

PUBLIC UTILITY DISTRICT NO. 1 OF WHATCOM COUNTY

**Board of Commissioners Special Meeting
Broadband | Fiber and Energy
July 21, 2020**

TODAY'S AGENDA

8:30 a.m.

Call to Order|Meeting Opening

Broadband

8:30 – 9:00

Whatcom Public Utility District

- PUD telecom authority
- What other PUDs in the state are doing now
- Overview of Whatcom's past foray into broadband
- Lessons learned

9:00 – 9:30

Port of Skagit/Skagit PUD/SkagitNet - Overview of SkagitNet

9:30 – 10:15

Port of Bellingham

- Overview of how they got to where they are at now – county fiber network;
- Feasibility study;
- Countywide plan;
- Status of first segment implementation and other, current, technology efforts;
- Port of Bellingham and other Washington Ports broadband/fiber programs

10:15 – 10:30

City of Bellingham – Fiber Optics

10:30 – 10:40

BREAK

10:40 – 10:50

Mynd Global – Investment in broadband infrastructure

10:50 – 11:00

John Humphrey – Local perspective

11:00 – 11:30

Agreement Concept with Port of Bellingham (PUD/Port)

11:30 – 12:00

Broadband Wrap Up

12:00 – 12:30

BREAK

TODAY'S AGENDA - CONTINUED

Energy

12:30 – 1:00

PUD – Energy Services Overview

1:00 – 1:45

City of Bellingham

- City's Climate Action Goals, public power and renewable energy

1:45 – 2:15

Puget Sound Energy

- Current de-carbonization programs;
- Renewable energy program

2:15 – 2:30

BREAK

2:30 – 3:00

Eric Powell – Renewable Natural Gas

- Digesters;
- Injection into natural gas pipelines;
- Local projects;
- Potential PUD role

3:00 – 3:30

BP – Discussion on BP corporate initiatives

3:30 – 4:00

Hydrogen Project proposed for Cherry Point

4:00 – 4:45

Energy Wrap Up

4:45 p.m.

Adjourn

BROADBAND

WASHINGTON PUBLIC UTILITY DISTRICTS TELECOMMUNICATIONS



P.U.D.s Providing Telecommunication Services:

**Benton | Chelan | Clallam
Douglas | Franklin | Grant
Grays Harbor | Kitsap | Lewis | Mason #3
Okanogan | Pacific | Pend Oreille | Skagit**

WASHINGTON PUBLIC UTILITY DISTRICTS TELECOMMUNICATIONS

Connecting our Communities

Widely available and reliable access to broadband service is important to our state's economic health, access to education and essential services, and quality of life. Public utility districts play an important role in connecting communities by providing access to high-speed broadband service.

Year	~Action~
2000	<p>P.U.D.s granted the authority to help bridge the digital divide by providing wholesale telecommunications services.</p> <ul style="list-style-type: none"> • P.U.D.s deploy high speed, robust broadband fiber and offer at-cost, open access to the fiber on a non-discriminatory basis. • In some cases, P.U.D.s use the fiber for their own communications systems and lease high-speed capacity to retail providers. <p>This makes it economically feasible for telecommunications retailers to provide service to end-users in areas that might otherwise not be served. RCW 54.16.330</p>
2018	<p>The legislature granted one P.U.D. (Kitsap County PUD) limited retail broadband authority to provide service when there are no or inadequate retail service providers on the P.U.D.'s broadband network. RCW 54.16.420(2)</p>
2019	<p>Broadband legislation passed which included a "safe harbor" provision allowing P.U.D.s to provide temporary retail service (six months) in the event a sole internet service <u>provider discontinues</u> service. RCW 54.16.330 Sec. 8(a)</p>

RCW 54 – PUBLIC UTILITY DISTRICTS

RCW 54.16.330

Telecommunications facilities—Purposes—Limitations—Provision of telecommunications services—Eminent domain.

- (1) (a) A public utility district in existence on June 8, 2000, may construct, purchase, acquire, develop, finance, lease, license, handle, provide, add to, contract for, interconnect, alter, improve, repair, operate, and maintain any telecommunications facilities within or without the district's limits **for the following purposes**:
- (i) For the district's internal telecommunications needs;
 - (ii) For the provision of **wholesale** telecommunications services within the district and **by contract with another public utility district**.
- (b) **Except as provided in subsection (8) of this section, nothing in this section shall be construed to authorize public utility districts to provide telecommunications services to end users.**
- (8) (a) If an internet service provider operating on telecommunications facilities of a public utility district that provides wholesale telecommunications services but does not provide retail telecommunications services, ceases to provide access to the internet to its end-use customers, and no other retail service providers are willing to provide service, **the public utility district may provide retail telecommunications services to the end-use customers of the defunct internet service provider in order for end-use customers to maintain access to the internet until a replacement internet service provider is, or providers are, in operation.**



RCW 54.16.420

**Kitsap
County PUD**

RCW 54.16.420

Retail internet service—Definitions—Authority—Requirements.

(2) Any public utility district that, as of **June 7, 2018**, provides only water, sewer, and wholesale telecommunications services **in a county with an area less than five hundred square miles and is located west of the Puget Sound may provide retail internet service on the public utility district's broadband network located within the public utility district boundaries only when all of the existing providers of end-user internet service on the public utility district's broadband network cease to provide end-user service or provide inadequate end-user service as determined in the manner prescribed by this section. The authority provided in this subsection expires five years after June 7, 2018,** for any public utility district that has not either entered into a partnership payment structure to finance broadband deployment **or** been petitioned to provide retail internet service within that time period.

WASHINGTON PUBLIC UTILITY DISTRICTS TELECOMMUNICATIONS



Formed by some members of the **Washington PUD Association**, **NoaNet** offers long-haul transport and last-mile access to wholesale communication providers within a portion of the Pacific Northwest.

- **Northwest Open Access Network (NoaNet)** is a not-for-profit wholesale telecommunications mutual corporation that has been serving **Washington State** since 2000.
- **As a mission-driven organization**, **NoaNet** focuses on bringing world-class telecommunications technology to hard-to-reach communities which lack access to high-speed affordable broadband services.
- **Current members of NoaNet:**

**Clallam P.U.D. | Pacific P.U.D. | Mason #3 P.U.D.
Kitsap P.U.D. | Franklin P.U.D. | Okanogan P.U.D. |
Benton P.U.D. | Jefferson P.U.D. | Energy Northwest | Pend Oreille P.U.D.**



Quick Facts About NoaNet

NoaNet sustains operations through the sale of its products and services to RSPs. They receive no government subsidies to operate.

NoaNet offers both lit and dark fiber services, depending on customer requirements and available infrastructure.

NoaNet is an open-access wholesale carrier. RSPs buy products and services that are resold to end-users.

NoaNet receives no tax or utility ratepayer revenue. All revenue is from products and services sold in the competitive marketplace.

And there was



WHATCOM P.U.D. #1 INFINET TIMELINE

Milestone Date	Description
Sept. 28, 1999	Washington Public Utility Districts Association (WPUDA) enters into Licensing Agreement with Bonneville Power Administration (BPA) for access to and lease of BPA dark fiber.
Sept. – Dec. 1999	Whatcom P.U.D. is engaged in discussions with other P.U.D.s within the context of the WPUDA to form a wholesale telecommunications utility member organization (NoaNet).
January 11, 2000	Whatcom P.U.D. Commission approves an Interlocal Agreement with NoaNet to become a member once NoaNet is formally established under Washington State RCWs.
February 9, 2000	NoaNet is formed with WPUDA support. The organization is formally incorporated as a Washington Non-Profit Mutual Corporation (RCW Chapters 26.06, 39.34).
	NoaNet assumes WPUDA Licensing Agreement with BPA and reimburses WPUDA for early efforts to help develop the telecommunications entity. BPA Licensing Agreement provides NoaNet with access to BPA fiber located throughout four states: Washington, Oregon, Idaho and Montana.

Milestone Date	Description
June 8, 2000	Washington State Legislature passes bill affirming P.U.D.s right to construct telecommunications infrastructure for their own operations and to offer wholesale telecom services. Infrastructure may be built and services offered within or outside an individual P.U.D.'s service area (RCW 54.16.330).
2000 – 2002	Whatcom P.U.D. works on organizing a separate wholesale telecommunications utility within the P.U.D.; hiring contract staff and developing a fiber optic backbone phased buildout plan. The P.U.D. was provided guidance and review of planning efforts by a multi-member Governance Advisory Board.
February 26, 2002	Whatcom P.U.D. Commission approves the name <i>InfiNet</i> for the P.U.D.'s newly established Wholesale Telecommunications Utility.
May 2002	Whatcom P.U.D. buys telecommunications assets owned by Avista Communications in downtown Bellingham. Assets include a six mile, 144-strand fiber optic cable ring; existing connections to ring and associated assets located at a "C" Street building (colocation center).
	FiberCloud Data Center located on Port property announces it will connect its Center to the "C" Street Colocation facility now owned by the P.U.D.

Milestone Date	Description
June 25, 2002	Whatcom P.U.D. Commission approves InfiNet Policies, Connected Entity Agreement, Wholesale Services Agreement, and Rates and Fees for InfiNet Services.
January 28, 2004	Whatcom P.U.D. Commission rejects an InfiNet assets purchase offer from Black Rock Communications.
February 2004	Whatcom P.U.D. finances InfiNet LTGO Bond
March 29, 2005	Whatcom P.U.D. sells InfiNet's assets to the City of Bellingham, to be administered by COB's Public Works Department.
August 23, 2005	Whatcom P.U.D. Commission approves a sale of surplus telecommunications equipment to the City of Bellingham and surplus of Slater Road office furnishings to Land Development Engineering and Surveying, Inc.

LESSONS LEARNED

I. **Establish as broad a coalition of public agencies as possible before proceeding with the fiber deployment.**

The coalition is the support group within which a shared vision of the public network is fostered. Also, the buy-in by multiple entities may include costs sharing and a greater ability to secure various grants.

Whatcom P.U.D. attempted to develop this coalition but was unsuccessful.

The P.U.D. continued on its own and the public fiber deployment initiative morphed into a private model.

2. Don't abandon the “vision” for a public open access network to serve rural and under-served areas in Whatcom County because a “great” opportunity presents itself.

Early in the planning and phased build-out design process, the P.U.D. was presented with an opportunity to purchase at a great price, Avista's 144-strand bundled fiber optic network ring, which was deployed around downtown Bellingham and had a colocation facility in a commercial building near the Bellingham Police Department. The purchase included equipment in the collocate facility – office furniture, etc.

The P.U.D. purchased Avista's assets with the mindset that it would be a great way to jump start the deployment of the fiber system out into rural Whatcom County.

The problem was that the P.U.D. immediately bogged down. The public perception in many quarters was that the P.U.D. abandoned its original stated mission in favor of serving a higher density market.

The original public model began looking like a private model. Since there were already telecom providers in the Bellingham area, the P.U.D.'s entrance into this market immediately heightened the opposition of the private providers.

3. Don't deploy a lit fiber optic network.

The best model for a public agency broadband communications system is a public open access dark fiber network.

The P.U.D.'s InfiNet network partially because of Avista's Bellingham lit fiber ring started as a lit network. This meant that the P.U.D. needed expensive electronics and converters (switches) at the customer end to convert the light signals to various other communications mediums.

The P.U.D. elected to sell the converter boxes as part of the customer's connection to the network. This put the InfiNet network in direct competition with private providers offering packages of services, including the end of fiber converter boxes.

4. Be very rigorous in keeping start-up costs as lean as possible and build-out the network in phases.

The P.U.D. did develop a phased build-out approach, but failed with regard to the lean startup cost concept, in addition:

- Three salaried P.U.D. employees
- Several consultants under contract
- Leased a two-story building space in a commercial complex off Slater Road
- Consultants worked along side InfiNet employees, separate from the P.U.D.'s main office.
- InfiNet grew increasingly separate from the P.U.D. and the mix of public employees and private consultants didn't always act in the P.U.D.'s best interests.
- The funding burn rate for this start-up venture was high.

5. Don't let consultants drive the process.

With lack of solid public policy and oversight, InfiNet was driven by the consultants.

6. Don't solely use estimates of future connections and associated revenues to justify recovery of the investment costs of the build-out.

The connection numbers and costs of connections have a funny way of always covering the investment cost of the build-out: *A build-out cost estimate is developed, then reverse engineered to project of the number of connections needed to be sure to show cost recovery of the investment.*

A public network needs revenues from telecom network users, but also must have access to low interest loans and grants to help offset the cost of the network infrastructure.

The capital cost of the build-out should be solely covered by public investment and the public coalition's ability to secure loans and grants. Connection fees, dark fiber leases, etc. should be used to cover the ongoing operations and maintenance costs of the network.

7. Make sure there is a thorough vetting of the potential market for use of the public communications network and be very conservative in analyzing the market.

InfiNet's estimates of the market potential were self-servingly high.

At the time, this was far more bandwidth than the businesses needed and the packaged cost and monthly fees were too high (again, a private, not public model).

The services offered did not match the market's needs.

For example, the P.U.D.'s InfiNet was offering small commercial businesses 100 Mbps of bandwidth (capability of the translator/converter boxes).