

How the Chippewas of Nawash are Bridging the Digital Divide

2023



The concept of connection is a complex one for the Chippewas of Nawash Unceded First Nation. For over 250 years, the Saugeen Ojibway have compromised and adapted. Their story is one of resilience and perseverance.

Prior to the arrival of the British, the Saugeen Ojibway occupied and utilized approximately 2 million acres of land. The Royal Proclamation of 1763 was created to protect the lands occupied by the First Nations of North America to decelerate European settlements and establish rules for the purchase and surrender of native lands with the Crown.

In 1836, the Saugeen Ojibway signed the treaty No. 45 ½ and proceeded to surrender 1.5 million acres of the rich lands of Upper Canada. In 1847, Queen Victoria issued a Royal Declaration confirming the lands of the Saugeen Ojibway as being the Saugeen Peninsula, roughly defined by a line between Southampton and Owen Sound, as well as any islands within 7 miles of the coast. In 1851, the Government of Canada and the Saugeen Ojibway signed the Half Mile Strip Treaty, and an additional 4,000 acres were surrendered for a road to join Owen Sound and Southampton.

Eurosettlement continued to accelerate, and Treaty No. 72 was signed in 1854, which had the Saugeen Ojibway ceding approximately 500,000 additional acres of the Saugeen Peninsula. Proceeds of these lands were to be held in trust. The remaining land base consisted of Chief's Point, Saugeen Reserve (Owen Sound), Colpoy's Bay Reserve (Big Bay), Cape Croker Indian Reserve No. 27, the fishing islands of Lake Huron, Cape Hurd Islands, and three islands at the entrance to Colpoy's Bay.

The 10,000-acre Nawash Reserve was surrendered in 1857. The residents were to move to Cape Croker. Less than four years later, the Colpoy's Bay Reserve of 6,000 acres was surrendered, and residents relocated to Cape Croker, Christian Island, and Southampton. Between 1885 and 1899, the Fishing Islands, Cape Hurd Islands of Lake Huron, Griffith Island, Hay Island, and White Cloud Island on Georgian Bay were also surrendered.





Saugeen Ojibway Nation Territory

In 1968, approximately 90 fishing islands in Lake Huron were returned to the Saugeen Ojibway.

Saugeen First Nation and Chippewas of Nawash Unceded First Nation acted together as the Saugeen Ojibway Nation (SON) to launch two legal claims. The first claim was filed in 1994 regarding Treaty 72, and the second was for Aboriginal Title in 2003. On 29 July 2021, the Ontario Superior Court released its decision and denied the Aboriginal Title Claim. However, it granted many of the terms of the Treaty Claim. The appeal process is ongoing. The Chippewas of Nawash believe that Kitchi-Manidoo put the Anishinabek on the peninsula to care for the land and water, and the appeal represents the honoring of their responsibility.

Community

Community has a special import to the Nawash akin to family. Everyone is related or connected in some way, and that binds members together.

In the territory, there are just under 300 households and 800 residents, with a total band membership of approximately 2,700.



Gimaa Kwe, Veronica Smith, Chief of the Chippewas of Nawash Unceded First Nations, said, “We are proud to be part of the Three Fires Confederacy between the Ojibway (Chippewas), Odawa, and Potawatomi Nations. We have held this land for time immemorial.”

“We are surrounded by the bluffs and the water, and many of our traditional medicines are grown here. We have a deep spiritual connection to the land, and our people have a responsibility to protect it”.



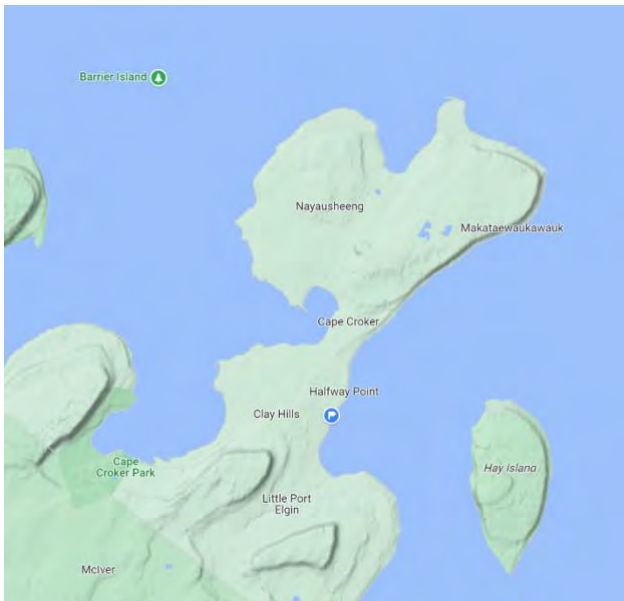
Gimaa Kwe Veronica Smith, Chief

On 21 January 1992, Cape Croker Indian Reserve officially changed their name to *Neyaashiinigmiing*, which is Anishnabemowin (Ojibway) and loosely translates to a point of land surrounded by water on three sides. In addition to being surrounded by water, there are rocky bluffs that form part of the Niagara Escarpment that creates a talus upon entering the community.

Neyaashiinigmiing is set aside for the entire band membership and today consists of 6,253 hectares (15,451 acres). Band lands are estimated at 4,035 hectares, while allocated lands are about 2,218 hectares.



The peninsula-shaped land base offers a shoreline of approximately 48 km along Georgian Bay; however, there is no thoroughfare of traffic to other destinations, which creates barriers of a different kind.



Topographical map of the area

“The community is at the end of a road, and it’s not on the way to anything. Economically, it is a challenging place to live as there are limited income opportunities and a predominantly outgoing economy,” shared Michael Johnston.

As a band member and one of the only practicing Ojibway lawyers in the area, Johnston has been an advocate for the community and part of the initial team working to improve connectivity to Neyaashiinigiing.

The Nawash community is currently connected to a fixed wireless system that provides local Internet services through Asymmetric Digital Subscriber Line (ADSL) and Long-Term Evolution (LTE) data links. Both types of services are limited, with the fastest available speeds in the community estimated at 15 Mbps download and 5 Mbps upload.

Let’s put that in context. You need at least 4-8 Mbps of Internet speed to watch pre-recorded shows and movies and 10 Mbps or more to stream live TV. 4K streaming requires speeds of around 20 Mbps per user. So, if three people in your home are streaming 4K video, a minimum Internet connection of 60 Mbps is required.

“We have a slow radio-based Internet, or an expensive satellite-based Internet, or both slow and expensive cellular-based Internet. People in the community are very limited in how they can connect to

the rest of the modern world. The impact ranges from children and their access to education to businesses being able to offer services online or promote their business online. We are in an information age now, and it is no longer possible to be disconnected in the modern world. So many services and opportunities are now exclusively available online”.



Michael Johnston, Lawyer

Johnston has a unique insight into the issue as not only a lawyer but previously a computer scientist. He became a lawyer to be able to offer services to his home community, which he is unable to do. “So much of what the legal profession does today is done online. There is not an appropriate infrastructure in the community to be able to offer legal services. If stable high-speed broadband were available, I would move my offices to Neyaashiinigiing”.

Beyond economic development is access to healthcare resources, services, and support.





Cynthia Porter, Health Manager

Cynthia Porter is the Manager at the Health and Wellness Centre provides home and community support for everything from mental health and harm reduction to medical transfers for care at the nearest hospital a 30-minute drive away. Currently, the Wellness Counselling Team is without a facility. There are six unfilled positions primarily due to housing shortages.

“We cannot attract staff as we cannot advertise available positions. If there are no staff, there are reduced programs available to the community,” stated Cynthia.

There are significant issues with all social determinants of health, and the healthcare team relies heavily on the Internet to provide care.

“Any purchases of supplies or expertise we want to tap into require Internet. We have attempted to use Ontario Telehealth to provide care to residents, but our Internet is not stable. We have software that helps manage the integration of health programs between agencies, but we can’t use it. If we have two people on at once, we get kicked off,” Cynthia continued.

Without the Internet, there is no continuity of care. If a patient is discharged from the hospital, there is no way to coordinate interagency care by record sharing.

“We are in a crisis with opioid addictions. These individuals are deterred from getting support because of the stigma of having to come into the Centre in hopes of an Internet connection. To avoid this, clients are going without mental health and substance abuse help”.

Healthcare is one piece of a larger puzzle, all impacted by access to the Internet. Education is another barrier the community faces.



Board of Education Office

For the past 17 years, Judy Nadjiwan has worked for the Board of Education and currently oversees all student services, including childcare, as Administrator. The Board of Education offices do not have stable, reliable Internet. Geographical isolation, climate, and dense vegetation make connectivity a challenge. You add historic trauma and a lack of trust in education as an institution, and it is a challenge to support young people trying to forge a new path for future generations.



Anishinaabemowin word "weweni" expresses thanks, exactitude, ease, and sincerity. The equivalent of slow down children at play on an otherwise uninhabited dirt road.



“Our students do not have the same opportunities students in a neighboring city just 20 km away do because they have fiber, and we do not even have a stable Internet connection,” stated Nadjiwan. “Learning today is so reliant on the Internet that it is very challenging for students to access curriculum and complete assignments. Layer on the impact of the pandemic and the requirements of remote learning, we were helpless to support students and their desire to learn. Students lost an entire year, opting out of school feeling unsupported and unvalued by the system”.

The impact goes beyond students and includes staff and the ability to access resources and training for professional development. “We have been struggling to fulfill an open position for the teaching of our Anishnabemowin (Ojibway) language. We have opportunities to connect with other resources across the province to potentially fulfill this remotely. But, without a reliable Internet connection, this is not a viable option. The lack of connectivity is adversely affecting cultural continuity and the ability to preserve our heritage. If we were to have fiber in the community, the opportunities would be endless”.



Judy Nadjiwan, Board of Education Administrator

Sparrow is a Youth Worker Assistant in Neyaashiinigiing and has struggled to perform her job duties because of the lack of Internet connection. “Youth of the community use social media platforms to maintain relationships. Without a reliable Internet connection, it is much harder to overcome the isolation we all experience,” said Sparrow.

Not having sustainable Internet affected her high school experience and resulted in her dropping out. To finish her diploma now, she would need to go off the reserve to access her education in a school located an hour away. The financial implications of this are untenable for her, which impacts her career opportunities and her belief in a positive future.



Sparrow McLeod, Youth Worker Assistant

Digital Divide

The Nawash community is currently connected to the Internet by microwave radio (broadband ADSL, wireless, and cellular) or satellite solutions.

Radio-based service requires a line of sight to the cell towers to be stable and reliable. As a result, residents need to install expensive towers or masts to access the signal with no guarantee of effectiveness. Add to this the escarpment bluffs and other topographical features, inclement weather conditions, and dense vegetation; the line of sight is rarely accessible.

These same towers are used for emergency responders within the community.

Satellite-based Internet is also available in the community. However, speed and affordability are limiting factors for equitable access.





Microwave radio-based tower serving Nawash

The lack of stable and reliable Internet not only impacts education, health care, and economic growth, but it also affects the community's ability to have clean drinking water.

In January 2019, a boil water advisory came into effect for Neyaashiinigmiing and was deemed a long-term advisory the following year. In the fall of 2021, Indigenous Services Canada funded the construction of a new water treatment plant and upgrades to the existing water distribution system.

The treatment plant will improve access to safe, clean drinking water for 264 homes and 20 community buildings and end the long-term drinking water advisory. The remote booster pumping stations will, however, rely on stable and reliable Internet to measure things like flow rate, pump speed, and water quality metrics such as pH level, conductivity, turbidity, salinity, biological oxygen demand (BOD), and chemical oxygen demand (COD), ammonia nitrogen levels, and others.

The need for stable and reliable high-speed Internet is imperative for the safety and well-being of the community.





Water Filtration Plant Construction Progress

The Journey to Connection

Grey Bruce Telecom (GBTel) is a local Internet Service Provider (ISP) established in 2005 in the town of Allenford in Bruce County. They have built and operated wireless and fiber optic networks in Grey and Bruce Counties. GBTel is the ISP for the Chippewas of Nawash and serves the majority of the community with a microwave radio-based or satellite Internet option.

When GBTel brought the opportunity to the Band Council to install Fibre-to-the-Home (FTTH) in Neyaashiinigiing, it was recognized as an opportunity not only as a service user but potentially as a service owner and operator. Leadership did not hesitate on the partnership. A joint proposal was submitted to SWIFT, a regional broadband expansion project initiated by the Western Ontario Warden's Caucus and delivered in partnership with member municipalities and the government of Ontario and Canada.

Focusing on enabling greater digital equality between rural and urban populations, SWIFT subsidizes the construction of open-access high-speed networks to encourage service providers to expand broadband infrastructure in underserved rural areas. Funding was approved, and in September of 2023, GBTel began the installation of over 30 km of fiber optic lines to serve approximately 297 homes and businesses in the community.



“Increasing access to high-speed Internet is pivotal to supporting economic growth, creating new jobs, and boosting social opportunities in communities,” said Barry Field, Executive Director of SWIFT. “With work now underway to bring greater high-speed fiber-optic connectivity to the residents and business owners in Chippewas of Nawash Unceded First Nations, SWIFT is proud to partner with GBTel and our community partners in another step in the right direction to ensuring equitable access to high-speed Internet service throughout our region.”

The installation will result in upgraded radio-based backhaul technology and new service levels of up to 50Mbps download and 10Mbps upload.

The investment in the FTTH infrastructure in Neyaashiinigmiing is an investment in future cultural, economic, and educational growth.

At the conclusion of the 7-year fiber optic project, the Chippewas of Nawash will own the FTTH network. Control over the FTTH infrastructure creates a number of business opportunities and the potential to significantly stimulate local economic growth.

“I really appreciate the investment that is being made on our behalf by the Internet Society to have affordable and reliable Internet in our community. We struggle to connect with the outside world, and we want to protect the sustainability of our culture, heritage, and traditions.” - Gimaa Kwe.

Mike Earl is the Senior Administrative Officer of the Chippewas of Nawash Unceded First Nation and a Champion of the Community Network initiative. “We are hopeful that the project will bring access to the Internet in an equitable way across the community. Up until this time, the service guarantees have not been equal. We want all households and businesses in the community to have equal opportunity to benefit from Internet access.”





Mike Earl, Senior Administrative Officer Chippewas of Nawash Unceded First Nation

“The Chippewas of Nawash have almost two thousand band members that live off the reserve across Canada and overseas, but they all value their connection to the community. By broadening our access to Internet services, we help ensure that those bonds of culture, family, and tradition can be maintained despite any distances.”

Internet access in this modern age is the tie that binds communities together, and there are many other Anishinaabe communities that share common cultural traditions and heritage values. The Chippewas of Nawash want to extend relationships to share, learn, and discuss big issues and challenges they face that many other Canadians take for granted.

Building Capacity

Recognizing the significance of the need of the Nawash community to obtain reliable, affordable, high-speed Internet connectivity for everything from education to clean drinking water prompted the Internet Society (ISOC) to get involved through the support of the National Research Council of Canada’s Industrial Research Assistance Program.

For 30 years, the Internet Society has been at the forefront of Internet education, delivering technical and policy training, organizing conferences, and disseminating research findings and best practices to the global Internet community. This work builds capacity around the world to bring the Internet to the



unconnected and keep it open, globally connected, secure, and trustworthy. From 2013 to date, the Internet Society has trained over 100,000 people worldwide.

In 2017, the Internet Society organized the first annual Indigenous Connectivity Summit (ICS), a unique event focused on connecting Indigenous communities in North America to the Internet. Every year since, the ICS has brought together diverse stakeholders – including community network operators, Internet service providers, researchers, policymakers, and Indigenous leadership and community members – to support Indigenous communities in connecting themselves to affordable, high-quality, and sustainable Internet. The ICS provides practical, hands-on training by and for Indigenous communities, creates opportunities for stakeholders to build relationships with each other to share their knowledge and experience, and highlights how Internet access can support social and economic development.

The Chippewas of Nawash were one of six Indigenous communities across the province invited to participate in the Community Broadband Networks for Rural and Remote Indigenous Communities pilot project. Of those six communities, three were selected to receive additional education and training on the development and deployment of Community-Based Networks (CBNs) in Indigenous communities in Ontario.

Nawash was one of the three communities selected. The other two communities were Whitesand First Nation and Aroland First Nation.



Beverly Nadjiwon, Council Member, and Priscilla Ashkewe, Level 2 Training



Building digital fluency in the community is critical. The Internet Society worked with local leadership and stakeholders in all three communities to deliver a series of training sessions focused on enabling local community members to be an active part of knowledge sharing and capacity building.

Over 30 people from all three Nations were trained in the basics of community networks and understanding the lingo.



Hands-on Crimping Training at the Nawash Unceded First Nation Band Office

“I now understand the difference between wireless and fiber-based community networks,” said Beverly. They (Internet Society) recognized our tradition of storytelling and facilitated the three Nations being able to share their experiences with the process of setting up a network and some of the challenges and risks they encountered and how they handled them. There are many regulatory considerations and hidden costs, so as a Band Council Member, I feel more confident in advocating for funding and what kinds of expertise we need to do it.”

“We need to build capacity in our community and provide training so we can look after the network once we have it installed. It will open a whole new world for us.”

Tibby Johnston is a band member and Supervisor of an Indigenous Child Protective Service Agency. “We were approached by a service provider and told we had to install a satellite at our own expense to receive Internet. The signal bounced off the tower that has since broken, and the service provider is not going to repair it, so now, we have no Internet. It has impacted my ability to do my job. I must constantly be available for my staff, that are often in crisis response scenarios. We have virtual monitoring meetings, which I cannot do, so I have to leave the community in order to support it.”

She heard that the training was happening through the paper-based community newsletter and wanted to learn more about the subject.



Tibby Johnston

Now, Tibby feels confident that she better understands what is involved in creating a Community Network and was proud to have crimped her own wire and got a positive test reading on the training gauge.

What's Next?

The Chippewas of Nawash continue to seek funding opportunities to bring a Fibre Optic Trunk Line as a backhaul to the community for a Fibre-to-the-Network (FTTN) connection. Once a backhaul over fiber reaches the community, Gigabit Internet speeds become possible, which would open limitless potential for this indigenous community to thrive.

