



## BROADBAND STUDY SUMMARY 2021

### Background

The Ellensburg Business Development Authority (dba CenterFuse) was established to promote business prosperity in Ellensburg. The 2018 strategic plan of CenterFuse identified the lack of consistent, high-speed broadband as a weakness in sustaining and recruiting business. In 2020, the pandemic shined a bright light on that weakness as thousands were forced to rely on Internet access for business activities of all kinds—from health care and education, to retail and recreation.

In November 2019, CenterFuse applied for and received funding from the Washington State Department of Commerce Public Works Board for a broadband planning feasibility study. The purpose of the study was to help to create and document a description of the broadband “eco-system,” in order to

- recommend data-informed strategies to enhance its efficiency and access; and
- inform future comprehensive broadband projects, focused on economic development, security and access.

After a competitive RFP process CenterFuse selected the partnership of Finley Engineering Company, Inc. and CCG Consulting (CCG) for the analysis work, which was completed in December 2020.

### Key Findings of the Study

The CenterFuse Broadband Study concluded that broadband capacity is robust in some areas, such as the downtown core. But residential service is “subpar” and generally options are poor for broadband outside city limits. Confidence in area broadband service is not strong, causing many businesses to subscribe to two or three services to ensure uninterrupted service.

The study makes an important point that business vitality requires strong Internet service both to businesses and residents, since employees and workers expect home Internet to be as good as it is at work. As well, the pandemic has perhaps changed the expectation of employers and employees for the frequency and desirability of working from home. Ellensburg lags neighboring, “competitor” communities both in residential and business broadband access and service, and would benefit from improvements in services, infrastructure and availability.

### Where does Ellensburg Broadband Lag?

#### Speed and Reliability

- More than 33% of home Internet connections are too slow or unreliable for work or school from home.
- People outside the city can’t connect to their workplace from home; if they can, connections are likely to be slow.
- High-speed broadband lies in the center of the downtown core, but old buildings are not connected to it so offices and residents do not benefit.
- Upload speeds are sluggish: 22% of Charter upload speeds are under 10 Mbps and 56% are under 15 Mbps.
- Fragmented service delivery
- Internet speeds fluctuate and are not delivered uniformly

#### Access

- 15% of residents have no home broadband connection at all.
- 35% of residents are still using DSL.

#### Security

- The broadband recovery lines for Ellensburg run to Seattle and Portland, which will serve to ensure continued service if fiber is accidentally severed. But in the event of a catastrophic earthquake, recovery routes only will provide resiliency if they are directed east rather than west.



## Solutions: How to enhance broadband quality, reliability and access in the Ellensburg area

- Create a matching fund that helps building owners connect to high-speed fiber downtown.
- Route recovery lines east to ensure emergency resiliency.
- Collaborate with broadband providers to expand and improve the quality of residential and rural networks.
- Work with KPUD, ISPs and WISPs to increase speeds.
- Explore options for publicly financed fiber.
- Secure grant funding to help pay for fiber extensions.
- Provide technical assistance for small businesses to effectively deploy broadband inside their buildings.

### Who provides Broadband Internet access in the Ellensburg area?

- The City of Ellensburg's **City Fiber** is the Internet Service Provider owned by the people of Ellensburg and operated as a public service by the City of Ellensburg.
- **Consolidated Communications** says it has already built fiber to most of downtown and is willing to build fiber to any business that wants it. Consolidated is also willing to discuss bringing fiber to businesses anywhere in the city, but not always without up-front construction fees. Consolidated also provides DSL to business located outside of downtown
- **Charter-Spectrum** already has fiber and will build fiber to businesses in some cases.
- **NoaNet fiber** passes through the city and is used by City Fiber and others in the city to gain access to the Internet.
- The Washington State **K20 network** provides fiber and Internet access to CWU and public schools.

### Other non-fiber providers include

- Wireless (e.g. Symplified Tech, WiFyber, Kittitas Broadband)
- DSL (e.g. Consolidated)
- Cellular (e.g. Verizon, T-Mobile, AT&T)
- Satellite (e.g. DISH, DirecTV)

### Who are the customers of broadband Internet?

- 1,440 non-governmental, non-agricultural businesses, of which 200 are in the downtown core
- ~8,500 residential units
- 1 school district with 5 K-12 schools
- 1 comprehensive public university
- 1 regional hospital and their clinics
- 2 local governments and their related sub-divisions

Data sources: Washington Department of Revenue (2017) and City of Ellensburg Comprehensive Plan

## Glossary

The term **broadband** commonly refers to high-speed Internet access that is always on and faster than dial-up access. Broadband includes several high-speed transmission technologies such as the following:

**Fiber optic network:** An Internet connection that transfers data fully or partially via underground fiber-optic cables.

**DSL** ("Direct Subscriber Line"): An Internet connection delivered via telephone lines, primarily copper.

**Satellite** broadband is another form of wireless broadband, and is also useful for serving remote or sparsely populated areas.

**Wireless** broadband uses a radio link between the customer's location and the service provider's facility. Wireless broadband can be mobile or fixed.

