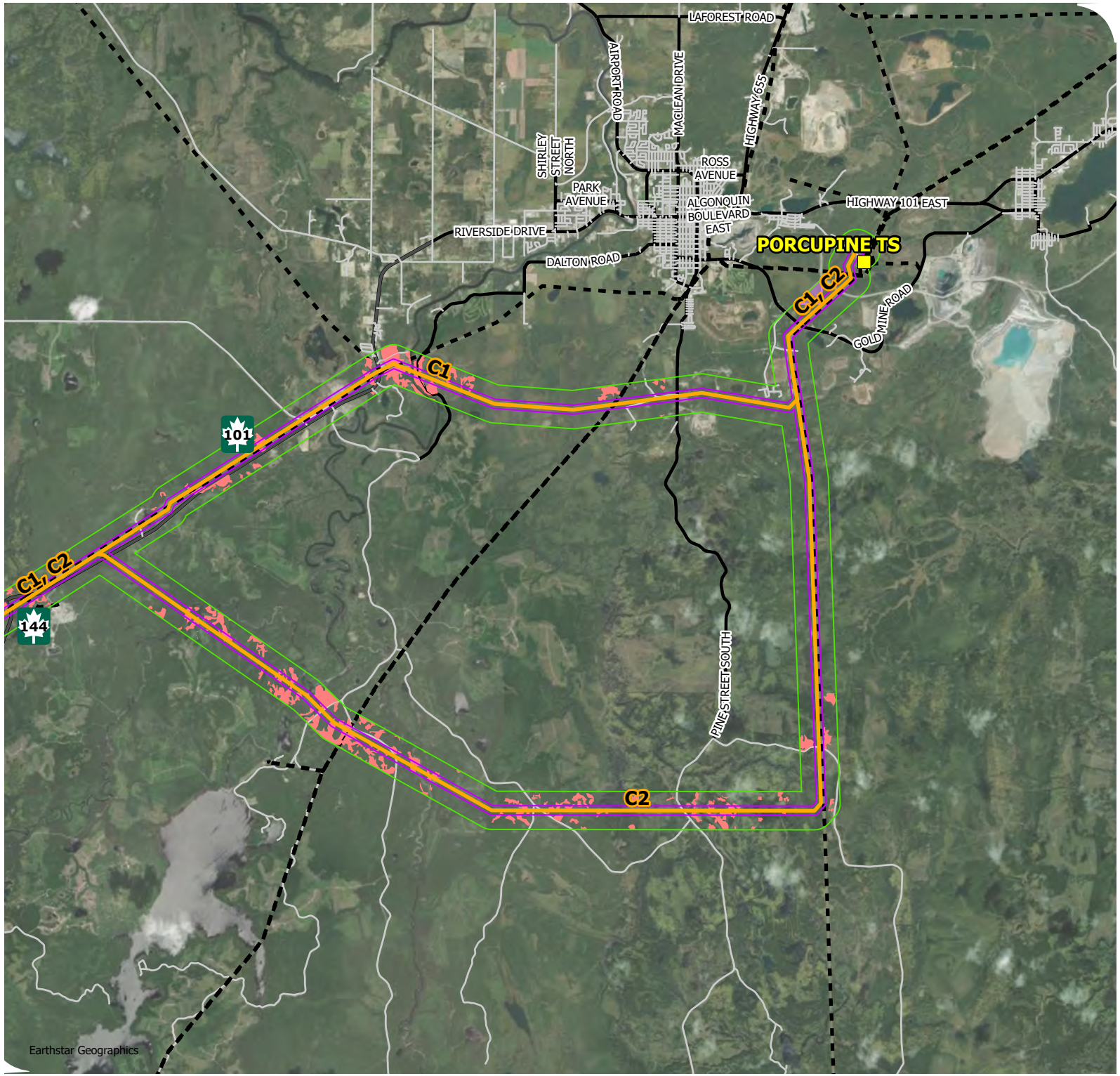
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WAWA TIMMINS POWER LINE

FIGURE 340. RVC - BLACK ASH HABITAT

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Black Ash Records (NHIC)
- Candidate Black Ash Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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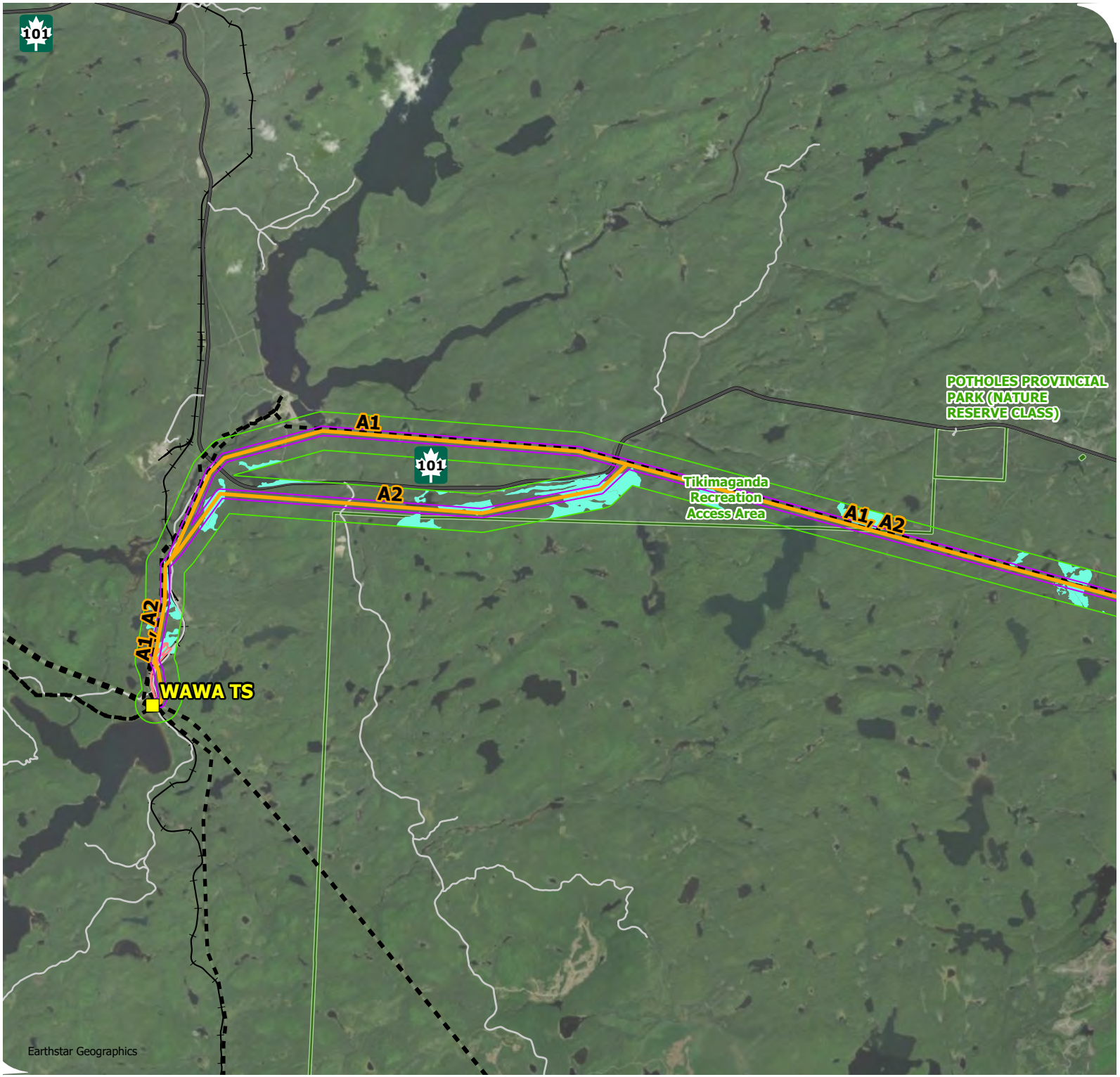
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WAWA TIMMINS POWER LINE

FIGURE 341. RVC - RED AND WHITE PINE HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Red and White Pine Habitat
- Red and White Pine Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

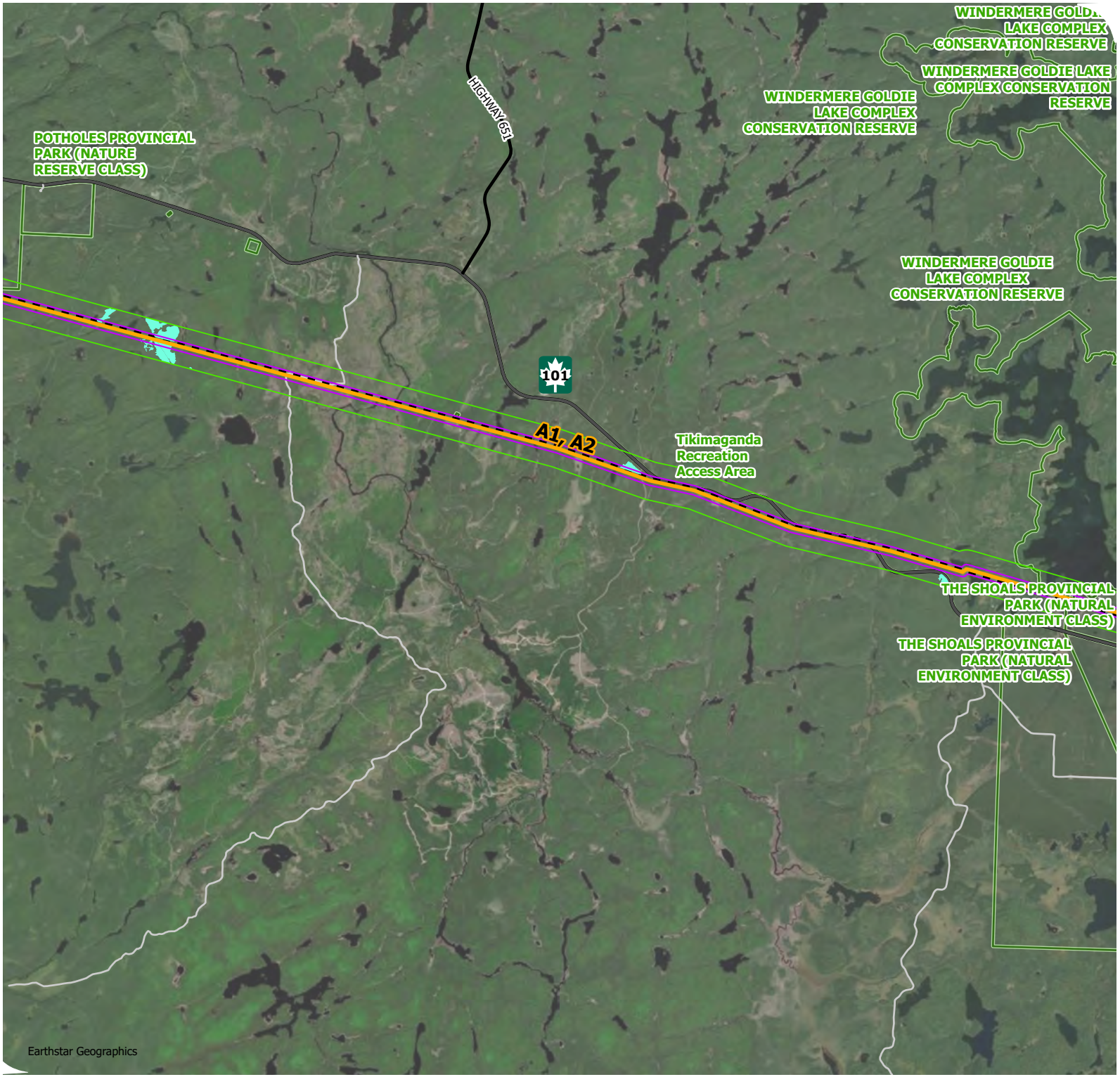
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 342. RVC - RED AND WHITE PINE HABITAT

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Red and White Pine Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

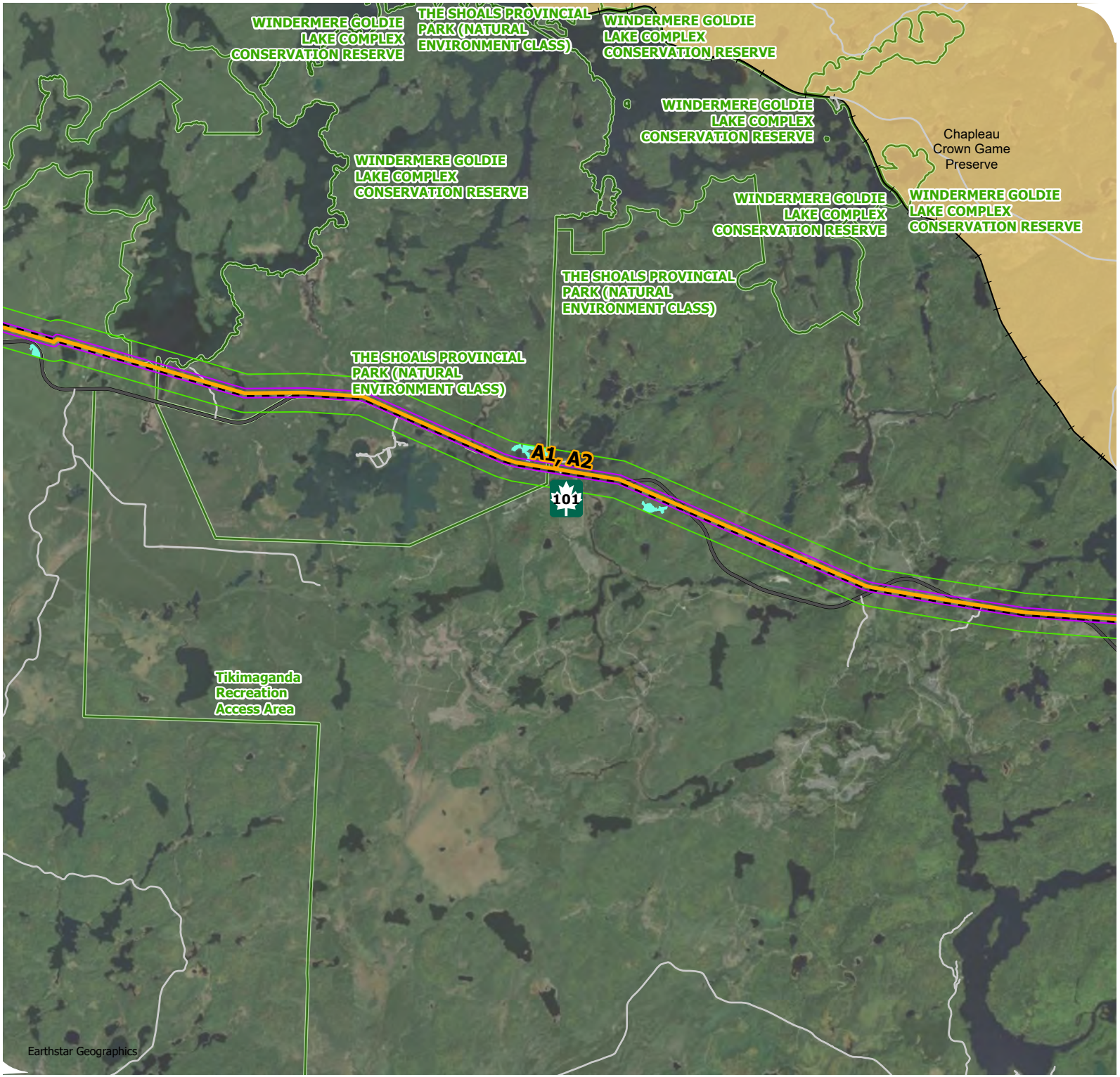
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 343. RVC - RED AND WHITE PINE HABITAT

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Red and White Pine Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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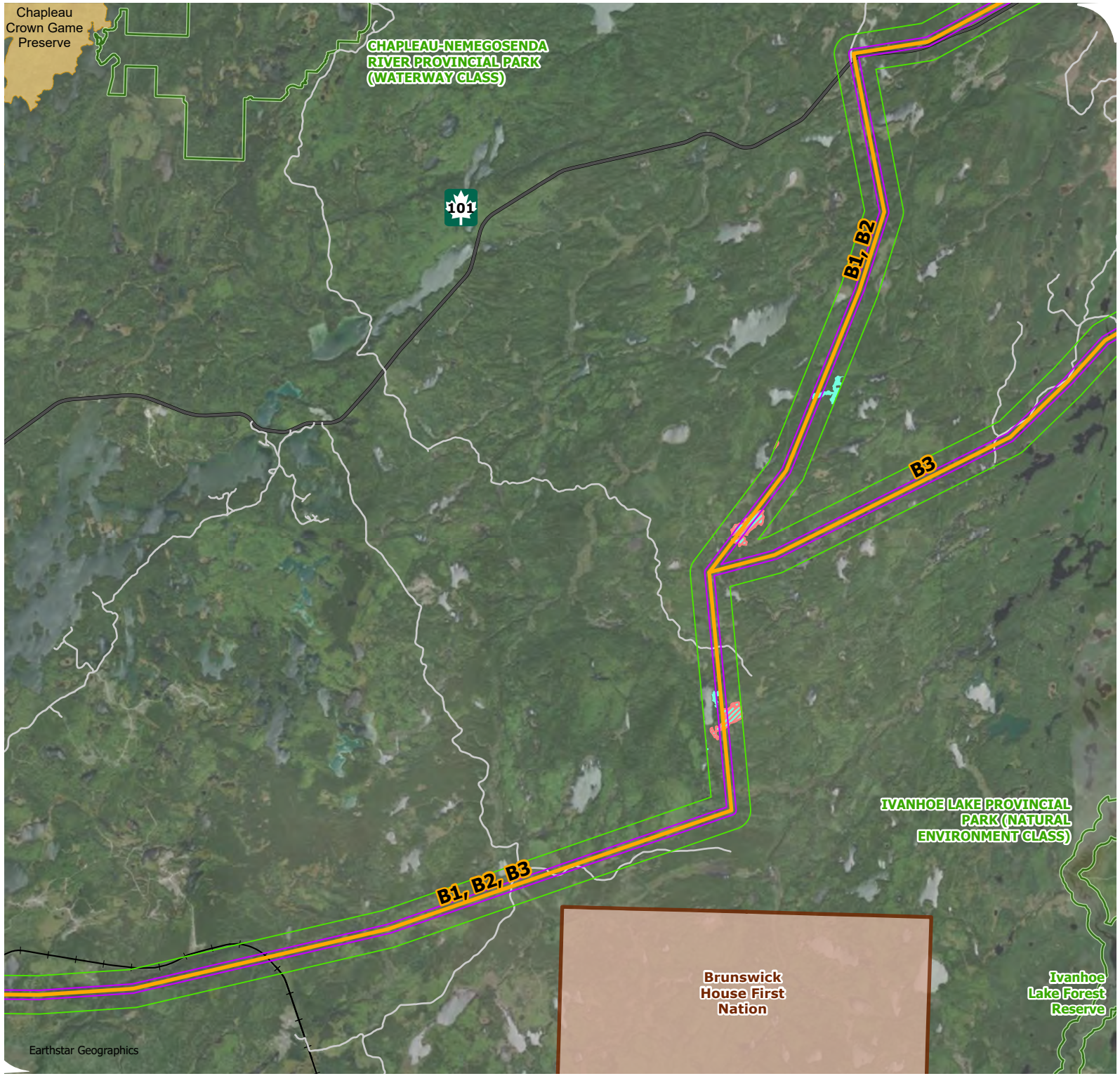
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WAWA TIMMINS POWER LINE

FIGURE 344. RVC - RED AND WHITE PINE HABITAT

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Red and White Pine Habitat
- Red and White Pine Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

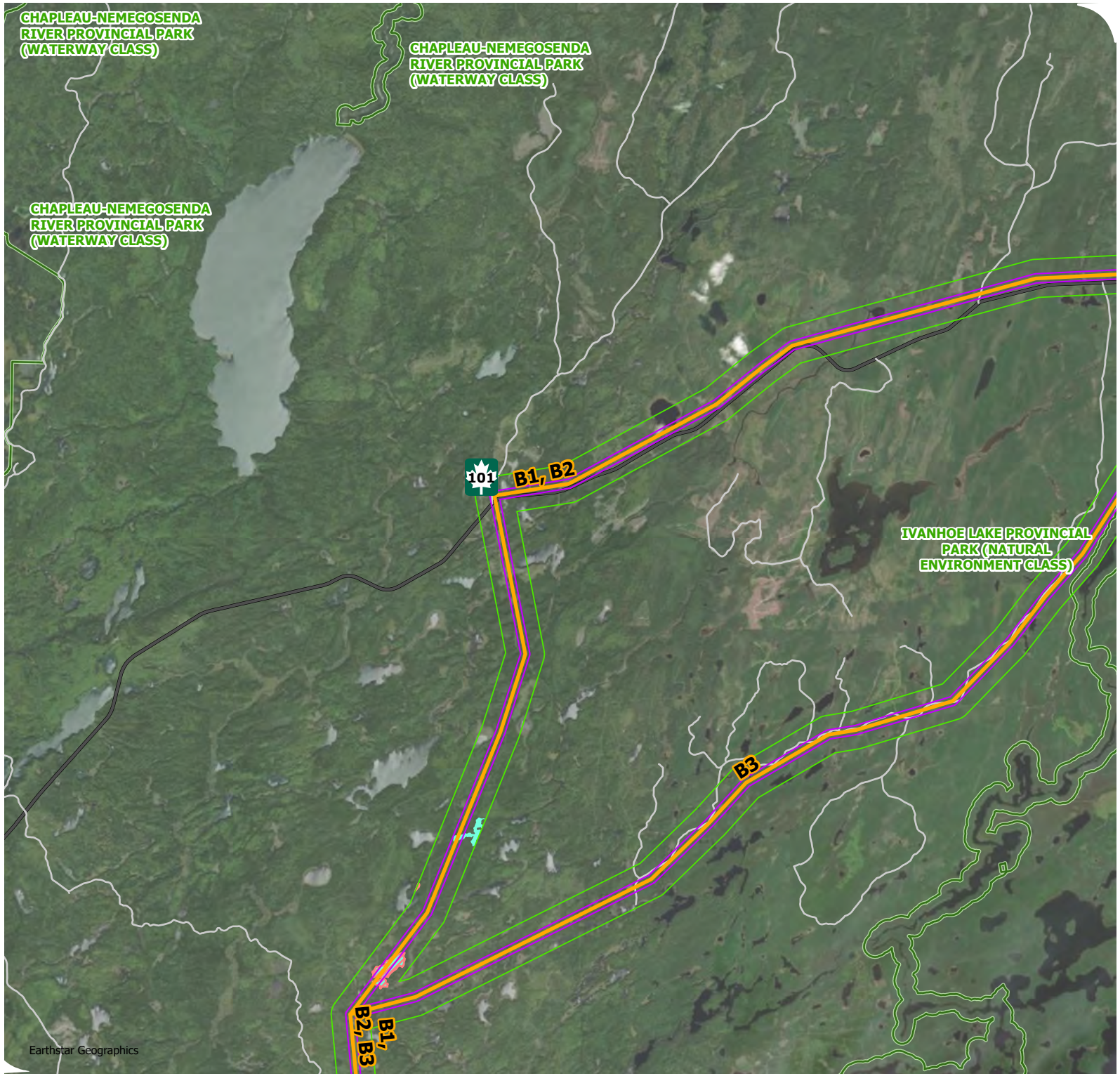
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 345. RVC - RED AND WHITE PINE HABITAT

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Red and White Pine Habitat
- Red and White Pine Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

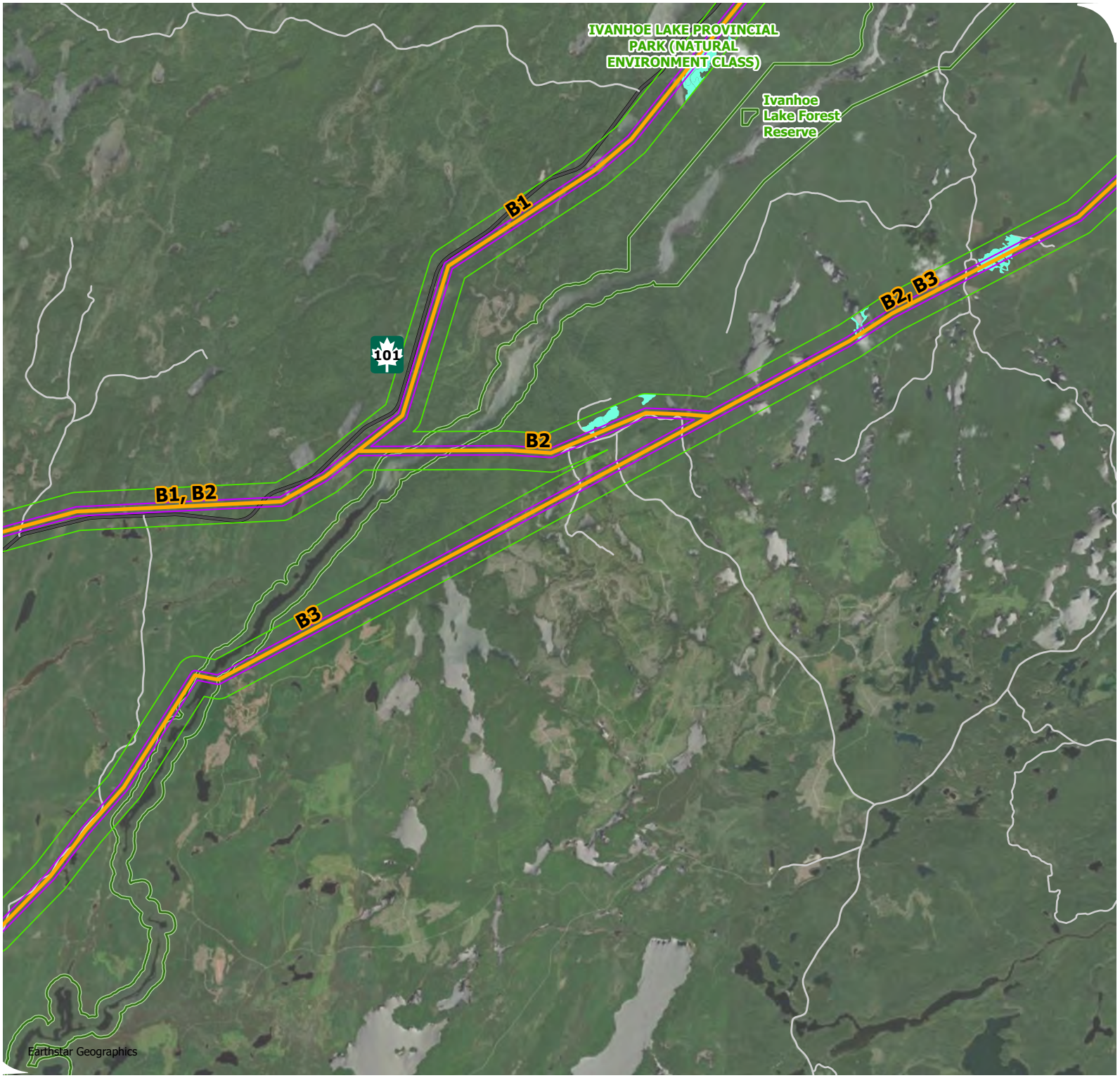
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25



WAWA TIMMINS POWER LINE

FIGURE 346. RVC - RED AND WHITE PINE HABITAT

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Red and White Pine Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

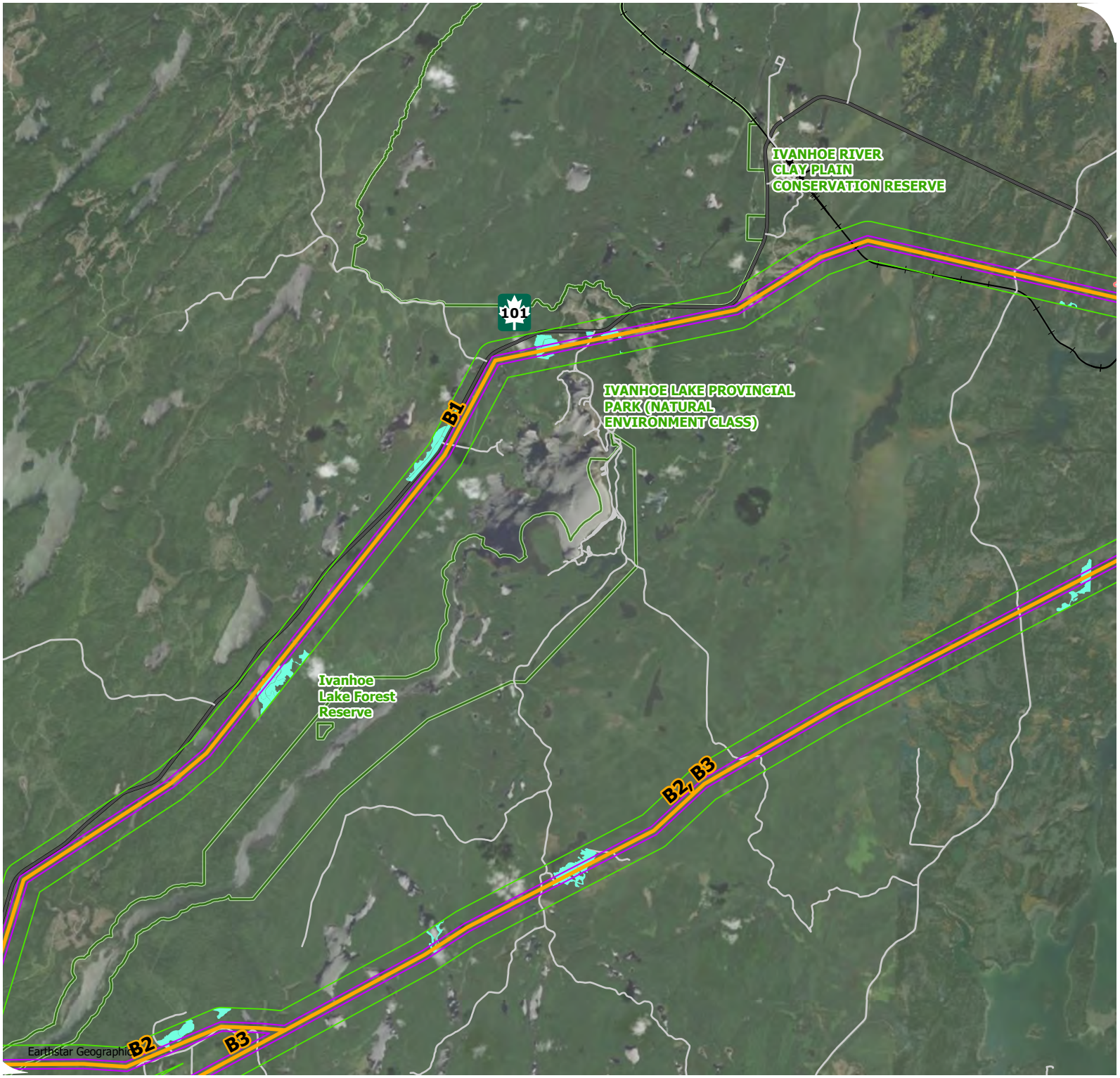


FIGURE 347. RVC - RED AND WHITE PINE HABITAT

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Red and White Pine Habitat
- Red and White Pine Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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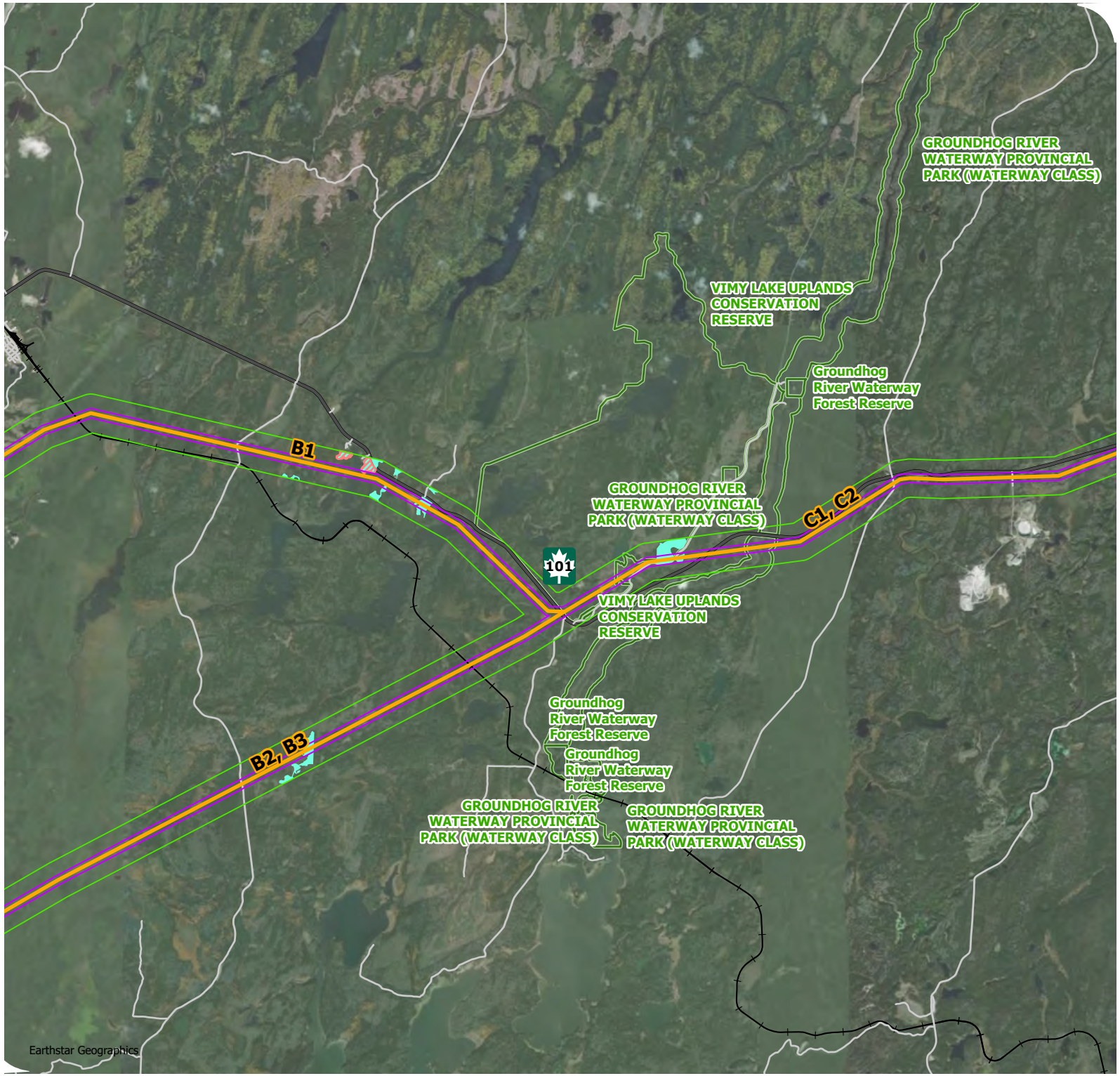
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WAWA TIMMINS POWER LINE

FIGURE 348. RVC - RED AND WHITE PINE HABITAT

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Red and White Pine Habitat
- Red and White Pine Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

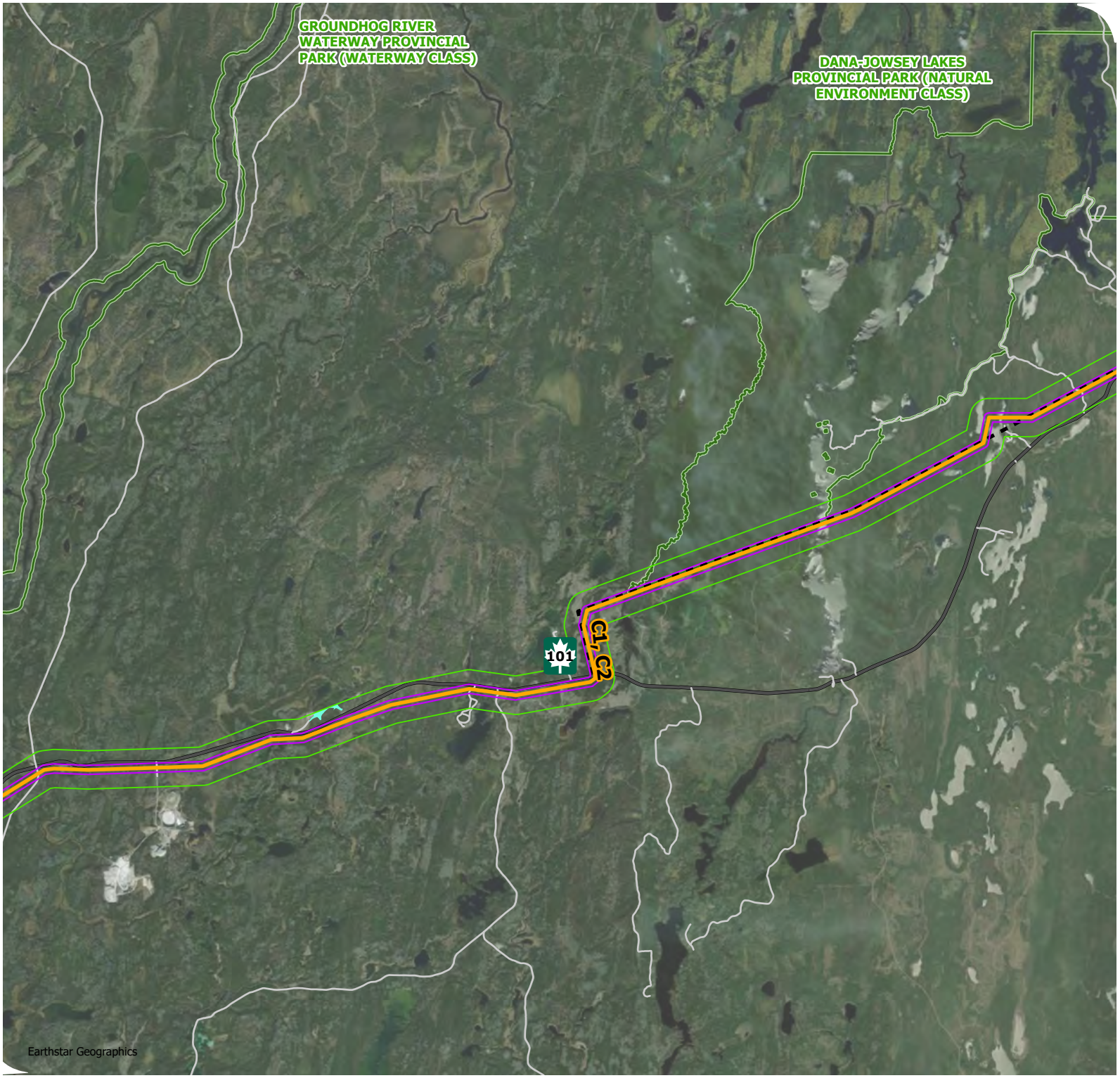
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
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FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 349. RVC - RED AND WHITE PINE HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Red and White Pine Records (FRI)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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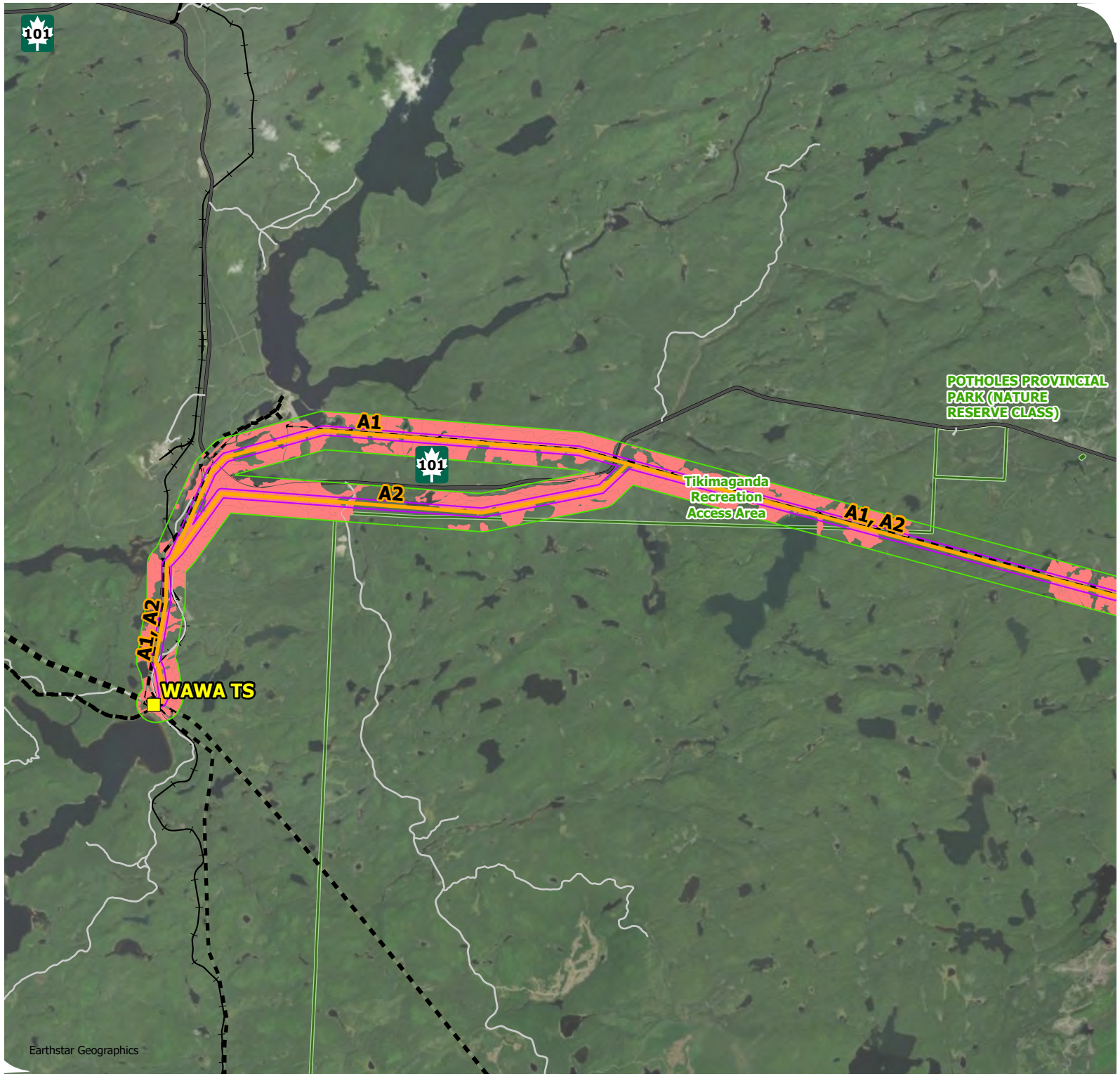
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WAWA TIMMINS POWER LINE

FIGURE 350. RVC - YELLOW BIRCH HABITAT

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Yellow Birch Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

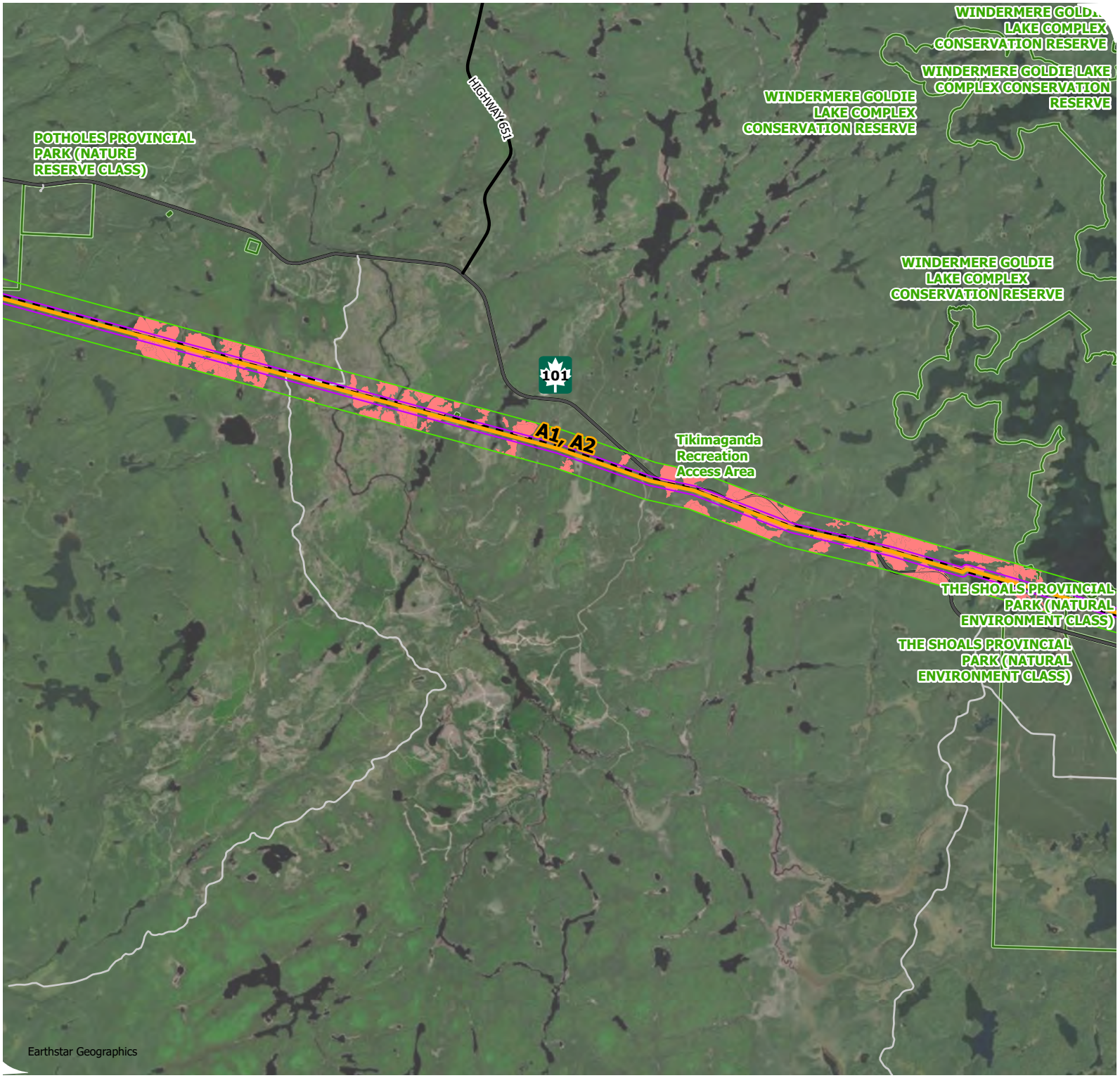
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WAWA TIMMINS POWER LINE

FIGURE 351. RVC - YELLOW BIRCH HABITAT

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Yellow Birch Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

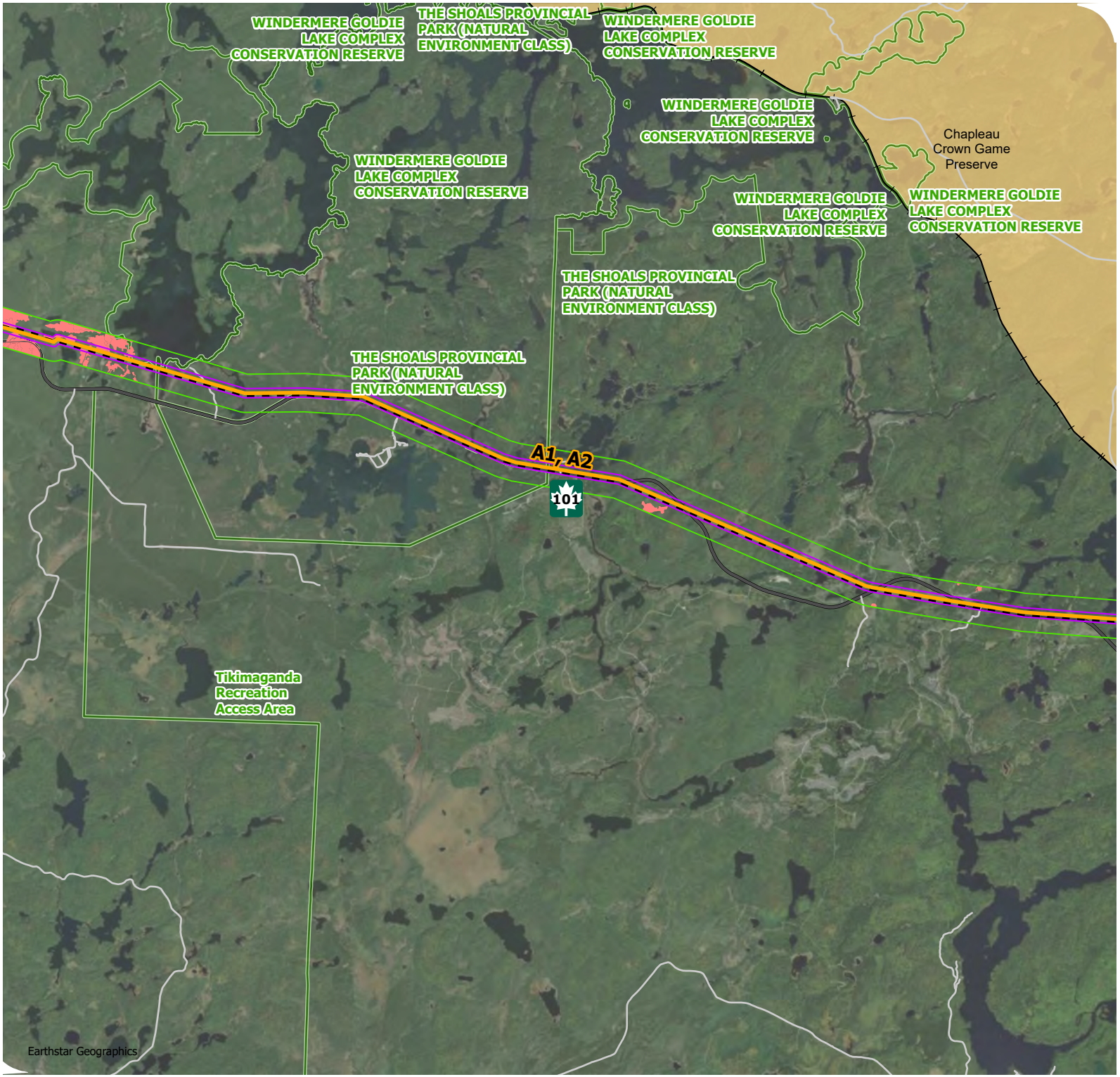
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WAWA TIMMINS POWER LINE

FIGURE 352. RVC - YELLOW BIRCH HABITAT

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Yellow Birch Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

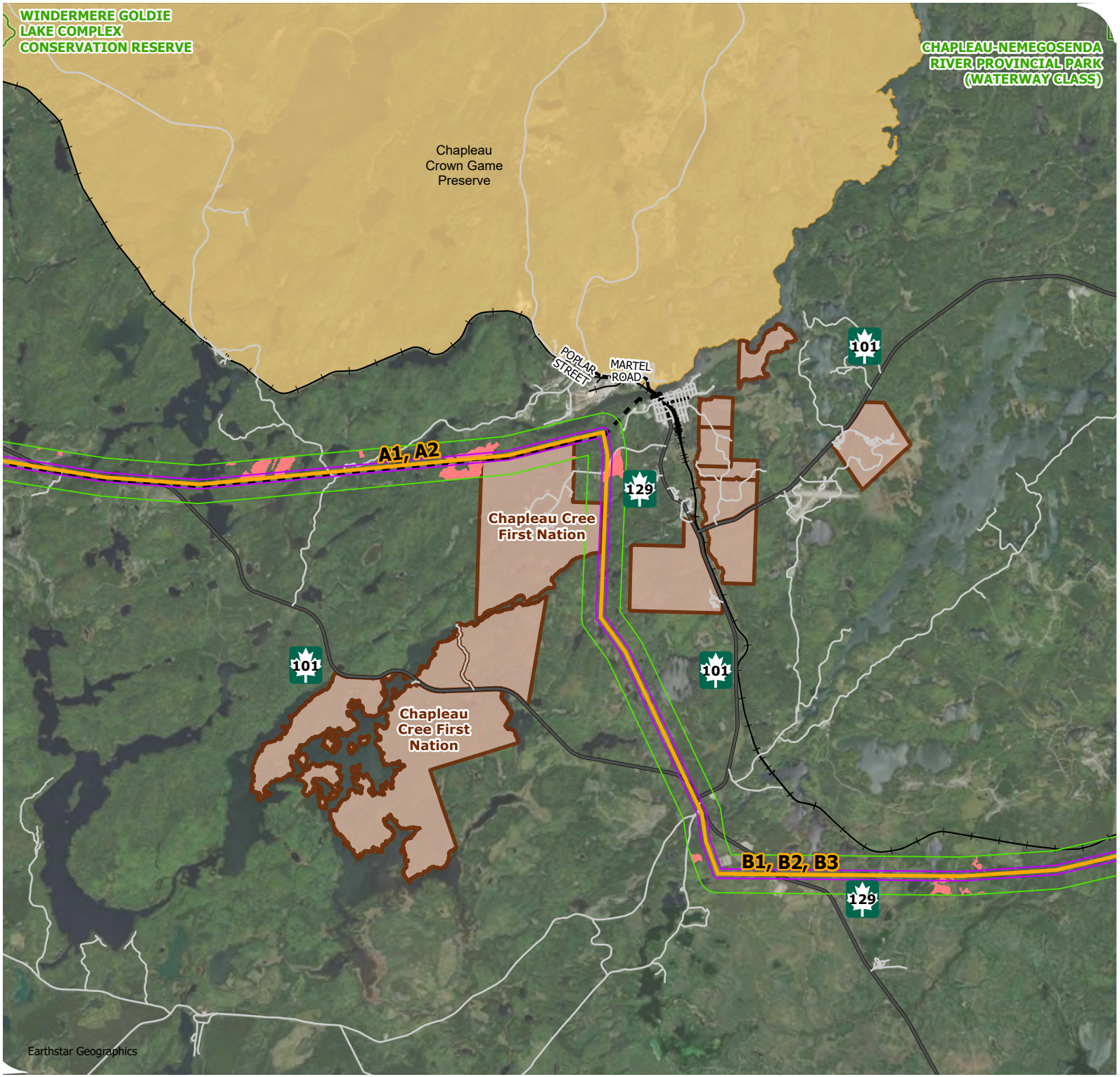
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WAWA TIMMINS POWER LINE

FIGURE 353. RVC - YELLOW BIRCH HABITAT

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Yellow Birch Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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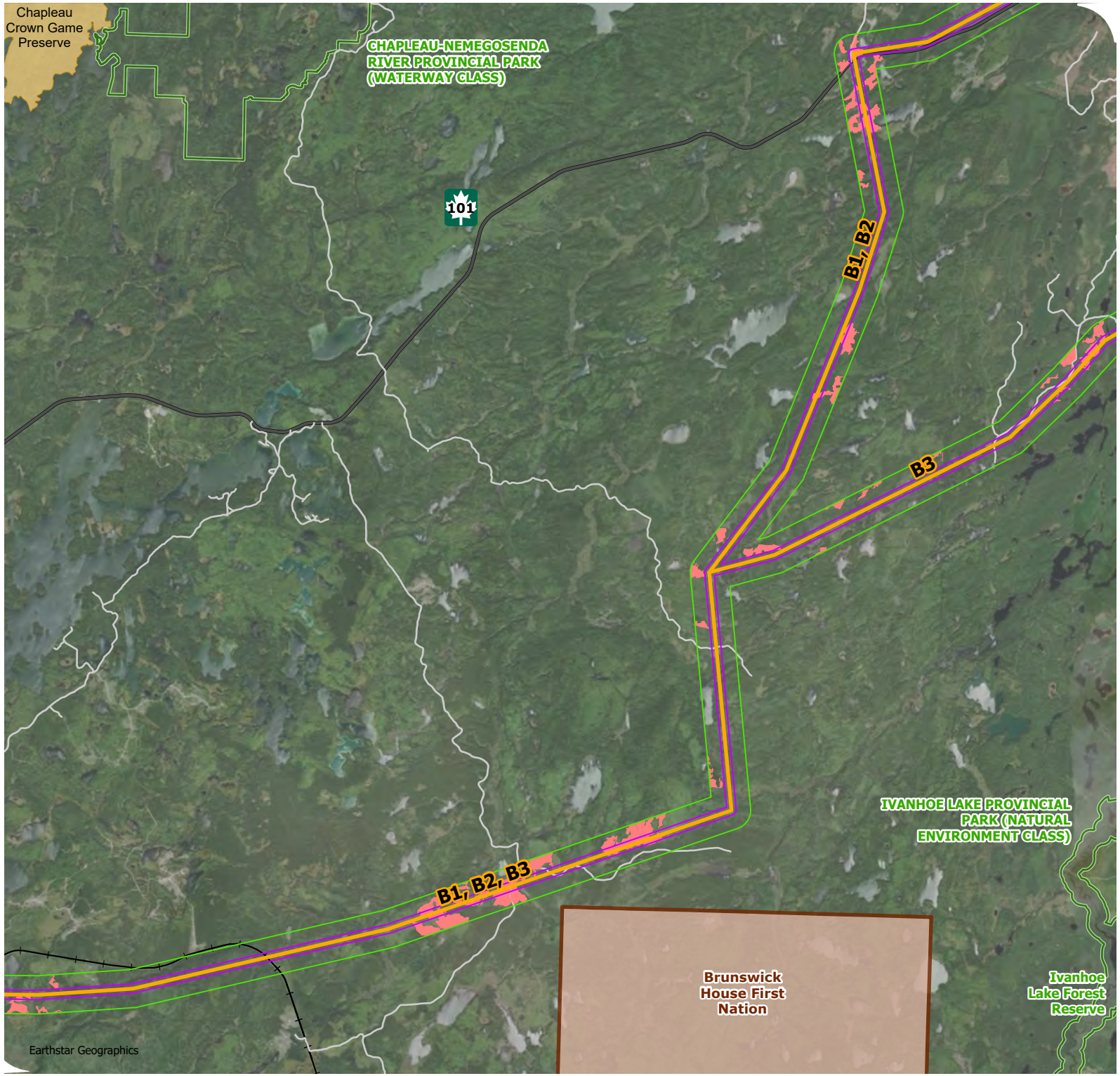
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WAWA TIMMINS POWER LINE

FIGURE 354. RVC - YELLOW BIRCH HABITAT

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Yellow Birch Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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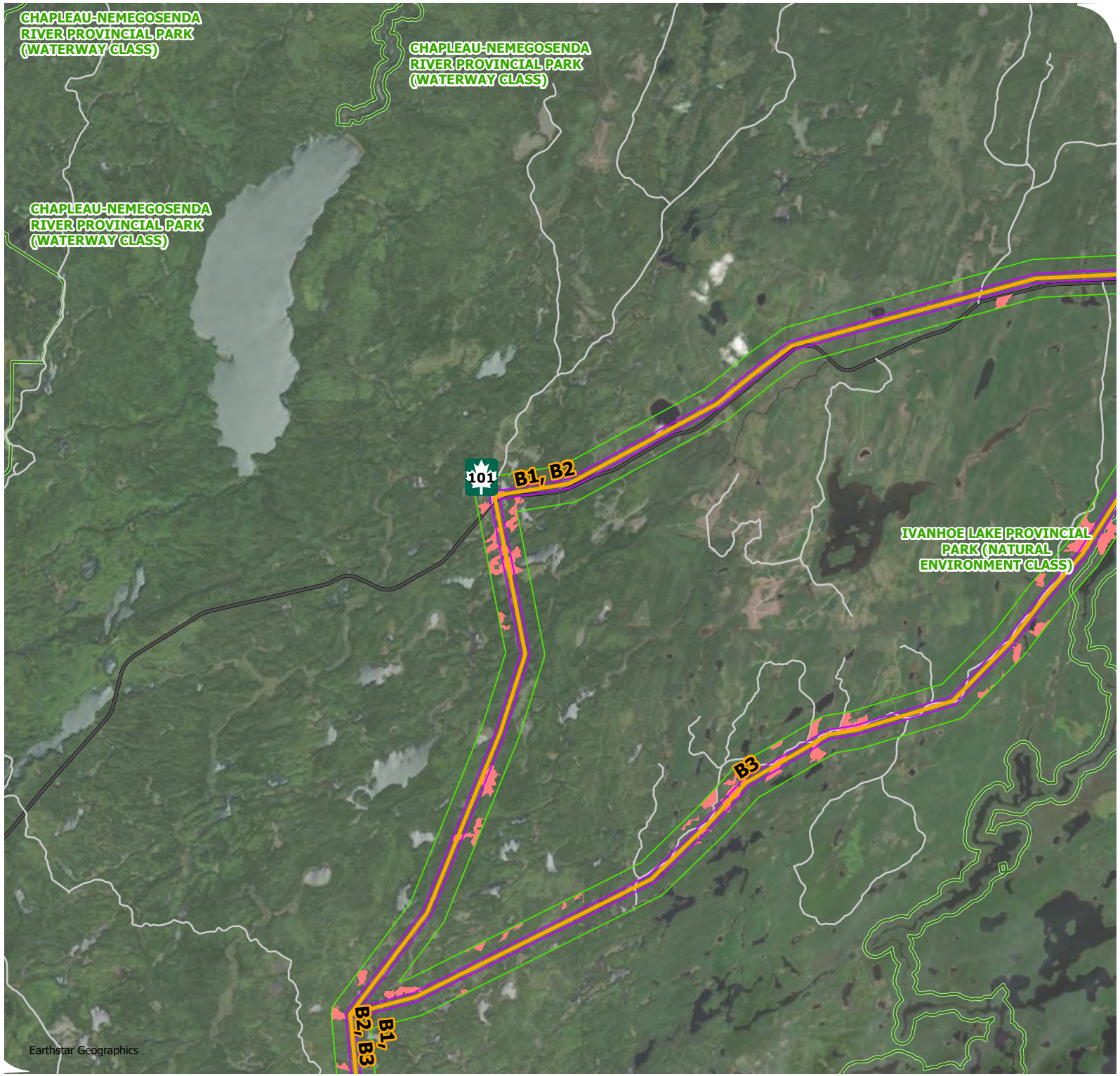
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WAWA TIMMINS POWER LINE

FIGURE 355. RVC - YELLOW BIRCH HABITAT

Mapping Extent - Ivanhoe Lake 2



- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Yellow Birch Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

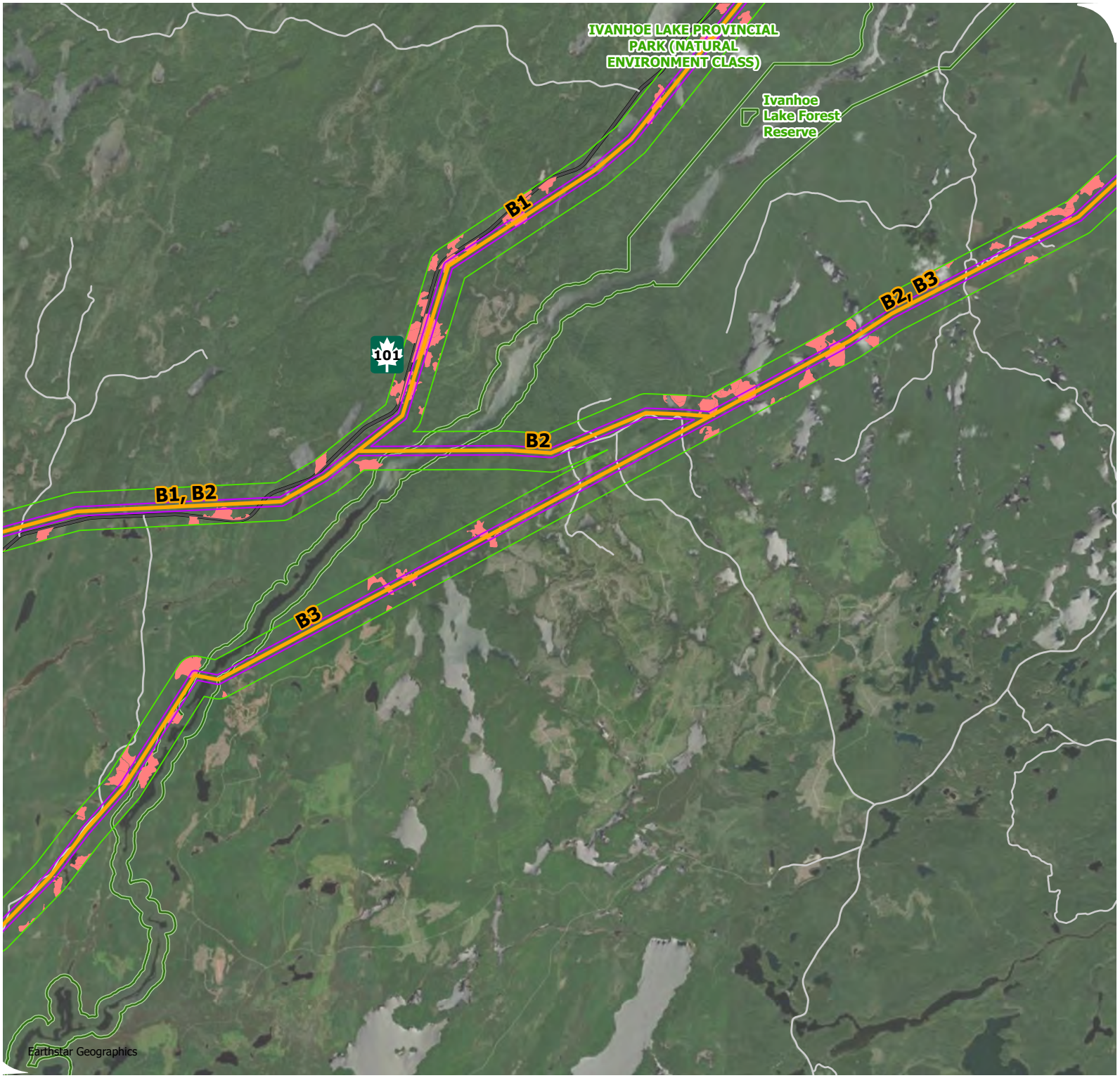


FIGURE 356. RVC - YELLOW BIRCH HABITAT

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Yellow Birch Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

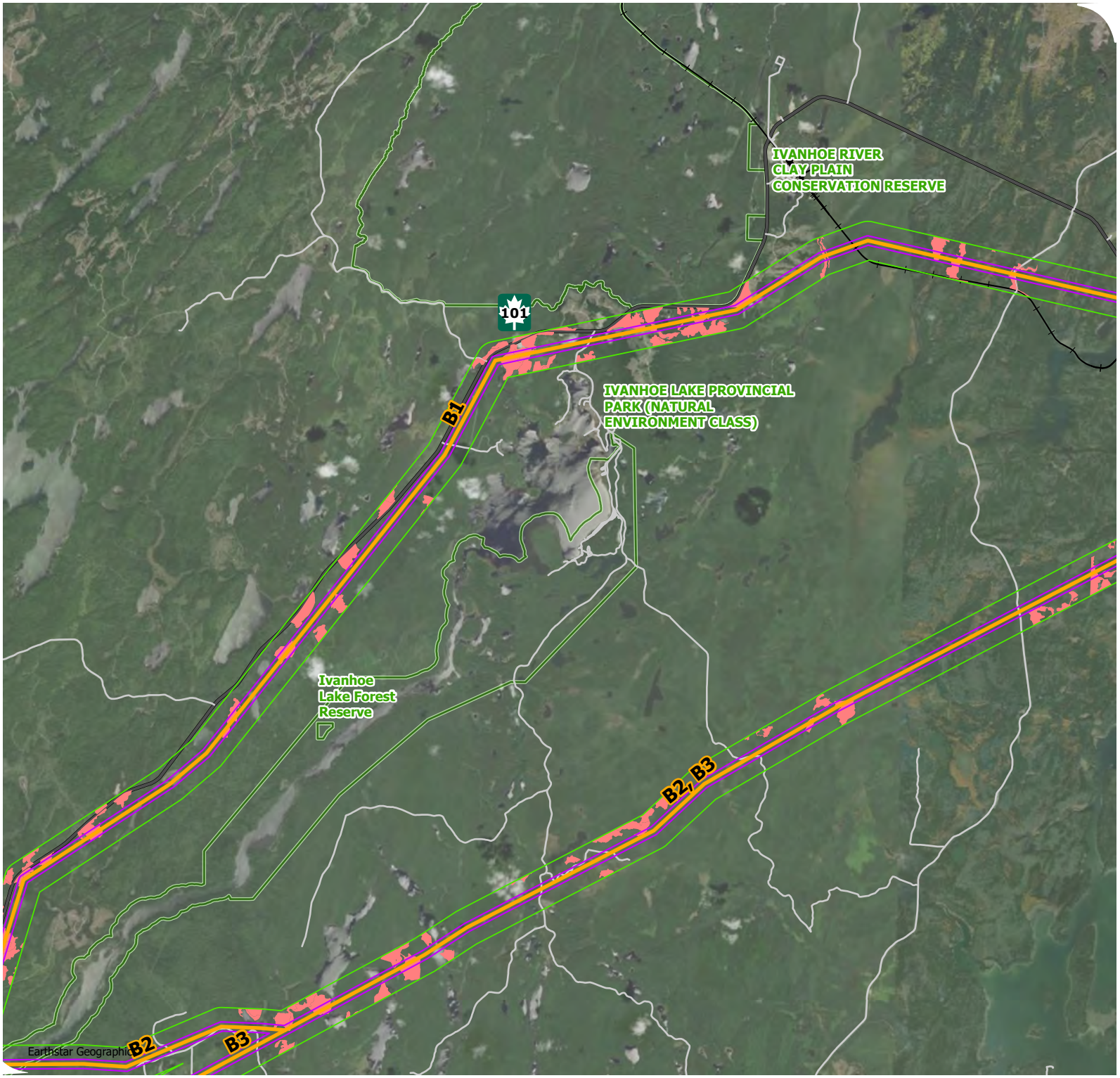
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 357. RVC - YELLOW BIRCH HABITAT

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Yellow Birch Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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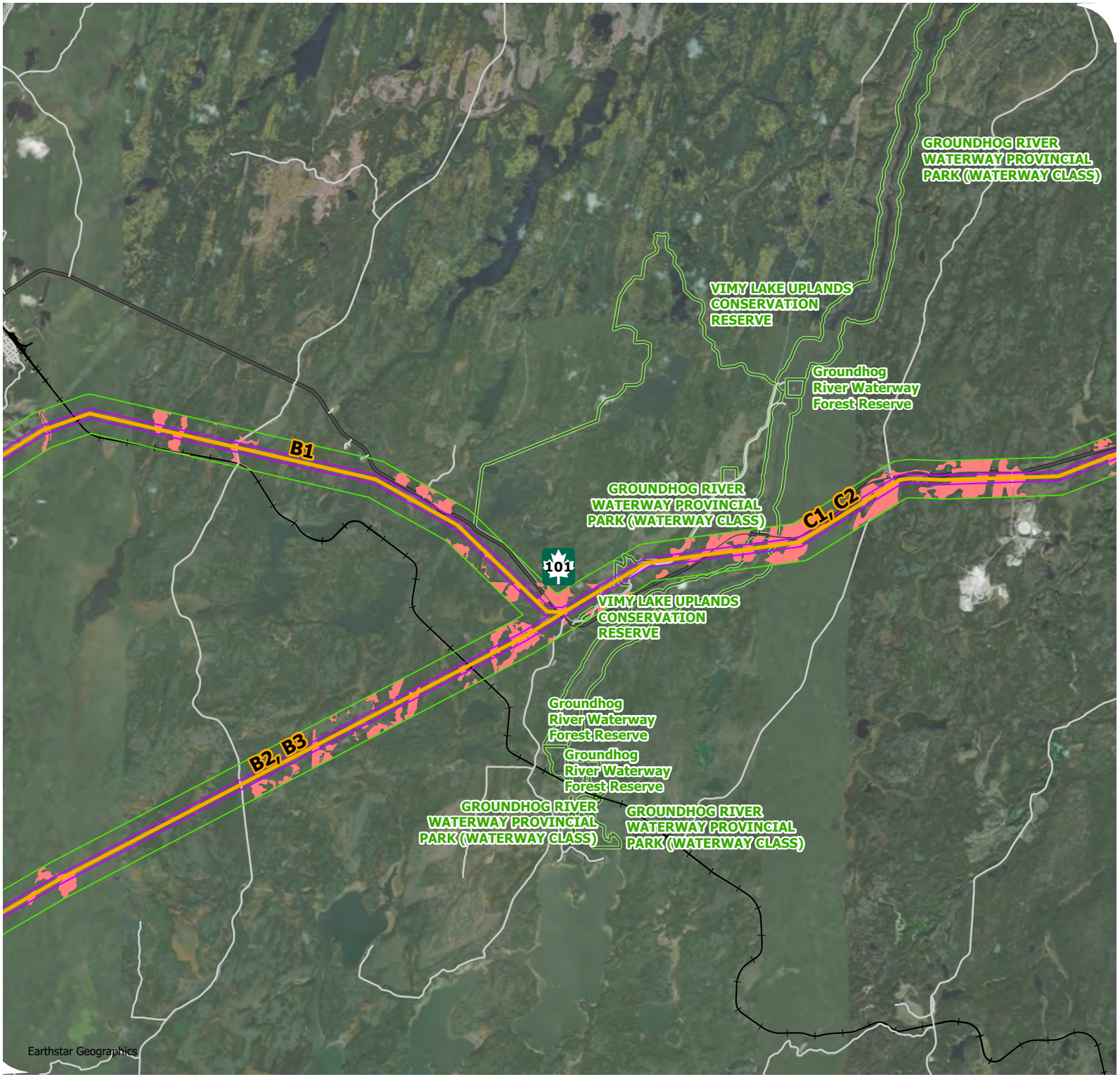
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WAWA TIMMINS POWER LINE

FIGURE 358. RVC - YELLOW BIRCH HABITAT

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Yellow Birch Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

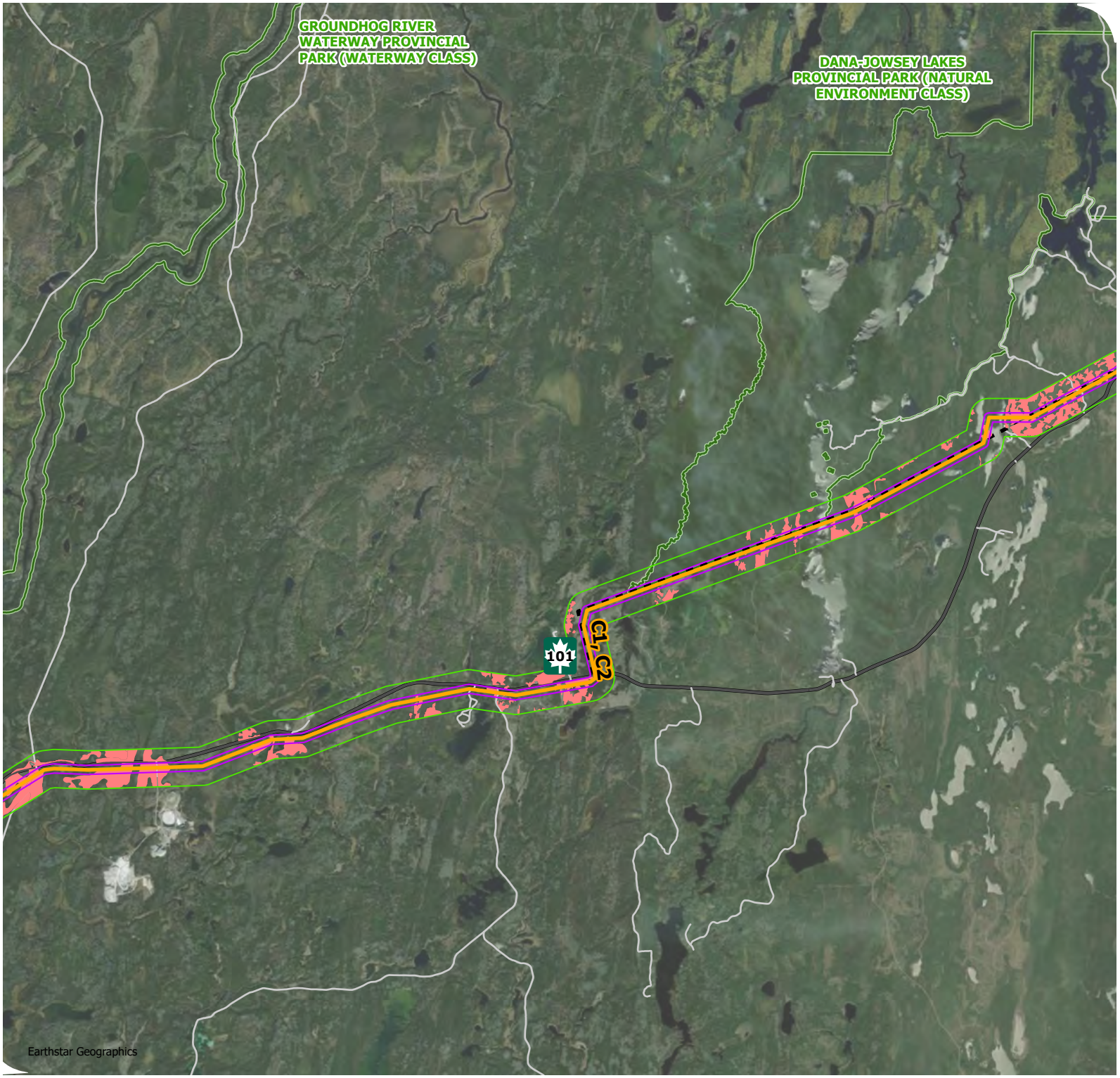
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 359. RVC - YELLOW BIRCH HABITAT

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Yellow Birch Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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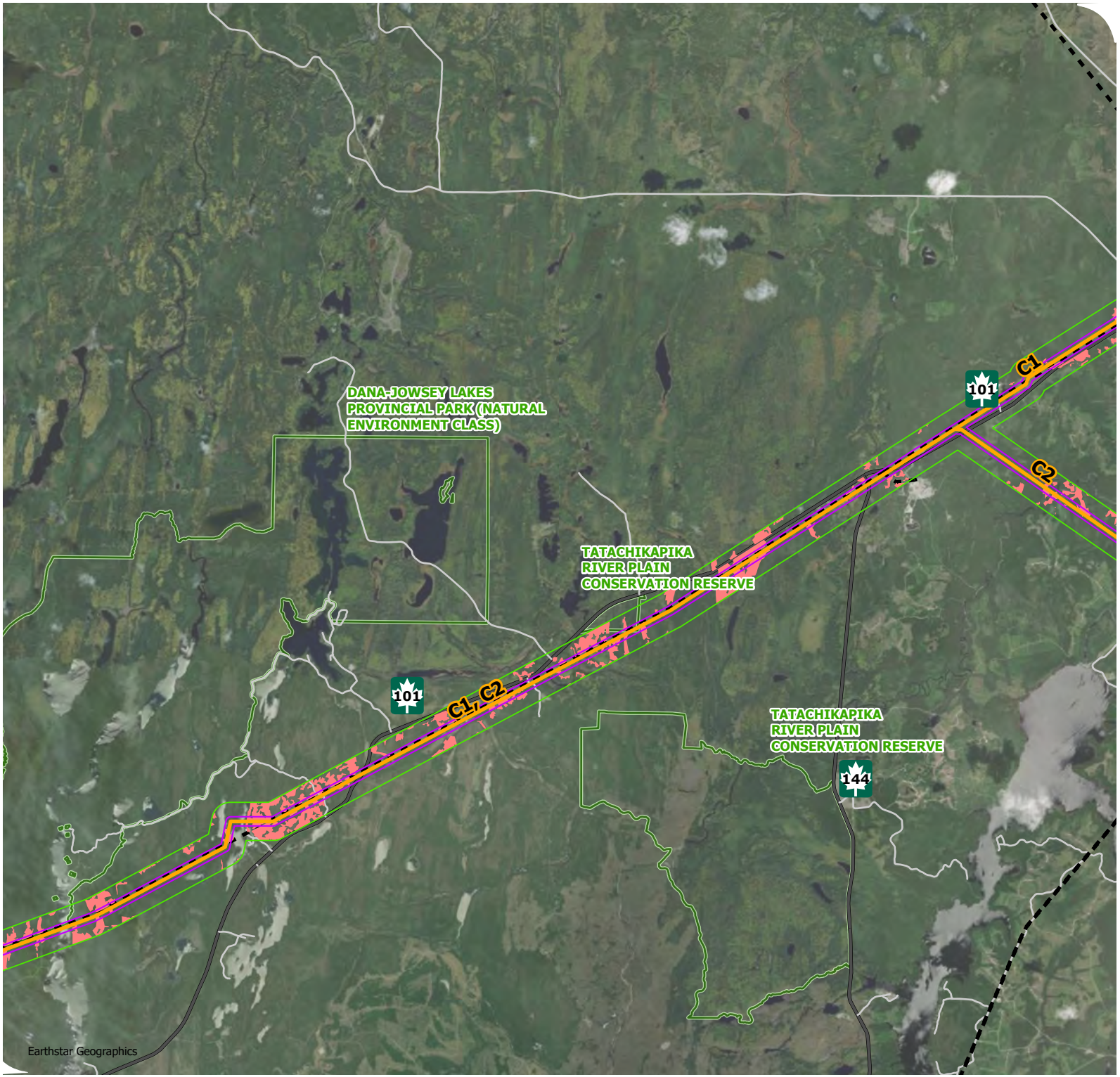
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WAWA TIMMINS POWER LINE

FIGURE 360. RVC - YELLOW BIRCH HABITAT

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Yellow Birch Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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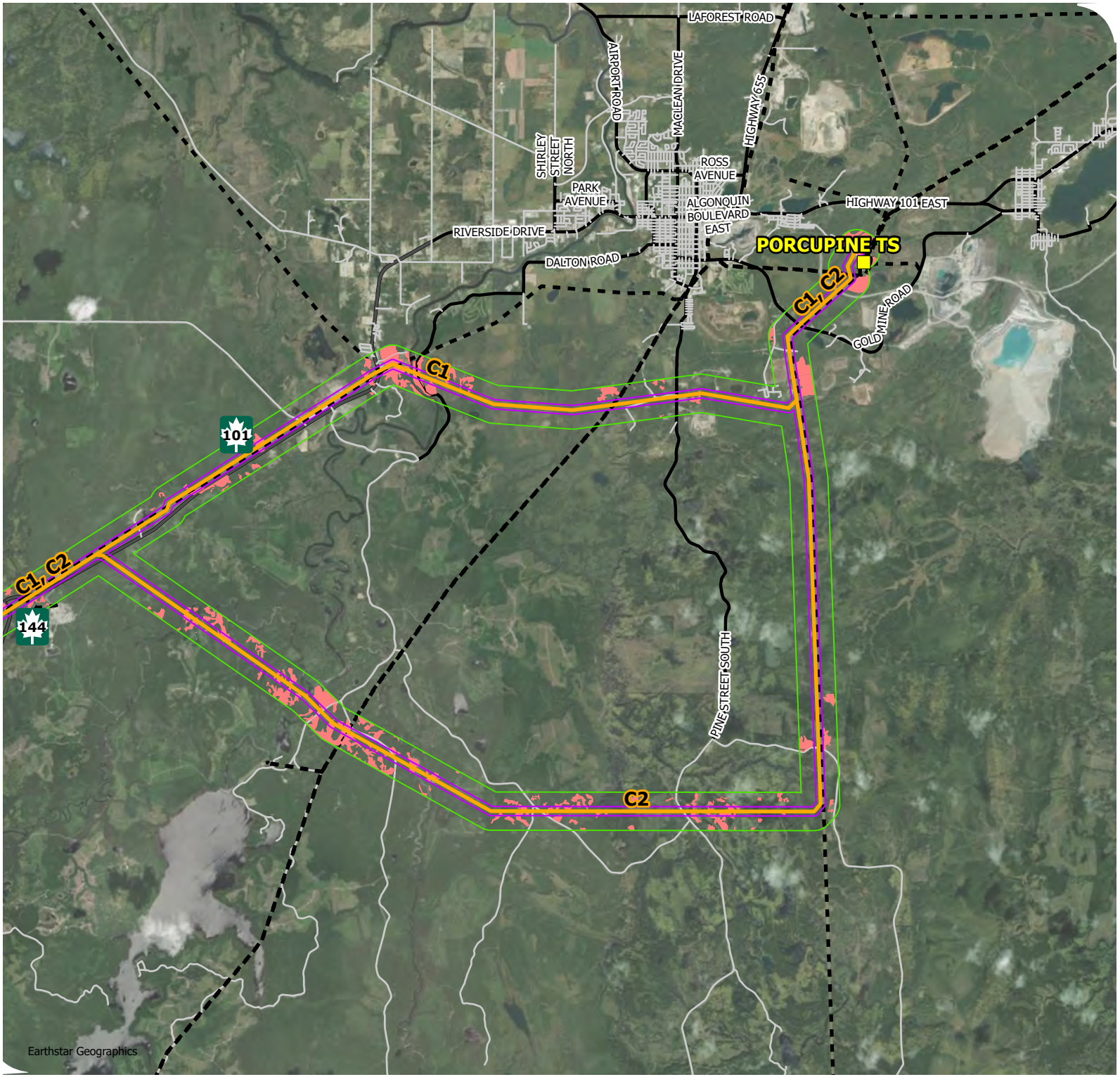
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WAWA TIMMINS POWER LINE

FIGURE 361. RVC - YELLOW BIRCH HABITAT

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Candidate Yellow Birch Habitat

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

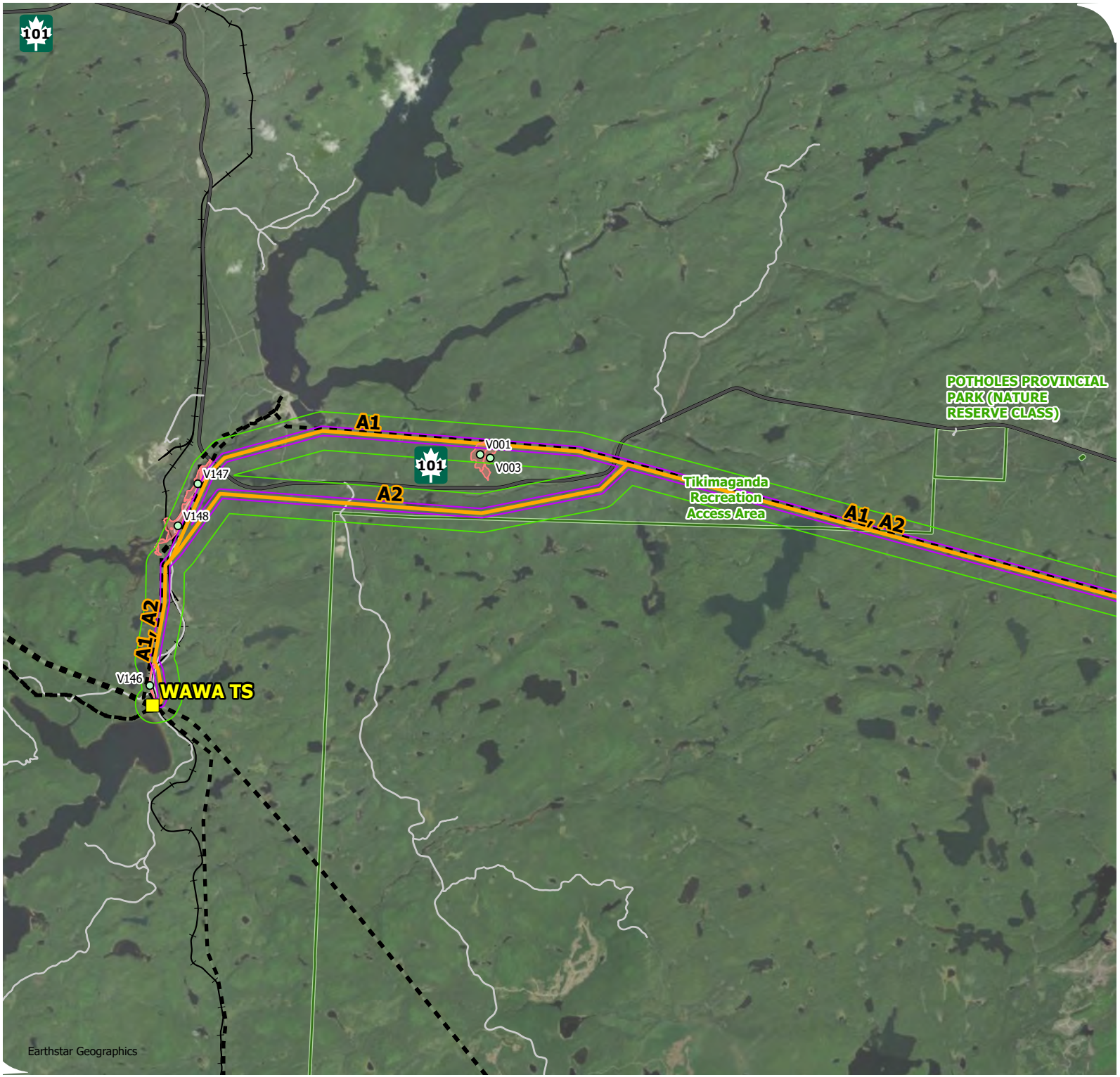
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WAWA TIMMINS POWER LINE

FIGURE 362. VEGETATION SURVEY LOCATIONS



Mapping Extent - Wawa Station

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Vegetation Survey Locations
- Surveyed Ecosite Polygons

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

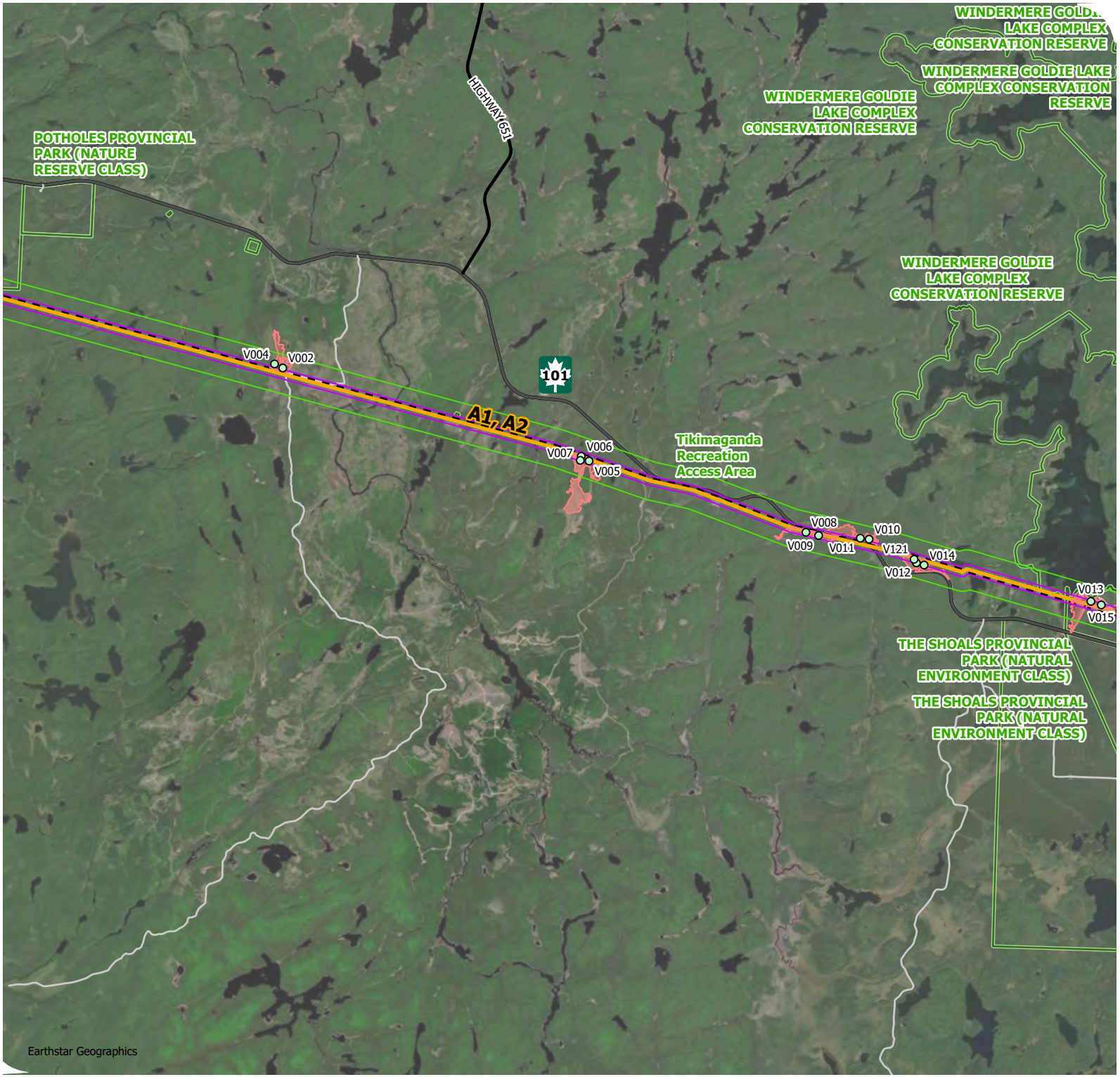
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WAWA TIMMINS POWER LINE

FIGURE 363. VEGETATION SURVEY LOCATIONS

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Vegetation Survey Locations
- Surveyed Ecosite Polygons

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 364. VEGETATION SURVEY LOCATIONS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Vegetation Survey Locations
- Surveyed Ecosite Polygons

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

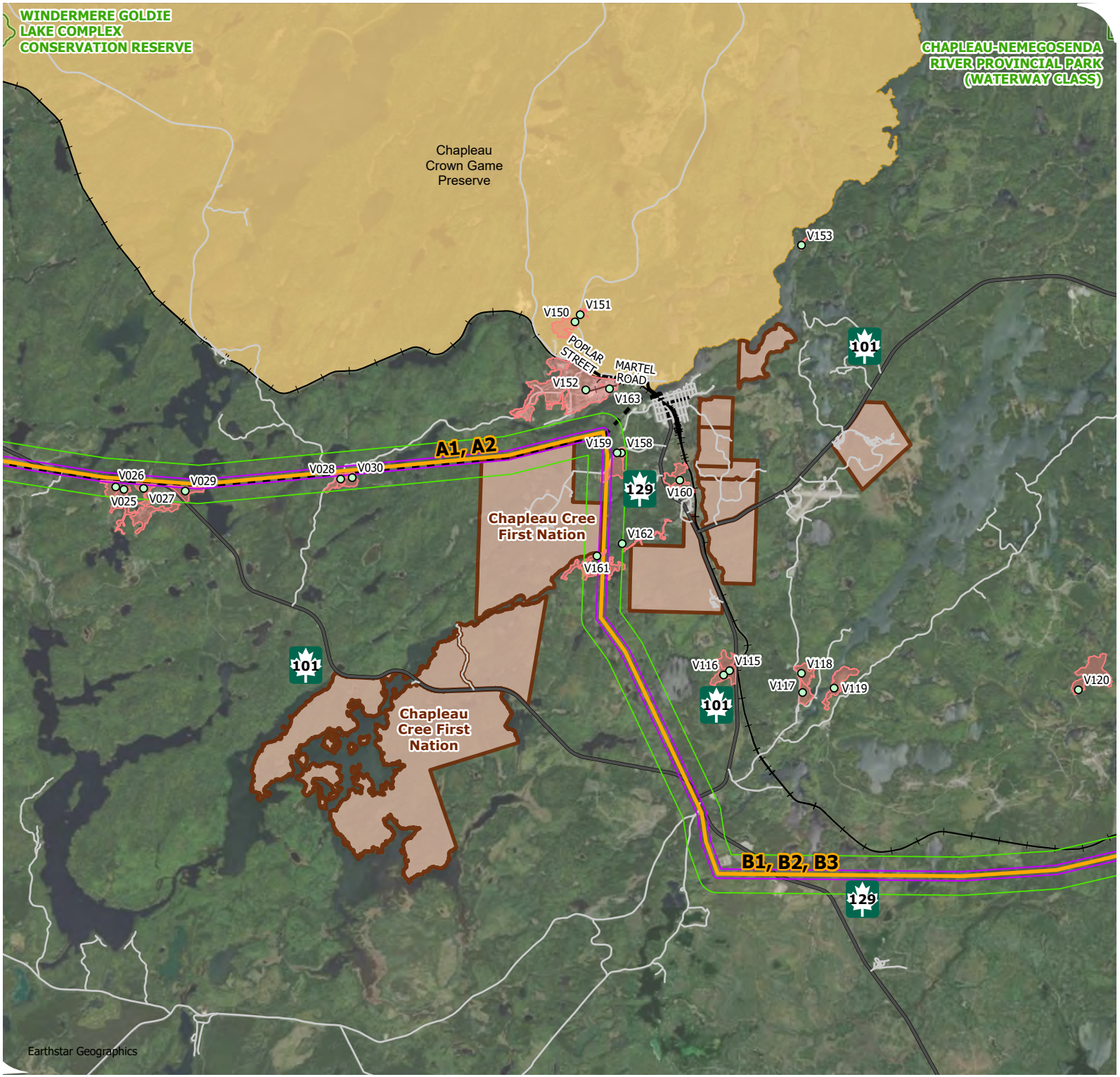
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 365. VEGETATION SURVEY LOCATIONS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Vegetation Survey Locations
- Surveyed Ecosite Polygons

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

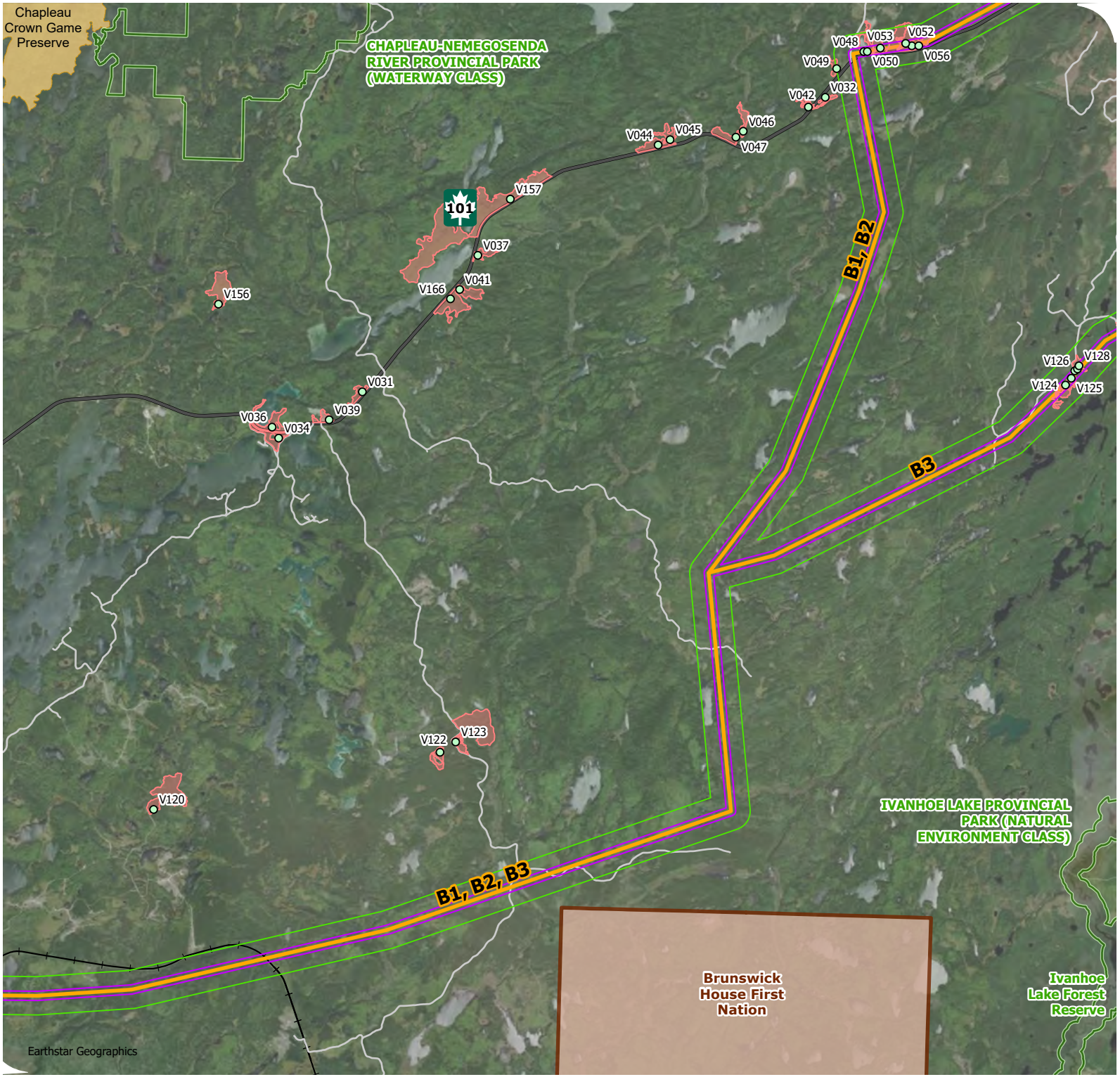
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SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 366. VEGETATION SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 1

- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Vegetation Survey Locations
- Surveyed Ecosite Polygons

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

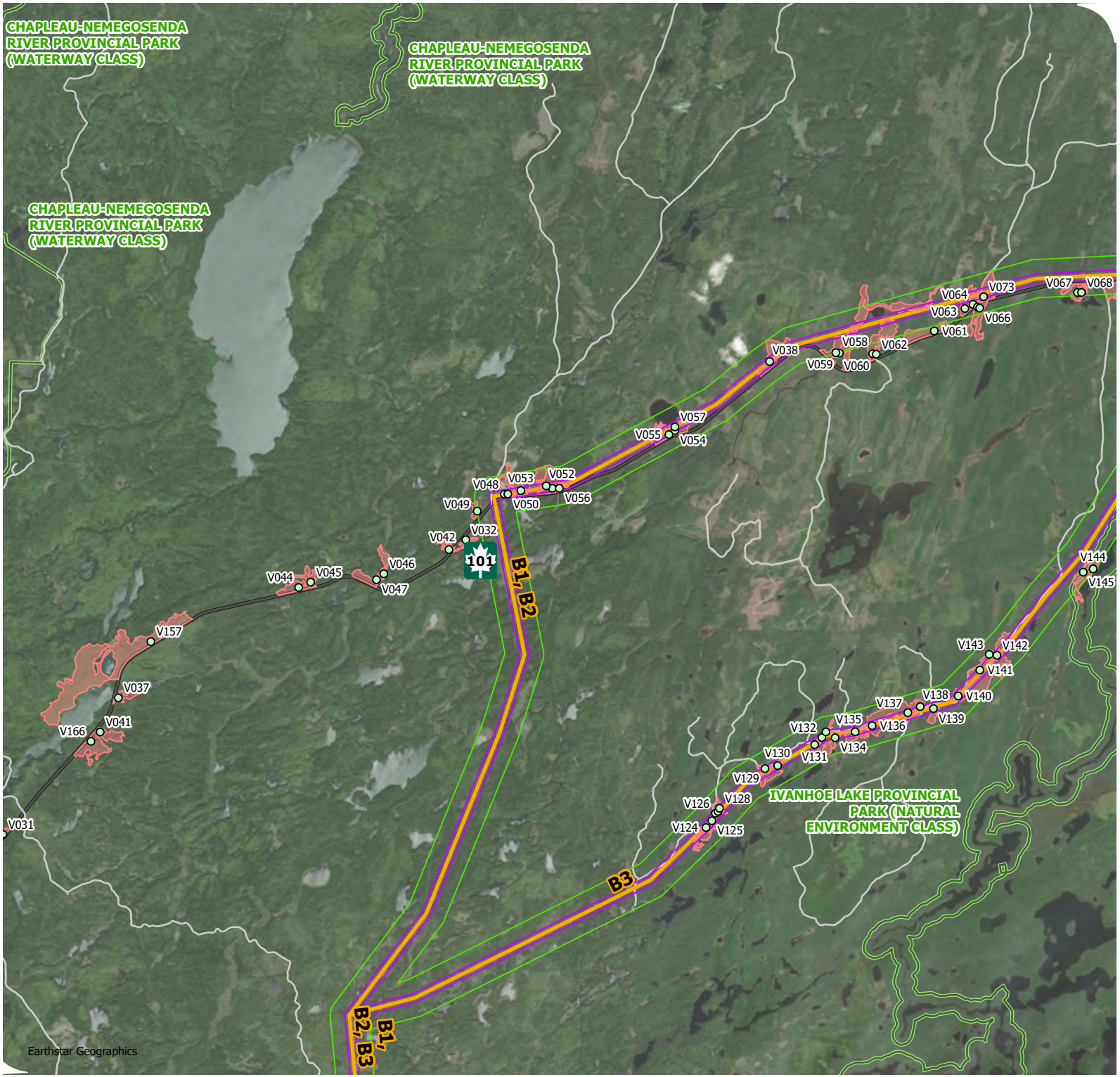
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 367. VEGETATION SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Vegetation Survey Locations
- Surveyed Ecosite Polygons

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

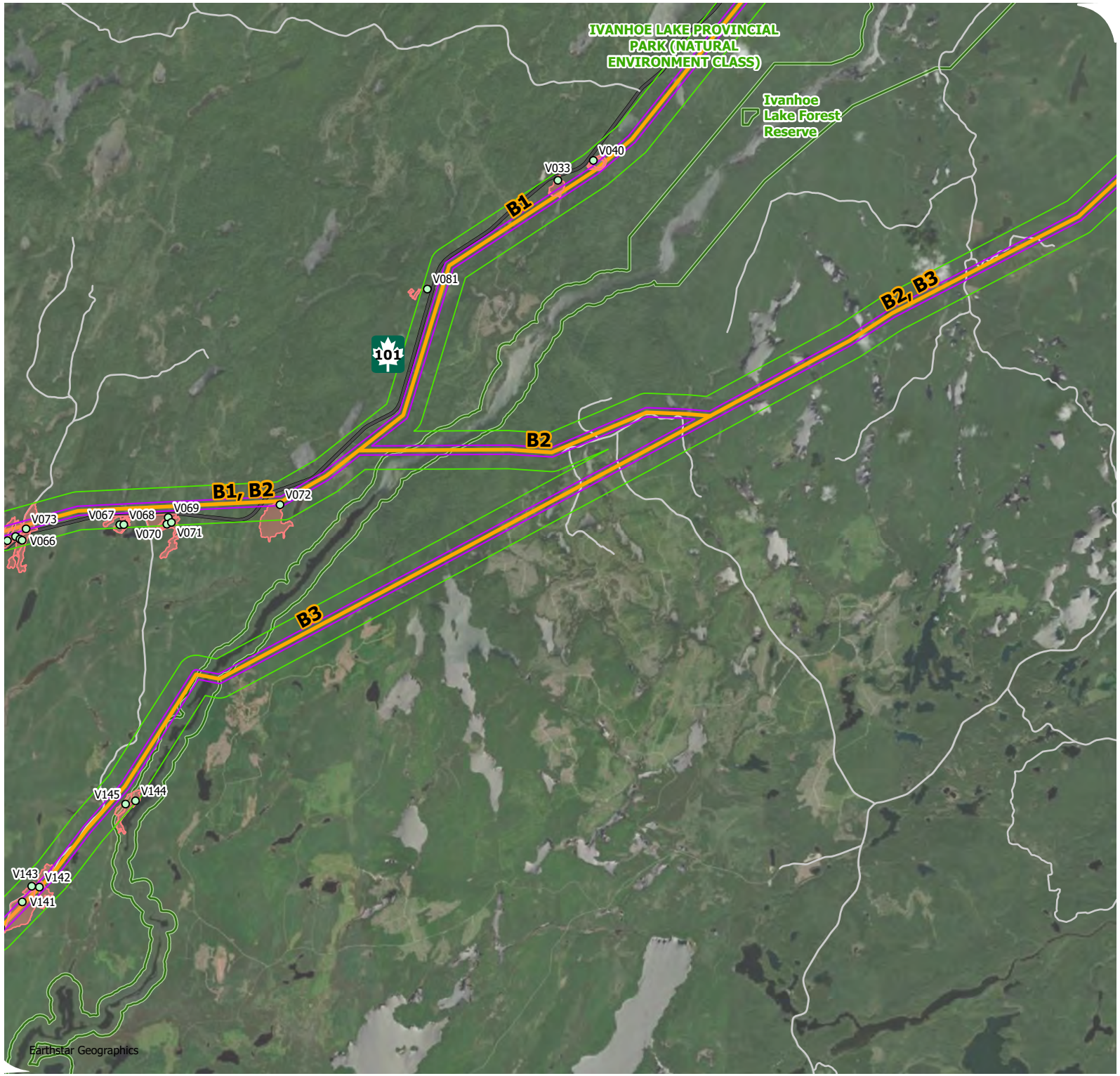
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 368. VEGETATION SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Vegetation Survey Locations
- Surveyed Ecosite Polygons

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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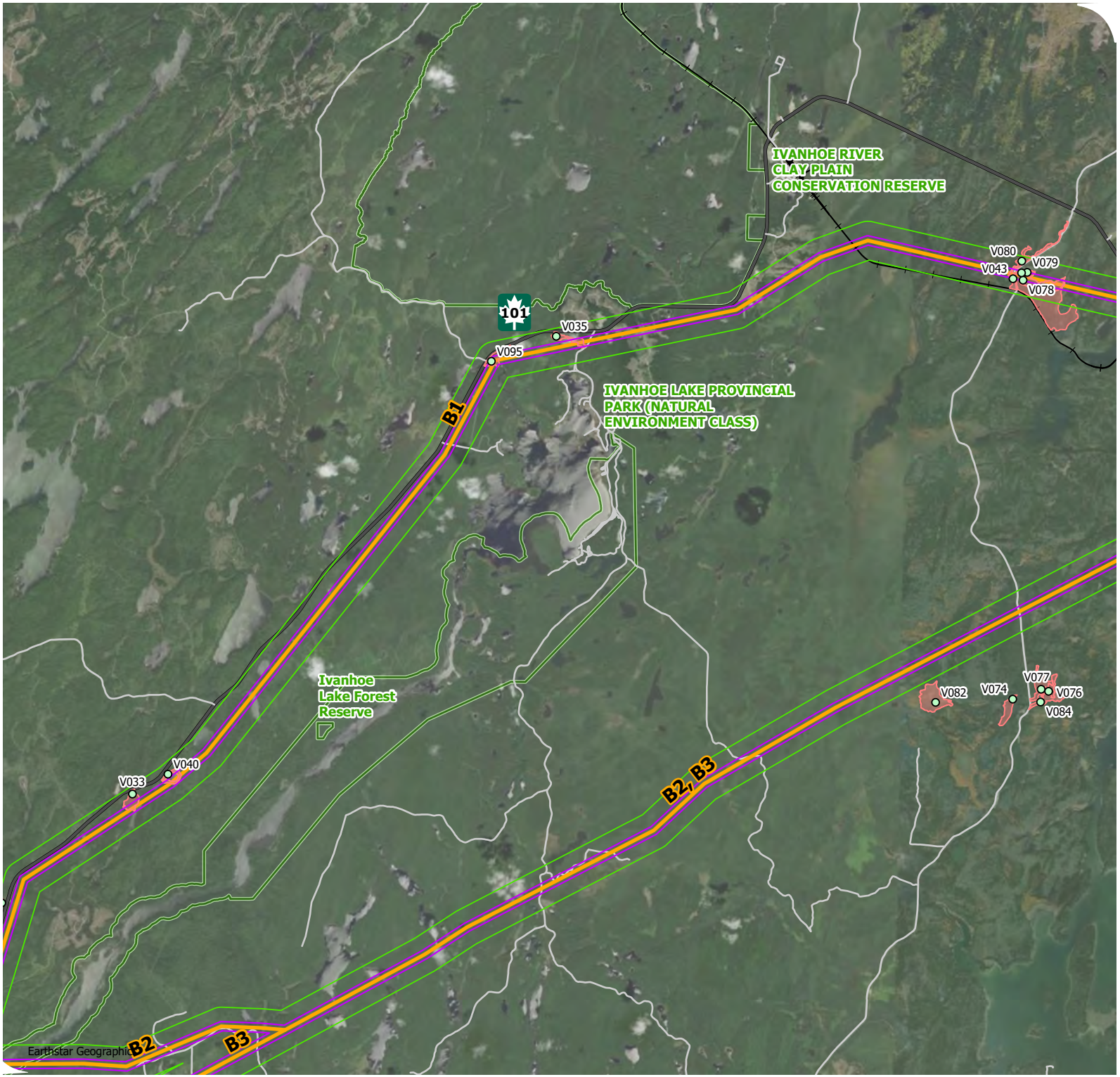
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WAWA TIMMINS POWER LINE

FIGURE 369. VEGETATION SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 4



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Vegetation Survey Locations
- Surveyed Ecosite Polygons

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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SCALE 1:139,000

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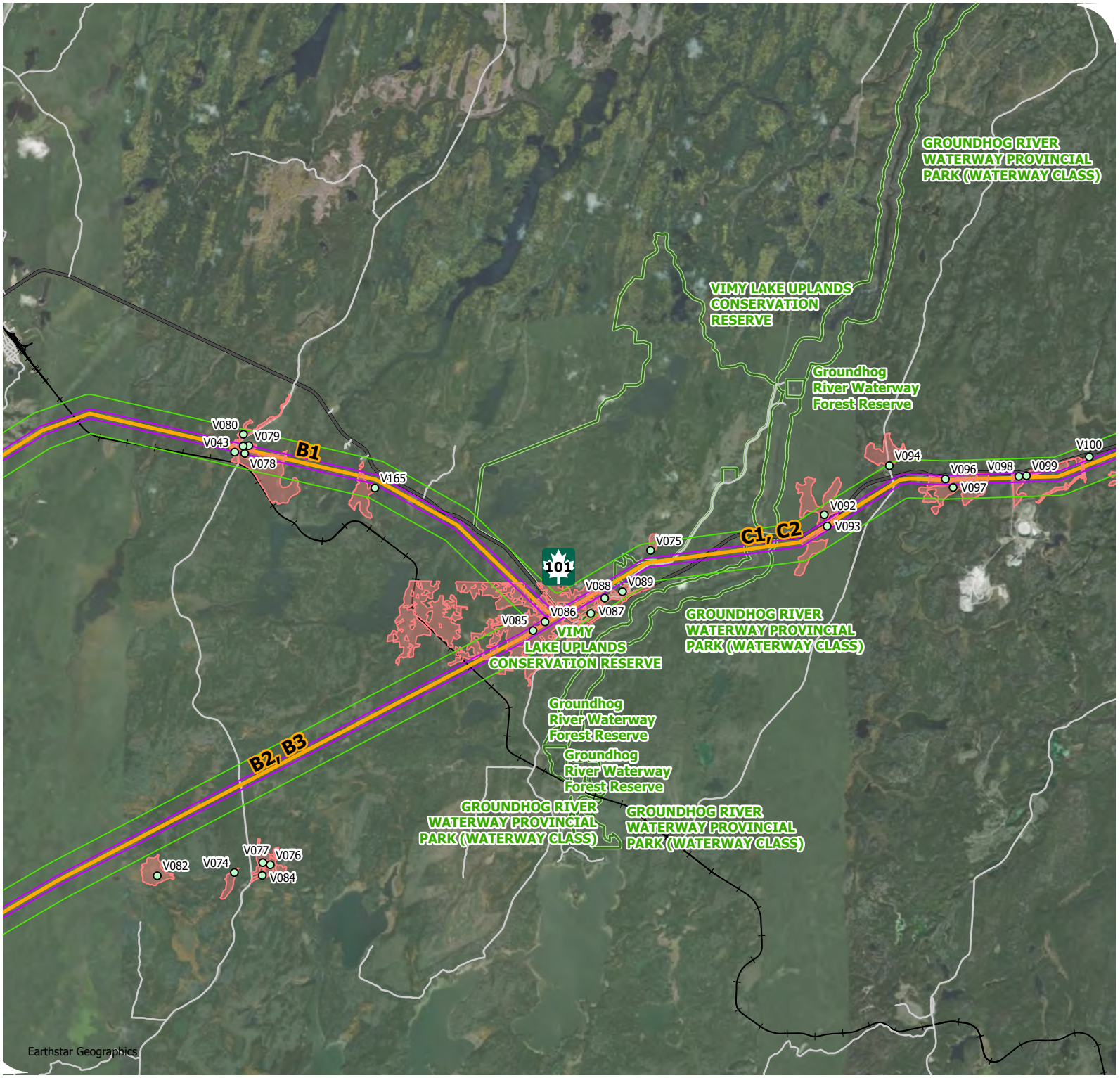
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WAWA TIMMINS POWER LINE

FIGURE 370. VEGETATION SURVEY LOCATIONS

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Vegetation Survey Locations
- Surveyed Ecosite Polygons

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

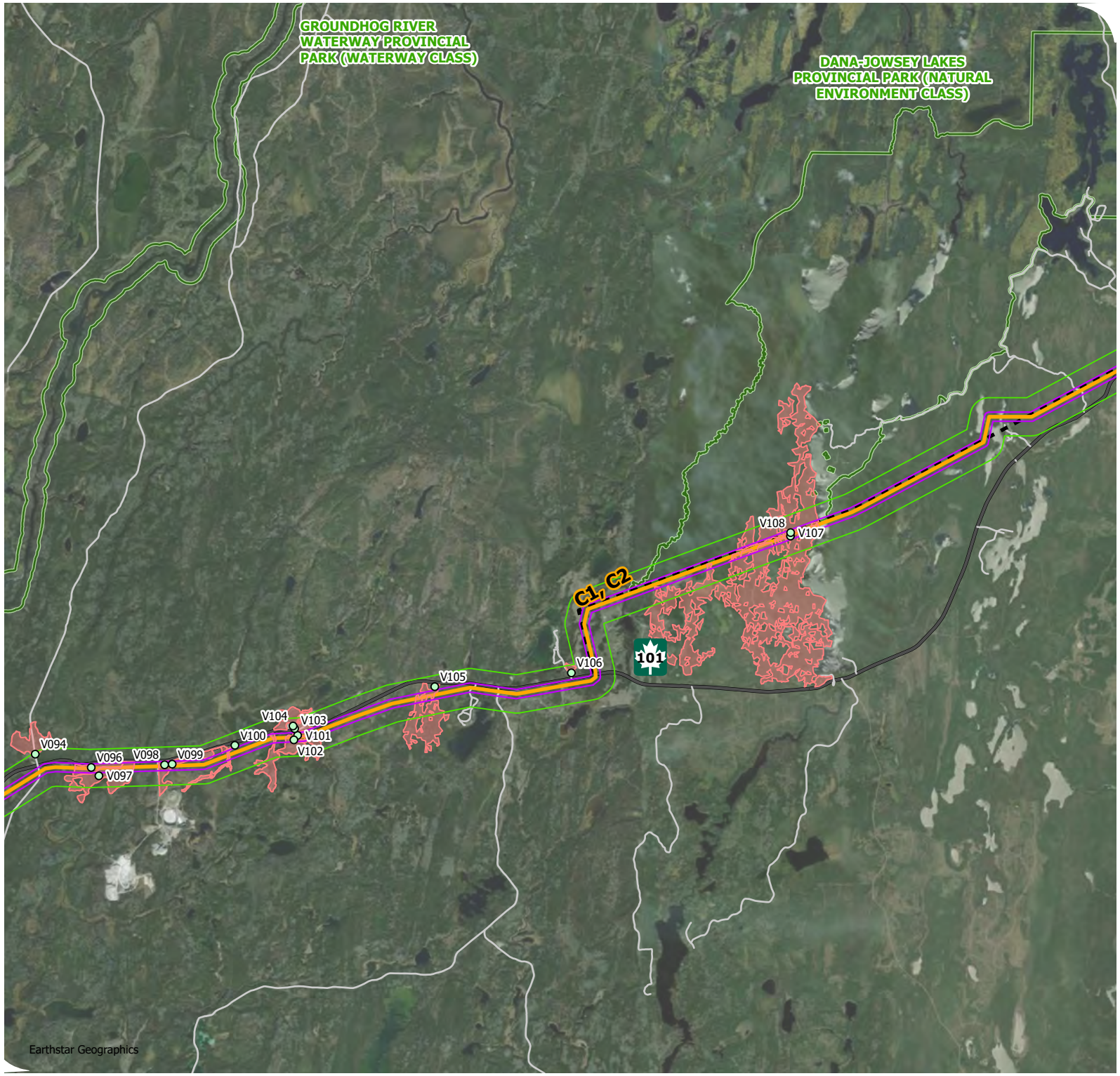
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
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FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 371. VEGETATION SURVEY LOCATIONS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Vegetation Survey Locations
- Surveyed Ecosite Polygons

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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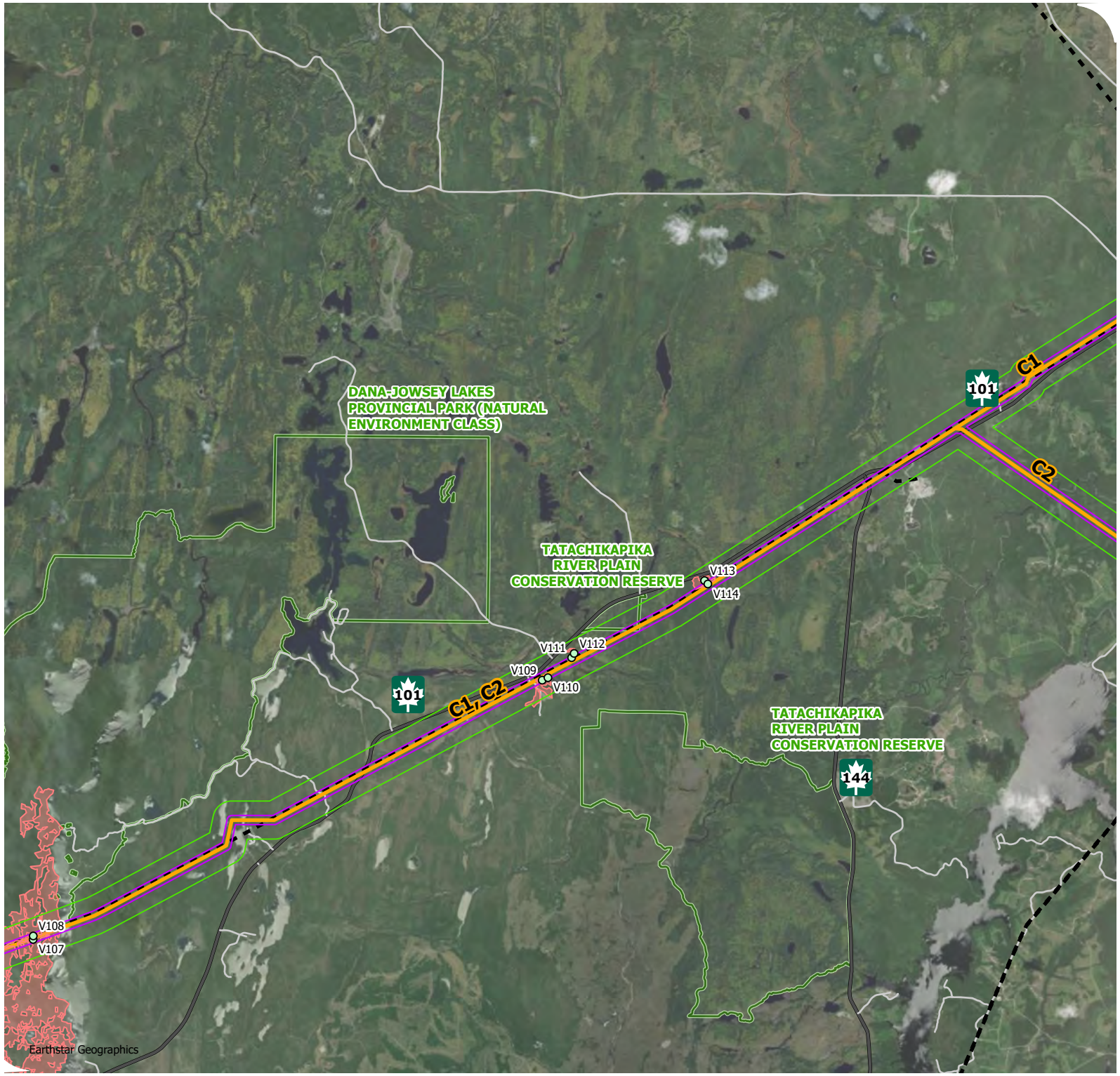
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WAWA TIMMINS POWER LINE

FIGURE 372. VEGETATION SURVEY LOCATIONS

Mapping Extent -
Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Vegetation Survey Locations
- Surveyed Ecosite Polygons

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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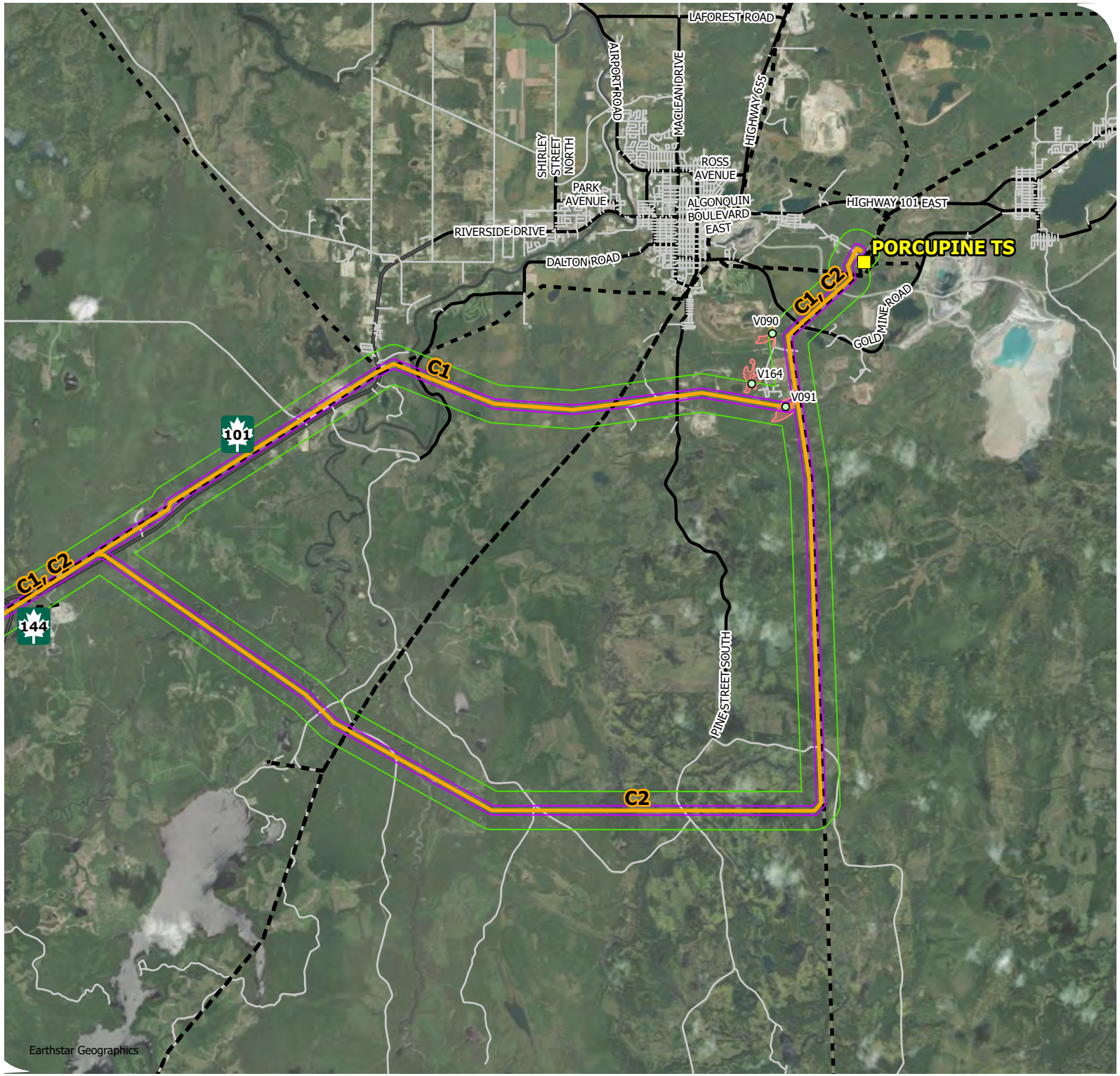
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WAWA TIMMINS POWER LINE

FIGURE 373. VEGETATION SURVEY LOCATIONS

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Vegetation Survey Locations
- Surveyed Ecosite Polygons

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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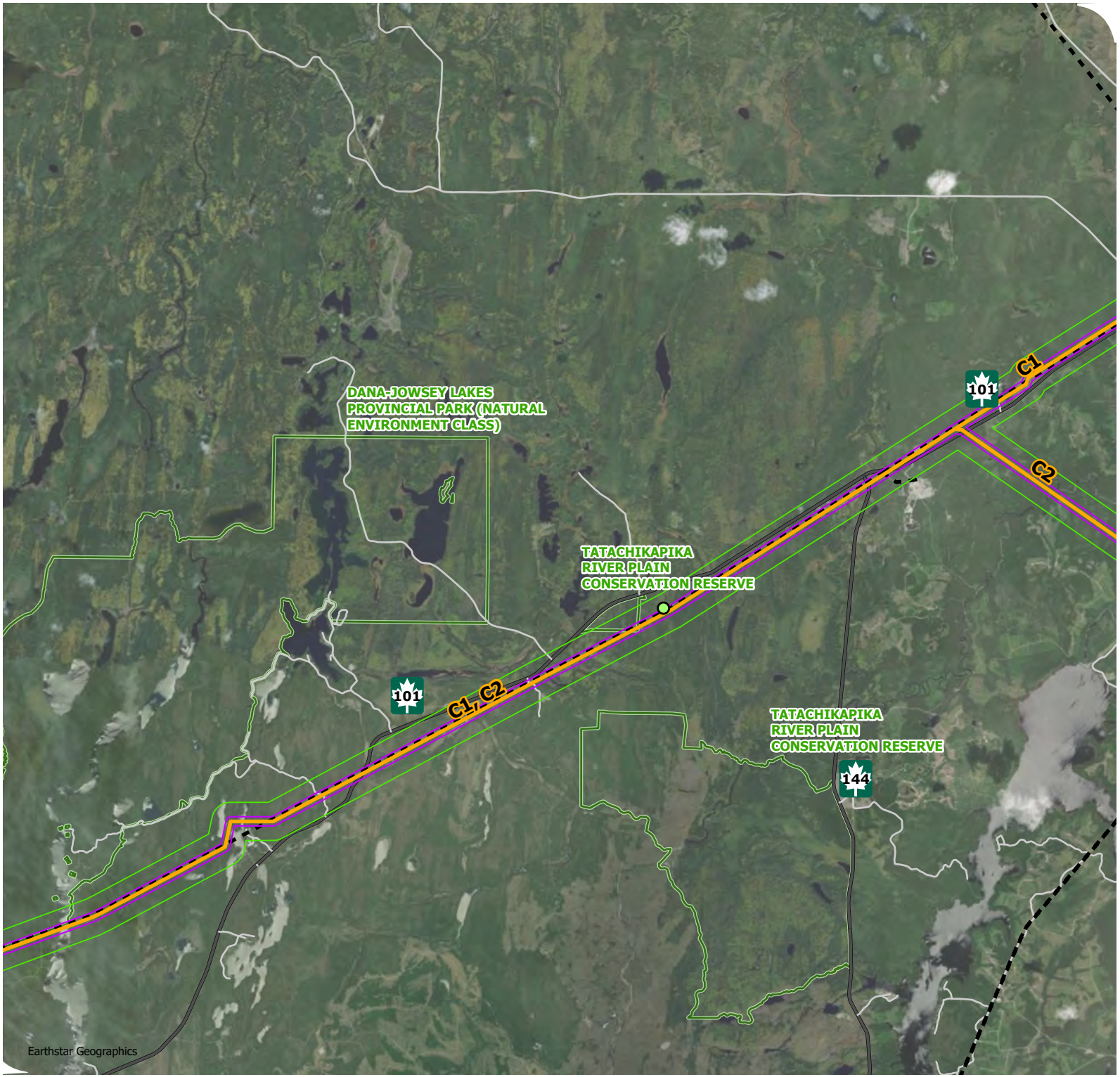
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WAWA TIMMINS POWER LINE

FIGURE 374. SLENDER SPIKERUSH LOCATION

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Slender Spikerush (Eleocharis nitida)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

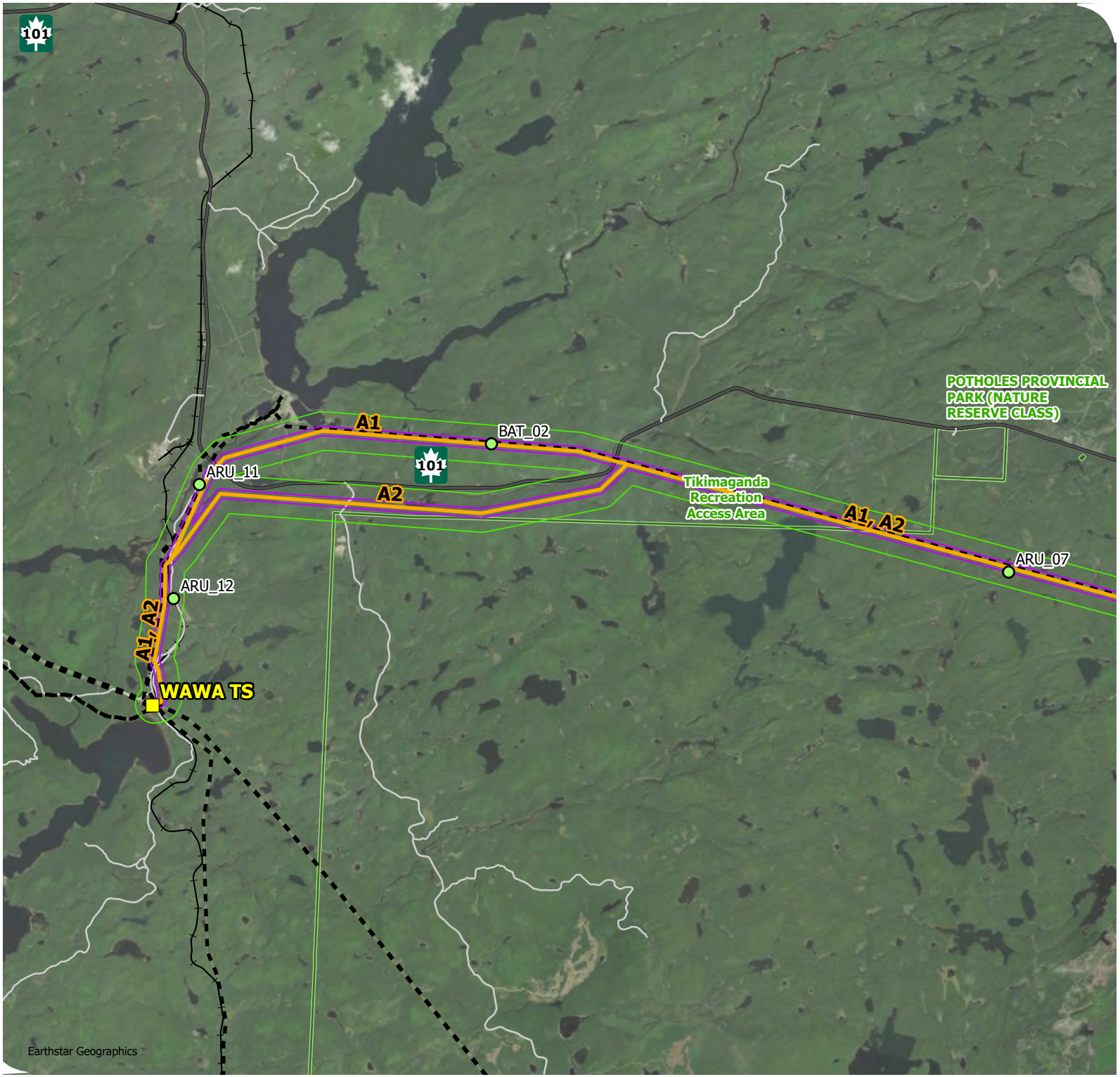
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WAWA TIMMINS POWER LINE

FIGURE 375. AMPHIBIAN SURVEY LOCATIONS

Mapping Extent - Wawa Station

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Amphibian Survey Locations

- ARU

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

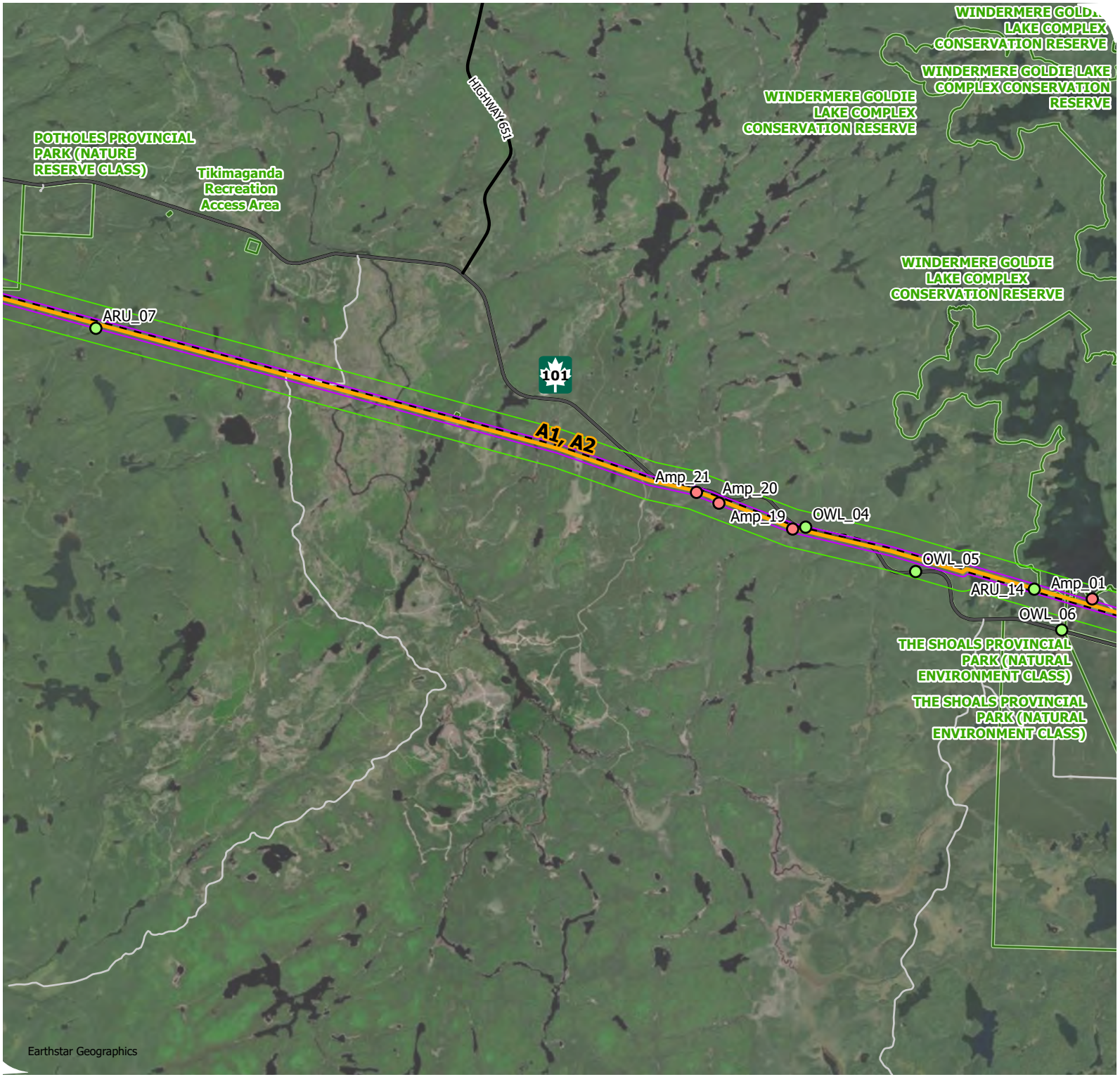
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STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 376. AMPHIBIAN SURVEY LOCATIONS

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Amphibian Survey Locations

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

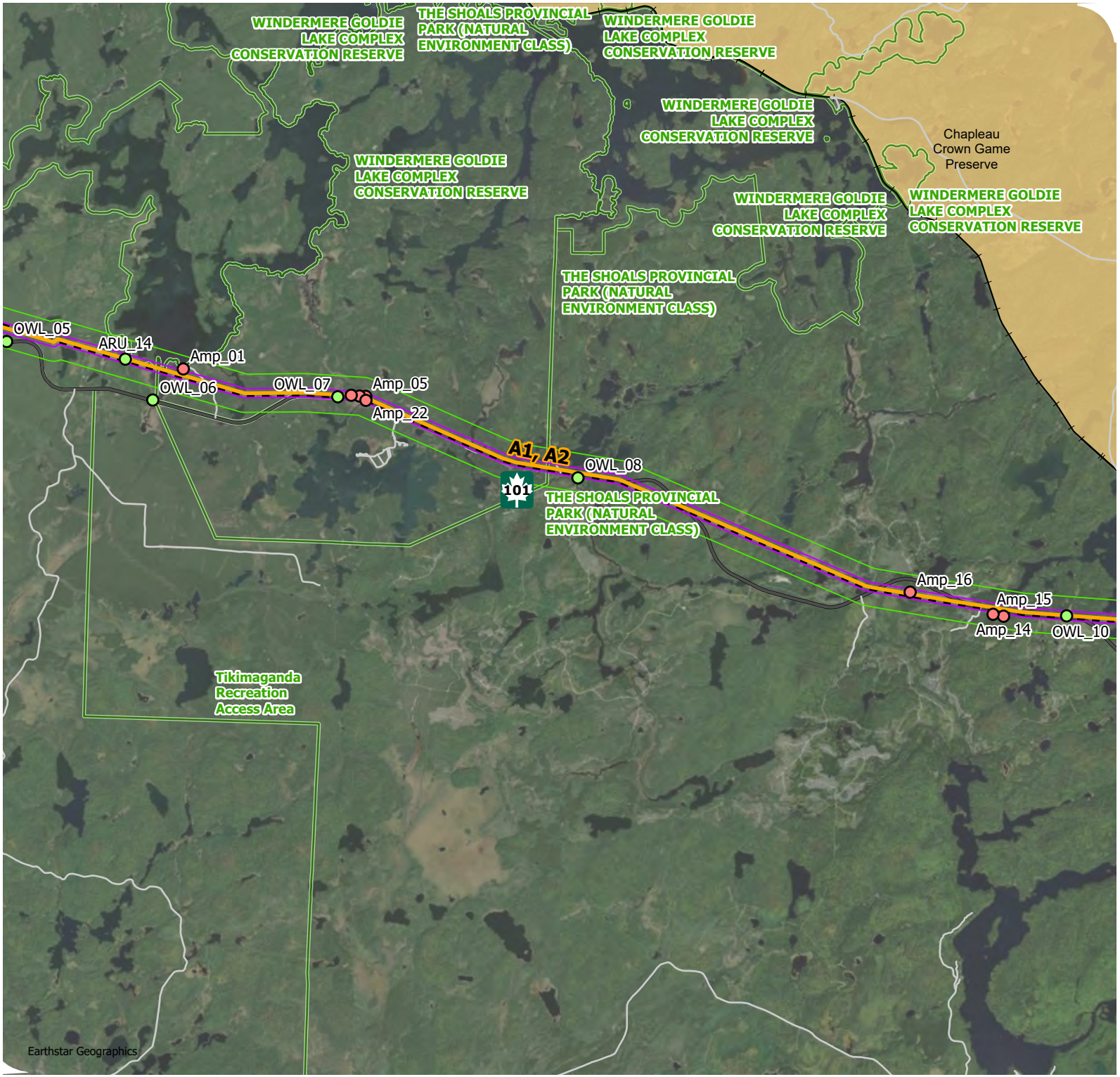
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WAWA TIMMINS POWER LINE

FIGURE 377. AMPHIBIAN SURVEY LOCATIONS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Amphibian Survey Locations

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

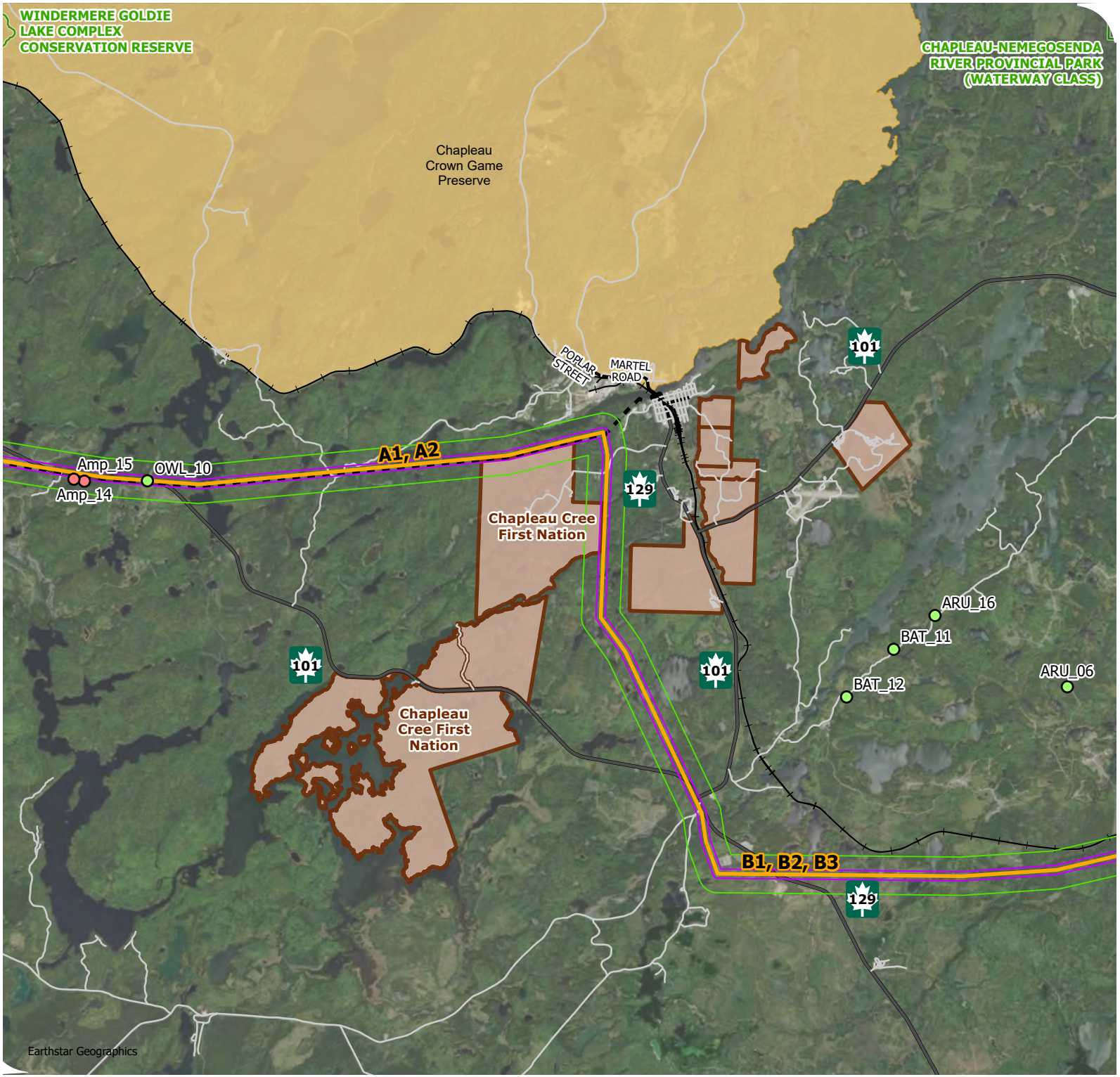
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WAWA TIMMINS POWER LINE

FIGURE 378. AMPHIBIAN SURVEY LOCATIONS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Amphibian Survey Locations

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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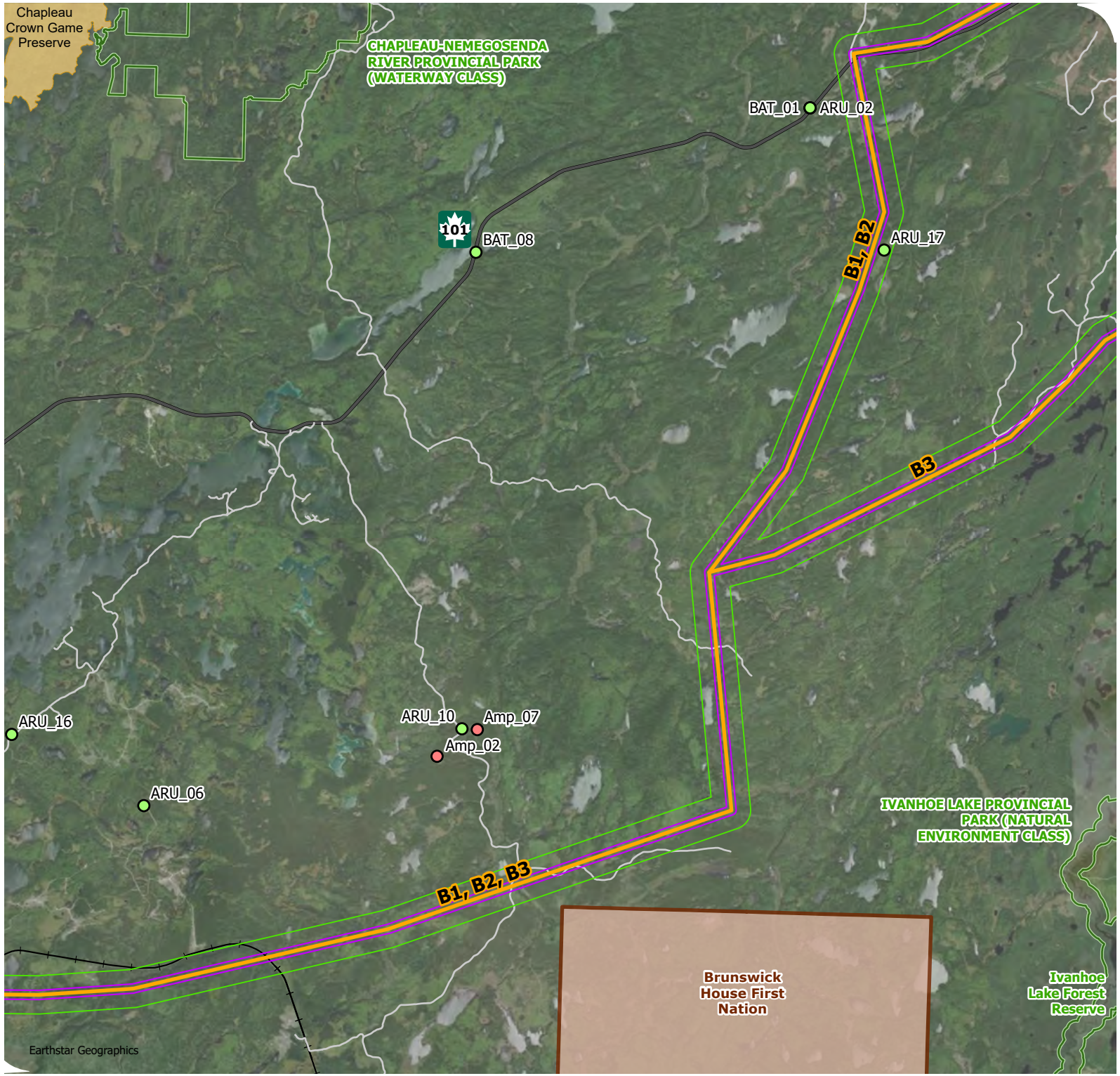
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WAWA TIMMINS POWER LINE

FIGURE 379. AMPHIBIAN SURVEY LOCATIONS



Mapping Extent - Ivanhoe Lake 1

- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Amphibian Survey Locations

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

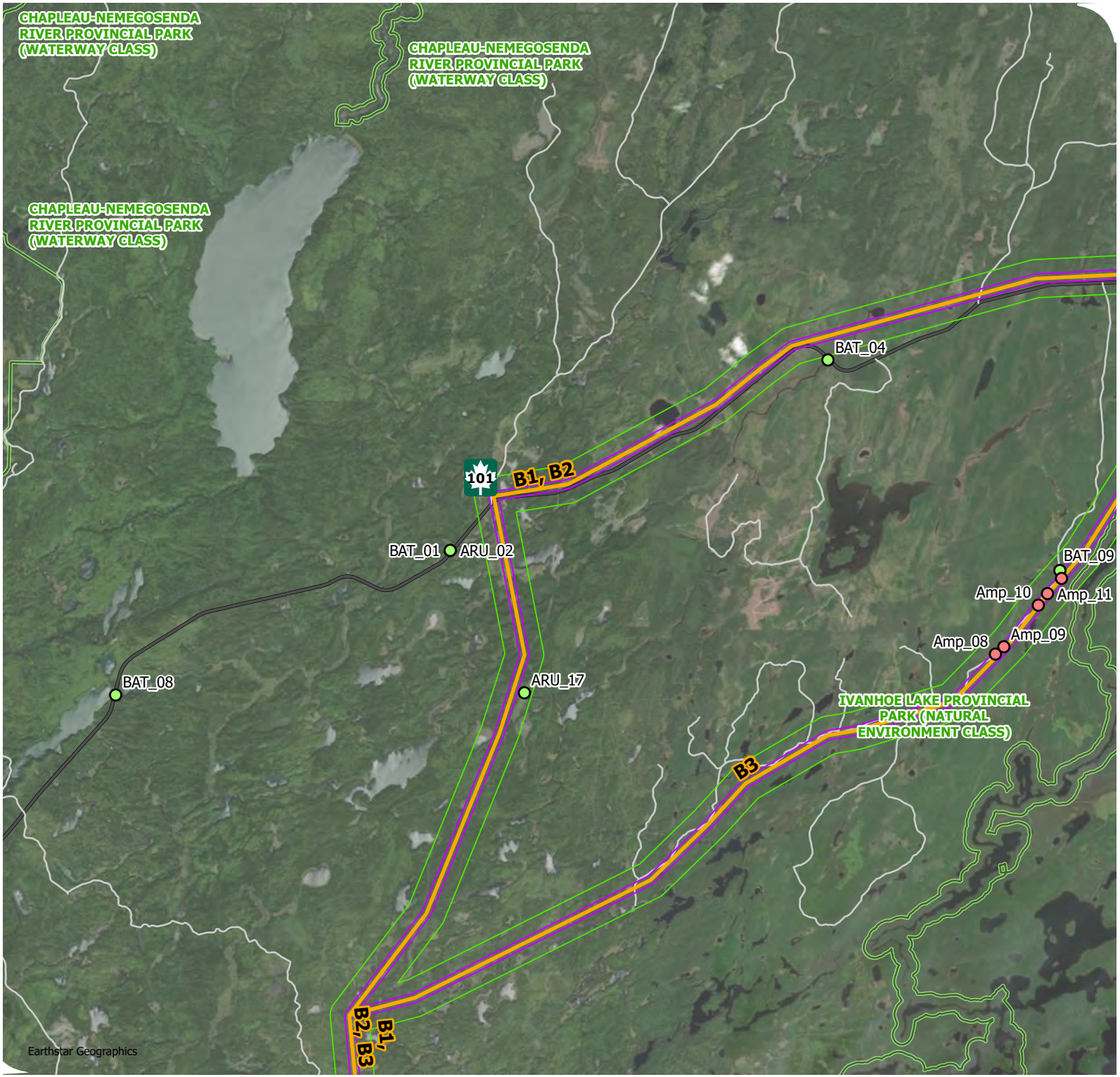
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WAWA TIMMINS POWER LINE

FIGURE 380. AMPHIBIAN SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Amphibian Survey Locations

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
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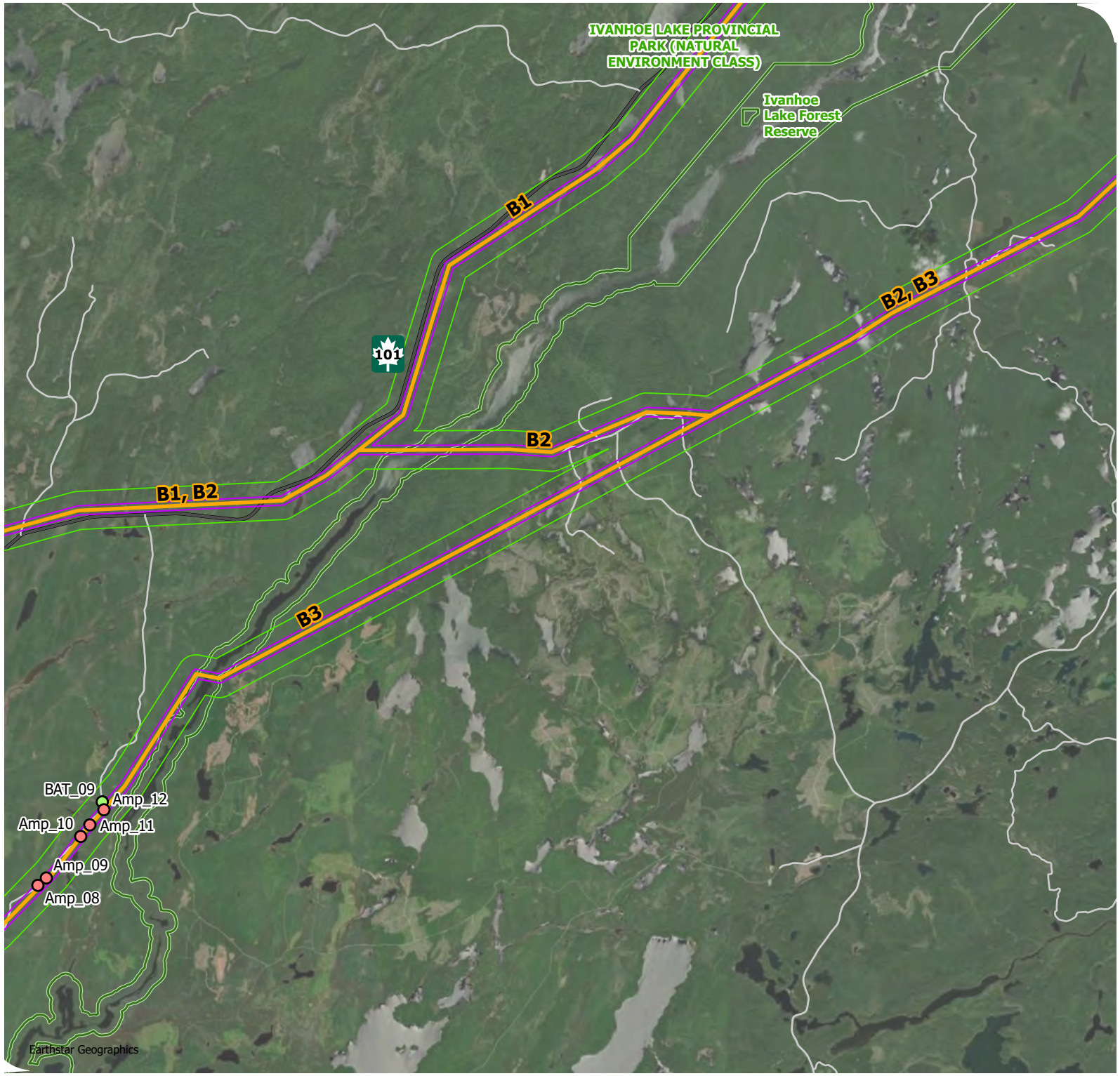
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WAWA TIMMINS POWER LINE

FIGURE 381. AMPHIBIAN SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 3



- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Amphibian Survey Locations

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

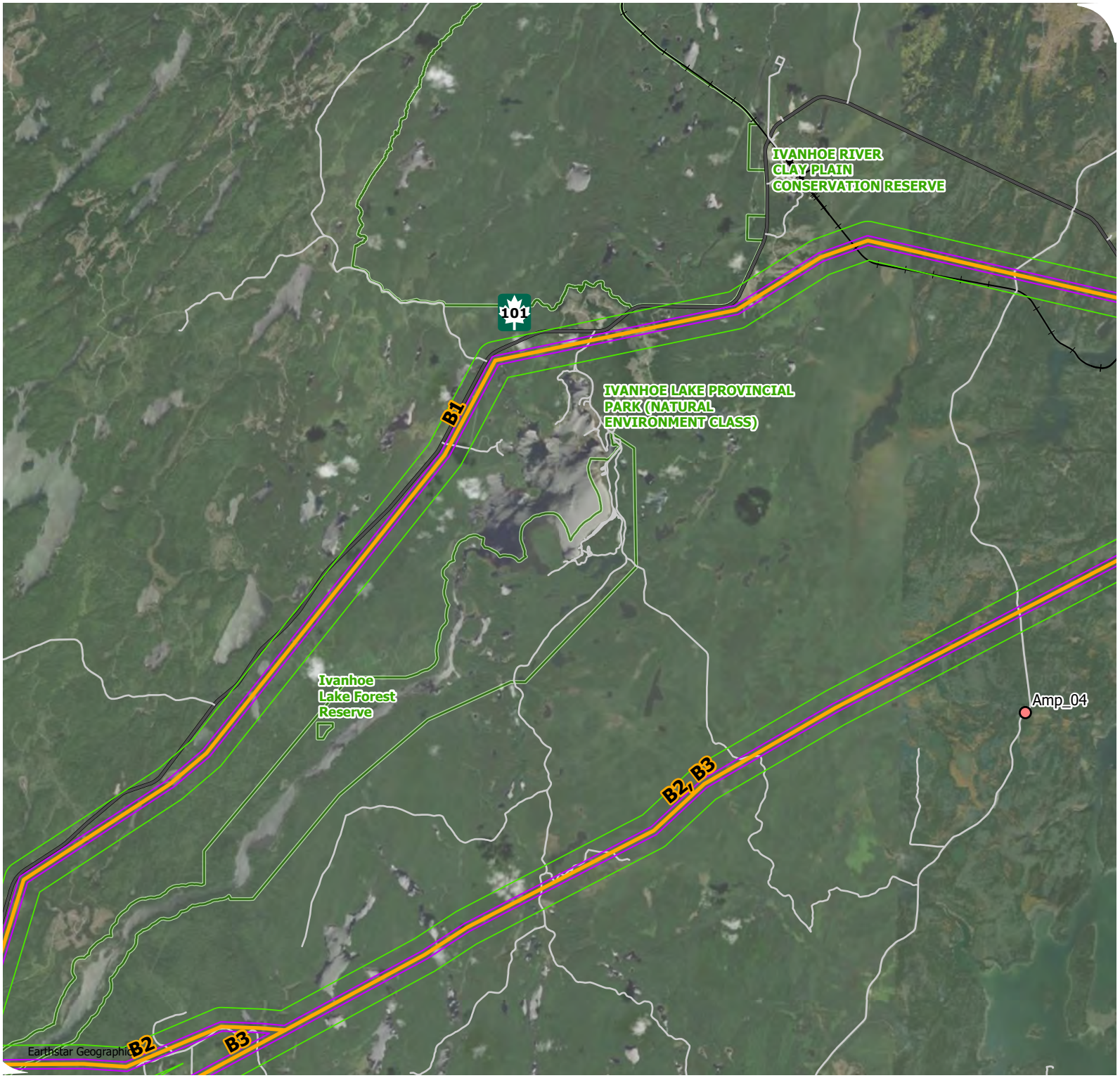
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PROJECT: 25-1043
STATUS: DRAFT
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WAWA TIMMINS POWER LINE

FIGURE 382. AMPHIBIAN SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Amphibian Survey Locations

- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

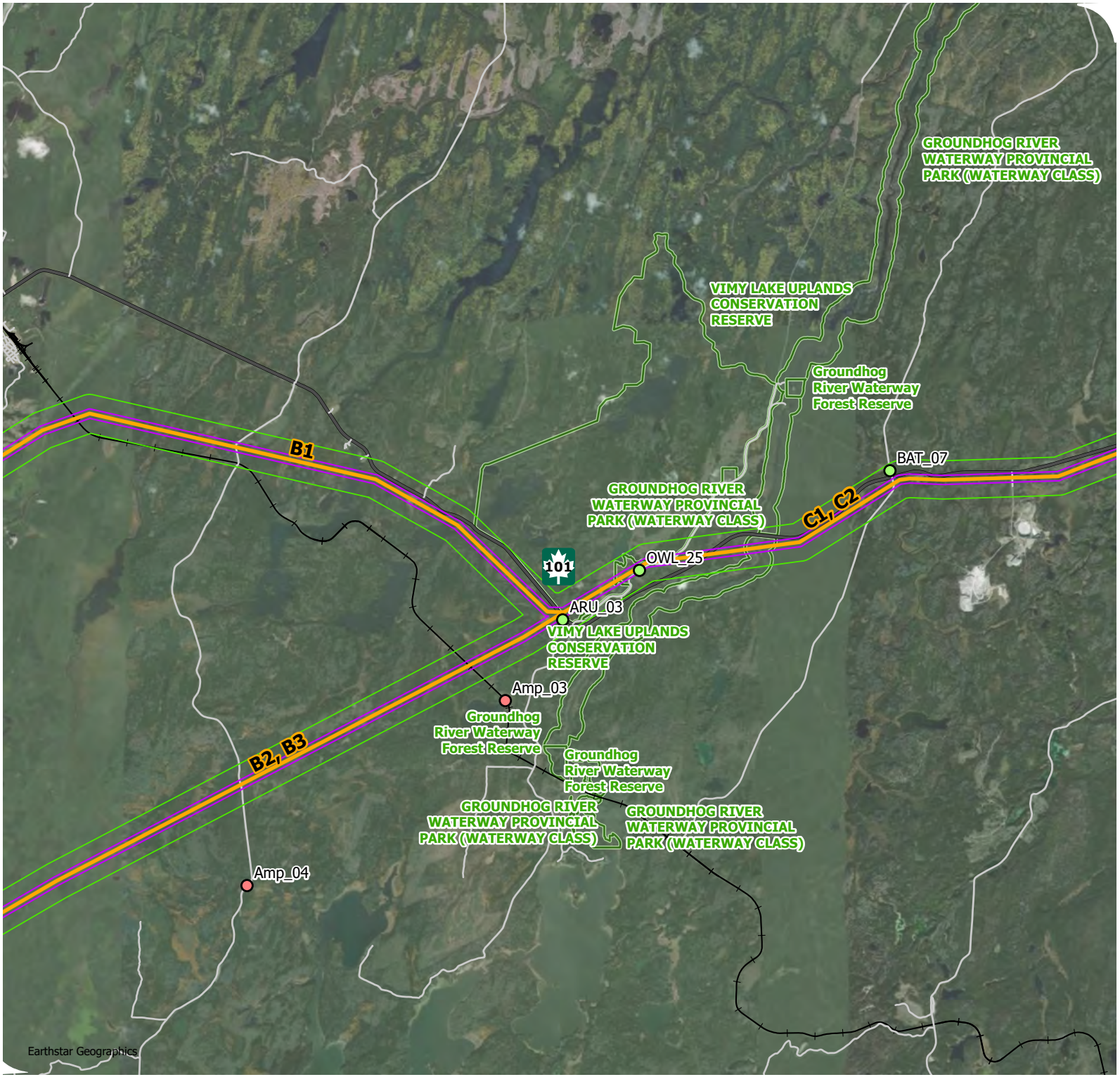
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 383. AMPHIBIAN SURVEY LOCATIONS

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Amphibian Survey Locations

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

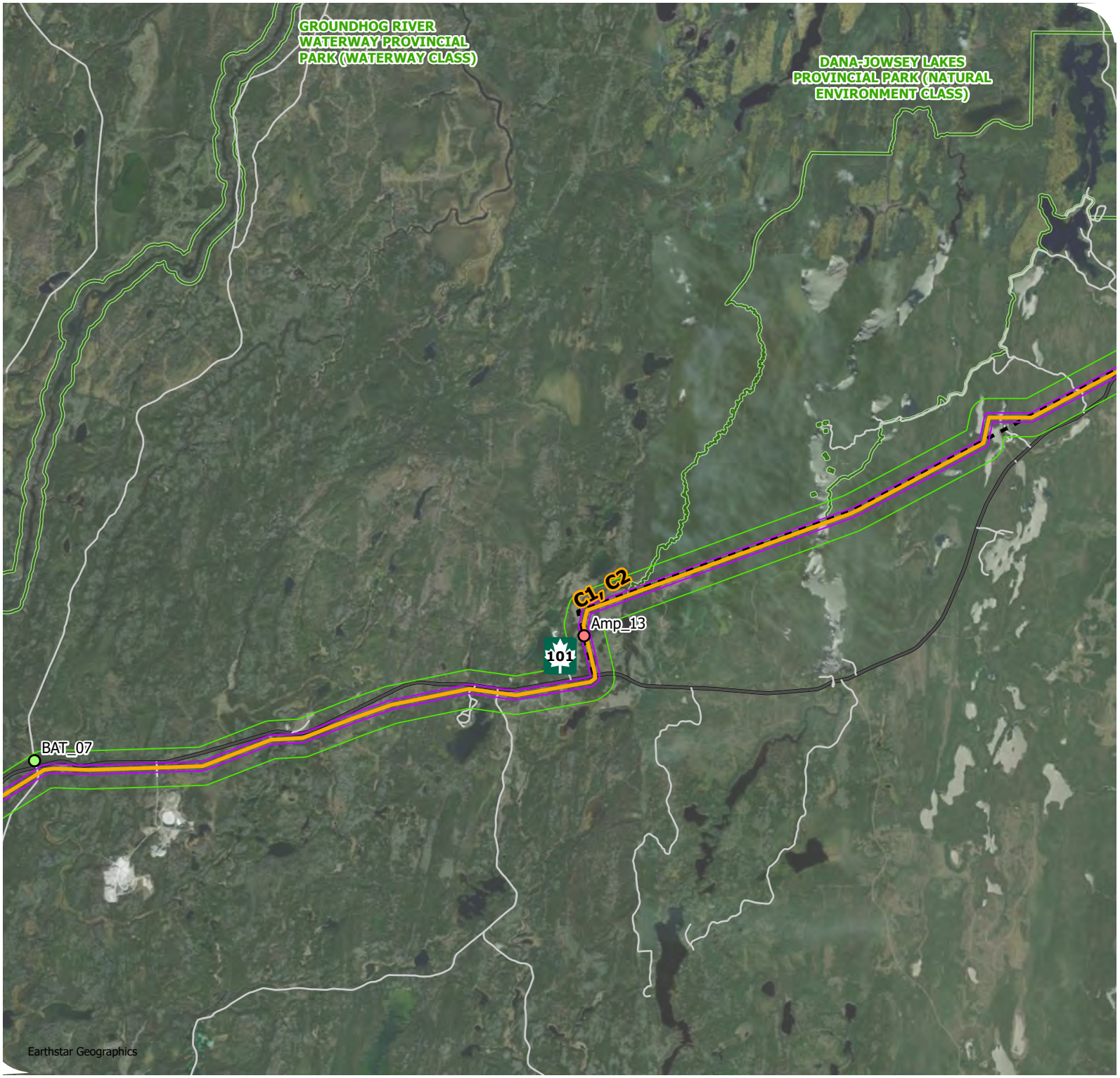
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PROJECT: 25-1043
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DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 384. AMPHIBIAN SURVEY LOCATIONS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Amphibian Survey Locations

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

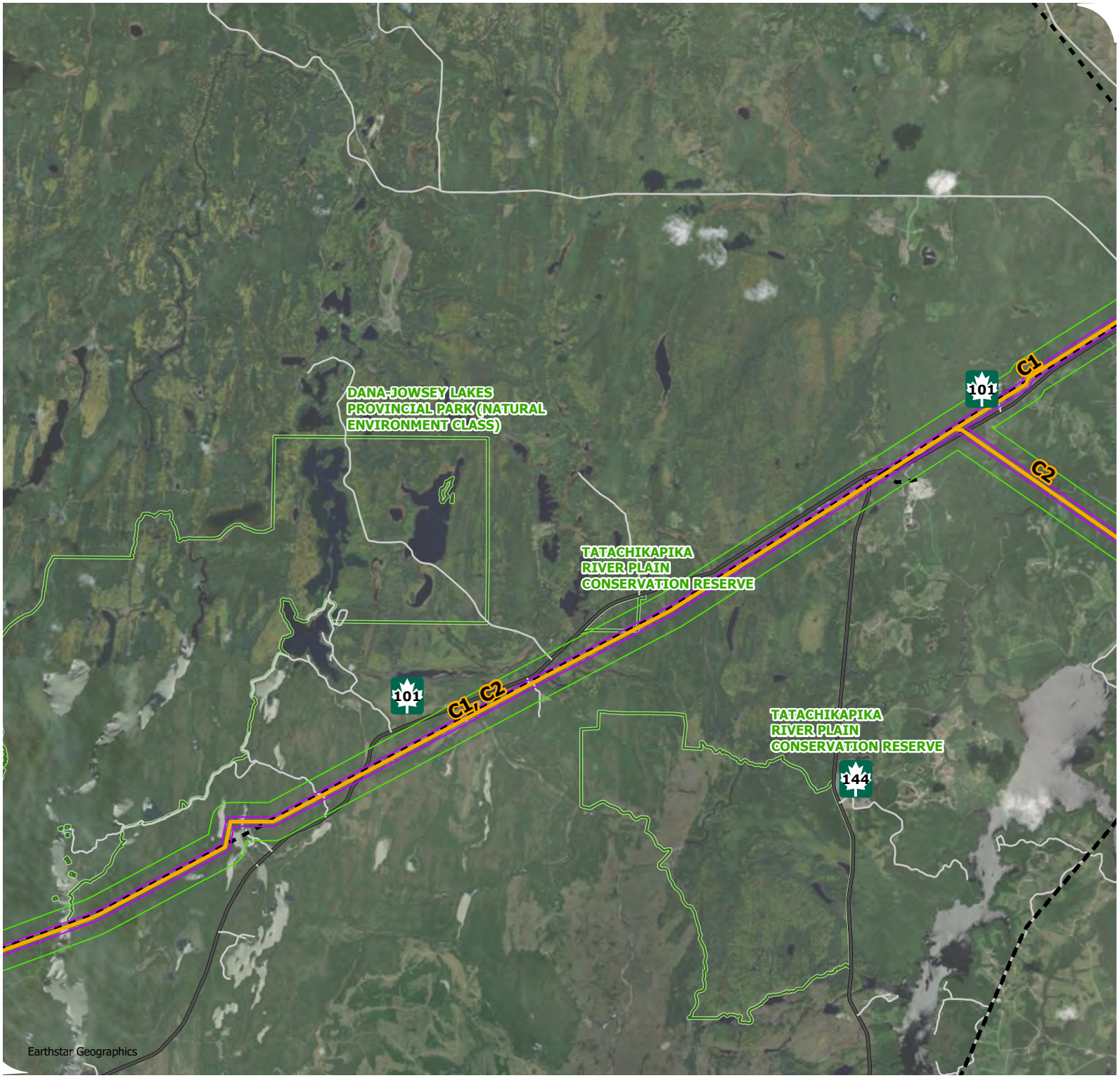
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WAWA TIMMINS POWER LINE

FIGURE 385. AMPHIBIAN SURVEY LOCATIONS

Mapping Extent -
Dana-Jowsey Lakes 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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SCALE 1:139,000

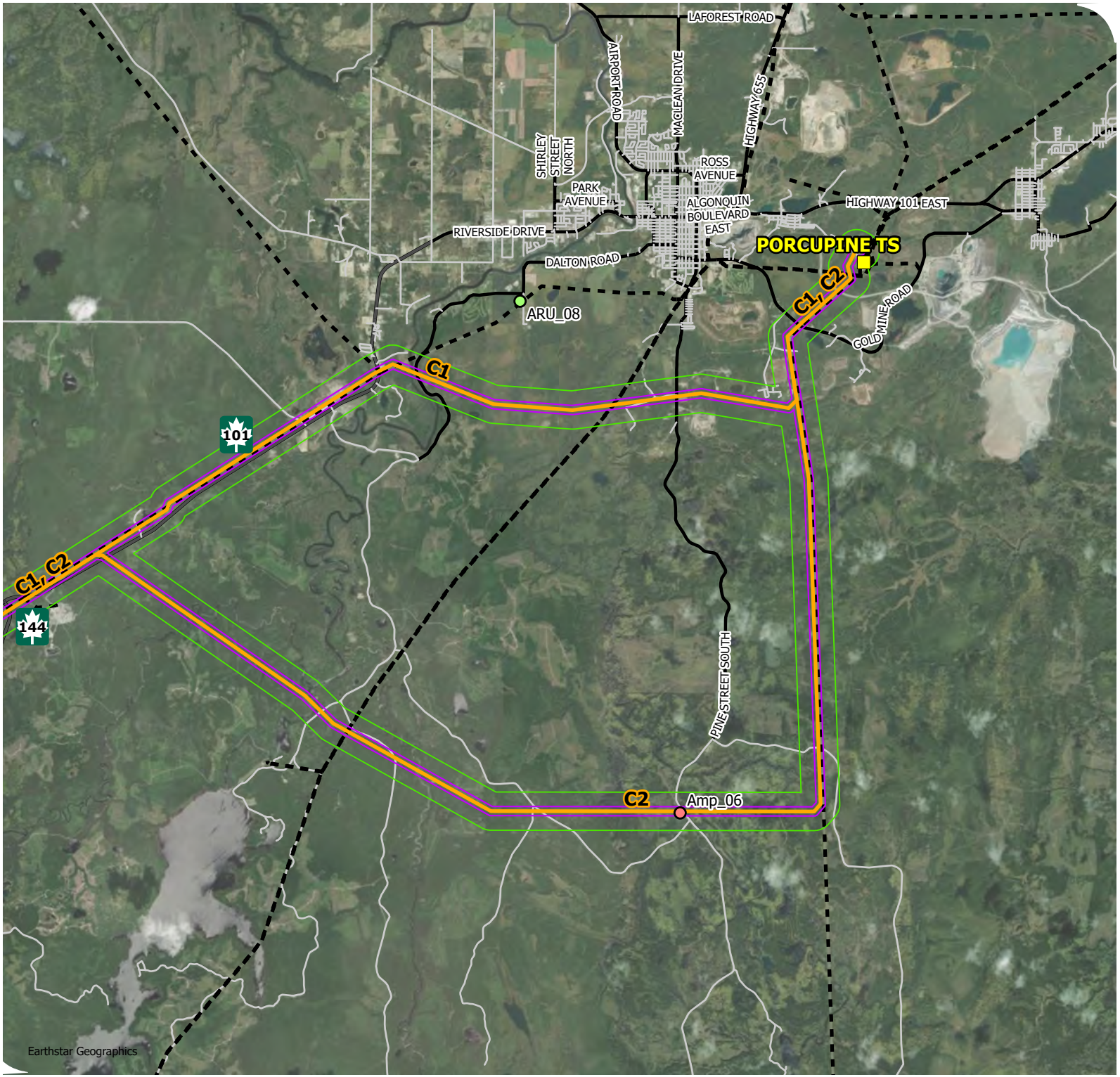
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WAWA TIMMINS POWER LINE

FIGURE 386. AMPHIBIAN SURVEY LOCATIONS



Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)

Amphibian Survey Locations

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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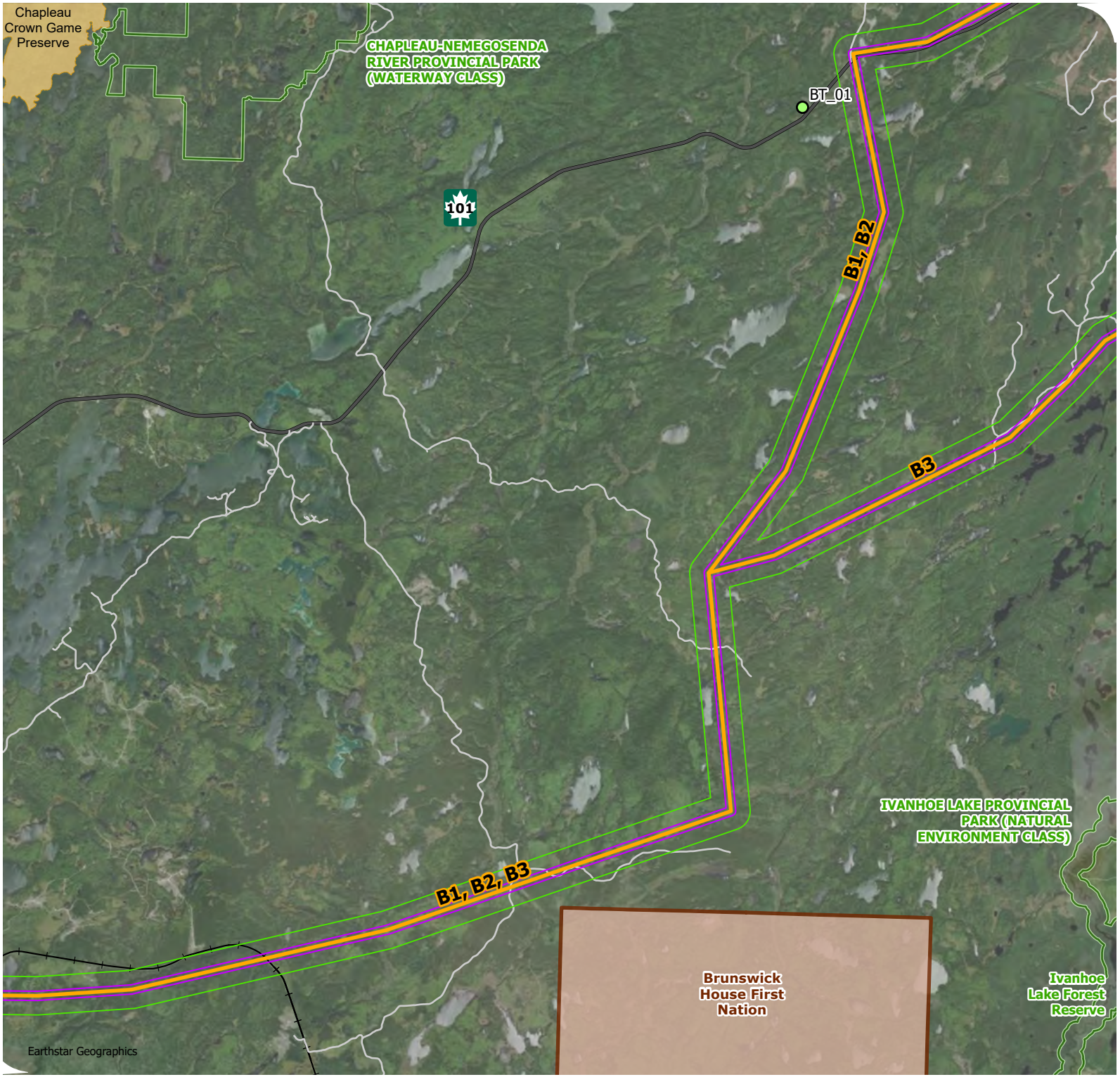
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DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 387. TURTLE SURVEY LOCATIONS



Mapping Extent - Ivanhoe Lake 1

- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Basking Turtle Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

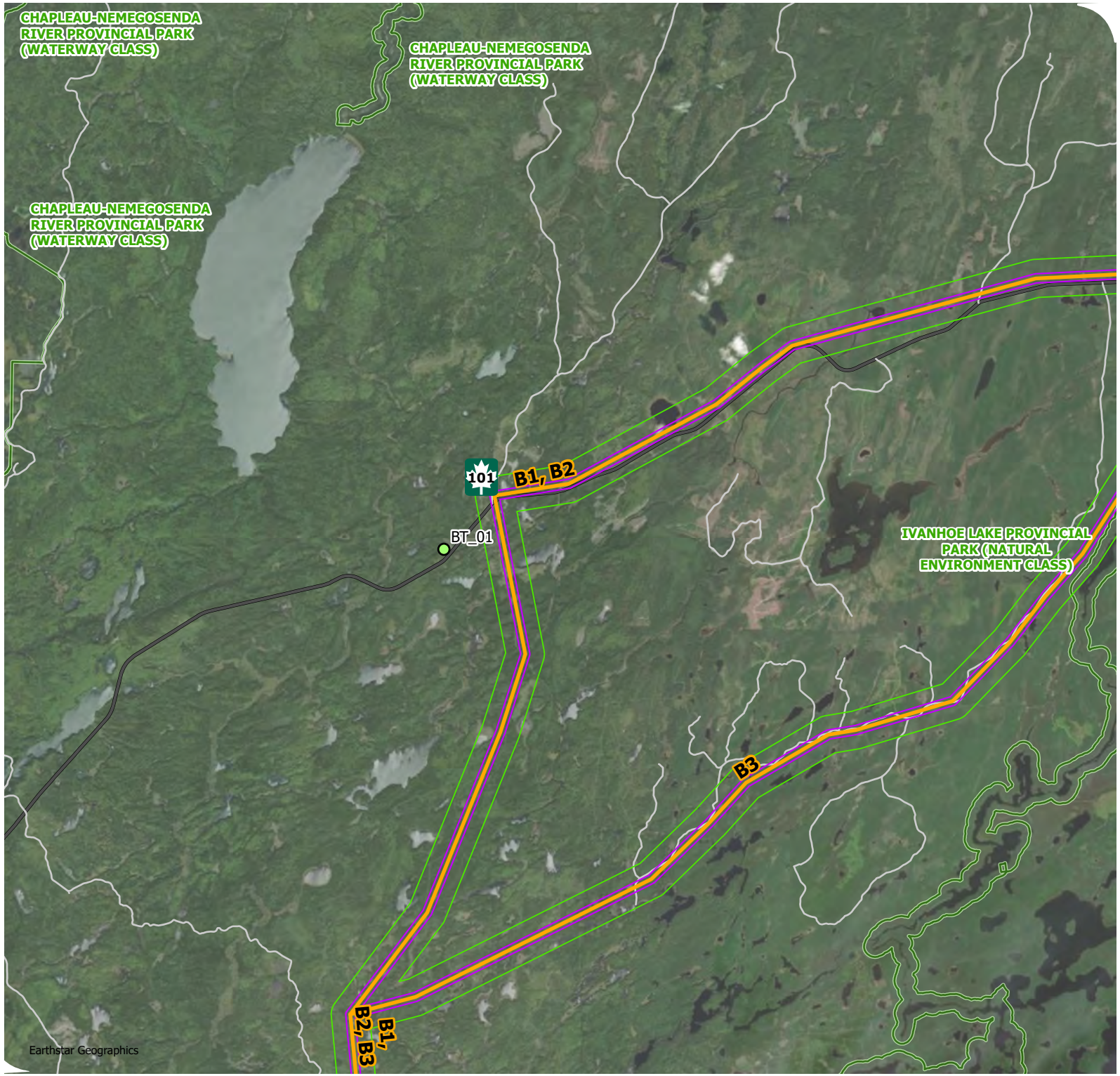
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 388. TURTLE SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Basking Turtle Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
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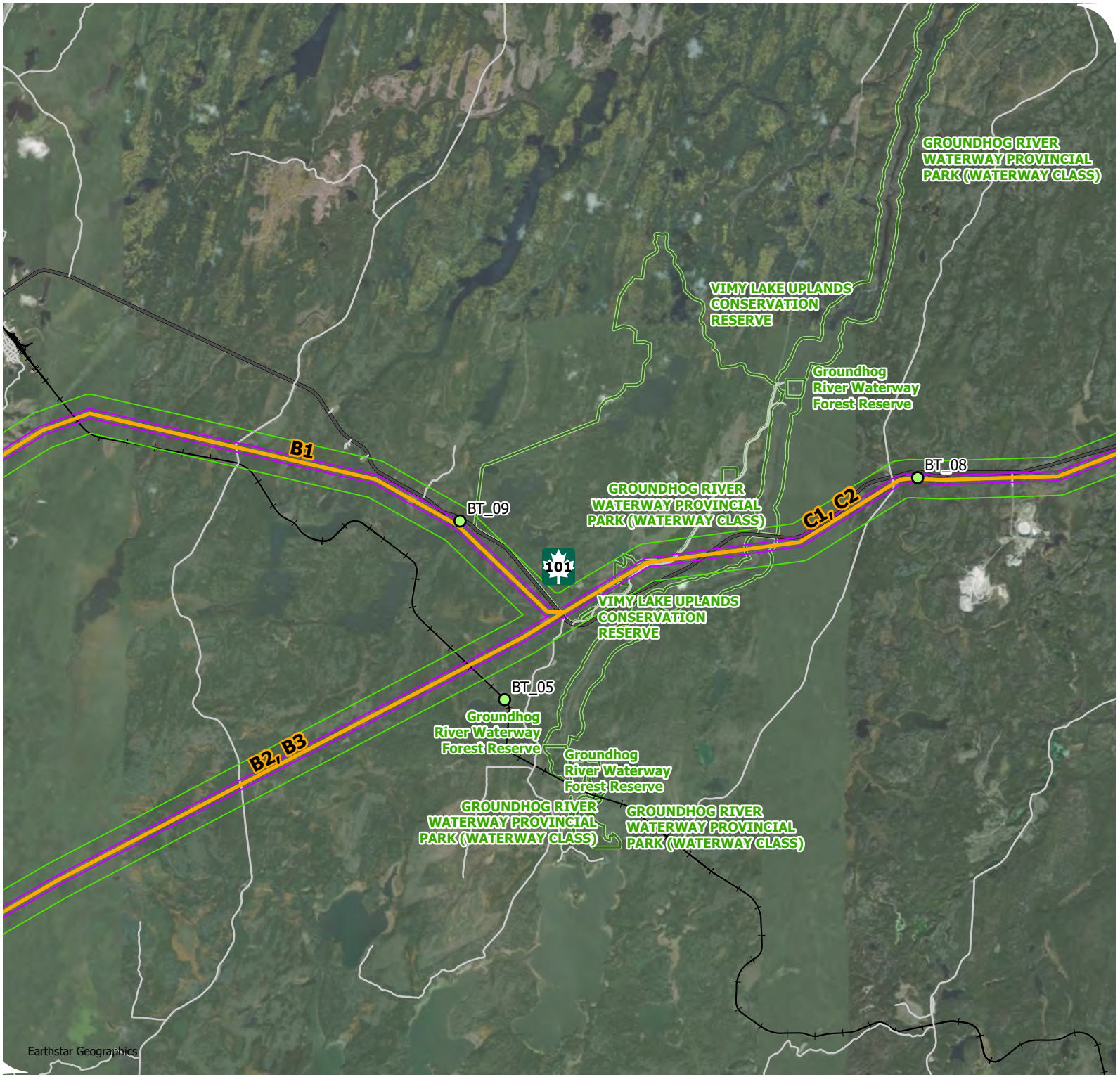
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WAWA TIMMINS POWER LINE

FIGURE 389. TURTLE SURVEY LOCATIONS

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Basking Turtle Survey Locations



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

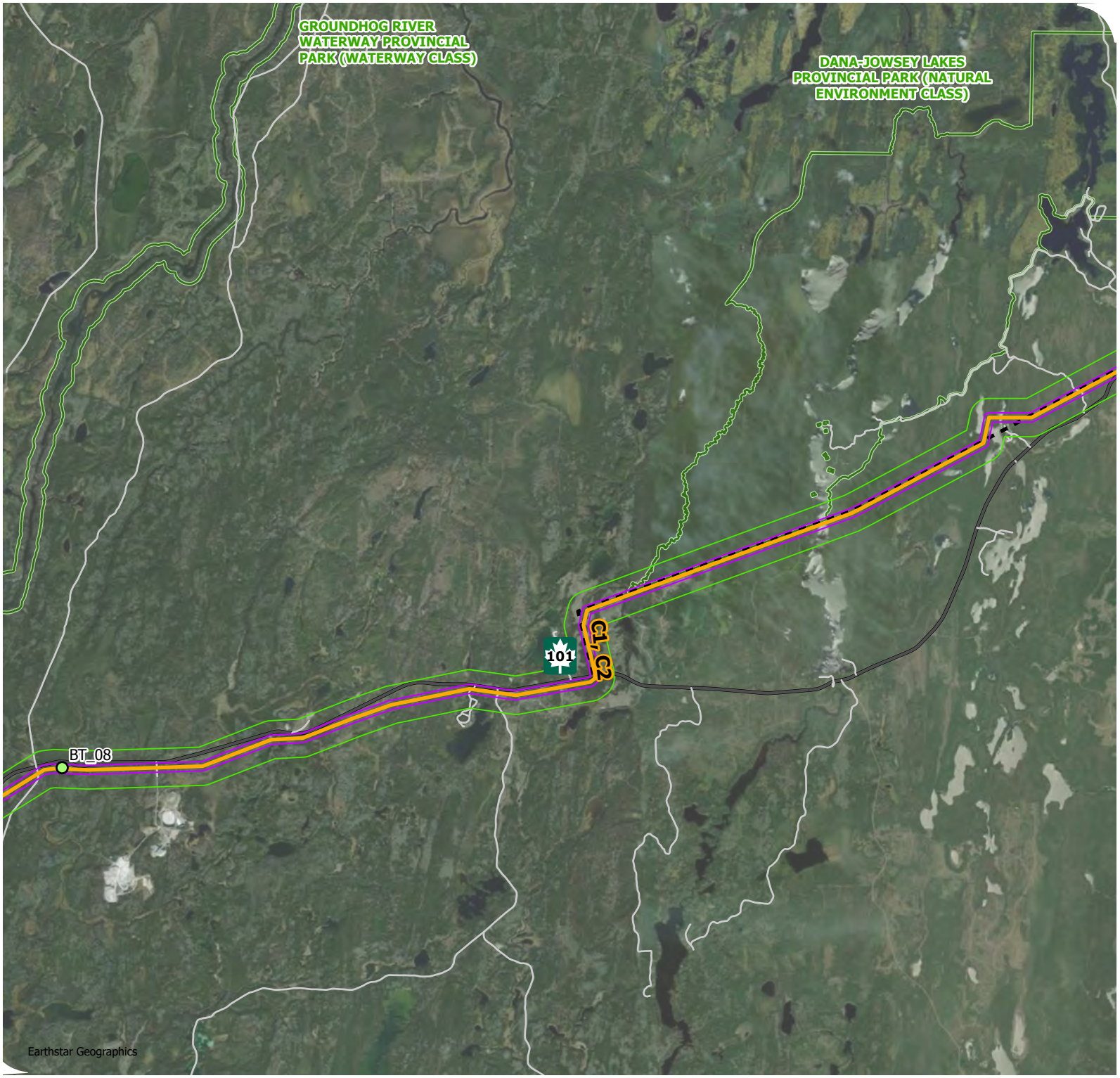
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 390. TURTLE SURVEY LOCATIONS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Basking Turtle Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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SCALE 1:139,000

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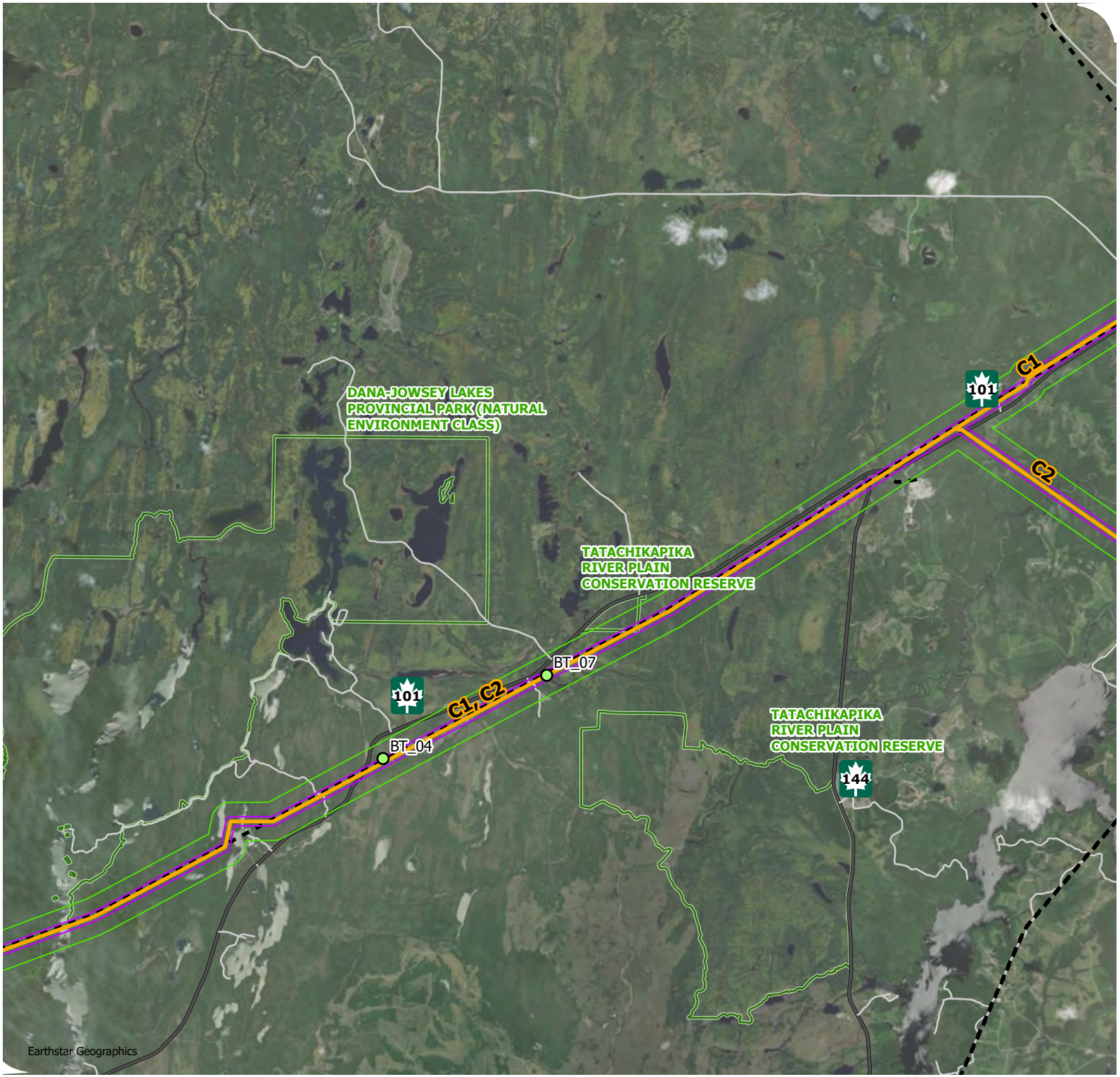
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WAWA TIMMINS POWER LINE

FIGURE 391. TURTLE SURVEY LOCATIONS

Mapping Extent -
Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Basking Turtle Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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MAP CHECKED BY: -
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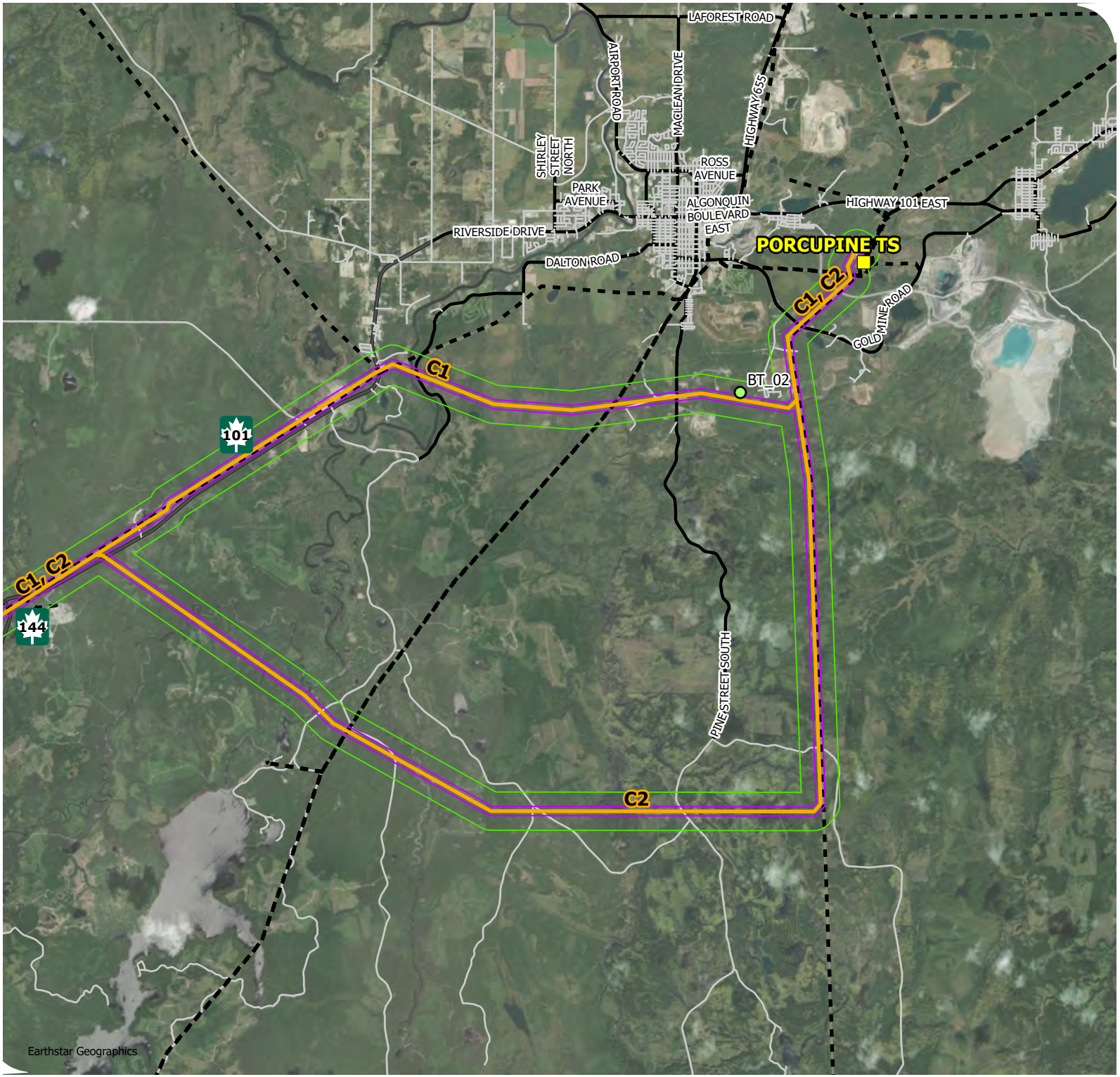
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WAWA TIMMINS POWER LINE

FIGURE 392. TURTLE SURVEY LOCATIONS



Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Basking Turtle Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

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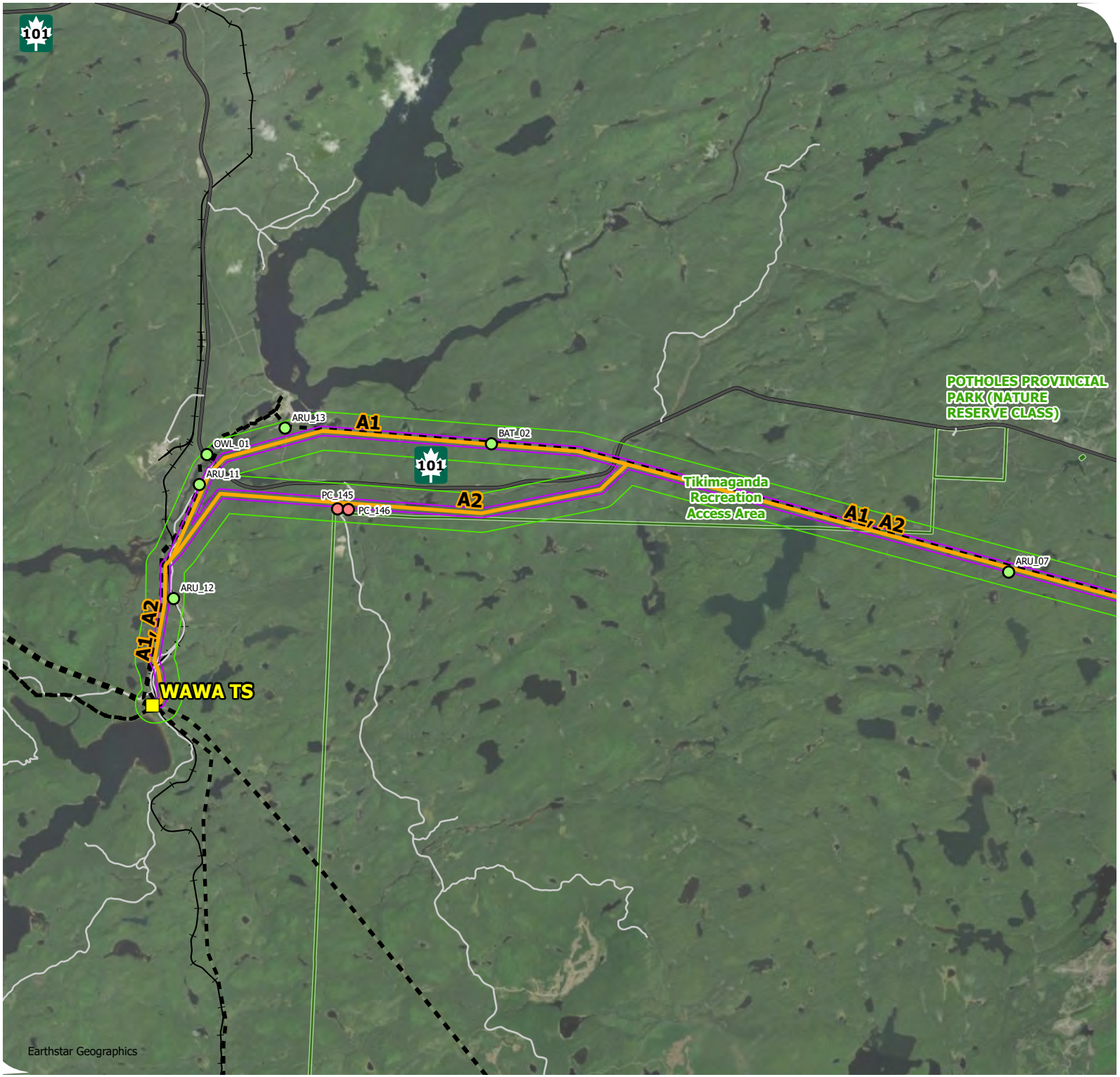
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WAWA TIMMINS POWER LINE

FIGURE 393. BREEDING BIRD SURVEY LOCATIONS



Mapping Extent - Wawa Station

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
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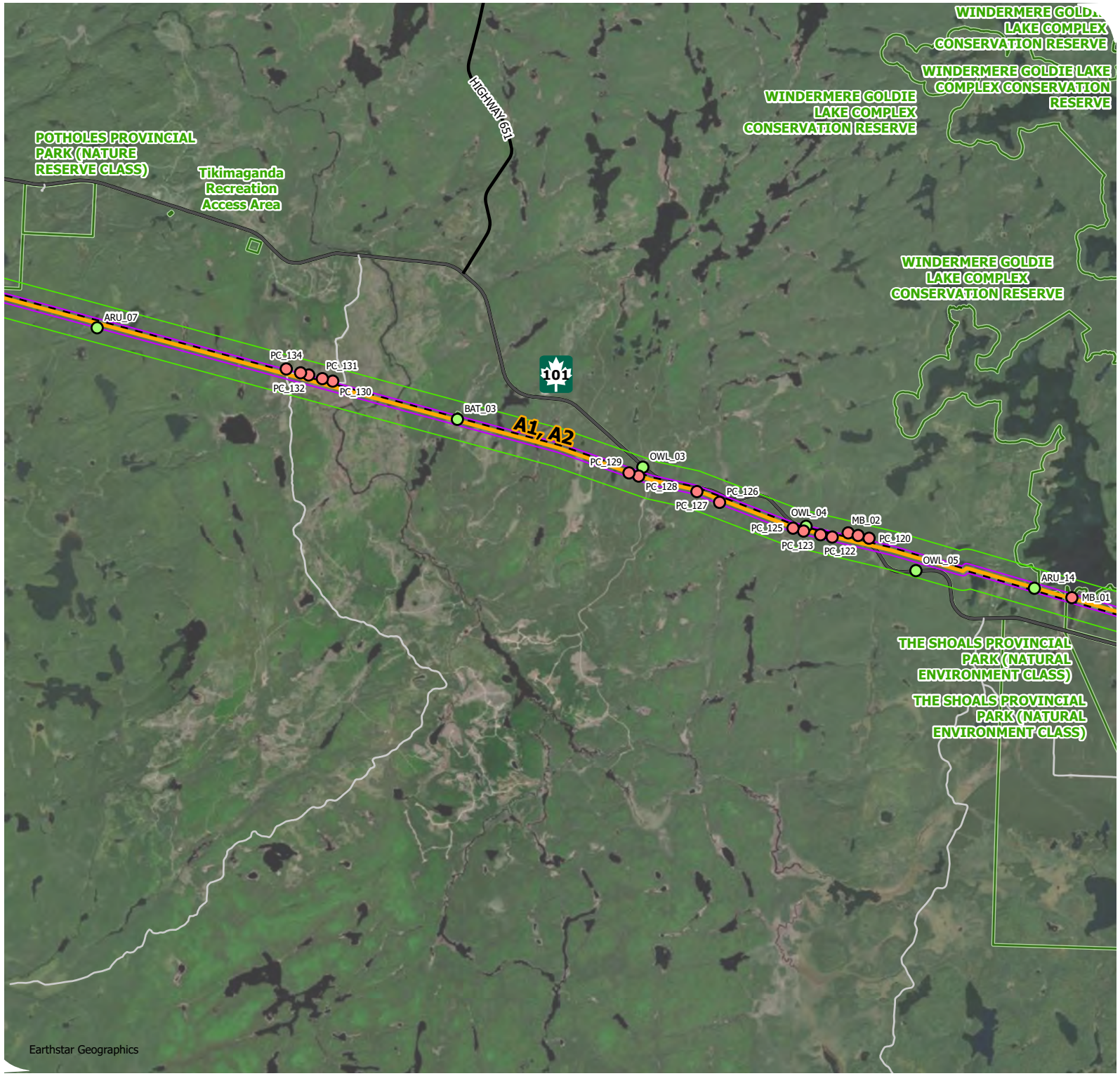
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WAWA TIMMINS POWER LINE

FIGURE 394. BREEDING BIRD SURVEY LOCATIONS



Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5

WAWA TIMMINS POWER LINE

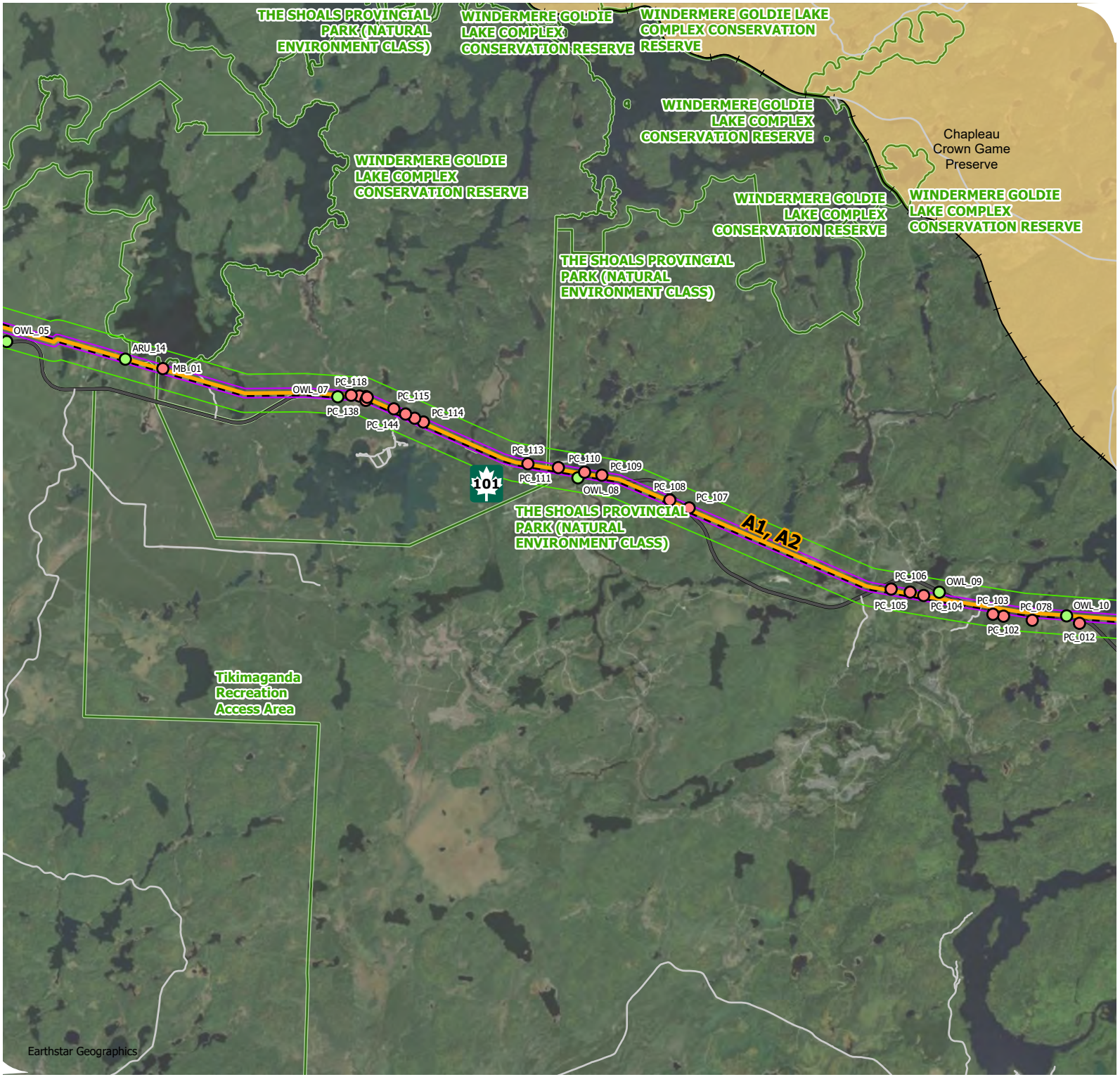
FIGURE 395. BREEDING BIRD SURVEY LOCATIONS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In person



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

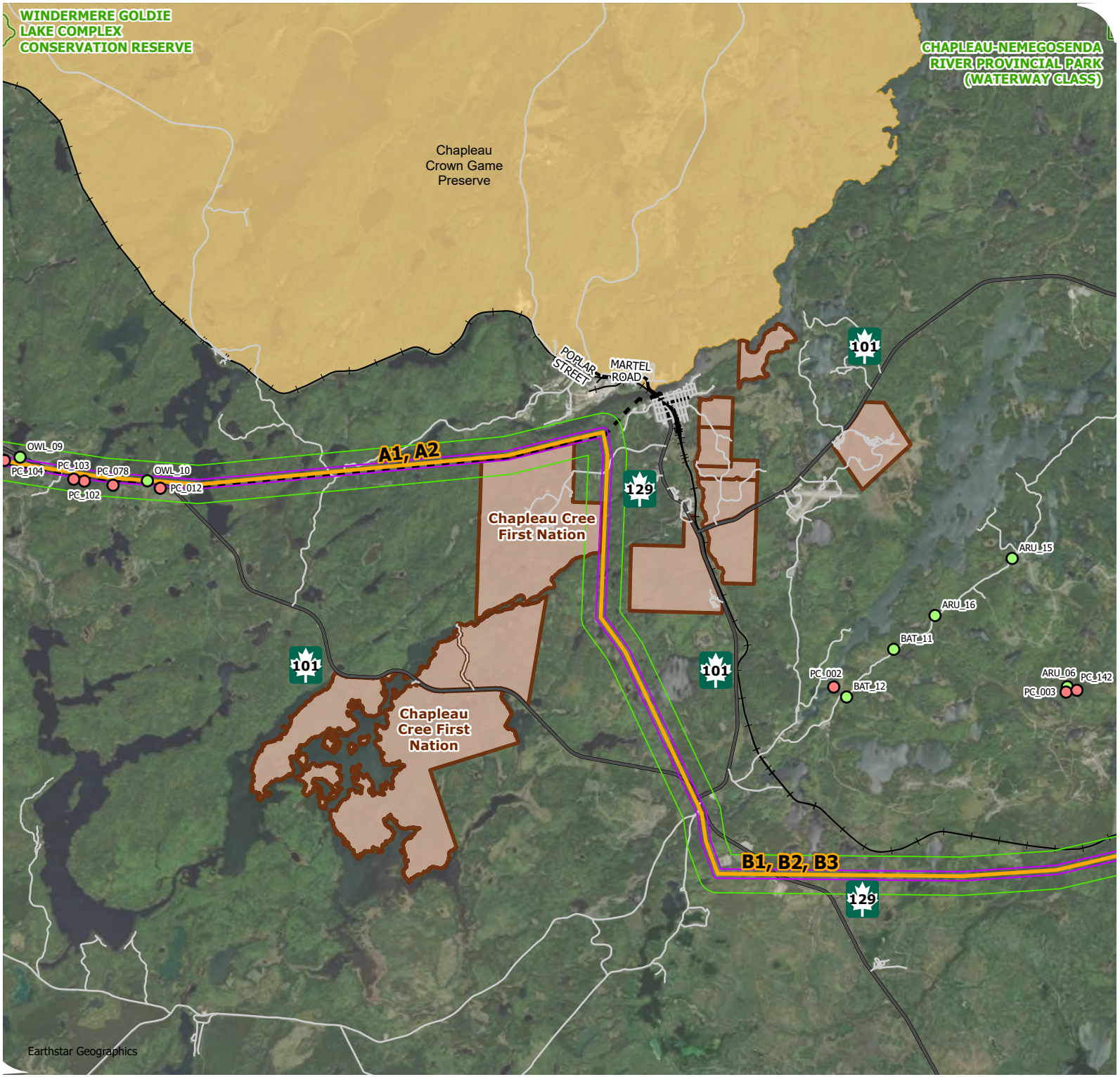
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
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FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 396. BREEDING BIRD SURVEY LOCATIONS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

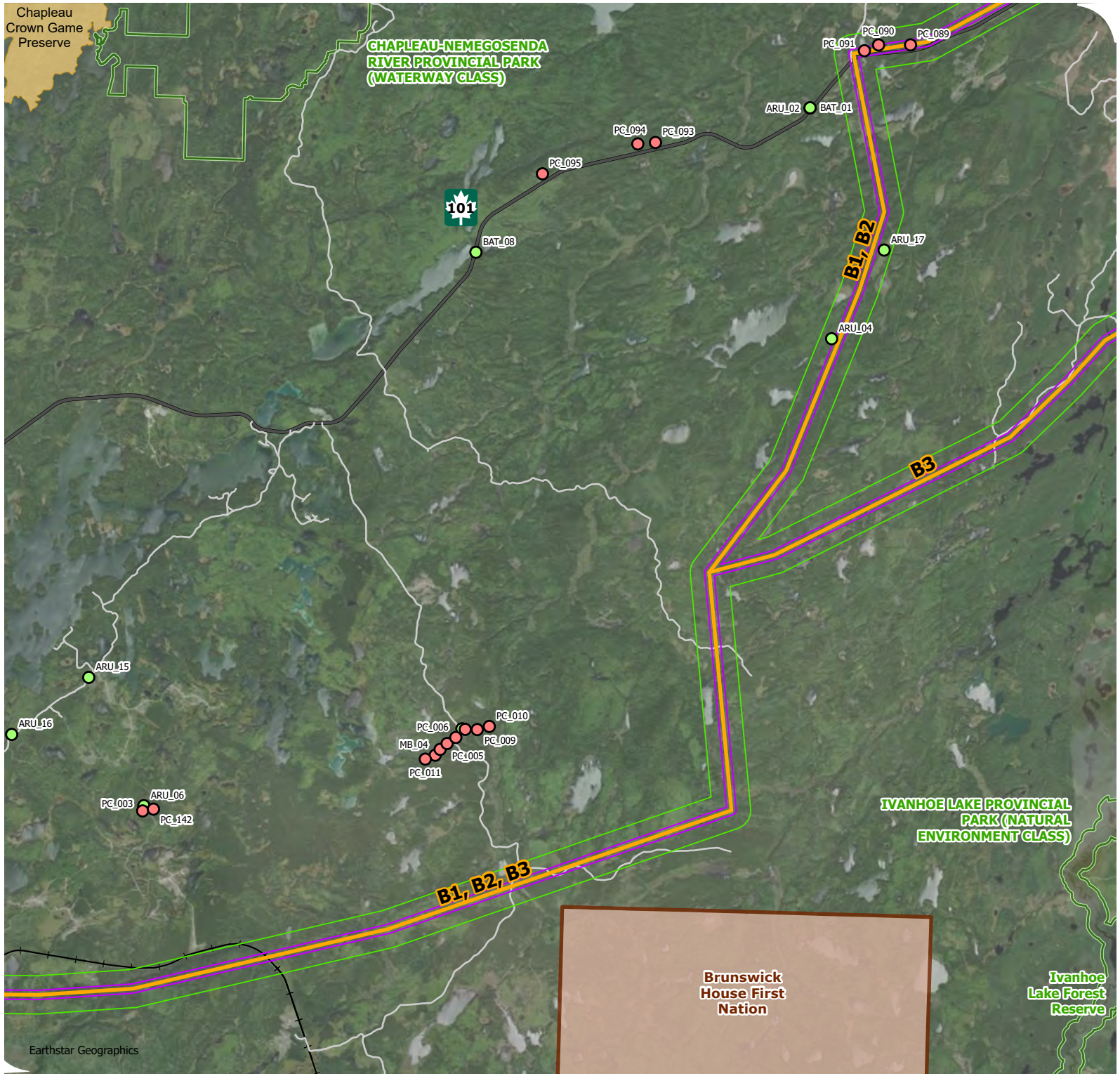
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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 397. BREEDING BIRD SURVEY LOCATIONS



Mapping Extent - Ivanhoe Lake 1

- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

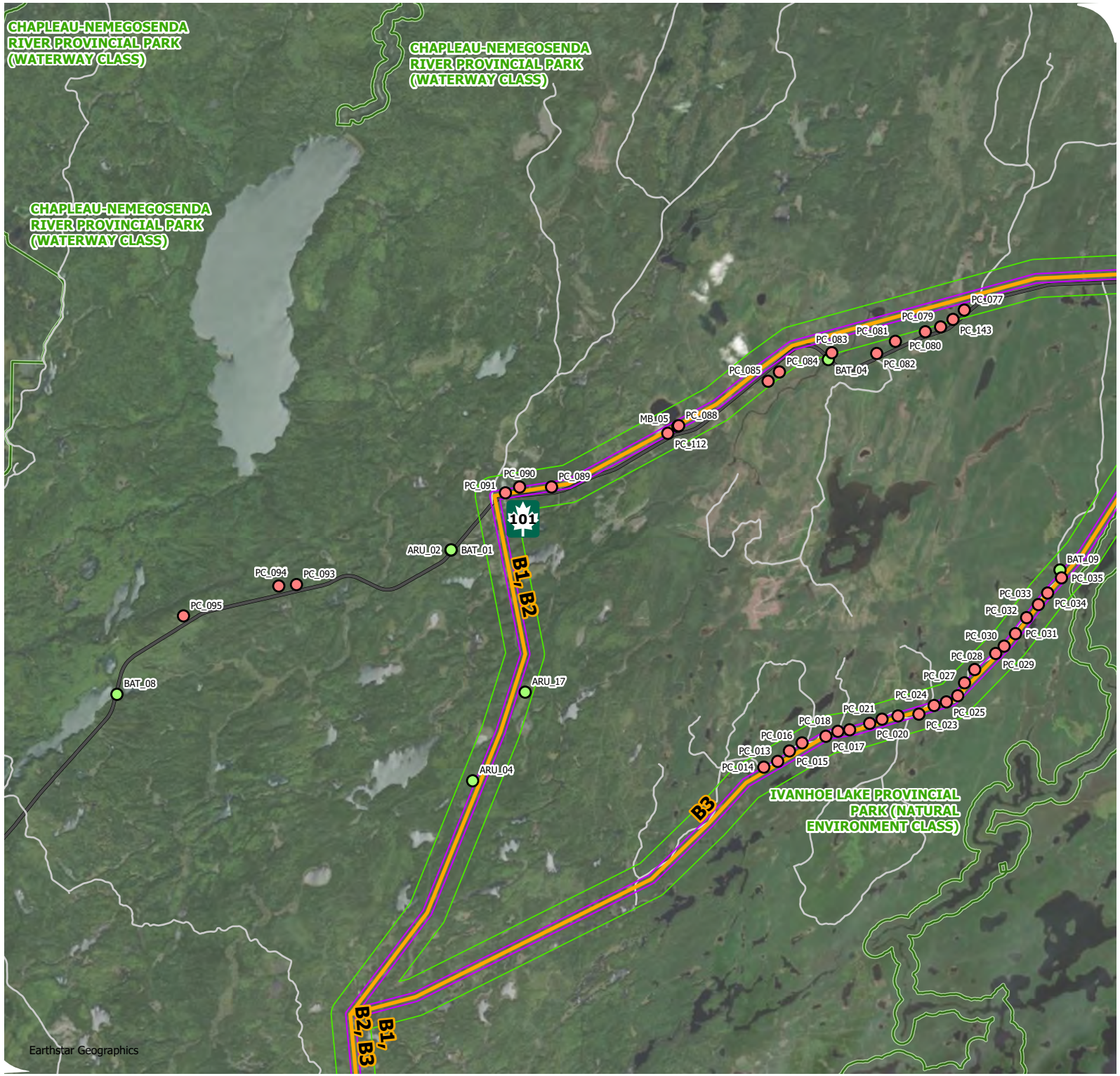
MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 398. BREEDING BIRD SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

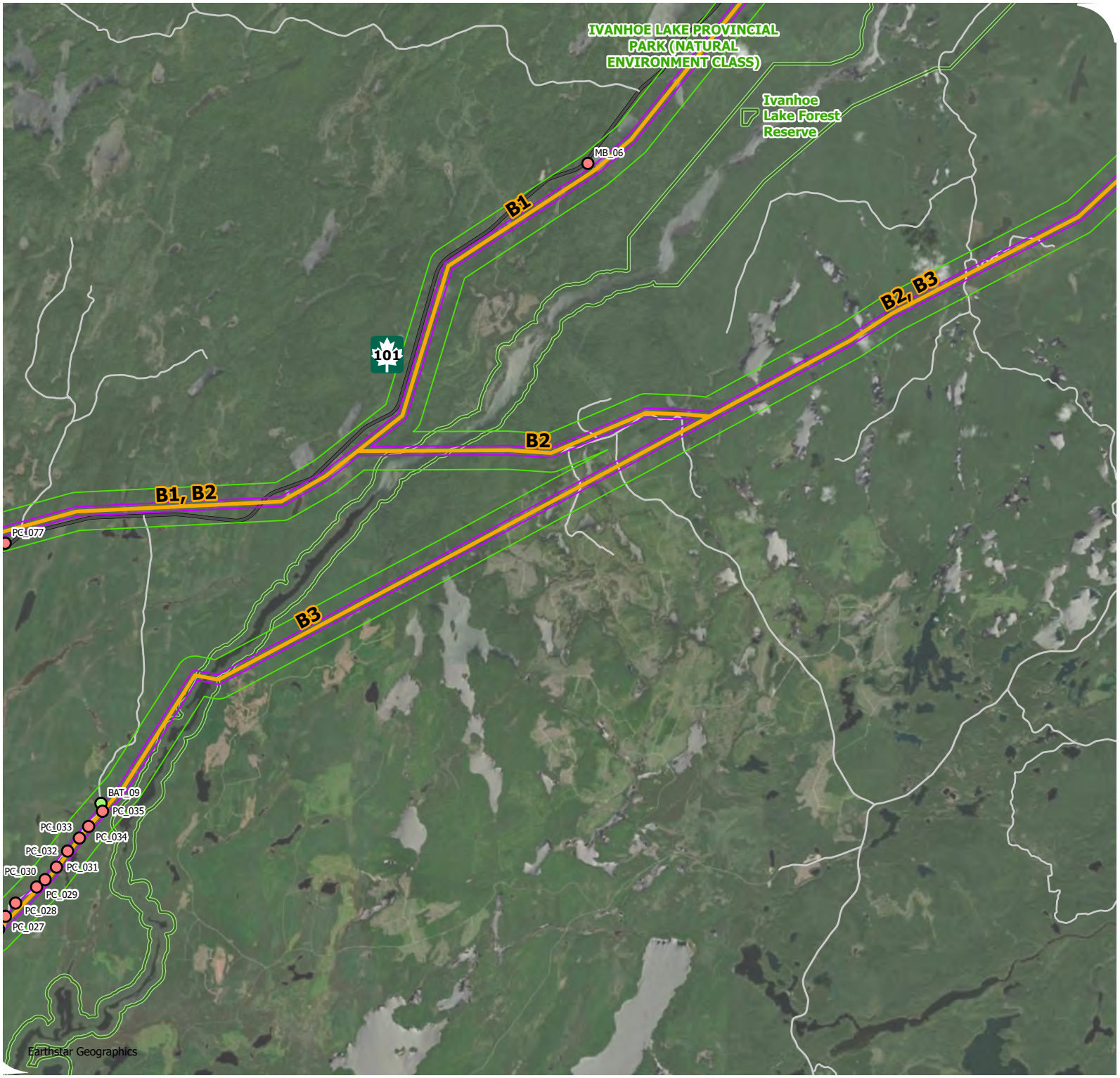
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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 399. BREEDING BIRD SURVEY LOCATIONS



Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

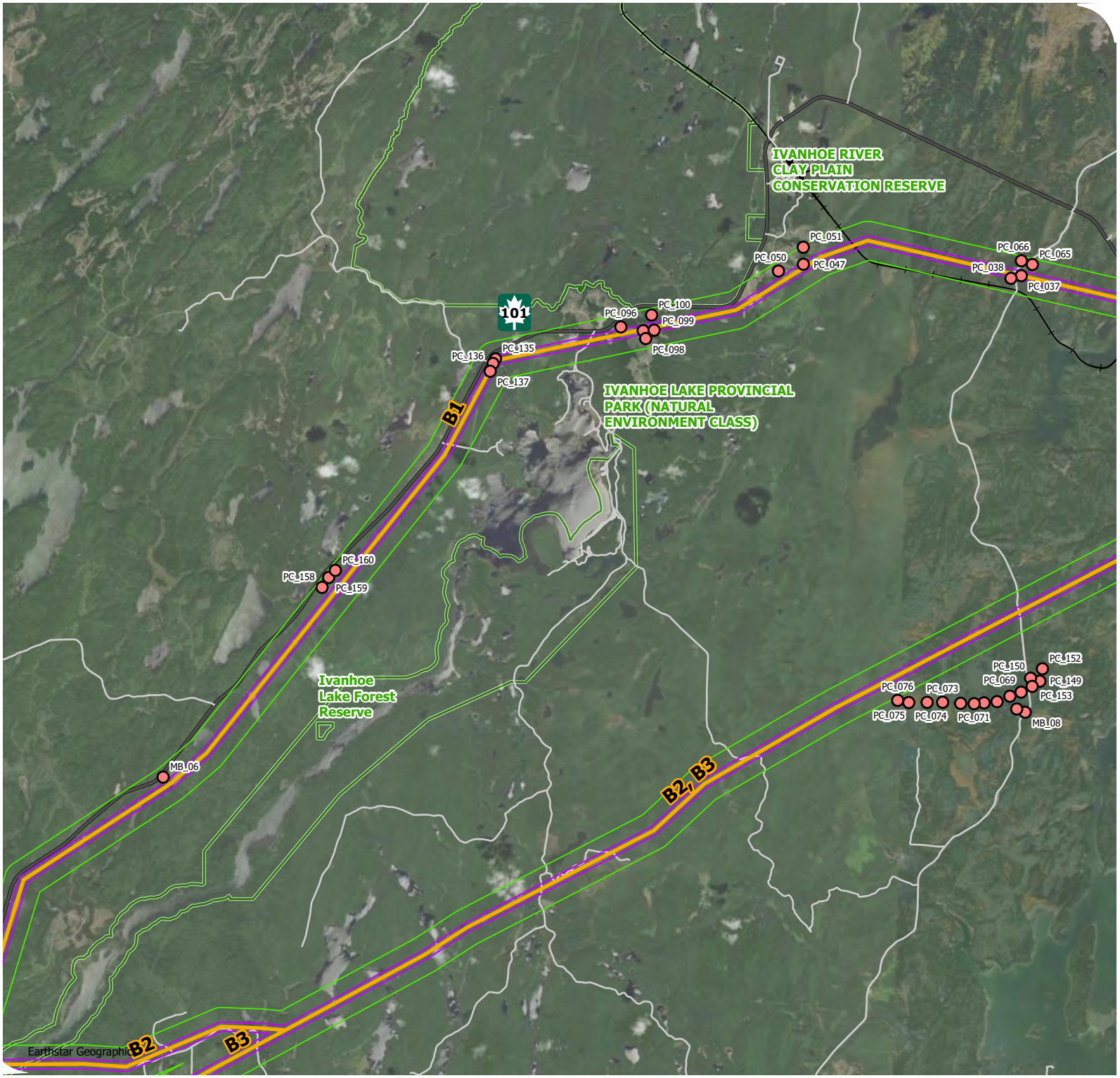
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 400. BREEDING BIRD SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5

WAWA TIMMINS POWER LINE

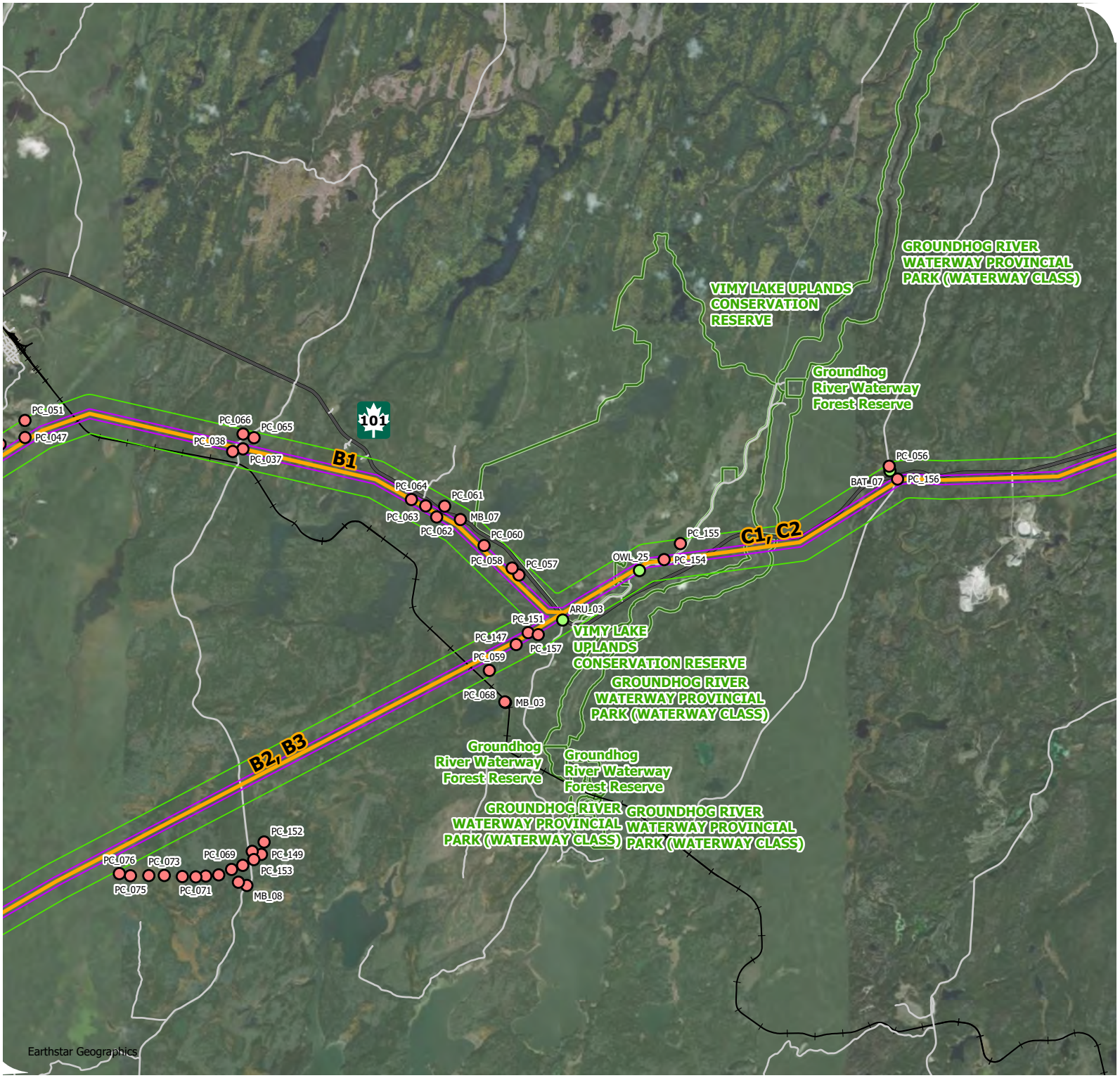
FIGURE 401. BREEDING BIRD SURVEY LOCATIONS

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In person



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

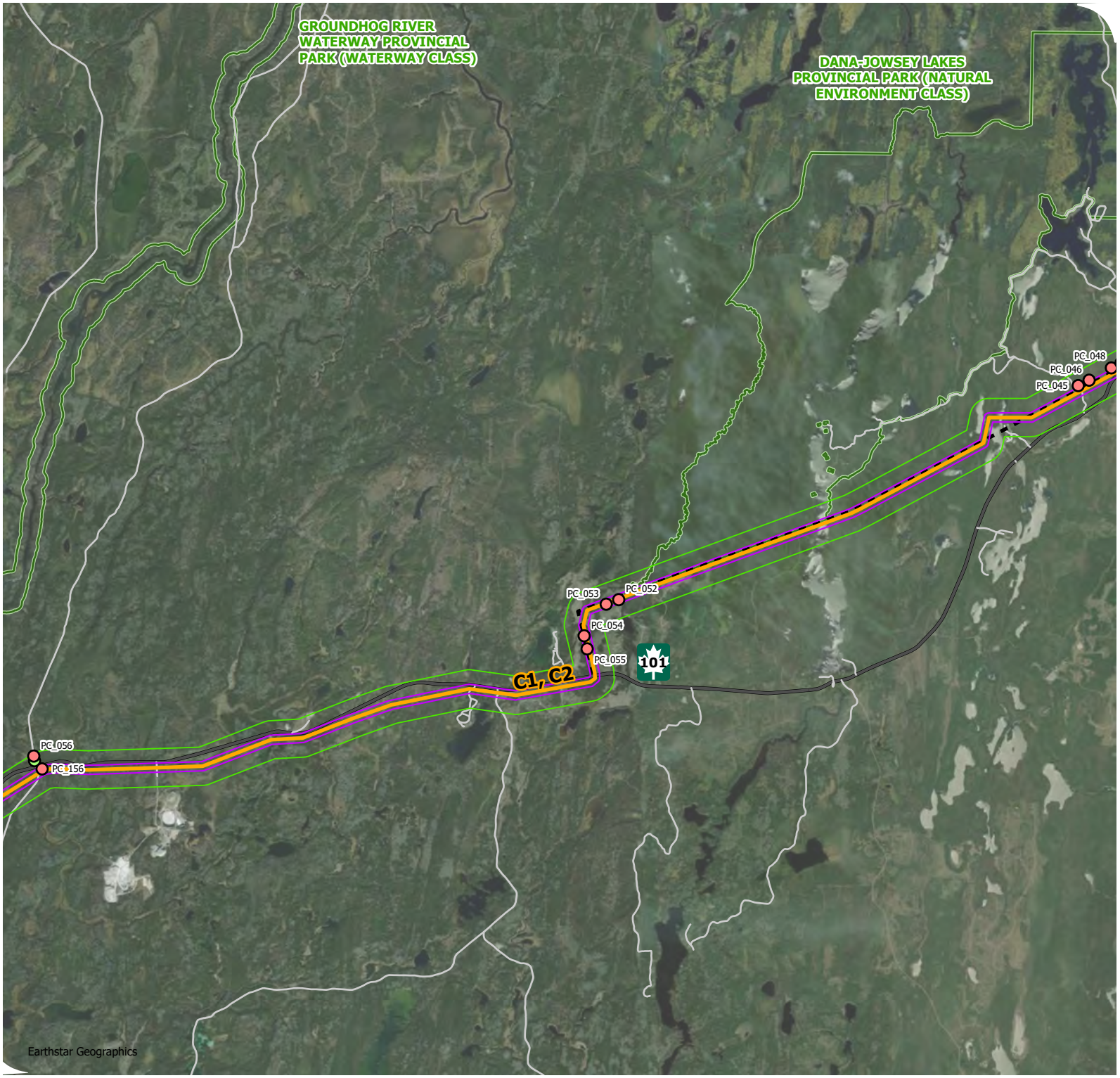
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 402. BREEDING BIRD SURVEY LOCATIONS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5

WAWA TIMMINS POWER LINE

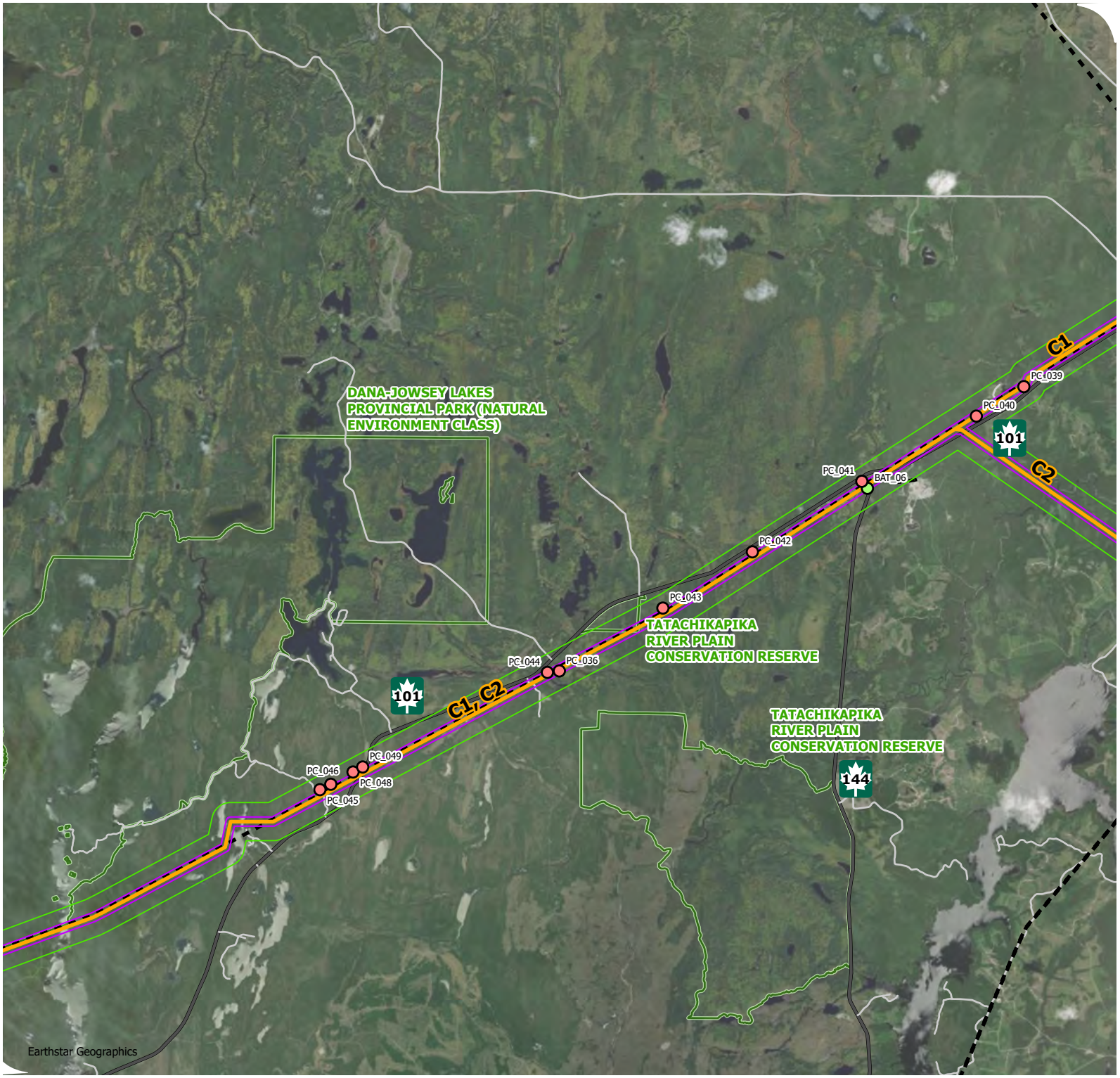
FIGURE 403. BREEDING BIRD SURVEY LOCATIONS

Mapping Extent -
Dana-Jowsey Lakes 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In person



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

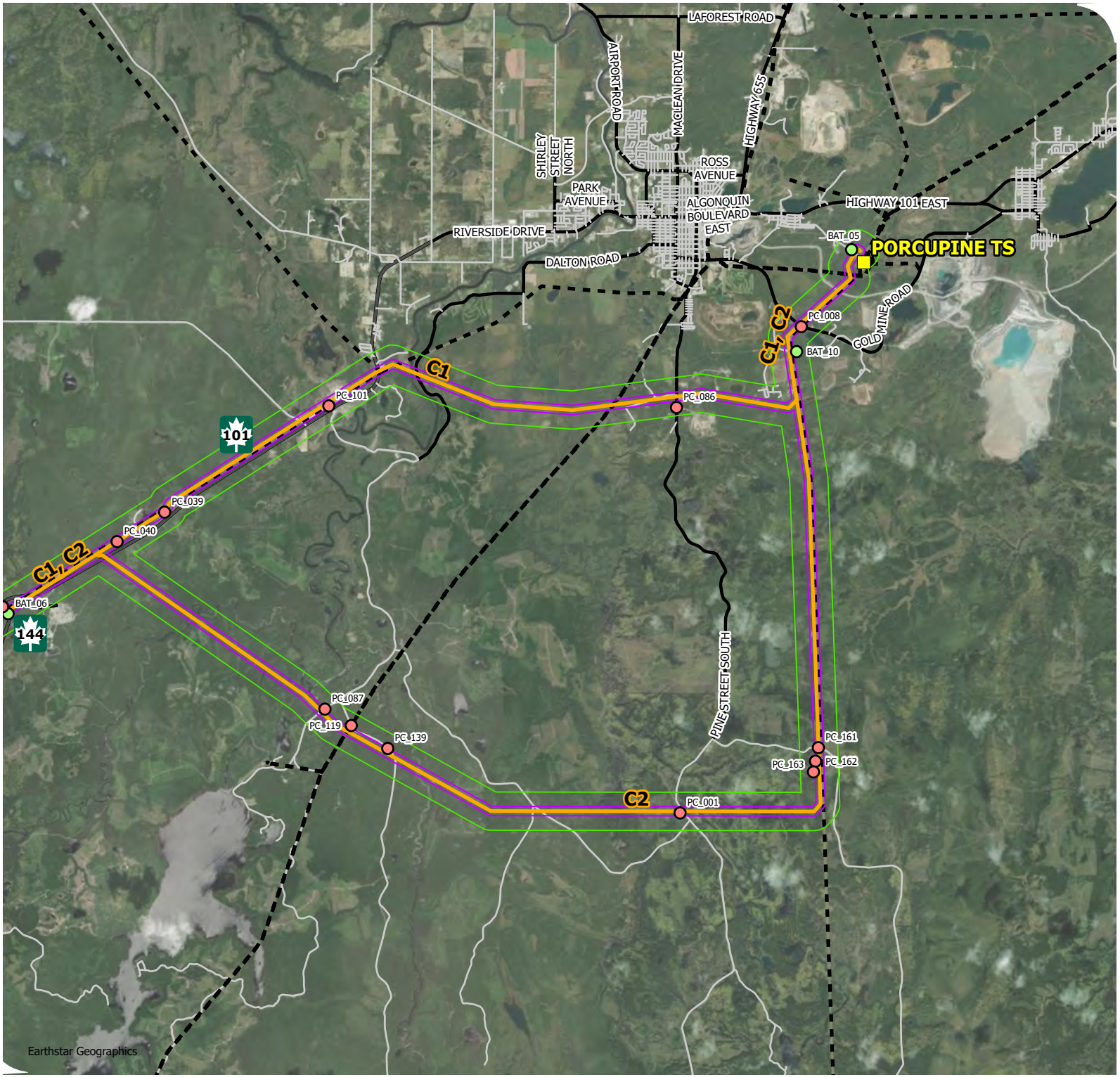
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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 404. BREEDING BIRD SURVEY LOCATIONS



Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

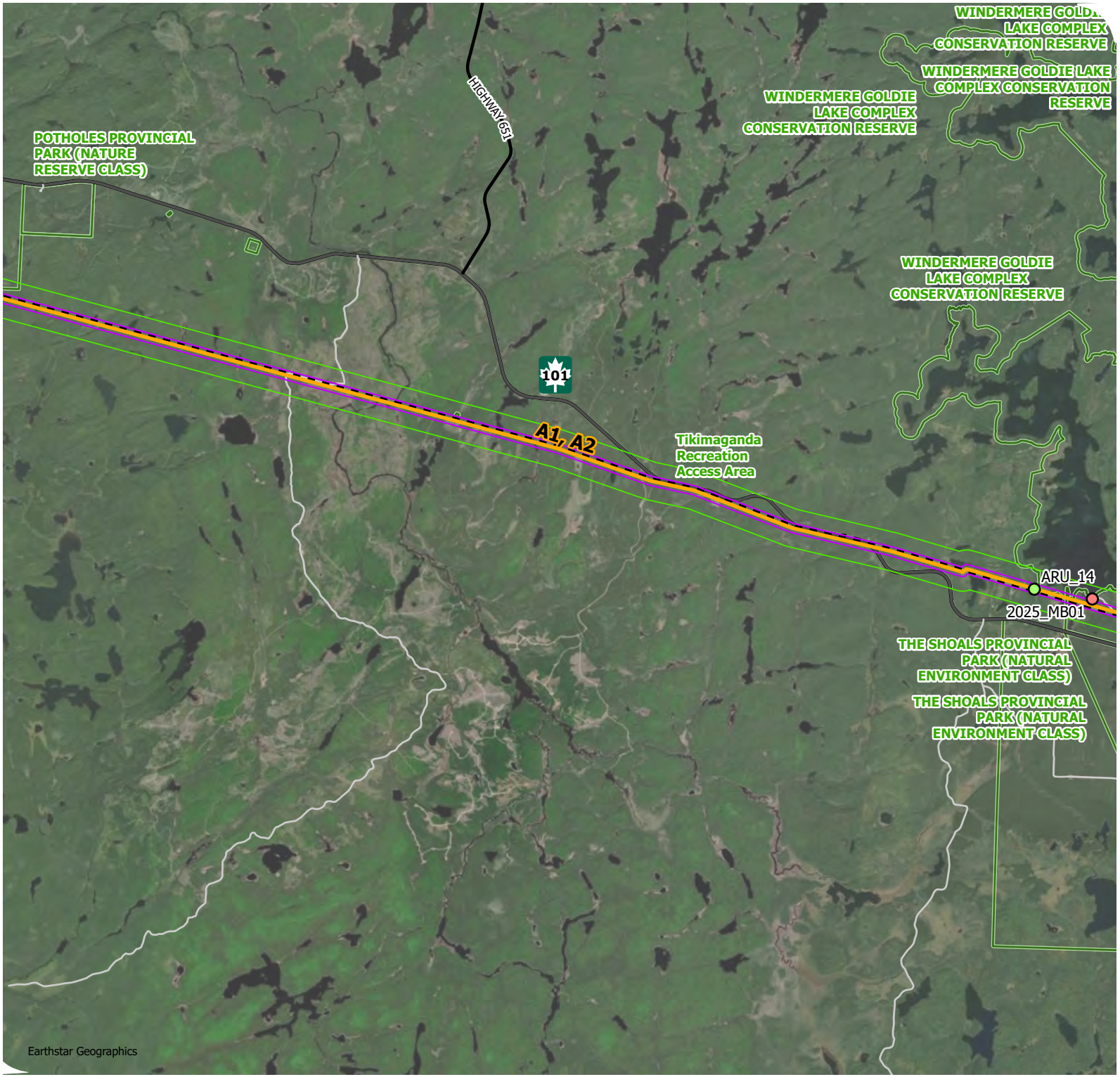
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 405. MARSH BIRD SURVEY LOCATIONS

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In Person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

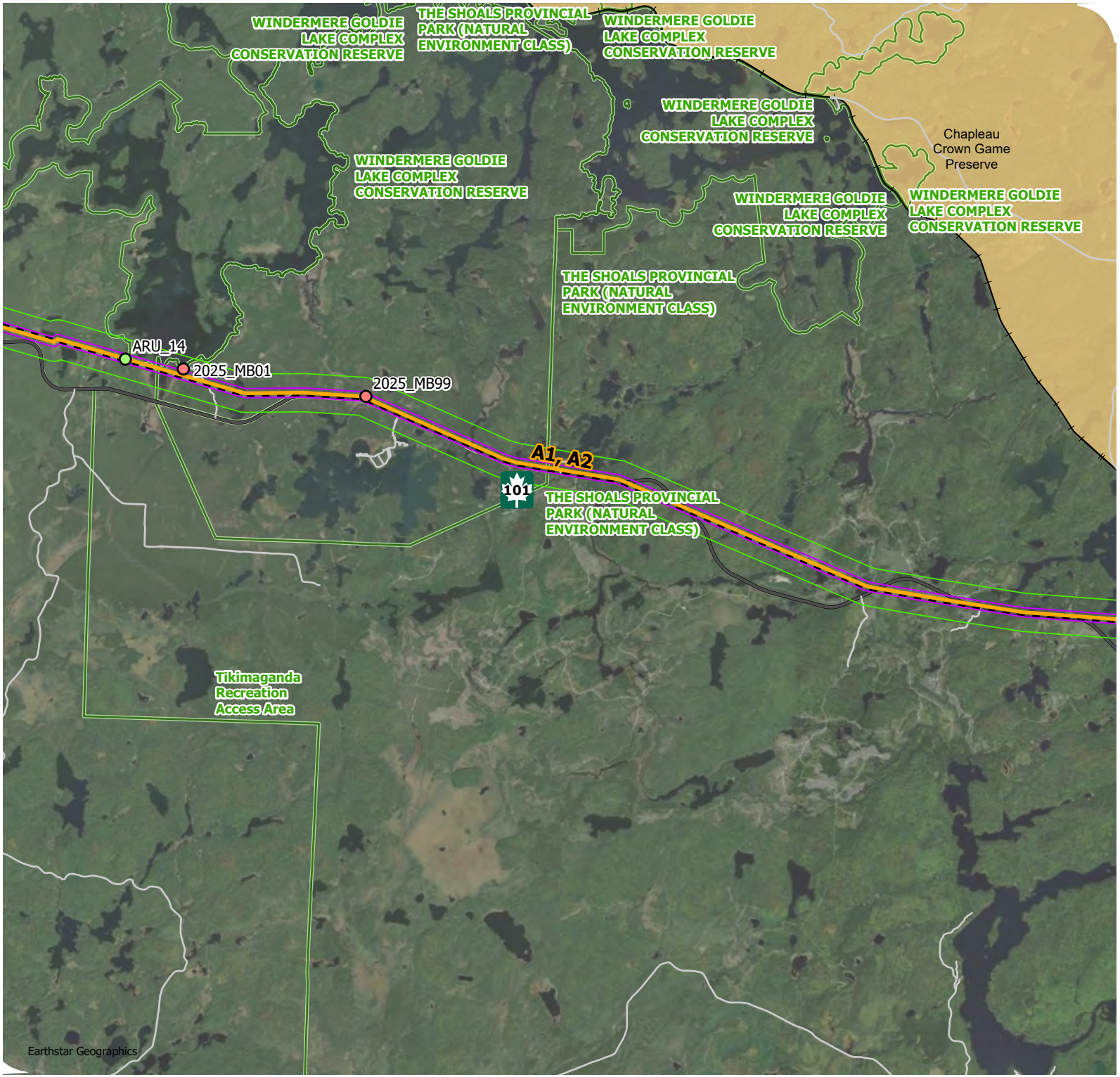
MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 406. MARSH BIRD SURVEY LOCATIONS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In Person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

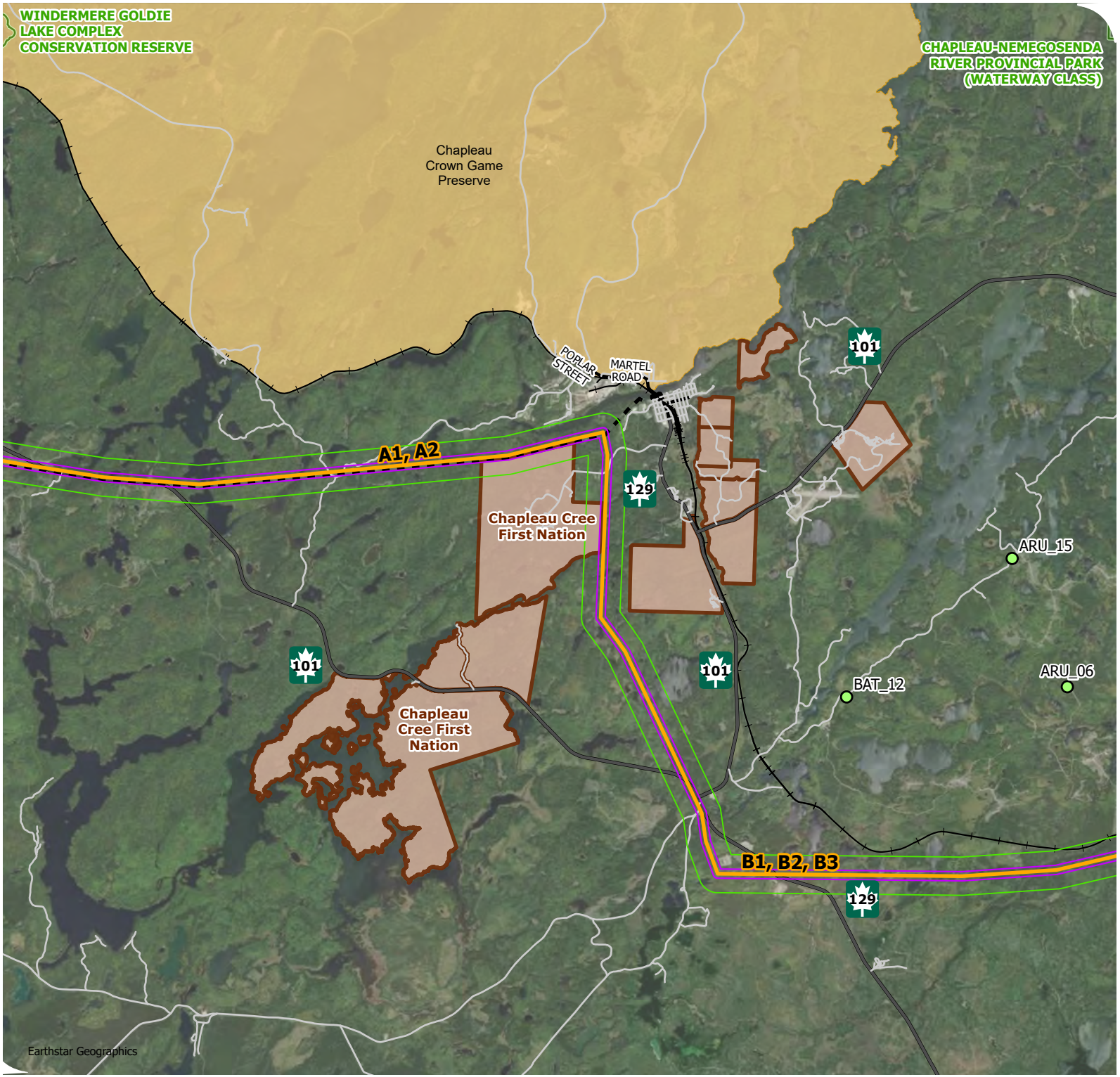
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
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FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 407. MARSH BIRD SURVEY LOCATIONS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

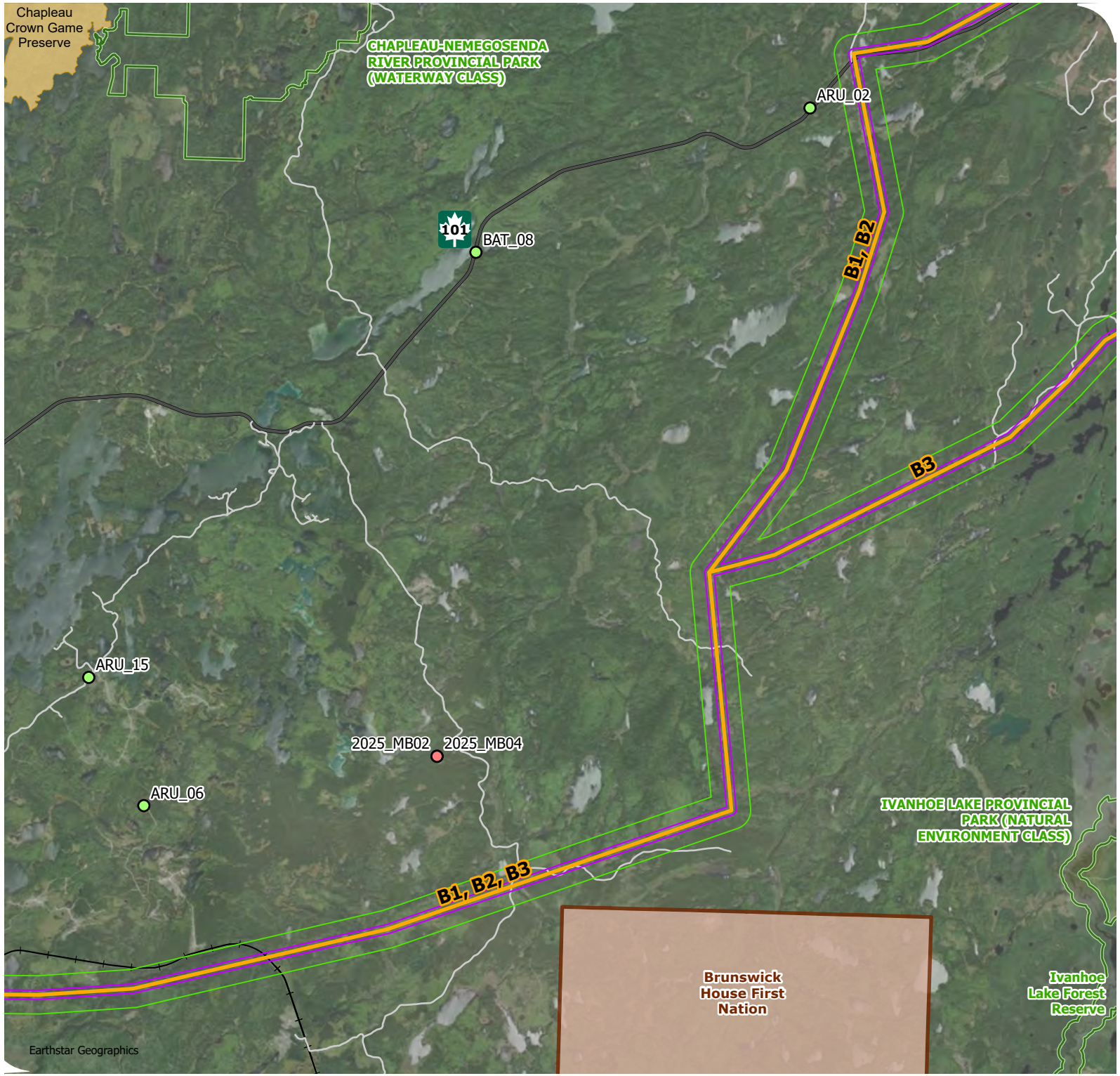
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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 408. MARSH BIRD SURVEY LOCATIONS



Mapping Extent - Ivanhoe Lake 1

- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In Person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

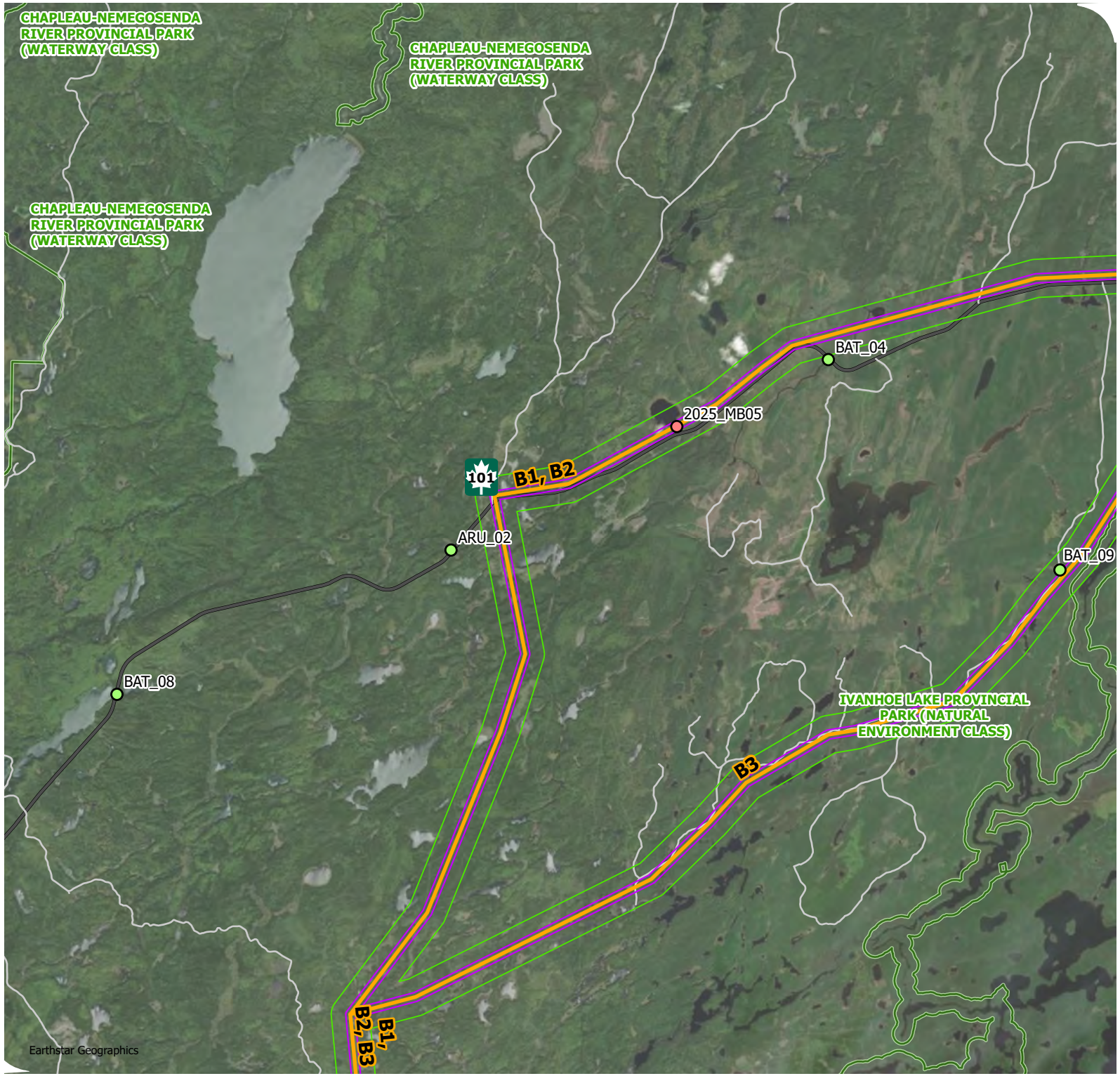
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 409. MARSH BIRD SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In Person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

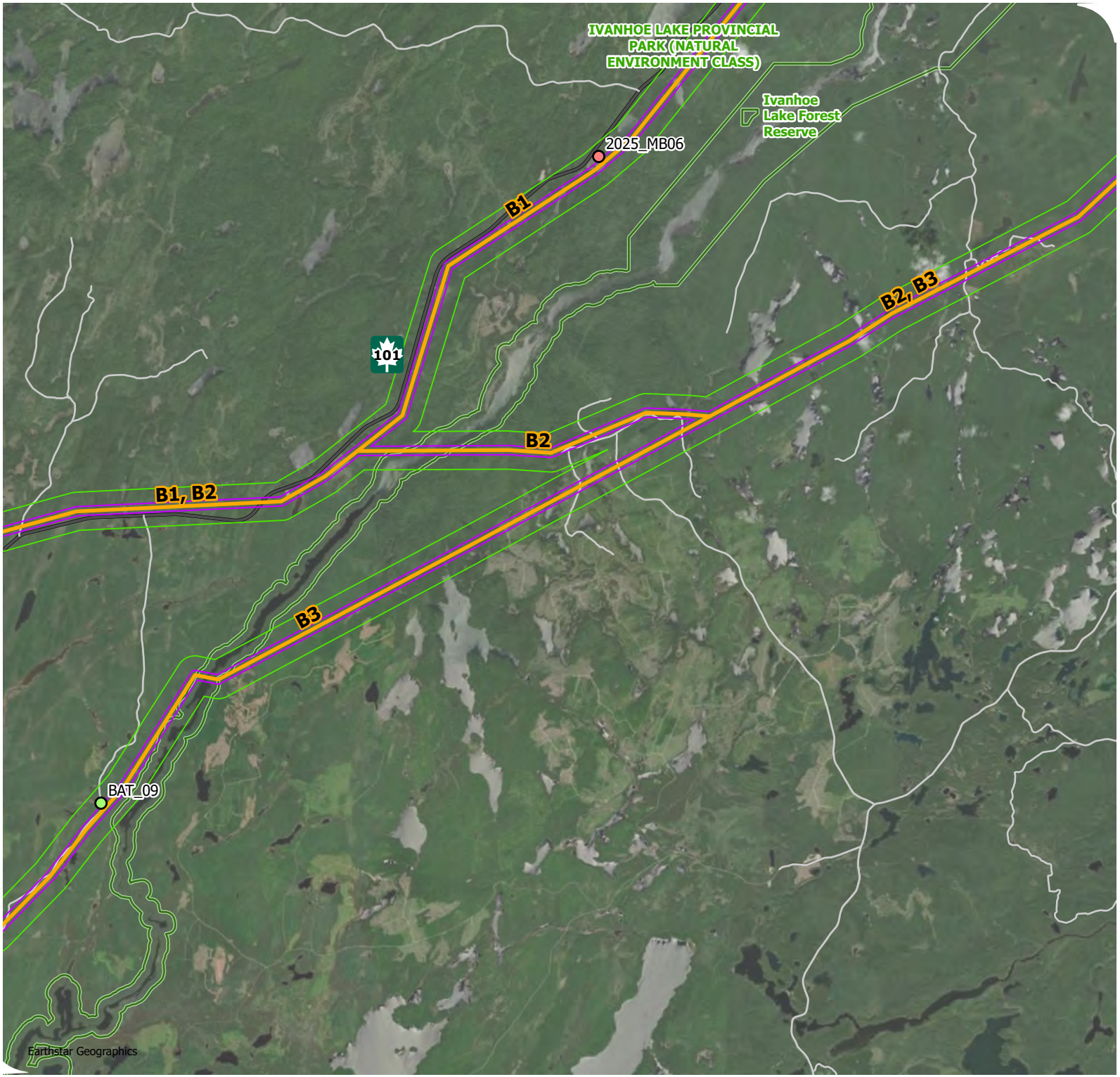
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 410. MARSH BIRD SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In Person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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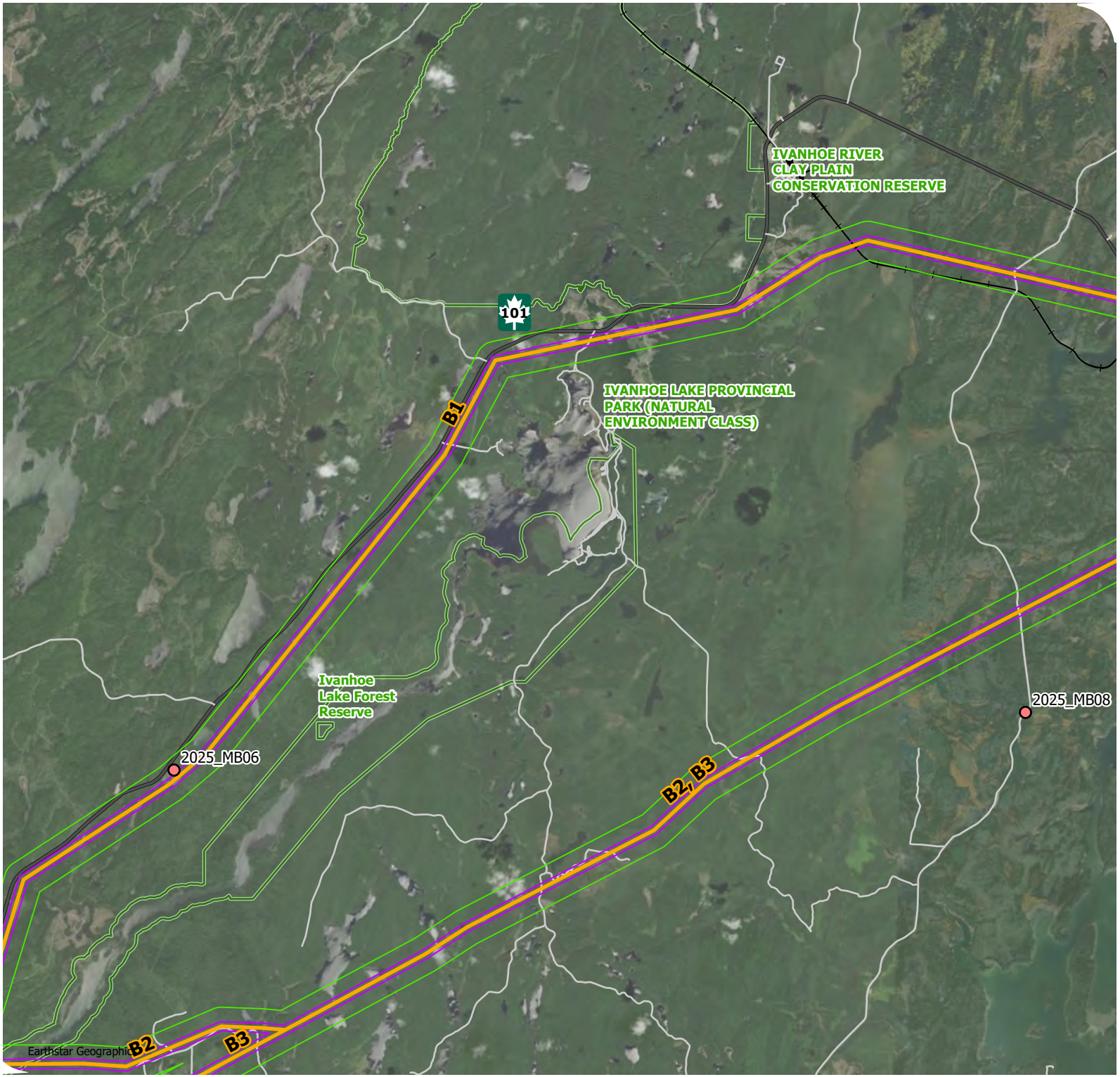
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WAWA TIMMINS POWER LINE

FIGURE 411. MARSH BIRD SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 4



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- In Person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

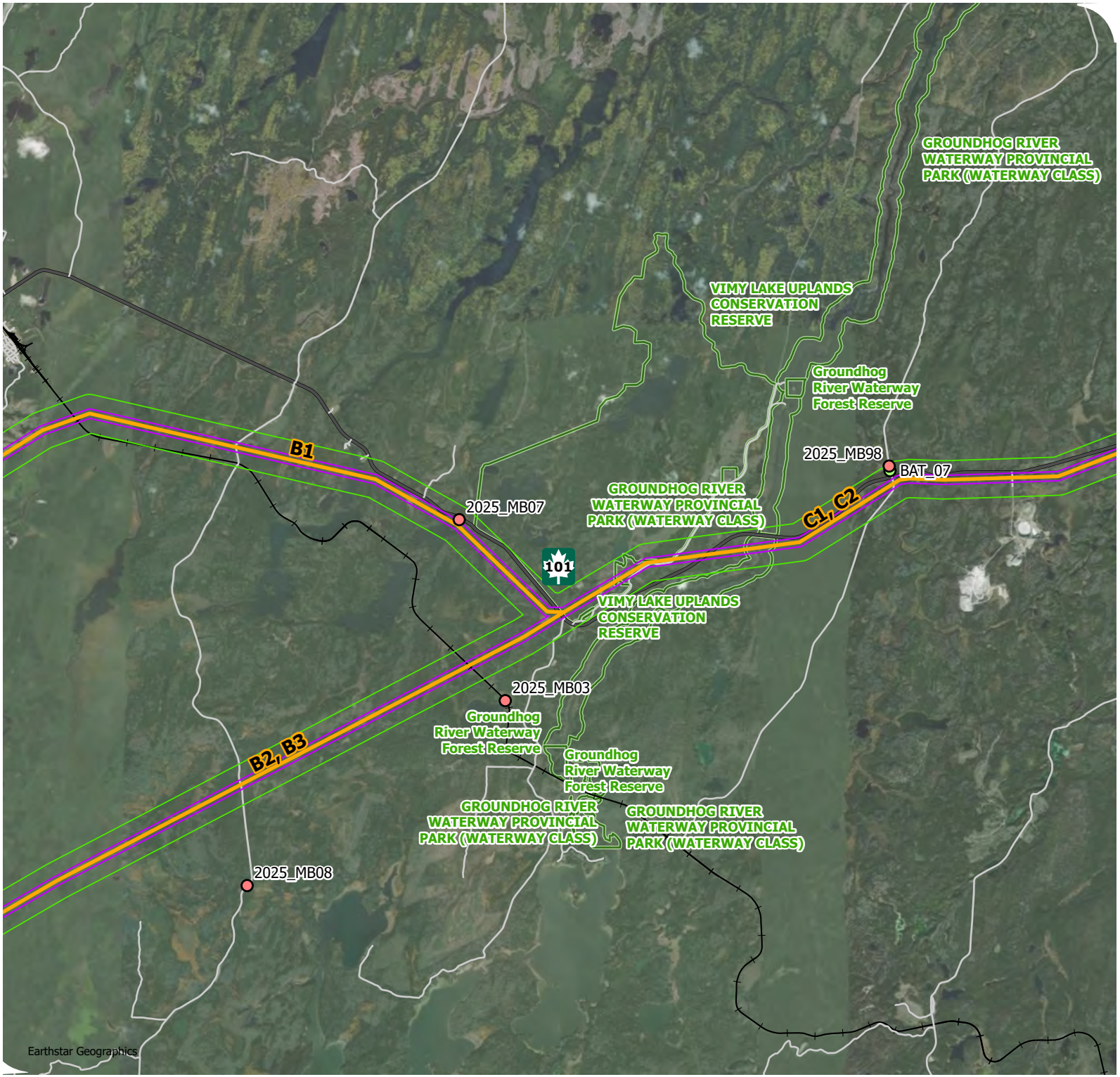
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 412. MARSH BIRD SURVEY LOCATIONS

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In Person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

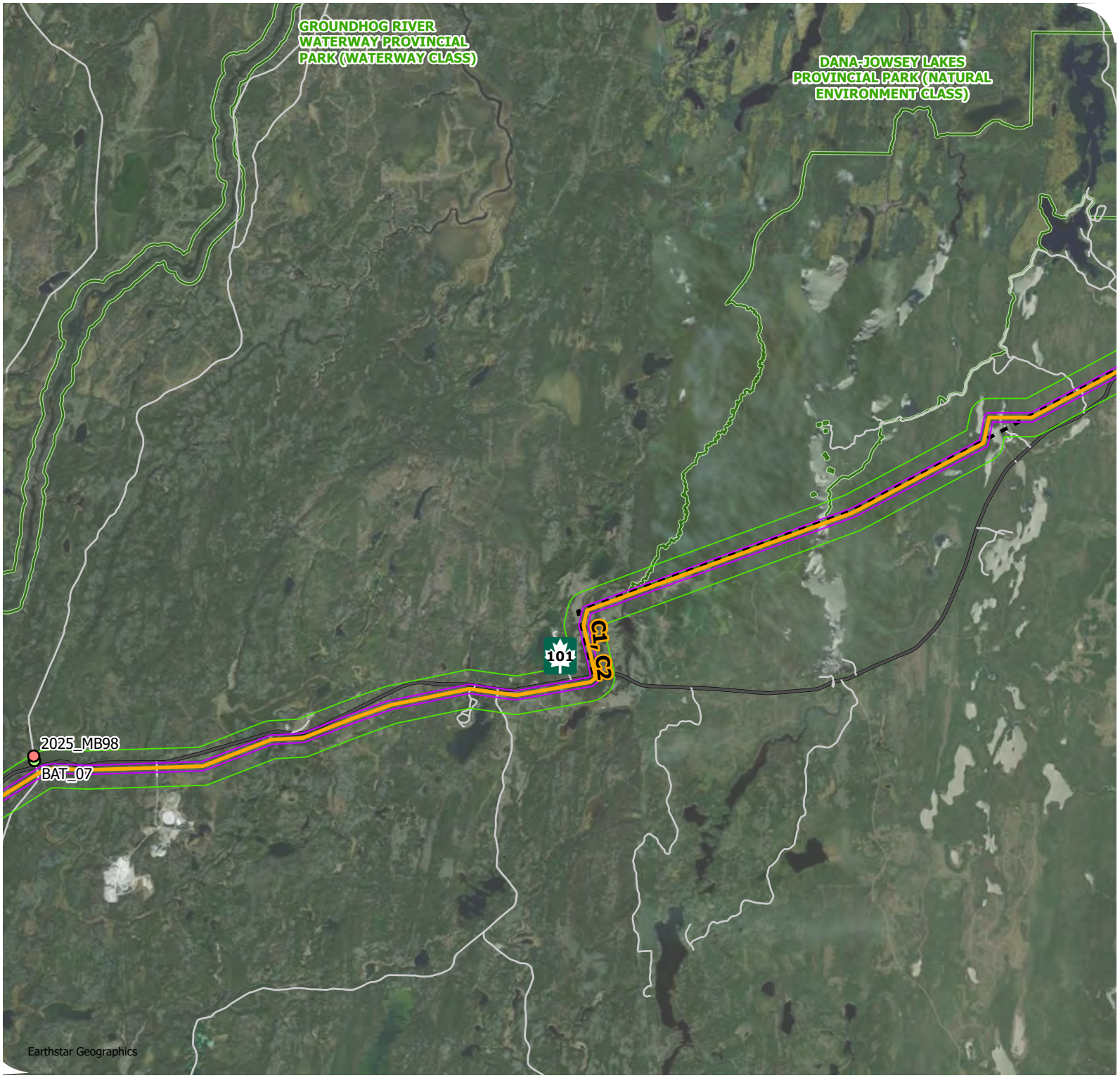
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 413. MARSH BIRD SURVEY LOCATIONS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- In Person

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5

WAWA TIMMINS POWER LINE

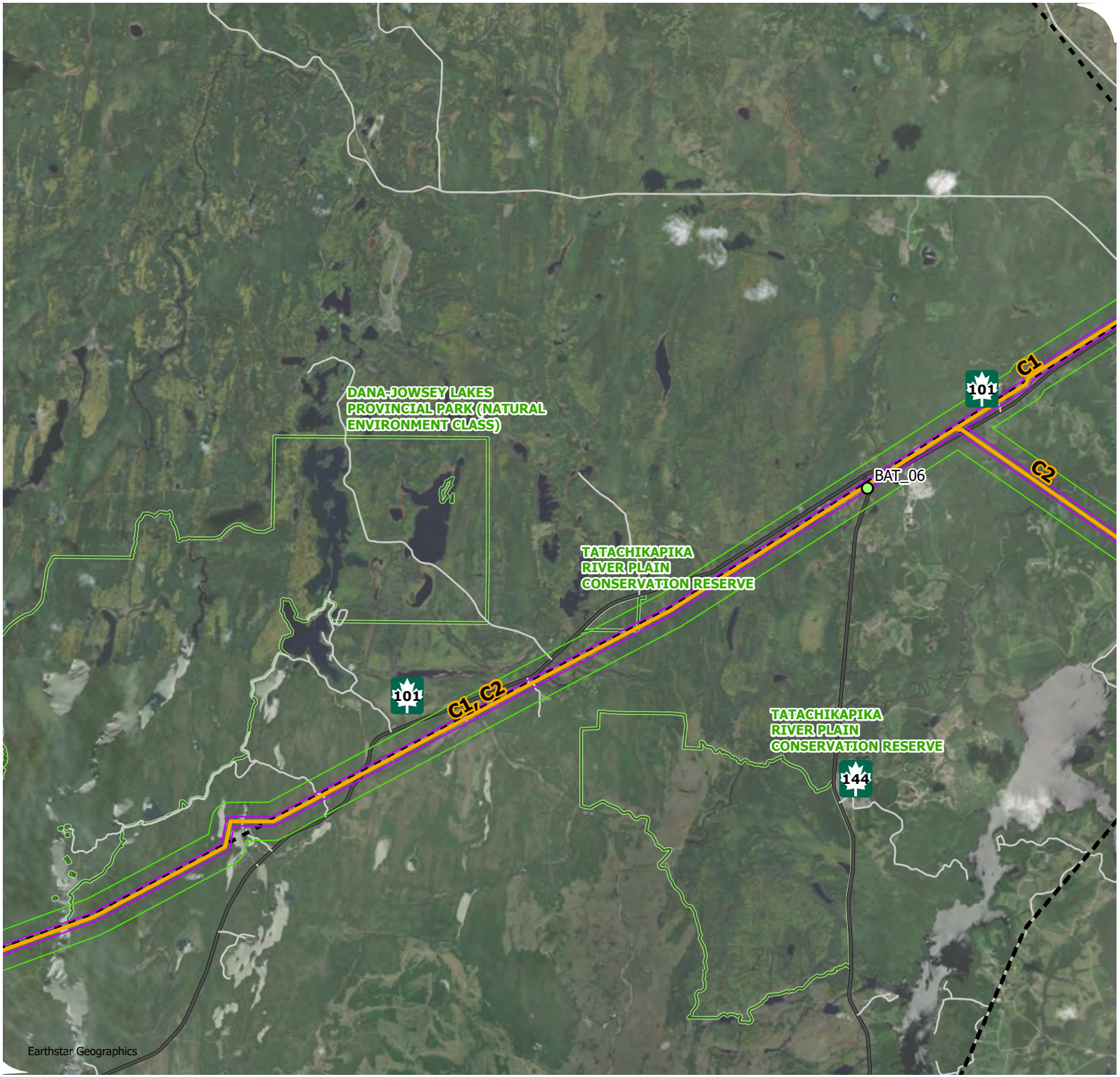
FIGURE 414. MARSH BIRD SURVEY LOCATIONS

Mapping Extent -
Dana-Jowsey Lakes 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

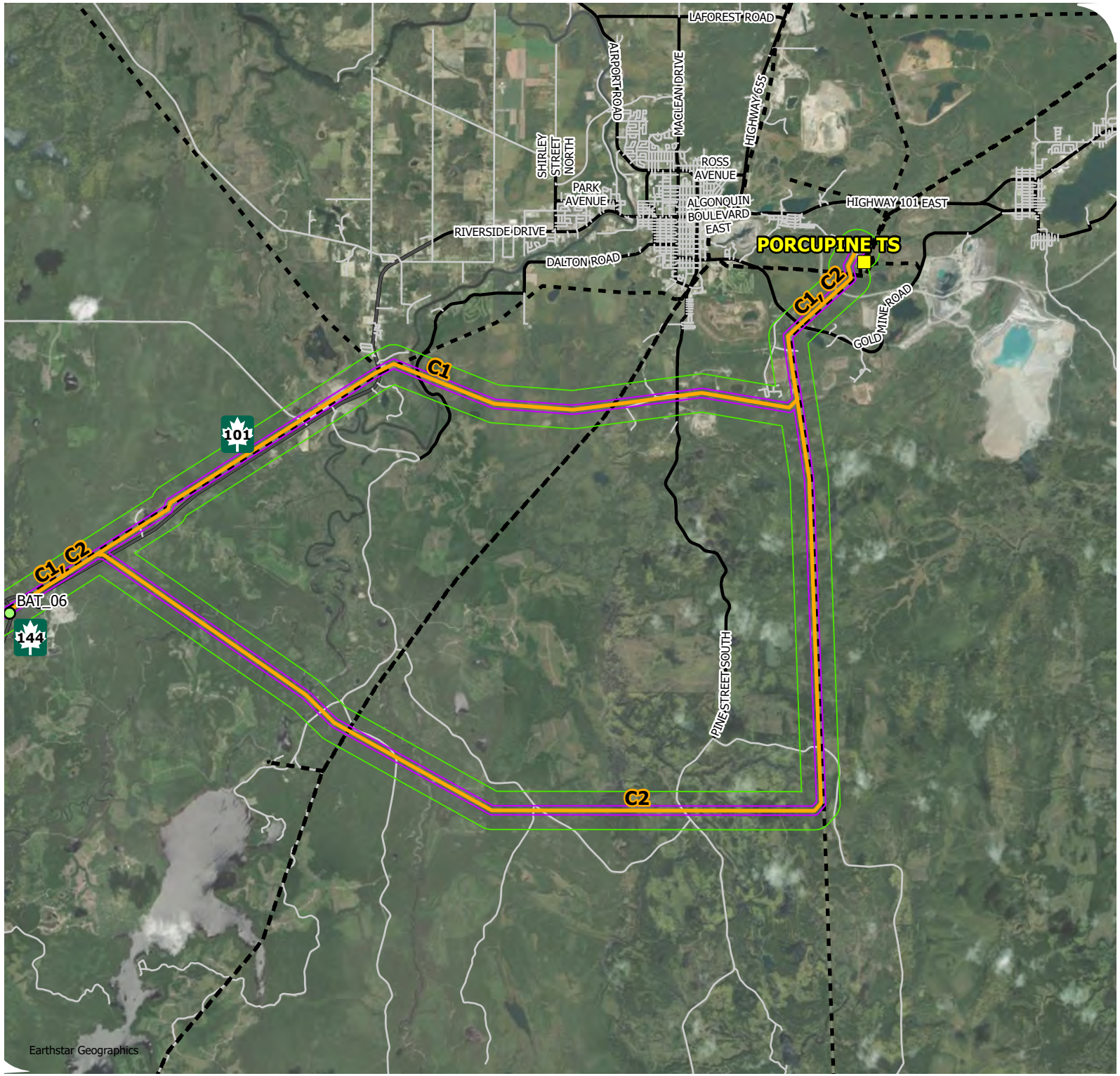
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 415. MARSH BIRD SURVEY LOCATIONS



Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

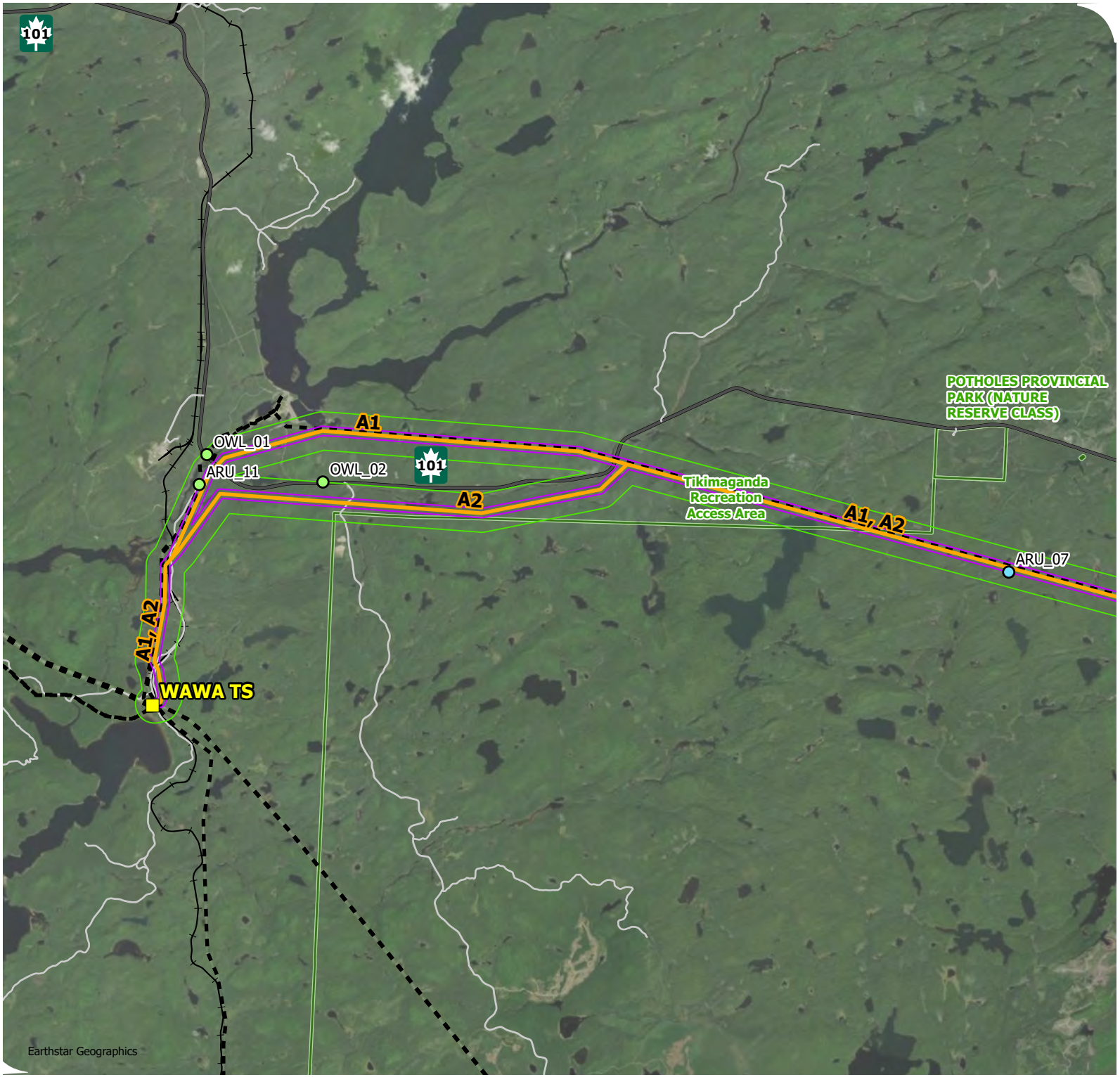
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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 416. OWL SURVEY LOCATIONS



Mapping Extent - Wawa Station

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- ARU (Incidental)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

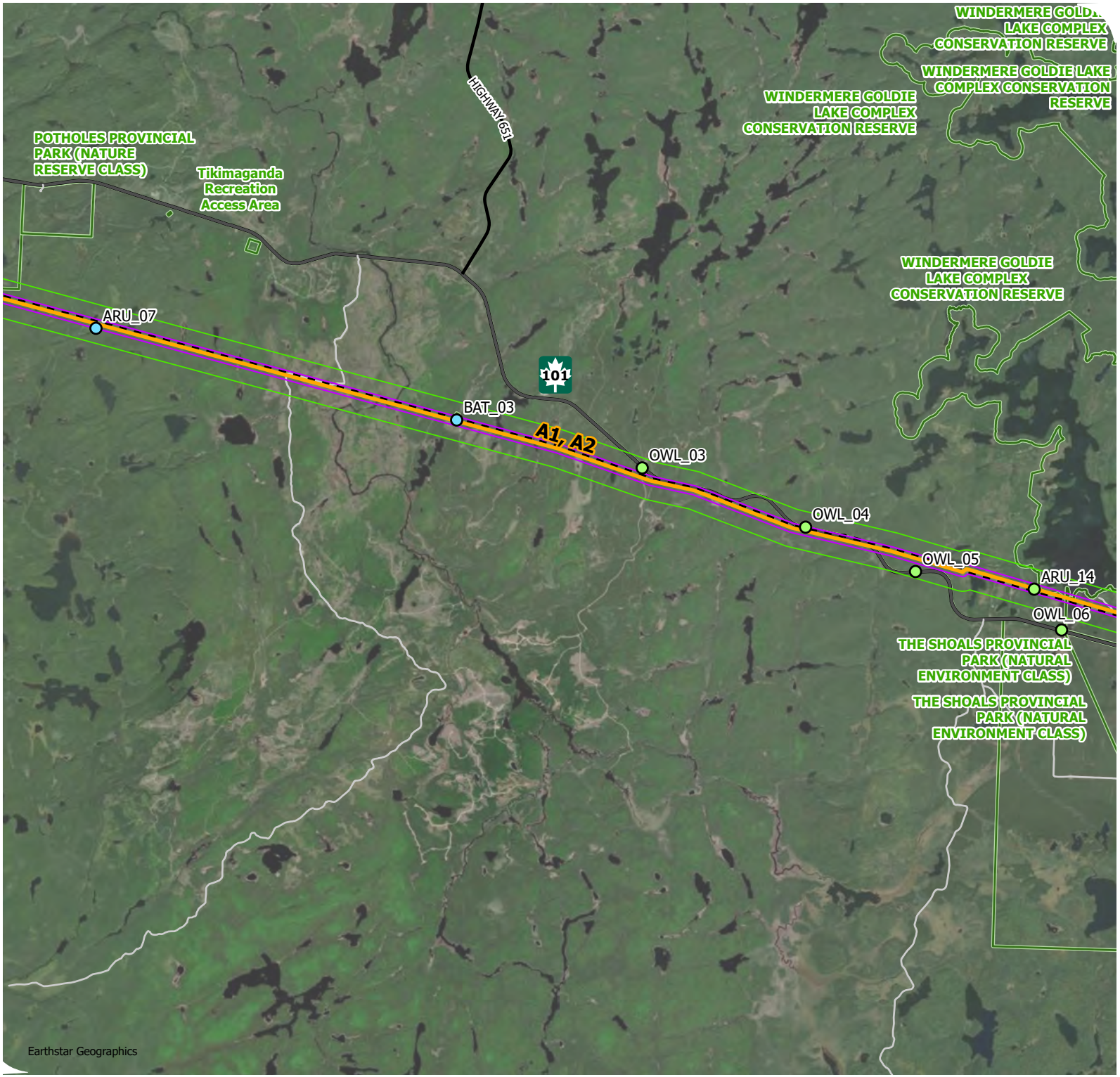
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 417. OWL SURVEY LOCATIONS

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- ARU (Incidental)

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

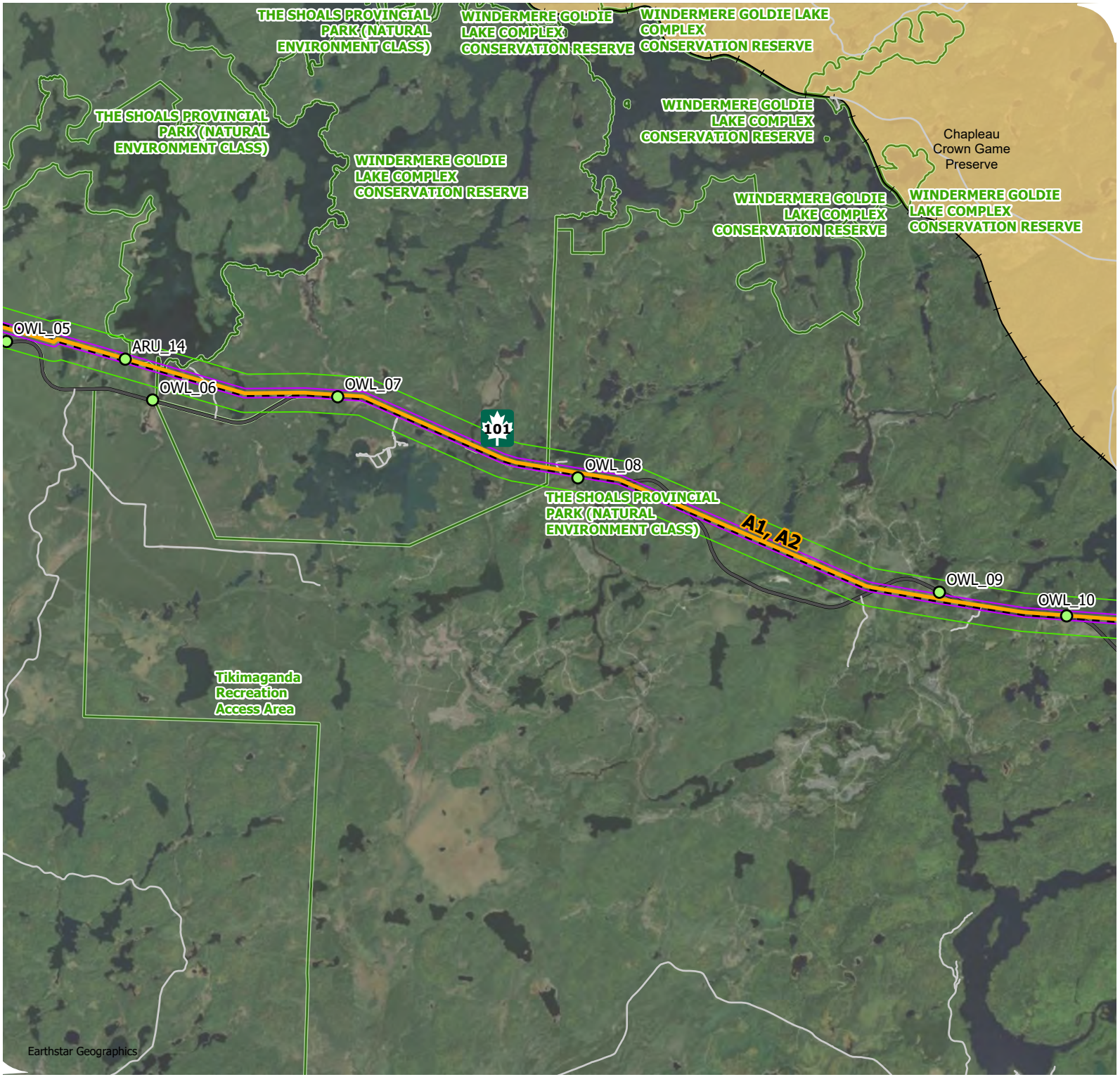
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 418. OWL SURVEY LOCATIONS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

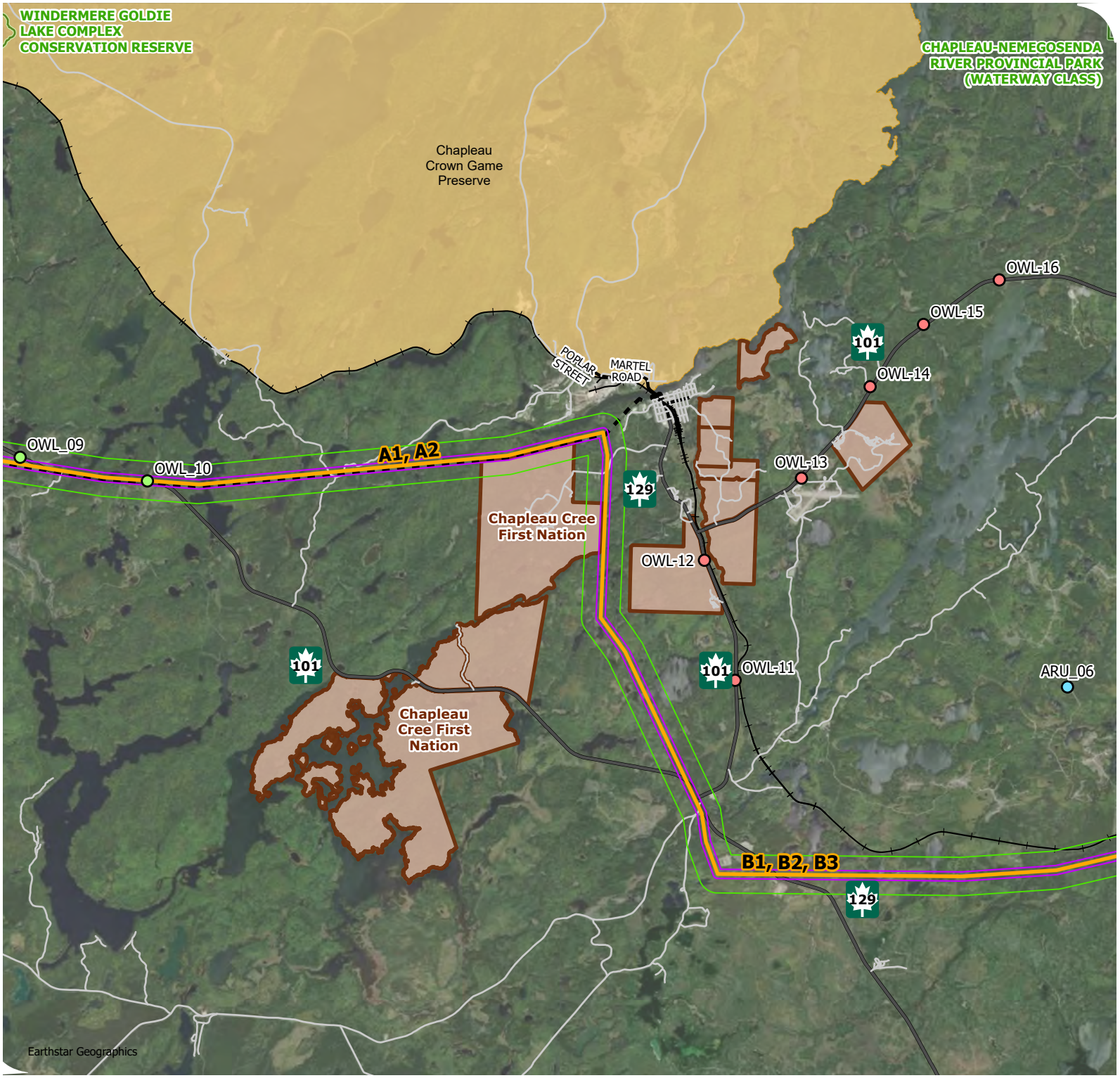
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 419. OWL SURVEY LOCATIONS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU
- ARU (Incidental)
- Roadside

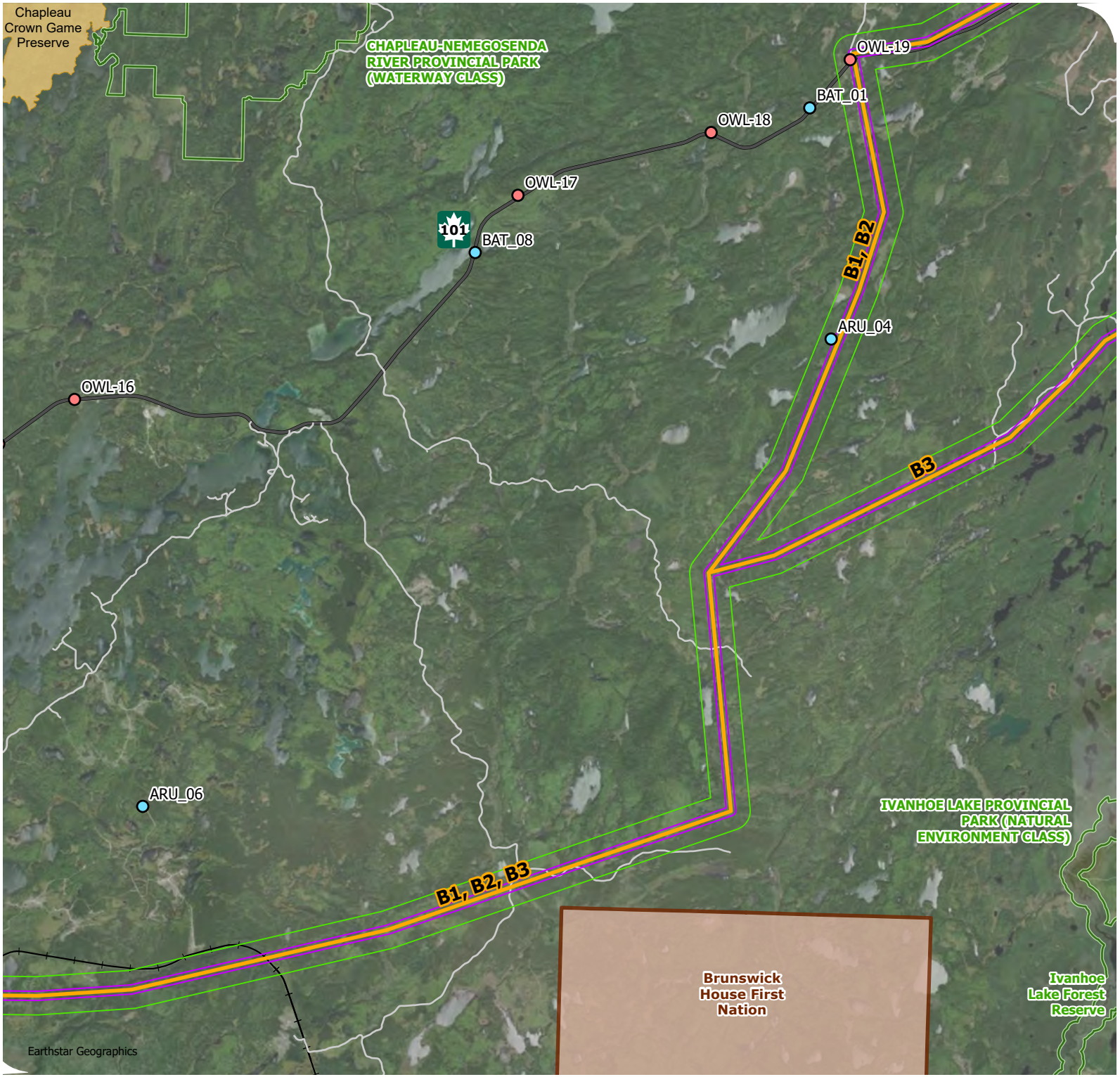
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MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25



WAWA TIMMINS POWER LINE

FIGURE 420. OWL SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 1

- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU (Incidental)
- Roadside

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

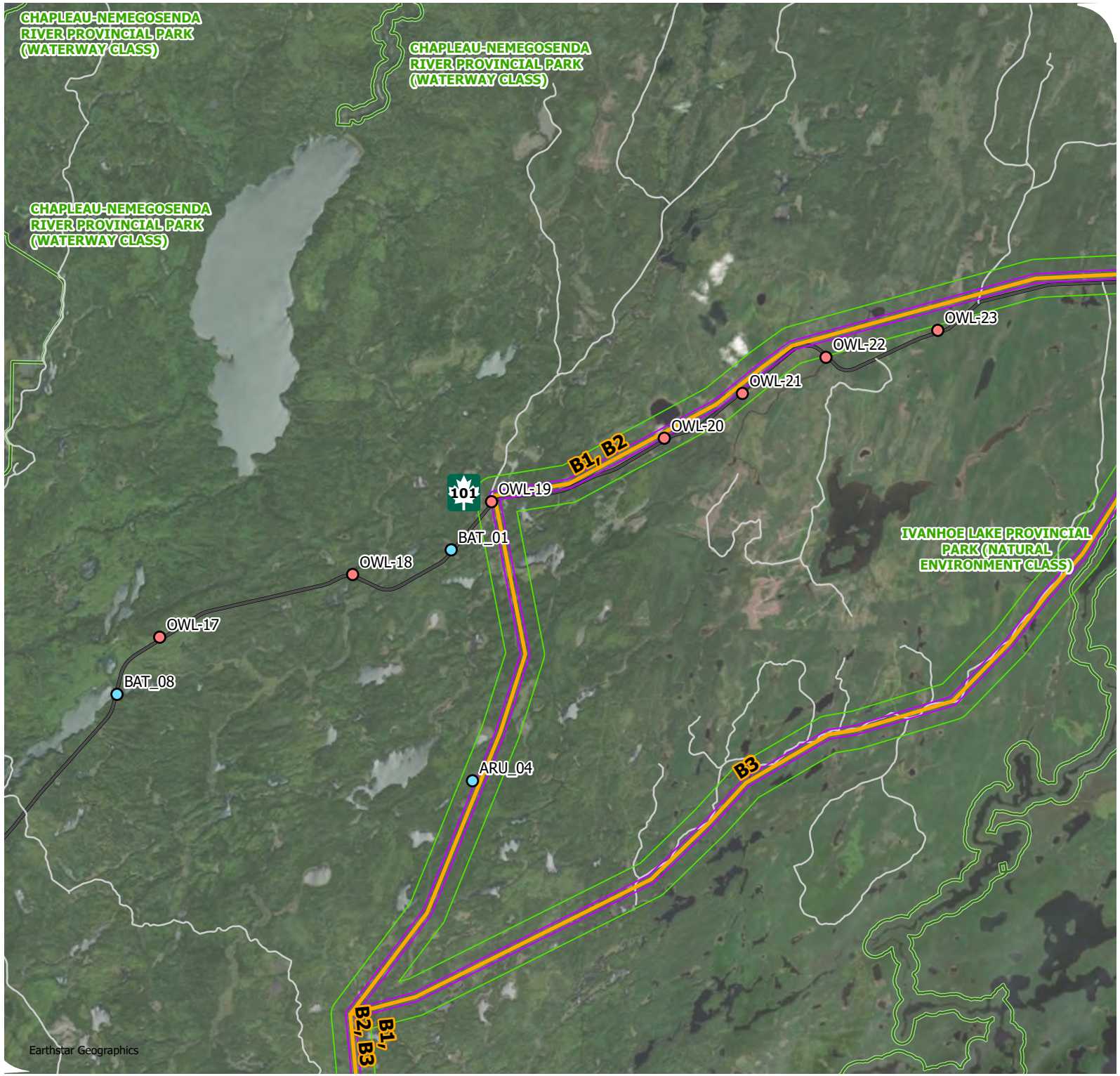
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 421. OWL SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU (Incidental)
- Roadside

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

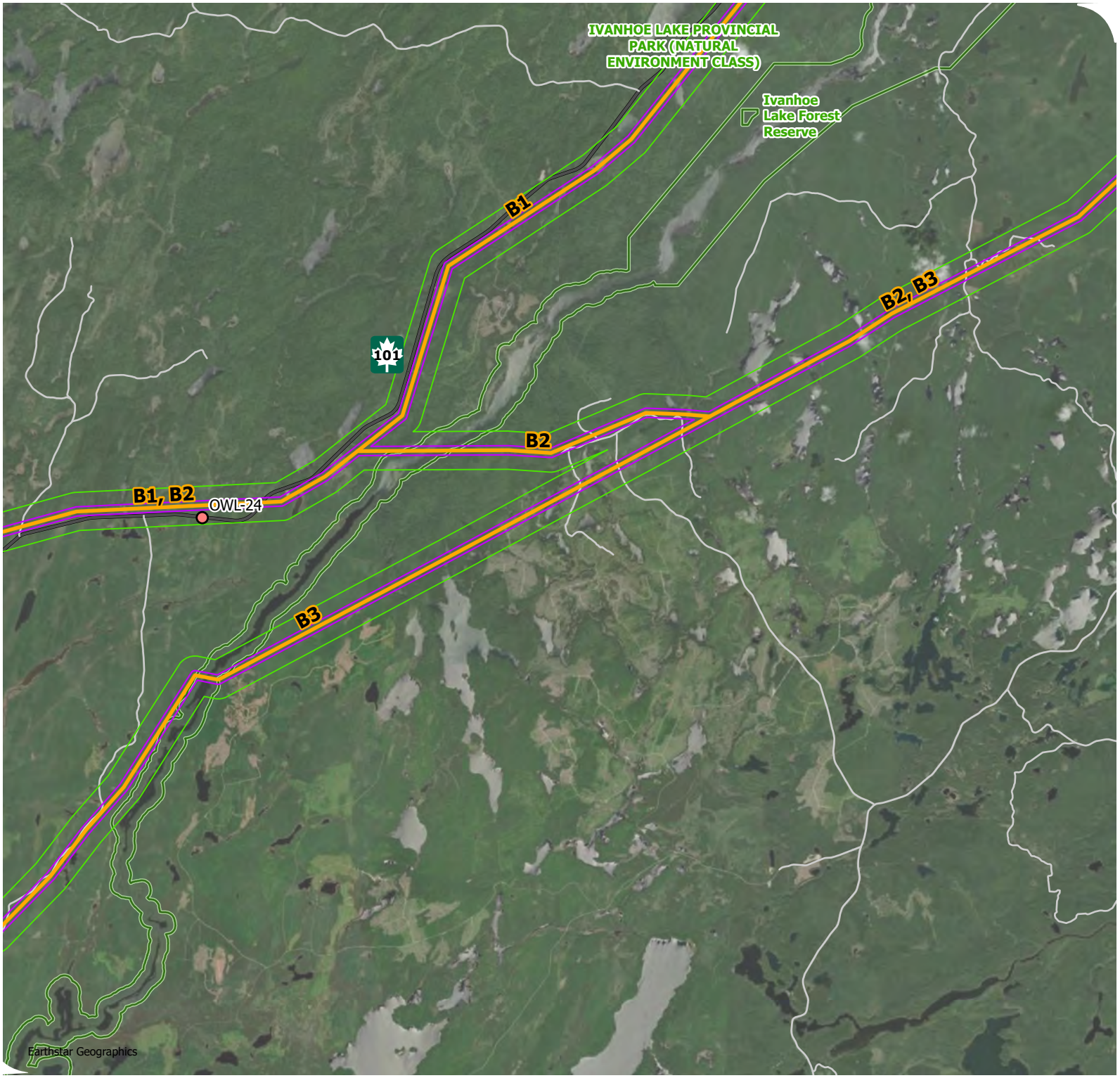
MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 422. OWL SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- Roadside

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

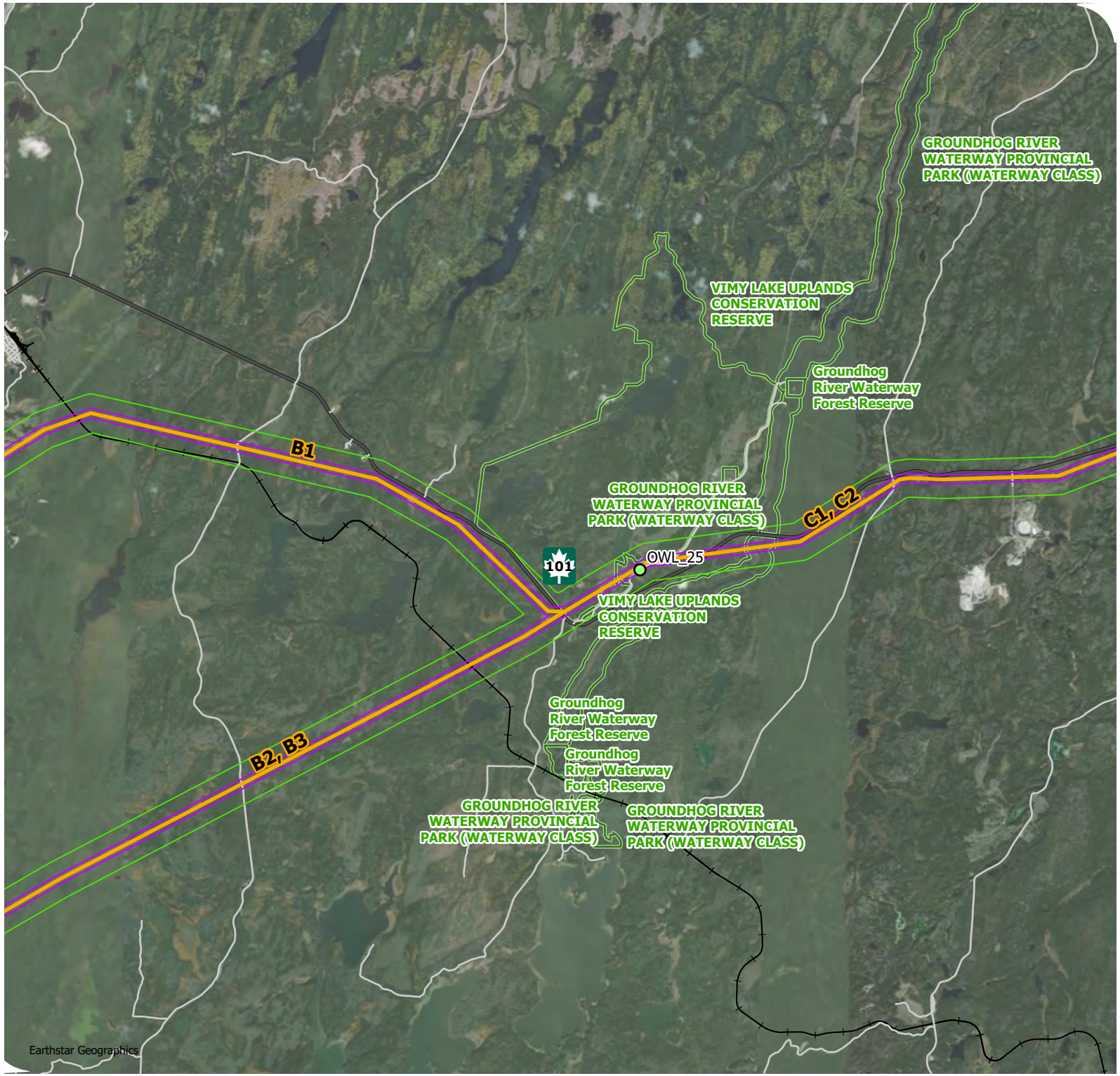
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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 423. OWL SURVEY LOCATIONS



Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- ARU

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

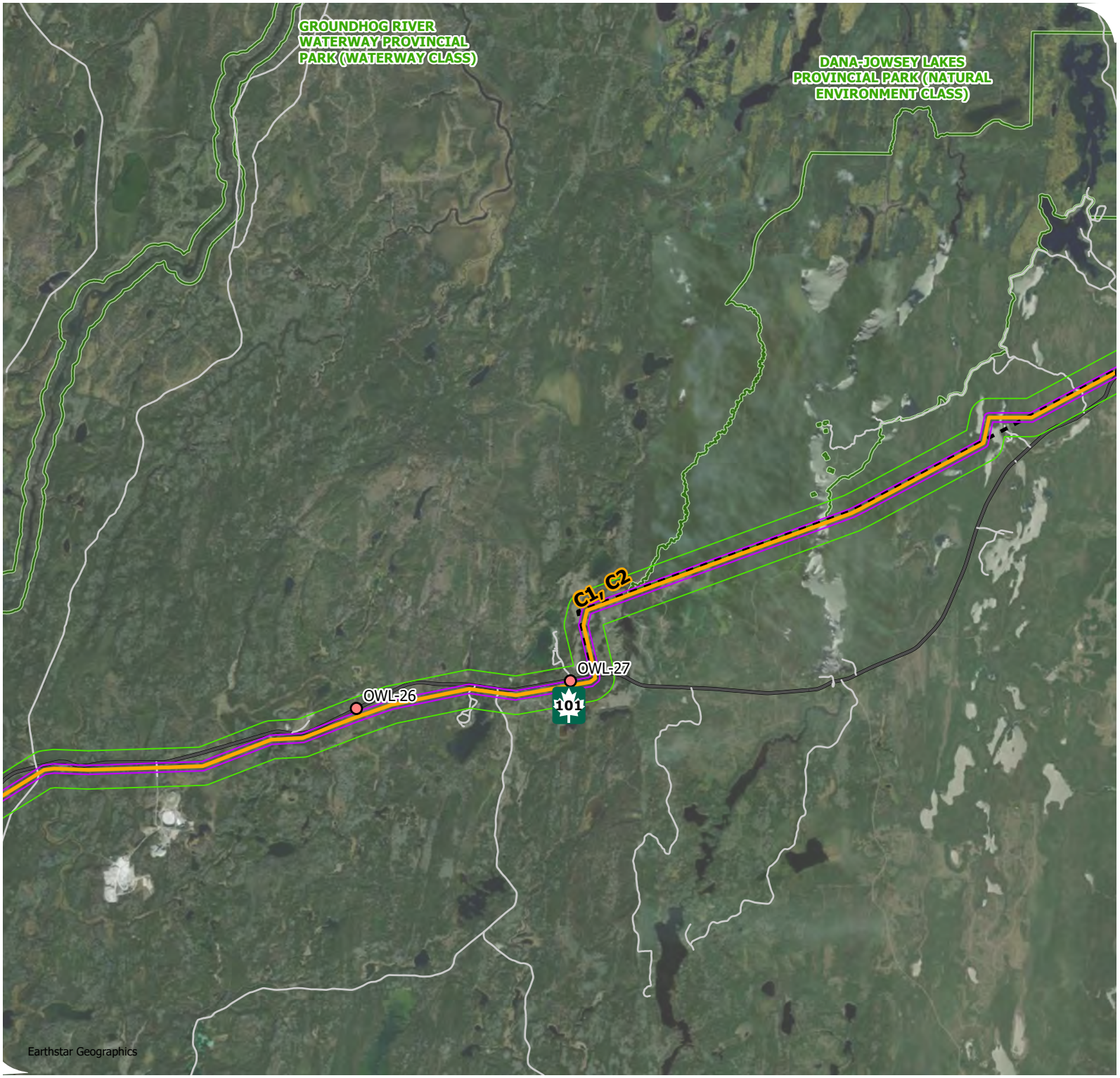
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 424. OWL SURVEY LOCATIONS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- Roadside

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5

WAWA TIMMINS POWER LINE

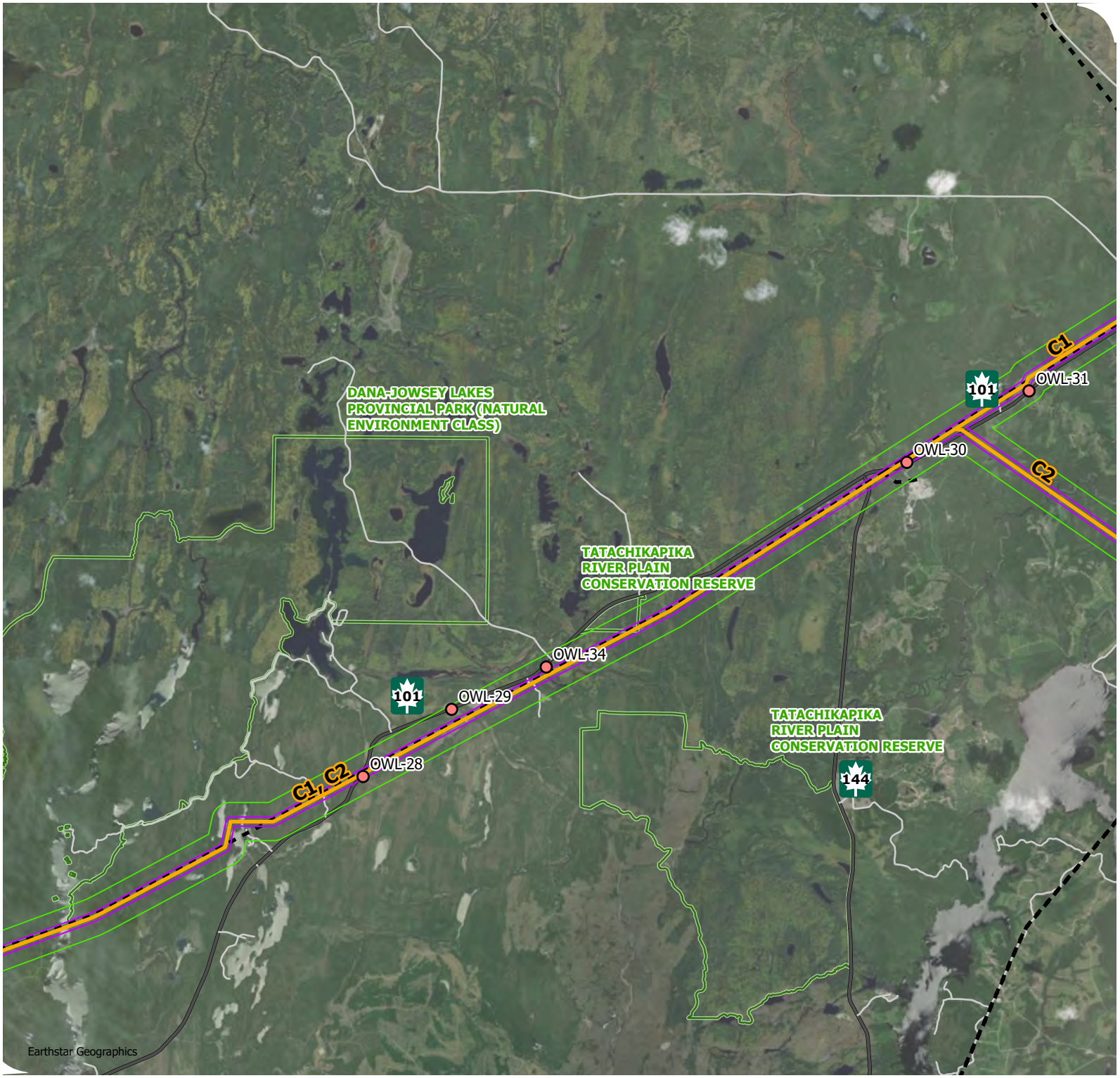
FIGURE 425. OWL SURVEY LOCATIONS

Mapping Extent -
Dana-Jowsey Lakes 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- Roadside



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

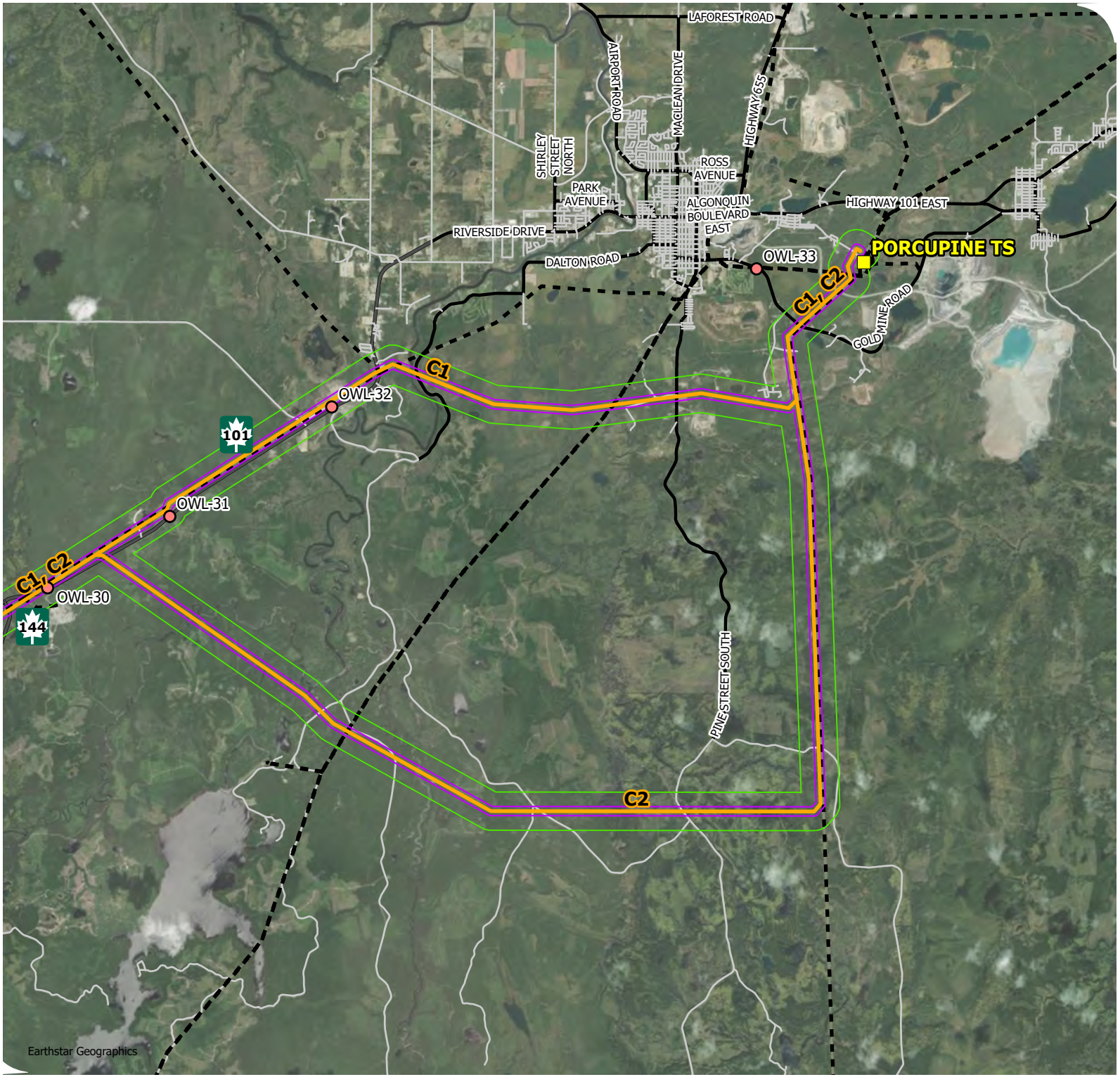
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 426. OWL SURVEY LOCATIONS

Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)

Survey Type

- Roadside

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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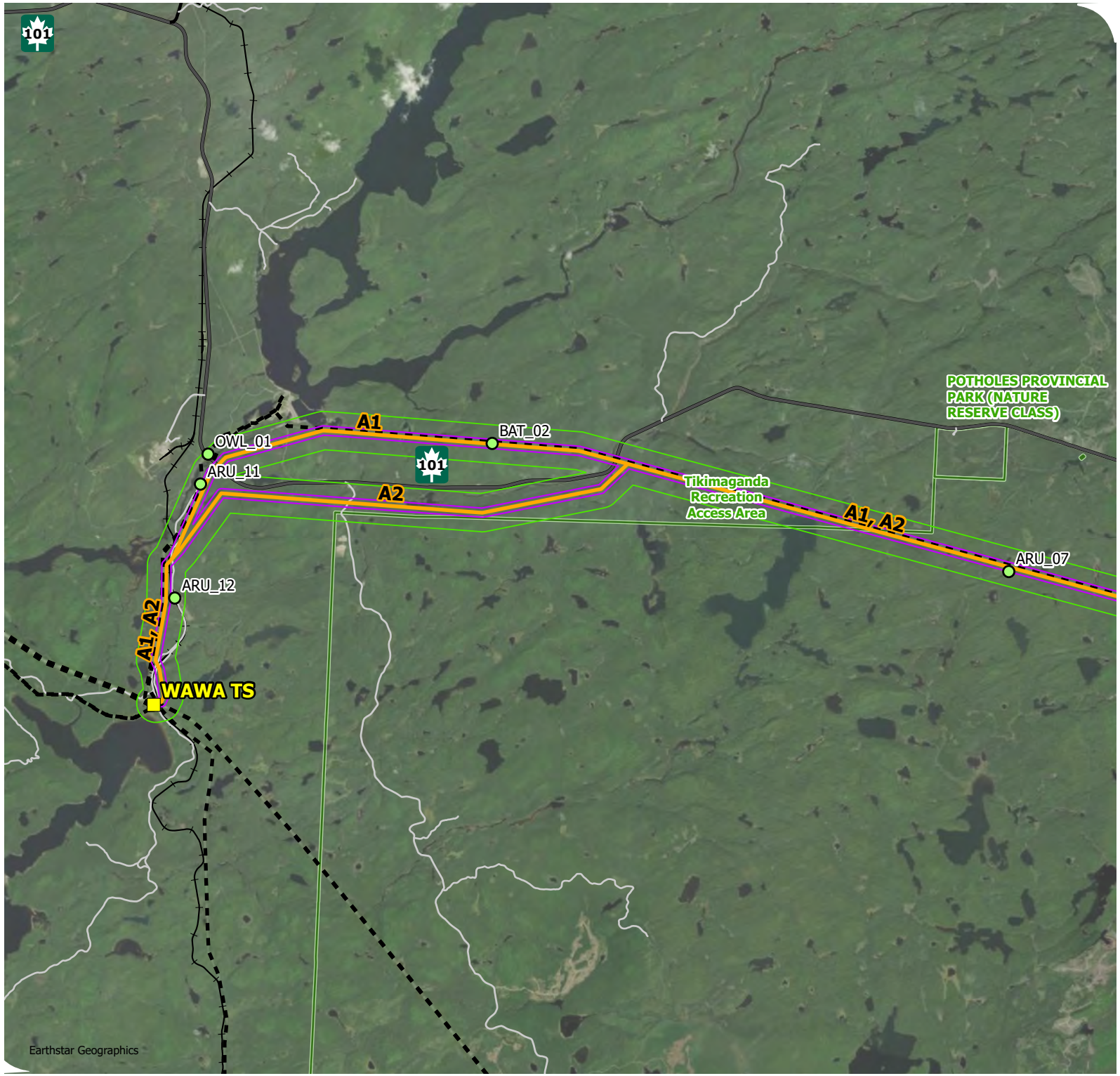
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WAWA TIMMINS POWER LINE

FIGURE 427. NIGHTJAR SURVEY LOCATIONS

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Nightjar Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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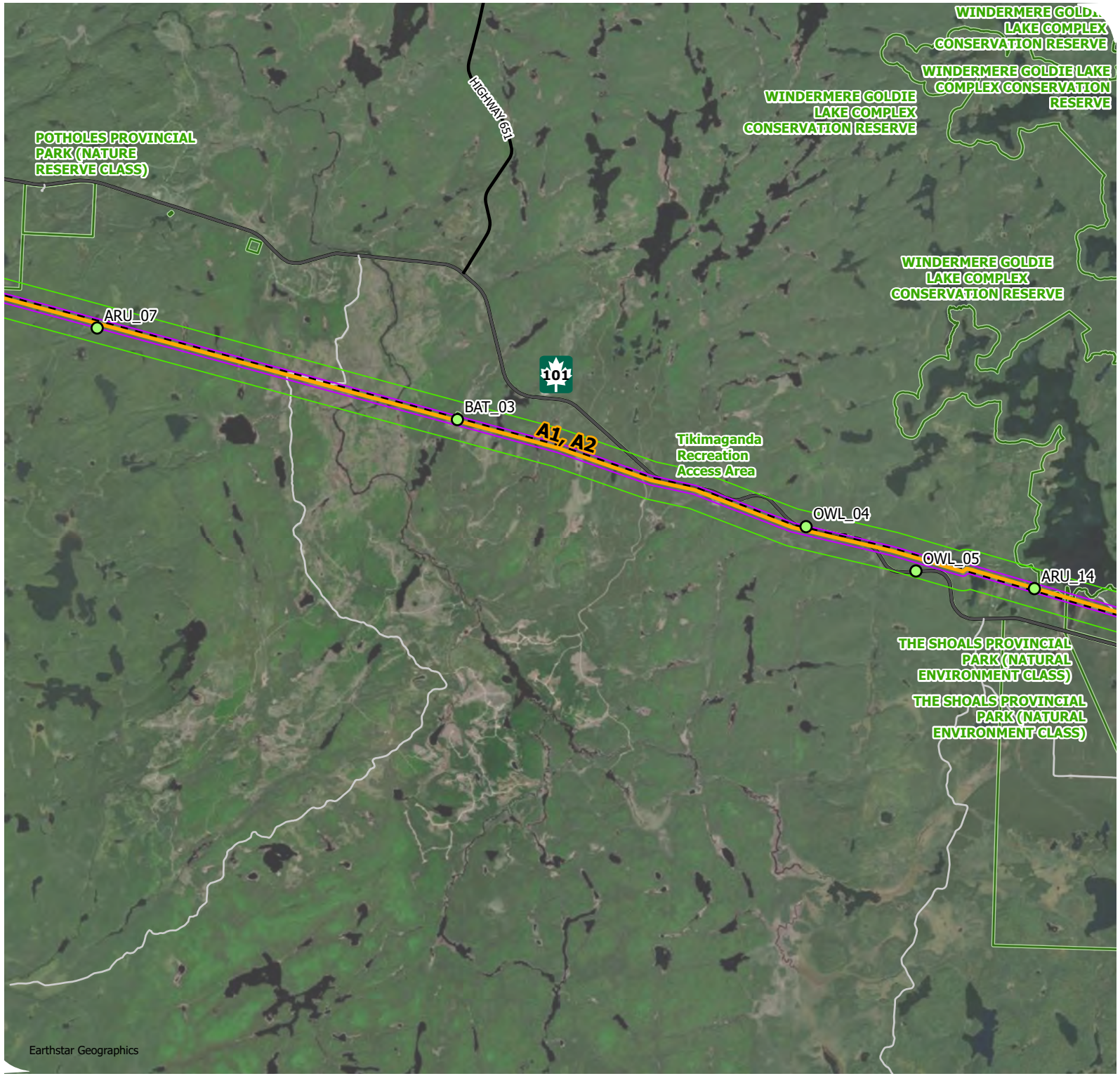
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WAWA TIMMINS POWER LINE

FIGURE 428. NIGHTJAR SURVEY LOCATIONS

Mapping Extent - Windermere Lake 1



- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Nightjar Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

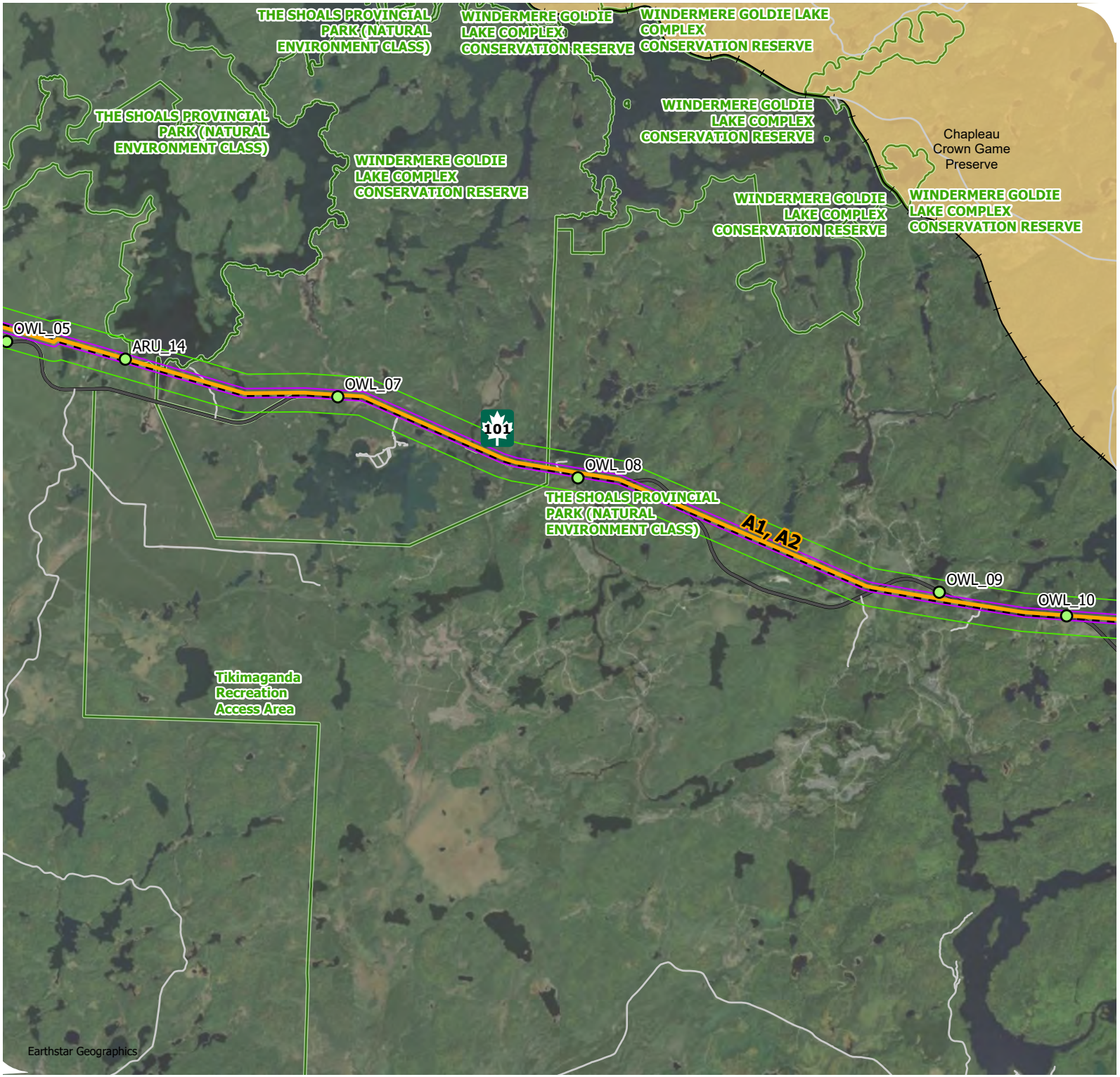
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 429. NIGHTJAR SURVEY LOCATIONS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Nightjar Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

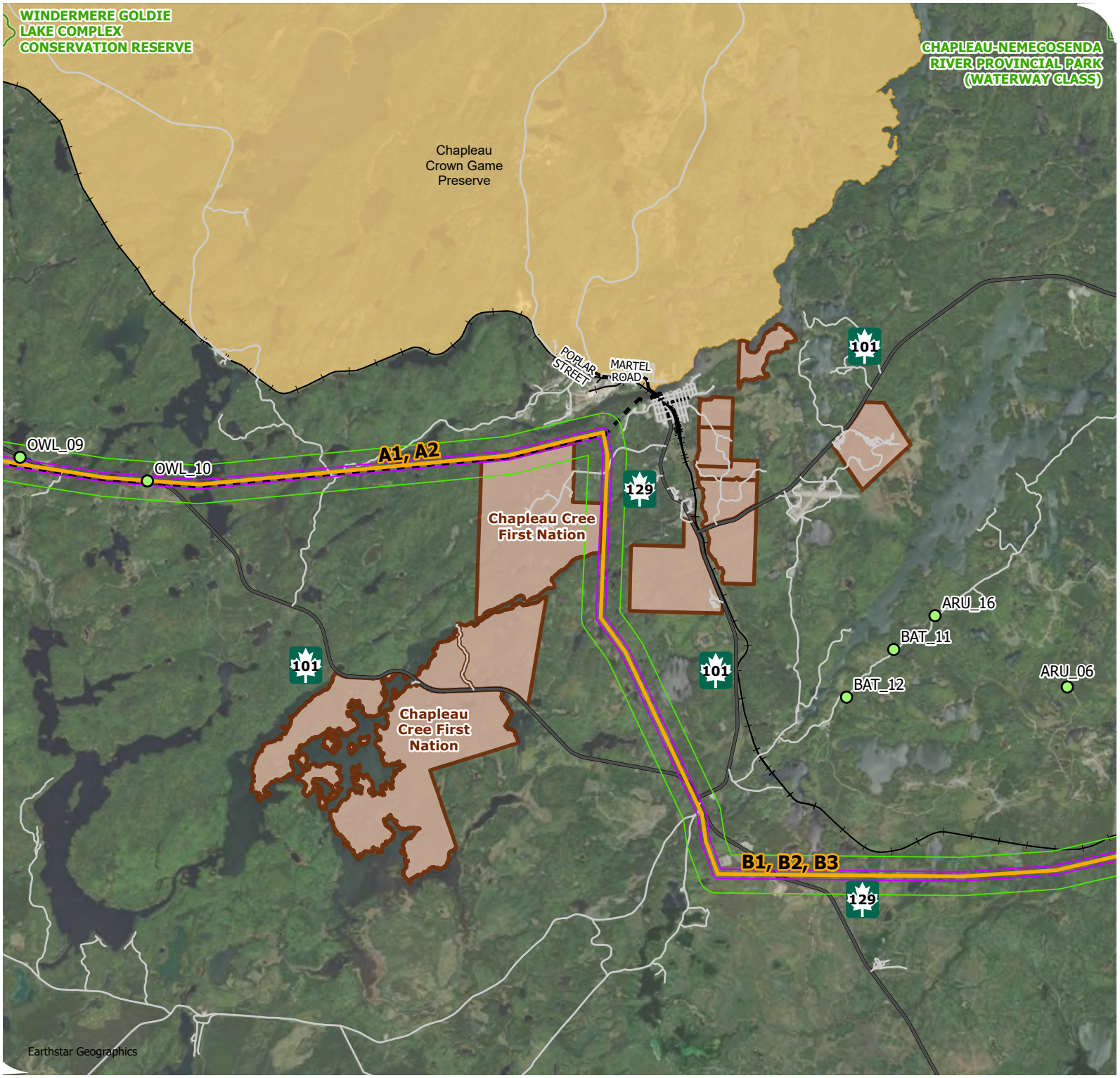
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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 430. NIGHTJAR SURVEY LOCATIONS



Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Nightjar Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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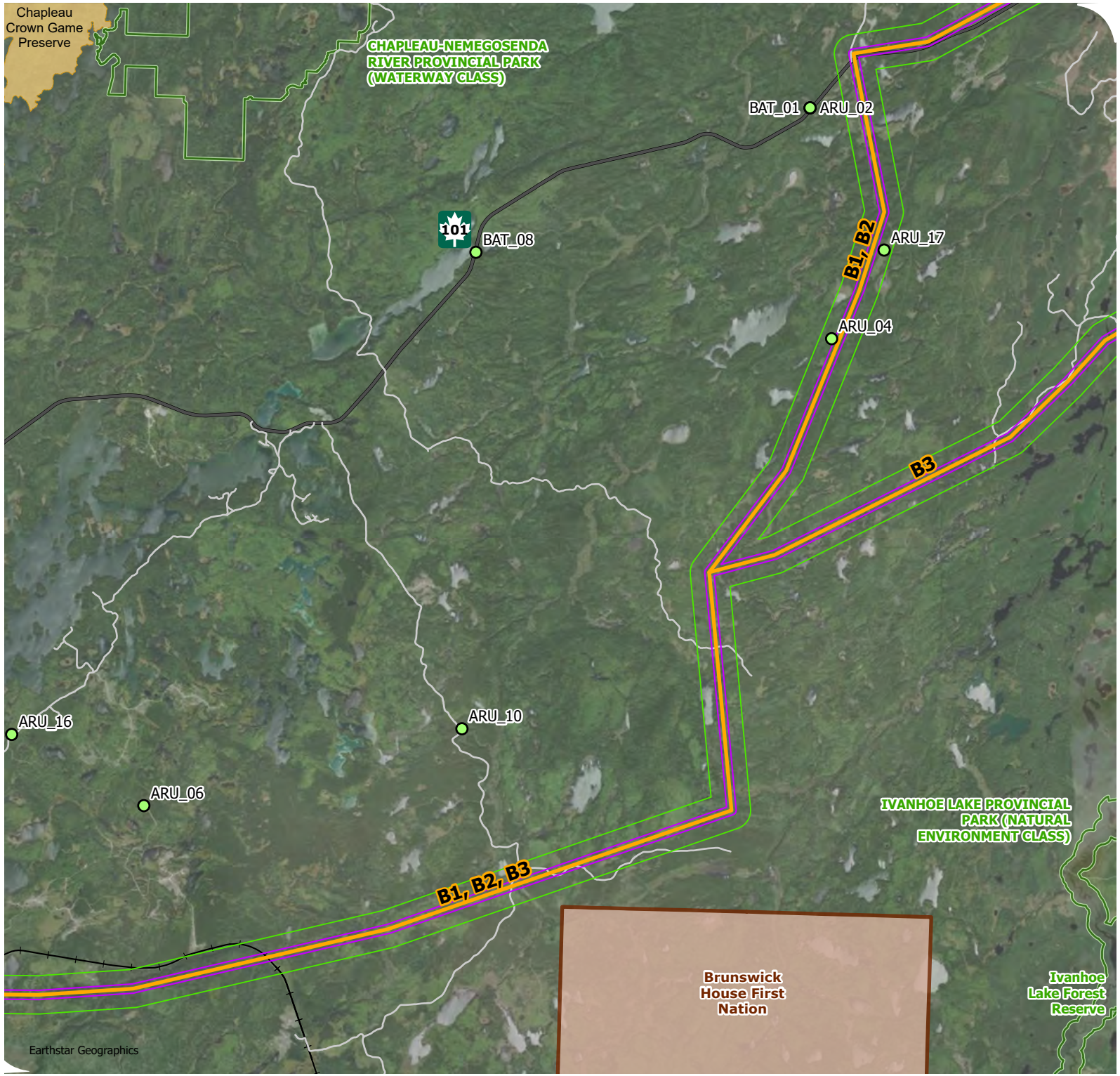
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WAWA TIMMINS POWER LINE

FIGURE 431. NIGHTJAR SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Nightjar Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

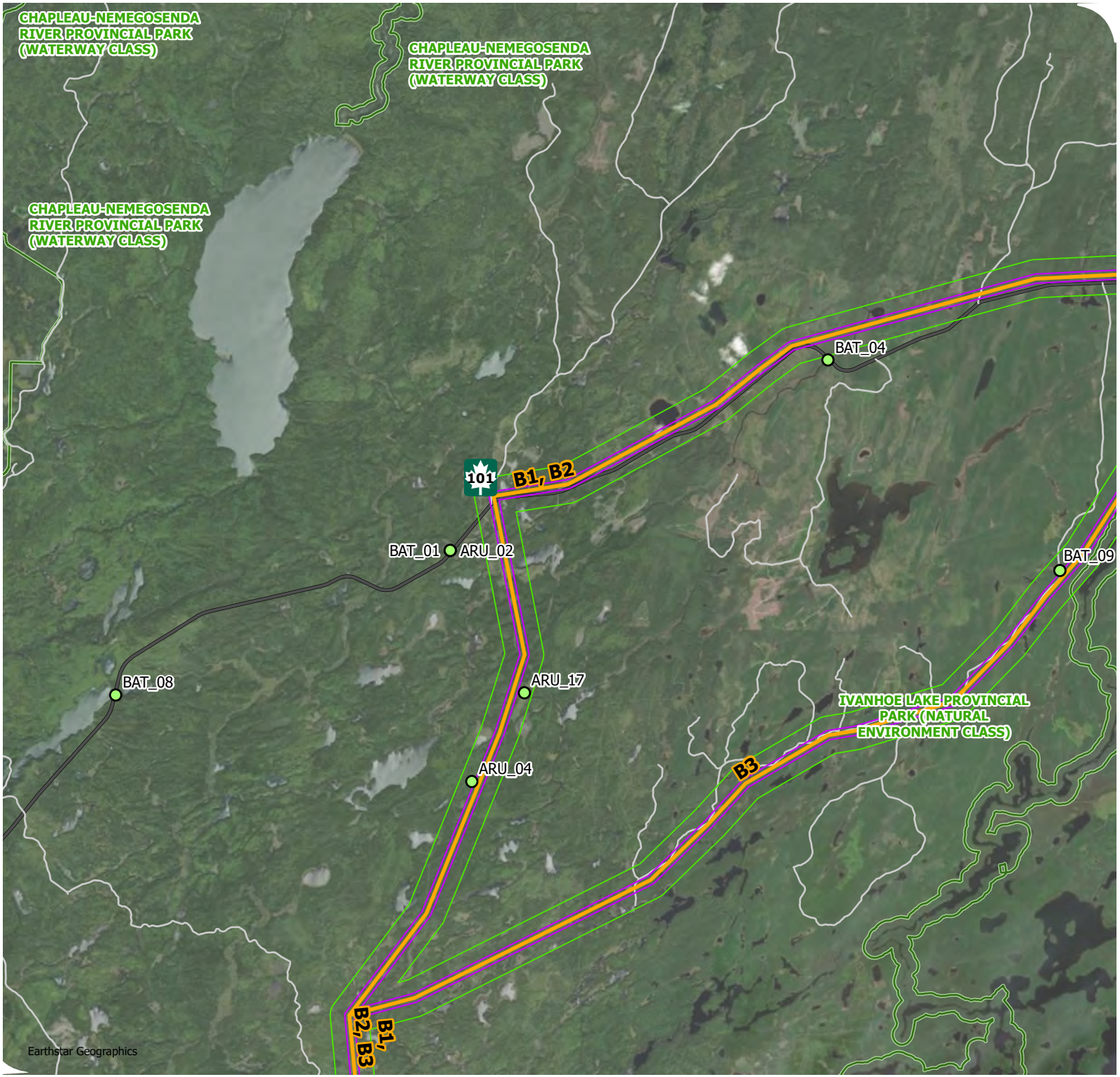
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 432. NIGHTJAR SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Nightjar Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

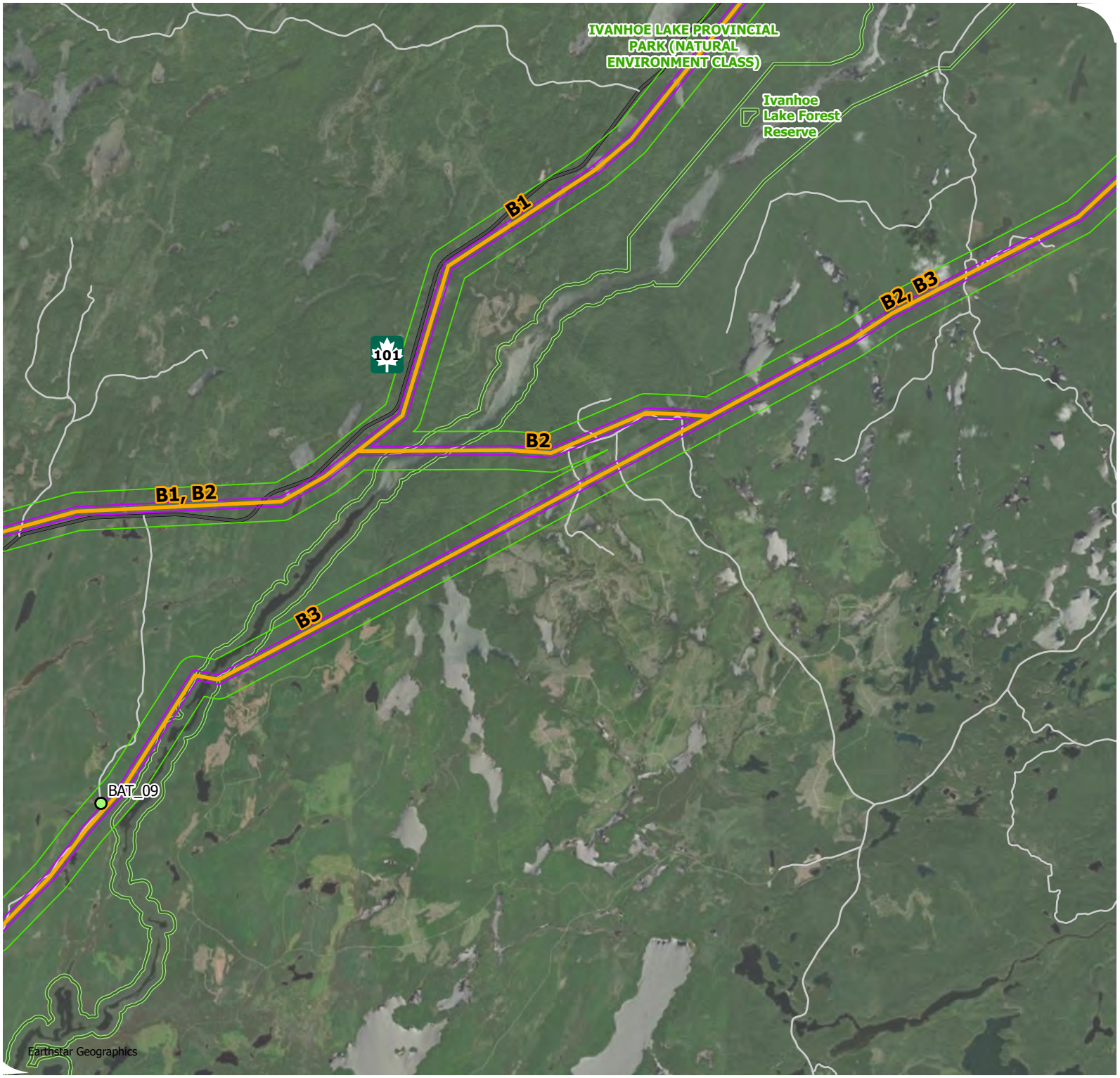
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SCALE 1:139,000

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STATUS: DRAFT
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WAWA TIMMINS POWER LINE

FIGURE 433. NIGHTJAR SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Nightjar Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

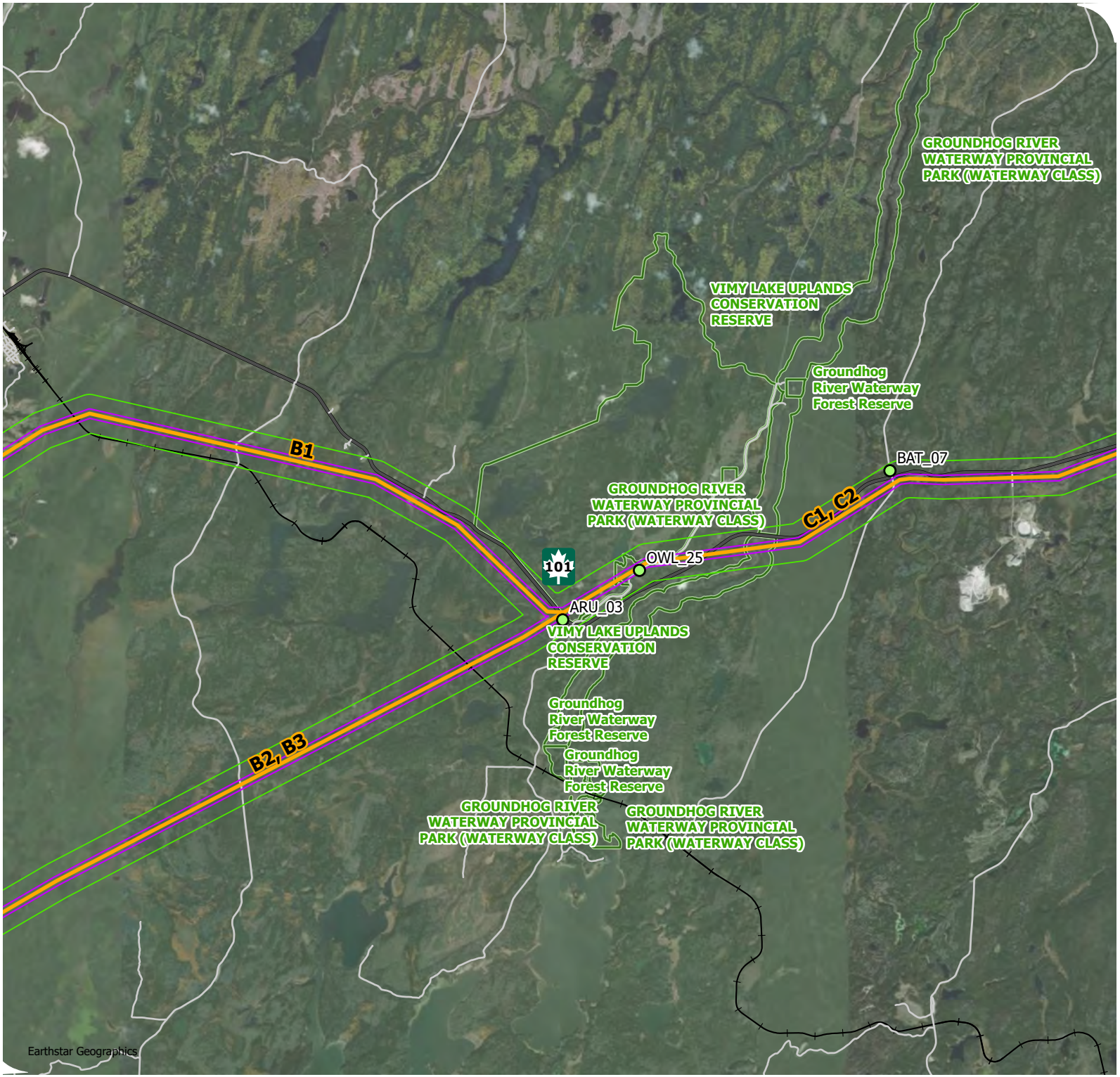
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WAWA TIMMINS POWER LINE

FIGURE 434. NIGHTJAR SURVEY LOCATIONS

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Nightjar Survey Locations



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

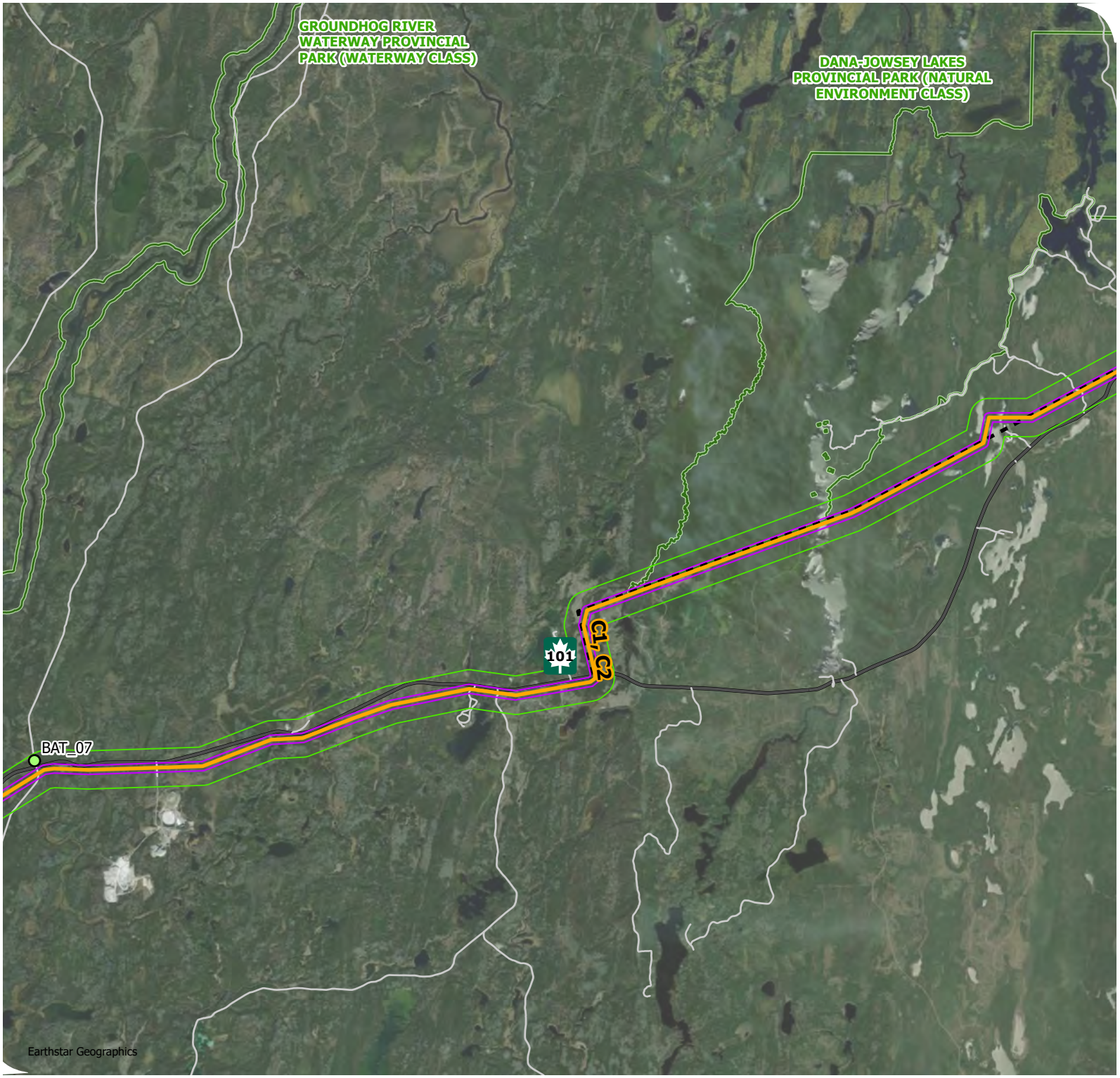
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 435. NIGHTJAR SURVEY LOCATIONS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Nightjar Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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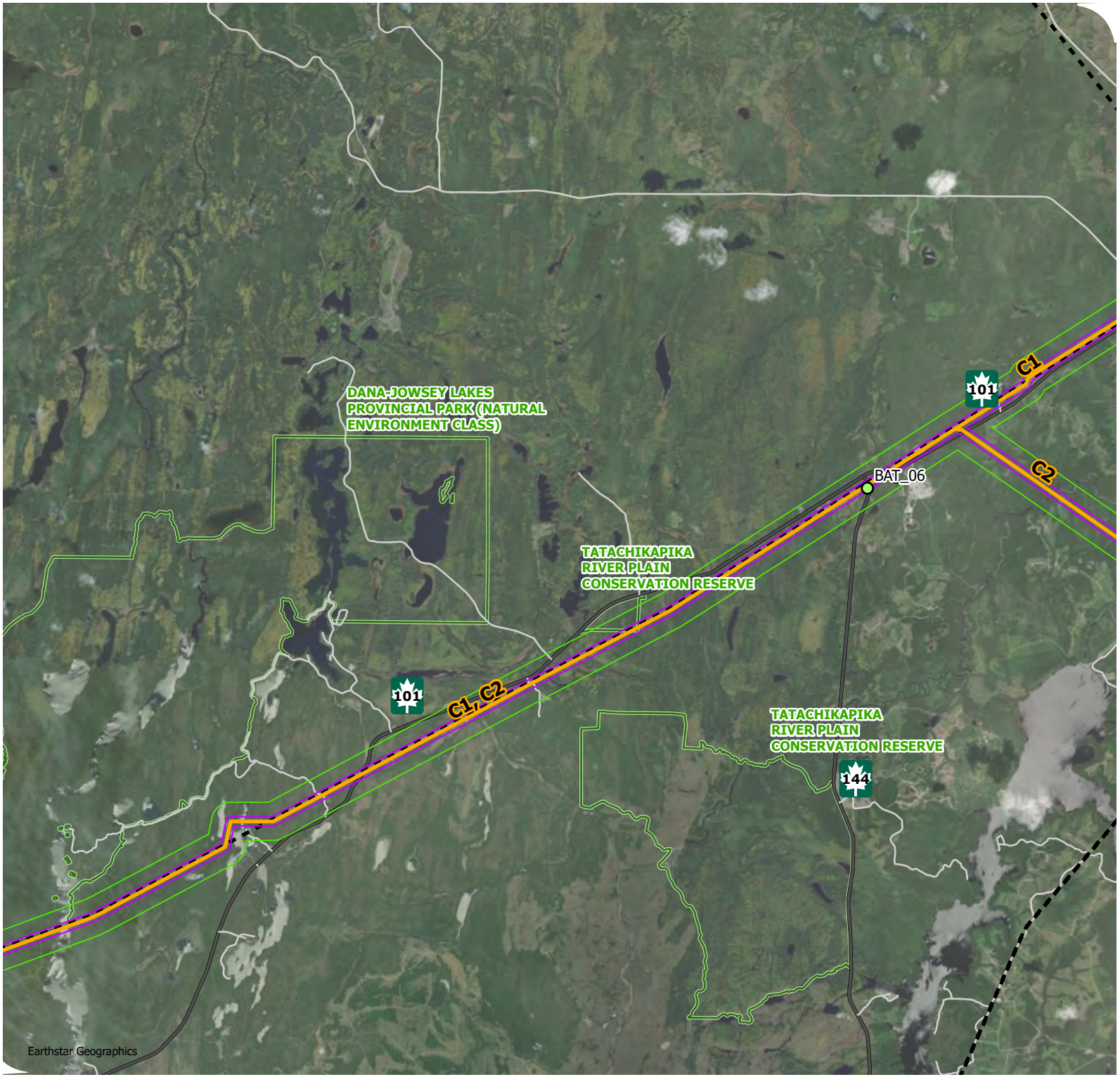
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DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 436. NIGHTJAR SURVEY LOCATIONS

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Nightjar Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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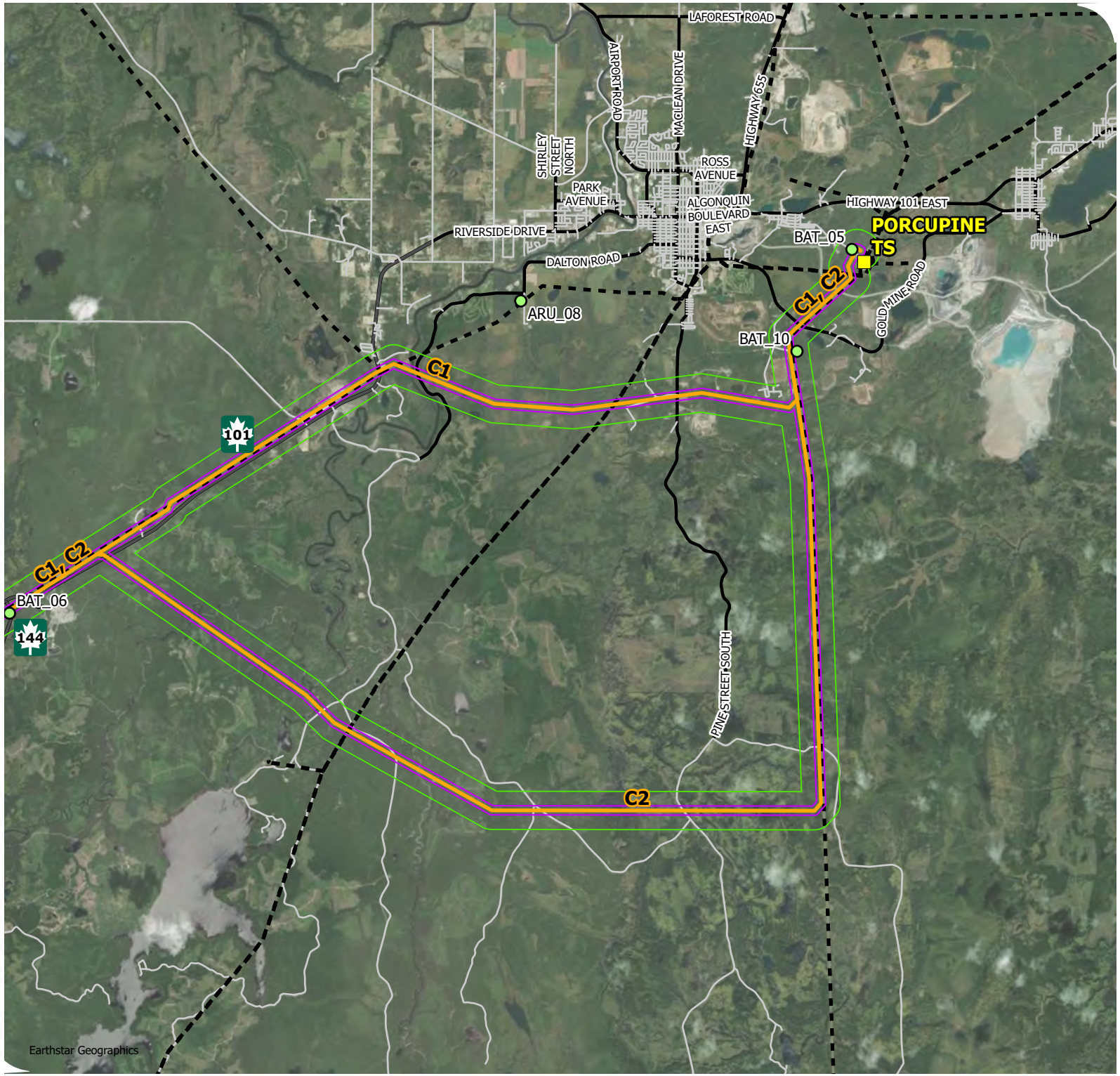
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DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 437. NIGHTJAR SURVEY LOCATIONS

Mapping Extent - Timmins



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Nightjar Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5

WAWA TIMMINS POWER LINE

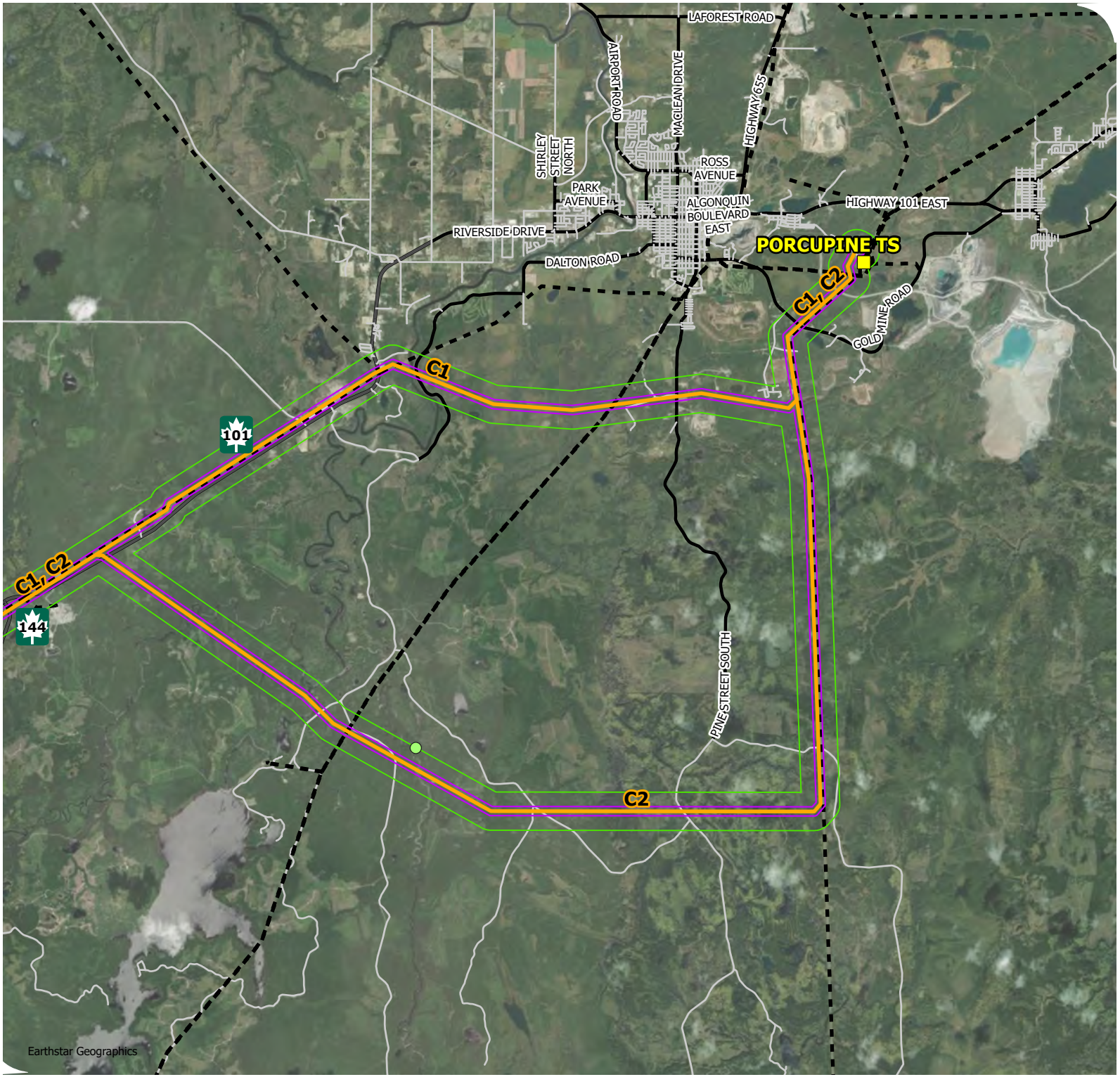


FIGURE 438. BANK SWALLOW COLONY LOCATION

Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)

Bank Swallow Colony

- Bank Swallow Colony

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

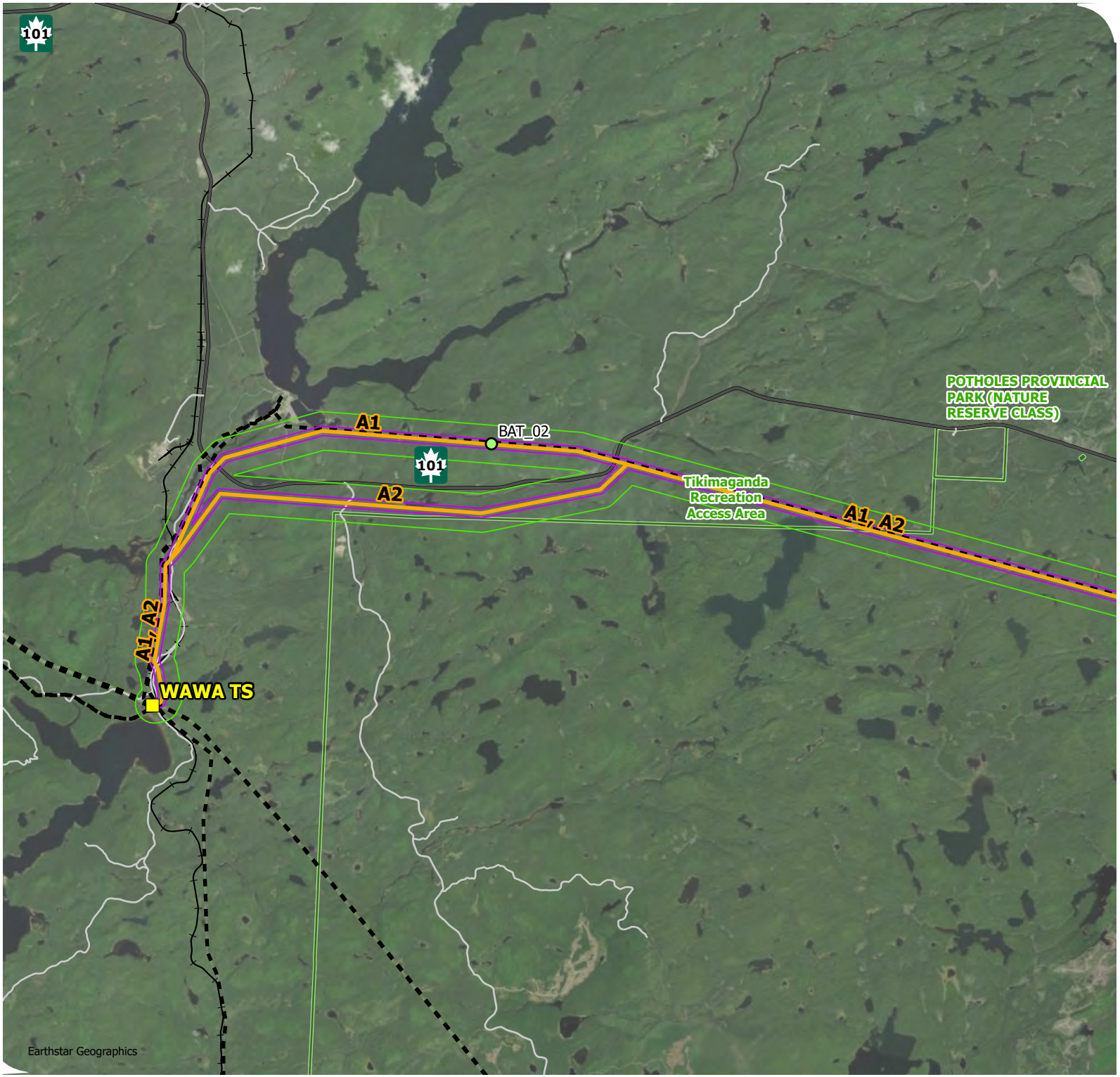
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
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WAWA TIMMINS POWER LINE

FIGURE 439. BAT SURVEY LOCATIONS

Mapping Extent - Wawa Station

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Bat Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

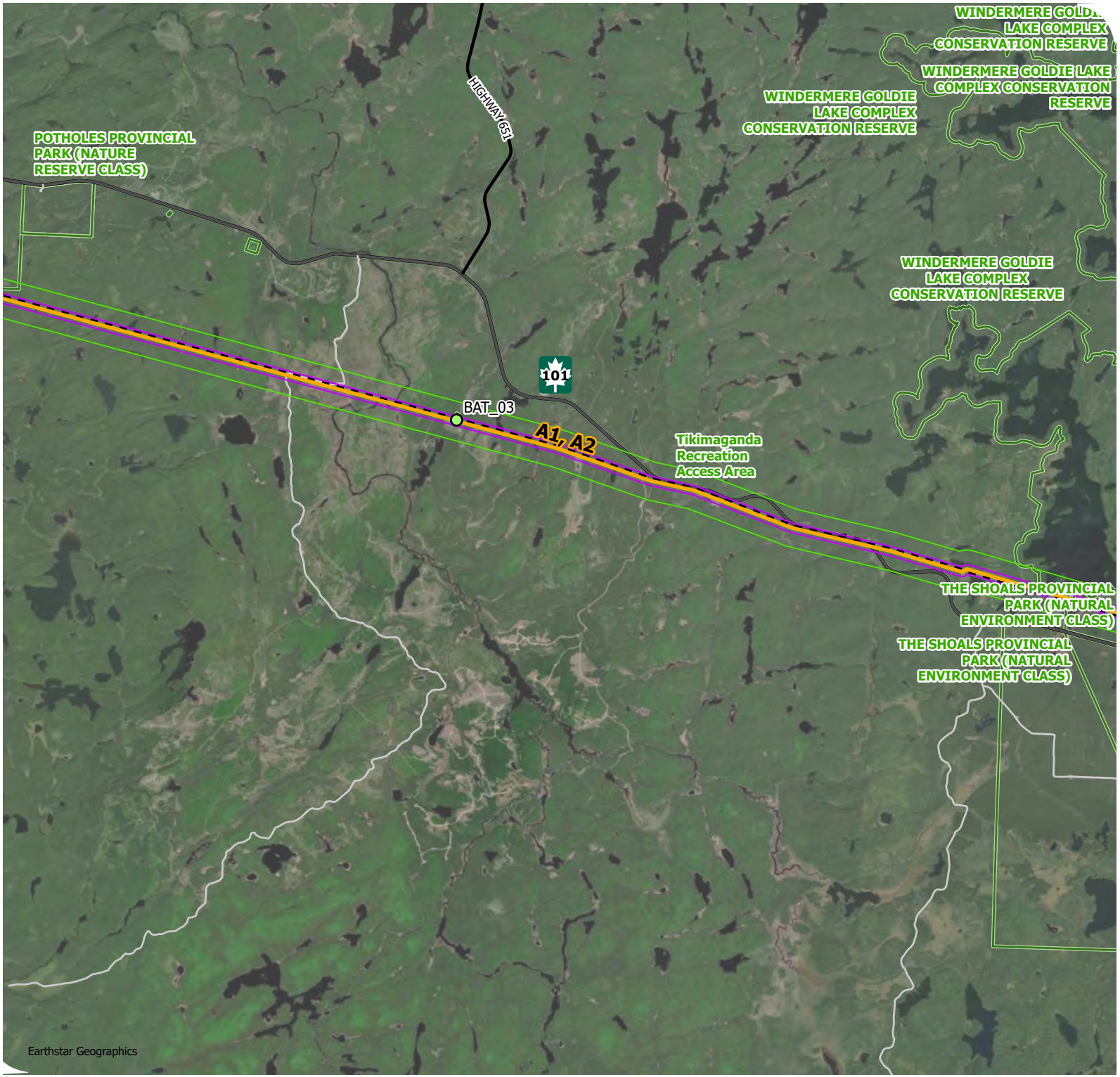
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 440. BAT SURVEY LOCATIONS

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Bat Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

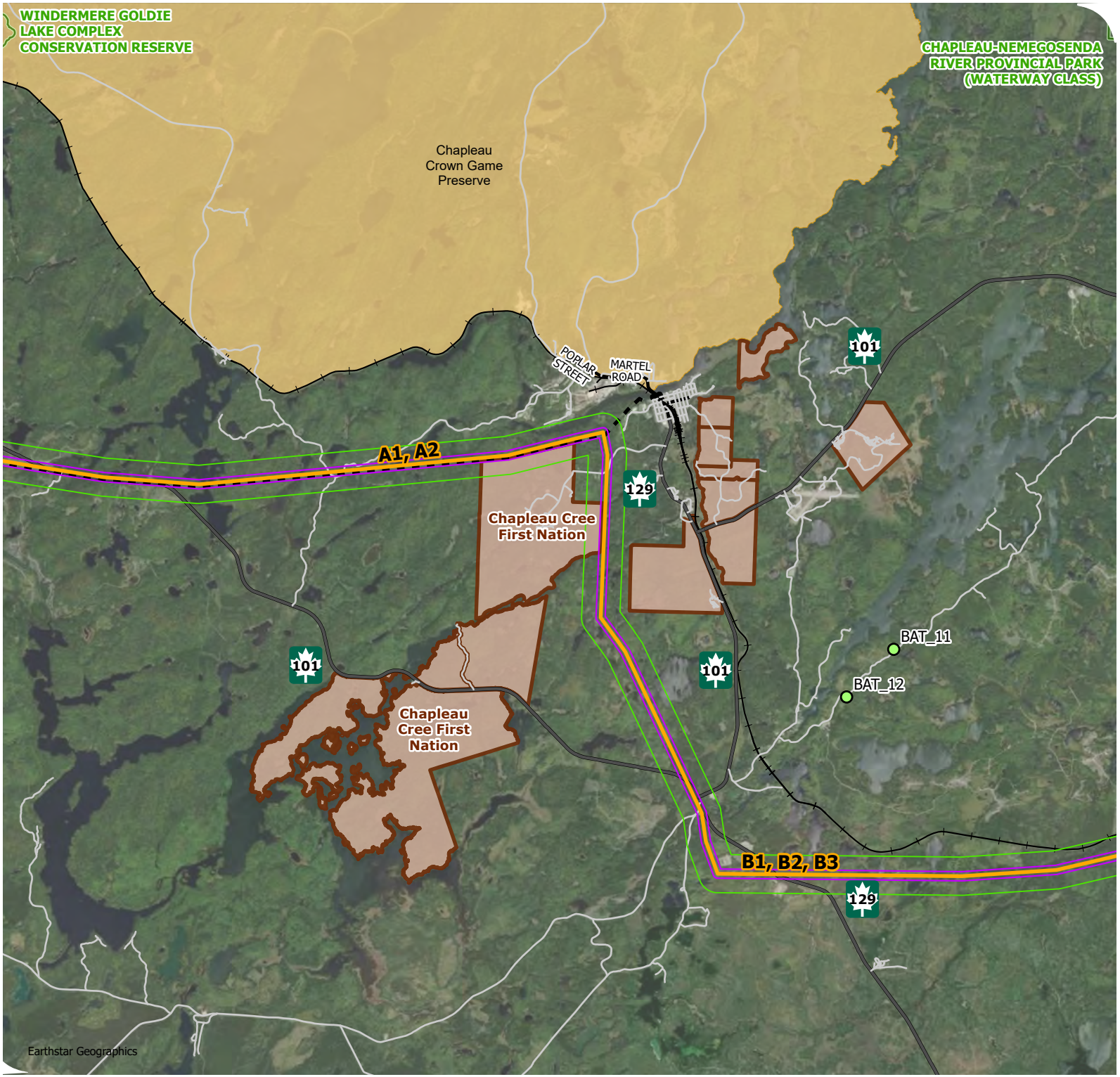
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 441. BAT SURVEY LOCATIONS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Bat Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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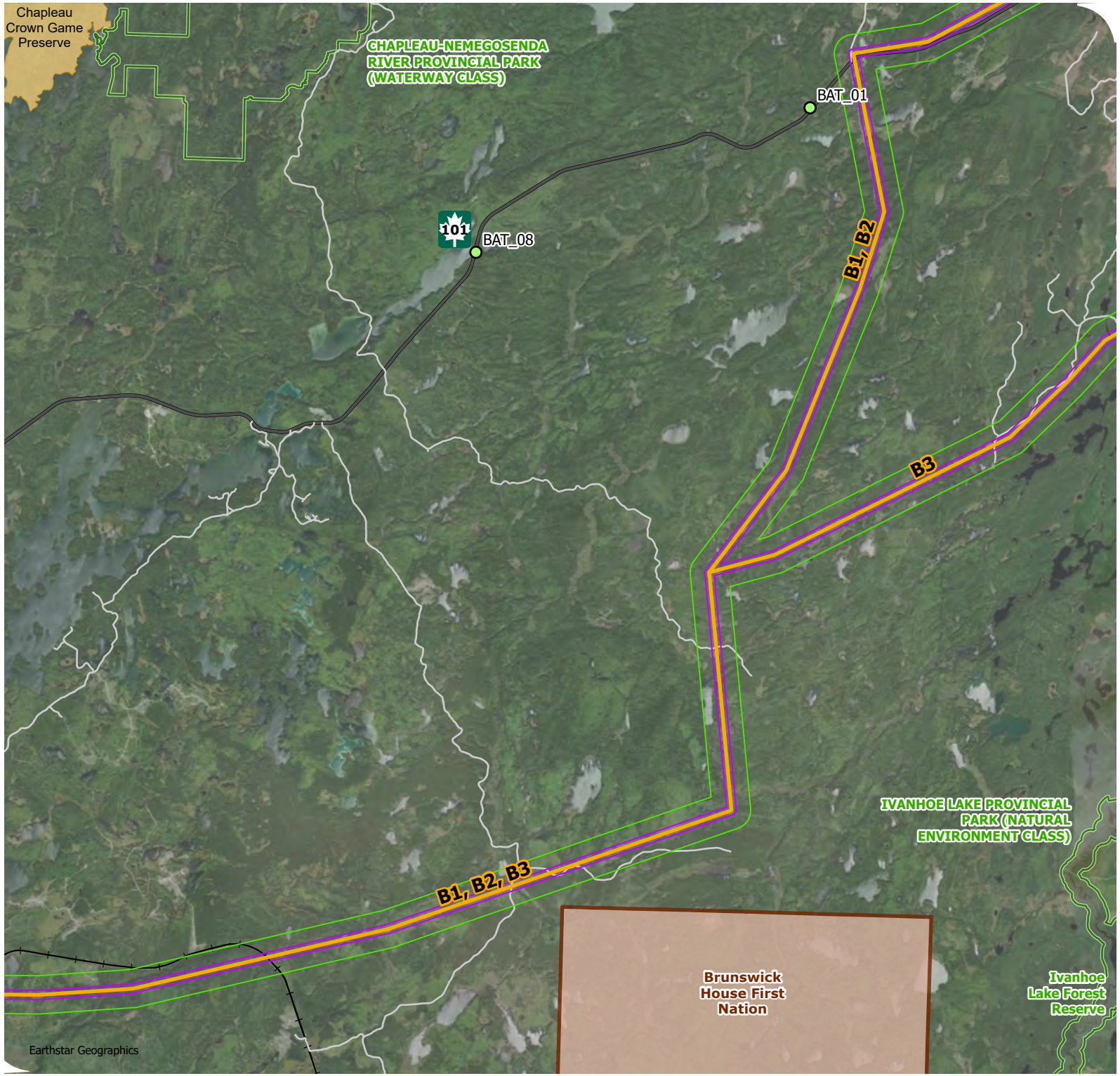
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WAWA TIMMINS POWER LINE

FIGURE 442. BAT SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Bat Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

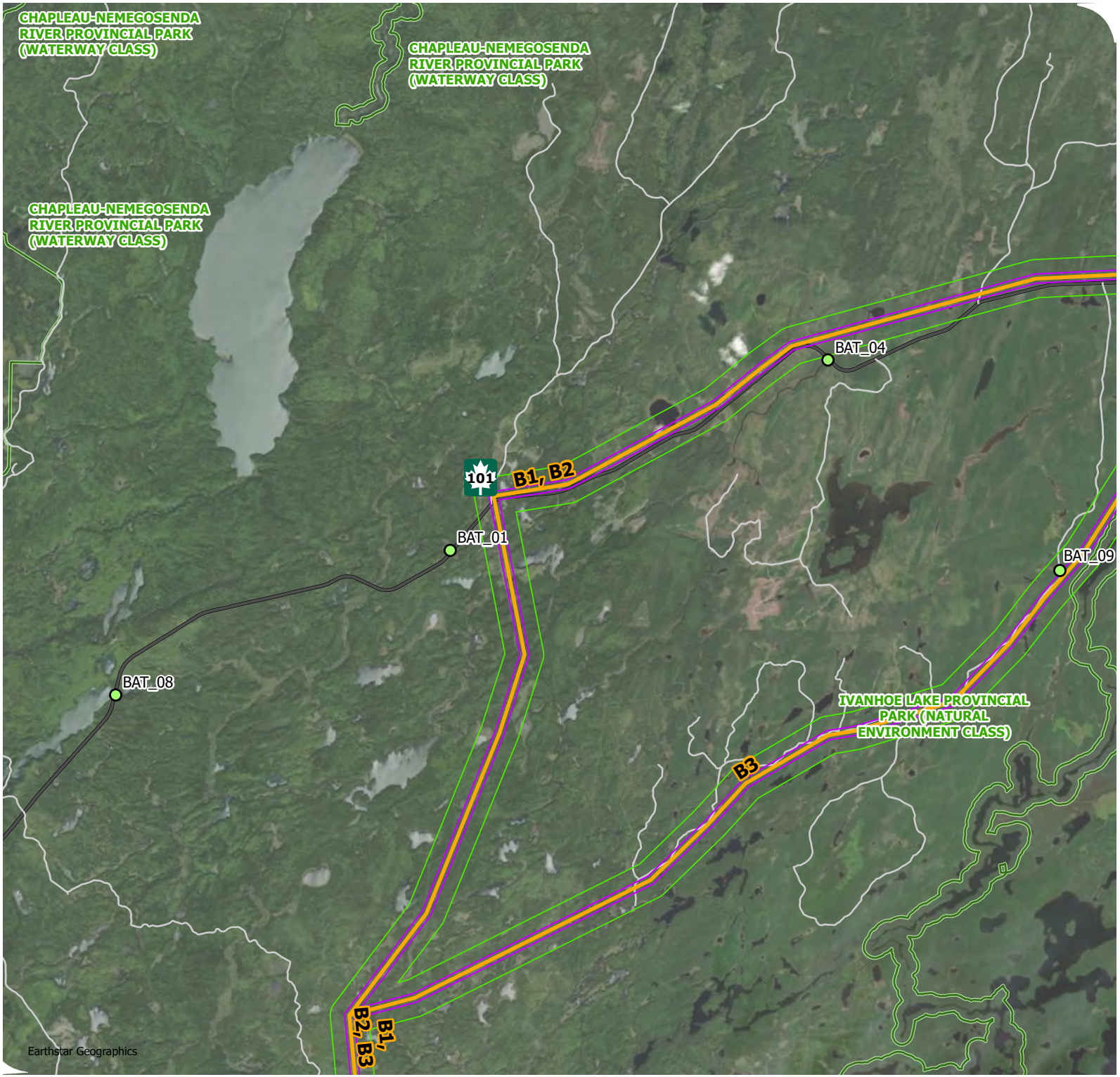
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 443. BAT SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Bat Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

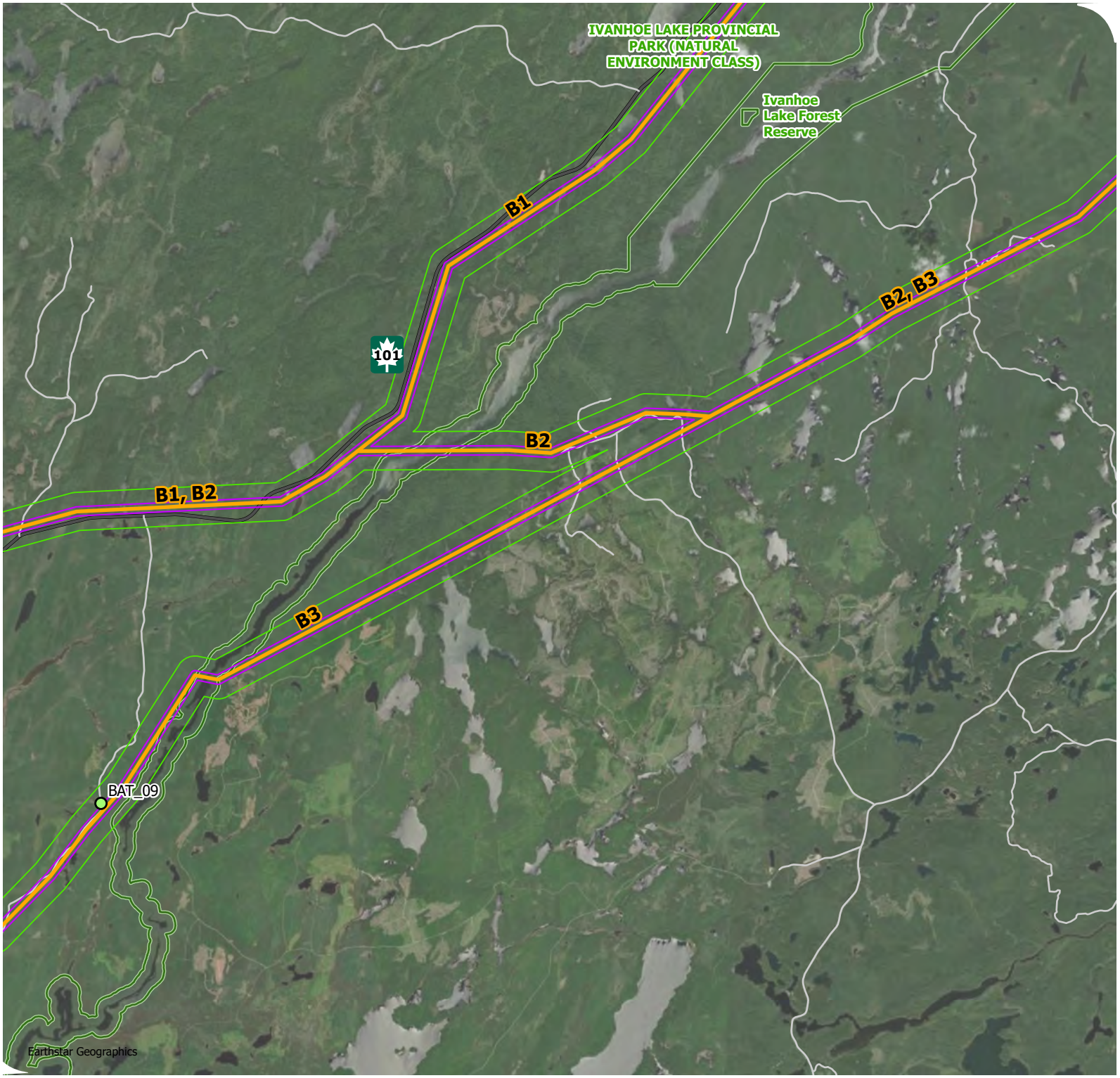
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 444. BAT SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Bat Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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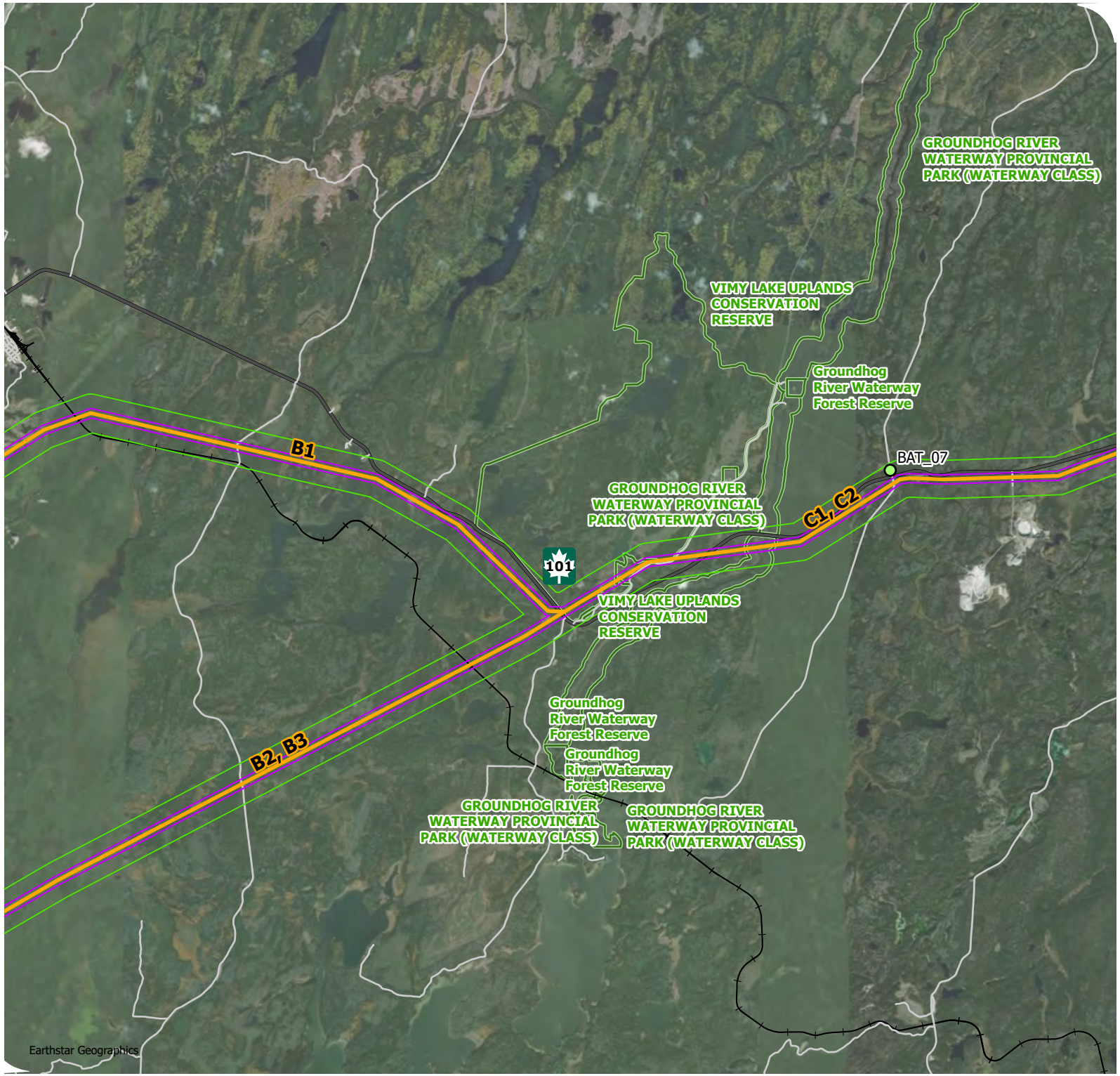
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WAWA TIMMINS POWER LINE

FIGURE 445. BAT SURVEY LOCATIONS

Mapping Extent - Foleyet



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Bat Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

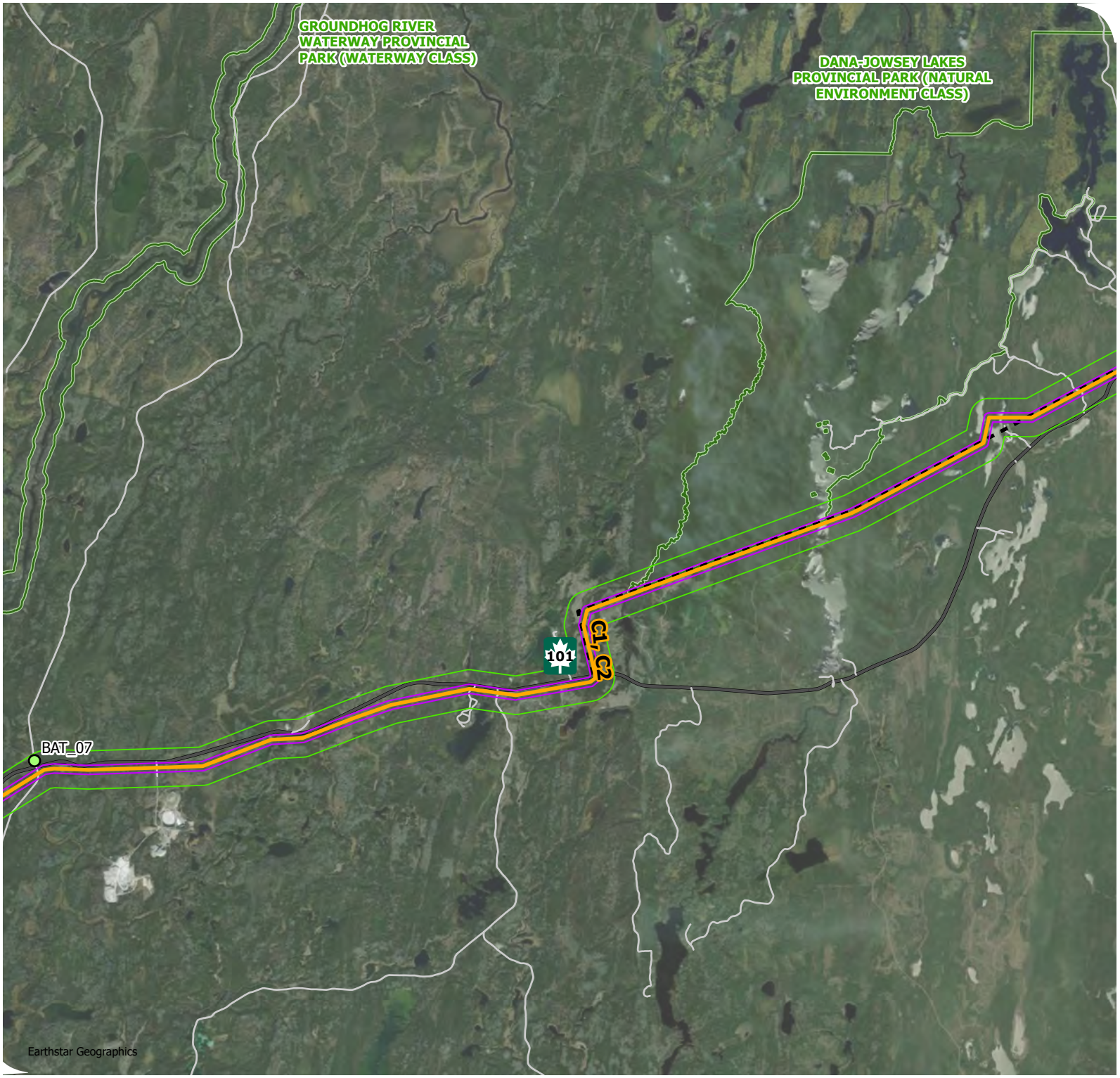
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 446. BAT SURVEY LOCATIONS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Bat Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

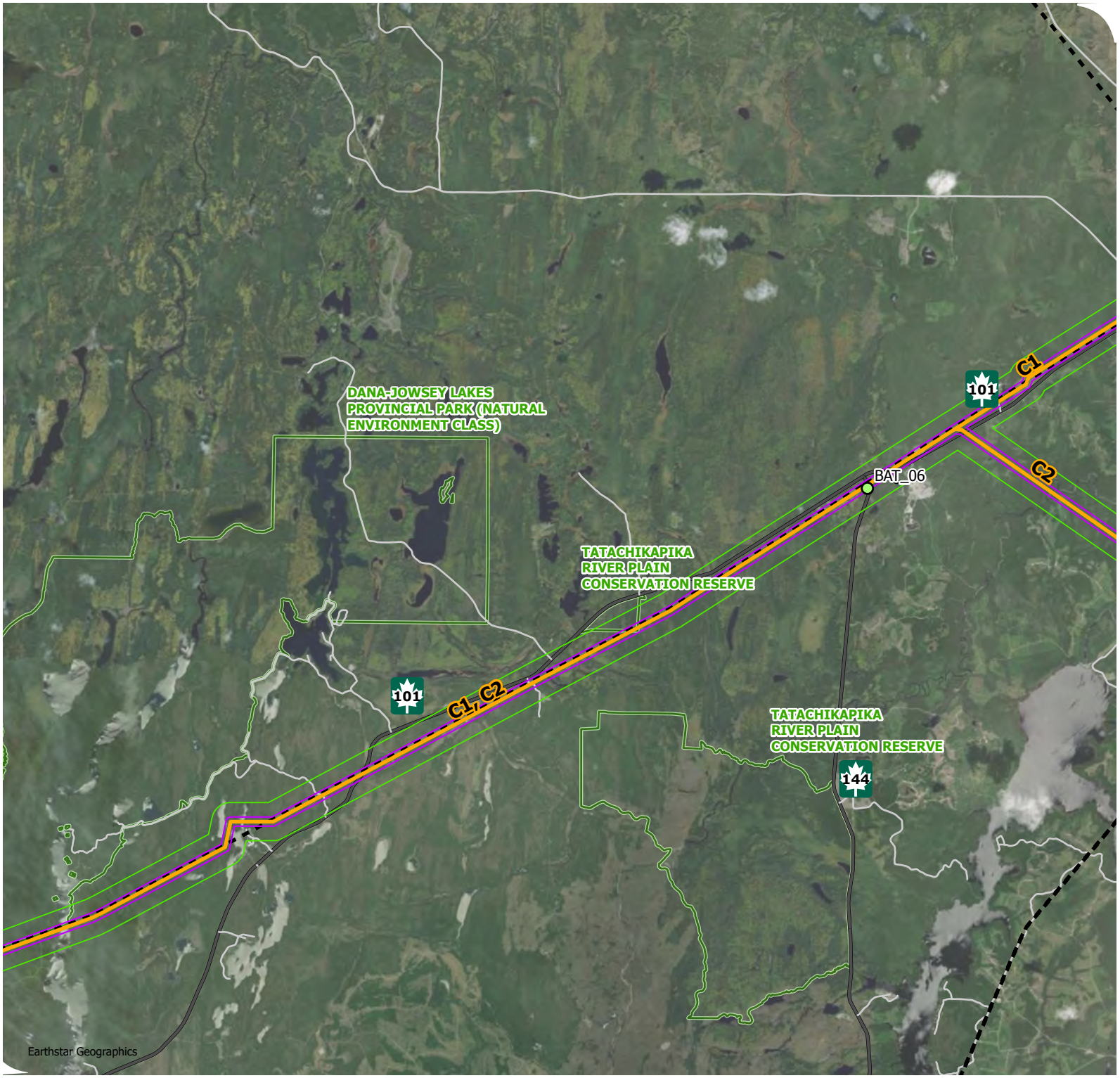
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WAWA TIMMINS POWER LINE

FIGURE 447. BAT SURVEY LOCATIONS

Mapping Extent -
Dana-Jowsey Lakes 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Bat Survey Locations



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

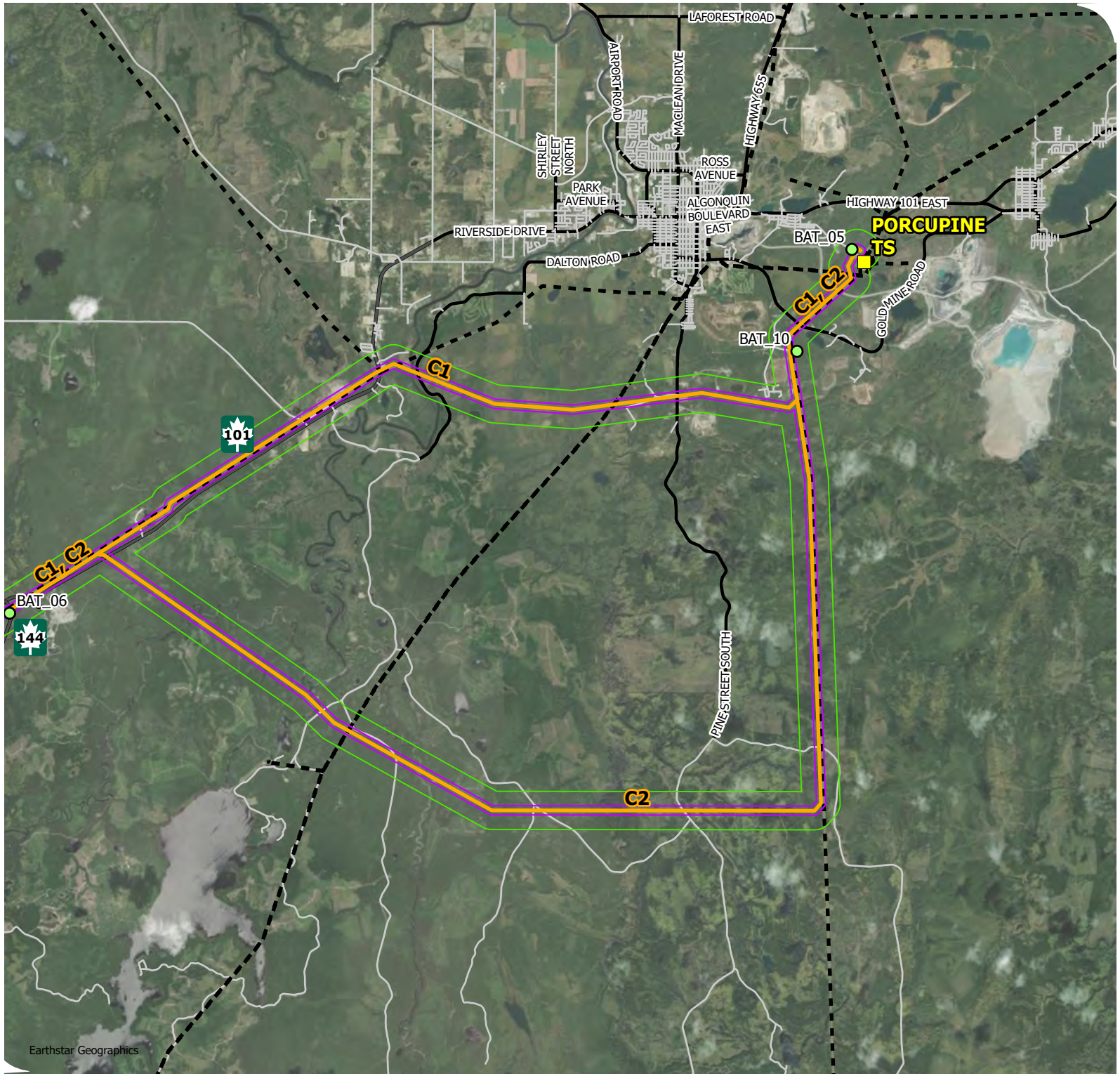
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WAWA TIMMINS POWER LINE

FIGURE 448. BAT SURVEY LOCATIONS

Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Bat Survey Locations



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

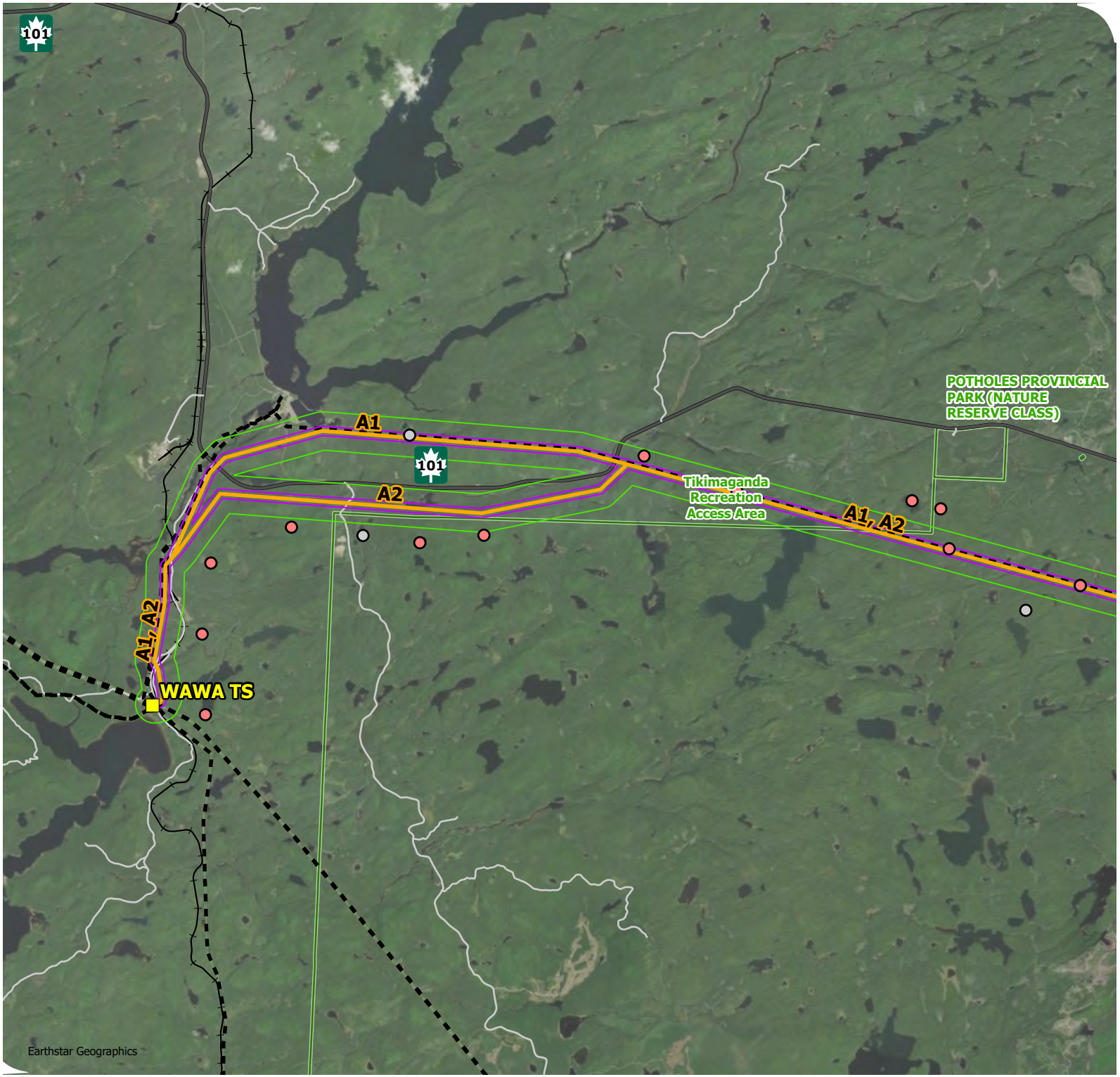
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WAWA TIMMINS POWER LINE

FIGURE 449. WINTER AERIAL SURVEY OBSERVATIONS



Mapping Extent - Wawa Station

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Species

- Gray Wolf
- Moose

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

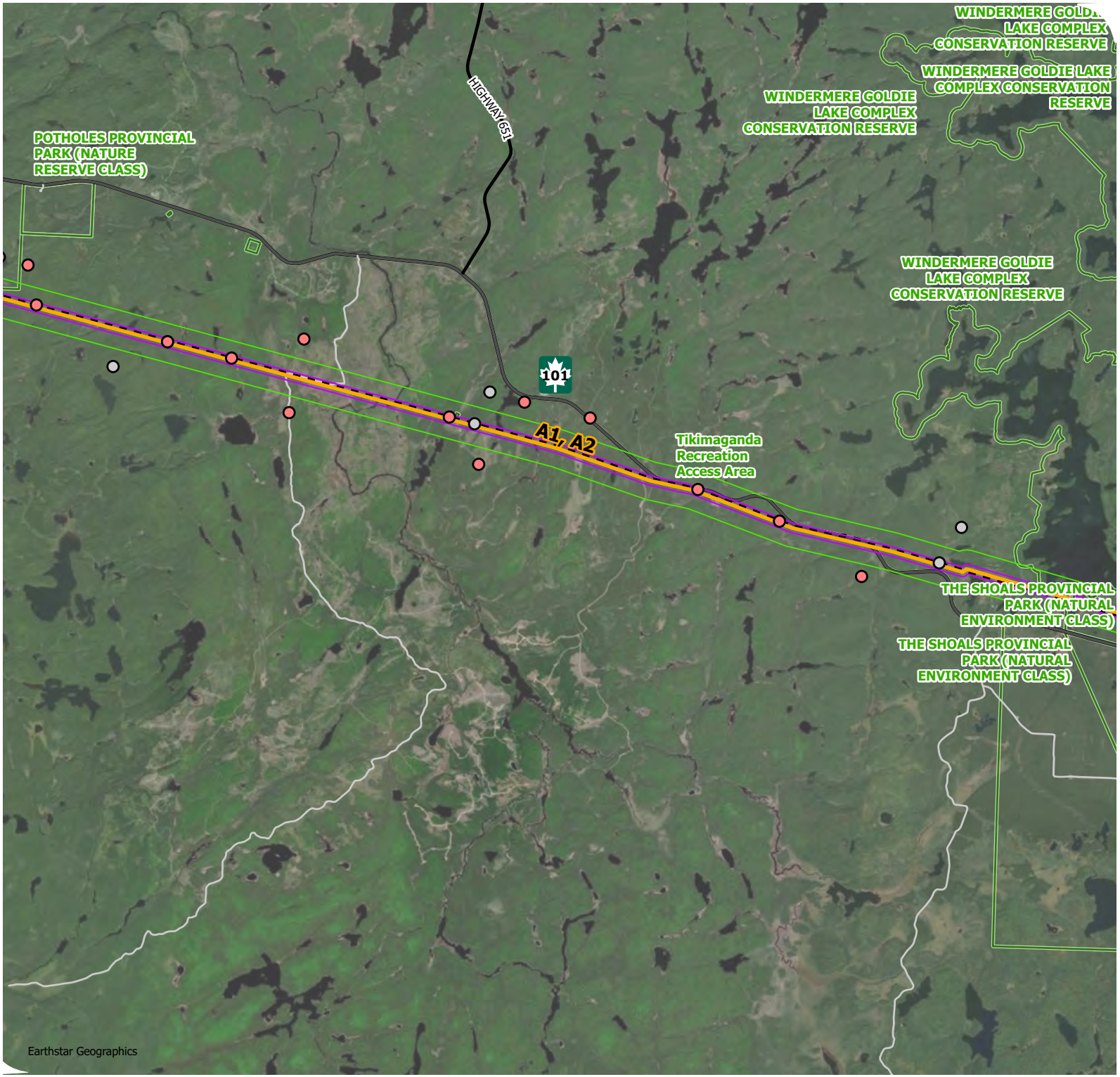
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WAWA TIMMINS POWER LINE

FIGURE 450. WINTER AERIAL SURVEY OBSERVATIONS

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Species

- Gray Wolf
- Moose

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

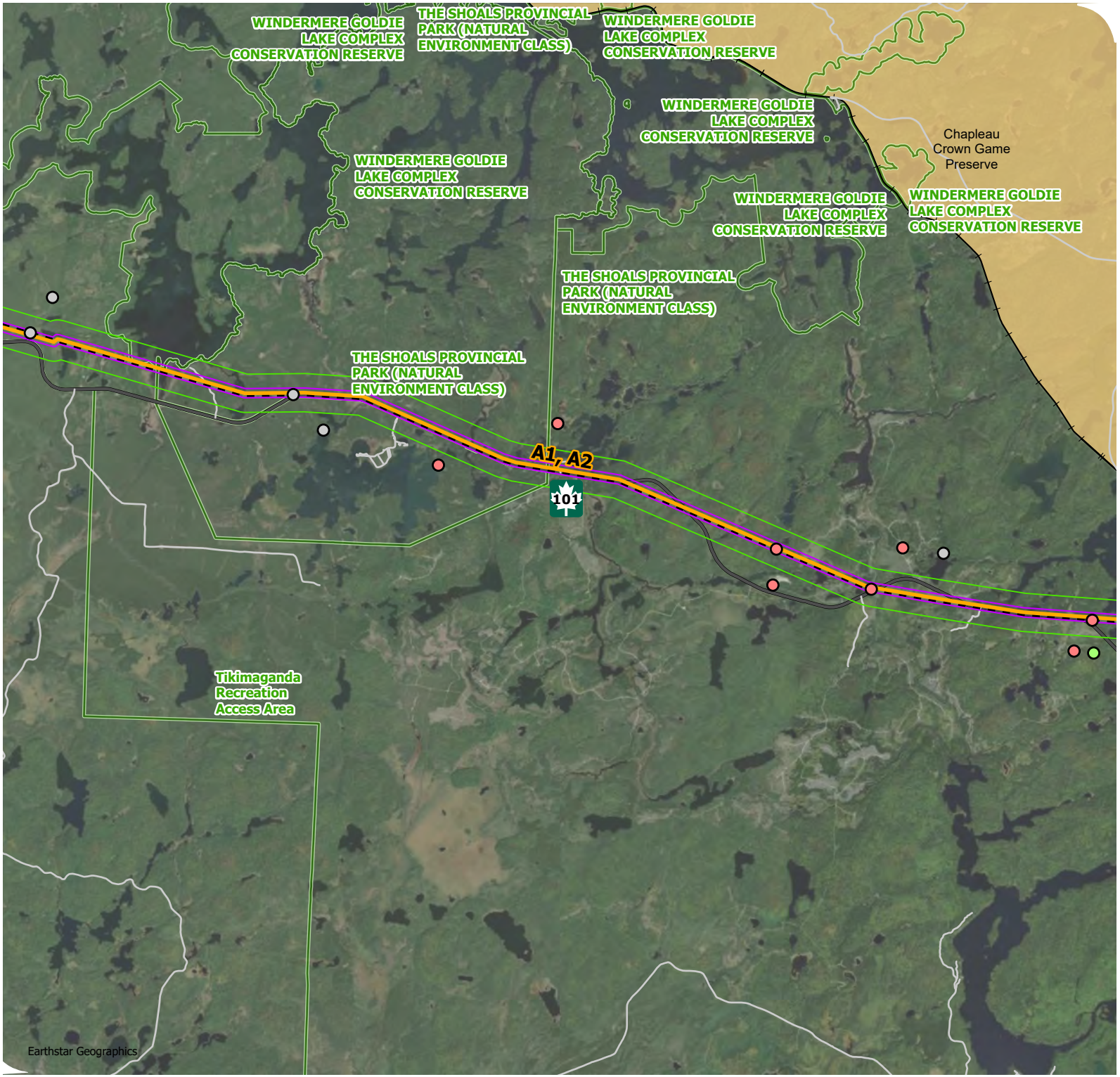
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 451. WINTER AERIAL SURVEY OBSERVATIONS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Species

- Gray Wolf
- Moose
- Stick Nest

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

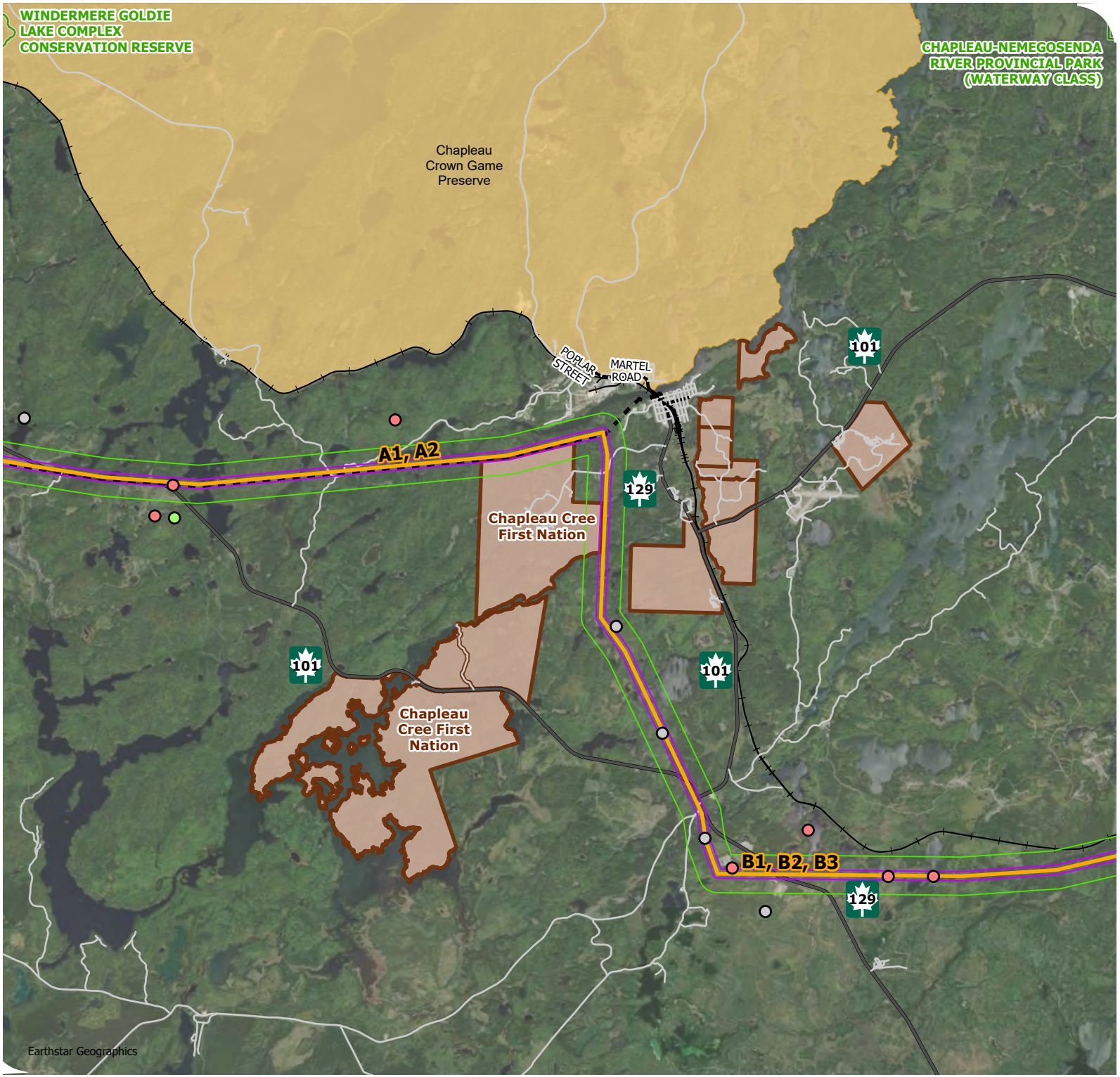
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SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 452. WINTER AERIAL SURVEY OBSERVATIONS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Species

- Gray Wolf
- Moose
- Stick Nest

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

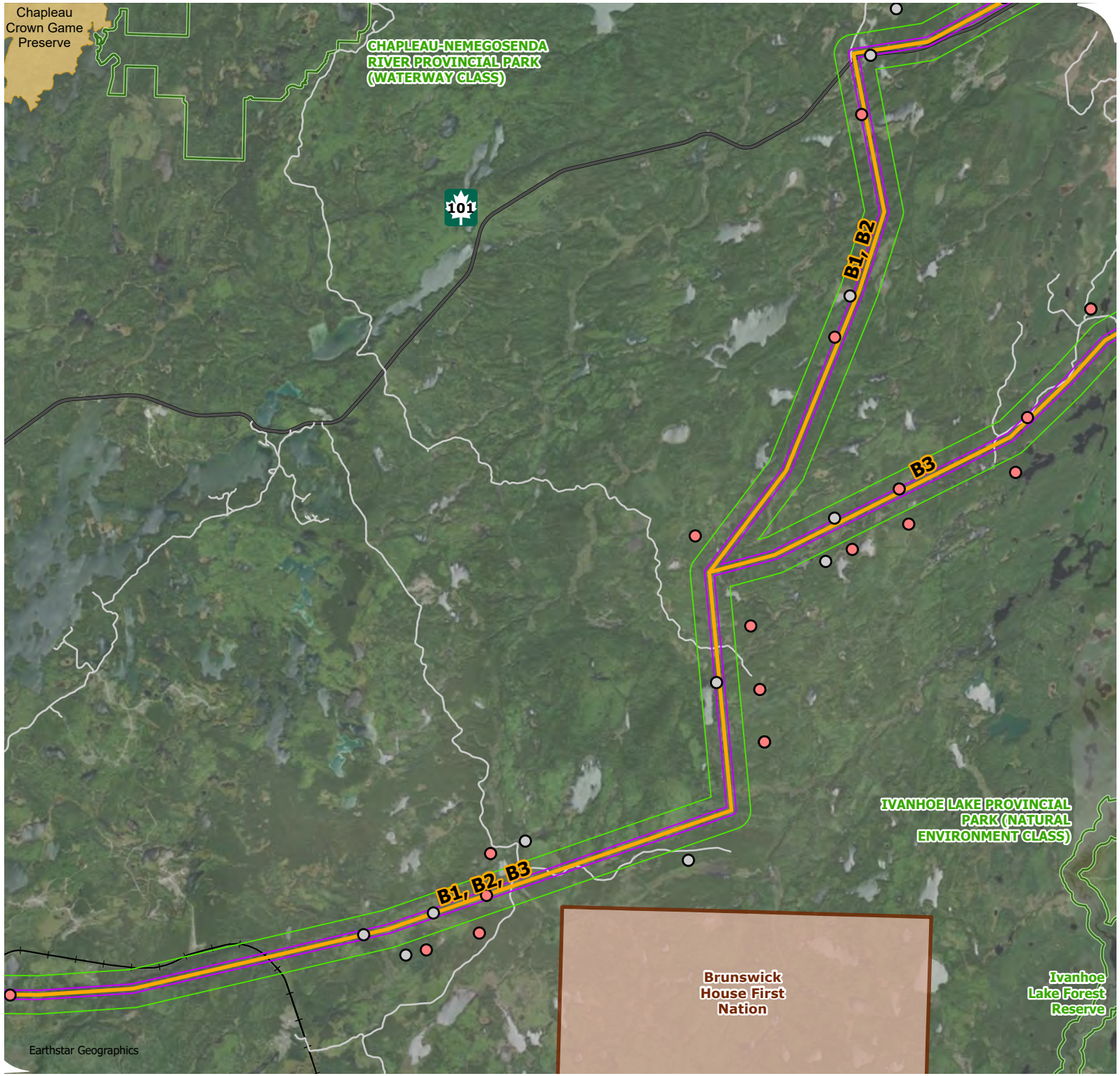
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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5

WAWA TIMMINS POWER LINE

FIGURE 453. WINTER AERIAL SURVEY OBSERVATIONS



Mapping Extent - Ivanhoe Lake 1

- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)

Species

- Gray Wolf
- Moose

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

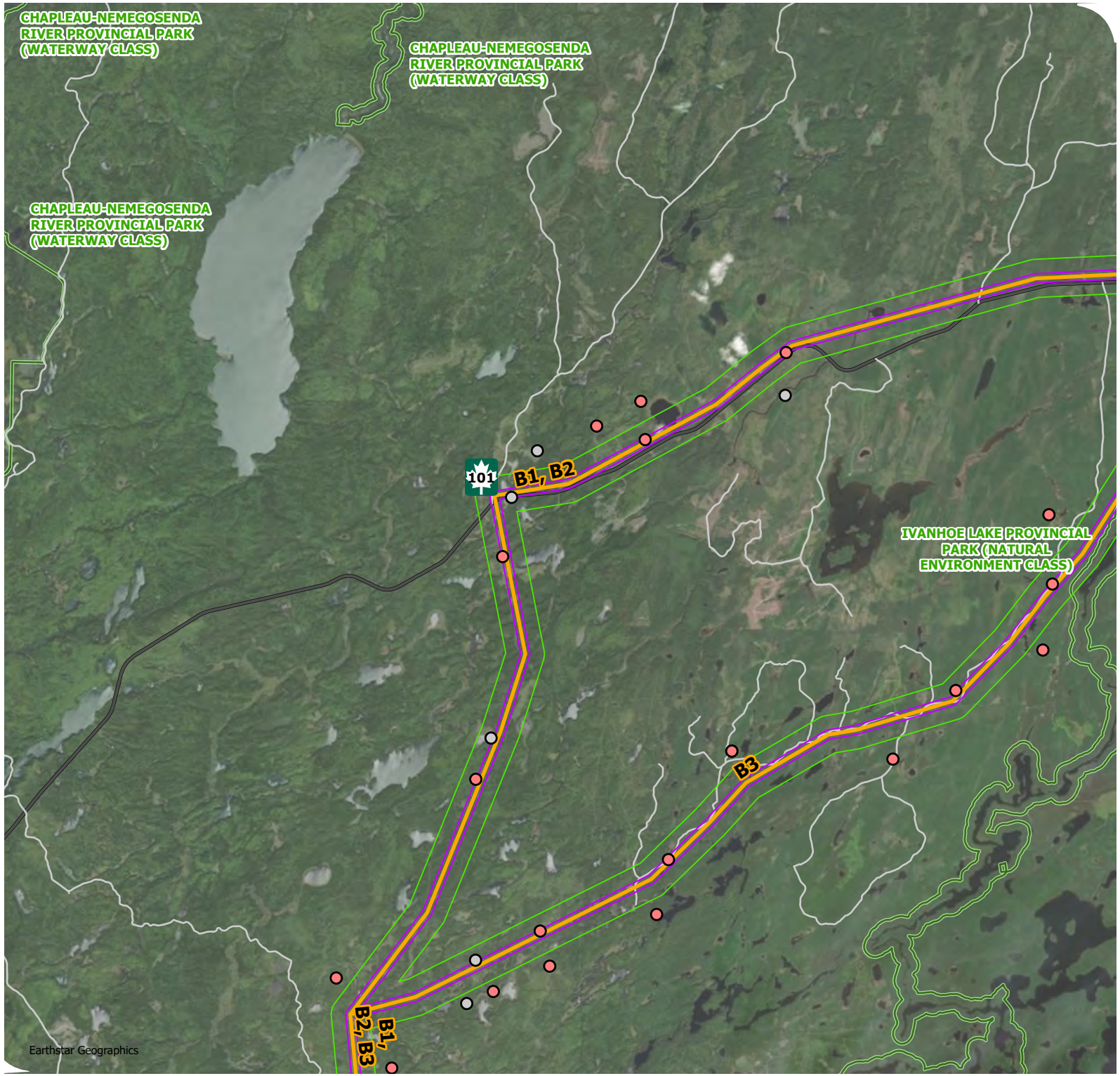
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 454. WINTER AERIAL SURVEY OBSERVATIONS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Species

- Gray Wolf
- Moose

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

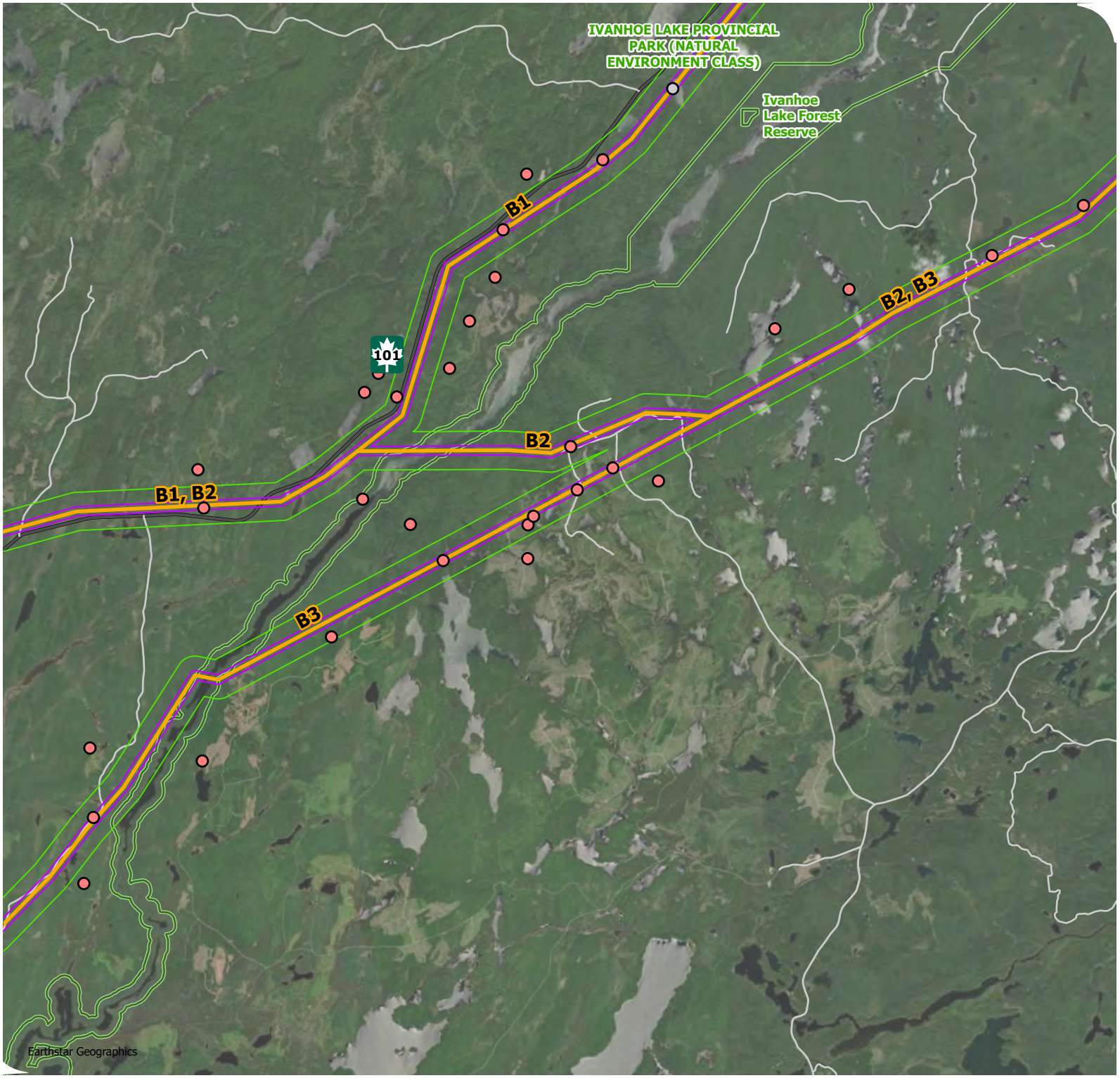
MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 455. WINTER AERIAL SURVEY OBSERVATIONS

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Species

- Gray Wolf
- Moose

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

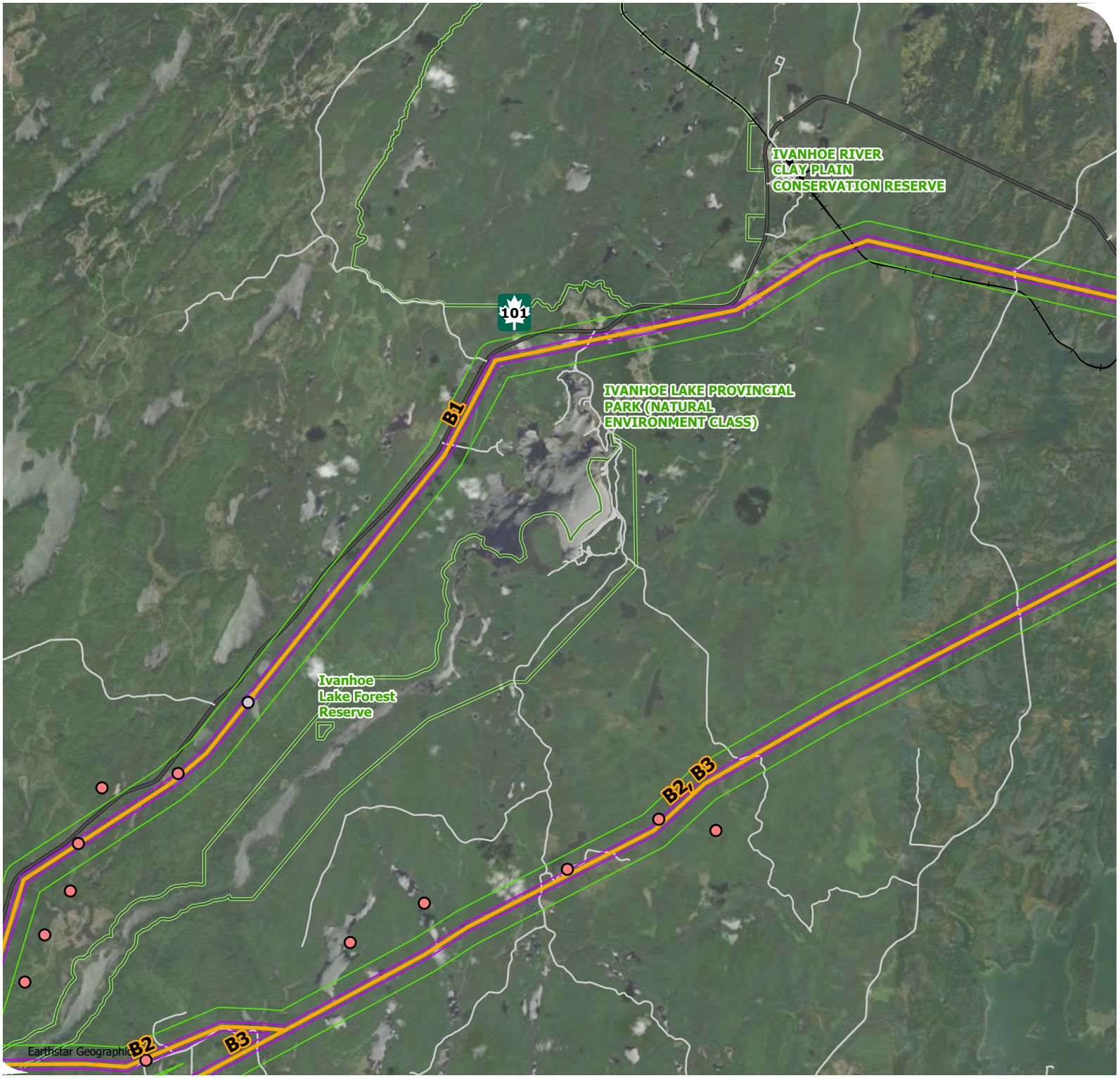
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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5

WAWA TIMMINS POWER LINE

FIGURE 456. WINTER AERIAL SURVEY OBSERVATIONS



Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Species

- Gray Wolf
- Moose

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

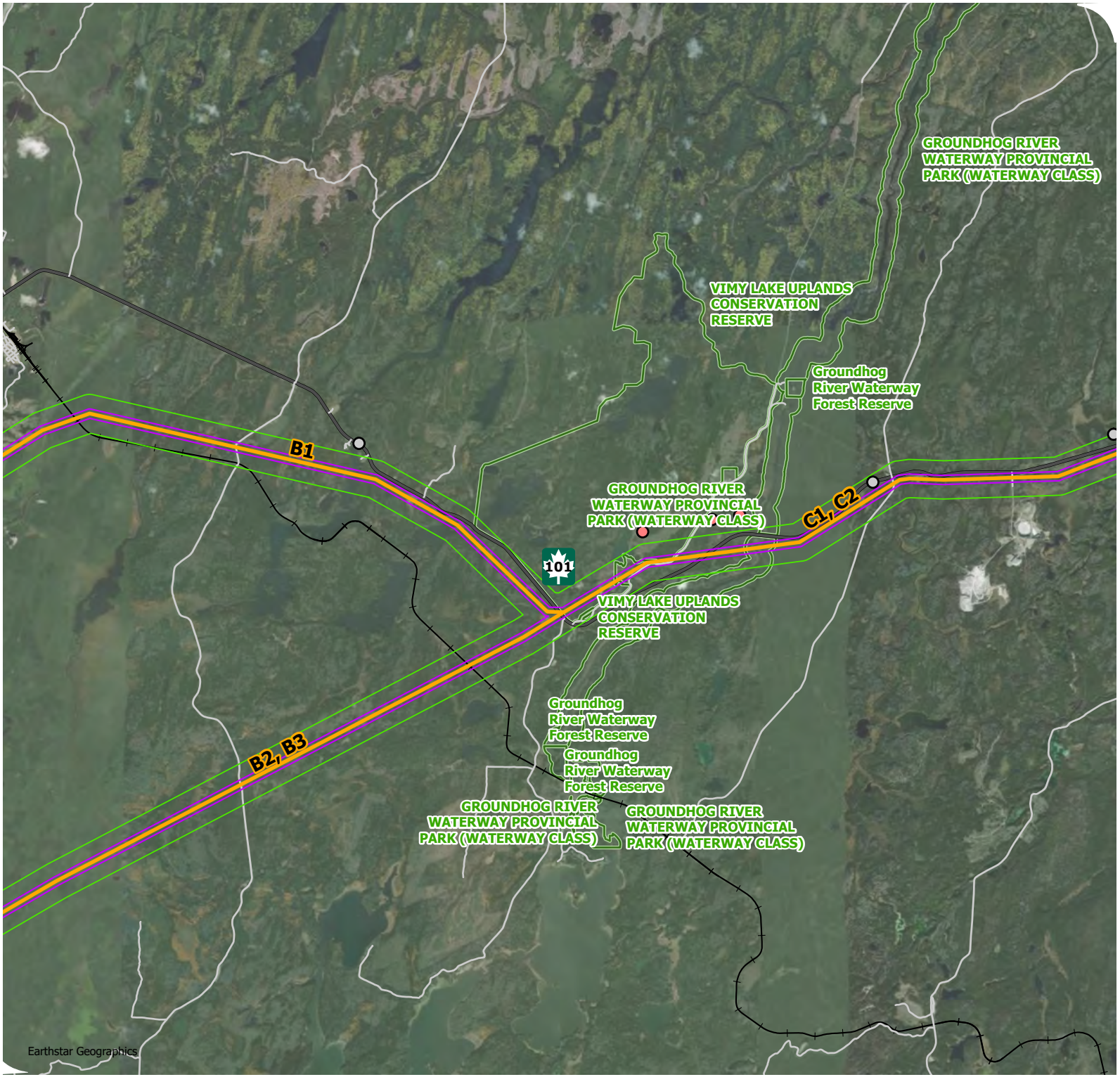
MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 457. WINTER AERIAL SURVEY OBSERVATIONS

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Species

- Gray Wolf
- Moose

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

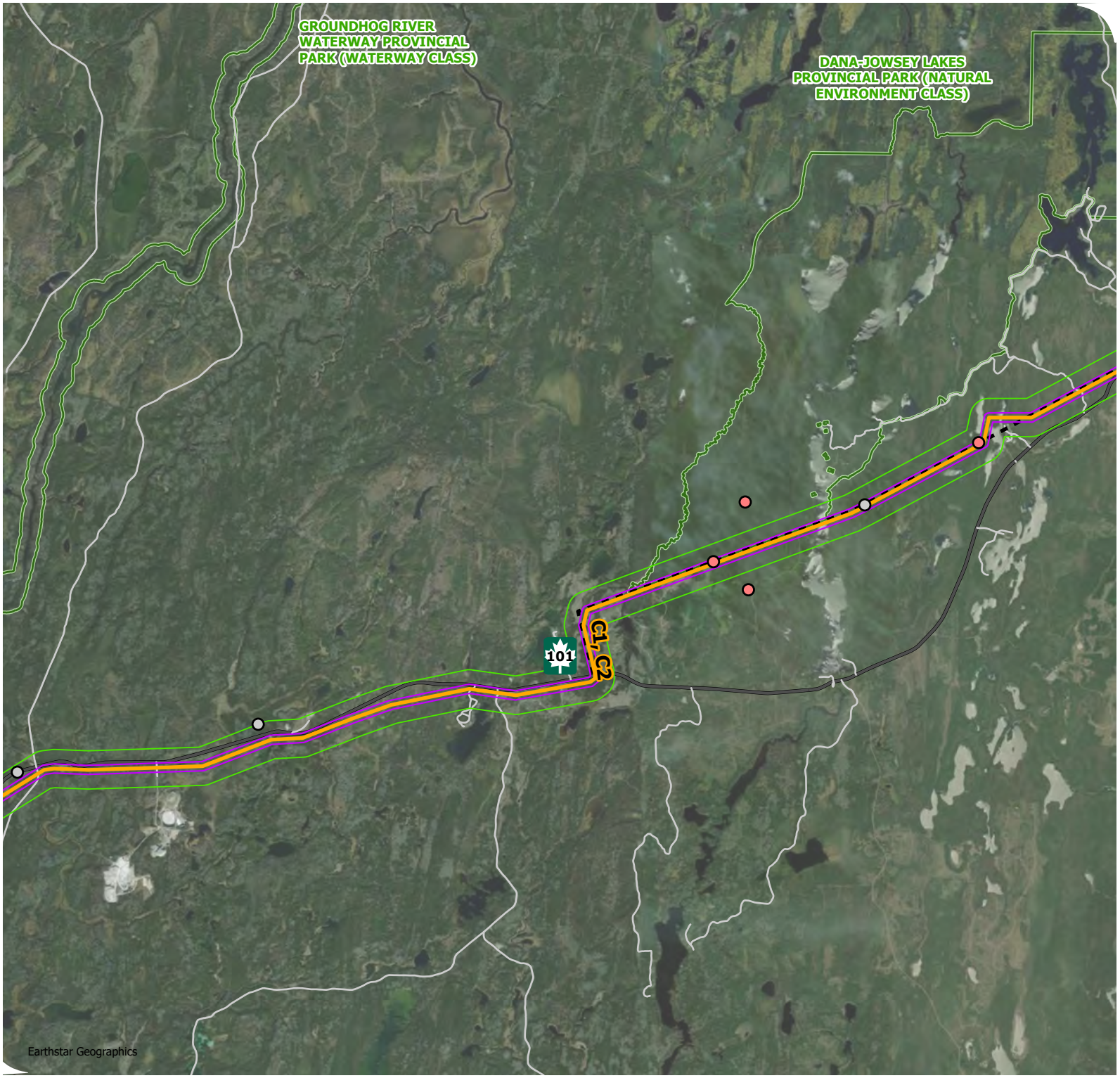
MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 458. WINTER AERIAL SURVEY OBSERVATIONS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Species

- Gray Wolf
- Moose

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5

WAWA TIMMINS POWER LINE

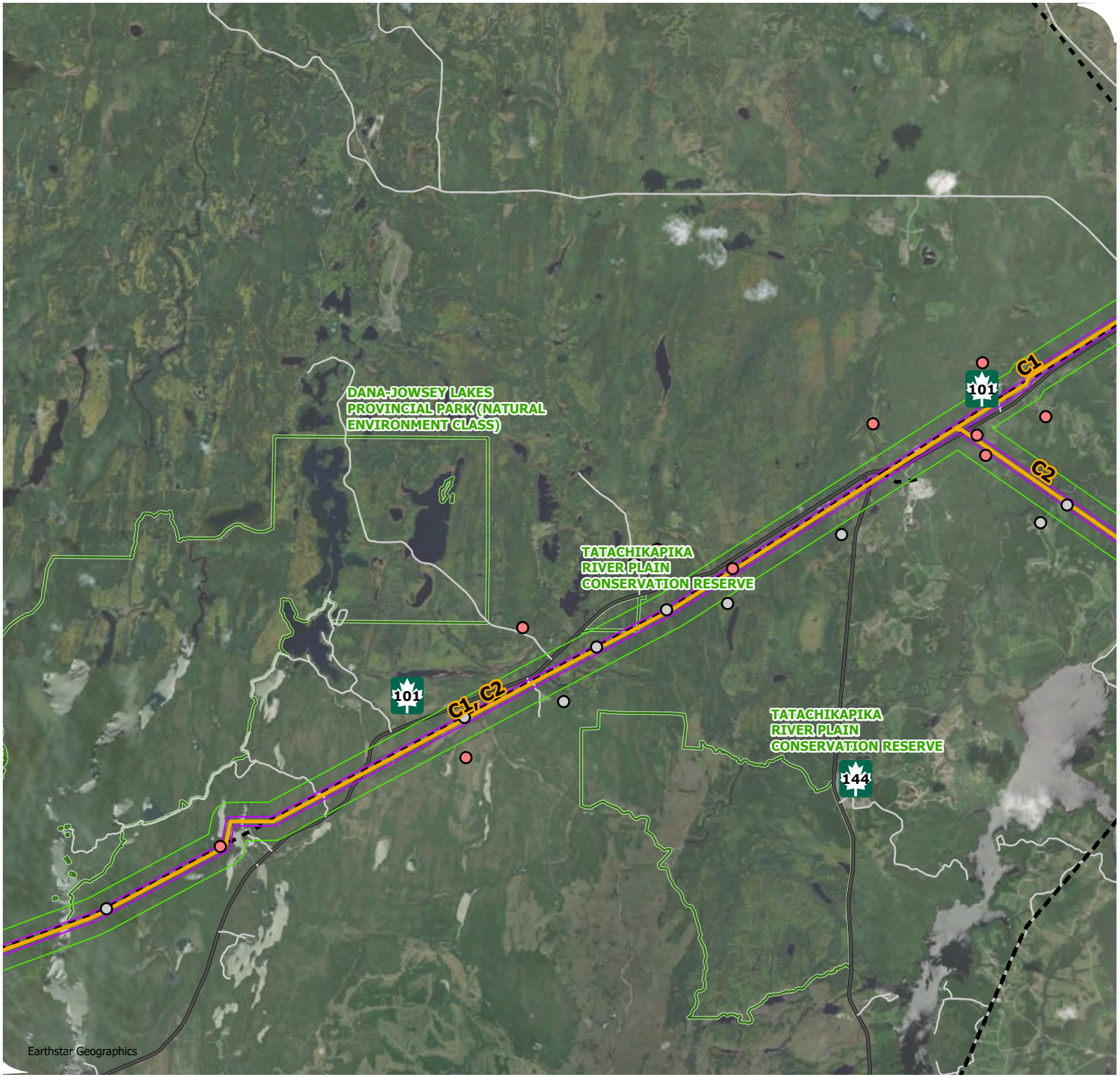
FIGURE 459. WINTER AERIAL SURVEY OBSERVATIONS

Mapping Extent -
Dana-Jowsey Lakes 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)

Species

- Gray Wolf
- Moose



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

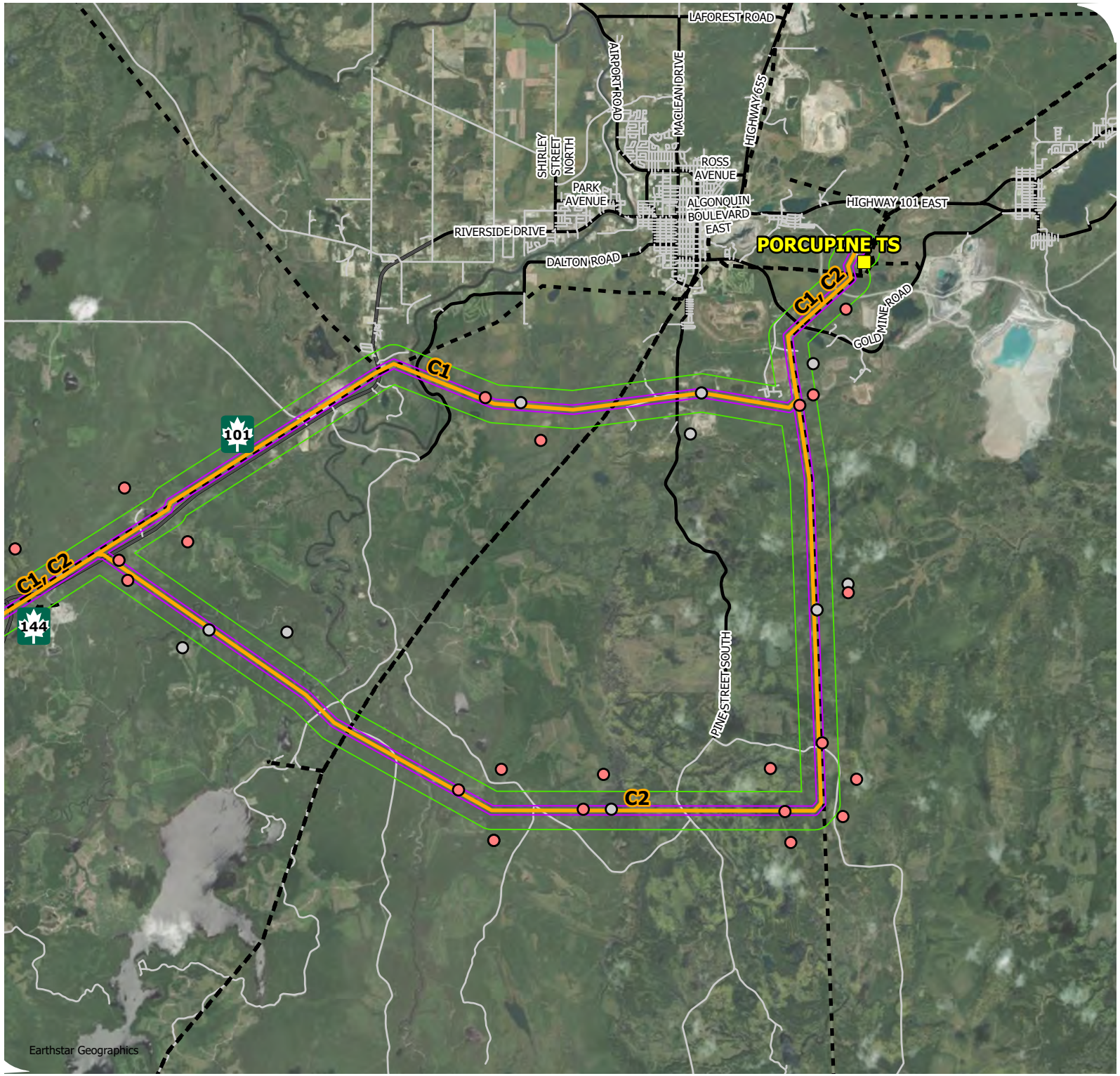
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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 460. WINTER AERIAL SURVEY OBSERVATIONS



Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)

Species

- Gray Wolf
- Moose

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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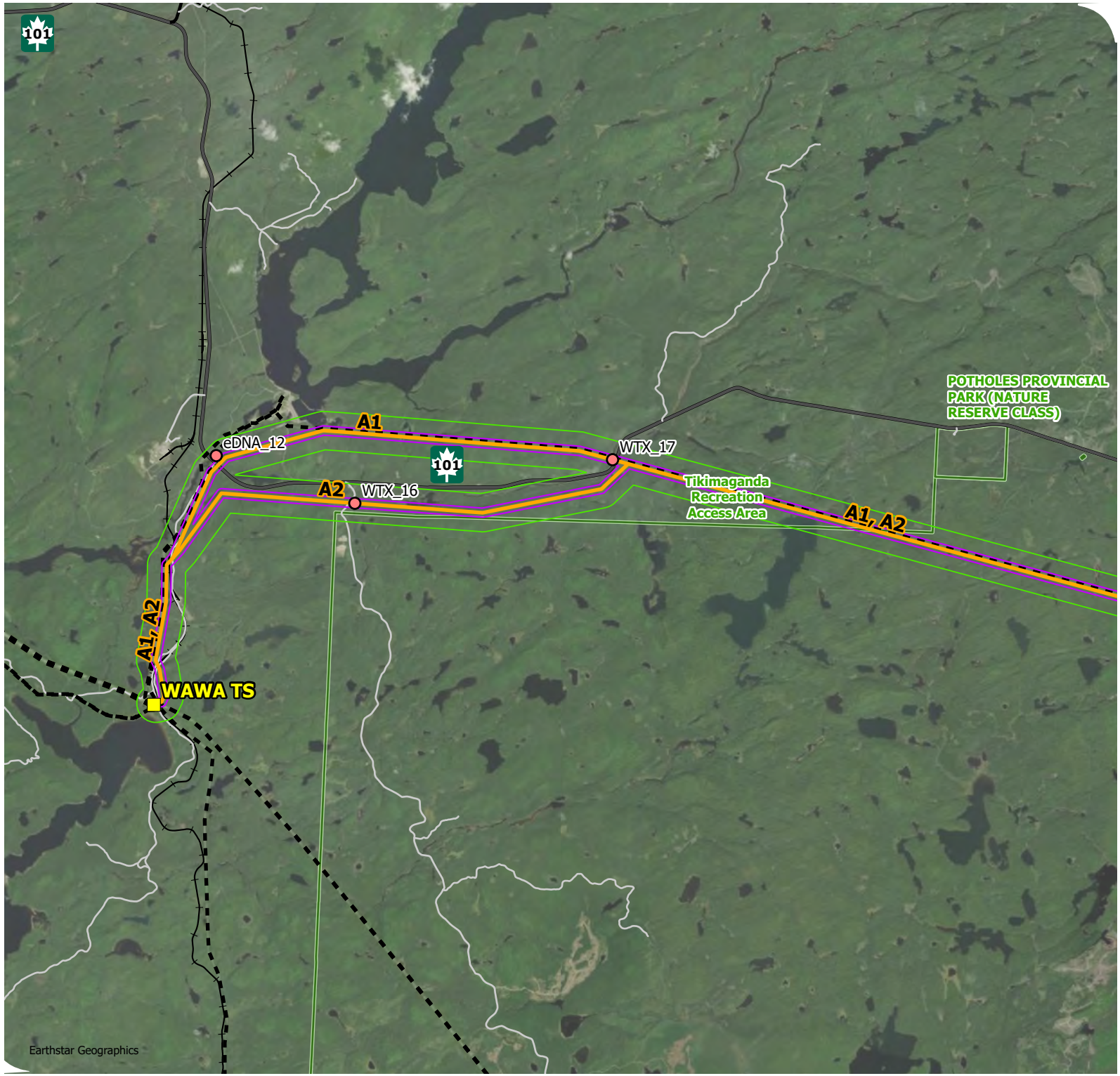
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STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5

WAWA TIMMINS POWER LINE

FIGURE 461. eDNA SURVEY LOCATIONS

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- eDNA Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

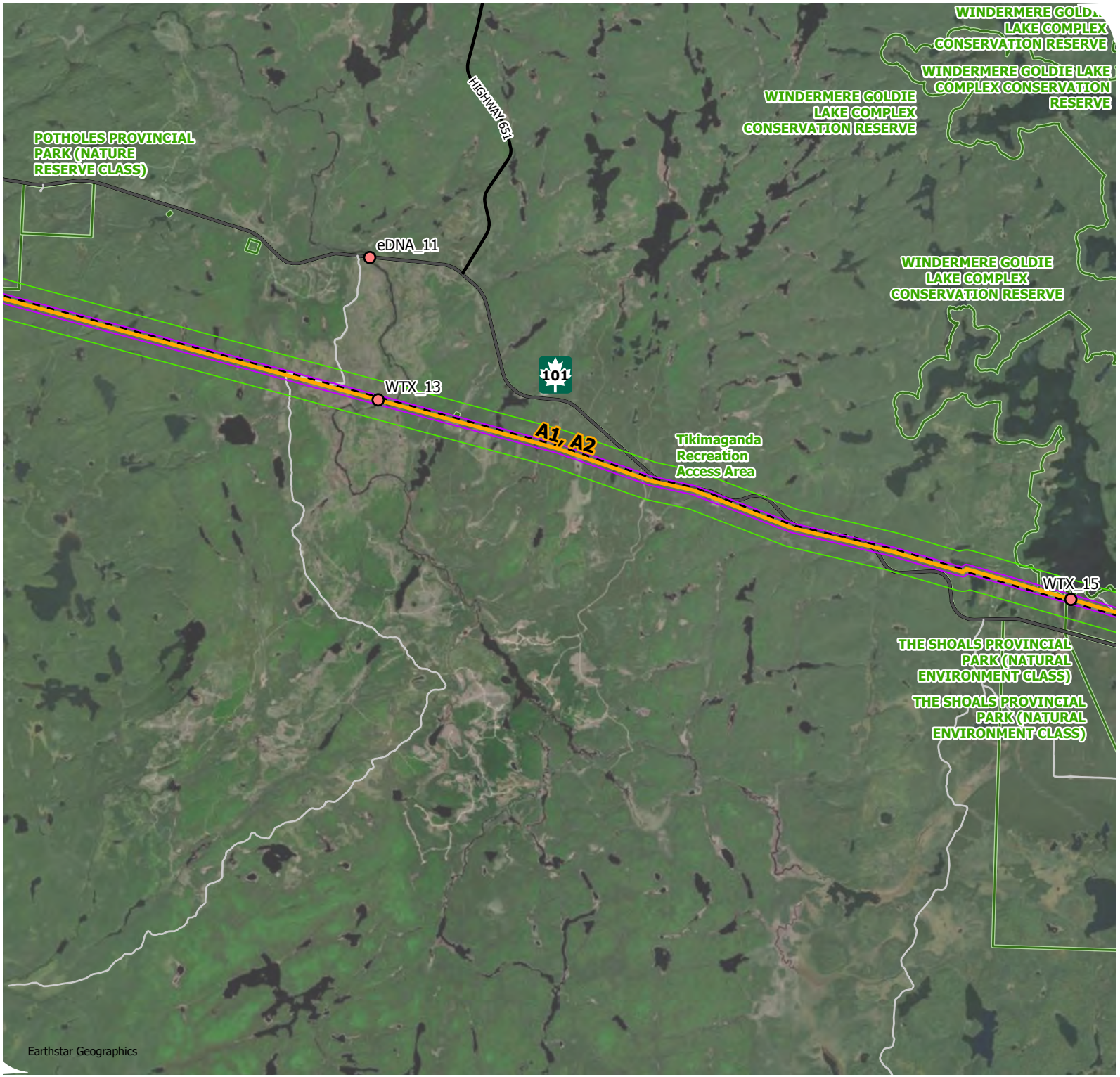
MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 462. eDNA SURVEY LOCATIONS

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- eDNA Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 463. eDNA SURVEY LOCATIONS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- eDNA Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

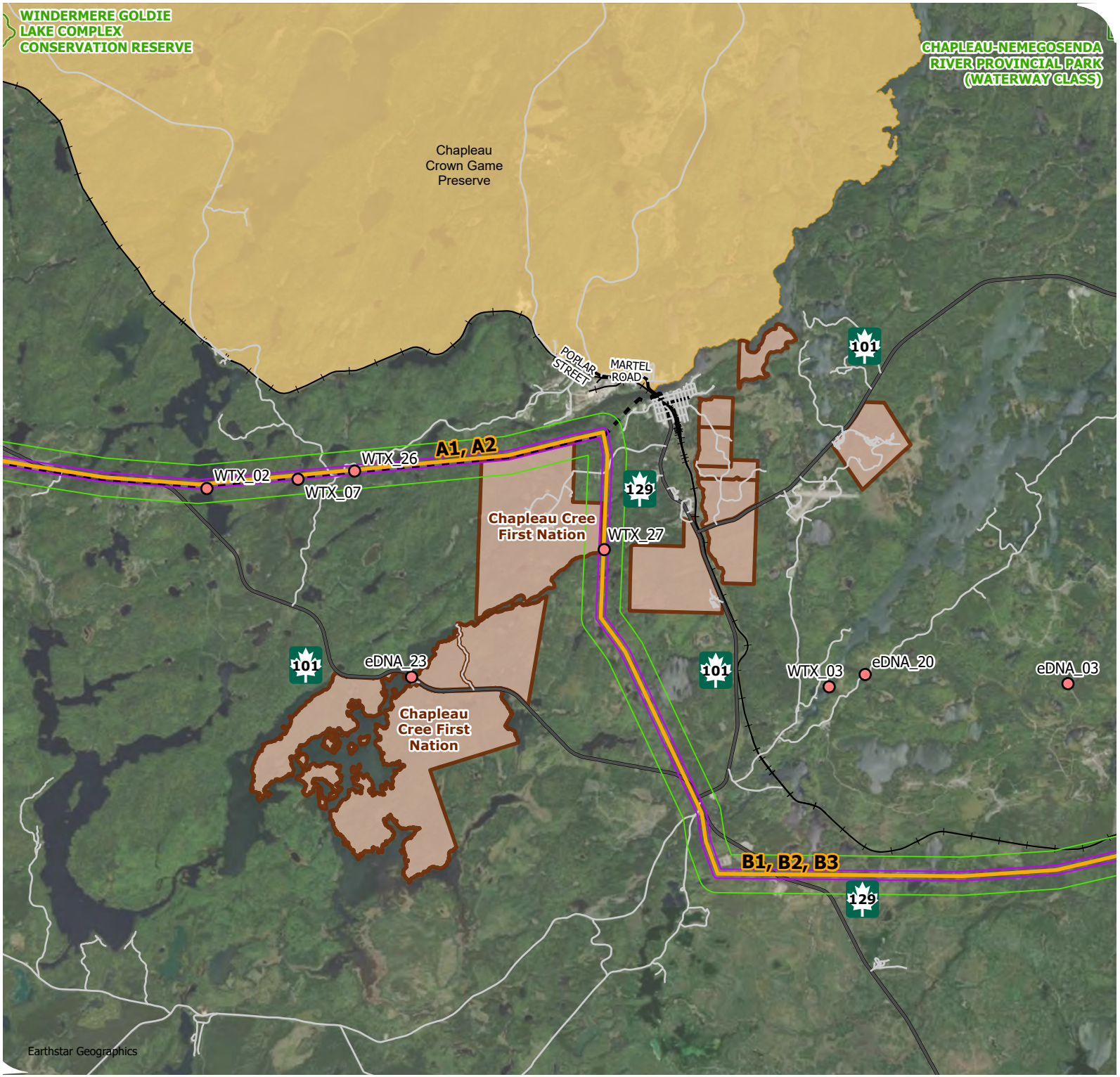
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 464. eDNA SURVEY LOCATIONS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- eDNA Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

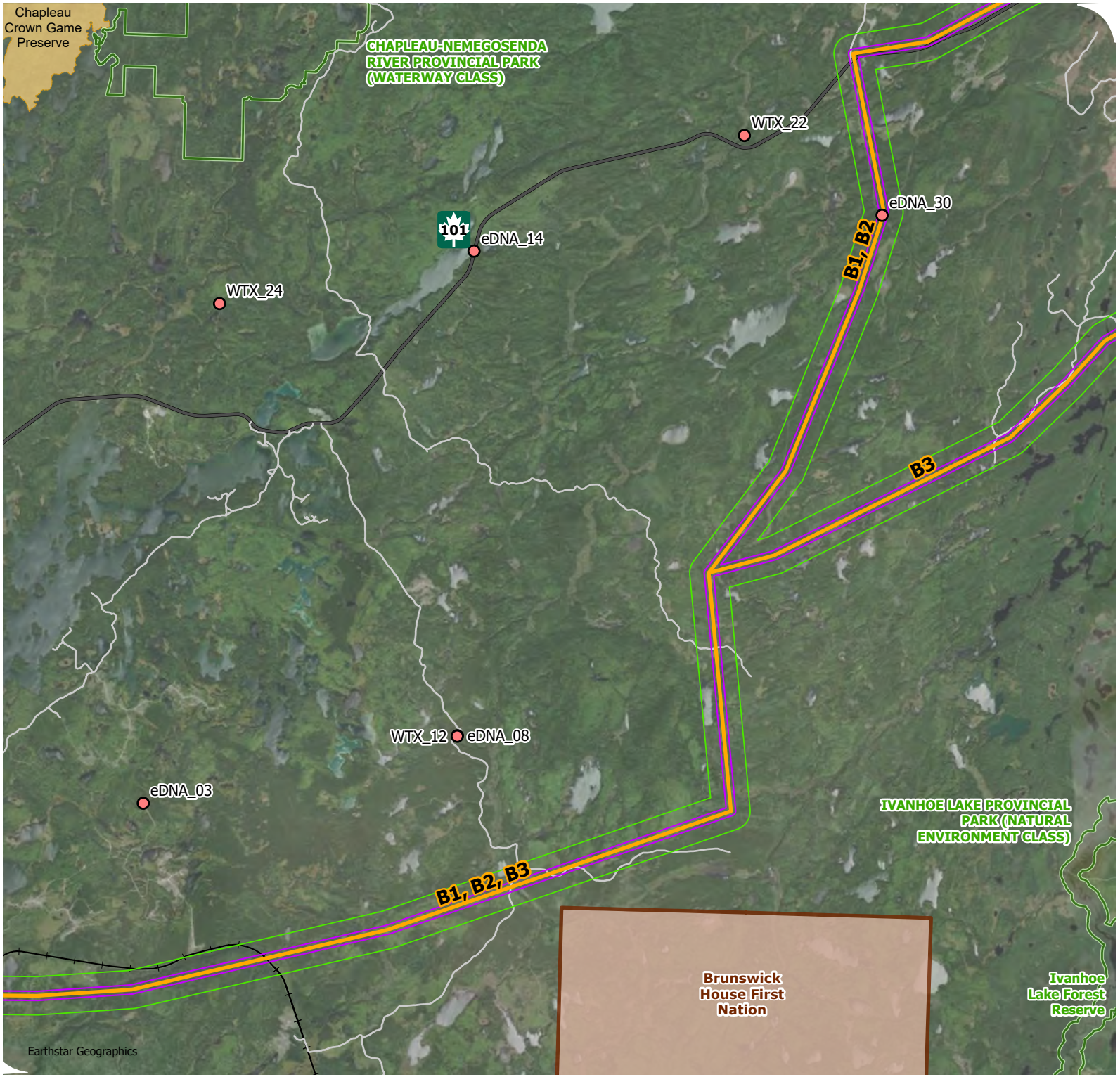
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STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5

WAWA TIMMINS POWER LINE

FIGURE 465. eDNA SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 1



- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- eDNA Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

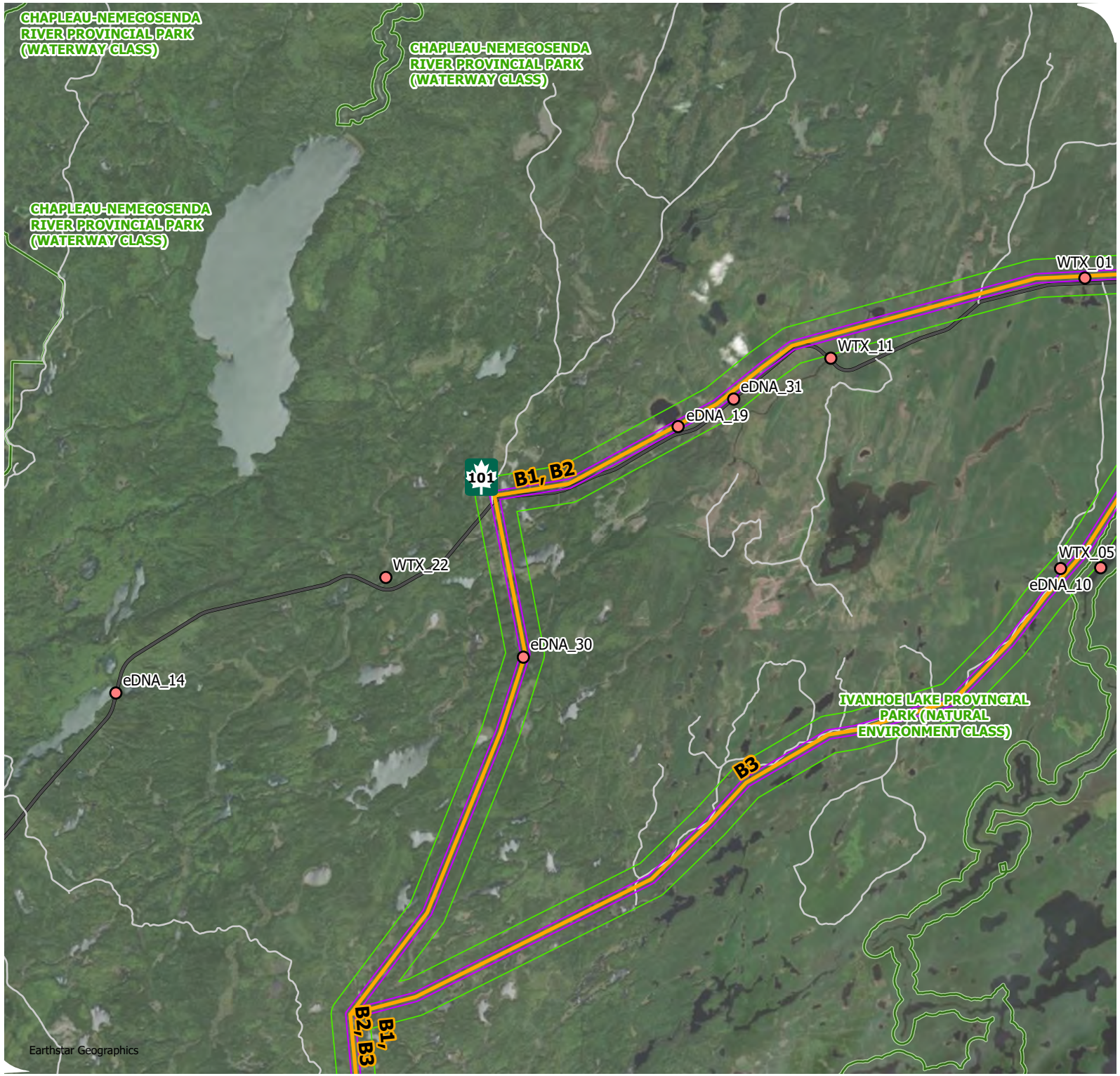
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 466. eDNA SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- eDNA Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

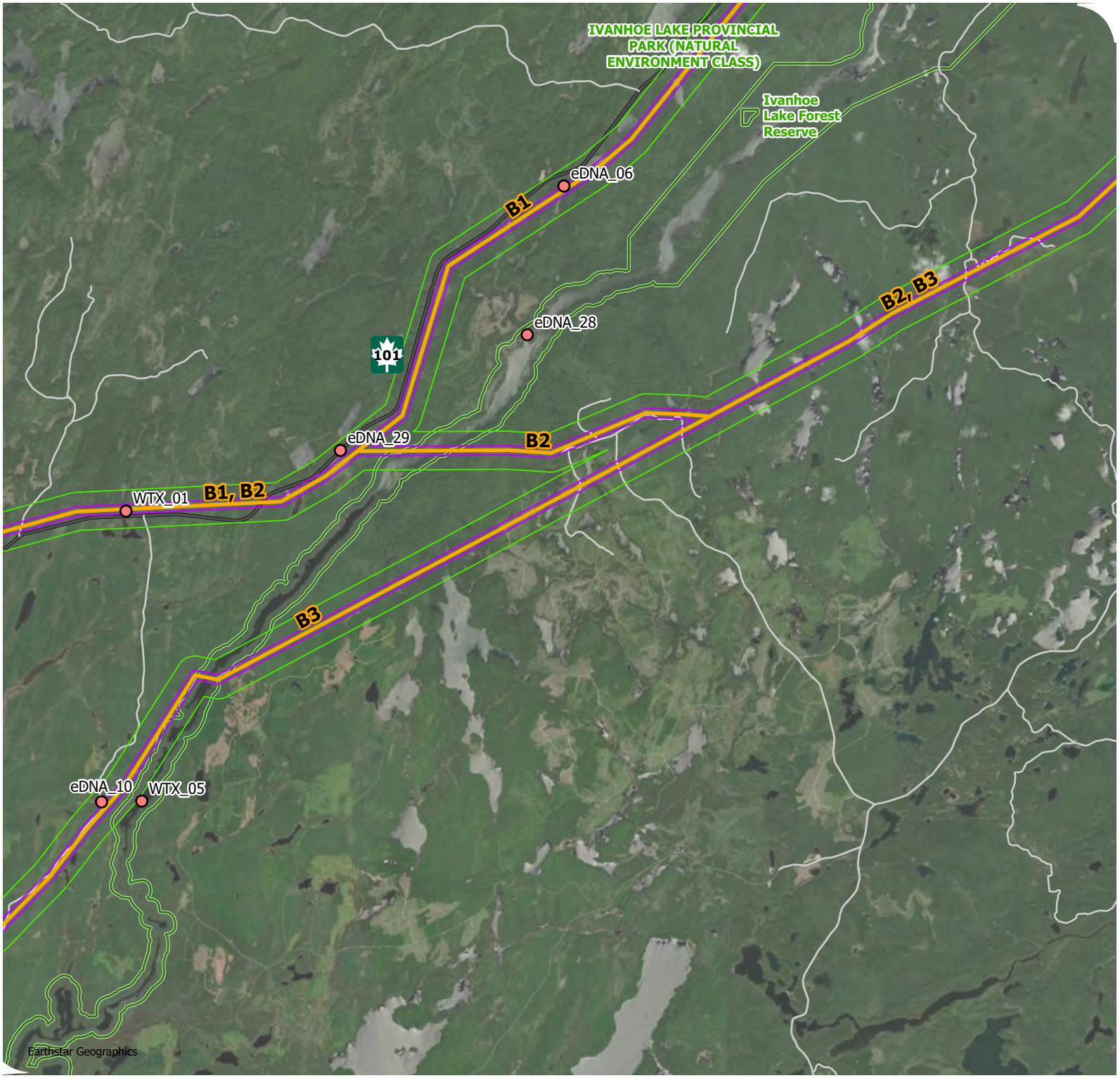
MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 467. eDNA SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 3

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- eDNA Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

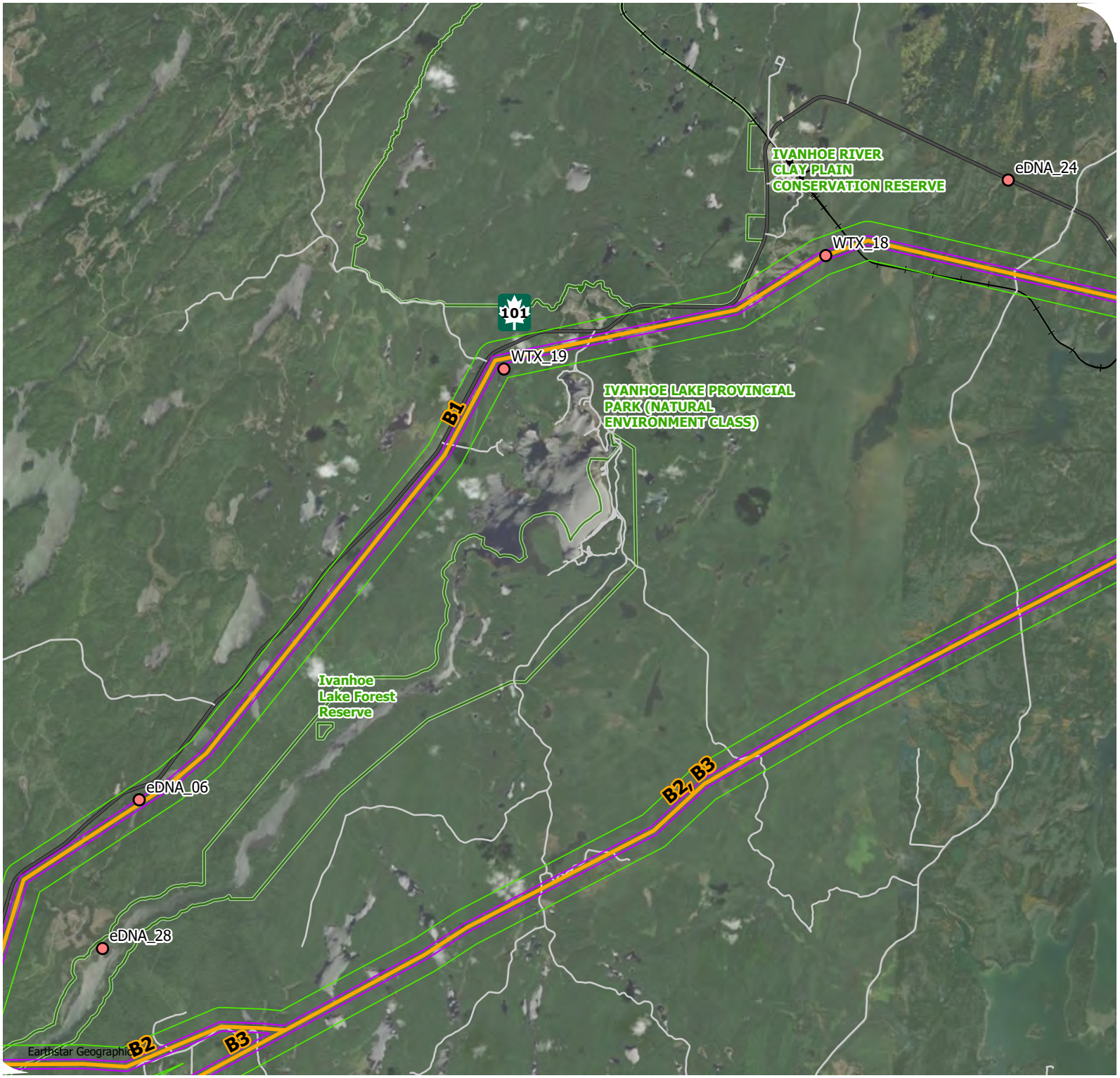
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DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 468. eDNA SURVEY LOCATIONS

Mapping Extent - Ivanhoe Lake 4



- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- eDNA Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

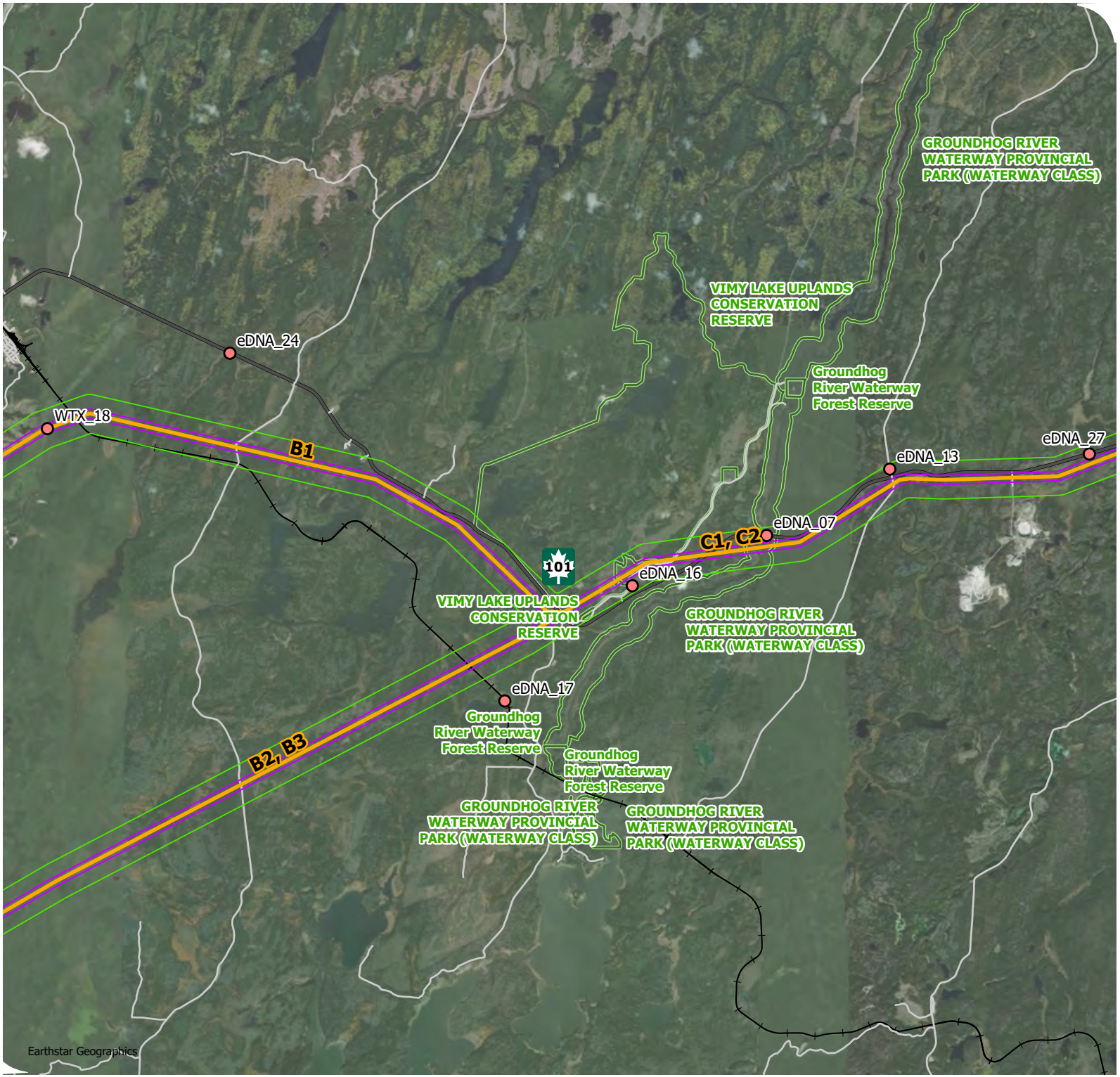
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WAWA TIMMINS POWER LINE

FIGURE 469. eDNA SURVEY LOCATIONS

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- eDNA Survey Locations



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

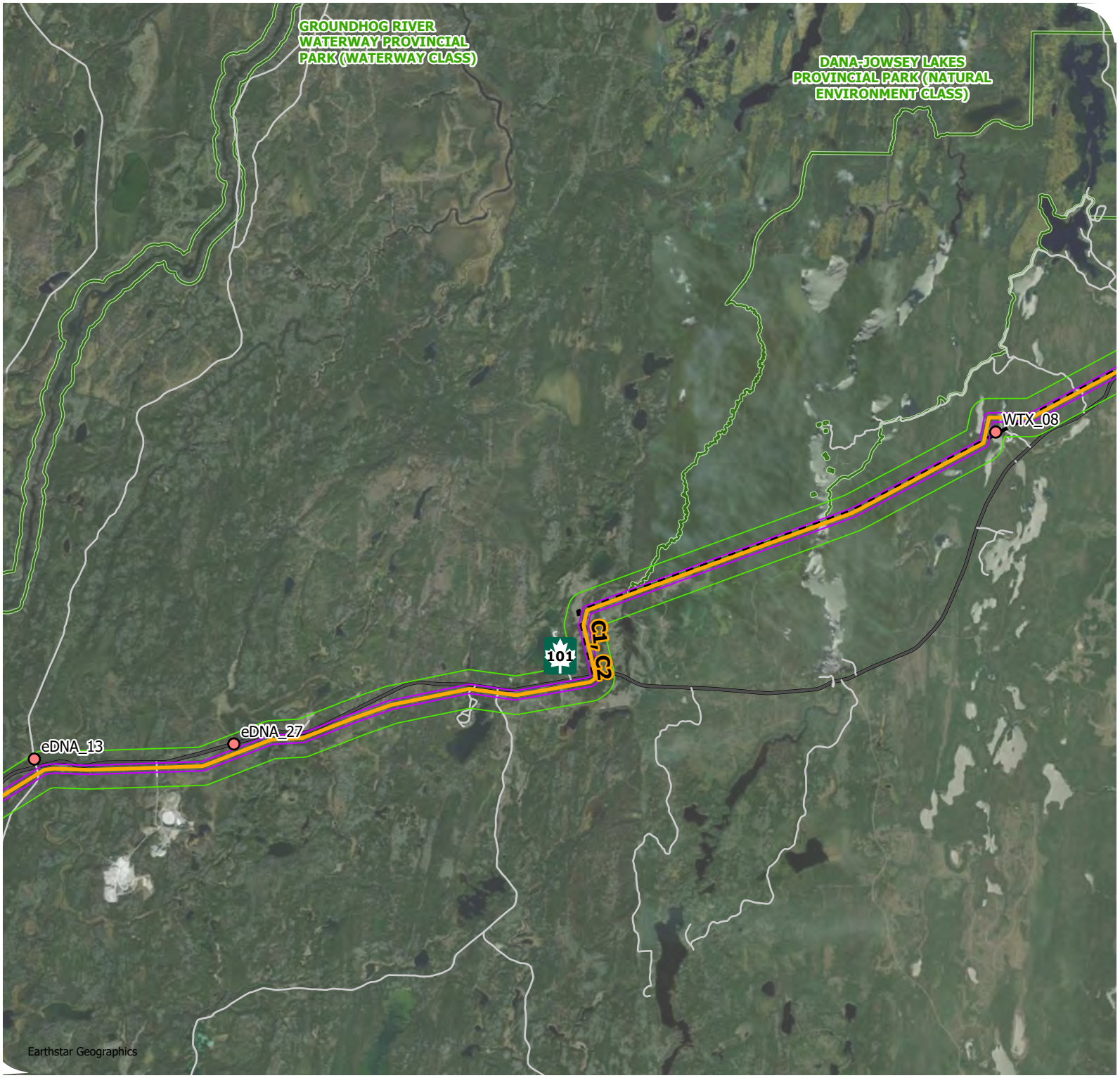
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STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 470. eDNA SURVEY LOCATIONS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- eDNA Survey Locations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

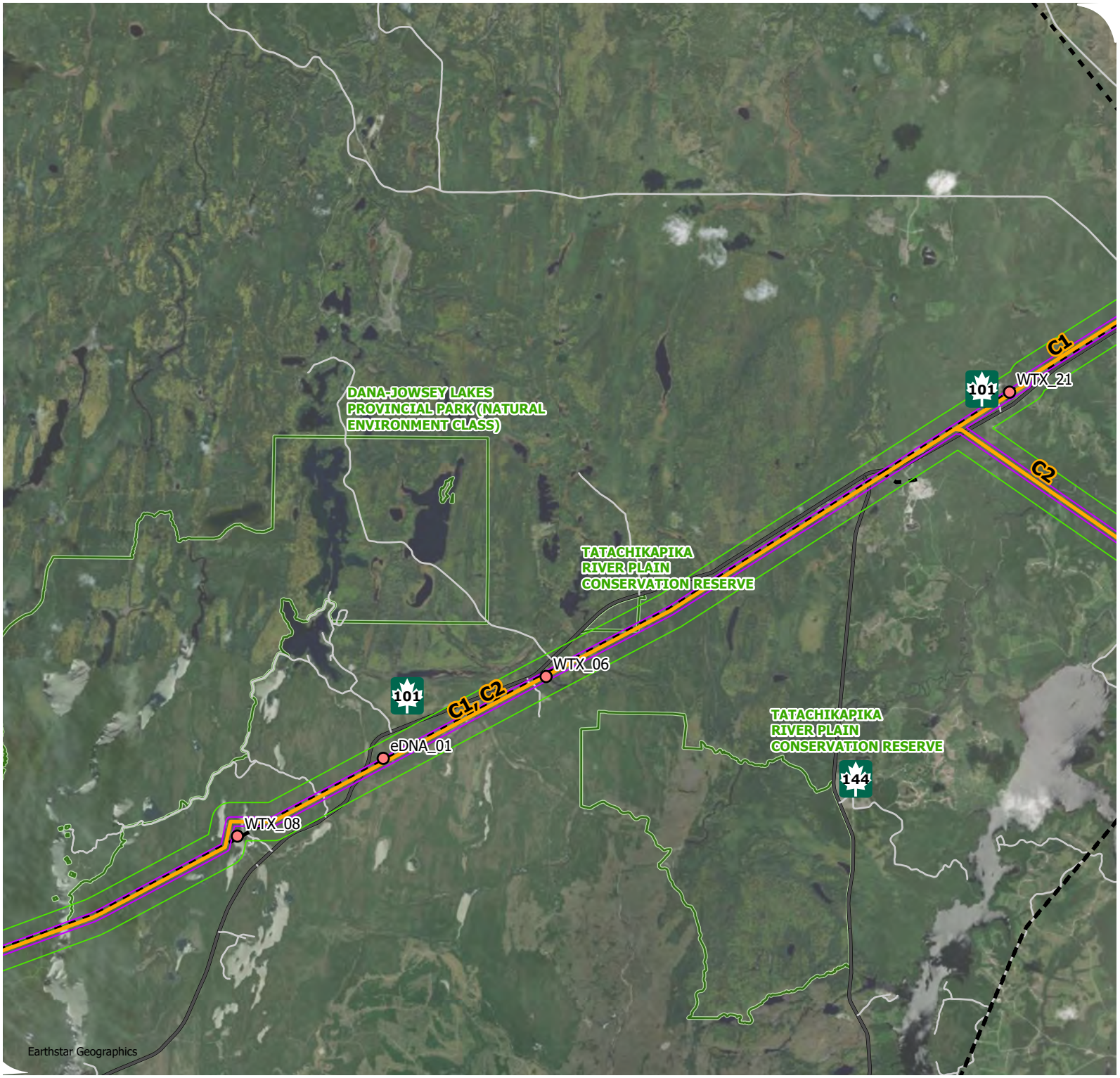
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WAWA TIMMINS POWER LINE

FIGURE 471. eDNA SURVEY LOCATIONS

Mapping Extent -
Dana-Jowsey Lakes 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- eDNA Survey Locations



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

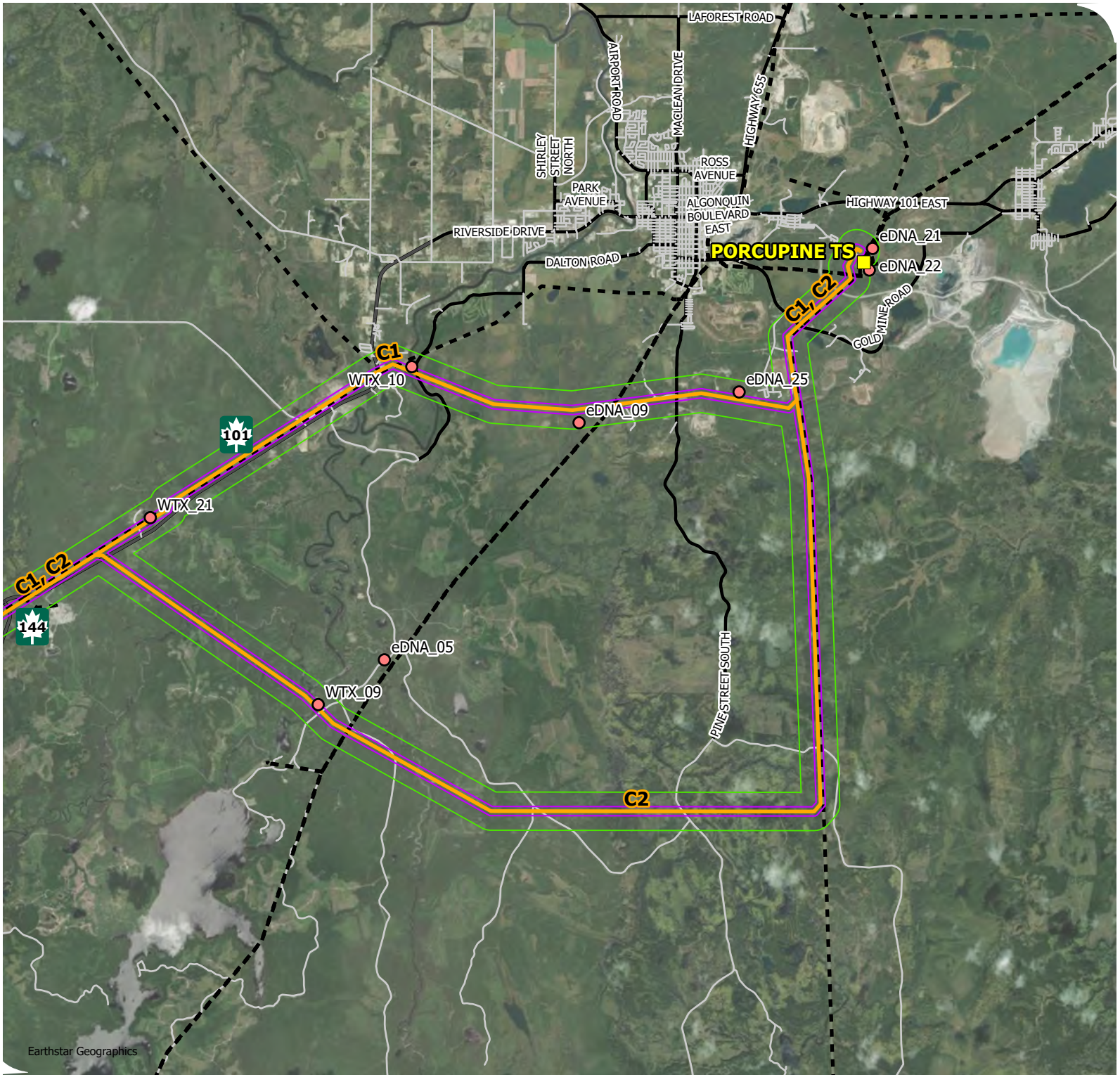
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WAWA TIMMINS POWER LINE

FIGURE 472. eDNA SURVEY LOCATIONS

Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- eDNA Survey Locations



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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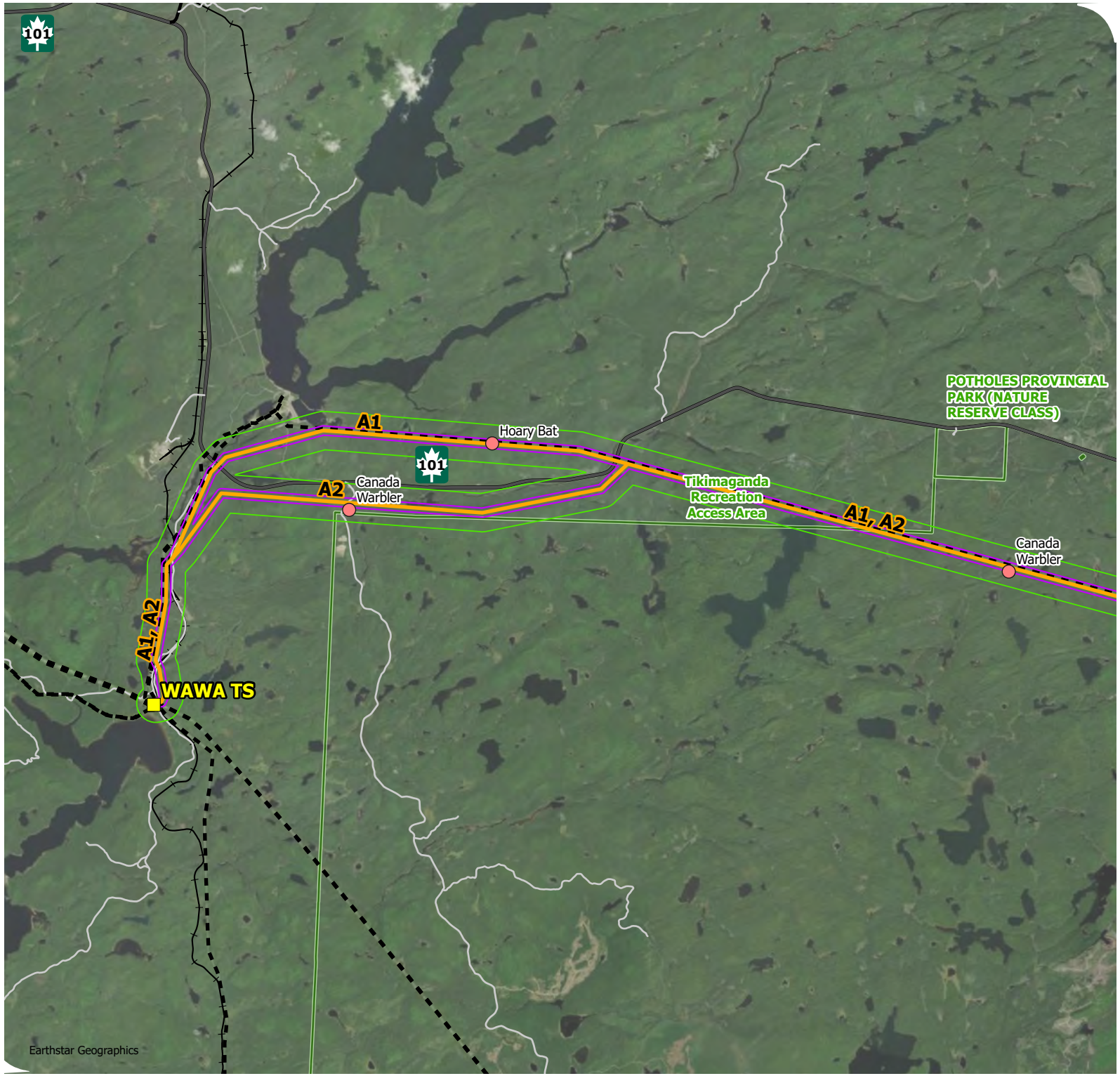
PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 473. SPECIES AT RISK FIELD OBSERVATIONS

Mapping Extent - Wawa Station



- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Species at Risk Field Observations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

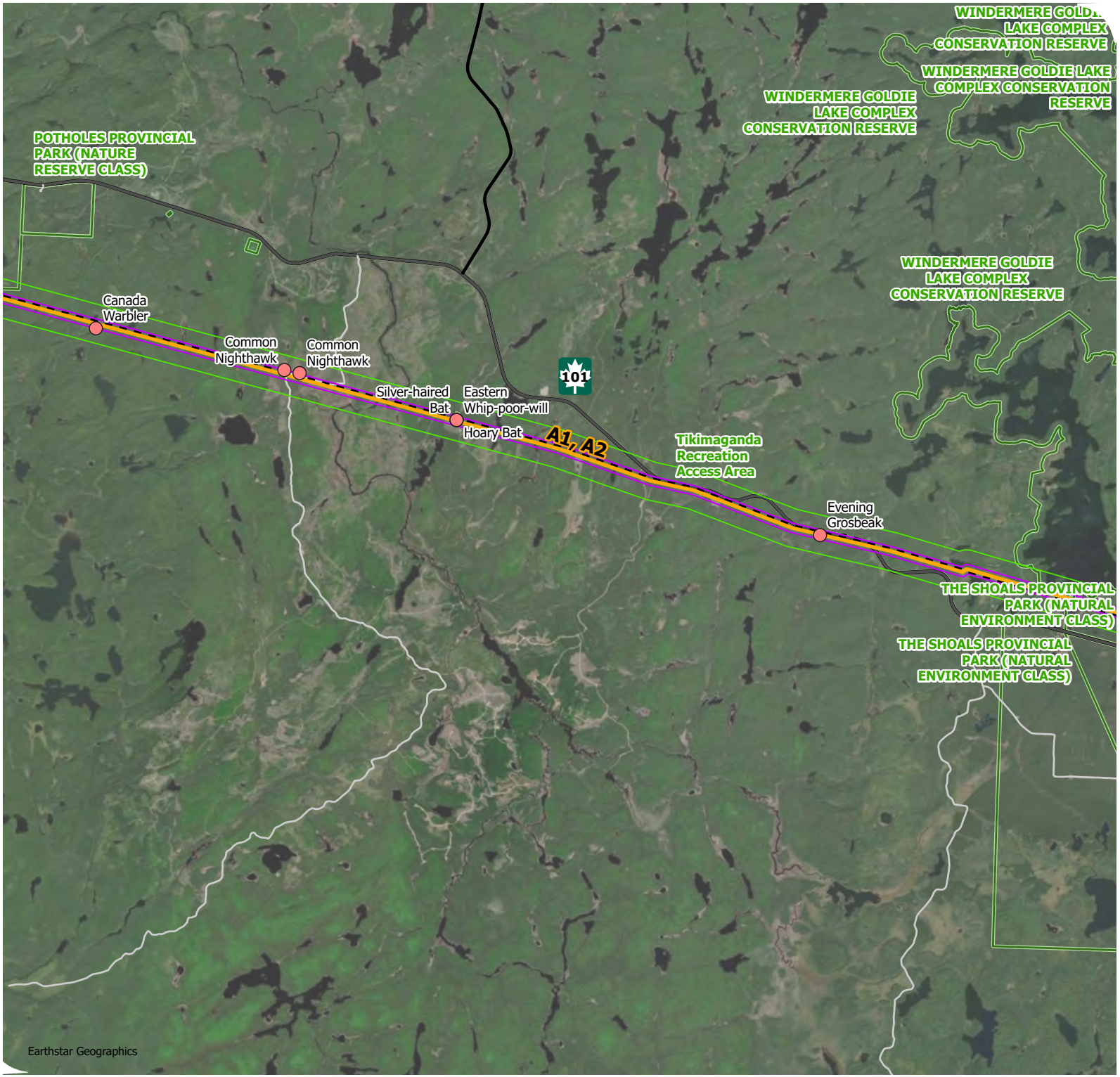
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 474. SPECIES AT RISK FIELD OBSERVATIONS

Mapping Extent - Windermere Lake 1

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Species at Risk Field Observations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

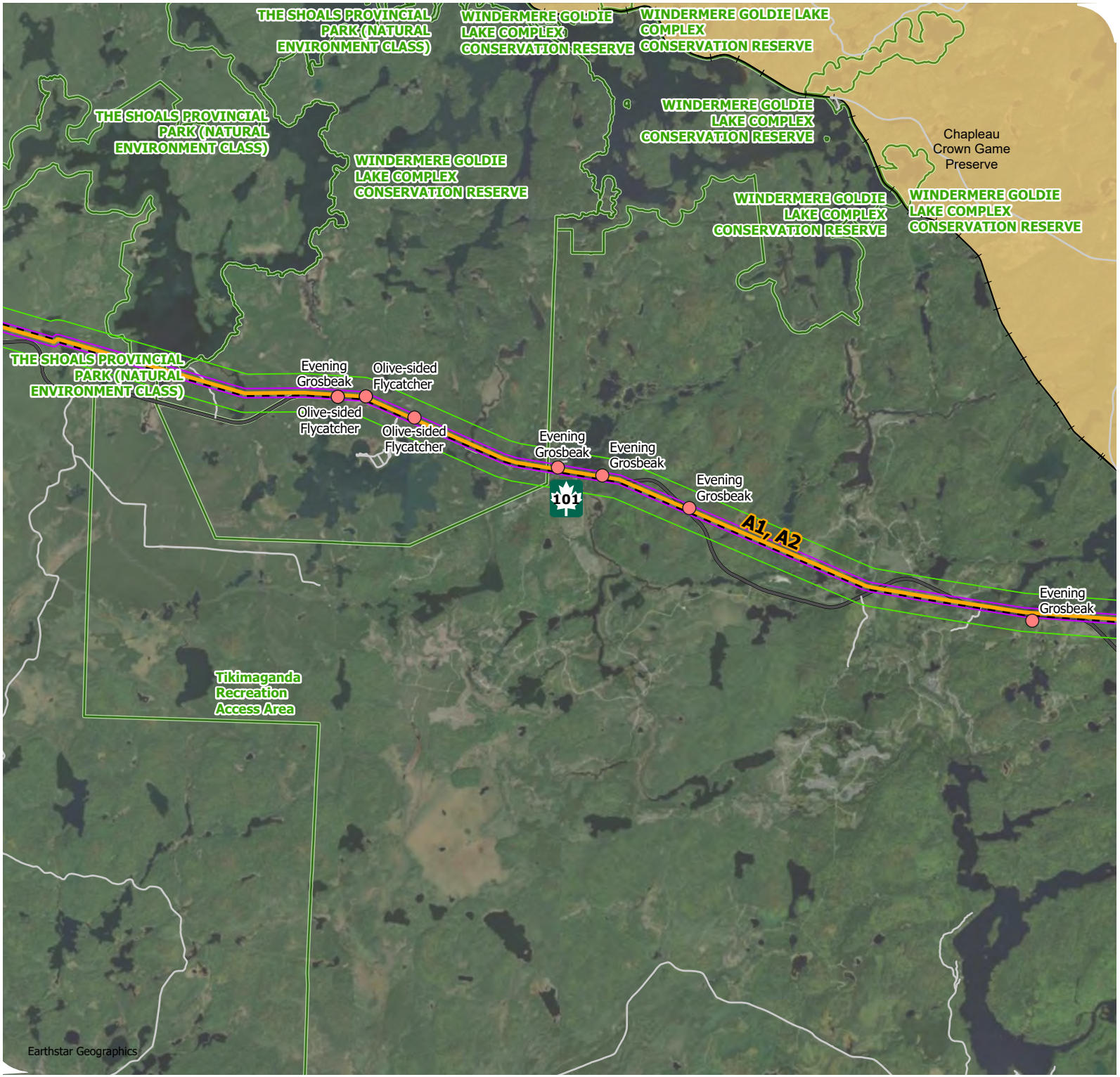
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 475. SPECIES AT RISK FIELD OBSERVATIONS

Mapping Extent - Windemere Lake 2

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Species at Risk Field Observations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

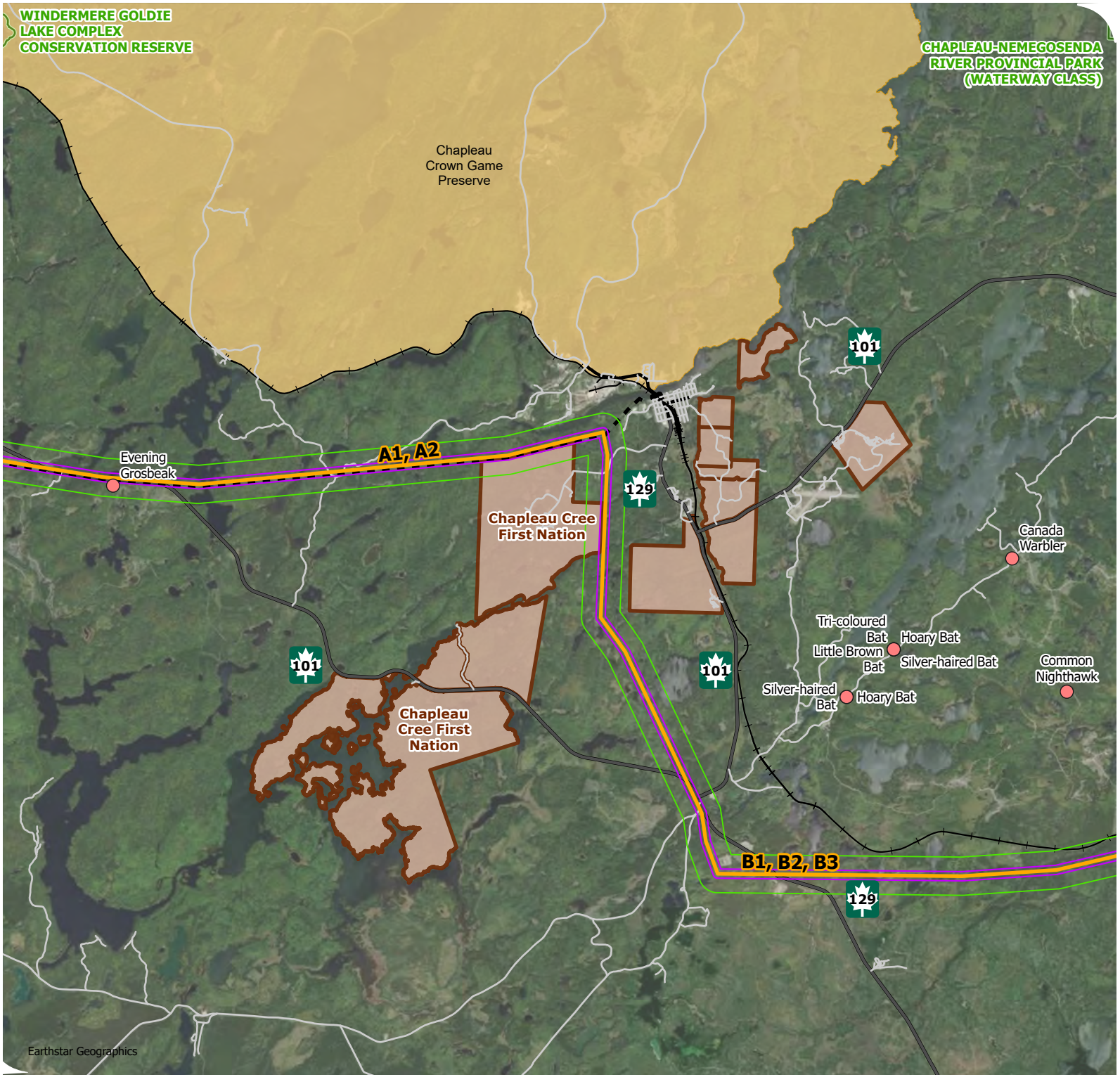
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 476. SPECIES AT RISK FIELD OBSERVATIONS

Mapping Extent - Chapleau

- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Species at Risk Field Observations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

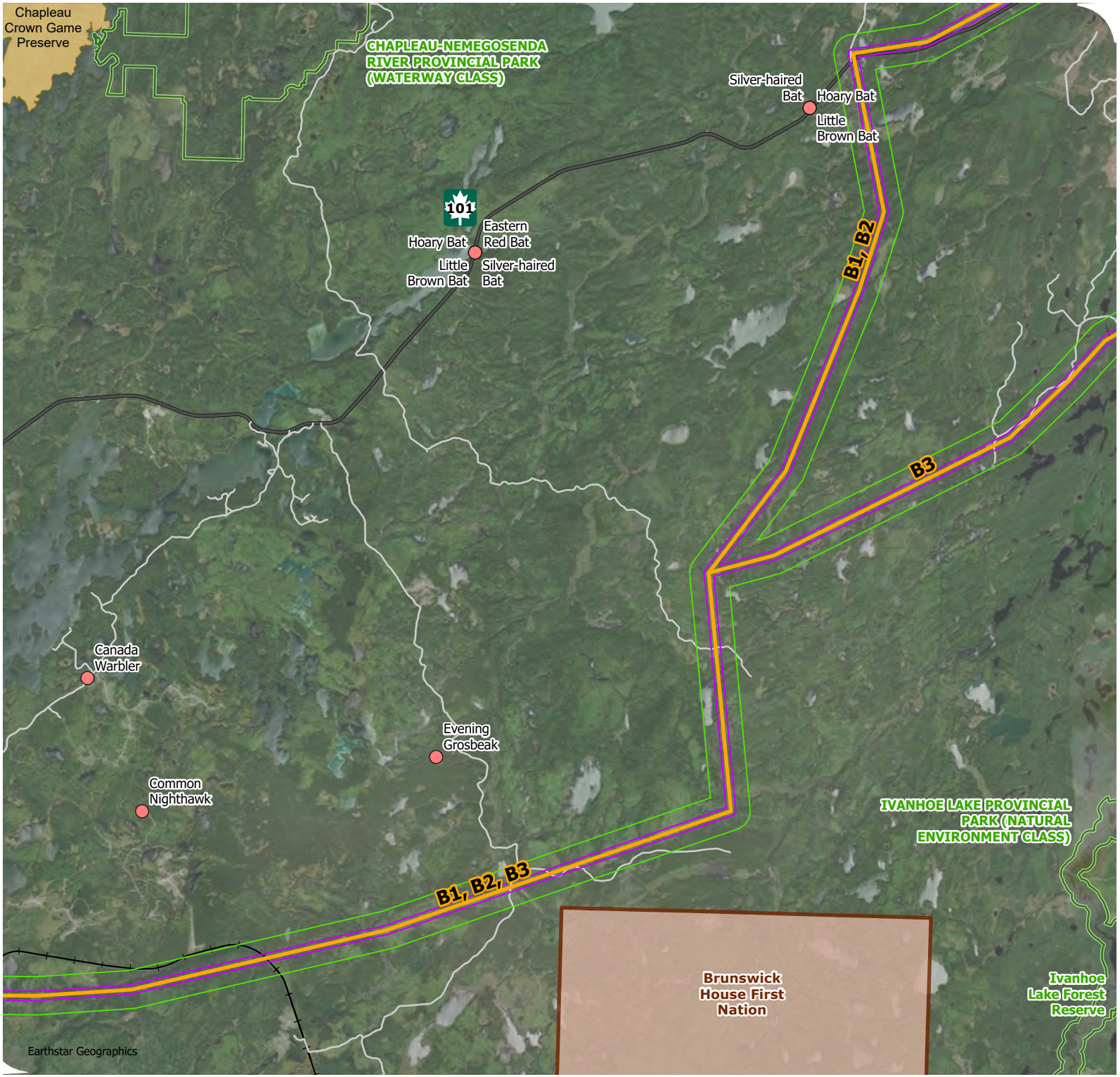
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 477. SPECIES AT RISK FIELD OBSERVATIONS

Mapping Extent - Ivanhoe Lake 1

- Expressway / Highway
- Minor Road
- Railway
- First Nation Reserve
- Crown Land Use Policy Area
- Chapleau Game Preserve
- Project Study Area (PSA)
- Local Study Area (LSA)
- Species at Risk Field Observations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

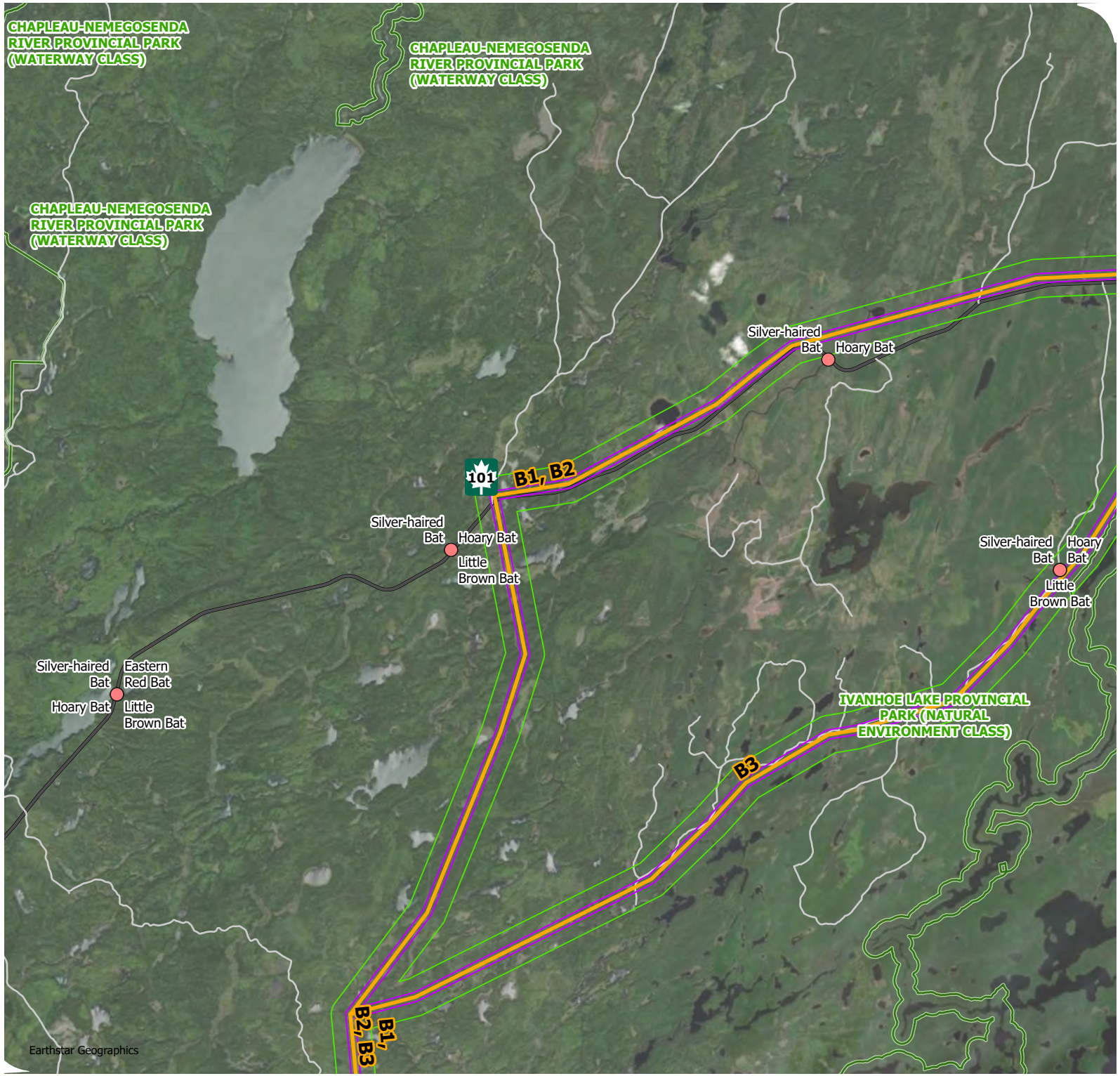
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PROJECT: 25-1043
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WAWA TIMMINS POWER LINE

FIGURE 478. SPECIES AT RISK FIELD OBSERVATIONS

Mapping Extent - Ivanhoe Lake 2

- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Species at Risk Field Observations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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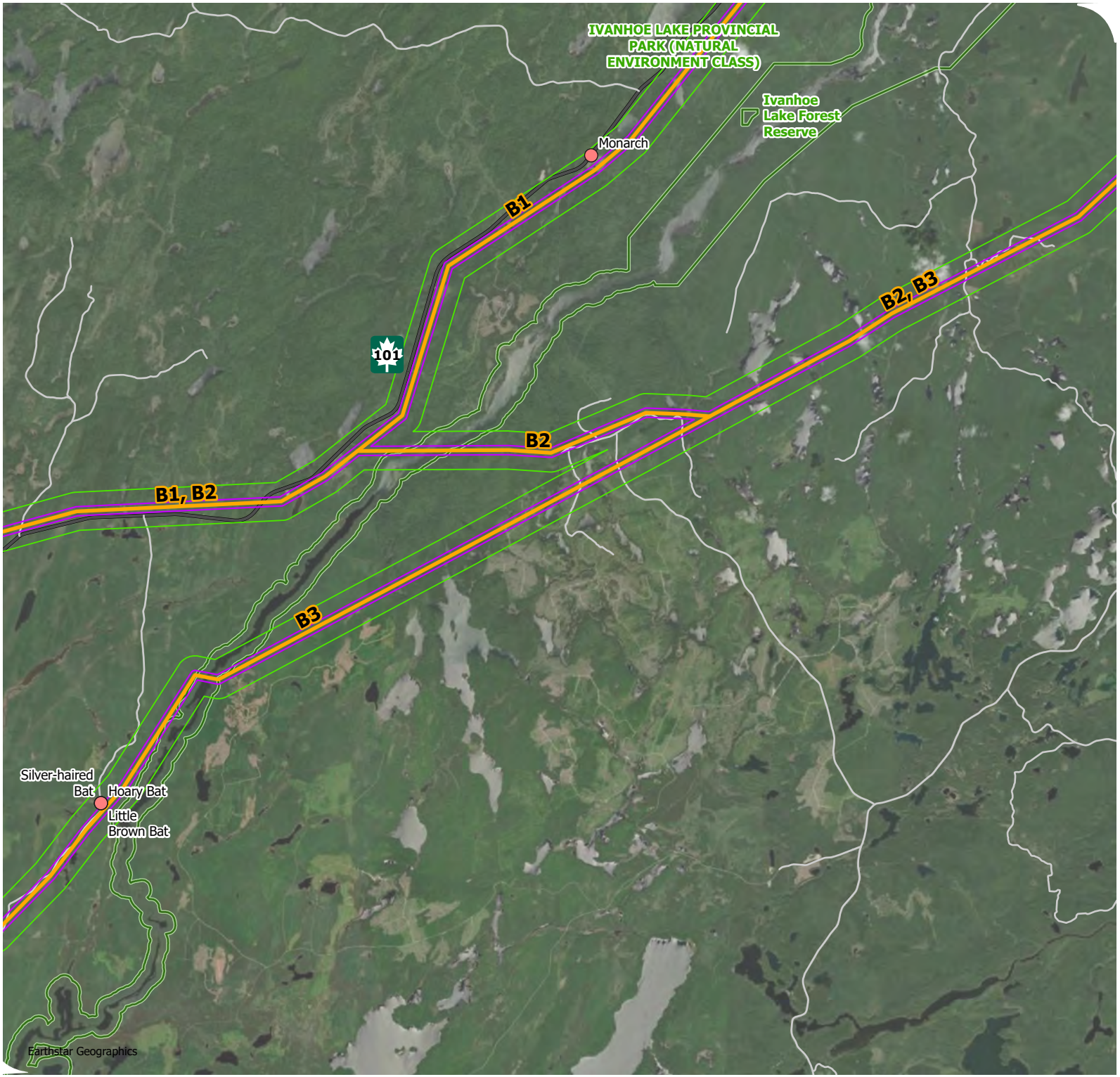
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WAWA TIMMINS POWER LINE

FIGURE 479. SPECIES AT RISK FIELD OBSERVATIONS

Mapping Extent - Ivanhoe Lake 3



- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Species at Risk Field Observations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

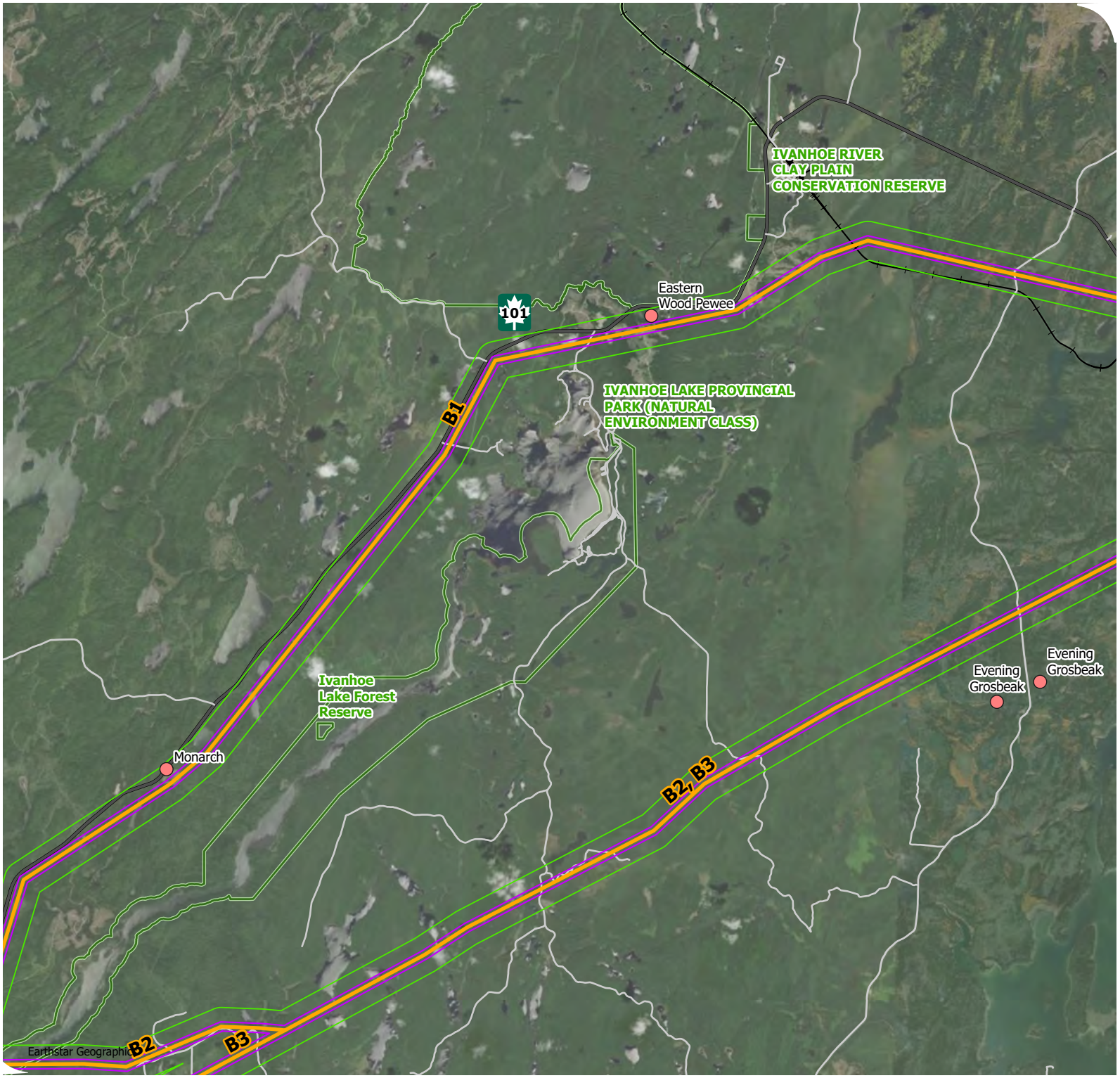
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 480. SPECIES AT RISK FIELD OBSERVATIONS

Mapping Extent - Ivanhoe Lake 4

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Species at Risk Field Observations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

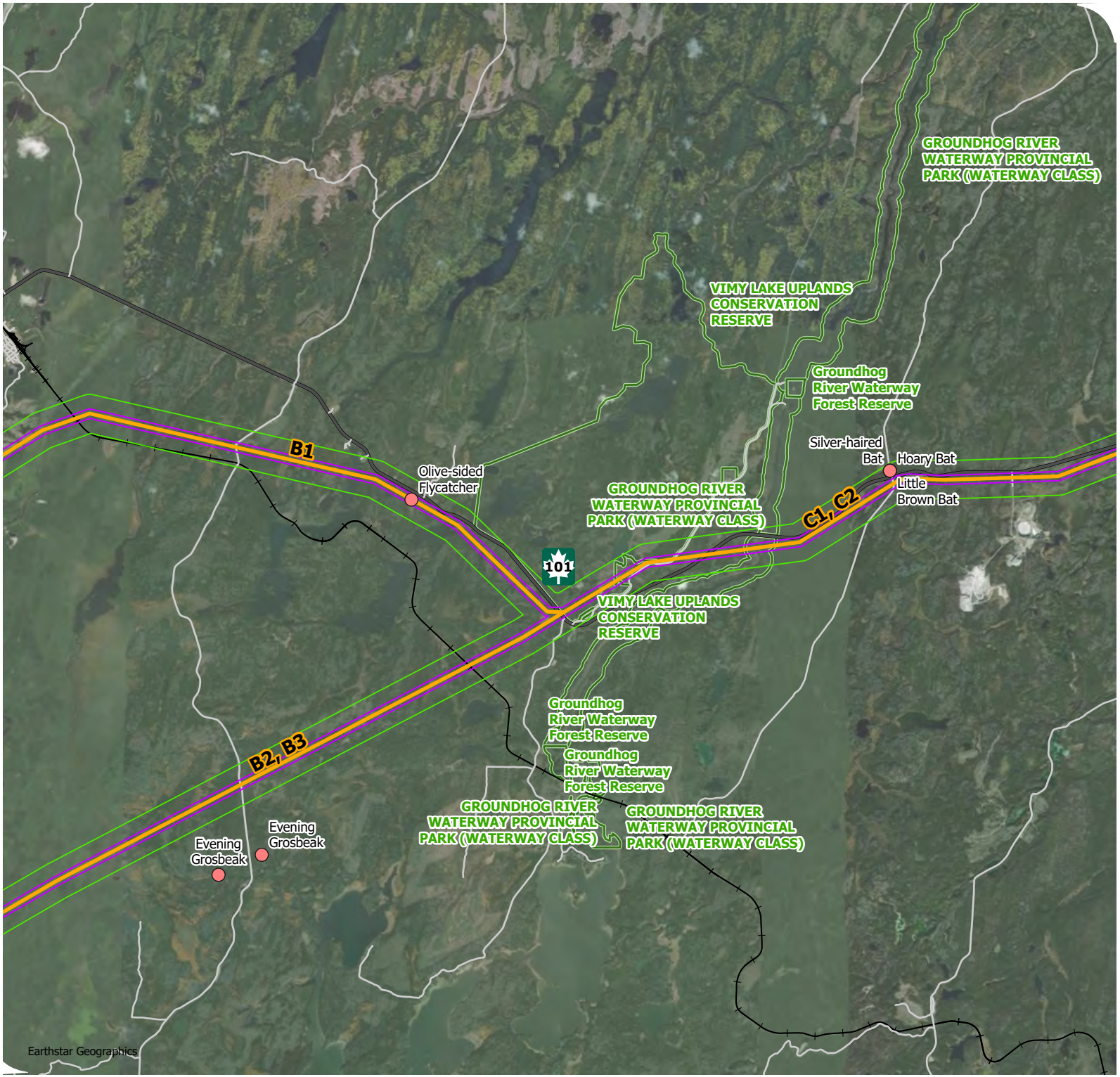
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MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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WAWA TIMMINS POWER LINE

FIGURE 481. SPECIES AT RISK FIELD OBSERVATIONS

Mapping Extent - Foleyet

- Expressway / Highway
- Minor Road
- Railway
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Species at Risk Field Observations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

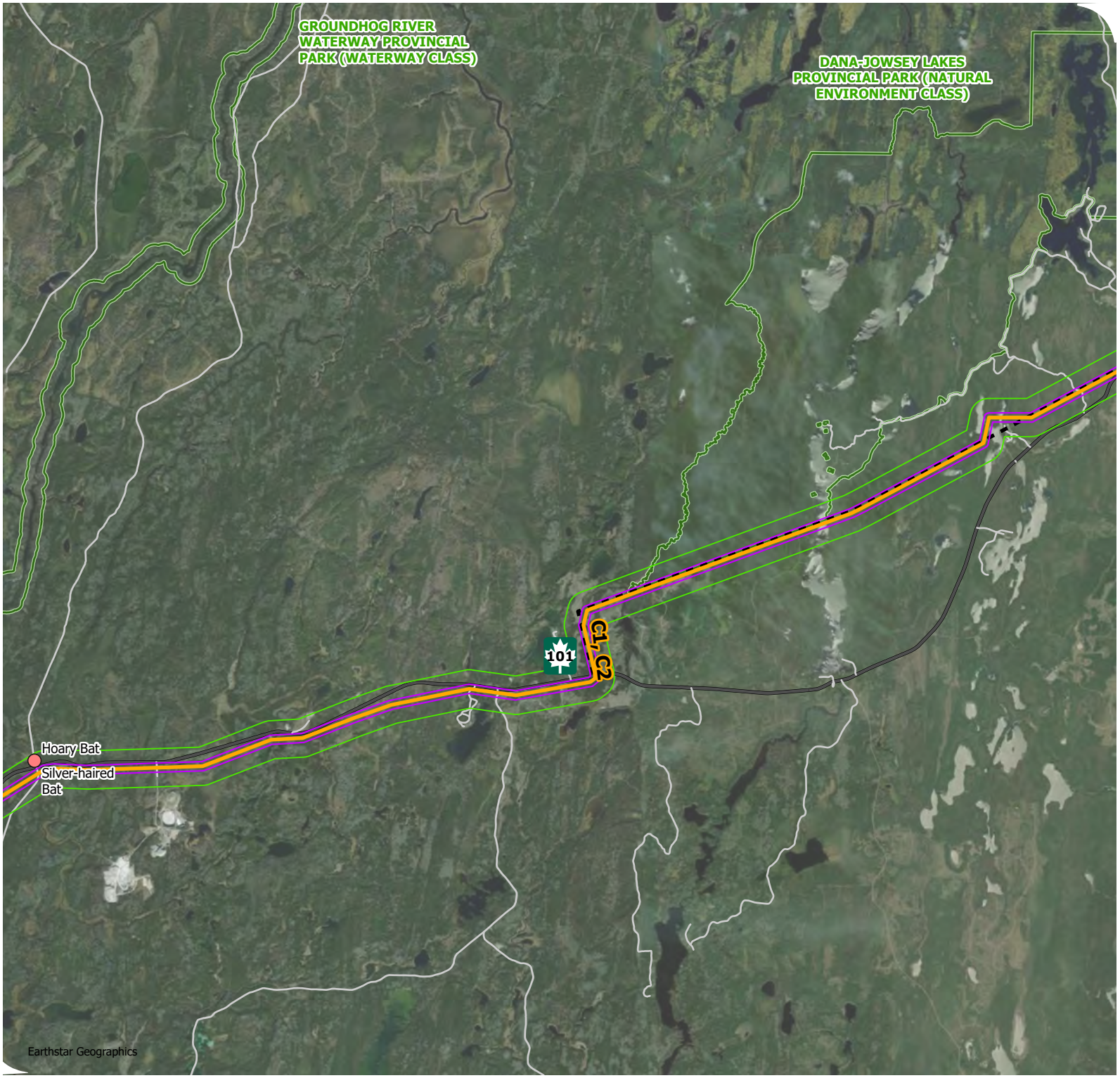
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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

FILE LOCATION: C:\Users\Zach\Documents\ArcGIS\Packages\p251043_WawaTimminsPL_ExternalMappingTemplate_50bad5\p30\F6A53830-3D00-44E0-AC7D-7F4647462B57.aprx; LAYOUT: WawaTimminsPL_04_PAGES_L11x8p5



WAWA TIMMINS POWER LINE

FIGURE 482. SPECIES AT RISK FIELD OBSERVATIONS

Mapping Extent - Dana-Jowsey Lakes 1

- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Species at Risk Field Observations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

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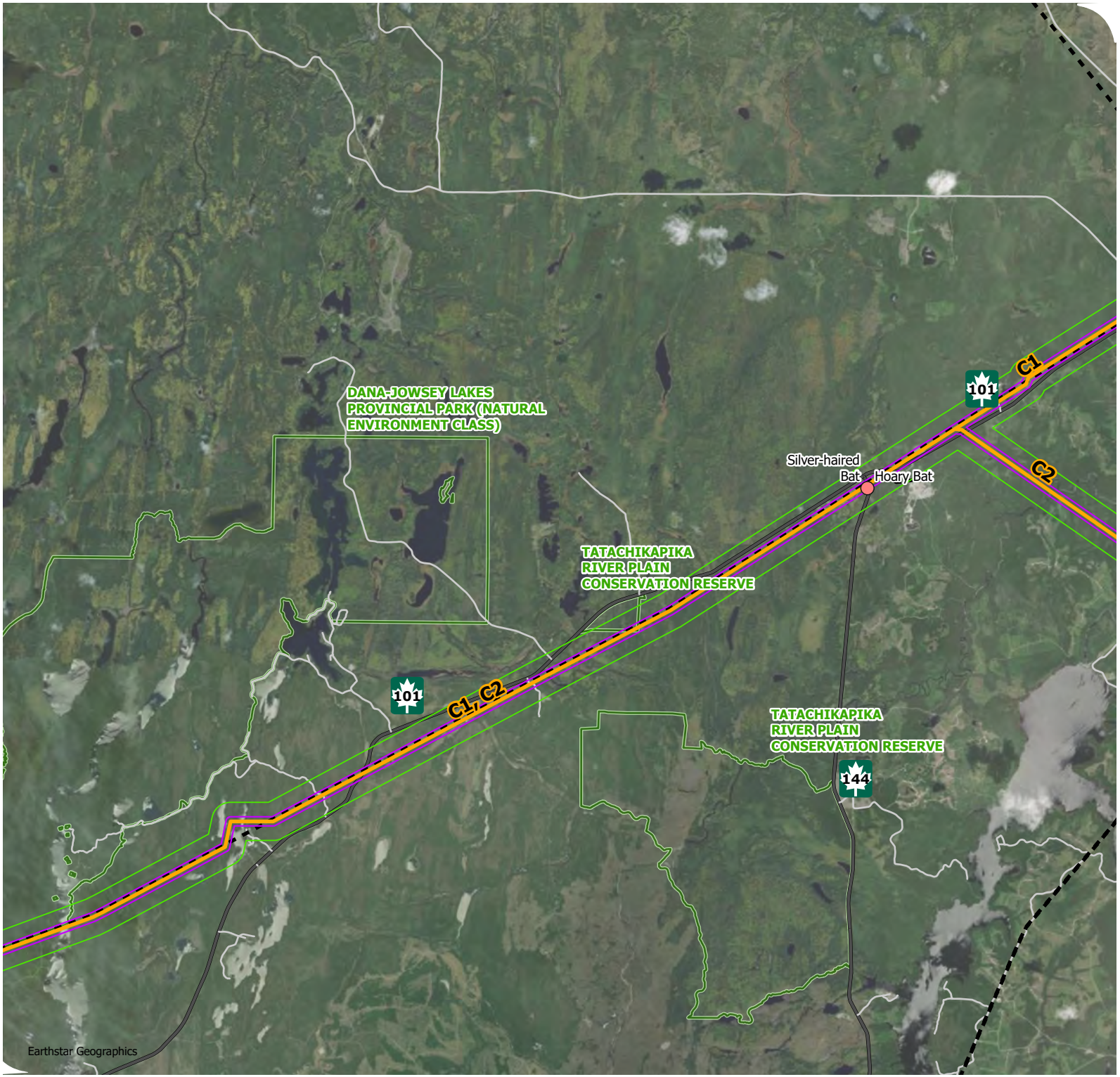
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WAWA TIMMINS POWER LINE

FIGURE 483. SPECIES AT RISK FIELD OBSERVATIONS

Mapping Extent - Dana-Jowsey Lakes 2



- Existing Transmission Line
- Expressway / Highway
- Minor Road
- Crown Land Use Policy Area
- Project Study Area (PSA)
- Local Study Area (LSA)
- Species at Risk Field Observations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

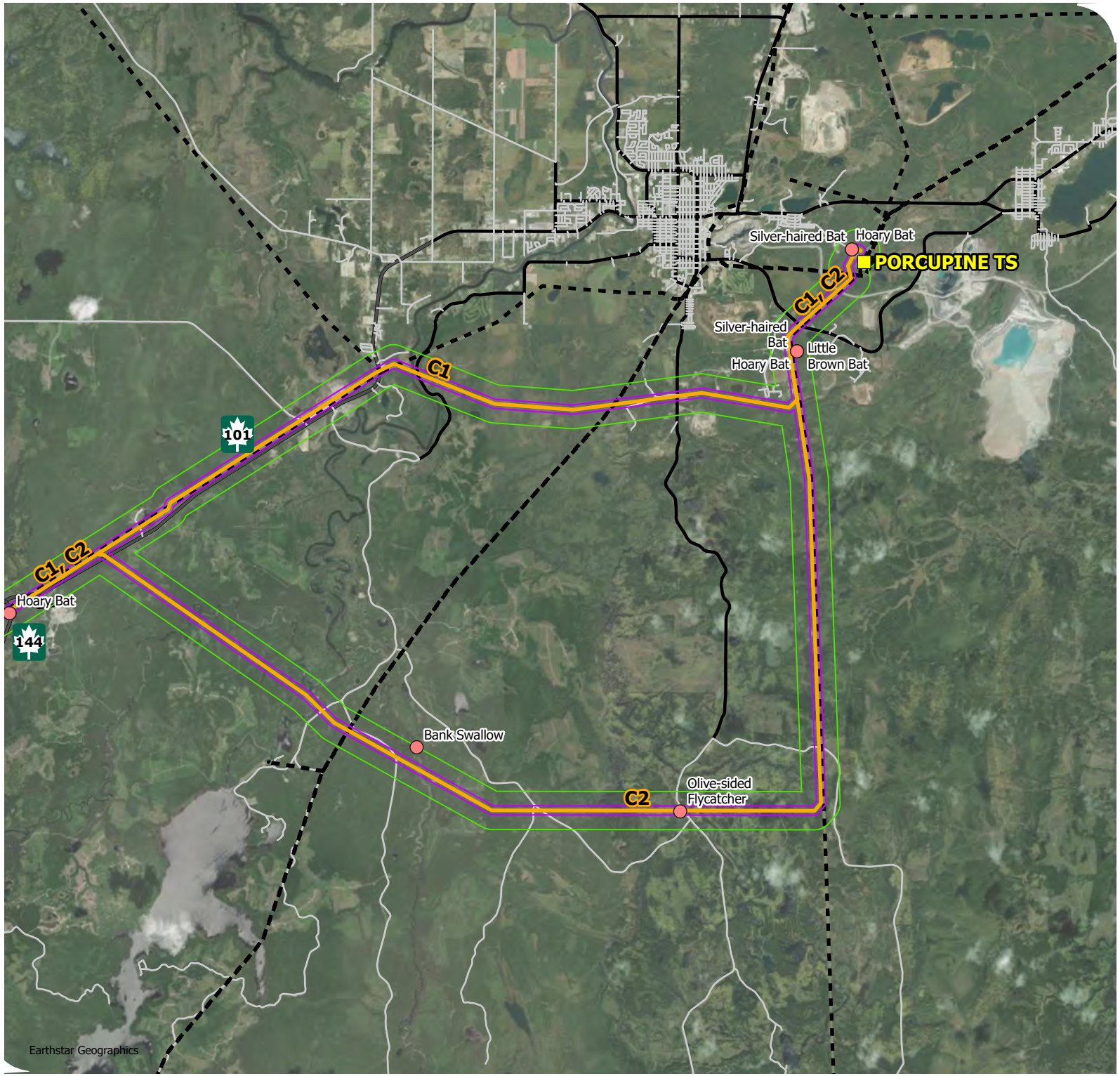
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WAWA TIMMINS POWER LINE

FIGURE 484. SPECIES AT RISK FIELD OBSERVATIONS



Mapping Extent - Timmins

- Hydro One Station/Junction
- Existing Transmission Line
- Expressway / Highway
- Major Road
- Minor Road
- Project Study Area (PSA)
- Local Study Area (LSA)
- Species at Risk Field Observations

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, Hydro One Networks Inc., Dillon Consulting Limited, NWES Data May 29 2025.

MAP CREATED BY: -
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:139,000

0 1 2 Km

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-03-25

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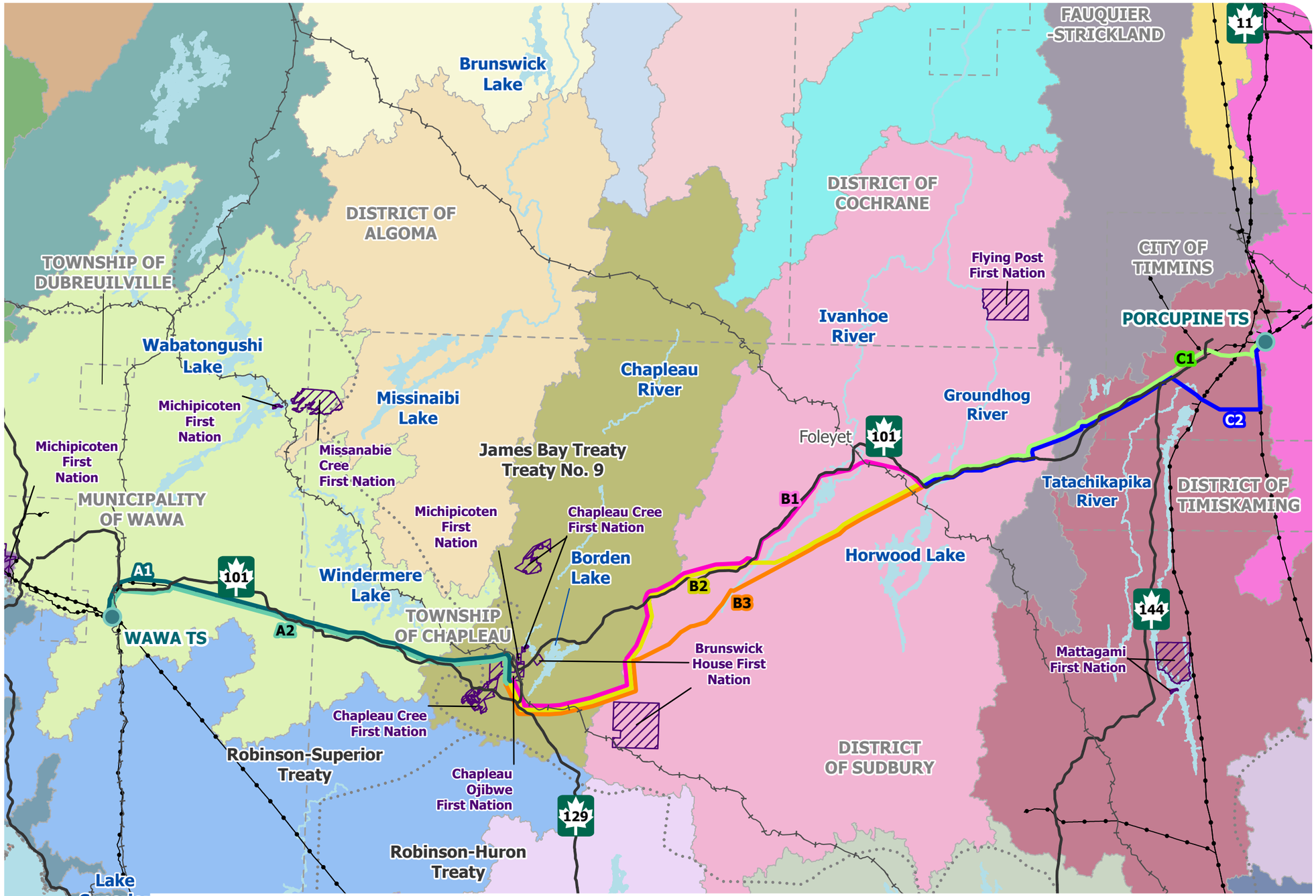
Appendix C-4

Tertiary Watershed

WAWA TIMMINS POWER LINE

ENVIRONMENTAL STUDY REPORT

Appendix C-4: Tertiary Watershed



Tertiary Watershed

- Agawa River
- Central Mattagami River
- East Lake Superior
- East Lake Superior Shoreline
- Frederick House River
- Goulais River
- Lower Abitibi River
- Lower Groundhog River
- Lower Kapuskasing River
- Mattagami River
- Mattawitchewan River - Central Missinaibi River
- Michipicoten River - Magpie River
- Montreal River
- Nagagami River
- Northeast Lake Superior Shoreline
- Opasatika Diversion - Opasatika River
- Spanish River
- Upper Groundhog River
- Upper Kabinakagami River
- Upper Kapuskasing River
- Upper Missinaibi River
- Upper Mississagi River
- Upper Wanapitei River
- White River

Existing Transformer Station (TS)

Alternative Routes

- Route Segment A1
- Route Segment A2
- Route Segment B1
- Route Segment B2
- Route Segment B3
- Route Segment C1
- Route Segment C2

Base Data

- Existing Transmission Line
- Railway
- Highway
- First Nation Reserve
- Ontario First Nation Treaty Boundary
- Municipal Boundary
- Water Body

SCALE 1:850,000

0 10 20 40 KM

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, OSG, Hydro One Networks Inc., Dillon Consulting Limited.

Project Data: v5.1

MAP CREATED BY: LMM / DDR / RR
MAP CHECKED BY: NL
MAP PROJECTION: NAD 1983 UTM Zone 17N

hydro one

PROJECT: 25-1043
STATUS: DRAFT
DATE: 2026-09-16

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