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Research Report | March 2017

Getting from Here to There

Transportation Infrastructure in Northern Ontario, Part 2:
System Gaps and Their Policy Implications

By: Julien Bonin

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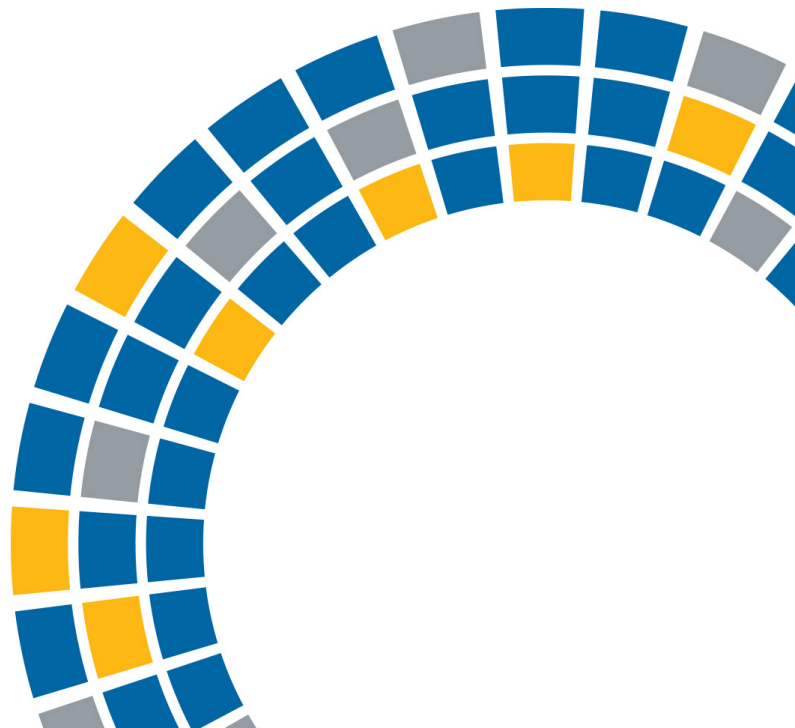
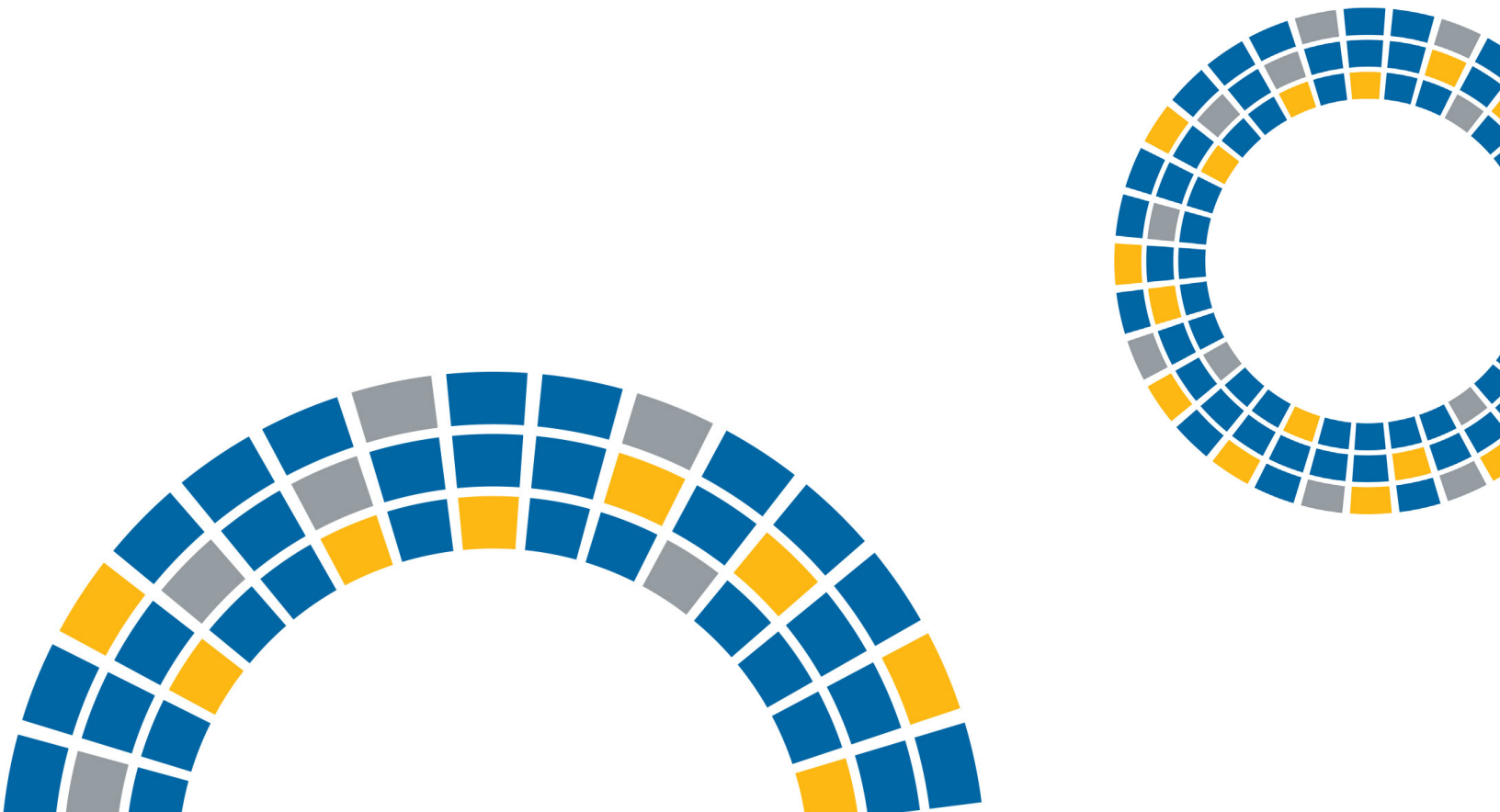


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Abbreviations

ACAP: Airports Capital Assistance Program

CGNDB: Canadian Geographical Names Database

CMA: Census Metropolitan Area

CN: Canadian National Railway

CP: Canadian Pacific Railway

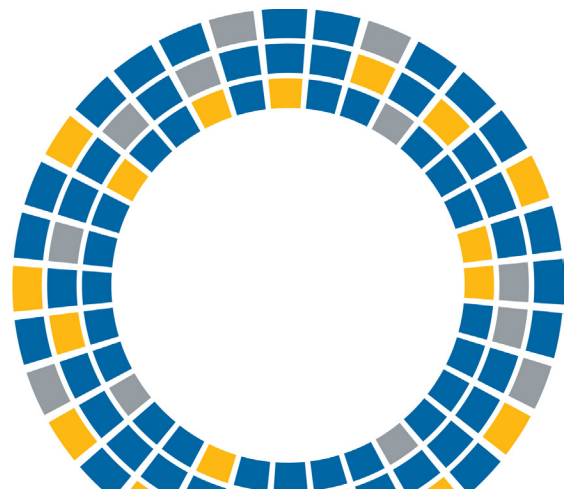
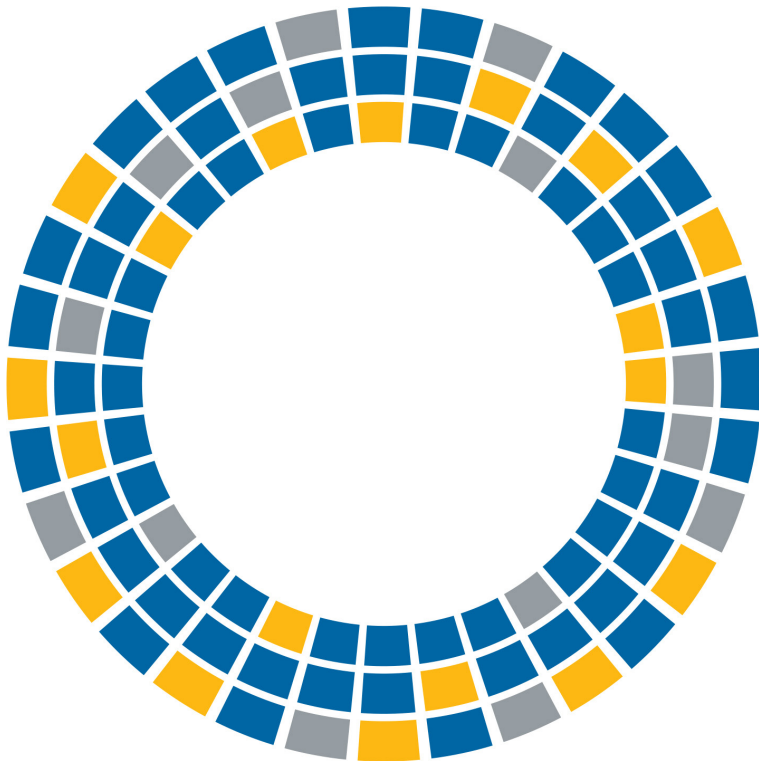
NRWN: National Railway Network

ONTC: Ontario Northland Transportation Commission

OVR: Ottawa Valley Railway

RDC: Rail Diesel Car

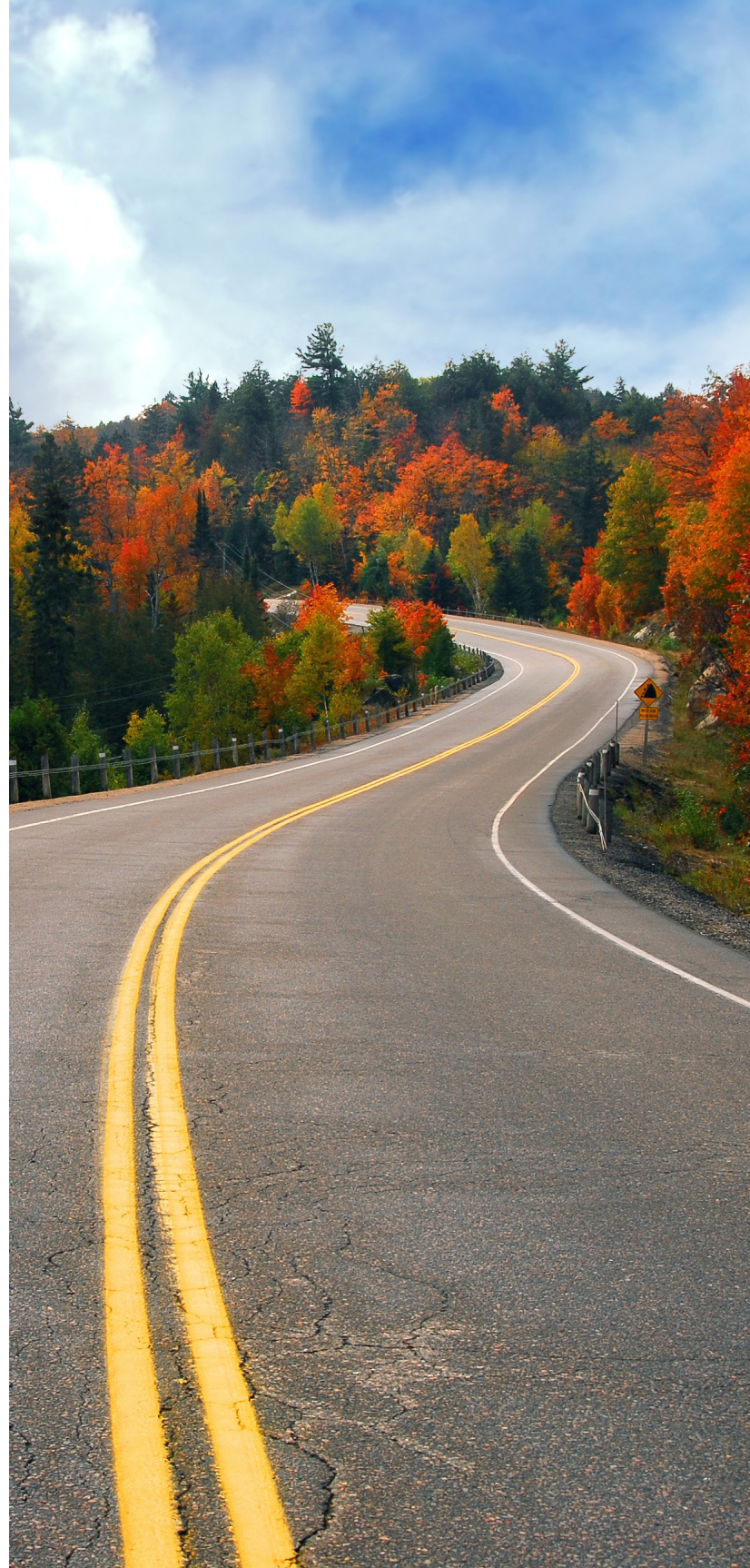
ORN: Ontario Road Network



Introduction

The transportation system plays a vital role in the economy and social well-being of an area. The transportation network is used to access natural resources and move goods between extraction sites, manufacturing plants, and domestic and international markets. It also allows individuals to access necessities, services, and recreation activities. Febraro and Mitchell (2006) state that even with Canada's large geographic area, there is a shortage of space to move goods effectively, and this is no different for Northern Ontario. Despite the region's large area, many communities still have limited transportation options (see Appendix B, Table 6). The larger urban centres were found to have the most transportation infrastructure available, whereas First Nation communities have the least.

This paper is the second part of this series regarding transportation infrastructure in Northern Ontario. The present paper will analyze empirical data and present empirical results on the state of Northern Ontario's transportation system. It aims to identify existing gaps in each transportation infrastructure analyzed and establish possible policy implications. Roads and highways, motorcoach services, railways for freight and passengers, airports, and seaports will be analyzed on the level of census subdivisions in Northern Ontario. Lastly, there will be a summary and review of the analysis. The methodology section can be found in Appendix C. The next paper in this series will discuss the results presented and conclude the series with the major takeaways and implications.



Results

For this research, communities are largely classified using Statistics Canada census subdivisions. A census subdivision is a municipality and consists of cities, townships, municipalities, towns, villages, First Nation reserves and settlements, and unorganized areas.¹ This approach is broad because census subdivisions can consist of large geographic areas, and Northern Ontario consists of numerous small communities that do not fit the criteria for a census subdivision. This paper may also refer to a place with a rail or motorcoach stop using smaller geographic areas that are included in census subdivisions. "Designated place" (DMU), "unincorporated place" (UNP), and "local service board" (LSB) are examples of these lower levels of geographic areas used in Canadian Censuses (see Appendix D for definition). In these cases, the place is identified within the corresponding census subdivision.

Roads and Highways

The spatial layout of Northern Ontario's road and highway infrastructure is displayed in Map 1. The road network is categorized using an adaptation of the provincial highway classification and the CanVec's road class attribute (See Table 1) (Natural Resources Canada 2013). Secondary and tertiary roads are only available in Northern Ontario, and municipal roads are not found in Northern Ontario except for Greater Sudbury. The provincial classification approach was used over a road structure classification (multi-lane divided, major road, and minor road) because this method clearly identified the principal roads of the region.

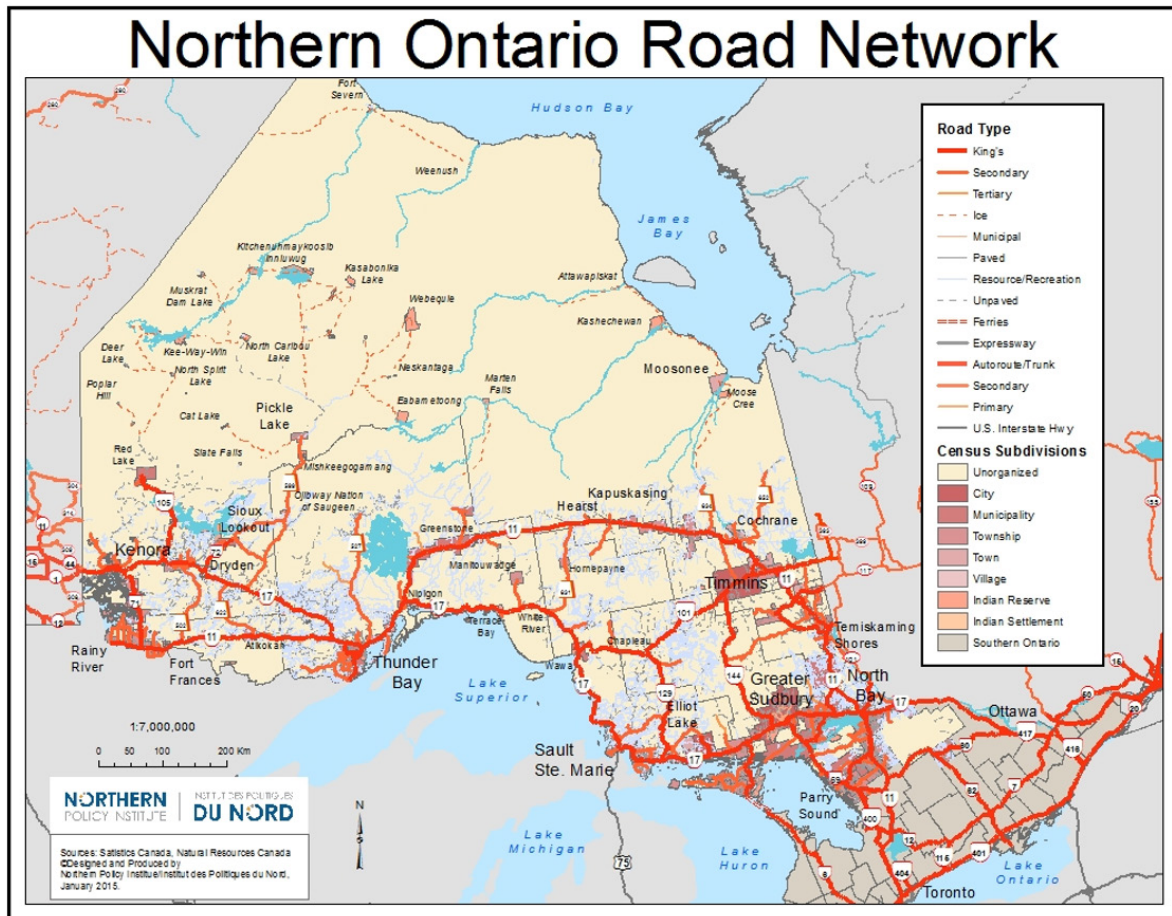
Table 1. Classification of Road

Road Type	Surface	Description
King's Highway	Paved	Primary highways that connect urban centres Largely two-lane road with twinned sections
Secondary Highway	Paved with some gravel sections	Connects small or remote communities to large towns or King's Highways Their standard is usually below King's Highways
Tertiary Highway	Mostly gravel	Connects remote areas not serviced by secondary highways and generally do not end at a settlement
Municipal	Paved	A major road that is maintained by the local government
Winter/Ice	Gravel	Seasonal roads are only available during the winter months when conditions permit passage over lakes, rivers and wetlands
Paved	Paved	Paved minor or local roads
Unpaved	Gravel	Unpaved minor roads
Resource	Largely Unpaved	A narrow road used for accessing resource extraction or providing access to backcountry

Source: author's own based on sources detailed in Appendix C.

¹ Statistics Canada refers to First Nation reserves and settlements as "Indian reserves" and "Indian settlements" (Statistics Canada 2016).

Map 1. Road Network for Northern Ontario



As King's Highways are the principal roads in the region (see Appendix B, Table 6) and of the non-First Nation reserves or settlements, 112 of 138 of the region's census subdivisions are located on a King's Highway. Only five communities are not connected either by a King's or Secondary Highway. The only significant census subdivision without year-round road access is the town of Moosonee.²

In general, the region's largest urban centres are located at the intersection of King's Highways and are, therefore, the most accessible communities. Greater Sudbury, Thunder Bay, and North Bay are located at the junctions of multiple King's Highways. Greater Sudbury is accessible by Highway 17, Highway 144, and Highway 69. North Bay is located at the intersection of Highway 17, Highway 11, and Highway 63. Thunder Bay is accessed by Highway 17 and Highway 11 from the east and west and to the south by Highway 61. Sault Ste. Marie, while only accessible by one King's Highway—Highway 17, is located at a border crossing with the United States and is connected to the United States Interstate Highway System. Kenora, meanwhile, is located where Highway 17 is divided into Highway 17 and Highway 17A and is situated just west of the intersection of Highway 17 and Highway 71. Most of the region's other communities are found along a King's Highway.

Map 1 shows that Northern Ontario is primarily serviced by two provincial highways: Highway 17 and Highway 11, with Highway 69/400 providing a major link to Southern Ontario. The majority of the region's communities are located along these two provincial highways. Of the nine cities in Northern Ontario, seven are accessible by either Highway 17 or Highway 11, the exceptions being Timmins and Elliot Lake. In fact, 77 of 138 non-First Nation census subdivisions are located on Highway 11 or Highway 17.³

When investigating First Nation communities, it is evident that they are less accessible by roads. Only 25 of 117 First Nation reserves or settlements are directly located on a King's Highway, and there are more First Nation communities (36) that do not have year-round access to a road. Of these 36 reserves or settlements, 8 do not have any road access, while the remaining 28 only have road access by a winter or ice road. Consequently, many First Nation reserves or settlements are dependent on other transportation modes to fulfill their travel needs and delivery of supplies.

²In 2013, Moosonee was connected to the rest of the province for the first time with a winter road (Ministry of Northern Development and Mines 2013).
³Seven of nine cities, 16 of 23 towns, 45 of 86 townships, 8 of 16 municipalities and 2 of 4 villages are located on either Highway 11 or Highway 17.

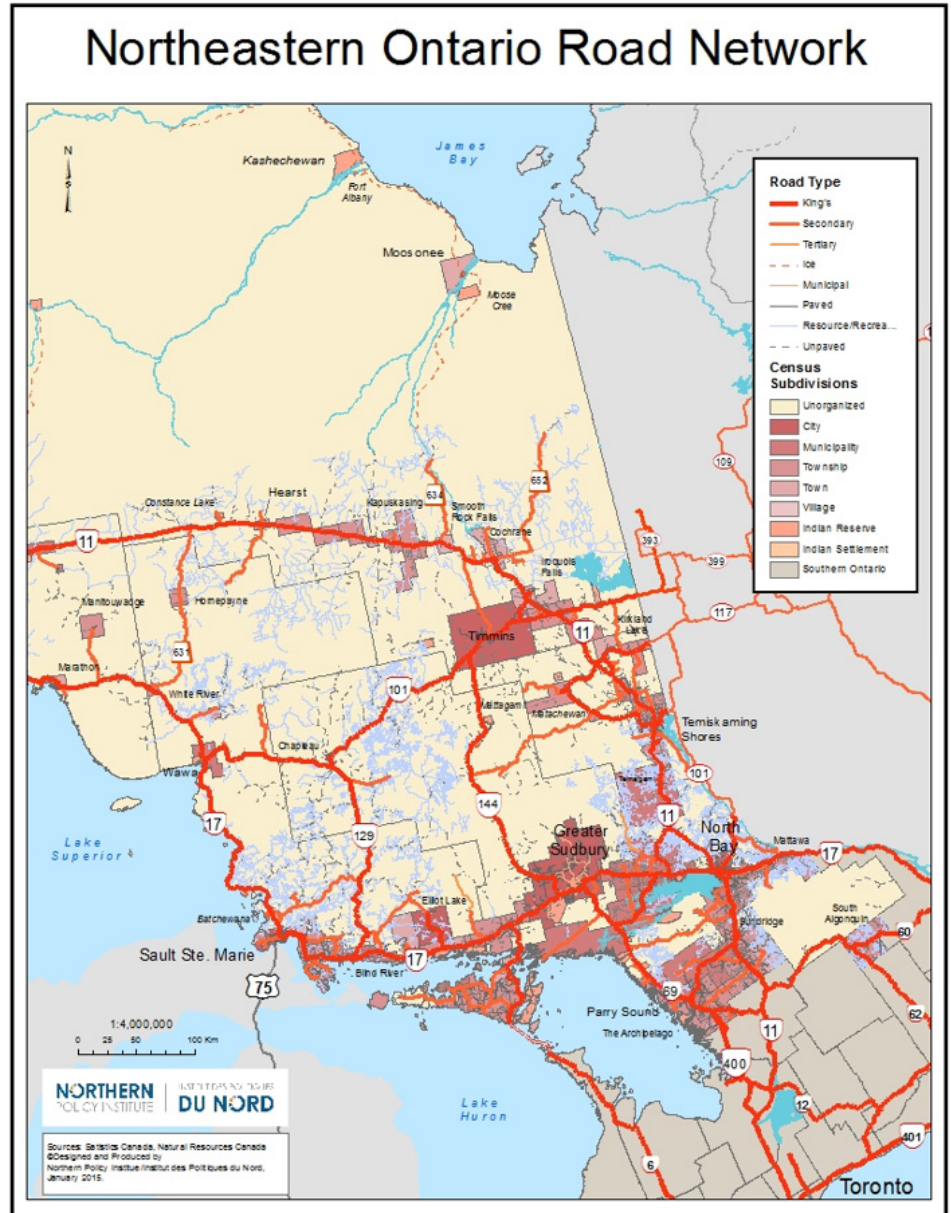
Description and Connection of Northern Ontario Road Work

Northeastern Ontario

The Northeastern Ontario road network is largely bound by Highway 11 and Highway 17. Accessibility between the highways is limited to a few major links, such as Highway 101. Highway 101 is the only King's Highway that travels across the region in an east-west direction. The highway travels from Highway 17 near Lake Superior and Wawa to the Québec border. The highway provides access to the communities of Timmins, Wawa, Chapleau, and Black River-Matheson. In the interior of Northeastern Ontario, Highway 129 and Highway 144 provide a north-south link from Highway 17 to Highway 101. However, there are no major census subdivisions along these routes. Above Highway 11, there are only five communities (Moosonee, Moose Cree First Nation, Kashechewan, Fort Albany, and Attawapiskat) that are located in the Far North of the province on the shore of James Bay and accessible by a winter road. To the south, Highway 6 provides the only year-round road access to Manitoulin. During the summer, Manitoulin Island is also connected to Southern Ontario via the Chi-Cheemaun ferry that operates during the summer months between South Baymouth on Manitoulin Island and Tobermory on the Bruce Peninsula.

South of Greater Sudbury and North Bay, in the Parry Sound and Nipissing districts, Highway 11 and Highway 69 serve as the primary routes. Highway 11 and Highway 69 in this area are largely twinned or are in the process of being twinned. The four-laning of Highway 11 between Barrie and North Bay was completed in August 2012 (Weber 2013). Meanwhile, Highway 69 is currently under construction, with approximately 80 kilometres remaining in the planning stage.

Map 2. Road Network for Northeastern Ontario

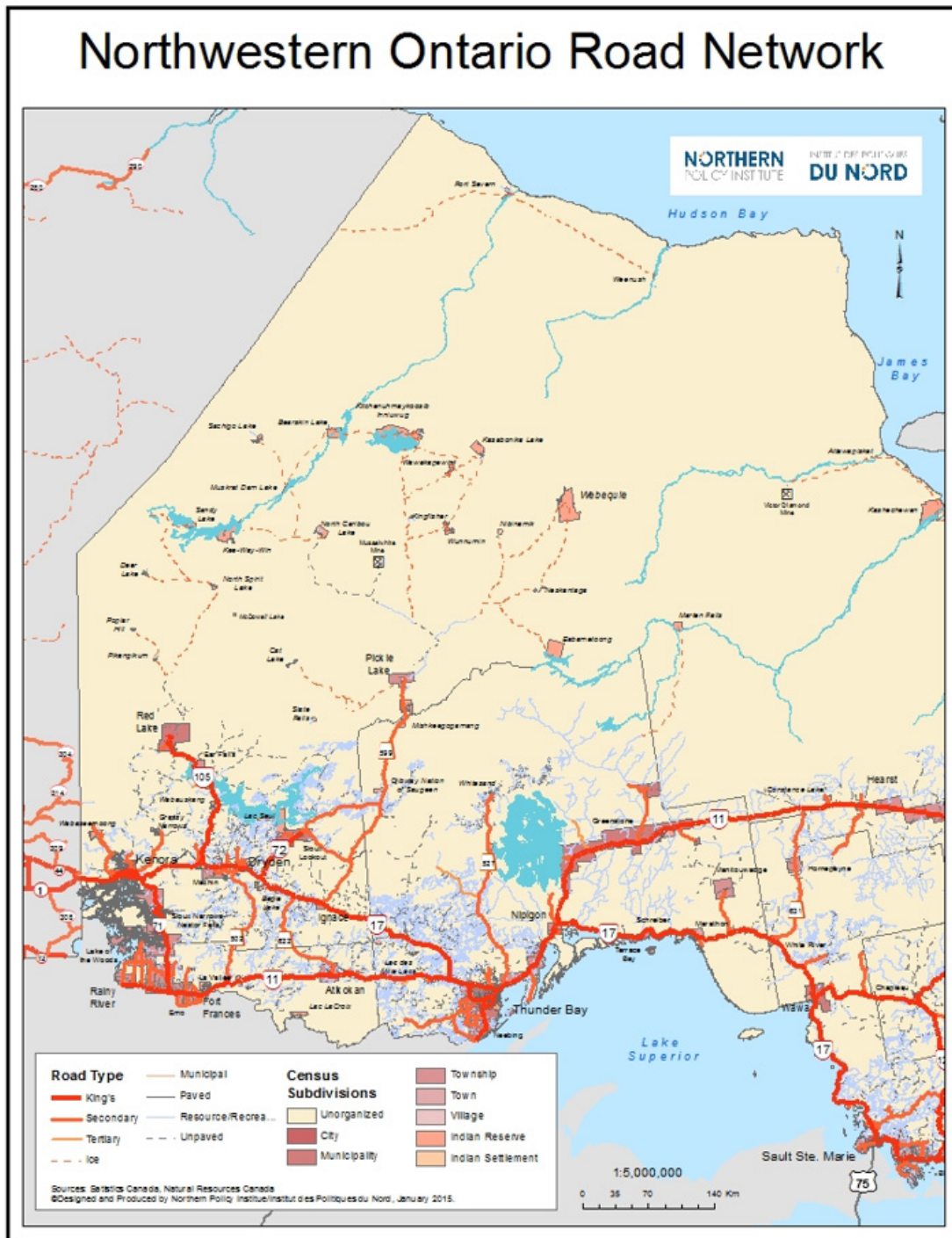


Northwestern Ontario

Northeastern and Northwestern Ontario are connected by Highway 11 and Highway 17. As is the case with Northeastern Ontario, Highway 11 and Highway 17 are the primary arteries in Northwestern Ontario. The region's largest urban centres of Thunder Bay, Kenora, Dryden, Fort Frances, Rainy River, and Ignace are all located on these two highways. Where Northwestern Ontario differs from Northeastern Ontario is that there is a higher number of communities located in the more northern areas of the

region, particularly in the Kenora District. King's Highways 72 and 105, along with Secondary Highways 599 and 527, are used to access various northern communities, including Sioux Lookout, Red Lake, and Pickle Lake. The region also has numerous First Nation communities that do not have year-round road access. Road access to these areas is only available on ice roads during the winter season.

Map 3. Road Network for Northwestern Ontario



Connection Outside Northern Ontario

There are two major road links between Northern Ontario and Southern Ontario; Highway 69/400 from Greater Sudbury and Highway 11 from North Bay. The two routes meet in Barrie at Highway 400 and then continue south to Toronto. Northern Ontario is only connected to Eastern Ontario by Highway 17, which follows the Québec border to Ottawa. Eastern access to the region is largely blocked by Algonquin Park. Consequently, alternative routes such as Highway 60 and Highway 118 are located south of the park in Southern Ontario.

There are several connections between Northern Ontario and Québec. Highway 17 East to Ottawa provides access to several places such as Deux-Rivières, Rolphton, and Pembroke. Highway 17 also connects to Highway 417 and travels to Québec all the way to Montréal. From North Bay, Highway 63 travels to Thorne, where it connects to Québec Route 101. In the Temiskaming and Cochrane districts, there are several connections between Northern Ontario and Québec: Highway 65 connects to Notre-Dame-du-Nord, Highway 66 connects to Québec Route 117, and Highway 101 connects to Québec Route 388, in addition to several other minor connections in this area.

There is only one major connection between Ontario and Manitoba, Highway 17. Besides this highway, there are only two or three minor roads that connect the two provinces. One of the reasons for the lack of connection between the provinces is there are no urban areas near the border, and both provinces have provincial parks along their borders.

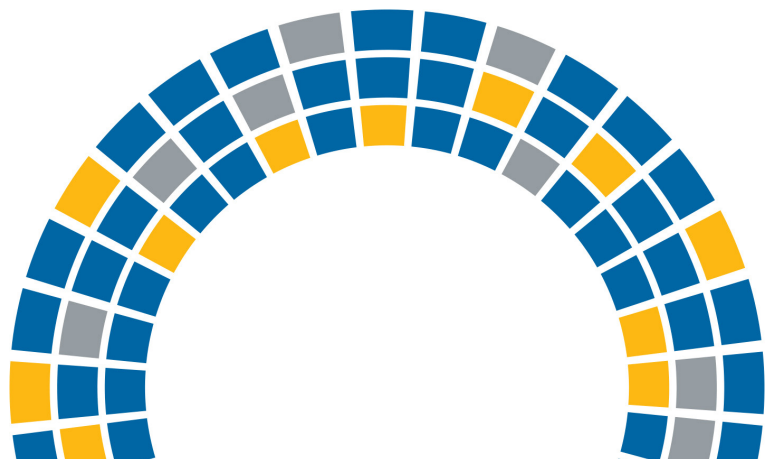
There are four border crossings between Northern Ontario and the United States. Three are in Northwestern Ontario, and one is in Northeastern Ontario. The Northwest crossings are Highway 11 in Rainy River and Fort Frances and Highway 61 at Pigeon River in the Census Metropolitan Area (CMA) of Thunder Bay. The Northeastern crossing is located at Sault Ste. Marie, where the border crossing connects to the United States Interstate Highway System, unlike the crossing in Northwestern Ontario.



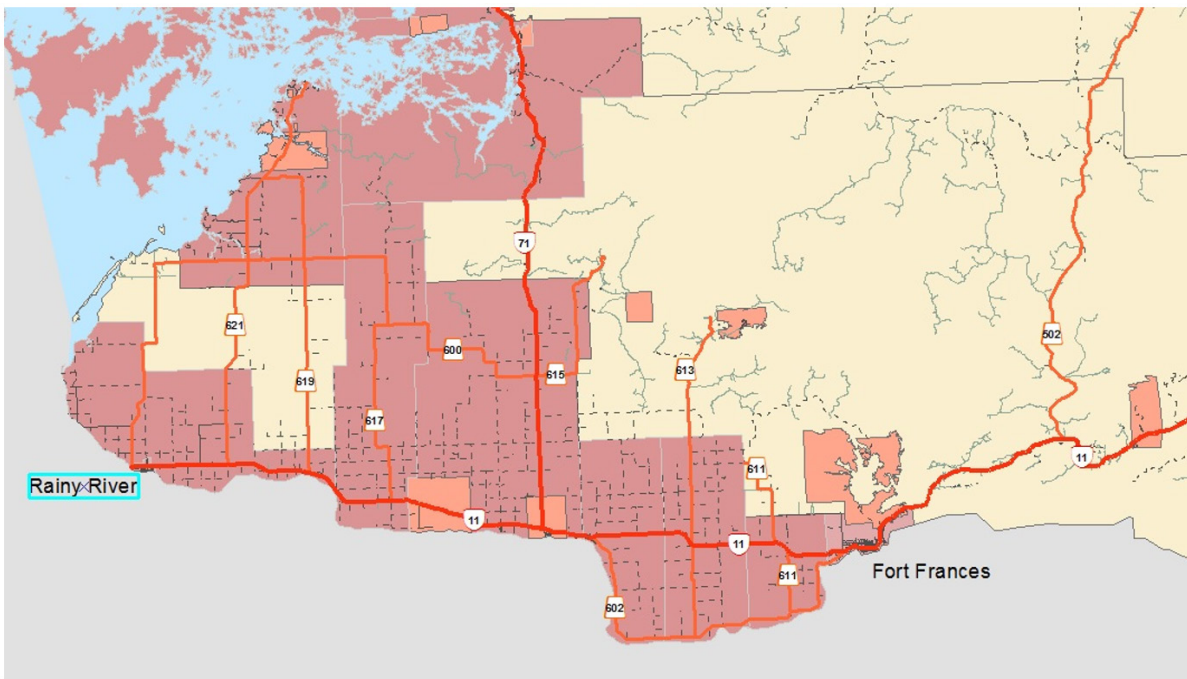
Accessibility of Road Network

At first sight, the Northern Ontario road network appears extensive; however, the region is largely dependent on the King's Highways, in particular Highway 11, Highway 17, and Highway 69/400. Throughout the entire region, there are only 25 King's Highways. This is significant since King's Highways have the highest standards and maintenance. Unlike some Secondary Highways, King's Highways all have a paved surface. Most roads in the region are classified as Resource / Recreational, meaning that the road's primary function is to provide access to natural resources or private camps. Resource or recreational roads consist of narrow and low-quality roads with gravel or loose surface. Many of these roads are forestry roads used by companies to access forest stands. As a result, these roads are not useful for intercity travel since they have remote destinations and are not well-known to the public.

Maoh, Anderson and Burke's (2012) study of the resilience of the Ontario Road Network found that "northern regions are especially vulnerable to network disruptions due to lack of redundancy" (Maoh, Anderson and Burke 2012, 15) or a lack of alternate routes. In Southern Ontario, where the network is much more resilient, the spatial layout of the road network mostly consists of a grid pattern, which is largely the result of lot division and topography. An advantage of the grid layout is a resilient network with numerous alternative routes. In Northern Ontario, there exist a few isolated instances where the structure of the road network resembles the grid pattern. Two examples are in the Rainy River District between Fort Frances and Rainy River and in the Timiskaming District, north of Temiskaming Shores (see Maps 4 and 5). However, the instances of grid patterns are limited, geographically small, and are often connected to the rest of the province by a single highway.

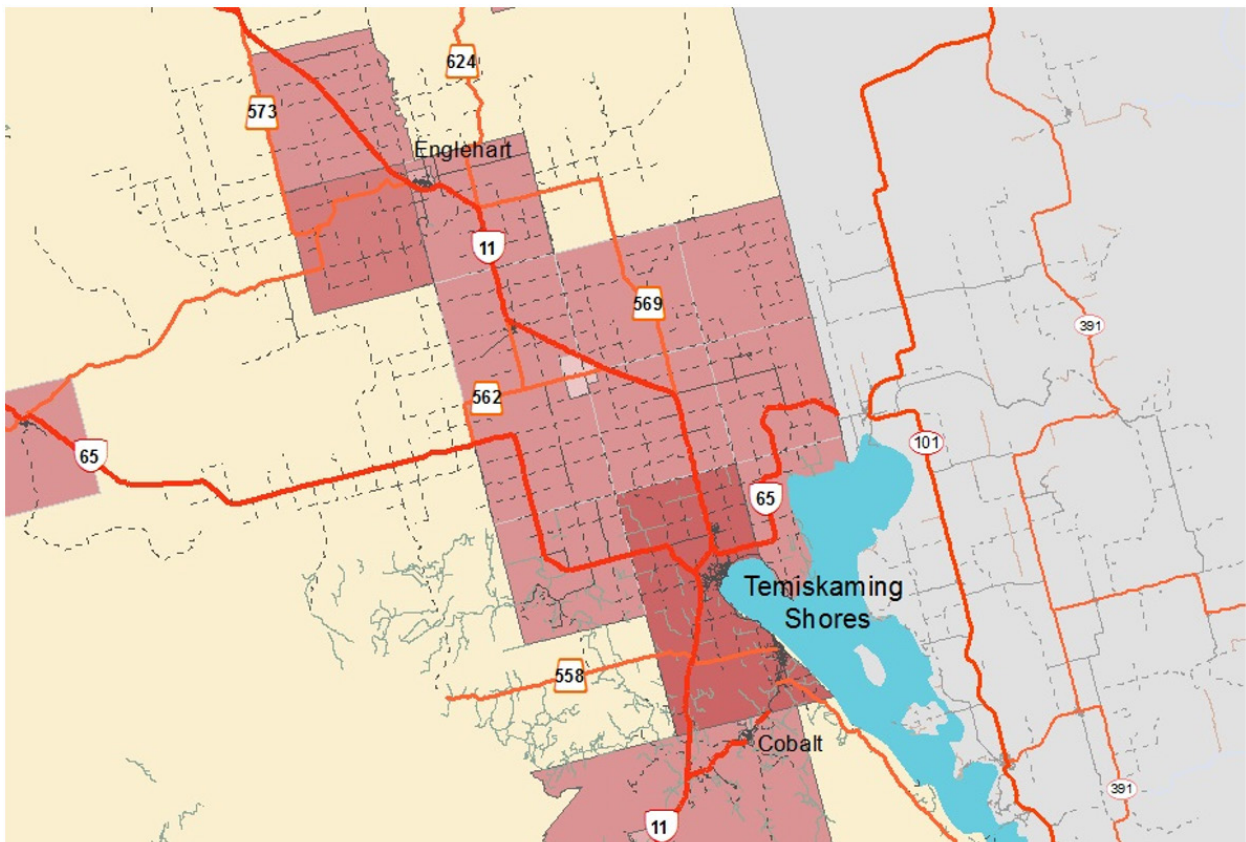


Map 4. Example of Grid Road Layout in Rainy River District



Source: author's own based on sources detailed in Appendix C.

Map 5. Grid Road Network in Timiskaming District

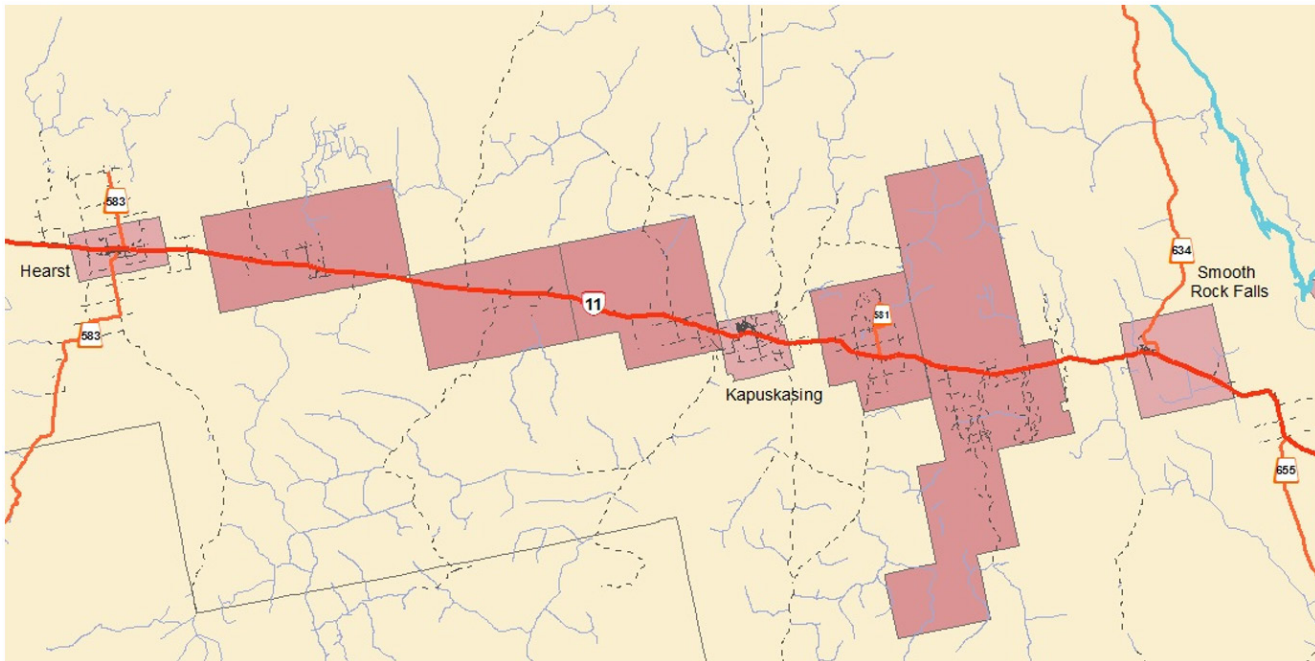


Source: author's own based on sources detailed in Appendix C.

In Northern Ontario, the spatial layout of the road network largely resembles a “tree structure” (Map 6). A King’s Highway (in most cases Highway 17 or Highway 11) is like the “tree trunk,” and Secondary Highways or local roads extend from it like “branches.” There are few connections between the branches, and because of this spatial distribution of the roads, there are few alternate paths and very few connections between major routes. The principal highways of 17 and 11 are largely only interconnected by Highway 64, Highway 101 and Highway 631 in Northeastern Ontario, and Highway 71, 502, and 622 in Northwestern Ontario. Highway 11 and Highway 69/400 toward Southern Ontario and Toronto are only linked by Highway 124 and Highway 522.⁴

Road or highway disruption such as a road closure has serious or costly consequences in Northern Ontario. A road closure often results in a lengthy detour or even complete isolation. For example, Map 7 demonstrates the effect of a closure on Highway 17 between Greater Sudbury and Highway 6. Under normal circumstances, without a road disruption, the trip between Greater Sudbury and Sault Ste. Marie would be approximately 315 kilometres. However, in the case of a closure, the trip would be nearly 700 kilometres, with a detour using Highway 144 up to Timmins required. This is an example of the consequences of a network disturbance between two of Northern Ontario’s major urban centres.

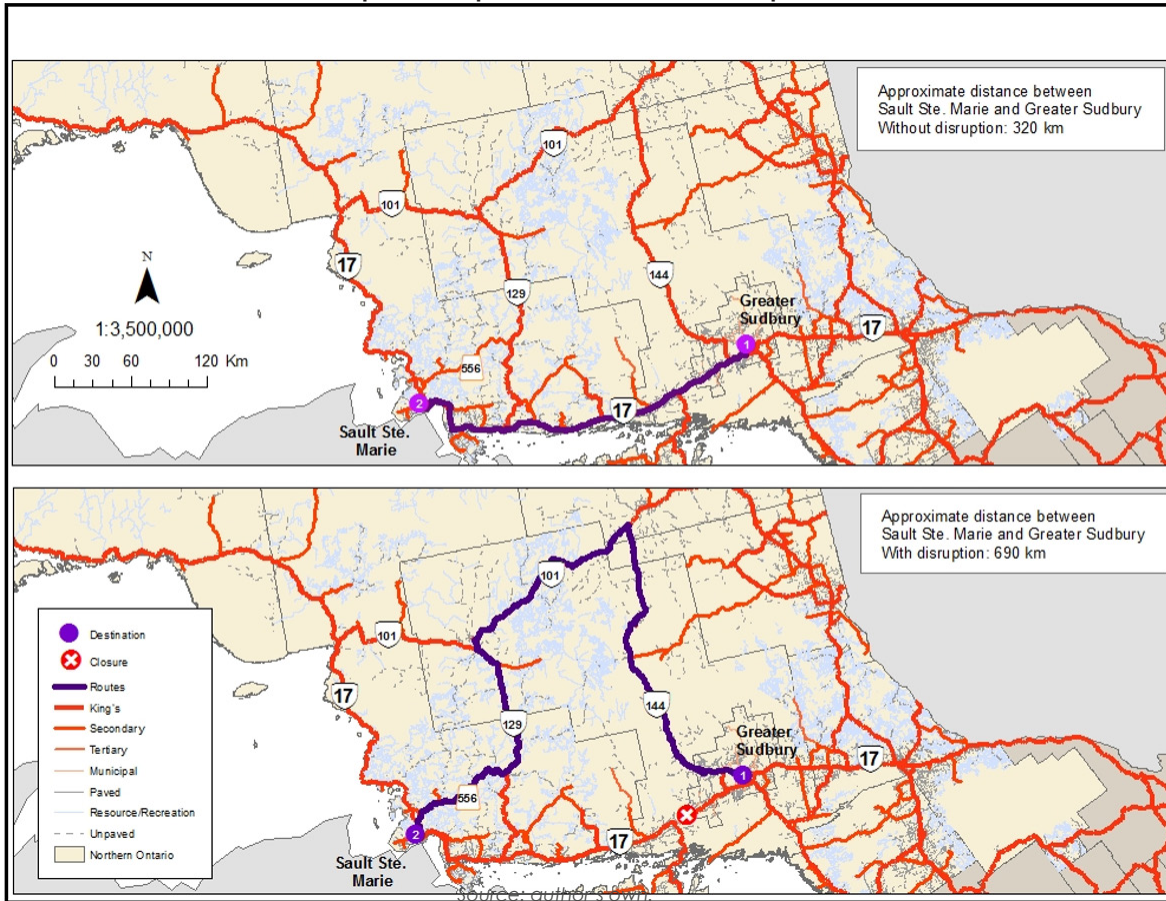
Map 6. Example of Tree Structure



Source: author's own based on sources detailed in Appendix C.

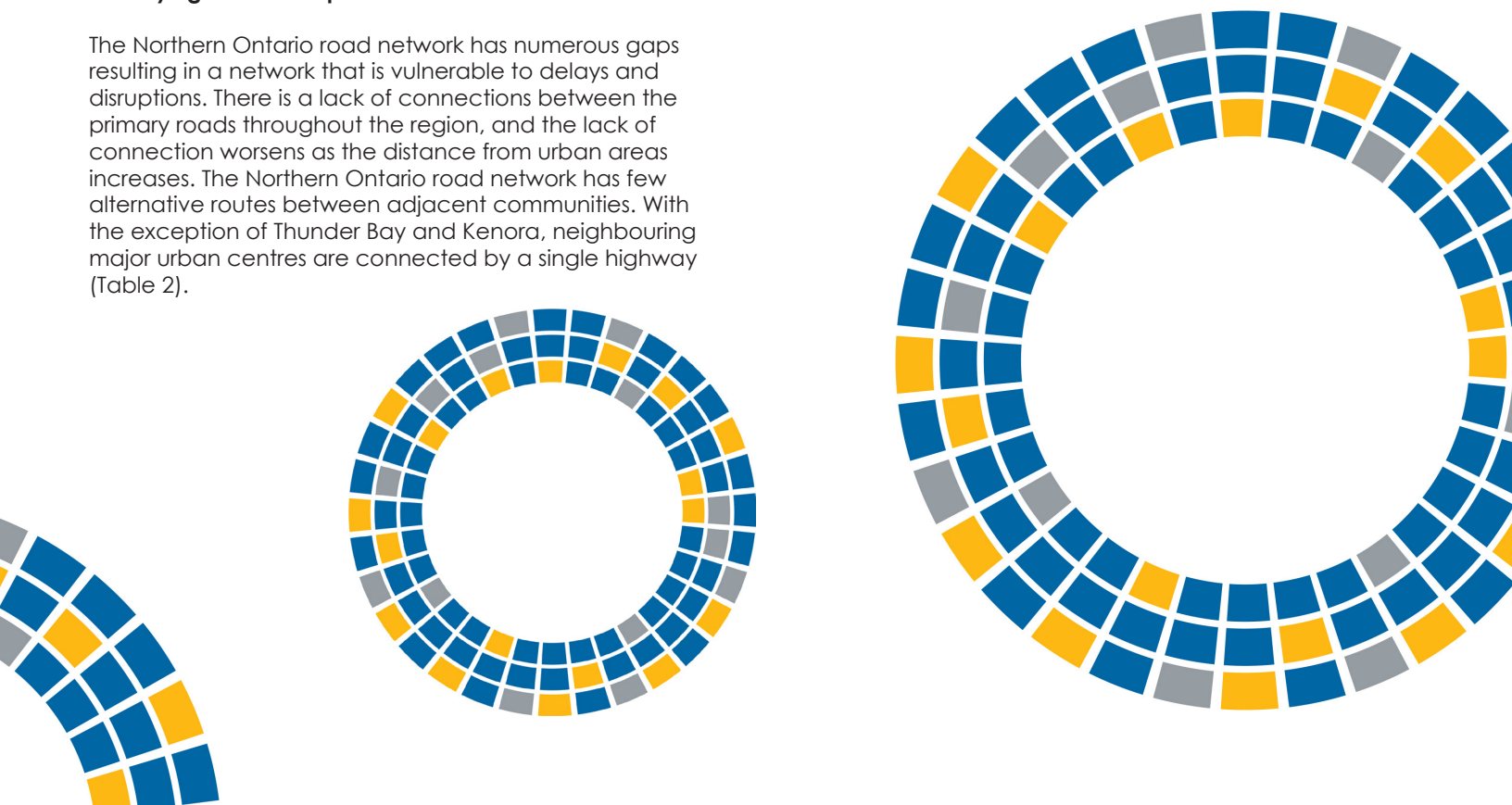
⁴ Highway 141 also connects Highway 17 and Highway 11 but is mostly located in the Muskoka District.

Map 7. Example of Effect of Road Disruption



Identifying Service Gaps in the Road Network

The Northern Ontario road network has numerous gaps resulting in a network that is vulnerable to delays and disruptions. There is a lack of connections between the primary roads throughout the region, and the lack of connection worsens as the distance from urban areas increases. The Northern Ontario road network has few alternative routes between adjacent communities. With the exception of Thunder Bay and Kenora, neighbouring major urban centres are connected by a single highway (Table 2).



Inter-Northern Ontario	Road Connection
Greater Sudbury to North Bay	Highway 17
Greater Sudbury to Timmins	Highway 144
Greater Sudbury to Sault Ste. Marie	Highway 17
North Bay to Temiskaming Shores	Highway 11
North Bay to Timmins	Highway 11 and Highway 101
Sault Ste. Marie to Thunder Bay	Highway 17
Thunder Bay to Kenora	Highway, Highway 11, and Highway 71
Outside Northern Ontario	Road Connection
Greater Sudbury to Southern Ontario	Highway 69/400
North Bay to Southern Ontario	Highway 11
North Bay to Eastern Ontario	Highway 17
Kenora to Manitoba	Highway 17

Source: author's own based on sources detailed in Appendix C.

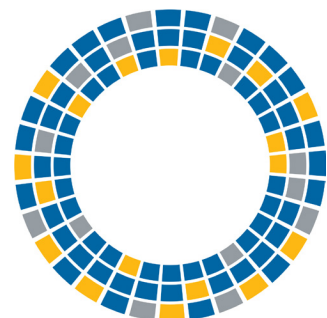
A particular concern in the network is the gaps that occur along Highway 11, Highway 17, and Highway 69, the primary inter and intra arteries for Northern Ontario. Significant gaps include but are not limited to:

- Highway 69/400 – between Greater Sudbury and Parry Sound
 - This major artery is a significant connection between Northern Ontario and Southern Ontario. Despite the importance of the corridor, there are few redundancies or connections to other roads such as Highway 11.
- Highway 11/17 – between Thunder Bay and Nipigon
 - In this area, Highway 11 and Highway 17 become a single highway, and there are no alternate routes in the area.
- Highway 11 – between Nipigon and Kapuskasing
- Highway 11 - between Temiskaming Shores and North Bay
- Highway 17 – in remote and rural areas, including between Greater Sudbury and Sault Ste. Marie as well as along the North Shore of Lake Superior

There are also numerous gaps for remote and isolated communities. These communities include:

- Highway 6 – to Manitoulin Island
- Highway 105 – to Red Lake
- Highway 631 – to Hornepayne
- Highway 599 – to Pickle Lake

First Nation communities were also found to have significant gaps in the road network that serve them, with 36 of the 117 First Nation reserves or settlements in Northern Ontario not having access to year-round roads. Most of these First Nation communities are in the northern area of the Kenora District and the Far North of Ontario, where there are limited roads.



Policy Implication

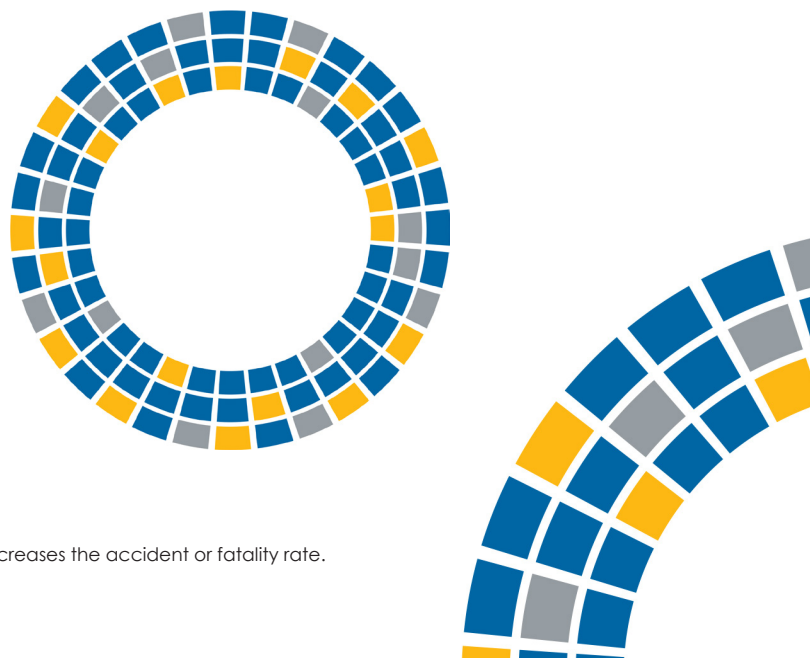
The construction of new alternative routes between various northern communities is unrealistic because of the high infrastructure cost and low demand. An infrastructure upgrade approach is used to overcome some of the gaps in the road network, most notably four-laning or highway twinning. This approach is being used to strengthen some key links such as north-south connections and at entrances of major urban centres. Highway twinning is believed to increase road safety and improve the accessibility of a region.⁵ The Greater Sudbury Chamber of Commerce believes that twinning Highway 69 will improve the local economy by reducing the transportation cost (decreasing travel time) and making the city more attractive to skilled workers (Leeson 2015). In Northern Ontario, there are several highway twinning projects. In August 2012, the four-laning of Highway 11 between North Bay and Barrie was completed after 30 years of construction (Young 2012). Highway 69 is currently being four-laned. However, over 80 kilometres remain. Despite this distance, the Ministry of Transportation Ontario and the Government of Ontario insist that the four-laning of Highway 69 will be complete by 2017 (Leeson 2015). Highway 11/17 between Thunder Bay and Nipigon is currently being twinned, with some sections already completed. Additionally, Highway 17 from the Manitoba border to Kenora is currently in the planning stage (Ministry of Northern Development and Mines 2013). There are calls to twin Highway 17 between Sault Ste. Marie and Mattawa, however, in 2013, the Ontario Government put off any further studies for at least five years. Highway twinning often occurs at the entrance of major urban areas. Greater Sudbury, North Bay, Sault Ste. Marie and Thunder Bay all have at least one twinned highway entering the city.

Additional policy is required to address the lack of accessibility of First Nation communities, particularly in the Kenora District. In 2013, a winter road was constructed to connect Moosonee, Moose Factory, and the First Nation community of Moose Cree, a valuable step to enhance the accessibility of northern communities. Bristow and Gill (2011) discuss the importance of road access to a community's identity. Connections and being able to access various services and social activities help reduce the negative impact of social exclusion and isolation. Early discussions with First Nation leaders during the Northern Ontario Multimodal Transportation Strategy found that upgrading winter roads to all-season roads was their top priority concerning transportation.

The development of the Ring of Fire also has important policy implications. Given the projected long life cycle (100 to 200 years) of the Ring of Fire resources, it is probable that the site will be accessible by road (at the very least a winter road). The site is also located close to Webequie First Nation, which is currently accessible by a winter road. Road connection between the Ring of Fire and nearby First Nation reserves could greatly increase the well-being of residents in these reserves.

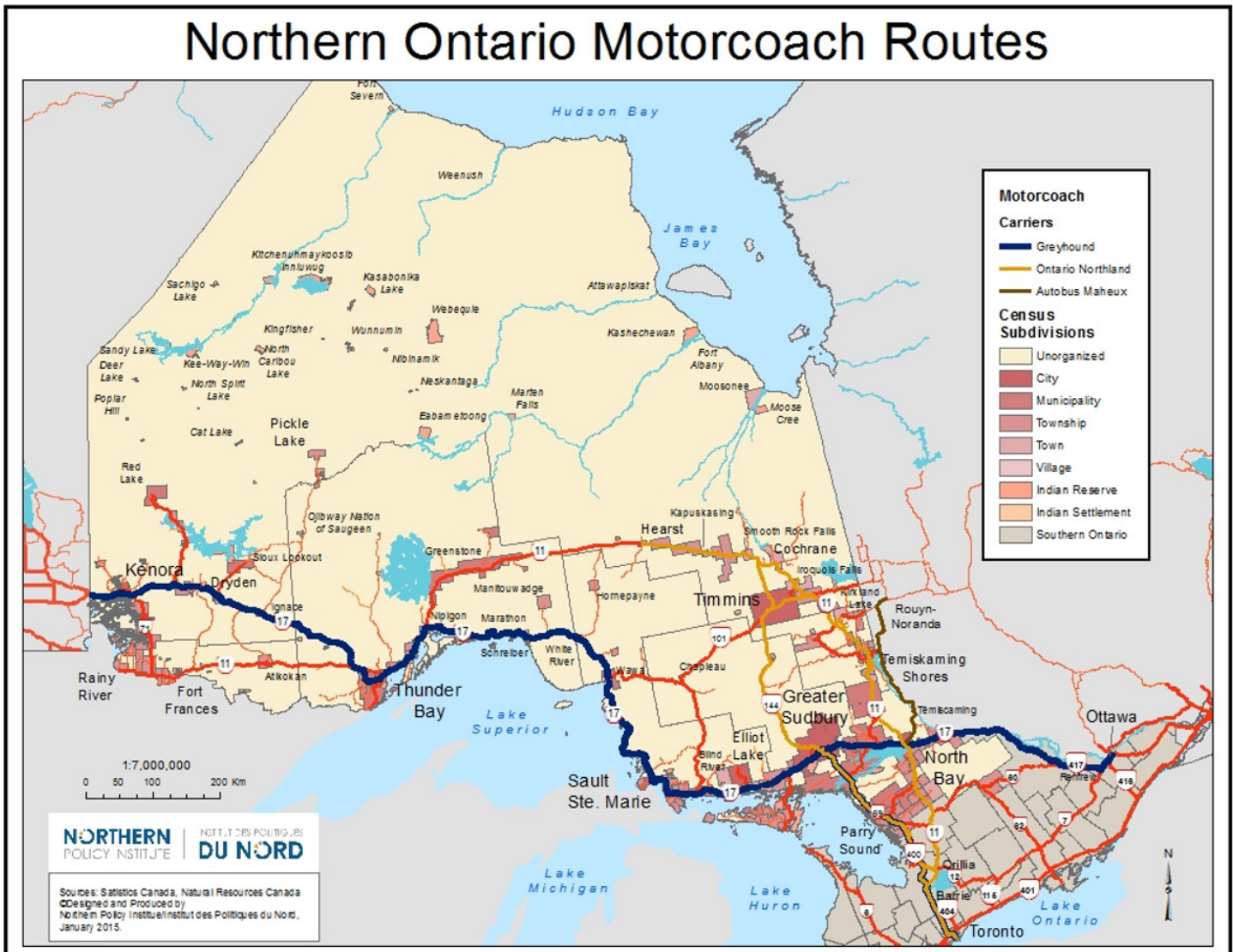
Motorcoach Service

Motorcoach service in Northern Ontario is restricted to communities along King's Highways, in particular Highway 17, Highway 11, Highway 69/400, Highway 144, and to a lesser extent, Highway 101 and Highway 63 (Map 8). There are two primary carrier companies in the area: Greyhound and Ontario Northland, and a third minor carrier, Autobus Maheux. Greyhound is a national carrier with routes in Northern Ontario that are part of its transcontinental service. Greyhound offers service from the west along Highway 17 to Greater Sudbury. From Greater Sudbury, it offers two different routes: one south to Toronto and one east via North Bay to Ottawa. Ontario Northland, on the other hand, is a local service that offers services in Northeastern Ontario with stops in Southern Ontario on route to Toronto. Ontario Northland service is also limited to Northeastern Ontario and does not deliver any services in Northwestern Ontario. Ontario Northland travels northwest as far as Hearst and passes through Timmins or Cochrane. The service travels as far south as Toronto by either Greater Sudbury (Highway 69/400) or North Bay (Highway 11). Ontario Northland does not offer service on Highway 17, and the carrier does not offer any service between North Bay and Greater Sudbury or Eastern Ontario. Autobus Maheux is largely a Québec provider. However, the company does offer a connection to North Bay and Highway 63.



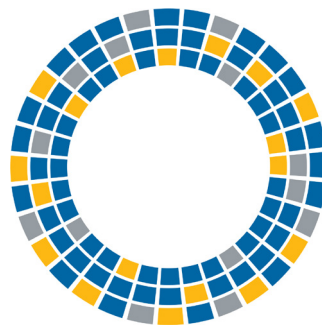
⁵ However, currently there is no evidence to conclude that highway twinning decreases the accident or fatality rate.

Map 8. Motorcoach Routes



The Motorcoach system in Northern Ontario is a local service, with the exception of Greyhound between Greater Sudbury and Toronto, which is an express service.^{6,7} There are two types of stops: schedule or flag. A scheduled stop means the bus will stop at a pre-scheduled time regardless of there being any passengers. A flag stop will occur only on request or as needed. As a result, the service is improved by avoiding seldom

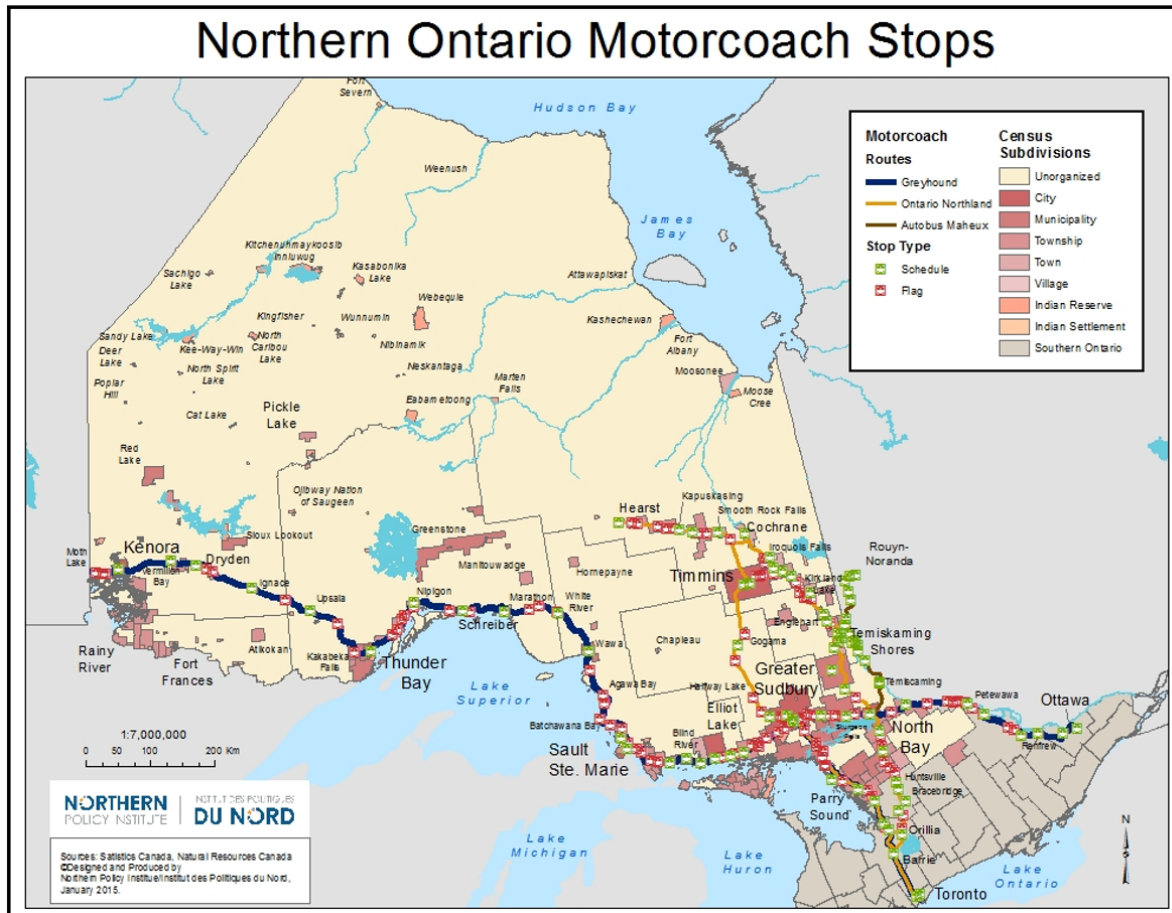
used stops but is still available when needed. Flag stops are often located along the road, without an enclosed waiting area or any support facilities, and thus do not sell tickets. Schedule stops usually have an enclosed waiting area, but in Northern Ontario, most scheduled stops do not have a dedicated motorcoach station (Map 9, Appendix B Table 8).



⁶ Local service has intermediate stops between an origin and a destination.

⁷ Express service does not have intermediate stops. The passenger can only disembark at the destination.

Map 9. Motorcoach Stop Locations



A dedicated motorcoach station is generally only located in the larger urban areas, except for Sault Ste. Marie, where the Greyhound stop is in a Howard Johnson Motel. The number of dedicated stations is decreasing as carriers continue to cut services. Ontario Northland announced in February 2015 the closure of the station in Enlehart and Matheson and a reduction of hours for its New Liskeard, Kirkland Lake, and Greater Sudbury stations. Greater Sudbury is unique because it has a dedicated station for both Greyhound and Ontario Northland. The multiple stations make transferring between carriers difficult and have been a source of confusion and frustration for passengers, especially when arranging pick-up from a friend or family member (The Sudbury Star 2014). Most scheduled stops in Northern Ontario are located at an external business such as a general store or gas station not owned by the motorcoach carriers. In many small rural communities, motorcoach tickets are only available online on the company's website since many scheduled stop locations no longer sell tickets. Unfortunately, in many rural communities, telecommunication infrastructure is still lagging, and many rural residents, particularly the elderly, are not computer proficient.⁸ As a result, purchasing tickets online could prevent users from accessing the service.

Connections outside Northern Ontario

Motorcoach service is connected to Southern Ontario by Greyhound and Ontario Northland. Greyhound offers express services between Greater Sudbury and Toronto, and Ontario Northland offers a local service to Southern Ontario from both Greater Sudbury and North Bay. Any connections to other Southern Ontario destinations using Greyhound are only available from Toronto. Stops in Southern Ontario along Highway 69/400 or Highway 11 are only available with Ontario Northland. Any other Southern Ontario destinations by motorcoach require a transfer, usually in Toronto. However, in some rare cases, the transfer is available in Barrie. Connection to Eastern Ontario is restricted to Greyhound, which offers a local service to Eastern Ontario and west to Manitoba (and beyond). A Motorcoach connection to Québec is available with Autobus Maheux from North Bay. Meanwhile, connections to the United States by motorcoach are not available in Northern Ontario (even though there are four road connections in Northern Ontario). Greyhound only provides a Canada – United States crossing at Windsor and Niagara Falls.

⁸ While internet service is widely available, there still exist many rural communities that do not have broadband access.

Motorcoach Gaps

A major limitation of the Motorcoach service is that it is restricted to the road network and is subject to its conditions and disruptions. The consequence of the lack of redundancy in the road network means that a network disruption or closure on a highway could result in a disruption of the motorcoach service as well. The service in Northern Ontario is limited to a few major highways: Highway 17, Highway 11, and Highway 69. Communities such as Rainy River, Fort Frances, Pickle Lake, Sioux Lookout, and Hornepayne do not have motorcoach service. In addition, the only connection between Northwestern Ontario and Northeastern Ontario is by Highway 17. Consequently, to travel west, residents of northern communities along Highway 11 must travel through Greater Sudbury. For example, if an individual wants to travel by road from Thunder Bay to Kapuskasing, the trip is approximately 620 km and would take about eight hours.⁹ The same journey by motorcoach would be around 1,400 km, take over 28 hours, and transfer in Sudbury from Greyhound to Ontario Northland (departure from Thunder Bay at 9:00 pm Monday night arriving in Kapuskasing at 1:30 am Wednesday morning).^{10,11}

Another significant gap in the motorcoach service is access for First Nation and Indigenous communities, with only 24 First Nation communities accessible by motorcoach. In cases where the reserve is located directly on a motorcoach route, the reserve has a flag stop (Shawanaga, Garden River, Nipissing 10). However, for most First Nation communities, stops are not located directly on the First Nation reserve but rather in nearby communities. For example, Gros Cap 49 is located adjacent to Wawa, Fort William is in the Thunder Bay CMA, and Ochiichagwe'babigo'ining First Nation and Anishinabe of Wauzhushk Onigum are near Kenora. This gap exists for First Nation communities because few reserves or settlements are directly serviced, and Indigenous residents usually require additional transportation to access the nearest stop.

Policy Implication

Northern Ontario is a difficult region to efficiently service because of its large geographic area and low population density. Intercity carriers are facing greater financial strain due to various factors, including decreased ridership and greater competition from inter-regional public transit systems such as GO Transit. GO Transit—a government-supported agency—has expanded its services into areas previously profitable by motorcoach companies (Mackenzie 2010). This expansion and subsequent decline in profits for motorcoach companies have reduced their ability to use money-making routes to support less profitable routes. In 2009, Greyhound threatened to cancel its service through Northwestern Ontario, stating that the route was not profitable. However, it decided only to reduce its services (Mackenzie 2010).

Change in motorcoach service has a significant impact on the elderly population. According to Transport Canada, the elderly are the largest users of public transportation because many older individuals can no longer drive or simply choose not to. Rural areas also have a large proportion of elderly people, and the proportion of elderly in rural areas is expected to continue to grow as the population of individuals aged 65 and over increases. Rural areas are experiencing a decline in services with the trend towards centralization (Noxon Associates Limited 2009). Activities such as shopping and, more importantly, healthcare are increasingly located in larger urban centres. Rural communities are losing many health care services, and people are now required to travel between communities to access the assistance they need (Noxon Associates Limited 2009).

Increased accessibility and mobility for Indigenous communities are also required. Besides lacking access to roads and highways, Indigenous communities in Northern Ontario are also neglected by motorcoach services. Even if a motorcoach route passed near a First Nation reserve, the service remained inaccessible for numerous reasons, including:

- tickets unavailable: are largely only available online;
- stop distance: stop located on the outskirts of the reserve, far from homes;
- stop unsafe: flag stop on a busy highway and passengers required to wait along a busy highway waiting for the motorcoach;
- climate: having to wait for a potentially long time in the harsh Northern Ontario (winter) climate;

Thus, increased services are necessary to make motorcoach service more accessible for Indigenous communities.

⁹ According to Google Maps.

¹⁰ According to Google Maps.

¹¹ Thunder Bay to Sudbury would be 14:35 hours (depart 9:00 pm - until 11:35 am), a 6-hour layover in Sudbury, Sudbury to Kapuskasing would be 8 hours (depart at 5:30 pm and arrive at 1:30 am).

According to Mackenzie (2010), there is an ongoing debate regarding whether all citizens have a right to public transportation and who is responsible for paying for that right. The provincial government has a social responsibility to ensure that all citizens have access to basic services (health care, shopping, recreational, etc.), including in Northern Ontario. The Government of Manitoba is subsidizing Greyhound service; a similar approach will be required to guarantee the long-term viability of the motorcoach service in Northern Ontario.

Railway

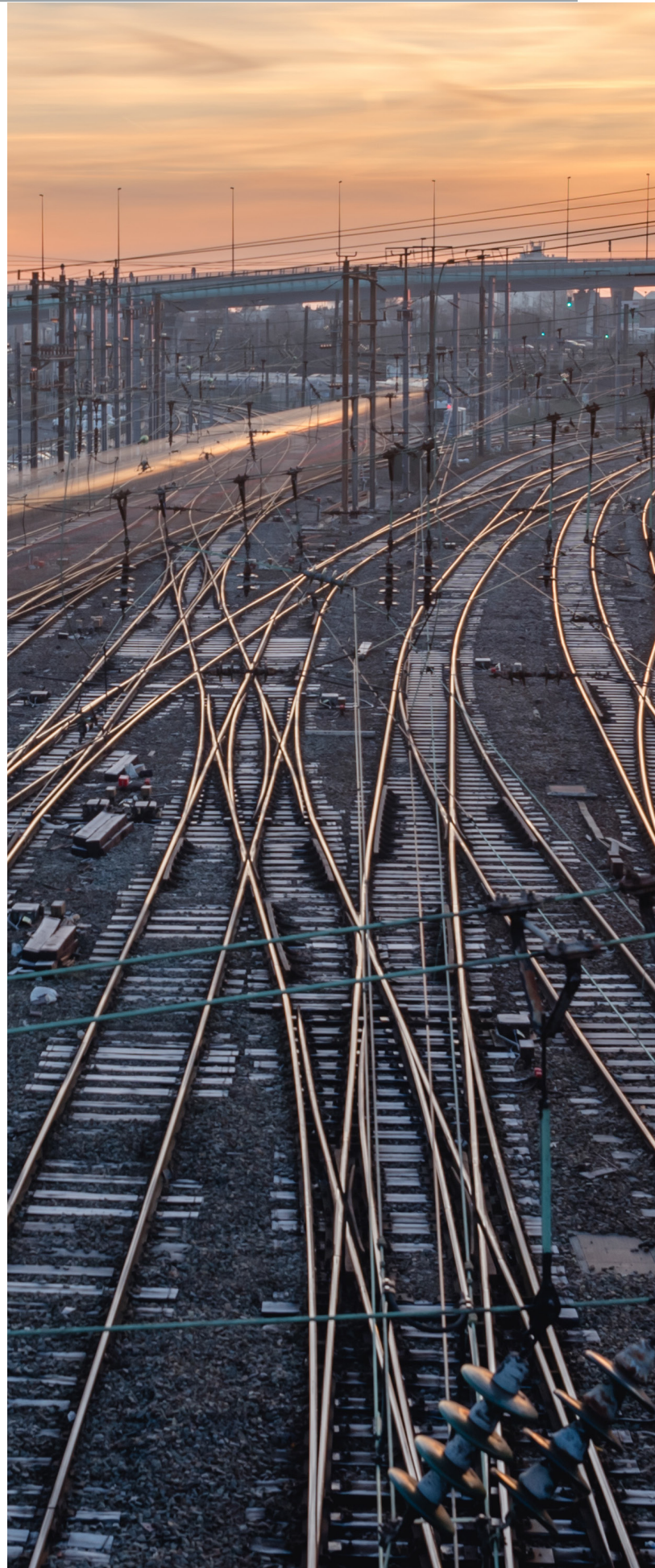
Rail service is in a state of decline in Canada (Gormick 2014), and this is certainly the case in Northern Ontario. At the turn of the 20th century, before the invention of the automobile, the railway was the only land-based, long-distance, and high-volume transportation method available. However, with the growth of the automobile and airplanes, railways are no longer viewed as necessary. Passenger railway service in Canada peaked at the end of World War II when the federal and provincial governments began to move their funding and policies away from railways and towards roads and air travel (Gormick 2013).

Railway Freight

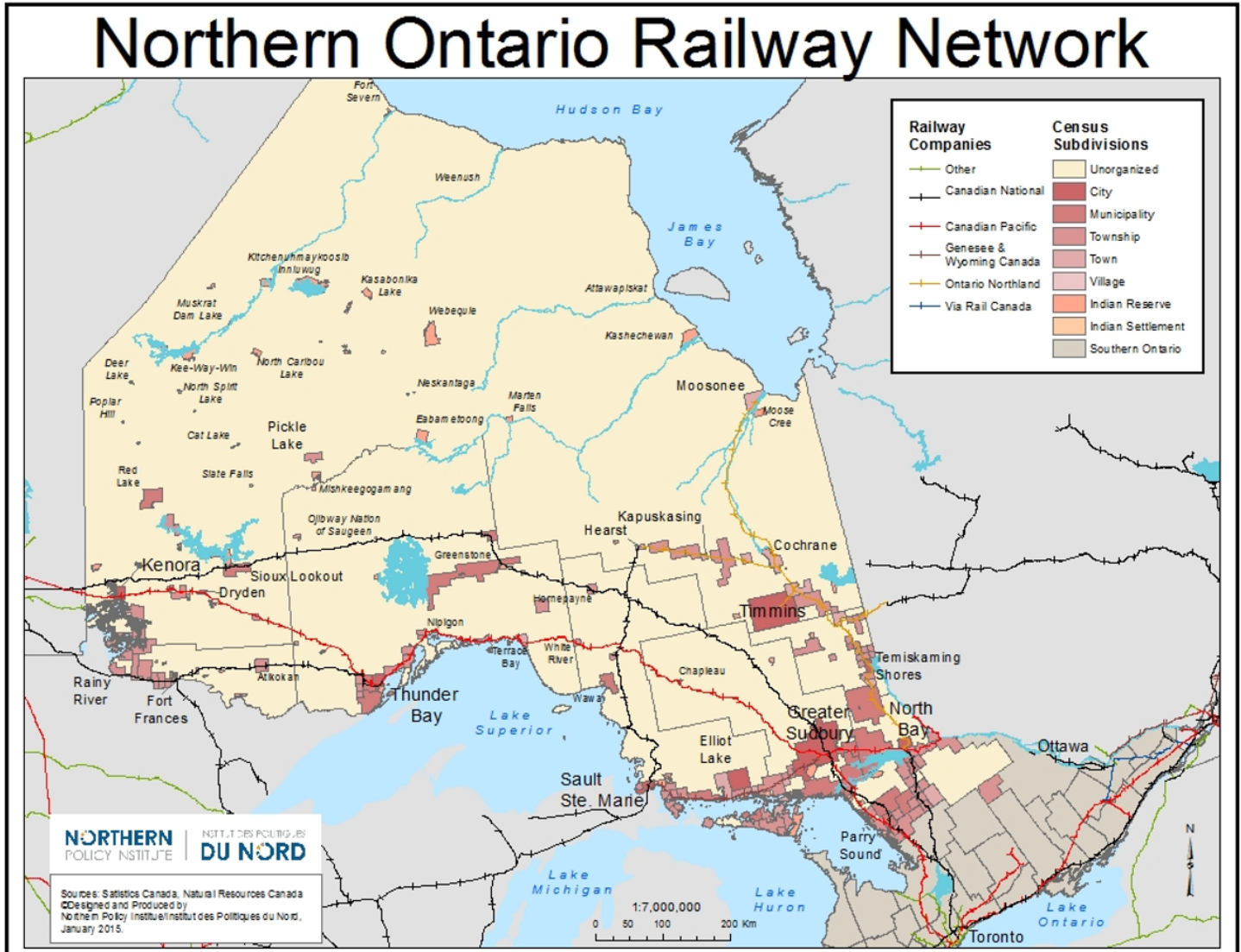
In Northern Ontario, freight railway service is provided by four major companies: Canadian National Railway (CN), Canadian Pacific Railway (CP), Ontario Northland Transportation Commission (ONTC), and Genesee & Wyoming (See Map 10). CN and CP are two of the primary rail companies in Canada and in North America. These two companies offer freight service in Northern Ontario with connections to Southern Ontario, Western Canada, and the United States. CN, the largest rail company in Canada, has four main lines in Northern Ontario:

- The principal line comes from Southern Ontario to Manitoba and Western Canada. The rail line passes through Greater Sudbury, continues north to Nakina and then west to Manitoba by Sioux Lookout;
- A line in Northwestern Ontario from Thunder Bay to Rainy River with a connection to the United States;
- A north-south line between Sault Ste. Marie and Hearst, with a connection to the United States; and
- A line from North Bay to Southern Ontario.

The CN rail lines connect Northern Ontario with Ontario Northland and Genesee & Wyoming rail lines. CN joins Ontario Northland at two locations, Hearst and North Bay, and connects with the Genesee & Wyoming rail line in Sault Ste. Marie.



Map 10. Rail Lines in Northern Ontario



Canadian Pacific Railway offers service from Toronto to Western Canada, passing through Greater Sudbury and Thunder Bay. The CP formerly provided service to Northeastern Ontario from Greater Sudbury to Smith Falls through a section of track called the Ottawa Valley Railway (OVR). However, in 2009, the CP pulled its freight off the OVR and re-routed it through Southern Ontario. The CP is currently leasing a portion of the OVR from Greater Sudbury to Témiscaming Québec (passing through North Bay and Mattawa) to Genesee & Wyoming (Reuters 2012). The remaining track east to Smith Falls is no longer in use and is currently being removed.

Genesee & Wyoming operates service between Greater Sudbury and Témiscaming Québec, in addition to owning the Huron Central Railway. The Huron Central Railway operates between Sault Ste. Marie and Greater Sudbury. In 2009, Genesee & Wyoming threatened to drop freight service because of declining freight volumes and deteriorating track conditions, but in 2011, a public-private agreement on a four-year reconstruction project saved the railway (Ross 2011). The line now serves 26 communities and First Nation reserves (Ross 2011) and transports commodities such as pulp and paper products, forest products, chemicals, petroleum products, steel, and scrap (Genesee & Wyoming Inc. n.d.).

¹² Genesee & Wyoming purchased Rail America in 2012.

Ontario Northland Transportation Commission, or Ontario Northland, operates a rail line in Northeastern Ontario. The company operates service from North Bay, north to Moosonee, west to Hearst and east to Rouyn-Noranda in the province of Québec. Ontario Northland provides service to the northern communities of Timmins, Temiskaming Shores, Cochrane, Iroquois Falls, Kapuskasing, and Kirkland Lake. As in the case with other railway companies in Northern Ontario, ONTC recently experienced challenges. In 2012, the Ontario Government called the ONTC a “chronic money loser” (Ross 2014b). The government proceeded to cut its passenger service between Cochrane and Toronto and announced that it would place the ONTC up for auction. In 2014, the Ontario Government decided to keep Ontario Northland as a Crown-owned agency (Ross 2014a).

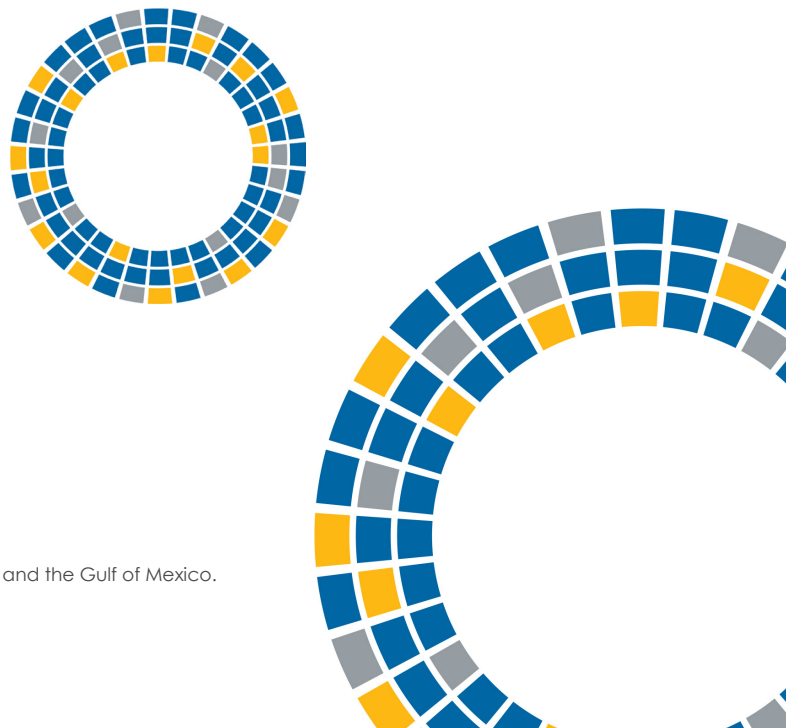
Connections outside Northern Ontario

Northern Ontario is connected to Southern Ontario by Canadian National and Canadian Pacific Railways. Both CN and CP provide service south to Toronto by Greater Sudbury, and CN also offers service south from North Bay. Canadian National and Canadian Pacific also have routes extending west through Manitoba to British Columbia. CN, however, is highly integrated with the remainder of the Northern Ontario rail system throughout North America and is connected to the other rail lines in Northern Ontario, in addition to its United States system.¹³ CN links with the Ontario Northland network at Hearst, North Bay, Rouyn Noranda (Québec), along with the Genesee & Wyoming line in Sault Ste. Marie. The company also has connections to the United States at Sault Ste. Marie, Fort Frances, and Rainy River. Canadian Pacific is linked to the Genesee & Wyoming western line from Sault Ste. Marie and the eastern line from North Bay at Greater Sudbury. However, CP does not have any of its United States connections in Northern Ontario.

Freight Rail Gaps

The railway network in Northern Ontario is not without gaps. First, Northern Ontario is no longer connected to Eastern Ontario, with both CN and CP abandoning the Ottawa Valley route in favour of a Southern Ontario route (Gormick 2014). While Genesee & Wyoming currently lease the track from Greater Sudbury to Mattawa from Canadian Pacific, the remainder of the tracks to Smiths Falls are currently being removed. The removal of rail lines is weakening the rail infrastructure by increasing the stress on busy lines and removing alternate routes (Gormick 2014). The rail lines from Greater Sudbury to the Manitoba border lack a north-south connection between the more northern CN line and the southern CP line. The northern CN rail line has no access to Thunder Bay. This lack of north-south access could be an important factor in the development of the Ring of Fire. The location of the current transportation infrastructure is a significant consideration for how and where the materials will be moved for processing and then delivered to global markets.

The railway network also lacks the support infrastructure to efficiently service the Northern Ontario economy. Drake (2013) identified the lack of grain-handling facilities in the clay belt area and the lack of intermodal terminals as two factors that negatively impact economic development. The use of shipping containers is on the rise, and its volume is estimated to double between 2006 and 2020; however, Northern Ontario lacks the transfer facilities required to benefit from container use (Febbraro and Mitchell 2006). Furthermore, there is industry concern with the amount and quality of available equipment, such as freight rail cars (Dirks 2013).



¹³ Canadian National has rail lines in the United States extending down to Louisiana and the Gulf of Mexico.

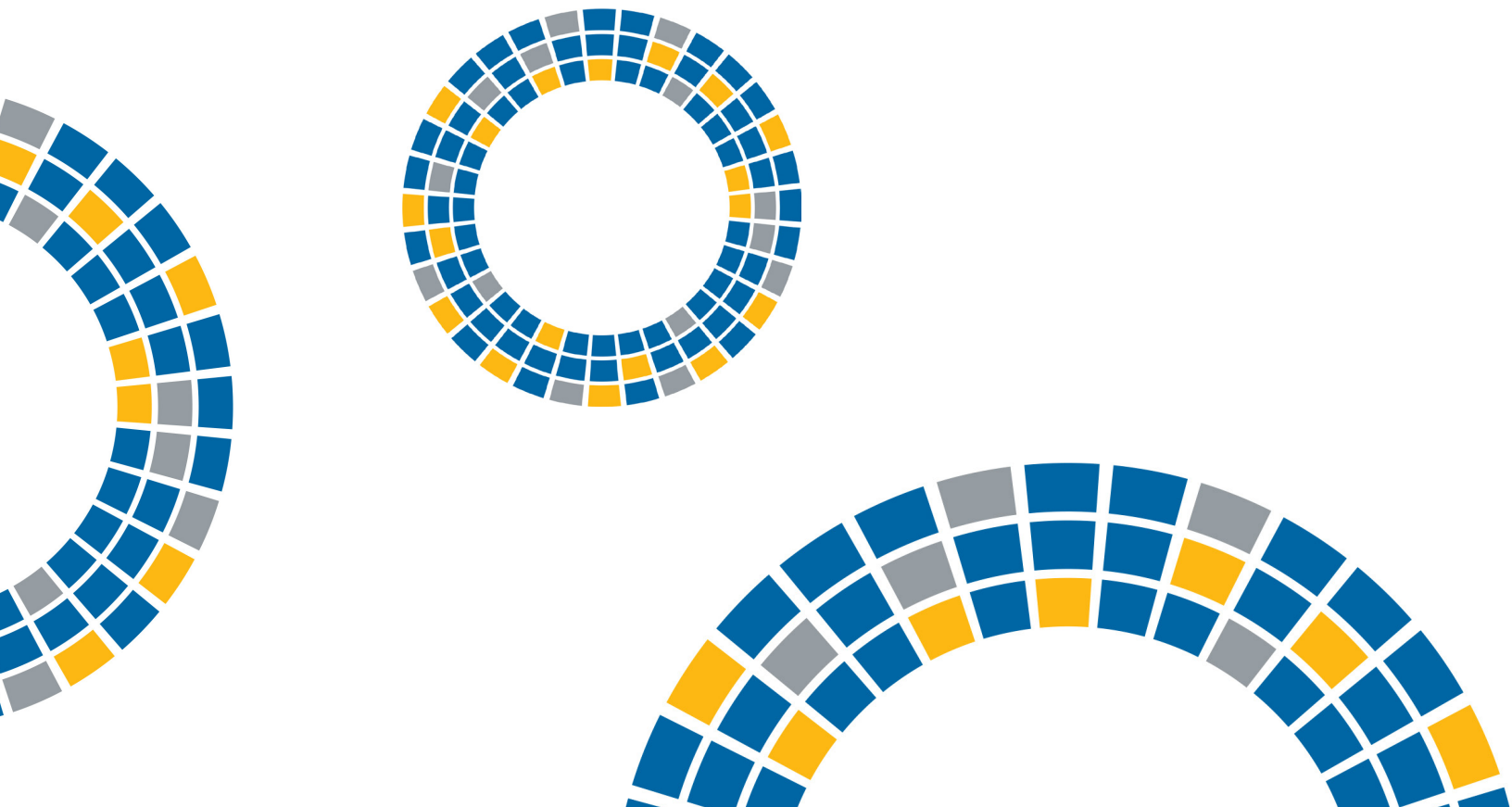
Policy Implication

A primary concern of government is the balance between the movement of goods and people. Increased movement of goods on the road negatively impacts the economic development of a region. Rail has the potential to transport large volumes of goods and take many freight or commercial trucks off the highways, yet rail service remains underutilized in Northern Ontario. The lack of intermodal distribution centres in Northern Ontario means that the region is still dependent on commercial trucks and roads, and highways to transport goods. Additionally, the primary carriers, Canadian National and Canada Pacific appear to be more concerned about moving goods and materials through the region rather than serving the region. For example, grain from Western Canada is transported to Thunder Bay but destined for foreign markets.

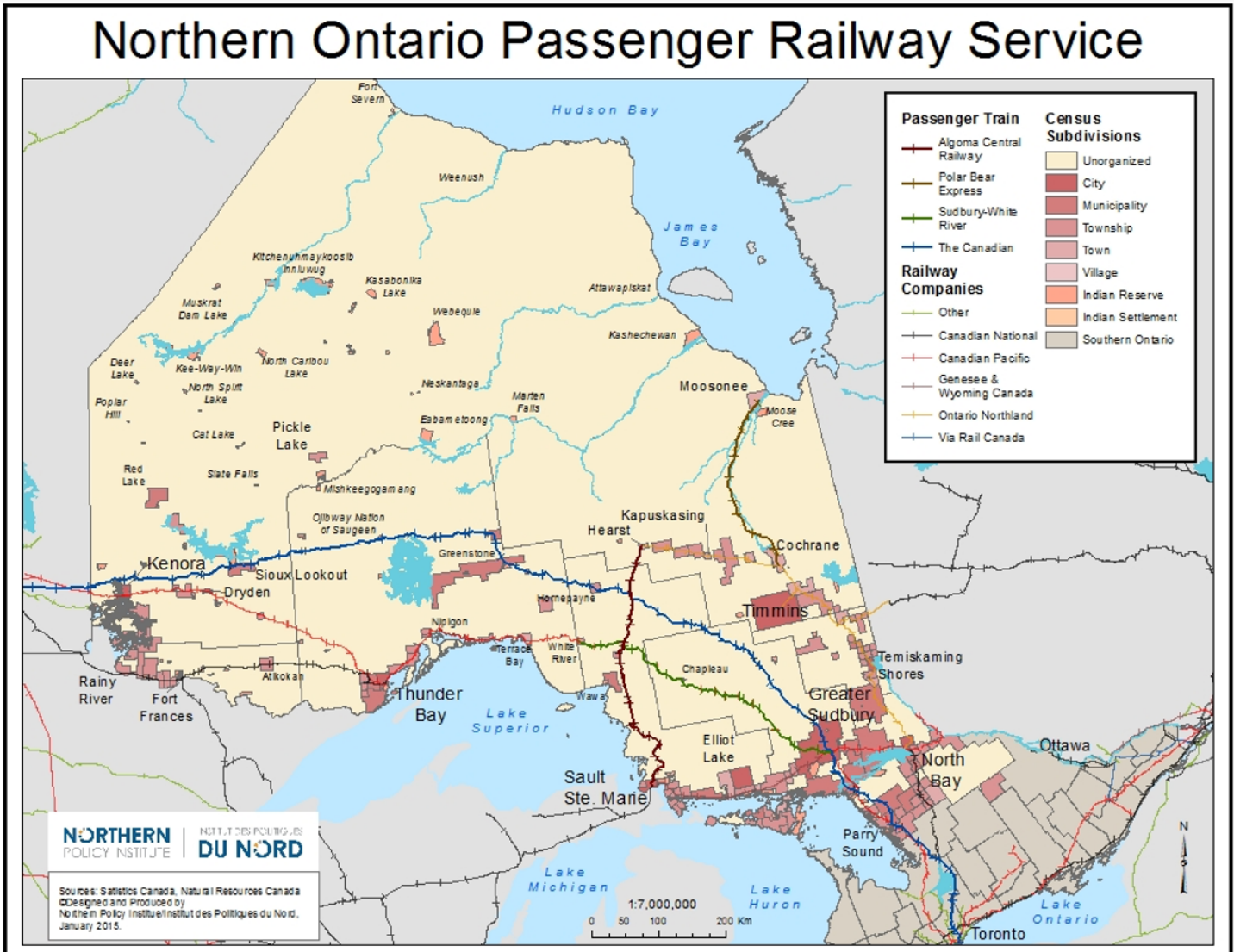
For railway transportation to be successful, greater collaboration is required between all levels of government (municipal, provincial, and federal) and private stakeholders. The government must increase its support for rail companies since they are solely responsible for their infrastructure (tracks, bridges, etc.) (Mongeau 2014). The infrastructure costs increase their operating budget, which makes it more difficult to offer rates competitive to commercial trucks that operate on publicly funded roads. Railway currently has a negative perception such that, as Gormick (2013) states, “public spending towards railways is called a ‘subsidy’ while funding for roads or aviation is ‘an investment’” (viii).

Passenger Railway

Passenger railway service began to decline in the late 1950s. In fact, the federal government intended to discontinue all passenger rail services (Gormick 2013). However, due to public objections, the service was never fully discontinued. Yet, the quality of service continues to drop. VIA Rail service was cut in half in 1990, and the lone remaining cross-Canada (Toronto–Vancouver) train, The Canadian, had its service reduced from tri-weekly to twice weekly between October and April. In Northern Ontario, all Thunder Bay and North Shore services have long since been cancelled. In 2012, the provincial government cancelled Ontario Northland’s Northlander passenger train between Cochrane and Toronto and in 2014, Canadian National announced the cancellation of the Algoma Central passenger service between Sault Ste. Marie and Hearst because the service was no longer eligible for a federal subsidy. In 2013, the federal government redefined the term “remote” in the Remote Passenger Rail Program and, as a result, the Algoma Central Railway was disqualified because most of the stops on the rail line have road access, and the program is “not intended for economic development or tourism purposes” (Ross 2014b). Transport Canada did extend funding for an additional year to allow CN and local stakeholders to create a private-sector solution.



Map 11. Passenger Railways in Northern Ontario



There are currently four passenger rail services remaining in Northern Ontario: VIA Rail's The Canadian train, the Sudbury to White River's Budd Car, Ontario Northland's Polar Bear Express, and Canadian National's Algoma Central (Map 12).¹⁴ In Northern Ontario, the purpose of passenger service is largely for tourism and to provide access to remote communities. The passenger trains do not access the region's larger urban areas but rather

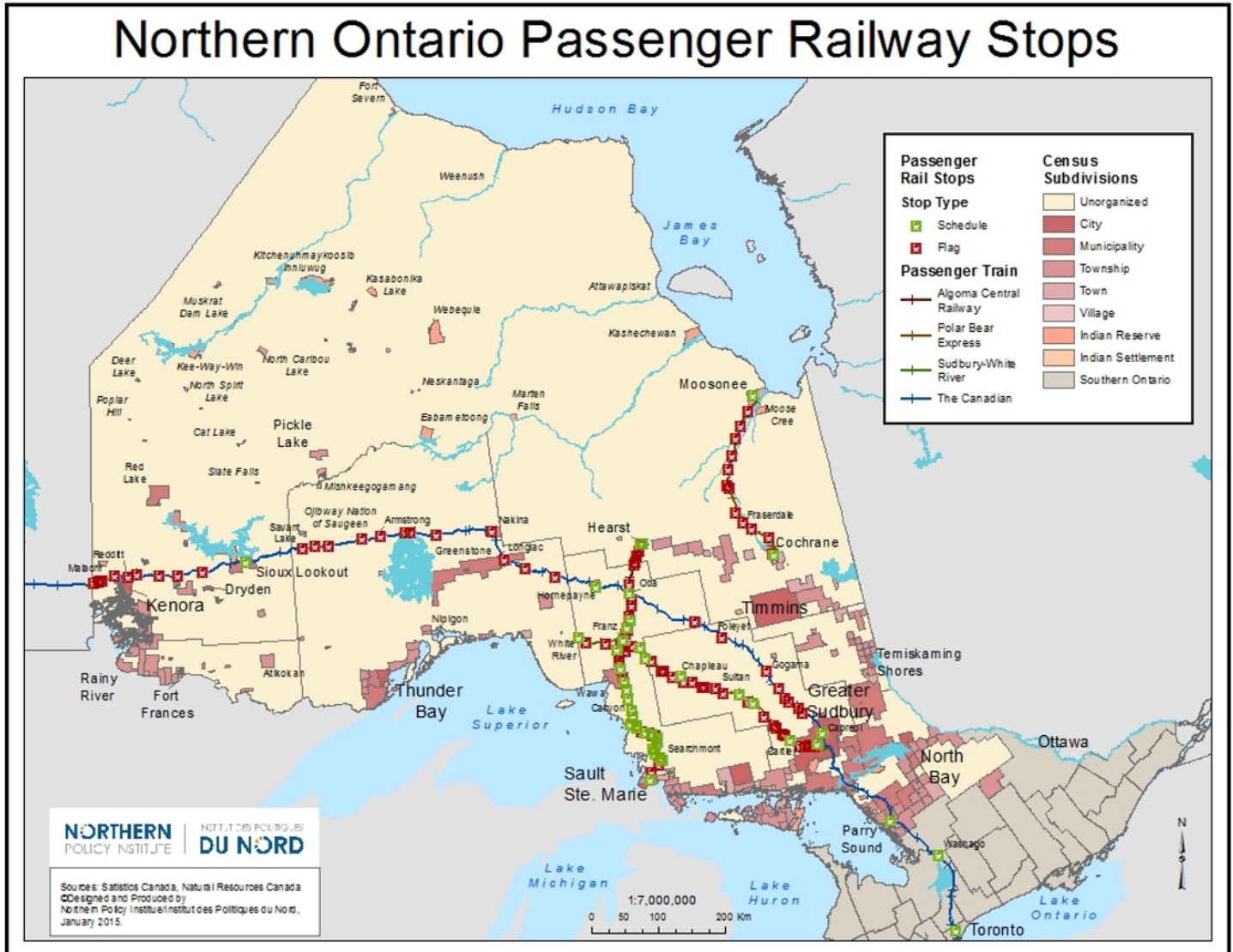
pass through remote communities or wilderness camps (Appendix B Table 9). Of the 138 railway stops in Northern Ontario, 116 are located in rural unorganized census subdivisions.¹⁵ An Ontario historian refers to the Sudbury-White River Budd Car as a "ghost town railway" and the Algoma Central Railway as a "Train Ride from the Past" (Brown 2007).¹⁶

¹⁴ VIA Rail's Sudbury-White River route consists of a single Rail Diesel Car (RDC), which "is a railroad car fitted with its own motive power" (Via Rail 2014)

¹⁵ Eight stops are located within the cities of Greater Sudbury (7) and Sault Ste. Marie (1), five in towns, five in municipalities (however three are located in the Municipality of Greenstone) and four in townships.

¹⁶ The communities of Benny, Biscotasing, Lochalsh and Nicholson located on the Sudbury - White trains are included in Ron Brown's book Ontario's Ghost Town Heritage (Brown 2007).

Map 12. Passenger Rail Stops in Northern Ontario



VIA Rail's The Canadian is a transcontinental train between Toronto and Vancouver and is the last remaining passenger rail service that offers connections outside of Northern Ontario. However, The Canadian does not pass through any of Northern Ontario's primary urban centres, with the exception of Parry Sound and Greater Sudbury. In Greater Sudbury, The Canadian only passes on the outskirts of the city with stops at

the Sudbury Junction and in the outlying community of Capreol. The current schedule of The Canadian also makes the service inaccessible for Northeastern Ontarians, as the train passes through Greater Sudbury during the night or early morning and often runs behind schedule (Table 3). Other notable communities serviced by train are Hornepayne, Longlac, and Sioux Lookout.

Table 3. VIA Rail Canadian Schedule

	Parry Sound	Sudbury Junction	Capreol
Westbound	2:24 AM	5:13 AM	5:38 AM
Eastbound	4:33 AM	1:17 AM	12:18 AM

Source: author's own based on sources detailed in Appendix C.

The Algoma Central Railway offers service between Sault Ste. Marie and Hearst. The main attraction of Algoma Central Railway is its "Agawa Canyon Tour Train," which, according to the company website, is "one of the most popular train tours in North America" (Agawa Canyon Tour Train 2014). Besides being a tourist attraction, the train also provides access to recreational wilderness locations and private camps.

Ontario Northland's aptly named Polar Bear Express offers service between Cochrane and Moosonee. This train connects Moosonee and Moose Factory on the James Bay coast to the rest of the province. Historically, the Moosonee and Moose Factory region was dependent on the train for access and supplies because there was no road access. However, since 2013, Moosonee has been connected to the rest of the province by a winter road. In April 2014, the provincial government announced that Ontario Northland would remain a Crown-owned agency, and the government would remain committed to this passenger service (Ross 2014a). However, what effect a winter road and the possible construction of a year-round road will have on the long-term viability of the Polar Bear Express is yet to be seen.

Passenger Rail Service Gap

There are significant gaps in the passenger rail service for Northern Ontario as most of the region does not have any service. The most notable gap is the virtual lack of service for Northern Ontario's urban centres. Except for Greater Sudbury and Sault Ste. Marie, no other city in the area has any passenger rail service. Operators such as CN state that passenger service is not profitable, yet passenger trains are not servicing the communities where the potential consumers are residing. With the trend of urbanization and the centralization of activities such as shopping, health care, and recreation increasingly located in cities, rural residents are still unable to access urban centres by train.

There are also no inter-city connections in Northern Ontario, making it impossible to travel between urban areas such as Thunder Bay, Sault Ste. Marie, Greater Sudbury, North Bay, or Timmins by train. The service to urban centres outside Northern Ontario is also sporadic and largely nonexistent. Passenger train service to large

urban centres like Toronto and Winnipeg is limited to twice or three times a week and is now only available through Greater Sudbury on The Canadian. Meanwhile, connections east to Ottawa, for example, only exist with a transfer in Toronto. The inability to travel between cities is a barrier to economic development and has a negative impact on the social well-being of Northern Ontario residents.

According to Gormick (2013), passenger trains offer a high degree of passenger comfort and ease of accessibility for individuals with mobility problems. The lack of passenger trains means that individuals are required to rely on other transportation modes, in particular, the automobile or motorcoach service, for intercommunity travel. Northern Ontario has an increasing proportion of elderly in rural and remote communities who are most likely to rely on a public transportation service (Transport Canada 2006) and require the highest accessibility and comfort. However, they are now required to travel long distances on the less comfortable transportation options such as a motorcoach.

Passenger rail service also has numerous spatial gaps in Northern Ontario. There is limited service in Northwestern Ontario, with only the municipalities of Greenstone (Caramat, Nakina, and Long Lac) and Sioux Lookout as the primary communities having service. There is no service to/from Thunder Bay as well as the North Shore of the Great Lakes. Since 2012, there has been no service in Northeastern Ontario between Cochrane and North Bay and North Bay and Toronto.

While passenger rail service accesses numerous small, remote communities, the trains do not access many First Nation communities. Even though passenger trains do pass near some First Nation communities such as Aroland 83, Ginoogaming, Gros Cap 49, Long Lake 58, Moose Factory 68, Ojibway Nation of Saugeen, and Chapleau 74A and Chapleau 75, there are no passenger rail stops located directly on a First Nation reserve or settlement and access to passenger rail service requires a trip to a nearby community. Indigenous communities in Rainy River and Kenora District and along the North Shore of Lake Huron are the most neglected by passenger rail service.

Policy Implication

The current approach to passenger rail service in Northern Ontario is not efficient (Gormick 2014) and does not meet the needs of northern residents. Gormick (2013) is critical of the current operation and management of Canadian railway companies, arguing that passenger train service in Northern Ontario is largely tourist-based, and unfortunately, tourism does not lend itself to repeat clientele. For the moment, passenger rail provides service to many small, isolated communities and private cottages. However, the number of communities, wilderness destinations, and private cottages only accessible by rail is declining as the road network continues to expand. There is no longer the required clientele entirely reliant on the train to fund the service, meaning that the service is dependent on government funding to remain operational. Unfortunately, the provincial and federal governments no longer deemed passenger railway service a necessity for many areas and are reducing the funds available (Gormick 2013, Ross 2014).

In Northern Ontario, a new approach to passenger service should be instituted, one that increases the connections between the largest urban centres. In most places, the rail infrastructure is already in place, so there is no need to construct new rail line corridors. A suggestion to improve passenger rail service made by Gormick (2013) is to transfer VIA Rail's The Canadian service in Northern Ontario from the northern Canadian National rail track to the more southern Canadian Pacific rail line, which is more populous (larger clientele) and more marketable to tourists because of the appealing North Shore Passage. Currently, the VIA Rail service in Northern Ontario is inefficient, leading to increased travel time.¹⁷ The Canadian makes frequent stops on the current route, and because of the length of the train, it is often required to make multiple stops in a single community.¹⁸ Gormick (2013) suggests that the communities on the Canadian National rail line would be better serviced using a self-propelled Budd Rail Diesel Car (RDC). However, Canadian National opposes the use of RDC cars on its tracks.

The addition of a new passenger service would need to overcome significant challenges such as freight carrier opposition to passenger services on its railway. Currently, passenger rail is at the mercy of the freight railways. Of VIA Rail's 12,500 km route, VIA Rail is the primary operator for only 223 km. For the remaining kilometres, VIA Rail must obey the freight companies' restrictions. Since Canadian National's privatization in 1995, VIA Rail has had little support from the federal government, and Canadian National has been very public that it is in the freight business and not passenger service. The company has threatened to cancel the Algoma Central Railway (Gormick 2013), and it has been suggested that the "optimal outcome for CN would be if VIA disappeared altogether" (Bird 2009, 9). Like Canadian National, Canadian Pacific objects to having passenger services on its rail lines. Regardless of freight opposition, Gormick (2013) states that VIA Rail still has some authority that it never exercises and believes freight resistance can be overcome.¹⁹ However, Gormick (2013) states that additional support from the federal government is still required.

Airports

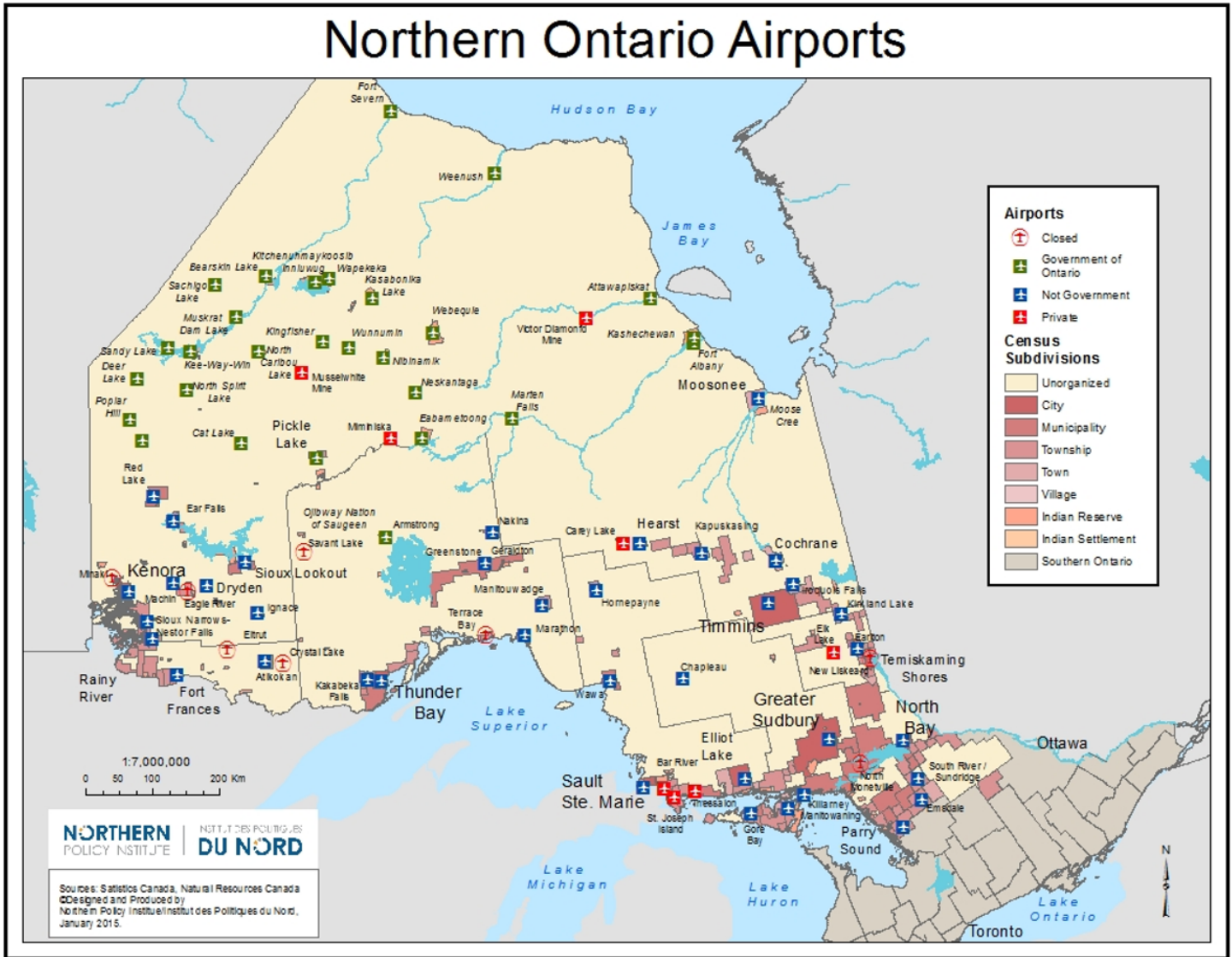
Airports play an important role in connecting communities. Airports are located in the region's largest urban centres of Greater Sudbury, Thunder Bay, Sault Ste. Marie, North Bay, Timmins, and Kenora (Map 13). However, in Northern Ontario, airports are especially important for remote communities, particularly First Nation communities in the northern region of the Kenora District. Many of these communities are completely isolated or are only connected by winter roads, making air travel the only year-round connection. For remote communities, airports and airplanes are used not only for intercommunity mobility but also for supplies (food) and access to essential services such as health care.

¹⁷ VIA Gormick (2013) states that the current schedule or travel time for The Canadian is 19 hours longer compared to the service in 1955.

¹⁸ The Canadian is 25 or more cars in length and the coach and sleeping cars are at opposite ends of the train.

¹⁹ Rocky Mountaineer tourist train operates on Canadian Pacific Railway's Calgary – Vancouver corridor.

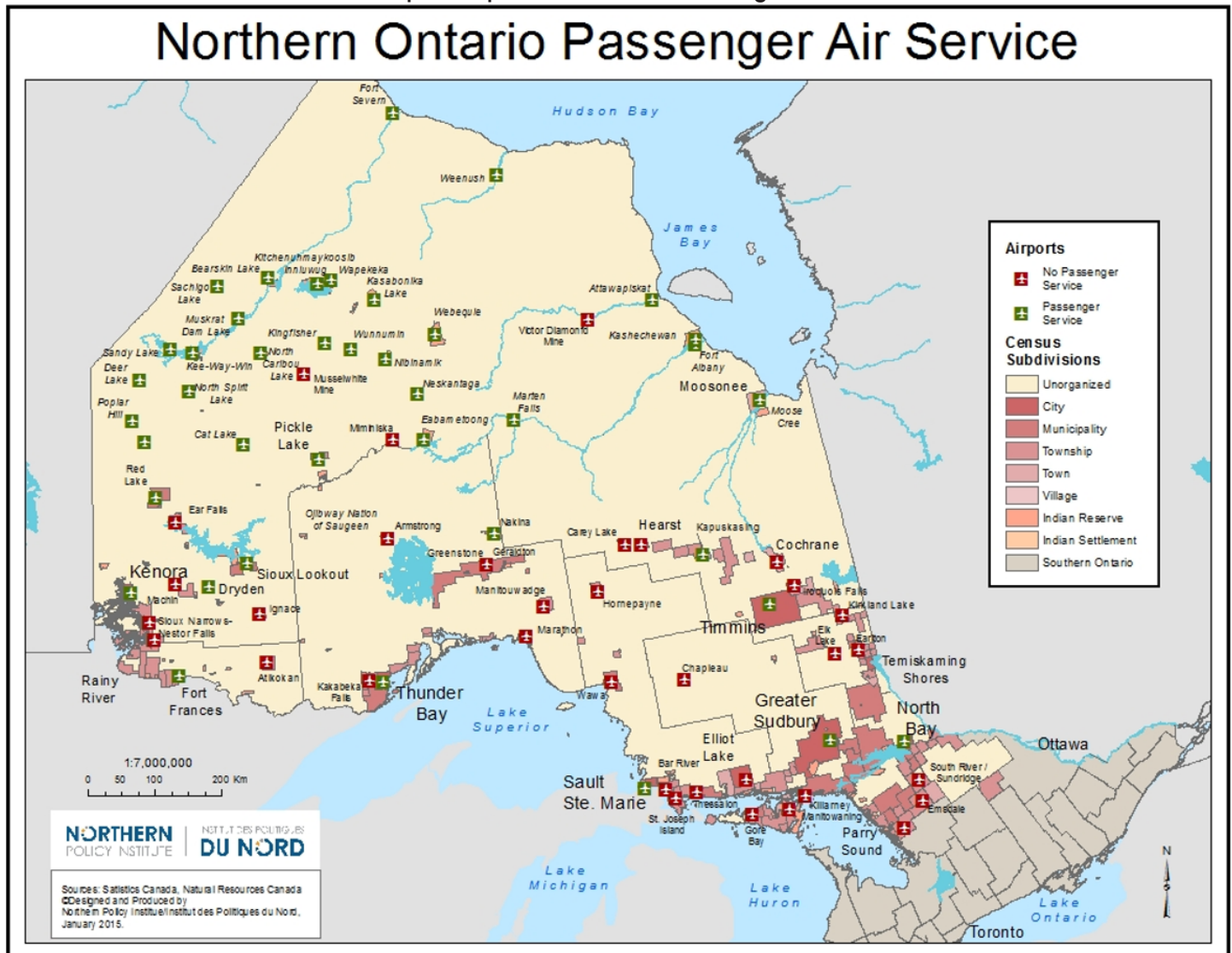
Map 13. Northern Ontario Airports



The larger urban centre such as Greater Sudbury, Thunder Bay, Sault Ste. Marie, North Bay, Timmins, and Kenora all have airports with regularly scheduled passenger service. Thunder Bay is the only community in the region with an international airport. Whereas Timmins' Victor M. Power Airport was found to be particularly important for Northern Ontario, not only does it offer connections to Toronto and regional service, but it is also a hub for airlines that provide service to isolated James Bay communities. The presence of an airport does not guarantee scheduled passenger service (Map 14), with many mid-size communities in the region, such as Elliot Lake, Temiskaming Shore (in Earlton), Parry Sound,

Chapleau, Marathon, Iroquois Falls, and Ignace, having airports but no regularly scheduled passenger service. Communities located in the southern regions of Northern Ontario with year-round access by road are less likely to have scheduled passenger service because the service is not deemed a necessity by the government, and the demand is not sufficient for the service to be profitable. These airports still serve a variety of purposes, including charter service, personal/private aircraft, flight training, forest fire management by the Ministry of Natural Resources, emergency services (air ambulance, police, search and rescue), air cargo, tourism, and private business.

Map 14. Airports with Schedule Passenger Service



Airports were found by Sypher (2006) to be a significant contributor to a community's economy. Airports increase the accessibility of a community as they allow people to quickly travel between regions, provinces, and the country (Sypher 2006). Airports are also increasingly used to transport equipment, materials, and goods (air cargo). This increase in accessibility allows communities to take part in the regional or national economy rather than just the local economy. Airports also serve as centres of industry and innovation, using facilities and surrounding land for various purposes, including aeronautical research.²⁰ Many local economic development organizations, as well as government ministries such as the Ministry of Northern Development and Mines, recognize the importance of airports in the economic development of a community. Airports are used by communities to attract skilled professionals and new businesses.

In the northern part of the Kenora District, there are three privately-owned airports that do not have regularly scheduled flights. Two are mining outposts, Victor Diamond Mine and Musselwhite Mine, which use airports to transport materials (in this case, diamonds and gold) in addition to transporting workers to and from the site. The two mines operate using a Fly-in/Fly-out approach. The last private airport is operated by Miminiska Lodge, which is a wilderness getaway business.

²⁰ The Northern Ontario School of Medicine is partnering with Discover Air to research algae blooms on Northern Ontario lakes (Pickard 2014).

The carriers that service Northern Ontario include Air Canada (Jazz), WestJet, Porter, Bearskin, Wasaya, Air Creebec, and Air Thunder. WestJet is only offered out of Thunder Bay and flies to Toronto and Winnipeg. Air Canada and Porter only offer flights from the larger northern urban centres to Toronto, with the exception of Thunder Bay, where flights are also available to Winnipeg. Bearskin Airlines is a regional airline that offers service within Northern Ontario and Winnipeg, Manitoba. Northern remote communities are serviced by Wasaya Airlines, Air Creebec, and Air Thunder. Wasaya Airlines services northern communities in the Kenora and Thunder Bay districts, while Air Creebec and Air Thunder service the communities along the James Bay shore. Air Creebec is not limited to Ontario as the airline also services isolated northern Québec communities along with Val D'Or and Montréal.

Identifying Airport Gaps

Airports do not have any noticeable spatial gaps. Approximately 70 census subdivisions have an airport. The gaps, however, are in the condition of infrastructure. Sypher (2006) found that aging/deteriorating or inappropriately-sized infrastructure was the most significant concern for airports in the region. Numerous remote airports have gravel runways, and newer airplanes are unable to safely land or take off on those runways. Current airplanes being used are aging and date back to the 1970s (Gill and Raynor 2013, Weber 2013). Gill and Raynor (2013) and Weber (2013) warned that communities would experience a reduction in service if the infrastructure is not updated.

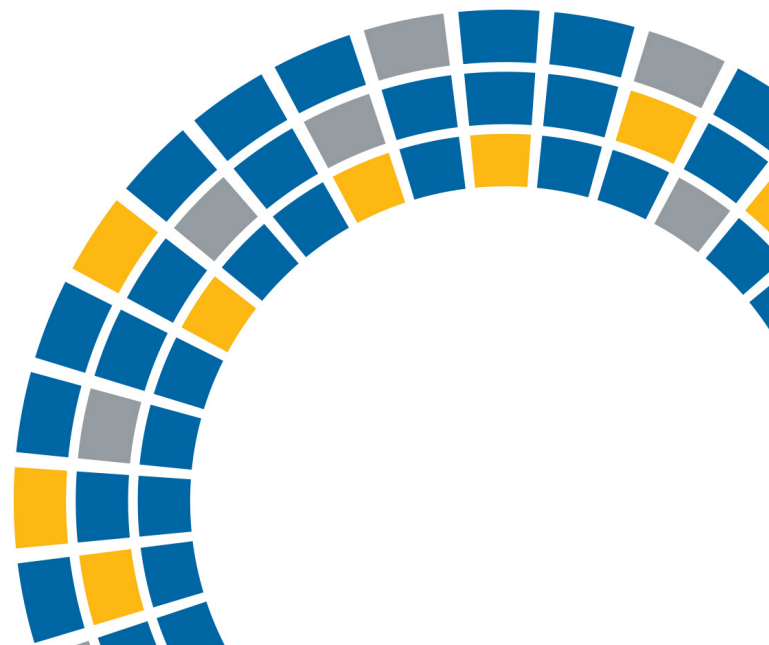
Policy implication

The current infrastructure of Canadian airports is deteriorating and is in need of a serious upgrade; however, airports do not have the funds required to accomplish the upgrades. Studies such as Sypher (2006), Metrass-Mendes, de Neufville and Costa (2011), and Gill and Raynor (2013) suggest that greater government support is required. All levels of government (municipal, provincial, and federal) need to reassess how fees are collected and funds allocated. The Airport Capital Assistance Program (ACAP) provides approximately \$38 million each year for all the country's eligible airports, which is simply not enough (Weber 2013). It is argued by Sypher (2006) and Gill and Raynor (2013) that eligibility for the ACAP should be changed to include more airports, such as those that do not currently have scheduled passenger service. The Ontario Government also needs to increase support for municipal airports. Sypher (2006) suggests reinvesting the provincial aviation fuel tax into airports. Greater government support can allow airports to reduce their user and landing fees to encourage growth.

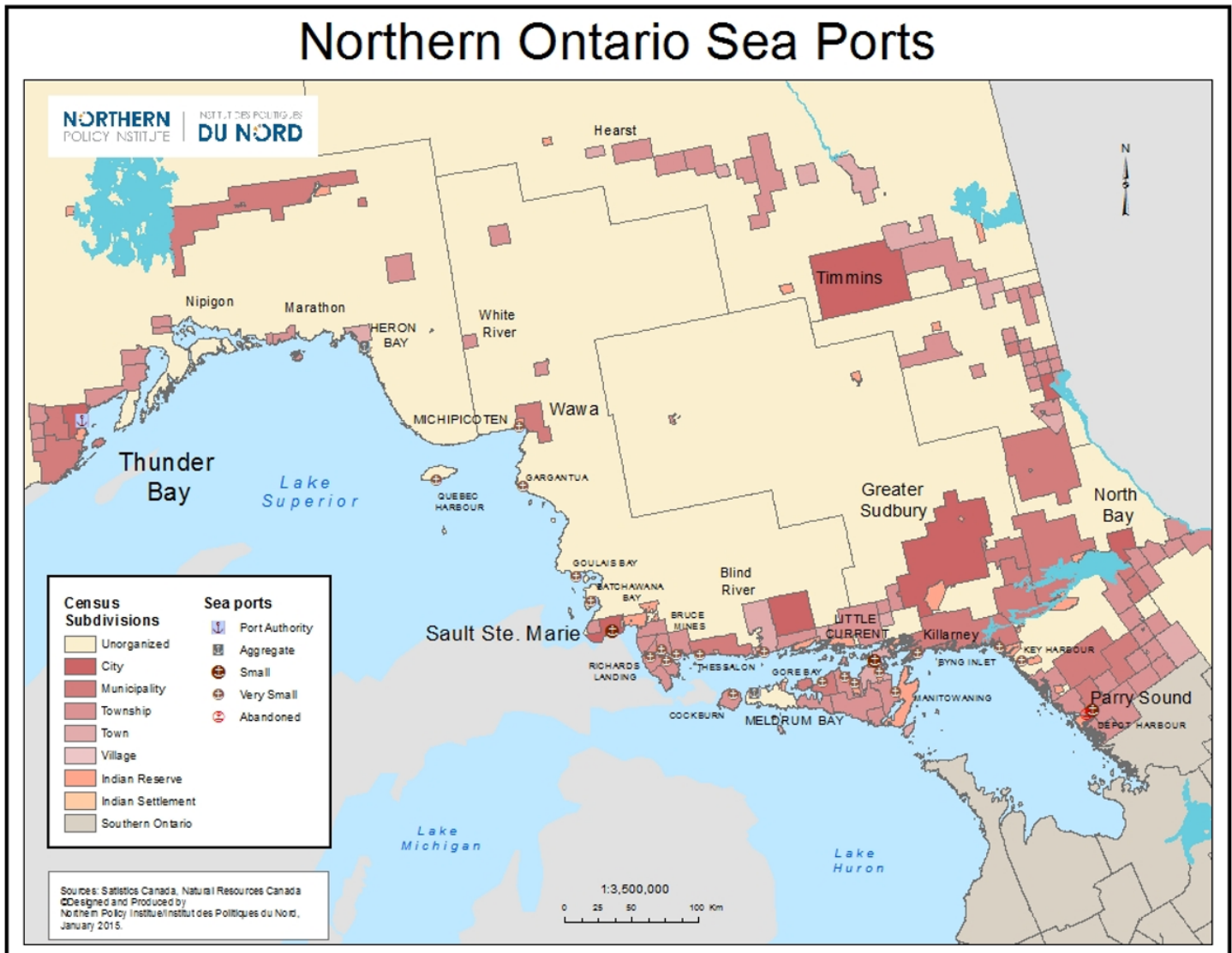
Seaports

Given Northern Ontario's location on the Great Lakes and James Bay, as well as the importance of water in early colonization, it is surprising that Northern Ontario has limited seaway connections (Map 15). The Great Lakes – St. Lawrence Seaway accesses Parry Sound, Sudbury, Algoma, and Thunder Bay districts. The entire north shore of Lake Superior, the largest of the Great Lakes, is in Northern Ontario. However, the only large urban centre on its shore is Thunder Bay. Despite the accessibility to the waterway, Northern Ontario only has one port authority: The Port of Thunder Bay. The World Port Index, which classifies harbour size based on several factors such as area, facilities, and wharf space (National Geospatial-Intelligence Agency 2014), classified Thunder Bay as a medium port, Sault Ste. Marie, Little Current, and Parry Sound as small, and the remaining ports as very small.

The Port of Thunder Bay provides Western Canada's gateway to the seaway, with 95 per cent of its shipment being to or from Western Canada (Port of Thunder Bay 2015). The port is largely used to transport grain (78 per cent of the total shipment), with coal (at 14 per cent) being the second most transported material (Port of Thunder Bay 2015). The Sault Ste. Marie harbour, which is privately owned by Essar Steel Algoma, is largely used to receive raw material for steelmaking (Ross 2013). Aggregate is also noteworthy material shipped in Northern Ontario. Lafarge, a producer of cement and aggregates, has several quarry pits in Northern Ontario. Meldrum Bay on Manitoulin Island is one of Canada's largest quarries. Lafarge also has facilities at Heron Bay and on Birch Island (Lafarge 2014).



Map 15. Northern Ontario Seaports



Northern Ontario has the potential for new ports. Michipicoten harbour on Lake Superior near Wawa has been in a state of deterioration since Essar Steel Algoma closed its mine in Wawa in 1998 (Northern Ontario Business 2009). Superior Aggregate had plans and received approval from the Ontario Municipal Board to proceed with an open-pit mine on Michipicoten Bay near the harbour (Northern Ontario Business 2009). In 2010, Superior Aggregates was still looking for a partner (Ross 2010), and as of 2014, there was no evidence to suggest work on the mine has begun. Revitalization of the harbour would benefit nearby forestry companies and businesses as they would be able to ship products by freighter. However, the water depth is too shallow for Great Lakes, and saltwater freighters, dredging, and blasting would be required to increase the capacity of the port (Ross 2010). There is a harbour in Parry Sound, but the community has no intention of increasing its size for freight. The community is moving away from a freight harbour to people-friendly walkways with condominiums, light commercial activity, and restaurants (Ross 2005, Ross 2008). Parry Sound is focussing instead on the continual twinning of Highway 69 and the expansion of its airport.

Another potential port is on James Bay at Moosonee. The material could be transported by ONTC rail lines and then shipped to various ports around the world. Proponents of the port, such as the Federation of Northern Ontario Municipalities, indicate the growth of the Churchill Manitoba port on Hudson Bay as evidence for the viability of a James Bay location (Northern Ontario Business 2008). In 2012, the James Bay and Lowlands Ports Trustee Corporation were created (Cowan 2012) with its goal to obtain ownership of the Ontario Northland Transportation Commission and play an active role in the development of projects around James Bay, such as the Ring of Fire. However, momentum for the James Bay port seems to have subsided with the announcement by the Ontario Government that they would retain control of the ONTC.

The Great Lakes is also a significant location for recreational boating. According to The St. Lawrence Seaway Management Corporation, over 2,000 pleasure crafts use the Seaway (The St. Lawrence Seaway Management Corporation 2015). On the northern shore of Lake Huron, Manitoulin Island, and Georgian Bay, there are collections of marinas that are used for recreational boating activities.

Identifying Seaport Gaps

Despite the location of numerous natural resources and access to a major seaway at the Port of Thunder Bay, only 5 per cent of shipments are to or from Western Canada. In Sault Ste. Marie, the port is privately owned by Essar Steel Algoma and is primarily used for steel manufacturing. Aggregate is the primary natural resource transported from Northern Ontario from facilities at Meldrum Bay, Heron Bay, and Birch Island. However, these facilities are also privately owned.

Policy Implication

There is plenty of potential for port expansion in Northern Ontario, particularly with the growth in trade and container shipments from the Asia-Pacific and the development of the Ring of Fire. Thunder Bay and Sault Ste. Marie currently have port infrastructures in place, and both cities are strategically located (see Table 4). The seaports, however, need to be upgraded to increase the volume of shipments and to accommodate two different types of products. Febraro and Mitchell (2006) discussed

that container shipments are increasing significantly and Canadian ports such as the Port of Vancouver are at capacity, and Canada–United States border crossings in Southern Ontario are congested (Febraro and Mitchell 2006). Northern Ontario ports are currently underutilized and could be used to relieve the strain from other North American ports. The Port of Thunder Bay has land available to expand and has multi-modal capabilities (Port of Thunder Bay 2015). Currently, the Port of Sault Ste. Marie is a “very small player in the global marketplace” (Febraro and Mitchell 2006, 30), and its infrastructure needs to be expanded if the port wants to increase its role. At the moment, two wharves are available for ships to offload their goods. The export dock is operated by Essar Steel Algoma, and its availability is dependent on the company’s needs (Febraro and Mitchell 2006). Other infrastructure and support services (tug service, multi-modal equipment, storage, and staging area) would also need to be upgraded.

The development of the Ring of Fire will have an important impact on the seaports in Northern Ontario. Regardless of where the material is processed or whether material is transported raw or processed, the infrastructure needs to be in place for the transportation of material in Northern Ontario. If the proper infrastructure is not available, the material will be transported to foreign markets outside of Northern Ontario, and the region will lose another opportunity for economic growth.

Table 4. Strategic Advantage of Thunder Bay and Sault Ste. Marie Ports

	Thunder Bay	Sault Ste. Marie
Road	-Trans-Canada Highway (Highway 11 and 17) -Highway 61	-Trans-Canada Highway (Highway 17)
Railway	-Canadian National -Canadian Pacific	-Canadian National Huron -Central Railway
Airport	-International	-Regional
Connection United States	-Highway 61 -Canadian Railway	-Canadian National Railway -Interstate 175
Advantage	-Western Canada's gateway to St. Lawrence Seaway	-Proximity to three Great Lakes (Superior, Huron and Michigan) -Proximity to U.S. Mid-west

Source: Febraro and Mitchell (2006), Port of Thunder Bay (2015).

Conclusion

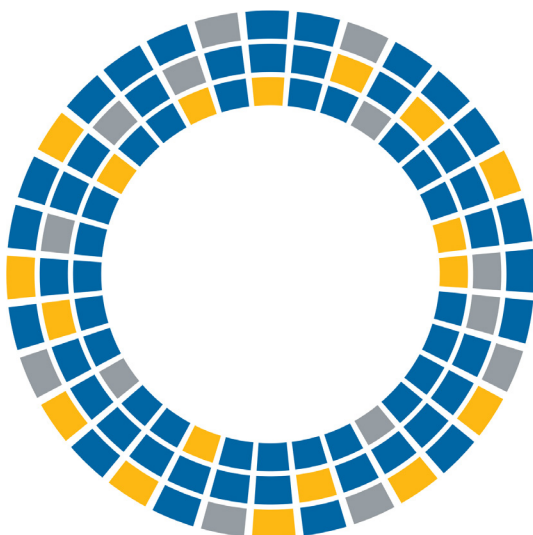
This paper has presented an analysis of the state of transportation infrastructure in Northern Ontario. It has covered what infrastructure exists, what gaps there are, and the policy implications of such gaps in road and highway, motorcoach, railway, airport, and seaport infrastructure in the region.

The road and highway network in Northern Ontario is mainly bound by Highway 11 and Highway 17, with a link between the two provided by Highway 101, the only east-west King's Highway in the region. Other King's Highways also serve as the principal roads in Northern Ontario, such as Highway 69/400. The road network in the region may seem extensive at first sight. Nonetheless, the "tree" structure of this network results in numerous gaps due to a lack of redundancy and alternate routes. Combined with the region's high dependency on these highways and roads, a possible disruption in roads or highways could completely isolate some communities and cause lengthy detours for others. However, the high cost and low demand for road construction in Northern Ontario pose a challenge in decreasing this dependency and lowering the impact of road closures.

Through roads and highways, large urban centres are the most accessible communities such as Greater Sudbury, Thunder Bay, and North Bay. In contrast, First Nation communities are less accessible by roads. Of all First Nation communities in the region, only 28 have year-round access through winter or ice roads, and eight do not have year-round road access. Therefore, a targeted policy to address the lack of accessibility to First Nation communities is needed.

Regarding motorcoach service, Northern Ontario has three carrier companies. Nonetheless, this service also presents limitations. For example, it is difficult to transfer between carriers since motorcoach stations generally are not located on the same site, except for Greater Sudbury. As well, there are gaps in the service provided since it is limited to the road and highway network of Northern Ontario. Additionally, in more rural communities, tickets are only sold online, which hinders the ability of those with limited computer proficiency or internet connection to use the service. Moreover, the service highly neglects First Nation communities. Lastly, outside of larger urban areas, this service lacks a dedicated motorcoach station for scheduled stops and an enclosed waiting area with support facilities for flag stops. Given that it is the responsibility of the provincial government to provide all citizens with access to basic services, including public transportation, subsidization of the motorcoach service in Northern Ontario is needed to increase accessibility to this service.

Railways offer the potential to transport a large volume of goods and reduce the number of commercial trucks on highways. However, due to the lack of intermodal distribution centres, the service is mainly used to move goods through Northern Ontario instead of serving the region itself. To improve this infrastructure, the perception of spending on railway infrastructure must change from one of "subsidy" to one of "investment," as increasing infrastructure for railway companies will allow them to offer competitive rates to commercial trucks that already operate on roads that are publicly funded.



Service for passenger rail is lacking in most of Northern Ontario. Except for Greater Sudbury and Sault Ste. Marie, no city has any passenger rail service, making it not possible to travel between cities by rail. This service is more present in small rural communities but still presents gaps in connecting smaller communities to municipalities and in accessing many First Nation communities. These gaps in passenger rail infrastructure need to be closed to connect smaller communities to municipalities and larger urban centres and provide access to First Nations. In most places, the expansion of this service can use the already existing rail infrastructure. Furthermore, serving more populous areas will allow this service to increase its profitability, making it a more viable option for passenger transportation.

Airports are deteriorating and lack funding for needed upgrades; thus, government funding is required, especially for municipal airports and those airports that do not have scheduled passenger service and therefore are not eligible for funding. This additional investment in airports could come from reinvesting provincial aviation fuel tax. Increasing funding and upgrading airports could reduce user and landing fees and encourage growth.

Seaports in Northern Ontario present a potential for expansion, especially considering the increasing volume of container shipments and the possible development of the Ring of Fire. Seaports in Northern Ontario can not only serve the region but also help to reduce congestion in other Canadian ports. However, for that to be possible, seaport infrastructure in Northern Ontario needs to be expanded and upgraded.

Therefore, as demonstrated by this paper, Northern Ontario's lack of population density and large geographic area pose challenges for more reliable transportation infrastructure. However, the gaps in this network also present opportunities for expansion and growth. Improving transport infrastructure in Northern Ontario will require planning and resources but can provide multiple solutions for the development of the region. The following and last part of this series will discuss the results presented by this paper, examine transportation infrastructure for the Ring of Fire and First Nation communities, and introduce implications for future research.



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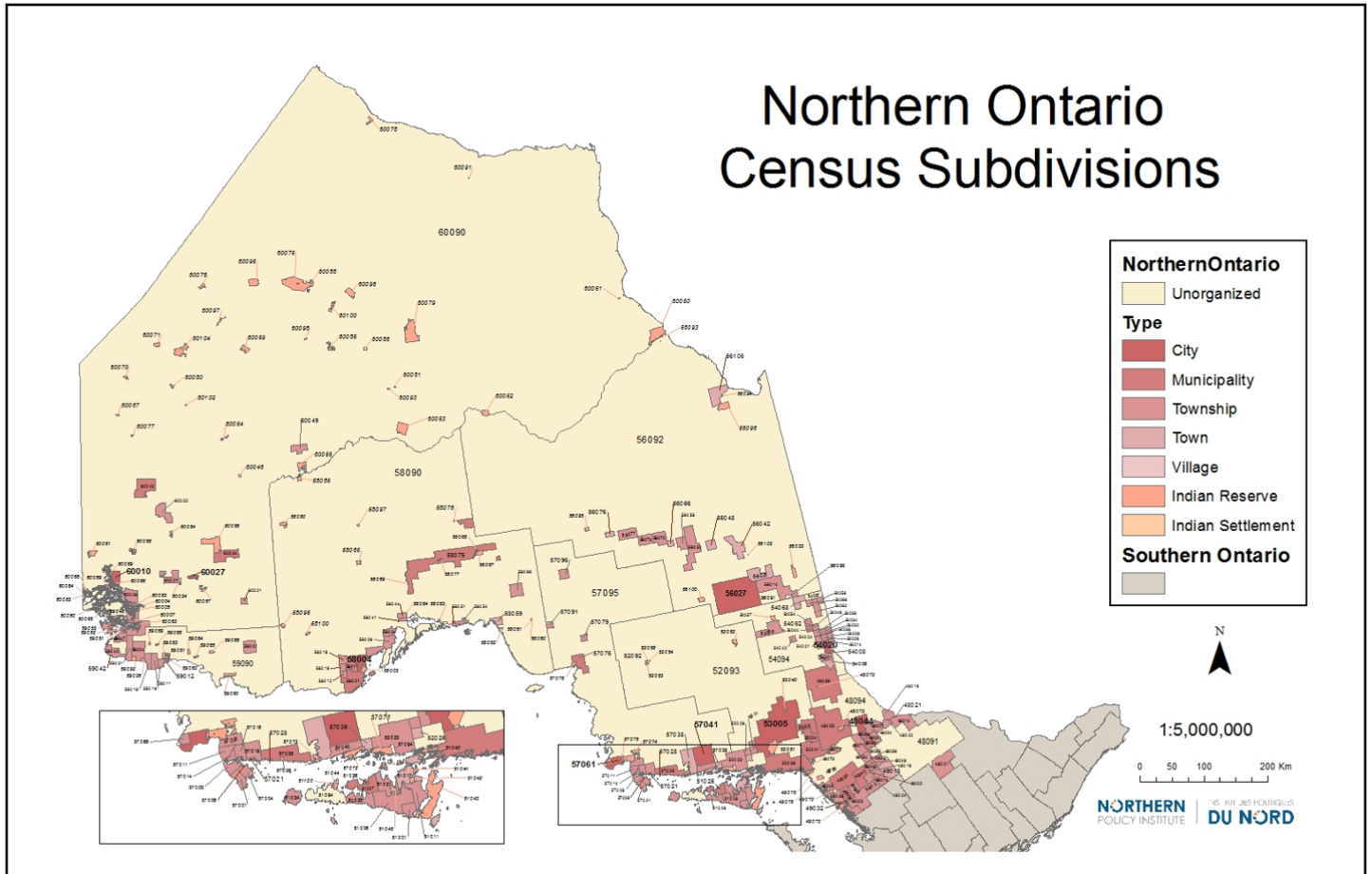
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Appendix A: Census Subdivisions

Map 16. Northern Ontario Census Subdivisions



Source: author's own based on sources detailed in Appendix C.

Label	CSDUID	CSDNAME	CSDTYPE	Census Division NAME	First Nations Name
48001	3548001	South Algonquin	TP	Nipissing	
48013	3548013	Papineau-Cameron	TP	Nipissing	
48019	3548019	Mattawan	TP	Nipissing	
48021	3548021	Mattawa	T	Nipissing	
48022	3548022	Calvin	TP	Nipissing	
48027	3548027	Bonfield	TP	Nipissing	
48031	3548031	Chisholm	TP	Nipissing	
48034	3548034	East Ferris	TP	Nipissing	
48044	3548044	North Bay	CY	Nipissing	
48055	3548055	West Nipissing / Nipissing Ouest	MU	Nipissing	
48069	3548069	Temagami	MU	Nipissing	
48072	3548072	Bear Island 1	IRI	Nipissing	Temagami
48073	3548073	Nipissing 10	IRI	Nipissing	Nipissing
48091	3548091	Nipissing, Unorganized, South Part	NO	Nipissing	
48094	3548094	Nipissing, Unorganized, North Part	NO	Nipissing	
49003	3549003	Seguin	TP	Parry Sound	
49005	3549005	The Archipelago	TP	Parry Sound	
49012	3549012	McMurrich/Monteith	TP	Parry Sound	
49014	3549014	Perry	TP	Parry Sound	
49018	3549018	Kearney	T	Parry Sound	
49019	3549019	Armour	TP	Parry Sound	
49022	3549022	Burk's Falls	VL	Parry Sound	
49024	3549024	Ryerson	TP	Parry Sound	
49028	3549028	McKellar	TP	Parry Sound	
49031	3549031	McDougall	MU	Parry Sound	
49032	3549032	Parry Sound	T	Parry Sound	
49036	3549036	Carling	TP	Parry Sound	
49039	3549039	Whitestone	MU	Parry Sound	
49043	3549043	Magnetawan	MU	Parry Sound	
49046	3549046	Strong	TP	Parry Sound	
49048	3549048	Sundridge	VL	Parry Sound	
49051	3549051	Joly	TP	Parry Sound	
49054	3549054	Machar	TP	Parry Sound	
49056	3549056	South River	VL	Parry Sound	
49060	3549060	Powassan	MU	Parry Sound	
49066	3549066	Callander	MU	Parry Sound	
49071	3549071	Nipissing	TP	Parry Sound	
49072	3549072	Shawanaga 17	IRI	Parry Sound	Shawanaga
49073	3549073	Parry Island First Nation	IRI	Parry Sound	Parry Island First Nation
49075	3549075	Henvey Inlet 2	IRI	Parry Sound	Henvey Inlet

Label	CSDUID	CSDNAME	CSDTYPE	Census Division NAME	First Nations Name
49076	3549076	French River 13	IRI	Parry Sound	Henvey Inlet
49077	3549077	Dokis 9	IRI	Parry Sound	Dokis
49078	3549078	Magnetewan 1	IRI	Parry Sound	Magnetewan
49095	3549095	Parry Sound, Unorganized, North East Part	NO	Parry Sound	
49096	3549096	Parry Sound, Unorganized, Centre Part	NO	Parry Sound	
51001	3551001	Tehkummah	TP	Manitoulin	
51006	3551006	Central Manitoulin	TP	Manitoulin	
51011	3551011	Assignack	TP	Manitoulin	
51017	3551017	Northeastern Manitoulin and the Islands	T	Manitoulin	
51021	3551021	Billings	TP	Manitoulin	
51026	3551026	Gore Bay	T	Manitoulin	
51027	3551027	Gordon/Barrie Island	MU	Manitoulin	
51028	3551028	Burpee and Mills	TP	Manitoulin	
51034	3551034	Cockburn Island	TP	Manitoulin	
51040	3551040	Whitefish River (Part) 4	IRI	Manitoulin	Whitefish River
51041	3551041	Sucker Creek 23	IRI	Manitoulin	Aundeck-Omni-Kaning
51042	3551042	Sheguiandah 24	IRI	Manitoulin	Sheguiandah
51043	3551043	Wikwemikong Unceded	IRI	Manitoulin	Wikwemikong
51044	3551044	Sheshegwaning 20	IRI	Manitoulin	Sheshegwaning
51045	3551045	M'Chigeeng 22 (West Bay 22)	IRI	Manitoulin	M'Chigeeng
51094	3551094	Manitoulin, Unorganized, West Part	NO	Manitoulin	
51100	3551100	Zhiibaahaasing 19A (Cockburn Island 19A)	IRI	Manitoulin	Zhiibaahaasing
52001	3552001	French River / Rivière des Français	MU	Sudbury	
52004	3552004	St.-Charles	MU	Sudbury	
52013	3552013	Markstay-Warren	MU	Sudbury	
52023	3552023	Sables-Spanish Rivers	TP	Sudbury	
52026	3552026	Espanola	T	Sudbury	
52028	3552028	Baldwin	TP	Sudbury	
52031	3552031	Nairn and Hyman	TP	Sudbury	
52036	3552036	Killarney	MU	Sudbury	
52051	3552051	Whitefish Lake 6	IRI	Sudbury	Atikameksheng Anishnawbek
52052	3552052	Mattagami 71	IRI	Sudbury	Mattagami

Label	CSDUID	CSDNAME	CSDTYPE	Census Division NAME	First Nations Name
52053	3552053	Chapleau 74A	IRI	Sudbury	Chapleau Ojibwe
52054	3552054	Duck Lake 76B	IRI	Sudbury	Brunswick House
52058	3552058	Chapleau 75	IRI	Sudbury	Chapleau Cree
52092	3552092	Chapleau	TP	Sudbury	
52093	3552093	Sudbury, Unorganized, North Part	NO	Sudbury	
53005	3553005	Greater Sudbury / Grand Sudbury	CY	Greater Sudbury / Grand Sudbury	
53040	3553040	Wahnapiitei 11	IRI	Greater Sudbury / Grand Sudbury	Wahnapiitei
54001	3554001	Coleman	TP	Timiskaming	
54006	3554006	Latchford	T	Timiskaming	
54008	3554008	Cobalt	T	Timiskaming	
54014	3554014	Harris	TP	Timiskaming	
54020	3554020	Temiskaming Shores	CY	Timiskaming	
54021	3554021	Hudson	TP	Timiskaming	
54024	3554024	Kerns	TP	Timiskaming	
54026	3554026	Harley	TP	Timiskaming	
54029	3554029	Casey	TP	Timiskaming	
54032	3554032	Brethour	TP	Timiskaming	
54034	3554034	Hilliard	TP	Timiskaming	
54036	3554036	Armstrong	TP	Timiskaming	
54038	3554038	Thornloe	VL	Timiskaming	
54042	3554042	James	TP	Timiskaming	
54044	3554044	Charlton and Dack	MU	Timiskaming	
54049	3554049	Evanturel	TP	Timiskaming	
54052	3554052	Englehart	T	Timiskaming	
54054	3554054	Chamberlain	TP	Timiskaming	
54056	3554056	Matachewan	TP	Timiskaming	
54057	3554057	Matachewan 72	IRI	Timiskaming	Matachewan
54058	3554058	McGarry	TP	Timiskaming	
54062	3554062	Larder Lake	TP	Timiskaming	
54066	3554066	Gauthier	TP	Timiskaming	
54068	3554068	Kirkland Lake	T	Timiskaming	
54091	3554091	Timiskaming, Unorganized, East Part	NO	Timiskaming	
54094	3554094	Timiskaming, Unorganized, West Part	NO	Timiskaming	
56014	3556014	Black River-Matheson	TP	Cochrane	
56027	3556027	Timmins	CY	Cochrane	
56031	3556031	Iroquois Falls	T	Cochrane	
56033	3556033	Abitibi 70	IRI	Cochrane	Wahgoshig

Label	CSDUID	CSDNAME	CSDTYPE	Census Division NAME	First Nations Name
56042	3556042	Cochrane	T	Cochrane	
56048	3556048	Smooth Rock Falls	T	Cochrane	
56052	3556052	Fauquier-Strickland	TP	Cochrane	
56056	3556056	Moonbeam	TP	Cochrane	
56066	3556066	Kapuskasing	T	Cochrane	
56070	3556070	Val Rita-Harty	TP	Cochrane	
56073	3556073	Opasatika	TP	Cochrane	
56076	3556076	Hearst	T	Cochrane	
56077	3556077	Mattice-Val Côté	TP	Cochrane	
56091	3556091	Cochrane, Unorganized, South West Part	NO	Cochrane	
56092	3556092	Cochrane, Unorganized, North Part	NO	Cochrane	
56093	3556093	Fort Albany (Part) 67	IRI	Cochrane	Fort Albany
56094	3556094	Factory Island 1	IRI	Cochrane	Moose Cree
56095	3556095	Constance Lake 92	IRI	Cochrane	Constance Lake
56096	3556096	Moose Factory 68	IRI	Cochrane	Moose Cree
56098	3556098	Cochrane, Unorganized, South East Part	NO	Cochrane	
56100	3556100	Flying Post 73	IRI	Cochrane	Flying Post
56102	3556102	New Post 69A	IRI	Cochrane	Taykwa Tagamou Nation
56106	3556106	Moosonee	T	Cochrane	
57001	3557001	Jocelyn	TP	Algoma	
57004	3557004	Hilton	TP	Algoma	
57006	3557006	Hilton Beach	VL	Algoma	
57008	3557008	St. Joseph	TP	Algoma	
57011	3557011	Laird	TP	Algoma	
57014	3557014	Tarbutt and Tarbutt Additional	TP	Algoma	
57016	3557016	Johnson	TP	Algoma	
57019	3557019	Plummer Additional	TP	Algoma	
57021	3557021	Bruce Mines	T	Algoma	
57026	3557026	Thessalon 12	IRI	Algoma	Thessalon
57028	3557028	Thessalon	T	Algoma	
57035	3557035	Huron Shores	MU	Algoma	
57038	3557038	Blind River	T	Algoma	
57039	3557039	Spanish	T	Algoma	
57040	3557040	The North Shore	TP	Algoma	
57041	3557041	Elliot Lake	CY	Algoma	

Label	CSDUID	CSDNAME	CSDTYPE	Census Division NAME	First Nations Name
57051	3557051	Macdonald, Meredith and Aberdeen Additional	TP	Algoma	
57061	3557061	Sault Ste. Marie	CY	Algoma	
57066	3557066	Prince	TP	Algoma	
57071	3557071	Sagamok	IRI	Algoma	Sagamok
57072	3557072	Serpent River 7	IRI	Algoma	Serpent River
57073	3557073	Mississagi River 8	IRI	Algoma	Mississagi
57074	3557074	Garden River 14	IRI	Algoma	Garden River
57075	3557075	Rankin Location 15D	IRI	Algoma	Batchewana
57076	3557076	Wawa	MU	Algoma	
57077	3557077	Goulais Bay 15A	IRI	Algoma	Batchewana
57078	3557078	Gros Cap 49	IRI	Algoma	Michipicoten
57079	3557079	Dubreuilville	TP	Algoma	
57091	3557091	White River	TP	Algoma	
57094	3557094	Algoma, Unorganized, South East Part	NO	Algoma	
57095	3557095	Algoma, Unorganized, North Part	NO	Algoma	
57096	3557096	Hornepayne	TP	Algoma	
58001	3558001	Neebing	MU	Thunder Bay	
58003	3558003	Fort William 52	IRI	Thunder Bay	Fort William
58004	3558004	Thunder Bay	CY	Thunder Bay	
58011	3558011	Oliver Paipoonge	MU	Thunder Bay	
58012	3558012	Gillies	TP	Thunder Bay	
58016	3558016	O'Connor	TP	Thunder Bay	
58019	3558019	Conmee	TP	Thunder Bay	
58028	3558028	Shuniah	TP	Thunder Bay	
58034	3558034	Dorion	TP	Thunder Bay	
58041	3558041	Red Rock	TP	Thunder Bay	
58044	3558044	Nipigon	TP	Thunder Bay	
58051	3558051	Schreiber	TP	Thunder Bay	
58054	3558054	Terrace Bay	TP	Thunder Bay	
58059	3558059	Marathon	T	Thunder Bay	
58060	3558060	Pic Moberg North	IRI	Thunder Bay	Pic Moberg North
58061	3558061	Pic Moberg South	IRI	Thunder Bay	Pic Moberg
58062	3558062	Pic River 50	IRI	Thunder Bay	Ojibways of the Pic River
58063	3558063	Pays Plat 51	IRI	Thunder Bay	Pays Plat
58064	3558064	Lake Helen 53A	IRI	Thunder Bay	Red Rock
58065	3558065	Gull River 55	IRI	Thunder Bay	Kiashke Zaaging Anishinaabek
58066	3558066	Manitouwadge	TP	Thunder Bay	

Label	CSDUID	CSDNAME	CSDTYPE	Census Division NAME	First Nations Name
58067	3558067	Ginoogaming First Nation	IRI	Thunder Bay	Ginoogaming
58068	3558068	Long Lake 58	IRI	Thunder Bay	Long Lake No. 58
58069	3558069	Rocky Bay 1	IRI	Thunder Bay	Rocky Bay 1
58075	3558075	Greenstone	MU	Thunder Bay	
58076	3558076	Aroland 83	IRI	Thunder Bay	Aroland
58077	3558077	Lake Nipigon	IRI	Thunder Bay	Lake Nipigon
58080	3558080	Ojibway Nation of Saugeen (Savant Lake)	IRI	Thunder Bay	Ojibway Nation of Saugeen
58085	3558085	Osnaburgh 63A	IRI	Thunder Bay	Mishkeegogamang
58090	3558090	Thunder Bay, Unorganized	NO	Thunder Bay	
58095	3558095	Seine River 22A2	IRI	Thunder Bay	Lac Des Mille Lacs
58097	3558097	Whitesand	IRI	Thunder Bay	Whitesand
58100	3558100	Lac des Mille Lacs 22A1	IRI	Thunder Bay	Lac des Mille Lacs
59001	3559001	Atikokan	TP	Rainy River	
59011	3559011	Alberton	TP	Rainy River	
59012	3559012	Fort Frances	T	Rainy River	
59016	3559016	La Vallee	TP	Rainy River	
59019	3559019	Emo	TP	Rainy River	
59024	3559024	Chapple	TP	Rainy River	
59026	3559026	Manitou Rapids 11	IRI	Rainy River	Rainy River First Nation
59031	3559031	Morley	TP	Rainy River	
59040	3559040	Dawson	TP	Rainy River	
59042	3559042	Rainy River	T	Rainy River	
59047	3559047	Lake of the Woods	TP	Rainy River	
59048	3559048	Sabaskong Bay (Part) 35C	IRI	Rainy River	Ojibways of Onigaming
59051	3559051	Big Grassy River 35G	IRI	Rainy River	Big Grassy
59052	3559052	Big Island Mainland 93	IRI	Rainy River	Anishnaabeg of Naongashiing
59053	3559053	Saug-a-Gaw-Sing 1	IRI	Rainy River	Anishnaabeg of Naongashing
59060	3559060	Neguaguon Lake 25D	IRI	Rainy River	Lac LaCroix
59061	3559061	Rainy Lake 18C	IRI	Rainy River	Mitaanjigamiing
59062	3559062	Agency 1	IRI	Rainy River	Crouchiching
59063	3559063	Couchiching 16A	IRI	Rainy River	Couchiching
59064	3559064	Rainy Lake 26A	IRI	Rainy River	Nigigoonsiminikaaning
59065	3559065	Seine River 23B	IRI	Rainy River	Seine River
59066	3559066	Seine River 23A	IRI	Rainy River	Seine River
59068	3559068	Rainy Lake 17A	IRI	Rainy River	Naicatchewenin

Label	CSDUID	CSDNAME	CSDTYPE	Census Division NAME	First Nations Name
59069	3559069	Rainy Lake 17B	IRI	Rainy River	Naicatchewenin
59090	3559090	Rainy River, Unorganized	NO	Rainy River	
59092	3559092	Long Sault 12	IRI	Rainy River	Rainy River First Nation
60001	3560001	Ignace	TP	Kenora	
60004	3560004	Whitefish Bay 32A	IRI	Kenora	Naoakamegwanning
60005	3560005	Whitefish Bay 33A	IRI	Kenora	Northwest Angle No. 33
60007	3560007	Sabaskong Bay (Part) 35C	IRI	Kenora	Ojibways of Onigaming
60008	3560008	Sioux Narrows-Nestor Falls	TP	Kenora	
60010	3560010	Kenora	CY	Kenora	
60021	3560021	Machin	TP	Kenora	
60024	3560024	Eagle Lake 27	IRI	Kenora	Eagle Lake
60027	3560027	Dryden	CY	Kenora	
60032	3560032	Ear Falls	TP	Kenora	
60034	3560034	Sioux Lookout	MU	Kenora	
60042	3560042	Red Lake	MU	Kenora	
60046	3560046	Slate Falls	S-É	Kenora	Slate Falls
60049	3560049	Pickle Lake	TP	Kenora	
60050	3560050	Fort Albany (Part) 67	IRI	Kenora	Kashechewan
60051	3560051	Attawapiskat 91A	IRI	Kenora	Attawapiskat
60052	3560052	Marten Falls 65	IRI	Kenora	Marten Falls
60053	3560053	Fort Hope 64	IRI	Kenora	Eabametoong
60054	3560054	Cat Lake 63C	IRI	Kenora	Cat Lake
60055	3560055	Osnaburgh 63B	IRI	Kenora	Mishkeegogamang
60056	3560056	Lac Seul 28	IRI	Kenora	Lac Seul
60057	3560057	Wabigoon Lake 27	IRI	Kenora	Wabigoon Lake Ojibway Nation
60058	3560058	English River 21	IRI	Kenora	Grassy Narrows
60059	3560059	Weagamow Lake 87	IRI	Kenora	North Caribou Lake
60060	3560060	Northwest Angle 33B	IRI	Kenora	Northwest Angle No. 33
60061	3560061	Wabaseemoong	IRI	Kenora	Wabaseemoong
60063	3560063	Sabaskong Bay 35D	IRI	Kenora	Ojibways of Onigaming
60064	3560064	Shoal Lake 34B2	IRI	Kenora	Shoal Lake No.40
60065	3560065	Lake Of The Woods 37	IRI	Kenora	Northwest Angle No. 37
60066	3560066	Kenora 38B	IRI	Kenora	Anishinabe of Wauzushk Onigum
60067	3560067	Poplar Hill	IRI	Kenora	Poplar Hill
60068	3560068	Shoal Lake (Part) 39A	IRI	Kenora	Iskatewizaagegan #39
60069	3560069	Rat Portage 38A	IRI	Kenora	Obashkaandagaang
60070	3560070	Deer Lake	IRI	Kenora	Deer Lake

Label	CSDUID	CSDNAME	CSDTYPE	Census Division NAME	First Nations Name
60071	3560071	Sandy Lake 88	IRI	Kenora	Sandy Lake
60075	3560075	Kitchenuhmaykoosib Aaki 84 (Big Trout Lake)	IRI	Kenora	Kitchenuhmaykoosib Innuuwug
60076	3560076	Sachigo Lake 1	IRI	Kenora	Sachigo Lake
60077	3560077	Pikangikum 14	IRI	Kenora	Pikangikum
60078	3560078	Fort Severn 89	IRI	Kenora	Fort Severn
60079	3560079	Webequie	IRI	Kenora	Webequie
60080	3560080	North Spirit Lake	IRI	Kenora	North Spirit Lake
60081	3560081	Lansdowne House	S-É	Kenora	Neskantaga
60082	3560082	Shoal Lake (Part) 40	IRI	Kenora	Shoal Lake No. 40
60083	3560083	Whitefish Bay 34A	IRI	Kenora	Northwest Angle No. 37
60084	3560084	Wabauskang 21	IRI	Kenora	Wabauskang
60085	3560085	Wunnumin 1	IRI	Kenora	Wunnumin
60086	3560086	Summer Beaver	S-É	Kenora	Nibinamik
60088	3560088	Wapekeka 2	IRI	Kenora	Wapekeka
60089	3560089	The Dalles 38C	IRI	Kenora	Ochiichagwe'babigo'ining
60090	3560090	Kenora, Unorganized	NO	Kenora	
60091	3560091	Peawanuck	S-É	Kenora	Weenush
60093	3560093	Neskantaga	IRI	Kenora	Neskantaga
60095	3560095	Bearskin Lake	IRI	Kenora	Bearskin Lake
60096	3560096	Kasabonika Lake	IRI	Kenora	Kasabonika Lake
60097	3560097	Muskrat Dam Lake	IRI	Kenora	Muskrat Dam Lake
60098	3560098	Kingfisher Lake 1	IRI	Kenora	Kingfisher
60100	3560100	Wawakapewin (Long Dog Lake)	IRI	Kenora	Wawakapewin
60102	3560102	McDowell Lake	S-É	Kenora	McDowell Lake
60104	3560104	Kee-Way-Win	IRI	Kenora	Kee-Way-Win

Source: author's own based on sources detailed in Appendix C.

Appendix B: Result Tables

Table 6. Transportation Infrastructure Available to a Community

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
Abitibi 70	First Nation Reserve	Cochrane	126	X				X					
Agency 1	First Nation Reserve	Rainy River	0	X	X								
Alberton	Township	Rainy River	864	X	X	X							
Armour	Township	Parry Sound	1372	X	X	X							
Armstrong	Township	Temiskaming	1216	X	X	X			X		X		
Earlton	UNP	Temiskaming		X	X	X			X		X		
Aroland 83	First Nation Reserve	Thunder Bay	361	X		X							
Assignack	Township	Manitoulin	960	X	X						X	X	
Manitowaning	UNP	Manitoulin		X	X						X	X	
Atikokan	Township	Rainy River	2787	X	X	X					X		
Attawapiskat 91 A	First Nation Reserve	Kenora	0	X					X		X		
Baldwin	Township	Sudbury	551	X	X								
Mckerrow	UNP	Sudbury		X	X				X				
Bear Island 1	First Nation Reserve	Nipissing	0										
Bearskin Lake	First Nation Reserve	Kenora	0	X					X				
Big Grassy River 35G	First Nation Reserve	Rainy River	249	X		X							
Big Island Mainland 93	First Nation Reserve	Rainy River	0	X				X					
Billings	Township	Manitoulin	506	X		X							
Kagawong	UNP	Manitoulin		X		X						X	
Black River - Matheson	Township	Cochrane	2410	X	X	X			X				
Matheson	UNP	Cochrane		X	X				X				
Bulter Lake	Lake	Cochrane		X	X				X				
Val Gagne	UNP	Cochrane		X	X				X				
Ramore	UNP	Cochrane		X	X				X				
Shillington	UNP	Cochrane		X	X				X				
Blind River	Town	Algoma	3549	X	X	X			X			X	
Bonfield	Township	Nipissing	2016	X	X	X			X				
Rutherglen	UNP	Nipissing		X	X				X				

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
Brethour	Township	Temiskaming	129	X				X					
Bruce Mines	Town	Algoma	566	X	X	X				X		X	
Burk's Falls	Village	Parry Sound	967	X	X	X				X			
Burpee and Mills	Township	Manitoulin	308	X		X							
Callander	Municipality	Parry Sound	3864	X	X	X							
Calvin	Township	Nipissing	568	X	X	X							
Carling	Township	Parry Sound	1248	X	X	X							
Casey	Township	Temiskaming	374	X	X								
Cat Lake	First Nation Reserve	Kenora	489	X					X		X		
Central Manitoulin	Township	Manitoulin	1958	X		X							
Campbell	LSB	Manitoulin	427	X		X							
Chamberlain	Township	Timiskaming	297	X	X	X							
Chapleau	Township	Sudbury	2116	X	X						X	X	
Chapleau 74A	First Nation Reserve	Sudbury	31	X	X								
Chapleau 75	First Nation Reserve	Sudbury	79										
Chapple	Township	Rainy River	741	X	X	X							
Charlton and Dack	Municipality	Temiskaming	671	X		X							
Chisholm	Township	Nipissing	1263	X				X					
Cobalt	Town	Temiskaming	1133	X	X					X			
Cochrane	Town	Cochrane	5340	X	X	X				X	X	X	
Cockburn Island	Township	Manitoulin	0									X	
Coleman	Township	Temiskaming	597	X	X					X			
Constance Lake 92	First Nation Reserve	Cochrane	670	X		X							
Couchiching 16A	First Nation Reserve	Rainy River	796	X	X								
Dawson	Township	Rainy River	563	X	X	X							
Deer Lake	First Nation Reserve	Kenora	763	X					X				
Dokis 9	First Nation Reserve	Parry Sound	204	X				X					
Dorion	Township	Thunder Bay	338	X	X					X			
Dryden	City	Kenora	7617	X	X	X				X		X	
Duck Lake 76B	First Nation Reserve	Sudbury	635	X	X								

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
Dubreuilville	Township	Algoma	84	X		X						X	
Eagle Lake 27	First Nation Reserve	Kenora	227	X		X							
Ear Falls	Township	Kenora	1026	X	X		X						X
East Ferris	Township	Nipissing	4512	X	X								
Elliot Lake	City	Algoma	11348	X	X	X							X
Emo	Township	Rainy River	1252	X	X	X							
Englehart	Town	Temiskaming	1519	X	X						X		
English River 21	First Nation Reserve	Kenora	639	X					X				
Espanola	Town	Sudbury	5364	X	X						X		
Lee Valley	LSB	Sudbury	453	X					X				
Evanturel	Township	Temiskaming	452	X	X	X							
Factory Island 1	First Nation Reserve	Cochrane	1414	X					X				
Fauquier - Strickland	Township	Cochrane	530	X	X						X		
Fauquier	UNP	Cochrane		X	X						X		
Strickland	UNP	Cochrane		X	X						X		
Flying Post 73	First Nation Reserve	Cochrane	0	X					X				
Fort Albany (Part) 67	First Nation Reserve	Kenora	511	X						X			X
Kashechewan	First Nation Reserve	Kenora		X						X			X
Fort Albany (Part) 67	First Nation Reserve	Cochrane	1520	X						X			X
Fort Frances	Town	Rainy River	7952	X	X	X							X
Fort Hope 64	First Nation Reserve	Kenora	0	X						X			X
Fort Severn 89	First Nation Reserve	Kenora	334	X						X			X
French River	Municipality	Sudbury	2442	X	X	X							
Alban	LSB	Sudbury	1039	X	X	X					X		
Bigwood	UNP	Sudbury		X	X						X		
French River 13	First Nation Reserve	Parry Sound	137	X	X						X		
Pickerel River Rd.				X	X						X		
Garden River	First Nation Reserve	Algoma	1107	X	X						X		
Gauthier	Township	Temiskaming	123	X	X	X							

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
Ginoogaming First Nation	First Nation Reserve	Thunder Bay	167	X				X					
Gordon / Barrie Island	MU	Manitoulin	526	X		X							
Gore Bay	Town	Manitoulin	850	X		X					X	X	
Goulais Bay 15A	First Nation Reserve	Algoma	0	X				X					
Greater Sudbury	City	Greater Sudbury	160274	X	X					X	X	X	
Azilda	UNP	Greater Sudbury	X				X		X	X			
Capreol	UNP	Greater Sudbury	3276	X				X			X		
Chelmsford	UNP	Greater Sudbury	X	X					X	X			
Coniston	UNP	Greater Sudbury	X	X					X				
Dowling	UNP	Greater Sudbury	1690	X	X					X			
Onaping - Levack	UNP	Greater Sudbury	2042	X	X					X	X		
Copper Cliff	UNP	Greater Sudbury	X				X		X				
Larchwood	UNP	Greater Sudbury	X	X						X			
Lively	UNP	Greater Sudbury	6922	X	X								
Naughton	UNP	Greater Sudbury							X				
Valley East	UNP	Greater Sudbury	20676	X				X					
Whitefish	UNP	Greater Sudbury							X				
Wahnapitae	UNP	Greater Sudbury	X	X					X				
Wahnapitae 11	First Nation Reserve	Greater Sudbury	102	X				X					
Greenstone	Municipality	Thunder Bay	4724	X	X	X	X						
Geraldton	UNP	Thunder Bay	2012	X		X						X	
Longlac	UNP	Thunder Bay	1388	X	X						X		
Nakina	UNP	Thunder Bay		X	X						X	X	
Caramat	LSB	Thunder Bay	58	X		X					X		

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
Gros Cap 49	First Nation Reserve	Algoma	68	X				X					
Gull River 55	First Nation Reserve	Thunder Bay	210	X		X							
Harley	Township	Temiskaming	539	X	X	X							
Harris	Township	Temiskaming	523	X	X								
Hearst	Town	Cochrane	5090	X	X	X			X	X	X		
Wyborn	UNP	Cochrane		X	X	X				X			
Henvey Inlet 2	First Nation Reserve	Parry Sound	28	X	X								
Hilliard	Township	Temiskaming	204	X	X	X							
Hilton	Township	Algoma	261	X		X						X	
Hilton Beach	Village	Algoma	145	X		X							
Hornepayne	Township	Algoma	1050	X		X				X	X		
Hudson	Township	Temiskaming	476	X	X	X							
Huron Shores	Municipality	Algoma	1723	X	X	X							
Iron Bridge	DMU	Algoma	632	X	X	X			X				
Ignace	Township	Kenora	1202	X	X	X			X		X		
Iroquois Falls	Town	Cochrane	4595	X	X	X			X		X		
Porquis Junction	UNP	Cochrane		X	X				X				
Nellie Lake	UNP	Cochrane		X	X				X				
James	Township	Temiskaming	424	X	X	X							
Elk Lake	UNP	Timiskaming									X		
Jocelyn	Township	Algoma	237	X		X							
Johnson	Township	Algoma	750	X	X								
Desbarats	UNP	Algoma		X	X				X			X	
Joly	Township	Parry Sound	284	X				X					
Kapuskasing	Town	Cochrane	8196	X	X				X		X		
Kasabonika Lake	First Nation Reserve	Kenora	0	X							X		
Kearney	Town	Parry Sound	841	X		X							
Kee-Way_Win	First Nation Reserve	Kenora	340	X					X				
Kenora	City	Kenora	15348	X	X	X			X		X		
Kerns	Township	Temiskaming	359	X	X	X							
Killarney	Municipality	Sudbury	505	X		X					X	X	
Key Harbour	UNP	Sudbury										X	
Key River	UNP	Sudbury							X				
King-Label	LSB	Temiskaming		X	X								

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
Magnetawan	Township	Parry Sound	1454	X	X	X							
Croft	LSB	Nipissing	523	X	X	X							
Magnetewan 1	First Nation Reserve	Parry Sound	93	X	X	X							
Manitou Rapids 11	First Nation Reserve	Rainy River	314	X	X								
Manitouwadge	Township	Thunder Bay	2105	X		X				X		X	
Marathon	Town	Thunder Bay	3353	X	X	X				X		X	
Markstay - Warren	Municipality	Sudbury	2297	X	X					X			
Markstay	UNP	Sudbury		X	X	X				X			
Hagar	UNP	Sudbury		X	X	X				X			
Stinson	UNP	Sudbury		X	X					X			
Warren	UNP	Sudbury		X	X	X				X			
Marten Falls 65	First Nation Reserve	Kenora	190	X					X			X	
Matachewan	Township	Temiskaming	268	X	X	X							
Matachewan 72	First Nation Reserve	Temiskaming	83	X				X					
Mattagami 71	First Nation Reserve	Sudbury	193	X	X			X					
Mattawa	Town	Nipissing	2023	X	X	X				X			
Mattawan	Township	Nipissing	162	X		X							
Mattice - Val Côté	Township	Cochrane	686	X	X					X			
Mattice	Township	Cochrane		X	X					X			
Val Cote	UNP	Cochrane		X	X					X			
McDougall	Municipality	Parry Sound	2705	X	X								
Ferguson	LSB	Parry Sound	392	X	X								
McGarry	Township	Temiskaming	595	X	X								
McKellar	Township	Parry Sound	1144	X	X								
McMurrich / Monteith	Township	Parry Sound	779	X		X							
Mississagi River 8	First Nation Reserve	Algoma	390	X	X	X							
Moonbeam	Township	Cochrane	1101	X	X					X			
Moose Factory 68	First Nation Reserve	Cochrane	0								X		
Moosonee	Town	Cochrane	1725	X				X		X		X	
Morley	Township	Rainy River	474	X	X	X							

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
Muskrat Dam Lakes	First Nation Reserve	Kenora	260	X					X		X		
Nairn and Hyman	Township	Sudbury	477	X	X								
Nairn Centre	UNP	Sudbury		X						X			
Neguaguon Lake 25D	First Nation Reserve	Rainy River	192	X				X					
Neskantaga	First Nation Reserve	Kenora	0	X					X				
Nestor Falls	Township	Rainy River	77	X	X						X		
Nipigon	Township	Thunder Bay	1631	X	X	X				X			
Nipissing	Township	Parry Sound	1704	X		X							
Nipissing 10	First Nation Reserve	Nipissing	1450	X	X								
North Bay	City	Nipissing	53651	X	X					X		X	
Northeastern Manitoulin and the Islands	Town	Manitoulin	2706	X	X	X							
Honora	UNP	Manitoulin		X		X						X	
Little Current	UNP	Manitoulin	1523	X	X	X						X	
McGregor Bay	LSB	Sudbury	90										
North Spirit Lake	First Nation Reserve	Kenora	263	X					X				
Northwest Angle 33B	First Nation Reserve	Kenora	86										
Opasatika	Township	Cochrane	214	X	X					X			
Osnaburgh 63 A	First Nation Reserve	Thunder Bay	153	X		X							
Osnaburgh 63 B	First Nation Reserve	Kenora	425	X		X							
Papineau-Cameron	Township	Nipissing	978	X	X								
Parry Island First Nation	First Nation Reserve	Parry Sound	419	X				X					
Parry Sound	Town	Parry Sound	6191	X	X					X	X	X	
Pays Plat 51	First Nation Reserve	Thunder Bay	75	X	X								
Peawanuck	First Nation Settlement	Kenora	237	X					X				
Perry	Township	Parry Sound	2317	X	X	X					X		
Emsdale	UNP	Parry Sound		X	X	X				X		X	
Novar	UNP	Parry Sound		X	X					X			

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
Sables-Spanish Rivers	Township	Sudbury	3075	X	X	X							
Walfort	UNP	Sudbury		X	X					X			
Massey	UNP	Sudbury		X	X					X			
Shakespeare	LSB	Sudbury	159	X				X					
Webbwood	DMU	Sudbury	458	X	X					X			
Sachigo Lake 1	First Nation Reserve	Kenora	0	X					X			X	
Sagamok	First Nation Reserve	Algoma	1036	X				X					
Sand Lake 88	First Nation Reserve	Kenora	1861	X					X		X	X	
Saug-a-Gaw-Sing 1	First Nation Reserve	Rainy River	119	X				X					
Sault Ste Marie	City	Algoma	75141	X	X	X				X	X	X	X
Ojibway Nation of Saugeen	First Nation Reserve	Kenora	100	X		X					X		
Schreiber	Township	Thunder Bay	1126	X	X					X			
Seguin	Township	Parry Sound	3988	X	X	X							
Horsehoe Lake Rd	UNP	Parry Sound		X	X					X			
Gordon Bay	UNP	Parry Sound		X	X					X			
Rosseau	DMU	Nipissing	256	X	X	X							
Seine River 22A2	First Nation Reserve	Thunder Bay	0	X				X					
Seine River 23A	First Nation Reserve	Rainy River	271	X				X					
Seine River 23B	First Nation Reserve	Rainy River	0	X				X					
Serpent River 7	First Nation Reserve	Algoma	373	X	X								
Shawanaga 17	First Nation Reserve	Parry Sound	213	X	X					X			
Sheguiandah 24	First Nation Reserve	Manitoulin	154	X	X								X
Sheshegwaning 20	First Nation Reserve	Manitoulin	118	X				X					
Shoal Lake (Part) 39A	First Nation Reserve	Kenora	388	X				X					
Shoal Lake (Part) 40	First Nation Reserve	Kenora	101	X				X					

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
Shoal Lake 34B2	First Nation Reserve	Kenora	97	X					X				
Sioux Lookout	Municipality	Kenora	5037	X	X	X					X	X	
Slate Falls	First Nation Settlement	Kenora	186										
Smooth Rock Falls	Town	Cochrane	1376	X	X	X				X			
South Algonquin	Township	Nipissing	1211	X	X	X							
Madawaska	LSB	Nipissing	371	X	X	X							
South River	Village	Parry Sound	1049	X	X					X		X	
Spanish	Town	Algoma	696	X	X					X			
St-Charles	Municipality	Sudbury	1201	X	X	X							
St Joseph Island	Township	Algoma	1282	X		X					X		
Richard's Landing	UNP	Algoma		X		X						X	
Strong	Township	Parry Sound	1341	X	X								
Sucker Creek 23	First Nation Reserve	Manitoulin	365	X		X							
Summer Beaver	First Nation Reserve	Kenora	0	X					X				
Sundridge	Village	Parry Sound	985	X	X					X			
Tarbutt and Tarbutt Additional	Township	Algoma	396	X	X	X							
Tehkummah	Township	Manitoulin	406	X	X	X							
Temagami	Municipality	Nipissing	820	X	X					X			
Marten River	UNP	Nipissing		X	X					X			
Temiskaming Shores	City	Temiskaming	10400	X	X	X							
Haileybury	UNP	Temiskaming	9988	X	X	X				X			
New Liskeard	UNP	Temiskaming		X	X					X			
Terrace Bay	Township	Thunder Bay	1471	X	X					X		X	
The Archipelago	Township	Parry Sound	566	X	X	X							
Pointe au Baril	UNP	Parry Sound								X			
The Dalles 38C	First Nation Reserve	Kenora	195	X					X				
The North Shore	Township	Algoma	509	X	X	X							
Spragge	UNP	Algoma		X	X					X			
Serpent River	UNP	Algoma								X			
Thessalon	Town	Algoma	1279	X	X					X		X	
Thessalon 12	First Nation Reserve	Algoma	108	X					X				

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
Thornloe	Village	Temiskaming	123	X	X	X				X			
Thunder Bay	City	Thunder Bay	108359	X	X	X				X		X	X
Conmee	Township	Thunder Bay	764	X	X								
Gilles	Township	Thunder Bay	473	X		X							
Fort William 52	First Nation Reserve	Thunder Bay	860	X				X					
Neebing	Municipality	Thunder Bay	1986	X	X	X							
O'Connor	Township	Thunder Bay	685	X		X							
Olivier	Municipality	Thunder Bay	5732	X	X	X							
Paipoonge													
Pearson	LSB	Thunder Bay	329	X		X							
Kakabeka Falls	UNP	Thunder Bay		X	X					X		X	
Shuniah	Township	Thunder Bay	2737	X	X	X							
Pearl	UNP	Thunder Bay								X			
Pass Lake Cornier	UNP	Thunder Bay								X			
Timmins	City	Cochrane	43165	X	X	X				X		X	
Porcupine	UNP	Cochrane	7163	X	X								
South Porcupine	UNP	Cochrane		X	X					X			
Hoyle	UNP	Cochrane		X	X					X			
Nighthawk	UNP	Cochrane		X	X					X			
Connaught	UNP	Cochrane		X	X					X			
Val Rita - Harty	Township	Cochrane	817										
Val Rita	UNP	Cochrane		X	X					X			
Harty	UNP	Cochrane		X	X					X			
Wabaseemoong	First Nation Reserve	Kenora	832	X		X							
Wabauskang 21	First Nation Reserve	Kenora	75	X				X					
Wabigoon Lake 27	First Nation Reserve	Kenora	184	X				X					
Wapekeka 2	First Nation Reserve	Kenora	368	X					X			X	
Wawa	Municipality	Algoma	2975	X	X					X		X	
Wawakapekwin	First Nation Reserve	Kenora	0	X					X				
Weagamow Lake 87	First Nation Reserve	Kenora	0	X					X			X	
Round Lake	First Nation Reserve	Kenora										X	
Webequie	First Nation Reserve	Kenora	0	X					X			X	

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
West Nipissing	Municipality	Nipissing	14149	X	X	X	X						
Cache Bay	UNP	Nipissing	643	X				X		X			
Verner	UNP	Nipissing		X	X					X			
Sturgeon Falls	UNP	Nipissing	6672	X	X					X			
Meadowside	UNP	Nipissing		X	X					X			
White River	Township	Algoma	607	X	X	X				X	X		
Whitefish Bay 32A	First Nation Reserve	Kenora	670	X	X								
Whitefish Bay 33A	First Nation Reserve	Kenora	79	X				X					
Whitefish Bay 34A	First Nation Reserve	Kenora	126	X	X								
Whitefish Lake 6	First Nation Reserve	Sudbury	394	X				X					
Whitefish River (Part)4	First Nation Reserve	Manitoulin	487	X	X								
Whitesand	First Nation Reserve	Thunder Bay	260	X				X					
Whitestone	Municipality	Nipissing	918	X	X	X							
Wikwemikong Unceded	First Nation Reserve	Manitoulin	2592	X				X					
Wunnummin Lake	First Nation Reserve	Kenora	0	X					X		X		
Zhiibaahaasing 19A	First Nation Reserve	Manitoulin	55	X				X					
Unorganized Census Subdivisions													
Algoma, Unorganized, North Part	Algoma	5518											
Achigan	UNP	Algoma		X		X					X		
Agawa	UNP	Algoma		X	X					X			
Agawa Canyon	UNP	Algoma									X		
Alden	UNP	Algoma									X		
Akron	UNP	Algoma									X		
Anjigami	UNP	Algoma		X				X			X		
Awana - Mileage 93		Algoma									X		
Batchawana Bay	UNP	Algoma		X		X				X	X	X	
Dalton	UNP	Algoma		X		X					X		

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
Ogidaki (S. Branch / Chippewa River)	UNP	Algoma									X		
Pangis (N. Branch / Chippewa River)	UNP	Algoma									X		
Perry	UNP	Algoma		X				X			X		
Pine Lake	UNP	Algoma		X				X			X		
Price (Oba River)	LSB	Algoma		X				X			X		
Quebec Harbour	UNP	Algoma											X
Rand	UNP	Algoma									X		
Red Rock Lake	Lake	Algoma		X	X					X			
Sand Lake	UNP	Algoma		X				X			X		
Scully	UNP	Algoma									X		
Searchmont	LSB	Algoma	293	X		X					X		
Spruce Lake	Lake	Algoma		X				X			X		
Summit	UNP	Algoma		X				X			X		
Tabor	UNP	Algoma		X				X			X		
Trout Lake	UNP	Algoma		X	X						X		
Wabatong	Lake	Algoma									X		
Wabos	UNP	Algoma		X				X			X		
Wanda	UNP	Algoma		X				X			X		
Cochrane, Unorganized, North Part	Cochrane	3064											
Calstock	UNP	Cochrane		X		X							
Carey Lake		Cochrane											X
Coppell	UNP	Cochrane		X		X					X		
Driftwood	UNP	Cochrane		X	X					X			
Jogues	LSB	Cochrane	325	X		X					X		
Mead	UNP	Cochrane		X		X					X		
Kenora, Unorganized	Kenora	7031											
Canyon	UNP	Kenora		X				X			X		
Clearwater Bay	UNP	Kenora		X	X					X			
Copelands Landing		Kenora									X		

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
Dinowic	UNP	Kenora		X	X					X			
Farlane	UNP	Kenora									X		
Granite Lake	UNP	Kenora		X	X					X			
Malachi	UNP	Kenora									X		
Minaki	LSB	Kenora	133	X		X					X		
Moth Lake	Lake	Kenora		X	X					X			
Opapimiskan Lake	Mine Lake	Kenora										X	
Ottermere	UNP	Kenora									X		
Red Lake Road	UNP	Kenora		X	X	X					X		
Redditt	LSB	Kenora	153	X		X					X		
Rice Lake	UNP	Kenora									X		
Richan	UNP	Kenora		X		X					X		
Victor Diamond Mine	Mine	Kenora		X					X			X	
Wabigoon	LSB	Kenora	427	X	X					X			
Manitoulin, Unorganized, West Part	Manitoulin	160											
Meldrum Bay	UNP	Manitoulin		X				X					X
Robinson	LSB	Manitoulin	116	X		X							
Nipissing, Unorganized, North Part	Unorganized	Nipissing	1853										
Thorne	LSB	Nipissing	196	X	X								
Tilden Lake	UNP	Nipissing		X	X					X			
Parry Sound, Unorganized, Centre Part	Unorganized	Parry Sound	2199										
Britt	LSB	Parry Sound	326	X	X	X				X			
Byng Inlet	UNP	Parry Sound		X		X				X			X
Depot Harbour	UNP	Parry Sound		X				X					X
Restoule	LSB		440	X		X							
Sudbury, Unorganized, North Part	Sudbury	2306											
Biscotasing	UNP	Sudbury		X				X			X		

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
Benny	UNP	Sudbury		X				X			X		
Bolkow	UNP	Sudbury									X		
Cartier	LSB	Sudbury	244	X	X					X	X		
Devon	UNP	Sudbury		X	X						X		
Esher	UNP	Sudbury		X				X			X		
Estaire	UNP	Sudbury		X	X			X		X			
Felix	UNP	Sudbury									X		
Foleyet	LSB	Sudbury	193	X	X						X		
Gogama	LSB	Sudbury	277	X	X	X				X	X		
Halfway Lake Provincial Park	Park	Sudbury		X	X					X			
Kinogama	UNP	Sudbury									X		
Kormak	UNP	Sudbury		X				X			X		
Laforest	UNP	Sudbury		X				X			X		
Metagama	UNP	Sudbury									X		
McKee's Camp	UNP	Sudbury		X				X			X		
Musk	UNP	Sudbury									X		
Nemegos	UNP	Sudbury		X				X			X		
Nicholson	UNP	Sudbury									X		
Pogamasing	UNP	Sudbury									X		
Ramsey	UNP	Sudbury		X				X			X		
Roberts	UNP	Sudbury									X		
Ruel	UNP	Sudbury		X				X			X		
Sheahan	UNP	Sudbury									X		
Stralak	UNP	Sudbury									X		
Sultan	LSB	Sudbury	49	X		X					X		
Watershed		Sudbury		X	X					X			
Westree	UNP	Sudbury		X		X					X		
Willisville & Whitefish Falls	LSB	Sudbury	272	X	X								
Woman River	UNP	Sudbury		X				X			X		
Timiskaming, Unorganized, West Part	Unorganized	Timiskaming	2925										
Dane	UNP	Timiskaming		X	X						X		
Kenogami	UNP	Timiskaming		X	X						X		
Savard	LSB	Timiskaming	249	X		X							
Sesekinika	UNP	Timiskaming		X	X						X		

Census Subdivision Name	Census Subdivision Type	Census District	Population	Road Type						Motorcoach	Train	Airport	Seaport
				Road	Kings	Secondary	Tertiary	Other	Winter				
Thunder Bay Unorganized	Unorganized	Thunder Bay	5906										
Allanwater Bridge	UNP	Thunder Bay									X		
Armstrong	LSB	Thunder Bay	220	X		X					X	X	
Auden	UNP	Thunder Bay		X				X			X		
Collins	UNP	Thunder Bay									X		
Ferland	UNP	Thunder Bay									X		
Flindt Landing	UNP	Thunder Bay		X				X			X		
Granite Lake	UNP	Thunder Bay		X	X					X			
Heron Bay	UNP	Thunder Bay		X		X							X
Hillsport	UNP	Thunder Bay		X				X			X		
Hurkett	LSB	Thunder Bay	236	X	X	X				X			
Kaministiquia	LSB	Thunder Bay	599	X	X								
Lappe	LSB	Thunder Bay	1360	X		X							
Miminiska		Thunder Bay										X	
Mobert	UNP	Thunder Bay		X	X					X			
Mud River	UNP	Thunder Bay									X		
Raith	UNP	Thunder Bay		X	X					X			
Rosspport	LSB	Thunder Bay	65	X	X					X			
Upsala	UNP	Thunder Bay		X	X					X			

Source: author's own based on sources detailed in Appendix C.

Table 7. Census Subdivision by Highway

Name	Census District	Road				
		King's Hwy	Secondary Hwy	Tertiary Hwy	Other	Winter
Perry	Parry Sound	11	518			
Pickle Lake	Kenora		599		X	X
Plummer Additional	Algoma	17	638			
Powassan	Parry Sound	11	522, 534			
Prince	Algoma		550, 565			
Red Rock	Thunder Bay	11/17	628			
Ryerson	Parry Sound		520			
Sables-Spanish Rivers	Sudbury	17	553			
Schreiber	Thunder Bay	17				
Seguin	Parry Sound	69/400, 69, 141	518, 632			
Sioux Narrows- Nestor Falls	Rainy River	71				
South Algonquin	Nipissing	60, 127				
St Joseph Island	Algoma		548			
Strong	Parry Sound	11, 124				
Tarbutt and Tarbutt Additional	Algoma	11	548			
Tehkummah	Manitoulin	6	542			
Terrace Bay	Thunder Bay	17				
The Archipelago	Parry Sound	69, 69/400	529			
The North Shore	Algoma	17, 108				
Val Rita - Harty	Cochrane	11				
White River	Algoma	17	631			
First Nation Reserve						
Abitibi 70	Cochrane				X	
Agency 1	Rainy River	11				
Aroland 83	Thunder Bay		643			
Attawapiskat 91 A	Kenora					X
Bear Island 1	Nipissing					
Bearskin Lake	Kenora					X
Big Grassy River 35G	Rainy River		621			
Big Island Mainland 93	Rainy River				X	
Cat Lake	Kenora					X
Chapleau 74A	Sudbury	101,129				
Chapleau 75	Sudbury					
Constance Lake 92	Cochrane		663			
Couchiching 16A	Rainy River	11				
Deer Lake	Kenora					X
Dokis 9	Parry Sound				X	
Duck Lake 76B	Sudbury	101				
Eagle Lake 27	Kenora		594			
English River 21	Kenora				X	
Factory Island 1	Cochrane					X

Name	Census District	Road				
		King's Hwy	Secondary Hwy	Tertiary Hwy	Other	Winter
City						
Dryden	Kenora	17	594, 601			
Elliot Lake	Algoma	108	639			
Greater Sudbury	Greater Sudbury	17, 69, 144				
Kenora	Kenora	17, 17A	596, 659			
North Bay	Nipissing	11, 17, 63				
Sault Ste. Marie	Algoma	17	550, 565			
Temiskaming Shores	Temiskaming	11, 65	567			
Thunder Bay	Thunder Bay	11/17,61	527, 587, 588, 589, 593			
Timmins	Cochrane	67, 101, 144	655			
Town						
Blind River	Algoma	17	557			
Bruce Mines	Algoma	17	638			
Cobalt	Temiskaming	11B				
Cochrane	Cochrane	11	579, 652			
Englehart	Temiskaming	11				
Espanola	Sudbury	6				
Fort Frances	Rainy River	11, 71	602			
Gore Bay	Manitoulin		540 B			
Hearst	Cochrane	11	583			
Iroquois Falls	Cochrane	11, 67	577			
Kapuskasing	Cochrane	11				
Kearney	Parry Sound		518			
Kirkland Lake	Temiskaming	66, 112				
Latchford	Temiskaming	11				
Marathon	Thunder Bay	17	627			
Mattawa	Nipissing	17	533			
Moosonee	Cochrane					X
Northeastern Manitoulin and the Islands	Manitoulin	6	540			
Parry Sound	Parry Sound	69/400				
Rainy River	Rainy River	11	600			
Smooth Rock Falls	Cochrane	11	634			
Spanish	Algoma	17				
Thessalon	Algoma	17, 129				
Village						
Hilton Beach	Algoma		548			
South River	Parry Sound	11, 124				
Sundridge	Parry Sound	124				
Thornloe	Temiskaming	11	562			

Name	Census District	Road				
		King's Hwy	Secondary Hwy	Tertiary Hwy	Other	Winter
Municipality						
Callander	Parry Sound	11, 94	654			
Charlton and Dack	Temiskaming	11	560, 573			
French River	Sudbury	64, 69	528, 535, 607			
Gordon / Barrie Island	Manitoulin		540, 542			
Greenstone	Thunder Bay	11	580, 584, 625	801		
Huron Shores	Algoma	17, 129	546			
Killarney	Sudbury	69	522, 637			
Markstay - Warren	Sudbury	17	535, 539			
McDougall	Parry Sound	69/400, 124				
Red Lake	Kenora	105, 124	618			
St-Charles	Sudbury		535			
Sioux Lookout	Kenora	72	516, 642, 664			
Temagami	Nipissing	11, 64				
Wawa	Algoma	17, 101				
West Nipissing	Nipissing	17, 64	539, 575	805		
Whitestone	Nipissing	124	520			
Township						
Alberton	Rainy River	11, 71	602, 611			
Armour	Parry Sound	11	520			
Armstrong	Temiskaming	11	562, 571			
Assiginack	Manitoulin	6				
Atikokan	Rainy River	11, 11B	622			
Baldwin	Sudbury	6,11				
Billings	Manitoulin		540			
Black River - Matheson	Cochrane	11, 101	572, 577			
Bonfield	Nipissing	17	531			
Brethour	Temiskaming				X	
Burk's Falls	Parry Sound	11	520			
Burpee and Mills	Manitoulin		540, 542			
Calvin	Nipissing	17	630			
Carling	Parry Sound	69/400	559			
Casey	Temiskaming	65				
Central Manitoulin	Manitoulin		542, 551			
Chamberlain	Timiskaming	11	573			
Chapleau	Sudbury	101, 129				
Chapple	Rainy River	71	600, 615			
Chisholm	Nipissing				X	
Cockburn Island	Manitoulin					
Coleman	Temiskaming	11				
Dawson	Rainy River	11	600, 621			
Dorion	Thunder Bay	11/17				

Name	Census District	Road				
		King's Hwy	Secondary Hwy	Tertiary Hwy	Other	Winter
Dubreuilville	Algoma		519			
Ear Falls	Kenora	105		804		
East Ferris	Nipissing	11, 94				
Emo	Rainy River	11	602			
Evanturel	Temiskaming	11	569, 624			
Fauquier - Strickland	Cochrane	11				
Gauthier	Temiskaming	66	672			
Harley	Temiskaming	11	562, 569			
Harris	Temiskaming	65				
Hilliard	Temiskaming	11	562, 569			
Hilton	Algoma		548			
Hornepayne	Algoma		631			
Hudson	Temiskaming	65				
Ignace	Kenora	17	599			
James	Temiskaming	65	560			
Jocelyn	Algoma		548			
Johnson	Algoma	17				
Joly	Parry Sound				X	
Laird	Algoma	17				
Kerns	Temiskaming	65	562, 571			
Lake of the Woods	Rainy River		600, 619, 621			
Larder Lake	Temiskaming	66	624			
Macdonal, Meredith and Aberdeen Additional	Algoma	17, 17B	638			
Machar	Parry Sound	11, 124				
Machin	Kenora	17, 105	594, 609			
La Vallee	Rainy River	11	602, 613			
Magnetawan	Parry Sound	124	510, 520			
Mattawan	Nipissing		533			
Mattice - Val Côté	Cochrane	11				
McGarry	Temiskaming	66				
McKellar	Parry Sound	124				
McMurrich / Monteith	Parry Sound		518			
Manitouwadge	Thunder Bay		614			
Matachewan	Temiskaming	65, 66	566			
Moonbeam	Cochrane	11	581			
Morley	Rainy River	11	600, 617			
Nairn and Hyman	Sudbury	17				
Nipigon	Thunder Bay	11, 17	585			
Nipissing	Parry Sound		534, 654			
Opasatika	Cochrane	11				
Papineau-Cameron	Nipissing	17				

Name	Census District	Road				
		King's Hwy	Secondary Hwy	Tertiary Hwy	Other	Winter
Flying Post 73	Cochrane				X	
Fort Albany (Part) 67	Kenora					X
Fort Albany (Part) 67	Cochrane					X
Fort Hope 64	Kenora					X
Fort Severn 89	Kenora					X
Fort William 52	Thunder Bay				X	
French River 13	Parry Sound	69				
Garden River 14	Algoma	17,17B				
Ginoogaming First Nation	Thunder Bay				X	
Goulais Bay 15A	Algoma				X	
Gros Cap 49	Algoma				X	
Gull River 55	Thunder Bay		527			
Henvey Inlet 2	Parry Sound	69				
Kasabonika Lake	Kenora					X
Kashechewan	Cochrane					X
Kee-Way_Win	Kenora					X
Kingfisher Lake 1	Kenora					X
Kitchenuhmaykoosib Inninuwug	Kenora					X
Lac des Mille Lacs 22A1	Thunder Bay				X	
Lac Seul 28	Kenora				X	
Lake Helen 53A		11				
Lake Nipigon	Thunder Bay	11				
Lake Of the Woods 37	Kenora					
Long Lake 58	Thunder Bay	11				
Long Sault 12	Rainy River	11				
M'Chigeeng 22 (West Bay 22)	Manitoulin		540, 551			
Magnetewan 1	Parry Sound	69	529			
Manitou Rapids 11	Rainy River	11, 71				
Marten Falls 65	Kenora					X
Matachewan 72	Temiskaming				X	
Mattagami 71	Sudbury				X	
Mississagi River 8	Algoma	17	557			
Moose Factory 68	Cochrane					X
Muskrat Dam Lakes	Kenora					X
Neguaguon Lake 25D	Rainy River				X	
Neskantaga	Kenora					X
Nipissing 10	Nipissing	17				
North Spirit Lake	Kenora					X
Northwest Angle 33B	Kenora					
Osnaburgh 63 A	Thunder Bay		599			

Name	Census District	Road				
		King's Hwy	Secondary Hwy	Tertiary Hwy	Other	Winter
Osnaburgh 63 B	Kenora		599			
Parry Island First Nation	Parry Sound				X	
Pays Plat 51	Thunder Bay	17				
Pic River 50	Thunder Bay		627			
Pic Moberg North	Thunder Bay				X	
Pic Moberg South	Thunder Bay				X	
Pikangikum 14	Kenora					X
Poplar Hill	Kenora					X
Rankin Location 15D	Algoma	17				
Rainy Lake 17A	Rainy River				X	
Rainy Lake 17B	Rainy River				X	
Rainy Lake 18A	Rainy River				X	
Rainy Lake 26A	Rainy River	11				
Rat Portage 38A	Kenora				X	
Rocky Bay 1	Thunder Bay				X	
Sabaskong Bay (Part) 35C	Rainy River					
Sabaskong Bay (Part) 35C	Kenora					
Sabaskong Bay 35D	Kenora	71				
Sachigo Lake 1	Kenora					X
Sagamok	Algoma				X	
Sand Lake 88	Kenora					X
Saug-a-Gaw-Sing 1	Rainy River				X	
Ojibway Nation of Saugeen (Savant Lake)	Thunder Bay		599			
Seine River 22A2	Thunder Bay				X	
Seine River 23A	Rainy River				X	
Seine River 23B	Rainy River				X	
Serpent River 7	Algoma	17				
Shawanaga 17	Parry Sound	69				
Sheguiandah 24	Manitoulin	6				
Sheshegwaning 20	Manitoulin				X	
Shoal Lake (Part) 39A	Kenora				X	
Shoal Lake (Part) 40	Kenora				X	
Shoal Lake 34B2	Kenora				X	
Sucker Creek 23	Manitoulin		X			
Summer Beaver	Kenora					X
The Dalles 38C	Kenora				X	
Thessalon 12	Algoma				X	
Fort William 52	Thunder Bay				X	
Wabaseemoong	Kenora		X			
Wabauskang 21	Kenora				X	
Wabigoon Lake 27	Kenora				X	

Name	Census District	Road				
		King's Hwy	Secondary Hwy	Tertiary Hwy	Other	Winter
Wahnapiitae 11	Greater Sudbury				X	
Wapekeka 2	Kenora					X
Wawakapekwini (Long Dog Lake)	Kenora					X
Weagamow Lake 87	Kenora					X
Webequie	Kenora					X
Whitefish Bay 32A	Kenora	71				
Whitefish Bay 33A	Kenora				X	
Whitefish Bay 34A	Kenora	71				
Whitefish Lake 6	Sudbury				X	
Whitefish River (Part)4	Manitoulin	6				
Whitesand	Thunder Bay				X	
Wikwemikong Unceded	Manitoulin				X	
Wunnummin Lake	Kenora					X
Zhiibaahaasing 19A	Manitoulin				X	
First Nation Settlement						
Lansdowne House	Kenora					X
MacDowell Lake	Kenora					
Peawanuck	Kenora					X
Slate Falls	Kenora					

Source: author's own based on sources detailed in Appendix C.

Table 8. Motorcoach Stop Locations

Location	Station Name	Carrier	Flag Stop	Junction	Tickets	Parcel Express
Cities						
Greater Sudbury	Sudbury Bus Depot	Ontario Northland	No	No	Yes	Yes
Greater Sudbury	Laurentian University SGA	Ontario Northland	No	No	Yes	No
Greater Sudbury	Sudbury Bus Terminal	Greyhound	No	No	Yes	Yes
	Azilda Mac's	Ontario Northland	Yes	No	No	No
	Chelmsford Esso Station	Ontario Northland	Yes	No	No	No
	Coniston Coniston Road	Greyhound	Yes	No	No	No
	Copper Cliff	Greyhound	Yes	No	No	No
	Dowling Dowling Plaza	Ontario Northland	Yes	No	No	No
	Levack Levack Mini Mart	Ontario Northland	No	No	No	Yes
	Naughton	Greyhound	Yes	No	No	No
	Wahnapitae	Greyhound	Yes	No	No	No
	Whitefish	Greyhound	Yes	No	No	No
Thunder Bay	Bus Depot	Greyhound	No	No	Yes	Yes
Kakbeka Falls		Greyhound	Yes	No	No	No
Pass Lake Cornier		Greyhound	Yes	No	No	No
Pearl		Greyhound	Yes	No	No	No
Sault Ste Marie	Howard Johnsons	Greyhound	No	No	Yes	Yes
North Bay	The Station	Greyhound, Ontario Northland, Autobus Maheux	No	No	Yes	Yes
	Nipissing University Student Centre	Ontario Northland	Yes	No	No	No
Timmins	ONTC Station	Ontario Northland	No	No	Yes	Yes
	Connaught Hwy 101/Municipal Rd.	Ontario Northland	Yes	No	No	No
	South Porcupine Krakana Sunny's Service	Ontario Northland	No	No	Yes	Yes
Nighthawk	Nighthawk Lake Rd.	Ontario Northland	Yes	No	No	No
Hoyle	Fredrickhouse Lake Rd	Ontario Northland	Yes	No	No	No
Kenora	GLC Corp	Greyhound	No	No	Yes	Yes
Temiskaming Shores						
	Haileybury BNS Corner Gas Inc	Ontario Northland	No	No	Yes	Yes
	New Liskeard ONTC Station	Ontario Northland	No	No	Yes	Yes
Dryden	Dryden	Greyhound	No	No	Yes	Yes
Town						
Blind River	Bus Stop	Greyhound	No	No	No	No
Bruce Mines		Greyhound	Yes	No	No	No
Cochrane	ONTC Station	Ontario Northland	No	No	Yes	Yes
Cobalt	J.J.'s Corner Store	Ontario Northland	No	No	Yes	Yes
Englehart		Ontario Northland	No	No	No	No
Espanola	Bus Stop	Greyhound	Yes	No	No	No
Hearst	Hearst Esso	Ontario Northland	No	No	Yes	Yes
Iroquois Falls	Myna Variety Store	Ontario Northland	No	No	Yes	Yes
Nellie Lake	Anson Rd.	Ontario Northland	Yes	No	No	No

Location	Station Name	Carrier	Flag Stop	Junction	Tickets	Parcel Express	
Porquis Junction	Edward St.	Ontario Northland	Yes	No	No	No	
Kapuskasing	Kapuskasing Special Events Resource Centre	Ontario Northland	No	No	Yes	Yes	
Kirkland Lake	ONTC Terminal	Ontario Northland	No	No	Yes	Yes	
Swastika	Cameron St	Ontario Northland	Yes	No	No	No	
Latchford	Dam Depot, MacEwen Service Station	Ontario Northland	No	No	Yes	Yes	
Marathon	Tekniques	Greyhound	No	No	Yes	Yes	
Mattawa	Discount & Variety	Greyhound	No	No	Yes	Yes	
Parry Sound	Richard's Coffee	Ontario Northland	No	No	Yes	Yes	
Smooth Rock Falls	Blanchette Ace Hardware	Ontario Northland	No	No	Yes	Yes	
Spanish	Bob's Service Centre	Greyhound	No	No	Yes	No	
Thessalon	Thessalon	Greyhound	No	No	No	Yes	
Village							
Burk's Falls	Burk's Falls	Ontario Northland	Yes	No	No	No	
South River	Stop 11	Ontario Northland	Yes	No	No	No	
Sunridge	Caswell Resort	Ontario Northland	No	No	Yes	Yes	
Thornloe	Hwy 562	Ontario Northland	Yes	No	No	No	
Municipalities							
French River							
	Alban	Lemieux Grocery	Ontario Northland	Yes	No	No	No
	Pickernel River	Pickernel River Rd.	Ontario Northland	Yes	No	No	No
	Bigwood	Hwy 69	Ontario Northland	Yes	No	No	No
Huron Shores							
	Iron Bridge	Esso VLG General Store	Greyhound	No	No	Yes	Yes
Markstay - Warren							
	Markstay	Markstay Jct	Greyhound	Yes	Yes	No	No
	Warren		Greyhound	Yes	No	No	No
	Hagar	Hagar General Store	Greyhound	No	No	No	No
	Stinson		Greyhound	Yes	No	No	No
Temagami		Temagami Petro Canada	Ontario Northland	No	No	Yes	Yes
	Marten River	Trapper Trading Post	Ontario Northland	No	No	Yes	Yes
West Nipissing							
	Cache Bay		Greyhound	Yes	No	No	No
	Sturgeon Falls	Sturgeon Gas Bar	Greyhound	No	No	Yes	Yes
	Verner		Greyhound	Yes	No	No	No
	Meadowside		Greyhound	Yes	No	No	No
Wawa		Algoma News & Printing Co	Greyhound	No	No	Yes	No
Township							
Armstrong							
	Earlton	Le Grand Blvd. Restaurant	Ontario Northland	No	No	Yes	Yes
Baldwin							
	Mckerrow		Greyhound	Yes	No	No	No

Location	Station Name	Carrier	Flag Stop	Junction	Tickets	Parcel Express
Dorion		Greyhound	Yes	No	No	No
Bonfield						
	Rutherglen	Greyhound	Yes	No	No	No
Black River - Matheson						
	Matheson	Ontario Northland	No	No	No	No
	Butler Lake Butler Lake Rd	Ontario Northland	Yes	No	No	No
	Ramore K&C General Store	Ontario Northland	No	No	Yes	Yes
	Shillington Hwy 101	Ontario Northland	Yes	No	No	No
	Val Gagne Guay's Garage	Ontario Northland	No	No	No	Yes
Coleman	Bass Lake Road	Ontario Northland	Yes	No	No	No
Fauquier - Strickland						
	Fauquier Hwy 11	Ontario Northland	Yes	No	No	No
	Strickland Cloutier Rd.	Ontario Northland	Yes	No	No	No
Ignace	Tower Hill Truck Stop	Greyhound	No	No	Yes	No
Johnson						
	Desbarats	Greyhound	Yes	No	No	No
Killarney						
	Key River Key River Esso	Ontario Northland	Yes	No	No	No
Macdonald, Meredith and Aberdeen Additional						
	Echo Bay	Greyhound	Yes	No	No	No
Manitouwadge	Manitouwadge Jct	Greyhound	Yes	Yes	No	No
Mattice - Val Côté						
	Mattice old Empire Hotel	Ontario Northland	Yes	No	No	No
	Val Côté Post Office	Ontario Northland	Yes	No	No	No
Moonbeam	Jackie's Variety	Ontario Northland	No	No	No	Yes
Nairn and Hyman						
	Nairn Centre	Greyhound	Yes	No	No	No
Nipigon	Nipigon Husky Travel Ctr	Greyhound	No	No	Yes	Yes
Opasatika	Martel store	Ontario Northland	Yes	No	No	No
Perry						
	Emsdale Emsdale Rd	Ontario Northland	Yes	No	No	No
	Novar Foodland Plaza	Ontario Northland	Yes	No	No	No
Powassan	Stevann's Video	Ontario Northland	No	No	Yes	Yes
	Trout Creek Main St.	Ontario Northland	Yes	No	No	No
Red Rock	Red Rock JCT	Greyhound	Yes	Yes	No	No
Sables-Spanish Rivers						
	Massey Hub 17 - A&M Bus Depot	Greyhound	No	No	Yes	No
	Webbwood	Greyhound	Yes	No	No	No
	Walford Walford JCT	Greyhound	Yes	Yes	No	No
Schreiber	Voyageur Esso	Greyhound	No	No	No	No
Seguin						
	Gordon Bay Gordon Bay Marine	Ontario Northland	Yes	No	No	No

Location	Station Name	Carrier	Flag Stop	Junction	Tickets	Parcel Express
Horsehoe Lake	Alves Auto Centre	Ontario Northland	Yes	No	No	No
Terrace Bay		Greyhound	Yes	No	No	No
The Archipelago						
Pointe au Baril	Pointe au Baril Shell Ltd	Ontario Northland	No	No	No	Yes
The North Shore						
Serpent River		Greyhound	Yes	No	No	No
Spragge	Algoma Car Care	Greyhound	No	No	Yes	No
Val Rita - Harty						
Harty	Church	Ontario Northland	Yes	No	No	No
Val Rita	Church	Ontario Northland	Yes	No	No	No
Machin						
Vermilion Bay		Greyhound	No	No	No	No
White River	Walsh's Esso	Greyhound	No	No	Yes	Yes
White River	White River Jct	Greyhound	Yes	Yes	No	No
White River Bridge		Greyhound	Yes	No	No	No
First Nations						
English River		Greyhound	Yes	No	No	No
Garden River		Greyhound	Yes	No	No	No
Mattagami	Mattagami First Nation Rd	Ontario Northland	Yes	No	No	No
Shawanaga	Shawanaga Rd. N./Hwy 69	Ontario Northland	Yes	No	No	No
Unorganized						
Agawa		Greyhound	Yes	No	No	No
Batchawana Bay		Greyhound	Yes	No	No	No
Cartier	Hi-Way Stop	Ontario Northland	Yes	No	No	No
Britt	Hwy 69	Ontario Northland	Yes	No	No	No
Byng Inlet	Hwy 69	Ontario Northland	Yes	No	No	No
Dane	Hwy 112	Ontario Northland	Yes	No	No	No
Dinorwic		Greyhound	Yes	No	No	No
Driftwood	Hwy 11B	Ontario Northland	Yes	No	No	No
Estaire	Cango Service Station	Ontario Northland	Yes	No	No	No
Gogama	Miros Gas & More	Ontario Northland	No	No	Yes	Yes
Goulais River	Timberland General Store	Greyhound	No	No	Yes	No
Granite Lake		Greyhound	Yes	No	No	No
Halfway Lake Provincial Park	Halfway Lake Provincial Park	Ontario Northland	Yes	No	No	No
Harmony Beach		Greyhound	Yes	No	No	No
Heyden		Greyhound	Yes	No	No	No
Hurkett	Hurkett Jct	Greyhound	Yes	Yes	No	No
Kenogami	Heart's Desire	Ontario Northland	Yes	No	No	No
Montreal River Harbour		Greyhound	Yes	No	No	No
Moth Lake		Greyhound	Yes	No	No	No
Raith		Greyhound	Yes	No	No	No
Red Rock Lake		Greyhound	Yes	No	No	No
Rosspport	Rosspport	Greyhound	Yes	Yes	No	No

Location	Station Name	Carrier	Flag Stop	Junction	Tickets	Parcel Express
Sesekinika	Hwy 11	Ontario Northland	Yes	No	No	No
Thorne		Autobus Maheux	No	No		
Tilden Lake	Tilden Lake Rd.	Ontario Northland	Yes	No	No	No
Upsala	Upsala	Greyhound	No	No	No	No
Wabigoon		Greyhound	Yes	No	No	No
Watershed	Watershed	Ontario Northland	Yes	No	No	No
Outside Northern Ontario						
Toronto	Toronto Coach Terminal	Greyhound, Ontario Northland	No	No	Yes	No
Toronto	Yorkdale	Greyhound, Ontario Northland	No	No	Yes	No
Ottawa	Ottawa Central Station	Greyhound	No	No	Yes	Yes
Kanata Town Centre	S'Creams	Greyhound	No	No	Yes	Yes
Barrie	Bus Terminal	Ontario Northland	No	No	Yes	Yes
Orillia	Train Station	Ontario Northland	No	No	Yes	Yes
Ardrea	Candy Shop	Ontario Northland	Yes	No	No	No
Arnprior	No Frills Store	Greyhound	No	No	Yes	No
Bracebridge	Riverside Inn	Ontario Northland	No	No	Yes	Yes
Chalk River		Greyhound	Yes	No	No	No
Clearwater Bay		Greyhound	Yes	No	No	No
Cobden		Greyhound	Yes	No	No	No
Coldwater	Coldwater Shell & Variety	Ontario Northland	No	No	Yes	Yes
Deep River	Petro Stop	Greyhound	No	No	No	No
Deux Rivières		Greyhound	Yes	No	No	No
Gravenhurst	P&T IT Brother	Ontario Northland	No	No	Yes	No
Haley		Greyhound	Yes	No	No	No
Huntsville	Huntsville Travel	Ontario Northland	No	No	Yes	Yes
Kilworthy	Kashe Lake Rd./Hwy 11	Ontario Northland	Yes	No	No	No
Mackey		Greyhound	Yes	No	No	No
Mactier	Laurie's	Ontario Northland	No	No	Yes	Yes
Petawawa Military Camp		Greyhound	Yes	No	No	No
Petawawa Village		Greyhound	No	No	Yes	Yes
Point Alexander		Greyhound	Yes	No	No	No
Port Severn	H&S Gas Bar	Ontario Northland	No	No	Yes	Yes
Port Sydney	Mary Lake Motors	Ontario Northland	No	No	Yes	Yes
Renfrew		Greyhound	No	No	Yes	No
Rolphon		Greyhound	Yes	No	No	No
Stonecliffe		Greyhound	Yes	No	No	No
Waubauskene	Pine St	Ontario Northland	Yes	No	No	No
Quebec						
Rouyn-Noranda	Terminus Maheux	Autobus Maheux	No	No	Yes	Yes
Arntfield		Autobus Maheux	No	No	No	No
Béarn	Chez Hec	Autobus Maheux	No	No	Yes	Yes
Évain		Autobus Maheux	No	No	No	No
Fabre	Épicerie Micheline	Autobus Maheux	No	No	Yes	Yes

Location	Station Name	Carrier	Flag Stop	Junction	Tickets	Parcel Express
Laniel		Autobus Maheux	No	No	No	No
Lorrainville	Tabagie Centrale	Autobus Maheux	No	No	Yes	Yes
Montbeillard		Autobus Maheux	No	No	No	Yes
Nédelec		Autobus Maheux	No	No	No	No
Notre-Dame-du-Nord	La Pierretterie	Autobus Maheux	No	No	Yes	Yes
Rollet	Place Talbot	Autobus Maheux	No	No	Yes	Yes
St-Bruno-de-Guigues	7/7 Épicerie du Coin	Autobus Maheux	No	No	Yes	Yes
Témiscaming	Esso - Lacasse	Autobus Maheux	No	No	Yes	Yes
Ville-Marie	Dépanneur Au Cagibi	Autobus Maheux	No	No	Yes	Yes

Source: author's own based on sources detailed in Appendix C.

Table 9. Passenger Rail Stops by Location

Location	Rail Company	Train	Flag Stop
City			
Greater Sudbury	Via Rail	Sudbury -White River	No
Azilda	Via Rail	Sudbury -White River	Yes
Chelmsford	Via Rail	Sudbury -White River	Yes
Larchwood	Via Rail	Sudbury -White River	Yes
Levack	Via Rail	Sudbury -White River	Yes
Sudbury Jct	Via Rail	The Canadian	No
Capreol	Via Rail	The Canadian	No
Sault Ste. Marie	Algoma Central Railway	Algoma Passenger Service	No
Town			
Cochrane	Ontario Northland	Polar Bear Express	No
Moosonee	Ontario Northland	Polar Bear Express	No
Hearst	Algoma Central Railway	Algoma Passenger Service	No
Wyborn	Algoma Central Railway	Algoma Passenger Service	No
Parry Sound	Via Rail	The Canadian	No
Municipality			
Greenstone			
Caramat	Via Rail	The Canadian	Yes
Longlac	Via Rail	The Canadian	Yes
Nakina	Via Rail	The Canadian	Yes
Red Lake	Via Rail	The Canadian	Yes
Sioux Lookout	Via Rail	The Canadian	No
Township			
Dubreuilville	Algoma Central Railway	Algoma Passenger Service	No
Chapleau	Via Rail	Sudbury -White River	No
White River	Via Rail	Sudbury -White River	No
Hornepayne	Via Rail	The Canadian	No
Unorganized			
Achigan	Algoma Central Railway	Algoma Passenger Service	No
Agawa	Algoma Central Railway	Algoma Passenger Service	No
Akron	Algoma Central Railway	Algoma Passenger Service	No
Alden	Algoma Central Railway	Algoma Passenger Service	Yes
Anjigami	Algoma Central Railway	Algoma Passenger Service	Yes
Awana - Mileage 93	Algoma Central Railway	Algoma Passenger Service	Yes
Batchewana (Batchewana River)	Algoma Central Railway	Algoma Passenger Service	No
Canyon	Algoma Central Railway	Algoma Passenger Service	No
Coppell	Algoma Central Railway	Algoma Passenger Service	Yes
Eton	Algoma Central Railway	Algoma Passenger Service	No
Franz	Algoma Central Railway	Algoma Passenger Service	No
Frater (Agawa River)	Algoma Central Railway	Algoma Passenger Service	No
Goudreau	Algoma Central Railway	Algoma Passenger Service	Yes

Location	Rail Company	Train	Flag Stop
Hansen	Algoma Central Railway	Algoma Passenger Service	No
Hawk Junction	Algoma Central Railway	Algoma Passenger Service	No
Hilda	Algoma Central Railway	Algoma Passenger Service	No
Horsey	Algoma Central Railway	Algoma Passenger Service	Yes
Heyden	Algoma Central Railway	Algoma Passenger Service	Yes
Hubert	Algoma Central Railway	Algoma Passenger Service	No
Langdon	Algoma Central Railway	Algoma Passenger Service	No
Limer	Algoma Central Railway	Algoma Passenger Service	No
Mashkode	Algoma Central Railway	Algoma Passenger Service	Yes
Mead	Algoma Central Railway	Algoma Passenger Service	Yes
Mekatina	Algoma Central Railway	Algoma Passenger Service	No
Mileage -122 1/2	Algoma Central Railway	Algoma Passenger Service	Yes
Mileage 210	Algoma Central Railway	Algoma Passenger Service	Yes
Mileage 212	Algoma Central Railway	Algoma Passenger Service	Yes
Mileage 215.5	Algoma Central Railway	Algoma Passenger Service	Yes
Millwood	Algoma Central Railway	Algoma Passenger Service	Yes
Mongoose	Algoma Central Railway	Algoma Passenger Service	No
Montreal Falls (Montreal River)	Algoma Central Railway	Algoma Passenger Service	No
Mosher	Algoma Central Railway	Algoma Passenger Service	No
Norris	Algoma Central Railway	Algoma Passenger Service	Yes
Northland (Goulais River)	Algoma Central Railway	Algoma Passenger Service	Yes
OBA (Oba River / Albany Branch)	Algoma Central Railway	Algoma Passenger Service	No
Ogidaki (S. Branch / Chippewa River)	Algoma Central Railway	Algoma Passenger Service	No
Pangis (N. Branch / Chippewa River)	Algoma Central Railway	Algoma Passenger Service	Yes
Perry (Michipicoten River)	Algoma Central Railway	Algoma Passenger Service	No
Pine Lake	Algoma Central Railway	Algoma Passenger Service	Yes
Price (Oba River)	Algoma Central Railway	Algoma Passenger Service	No
Rand	Algoma Central Railway	Algoma Passenger Service	Yes
Sand Lake	Algoma Central Railway	Algoma Passenger Service	Yes
Scully	Algoma Central Railway	Algoma Passenger Service	Yes
Searchmont	Algoma Central Railway	Algoma Passenger Service	No
Spruce Lake	Algoma Central Railway	Algoma Passenger Service	Yes
Stavert (Jogues) Mattawishkwia	Algoma Central Railway	Algoma Passenger Service	Yes
Summit	Algoma Central Railway	Algoma Passenger Service	No
Tabor	Algoma Central Railway	Algoma Passenger Service	No
Trout Lake	Algoma Central Railway	Algoma Passenger Service	Yes
Wabatong	Algoma Central Railway	Algoma Passenger Service	Yes
Wabos	Algoma Central Railway	Algoma Passenger Service	No
Wanda	Algoma Central Railway	Algoma Passenger Service	Yes
Benny	Via Rail	Sudbury -White River	Yes

Location	Rail Company	Train	Flag Stop
Biscotasing	Via Rail	Sudbury -White River	No
Bolkow	Via Rail	Sudbury -White River	Yes
Cartier	Via Rail	Sudbury -White River	No
Dalton	Via Rail	Sudbury -White River	No
Devon	Via Rail	Sudbury -White River	Yes
Escher	Via Rail	Sudbury -White River	Yes
Franz	Via Rail	Sudbury -White River	No
Girdwood	Via Rail	Sudbury -White River	Yes
Kinogama	Via Rail	Sudbury -White River	Yes
Kormak	Via Rail	Sudbury -White River	Yes
Lochalsh	Via Rail	Sudbury -White River	Yes
Metagama	Via Rail	Sudbury -White River	Yes
Missanabie	Via Rail	Sudbury -White River	No
Musk	Via Rail	Sudbury -White River	Yes
Nemegos	Via Rail	Sudbury -White River	Yes
Nicholson	Via Rail	Sudbury -White River	Yes
O'Brien	Via Rail	Sudbury -White River	Yes
Pogamasing	Via Rail	Sudbury -White River	Yes
Ramsey	Via Rail	Sudbury -White River	No
Roberts	Via Rail	Sudbury -White River	Yes
Sheahan	Via Rail	Sudbury -White River	Yes
Stralak	Via Rail	Sudbury -White River	Yes
Sultan	Via Rail	Sudbury -White River	Yes
Woman River	Via Rail	Sudbury -White River	Yes
Allanwater Bridge	Via Rail	The Canadian	Yes
Armstrong	Via Rail	The Canadian	Yes
Auden	Via Rail	The Canadian	Yes
Canyon	Via Rail	The Canadian	Yes
Copelands Landing	Via Rail	The Canadian	Yes
Collins	Via Rail	The Canadian	Yes
Elsas	Via Rail	The Canadian	Yes
Farlane	Via Rail	The Canadian	Yes
Felix	Via Rail	The Canadian	Yes
Ferland	Via Rail	The Canadian	Yes
Flindt Landing	Via Rail	The Canadian	Yes
Foleyet	Via Rail	The Canadian	Yes
Gogama	Via Rail	The Canadian	Yes
Hillspport	Via Rail	The Canadian	Yes
Laforest	Via Rail	The Canadian	Yes
Malachi	Via Rail	The Canadian	Yes
McKee's Camp	Via Rail	The Canadian	Yes
Minaki	Via Rail	The Canadian	Yes
Mud River	Via Rail	The Canadian	Yes
Oba	Via Rail	The Canadian	Yes

Location	Rail Company	Train	Flag Stop
Ottermere	Via Rail	The Canadian	Yes
Reddit	Via Rail	The Canadian	Yes
Rice Lake	Via Rail	The Canadian	Yes
Richan	Via Rail	The Canadian	Yes
Ruel	Via Rail	The Canadian	Yes
Savant Lake	Via Rail	The Canadian	Yes
Westree	Via Rail	The Canadian	Yes
Brownrigg	Ontario Northland	Polar Bear Express	Yes
Coral	Ontario Northland	Polar Bear Express	Yes
Clute	Ontario Northland	Polar Bear Express	Yes
Fraserdale	Ontario Northland	Polar Bear Express	Yes
Galeton	Ontario Northland	Polar Bear Express	Yes
Island Falls	Ontario Northland	Polar Bear Express	Yes
Moose River	Ontario Northland	Polar Bear Express	Yes
Onakawana	Ontario Northland	Polar Bear Express	Yes
Otter Rapids	Ontario Northland	Polar Bear Express	Yes
Ranoke	Ontario Northland	Polar Bear Express	Yes
Renison	Ontario Northland	Polar Bear Express	Yes
Wurtele	Ontario Northland	Polar Bear Express	Yes
Outside Northern Ontario			
Toronto	Via Rail	The Canadian	No
Washago	Via Rail	The Canadian	Yes

Source: author's own based on sources detailed in Appendix C.

Table 10. Airport Location

Location Name	Airport Code	Airport Name	Owner	Type	Runway Surface	Passenger Service	Carrier Companies
City							
Greater Sudbury	CYSB	Greater Sudbury Airport	Sudbury Airport Community Development Corporation	Public	Asphalt	Yes	Air Canada, Porter Airlines, Bearskin Airlines
Thunder Bay	CYQT	Thunder Bay International Airport	Thunder Bay International Airport Authority	Public	Asphalt	Yes	Air Canada, Porter Airlines, WestJet, Bearskin Airlines, Air Thunder
Kakabeka Falls	KG8	Kakabeka Falls Airport	Kakabeka Falls Flying Club	Public	Grass	No	
Sault Ste. Marie	CYAM	Sault Ste. Marie Airport	Sault-Ste Marie Airport Development Corporation	Public	Asphalt	Yes	Air Canada, Porter Airlines, Bearskin Airlines
North Bay	CYYB	Jack Garland Airport	Municipality of North Bay	Public	Asphalt	Yes	Air Canada, Bearskin Airlines
Timmins	CYTS	Timmins Victor M. Power Airport	City of Timmins	Public	Asphalt	Yes	Air Canada, Porter Airlines, Bearskin Airlines, Air Thunder
Kenora	CYQK	Kenora Airport	Kenora Airport Authority	Public	Asphalt	Yes	Bearskin Airlines
Dryden	CYHD	Dryden Regional Airport	City of Dryden	Public	Asphalt	Yes	Bearskin Airlines
Elliot Lake	CYEL	Elliot Lake Municipal Airport	City of Elliot Lake	Public	Asphalt	No	
Town							
Cochrane	CYCN	Cochrane Municipal Airport	Town of Cochrane	Public	Asphalt	No	
Fort Frances	CYAG	Fort Frances Airport	Town of Fort Frances	Public	Asphalt	Yes	Bearskin Airlines
Gore Bay	CYZE	Gore Bay-Manitoulin Airport	Gore Bay - Manitoulin Airport Commission Inc.	Public	Asphalt	No	
Hearst	CYHF	Hearst (René Fontaine) Municipal Airport	Corporation of the Town of Hearst	Public	Asphalt	No	
Carey Lake	CNX3	Carey Lake Airport	Hearst Air Service	Private	Gravel	No	
Iroquois Falls	NE4	Iroquois Falls Municipal Airport	Township of Iroquois Falls	Public	Asphalt	No	
Kapuskasing	CYYU	Kapuskasing Airport	Corporation of the Town of Kapuskasing	Public	Asphalt	Yes	Bearskin Airlines

Location Name	Airport Code	Airport Name	Owner	Type	Runway Surface	Passenger Service	Carrier Companies
Kirkland Lake	CYKX	Kirkland Lake Airport	Town of Kirkland Lake	Public	Asphalt	No	Air Thunder, Air Creebec
Marathon	CYSP	Marathon Municipal Airport	Corporation of the Town of Marathon	Public	Asphalt	No	
Moosonee	CYMO	Moosonee Airport	The Cooperation of the Town of Moosonee	Public	Asphalt	Yes	
Parry Sound	CNK4	Parry Sound Area Municipal Airport	Municipality of Parry Sound	Public	Asphalt	No	
Thessalon	CPL5	Thessalon Municipal Airport	Town of Thessalon	Private	Asphalt	No	
Municipality							
Greenstone Geraldton	CYGQ	Geraldton (Greenstone Regional) Airport	Town of Greenstone	Public	Asphalt	No	Nakina Air Service Bearskin Airlines, Wasaya Airways Bearskin Airlines, Wasaya Airways
Nakina	CYQN	Nakina Airport	The Corporation of the Municipality of Greenstone	Public	Asphalt	Yes	
Red Lake	CYRL	Red Lake Airport	The Corporation of the Municipality of Red Lake	Public	Asphalt	Yes	
Killarney	CPT2	Killarney Airport	Municipality of Killarney	Public	Asphalt	No	
Sioux Lookout	CYXL	Sioux Lookout Airport	Sioux Lookout Airport Development Commission	Public	Asphalt	Yes	
Wawa	CYXZ	Wawa Municipal Airport	The Corporation of the Municipality of Wawa	Public	Asphalt	No	
Township							
Armstrong Earlton	CYXR	Earlton - Timiskaming Regional Airport	Township of Armstrong	Public	Asphalt	No	
Assignack Manitowaning	CYEM	Manitowaning/Manitoulin East Airport	Manitoulin East Municipal Airport Commission	Public	Asphalt	No	
Atikokan	CYIB	Atikokan Municipal Airport	Atikokan Township	Public	Asphalt	No	

Location Name	Airport Code	Airport Name	Owner	Type	Runway Surface	Passenger Service	Carrier Companies
Chapleau	CYLD	Chapleau Airport	Township of Chapleau	Public	Asphalt	No	
Ear Falls	CYMY	Ear Falls	Township of Ear Falls	Public	Asphalt	No	
Hornepayne	CYHN	Hornepayne Municipal Airport	Township of Hornepayne	Public	Asphalt	No	
Ignace	CZUC	Ignace Municipal Airport	Township of Ignace	Public	Asphalt	No	
James Elk Lake Macdonald, Meredith and Aberdeen Additional	PE3	Elk Lake Airport	Karl Wettlaufer	Private	Grass	No	
Bar River	CPF2	Bar River Airport	Springer Aerospace Ltd.	Private	Asphalt	No	
Machin	CKQ7	Vermilion Bay Airport	Municipality of Machin	Public	Gravel	No	
Manitouwadge	CYMG	Manitouwadge Municipal Airport	Township of Manitouwadge	Public	Asphalt	No	
Perry Emsdale	NA4	Emsdale Airport	Emsdale Airport Authority Inc.	Public	Grass	No	
Pickle Lake	CYPL	Pickle Lake Airport	Government of Ontario	Public	Asphalt	Yes	Wasaya Airways
St Joseph Island	PV3	St Joseph Island Airport	Jack Kingsley	Private	Grass	No	
Sioux Narrows- Nestor Falls							
Nestor Falls	CJA5	Nestor Falls Airport	Township of Sioux Narrows- Nestor Falls	Public	Gravel	No	
Sioux Narrows	KM2	Sioux Narrows		Public	Grass	No	
Village							
South River/ Sundridge	CPE6	Almaguin Highlands Airpark	South River/ Sunridge/ Machar/Strong/ Joly	Public	Grass	No	
First Nation							
Attawapiskat	CYAT	Attawapiskat Airport	Government of Ontario	Public	Gravel	Yes	Air Creebec, Air Thunder
Bearskin Lake	CNE3	Bearskin Lake Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Cat Lake	CYAC	Cat Lake Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Deer Lake	CYVZ	Deer Lake Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways

Location Name	Airport Code	Airport Name	Owner	Type	Runway Surface	Passenger Service	Carrier Companies
Fort Albany	CYFA	Fort Albany Airport	Government of Ontario	Public	Gravel	Yes	Air Creebec, Air Thunder
Fort Albany 67 Kashechewan	CZKE	Kashechewan Airport	Government of Ontario	Public	Gravel	Yes	Air Creebec, Air Thunder
Fort Hope	CYFH	Fort Hope Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airlines, Nakina Air Service
Fort Severn	CYER	Fort Severn Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Kasabonika	CYAQ	Kasabonika Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Keewaywin	CPV8	Keewaywin Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Kingfisher Lake	NM5	Kingfisher Lake Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
	CYTL	Big Trout Lake Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Kitchenukmaoosib Innuwug House	CYLH	Lansdowne House Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways, Nakina Air Service
Marten Falls	CYKP	Ogoki Post Airport	Government of Ontario	Public	Gravel	Yes	Nakina Air Service
Muskrat Dam	CZMD	Muskrat Dam Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Nibinamik	CJV7	Summer Beaver Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
North Spirit Lake	CKQ3	North Spirit Lake Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Peawanuck	CYPO	Peawanuck Airport	Government of Ontario	Public	Gravel	Yes	Air Creebec, Air Thunder
Pikangikum	CYPM	Pikangikum Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Poplar Hill Airport	CPV7	Poplar Hill Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Sachigo Lake	CZPB	Sachigo Lake Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Sandy Lake	CZSJ	Sandy Lake Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Wapekeka	CKB6	Angling Lake / Wapekeka Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Weagamow Lake							
Round Lake	CZRJ	Round Lake (Weagamow Lake) Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Webequie	CYWP	Webequie Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways, Nakina Air Service
Wunnummin Lake	CKL3	Wunnummin Lake Airport	Government of Ontario	Public	Gravel	Yes	Wasaya Airways
Unorganized							

Location Name	Airport Code	Airport Name	Owner	Type	Runway Surface	Passenger Service	Carrier Companies
Armstrong	CYYW	Armstrong Airport	Government of Ontario	Public	Asphalt	No	
Miminiska	CPS5	Miminiska Airport	Miminiska Lodge	Private	Grass	No	
Opapimiskan Lake	CKM8	Opapimiskan Lake Airport	Goldcorp Canada Inc. - Musselwhite Mine	Private	Gravel	No	
Victor Mine	CVM2	Victor Mine Aerodrome	De Beers Canada Inc. - Victor Diamond Mine	Private	Gravel	No	
Closed							
Atikokan/Crystal Lake	JZ8	Atikokan/Crystal Lake	None	Closed		Closed	
Eagle River	CKX3	Eagle River	None	Closed	Grass	Closed	
Eltrut	JT6	Eltrut	None	Closed		Closed	
Minaki	JA6	Minaki	None	Closed		Closed	
Temiskaming Shores							
New Liskeard	CPX3	New Liskeard	None	Closed	Grass	Closed	
North Monetville	CPX4	North Monetville Skypark	None	Closed	Grass	Closed	
Savant Lake	KE7	Savant Lake	None	Closed		Closed	
Terrace Bay	CYTJ	Terrace Bay Airport	None	Closed	Asphalt	Closed	

Source: author's own based on sources detailed in Appendix C.

Appendix C: Methods and Data Collection

Data Collection

The data and digital files used for this project were collected from the following sources:

- **Statistics Canada:** provided Census Boundary files. These files were used as a base map to provide context and identify the locations of Northern Ontario communities.
 - **Provinces and Territories:** used for background information to provide context for Ontario and highlight transportation connections with neighbouring regions, including Québec, Manitoba, and Nunavut
 - **Census Divisions:** was used to identify Northern Ontario
 - **Census Subdivisions:** were used to identify and map cities, townships, municipalities, towns, villages and First Nation reserves and First Nation settlements
 - **Census Metropolitan Areas and Census Agglomerations:** were used to identify and map cities
 - **Designated Places and Population Centres:** were used to identify and map a stop by transportation mode identified at a lower geographical level than a Census subdivision
- **Natural Resources Canada:** produces CanVec product that is a piece of digital cartographic reference information. CanVec has more than 90 topographical entities (Natural Resources Canada 2013)
 - **Ontario Road Network:** created from Road segment (TR_1760009) entity
 - **Airports:** created and modified from Runway (TR_1190009) entity
- **Canadian Council on Geomatics:** oversees GeoBase portal. Geobase provides geospatial information from federal, provincial, and territorial agencies.
 - **Railways:** obtained and created from National Railway Network for Ontario, Québec, and Manitoba
 - **Canadian Geographical Names Database (CGNDB)**
- **Ministry of Northern Development and Mines:** was used for the location of the Ring of Fire in addition to the north–south proposed road and railway.
- **National Geospatial-Intelligence Agency:** prepares and publishes The World Port Index. The World Port Index provides the digital location and characteristics of seaports throughout the World (National Geospatial-Intelligence Agency 2014).
 - **Seaports:** obtained from the World Port Index (National Geospatial-Intelligence Agency 2014).
- **Company websites:**
 - Ontario Northland:
 - Rail Freight: <http://www.ontarionorthland.ca/images/ONTCfreight2.pdf>
 - Station Locator: <http://www.ontarionorthland.ca/index.php/en/passenger-trains-and-buses/bus-scheduled-routes/station-locations>
 - Service Map: <http://www.ontarionorthland.ca/index.php/en/map>
 - Greyhound: <https://www.greyhound.ca/>
 - Station locator: <https://www.greyhound.ca/en/locations/default.aspx>
 - VIA Rail:
 - Sudbury – White River: <http://www.viarail.ca/en/explore-our-destinations/trains/ontario-and-quebec/sudbury-white-river>
 - The Canadian: <http://www.viarail.ca/en/explore-our-destinations/trains/rockies-and-pacific/toronto-vancouver-canadian>
 - Algoma Central Railway: <http://www.agawacanyontourtrain.com/content/tours/passenger/index.html>

The Census Division Boundary File was used to identify Northern Ontario. Northern Ontario is defined in the Growth Plan for Northern Ontario as the census divisions or districts of Parry Sound, Nipissing, Sudbury, Greater Sudbury, Timiskaming, Cochrane, Manitoulin, Algoma, Thunder Bay, Rainy River, and Kenora (Growth Plan 61). To create the study area, these census divisions and census subdivisions were extracted because the original boundary file from Statistics Canada is for the entire country. The Census Metropolitan Areas and Census Agglomerations, Designated Places and Population Centres were used to locate other communities that are serviced by a transportation infrastructure but are not identified by a census subdivision. For definitions of these terms, see Appendix D.

Transportation Infrastructure

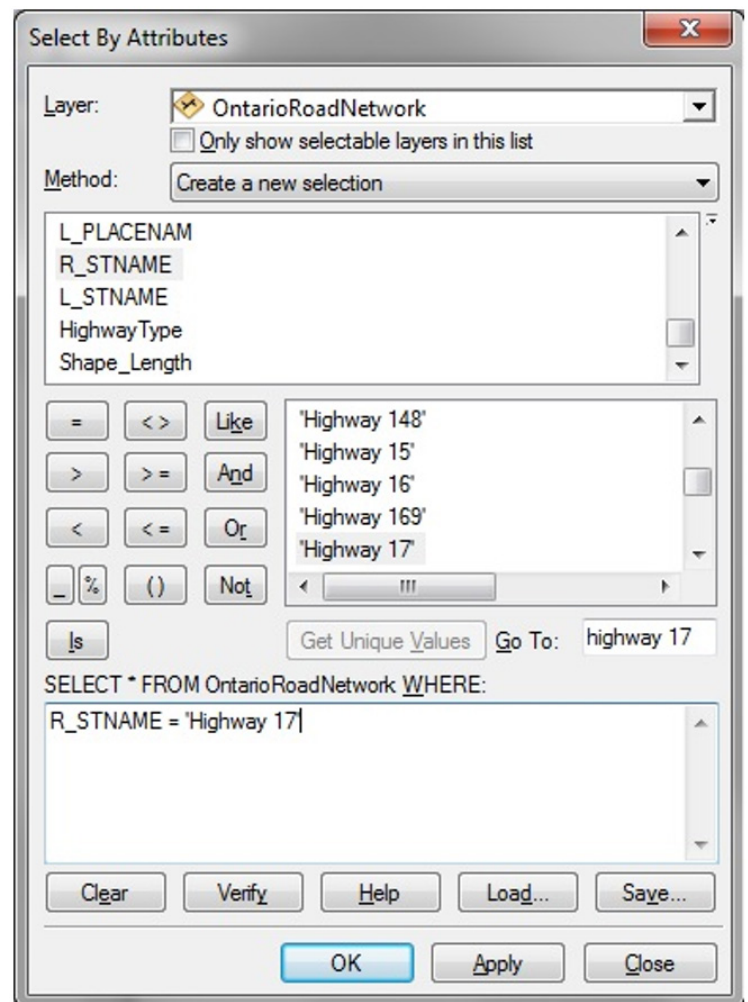
For the transportation infrastructure, the cartographic/map layers were created from the sources identified. Information for road and railway networks were also obtained for Québec and Manitoba in order to identify Northern Ontario's connections to neighbouring regions. Compared to the maps provided by CanVec, the National Railway Network was found to provide more up-to-date information and attribute information on rail lines such as the owning company, users, type, and status. Digital files and information for seaports were not available through CanVec or Geobase. These agencies only provided information on marinas for recreation use, which does not fulfill the scope of this study.

Ontario Road Network

The Ontario Road Network was acquired from Natural Resources Canada. It contains the entire road network for the province of Ontario. The roads were classified according to the Provincial Highway System to distinguish the type of road and assign importance. The network was divided into King's, Secondary, and Tertiary highways, along with municipal, winter, paved, unpaved, or resource/recreational roads. A new column in the Ontario Road Network was added and named "Highway Type" to classify the roads. In order to classify the roads and validate the process, the 2014 Official Road Map was used as a guide to identifying the type of road. The Official Road Map of Ontario was created by the Geomatics Office at the Ministry of Transportation Ontario and was released on January 1, 2014 (Government of Ontario 2014d).

Once the road was identified, ArcGIS was used to select the road by its name (for example, Highway 17) and by the highway number ("RTENUMBER1"). The process was accomplished for King's, Secondary, Tertiary, and municipal highways.

Figure 1. Example of Selecting a Road by its Name



Source: author's own based on sources detailed in this Appendix.

The Field Calculator was used to classify the roads as "Municipal."

Winter roads are an important type of road to identify because they are only available seasonally and have a significant role in the accessibility of the region. A "winter" road is defined as "[a] road that is only useable during the winter when conditions allow for passage over lakes, rivers, and wetlands" (Natural Resources Canada 2013, 89). The CanVec road file has a feature attribute that classifies the road based on its importance, and "winter" is a class (Natural Resources Canada 2013, 88). The feature attribute also has a class which identifies resources/recreational.

This road type was found to have a significant presence in Northern Ontario because of the region's reliance on natural resources.

The remaining streets were classified according to surface type in order to distinguish between paved and unpaved roads. "Paved" is defined as a "road with a surface made of hardened materials such as concrete, asphalt, tar gravel, or steel decks" (Natural Resources Canada 2013, 90). "Unpaved" is a "road with a surface made of loose material such as gravel or dirt" (Natural Resources Canada 2013, 90). The road surface type helps further identify the importance of the region's roads.

Motorcoach Services

Two files were created for the motorcoach service: motorcoach routes and motorcoach stops. The motorcoach service route file is a polyline feature that displays the route travelled by bus. The motorcoach stops file is a point feature and displays the community or the location of the stops. Motorcoach service routes were created from the Ontario Road Network, and the stop layer was created from CGNDB. The route and stops for three motorcoach companies were created using the information provided on the company's website, such as service maps, station locator, and schedule as a guide. The motorcoach route map was created by selecting the appropriate roads from the road network files. Once the roads were selected, they were exported into a new motorcoach file, and the corresponding attribute table was modified accordingly. The non-relevant "Road Network" attributes were removed, and attributes such as "Carrier Company" and "Express Service" were added.

The motorcoach stop layer was created in two stages. First, the attribute information was collected from the company website using the schedule detail option and the station locator (See Appendix E). The attribute information was stored in an Excel file, and a unique Station ID was assigned to each stop. ArcGIS was then used to determine the spatial location of the stops by exporting a point location from the Canadian Geographical Names Database. The appropriate communities were selected and then exported into a

new motorcoach stop layer. The attribute table was again modified to remove non-relevant CGNDB attribute fields and add a new "station ID" field. The "station ID" corresponding to the value in the Excel attribute table allows the tables to be joined.

Passenger Rail Service

Passenger Rail Service was created using a similar process as the motorcoach service. Once again, two layers were created: Passenger Rail Routes and Passenger Rail Stops. The railway tracks digital file was obtained from the National Railway Network (NRWN). It was determined that three companies offered passenger service in Northern Ontario: Via Rail, Ontario Northland, and Algoma Central. The NRWN file provided attribute fields on companies that used a rail line.

The rail lines with passenger service were identified. Once the rail lines with passenger service were selected, they were exported into a new layer. The provider website was used to identify the stops for passenger service (see Appendix E). The attribute information for the stops was collected in an Excel file. The geographical location of the stops was obtained using the Canadian Geographical Names Database. The non-relevant attributes were removed, and a station ID was created to match the stop attributes in the Excel file. Once the spatial locations were extracted into a new file, the stop attribute information was then joined using the station ID as a common field. The different route layer and stops layer were merged to form a passenger Rail Service, and Passenger Rail Stops layer.

Airports

The airport digital file was obtained and modified from the CanVec file created by Natural Resources Canada. First, the original file contained the airports for all of Ontario. Subsequently, the Northern Ontario airports were extracted into a new file. Since the file did not provide any characteristics of the airport, such as its name, location, owner, airport type, runway surface, or whether passenger service was available, this information had to be determined. The attribute information was collected from the airport website page (if it existed), other websites such as airportdatabase.net, or the Canada Flight Supplement. Additionally, information on passenger service was obtained from the carrier's website. The information was added to the airport data layer. A few cases, for example, Killarney and Peawanuck, were found to have airports that were not included on the original airport digital provided by CanVec. As a result, these airports were added. The location was determined and mapped using the base maps provided by ArcGIS.

Seaports

The location of seaports was obtained from the World Port Index, which provides the location of ports for the entire world (National Geospatial-Intelligence Agency 2014). The ports for Ontario and then Northern Ontario ports were extracted.

Analysis

The analysis was completed using ArcGIS 10.2. Once all the digital files were created and processed, an analysis was performed to determine the accessibility of the Northern Ontario communities. A table was created to identify the communities and the mode of transportation available to each. For the road network, the connection to each Highway was determined. To accomplish this, the Highway was selected using the following query

```
HighwayType = "King's" AND (RTENUMBER1 = "17" OR RTENUMBER2 = "17")
```

This selected all of Highway 17 in Northern Ontario. Two fields for the route number were necessary for the query because Highway 17 shares a section with Highway 11, giving the highway two route numbers in those cases.

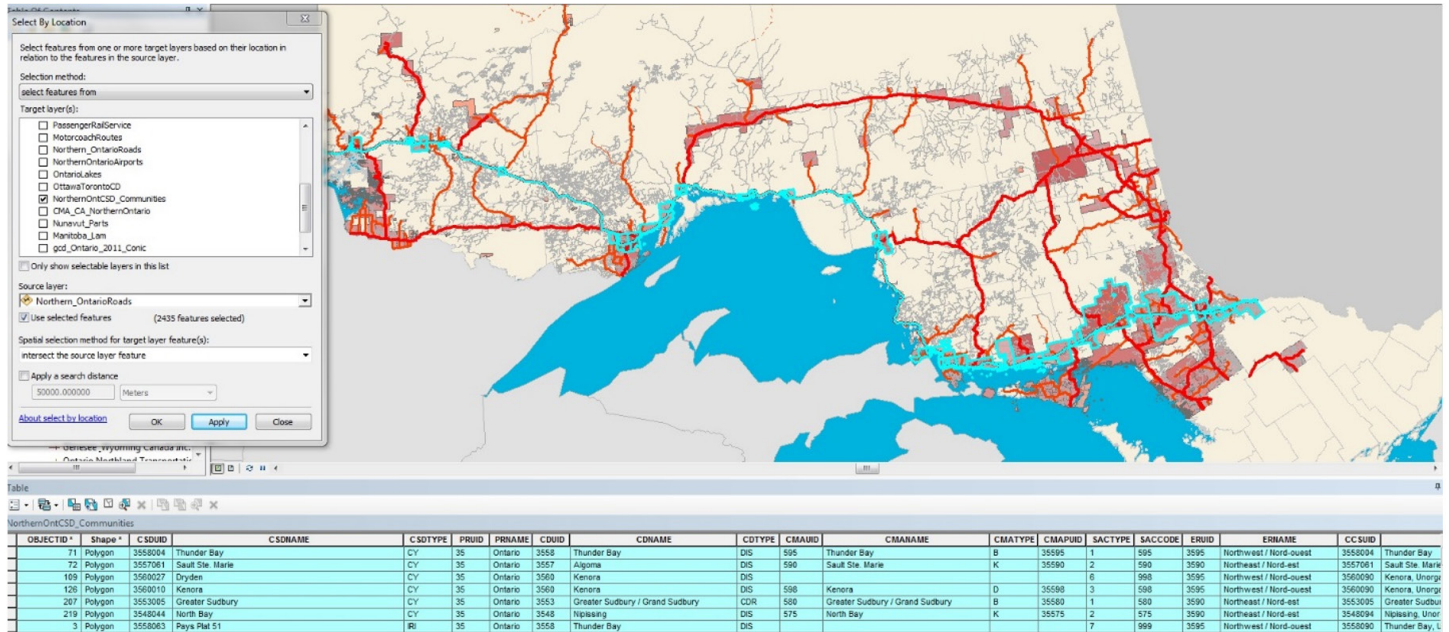
Figure 2. Selecting Highway 17



Source: author's own based on sources detailed in Appendix C.

Once a route was selected, each Census Subdivision that the road intersects could be identified.

Figure 3. Select the Intersecting Communities



Source: author's own based on sources detailed in Appendix C.

The information was then entered into the transportation table, and the process was repeated for the rest of the King's Highway and the Secondary Highways, Tertiary Highways, and Winter Roads. Census Subdivisions can encompass a large region, and in order to determine the accessibility at the lowest geographic areas, the process was repeated at different geographic levels, such as Population Centres and Designated Places.

In the case of determining the connection for motorcoach, passenger rail, airport, and seaport, the process was straightforward. For the motorcoach and passenger rail, the communities with access were determined when creating the stop layers. The communities with service were added to the transportation table. The communities with airport and seaport access were determined in the creation of the layer as an attribute field with the community name added.

Appendix D: Definitions

Census Agglomeration: the core must have a population of at least 10,000.

Census division: a unit of regional government (such as a county or regional district) or an area treated as equivalent for statistical purposes. Census divisions are the geographic areas between the province/territory level and the municipality (census subdivision).

Census Metropolitan Area: the core must have a population of at least 50,000, and the entire census metropolitan area must have a total population of at least 100,000.

Census Subdivision: a municipality or an area treated as equivalent to a municipality for statistical (e.g., as a First Nation reserve or an unorganized territory).

Designated Place: normally a small community or settlement that does not meet the criteria established by Statistics Canada to be a census subdivision (an area with municipal status) or a population centre.

Dissolved Municipality (DMU): A municipality that no longer exists.

Economic Region: a grouping of complete census divisions (with an exception in Ontario) created as a standard geographic unit for analysis of regional economic activity.

Local Service Board (LSB): is a volunteer organization that has the authority under the Northern Services Boards Act to deliver services to residents. These boards are set up in rural areas where there is no municipal structure to deliver services such as fire protection or garbage collection. Area residents vote to determine an LSB's boundaries.

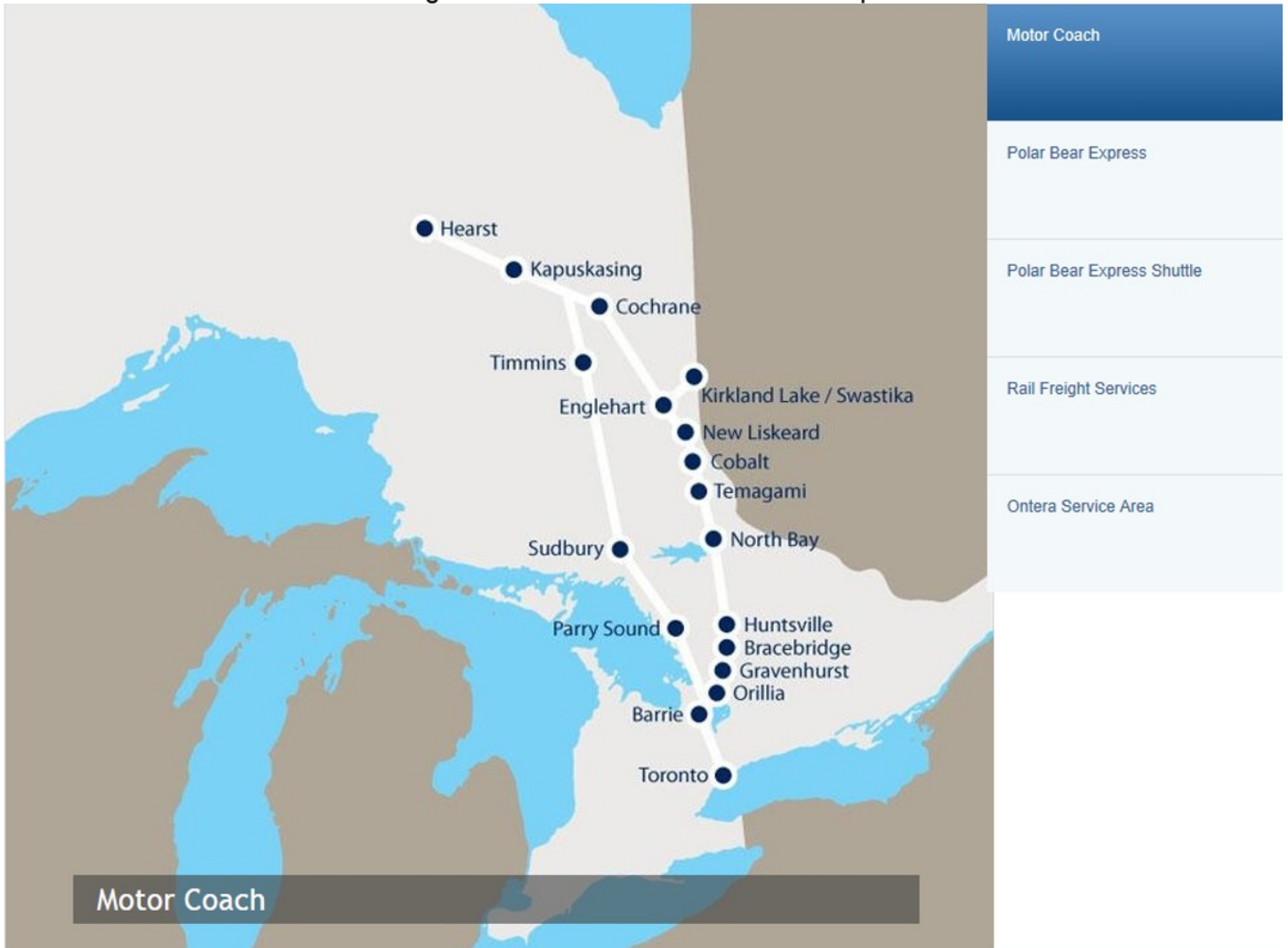
Population Centre: a minimum population concentration of 1,000 persons and a population density of at least 400 persons per square kilometre, based on the current census population count

Provinces and territories: the major political (legislated) areas of Canada.

Unincorporated Area: a region that is not governed by its own local municipal corporation but rather is administered as part of a larger administrative municipal government.

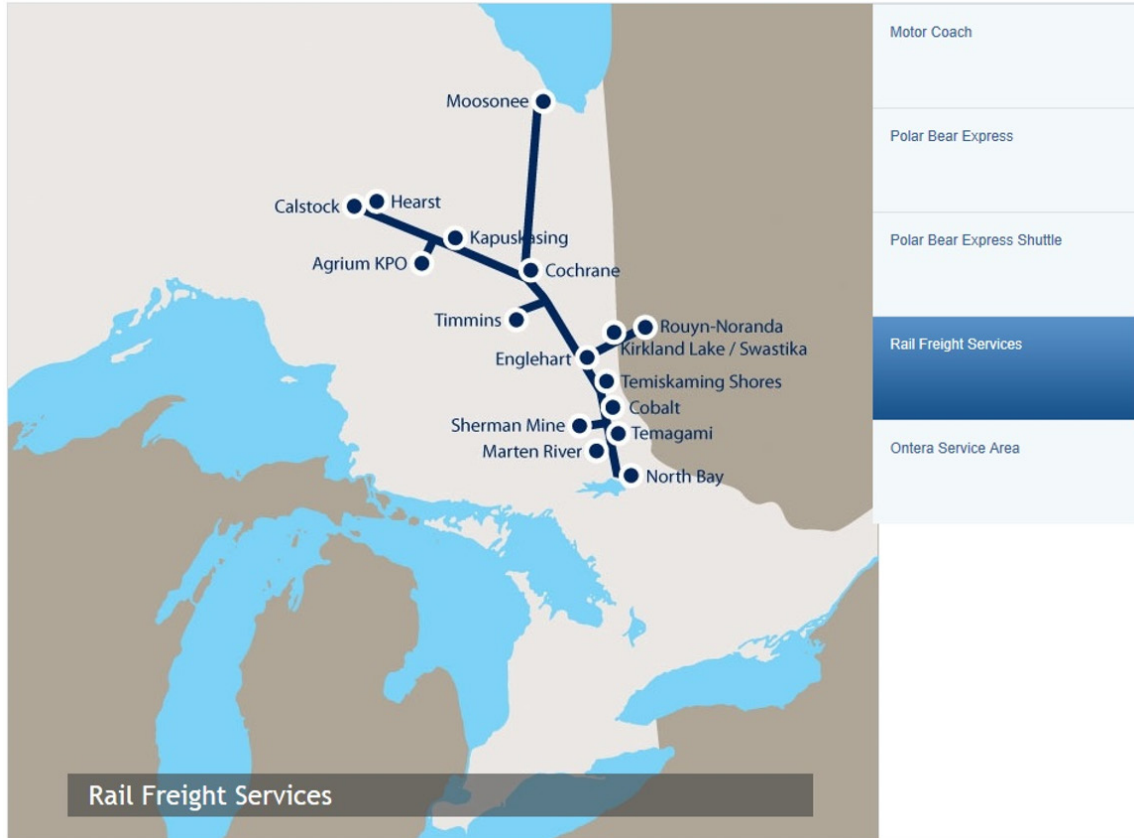
Appendix E: Company Service Maps

Figure 4. Ontario Northland Motorcoach Map



Sources: Ontario Northland (Map n.d.).

Figure 5. Ontario Northland Motorcoach Map



Sources: Ontario Northland (Map n.d.).

Figure 6. Ontario Northland Online Tickets System

Buy Tickets / Acheter des billets **Ontario Northland**

1 SEARCH 2 SELECT 3 PASSENGERS 4 PURCHASE

Select trip
Tue, September 09 2014

Details	Duration	Prices
<input type="radio"/> Departs: 7:00 AM - Sudbury Arrives: 12:30 PM - Toronto	5h 30m	adult -reserved seat:\$ 65.84
34B (09/09/2014): Sudbury (7:00 AM) -> Parry Sound (9:05 AM) -> Orillia (10:20 AM) -> Barrie (11:00 AM) -> Yorkdale (12:00 PM) -> Toronto (12:30 PM)		
<input type="radio"/> Departs: 10:15 AM - Sudbury Arrives: 4:00 PM - Toronto	5h 45m	adult -reserved seat:\$ 65.84
16 (09/09/2014): Sudbury (10:15 AM) -> Estaire (10:40 AM) -> Killarney Rd (10:50 AM) -> Alban (11:05 AM) -> Bigwood (11:15 AM) -> Pickeral River Rd (11:20 AM) -> Key River (11:30 AM) -> Byng Inlet Rd (11:40 AM) -> Britt (11:45 AM) -> Pointe Au Baril (11:50 AM) -> Shawanaga Rd N (12:05 PM) -> Parry Sound (12:35 PM) -> Horseshoe Lake Rd (12:45 PM) -> Gordon Bay (1:00 PM) -> MacTier (1:10 PM) -> Port Severn (1:40 PM) -> Waubausshene (1:50 PM) -> Coldwater (1:55 PM) -> Barrie (2:30 PM) -> Yorkdale (3:30 PM) -> Toronto (4:00 PM)		
<input type="radio"/> Departs: 4:30 PM - Sudbury Arrives: 10:15 PM - Toronto	5h 45m	adult -reserved seat:\$ 65.84
32B (09/09/2014): Sudbury (4:30 PM) -> Estaire (4:55 PM) -> Killarney Rd (5:05 PM) -> Alban (5:20 PM) -> Bigwood (5:30 PM) -> Pickeral River Rd (5:35 PM) -> Key River (5:45 PM) -> Byng Inlet Rd (5:55 PM) -> Britt (6:00 PM) -> Pointe Au Baril (6:05 PM) -> Shawanaga Rd N (6:20 PM) -> Parry Sound (6:50 PM) -> Horseshoe Lake Rd (7:00 PM) -> Gordon Bay (7:15 PM) -> MacTier (7:25 PM) -> Port Severn (7:55 PM) -> Waubausshene (8:05 PM) -> Coldwater (8:10 PM) -> Barrie (8:45 PM) -> Yorkdale (9:45 PM) -> Toronto (10:15 PM)		

< Modify Search Next >

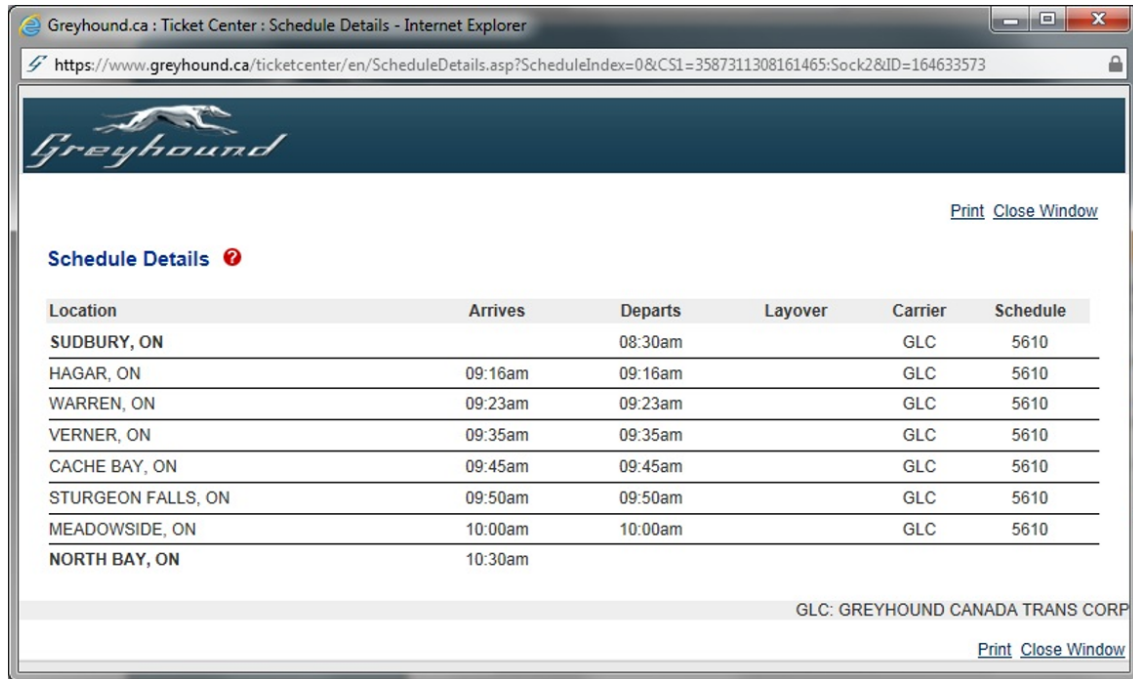
Instructions

You must travel on the date selected.
 Tickets are non refundable.
 Before arriving at the station, please print a paper copy of your ticket.

Vous devez voyager a la date choisie.
 Les billets achetés en ligne ne sont pas remboursables.
 Avant d'arriver à la gare d'autocars, veuillez imprimer une copie de votre billet.

Sources: Ontario Northland (Buy Tickets / Acheter des billets n.d.).

Figure 7. Example of Greyhound Schedule



Greyhound.ca : Ticket Center : Schedule Details - Internet Explorer
 https://www.greyhound.ca/ticketcenter/en/ScheduleDetails.asp?ScheduleIndex=0&CS1=3587311308161465:Sock2&ID=164633573

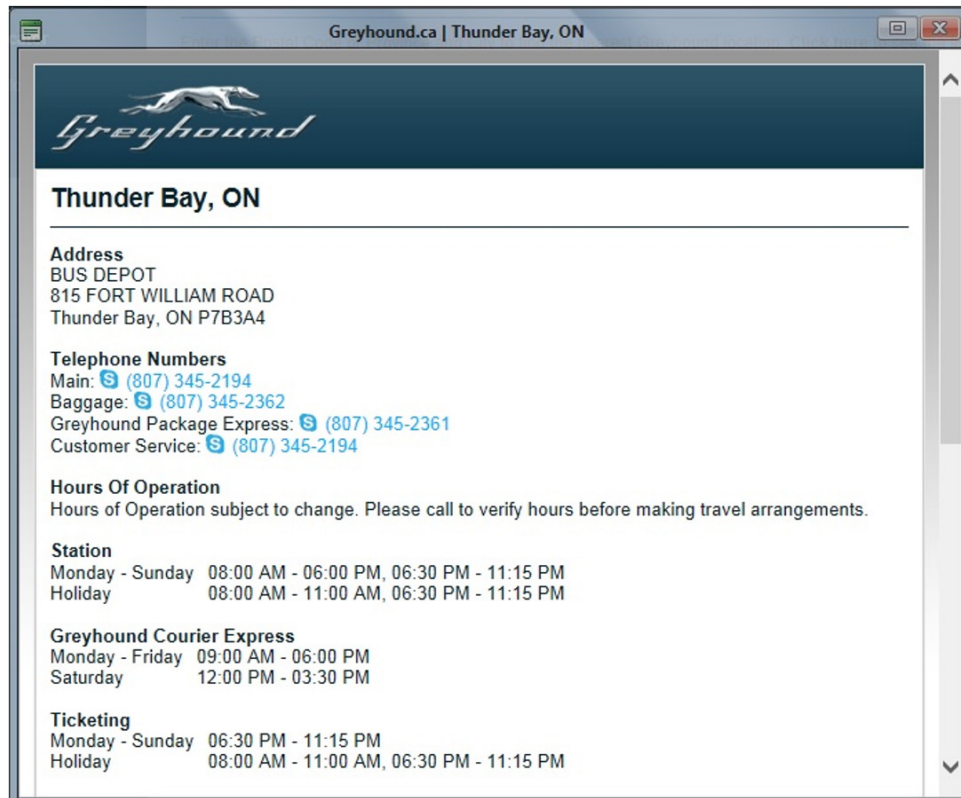
Schedule Details

Location	Arrives	Departs	Layover	Carrier	Schedule
SUDBURY, ON		08:30am		GLC	5610
HAGAR, ON	09:16am	09:16am		GLC	5610
WARREN, ON	09:23am	09:23am		GLC	5610
VERNER, ON	09:35am	09:35am		GLC	5610
CACHE BAY, ON	09:45am	09:45am		GLC	5610
STURGEON FALLS, ON	09:50am	09:50am		GLC	5610
MEADOWSIDE, ON	10:00am	10:00am		GLC	5610
NORTH BAY, ON	10:30am				

GLC: GREYHOUND CANADA TRANS CORP

Source: Greyhound (n.d.).

Figure 8. Example of Greyhound Stop



Greyhound.ca | Thunder Bay, ON

Thunder Bay, ON

Address
 BUS DEPOT
 815 FORT WILLIAM ROAD
 Thunder Bay, ON P7B3A4

Telephone Numbers
 Main: ☎ (807) 345-2194
 Baggage: ☎ (807) 345-2362
 Greyhound Package Express: ☎ (807) 345-2361
 Customer Service: ☎ (807) 345-2194

Hours of Operation
 Hours of Operation subject to change. Please call to verify hours before making travel arrangements.

Station
 Monday - Sunday 08:00 AM - 06:00 PM, 06:30 PM - 11:15 PM
 Holiday 08:00 AM - 11:00 AM, 06:30 PM - 11:15 PM

Greyhound Courier Express
 Monday - Friday 09:00 AM - 06:00 PM
 Saturday 12:00 PM - 03:30 PM

Ticketing
 Monday - Sunday 06:30 PM - 11:15 PM
 Holiday 08:00 AM - 11:00 AM, 06:30 PM - 11:15 PM

Source: Greyhound (n.d.).

Figure 9. Algoma Centrail Rail Map



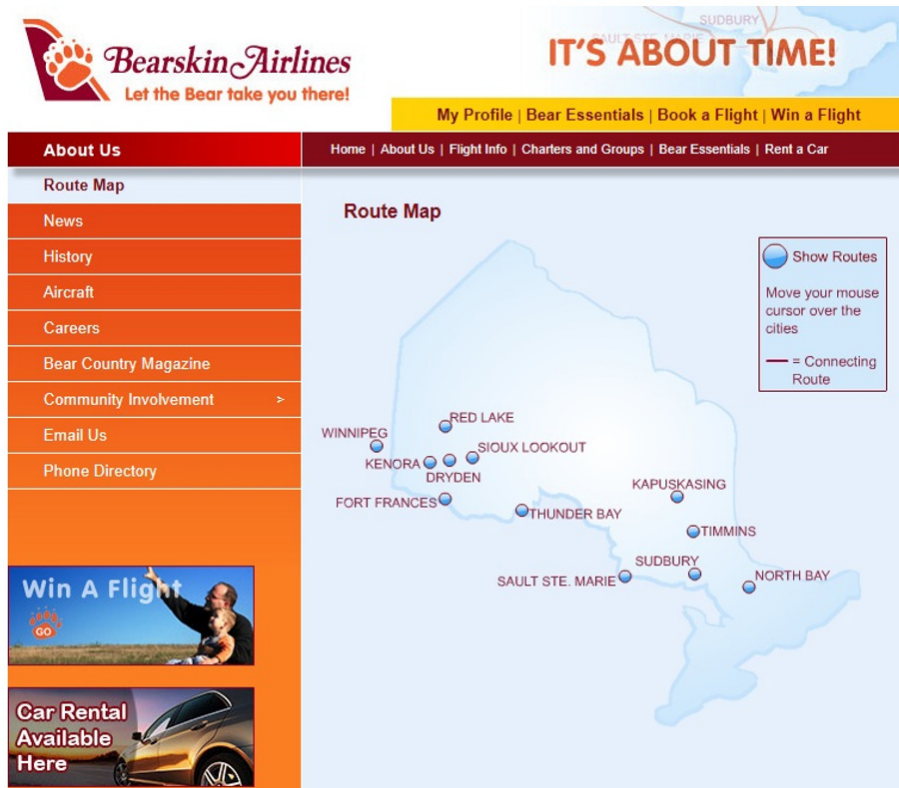
Source: Agawa Canyon Tour Train (Route Map n.d.).

Figure 10. Algoma Centrail Railway Schedule Exam
 Summer Timetable

LOCAL SERVICE		2014 SUMMER TIMETABLE				
EFFECTIVE: MAY 8, 2014 to November 4, 2014						
NORTHBOUND (631): Thursday, Saturday, Monday						
SOUTHBOUND (632): Friday, Sunday, Tuesday						
No. 631 North	Mile	Kilo	Destination		Arrive	No. 632 South
0920	0	0	Depart	Sault Ste. Marie		1810
F	14	22.7		Heyden		F
F	25	39.8		Northland (Goulais River)		F
1025	32	39.8		Searchmont		1655
1035	36	57.8		Wabos		1645
1045	42	67.3		Achigan		1630
1100	48	77.4		Ogidaki (S. Branch / Chippewa River)		1620
1110	56	90.5		Mashkode		1610
F	57	91.7		Trout Lake		F
F	62	100.4		Pine Lake		F
1130	64	104.0		Mekatina		1550
F	69	110.7		Pangis (N. Branch / Chippewa River)		F
F	71	115		Spruce Lake		F
1145	73	117.3		Summit		1540
F	75	121.8		Mongoose		F
1200	80	128.4		Batchewana (Batchewana River)		1520
F	85	137.4		Rand		F
1225	92	148.5		Montreal Falls (Montreal River)		1450
F	93	149.6		Awana - Mileage 93		F
1235	96	153.7		Hubert		1435
1255	102	165.1		Frater (Agawa River)		1420
1325	114	183.1		Canyon		1355

Source: Agawa Canyon Tour Train (Summer Timetable n.d.).

Figure 11. Bearskin Airlines Map



Source: Bearskin Airlines (n.d.).

Figure 12. Air Creebec Service Map

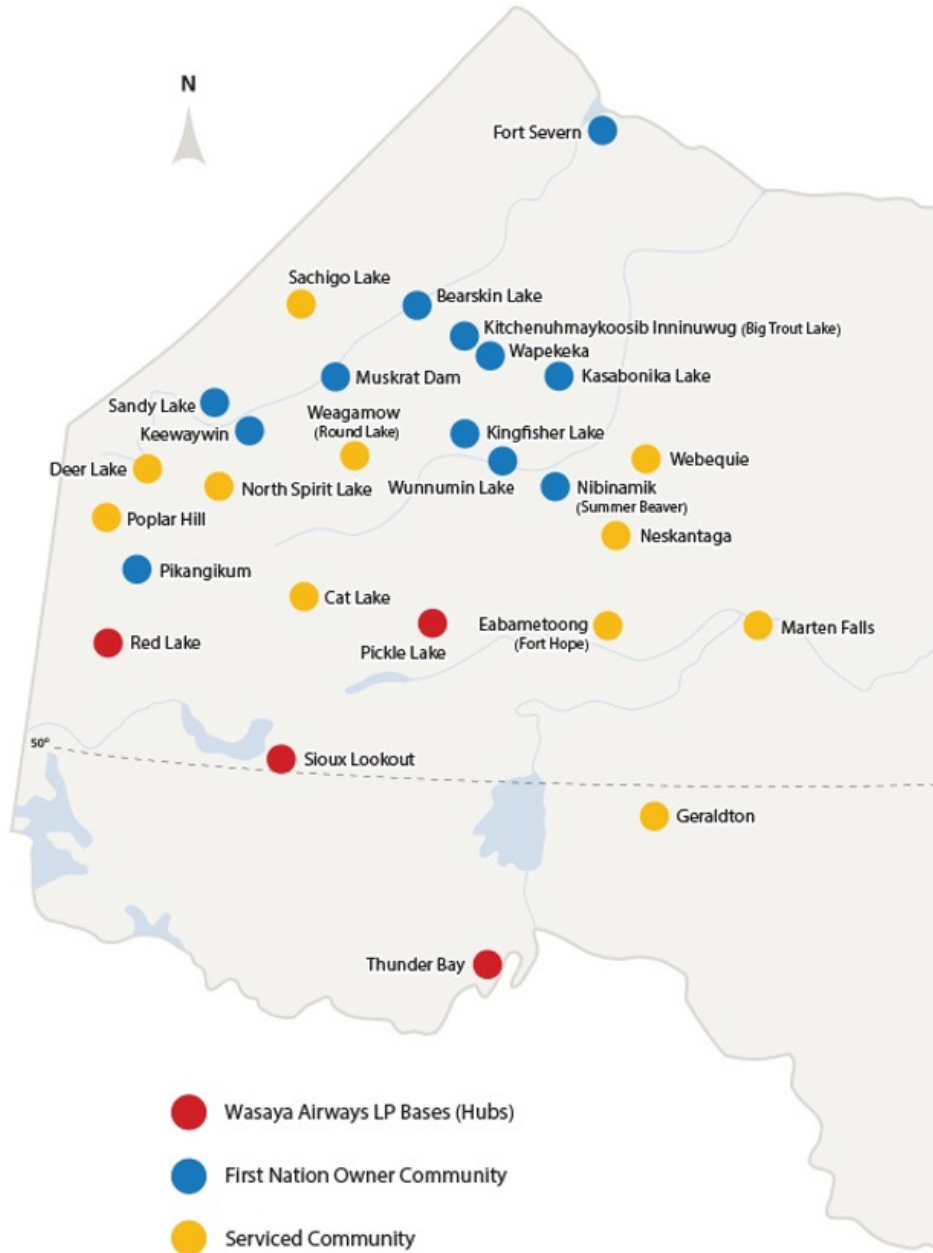


Source: airCreebec (Carte n.d.).

Figure 13. Wasaya Airlines Service Map

Destinations

Click a destination on the map below to see its flight paths.



Source: Wasaya Airways LP (n.d.).

About Northern Policy Institute

Northern Policy Institute is Northern Ontario's independent think tank. We perform research, collect and disseminate evidence, and identify policy opportunities to support the growth of sustainable Northern Communities. Our operations are located in Thunder Bay, Sudbury, and Sault Ste. Marie. We seek to enhance Northern Ontario's capacity to take the lead position on socio-economic policy that impacts Northern Ontario, Ontario, and Canada as a whole.

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