Community Economic Development Grant 2023-24

Row 12

Name of Applicant (Organization)	Pioneer Telephone Cooperative
Mailing Address	PO Box 631 Philomath, OR 97370
Name of Contact Person	James Rennard
Contact Phone	541-929-8213
Contact Email Address	jamesrennard@pioneerconnect.net
Name of Project	Lincoln County Broadband Priorities
Total Project Budget	$21,560,365.00
Amount Requested from this Program	$60,000.00
Project Description	The Cascades West Council of Governments (CWCOG) contracted with a consultant (Solarity) to prepare a region-wide broadband strategic plan, along with County-specific recommendations for Lincoln, Benton, and Linn Counties. This project identified the highest priority internet build areas in each County. A copy of the report and the Lincoln County details are attached. Together, Pioneer Telephone Cooperative (Pioneer)and Solarity will prepare and submit a Broadband Deployment Grant (BDP) application to the Oregon Broadband Office in early 2024. Pioneer has already received two federal grants totaling almost $50 million to bring fiber to portions of these prioritized areas. The BDP grant will leverage those grants and include about 1,300 total locations and will cost about $21.5 million to build. Of this total, there are about 400 locations in Lincoln County with an estimated cost of $4.25 million. We estimate that the Lincoln County Community and Economic Development Grant IMPACT funds will be used to pay for 20% engineering work for the 400 locations in Lincoln County. They will also count as matching funds for the BDP grant. As matching funds, the Lincoln County Community and Economic Development Grant will enhance the scoring of the BDP grant, therefore increasing the probability of Pioneer being awarded those funds. This will, in turn, leverage the already awarded federal dollars (ReConnect program) and Pioneer’s existing fiber network to extend “future-proof” high speed internet outlined in the CWCOG study in Lincoln and Benton Counties. Fiber, the "future-proof" network, provides virtually unlimited bandwidth and easily scales to meet future demand. If approved, the $60,000 IMPACT

grant funds would be leveraged many times over as the overall project is estimated to cost approximately $21.5 million. According to the Bureau of Economic Analysis, the digital economy is growing nearly three times as fast as the overall economy, at about 10% annually. The first phase in any telecommunications project is the engineering work. If Pioneer is awarded the BDP grant, the Lincoln County Community and Economic Development Grant will be used to pay for engineering work. This project will create and retain local jobs by enabling telework; allow people to take advantage of telehealth; and provide connectivity for entrepreneurs to start and operate small businesses using the internet. It will also improve educational opportunities through remote learning. It will enhance the attractiveness of the area as fiber is now a must-have for both businesses and residents in their decision where to locate. Fiber brings direct financial benefits to the community including more property tax revenue from increases in property values. High-speed fiber internet can add an average of 3.1% to home values, according to a study conducted by researchers at the University of Colorado. Pioneer is currently finalizing the specific locations we expect to serve. Pioneer's objective is to quickly bring fiber to as many residents and businesses in our service area as we can. The BDP grant is an opportunity to do so. Pioneer is a 501(c)(12) non-profit cooperative serving 1,300 square miles, including a large portion of Lincoln County. Pioneer recently completed similar projects to 2,600 locations in and around Philomath and 575 locations in Waldport. Providing service to these 400 locations is dependent on the completion of a portion of the mainline fiber in one of the ReConnect projects. The ReConnect funding is provided by the Rural Utilities Service (RUS). RUS has rigorous processes and procedures that must be followed that often extend project timelines. We are currently estimating construction on the relevant ReConnect project to start in late 2024. In the meantime, we will begin construction on the BDP project. This will ensure that once the necessary mainline fiber is complete, connecting end users can be done quickly.

Funding

Given the short timeframe that BDP funds must be expended, and projects completed (December 31, 2026), the Oregon Broadband Office is seeking shovel-ready projects and Pioneer is investing in advance to address that priority. We expect that our BDP project will apply for the maximum of $20,000,000. No costs incurred prior to the grant award are eligible for funding. However, costs directly related to the project incurred prior to the grant award are eligible in-kind matching funds. Pioneer has begun investing in the engineering design and preparing data for the BDP grant application. Although the total of these in-kind matching funds has not yet been determined, these costs are reflected in the Project Budget. Pioneer will also be providing existing infrastructure as in-kind match. Solarity is also working to garner other matching contributions from the impacted cities and counties, both cash and in-kind. Solarity will also be reaching out to major health care providers, businesses, foundations and others who may have an interest in seeing this overall project come to fruition. Pioneer will contribute cash to fund the remainder of the project. These final totals will be determined once the service area has been identified. Two of the most relevant factors that the Lincoln County Community and Economic Development Grant would impact in the scoring of the BDP grant are regional scale considerations and matching. Both allow for additional points to be earned for the application. Participants in the CWCOG study that provide matching funds serves as direct evidence that our BDP project considers the larger region in its design, qualifying for additional points on both these metrics. The scoring metrics from the BDP program handbook are attached. The BDP grant project will connect approximately 400 locations in Lincoln County, with an estimated cost of $4.25 million. These locations are contiguous to areas where Pioneer is deploying fiber using its ReConnect funding.

	Larger BDP projects, serving a greater number of locations, will score more favorably under the BDP scoring rubric. That is a primary reason we are including priority areas in both Lincoln and Benton Counties. Additionally, significant design and construction efficiencies can be realized by including the BDP locations with the ReConnect projects already underway.
Collaboration	Pioneer is collaborating with Solarity to prepare the BDP grant application. Pioneer and Solarity are seeking to expand the depth of the collaboration that will help make this project successful. We are working with CWCOG to provide BDP grant management assistance. Solarity is also reaching out to the wider community, not just for funding as mentioned above, but to understand how they would benefit from the economic and community development this broadband project would create. Pioneer is reaching out to the City of Waldport, a previous partner in a fiber project, seeking matching funds for the BDP grant. The City, who has provided a letter of support, shares the objective to get fiber to all its businesses and residences. This project will make a significant step toward that goal as there is no fiber in the BDP grant area today. Pioneer also works with the regional Broadband Action Team (BAT). Two members of Pioneer's leadership team actively participate in the BAT because we want to target our investments that align with the needs of the communities we serve. While the BAT is unable to provide funding, it is a valuable partner and resource to ensure that the project is consistent with Lincoln County's overall broadband goals. Finally, one of our most important partners is our outside engineering resource. They are a full-service construction contractor that Pioneer has worked with for years. Perhaps most importantly, their involvement in the engineering will ensure their availability to complete the project. Furthermore, their familiarity with the design will expedite the construction and minimize potential construction delays that inevitably occur.
Viability	Success will be measured by the availability of high-speed internet at each project location. As noted above, this grant will fund the engineering work that will be completed in mid-2024. Construction will begin about 30 days after the engineering is completed. The project construction should be completed relatively quickly as we are already working with a construction contractor on the engineering. This should take anywhere from nine to eighteen months to complete in its entirety. This project will require no ongoing funding. This area is already served by Pioneer and the operating expenses will be part of and funded by the Cooperative's ongoing activities.
Desired Start Date	03/01/24
Desired Completion Date	07/31/24
Name of Chief Executive	James Rennard
Position Title	General Manager
Chief Executive Email	jamesrennard@pioneerconnect.net
Tax ID#	93-0395815

Type of Applicant	Cooperative Nonprofit
Grant Pool	Impact Grant ($60,000)
Date Submitted	12/18/23 11:18 AM

Lincoln County Community and Ecomonic Development Fund
Pioneer Telephone Cooperative - 2023-2024
Estimated Project Budget

As explained in the application text, Pioneer is still finalizing the locations for the project area to maximize the probability of success. We will seek the maximum $20M grant. The following is a current project estimate.

Income	
Lincoln County Community & Economic Development Fund	60,000
State of Oregon Broadband Development Program Award	20,000,000
Pioneer Telephone Cooperative - Cash and In-Kind	1,360,365
Other Community Matching Funds - Cash and In-Kind	100,000
Total Income	21,520,365
Expenditures	
Construction Labor	12,051,404
Project Materials	4,949,684
Central Office and End User Electronics	2,797,647
Project Engineering	1,721,629
Total Expenditures	21,520,365

City of Waldport
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December 14, 2023

Economic Development Alliance of Lincoln County
Lincoln County Board of Commissioners

Re: Letter of Support

Greetings,

The City of Waldport would like to express its support for Pioneer Connect's application for the Lincoln County Community & Economic Development grant. In 2021, the city actively supported a similar grant submitted by Pioneer, which they were awarded. That specific grant played a pivotal role in deploying fiber to a large portion of Waldport, including the Port of Alsea. Additionally, the city has partnered with Pioneer to provide fiber to all municipal buildings in Waldport.

The City of Waldport believes Pioneer's overall objective to deploy fiber throughout their serving area has substantial benefits for Lincoln County. Leveraging grants like this one will offer residents and businesses in Lincoln County a future proof internet infrastructure and aid the communities we live and work in. This project will significantly contribute to the enhancement of various community aspects, including employment, economic development, entrepreneurs starting small businesses, healthcare and social services, education, infrastructure and public services, arts and culture, as well as recreation and the environment. Projects like this will be an important part of changing that historical deficiency in Lincoln County.

Once more, the City of Waldport is excited to support Pioneer and its ongoing initiatives to expand fiber connectivity to communities within Lincoln County.

Sincerely,

Dann Cutter, City Manager
The City of Waldport

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To whom it may concern,

Central Lincoln is in support of Pioneer telephones application for Economic Development Alliance of Lincoln County (EDALC). We stand behind this project as necessary and important for the rural communities we both serve.

As an electric power company, we don't just rely on conductors to transfer energy but the need to have fiber in between our substations for protection of the power grid along with fiber connectivity for cloud based services that not an option but are a necessity for the operations or our organization. Access to high speed internet is critical to these type of public safety advancements.

The electrical power industry is changing rapidly today and for us to provide SCADA (supervisory control and data acquisition) to our Operators of the power grid for downstream devices such as Regulators, Motor Operators, VFI (Vacuum Fault Interrupters) and other Distribution Apparatus devices relies on reliable Internet connectivity. This project will allow us to have these types of options for communication and help ensure residential customers not only have internet to their homes but power to their homes as well.

We have learned over the many years of serving the Central Oregon Coast with electricity we perform better in the recruitment and retainment of employees when we can offer some of the same convinces that an urban or city life would provide such as high-speed internet at their homes. Our employees often require access to the internet after hours to perform their job functions from home.

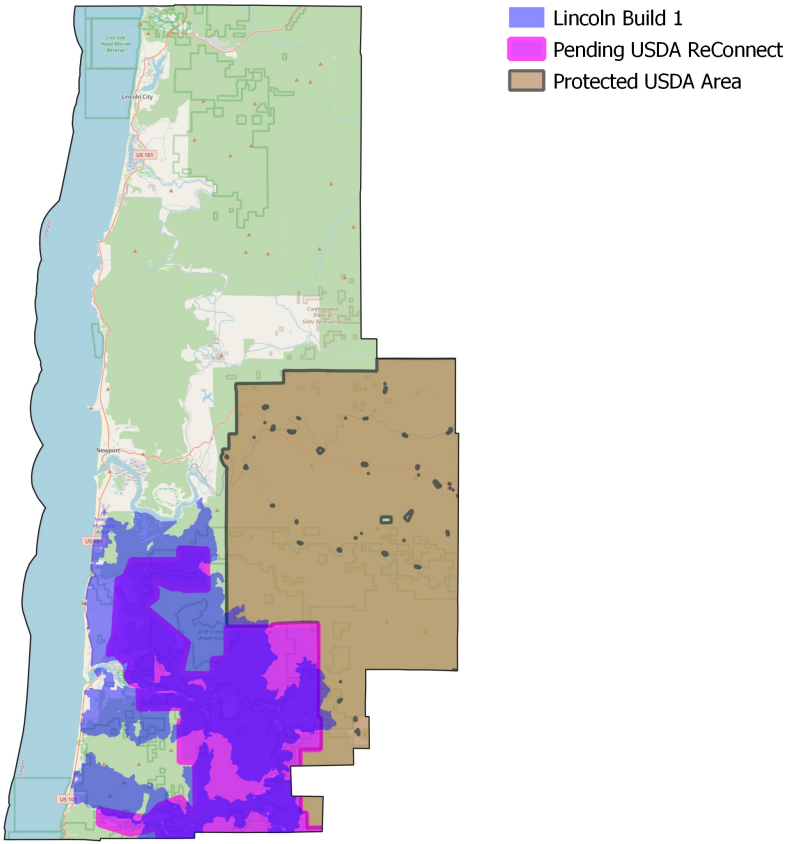
We stand behind Pioneer in their application with our full support.

Shamus Gamache

Director of Engineering

Central Lincoln People's Utility District

Lincoln Build 1



submissions when relevant or necessary.

Challenge Outcomes
If a challenge effectively demonstrates service availability at an applicant's proposed locations, the Department will uphold the challenge and reject or request modifications for the relevant application and its associated project. The following procedures apply:

- The applicant's proposed locations for which a challenger has demonstrated the existence or construction of 100/20 Mbps service will no longer contribute to Application Scoring.
- If a challenged Applicant receives an award, expenses incurred in serving end-users at the successfully challenged locations will be ineligible for grant reimbursement if overbuilt. The Department may reduce the award on a pro-rated basis. An award will be conditioned upon the offer of an interconnection agreement with the incumbent provider.
- See "Overbuilding Eligibility Restrictions" section for more information.

Persistence or Dismissal of Challenges
Unless dismissed, challenges submitted in response to an application will remain attached to and be considered alongside an Application for as long as the Application remains in consideration for grant funding.

The Department may reject or otherwise dismiss a challenge, and its decision will be final. The Department will notify a challenger in the event their submission is rejected or otherwise dismissed.

Abuse and Disqualification
The Department may dismiss a challenge if the Department determines, in its sole discretion, that the entity's challenge is an abuse of the challenge process. Reasons for such a determination may include but are not limited to the following:

- Serial submission of meritless challenges;
- Intentional repeated challenges of a single project;
- Multiple challenges containing no supporting information; or
- Harassment of Department staff, applicants, or subject community members.

For entities found to have abused the challenge process, the Department may deny their eligibility to participate in, apply for, challenge, or appeal any current or future Broadband Programs. Dismissed challenges will not be considered alongside applications.

Application Review Criteria and Scoring

The Department will evaluate the Applications requesting funds through the Program for each round of funding. Department review will be conducted as specified in ORS 123-047 "Broadband Program Rules." Additionally, the Department may use a third-party telecommunications specialist and engineer to review proposals.

The Department will (1) apply a points system to the Proposed Infrastructure Project (See Appendix C for sample Score Sheet) and (2) apply a percentage score to the Application Contents. The Total Project Score will be multiplied by the Application Contents percentage score for an Overall Score. A Score per Location will be calculated to help compare small and large projects.

Application Contents Scoring (Total Maximum Score of 100%):
- Applicant Information & Project Contacts (10%)
- Project Description (30%)
- Project Readiness (30%)
- Amount of Funds Requested (20%)
- Signed Letters of Support (10%)

Proposed Infrastructure Project Scoring will use a matrix to award points based on the following "Key Priorities" :
A) Number of Unserved Locations (lacking 25/3 Mbps service)
B) Total Number of Eligible Locations proposed (between 25/3 Mbps and 100/20 Mbps)
C) Subscription cost for 100/100 Mbps package (details on scoresheet)
D) Match Amount

[A+B+C+D] = [Raw Project Score]

- Each of the "Additional Priorities" (See "Project Priorities" section. Note the difference between "Key" and "Additional" Priorities) met by an Application will provide a 5% bonus to the calculated Raw Project Score, up to a maximum 20% bonus.

The Department will use the following formulas to score and compare projects:

[Raw Project Score] * [Priorities Bonus (+5% for each)] = [Total Project Score]

[Total Project Score] * [Application Contents %] = [Overall Score]

[Overall Score] ÷ [total # of proposed locations] = [Score per Location]

The Department will provide a sample Scoresheet for Applicants to fully understand how their proposed Project will be evaluated. See Appendix C – Infrastructure Project Scoring for a sample score sheet. The full Scoresheet will be available online alongside the

Handbook.

Rankings

After scoring applications in the manner described above, Staff will sort projects according to their score relative to all other applications. Each project will receive a ranking based on their Overall Score and their Score per Location.

Those rankings will be averaged into a composite ranking. For example, a project that ranked 4th in Overall Score and 10th in Score per Location would receive a composite ranking of 7 ([10+4] / 2 = 7). Projects whose composite rankings are identical will be considered as equals.

Tiebreakers

The Department will generally make awards to the projects with the highest composite rankings. If a situation arises where two or more equally ranked projects are under consideration for an amount of funds that cannot support a full award to the tied applications, the Department may exercise its discretion in selecting the final awardees.

Department reserves the right to reject any application for good cause if it is in the public interest and is not liable for any costs an Applicant incurs while preparing or presenting its application or during further evaluation stages.

Notice of Decision

Business Oregon will notify applicants of the decision regarding individual applications, providing the following information:

- Completeness/rejection
- Evaluated Score & Rankings
- OBAC Grant Review Committee Date

Contract Administration

A. Grant awards will be contingent on the Department's receipt of the following:
   1) Documentation that all other funds necessary to undertake and complete the project have been committed and are available prior to issuance of the Grant Agreement.

B. Business Oregon will award funds by entering into a contract with the Awardee (Grant Agreement). The Grant Agreement will include, but will not be limited to, provisions regarding the following requirements:
   1) An agreement that the Awardee will proceed expeditiously to complete the Project as defined in the Grant Project Description. The required completion will

Appendix C – Infrastructure Project Scoring Sample

The Department will share a functional version of this scoresheet along with an announcement of funding availability. This is an example of a project which would build 100/100 Mbps service to 500 locations, 67 of which are unserved; would charge $50/month for the 100/100 package; would provide a 25% match; meets additional priorities; and was accompanied by a Long-Form Application that scored 100%. Please visit the Program webpage for a downloadable copy of the Scorecard.

Project Details

Deployment Characteristics	# of locations	Points explained	Points	
Total number of locations to be served by proposed project	500			
Number of Addresses currently lacking 25/3 Mbps service (Unserved)	67	*1 location = 10 points*	670	Unserved Locations are a Key Priority listed in the Handbook.
Number of Addresses currently between 25/3 Mbps and 100/20 Mbps	433	*1 location = 5 points*	2165	
Points for Deployment			**2835**	

Service Cost				
				Affordability of a 100/100 package is a Key Priority listed in the Handbook.
Monthly cost of 100/100 package (regular, non-introductory price) *,**	$ 50.00	Price <= $30?	FALSE	True/False Indicator to verify score card is functioning correctly
		Price <= $50?	TRUE	True/False Indicator to verify score card is functioning correctly
*: Price before ACP benefit is applied. This price must remain in place for five years from project completion.		*<=$30.00/mo = 5 points per location ;*	0	Value populates if 100/100 Mbps package costs $30 or less per month.
**: Must include at least 1 TB data per month at full speeds		*$30.00 - $50.00/mo = 2 points per location*	1000	Value populates if 100/100 Mbps package costs between $30 and $50.
Points added for End-User Pricing			**1000**	

Match		Percentage Match		
Match Amount	$ 750,000	25%		
Total Estimated Project Cost (Including Match)	$ 3,000,000			
Points added for Match			**1250**	Add 50 points per 1% match.

Additional Priorities		Status
Regional Scale Considerations	☑	TRUE
Muni/Co-Op/Non-Profit Affiliated	☐	FALSE
High level of Readiness	☑	TRUE
Census Block or Tract with Moderate to High Social Vulnerability	☑	TRUE

Priorities Met	3	Each Checkbox adds 5% multiplier, maximum 20% bonus added to raw score
% Bonus applied	15%	
Priority Bonus points added	763	Priority Bonus Points = ([% Bonus] * [Raw Project Score]) + [Raw Project Score]

Raw Project Score	5,085	Points from Deployment Characteristics, Service Cost, and Match
Total Project Score	5,848	Add 5% to score for each Priority met by Project and Application
Application Contents Score	100%	Determined by review of Long-Form Application
Overall Score	5,848	[Total Project Score] * [Application Contents Score %]
Score Per Location	11.70	Points per location helps the Department compare projects of all sizes.

Oregon Cascades West Council of Governments Broadband Strategy: Lincoln County

Version 1.0

August 30, 2023

Revision History

Date	Version	Author(s)	Notes
8/30/23	1.0	Solarity Team	Original submission

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Top Recommendations

Solarity, through contractual work with the Oregon Cascades West Council of Governments (OCWCOG), has been asked to develop a broadband strategic plan for Benton, Lincoln, and Linn Counties. This comes at an opportune moment as multiple federal programs will be managed by the Oregon Broadband Office, over $860 million in funds, with grant application windows starting in the final quarter of 2023 and ongoing for the next few years.

This broadband strategic plan focuses on providing guidance on activities for improving and expanding the region's current broadband service infrastructure as well as strategies to increase adoption and use of broadband internet to unserved and underserved communities. As part of the full three county report, Solarity is presenting recommendations for each of the three counties individually.

In order to answer the county's broadband needs, Lincoln County leadership is recommended to do the following actions:

1. **Establish a Broadband Organizational Effort that has impact:** The importance of this issue calls for standing up an ongoing effort to address the issue on the more local level. The three counties have been participating in the Broadband Action Team support meetings in the past, and this model has proven helpful during this time of opportunity. It offers support and clarity which is necessary as leaders all over the state become more fluent in broadband issues. To bring those resources closer to home, we suggest counties convene local leadership as a county level broadband Task Force, Commission, or Committee with the intent to further identify broadband needs, communicate with ISP's who offer service in the area, and plan to monitor and actively participate in projects to close the broadband gap. Establish a clear point of leadership which has the ability to move projects forward and understand that the effort may be in operation for multiple years to ensure the broadband connectivity issues are properly monitored.
2. **Commit to broadband infrastructure completion as a county leadership level priority:** the importance of broadband infrastructure calls for expanded interest in the issue by elected officials. County elected officials should prioritize broadband access issues and infrastructure support because it has profound impact on the county's economic possibilities, educational opportunities, access to healthcare, public safety, and overall quality of life. With large areas of unincorporated land, it is best to work from the county level, with local support, to ensure that projects create connections rather than stay isolated with varying level of connectivity within the county. *Applying public resources to the potential broadband grant builds will have to be a priority.*
3. **Build partnerships with ISP's serving each county and discuss the potential for partnerships:** The funding for infrastructure that will become available in the next few years is historic, but by no means ensure the community will receive the funds. Broadband grants tend to be competitive, given the importance of the issues, and county leaders should be ready to partner with ISP's on the upcoming grant cycles. Building competitive grants take time, and grant match from municipalities show cooperation and creates strong applications.

4. **Review the Rapid Design Study proposals and prioritize efforts on a timeline that fits with infrastructure grant opportunities:** With access to the Rapid Design Study for an extended period of time, the tool should be used as a decision-making tool for ongoing monitoring and costing activities as the broadband activities continue. Given the lack of clarity on the timeline for grant award windows, this should be left to the Broadband Efforts themselves. Each county has roughly 3-5 projects that could be done in order to build connectivity to the identified BSL's. The county Broadband group will need to decide the order in which to proceed, prioritizing which projects will need what type of support (grant, bonding, PPP, and many others). *This is an ongoing project. New locations for residents and businesses will be built, and ensuring they have connections going forth will become important. Monitoring equipment upgrades as necessary, and tracking additional funding being allocated to broadband (like use of E-Rate to address educational broadband connection needs) will become second nature.*

5. **Ensure Affordability and Adoption are not forgotten by addressing within the broadband effort's purview.** As mentioned before, there are barriers to using broadband for some individuals beyond not having the infrastructure available where they live. The Oregon Broadband Office will be addressing Digital Equity issues throughout the state, in parallel with establishing Infrastructure programs (BEAD, CPF, and others). Affordability and awareness of available resources for county residents is critical for accessing, purchasing and training with devices at affordable rates. *Please read the OCWCOG Regional Broadband Strategy for more information on Digital Equity. This county level report focuses on broadband infrastructure needs.*

By concentrating on the county's broadband effort, coupled with support from the Lane, Benton, Lincoln, and Linn Broadband Action Team (LBLL BAT) which has been in operation as a regional advocacy support, the process of identifying broadband provider partners for the areas that lack adequate service will happen with the preparedness that leads to successful grant applications.

Although the amount of funding that will be available as grants for Oregon's broadband needs seems incredible, this is not enough to build out the infrastructure- end to end- with fiberoptic cables. Many times, a hybrid approach will need to be taken. The Rapid Design Study referenced in this report, and the OCWCOG Three County Strategy, is a tool that the Lincoln County leaders will be able to use to help make ongoing decisions.

Speeds, Availability, and Maps

Alongside our outreach and speed testing efforts, Solarity has gathered user information and readily available data to help understand the state of broadband access in the OCWCOG service area. Broadband refers to high-speed internet access that is always on and provides faster speeds than traditional dial-up connections. Broadband speeds are typically measured in megabits per second (Mbps). Download and upload speeds refer to how fast data can be transmitted to and from your device over the internet. Upload speed refers to the rate at which you can send data from your device to the internet, while download speed refers to the rate at which you can receive data from the internet to your device.

Below you will find table 1 information from leading national surveys and speed test gathering platforms.

Table 1. Current State of Broadband as of 2020[1]

Broadband Data	Lincoln
Population (FCC 2020 Estimate):	50,582
American Community Survey (ACS) Percentage of Households without Internet Access:	10.00%
ACS Percentage of Households without a Computer, Smartphone, or Tablet:	7.40%
M-Lab Speed Test Median Download/Upload (Mbps):	48.10/8.47
Ookla Speedtest Median Download/Upload (Mbps):	43.99/10.08
Microsoft Percentage of Downloads Completed Over 25 Mbps or Higher:	95.44%

Given it is at such a high level and does not display granular information, Solarity (and Faster Internet Oregon) uses Breaking Point Solutions speed test mapping system to help make decisions. Breaking Point Solutions also conducted a Rapid Design Study (RDS) for each of the three counties to better understand the needs of each county. RDS uses the Federal Communications (FCC) fabric map as its source.

Federal Communications Commission (FCC) Map and Fabric

For many years, the FCC (Federal Communications Commission) set a benchmark speed of 25 Mbps for download and 3 Mbps for upload for broadband internet, which means that any internet service provider (ISP) offering broadband service must provide at least those speeds to be considered as broadband.

However, in 2021, the National Telecommunications and Information Administration (NTIA) increased the minimum download speed to 100 Mbps and upload speed to 20 Mbps for its broadband grant program. This means that to receive funding for broadband infrastructure projects, ISPs must meet these minimum speed requirements.

[1] https://broadbandusa.maps.arcgis.com/apps/webappviewer/index.html?id=50c64e2c028d46a58247125e4bcdcdc8

Following the Congressional request for the FCC to establish a new mapping system in 2020[2], Fabric data has established a stronger, location-based understanding of what locations need to be connected to broadband services. First published at the end of 2022, the FCC Fabric map will be updated on a regular basis, offering an indication of improvements in connectivity and speeds as progress is made. In total, the FCC Fabric shows a total of 8,761 locations in the three counties that lack a broadband connection.

The definition of a broadband serviceable location (BSL) is "a business or residential location in the United States at which mass-market fixed broadband Internet access service is, or can be, installed." Below are the locations in the three counties identified by the FCC fabric as BSL to close the broadband gap.

Table 2. Current Unserved and Underserved BSL Data

County	Unserved BSL	Underserved BSL	Total BSL
Lincoln	**1,085**	**462**	**1,547**

Do note the speeds are self-reported from the providers, a point that needs to be remembered when assessing coverage. The information and the map are continually updated, and the FCC will accept challenges to the location information if deemed inaccurate[3].

Revisiting the NTIA's definition of served and unserved, speeds are categorized in the following way:

- Unserved: lacking access to 25/3 mbps service.
- Underserved: access that ranges 25/3 to 100/20 mbps service.
- Served: access to higher than 100/20 mbps.

The NTIA defines Unserved as a project in which not less than 80 percent of broadband-serviceable locations served by the project are unserved locations. An unserved location is defined as a broadband-serviceable location that the Broadband DATA Maps show as (a) having no access to broadband service, or (b) lacking access to Reliable Broadband Service offered with - (i) a speed of not less than 25 Mbps for downloads; and (ii) a speed of not less than 3 Mbps for uploads; and (iii) latency less than or equal to 100 milliseconds (NOFO Section I.C.dd). 1.6

The NTIA also notates that under the BEAD Program, any location with speeds of 100/20 by technology that meets the definition of Reliable Broadband Service is considered served. Reliable Broadband Service is broadband service that the FCC Broadband DATA Maps show is accessible to a location via: (i) fiber-optic technology; (ii) Cable Modem/ Hybrid fiber-coaxial technology; (iii) digital subscriber line (DSL) technology; or (iv) terrestrial fixed wireless technology utilizing entirely licensed spectrum or using a hybrid of licensed and unlicensed spectrum (NOFO Section I.C.u).

Maps of Current Coverage and BSL Items

Below you can find the 1,085 *unserved* locations identified in Lincoln County. Do note that some census blocks have a low number of serviceable locations due to their rural nature. Thus, a census block can show that they are 100% unserved with 4 out of 4 locations not being served. The map does show, however, the areas of concern where infrastructure may not be located.

[2] https://www.fcc.gov/news-events/notes/2022/06/30/status-update-mapping-where-broadband-and-not-available-us#:~:text=Congress%20took%20up%20this%20challenge,available%20throughout%20the%20United%20States

[3] https://help.bdc.fcc.gov/hc/en-us/articles/8554187214107-Fabric-Challenge-Process

Image 1. Maps of Unserved and Underserved Locations in Lincoln County

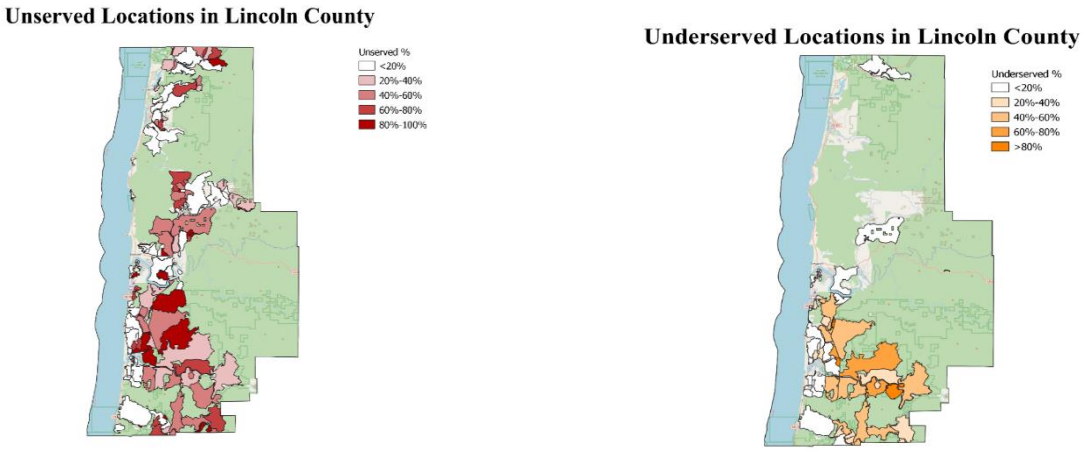


Image 1 shows the 462 *underserved* locations identified in Lincoln County. Like the *unserved* locations, they seem to depict where the infrastructure needs to be upgraded (potentially from DSL to fiberoptics) to serve the area better.

Provider Led Projects

There are broadband infrastructure projects that are occurring through Provider led service to their territories or through a grant process secured by an ISP in Lincoln Co at the time of the creation of this Strategic Plan. *This is by no means an exhaustive list of projects occurring in the county, and Solarity did their best to communicate with all ISP's that were willing to connect with us over the life cycle of this project.*

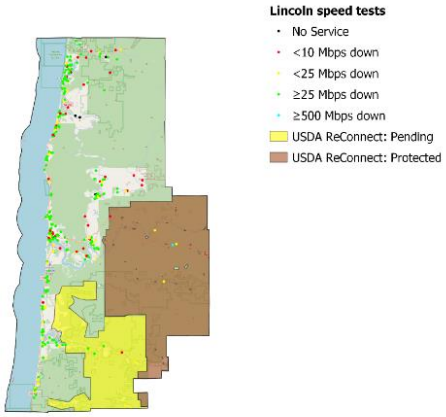
Wave naturally focuses on providing connectivity to business sector partners and residential secondarily as their models are a bit different. They are the incumbent operator in a few places, including Depoe Bay. Wave is upgrading their infrastructure in the north side of Newport, as well as South Beach.

Charter informed our team that the company has or will soon be expanding some of their infrastructure in Depoe Bay. Charter was one of the largest winners of RDOF auction bids, but there are no census blocks to be served in Lincoln County.

Alyrica, who is more present in Benton and Linn Counties, does not focus on the county although they do own available spectrum if a community were interested in exploring a Public/Private Partnership. If partners for work in the northern part of the county needed to be considered, they offer service in Grande Ronde in Polk County to the north of Lincoln, and east in Benton County.

Pioneer has secured Round 3 USDA ReConnect loan funding that will upgrade the broadband infrastructure in the southeast portion of their service territory.

Image 2. Map of ISP Speed Test Results in Lincoln County



At the time of the writing of this report, Pioneer was undergoing the engineering process for the project, and leadership should stay in good contact with the company as they proceed through their preparation into construction. Pioneer was awarded an additional ReConnect loan (Round Four) in August of 2023 that will service a portion of the area that is highlighted with BSL, described in Build 1 below. Leadership will have to continue communication with Pioneer to have an update if they will be participating in Enhanced ACAM as they are also making decisions about their participation. their service area in the southern portion of the county to their federally funded infrastructure upgrading process.

The leadership of Lincoln County's broadband effort should continue to be in contact with the Provider to understand the schedule of the ReConnect funded project's progress towards breaking ground, as well as any updated information about pending awards.

County leaders should also be in conversation with Incumbent broadband service providers who may be eligible to participate in the Enhanced ACAM program. Decisions will not be made until after this report has been completed, but these decisions may reduce the number of BSL's needing service in the region.

Siletz Tribe Broadband Efforts

The Tribe Siletz has contracted with a consultant to perform a broadband study of their territory in Lincoln County. This approach will help provide the tribal community all options available and eventually a direction that is best for their communal members. As a unique sovereign nation, they have access to funds that the county and other organizations simply cannot obtain. This puts them in a distinctive position and a much-needed partnership should be continually cultivated. While the tribe is committed to benefitting their members, they also understand the direction can benefit the overall county. While the tribe is an extremely important entity, they often feel overlooked and because of this trust is the most critical component in the relationship. The best for Lincoln County and Siletz can be realized by working together and establishing good-will between both. We recommend to continually engage, foster, and information share project updates to be sure Lincoln as a whole can benefit together.

Recommended Buildouts

To solve the broadband connectivity issues of each identified location, our use of Breaking Point Solution's Rapid Design Study shows that the process for closing the broadband divide involves least three different grant applications with up to three different partners. As Lincoln County leaders develop an on-going strategy towards broadband initiatives, it should take into consideration this on-going work to ensure that the broadband connection gap is closed swiftly while using public dollars prudently.

Broadband buildout deployments and extending existing broadband networks are two approaches to expanding and improving internet connectivity. While both strategies aim to enhance internet access, they have distinct characteristics and considerations. Below is a table highlighting the key differences between the two:

Table 3. New Deployment or Extending Existing Networks

Key Differences	New Deployments	Extending Existing Networks
Scope and Scale	Setting up new network equipment, laying down fiber-optic lines or installing wireless infrastructure from scratch.	Extension of cables, fiber-optic lines or wireless access points from existing network.
Cost and Complexity	Require higher initial investments, more complex due to building new infrastructure. Significant planning, permitting and construction efforts.	Less expensive and complex, groundwork is already in place, focus on expanding to serve additional areas.
Timeframe	Extensive planning, regulatory, and construction efforts. Could cause delays	Faster to deploy, regulations and approvals already in place. Can be efficient and streamlined.
Infrastructure Compatibility	Implement latest technology and standards. Designed with future scalability in mind, could offer higher speeds and capacity.	Technology and speed could have limitations based on existing infrastructure. Outdated networks could require more upgrades or replacing.
Regulatory and Environmental Considerations	Often require more and extensive regulatory approvals, environmental assessments, and community engagement	Regulatory compliance process smoother with previously approved infrastructure.

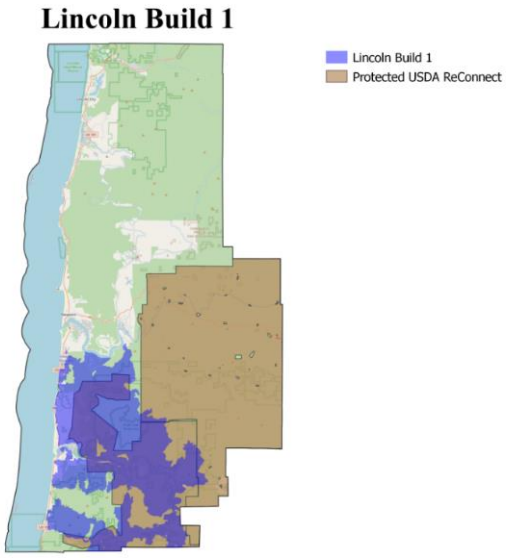
Both approaches are essential in improving internet accessibility. Buildout deployments are crucial for connecting remote and previously unconnected regions, while extending existing networks helps in bringing reliable broadband services to neighboring areas that are already partially served. The most effective strategy depends on the specific needs, geography, and available resources in a given region.

Buildout Details

Our analysis of the RDS information showed that, by and large, Benton County's connectivity issues can be solved by working with ISP's to extend or complete networks where they may be lacking. This will likely mean working with the providers already serving an area is essential to successfully closing the gap. The following are specific builds and potential ISP partners.

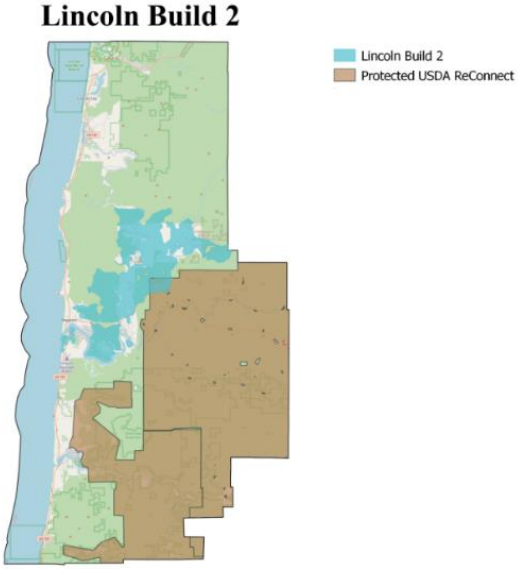
Do note the number of BSL's in each build are close approximations and may be slightly different when moving into future project development. They may also be updated by the provider as they pursue equipment and network upgrades. The FCC fabric will be updated on a regular basis, and the RDS will include these updates. Because your county will have access to the RDS for some time, please contact them for updated information.

Image 3. Map of Build 1 Extending Existing Network



Build 1: Extending Existing Network touches 1,038 of the identified BSL and a large portion of the *unserved* locations in the county. The purple layer details the service area put forth by Pioneer in their pending USDA ReConnect grant proposal. If that bid is successful, it would be prudent for the county broadband effort's leadership to discuss the remaining BSL in the area with Pioneer, especially in the areas where they are the incumbent service provider.

Image 4. Map of Build 2 Blend of New Deployment and Extending Existing Network

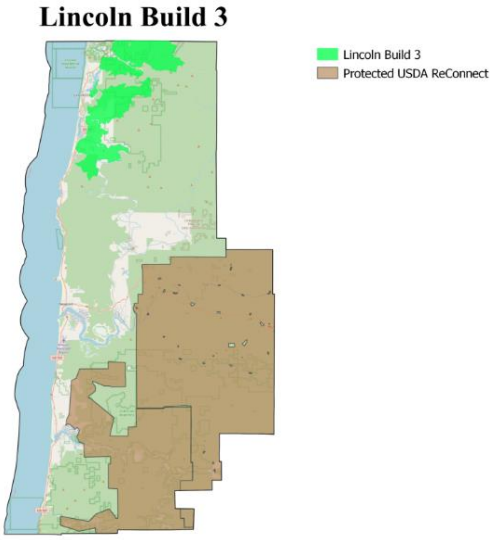


Build 2: Blend of New Deployment and Extending Existing Network in the south-central portion of the county includes 304 BSL locations in an area that is served by CenturyLink as an incumbent provider.

The leaderships of the county's broadband effort should prioritize this area as it has a substantial amount of *unserved* BSL locations with need to identify the right partner for this work.

Leadership should also work alongside the Confederated Tribes of Siletz Indians as they are addressing their member's own broadband connectivity issues head on. Any opportunities to collaborate could be beneficial for the Tribal and county efforts.

Image 5. Map of Building 3 Extending Existing Network



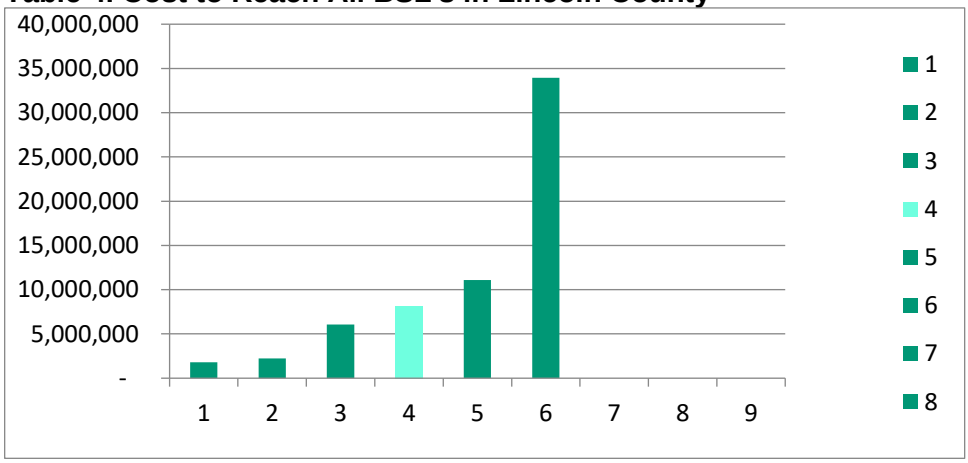
Build 3: Extend Existing Network Includes the 205 BSL's identified in the northern part of the county. Both Wave and Charter have service in the area and could be partners in a project to complete either of their builds. County leaders will need to decide on how to proceed with the project partner process.

Cost Analysis

The RDS tool offers an estimated cost for the complete cost of building infrastructure to connect all the BSL's to efficient, reliable broadband connections. Attempting to provide fiber to every un/underserved household through new deployment could cost as much as $40 million ($26,500 per household). *The full RDS report can be accessed by contacting the broadband lead for your county.*

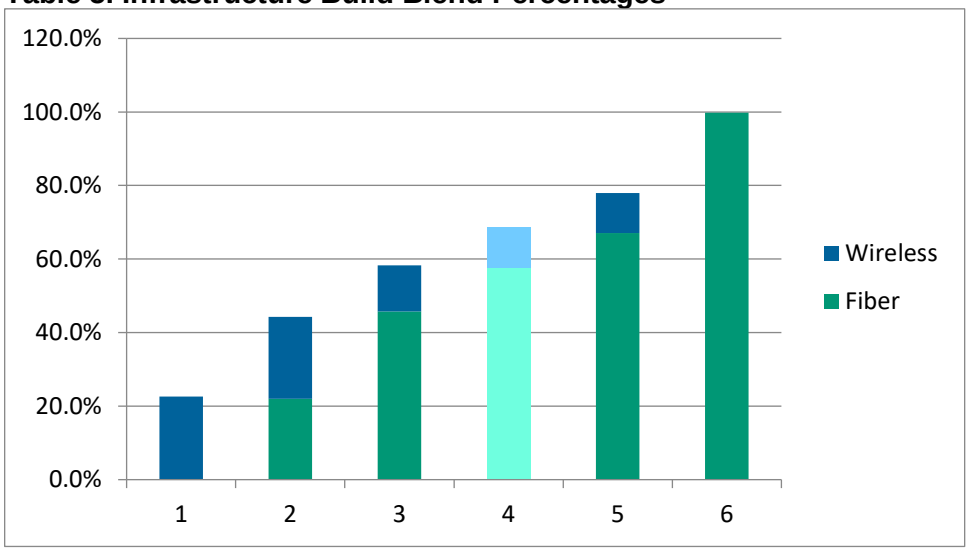
The table below describes the price difference found in their reports with *option number four* as the most affordable blend of equipment to reach all BSL's in the county.

Table 4. Cost to Reach All BSL's in Lincoln County



This would be 57.7% fiber and 11% fixed wireless covering 68.7% of the BSL. Those who are not reached in this hybrid model is likely due to the topography and working to ensure options (like satellite) are available will be important. Additionally, as infrastructure, replacement of equipment and upgrading the system should include reaching those previously not included.

Table 5. Infrastructure Build Blend Percentages



With Oregon expecting approximate $688 million from the BEAD program ($5,935 per household), an average allocation per county would be on the order of $19 million which constrains the total capacity any county would have available for projects. This targets towards our projected recommended hybrid which comes in at $10 million ($6,400 per household). Attempting to provide fiber to every un/underserved household through new deployment could cost as much as $40 million ($25,800 per household). Since the county lacks the preferential bias of low income and other priorities, we think it unlikely the state would give 6% of the available funding to Lincoln.

However, the funding options do not only include BEAD funding. CPF, future rounds of USDA ReConnect, and other programs will be necessary to close the gap. Additional cost to serve reductions could occur for the moderately served areas in that if incumbents are targeted to complete their deployments, their existing infrastructure may not require full deployment resources and it's possible that they could provide more fiber than we would otherwise forecast. Additionally, any EACAM received by an ILAC allows more funding to be used for the remaining BSL's.

County leaders should plan that work happen in phases by different ISP partners through a handful of funding processes. Grants written in partnership with ISP's, Bonding for certain portions of projects, and other means should all be part of the approach.

More detail about the recommended funding options can be found in the financial detail of the RDS. Access to this software tool has been turned over to the appointed Lincoln County contact, and they will be trained on how to use this for future use.

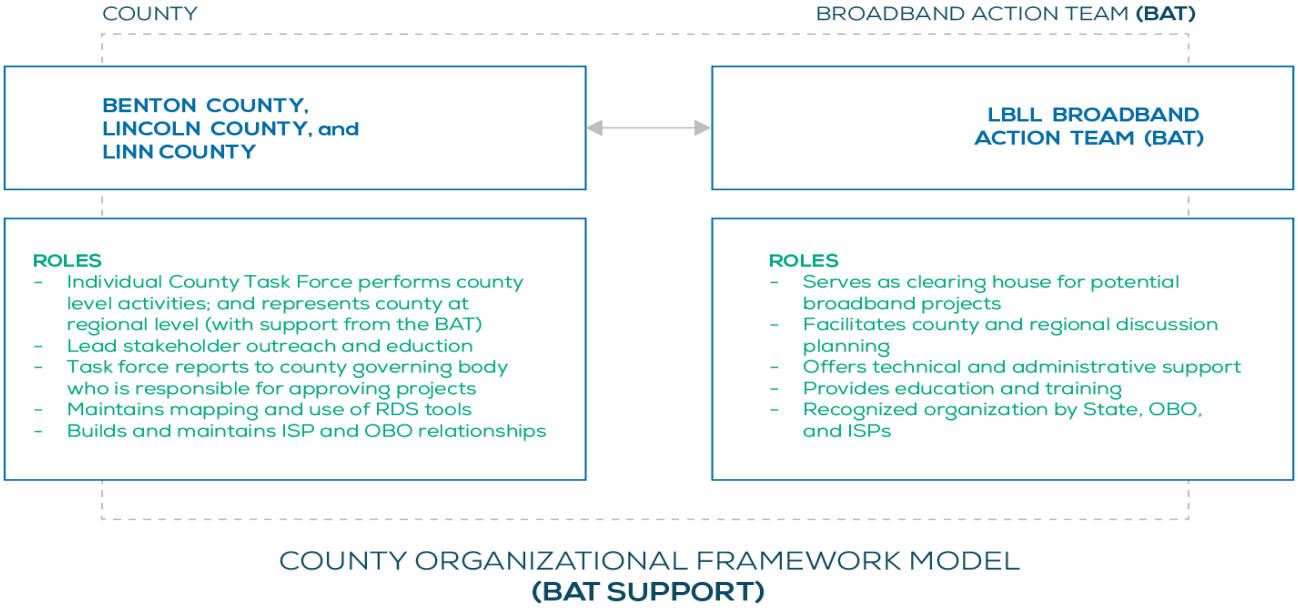
Recommended Strategic Organizational Framework

Solarity strongly recommends the counties put in place a County Led Effort with Regional Clearinghouse (BAT) Support as the Strategic Organizational Framework to best meet the needs of each county and the region. This is the only model where the counties retain control of the identification, application, and implementation of broadband funding opportunities. It offers both the ability of an individual county to decide whether to apply for a particular grant for its county, while also offering the opportunity to partner with one or both of the other counties to leverage economies of scale and where potential broadband services necessitate crossing county boundaries, such as middle mile or even last mile projects. It also offers the opportunity to work with existing ISPs that may already serve a portion of one county to cross into another county to provide broadband, potentially at a lesser cost than if a county attempts to negotiate with the ISP on its own. Additionally, county-led organizational structures may facilitate outreach and education to low-income households that are eligible (but not partaking of) federal broadband discount programs; and public facilities such as hospitals and essential community facilities/anchor institutions, to participate in federal discount broadband programs.

Some elements of the individual county/regional approach already exist with the BAT structure, which has proven to be helpful to the three counties and is a recognized organizational approach used throughout Oregon. The BAT provides a valuable clearing-house function and has established relationships with the OBO, and ISPs that may be providing broadband services in portions of the counties. It is also a more natural fit than an ISP led or centralized framework as it recognizes the importance of county autonomy.

The county approach also works well for funding opportunities where the counties or in partnership with ISPs, are eligible to apply directly to federal agencies for broadband funding (e.g., USDA Community Connect).

Table 6. County Organizational Framework Model



County Led Strategic Organizational Framework

Regardless of which option the three counties determine best meets the regional Organizational Framework, the foundation of broadband efforts lies at the county level. Each county needs an organized, sustainable, and concerted county leadership effort to develop a comprehensive mapping of needs and operations--not leaving the responsibility to rural towns that might lack the resources and expertise to oversee broadband infrastructure.

The framework that a county decides to stand up can take shape and formality which depends on the leadership's perspective. Below are three common structures employed to run broadband initiatives on a municipal level:

Municipal Task Force**:** A municipal task force is a temporary and focused group formed to address a specific issue, problem, or goal within a municipality. Task Forces are designed to be agile, flexible, and typically composed of individuals with expertise or interest in the subject matter at hand. Task Forces are established for a limited time and dissolve once their objective has been achieved or their recommendations have been presented to the relevant authorities.

Municipal Committee**:** A municipal committee is a good of individuals appointed or elected to represent different areas, interests, or functions within a local government. Committees can be permanent or temporary and are often established to oversee ongoing activities, provide recommendations, and make decisions on certain matters. Examples include finance committees, planning committees, and public safety committees. Committees play a role in researching, analyzing, and proposing actions related to their specific area of focus. They might also facilitate communication and coordination among different departments or functions within the municipality.

Municipal Commission**:** A municipal commission is a formal entity with a specific mandate and authority to regulate, oversee, or manage a particular area or function of local governance. Commissions are typically established by law or ordinance and may have regulatory, policy-making, or advisory powers. They usually consist of members appointed by relevant authorities or elected by the public. Commissions often operate independently of other municipal bodies and play a more autonomous role in decision-making. Examples include human rights commissions, zoning commissions, and environmental commissions.

The key differences between a municipal task force, committee, and commission lie in their purpose, duration, authority, and scope. Task forces are temporary groups focused on specific issues, committees are more permanent groups overseeing specific areas, and commissions are formal entities with regulatory or oversight powers in a particular domain of local governance.

It should be noted that in counties where larger broadband grants have been written and managed by the county leadership that having a Commission becomes an important tool in the management of the funds. Again, this may not be the right model in all three counties.

Without a strong commitment to broadband, the effort runs a very substantial risk that the goals and desires of the counties and their citizens will not be realized. The broadband infrastructure grants typically take a funding match (ranging from 15%- 35%), and while the providers can sometimes manage the match as part of a business plan, local funding participation can move the process

forward in a much more efficient manner. Moreover, the most recent rounds of federal grants, including past USDA ReConnect grants, along infrastructure grants in other states have been oversubscribed by three or four times, and the projects with higher percentages of match tended to score better and have a stronger likelihood of solidifying the funding. Solarity conducted an infrastructure grant match webinar in May to support this activity.

County governing body leadership should be looking towards their budgeting process, their municipal bonding potential, and their ability to braid town and county support for these projects to be successful. Working with other sectors, such as K-12 schools, higher education, forestry, economic development, and others that have access to broadband infrastructure funding of their own will build an accurate picture of the funding flowing into the location to address broadband access concerns.

County decision makers should also consider the ongoing monitoring of their broadband infrastructure needs, at least in the next five years as funding for this infrastructure expands at a historic level. Much of the oversight will be doing the FCC Fabric map monitorization. The FCC will be updating the public at least twice a year, and as projects go into effect speeds should be improved. It is recommended that staff time- GIS department especially- should be allocated to these efforts.

Although there are some differences in regional Organizations Framework approaches, at the county level, there is basically one Organizational Framework that meets the needs of each county and also comports to any one of the three regional frameworks chosen. That framework consists of elected county officials appointing a county level body to facilitate and lead each county's broadband activities, participate in the BAT meetings, and report up to the county government for assessing and approving potential funding opportunities.

In the table below, Solarity identifies the actions each county takes to implement a county task force that complements the regional framework.

County Level Readiness

County and Regional level communications and stakeholder efforts naturally include efforts at the "general public" level. Having said that, the foundational level of successful communications must begin with county leaders. In the April 30, 2023, Solarity indicated in the Current State Assessment Report, a general rule for counties to deepen their broadband support through community endeavors exhibiting three tiers of readiness. The type of support, tools, and tactics needed for successful public communications and stakeholder efforts are different for each county as described below:

Tier 1: Counties that need support in gaining leadership and understanding of broadband issues, and preparing for first grants are ready to coach through the steps for broadband project development.

Tier 2: Counties that have less gaps in leadership understanding and infrastructure need to concentrate on continual upgrading of equipment, targeting smaller areas of concerns, and partnering with ISPs to close those gaps need coaching on identifying the development of skills to complete tasks.

Tier 3: Counties that have very specific, unique issues to close any remaining broadband infrastructure gaps need coaching on learning skills to continually monitor and improve performance.

The success of a regional communications and stakeholder effort depends, in part, on each county

recognizing which tier represents where the county currently lies and making concerted efforts to move from Tier 1 and 2 to collectively tier 3. This analysis will assist the county elected governing body determine which Operations Framework entity (task force, committee, or commission) that will best position the county and collectively, the three counties, to successfully communicate the importance of broadband to the communities and to bring the goals and objectives under the county's Strategic Plan, as well as the regional Strategic Plan, to fruition.

The description below of where each county lies within the three tiers helps inform the discussions and development of individual county and the regional Communications Plan. (This information is also provided in each county's Strategic Plan.)

Lincoln, which stood at Tier 1 readiness at the time the Assessment Report was issued, has taken steps to convene community leaders on making broadband a priority. This work needs to continue as the County determines which type of Organizational Framework entity brings the best chances of successfully meeting its strategic plan needs and desires. within the NTIA BEAD Program, the Task Force should prioritize projects that serve the *unserved* BSL first, knowing that *underserved* will also be addressed in those grant project proposals. Solarity recommends that under its Strategic Plan, Lincoln create an Organizational Framework entity that prioritizes building local broadband expertise and identifies and invests county staff time to be points of contact for ISPs. Additionally, broadband infrastructure projects must be closely monitored to ensure households and businesses obtain broadband connections desired.

Lincoln County appears to have pockets of low-income households that require affordability to be addressed as an ongoing focus. Lincoln will also need to work alongside the Confederated Tribes of Siletz Indians that have their own broadband efforts.

Communications and Stakeholder Plan Framework

Creating a comprehensive broadband communication plan that the broadband effort will put into practice involves considering various stakeholders, organizing effective meetings, and outlining the key messages that need to be communicated.

Identifying Stakeholders

When determining key stakeholders, think through those leaders in your community who can rally the troops as well as decision makers to be onboard with project efforts. When conducting these meetings, consider the following to be at the table and involved as early as possible.

- Government Representatives: Elected officials, policymakers, regulatory bodies, and key staff members.
- Service Providers: Broadband providers, ISPs, technology companies.
- Emergency personnel: police, EMT, Forestry services.
- Local Communities: Residents, community organizations, local businesses.
- Infrastructure Partners: Utility companies, construction firms, engineering teams.
- Educational Institutions: Schools, colleges, universities.
- Healthcare Organizations: Hospitals, clinics, telemedicine providers.
- Nonprofit Organizations: Those focusing on digital inclusion, equity, and access.
- Media: Local news outlets, online platforms.

Core Team

A mixture of individuals from this list, and any "unusual suspects" that are leaders in your community should be part of your broadband effort's group. However, in order to be effective, the core team should include:

- A policy maker, usually a government representative, who will be instrumental in shepherding issues through the decision-making process.
- A person skilled at using the RDS software for decision-making on the mapping side and the funding side. This could be a county GIS staff member, member of the county finance team, economic development professional, or others.
- A representative, or multiple representatives, from the Education sector to ensure that their funding strategies are put into consideration throughout this practice.
- Tying in Healthcare and Telemedicine early will provide another sector that is also potentially applying for their own broadband support.
- Emergency services to ensure their needs are voiced early in the discussion process.

An individual should be clearly appointed as the lead on the county's broadband effort. This person should have clear capacities to make decisions and address issues when necessary. Generally, an organization with vested interest in the broadband issue makes it possible for the right individuals to lead this. In some cases, it is a county staff member. In others, it is the director of an economic development organizations. Whomever it is should 1) be given the management of the broadband effort as a clear responsibility in their assigned tasks, and if tasks need to be reassigned to others in order to maintain a good standards that should be considered, and 2) given the importance of the issue, they should have the tools to be successful in building the broadband effort.

If outside facilitation of this issue with a consultant is sought, given resources, the above steps will be important to have in place regardless, especially designating a leader of the effort with some authority.

Setting Up Meetings

When organizing and planning a series of meetings to engage stakeholders be sure to have a purpose with each meeting. Why are you here? What purpose does this meeting achieve? Below are some examples of important meetings that can help answer those questions your stakeholders will naturally have.

- Kickoff Meeting: Introduce the broadband initiative, its goals, and expected outcomes. Define roles and responsibilities.
- Define Priority Projects: Multiple projects have been identified for each county. Prioritize projects, build a timeline, and set expectations.
- Progress Updates: Regular updates on the project's status, including infrastructure deployment, policy changes, and community engagement.
- Feedback Sessions: Gather input and feedback from stakeholders to address concerns and adapt the plan accordingly.
- Milestone Reviews: Review achievements and milestones reached throughout the implementation process.

- Completion and Launch: Celebrate the project's completion and communicate the availability of broadband services.

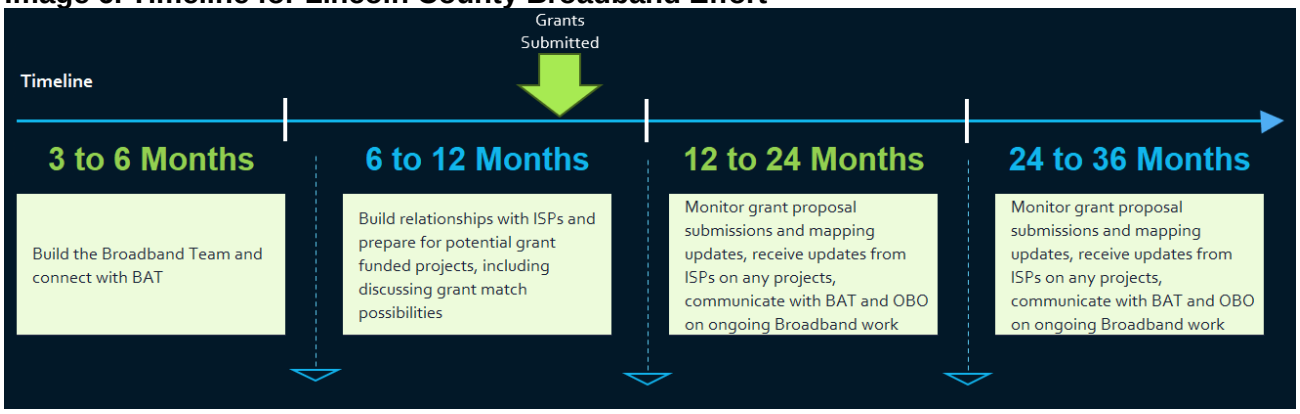
This process can be self-guided with the use of readily available curriculum, like Benton Foundation's Accelerate model, or with an outside facilitator. There are pros and cons to each, most of which are dictated by available financial resources and local expertise. The LBLL BAT may have some resources in this area, as well as Solarity and others.

Communication Plan

Define what needs to be communicated and how it will be shared with stakeholders. Some examples include project overview, which communicate the purpose, benefits, and objectives of the broadband initiative. Progress updates, this allows for shared updates on topics such as infrastructure deployment, policy changes, and community engagement efforts. Benefits the project will have, like highlighting the positive impacts of broadband access including economic growth, improved education, and healthcare. Continue with equity and inclusion, focus on emphasizing efforts to ensure that underserved communities have access to broadband services. Voice those challenges and solutions, be deliberate in addressing potential challenges and explain how they will be overcome. Divulge timelines, providing a clear timeframe of project phases, expected completion dates, and key milestones. Finally, contact information, sharing contact details for those inquiries and feedback.

This work will take time to put in place, ready the team for potential grant applications and pursue grant match or other funding strategies. Monitoring and communicating the advances in the work should be an ongoing process, which could take multiple years given the timeline for completion of some of these projects.

Image 6. Timeline for Lincoln County Broadband Effort



Communication Channels

This can be overlooked but it still is just as important, selecting the appropriate communication channels to reach different stakeholders effectively. These really are a spectrum of options that can be used based on the stakeholder or groups of stakeholders. If you tried to have meetings with all groups it would feel daunting and never-ending, we recommend meeting with key stakeholders when appropriate as well as utilizing the following communication channels to reach tiers and groups.

- Email Updates: Regular email newsletters summarizing progress and upcoming milestones.

- Social Media: Engage stakeholders through platforms like Twitter, Facebook, and LinkedIn.
- Website: Maintain a dedicated website with project information, updates, and resources.
- Press Releases: Issue press releases for significant project developments and achievements.
- Community Workshops: Organize workshops to engage directly with local communities and address their concerns.

It is important to make sharing of this information as easy as possible. If you are asking constituents to share information through social media posts and newsletter blasts, take the mystery out of the process by offering up pre-approved and ready-to-go social media posts (text + pictures adjusted for each platform) and template newsletter text with approved images. By streamlining the process for sharing information, we have found better returns on the backend.

As the broadband initiative progresses, be prepared to adapt the communication plan based on feedback and changing circumstances. Flexibility is key to ensuring the plan remains effective and relevant. Remember, effective communication is a crucial aspect of any project, but vital to broadband. By involving the right leaders and players, holding productive meetings, and consistently sharing relevant information can help ensure the success of the project as well as its positive impact on the community.

Risks Related to Lincoln County's Broadband Efforts

It is well understood that broadband gaps will require multiple grant funded applications and projects, some of which will occur at the individual county level while others will be regionally focused. Within the realm of assessing funding opportunities there are several logistical matters to consider:

- The types of grants that offer the best use of scarce resources and the best chance of being successful in obtaining funding in the near future.
- Infrastructure grants produce tangible results in that actual broadband is deployed, but the timing of when the grants become available has proven to be uncertain. (Technical assistance grants can provide tremendous value for infrastructure readiness.)
- How to handle opportunities that may be best addressed by a regional effort consisting of more than one county.
- How to navigate individual counties or the region applying directly to a federal agency for a broadband grant.
- How to handle grants that offer the counties an opportunity to work with ISPs who may be the entity that is eligible to apply for the funding and have been successful in past funding efforts.
- Considerations for funding opportunities for the counties to collaborate or partner with schools, libraries, medical facilities or organizations, and the like, to form a consortium to facilitate broadband expansion for more specific purposes.

All these considerations must be made based on resources, timing, and what is known at this time (and as important, what has not been settled), to be the most viable opportunities and options to pursue.

Projects that also involve managing grants have significant reporting requirements to multiple funding sources at the federal and State level. Still other projects may require sub-grantee and ISP audits that must be conducted in accord with the U.S. Department of the Treasury and Office of Management and Budget, and other federal and State rules and regulations. The Risk Plan

methodology and guidance is designed to be used across the board to identify and plan for risks associated with grant applications, managing and reporting requirements, and conducting sub-grantee audits, as well as processes for risks that elevate into issues.

Given the complexity of the overlapping efforts and opportunities that will influence decision making, Solarity has identified risks and potential mitigation steps that should be put into place under the Strategic Plan. All identified risks have been grouped into two categories: 1. Risks relating to the three-counties collectively as a region; and 2. Risks that relate to an individual county. The table below identifies and summarizes ongoing risks at the regional level under the Strategic Plan.

Table 7. Regional Risk Under the Strategic Plan

Risk Category	Risk Details	Risk Response Recommendations
Resources needed to identify, plan, submit, implement, and manage grants are not identified and/or available.	It has been stated that counties and regions with identified and experienced resources are better positioned to apply and successfully obtain federal and State grants. As a new item in a county's scope of responsibility, broadband will require dedicated resources that may or may not be within current capabilities of county staff. For example, GIS mapping of areas that are un- or underserved is not a task that many of the county's current staff may have conducted. Similarly, administering broadband grants may be new to counties. This situation can hinder a county's capacity to successfully obtain grant funding and meet grant reporting and other compliance requirements.	Identify current resource capabilities and resources needed to build capacity; if needed, seek external resources
Lack of Formal and/or Informal organizational Strategic Framework ("governance")	Broadband as a new county/regional initiative requires counties to have an organizational structure that facilitates a coordinated and collaborative effort to plan, strategize, identify, and apply for grants. The Oregon Broadband Office rules identify having a strong strategic organizational framework is a critical component of grant applications and awards. The structure must be sustainable and capable of changing as broadband technology evolves and changes to application and administrative responsibilities are made at the federal and State levels. Additionally, there will be likely be funding opportunities that are best served by a multi-county regional approach, such as projects that cross boundary lines or middle-mile connections between counties. Without a coordinated framework and approach, a county that does make broadband a high priority may lag behind and not able to leverage broadband opportunities and new technology.	Lack of Formal and/or Informal organizational Strategic Framework ("governance")

Risk Category	Risk Details	Risk Response Recommendations
Lack of capacity to keep momentum going to build stakeholder buy-in and accomplish the strategic plan and broadband goals.	A critical role of the broadband strategy organizational framework is that each county has a champion who can continue to emphasize broadband as a high priority and achieve stakeholder buy-in. The champion should be the point-person for the county's broadband strategy and represent the county at the BAT level. Additionally, that individual should lead a core group of county officials committed over the long run to continue the momentum from beginning to end of the grant application and award process, as well as managing the operational component of the strategic plan implementation process. The core group should build on the communication plan under the strategic plan to develop relationships with stakeholders to ensure broadband education and buy-in with public entities such as schools, and healthcare facilities and businesses. Without this consistent and sustainable effort, the county risks less than optimal grant results, with the worst-case scenario not obtaining desired broadband funding or not meeting grant program requirements which would be detrimental to the county, its citizens and its economy.	Continue stakeholder out-reach. Could sustain with a formal Task Force, Commission, or Committee. Follow recommended frameworks, like Benton Foundation's Accelerate model.
Existing county resources not familiar with federal IRS and FCC/NTIA and State broadband reporting and audit requirements for sub-grantees and ISPs	The BEAD and DEA federal regulations give considerable flexibility to states and regional/county governments for oversight of the broadband grant programs. In return, the federal rules establish stringent reporting and audit requirements that states, and local governments must adhere to, to remain in compliance with federal and State regulations. If a county does not have resources that are familiar and experienced in conducting sub-grantee audits and ensuring ISPs meet their deadlines and obligations, there is a risk that the county may be found to be noncompliant and subject to claw-backs or other penalties.	May be opportunity to have regional approach; Identify the entity who will conduct audits; if internal, need substantial education or hire external experienced entity.
Lack of knowledge and understanding of grant application timelines and requirements at the federal and State levels.	In the next several years, there will be numerous broadband grant opportunities at the federal and State levels. Even though the BEAD and DEA and other grant programs were introduced more than a year ago, the grants are still under development with rules and application requirements being further refined before grant periods open. At the State level, the Oregon Broadband Office's (OBO) application requirements have been pending for almost a year and have yet to be finalized. Counties must constantly monitor grant application rules and be ready at a moment's notice to put together complete and competitive grant applications. If a county does not have the capacity or does not closely monitor and react to federal and State program requirements, it risks not being able to identify, gather needed information such as maps and speed tests, and submit a well-crafted broadband application, thus potentially losing out on economic, health, social and educational benefits for its citizens.	Strengthen relationship with OBO and continue to grant opportunities. Address grant writing and grant management either internally by building staff capacities or seek external resources

Risk Category	Risk Details	Risk Response Recommendations
Grants opportunities hampered by not building relationships with ISPs currently providing (or planning) broadband infrastructure in the county or contiguous areas	Many ISPs have been the recipients of federal broadband grants in the past and/or have pending applications or been awarded grants that are in the planning stages. Counties that build relationships with incumbent or potential ISPs may be able to leverage planned buildouts to include unserved locations within their communities. Building these relationships, including offering letters of support and potential match funding may greatly enhance a county's ability to have broad band services extended under current or future grants at less cost than applying for a new grant. Not expressing a keen interest in existing and planned, as well as potential future grant opportunities, hinders a county's efforts to take advantage of the benefits of broadband and potential economies of scale.	By clearly identifying a county point person, build relationships with ISPs with presence in counties to explore planned expansions and potential for counties to supplement natural territorial buildouts with grants done in partnership
Not being aware of or not obtaining the "match" in a timely manner.	Many federal grant programs such as BEAD, Economic Development, and Community Connect (and in some cases, DEA) have match requirements. In some cases, the match can be "in-kind" while in others, the recipient must provide a cash match. It is crucial for regional grant officials to be knowledgeable about match requirements early on to identify sources and types of match. The mix that best leverages federal, State, and county funds, as well as when to pursue private and non-profit organization funding including educational institutions, health care facilities, and businesses must be determined. As an example, if a public right-of-way (ROW) is needed, the value of the ROW may be permitted as match, thus reducing the need for seeking match funding. Regional approaches may be particularly tricky to determine the best mix and type of matches, as each county will likely have to consider single county match requirements as well as regional matches.	Counties may "pool" resources and available "match" opportunities to determine how to best leverage in-kind matches and then move to cash matches based on the timing of a project, and dependencies based on whether another project must be completed first, or other factors.

Table 8. Scoring Table

Score	Exposure
1-4	Low
5-10	Medium
11-25	High

Funding Options

Funding broadband projects can be essential for improving digital connectivity and bridging the digital divide. We have heard county leaders discuss the need to promote the placing of broadband items in the county fiscal budget in the future, but there are options and tools that lay beyond that resource as well. This should be done, but we also ask that the leaders of the broadband efforts educate elected officials about using every opportunity on hand. For example, American Rescue Plan Act (ARPA) funds were allowed to be used for broadband connectivity efforts. Because the issue was not understood, the funds were spent on other items. Although they may have gone to good projects, these county efforts can help ensure funds flow in this direction.

There are several funding sources that can be considered when initiating and supporting broadband projects. Below is a table showcasing options to consider.

Table 9. Different Funding Options

Choices for Funding	Description
Bonding	Borrowing money from investors by selling these and promising to repay the principal amount with interest over a specified period.
Provider Support and Cost Sharing	Can offer financial support, resources and/or collaborative partnerships due to expanding customer base and revenue potential.
Capital Improvement Funds	Earmarked funds set aside for public infrastructure, can allocate funds to broadband to enhance digital connectivity. Can be used as collateral or down payment when seeking loans or bonds.
Grant Strategy	Identifying, applying for various grants from government agencies, private foundations, and other organizations. Can provide various funding aspects for broadband projects.

Summary Table of Major Funding Opportunities

Solarity presented a matrix prioritizing specific broadband infrastructure grant funding in the “Current State Analysis” presented to OCWCOG in May. The table has been updated with information to date. More information about the grant matrix can be read in Appendix H the OCWCOG Broadband Strategic Plan.

Table 10. Major Funding Opportunities

Title of Grant Opportunity	App. Source	Type/Title	Application Due Date	Preliminary Assessment Score (1– 100%)	Notes/ Recommendations
Federal BEAD	OBO	Implementation (Infrastructure, etc.)	TBD in 2024	76%	Applicants are generally ISPs --Consider and discuss grant match with ISP’s. Prioritize *unserved* BSL’s in first grants

Title of Grant Opportunity	App. Source	Type/Title	Application Due Date	Preliminary Assessment Score (1– 100%)	Notes/ Recommendations
Federal DEA	OBO	Competitive Grant	TBD in 2024	68%	Digital Equity facing support --NOFO is not out at this time. Continue to monitor
Federal Capital Fund Projects	OBO	Infrastructure Grants	TBD in fall 2023, early 2024	85%	Planning- counties / regions can apply. Implementation applicants are generally ISPs --Grant match not required but adds points
Federal USDA	USDA	Community Connect Grants	June 20, 2023	76.6%	Applications for tri-county area submitted by ISP's. Monitor
Federal USDA	USDA	ReConnect Grants/Loans	TBD likely fall 2023	70%	Applicants are generally ISPs, but counties are eligible -- Consider and discuss grant match with ISP's
State Oregon Broadband Office (via Federal CPF and state funds)	OBO	Broadband Technical Assistance Program	TBD 2023	70%	Applicants can be counties / regions -- Lincoln Co will be lead for a multi-county grant application

The second table shows a sample of funding opportunities that the counties need to be aware of and consider how they can help assist in gaining broadband funding or other collaborative activities. Counties may not be able to apply for all of these funds directly, but partner organizations may be actively using these funding mechanisms. For example, Samaritan Health Services receives rural healthcare support, or E-rate funds, for their hospital system. Understanding if and when they use the funds for adding fiber to their network or partnering with a service provider to accomplish that task is important. Strategizing a larger initiative with Samaritan to address telehealth needs in portions of their service area that do not have reliable connectivity could be built into a broadband infrastructure project. The E-rate funding may act as an element inside of a project's capital stack as there are complimentary needs that are met when building out strategic pieces of the broadband infrastructure.

We recommend that the counties have active broadband efforts bringing together leadership for these reasons. The complex network of agencies and organizations who receive partial funding for their work could be aggregated together in a larger broadband strategy and used during grant application process to paint a fuller picture of funding.

Summary Table of Potential Broadband Opportunities to be Aware of for Collaboration

Table 11. Potential Broadband Opportunities

Title of Funding Opportunity to Collaborate on	App. Source	Type/Title	Notes
Federal Economically Distressed Assistance	State of Oregon	Comprehensive and flexible resources for economic needs. (Opportunity Zones, increase private investment, workforce development, etc.); created in 2020 as part of COVID funding	Like ARPA funds, reflect if there are remaining funds that can be put towards broadband efforts. Guidance was broad, and broadband projects were included as an allowable usage of funds.
Federal FCC Emergency Connectivity Fund (ECF)	FCC	Emergency $7.17 Billion for schools and libraries for electronic devices and broadband hot-spots, and wi-fi services.	Last grant period was for applications in 2022. Counties can work with local schools to collaborate on status and new potential under major funding opportunities (BEAD, DEA, etc.).
Rural Health Care (RHC)	Universal Services Ad. Co. (USAC)	Funding for health care providers for broadband services needed for healthcare. (Telehealth)	This is revolving program with funding based on appropriations. Counties may work with local health care facilities to collaborate.

Importance of Grant Matching Funds

Grant matching programs involve leveraging public or private funds by requiring the recipient to match a portion of the grant amount with their own funds. Some grants require recipients to match a portion of the grant amount with their own funds or resources. Matching funds can encourage local commitment to the project and demonstrate the project's viability to funders. This approach encourages collaboration and investment from multiple sources, maximizing the impact of the grant money.

Matching funds for grants do not have to come from one source but can be from multiple organizations; in-kind may be an allowable match depending on the grant rules; and match can be from bonds and capital projects funds. It should be noted, as with other federal programs, that match for a federal program (which BEAD and CPF are but managed by OBO) cannot be from another federal resource.

Each funding option has its own benefits and considerations, so it's important to choose the options that best align with the project's goals, timeline, and financial requirements. Combining multiple funding sources can also help diversify the project's financial support and reduce risk.

Conclusions/Next Steps

During our work with appointed local county leads on this project, it has been clear that there is a willingness and a drive to address broadband issues in Lincoln County. It is of critical importance that county municipal leadership prioritize this issue for the next three to five years as the infrastructure funds start to impact the area. These are complex infrastructure projects and necessitate a level of support.

The Rapid Design Study software will be available to counties beyond the timeframe of Solarity's study. Leaders who have been working with our team through the process have already gained access to this software and training on how to use it in your ongoing planning efforts.

As noted, the municipalities have a responsibility to their communities to ensure that the infrastructure for success is in place. Roads for transport were the dominate infrastructure piece in the 20th century. Broadband infrastructure is shaping up to be just that for the 21st century. The time is now to expand local leadership's knowledge base on the issue to be successful in this moment of opportunity.

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SOLARITY
A HealthTech Solutions Company

OCWCOG Broadband Strategic Plan

Oregon Cascades West Council of Governments Broadband Project

Regional Broadband Strategy

Version 1.1

August 30, 2023

Revision History

Date	Version	Author(s)	Notes
9/1/23	1.0	Solarity Team	Original submission

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Executive Summary

As a consequence of once-in-a-lifetime investment from the federal level, Oregon is poised to receive over $860 million from several federal programs for broadband expansion efforts. The Oregon Broadband Office (OBO) has been statutorily authorized to administer the application and distribution of funds to public and private entities, including Oregon Cascades West Council of Governments (OCWCOG), counties, and other qualified applicants. Recognizing the critical importance of broadband particularly in the rural areas and for economically disadvantaged populations, Cascades West Council of Governments contracted with Solarity, a HealthTech Solutions company, in August, 2022 to assess the current state of broadband; assist in the development of a cohesive broadband strategy (Regional Broadband Roadmap); and to identify, assess, and prioritize funding opportunities, focusing on the Broadband, Equity, Access, and Deployment (BEAD) and Digital Equity Act (DEA).

Since the time this engagement began, the timelines for the major federal programs of BEAD, DEA, and Capital Projects Fund (CPF) have been clarified. CPF related funds administered by OBO are being projected with an early date of late fall 2023, while BEAD and DEA subgrants are slated as being available in 2024 and beyond. These dates are beyond the timeframe of our contracted work, but Solarity has presented OCWCOG and county partners as much clarity about the grant timeline with potential importance. Details are found in the Funding Options section and Appendix G.

Solarity has gathered user information and readily available data to help understand the state of broadband access in the OCWCOG service area. Partnering with Breaking Point Solutions, Solarity produced Rapid Design Studies for the three counties to understand the unserved and underserved locations.

The definition of those terms which will guide the BEAD funding, the terms mean:

- Unserved: lacking access to 25/3 mbps service.
- Underserved: access that ranges 25/3 to 100/20 mbps service.
- Served: access to higher than 100/20 mbps.

The study found 8,764 Broadband Serviceable Locations (BSL) in the tri-county area.

Table 1. Current Unserved and Underserved BSL Data

County	Unserved BSL	Underserved BSL	Total BSL
Benton	641	1,095	1,736
Lincoln	1,085	462	1,547
Linn	588	4893	5,481
Total	2,314	6,450	8,764

This report will offer analysis of the maps and details of these locations, offering suggested Broadband Infrastructure projects which will address these issues, with suggestions for partner internet providers when more clear, especially if they are an incumbent provider.

Solarity also suggests the following top recommendations to county leaders, both elected and otherwise, to capitalize on the potential federal funding on the horizon. This includes:

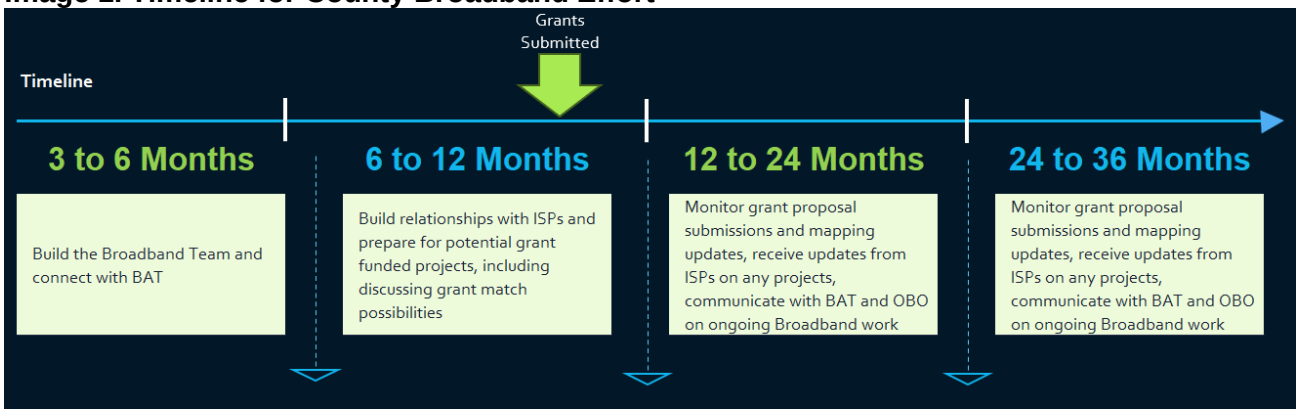
- Establish a Broadband Organizational Effort that has impact
- Commit to broadband infrastructure completion as a county leadership level priority

- Build partnerships with ISP's serving each county and discuss the potential for partnerships
- Review the Rapid Design Study proposals and prioritize efforts on a timeline that fits with infrastructure grant opportunities
- Ensure Affordability and Adoption are not forgotten by addressing within the broadband effort's purview

In order to ensure that counties are able to play an active part in addressing their broadband connectivity issues, Solarity strongly suggests that counties establish broadband organizational efforts with local leadership working through their broadband desires as a Task Force, Committee, or Commission. There are key decisions that are best made and led by local leadership, and examples of this work are included in the Case Studies section. County leadership should remember they have access to the Rapid Design Study software for an extended period of time to continue analysis of the information, and this will become a useful tool in ongoing work. Counties should also utilize the established Broadband Action Team structure that has been in operation for some time, with the expectation they will support the county work through advocacy and resource sharing.

A timeline for building a county level broadband effort should be considered as a multi-year endeavor as education and preparation for grants should be occurring now, and monitoring progress should be occurring for the entirety of the life cycle of the grants.

Image 1. Timeline for County Broadband Effort



It is imperative that elected officials understand that public dollars may need to be used as a tool to support the development and investment in these projects. Broadband grants typically have a 15-35% match and given the competitive nature. If grants are not secured, there are other avenues for funding, which is also described in the Funding Options section.

This is an important moment for the leaders in Benton, Lincoln, and Linn Counties to take this information into account; prioritize broadband access, affordability, and adoption issues; and plan to actively pursue projects with internet providers to bring services to every resident and business in the tri-county area. Although a large task, it is surmountable and will set the community up for future success.

Introduction

Broadband and the advancement of technology have been influencing how individuals and communities set up their lives for the better half of the 20th century, but it is now clear that broadband access has become an essential part of life. It has become important for many aspects of our lives- from education, economic opportunities, health, and emergency situations. COVID brought to light that not every part of a state, and not every part of a county, have the same ability to access reliable, fast internet speeds. There is more to do in assuring that every resident can access reliable broadband, afford the connection, and has the skills and tools to adopt and integrate these into their daily lives.

Solarity, through contractual work with the Oregon Cascades West Council of Governments (OCWCOG), has been asked to develop a broadband Strategic Plan for Benton, Lincoln, and Linn Counties. This Strategic Plan focuses on providing guidance on activities for improving and expanding the region's current broadband service infrastructure as well as strategies to increase adoption and use of broadband internet to unserved and underserved communities.

The counties supported in this work are largely rural in nature with county seats (Corvallis, Newport, and Albany respectively) that have the most substantial populations in each county. There is a relatively low population density as a feature of their makeup, and their rural areas are a mixture of state and federal protected lands (largely forested and mountainous), some agricultural land, and small towns that have unincorporated distances between them.

It has been common, in locations all around the country, that counties that match this profile have challenges in closing broadband infrastructure gaps for these reasons. Solarity believes that the local decision makers should prioritize this infrastructure issue, especially as once-in-a-generation investments will be available in the coming years, due to the significant investment put in place by the federal government as part of the Infrastructure Investment and Jobs Act (IIJA) and other programs, like the massive investment seen in the Capital Projects Fund (CPF) and funding of USDA programs at considerably high levels.

At the state level, Oregon is poised to receive over $860 million from several federal programs for broadband expansion efforts. The Oregon Broadband Office (OBO) has been statutorily authorized to administer the application and distribution of funds to public and private entities, including OCWCOG, counties, and other qualified applicants. Recognizing the critical importance of broadband particularly in the rural areas and for economically disadvantaged populations, Cascades West Council of Governments contracted with Solarity, a HealthTech Solutions company, in August, 2022 to assess the current state of broadband; assist in the development of a cohesive broadband strategy (Regional Broadband Roadmap); and to identify, assess, and prioritize funding opportunities, focusing on the Broadband, Equity, Access, and Deployment (BEAD) and Digital Equity Act (DEA). Solarity is to complete at least two timely applications for federal and/or state grants chosen by OCWCOG on behalf of the counties in the study.

Since the time this engagement began, the BEAD, DEA, and CPF grant program timelines have been clarified. CPF related funds administered by OBO are being projected with an early date of late fall 2023, while BEAD and DEA subgrants are slated as being available in 2024 and beyond. These dates are beyond the timeframe of our contracted work, but Solarity is still committed to completing infrastructure grant applications as part of our engagement with OCWCOG.

History of Telecommunications and Broadband Access

Access to high-speed broadband internet has become increasingly important over the past few decades, as many aspects of our lives are now conducted online, from work and education to healthcare and entertainment. Unfortunately, there are still many rural communities in the United States that lack reliable access to broadband internet, and this digital divide has only been exacerbated by the COVID-19 pandemic.

The digital divide is the gap between those who have access to digital technology and those who do not, and it is a significant issue in rural communities including areas in Benton, Lincoln, and Linn Counties. According to the Federal Communications Commission (FCC), approximately 14.5 million people in rural America do not have access to broadband internet. In Oregon, it is estimated that 1.7 million of its 4.2 million residents lack access to broadband. This lack of access puts rural residents at a disadvantage in many areas, including education, healthcare, and economic opportunities.

The telecommunications sector became the home of broadband access as tv, cable, and telephone services became more intertwined as time passed. The first cable television networks were established in the 1950s and 1960s, and by the 1970s, cable TV had become a popular form of entertainment. In the 1980s, the telecommunications industry underwent a significant transformation with the introduction of cellular phones and the deregulation of the industry.

The Telecommunications Act of 1996 was a significant turning point in the history of cable and telecommunications in the United States. The act was designed to promote competition and innovation in the industry, and it paved the way for new technologies like high-speed internet and digital television. However, the act also resulted in the consolidation of the industry, with a few large corporations dominating the market.

In the early 2000s, high-speed internet became more widely available in urban areas, and many people began to rely on it for work, education, and entertainment. However, rural areas were left behind, as the cost of deploying broadband infrastructure in these areas was prohibitively high for many telecommunications companies. This has led to a situation where many rural communities still lack access to reliable broadband internet, even though it is a necessity for many aspects of daily life.

Over the past few years, there have been some efforts to address the issue of broadband access in rural communities. One example is the FCC's Connect America Fund, or CAF program, established in 2011. It has provided funding to telecommunications companies to help them deploy broadband infrastructure in rural areas. Unfortunately, speeds associated with that program were not future focused. The technology then, largely Digital Subscriber Line (DSL), is now a hinderance for connectivity in some places. At the same time, states have become more active in addressing their broadband connectivity issues, with an acceleration after the pandemic closures disclosed how acute the issue was for many individuals and businesses.

Despite these efforts, the digital divide in rural America persists. Many rural communities still lack access to reliable broadband internet, and those that do have access often pay more for slower speeds than their urban counterparts. This digital divide has significant consequences, as it exacerbates existing inequalities and limits opportunities for rural residents.

The changes in cable and telecommunications over the last 40 years have led to a situation where

many rural communities in the United States lack access to reliable broadband internet. This digital divide has significant consequences for rural residents, limiting opportunities for education, healthcare, and economic growth. While there have been some efforts to address this issue, more needs to be done to ensure that all Americans have access to reliable broadband internet, regardless of where they live.

Current State

Speeds, Availability, and Maps

Solarity has gathered user information and readily available data to help understand the state of broadband access in the OCWCOG service area. Broadband refers to high-speed internet access that is always on and provides faster speeds than traditional dial-up connections. Broadband speeds are typically measured in megabits per second (Mbps). Download and upload speeds refer to how fast data can be transmitted to and from your device over the internet. Upload speed refers to the rate at which you can send data from your device to the internet, while download speed refers to the rate at which you can receive data from the internet to your device.

Below you will find in table 2 information from leading national surveys and speed test gathering platforms.

Table 2. Current State of Broadband as of 2020[1]

Broadband Data	Benton	Lincoln	Linn
Population (FCC 2020 Estimate):	93,239	50,582	131,053
American Community Survey (ACS) Percentage of Households without Internet Access:	5.1%	10.00%	11.10%
ACS Percentage of Households without a Computer, Smartphone, or Tablet:	3.70%	7.40%	7.4%
M-Lab Speed Test Median Download/Upload (Mbps):	67.52/5.88	48.10/8.47	26.61/3.85
Ookla Speedtest Median Download/Upload (Mbps):	81.68/8.76	43.99/10.08	71.09/8.34
Microsoft Percentage of Downloads Completed Over 25 Mbps or Higher:	99.51%	95.44%	97.46%

Given it is at such a high level and does not display granular information, Solarity (and Faster Internet Oregon) uses Breaking Point Solutions speed test mapping system to help make decisions. Breaking Point Solutions also conducted a Rapid Design Study (RDS) for each of the three counties to better understand the needs of each county. RDS uses the Federal Communications (FCC) fabric map as its source.

Federal Communications Commission (FCC) Map and Fabric

For many years, the FCC set a benchmark speed of 25 Mbps for download and 3 Mbps for upload for broadband internet, which means that any internet service provider (ISP) offering broadband service must provide at least those speeds to be considered as broadband.

However, in 2021, the National Telecommunications and Information Administration (NTIA) increased the minimum download speed to 100 Mbps and upload speed to 20 Mbps for its broadband grant program. This means that to receive funding for broadband infrastructure projects, ISPs must meet these minimum speed requirements.

[1] https://broadbandusa.maps.arcgis.com/apps/webappviewer/index.html?id=50c64e2c028d46a58247125e4bcdcdc8

Following the Congressional request for the FCC to establish a new mapping system in 2020[2], Fabric data has established a stronger, location-based understanding of what locations need to be connected to broadband services. First published at the end of 2022, the FCC Fabric map will be updated on a regular basis, offering an indication of improvements in connectivity and speeds as progress is made. In total, the FCC Fabric shows a total of 8,761 locations in the three counties that lack a broadband connection.

The definition of a broadband serviceable location (BSL) is "a business or residential location in the United States at which mass-market fixed broadband Internet access service is, or can be, installed." Below are the locations in the three counties identified by the FCC fabric as BSL to close the broadband gap.

Table 3. Current Unserved and Underserved BSL Data

County	Unserved BSL	Underserved BSL	Total BSL
Benton	641	1,095	1,736
Lincoln	1,085	462	1,547
Linn	588	4893	5,481
Total	2,314	6,450	8,764

Do note the speeds are self-reported from the providers, a point that needs to be remembered when assessing coverage. The information and the map are continually updated, and the FCC will accept challenges to the location information if deemed inaccurate[3].

The NTIA's definition of served and unserved, speeds are categorized in the following way:

- Unserved: lacking access to 25/3 mbps service.
- Underserved: access that ranges 25/3 to 100/20 mbps service.
- Served: access to higher than 100/20 mbps.

The NTIA also notates that under the BEAD Program, any location with speeds of 100/20 by technology that meets the definition of Reliable Broadband Service is considered served. Reliable Broadband Service is broadband service that the FCC Broadband DATA Maps show is accessible to a location via: (i) fiber-optic technology; (ii) Cable Modem/ Hybrid fiber-coaxial technology; (iii) digital subscriber line (DSL) technology; or (iv) terrestrial fixed wireless technology utilizing entirely licensed spectrum or using a hybrid of licensed and unlicensed spectrum (NOFO Section I.C.u).

[2] https://www.fcc.gov/news-events/notes/2022/06/30/status-update-mapping-where-broadband-and-not-available-us#:~:text=Congress%20took%20up%20this%20challenge,available%20throughout%20the%20United%20States
[3] https://help.bdc.fcc.gov/hc/en-us/articles/8554187214107-Fabric-Challenge-Process

Image 2. Map of Unserved Location for Benton, Lincoln, and Linn

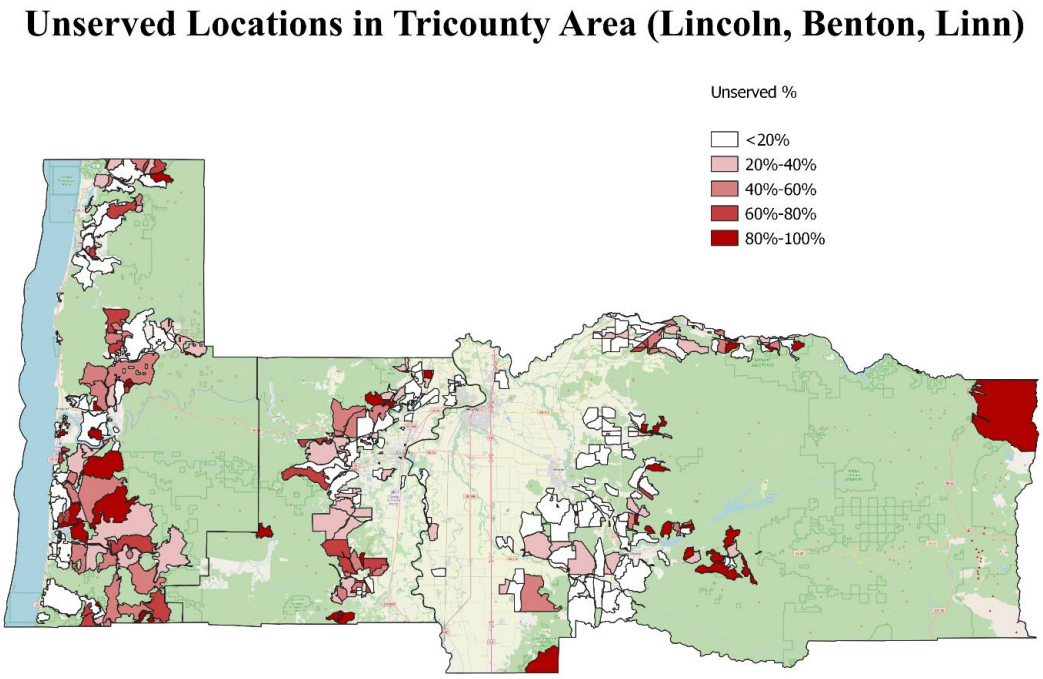


Image 2, above, shows the 2,314 *unserved* locations identified by the FCC Fabric data. Do note that in many of the census blocks noted as Unserved are sparsely populated. Thus, an area that is 100% Unserved may only have two locations in the census block and both locations do not have service.

Lincoln County has highest number of unserved locations (1,085), especially in the southern portion of the county. This issue will be explored in more detail in Appendix B which details Lincoln County's particular broadband project needs.[4]

[4] This will be updated as the recently secured USDA ReConnect grant adjusts the BSL's. More information on this can be found in the Lincoln County report in Appendix B.

Image 3. Map of Underserved Locations in Benton, Lincoln, and Linn

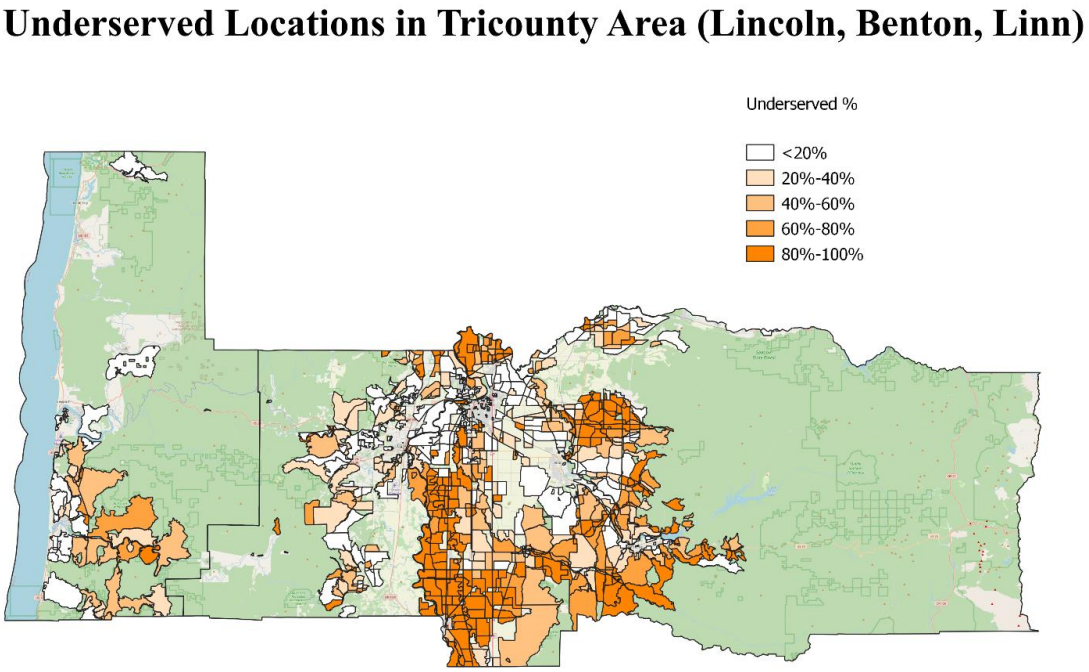


Image 3 shows the 6,450 *Underserved* locations identified by the FCC Fabric data.

Linn County has a high number of BSL's due to the prevalence of fixed wireless options as the predominant option for connectivity in the area of concern, coupled the size of the CAFII award for CenturyLink (see Existing Federal Funding section). To transmit the speeds desired today, along with meeting the 100/20 mbps minimum, an upgrade in technology is necessary in order to achieve the desired, long-term outcomes for the area. This is a sizable investment that will need to be done with committed leadership from the county.

~Do note that a USDA ReConnect award was secured by Pioneer during the final weeks of preparing this report. The above BSL data does not have that award removed, due to the timing of updates between the FCC fabric updates and BPS's software. It removes a substantial portion of the southern section of Lincoln County's unserved area, along with a small portion of the unserved in southern Benton County. You will see these overlaps in maps titled Build 1 for Benton and Lincoln Counties.

Service Provider/Asset Analysis

In Appendix D, you will find the type of technology, internet providers, advertised speeds, monthly subscription types, and locations these services are available. This list is broken down by county for ease.

Solarity has been in discussion with many of the providers who have networks of service in the tri-county area of this study. You will find some shared information about current projects underway in the county specific sections, found in Appendices A-C.

It is important to remember providers can use different types of technology within one service area. Many, if not all, are using a mixture of fiberoptic cables, fixed wireless, and DSL as they are replacing it. Simply put- just because a provider has fiber in one place and speeds that meet the new minimums

does not mean they have built out the service in their whole service area. The providers tend to not share the maps of their service areas to protect sensitive information, but the counties that have put a priority on understanding this topic with their existing Geographic Information Systems (GIS) resources will be able to quickly turn their understanding of the need into competitive grant applications. For more information on the build types, visit Appendix G.

Previous and Current Federal Broadband Investments

The following maps highlight key Federal Broadband investments that have already been made in the tri-county area with notes on their impact on future broadband planning. Some investments (CAF II, ACAM) have need for notation because they will be included in the need for broadband infrastructure investment (through planning or noting that redress is underway, in the case of a substantial amount of ACAM service area). Others should be noted as projects that have been secured or pending, with those that have been secured should be monitored.

Do note that most of the investment with federal programs that the providers have been able to secure were without local partnerships in the financial sense. In recent years multiple providers have been able to source USDA funds for their continued upgrades of equipment, but by and large they were loans and not grants. This becomes important to note as BEAD grants become the focal point in the near future. Congress built the IIJA law with express need for a letter of credit to be carried by the subgrantee on the grant award. If providers are carrying debt, this will be more of a financial hurdle. There have been concerns with this element of the program brought to the federal government's attention, and the issue should be followed by leaders in the tri-county area.

Existing Federal Funding

Three Federal programs from the FCC had the most influence in shaping connectivity in the tri-county region are CAF, ACAM, and USDA grants and loans.

CAF and CAF II is a part of the Universal High-Cost Program, designed to expand access to voice and broadband services for areas where they are unavailable. CAF began as of 2011 with an annual budget of 4.8 billion while CAF Phase II is more of a long-term, 6-year program, specifically provided to ISPs to subsidize the cost of building new network infrastructure or performing network upgrades. Beginning in 2018 with an annual budget of 198 million over 10 years which in total exceeds 1.9 billion. The minimum required speed for CAF is 10/1mpbs fixed broadband.

ACAM is Alternative Connect America Cost Model which provides funding rate-of-return carriers that voluntarily elected to transition to a new cost model for calculating High-Cost support in exchange for meeting defined broadband build-out obligations. Beginning in 2016, ACAM models the forward-looking economic costs of deploying a high-speed network and delivering broadband service. Announced in the summer of 2023, Enhanced ACAM (or EACAM) is a progressive iteration of its precursor ACAM, which is a funding program designed to address rural connectivity challenges within the broadband telecommunications domain. Ranging for 15 years, it will begin in January 2024 and will not only offer to areas lacking 25/3, but now it will include areas that are lacking speeds 100/20. More importantly, this new program will specifically require recipients to deploy services to all eligible locations.

USDA grants and loans, principally the recent ReConnect rounds, are designed to expand broadband internet access to rural and underserved areas of the United States. The program aims to address the digital divide by providing financial assistance to eligible entities, such as telecommunications

companies, cooperatives, and government entities, to deploy and upgrade broadband infrastructure in rural communities where internet access is limited or unavailable. Additionally, this program offers three types of financial assistance to support broadband deployments such as Grants, Loans, and Hybrid combinations. The program prioritizes projects that serve areas with the greatest need for improved broadband access, which typically include rural areas with limited connectivity options.

Image 4. Map of ACAM Builds in Benton, Lincoln, and Linn

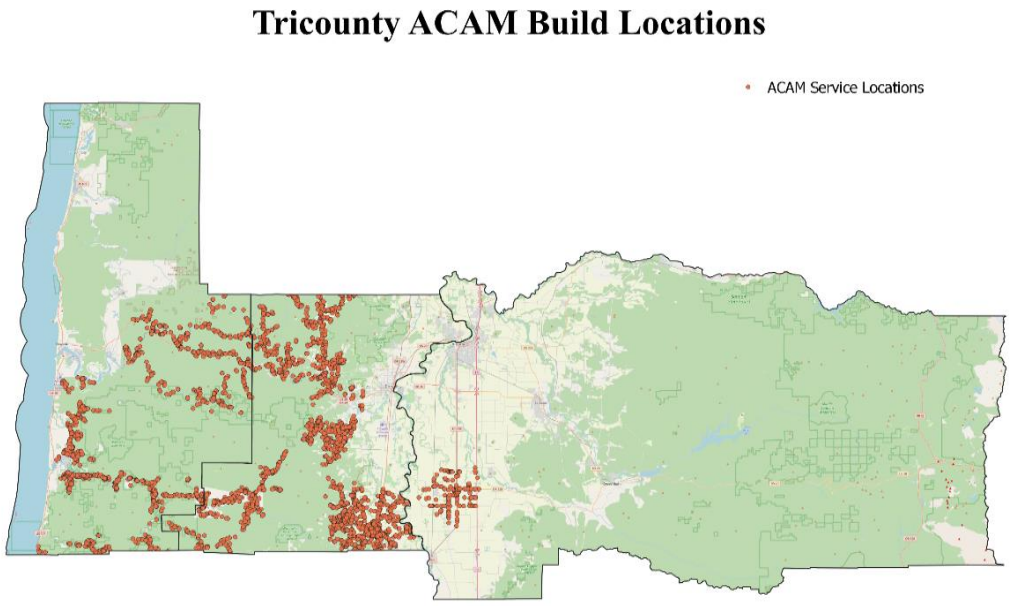
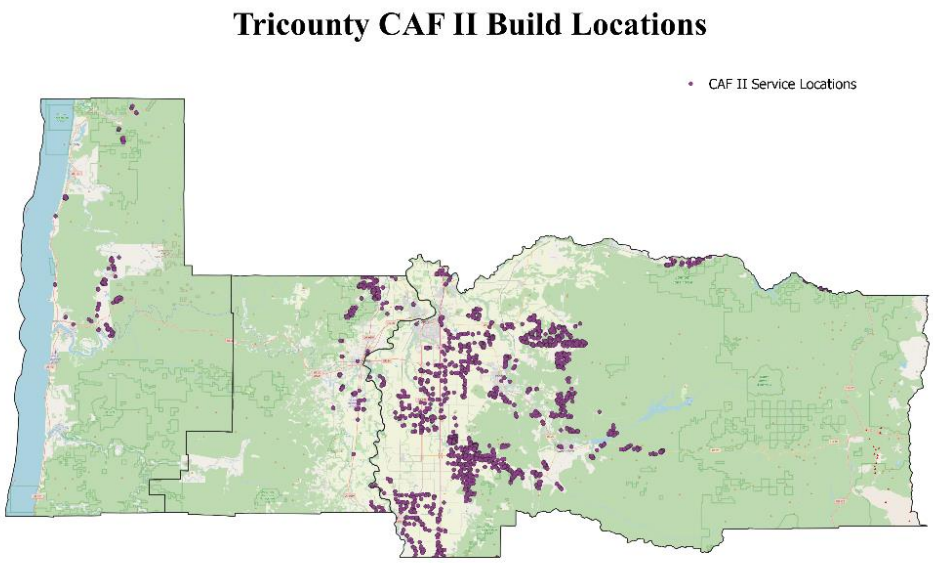


Image 4 Shows ACAM investment in the tri-county region, predominantly in Benton into Lincoln County. The ISP's that received this funding included Pioneer with the majority of the area, alongside, Monroe, and Roome. Initially, speeds serviced by the ACAM investment were far less than 100/20mbps minimum established from the IIJA. (Enhanced A-CAM will be providing new requirements matching the speeds with the standard set from the IIJA). One awardee of these ACAM awards, Pioneer, has secured funds through ReConnect to upgrade their service area. These are detailed in the county sections.

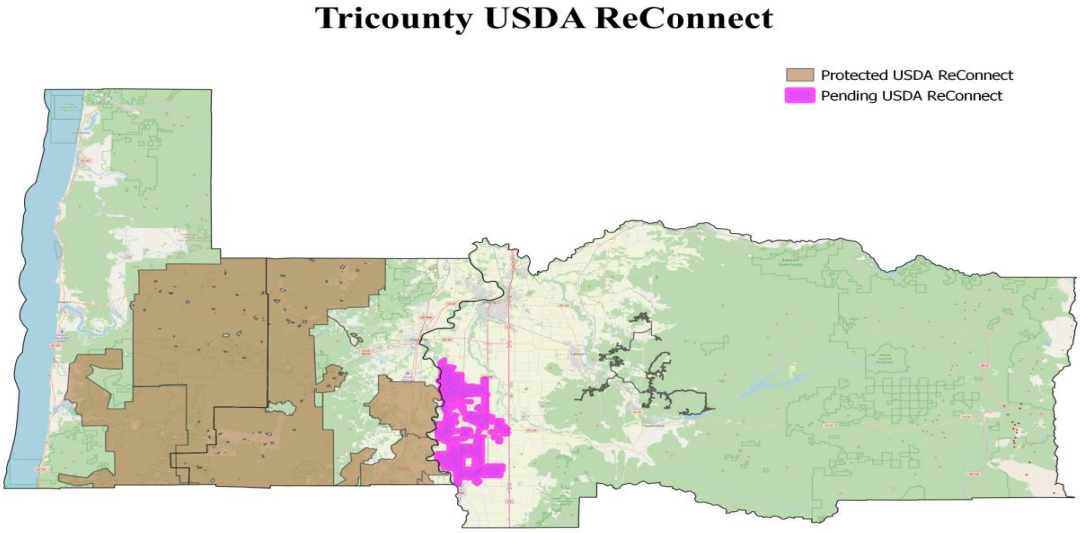
Other investments to update infrastructure have been made with the other ISP's but the size of the impact of the Pioneer investment also addresses this to a degree that has removed many of the locations that need access to faster, reliable speeds will be corrected through this project.

Image 5. Map of CAF II Builds in Benton, Lincoln, and Linn



The predominate CAF II investment, seen in Image 5 largely resides in Linn, parts of Benton, and a small portion of Lincoln Counties. The predominate recipient of this funding stream was CenturyLink. This section overlays with the underserved map of BSL locations, especially in Linn County, with close proximity given the CAF II funded locations fall underneath the 100/20 minimum to be considered served. CenturyLink, also known as Lumen and other names, has not provided indication that they will be upgrading its infrastructure, thus these locations are shown as BSL's. Our attempts to contact a CenturyLink representative were not successful, but we know this is common in other communities across the country. We suggest local leaders continue to connect with them on projects, but by and large other ISP's may be more proactive partners in broadband infrastructure planning.

Image 6. Map of USDA ReConnect Builds in Benton, Lincoln, and Linn



One other federal funding mechanism with impact on the tri-county area is USDA programs, specifically the ReConnect program. A handful of local partners have been active in applying to USDA's grant and loan programs with success in multiple rounds of ReConnect. It is important to note the differences between grants and loans. Grants are non-repayable funds provided by governments, organizations, institutions, or individuals to support specific projects, research, education, or other activities that are not repaid. Loans are borrowed funds that are provided with the expectation of repayment, typically with interest. There is a financial obligation to the entity that takes on the loan. The awards are a mixture of loans and grants in the tri-county area.

Above is Image 6 detailing a few elements related to recent USDA proposed or secured funding:

1) Magenta *pending* USDA ReConnect proposals which were put forth by two different companies—Alyrica and Peak. Pending means they are under review by USDA without a commitment for the program.
2) Brown *protected* USDA areas. Pioneer has two ReConnect cycles secured, and Monroe Telephone Company has two as well. County level detail will highlight recommendations for the counties where the most recently secured area has not been removed from the BSL data.
3) Black lines in Linn County are USDA reconnect loans submitted as fiber lines.

In addition to broadband infrastructure grant programs on the horizon, there are other federal programs that leaders should be aware of. As mentioned above, FCC's Enhanced ACAM (or EACAM) is a progressive iteration of its precursor ACAM, which is a funding program designed to address rural connectivity challenges within the broadband telecommunications domain. Ranging for 15 years, it will begin in January 2024 and will not only offer to areas lacking 25/3, but now it will include areas that are lacking speeds 100/20. More importantly, this new program will specifically require recipients to deploy services to all eligible locations. The target recipients will be offered to current A-CAM participants and prevailing rate-of-return carriers eligible for legacy support. Another important stipulation will be that carriers are required to make efforts to avoid duplicative broadband funding from federal programs. This is important as it will disqualify carriers from using BEAD and

other future federal grants for the same area, something to continue to monitor as more funding becomes available and it will remove the BSL in that service area from the locations identified as needing broadband service. Leaders should be in conversations with providers who qualify as they make their decisions to participate or not by the end of the calendar year 2023.

There are many federal programs that allow broadband infrastructure work as an allowable project activity, but these programs tell the story of public investment in the area. Details found in analyzing these federal grants give you a feeling of a number of issues:

1) In recent past, the providers have been doing a tremendous job utilizing these federal programs, but it should be noted that the largest recent investments in infrastructure upgrades have been in the form of the *loan* programs and not *grants.* There is interest in grants, but providers have indicated they need local funding partners to make this happen. Loans have guarantees the company needs to produce; grants have matches ranging from 15-35%. Communities can offer in-kind and financial matches to ensure work is prioritized, and it gives the program higher scoring potential.
2) For those who have applied and were awarded these funds but not awarded, they were willing to commit to the federal grant application process, follow federal guidelines for reporting and allowable usage, and are actively looking at opportunities to serve these communities.
3) For those who are continuing to apply for funds on their own, these are great first level partners in your communities. As willing partners with plans of their own, local leaders will find that they could be logical Public/Private Partnership participants.

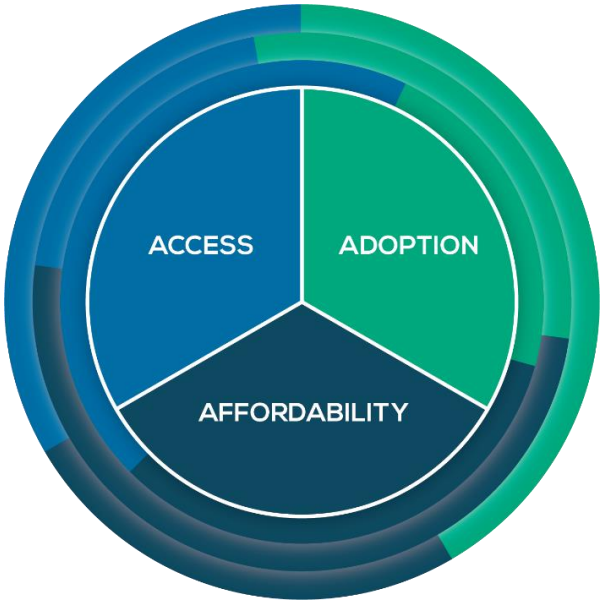
Understanding the past investments of projects completed, coupled with the understanding of federally funded projects that are secured or on the horizon, is important in order to prevent overbuilding. The OBO will be monitoring this activity as well, but localized knowledge of the issue is important as well.

Digital Equity and Broadband Access

Solarity has taken stock of the infrastructure that is necessary for Broadband to become the full resource it needs to be in a community. Many community members have barriers beyond accessing the infrastructure that prevent them from connecting to the resources found online. It may be because they cannot afford a monthly subscription or the technology itself, or they may lack the training to use the equipment or online resources.

For that reason, we look at broadband as an issue of Access, Affordability, and Adoption. Every community has its own challenges and barriers unique to their area. Each of those requires its own solution in order to achieve individual participation in all the resources that touch our 21st Century lives.

Image 7. Access, Affordability, and Adoption



We saw in detail at the height of COVID closures how many were struggling with these issues, and it was recognized that more attention to this issue was necessary.

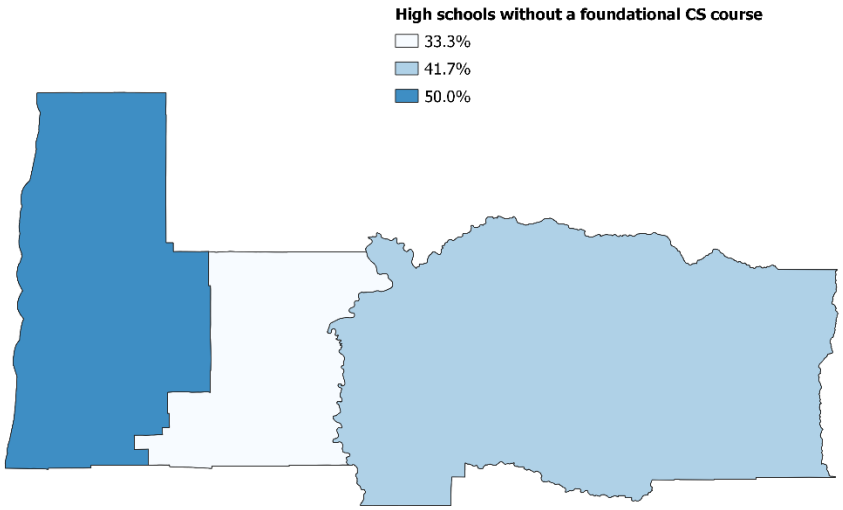
The National Digital Inclusion Alliance defines digital equity as a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy. Digital equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services.[5] Approaching the problem of broadband access in this way is a relatively new manner, although many in our communities have been doing this work in earnest, and usually from a non-profit or social safety net perspective. The K-12 schools rapidly stood up hotspot loaning programs to ensure that children had access they needed for online schooling; the libraries have continually been a resource for training and computer access when it might not be available at home; and community colleges have been a great resource for ongoing training for individuals who need to gain new technological skills. These resources are available and critical for digital equity support, highlighting the central role they play in the three-county region. Connection to training that sets individuals up for future technology driven jobs, and that begins with the opportunities that are offered during the K-12 schooling experience. One important data point for thinking about opportunities that are available to youth in the region is looking at access to computer science training students have available at the high school level. Below is Microsoft Airband's percentage of high school offering a computer science class.[6] Clearly, opportunity starts with having access to the technology but also training to use the tools successfully.

[5] More on Digital Equity, digital literacy, and digital inclusion found on the NDIA's website: https://www.digitalinclusion.org/definitions/.

[6] https://www.microsoft.com/en-us/corporate-responsibility/airband-initiative

This could be improved if this was decided as a data point the community wished to improve upon.

Image 8. Percentage of High Schools Without a Computer Science Course



Our research also looked at the public computer banks, existing computer literacy classes that are offered, and those who are doing such work. Those services are conducted by key organizations, like the library system, job training centers, and others that have done this work before it was identified as a crucial digital equity resource due to their missions.

One currently available opportunity to close the affordability gap for those who qualify is the Affordable Connectivity Program (ACP). The Affordable Connectivity Program is an FCC benefit program that helps ensure that households can afford the broadband they need for work, school, healthcare and more. The benefit provides a discount of up to $30 per month toward internet service for eligible households and up to $75 per month for households on qualifying Tribal lands. Eligible households can also receive a one-time discount of up to $100 to purchase a laptop, desktop computer, or tablet from participating providers if they contribute more than $10 and less than $50 toward the purchase price.

A household is eligible for the Affordable Connectivity Program if the household income is at or below 200% of the Federal Poverty Guidelines or meets the criteria for eligibility through participating in Medicaid, receives Free and Reduced lunches, or many other qualifying programs that you can find on the FCC's website.[7] Below you will see several tables and a map of the number of individuals who qualify for ACP in the counties vs. those who are using the benefit.

The FCC's reporting on ACP adoption shows that 25% of eligible Oregonians have signed up for ACP, and below we detail coverage in the three counties. These percentages can improve, removing one barrier to broadband usage through an affordability program, by working with leaders already promoting the program, potentially seeking ways to fund initiatives that can raise awareness (such as FCC's American Connectivity Outreach Grant Program, which had a grant window in January of

[7] More information about qualifying for ACP: https://www.fcc.gov/acp .

2023[8]), and tracking the improvement of ACP take-rates. It should be noted that awareness of the ACP program is one thing, but the application process benefits from having an individual that can guide through the process. Like many federal assistance programs, they can be daunting. Planning for support around those barriers is important, and thus working with organizations and agencies who are already supporting those who qualify for those programs is important.

ACP information was included in our Current State Assessment, and we have been able to update the current totals of participation in the counties. It would be recommended that for areas with lower percentages of enrollment that local leaders connect with non-profits in the area working with individuals with lower income to promote the program. Do also note that any family that qualifies for the free and reduced lunch program can receive ACP benefits. Schools should be promoting this as well.

Table 4. Benton County ACP

Benton County Zip Codes	Total Households in Zip Code	Total Households Enrolled	Percent of Eligible Households Enrolled April 2023	Percent of Eligible Households Enrolled Aug 2023	ACP Funding Spent in Zip Codes
97330	18479	1355	12%	**14%**	$446,843.00
97321	18479	1194	12%	**12%**	$294,115.00
97333	9947	848	12%	**14%**	$288,923.00
97361	8312	1064	17%	**17%**	$318,521.00
97370	3586	223	15%	**17%**	$77,098.00
97331	15	1	100%	**100%**	$120.00
97456	1188	66	6%	**7%**	$19,332.00
97324	541	42	16%	**20%**	$15,608.00
97326	356	32	42%	**44%**	$12,842.00

[8] https://www.fcc.gov/acp-grants

Table 5. Lincoln County ACP

Lincoln County Zip Codes	Total Households in Zip Code	Total Households Enrolled	Percent of Eligible Households Enrolled April 2023	Percent of Eligible Households Enrolled Aug 2023	ACP Funding Spent in Zip Codes
97367	4824	1095	24%	**37.5%**	$398,736.00
97365	4749	1073	35%	**38%**	$374,297.00
97391	2320	283	18%	**18%**	$79,849.00
97394	2397	289	18%	**21%**	$96,377.00
97368	1318	219	24%	**29%**	$67,705.00
97380	845	122	26%	**28%**	$44,194.00
97324	541	35	16%	**16%**	$11,584.00
97376	573	60	23%	**24.5%**	$19,702.00
97390	372	24	12%	**14%**	$9,711.00
97341	1779	106	9%	**11%**	$33,716.00
97326	356	31	42%	**42%**	$9,742.00
97498	921	118	28%	**32%**	$42,238.00
97366	873	95	31%	**35%**	$32,909.00
97343	149	18	17%	**20.5%**	$5,851.00
97357	138	11	9%	**18%**	$1,870.00
97388	373	17	33%	**36%**	$7,223.00
97364	257	47	24%	**29%**	$17,886.00
97369	81	6	27%	**27%**	$2,736.00

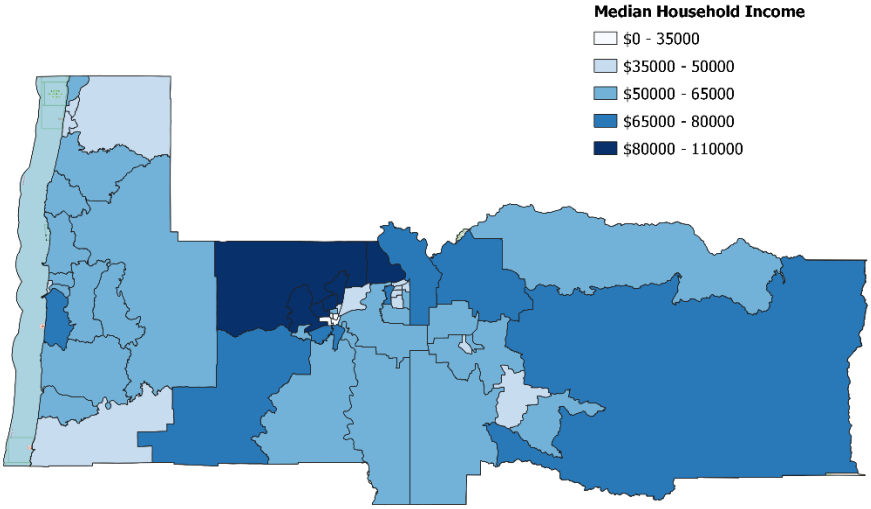
Table 6. Linn County ACP

Linn County Zip Codes	Total Households in Zip Code	Total Households Enrolled	Percent of Eligible Households Enrolled April 2023	Percent of Eligible Households Enrolled Aug 2023	ACP Funding Spent in Zip Codes
97322	13918	1708	21%	**23%**	$616,506.00
97355	12435	1480	19%	**22%**	$494,555.00
97321	11009	969	19%	**23%**	$318,474.00
97333	19948	1532	12%	**12%**	$383,227.00
97386	5802	956	25%	**29%**	$328,780.00
97383	3828	323	13%	**13%**	$89,638.00
97352	4126	402	34%	**34%**	$117,544.00
97446	2092	171	10%	**13%**	$54,571.00
97374	1936	90	9%	**11%**	$34,102.00
97358	1045	65	14%	**17%**	$20,881.00
97327	1322	62	8%	**10%**	$.00
97389	702	59	13%	**16%**	$18,631.00
97348	630	34	20%	**27%**	$11,348.00
97360	882	84	13%	**16%**	$26,925.00
97488	447	41	34%	**34%**	$9,095.00
97413	455	55	25%	**25%**	$13,410.00
97350	79	9	21%	**21%**	$1,992.00
97345	230	20	12%	**13%**	$6,363.00
97377	319	15	6%	**8%**	$4,359.00
97346	338	31	20%	**20%**	$6,603.00
97329	18	10	24%	**30%**	$2,780.00
97342	47	5	24%	**24%**	$1,840.00

Available income directly relates to the capacity to pay for a month broadband subscription, and the socio-economic picture of the three counties helps offer more nuance to where the individuals who might be struggling with affordability issues reside in the community. Do note the various levels of monthly subscription price noted in the table of providers. If choices are limited, with only expensive options offering inadequate speeds, those families with lower incomes will have difficulty affording

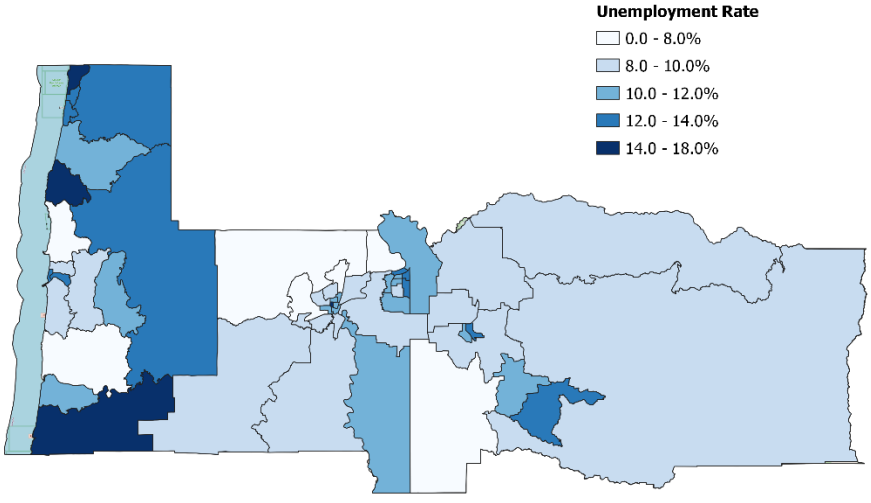
any service and may forgo in the first place.

Image 9. Median Household Income for Benton, Lincoln, and Linn



The unemployment rate highlights the fact that specific areas, especially Lincoln County and the southeastern section of Benton County, may benefit from targeted outreach support for connecting residents to ACP and other affordability programs.

Image 10. Map of Unemployment Rates in Benton, Lincoln, and Linn



Part of a well-executed broadband vision for a community should take issues of digital equity into account. The benefit of this is threefold:

1. It takes a holistic account of the broadband connectivity issue in the area including the ability to afford service, giving higher probability that the community usage of broadband infrastructure, or take-rate, will be as high as possible.

2. More partners will be at the planning table offering their own resources and connections.
3. Having these digital equity resources at the ready as the infrastructure is completed (in the next five years, given the timing of the grant opportunities) shortens the timeline between completion and the community enjoying economic and health benefits as a whole.

Although some people and organizations have been providing services that meet the definition of this work for some time, the concept of digital equity programs and the emphasis on supporting the work is very new for most local decision makers. The Oregon Broadband Office is prioritizing this work in the development of a state digital equity plan that will be submitted to the NTIA, and the area has an appointed Digital Equity lead contact at the Oregon State University (OSU) Extension office. Communities that are beginning to assess their digital equity needs now will be able to take full advantage of the NTIA's competitive Digital Equity grant process, which will not open until sometime in 2024. However, it is recommended to begin this reflection and alignment now.

In our research, organizations like the Libraries, Community Services Consortium, the k-12 school system, job training centers, and the OSU Extension office are local partners already leading digital equity efforts in the CWCOG service area. It would be important for local broadband outreach initiatives to bring these partners into their planning meetings because of the interplay between access, affordability, and adoption. For tips and guidelines about this work, the National Digital Inclusion Alliance offers many resources, including a start-up kit, found here.[9]

[9] https://startup.digitalinclusion.org/.

Three County Broadband Recommendations

To capitalize on the federal funds that could be used to address broadband concerns in the tri-county area, Solarity suggests the following steps. This is based off an analysis to resources in the region already mobilized in the broadband space, best practices that are occurring around the country, and understanding that the window of opportunity necessitates a focus on broadband with local resources to be successful when broadband infrastructure grants become available.

1. **Establish a Broadband Organizational Effort that has impact:** The importance of this issue calls for standing up an ongoing effort to address the issue on the more local level. The three counties have been participating in the Broadband Action Team support meetings in the past, and this model has proven helpful during this time of opportunity. It offers support and clarity which is necessary as leaders all over the state become more fluent in broadband issues. To bring those resources closer to home, we suggest counties convene local leadership as a county level broadband Task Force, Commission, or Committee with the intent to further identify broadband needs, communicate with ISP's who offer service in the area, and plan to monitor and actively participate in projects to close the broadband gap. Establish a clear point of leadership which has the ability to move projects forward. *Understand that the effort may be in operation for multiple years to ensure the broadband connectivity issues are properly monitored.*

2. **Commit to broadband infrastructure completion as a county leadership level priority:** the importance of broadband infrastructure calls for expanded interest in the issue by elected officials. County elected officials should prioritize broadband access issues and infrastructure support because it has profound impact on the county's economic possibilities, educational opportunities, access to healthcare, public safety, and overall quality of life. With large areas of unincorporated land, it is best to work from the county level, with local support, to ensure that projects create connections rather than stay isolated with varying level of connectivity within the county. *Applying public resources to the potential broadband grant builds will have to be a priority.*

3. **Build partnerships with ISP's serving each county and discuss the potential for partnerships:** The funding for infrastructure that will become available in the next few years is historic, but by no means ensure the community will receive the funds. Broadband grants tend to be competitive, given the importance of the issues, and county leaders should be ready to partner with ISP's on the upcoming grant cycles. Building competitive grants take time, and grant match from municipalities show cooperation and creates strong applications.

4. **Review the Rapid Design Study proposals and prioritize efforts on a timeline that fits with infrastructure grant opportunities:** With access to the Rapid Design Study for an extended period of time, the tool should be used as a decision-making tool for ongoing monitoring and costing activities as the broadband activities continue. Given the lack of clarity on the timeline for grant award windows, this should be left to the Broadband Efforts themselves. Each county has roughly 3-5 projects that could be done in order to build connectivity to the identified BSL's. The county Broadband group will need to decide the order in which to proceed, prioritizing which projects will need what type of support (grant, bonding, PPP, and many others). *This is an ongoing project. New locations for residents and*

businesses will be built, and ensuring they have connections going forth will become important. Monitoring equipment upgrades as necessary, and tracking additional funding being allocated to broadband (like use of E-Rate to address educational broadband connection needs) will become second nature.

5. **Ensure Affordability and Adoption are not forgotten by addressing within the broadband effort's purview:** As mentioned before, there are barriers to using broadband for some individuals beyond not having the infrastructure available where they live. The Oregon Broadband Office will be addressing Digital Equity issues throughout the state, in parallel with establishing Infrastructure programs (BEAD, CPF, and others). Affordability and awareness of available resources for county residents is critical for accessing, purchasing, and training with devices at affordable rates.

The majority of the report will be focusing on the building of an effort that addresses the broadband issue given its importance, thus it is the top strategy offered. The remaining recommendations flow from that emerging work and are important to the success of locally driven efforts.

Do know the detail of Solarity's recommendations, which flow from these recommendations, for each county can be found in Appendices A, B, and C.

Infrastructure Projects Projected

The RDS for each county analyzes the BSL's for each county, offering projected costs for broadband infrastructure projects that would solve the current lack of access. We understand that the "gold standard" in broadband infrastructure is fiber to the home, but we believe some projects will entail a mixture of fiber, cable coaxial, and fixed wireless to close the gap.

If this is the case, the opportunity to upgrade the system lies within the window where equipment needs to be upgraded. Like all infrastructure sectors, broadband equipment has to be replaced as it faces the end of its lifecycle, and ISPs are keenly aware of this. Fixed Wireless equipment generally needs to be replaced every 5-7 years. If a hybrid approach is taken, continual discussions with the ISP's who operate those networks will be beneficial.

The funding options for broadband do not only include BEAD funding, which is highlighted below because of its importance as a central program for addressing broadband infrastructure given the size of the federal investment. CPF, future rounds of USDA ReConnect, and other programs will be available as additional resources to close the gap. Additionally, any grants secured (such as the recent ReConnect project for Pioneer) and EACAM received by an ILAC allows more funding to be used for the remaining BSL's. What is impossible to predict at this moment is the order in which these grant windows to open and funding streams to become accessible.

Therefore, Solarity can identify the potential projects but leaves the counties to their decision-making process as the funding is closer to term.

New Deployments Vs. Extending Existing Networks

Broadband buildout deployments and extending existing broadband networks are two approaches to expanding and improving internet connectivity. While both strategies aim to enhance internet access, they have distinct characteristics and considerations. Below is a table highlighting key differences between the two:

Table 7. New Deployments vs. Extending Existing Networks

Key Differences	New Deployments	Extending Existing Networks
Scope and Scale	Setting up new network equipment, laying down fiber-optic lines or installing wireless infrastructure from scratch.	Extension of cables, fiber-optic lines or wireless access points from existing network.
Cost and Complexity	Require higher initial investments, more complex due to building new infrastructure. Significant planning, permitting and construction efforts.	Less expensive and complex, groundwork is already in place, focus on expanding to serve additional areas.
Timeframe	Extensive planning, regulatory, and construction efforts. Could cause delays	Faster to deploy, regulations and approvals already in place. Can be efficient and streamlined.
Infrastructure Compatibility	Implement latest technology and standards. Designed with future	Technology and speed could have limitations based on existing infrastructure. Outdated networks

Key Differences	New Deployments	Extending Existing Networks
	scalability in mind, could offer higher speeds and capacity.	could require more upgrades or replacing.
Regulatory and Environmental Considerations	Often require more and extensive regulatory approvals, environmental assessments, and community engagement	Regulatory compliance process smoother with previously approved infrastructure.

Both approaches are essential in improving internet accessibility. Buildout deployments are crucial for connecting remote and previously unconnected regions, while extending existing networks helps in bringing reliable broadband services to neighboring areas that are already partially served. The most effective strategy depends on the specific needs, geography, and available resources in a given region.

County Recommendations

Benton County

With Oregon expecting approximate $688 million from the BEAD program ($5,935 per household), an average allocation per county would be on the order of $19 million which constrains the total capacity any county would have available for projects.

Attempting to provide fiber to every un/underserved household through new deployment could cost as much as $51 million ($29,000 per household). The RDS suggests a recommended hybrid approach which comes in at $17 million ($9,800 per household). Since the county lacks the preferential bias of low income and other priorities under BEAD guidelines, we think it unlikely the state would give 7% of the available funding to Benton.

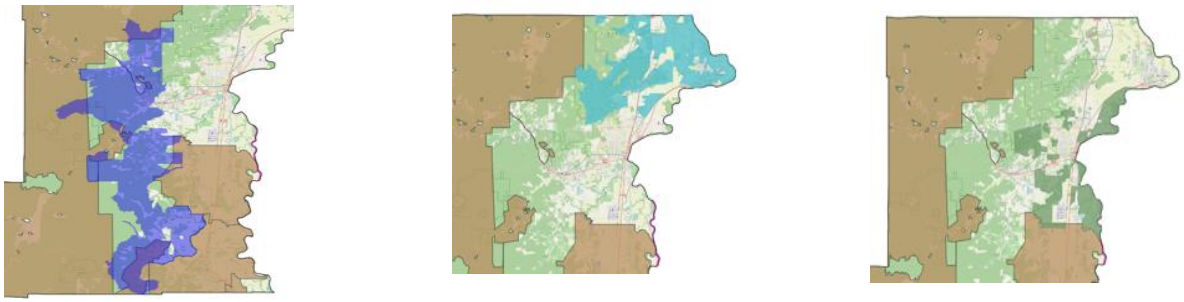
We predict this may be done through *at least three grant* applications with providers who are identified as ISPs with presence in those areas, and this funding will help to extend or complete their existing networks.

The reality of the final cost may be slightly different. The county may find from monitoring the broadband sector, using the RDS software as a planning tool by the county broadband effort, that there will be a number of natural expansions and upgrades of networks being pursued by ISP's, identifying specific potential builds (as identified above) that will be best served by grant funding support, and when grants are not secured or otherwise not pursued, other funding mechanisms (such as bonding) can be pursued.

For each of the builds there is a logical partner or short list of partners identified and presented in the county specific report. Partnering with ISPs will allow for cost saving measures as they can improve their existing network and extend their current service area, especially given the need and cost of the equipment.

Build 1 overlaps with Pioneer's incumbent service area, making them a reasonable partner for an extension of an existing network, Build 2 has a choice between a small number of providers, and Build 3 is a possible extension of existing network by Comcast inside of Corvallis. Benton County's broadband efforts should identify what work the providers are doing to upgrade equipment already, assess which areas are best matched with which grant opportunities, and consider other methods of completing projects (bonding, capital improvement funds, cost sharing) when appropriate.

Image 10. Left to Right: Maps of Builds 1, 2, and 3 Benton County



Lincoln County

With Oregon expecting approximate $688 million from the BEAD program ($5,935 per household), an average allocation per county would be on the order of $19 million which constrains the total capacity any county would have available for projects.

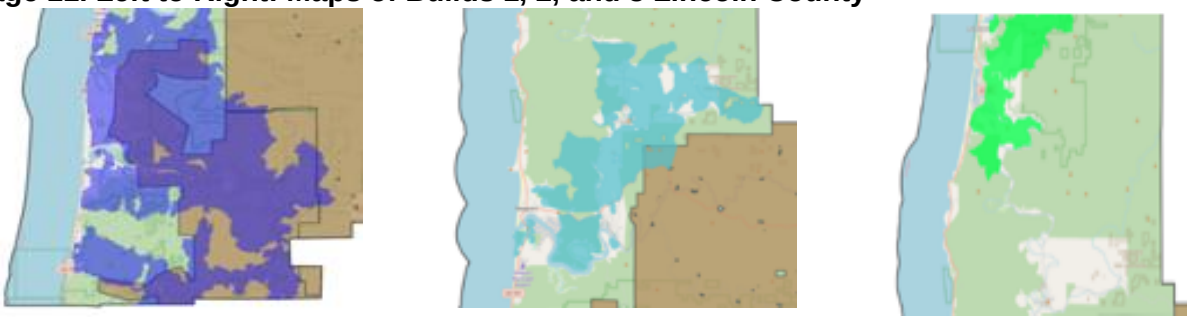
Attempting to provide fiber to every un/underserved household through new deployment could cost as much as $40 million ($25,800 per household). The RDS suggests a recommended hybrid approach hybrid approach which comes in at $10 million ($6,400 per household). Since the county lacks the preferential bias of low income and other priorities, we think it unlikely the state would give 6% of the available funding to Lincoln.

We predict this may be done through *at least three grant* applications with providers who are identified as ISPs with presence in those areas, and this funding will help to extend or complete their existing networks.

The reality of the final cost may be slightly different. The county may find from monitoring the broadband sector, using the RDS software as a planning tool by the county broadband effort, that there will be a number of natural expansions and upgrades of networks being pursued by ISP's, identifying specific potential builds (as identified above) that will be best served by grant funding support, and when grants are not secured or otherwise not pursued, other funding mechanisms (such as bonding) can be pursued.

Build 1 would be working with Pioneer to possibly extend their work to service BSL not covered in their ReConnect related infrastructure work. *Do note that the latest ReConnect work was awarded close to the date of completion of this report, therefor the BSL that overlaps with the award areas could not be removed.* Build 2 will be a priority area for leadership to decide who the right provider for this project will be, with an understanding that the Siletz Tribe will also be working on broadband projects in their tribal jurisdiction. Coordination and communication on these efforts will be key. Build 3 will be an extension of deployment for one of two ISP already servicing the area.

Image 11. Left to Right: Maps of Builds 1, 2, and 3 Lincoln County



Linn County

With Oregon expecting approximate $688 million from the BEAD program ($5,935 per household), an average allocation per county would be on the order of $19 million which constrains the total capacity any county would have available for projects.

Attempting to provide fiber to every un/underserved household through new deployment could cost as much as $149 million ($27,000 per household). The RDS suggests a recommended hybrid approach which comes in at $24 million ($4,300 per household). Since the county lacks the preferential bias of low income and other priorities, we think it unlikely the state would give 22% of the available funding to Linn.

With the amount of locations receiving service on equipment registering *underserved* locations, the leaders of Linn's broadband efforts need to concentrate on how to strategically close the access gap with a hybrid design of fiberoptic cables and fixed wireless, with an extended plan to upgrade fixed wireless options with more fiberoptic cables in the future. Fortunately, local partners like Alyrica and Peak, are willing to upgrade their fixed wireless deployments to meet the speed requirements while installing fiberoptic cables as they can.

Linn County's broadband efforts should identify what work the providers are doing to upgrade equipment already, assess which areas are best matched with which grant opportunities, and consider other methods of completing projects (bonding, capital improvement funds, cost sharing) when appropriate. Identifying funding match and strategizing which projects will be prioritized will also be important as this process will occur through at least five builds- through grants and other means.

Image 12. Maps of Builds 1 and 2 Linn County

Highlighted here, Build 1 would include working with Roome Telephone to see if they will be using EACAM in their service area as an extension of deployment and working with another partner to service the remaining areas as a relatively new build. Build 2 would be working with Stayton Telephone Company or Scio telephone to service this area as extension of their service area. Build 3 calls for partnering with a local ISP to enhance existing fixed wireless to a more robust hybrid network. Build 4 encompasses a good deal of the *unserved* locations in the county and overlaps Peak's fiber build just to the north of the area. Analyzing how to reach the additional homes in this area would be an extension of their deployment, which would be upgrading it as well.

Image 13. Maps Builds 3 and 4 Linn County

Linn County leaders should also be aware that the DOT and University of Oregon conducted a feasibility study to understand the overall cost of laying down fiberoptic cables following the highway pathway in eastern Linn County. As a study, it gave the relative cost to complete the project, at the time of writing estimated as over $50million. Given the cost, it may be unlikely that this will be approached, but it is important for leaders to understand there could be renewed interest if a large project were approached. Given the low BSL in that area of the county, it was not a focus of our exercise.

Economic and Community Impact

As stated earlier in this document, the need for broadband connectivity is no longer seen as a luxury but as a necessity. There are specific reasons for concentrating on ensuring broadband access is available for the economic and community vitality of the county.

By prioritizing broadband along with other ongoing initiatives, such as Cascade West Economic Development District's (CWEDD) Comprehensive Economic Development Strategy (CEDS), full connectivity in the county will come to fruition in a timelier fashion.

Broadband goals in the CWEDD's 2020-2025 CEDS include:[10]

1. The CEDS recognizes that access to high-speed internet is critical for economic development and highlights the need for broadband infrastructure in the region.
2. The CEDS identifies several strategies to improve broadband access, including expanding existing infrastructure, promoting public-private partnerships, and increasing public funding for broadband projects.
3. The CWEDD is working to coordinate regional efforts to expand broadband access and has partnered with local governments, service providers, and other stakeholders to develop a regional broadband plan.
4. The CEDS acknowledges the digital divide in rural areas and highlights the need to address affordability and accessibility issues to ensure all residents have access to high-speed internet.
5. The CEDS also recognizes the importance of digital skills for workforce development and encourages the development of training programs to help individuals acquire the necessary skills for jobs in the digital economy.

[10] https://www.ocwcog.org/wp-content/uploads/2022/12/CWEDD-2020-25-CEDS-Main-Plan-and-Appendices_FINAL_February-2022.pdf

Beyond the importance of broadband to the overall economy, access matters to the individual financial and health wellbeing of residents.

Since the millennium, the job market in the US has increasingly relied on technology and digitizing business operations. A study conducted in 2002 analyzed 545 job categories and found that 56% were classified as low-level digital skilled jobs, 40% as medium-level digital skilled jobs, and only 5% as high-level digital skilled jobs. However, by 2016, the percentage of jobs requiring low-level digital skills had decreased to 30%, while medium-level digital skills jobs increased to 48%, and high-level digital skills jobs increased to 23%. Over the span of 14 years, digitalization scores rose in 517 of the 545 analyzed jobs, with all industry groups showing an increase.[11]

A more recent study conducted by the National Skills Coalition (NSC) analyzed 43 million job postings from 2021 and found that digital skills are required in 92% of jobs across all industries, including entry-level and frontline positions.[12] As technology continues to play a larger role in businesses, the level of digital skill required for employment is becoming more demanding.

Additionally, as the American job market continues to become more digitized, the skills gap for workers to either find or maintain employment continues to widen. As of 2020, the NSC found that 1 in 3 Americans lack any foundational digital skills necessary for today's job market climate. This has a negative effect on employers too as the turnover cost on employees that leave within the first-year costs businesses $25000 and $78000 for employees that leave after 5 years.[13] This skill gap has become noticeably harder to overcome for people who only have a high school diploma to find or maintain a job, especially in smaller and more rural communities. As of 2018 about 50% of all jobs in the State of Oregon require skills training beyond a high school, but not a four-year degree. However, only 45% of Oregonians have access to the skills training necessary to fill these in-demand careers.[14]

High-speed internet is a healthcare necessity and continues to be dependent on a reliable connected network. Many health applications and data-connected devices require a high-speed, always-on connection. It is a reality of today that the quality of one’s health may have more to do with a zip code than the medical care they receive. The impact and benefits of telehealth would range from reducing non-emergency medical transportation, emergency department visits and costs, missed appointments, facilitating patient monitoring, aging in place and assisting family caregivers. States invest a percentage of their budget in Medicaid and improvement in the list above can translate into financial benefit for Oregon. There were over 60 million non-emergency ride-days with state and federal spending at $2.6 billion. Medicaid programs have high no-show rates. Documented studies show that the no-show rate for psychiatry services was between 19 and 22%. However, recent telehealth studies since 2020, report no-show rates of only 4 to 7%.

[11] https://www.brookings.edu/articles/digitalization-and-the-american-workforce
[12] https://nationalskillscoalition.org/news/press-releases/new-report-92-of-jobs-require-digital-skills-one-third-of-workers-have-low-or-no-digital-skills-due-to-historic-underinvestment-structural-inequities/
[13] https://nationalskillscoalition.org/resource/publications/closing-the-digital-skill-divide/
[14] https://nationalskillscoalition.org/wp-content/uploads/2020/12/OR-Skills-Mismatch-Fact-Sheet-2020.pdf

Strategic Organizational Framework

This section of the Strategic Plan offers three options for the counties to consider and chose as the organizational framework that best serves the needs of the three counties collectively as a region, and also for each county individually. The purpose of having this two-level framework is to ensure authority and organizational processes are in place at both the county and regional levels thus allowing repeatable criteria and decision making for federal and State broadband initiatives. This section also includes a framework for a risk management process plan which is integral to a highly functional operations framework.

A Strategic Organizations and Operations Framework is the overall management approach implemented to validate that critical information reaching county leaders is complete, accurate, and timely to enable appropriate decision making and conflict resolution. This management approach adopts the five long-standing principles of governance in the public sphere: accountability, leadership, integrity, stewardship, and transparency. Following these principles ensures everyone in a specific county (or collectively, counties) follows appropriate and transparent decision-making processes and that the interests of all stakeholders are heard and considered. This is essential to building and retaining public trust in public programs, especially for broadband which has been recognized as having “public utility” attributes.

Strategic Organization Framework

The “management” structure for the counties’ broadband efforts must be capable of functioning at the individual county level and collectively, for the three-county region. The term “project” under the Strategic Plan is defined as a discrete set of objectives, activities, timelines, and measures to be achieved under a carefully designed plan to achieve a particular aim, in this case, federal and State broadband funding for one or more counties. Projects may be for planning or technical assistance, yet the primary focus of the Strategic Plan is infrastructure grants that result in expansion of broadband to un- and underserved areas of the counties.

The Organizational Framework model chosen must be logical, robust, repeatable, and govern the overall effort of programs and projects within the broadband arena. There are several time-tested and well-respected models for the counties to reflect upon and choose the Framework that best meets the needs and desires of the individual county and where appropriate, collectively the three counties.

Each county must consider specific topics and issues related to its county:

- What is the current state of broadband in my county (un- and underserved) and what will it take to expand broadband infrastructure, so all households and businesses have adequate broadband to meet the priorities identified in the strategic plan?
- What funding opportunities are available or will become available to meet those priorities?
- Do we have the internal capacity to identify and successfully apply and obtain grant funding?
- Is there consensus among stakeholders on priorities?
- What attributes and skills must individuals have to lead our broadband funding opportunities (business leaders, public officials, advocacy organizations, educational leaders, broadband experts, health care facility representatives, and citizens), and as important, which individuals are available to lead over the longer-term to ensure grants are applied for and ensuing

projects are completely timely and accomplish the intended results?

In addition to an individual county Framework, it is not only wise but essential for the counties to have a regional three-county approach to governance and management where appropriate. The counties must collaborate to develop a collective Framework approach built on consensus and consider the following:

- How do the counties account for the differences in the level of awareness of broadband and commitment of county officials and stakeholders?
- What does the current infrastructure of broadband, including availability and use look like in each county; will a county need to catch-up to the other counties to leverage opportunities?
- How does the capacity and skill level of county resources compare among the counties?
- What can be done if financial resources and potential match dollars are not equal among the counties?
- What types of projects require regional approaches and who decides which projects to pursue as priorities?
- How do the counties maintain the early momentum built during the Solarity project to develop activities under the broadband Strategic Plan for each county and the three- counties collectively?

These preliminary questions must be considered along with the fundamental question of how each county will decide who will lead the county broadband effort, and then collectively, who will comprise the leadership group at the three-county regional level? And what protocol and processes will be employed to ensure the guiding principles of governance in the public sphere are followed?

Three Options for Strategic Organization Framework

Organizational frameworks must have the capacity to meet Strategic Plan goals and objectives of both the individual counties and the three counties as a region. The choice of which single Framework can best serve the counties is not a simple matter of centralization vs. decentralization. Rather, the conversation needs to consider individual county priorities and the current state of their broadband infrastructure and funding needs, and as important, the economies of scale and logistical advantages of submitting regional broadband applications as warranted and agreed upon.

After researching, assessing various frameworks and having several conversations with county officials and the Broadband Action Team (BAT), Solarity developed three potential Strategic Organizational Framework options for the counties to methodically weigh before choosing the solution that best meets county and regional needs and goals. Each model is titled and summarized in the tables below, along with pros and cons of each model. The tables are followed by Solarity's analysis and recommended organization framework, and the rationale for the recommendation. The counties would be wise to carefully consider all three options and using a consensus-based approach, identify the most-sound model that serves the individual counties and the three-county collaborative effort.

The three Strategic Organizational Framework models chosen for further consideration are based on the totality of the factors applicable to applying and managing federal and State broadband funding opportunities:

1. ISP Market Driven Management Structure
2. County Led Effort with Regional Clearing House with Lincoln, Benton, Lane, and Linn (LBLL)

BAT Support

3. Regional Economic Council (OCWCOG) Governance Model

Table 8. ISP Market Driven Management Structure

No. 1 ISP Market Driven Management Structure

Broadband priorities and infrastructure project decisions flow from ISPs based on ISP business plans and their existing and proposed markets. County participation, if any, is through partnering with ISPs (generally for specific projects), to provide letters of support, potential match funding, and other related endorsements.

POSITIVES		NEGATIVES
✓ ISPs may have significant expertise in broadband infrastructure planning and expansion	1	○ Counties may be subject to levels of broadband and the service areas that ISPs want to expand based on the ISP business plan
✓ ISPs likely already providing broadband service in one or more areas of the counties		○ May not have strong relationships within the counties and their communities
✓ ISPs may have experience in applying and securing grant funding		○ As broadband prices are not regulated, no guarantee that broadband service will be affordable or what the county desires
✓ ISPs may already have relationships with federal, State, Tribal, and OBO authorities.		○ ISP strategic business plans may not match county or regional strategic plan.
		○ Due to low ROI for rural areas in the three counties, broadband expansion may not be a priority for the ISPs.
		○ Where there is county staff turnover, institutional knowledge may lie with the ISP giving it more sway in decision making.
		○ Many ISP territories do not follow county boundaries. Incumbent ISPs that may or may not want to expand broadband in a particular area, may be prone to file challenges or not participate in planning efforts for broadband grants claiming their information is proprietary in nature.

Table 9. County Led with Regional Clearing House (with BAT Support)

No. 2 County Led Framework with Regional Clearing House (with BAT Support)

Each county identifies a core group of individuals who have been delegated certain authority by the county elected officials (task force, committee, commission) to make certain decisions at the county level and to represent the county at the regional level. These "designated county entities" become the core Organizational Framework group at the regional level (supplemented by county staff and external contractors if necessary). The BAT serves as a clearing house and facilitates discussions at the regional level on broadband priorities and projects and further actions are mapped, including: each county's potential broadband funding opportunities are summarized; potential regional opportunities identified, discussed, and weighed for regional action, including decisions on whether to apply for a grant as a region; and status of pending applications, projects, lessons learned, and best practices are discussed.

POSITIVES

- ✓ Counties "know" their communities and what best meets their needs
- ✓ Have built strong long-term relationships with local businesses and citizens
- ✓ Can use regional approach where economics of scale, match requirements, or cross-border projects exist
- ✓ Having regional clearing house provides opportunities of sharing best practices, lessons learned, potential funding, sharing of ideas and technology, and division of labor for regional opportunities
- ✓ Leverages facilities (hospitals, schools, businesses) that cross county borders

2

NEGATIVES

- ○ Risk of inadequate coordination and communication at the regional level
- ○ Momentum from Solarity project at the regional level wanes over time
- ○ Relies on each county's officials treating broadband as a high priority and providing adequate administrative funding and resources at the county and regional levels.

Table 10. Regional Leadership (OCWCOG) Framework

No. 3 Regional Economic Council (OCWCOG) Governance Model Leadership (OCWCOG) Framework

All Broadband Initiatives, including grant identification, application, and implementation are led by regional or OCWCOG representatives with designated leaders (central authority) representing each county participating in the effort. Potential funding opportunities may be identified by the central authority or one or more counties and brought to the OCWCOG Regional level board leaders for discussion, prioritization, and decisions on which funding opportunities to pursue. Counties are likely expected to provide resources needed to complete applications and grant project operations collaboratively with the OCWCOG regional leadership central authority.

POSITIVES

- ✓ Centralized management for control
- ✓ Allows for economies of scale
- ✓ Facilitates communication among counties
- ✓ Costs (administrative and match) spread over three counties Facilitates communication among counties

3

NEGATIVES

- ○ May be less emphasis on individual county needs
- ○ Requires more education for county leaders as different levels of readiness exists among the counties. , and supporting the learning for county leaders will be necessary
- ○ Requires counties to contribute funds for central management "position(s)" requiring a long-term funding commitment that is and not in place currently
- ○ Likely different multiple ISPs serving (or propose to serve) areas within the region.
- ○ Individual counties give up autonomy and some decision-making power.

In analyzing the three options, approach #1, ISP Market Driven Model, could result in control of

infrastructure expansion being with the ISP. This may advantage certain areas of the counties as the ISP has every reason to base broadband expansion on market conditions which favor more urban areas and the ISP's bottom line. This is the reality of a free-market economy which the FCC (and Congress) has grappled with in terms of "universal service" and ultimately established subsidies for low-income households and small businesses. The result could be a mismatch in responsibility, accountability, and control. Furthermore, each of the three counties has significant portions of rural areas, which are most likely the unserved locations. This disparity may continue to exist if the ISP leads the broadband effort. The quote below best captures that reality.

The centralized regional approach under #3 led by the regional lead, or potentially OCWCOG, focuses the decision-making authority with a council that was formed to promote economic ventures. It also requires a long-term funding commitment on the part of the counties to fund the OCWCOG services which is not in place and would need to be sourced.

"In terms of the incumbents... It doesn't make Wireless any sense for them to deploy networks where they're not going to make a profit. But at the same time, cities have a responsibility to their communities." ~Linda Hardesty, Fierce

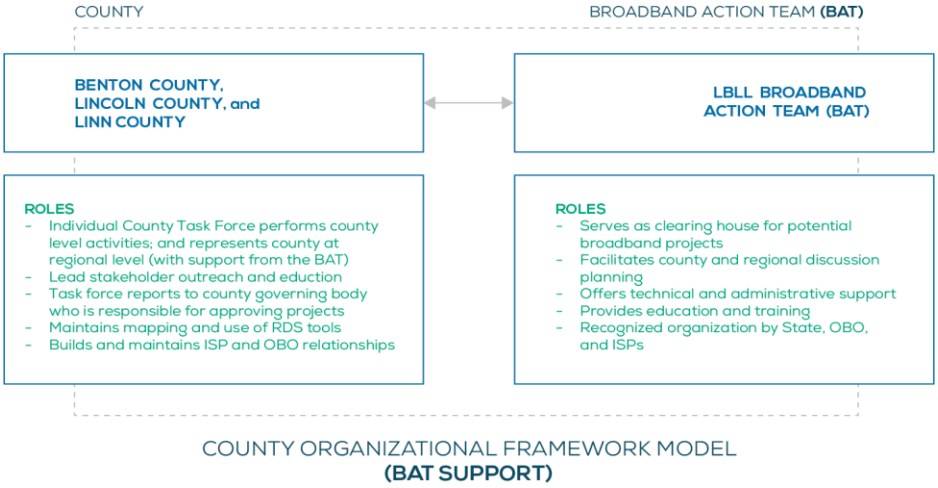
Solarity strongly recommends the counties select approach #2, County Led Effort with Regional Clearinghouse (BAT) Support as the Strategic Organizational Framework to best meet the needs of each county and the region. This is the only model where the counties retain control of the identification, application, and implementation of broadband funding opportunities. It offers both the ability of an individual county to decide whether to apply for a particular grant for its county, while also offering the opportunity to partner with one or both of the other counties to leverage economies of scale and where potential broadband services necessitate crossing county boundaries, such as middle mile or even last mile projects. It also offers the opportunity to work with existing ISPs that may already serve a portion of one county to cross into another county to provide broadband, potentially at a lesser cost than if a county attempts to negotiate with the ISP on its own. Additionally, county-led organizational structures may facilitate outreach and education to low-income households that are eligible (but not partaking of) federal broadband discount programs; and public facilities such as hospitals and essential community facilities/anchor institutions, to participate in federal discount broadband programs.

Some elements of the individual county/regional approach already exist with the existing LBLL BAT, which has proven to be helpful to the three counties and is a recognized organizational approach used throughout Oregon. The LBLL BAT provides a valuable clearing-house function and has established relationships with the OBO, and ISPs that may be providing broadband services in portions of the counties. It is also a more natural fit than an ISP led or centralized framework as it recognizes the importance of county autonomy.

The county approach also works well for funding opportunities where the counties or in partnership with ISPs, are eligible to apply directly to federal agencies for broadband funding (e.g., USDA Community Connect).

The table below graphically displays the recommended #2 County Organizational Framework model.

Table 11. County Organizational Framework Model



County Led Strategic Organizational Framework

Regardless of which option the three counties determine best meets the regional Organizational Framework, the foundation of broadband efforts lies at the county level. Each county needs an organized, sustainable, and concerted county leadership effort to develop a comprehensive mapping of needs and operations--not leaving the responsibility to rural towns that might lack the resources and expertise to oversee broadband infrastructure.

The framework that a county decides to stand up can take shape and formality which depends on the leadership's perspective. Below are three common structures employed to run broadband initiatives on a municipal level:

Municipal Task Force: A municipal task force is a temporary and focused group formed to address a specific issue, problem, or goal within a municipality. Task Forces are designed to be agile, flexible, and typically composed of individuals with expertise or interest in the subject matter at hand. Task Forces are established for a limited time and dissolve once their objective has been achieved or their recommendations have been presented to the relevant authorities.

Municipal Committee: A municipal committee is a good of individuals appointed or elected to represent different areas, interests, or functions within a local government. Committees can be permanent or temporary and are often established to oversee ongoing activities, provide recommendations, and make decisions on certain matters. Examples include finance committees, planning committees, and public safety committees. Committees play a role in researching, analyzing, and proposing actions related to their specific area of focus. They might also facilitate communication and coordination among different departments or functions within the municipality.

Municipal Commission: A municipal commission is a formal entity with a specific mandate and authority to regulate, oversee, or manage a particular area or function of local governance. Commissions are typically established by law or ordinance and may have regulatory, policy-making, or advisory powers. They usually consist of members appointed by relevant authorities or elected by the public. Commissions often operate independently of

other municipal bodies and play a more autonomous role in decision-making. Examples include human rights commissions, zoning commissions, and environmental commissions.

The key differences between a municipal task force, committee, and commission lie in their purpose, duration, authority, and scope. Task forces are temporary groups focused on specific issues, committees are more permanent groups overseeing specific areas, and commissions are formal entities with regulatory or oversight powers in a particular domain of local governance.

It should be noted that in counties where larger broadband grants have been written and managed by the county leadership that having a Commission becomes an important tool in the management of the funds. Again, this may not be the right model in all three counties.

Without a strong commitment to broadband, the effort runs a very substantial risk that the goals and desires of the counties and their citizens will not be realized. The broadband infrastructure grants typically take a funding match (ranging from 15%- 35%), and while the providers can sometimes manage the match as part of a business plan, local funding participation can move the process forward in a much more efficient manner. Moreover, the most recent rounds of federal grants, including past USDA ReConnect grants, along infrastructure grants in other states have been oversubscribed by three or four times, and the projects with higher percentages of match tended to score better and have a stronger likelihood of solidifying the funding. Solarity conducted an infrastructure grant match webinar in May to support this activity.

County governing body leadership should be looking towards their budgeting process, their municipal bonding potential, and their ability to braid town and county support for these projects to be successful. Working with other sectors, such as K-12 schools, higher education, forestry, economic development, and others that have access to broadband infrastructure funding of their own will build an accurate picture of the funding flowing into the location to address broadband access concerns.

County decision makers should also consider the ongoing monitoring of their broadband infrastructure needs, at least in the next five years as funding for this infrastructure expands at a historic level. Much of the oversight will be doing the FCC Fabric map monitorization. The FCC will be updating the public at least twice a year, and as projects go into effect speeds should be improved. It is recommended that staff time- GIS department especially- should be allocated to these efforts.

Although there are some differences in regional Organizations Framework approaches, at the county level, there is basically one Organizational Framework that meets the needs of each county and also comports to any one of the three regional frameworks chosen. That framework consists of elected county officials appointing a county level body to facilitate and lead each county's broadband activities, participate in the LBLL BAT meetings, and report up to the county government for assessing and approving potential funding opportunities.

In the table below, Solarity identifies the actions each county takes to implement a county task force that complements the regional framework.

Table 12. Actions to Establish Framework and High-Level Roles and Responsibilities

Communications and Stakeholder Operations Plan

The counties have made considerable progress in internal, external communications, education, and stakeholder outreach since last fall when this process began. Yet, much work remains as the counties move to accomplishing goals and objectives of their respective strategic plans and broadband projects at the regional level. The importance of stakeholder outreach, building partnerships among the counties and with ISPs will rise exponentially as broadband initiatives move from planning to submitting applications as a result to obtain funding. Understanding that broadband efforts will have to be sustained for an extended period of time is essential as well. This section provides a framework for communications, stakeholder involvement at the county level, and how that involvement looks at the regional three-county approach.

County Level Readiness

County and Regional level communications and stakeholder efforts naturally include efforts at the "general public" level. Having said that, the foundational level of successful communications must begin with county leaders. In the in the Current State Assessment Report, Solarity indicated the importance of counties deepening their broadband support through community endeavors. It is common to see communities exhibiting three tiers of readiness. The type of support, tools, and tactics needed for successful public communications and stakeholder efforts are different for each county as described below:

Tier 1: Counties that need support in gaining leadership and understanding of broadband issues, and preparing for first grants are ready to coach through the steps for broadband project development. Action: Educating leaders on the issues of broadband, discussing recommendations in this plan, set priorities, and build relationships with ISP's that lead to broadband projects.

Tier 2: Counties that have less gaps in leadership understanding and infrastructure need to concentrate on continual upgrading of equipment, targeting smaller areas of concerns, and partnering with ISPs to close those gaps need coaching on identifying the development of skills to complete tasks. Action: Analyze recommendations in plan, align with existing priorities, and work in a targeted fashion with ISPs to complete infrastructure needs.

Tier 3: Counties that have very specific, unique issues to close any remaining broadband infrastructure gaps need coaching on learning skills to continually monitor and improve performance. Action: Assess what skills are needed to lead project and put into place, take recommendations into consideration, work with providers to complete infrastructure builds.

The success of a regional communications and stakeholder effort depends, in part, on each county recognizing which tier represents where the county currently lies and making concerted efforts to move from Tier 1 and 2 to collectively tier 3. This analysis will assist the county elected governing body determine which Operations Framework entity (task force, committee, or commission) that will best position the county and collectively, the three counties, to successfully communicate the importance of broadband to the communities and to bring the goals and objectives under the county's Strategic Plan, as well as the regional Strategic Plan, to fruition.

The description below of where each county lies within the three tiers helps inform the discussions and development of individual county and the regional Communications Plan. (This information is

also provided in each county's Strategic Plan.) Although we are focusing mostly on the infrastructure concerns, digital equity work should not be forgotten.

Lincoln County

Lincoln, which stood at Tier 1 readiness at the time the Assessment Report was issued, has taken steps to convene community leaders on making broadband a priority as a Task Force. Solarity recommends that under its Strategic Plan, Lincoln prioritizes building local broadband expertise and identifies and invests county staff time to be points of contact for ISPs and utilize the RDS and other mapping resources. Additionally, broadband infrastructure projects must be closely monitored to ensure households and businesses obtain broadband connections desired. For the NTIA BEAD Program, the Task Force should prioritize projects that serve the *unserved* BSL first, knowing that *underserved* will also be addressed in those grant project proposals, and the Build project with the highest *unserved* locations has been named in the county report. Other grant funding projects can complement that work.

Lincoln County appears to have pockets of low-income households that require affordability to be addressed as an ongoing focus. Ensuring that the broadband effort is incorporating affordability and adoption efforts will be key to successfully closing the digital divide.

Lincoln County should work alongside the Confederated Tribes of Siletz Indians, who has their own broadband planning effort occurring with the intent on developing their own broadband projects to be funded. It will be important to ensure efforts are aligned, considering the footprint of the Siletz Tribe and the surrounding towns are identified as an area of need for broadband infrastructure. There is a great opportunity to work alongside each other with trust building and open communication.

Linn County

Linn County, which also stood at Tier 1 readiness at the time the Assessment Report was issued, has taken some steps to convene community leaders on making broadband a priority. This work needs to continue with more local leadership participation as the County determines which type of Organizational Framework entity brings the best chances of successfully meeting its strategic plan needs and desires. County staff time being cleared to be points of contact for ISPs and utilize the RDS and other mapping resources is a beneficial step we have seen in other communities. Having the highest amount of BSL's and the largest need for building new infrastructure in comparison with the other counties in the tri-county study, Linn County needs to prioritize the broadband issue in order to be competitive in the grant processes that are opened, given USDA programs have been four times oversubscribed.

Within the NTIA BEAD Program, the Task Force should prioritize projects that serve the *unserved* BSL first but knowing that they have a high number of *underserved* residents will they need to balance these two priorities in grant project proposals. Other grant funding projects can complement that work. Given the size of the *underserved* locations in comparison to the other two counties, Linn County should understand the overlap of those two sets of BSL because the area of investment will be greatest to close the gap.

County leadership needs to understand the broadband issues of both eastern and western Linn County, as their population density is vastly different. This is especially important for emergency services such as forest fires and other emergency situations. There has been some work done to estimate the cost of addressing broadband connectivity needs. Please see the University of Oregon

Feasibility study for more information on this.

Benton County

Benton County was considered a combination of Tier 1 and 2 under the Assessment Report. However, as the information emerged around the nature of the remaining broadband gaps emerged, this may need to be reconsidered. The county is in Tier 1 for local leader participation in solving the broadband issue yet Tier 3 in the needs of strategic planning to effectively complete buildouts in the county. This means specific skills would be best in place to shepherd the completion of these service areas with ISP partners. This includes GIS mapping skills to utilize the RDS tool another mapping resources. In terms of communications, local leadership and stakeholders still need to be engaged, perhaps focusing on more digital equity facing issues, while a key point of contact that builds the right skill set for broadband project monitoring will be essential.

Building on-the-ground knowledge dovetails with the growing responsibility of infrastructure maintenance around broadband access. Counties, communities, and regions across the country are making similar efforts, and the growing number of broadband technical assistance grants that are becoming available align with these efforts.

Communications and Stakeholder Plan Framework

Creating a comprehensive broadband communication plan that the broadband effort will put into practice involves considering various stakeholders, organizing effective meetings, and outlining the key messages that need to be communicated.

Identifying Stakeholders

When determining key stakeholders, think through those leaders in your community who can rally the troops as well as decision makers to be onboard with project efforts. When conducting these meetings, consider the following to be at the table and involved as early as possible. Making sure digital equity leaders (library, schools, community action programs, job centers, and others) are part of the stakeholder group will ensure that their needs are in consideration.

- Government Representatives: Elected officials, policymakers, regulatory bodies, and key staff members.
- Service Providers: Broadband providers, ISPs, technology companies.
- Emergency personnel: police, EMT, Forestry services.
- Local Communities: Residents, community organizations, local businesses.
- Infrastructure Partners: Utility companies, construction firms, engineering teams.
- Educational Institutions: Schools, colleges, universities.
- Healthcare Organizations: Hospitals, clinics, telemedicine providers.
- Nonprofit Organizations: Those focusing on digital inclusion, equity, and access.
- Media: Local news outlets, online platforms.

Core Team

A mixture of individuals from this list, and any “unusual suspects” that are leaders in your community should be part of your broadband effort’s group. However, in order to be effective, the core team should include:

Table 13. Core Team Make-up

Core Team
A policy maker, usually a government representative, who will be instrumental in shepherding issues through decision-making process.
A person skilled at using the RDS software for decision-making on the mapping side and funding side. This could be a county GIS staff member, member of the county finance team, economic development professional, or others.
A representative, or multiple representatives, from the Education sector to ensure that their funding strategies are put into consideration throughout this practice.
Tying in Healthcare and Telemedicine early will provide another sector that is also potentially applying for their own broadband support.
Emergency services to ensure their needs are voiced early in the discussion process.

An individual should be clearly appointed as the lead on the county's broadband effort. This person should have clear capacities to make decisions and address issues when necessary. Generally, an organization with vested interest in the broadband issue makes it possible for the right individuals to lead this. In some cases, it is a county staff member. In others, it is the director of an economic development organizations. Whomever it is should 1) be given the management of the broadband effort as a clear responsibility in their assigned tasks, and if tasks need to be reassigned to others in order to maintain a good standards that should be considered, and 2) given the importance of the issue, they should have the tools to be successful in building the broadband effort.

If outside facilitation of this issue with a consultant is sought, given resources, the above steps will be important to have in place regardless, especially designating a leader of the effort with some authority.

Setting Up Meetings

When organizing and planning a series of meetings to engage stakeholders be sure to have a purpose with each meeting. Why are you here? What purpose does this meeting achieve? Below are some examples of important meetings that can help answer those questions your stakeholders will naturally have.

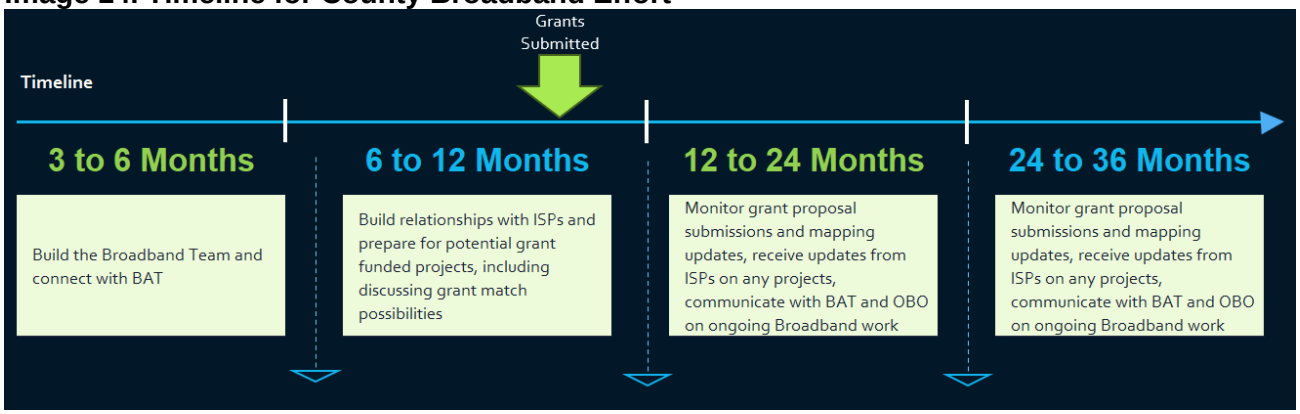
- Kickoff Meeting: Introduce the broadband initiative, its goals, and expected outcomes. Define roles and responsibilities.
- Define Priority Projects: Multiple projects have been identified for each county. Prioritize projects, build a timeline, and set expectations.
- Progress Updates: Regular updates on the project's status, including infrastructure deployment, policy changes, and community engagement.
- Feedback Sessions: Gather input and feedback from stakeholders to address concerns and adapt the plan accordingly.
- Milestone Reviews: Review achievements and milestones reached throughout the implementation process.
- Completion and Launch: Celebrate the project's completion and communicate the availability of broadband services.

This process can be self-guided with the use of readily available curriculum, like Benton Foundation's Accelerate model, or with an outside facilitator. There are pros and cons to each, most of which are dictated by available financial resources and local expertise. The LBLL BAT may have some resources in this area, as well as Solarity and others. The decision on how to proceed long-term will be for the county broadband effort to decide.

The arc of time this work should be in operation varies upon the county's decision on forming a Task Force, Committee, or Commission. Generally, these efforts take 3-6 months to gather the core team and set priorities, moving to building the key ISP relationships and identifying funding opportunities in the following six months.

It is likely that the BEAD and CPF infrastructure grant award rounds will open in 2024, making this an important time to organize and prepare. Below is a timeline of potential activities for county broadband efforts to follow. Do note that these efforts should be ready to operate for a number of years, given that grant funded projects usually are completed in 1–2-year time periods, and the grants will not all be awarded at the same time.

Image 14. Timeline for County Broadband Effort



Communication Plan

It is important that the broadband effort decides what needs to be communicated and how it will be shared with stakeholders. Progress updates, requests for participation in surveys, pushing out important information at key moments will all be important. This allows for shared updates on topics such as infrastructure deployment, policy changes, and community engagement efforts. It is also an opportunity to reiterate the benefits the project will have, like highlighting the positive impacts of broadband access including economic growth, improved education, and healthcare.

It will also be an opportunity to continue to build digital equity engagement, with a focus on emphasizing efforts to ensure that underserved communities have the right tools to access, afford, and adopt skills necessary. The communications work can voice those challenges and solutions, and it is an opportunity to be deliberate in addressing potential challenges and explain how they will be overcome. As projects proceed, this can be the place to divulge timelines, providing a clear timeframe of project phases, expected completion dates, and key milestones.

The importance of an ongoing communications plan can be overlooked but it still is important. Selecting the appropriate communication channels—that are easy to maintain and are deemed effective- will allow the group to reach different stakeholders effectively. If you tried to have meetings

with all groups, it would feel daunting and never-ending. We recommend meeting with key stakeholders when appropriate as well as utilizing the following communication channels to reach tiers and groups.

- Email Updates: Regular email newsletters summarizing progress and upcoming milestones.
- Social Media: Engage stakeholders through platforms like X (formally known as Twitter), Facebook, and LinkedIn.
- Website: Maintain a dedicated website with project information, updates, and resources.
- Press Releases: Issue press releases for significant project developments and achievements.
- Community Workshops: Organize workshops to engage directly with local communities and address their concerns.

It is important to make sharing of this information as easy as possible. If you are asking constituents to share information through social media posts and newsletter blasts, take the mystery out of the process by offering up pre-approved and ready-to-go social media posts (text + pictures adjusted for each platform) and template newsletter text with approved images. By streamlining the process for sharing information, we have found better returns on the backend.

As the broadband initiative progresses, be prepared to adapt the communication plan based on feedback and changing circumstances. Flexibility is key to ensuring the plan remains effective and relevant. Remember, effective communication is a crucial aspect of any project, but vital to broadband. By involving the right leaders and players, holding productive meetings, and consistently sharing relevant information can help ensure the success of the project as well as its positive impact on the community.

Risk Management

Risk management is a critical component of successful project efforts. Unmanaged risks can easily prevent a project from achieving objectives or even cause it to fail. Risk management is important during project initiation, planning, and execution; well-managed risks significantly increase the likelihood of project success.

Risk Management Process Plan under Strategic Plan

The Risk Plan is intended to provide a practical and effective tool for each county and the three countries collectively to identify and deal with risks that are inevitable in such an expansive and complex effort. For the counties to successfully apply and obtain federal and State broadband grants, timely risk prevention, avoidance, and mitigation are key management components. Diligence and commitment to risk management must begin at the leadership level and be at the forefront of broadband endeavors.

It is well understood that broadband gaps will require multiple grant funded applications and projects, some of which will occur at the individual county level while others will be regionally focused. Within the realm of assessing funding opportunities there are several logistical matters to consider:

- The types of grants that offer the best use of scarce resources and the best chance of being successful in obtaining funding in the near future.
- How to handle opportunities that may be best addressed by a regional effort consisting of more than one county.
- How to handle grants that offer the counties an opportunity to work with ISPs who may be the entity that is eligible to apply for the funding and have been successful in past funding efforts.

Considerations for funding opportunities for the counties to collaborate or partner with schools, libraries, medical facilities, or organizations, and the like, to form a consortium to facilitate broadband expansion for more specific purposes.

All these considerations must be made based on resources, timing, and what is known at this time (and as important, what has not been settled), to be the most viable opportunities and options to pursue.

Additionally, projects that result in obtaining grant funding have significant reporting requirements to multiple funding sources at the federal and State level. Still other projects may require sub-grantee and ISP audits that must be conducted in accord with the U.S. Department of the Treasury and Office of Management and Budget, and other federal and State rules and regulations. Thus, the Risk Plan methodology and guidance is designed to be used across the board to identify and plan for risks associated with grant applications, managing, and reporting requirements, and conducting sub-grantee audits, as well as processes for risks that elevate into issues.

The Solarity team has identified and documented new risks under the Strategic Plan along with risks carried over from the project period, that the individual counties and/or the counties at the regional level will need to address. Suggested actions or mitigation strategies are being offered to give county officials best practices to guide their readiness and risk management work.

Given the complexity of the overlapping efforts and opportunities that will influence decision making, Solarity has identified risks and potential mitigation steps grouped into two categories:

1. Risks relating to the three-counties collectively as a region
2. Risks that relate to an individual county

The risks identified at regional level are summarized in the table below, for individual county risks please see the reports for Benton, Lincoln, or Linn.

Table 14. Regional Risk Under the Strategic Plan

Risk Category	Risk Details	Risk Response Recommendations
Lack of regional strategic organizational framework ("governance")	Federal and State broadband grant programs are new initiatives at the county and regional levels which require the three counties to have an organizational structure that facilitates a coordinated and collaborative effort to consider if a regional approach is appropriate for a particular funding opportunity. If so, the counties must plan, strategize, and apply for grants keeping in mind that the grant should benefit each county and collectively, the region. The structure must be feasible and sustainable, yet capable of changing as broadband technology, applications, and administrative responsibilities advance. As important, the counties each county must view broadband as a high priority for the county and the region with all counties being as a whole and be on equal footing with the other counties to ensure the region does not lag behind other regional groups in Oregon.	The strategic plan outlines three organizational frameworks for the three counties to consider based on the capacity and needs of the region. The counties should carefully weigh these options and choose the most viable option for a strategic regional framework.

Risk Category	Risk Details	Risk Response Recommendations
Lack of capacity to keep momentum going to build stakeholder buy-in and accomplish the Strategic Plan and broadband goals of the region.	A critical role of the broadband strategy organizational framework is that the three counties point-persons are committed over the long run to continue the regional momentum built during the project. This three-county core group should build on the communication activities under the Strategic Plan to develop continued relationships with stakeholders, ISPs, and the OBO, to build broadband knowledge and achieve buy-in with private and public entities such as schools, healthcare facilities, businesses. Without consistent and sustainable efforts, important regional efforts run the risk of less-than-optimal results in terms of successful grant applications and projects so important to the people of the region and their well-being.	Continue and expand stakeholder out-reach and education efforts and build strong relationships with ISPs and the OBO. Actively participate in the BAT organization through meetings, coordinated sharing of grant opportunities including lessons learned and best practices.
Lack of knowledge and/or resources to identify, plan, timely draft and submit applications; operationalize and manage grants; and meet federal and State reporting and auditing requirements.	It has been stated that entities with identified and experienced resources are better positioned to apply and successfully obtain federal and State broadband grants. As a relatively new initiative, funding opportunities will require dedicated resources that may or may not be within current capabilities of a county or even at the regional level. GIS mapping of areas that are un- or underserved is not a task that many of the county's current staff may have conducted. Similarly, administering and/or auditing broadband grants may be new to the counties staff. Although each county should certainly monitor grant opportunities for its communities, having the capacity at the regional level to identify, and perform application and operational functions on short notice may result in larger grant awards and more successful projects. Not having resources (or seeking external assistance) to identify, gather needed information such as maps and speed tests, and submit well-crafted applications on a regional basis hampers the region's prospects of successfully competing for significant federal broadband funding.	Inventory current resource capabilities at the county and regional level. Seek additional resources, including external contractors if needed.
Not being aware of or not obtaining the "match" in a timely manner.	Many federal grant programs such as BEAD, Economic Development, and Community Connect (and in some cases, DEA) have match requirements. In some cases, the match can be "in-kind" while in others, the recipient must provide a cash match. It is crucial for regional grant officials to be knowledgeable about match requirements early on to identify sources and types of match. The mix that best leverages federal, State, and county funds, as well as when to pursue private and non-profit organization funding including educational institutions, health care facilities, and businesses must be determined. As an example, if a public right-of-way (ROW) is needed, the value of the ROW may be permitted as match, thus reducing the need for seeking match funding. Regional approaches may be particularly tricky to determine the best mix and type of matches, as each county will likely have to consider single county match requirements as well as regional matches.	Counties may "pool" resources and available "match" opportunities to determine how to best leverage in-kind matches and then move to cash matches based on the timing of a project, and dependencies based on whether another project must be completed first, or other factors.

It is recommended that the county risk register and issues log be considered companion documents to be acted upon and resolved at the appropriate level.

Funding Options

Funding broadband projects can be essential for improving digital connectivity and bridging the digital divide. We have heard county leaders discuss the need to promote the placing of broadband items in the county fiscal budget in the future, but there are options and tools that lay beyond that resource as well. This should be done, but we also ask that the leaders of the broadband efforts educate elected officials about using every opportunity on hand. For example, American Rescue Plan Act (ARPA) funds were allowed to be used for broadband connectivity efforts. Because the issue was not understood, the funds were spent on other items. Although they may have gone to good projects, these county efforts can help ensure funds flow in this direction.

There is several funding sources that can be considered when initiating and supporting broadband projects. Below is a table displaying options to examine.

Table 15. Different Funding Options

Choices for Funding	Description
Bonding	Borrowing money from investors by selling these and promising to repay the principal amount with interest over a specified period.
Provider Support and Cost Sharing	Can offer financial support, resources and/or collaborative partnerships due to expanding customer base and revenue potential.
Capital Improvement Funds	Earmarked funds set aside for public infrastructure, can allocate funds to broadband to enhance digital connectivity. Can be used as collateral or down payment when seeking loans or bonds.
Grant Strategy	Identifying, applying for various grants from government agencies, private foundations, and other organizations. Can provide various funding aspects for broadband projects.

Summary Table of Major Funding Opportunities

Solarity presented a matrix prioritizing specific broadband infrastructure grant funding in the “Current State Analysis” presented to OCWCOG in May. The table has been updated with information to date. More information about the grant matrix can be read in Appendix G.

Table 16. Major Funding Opportunities

Title of Grant Opportunity	App. Source	Type/Title	Application Due Date	Preliminary Assessment Score (1– 100%)	Notes/ Recommendations
Federal BEAD	OBO	Implementation (Infrastructure, etc.)	TBD in 2024	76%	Applicants are generally ISPs --Consider and discuss grant match with ISP’s. Prioritize *unserved* BSL’s in first grants

Title of Grant Opportunity	App. Source	Type/Title	Application Due Date	Preliminary Assessment Score (1– 100%)	Notes/ Recommendations
Federal DEA	OBO	Competitive Grant	TBD in 2024	68%	Digital Equity facing support --NOFO is not out at this time. Continue to monitor
Federal Capital Fund Projects	OBO	Infrastructure Grants	TBD in fall 2023, early 2024	85%	Planning- counties / regions can apply. Implementation applicants are generally ISPs --Grant match not required but adds points
Federal USDA	USDA	Community Connect Grants	June 20, 2023	76.6%	Applications for tri-county area submitted by ISP's. Monitor
Federal USDA	USDA	ReConnect Grants/Loans	TBD likely fall 2023	70%	Applicants are generally ISPs, but counties are eligible -- Consider and discuss grant match with ISP's
State Oregon Broadband Office (via Federal CPF and state funds)	OBO	Broadband Technical Assistance Program	TBD 2023	70%	Applicants can be counties / regions -- Lincoln Co will be lead for a multi-county grant application

The second table shows a sample of funding opportunities that the counties need to be aware of and consider how they can help assist in gaining broadband funding or other collaborative activities. Counties may not be able to apply for all of these funds directly, but partner organizations may be actively using these funding mechanisms. For example, Samaritan Health Services receives rural healthcare support, or E-rate funds, for their hospital system. Understanding if and when they use the funds for adding fiber to their network or partnering with a service provider to accomplish that task is important. Strategizing a larger initiative with Samaritan to address telehealth needs in portions of their service area that do not have reliable connectivity could be built into a broadband infrastructure project. The E-rate funding may act as an element inside of a project's capital stack as there are complimentary needs that are met when building out strategic pieces of the broadband infrastructure.

We recommend that the counties have active broadband efforts bringing together leadership for these reasons. The complex network of agencies and organizations who receive partial funding for their work could be aggregated together in a larger broadband strategy and used during grant application process to paint a fuller picture of funding.

Summary Table of Potential Broadband Opportunities to be Aware of for Collaboration

Table 17. Potential Broadband Opportunities

Title of Funding Opportunity to Collaborate on	App. Source	Type/Title	Notes
Federal Economically Distressed Assistance	State of Oregon	Comprehensive and flexible resources for economic needs. (Opportunity Zones, increase private investment, workforce development, etc.); created in 2020 as part of COVID funding	Like ARPA funds, reflect if there are remaining funds that can be put towards broadband efforts. Guidance was broad, and broadband projects were included as an allowable usage of funds.
Federal FCC Emergency Connectivity Fund (ECF)	FCC	Emergency $7.17 Billion for schools and libraries for electronic devices and broadband hot-spots, and wi-fi services.	Last grant period was for applications in 2022. Counties can work with local schools to collaborate on status and new potential under major funding opportunities (BEAD, DEA, etc.).
Rural Health Care (RHC)	Universal Services Ad. Co. (USAC)	Funding for health care providers for broadband services needed for healthcare. (Telehealth)	This is revolving program with funding based on appropriations. Counties may work with local health care facilities to collaborate.

Importance of Grant Matching Funds

Grant matching programs involve leveraging public or private funds by requiring the recipient to match a portion of the grant amount with their own funds. Some grants require recipients to match a portion of the grant amount with their own funds or resources. Matching funds can encourage local commitment to the project and demonstrate the project's viability to funders. This approach encourages collaboration and investment from multiple sources, maximizing the impact of the grant money.

Matching funds for grants do not have to come from one source but can be from multiple organizations; in-kind may be an allowable match depending on the grant rules; and match can be from bonds and capital projects funds. It should be noted, as with other federal programs, that match for a federal program (which BEAD and CPF are but managed by OBO) cannot be from another federal resource.

Each funding option has its own benefits and considerations, so it's important to choose the options that best align with the project's goals, timeline, and financial requirements. Combining multiple funding sources can also help diversify the project's financial support and reduce risk.

Case Studies

Best practices are emerging for building relationships between municipalities and providers to build broadband infrastructure through investment in grants or other means of cost sharing. Included are three examples from counties around the country who built broadband projects of different sizes, all answering their broadband needs. Below are three examples of municipalities working with providers to collaborate to build Public/Private collaborations.

Clatsop County, Oregon

Located in the northwest corner of Oregon along the Columbia River, Clatsop County is renowned for scenic natural beauty from its inland mountain terrain to its stunning coastline. Due to the geographical makeup of the county, obtaining reliable high-speed internet access for residents and businesses has been a challenge in the past.

Charter Communications, also known as Spectrum, was awarded federal funds to build out service to several census block locations in Clatsop County through the FCC Rural Digital Opportunity Fund (RDOF) reverse auction. Leaders felt that locations left out of the RDOF funded work, like the unincorporated town of Jewell which joins Highway 202 with Hwy 103, would continue to find reliable speeds out of reach unless action was taken.

Clatsop County leaders approached Charter to understand their RDOF work in progress in the county, sharing with them the concerning area adjacent to their funded builds. Analyzing unincorporated Jewell's proximity to RDOF projects, Charter and county leadership came up with a strategy to explore how this gap could be closed through a Public-Private agreement.

Charter proposed a small investment be made to help understand the feasibility of the work. Clatsop County agreed to use $16,000 of unallocated ARPA funds to conduct a "walkout survey" to gather information on utility poles along the proposed build route, including ownership, attachments, and accessibility for broadband installation. The date for that assessment's completion is in the fall of 2023.

Once Charter has information from the "walkout survey" they will assess other elements of the project costs to extend fiber and end user connectivity to this area. Clatsop County leadership understands that there will be a cost savings agreement to complete this work, as Charter will fund a portion and the County will fund the remainder.

These figures were not available at the time of writing the report, but it should be noted that this process did not involve submission of a grant but using available county funds efficiently. Continuing to have open communication with ISP's who are conducting work in a county and assessing if locally held funds can support extension of their work should be considered by county level broadband efforts in the future.

Pittsylvania County, Virginia

Pittsylvania County, Virginia[15] created a unique partnership to expand internet access to its residents. In square miles, Pittsylvania County is the largest county in Virginia, however, the county has 60,000

[15] https://cardinalnews.org/2023/01/27/pittsylvania-countys-unique-approach-to-solving-broadband-challenges/?utm_medium=email&utm_campaign=Newsletters&utm_source=sendgrid

residents spread out in small rural pockets with the middle swath of the county having little to no internet access. Those areas that do have some internet coverage located in the northernmost and southernmost parts of the county have only the slowest upload and download speed: 25mpbs download and 3 mbps upload. Pittsylvania County has no coverage with faster speeds.

With the realization that internet is not just for entertainment, but is a 21st Century necessity needed for remote work or telework, remote learning, remote healthcare or telemedicine as well as needed to gain access to goods and services to include basic consumables, a three-way partnership was formed between the Pittsylvania County Board of Supervisors, the Pittsylvania County School Board and RiverStreet Networks, a North-Carolina based network provider who expanded operations into Virginia, to expand and fund broadband infrastructure.

Because Pittsylvania County is both vast and rural, there is significant cost to build a fiber network throughout most of the county. The partners quickly realized that pooling funds could reach more residents. The board of supervisors contributed $11 million, $6.5 million of which came from the American Rescue Plan Act (ARPA) funds, with the remaining $4.5 million coming from revenue sharing agreements. The school board provided $5.5 million in ARPA funds, and RiverStreet Networks provided a match up to $19.5 million. These funds along with a $39.1 million grant awarded from the Virginia Telecommunications Initiative through the Virginia Department of Housing and Community Development increased the project budget to $75 million and will reach about 12,000 unserved locations by 2025.

Oneida County, Wisconsin

Oneida County, Wisconsin used conduit financing as a means to raise the capital needed via tax-exempt municipal bonds to fund their broadband project to benefit the public.[16]

Oneida County is one of thirteen Central and Northern Wisconsin counties working towards expanding broadband infrastructure, particularly to rural unserved and underserved residents and businesses, through bonding. These counties partnered with the internet service provider, Bug Tussel who is backed by the parent corporation, Hilbert Communications, a large Midwest communications company.

Multiple parties contributed funds for a total of $13.8 million to increase broadband internet to 5,700 homes. For the largest share of the budget, Oneida County partnered with Hilbert Communications and issued tax-exempt conduit municipal bonds to raise the $9.5 million funds needed for this public broadband infrastructure project. With this arrangement, Oneida County did not provide the dollars directly, but instead guarantees the financing through others with the infrastructure installed as collateral. Other funds were received from the Wisconsin Public Service Commission with a $2.8 million grant. Also, the Oneida County Board contributed $1.5 million in ARPA funds. Several towns within Oneida County contributed $57,500 and the Marshfield Clinic contributed $10,000.

With successful completion of this project, the following benefits will be realized:

Rural residents across Oneida County will have access to broadband, many of which are currently unserved or underserved. Cell phone coverage across the county including internet access will be

[16] https://www.co.oneida.wi.us/wp-content/uploads/ARPA-Oneida-County-Broadband-Bug-Tussel-Project-May-19-2022.pdf

greatly improved as well as first responder communication across the county. Also, the economic infrastructure climate will be improved for attracting new, low environmental impact businesses. Remote work/work from home opportunities will be expanded, increasing the number of residents who can participate in the workforce which is critically needed given the current lack of childcare resources. Oneida County sales tax revenue will be enhanced as seasonal usage of existing properties are predicted to increase with seasonal residents due to the increased broadband access – one study estimated an increase of $18 million in additional spending by seasonal residents in the county and finally, Oneida County will be provided with over $100,000 in right of way and basis points fees.

Conclusion

During our work with appointed local county leads on this project, it has been clear that there is a willingness and a drive to address broadband issues in all three counties. It is of critical importance that county municipal leadership prioritize this issue for the next five years as the infrastructure funds start to impact the area. These are complex infrastructure projects and necessitate a level of support.

The Rapid Design Study software will be available to counties beyond the timeframe of Solarity's study. Leaders who have been working with our team through the process have already gained access to this software and training on how to use it in your ongoing planning efforts.

As noted, the municipalities have a responsibility to their communities to ensure that the infrastructure for success is in place. Roads for transport were the dominate infrastructure piece in the 20th century. Broadband infrastructure is shaping up to be just that for the 21st century. The time is now to expand local leadership's knowledge base on the issue to be successful in this moment of opportunity.

Appendix A: Benton County Broadband Strategy

Appendix A was submitted as a separate document. Please see Appendix A-Benton County Strategy.

Appendix B: Lincoln County Broadband Strategy

Appendix B was submitted as a separate document. Please see Appendix B-Lincoln County Strategy.

Appendix C: Linn County Broadband Strategy

Appendix C was submitted as a separate document. Please see Appendix C-Linn County Strategy.

Appendix D: Table Internet Service Providers

Table 18. Internet Service Providers

Provider Name	Technology Type	Speeds	Price	County		
				Benton	Lincoln	Linn
Alyrica	Fiber	100 Mbps	$49.99	No fiber	No fiber	Albany, Halsey, Harrisburg
Comcast		200 Mbps	$63.00	Adair Village, Corvallis, Philomath	No fiber	Albany, Harrisburg, Millersburg, Sweet Home, Tangent, Holley
LS Network		Last Mile Provider	Not Listed	Adair Village, Corvallis	No fiber	Albany, Millersburg
Hunter Communication		500/100 Mbps	$59.99	No fiber	No fiber	Harrisburg
Monroe Telephone		100/50 Mbps	$89.95	Corvallis, Monroe, Alpine, Bellfountain	No fiber	No fiber
Peak		100 Mbps	$59.95	Adair Village, Corvallis, Philomath, Alsea	No fiber	Albany, Halsey, Lebanon, Millersburg, Scio, Sodaville, Tangent, Waterloo
People Telephone (PTC)		100 Mbps	$84.95	No fiber	No fiber	Lyons
Pioneer		100 Mbps	$64.95	Corvallis, Philomath, Alsea, Blodgett	Newport, Waldport, Yachats	Albany
SCTC		100 Mbps	$84.95	No fiber	No fiber	Lyons, Mill City, Scio
SMTA Comm & Tech Co-Op		Not Listed	Not Listed	No fiber	No fiber	Lebanon, Lyons, Mill City, Scio, Sodaville, Waterloo
Wave		100 Mbps	$30.00	No fiber	Depoe Bay, Lincoln City, Newport, Siletz, Toledo, Waldport, Otis/Rose Lodge	Lyons, Mill City
Viser		1 Gbps	$59.95	Adair Village, Corvallis	No FWA	Albany, Lebanon, Lyons, Millersburg, Sodaville, Waterloo
Ziply		500/100 Mbps	$59.95	No fiber	No fiber	Gates
Comcast	Cable	100/5 Mbps	$65.00	No cable	No cable	Lebanon, Sodaville, Waterloo, Cascadia

Provider Name	Technology Type	Speeds	Price	County		
				Benton	Lincoln	Linn
Roome Telecom		100/5 Mbps	$65.00	No cable	No cable	Halsey
Spectrum		300 Mbps	$84.95	No cable	Depoe Bay, Lincoln City, Newport, Toledo, Waldport, Yachats, Neotsu, Otis/Rose Lodge	No cable
Wave		100/5 Mbps	$65.00	Corvallis, Blodgett	No cable	Albany, Gates, Millersburg, Scio
Alyrica	Fixed Wireless Access (FWA)	200/40 Mbps	$69.99	Monroe, Philomath, Alpine, Alsea, Bellfountain, Blodgett	No FWA	Brownsville, Lebanon, Lyons, Millersburg, Scio, Sodaville, Sweet Home, Tangent, Waterloo, Cascadia, Holley, Shedd
Earthlink		100 Mbps	$99.95	Adair Village, Corvallis, Monroe, Philomath, Alpine, Alsea, Bellfountain, Blodgett	Depoe Bay, Lincoln City, Newport, Toledo, Waldport, Neotsu, Otis/Rose Lodge	Albany, Brownsville, Halsey, Harrisburg, Lebanon, Lyons, Mill City, Millersburg, Scio, Sodaville, Tangent, Waterloo, Shedd
Hunter Communication		30/5 Mbps	$119.99	Corvallis, Monroe, Alpine, Bellfountain	No FWA	Brownsville, Halsey
King Street Wireless		12/2 Mbps	$70.00	Monroe, Alpine, Alsea, Bellfountain	Depoe Bay	No FWA
Peak		30/10 Mbps	$139.95	Adair Village, Monroe, Alpine, Bellfountain	No FWA	Brownsville, Harrisburg, Lyons, Mill City, Sweet Home, Cascadia, Holley, Shedd
T-Mobile		5G	$30.00	Adair Village, Corvallis, Philomath	Depoe Bay, Lincoln City, Newport, Toledo, Waldport, Neotsu, Otis/Rose Lodge	Brownsville, Halsey, Harrisburg, Lebanon, Lyons, Mill City, Scio, Sodaville, Sweet Home, Tangent, Waterloo, Holley, Shedd
Alyrica	DSL	100/5 Mbps	$65.00	Adair Village, Corvallis	No DSL	No DSL

Provider Name	Technology Type	Speeds	Price	County		
				Benton	Lincoln	Linn
CenturyLink		100 Mbps	$50.00	Corvallis, Blodgett	Depoe Bay, Lincoln City, Newport, Siletz, Toledo, Neotsu, Otis/Rose Lodge	Albany, Brownsville, Halsey, Harrisburg, Scio, Sweet Home, Cascadia, Holley, Shedd
Monroe Telephone		100/20 Mbps	$89.95	Philomath, Blodgett	No DSL	Albany, Harrisburg, Lebanon, Millersburg, Sodaville, Waterloo
Pioneer		10 Mbps	$69.95	Adair Village, Monroe, Alpine, Bellfountain	No DSL	No DSL
Roome Telecom		15/1 Mbps	$68.95	No DSL	No DSL	Albany, Harrisburg, Shedd
Silver Star Telecom		Not Listed	Not Listed	No DSL	No DSL	Albany
Ziply		200 Mbps	$40.00	No DSL	No DSL	Idanha, Lyons
HughesNet	Satellite	25/3 Mbps	$99.99	Adair Village, Corvallis, Monroe, Philomath, Alpine, Alsea, Bellfountain, Blodgett	Depoe Bay, Lincoln City, Newport, Siletz, Toledo, Yachats, Neotsu, Otis/Rose Lodge	Brownsville, Gates, Halsey, Harrisburg, Idanha, Lebanon, Lyons, Mill City, Millersburg, Scio, Sodaville, Sweet Home, Tangent, Waterloo, Cascadia, Holley, Shedd
Starlink		100 Mbps	$120	Adair Village, Corvallis, Monroe, Philomath, Alpine, Alsea, Bellfountain, Blodgett	Depoe Bay, Lincoln City, Newport, Siletz, Toledo, Yachats, Neotsu, Otis/Rose Lodge	Brownsville, Gates, Halsey, Harrisburg, Idanha, Lebanon, Lyons, Mill City, Millersburg, Scio, Sodaville, Sweet Home, Tangent, Waterloo, Cascadia, Holley, Shedd
Viasat		100 Mbps	$120.00	Adair Village, Corvallis, Monroe, Philomath, Alpine, Alsea, Bellfountain, Blodgett	Depoe Bay, Lincoln City, Newport, Siletz, Toledo, Yachats, Neotsu, Otis/Rose Lodge	Brownsville, Gates, Halsey, Harrisburg, Idanha, Lebanon, Lyons, Mill City, Millersburg, Scio, Sodaville, Sweet Home, Tangent, Waterloo, Cascadia, Holley, Shedd

Appendix E: Acronyms

Acronym	Meaning
ACAM	Alternate Connect America Cost Model
ACP	Affordable Connectivity Program
ACS	American Community Survey
ARPA	American Rescue Plan Act
BAT	Broadband Action Team
BEAD	Broadband, Equity, Access, and Deployment
BSL	Broadband Serviceable Location
CAF	Connect America Fund
CEDS	Comprehensive Economic Development Strategy
CPF	Capital Projects Fund
CWEDD	Cascade West Economic Development District
DEA	Digital Equity Act
DSL	Digital Subscriber Line
FCC	Federal Communications Commission
FIO	Faster Internet Oregon
FTTP	Fiber To the Premises
FWA	Fixed Wireless Access
GIS	Geographic Information System
IIJA	Investment, Infrastructure Jobs Act
ISP	Internet Service Provider
LBLL	Lane, Benton, Lincoln, Linn
MBPS	Mega Bits Per Second
NITA	National Telecommunications Information Administration
NSC	National Skills Coalition
OBO	Oregon Broadband Office
OCWCOG	Oregon Cascades West Council of Governments
OSU	Oregon State University
RDOF	Rural Digital Opportunity Fund
RDS	Rapid Design Study
RHC	Rural Health Care
USAC	Universal Services Administrative Company
USDA	United States Department of Agriculture

Appendix F: Risk Register

Risk management is the systematic process of identifying, analyzing, and responding to a chance that an outcome differs from an expected result, in a negative or adverse way. There are various types and levels of risk, but they all must be anticipated and dealt with in an appropriate manner to ensure the success of the project. Risk management includes the proactive act of maximizing the probability of positive events while minimizing the probability and consequences of adverse events to program or project objectives. A risk is a potential issue that may or may not happen and can impact the project positively or negatively. If the risk does materialize, it becomes an "issue" that needs immediate attention to resolve. A separate issue log is created and maintained to deal with issues.

Methodology

Effective risk management provides a mechanism by which risks are identified, documented, assessed, assigned contingencies, communicated, escalated (as actual issues), and resolved.

The goals of this Risk Management Plan are to:

- Reduce risks;
- Standardize how risks are documented and communicated;
- Plan resolution strategies before risks become issues;
- Minimize the disruption of rework;
- Ensure transparency up, down, and across the project internally and externally; and
- Provide a process that facilitates a controlled yet responsive environment that can be used during and after the Solarity project.

Effective risk management provides the following value during and after the project:

- Provides a central point to highlight risks and issues;
- Ensures risks and issues are properly documented, analyzed, and resolved;
- Communicates information effectively and consistently to all affected parties; and
- Encourages the identification of potential risks and issues early on to minimize impacts and reduce rework.

Risk Register Tools

The OCWCOG Risk Management Plan used a Solarity developed Risk Register to log and track all risks (which is recommended for use moving forward) using the following categories of risks:

- Schedule
- Costs (direct and indirect)
- Quality
- Scope
- Internal factors (including governance structure)
- External factors
- Technical (broadband infrastructure)
- Non-technical (broadband planning, outreach, education)
- Broadband industry-specific risks

- Generic

Risk Management Process

Risks need to be identified as early as possible in the project to minimize their impact. There are four primary steps used to prepare a risk assessment:

Step	Description
1	Risk Identification: identify the main management and operational processes risks
2	Risk Analysis: assess the likelihood of each risk occurring and the consequences of occurrence; calculate the exposure the risk presents to the project and subsequent broadband efforts
3	Risk Response: identify the response needed for each risk and develop contingencies if response plan needs to be modified
4	Monitor and Reporting: establish a schedule to regularly review and update the risk assessment (Risks that elevate into an issue are transferred to an Issue Log and handled in accord with guidance from the project's leadership.)

Step 1: Risk Identification

The first task is to identify the risks associated with the management and operational processes of the project. The goal is to identify major risks before they adversely affect the project. (All project team members can log risks to be evaluated.)

To create the initial risk management plan, the Project Manager and Project Lead review the scope of work and deliverables under the project contract and identify potential risks. The next step is to conduct a brainstorming session with the project team to identify risks without debating or assessing them at this initial phase. OCWCOG and county officials, along with other stakeholders, then contribute to this effort by identifying potential risks.

All the risks are then documented in the Risk Register which is reviewed at project status meetings to identify actions taken, further actions needed, and risk resolutions.

The following information is captured on the Risk Register:

- Project Name: OCWCOG
- Risk ID Number
- Date Identified
- Risk Category
- Risk Details: Brief description of the risk
- Probability
- Impact
- Risk Exposure Score
- Risk Strategy (Avoid, Transfer, Accept, Mitigate, Prevent, and Contingencies)
- Risk Owner
- Risk Response
- Follow-up Date (Status update)
- Close out Date
- Moved to Issues

- Resolved

Step 2: Risk Analysis

The second step in the risk assessment process is to score risks based on the urgency and significance of the risk to the project by determining:

- Probability: Likelihood of the risk occurring
- Impact: Overall impact if the risk becomes an issue
- Risk Exposure Score: The severity of the risk calculated by multiplying impact by probability

Risk prioritization ensures the highest risks receive most of the project team's attention, planning, and resources. Because these priorities can change with time, risks will be regularly re-evaluated throughout the lifecycle of the project.

Assess Probability

The probability is how likely it is the risk will occur as scored in one of the five categories listed:

Probability	Guidelines
1	Low: less than 25% likely
2	Moderately Low: between 25% to 49% likely
3	Even: 50% chance of occurrence
4	Moderately High: between 51% and 75% likely
5	High: greater than 75% chance of occurrence

Assess Impact

The impact aspect considers the severity-potential the risk poses on the project if it escalates into an issue. Each risk falls into one of the five impact categories:

Impact	Guidelines
1	Low: easily mitigated by the Risk Owner or project team. The impact would be small and easily managed at a relatively routine level within the project team.
2	Fair: project team coordination is required to mitigate. The impact would be manageable within the project's budget, timeline, or performance expectations.
3	Moderate: manageable within OCWCOG's (or county) budget, timeline, or performance expectations.
4	Significant: change to cost/schedule/scope that requires re-baseline. The project would continue, but the risk significantly affects scope, performance, timelines, or costs.
5	Catastrophic: impact to cost/schedule/scope results in significant components of the project failing. The project might be forced to stop activities temporarily or end the project.

Risk Exposure

Risk exposure is calculated by multiplying the probability score by the impact value assigned to the

risk. The chart below depicts five levels of probability and impact which are used to calculate one of three levels of urgency for risk response planning and reporting:

Impact	Probability				
	1-Low	2-Moderately Low	3-Even	4-Moderately High	5-High
1-Low	Low (1)	Low (2)	Low (3)	Low (4)	Medium (5)
2-Fair	Low (2)	Low (4)	Medium (6)	Medium (8)	Medium (10)
3-Moderate	Low (3)	Medium (6)	Medium (9)	High (12)	High (15)
4-Significant	Low (4)	Medium (8)	High (12)	High (16)	High (20)
5-Catastrophic	Medium (5)	Medium (10)	High (15)	High (20)	High (25)

Each risk is then categorized into one of three levels of exposure as depicted below.

Score	Exposure
1-4	Low
5-10	Medium
11-25	High

Risk exposure is subject to change at any time during the project. The Project Manager, sponsor, and project team are responsible for regularly reviewing all risks and re-evaluating risk exposure.

Step 3: Risk Response

Risk assessment is a continuous process and is fully integrated into all project management and review processes for the OCWCOG Project.

The Project Manager provides an analysis of the most current risk register at the regularly scheduled bi-monthly project status meetings including discussing the highest risks and adding and assessing any new risks identified.

Strategies for Managing Risks

The key concept in risk management is not to wait passively until a risk materializes and becomes an issue or problem. There are five main strategies for managing risks:

- **Avoid**: reorganize the project so it cannot be affected by that risk
- **Transfer**: reorganize the project so someone or something else bears the risk
- **Accept**: decide to live with the risk and monitor the risk and develop a contingency plan of action if the risk emerges into an issue.
- **Mitigate**: develop proactive steps to reduce the impact of the risk
- **Prevent**: develop proactive steps to reduce the probability of the risk occurring

For each identified risk, a response strategy and/or series of actions are identified. These tactics are designed to prevent or lower the probability or impact of a risk event. Risks with a high severity and some with medium severity, require response planning and very close monitoring throughout the life of the project. The project team, including the project sponsor, determines which of these response strategies are most applicable.

Avoid

Risk avoidance involves changing the Project Management Plan to eliminate the threat entirely. The Project Manager may also isolate the project objectives from the risk's impact or change the activity that is in jeopardy.

Transfer

Risk transfer requires shifting some or all the negative impact of a risk, along with ownership of the response, to a third-party. Transferring the risk simply gives another party responsibility for its management – it does not eliminate it. For the OCWCOG Project, transferring the risk most likely would involve making the Internet Service Provider (ISP) responsible for a risk, such as getting all necessary data and mapping information to ensure that grant applications are complete and submitted on time.

Accept

The accept strategy is adopted when eliminating all threats from a project is not feasible. This strategy is adopted when the project team has decided not to change the Project Management Plan to deal with a risk or is unable to identify any other suitable response strategy. Passive acceptance requires no action except to document the strategy leaving the project team to deal with the risks if they occur. The most common active acceptance strategy is to establish contingencies to extend the time of a project or increase resources to oversee the risk.

Mitigate

A mitigation response addresses the impact of a risk by reducing the impact of an adverse risk event after the risk has become an issue. Having a plan to take decisive early action to address the impact of a risk that has escalated facilitates communication, reduces response time, and can significantly minimize the damage of the event to the project. The impact of a risk event is often time sensitive and grows worse the longer the event remains unaddressed. Establishing and securing approval for immediate response is an important aspect of a mitigation strategy. Prioritizing scope, adding resources, or adding time are examples of mitigating actions.

Prevent

Risk prevention involves the implementation of active countermeasures or changes in the Project Management Plan to prevent a risk from occurring. Risk prevention addresses the probability of a risk event escalating into an issue. Acting to reduce the probability of a risk occurring in a project is often more effective than trying to repair the damage after a risk has become an issue. Adopting fewer complex processes, reducing scope, planning more tests, or choosing experienced and stable project managers and/or ISPs are examples of preventive actions.

Contingency Planning

The Risk Response Plan details the risk response strategy selected for each risk, and where needed, contingencies which identify backup actions to take if a risk response is not effective. This step is taken after the risk identification and risk response strategies for all identified risks are recorded in the Risk Register. This step is conducted with the project team, sponsor, and identified executive officials who consider performance expectations, available funding, schedule, and scope of work.

Step 4: Risk Monitoring and Reporting

The final step in the risk assessment process is to establish and follow a plan for monitoring, reviewing, and reassessing all identified risks. All active high exposure risks are tracked and discussed in the bi-weekly project status report. After each status meeting, the Project Manager:

- Updates Risk Register to record risks changes and additions
- Disseminates the updated Risk Register to Risk Owners as needed for further action
- Archives the Risk Register to cover in the next status meeting

Risk Monitoring

The Project Manager monitors all identified project risks throughout the life of the project for as long as the risk remains in active status. Risks are handled through the approved Risk Response Plan.

Key responsibilities when conducting a risk review are:

- Where necessary, update the risk assessment, response, or other details
- Determine the appropriate new Risk Owner(s) if the risk assignment needs to change
- Determine if or when a risk needs to be escalated to leadership for further guidance
- Determine if a risk has elevated into an issue, in which case the risk is moved to the Issue Log and handled as described below

Process for when a Risk becomes an Issue

This section discusses known risks and actual issues that have been identified by Project Leaders for the post-project period that the counties will need to address either as a group or individually as they move forward with accomplishing their strategic plan(s). The risks and issues are logged on, and scored, in the Risk Register or Issue Log in accord with the guidance outlined in the previous sections of this Risk Plan. To facilitate the transition of risk and issue response to the counties, below is an example of how the post-project risk “Resource needs to identify, apply and implement grants” was scored based on the risk that insufficient resources would “hinder the capacity to develop and apply for grants.”

If a risk becomes an issue, the Project Manager documents the new issue into the project’s Issue Log; notes the issue number and closes out the risk in the Risk Register. The issue is handled using the risk management process, with the exception of notifying the project leadership including the sponsor if immediate attention is needed before the next project status meeting.

Resource needs to identify, apply, and implement grants	May hinder capacity to develop & apply for grants	4	3 to 4	12 to 16	Prevent or mitigate	Determine external expertise & funding needs; seek funding sources

Probability	Guidelines
1	Low: less than 25% likely
2	Moderately Low: between 25% to 50% likely
3	Even: 50% chance of occurrence
4	Moderately High: between 50% and 75% likely
5	High: greater than 75% chance of occurrence

This risk was assigned a "4" for probability of occurring. Broadband is a new category of funding opportunities for the counties. As such, it does not have a formal nor historical "home" in county government. Multiple county government duties are handled by only a few resources that must take on extra duties and projects as they arise. Also, given the vacancies and the turnover of county staff the risk becomes greater. It is more likely than not that with the current level of staffing the counties will not have the resources capable of applying for grants after the Solarity project ends. Moreover, the project deliverables include applying for two infrastructure grants; yet if county staff will be responsible for implementing and managing the two grants, they need to be identified and trained in all aspects of grant oversight and reporting.

Impact	Guidelines
1	Low: easily mitigated by an individual or team. The impact would be small and easily managed at a relatively routine level within the project team.
2	Fair: project team coordination required to mitigate. The impact would be manageable within the project's budget, timeline, or performance expectations.
3	Moderate: manageable within the client's budget, timeline, or performance expectations.
4	Significant: change to cost/schedule/scope that requires re-baseline. The project would continue, but the risk significantly affects scope, performance, timescales, or costs.
5	Catastrophic: impact to cost/schedule/scope results in project failure. The project might be forced to stop activities temporarily or end the project.

The impact was scored as a "3" (moderate) to a "4" (significant), and depends in part, on whether county staff are available and have the capacity to manage the grant process and operations. If county staff are identified and have the capacity. then the grants may be manageable within the timeline and performance expectation. However, given the potential of risk is between 50% to 75% that the current capacity is not sufficient, it is also likely that the identification, application, and implement of future grant opportunities will need to be significantly reduced or that external resources will be needed to perform these functions. The cost-benefit ratio of the grant opportunities shows a high level of return on investment which justifies the hiring of external resources; the counties frankly need to acknowledge that and determine the best methods of allocating funds for that purpose.

Score	Exposure
1-4	Low
5-10	Medium
11-25	High

The score of 12 to 16 puts the risk exposure in the high category which means the counties should begin working now on preventing or mitigating the risk by 1) identifying a “home” for the broadband grants; and 2) assigning existing staff (or hire new staff) and/or consider external resources to minimize the risk and avoid it becoming a full-blown issue.

Appendix G: Connectivity Solutions

Fiber builds, fixed wireless, and hybrid models are different approaches to providing internet connectivity. Each has its own set of advantages and limitations. A closer examination of these can help decision makers in urban and rural areas.

Fiber Builds

Fiber builds refer to the deployment of fiber optic cables to deliver high-speed connectivity to end-users. Fiber optic cables use light signals to transmit data, resulting in extremely fast speeds and reliable internet connections. These key characteristics would include:

- High Speeds-Fiber can provide symmetrical speeds, meaning both upload and download speeds are nearly the same and can reach gigabit speeds.
- Low Latency-Fiber offers low latency, making it ideal for real-time applications like videoconferencing and online gaming.
- Reliability-Fiber is less prone to signal interference and degradation over long distances, ensuring consistent performances.

Fiber builds offer multiple advantages because of the key characteristics, and it is the reason many believe as to why fiber is king. However, being the superior build often comes with a superior price tag. Fiber is extremely expensive and time consuming to implement, especially in rural or remote areas, as they require significant infrastructure investment and digging to lay the cables.

Fixed Wireless

Fixed wireless internet uses radio signals to deliver internet access to specific fixed locations, such as homes and businesses. It involves the installation of antennas or radio receivers on buildings or towers to establish a direct line of sight with a wireless internet service provider. Key features would include:

- Faster Deployment-Fixed wireless can be deployed relatively quickly compared to fiber, making it an attractive option for reaching remote or underserved areas.
- Less Infrastructure Cost-Compared to fiber builds, fixed wireless requires fewer physical infrastructure investments.
- Susceptible to Obstructions-Fixed wireless signals can be obstructed by physical obstacles like trees, buildings, or hills, leading to signal degradation and lower speeds.

Fixed wireless offers a cost effective, quicker install option as opposed to fiber builds. While this solution is effective in more remote areas to provide coverage to unserved, it is considered a more short-term band aid.

Hybrid Models

Hybrid models combine different internet delivery technologies to leverage the advantages of each and provide a more realistic, flexible, and reliable solution. For instance, a hybrid model may use a

combination of fiber optic cables, fixed wireless and/or other technologies like Digital Subscriber Line (DSL) or cable internet. The specific implementation varies depending on the service provider's infrastructure and the geography of the region.

- Versatility-Hybrid models can adapt to various geographical and infrastructural challenges, optimizing the use of available resources.
- Scalability-Providers can scale the network by using different technologies based on the demand and available resources.
- Complexity-Hybrid models can be more complex to manage and maintain compared to single-technology solutions.

Ultimately, the choice between these solutions depends on factors such as geographical area, population density, budget constraints and the desired levels of internet service quality. In urban areas, fiber builds might be more feasible while fixed wireless and hybrid approaches can be viable options in rural or remote regions.

Solarity strongly suggest that leaders in Benton, Lincoln, and Linn Counties begin the process of prioritizing projects, given that multiple projects and grants will be necessary to close the funding gap.

Appendix H: Grant Scoring Matrix

Evaluation of the Capital Projects Fund Grant Program

April 30, 2023

HealthTech Solutions / Solarity

Background

Under the American Rescue Plan Act (ARPA) the U.S. Treasury allocated up to $156,795,418 to Oregon in Capital Projects Fund money. To access these funds, Oregon submitted an application which proposed to create the ARPA Capital Projects Fund: Broadband Deployment Program (BDP), The BDP would provide funding for broadband infrastructure projects to reach communities that lack high-speed internet (broadband) to enable and improve work, education, health monitoring, and communications.

The Oregon Broadband Office (OBO) was created to be Oregon's designated administrator for the ARPA Capital Projects Fund (and other broadband) grant programs. In 2022, the OBO issued draft rules and a handbook outlining application processes and requirements for the Capital Projects Funds program. In early 2023, a bill was introduced (and remains pending) in the Oregon legislature to reaffirm the OBO's authority as the State's administrator for the federal broadband programs and for the OBO to establish rules for the application and awarding of the Capital Projects Fund and other federal grant programs (BEAD, DEA, etc.)

The rules and handbook, expected to be finalized in the summer of 2023, will include publication of all eligible locations via a State "Eligibility Map." Applicants (generally ISPs) will be required to submit a short-form application followed by a long-form application with geospatial maps for proposed broadband service areas. Applications will be scored based on description, readiness, and funds requested being 90% of the score, with 10% for signed letters of support.

The application amounts are specific to each request, and applicants may receive up to $20,000 upfront for purposes such as planning.

Counties may participate by collaborating with prospective ISPs to offer assistance in garnering letters of support and education.

The Grant Demographic Information and Scoring Tables are intended as a reference as the applicants will be current or prospective ISPs.

Table 19. Grant Demographic Information

Element/Field	Definition of Field
1. Title and ID	Coronavirus Capital Projects Fund established by Section 604 of the Social Security Act, as added by Section 9901 of the American Rescue Plan Act of 2021
2. Grantor No.	American Rescue Plan Act of 2021

Element/Field	Definition of Field
3. Funding Source	U.S. Department of the Treasury
4. Organization Type	Federal Agency
5. Publication Date	Funds were allocated in 2021
6. Due Date	State specific based on State submitting application for release of funds. Expected Q4 of calendar year 2023
7. Award Duration	State specific based on application and projects
8. Eligible Applicants	State of Oregon to be administered by OBO
9. Amount of Grant	Up to $156,795,418 was made available to Oregon to apply for under its proposal.
10. Type of Grant	Primarily infrastructure grants to deploy broadband with limited planning funding available upfront.
11. Purpose/Focus	Funding for broadband infrastructure projects to reach communities that lack high-speed internet (broadband).
12. Eligible Components	Funds are provided to the State and then through OBO to create and implement rules for grant funding for existing and prospective ISPs. (Rules and handbook currently in draft form with finalization expected in summer 2023. The eligible components would be funding for current or prospective ISPs to build broadband infrastructure to reach unserved areas “to enable and improve work, education, health monitoring, and communications.”
13. Scoring	- Applicant Information & Project Contacts (10%) - Project Description (30%) - Project Readiness (30%) - Amount of Funds Requested (20%) - Signed Letters of Support (10%)
14. Importance of counties to Project	Counties may participate by collaborating with prospective applicant ISPs to offer assistance in garnering letters of support and education among communities. Ten percent of the scoring is letters of support so there are opportunities for counties to work with ISPs. Also building relationships with potential applicants, can facilitate counties identifying how they can support ISP under

Element/Field	Definition of Field
	Community Connect, BEAD, and DEA. (See assessments of those grant programs)

Table 20. Grant Scoring Matrix

	Scoring Elements	Measurement	Score
1	Benefit to counties (accomplished via getting broadband to communities)	1 = low 5 = high	5
2	Timing of Project (Implementation may begin in late 2023)	5 = High 1 = Low	4
3.	Resources required (in-kind for education, assistance, collaboration)	1 = High 5 = Low	3
4.	Administrative burden (applications, reporting, etc.)	1 = High 5 = Low	5
	Overall Score	**20= High 17 = Low**	**85%**
	Percentage of Total Possible (50% is "break even") **Note: The scoring matrix is for reference as ISPs will be the applicant and will be scored by OBO. It is the highest scoring of all grants as it is anticipated to begin in 2023 and provides broadband expansion for all counties.**		

Next Steps

1. Build relationship with OBO and offer results of Solarity project (Rapid Response and outreach/speed tests) to help with proposed rulemaking and handbook.
2. Conduct outreach and education efforts within communities (schools, libraries, health care facilities, community organizations to build support).
3. Identify incumbent and prospective ISPs:
    a. Offer assistance with outreach and education and to get letters of support from multiple communities, businesses, and organizations for Capital Fund Projects.
    b. Collaborate with ISPs on other areas counties can assist with broadband expansion (BEAD, DEA, Community Connect Grant Program).

Evaluation of the USDA ReConnect Program
April 30, 2023
HealthTech Solutions/Solarity

Background

The ReConnect Program is an ongoing federally funded program under the USDA that offers loans, grants, and loan-grant combinations via a series of competitive "rounds." The purpose is to facilitate broadband deployment in areas of rural America that currently do not have sufficient access to broadband.

Eligibility requirements include:

1. **Lack Sufficient Access to Broadband:** At least 50% of households in the proposed funded

service area (PFSA) must lack sufficient access to broadband service, as defined in the latest Funding Opportunity Announcement (FOA).

2. **Serve All Premises in the PFSA:** The proposed network must be capable of providing broadband service to every premises located in the PFSA at the time of application submission at the speed defined.

3. **Be in a Rural Area:** A rural area is any area that is not located in a city, town, or incorporated area that has a population of greater than 20,000 inhabitants or an urbanized area contiguous and adjacent to a city or town that has a population of greater than 50,000 inhabitants.

Private and public entities, including counties, are eligible to apply for assistance. Award funds may be used to fund:

- The construction or improvement of facilities required to provide broadband service, including buildings, land, and fixed wireless service; and reasonable pre-application expenses limited to up to 5% of the awarded application;
- A percentage of the acquisition of an existing system that does not currently provide sufficient access to broadband (eligible for 100% loan requests only).

Funding amounts for each round may be:

- Up to $150 million available for grants, generally with a maximum amount of grant application limited to $25 million.
- Up to $350 million available for grants to provide broadband to tribes and other populations, including “Persistent Poverty Areas and Socially Vulnerable Communities.”
- Up to $150 million is available for join loan and grant combinations.
- Up to $150 million is available for loans. The maximum amount that can be requested in an application is $50 million.

The ReConnect program is highly competitive with many more applications received than can be funded. The current Round 4 has and continues to award grant applications made in July 2022. It is anticipated that a new grant round window will open in late fall 2023.

Table 21. Grant Demographic Information

Element / Field	Definition of Field
1. Title and ID	ReConnect Program
2. Grantor No.	Grant funded based on “rounds”
3. Funding Source	US Department of Agriculture
4. Organization Type	Federal Agency

Element / Field	Definition of Field
5. Publication Date	Last round July 2022; expected application window November 2023
6. Due Date	Depends on set application date; likely in November-2023
7. Award Duration	Based on individual project applications
8. Eligible Applicants	Private and public entities, including counties, are eligible to apply for assistance.
9. Amount of Grant/Loan	Grant rounds are funded "up to" a certain amount based on budget appropriations.
10. Type of Grant	The program is a mix of loans and/or grants
11. Purpose/Focus	To facilitate the expansion of broadband services and infrastructure, the program will fuel long-term rural economic development and opportunities in rural America.
12. Eligible Components	Construction or improvement of facilities and infrastructure build out of broadband, and related components.
13. Scoring	It is a highly competitive grant/loan program that includes detailed scoring on cost/benefit ratios and profitability.
14. Importance of counties to Project	Although counties may submit an application directly for a grant or loan it is much more likely that a collaborative process with ISPs or a consortium of organizations offer the best chance of getting a grant. Practically speaking, incumbent ISPs in the counties would be the primary applicant as they have a history of applying and receiving these grants. A strong presence of the counties supporting an application(s) through letters of support, helping to obtain funding through private and public sources would be beneficial.

Table 22. Grant Scoring Matrix

	Scoring Elements	Measurement	Score
1.	Benefit to counties (accomplished via getting broadband to communities)	1 = low 5 = high	5
2.	Timing of Project (If Round 5 opens in 2023, Implementation may begin in late 2024)	5 = High 1 = Low	2
3.	Resources required (in-kind for education, assistance, collaboration, fund-raising)	1 = High 5 = Low	2
4.	Administrative burden (applications, reporting, etc.)	1 = High 5 = Low	5
	Overall Score	**20= High 14 = Low**	**70%**
	Percentage of Total Possible (50% is "break even") **Note: The scoring matrix is mainly for reference as the counties while eligible, are not likely to be the primary**		

	Scoring Elements	Measurement	Score
	applicant. ISPs will be the applicant and will be scored by USDA.		

Next Steps

1. Conduct outreach and education efforts within communities (schools, libraries, health care facilities, community organizations) to build support and encourage ISPs to apply.
2. Identify incumbent and prospective ISPs:
    a. Offer assistance with outreach and education and to get letters of support from multiple communities, businesses, and organizations for ReConnect applications.
    b. Collaborate with ISPs on other areas counties can assist with broadband expansion (BEAD, DEA, Community Connect Grant Program).

Evaluation of the Broadband Equity, Access, and Deployment (BEAD)

Grant Program

April 30, 2023

HealthTech Solutions/Solarity

Background

The Broadband Equity, Access, and Deployment (BEAD) Program will provide up to $41.6 billion for "broadband deployment and related activities" through grants to states that will allocate funding primarily to individual "subgrantees." The term subgrantees means public and private entities that will be responsible for building out broadband infrastructure and providing broadband Internet access service (generally counties do not engage in the provision of broadband services). Oregon is scheduled to receive up to $670 Million from several broadband grant programs, with the BEAD providing an estimated $550 Million. Under BEAD, each state received at least $100M supplemented by additional allocations and could request up to $5M for planning.

States are required to designate an administrative entity (in Oregon, the OBO) to create and submit to NTIA for approval a five-year BEAD Plan (which is separate but may be done in conjunction with the Digital Equity Act five-year plan). BEAD planning funds may be spent on research and data collection, community outreach, technical assistance to potential subgrantees, and related functions to support Oregon's BEAD Program. OBO has hired a consultant to assist with the development of the BEAD Plan due in 2023. BEAD implementation funds are to be used to implement, provide, and operate broadband in the areas identified in its application, and provide a lost-cost option for low-income and other designated populations.

Funding for the implementation of the BEAD Plan is based on the state's population and the number of unserved (broadband not available) locations relative to the national total; and what are deemed high-cost areas where the expense to provide broadband service is basically unrealistic from a business standpoint. Generally, a 25% match is required which may be cash (from state, private, or non-profit) and/or "in-kind" contributions such as property, hardware, or software, and potentially employee or volunteer services.

There is a bill pending in the Oregon legislature to reaffirm the OBO's authority as the State's administrator for the federal broadband programs and to establish rules for the application and awarding of BEAD and other grants.

Although the counties will likely not be a subgrantee in terms of actually providing broadband services, they have an important role in the BEAD program. BEAD funding is to be used to expand broadband to meet FCC established levels of internet service. The FCC has stated that certain facilities, deemed to be community anchor institutions or essential community facilities, are eligible for BEAD (and DEA) funding to get higher speeds of broadband. These facilities can be schools, libraries, health care facilities, and even the corner store (if it is available for the public to access and use broadband during office and some-nonoffice hours). Under the DEA, the ISPs providing access to these designated facilities must also provide at least two and can request funding for up to ten access points (electronic devices) and must offer free broadband service to the facilities for at least two years. States, in their BEAD and DEA Plans and grant programs, are able to designate which facilities qualify for this higher-speed broadband. The counties can and should provide input and offer assistance in making this determination (See Community Connect assessment). A high-level list of activities the counties may consider is shown below in next steps.

The Grant Demographic Information and Scoring Tables incorporate both the Planning and Implementation criteria as they are essentially linked.

Table 23. Grant Demographic Information

Element/Field	Definition of Field
1. Title and ID	Broadband Equity, Access, and Deployment (BEAD) NTIA BEAD-2022.
2. Grantor No.	Infrastructure Investment and Jobs Act, Public Law 117-58, 135 Stat. 429 (November 15, 2021) (IIJA)
3. Funding Source	National Telecommunications Information Administration (NTIA)
4. Organization Type	Federal Agency (Administrator for Federal Communications Commission)
5. Publication Date	Notice for Funding Opportunity (NOFO) issued July 2022.
6. Due Date	TBD upon the completion of the 5-year plan and the approval by NTIA of the proposed initial plan both completed by OBO by the end of calendar year 2023. It is estimated the first implementation grants will be available in 2024
7. Award Duration	Upon approval of BEAD Plan the implementation period is five years.
8. Eligible Applicants	BEAD Plan: State of Oregon OBO; BEAD Implementation Grants (State to subgrantee ISPs)

Element/Field	Definition of Field
9. Amount of Grant	Subgrantee Project Dependent
10. Type of Grant	Planning Grant to create BEAD Plan; Implementation Grants: Subgrantee grants for infrastructure, technical and other assistance consistent with the BEAD Plan.
11. Purpose/Focus	Expand broadband service to what are deemed unserved areas to provide access to broadband in all areas of the nation.
12. Eligible Components	Funds are provided to the State and then through OBO to develop and create BEAD plan. Funds can be used to facilitate outreach, education, assess current state of BB, and create 5-year vision and objectives. Grant cannot be used to fund actual inclusion programs--only planning. The OBO will provide implementation funding to subgrantees who will be responsible for expanding broadband, providing low-cost options for certain populations, and providing higher-speed broadband, access points such as computers, and free access for two years, for designated community facilities and institutions.
13. Scoring	NTIA “scores” BEAD Plans based on criteria in federal BEAD Plan rules and regulations. When approved, OBO will operate grant program for subgrantees that will install, operate, and maintain broadband service. As counties are not eligible subgrantees (unless they elect to become an ISP) the scoring component is only relevant in terms of the amount of support the counties could provide.
14. Importance of counties to Project	The OBO must conduct outreach and seek input from counties and communities, which must be reflected in BEAD Plan. Also, the counties are important to the OBO and subgrantees who will be required to submit applications to the OBO, for defining community anchor institutions and essential community facilities which will directly benefit from the BEAD grant. (See 12. Eligible Components above)
20. Match Funds	Generally, 25% match required (cash and/or in-kind).
21. Brings Additional Funding	Having an approved BEAD Plan enables Oregon to award implementation grants to subgrantees. (See

Element/Field	Definition of Field
	12. Eligible Components above)

Table 24. Grant Scoring Matrix

	Scoring Elements	Measurement	Score
1	Benefit to counties (accomplished via broadband to community facilities with computer connections and free access for two years, low-income options, and broadband speeds)	1 = low 5 = high	5
2	Timing of Project (Implementation not likely until ~late 2025 or 2026)	5 = High 1 = Low	2
3.	Resources required (in-kind for education, assistance, development of community facilities, seeking support for funding match)	5 = High 1 = Low	3
4.	Administrative burden (applications, reporting, etc.)	1 = High 5 = Low	5
5.	Funding required (BEAD generally requires 25% match; Potentially State could ask for county contribution)	1 = High 5 = Low	4
	Overall Score	**25= High 5 = low**	**76%**
	Percentage of Total Possible (50% is "break even") **Note: The scoring matrix is for reference as ISPs will be the applicant subgrantees and will be scored by OBO. If the implementation projects were expected to begin sooner, the score would be ~85%.**		

Next Steps

1. Build relationship with OBO and offer results of Solarity project (Rapid Response and outreach/speed tests) to help with education and outreach efforts with BEAD Plan (as well as other grants such as DEA, Community Connect, etc.).
2. Conduct outreach and education efforts within communities (schools, libraries, health care facilities, community organizations to build support).
3. Identify incumbent ISPs:
    a. Offer assistance with outreach and education for DEA Plan (and later Capacity and Competitive Programs).
    b. Coordinate DEA Plan activities with Community Connect Grant Program (See Community Connect Assessment Matrix).
4. Become knowable about eligible projects and begin development for proposals from counties for digital inclusion grants under Capacity and Competitive Grant Programs.

Evaluation of the Digital Equity Act (DEA) Grant Programs
April 30, 2023
HealthTech Solutions/Solarity

Background

The 2021 federal Bipartisan Infrastructure Law included $2.75B for Digital Equity Act (DEA) for planning and implementation programs to ensure all communities can access and use affordable, reliable high-speed internet. The goal of the DEA is for states to develop a vision for digital equity for all of its citizens, especially "covered populations" such as low-income, rural, and economically disadvantaged communities and an objective plan for reaching its vision and implementing the vision. The DEA includes three programs:

1. **State** Planning Program: States are required to conduct an assessment and visioning process with extensive public outreach and input to develop and submit to federal National Telecommunications Information Administration (NTIA) for approval, a five-year DEA Plan with clear objectives and timelines. Based on a formula, the State of Oregon received $782,193 to create the DEA Plan (2023).
    - Grants cannot be used to fund "programs."
    - Oregon law established Oregon Broadband Office (OBO) to develop and oversee DEA plan and implementation.
2. **State** Capacity Program: A $1.44 billion formula-based five-year grant program to implement DEA Plan (late ~2024 or 2025).
    - Oregon share based on population, low-income, rural factors.
    - OBO to oversee (pending bill in Legislature to confirm OBO authority and rules) to implement the components of the approved State Digital Equity Plan.
3. **Competitive** Program: A $1.25 billion five-year program to distribute funds annually to entities to implement digital equity projects. (~late 2025).
    - Counties and non-profits are eligible: "digital inclusion activities" (digital literacy, skills education, facilitate adoption, etc.).

NOTE: The DEA assessment and scoring is being completed under a hybrid approach. The demographic information table is essentially for the DEA Planning Program which is the current DEA activity. Information about the Competitive grant.

NOTE: The DEA assessment and scoring is being completed under a hybrid approach. The demographic information table is essentially for the DEA Planning Program which is the current DEA activity. Some elements reference the Competitive Programs as they flow from the DEA Plan but would be scoring separately in 2024 and later based on program rules and regulations that have yet to be developed at the State and federal levels. This will be the bulk of the program that counties can apply directly to for grants. However, it may be more appropriate for municipalities to partner with organizations, like schools, libraries, and social service providers, who will do the digital equity work in the region.

Table 25. Grant Demographic Information

Element / Field	Definition of Field
1. Title and ID	Digital Equity Act (DEA) 1. State Digital Equity Planning Grant Program; (followed by the 2. State Digital Equity Capacity Grant Program and 3. Competitive Grant Grogram
2. Grantor No.	Section 60304(c) of the Infrastructure Investment and Jobs Act, Public Law 117-58, 135 Stat. 429 (November 15, 2021) (IIJA)
3. Funding Source	National Telecommunications Information Administration (NTIA)
4. Organization Type	Federal Agency (Administrator for Federal Communications Commission)
5. Publication Date	NOFO for Competitive grant process not developed yet, but expected in before close of calendar year 2023
6. Due Date	TBD
7. Award Duration	TBD but likely completed by 2028
8. Eligible Applicants	State of Oregon
9. Amount of Grant	Competitive Program Grant amounts are TBD.
10. Type of Grant	3. Competitive TBD
11. Purpose/Focus	DEA provides federal funding to ensure that individuals and communities have the skills and tools needed for full participation in society and the economy. (Grant No. 1 is for the creation of the DEA inclusion plan.)
12. Eligible Components	Funds for 1. DEA Planning grant provided to State and then through OBO to develop and create plan. Funds can be used to facilitate outreach, education, assess current state of BB, and create 5-year vision and objectives. Grant cannot be used to fund actual inclusion programs--only planning.
13. Scoring	NTIA “scores” DEA Plans based on criteria in DEA Plan rules and regulations. The scoring component will become important for development of applications and proposals under Competitive Programs.

Element / Field	Definition of Field
14. Importance of counties to Project	The OBO must conduct outreach and seek input from counties and communities, which must be reflected in DEA Plan.
20. Match Funds	Match for Competitive grant TBD

Table 26. Grant Scoring Matrix

	Scoring Elements	Measurement	Score for Plan	Preliminary Score Capacity or Competitive Grant
1	Benefit to counties (indirect for DEA Plan)	1 = Low 5 = high	2	4
2	Timing of Project (Planning is timely as it is 23; yet implementation not likely until ~late 2024 into 2025 or 26;	5 = High 1 = Low	5	1
3.	Resources (time) required (education, assistance, development of community facilities, seeking support)	5 = Low 1 = High	4	1
4.	Administrative burden to counties	1 = High 5 = Low	5	1
5.	Direct Funding to counties	1 = Low 5 = High	1	5
6.	Amount of time available for further planning and development	1 = Low 5 = High	N/A	5
	Overall Score (25 possible)		**17**	**17**

Next Steps

1. Build relationship with OBO and offer results of Solarity project (Rapid Response and outreach/speed tests) to help with education and outreach efforts with DEA Plan (as well as other grants such as BEAD, Community Connect, etc.).
2. Conduct outreach and education efforts within communities (schools, libraries, health care facilities, community organizations to build support).
3. Build relationships with potential lead grantees in region who will administer work.
4. Identify incumbent ISPs:
    a. Offer assistance with outreach and education for DEA Plan (and later Capacity and Competitive Programs)

b. Collaborate on DEA Plan activities (and other federal funding opportunities such as Community Connect Grant Program, BEAD grants, etc.).

5. **Capacity or Competitive Grant**: Become knowledgeable about eligible projects and begin development for proposals from counties for digital inclusion grants under Capacity and Competitive Grant Programs. NOTE: The Capacity grant is under the jurisdiction of the OBO which makes it more viable for the counties to develop a capacity grant. The Competitive grant is more administratively burdensome as it requires counties to develop robust plans and grant applications that are competing with public and private entity applications and proposals.

Assessment of the USDA Broadband Technical Assistance Grant Program for Cascades West Broadband Project
April 30, 2023
HealthTech Solutions/Solarity

Background

The Rural eConnectivity Program, associated with USDA Rural Development's ReConnect Program, provides fundings for broadband project planning and community engagement, financial sustainability, environmental compliance, construction planning and engineering, accessing federal resources, and data collection and reporting.

Under the current funding opportunity, $20 million is available:

- $7.5 million is for Technical Assistance Providers. The minimum award amount is $50,000 and the maximum award amount is $1 million.
- $7.5 million is for Technical Assistance Recipients. The minimum award amount is $50,000 and the maximum award amount is $250,000.
- $5 million is for projects that support cooperatives. The minimum award amount is $50,000 and the maximum award amount is $1 million.

Private and public entities, including counties are eligible to apply for the funds that must promote broadband expansion in a rural community.

There are no matching requirements for the grants.

Table 27. Grant Demographic Information

Element/Field	Definition of Field
1. Title and ID	Broadband Technical Assistance Program
2. Grantor No.	2023 Broadband Technical Assistance Program
3. Funding Source	Rural eConnectivity Program, associated with USDA Rural Development's ReConnect Program
4. Organization Type	Federal agency

Element/Field	Definition of Field
5. Publication Date	April 19, 2023
6. Due Date	June 20, 2023
7. Award Duration	Project Specific
8. Eligible Applicants	Private and public entities (including counties, schools, etc.)
9. Amount of Grant	Project specific
10. Type of Grant	Technical assistance
11. Purpose/Focus	Promote broadband expansion in eligible rural areas
12. Eligible Components	Activities such as project planning and community engagement, operations, financial sustainability, environmental compliance, construction and engineering planning, accessing federal resources, and data collection and reporting.
13. Scoring	Scoring is done on a case-by-case basis, based on the technical assistance that will be provided and the resulting expansion of broadband. It requires working very closely with the USDA Rural Officer.
14. Importance of counties to Project	This provides a timely mechanism for getting funding to promote the benefits of broadband to rural communities and studies for justifying funding for rural communities. It can be used to support other grant applications.
20. Match Funds	No match required.
21. Brings Additional Funding	Enables counties to better respond to other requests for funding and assisting ISPs with financial data.

Table 28. Grant Scoring Matrix

	Scoring Elements	Measurement	Score
1	Benefit to counties	1 = low 5 = high	4
2	Timing of Project	5 = High 1 = Low	4
3.	Resources required	5 = High 1 = Low	3
4.	Administrative burden (applications, reporting, etc.)	1 = High 5 = Low	3
	Overall Score	**20= High 5 = low**	**70%**
	Percentage of Total Possible (50% is "break even") **Note: The scoring matrix is for reference as ISPs will be the applicant subgrantees and will be scored by OBO. If the**		

	Scoring Elements	Measurement	Score
	implementation projects were expected to begin sooner, the score would be ~85%.		

Next Steps

1. Conduct outreach and educate communities (schools, libraries, health care facilities, community organizations to build support).
2. Conduct assessment of current broadband and needs of groups.
    a. Current state, desired state, gaps for technical assistance needed.
3. Build relationships with ISPs to determine support.
4. Become familiar with on-line application process.

Assessment of the Broadband Technical Assistance Program (BTAP) for Cascades West Broadband Project
April 30, 2023
HealthTech Solutions/Solarity

Background

The Oregon Broadband Office (OBO) operates the Broadband Technical Assistance Program (BTAP) to provide funds for obtaining experienced vendors/personnel and conducting technical assistance in developing or evaluating strategies to serve unserved and underserved areas of the State. It is supported by $1.5 Million from the Oregon Universal Service Fund monies collected from telecommunications services in the State, with an additional influx of up to $5 Million appropriated.

Eligible applicants include nonprofits, municipalities, coops, and counties. Private for-profit providers are ineligible (they may however partner with one of the eligible applicants). Applicants may use Technical Assistance funds to acquire qualified professional assistance to develop a strategic plan, feasibility study, business plan, and preliminary engineering.

The stated priority of the fund is "Closing the Digital Divide with a Regional Focus" with scoring based on specific projects and how well they will accomplish that goal. Amounts of grants are also project specific.

The counties would be well served by this grant opportunity which is administered by the State's OBO. It offers opportunities to collaborate among the communities in all three counties to develop processes and mechanisms to build a consortium of public and nonprofit entities and create a regional group with broader input and influence among ISPs and potential other funding opportunities including infrastructure grants.

Table 29. Grant Demographic Information

Element / Field	Definition of Field
1. Title and ID	Broadband Technical Assistance Program (BTAP)
2. Grantor No.	2023 Broadband Technical Assistance Program

Element / Field	Definition of Field
3. Funding Source	OR Universal Service Fund, supplemented by state allocation
4. Organization Type	State agency
5. Publication Date	TBD
6. Due Date	TBD (Likely summer / beginning fall 2023)
7. Award Duration	Project Specific
8. Eligible Applicants	Nonprofit and Public entities (including counties)
9. Amount of Grant	Project specific
10. Type of Grant	Technical assistance
11. Purpose/Focus	Provide technical assistance funding for "Closing the Digital Divide with a Regional Focus"
12. Eligible Components	Obtaining qualified professional assistance and conducting technical assistance to develop a strategic plan, feasibility study, business plan, and preliminary engineering.
13. Scoring	Draft application and scoring processes have been issued in proposed form with expectations that the program will be implemented in the fall, 2023. The scoring elements will focus on meeting the stated intent of "Closing the Digital Divide with a Regional Focus"
14. Importance of counties to Project	The grant provides an opportunity for the counties to build consortiums of nonprofit and public entities to build on their strategic planning efforts. The grants may be used for feasibility studies and business plans which are required by many, if not all, federal grant opportunities. This grant would position the counties well to be competitive with other regional efforts in the State and at the federal level.
20. Match Funds	No match required.
21. Brings Additional Funding	Having successfully completed a robust feasibility and business plan, the opportunity to seek and successfully obtain additional funding is increased exponentially.

Table 30. Grant Scoring Matrix

	Scoring Elements	Measurement	Score
1	Benefit to counties	1 = low 5 = high	4
2	Timing of Project (fall 2023)	5 = High 1 = Low	4
3.		5 = Low 1 = High	
4.	Administrative burden (applications, reporting, etc.)	1 = High 5 = Low	2
	Overall Score	**20= High 5 = low**	**70%**
	Percentage of Total Possible (50% is "break even") **Note: The scoring matrix is for reference as ISPs will be the applicant subgrantees and will be scored by OBO. If the implementation projects were expected to begin sooner, the score would be ~85%.**		

Next Steps

1. Build relationship with OBO to express interest and seek input for successful grant.
2. Create regional consortium of non-profit and public entities for leadership and working groups.
3. Pursue qualified professional assistance vendor.
4. Conduct outreach and educate communities (schools, libraries, health care facilities, community organizations) to build support.
5. Meet with ISPs to gain support.