

Chapter 5

Technology

Individuals increasingly rely on technology to connect them to their workplace, schools, community, family and friends as well as products, services, telehealth, and informationb which includes government information. Technology has the potential to promote citizen involvement in the community and to increase social connectivity. Telecommunications is also a critical infrastructure need for businesses. Businesses are increasingly relying on internet access for data gathering, online commerce, marketing, and video conferencing. As the community demands more information and resource sharing and as the number of integrated voice and data services continues to grow, businesses may be constrained by telecommunications service if it does not expand.

Today, high-speed internet service is typically provided through broadband. Broadband is the provision of a high-speed connection to the internet via the transmission of data through wide bandwidths, allowing for multiple signals to be transferred at once, as opposed to dated dial-up technology where only a single-line of data can be transferred. Broadband internet access is always on and is faster than dial-up access. The Federal Communications Commission (FCC) defines broadband as any of the following high-speed technologies: fiber, cable, fixed wireless, or satellite.

Existing Internet Service Conditions

Local government's role in promoting technology comes in a few ways: 1) to provide an even playing field for businesses and residents to succeed through accessible government information, 2) by allowing right-of-way access and high structure access for infrastructure development, and 3) provide free access to high-speed internet for everyone through computers and Wi-Fi networks at public places such as libraries, schools, and City Hall.

When examining internet service conditions within the City, it is important to measure the availability of broadband, the affordability of broadband, and broadband adoption rates. The availability of broadband can be measured by the percentage of broadband serviceable locations that have access to broadband meeting federal standards. Broadband affordability is measured by identifying an area's affordability threshold and comparing it to the surveyed minimum cost of broadband. Broadband adoption rates are measured through the percentage of serviceable locations with an internet subscription.

The **Public Service Commission of Wisconsin** (PSC) tracks current broadband conditions within Wisconsin. The PSC maintains maps showing the current provision of broadband and also maintains a broadband almanac which shows data on availability, affordability, and current broadband adoption rates. Maps and the broadband almanac can be accessed at PSC's Wisconsin Broadband Office website: <https://psc.wi.gov/Pages/ServiceType/Broadband/BroadbandMaps.aspx>.

Broadband Availability

The current standard for reliable broadband internet access is defined by the FCC as internet access with a download speed of 100 mbps and an upload speed of 20 mbps. Generally, these speeds are the minimum speeds where video streaming and a few in-home devices can work simultaneously. However, higher internet speeds are becoming increasingly important as broadband demand and data traffic rates continue to increase.

Almost every broadband serviceable location within the City of Rhinelander has access to reliable broadband, as over 99 percent of the City's serviceable locations currently have access to broadband that meets the current federal standard. Most locations within the City have access to broadband that exceeds this standard. According to data provided by the PSC, the City as a whole had an average download speed of 606 mbps and an average upload speed of 25 mbps in 2025.

As mentioned earlier in Chapter 4, there are several Internet Service Providers offering service within Rhinelander. Fiber and cable providers serving the area include Spectrum and Frontier. Satellite providers serving the area include Starlink, Bug Tussel Wireless, Hughes Net, and ViaSat.

Broadband Affordability

The PSC has found that the cost of broadband is the most significant barrier to broadband adoption for households. In an effort to define affordability, the PSC has established the reasonable cost threshold for a household to spend on broadband at 1.17% of their monthly gross income. Based on this threshold, the monthly cost of broadband in the City of Rhinelander needs to be \$49.17 or lower in order to be considered affordable for the average household.

According to the PSC, the surveyed minimum broadband cost within the City of Rhinelander was \$55 per month in 2025, which is higher than the reasonable cost threshold identified by the PSC for Rhinelander. This indicates that there is a broadband affordability gap for the average household within the City. The PSC's **Internet Discount Finder** can help eligible households find discounted internet services: <https://apps.psc.wi.gov/InternetDiscountFinder/>.

Broadband Adoption

The PSC measures broadband adoption rates by measuring an area's Take Rate. The Take Rate is the percentage of serviceable locations with a served plan available that opt to purchase an available service plan from an Internet Service Provider (ISP).

According to the PSC, the City of Rhinelander had a Take Rate of 80 percent in 2025. This indicates that 80 percent of broadband serviceable locations with access to broadband service within the City opted to purchase an available service plan. This indicates that there are barriers to adoption such as affordability, device access, difficulty communication with service providers, lack of awareness of assistance programs, a lack of digital literacy and skills, and an overall lack of interest in having internet access that exist within the City.

Local Facilities with Public Wi-Fi

Providing public Wi-Fi is one way to help provide residents with access to high-speed internet. Listed below are some places in Rhinelander that offer public Wi-Fi:

- Rhinelander District Library
- Rhinelander School District
- Nicolet Technical College
- City Hall
- ArtStart
- Various Downtown café's
- Various fast-food locations
- Various Hotels

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Goals, Objectives, and Policies

Goal 1: Promote access to affordable broadband service in Rhinelander.

Objective 1: Allow right-of-way access and high structure access for technology infrastructure development.

- a. Implement a joint trench use policy to reduce the number of repeated excavations for the installation and maintenance of communications and utilities infrastructure in public rights-of-way.
- b. Share Rhinelander’s capital improvement programs with utility and telecommunication companies.
- c. Require coordination between road and utility construction projects, and restrict the frequency of road excavations.

Objective 2: Work to increase broadband internet usage among businesses and in the community.

- a. Cooperate with local partners such as Nicolet Technical College, Oneida County Economic Development, and the School District of Rhinelander to address barriers such as a lack of digital skills and a lack of awareness of assistance programs available that might be holding residents, businesses, and workers back from using the internet.
- b. Promote the Public Service Commission’s Broadband Maps and Internet Discount Finder as a resource to find current data on internet services and assistance programs available within the City.