



CONNECTEDNORTH.CA

NORTHERN ONTARIO BROADBAND REPORT 2024



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About Blue Sky Net

The Blue Sky Economic Growth Corporation (Blue Sky Net) is a FedNor-funded not-for-profit organization with a mandate to support economic development and innovation through the promotion of technology adoption.

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About connectednorth.ca

Connectednorth.ca is a Blue Sky Net project that provides information resources and GIS mapping of broadband for all of Ontario with a focus on Northern Ontario.

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Blue Sky Net appreciates the support from the Federal Economic Development Agency for Northern Ontario.



Federal Economic Development
Agency for Northern Ontario

Agence fédérale de développement
économique pour le Nord de l'Ontario

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MESSAGE FROM THE EXECUTIVE DIRECTOR

High-speed broadband networks are seen as a key enabler for socio-economic development. Their roll-out has been made a priority worldwide and is considered as an investment for the future.

High speed connections allow all users, households, businesses and administrations, regardless of their size or geographic location, to benefit from enhanced and more efficient broadband services. It shapes the way companies do business, enhancing their capacities, broadening their markets. It improves household online experiences, allowing them to use multiple connected devices at the same time, benefits from faster download speeds and increasingly important upload speeds that carry online transactions.

One of the existing pillars of our current work plan is a leadership role in coordinating and facilitating broadband infrastructure projects on behalf of communities, municipalities, and Indigenous groups.

Our efforts include:

- Conducting needs assessments of Northern Ontario broadband and cellular gaps using information from Blue Sky Net's Broadband and Associated Infrastructure Mapping Analysis project (BAIMAP) down to the property parcel level.
- Providing public Ontario-wide broadband data portals and mapping through Blue Sky Net's **[connectednorth.ca](#)**, the **[Ontario Internet Access Map \(OIAM\)](#)** and the **[Ontario Broadband Resource Hub](#)**.
- Hosting community consultations and engagement sessions to gather input.
- Developing terms of reference for requests for proposals;
 - and compiling any other information required to support proposals for Provincial and Federal funding and Regional Broadband Deployment.
- Additional efforts include working with Service Providers as they engage with municipalities throughout the course of broadband project development and construction and
 - Working with the municipalities to assist in the process of developing siting policies, permitting and infrastructure data.

MESSAGE FROM THE EXECUTIVE DIRECTOR

We know our municipalities, we know our Indigenous leaders, we work with these stakeholders every day.

In the North, Blue Sky Net has integrated more than 500,000 digital property parcel files from every municipality in Northern Ontario with the latest broadband coverage data from the Ministry of Innovation, Science and Economic Development (ISED) and census data.

In general, Northern Ontario presents some unique challenges when it comes to delivering technology services to home or business (High Speed Internet, Cellular telephone service, etc.). Blue Sky Net brings together service providers, community residents and organizations, and government programs to understand why these services aren't available, and to develop a strategy to overcome these service gaps.

The internet offers access to information from every corner of the globe. Blue Sky Net is concerned about improving information and tools that will benefit Northerners specifically and so we work with stakeholders to develop common, beneficial applications that utilize ICT and provide a benefit in the lives of those who use it.

Broadband is part of cultivating a strong and diverse economy. It delivers greater educational opportunities, empowers citizens, provides opportunities for higher paying jobs, and encourages entrepreneurship in our communities.

Blue Sky Net will continue our efforts to provide quality of life and helping to create effective, connected networks for all Northerners.

Susan Church, Executive Director
Blue Sky Economic Growth Corporation

INTRODUCTION

In 2016, the CRTC updated its universal service objectives and mandated that the minimum broadband access for Canadian homes and businesses as 50 Mbps download and 10 Mbps upload (which will be represented as “50/10” within this document). According to Innovation, Science and Economic Development Canada (ISED), as of September 2023 92.9% of Ontario households have 50/10 available. However, if Northern Ontario is isolated from these statistics, 73% of Northern Ontario households have 50/10 availability as of November 2023 and that number is even smaller when you isolate the five largest communities.

Both the Federal Canadian Government and Ontario Provincial Government recognize the importance of broadband access. The Federal Government has set a goal of every Canadian household having access to 50/10Mbps by 2030 (Government of Canada, Innovation, Science and Economic Development Canada, Office of the Deputy Minister, Digital Transformation Service Sector, 2023) and the Government of Ontario has set a 2025 (Government of Ontario, n.d.) target for this level of access for every Ontario household.

Governments on both the Federal and Provincial levels are investing in broadband projects. They have both identified the economic and social importance of access to high-speed internet and as well understand the cost-linked barriers associated with developing networks for Internet Service Providers in rural and remote regions. Due to the low population density and diverse topography and geography of Northern Ontario, subsidies and unique technology solutions are required to meet the goal of 50/10Mbps broadband access for all Ontarians.



INTRODUCTION

METHODOLOGY

BROADBAND ACCESS INFORMATION

Blue Sky Net has consolidated publicly available information from both ISED's National Broadband data portal and Census Canada community data to perform an analysis of broadband availability throughout all of Ontario. This analysis utilizes pseudo-households and broadband road-segment data to provide a look at district, community and neighbourhood-level broadband access availability.

The Pseudo-Household Demographic Distribution is a geospatial representative distribution of demographic data (population and households) derived from the Canadian Census from Statistics Canada. Demography is distributed within Dissemination Blocks along roadways, providing a more accurate geospatial distribution while still aligning with published Census geographies. Pseudo-household demographics are currently used to calculate broadband Internet service availability, but are equally applicable to other disciplines requiring a spatial distribution of households or population.

ANNOUNCED AND IN-PROGRESS BROADBAND PROJECTS

Data is taken from the Ontario Connects website and open data files. Project information within this report was last updated on Ontario Connects in February 2024.



METHODOLOGY

KEY FINDINGS

While the percentage of households in Ontario are 92.9% covered with 50/10 Mbps, Northern Ontario connectivity statistics are vastly different.

- *73% of Northern Ontario households have access to 50/10 Mbps*
- *Removing the 5 biggest cities in Northern Ontario (North Bay, Timmins, Sudbury, Thunder Bay and Sault Ste Marie), the remaining households that make up just over half of the households in Northern Ontario have 52% of households covered with 50/10 Mbps*

Of the 286 communities within the Federally defined region of Northern Ontario, only 74 communities have at least 50% of households with access to 50/10Mbps broadband speeds.

Funded broadband projects in Northern Ontario are taking longer for completion than the rest of Ontario.

- *Project completion rate for Northern Ontario as of Feb 2024 is 8.9%*
- *Project completion rate for broadband projects outside of Northern Ontario as of Feb 2024 is 42%*



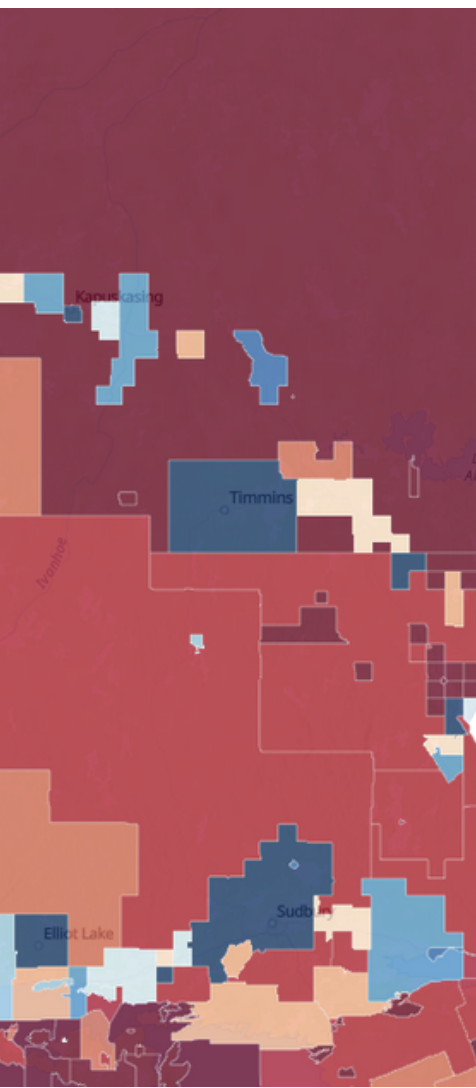
KEY
FINDINGS



NORTHERN ONTARIO BROADBAND ACCESS

Blue Sky Net has performed an analysis using the latest publicly available data from ISED's National Broadband data portal to produce a better understanding of the state of broadband access throughout all of Ontario. This public data is combined with census information to form an assessment of available broadband access by district, community, and neighbourhoods. A geospatial analysis is performed in order to combine the data and provides an estimate for the number of households receiving coverage for: 50/10Mbps, 25/5Mbps, 10/2Mbps, 5/1Mbps, less than 5/1Mbps and no service availability.

This analysis and mapping product can be viewed publicly on www.connectednorth.ca within the **Ontario Internet Access Map** and the **Ontario Broadband Reporting** tool.



It is important to note that this data only includes broadband access information of the infrastructure owners and not broadband re-sellers. A further important consideration when forming the analysis from the data provided by ISED is the exclusion of satellite and cellular internet access providers - ISED does not recognize these options as part of broadband infrastructure.

This analysis provides a snapshot of broadband access throughout Northern Ontario as measured against the 50/10Mbps standard that was set by the CRTC and is adhered to by both the Federal and Ontario Provincial governments when considering a household has sufficient broadband access.

Fig. 1 - A visual snapshot of community access levels on the Ontario Internet Access Map

NORTHERN ONTARIO BROADBAND ACCESS

Summary

The geographic boundary of Northern Ontario as defined by the federal government includes **12 districts** and within those 12 districts there are **286 communities**.

73% of Northern Ontario households currently **have 50/10 Mbps available**.

Northern Ontario **covers 89% of the land mass of Ontario**, but also has **only 6% of the population** of Ontario.

By population, Northern Ontario has **187 communities with fewer than 1,000 people according to census reporting**, (this also includes optional census reporting for First Nation communities).

Outside of Northern Ontario, population density is **~132 people per square kilometer**. In **Northern Ontario** the population density is **1 person per square kilometer**. Even within the 5 largest cities in Northern Ontario, the average population density is still only **~63 people per square kilometer**. This presents a challenge that is amplified in Northern Ontario for Internet Service Providers seeking to expand their networks as **population density is lower than larger urban centers elsewhere in the country and the business case is diminished**.

The following data summaries utilize the data from connectednorth.ca to form an analysis of Northern Ontario broadband availability by district, community and populations.

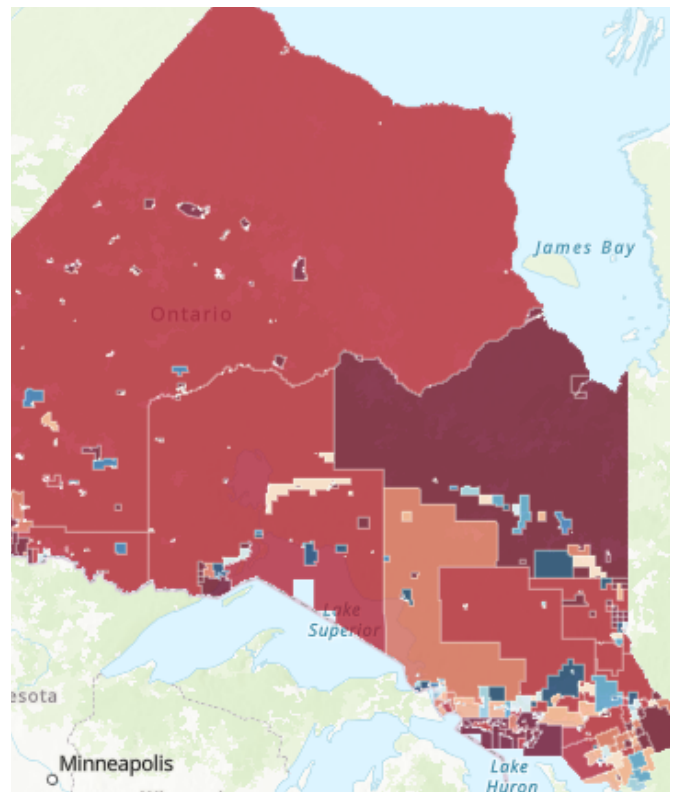


Fig. 2 - Ontario Broadband Report Tool visualizing Northern Ontario broadband access.

NORTHERN ONTARIO BROADBAND ACCESS

District Overview

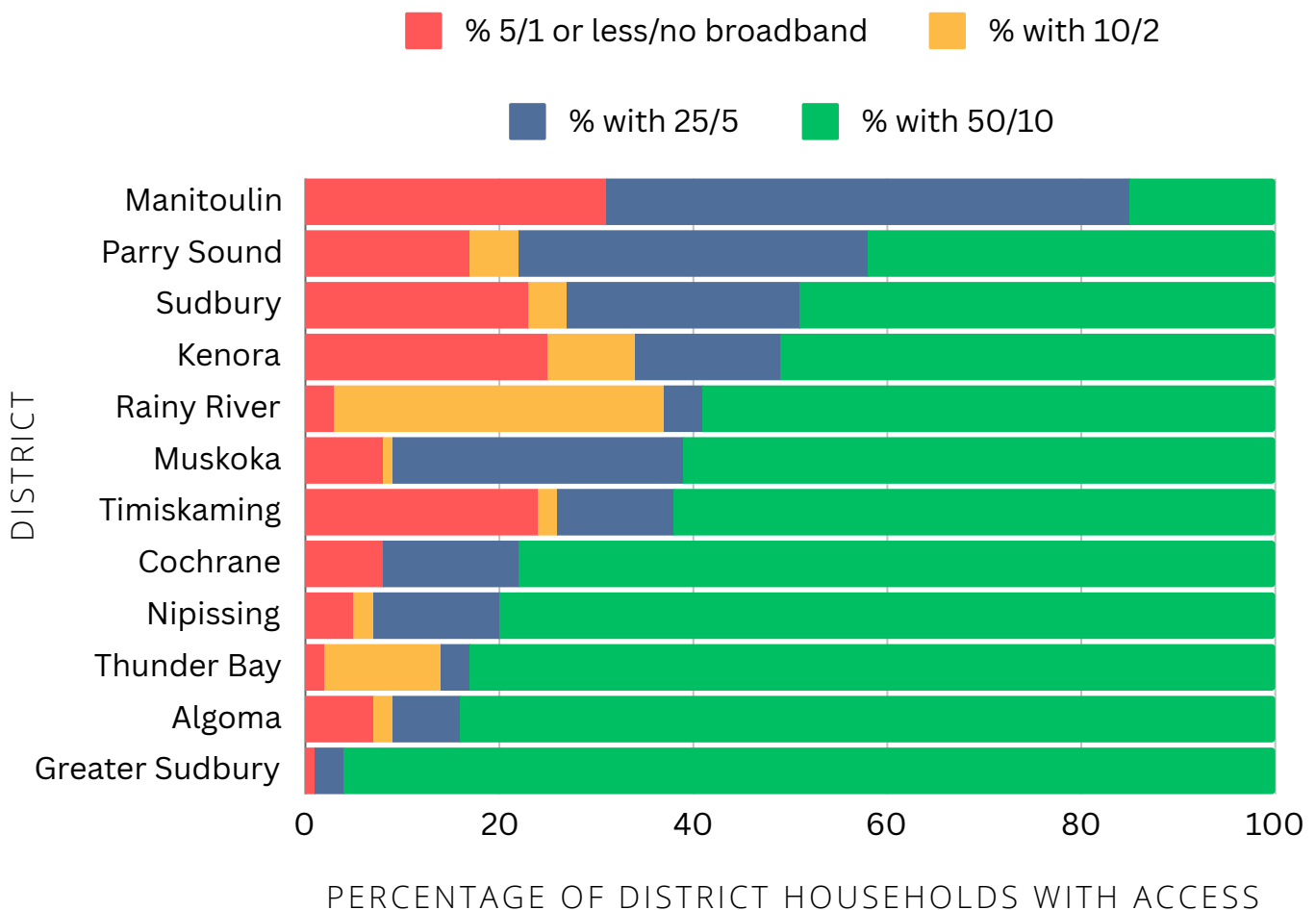
of Northern Ontario communities able to access 50/10Mbps fixed broadband.

District	# of Communities	# of Communities that have 50-74% of households with access to 50/10	# of Communities that have 75%+ of households with access to 50/10
Algoma	32	17	12
Cochrane	23	9	5
Greater Sudbury	2	-	1
Kenora	59	-	9
Manitoulin	17	1	-
Muskoka	8	3	2
Nipissing	15	4	3
Parry Sound	30	10	6
Rainy River	25	5	4
Sudbury	15	7	2
Temiskaming	26	5	3
Thunder Bay	33	10	8
TOTALS	286	71	55



NORTHERN ONTARIO BROADBAND ACCESS

District Overview - Maximum Broadband Available



NORTHERN ONTARIO BROADBAND ACCESS

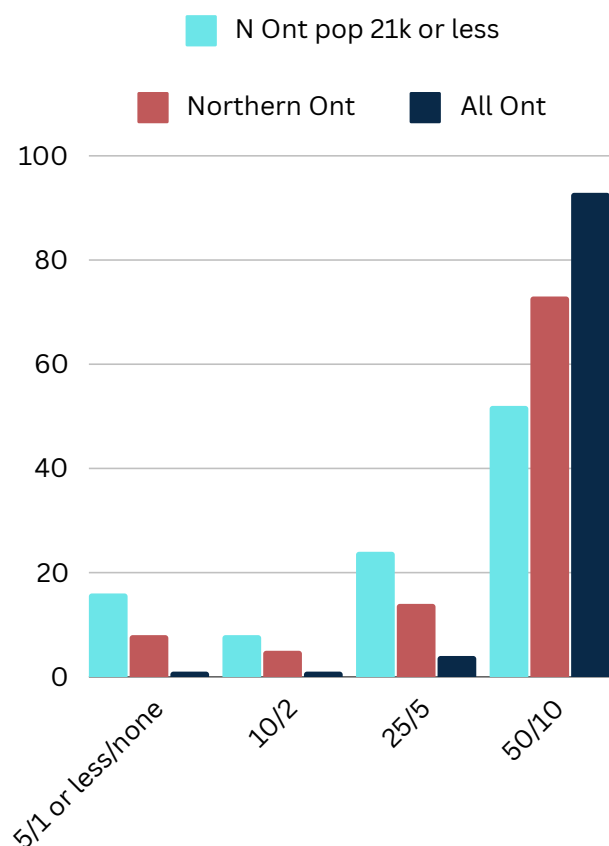
By Population

When the largest five cities in Northern Ontario (Greater Sudbury, Thunder Bay, Sault Ste Marie, North Bay and Timmins) are removed from the connectivity to 50/10 statistics, the availability of 50/10 in Northern Ontario looks vastly different. The percentage of households with access to 50/10 drops from 73% with these cities included, to 52% of household coverage with these cities removed from the data.

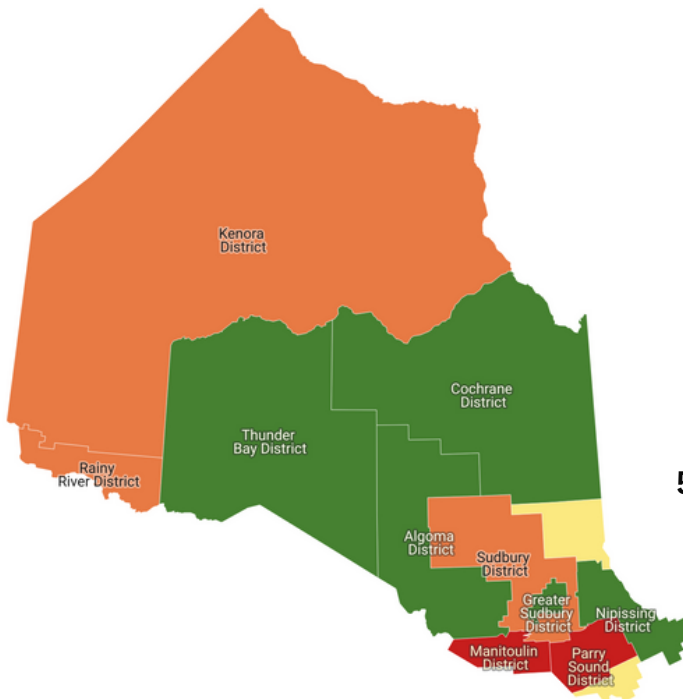
The households within the smaller communities make up just over half (54%) of the households in Northern Ontario. Meaning more than half of Northern Ontario has only 52% of households covered with 50/10 Mbps.

With low populations across widespread landmass, population density correlates with the availability of 50/10 broadband infrastructure.

It is important to ensure we look at the smaller communities on their own, as the larger populated areas can skew the picture of the connectivity situation in these smaller communities that make up more than half of the households in Northern Ontario.

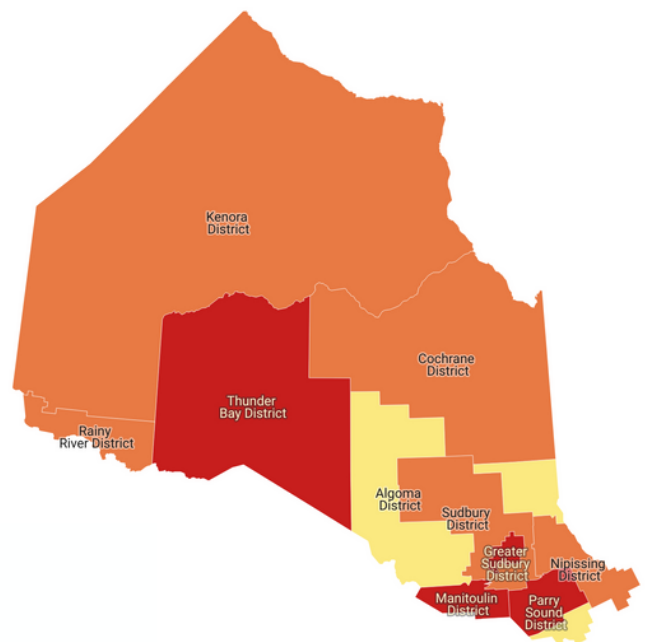


50/10 Mbps Household Availability by District

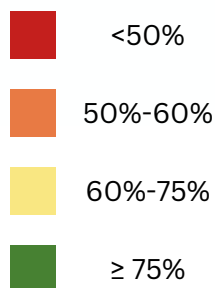


Broadband availability of 50/10 looks much different when the largest cities are not included within the statistics.

50/10 Mbps Household Availability by District 5 Largest Cities Removed



Percentage of Households with 50/10 Mbps



ANNOUNCED, IN-PROGRESS & COMPLETED BROADBAND PROJECTS

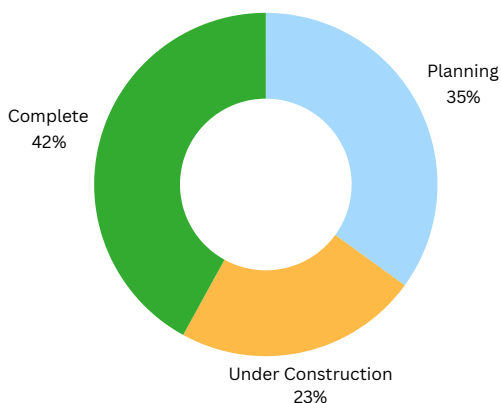
Both the Canadian Federal Government and the Ontario Provincial Government have committed to ensuring every household in Ontario has access to 50/10Mbps fixed broadband infrastructure. The Federal Government has set the date of 2030 for all of Canada and the Ontario Provincial Government has committed to every Ontario household by 2025.

To reach these connectivity targets, the Federal and Provincial governments have announced financial contributions of over \$2.8 billion for Ontario broadband projects, \$1 billion of the Ontario broadband funding has been allocated to Northern Ontario. The Ontario government has committed to over \$4 billion in funding for Ontario broadband projects.

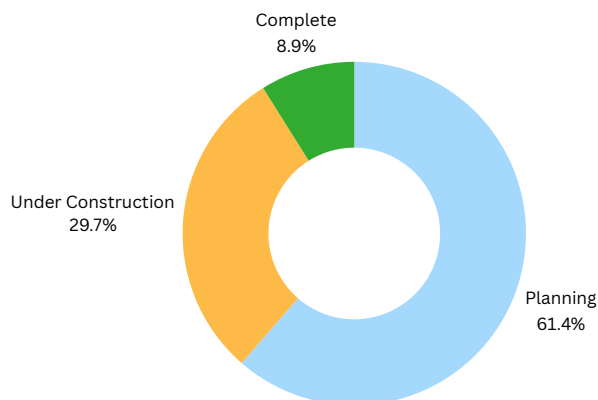
Projects are tracked and reported in three stages: Planning, Under Construction, and Complete. The goal for Ontario is to have all funded projects completed and all households covered with 50/10 Mbps by 2025. Progress on funded projects in Northern Ontario have been slower to complete than those in the rest of Ontario.

Broadband Projects Status

Status of Projects Outside Northern Ontario



Northern Ontario Projects Status



CLOSING REMARKS

Blue Sky Net recognizes that high-speed broadband is not a "one solution fixes all" landscape and that a diverse array of technologies will be required in order to ensure the 50/10Mbps broadband access target for every household is achieved. There are many benefits and advantages to living in Northern Ontario - from its thriving economy and diverse communities to its natural wonders, lakes, forests, and the hills that are formed by the Canadian Shield. The geography and topography of Northern Ontario are both unique and beautiful, but as well present challenges to network developers as the hard bedrock is costly to blast through for fibre and cable and our forests and hills may block line-of-sight technologies such as fixed-wireless broadband. It is positioned by Blue Sky Net that a diversity in technology deployment for broadband will be required in order to meet the 50/10Mbps targets that both the Federal and Provincial governments have agreed to.

The majority of regions throughout Northern Ontario still do not benefit from 50/10Mbps access and this issue is further exacerbated when viewing communities further away from urban centres. One of the major contributing factors in this digital divide between rural and urban centres is the cost of developing fixed networks in areas where the return on investment for Internet Service Providers is diminished due to the longer distances between households and communities, lower population density and the cost of overcoming geographic challenges.

Optimism in both the present and future for Northern Ontario broadband.

Both the Federal and Provincial governments have made high-speed broadband access a priority and significant investments into infrastructure throughout Northern Ontario have already been made. It is encouraging to see investments being made by governments to help subsidize the cost of developing broadband networks in areas where Internet Service Providers require financial support to access communities and households.

Blue Sky Net is continuously committed to mapping Northern Ontario broadband and cellular access to the property level and monitoring projects in order to help support all efforts to reach as many households as possible.

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