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## WHATCOM COUNTY COUNCIL

FROM THE DESK OF COUNCILMEMBER KAYLEE GALLOWAY

### MEMO

TO: WHATCOM COUNTY COUNCIL  
FROM: COUNCILMEMBER KAYLEE GALLOWAY  
DATE: SEPTEMBER 6, 2022  
RE: **BROADBAND ACCESS POLICY**

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Expanding affordable high-speed internet access throughout Whatcom County is a top priority for many community members. According to the National Association of Counties (NACO), reliable, fast, and affordable high-speed internet is as fundamental today as acquiring electricity was in the first half of the 20<sup>th</sup> century.<sup>i</sup> The following memo outlines the current challenges with broadband access and identifies additional steps to be considered to **create Whatcom County policies** that further support the expansion of broadband access to unserved and underserved areas.

#### **What is the problem?**

The COVID-19 pandemic intensified gaps in access as people were asked to stay home and rely on internet access for school, work, health care, groceries, safety information, and other essential needs. Fast, reliable internet access is *critical to full participation in society and the modern economy*<sup>ii</sup>, and many households, often low-income and rural, have no or slow home internet access. Private internet service providers (ISPs) are reluctant to extend services to rural areas due to the low return on investment, the high cost to install, and the limited customer base. Last mile connections are still a challenge, especially for rural residential customers. Additionally, open access broadband infrastructure is helpful to increasing access. Without open access, private ISPs can limit use of their private infrastructure, often resulting in duplicative infrastructure or limiting competition/consumer choice, adding to the cost of service.

#### **What is currently being done?**

Whatcom County's Comprehensive Economic Development Strategy 2022-2026 sets a goal to develop and enhance critical infrastructure that promotes economic development and resiliency, including the deployment of broadband infrastructure to underserved communities.<sup>iii</sup> The Port of Bellingham commissioned a study, with support from Public Utility District No.1 of Whatcom County (PUD), to evaluate the need for further broadband investments, with a focus on rural economic development. The Broadband Feasibility Study for Rural Whatcom County (2019)<sup>iv</sup> assesses broadband needs and identifies priority routes for expanding services from Bellingham to Cedarville, Nugent's Corner, Deming, Nooksack, Kendall, Maple Falls, and Glacier, using mostly aerial and some underground connections. Whatcom County is supporting the design and construction of these broadband connections through the Economic Development Investment (EDI) program,<sup>v</sup> which has provided matching funds, approximately \$4,750,000 since 2019<sup>vi</sup>, to the Port of Bellingham for Washington State Dept. of Commerce grants. The Broadband Study addresses mid-mile and last-mile

connections and at full build out includes service to 186 end users including government buildings (e.g., fire districts, county offices, port facilities), schools, tribal facilities, and private businesses. The most recent \$2,750,000 in EDI funding resulted in leveraging an additional \$7.16 million in state funding, and will help fund 123 miles of open access fiber network serving over 2,064 homes and businesses in East Nooksack, North Mosquito Lake Rd, North Lynden, and North Ferndale. For the first project, East Nooksack/North Mosquito Lake Rd, the Port has signed in Indefeasible Right of Use (IRU) agreement with PogoZone to design, build, and maintain the broadband infrastructure, which will include open access fiber in perpetuity. After the term of the agreement, the infrastructure will be owned by PogoZone.

### **What more can we do?**

Whatcom County can consider the following strategies to increase broadband access:

- Improve notification to broadband infrastructure providers about open trenches during development and road construction and future planned installation opportunities
- Fund efforts to expand broadband infrastructure to unserved and underserved areas, and leverage federal and state funding opportunities
- Support coordinated trenching through better communications and code requirements
- Require new developments and right-of-way excavation projects to install broadband infrastructure
- Expand opportunities for publicly-owned, open-access broadband infrastructure network through the Cities, County, Port of Bellingham, and/or PUD.

The following examples provide ideas to further expand access to broadband in our community:

### **NEAR TERM**

#### 1. Notifications.

- a. Set up a joint notification system (email list) for right-of-way projects or potential coordinated trenching opportunities for Whatcom County Public Works and Planning and Development Services, the Port of Bellingham, Public Utility District No. 1 of Whatcom County, and other public and private utility and internet service providers.
  - EXAMPLE: CO Dept. of Transportation, Broadband Open Trench [notification form](#) and [notification list](#)
  - EXAMPLE: Whatcom County – [Stay Informed](#) notification lists
- b. Include a statement regarding *'broadband installation opportunities may be present'* when issuing required public notice for applicable permit categories. A statement could be added to permits already requiring notification, as identified in Whatcom County Code Section [22.05.020 Project permit procedures](#).
- c. Codify notification requirements for excavations of rights-of-way and permitted development to ensure notification to ISPs and the public.

#### 2. Funding.

- a. Provide matching funds for state broadband grants.
  - EXAMPLE: Whatcom County Council authorized interlocal agreements with the Port of Bellingham – see [Contract 201908011-1](#), [Contract 202207029](#) – to provide matching funds for WA State infrastructure acceleration grants leveraging funds to complete \$4M in improvements by Dec. 31, 2024.<sup>vii</sup>
- b. Provide County grants and loans to public and private utility providers to help expand broadband connections to residential communities
  - EXAMPLE: [Last Mile Broadband Grants program](#), Nevada City, CA
  - EXAMPLE: [Placer County 2021 Last Mile Broadband Grant program](#)
- c. Prioritize ARPA funding for publicly owned, open access broadband infrastructure
  - Whatcom County's original plan included \$4,000,000 for broadband, none of which has been spent or designated to date.
  - EXAMPLE: [Counties and the American Rescue Plan Act \(ARPA\) Recovery Fund: Broadband](#)

- d. Expand wireless access points or wireless hotspots, building off previous efforts by the Port of Bellingham.
  - EXAMPLE: [Wi-Fi Expansion by City and State Governments Boosts Citizen Access to the Internet](#)
  - EXAMPLE: [Kern parks might soon be getting public WIFI](#)
- e. Fund a county staff position to lead and manage a county broadband program, which may include manage, operate, and maintain an open-access broadband system as well as maintain a map resource and notification system
  - EXAMPLE: [Bellingham Fiber Optics Network Engineer](#)
3. GIS mapping, updated regularly
  - a. GIS mapping of broadband infrastructure and of future planned capital project locations (as opportunities for future broadband infrastructure). Consider adding map to Comprehensive Plan utilities chapter or other guiding policy document.
    - EXAMPLE: [Seeing Orange](#) utilities coordination map ([see GIS map here](#))
    - EXAMPLE: Map of City of Bellingham Unused Dark Fiber Strand Counts, see [Misc. Materials shared by Workgroup Members](#)
    - EXAMPLE: [UDOT Coordination Map](#)
  - b. Develop a map of priority areas for needed installation of broadband infrastructure to help inform coordination/dig-one requirements
    - Coordinate with the cities, Port, PUD, WCOG, state, federal, and tribal governments, public and private utility providers, and relevant developers and contractors.
    - Align with transportation improvement plans and future planned developments based on Comprehensive Plan, Buildable Lands Report, zoning/UGAs, and other guiding documents.
    - EXAMPLE: City of Bellingham created a map of missing links to the broadband network as part of its [Conduit Policy \(2020\)](#)
4. Discuss the role the 5-county partnership, SWISS (Snohomish, Whatcom, Island, San Juan, and Skagit), could play in a regional approach to expanding access to broadband.
  - EXAMPLE: [Petrichor Broadband](#) is a publicly owned corporation formed by six public port districts (including Port of Bellingham, Skagit, Kalama, Pasco, Ridgefield, and Whitman County) to expand broadband access to underserved communities. Petrichor offers project management, broadband feasibility and planning studies, assistance with state and federal grant/loan applications, facility mapping, one-call management system, oversight of network operations, and advocacy for open-access dark fiber infrastructure.
  - EXAMPLE: [Utopia Fiber](#) (Utah Telecommunication Open Infrastructure Agency) Fiber is a group of 11 Utah cities that joined together in 2004 to build, deploy, and operate a fiber to the home (FTTH) network to every business and household within their communities.
  - EXAMPLE: [Golden State Connect](#) is a joint powers authority comprised of 39 rural California counties designed for the purpose of increasing access to reliable, affordable high-speed internet for their residents and businesses.
5. Evaluate Whatcom County's potential for owning, maintaining, and leasing open access conduit and/or fiber infrastructure.
  - EXAMPLE: [SkagitNet](#) is a wholesale, fiber optic network that consists of six segments that will span from Anacortes to Concrete. SkagitNet oversees construction and operates key pieces of fiber optic infrastructure throughout Skagit County
6. Codify that all franchise agreements include a provision to require coordination of all construction activities where excavation of the right-of-way takes place, and allowing the county to send out a notification to interested parties.
  - a. EXAMPLE: [Ordinance 2022-056](#) granting Cascade Natural Gas Corporation a franchise
    - Section 12. Coordination of construction activities; Shared excavations

#### MID TERM

7. Coordinated trenching can lower installation costs of underground lines, which are less susceptible to service disruptions than aerial lines.

- a. Charging for cutting pavement to create trenches for utilities.
    - EXAMPLE: [Prosser, WA charges fees](#) based on age of pavement and linear foot of excavation
  - b. Establish joint use, joint trench policies
    - EXAMPLE: Idaho State Code Title 40 Highways and bridges, [Section 40-520](#) (2)(d) may require broadband provider to install conduit for nonexclusive use.
    - EXAMPLE: [LA County Joint Trench Utility Permit Guidelines](#)
8. Construction Standards and Dig-Once Requirements
- a. Codify the required installation of conduit for new developments and certain road construction projects (e.g., as identified within the developed Broadband Priority Map or administrative approval)
    - EXAMPLE: [Mount Vernon, WA Municipal Code Chapter 12.20](#) requires the installation of conduit for all developments
    - EXAMPLE: City of Pasco's [15.110.080 "Dig Once" requirements](#), the Community Development and the Public Works departments may require developers of all new commercial, residential, mixed use and other significant planned developments to make sufficient accommodation for the deployment of broadband as a condition of permitting.
  - b. Establish design standards for broadband infrastructure (e.g. 2" vs 4" conduit, etc.)
9. Establish a county policy for installing conduit when a project is being done by the county (when there is earthwork being done). Develop a funding source to cover the cost of installation by a contractor or in coordination with the Port.
10. Moratorium on excavation of newly constructed streets (except for emergency repairs)
- EXAMPLE: El Cerrito [Excavation Moratorium](#) for up to five (5) years, excluding emergency work
  - EXAMPLE: Glendale, California - [Excavations prohibited for three \(3\) years](#) after any public right-of-way or other public place has been newly constructed/reconstructed.

## LONG TERM

11. Report to show progress on 2019 Broadband Feasibility Study for Rural Whatcom County and identify next steps (new connections, last mile connections)
12. Consider working with the Port's Broadband Steering Committee, [TAGNW](#) Connectivity group, or creating a new broader committee to advise the Council on broadband needs
13. Implementation of a Whatcom County owned, open access broadband infrastructure network
  - a. Consider retail or leasing authority, funding, and FTE needs for maintenance and operation

<sup>i</sup> [Broadband Task Force: High-Speed Internet Is Essential For All Counties](#), July 2021

<sup>ii</sup> Washington State Broadband Policy, <https://data.wa.gov/stories/s/Broadband-in-Washington/irv9-b275/>

<sup>iii</sup> Whatcom County's Comprehensive Economic Development Strategy (CEDS), <https://www.whatcomcounty.us/2091/CEDS-Report>

<sup>iv</sup> Broadband Feasibility Study for Rural Whatcom County (2019), <https://www.portofbellingham.com/DocumentCenter/View/10384/Rural-Broadband-Feasibility-Study->

<sup>v</sup> Whatcom County Economic Development Investment Program, <https://www.whatcomcounty.us/1020/Economic-Development-Investment-Program>

<sup>vi</sup> Interlocal Agreements with the Port of Bellingham: [Contract 201908011](#) and [Contract 202207029](#) totaling \$2,750,000

<sup>vii</sup> [Latest Washington state broadband infrastructure funding](#) will connect residents of 14 communities currently lacking reliable high-speed internet service - Washington State Department of Commerce

## **BROADBAND GLOSSARY OF TERMS**

**Broadband:** Any service providing advanced telecommunications capability and internet access with transmission speeds that, at a minimum, provide 100 megabits per second download and 20 megabits per second upload.

**Broadband Infrastructure:** Networks of deployed telecommunications equipment and technologies necessary to provide high-speed internet access and other advanced telecommunications services to end users.

**Conduit:** A reinforced tube through which cabling runs. Conduit protects fiber-optic cables in the ground and can be placed underground when convenient and later "blow" or "pull" the fiber cabling through.

**Fiber:** A glass strand or strands which is/are protected by a color-coded buffer tube and which is/are used to transmit a communication signal along the glass strand in the form of pulses of light.

**Dark Fiber:** Fiber between two specified locations that has no optronics or electronics attached to it.

**Lit fiber:** Fiber infrastructure that is being used to provide internet service

**Hotspot:** Hotspot is a term for an access point that offers WiFi access for guest users

**IRU (Indefeasible Right of Use) Agreement:** A contractual agreement (temporary ownership) of a portion of the capacity of an international cable. Generally, IRU agreements last for a specified number of years, usually about 25-30 years. For this term, the IRU owner acquires an unconditional right to use the relevant capacity of the network.

**ISP (Internet Services Provider):** An organization that provides services for accessing, using, or participating in the Internet.

**Joint use:** Broadband utilities install at the same time, in the same trench, or in the same conduit(s). It may also mean the first utility in places extra conduits, and subsequent utilities must negotiate with that utility to occupy one or more of the empty conduits.

**Last mile:** Broadband infrastructure that serves as the final connection from a broadband service provider's network to the end-use customer's on-premises telecommunications equipment.

**Middle mile:** Broadband infrastructure that links a broadband service provider's core network infrastructure to last mile infrastructure.

**Open Access:** An arrangement in which the network is open to independent service providers to offer services. In many cases, the network owner only sells wholesale access to the service providers who offer all retail services (i.e. triple play of internet, phone, tv).

**Trench:** An area normally excavated to accommodate a substructure

**Wireless Access Point:** A networking hardware device that allows other Wi-Fi devices to connect to a wired network.