

The Skamania Broadband Infrastructure Project will allow Sawtooth Technologies LLC to address the lack of broadband Internet access in 6 unserved areas and bring fiber-optic networks to 13 schools, 10 firehalls, and a medical clinic and connect several counties in Washington and Oregon. In conjunction with bringing broadband to the unserved areas in the Columbia River Gorge, this project has the following key benefits:

1. Increased jobs by connecting high tech facilities, the fastest growing businesses in Skamania county where unemployment has increased from 7.8% in 2008 to 13.5% in 2009 (Skamania County) (MCEDD Newsletter 8/1/09, Oregon and Washington Employment Depts, and Bureau of Labor Statistics).
2. 911 redundancy for Skamania County with new Fiber Optic Route.
3. Connect Clinic, Schools, WorkSource Center, Department of Health, and other community organizations.

The unserved areas addressed in SawNct's plan include: [REDACTED] in Skamania County. The Wind River Nursery is approximately ten miles north of Carson, Washington and this former US Forest Service Nursery is of high priority for development with both local residents and the Skamania County Economic Development Council. Additional infrastructure [REDACTED] will help bring modern connectivity to a heavily traveled, interstate highway.

Given Sawtooth Technologies LLC's commitment to and experience in delivering telecommunication services to the Columbia Gorge region, the installation and maintenance of a broadband middle mile solution to the Wind River Nursery, and several communities [REDACTED] on the route to these areas would be congruous with currently offered services and maintenance routes. The Wind River Nursery is completely unserved in terms of terrestrial, broadband internet despite being the largest developable area in Skamania County. As an area with one of, if not the, highest potential for economic growth and development in the county, the Wind River Nursery area is sorely impeded by its lack of telecommunication services. Sawtooth Technologies LLC has over 14 years of experience installing, maintaining, and administrating telecommunication networks in Washington, Oregon, Idaho, and New Mexico and view the opportunity to serve a greater number of people in our home community with exuberance and anticipation.

The Skamania Broadband Infrastructure Project would originate in Stevenson, WA and continue [REDACTED] to [REDACTED] the Wind River Nursery area. Given the unique geography of the region, freezing rain and hurricane force winds are commonplace at higher elevations. These conditions create the need for a locally based, skilled maintenance group if reliable service is to be developed. Sawtooth Technologies LLC has the experience, the specialized equipment, and the local presence to ensure the reliability and longevity of a broadband network under these extreme conditions. Additionally, a link between Stevenson, WA and schools [REDACTED] will be installed, creating opportunities for providing service

to many areas

Development of these rural and remote areas is crucial for economic and residential growth. The Wind River Nursery area is the largest developable area within Skamania County (Skamania County Wind River Redevelopment Team, 2000) and it is the feeling of the Skamania County Economic Development Council that addressing the lack of broadband access to this region is of paramount importance (Peggy Bryan, Skamania County EDC). Growth in developable areas in this county is especially important as approximately 80% (Skamania County 2003 Population and Economic Handbook) of the land in Skamania County is national forest and unusable for residential or commercial purposes. There are already over 1,100 (census.gov) unserved homes in the area and the addition of reliable broadband service has the potential to spur not only further economic development but residential growth as well.

Additionally, the proposed path for the network would allow Sawtooth Technologies LLC to partner with the Public Utility District #1 of Skamania County in creating a system to better monitor and control the water supply for Carson and surrounding residents, provide broadband access to Carson area schools, and potentially provide more reliable connections for local emergency services with a target goal of 911 Redundancy for Skamania County. Furthermore, with the new middle mile infrastructure in place, extending service to the unserved residents along the path becomes reasonable and feasible.

Sawtooth Technologies LLC will provide the technical support and perform field repairs for the middle mile section. Our long history of working with hybrid fiber optic/microwave networks means that we have both the skillset and equipment to properly maintain and manage a network within an area that presents as many unique challenges as the Columbia Gorge region. We will work to make available bandwidth for other broadband companies over this infrastructure, should they seek to provide service to a rural client. No company will be discriminated against, but a standard fee covering maintenance and administrative costs will be levied for this bandwidth.

Last Mile:

Sawtooth Technologies LLC's fiber optic network will reach a variety of existing and yet-to-be constructed tower sites. While firehalls, schools, and medical facilities on the proposed middle mile route will be connected with direct fiber optic connections, the majority of residential connections will be connected via microwave wireless.

The ability for connections to traverse difficult terrain is of paramount importance to any ISP hoping to operate in Skamania County. Microwave wireless connections are excellent solutions for residential users because they strike a perfect balance between speed, cost, and maintenance. Because of the limiting terrain, delivering fiber optic

connections directly to a customer accrues extra costs in both installation and maintenance that are only feasible for commercial customers.

The proposed design a clear division between middle mile and end mile network sections. This division is reflected in Sawtooth Technologies LLC's budget and business plan. The advantage of such an arrangement lies in the ability for each section to stand independently. With added redundancy and isolation of individual sections of the network, it becomes unlikely that an isolated incident (damage from weather events, trees, etc) will affect more than a single section of the network (e.g. a single tower). Furthermore, in the event of damage to the network, the isolated nature of each particular component makes pinpointing the physical location of damage much quicker.

Ultimately, Sawtooth Technologies LLC's planned middle mile and last mile project stands to greatly increase connectivity and stimulate business interest in much of Skamania County while creating the potential for better interconnection with surrounding counties and communities. As the unemployment rate rises and more and more people seek work outside the area, better communication between communities and business centers is key in economically invigorating Skamania County.

Addendum: Sawtooth Technologies LLC works closely with the Northwest Open Access Network (NoaNet). NoaNet is additionally submitting a proposal for BIP/BTOP and is including Sawtooth Technologies LLC in this proposal. Their proposal is titled "NoaNet BB Infrastructure Project" and compliments our own goal of broadband proliferation within the Columbia Gorge region.