METHOW VALLEY WA BROADBAND PLAN DRAFT UPDATE
December 2018

Introduction

The outline for this Methow Valley Broadband Plan Draft Update ("The Plan") is structured per the outline for basic broadband planning as provided by the Community Economic Revitalization Board (CERB), State of Washington. This outline is used for their Rural Broadband Program which includes resources for planning and infrastructure funding. In addition, at which time the Methow Valley Broadband Action Team (BAT) may choose to submit a planning grant application to the CERB to complete all elements of this plan, Partners for Rural Washington has completed a draft of that application subject to any approval process as determined by the BAT. A draft of that application is attached to this Plan as **Attachment M**. The work done to develop this draft Plan was carried out over a period of 6 months from June 2018 to December 2018.

1. Community Support

a. Create a Community Broadband Team

With leadership initially provided by the Mayor of Twisp WA Soo Ing-Moody, the Methow Valley Broadband Action Team (BAT) was formed in July 2018. Methow Valley BAT members include:

Soo Ing-Moody, Mayor of Twisp, Ashley Thrasher, Programs Manager for TwispWorks, Don Linnertz, Executive Director of TwispWorks, Don Rudolph, Senior Consultant, Network Computing Architects Inc., Andy Hover, Okanogan County Commissioner, Sally Ranzau, Mayor of Winthrop and Harry Grant, Methow Valley resident. Partners for Rural Washington (PRWA) Executive Director Mario Villanueva also worked with the BAT to provide additional staffing capacity for this planning effort. A Memorandum of Understanding to govern work to be done per the involvement of the BAT members for this planning project was crafted and signed between the public jurisdictions represented on the BAT and PRWA (see **Attachment A**).

During the past 6 months the group has met in person and by telephone multiple times to establish the goals and plan the work of the BAT. From the outset, there was discussion and general agreement that improved broadband services were needed to some degree in some areas of the Methow Valley. Based on this discussion, initial work also focused around steps needed to agree upon what the target area for this broadband assessment was.

There was general agreement that the boundaries of the Methow Valley School District would be the broadband planning target area. The BAT also sought to: 1) assess community opinion on the quality of current broadband service, 2) identify how current broadband service was being delivered (i.e., who were the service providers, what was their service area and what technologies were being used for their services – this included broadband network backbone (wholesale) and retail systems), 3) identify what areas are currently underserved or unserved, and 4) determine how various stakeholders could help to meet the goal of improving broadband service in the Methow Valley where this might be needed. It was also agreed that community outreach was a key initial goal for the BAT.

The Methow Valley BAT decided on two steps to accomplish the initial goal of community outreach. The first step was to hold a community meeting on October 10, 2018 in Twisp to gather public input on current service and the potential need for improved high-speed broadband service in the Methow Valley. The second step was to conduct an online survey to gather community feedback and opinion about the level and quality of the broadband services the general public were receiving. (See **Attachments B and C** for notes submitted by PRWA from the Community Meeting on October 10th, 2018 and the summary results of the online survey conducted by TwispWorks, respectively).

Some Items Remaining: The Methow Valley Broadband Action Team needs to determine: 1) Is the Methow School District boundary still the desired target area for this broadband effort? 2) If a planning grant from CERB is desired, who will apply for that and how will the match be made? 3) Is the BAT unified in their agreement that broadband service in the Methow Valley needs to be improved? 4) How will the BAT create public policy for a broadband plan with input from the general public?

b. Hold at least one Community Broadband Meeting

The first Methow Valley Broadband Community Meeting was held in Twisp WA at the Methow Valley Community Center on Wednesday October 10th, 2017 at 7 pm. Marketing for the meeting was done well in advance and utilized the local newspaper, local radio with spots in English and Spanish and the TwispWorks website. The meeting was well attended by approximately 40 persons and included very good participation by the general public in attendance. (see attendees list, meeting agenda and reference to MP4A recorded file of public comments as **Attachments D, E and F** respectively).

Prior to the Community Meeting, the Methow Valley BAT deemed it appropriate to meet with local Internet Service Providers (ISP's) to apprise them of the BAT's efforts to assess broadband need in the Methow Valley. To this end, a meeting with 5 ISP's, including the public backbone provider Okanogan County PUD was held on October 4th, 2018 in Twisp WA at TwispWorks (see agenda for meeting, attendees list and invitational flyer as **Attachments G, H and I**, respectively). ISP providers, and industry and other stakeholders in attendance included Okanogan County PUD, NCI Datacom, The Colville Tribe, Noel Communications, Okanogan County Electrical Co-op, Okanogan County, TwispWorks and the Towns of Twisp and Winthrop.

As mentioned, part of the BAT's work was to reach out to community members to assess public opinion on broadband need. TwispWorks staff person Ashley Thrasher, supported by PRWA, led the effort to create a community online broadband survey and invited the general public to respond to this via the TwispWorks website. We received 268 responses to the survey (please see survey sample reference page as **Attachment J**). We intend to follow up on this successful survey format to gather additional information about ISP's used by customers, levels of internet speed and exact addresses/ locations of those indicating a desire/need for better service, and possibly other relevant data. This will help with future broadband network mapping and design, cost estimating for improvements and with assessing how best to structure permanent financing for needed improvements and the subsequent cost impacts on rate payers.

Some Items Remaining: It is recommended that the BAT run one more community online survey. In this survey, more data needs to be gathered regarding: 1) the exact location of respondents (to help with mapping) 2) what internet service provider they are using 3) once again, the quality of service and, 4) what level of service they want and why. Also, holding one more community meeting could be helpful to gather the similar information but more importantly, to ensure that a community process has been part of forming this broadband plan and any public policy developed around the need for better broadband.

2. Project Focus

a. Define local broadband needs and goals

During the 6 months related to the development of this Plan, the Methow Valley BAT consistently discussed measures needed to more accurately apprise local broadband need. In general, and since its initial formation the consensus opinion of the members of the BAT continued to be that a general need did exist for better, faster broadband service in some neighborhoods and regions of

the Methow Valley. The main basis for this consensus was primarily anecdotal information. Information and data gathered from the broadband Community Meeting on 10/10/18 and from 268 responses to the online survey conducted in recent months by TwispWorks, provides clearer comment and information that tends to show more concretely that a real need for better broadband does exist in some areas of the Methow Valley. All of this from unfiltered public feedback which is a needed basis of input for assessing this topic.

What remains to be done is for the Methow Valley region to define its broadband goals more clearly based not only on public feedback but on technical analysis of what current broadband service delivery is in terms of speed, placement and reliability and where and why the areas of poorer service exist. A formal public policy would be best in terms establishing local support for broadband improvement goals.

As stated, the target area for the purposes of this broadband planning effort are the boundaries of the Methow Valley School District. Within the boundaries of this region, which includes the only two incorporated Towns of Twisp and Winthrop, the public utility Okanogan County PUD has built and provides "backbone" or wholesale internet infrastructure primarily in the region south of Twisp. Private ISP's provide retail service in this PUD infrastructure area primarily by riding the PUD's public backbone to deliver last mile, mostly wireless service to customers.

North of Twisp, internet service providers typically do the same thing from different logistics – that is drawing from the PUD backbone that exists mainly south of Twisp they create their own networks to deliver internet retail services north of Twisp and up the Methow Valley. In general, and as stated, the ISP's in the target regions of this Plan primarily use wireless technology to deliver last mile internet. This does not exclude the potential fact that additional internet fibered backbone service, which typically is accomplished by hanging fiber on public utility power poles, may still be needed in various regions of the Methow Valley.

b. Inventory existing broadband infrastructure assets within the community.

The BAT has sought to meet with local private and public ISP's to aggregate a discussion of how to best assess the quality of current broadband service and how to make that better where it is needed. To this end, the BAT has recruited and begun meeting with local broadband experts to form a broadband Technical Team. One of the goals for this Team is to create a broadband network map that shows where current broadband network infrastructure is in the Methow Valley in an aggregated way. This includes wholesale and retail infrastructure. To create a good map, it will take a collaborative effort between the BAT and public and private internet service providers to accomplish this.

An accurate broadband network map can at a minimum help accomplish two things: 1) map out where current broadband backbone (wholesale) and retail infrastructure exists and what technologies those consists of and, 2) show where service gaps are in the existing broadband network by overlaying current network systems over where existing business and population centers are. This is key to forming a final technical plan to identity where upgrades are needed for current systems and where new network system infrastructure is needed. Once this can be defined, determining what technologies are best to be used to improve the system, and what that will cost will form the basis of what type and how much funding is required to make needed upgrades and improvements.

There also needs to be an affordability and business case analysis done prior to finalizing any assessment of a funding plan for infrastructure. So far, the Okanogan County PUD, NCI Datacom, Okanogan County Electrical Co-op and several members of the BAT have begun these discussions

to, among other things, accurately identify where current broadband network infrastructure is and where areas in need of additional broadband infrastructure or improved service delivery are within the defined areas of this planning project.

Some Items Remaining: For good planning and as stated, the need exists for a comprehensive map of broadband networks that exist in the Methow Valley. The County PUD is willing to develop that, and one does not currently exist. This is needed to 1) assess the capacity of the current system, 2) assess needed upgrades and cost for those, 3) pinpoint where service is poor 4) identify needed new backbone and wireless service networks and costs for those and 5) help with design of all needed improvements. The main contributors to this effort would logically be the main service providers in the Methow Valley who are the Okanogan County PUD, NCI Datacom and Methownet.Com.

c. Include a gap analysis defining the additional broadband infrastructure necessary to meet the identified goals.

As noted in section 2.b., above, work has already begun by the BAT Technical Team to assess the broadband service gap in the Methow Valley with first steps being to analyze the capacity and placement of current wholesale and retail broadband network systems in the Methow Valley. As stated in the referenced section, creating a map that illustrates current infrastructure overlaid onto areas that include those that have been identified as possibly needing better service through online surveys and public outreach meetings, would be invaluable in helping create a broadband infrastructure development plan that could be completed with technical, business case and funding analyses.

All of this will help form the basis of a gap analysis. In addition, it needs to be stated that several members of the current BAT Technical Team are technical experts in the field of broadband mapping, system design and engineering, cost estimating and following complex industry standards. These local experts are willing to assist in the aforementioned network design, engineering, cost estimating and business case analysis work for a fee.

d. Include one or more potential network designs, cost estimates, operating models and business models.

The work in this section still needs to be completed. With potential funding from a Community Economic Revitalization Board (CERB) Planning Grant, this work can be fully completed by the BAT Technical Team as described in section 2.c., above. That said, PRWA has researched various funding and operating models and these need to be assessed and evaluated by the BAT before a final decision is made. Some of these models include:

i. The Mason County PUD uses a "Fiberhoods" model where they work with neighborhoods to identify need. When this is determined they achieve a 75% commitment from neighborhood residents to adopt any broadband infrastructure improvements before funding is applied for. The PUD then secures funding for needed improvements. They recently have used State CERB funds for this.

ii. For years, the Kitsap County PUD has used a Local Utility District (LUD) model for improving broadband infrastructure. The PUD finances the improvements from a select most cost-efficient resource and then through covenants running with the land, recoups the costs for infrastructure improvements over time. This has worked well on subdivisions.

iii. The Okanogan County PUD favors a structure where the PUD would, after a confirming needs assessment, finance needed infrastructure improvements with financing that could include private financing and/or bond proceeds, and then they recoup the cost for

improvements from an increase in the number of rate paying customers or current customers increasing their level of services.

iv. Finally, another structure could be to apply for federal or state funding (there are many resources available for this) per any requisite funding requirements and then use utility rates to pay for improvements made. In this scenario, it would need to be determined early on who the borrower is and how repayment of resources would be best structured.

e. Include an assessment of municipal procedures, policies, rules and ordinances that impact or influence broadband infrastructure deployment.

The work in this section still needs to be completed. With potential funding from a Community Economic Revitalization Board (CERB) Planning Grant this work can be fully completed by the BAT as County and Municipal leadership are on the Methow Valley BAT. Policies that need to be in place or that will be developed include:

i. Affordable Internet - Description of how the community will address providing affordable internet options.

ii. Affordable Equipment – Description of how the community will expand the availability of affordable equipment to low-income residents.

iii. Digital Literacy Training – Description of how the community will teach people to use technology.

iv. Public Computer Access - Description of how the community will increase public computer access locations.

3. Create a Vision Statement

a. Status of Vision Statement

A Vision Statement for this broadband planning project has been drafted and is currently being developed further by the Methow Valley BAT. This will include input from the public in the form of online surveys, feedback at future Community Broadband meetings or other methods of community outreach with the goal of setting a clear direction for the Methow Valley's future broadband efforts.

b. The statement should describe the role broadband would play in the community's future.

The Methow Valley BAT Vision Statement will include various elements focused on meeting local needs and specific priority areas that can include the following: 1) connecting community anchor institutions, 2) ensuring older citizens can age in place, 3) closing the "homework gap", and 4) providing affordable high-speed connections to a business park.

c. Explain how this effort conforms to other planning documents/published visioning efforts on other issues in your community.

The work in this section still needs to be completed. As part of the Vision Statement process, the Methow Valley BAT will commit to address how the Methow Valley Broadband conforms to other planning and visioning documents for the County and the municipalities that comprise the jurisdictions represented on the Methow Valley BAT and the Methow Valley region.

In addition, and as will also be stated later, as part of this planning effort PRWA reached out to the North Central Washington Economic Development District and the Economic Alliance of Okanogan

County to discuss the relevance of this planning effort with regional broadband planning needs and/or plans. Given that neither organization has a formal set of goals for broadband infrastructure, it was agreed that the current planning efforts in the Methow Valley support the overall, general community and economic development goals of these two organizations who have jurisdiction in the Methow Valley. It needs to be stated that the development of a complete Broadband Plan for the Methow Valley could serve as a best practice template that could be aligned with the planning goals of these organizations and for Okanogan County.

4. Financial Commitment and Budget

The work in this section still needs to be completed. As part of this Broadband Plan the local and county jurisdictions will commit to the following actions:

a. Submit a budget for the plan aligned to significant project plan milestones, costs and tasks.

Some Items Remaining: To complete an accurate budget, professional engineering and cost estimating services are now needed. These can be secured with funding from a CERB planning grant. The County PUD is willing to assist with this and may charge a fee for this. Other local engineering assistance is also available on a fee for service basis.

A full budget for improving broadband service in the Methow Valley should be based on a detailed line item budget based on details such as the following:

1. Needed upgrades to current public infrastructure. For example, the wireless access points for the PUD system could be upgraded in terms of the number and location of these. The potential cost is approximately $4,500 for each unit and there are approximately 40 on the current PUD backbone system at approximately 1 ¾ to 2 miles apart installed on PUD electrical utility lines. Increasing the number and quality of these could improve wireless service. Mountain top wireless access points could also be upgraded. If public backbone is extended north of Twisp up the Methow Valley, more wireless access points would be needed for this backbone infrastructure as well.

2. Additional fiber backbone as needed and hung on existing electrical infrastructure both south and north of Twisp. Cost for this varies from $ $2.50 to $3.00 per foot for population centers with utility poles 200 to 250 feet on center to $10 to $15 per foot for more rural, open areas with utility poles at 400 to 450 on center. Accurate mapping will help identify this type of cost.

3. Needed back bone and service delivery infrastructure where service does not exist or is poor. This information is already being collected from online surveying and direct contact with local businesses, public entities and the general population that will help continue identifying where the poor service areas are.

4. Unlicensed Spectrum – a solution. The sharing of this unlicensed spectrum among current public and private providers for wireless service requires collaborative protocols among providers that may or may not be working. Use of unlicensed spectrum by current providers can become crowded and can diminish the quality of wireless service. Sharing this spectrum could be a major obstacle to improving broadband service, in particular north of Twisp. One solution that might work is the purchase of licensed spectrum by the PUD. There is a cost for this and this needs to be better evaluated and cost analyzed.

5. Appropriate soft costs for project management, construction management, licenses and permits, legal, accounting and management expenses for project close out and service delivery

roll out.

Cost Information

6. Cost information from the County PUD for the American Recovery Reinvestment Act (ARRA) backbone infrastructure project that was recently completed in Okanogan County is $9 million for that project. Based on this and on discussions with the PUD, it is estimated that a broadband improvement project for the Methow Valley could cost between $3 million to $5 million. This obviously depends on the final design, scope of work and cost estimate but this appears to be a very achievable budget for the BAT.

Milestones: This general estimate of milestones and dates for those for next steps for this broadband planning project are:

   a. $50,000 in planning funding applied for from CERB – January 2019

   b. Planning work complete, project scope completed, applicant and funding sources identified and applied for, business case confirmed – June 2019

   c. Funding for project finalized and contracted – December 2019

   d. Contractor contracted and notice to proceed – March 2020

   e. Construction and monitoring, draws etc. – April through December 2020

   f. Placed in service and ongoing management date – February 2021

b. Submit Pro Forma Income Statement and Expenses.

   1. Income Statement

   2. Balance Sheet

   3. Cash Flow

c. Identify potential sources of funding for the broadband infrastructure.

The list of current funders that may be viable resources for this project is robust and varied and includes USDA Rural Development (various programs), Community Economic Revitalization Board, State of Washington, Communities of Concern Commission, US Department of Commerce-Economic Development Administration, Farm Bill Broadband Loan Program, Federal Communications Commission Connect America Fund, Microsoft, and various banking institutions to name a few. The *Gillibrand Guide to Broadband Funding Opportunities* is an excellent resource for rural broadband financing resources and is included in this Plan as **Attachment K**.

d. Include letters of commitment for community funding.

Included as **Attachment L** is a letter of support for this project from the Economic Alliance, the Associate Development Association (ADO) for Okanogan County. This is a requirement of the CERB planning grant but to date does not include community funding. This requirement still needs to be completed.

e. Include letters of commitment from any Internet Service Providers.

This still needs to be done.

5. Identify Key Documents/Existing Efforts

> **The work in this section still needs to be completed.**

a. Does the municipality or region use broadband to deliver municipal services? (Describe the services, and how broadband is used to deliver these services)

b. Is there local or regional economic development plans in which broadband could play a role? (If so, provide a list of these documents)

> Contact made with the Economic Alliance and the North Central Washington Economic Development District indicates that at present, there is not a full or robust component in current planning documents for these organizations that includes a specific broadband plan for Okanogan County and more specifically, for the Methow Valley. That said, it is also clear, based on the economic development goals for these entities, that it's understood that the availability of adequate high-speed broadband for residents, public and non-governmental organizations (NGO's) and businesses is key to achieving local economic development goals in Okanogan County. In discussions with North Central Washington Economic Development District there is a possibility that this Broadband Plan may serve as an example of good broadband planning that the agency can include in their planning documents.

c. Are there any on-going community projects focusing on the digital divide or information technology (public access through schools or libraries, training, improving access to broadband, etc.?)

This information still needs to be fully determined. That said, to date there has been no mention of robust or significant access from these types of technology portals from the online survey or community meeting comments.

5. Identify potential Community Anchor Institutions and Businesses

> **The work in this section still needs to be completed.** Key elements to be completed for this section include:

a. Provide a list of potential community anchor institutions*.

b. Provide a list of businesses** that could benefit from lower cost, higher bandwidth, and/or improved reliability of broadband.

c. Including the level of broadband improvements needed by the business to become and/or remain competitive and/or expand markets.

6. Development of a Management Plan

> **The work in this section still needs to be completed.** Planning Grant assistance from CERB is an excellent resource that could help the BAT complete the elements required for this section. Elements will include the following:

a. Define (or refine) the broadband plan.

> **The work in this section still needs to be completed.** The plan should have a clear definition of roles and responsibilities, partners required, levels of effort and associated costs, and a timeline. Plans and actions must include promotion and community awareness

and extend beyond the initial deployment.

1. Complete Readiness Self-Assessment

2. Evaluate how the project would benefit health and safety for the community.

3. Evaluate how this project would benefit education access (for all ages).

4. Identify if the community is unserved or underserved (as defined by the BAT). It is fairly established from public feedback and comment to date, that good broadband internet services are being provided in some areas of the Methow Valley. Therefore, areas in the target region for this Plan can be deemed as some being underserved, some being unserved, and some being well served.

   a. Provide evidence of how this was determined.

Community Anchor Institutions definitions: includes facilities such as libraries, township halls, fire and police stations, city halls, county buildings, state facilities, public safety locations, hospitals and nursing homes, and educational institutions.

**Business definitions: all business types; includes farms & home-based businesses, and work-at-home/telecommuter use of broadband.*