
INTERNET FOR ALL ALASKA



State of Alaska Five-Year Action Plan

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to

U.S. Department of Commerce

National Telecommunications and Information Administration

Table of Contents

1	Executive Summary.....	3
2	Overview of the Five-Year Action Plan.....	3
2.1	<i>Vision</i>	4
2.2	<i>Goals and Objectives</i>	4
3	Current State of Broadband and Digital Inclusion	5
3.1	<i>Existing Programs</i>	5
3.2	<i>Partnerships</i>	11
3.3	<i>Asset Inventory</i>	13
3.3.1	Broadband Deployment.....	13
3.4	<i>Broadband Adoption</i>	15
3.4.1	Broadband Affordability.....	16
3.4.2	Broadband Access	16
3.4.3	Digital Equity	17
3.5	<i>Digital Equity Needs and Gaps Assessment</i>	20
3.5.1	Broadband Deployment.....	20
3.5.2	Digital Equity	32
3.5.3	Digital Equity Broadband Adoption	33
3.5.4	Digital Equity Broadband Affordability	33
3.5.5	Digital Equity Broadband Access.....	33
4	Obstacles or Barriers.....	34
4.1	<i>Geographic Size and Distance</i>	34
4.2	<i>Population</i>	34
4.3	<i>Topography</i>	35
4.4	<i>Existing Assets and Infrastructure</i>	35
4.5	<i>Land Ownership, Land and Water Designations, Culturally Sensitive / Significant Areas</i>	35
4.5.1	Federal Land.....	35
4.5.2	State Land	36
4.5.3	Alaska Native Land (Private)	36
4.5.4	Other Program Funding and Projects	36
4.5.5	Climate	36
4.5.6	Access/Transportation.....	37
4.5.7	Permitting	38
4.5.8	Workforce Availability.....	38
4.5.9	Communication.....	38
5	Implementation Plan	38
5.1	<i>Stakeholder Engagement Process</i>	38
5.2	<i>Priorities</i>	39
5.3	<i>Planned Activities</i>	40
5.3.1	Activities Supporting Universal Service.....	40

5.3.2	Key Players Supporting Universal Service	40
5.3.3	Funding Sources for Universal Service Activities	40
5.3.4	Expected Outcomes for Universal Service Activities	41
5.3.5	Universal Service Expected Funding Gaps	41
5.4	<i>Key Execution Strategies</i>	41
5.4.1	Public-Private Partnerships.....	41
5.4.2	Strategies to Address Affordability Issues	41
5.4.4	Statewide Broadband Advisory Board Meetings:	45
5.5	<i>Estimated Timeline for Universal Service</i>	45
5.6	<i>Estimated Cost for Universal Service</i>	49
5.7	<i>Alignment</i>	52
5.7.1	State Digital Equity Plan	52
5.7.2	Governor’s Task Force on Broadband Final Report	52
5.7.3	Short-Term Action.....	52
5.7.4	Comprehensive Economic Development Strategy (CEDS).....	54
5.7.5	Alaska Works Matters Task Force Final Report	55
5.8	<i>Technical Assistance</i>	55
6	Conclusion.....	57
7	Appendices.....	58

Internet For All

1 Executive Summary

Everyone has a story. In Alaska, there is a long history of people telling their stories. Some of the richest cultural stories are in danger of being lost due to the digital divide and digital inequities. This Five-Year Action Plan was developed for the purpose of helping all Alaskans continue to share their stories and write new ones without limitations.

The State of Alaska Five-Year Action Plan does more than identify the needed physical assets and infrastructure to bridge the digital divide and create digital equity for all Alaskans; it also ensures access and training to use the infrastructure in a meaningful way. The State of Alaska recognizes that true digital equity ranges from something as simple as making sure that users know how to log onto a computer and navigate the programs, to as complicated and textured as establishing new internet-based businesses. In this ever-growing digital and global society, having internet service; access to the tools needed to utilize that service; and the knowledge of how to use it proficiently; will provide rural communities with opportunities that are widely available to non-rural communities. Digital equity will give all Alaskans the chance to engage in the global economy, pursue education, and receive healthcare services, all while still maintaining a traditional lifestyle in their ancestral homelands.

Digital Equity is the key measure of success in achieving “Internet for All”. The Alaska Broadband Office (ABO) will work to make sure every Alaskan can have their stories heard. Sustainable, future-proof broadband systems, operated and maintained by a newly trained local workforce, is the first step toward bridging the digital divide. Once the infrastructure is in place, *Digital Inclusion* will be vital to ensure access to broadband service and devices that meet the needs of users across Alaska. *Digital Literacy* will then be the final step to ensuring *Digital Equity* has been achieved. The skills to find, evaluate, organize, create, and communicate information digitally will ultimately give rural communities a new voice with which to tell their stories. As part of the State of Alaska Five-Year Action Plan, the ABO will be evaluating public-facing services available online through the State of Alaska website to determine if Alaskans in the eight covered populations can effectively interact with their state government online.

2 Overview of the Five-Year Action Plan

2.1 Vision

The State of Alaska, Department of Commerce, Community and Economic Development, ABO will implement sufficient grant opportunities to build the necessary infrastructure to empower full Digital Equity for all Alaskans, with appropriate growth and affordable services to accommodate today’s needs and the needs through the next 20 to 30 years. Alaska has 389 communities¹, 95 (24.4%) communities can achieve 100/20 Mbps to at least 80% of the Broadband Serviceable Locations (BSLs); with an additional 101 (26.0%) communities with projects funded to provide 100/20 Mbps service. The remaining communities break out into 11 (2.8%) locations that are removed from the official count

¹ All communities are listed with service status in Appendix A.

(military installations and communities that have a population of 0), 11 (2.8%) communities are underserved², and 171 (44.0%) communities that are unserved³.

The ABO has made it its charter to seek as many inputs as possible to design infrastructure to optimally reach each of the underserved and unserved communities as well as those BSLs that occur within a nominally served community. The ABO understands that ensuring *Digital Equity* to all Alaskans begins with ensuring that all Alaska individuals and communities have the information technology capacity that is needed for full participation in the global society and economy no matter the rurality of location.

2.2 Goals and Objectives

The ABO has one all-encompassing goal for achieving Digital Equity through, in part, universal broadband deployment.

Goals:

Provide sufficient capacity to the unserved and underserved locations with corresponding Digital Equity training such that the current unserved and underserved individuals and communities can fully participate in the global society and economy.

Success will be measured in each community in four ways:

1. ability of individuals and families in the communities to participate in the global society and economy,
2. availability of affordable broadband service,
3. network economically, self-sustainable broadband infrastructure network, and
4. scalable broadband infrastructure network.

Objectives:

- Develop a Digital Equity Plan to address and eliminate digital equity deficiencies.
- Work jointly with Tribal and local entities, the telecommunications industry, community anchor institutions, and the public at large to design the most strategic network to reach all unserved and underserved communities.
- Distribute BEAD funding through a subgrant program to prospective subgrant awardees to deploy broadband infrastructure to unserved and underserved communities.
- Coordinate with industry, organized labor, universities and trade programs, workforce alliances, Native Entity, local governments, economic development organizations, the Alaska Department of Labor and Workforce Development, the Governor's Office of Infrastructure Coordination, and other state agencies to develop a plan ensuring an available and qualified workforce.

² Underserved denotes a location that can achieve 25/3Mbps, but not able to achieve 100/20Mbps.

³ Unserved denotes a location that is unable to achieve 25/3Mbps.

3 Current State of Broadband and Digital Inclusion

3.1 Existing Programs

Table 1: Current Activities that the Broadband Program/Office Conducts

Activity Name	Description	Intended Outcome(s)
<i>Digital Equity Facilitation</i>	<i>Brief description of activity</i>	<i>Brief list of intended outcomes(s)</i>
Fabric Mapping	Working with mapping consultants and the FCC to ensure Alaska’s BSLs are correctly mapped in the Broadband Data Map.	<ul style="list-style-type: none"> Alaska’s BSL count is accurate. Alaska’s unserved count is accurate. Maximization of BEAD funding coming to Alaska.
Tribal Outreach	Consultation with all Alaska’s Native Entities.	<ul style="list-style-type: none"> Ensure government to government consultation. Understand Tribal network needs and preferences. Understand digital equity gaps and solutions. Understand local workforce needs and opportunities. Identify planning, deployment, and funding partnerships.
Workforce Development	Create a Workforce Development Plan.	<ul style="list-style-type: none"> Partner with existing entities. Understand workforce gaps. Support existing and develop additional workforce training programs. Plan for deployment, O&M, and post deployment work opportunities and training.
Network Design	Design a network to all of Alaska’s unserved and underserved communities.	<ul style="list-style-type: none"> Partner with industry, Native Entities, and the public on network design. Achieve most strategic design for the state.
Network Economic Modeling	Design network economic model to understand capital costs and long-term viability of network projects.	<ul style="list-style-type: none"> Identify cost to achieve universal service to unserved and underserved communities. Identify life-cycle economic viability of network projects.

Table 2: Current and Planned Full-Time and Part-Time Employees

Current/ Planned	Full-Time/ Part-time	Position	Description of Role
Current	Full Time	Director, ABO	Organize and manage all the efforts to bring broadband to all the Alaska communities and households sufficient to achieve Digital Equity.
Current	Full Time	Deputy Director	Support the Director in managing all efforts to bring broadband to all Alaska communities and households sufficient to achieve Digital Equity.
Current	Full Time	Tribal Liaison	Organize and manage the outreach efforts to understand the broadband needs of and uses by the indigenous communities in the state of Alaska. This includes all Native Entities: Federally Recognized Tribal Governments, Alaska Native Claims Settlement Act corporations both regional and village, and Native Non-Profit Organizations. Develop a plan for full participation in Digital Equity.
Current	Full Time	Administrative Specialist	Manages all administrative support functions for the ABO.
Planned	Full Time	Grant Coordinators	Reciprocal Services Agreement with the Division of Community & Regional Affairs to manage grants to subgrant awardees.
Planned	Full Time	Permit Coordinator	Reciprocal Services Agreement with the Department of Natural Resources, Office of Project Management and Permitting to enable a streamlined permitting process for broadband projects.

Table 3: Current and Planned Contractor Support

Current/ Planned	Time	Position	Description of Role
Planned		Engineering and Construction Estimating Consulting Firm	Review "Crowd Sourced" network design for most efficient routing and confirm network cost estimate.
Planned		Environmental Consulting Firm	Complete Climate Threat Assessment.
Current		Kijik Corporation	Data Assessment per Requirement 8 of the Five-Year Action Plan.
Current		Alaska Municipal League (Subgrant)	Community Anchor Institution Assessment.
Current		Alaska Works Partnership	Write Workforce Development Plan.

Table 4: Broadband Funding

Source	Purpose	Total	Expended	Available
National Tribal Broadband Grant (NTBG) -- Bureau of Indian Affairs	Provides the opportunity for tribes to receive funding to explore the possibility of developing or extending broadband services in their communities to spur economic development and commercial activity, create opportunities for self-employment, enhance educational resources and remote learning opportunities, and meet emergency and law enforcement needs by bringing broadband services to Native American communities that lack them.	\$396,991	\$396,991	\$0
Affordable Connectivity Outreach Grant Program Pilot Programs Total -- Federal Communications Commission (FCC)/Universal Services Administrative Company (USAC)	To facilitate the promotion of the ACP to increase awareness of and participation among eligible households by aiding with the completion and submission of the ACP application.	\$1,311,635	\$0	\$1,311,635

Alaska Plan Total -- Federal Communications Commission (FCC)/Universal Services Administrative Company (USAC)	Provides support to rate-of-return carriers, and their wireless affiliates, to maintain, extend, and upgrade broadband service across the state. The Alaska Plan gave carriers the option to receive a fixed amount of support over ten years (2017-2026) for both fixed and mobile voice and broadband service in high-cost areas.	\$543,762,240	\$326,257,344	\$217,504,896
Alternative Connect America Cost Model (ACAM) Total -- Federal Communications Commission (FCC)/Universal Services Administrative Company (USAC)	Provides funding to 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. (Carriers that elected ACAM support following the 2016 order, but did not elect the new Revised ACAM offer, continue to participate in the original ACAM program, or ACAM I.) ACAM models the forward-looking economic costs of deploying a high-speed network and delivering broadband service. Carriers that elected this option receive predictable monthly payments to provide voice and broadband service to all funded locations over the program's 10-year support term (2017-2026).	\$73,731,590	\$44,238,954	\$29,492,636
Connect America Fund II (CAF II) Total -- Federal Communications Commission (FCC)/Universal Services	Provides support to price-cap carriers based on a forward-looking model of the cost of constructing modern networks for deploying voice and broadband services in states with unserved areas.	\$177,247,872	\$177,247,872	\$0

Administrative Company (USAC)				
Emergency Connectivity Fund Total -- Federal Communications Commission (FCC)/Universal Services Administrative Company (USAC)	Help schools and libraries support remote learning.	\$55,183,278	\$55,213,278	\$0
Lifeline Total -- Federal Communications Commission (FCC)/Universal Services Administrative Company (USAC)	Provides a discount on phone service for qualifying low-income consumers to ensure that all Americans have the opportunities and security that phone service brings, including being able to connect to jobs, family, and emergency services.	\$34,653,864	\$34,653,864	\$0
Rural Healthcare Total -- Federal Communications Commission (FCC)/Universal Services Administrative Company (USAC)	Improve the quality of health care available to patients in rural communities by ensuring that eligible health care providers. have access to telecommunications and broadband services.	\$627,765,383	\$216,539,560	\$411,225,823
School Broadband Assistance Grant (School BAG) Total -- State of Alaska/Alaska State Library	To assist schools to increase internet download speeds.	\$21,100,981	\$21,100,981	\$0
Connecting Minority Communities Program Total -- National Telecommunications & Information Administration (NTIA)	Enabling the purchase of broadband internet access service and eligible equipment or to hire and train information technology personnel.	\$4,544,546	\$0	\$4,544,546
Enabling Middle Mile Total -- National Telecommunications & Information Administration (NTIA)	Expand and extend middle mile infrastructure to reduce the cost of connecting areas that are unserved or	\$0	\$0	\$0

	underserved to the internet backbone.			
Tribal Broadband Connectivity (TBCP) Total -- National Telecommunications & Information Administration (NTIA)	Improve the quality of life, spur economic development and commercial activity, create opportunities for remote employment and online entrepreneurship, remote learning, and telehealth by expanding broadband access and providing digital training and inclusion programs to Native American communities.	\$386,140,121	\$0	\$0
E-Rate Total -- Federal Communications Commission (FCC)/Universal Services Administrative Company (USAC)	Provides discounts to assist eligible schools and libraries to obtain affordable internet access and telecommunications services.	\$590,713,953	\$590,713,953	\$0
Online with Libraries (OWL) Total -- State of Alaska/Alaska State Library	Through libraries, provide rural Alaskans with high-speed internet access that urban Alaskans have long been using for education, employment, and enjoyment.	\$769,237	\$769,237	\$0
Coronavirus Capital Projects Fund Total -- US Department of Treasury	Allows recipients to invest in capital assets that meet communities' critical needs with a key emphasis on making funding available for broadband infrastructure.	\$111,799,968	\$0	\$111,799,968
ReConnect Total -- US Department of Agriculture (USDA)/Rural Utility Service (RUS)	Furnishes loans and grants to provide funds for the costs of construction, improvement, or acquisition of facilities and equipment needed to provide broadband service in eligible rural areas.	\$282,503,227	\$18,888,668	\$180,662,358
Community Connect Total -- US Department of Agriculture	The projects funded by these grants help rural residents tap into the enormous potential of the Internet for jobs, education, healthcare,	\$14,339,341	\$14,339,341	\$0

(USDA)/Rural Utility Service (RUS)	public safety, and community development.			
Distance Learning & Telemedicine Total -- US Department of Agriculture (USDA)/Rural Utility Service (RUS)	Uses the unique capabilities of telecommunications to connect to each other and to the world, overcoming the effects of remoteness and low population density.	\$4,684,528	\$4,672,528	\$0
Telecommunications Infrastructure Loans & Loan Guarantees Total -- US Department of Agriculture (USDA)/Rural Utility Service (RUS)	Furnishes loans to provide funds for the costs of construction, improvement, or acquisition of facilities and equipment needed to provide broadband service in eligible rural areas.	\$30,000,000	\$0	\$0
Total		\$2,960,648,754	\$1,505,032,571	\$956,541,862

3.2 Partnerships

Table 5: Partners

Partners	Description of Current or Planned Role in Broadband Deployment and Adoption
Alaska Department of Labor & Workforce Development (AWIB)	State agency that manages labor and workforce data tracking, enforcement, and training. Participating as a member of the core planning team for the Broadband Workforce Development Plan.
Alaska Department of Natural Resources, Office of Project Management & Permitting (OPMP)	Coordinates the review of larger-scale projects in the state. The complexity and potential impact of these projects typically involves multiple divisions or agencies, and OPMP serves the project coordinator. Working with the ABO to streamline permitting for broadband projects in Alaska.
Alaska Division of Community & Regional Affairs (DCRA)	DCRA’s purpose is to provide for maximum local self-government with a minimum of local government units, and to prevent duplication of tax-levying jurisdictions. DCRA was established to advise and assist local governments, review their activities, collect, and publishes local government information and perform other duties as prescribed by law. DCRA is providing mapping and grant management assistance to the ABO.
Alaska Federation of Natives (AFN)	Largest statewide Native organization representing many of Alaska’s 229 federally recognized tribes, 185 village corporations, 9 regional corporations, and 10 regional nonprofit & tribal consortiums.

Alaska Municipal League (AML)	Association representing the municipal entities of Alaska, including cities and boroughs (county equivalent).
ANCSA Regional Association (ARA)	Twelve private, for-profit Alaska Native regional corporations created under the Alaska Native Claims Settlement Act of 1971.
Alaska Office of Infrastructure Coordination	Tracking and managing the programs and funding established in the Infrastructure, Investment, & Jobs Act of 2021 – this includes broadband.
Alaska Regional Development Organizations (ARDORs)	Regional non-profits facilitating development of a healthy regional economies that results in sustainable business growth, new business investment, and economic diversification.
Alaska Safety Alliance (ASA)	Alaska’s nonprofit, regional, safety council. Participating as a member of the core planning team for the Broadband Workforce Development Plan. The subgrantee managing the development of the Broadband Workforce Development Plan.
Alaska Telecom Association (ATA)	Association representing many of the telecommunications companies operating in Alaska.
Alaska Works Partnership (AWP)	Alaska Works Partnership is a non-profit organization that gives Alaskans access to jobs and careers in the construction industry. Provide training and assistance to covered populations. Participating as a member of the core planning team for the Broadband Workforce Development Plan. The subgrantee managing the development of the Broadband Workforce Development Plan.
Associated General Contractors of Alaska (AGCA)	Association representing many of the general contractors operating in Alaska.
Denali Commission	Introduced by Congress in 1998, the Denali Commission is an independent federal agency designed to provide critical utilities, infrastructure, and economic support throughout Alaska. With the creation of the Denali Commission, Congress acknowledged the need for increased inter-agency cooperation and focus on Alaska’s remote communities. Working with RurAL CAP on a broadband service study in the Y/K Delta. Managing a \$35 Million grant program which can be used for broadband.
Federal Communications Commission (FCC)	Responsible for managing the program developing and updating (through their contractor) the Broadband Data Map (Fabric) for the United States.

National Telecommunications and Information Administration (NTIA)	The Executive Branch agency that is principally responsible for advising the President on telecommunications and information policy issues. Agency managing and providing technical assistance on Digital Equity, BEAD, Tribal Broadband, and Middle Mile grant programs.
Organized Labor Entities	Alaska’s Labor and Trade Organizations. IBEW, Teamsters, etc.
Pew Charitable Trust (Pew)	Founded in 1948, The Pew Charitable Trusts uses data to make a difference, addressing the challenges of a changing world by illuminating issues, creating common ground, and advancing ambitious strategies that lead to tangible progress. The PEW broadband access initiative works with state and federal policymakers, researchers, and other partners to accelerate the nation’s progress toward universal, affordable high-speed internet service.
Rasmuson Foundation (Rasmuson)	Statewide philanthropic foundation that was created in 1955 to promote a better life for Alaskans is serving as the State’s Administering Entity for Digital Equity Planning.
Rural Alaska Community Action Program (RurAL CAP)	Founded in 1965, it is a private, statewide, nonprofit organization working to improve the quality of life for low-income Alaskans. Working with the Denali Commission on a broadband service study in the Y/K Delta. Applied for the Tribal Pilot Program Grant on behalf of AFN under the FCC’s Affordable Connectivity Outreach Program.
State of Alaska Office of Management and Budget (OMB)	Managing the Corona Virus Capital Projects Fund program from the US Department of Treasury.
University of Alaska (UA)	Alaska’s public university system including the Office of Workforce Development's role to facilitate industry-driven training and degree programs focused on providing skilled Alaskan workers for Alaska jobs. Participating as a member of the core planning team for the Broadband Workforce Development Plan.

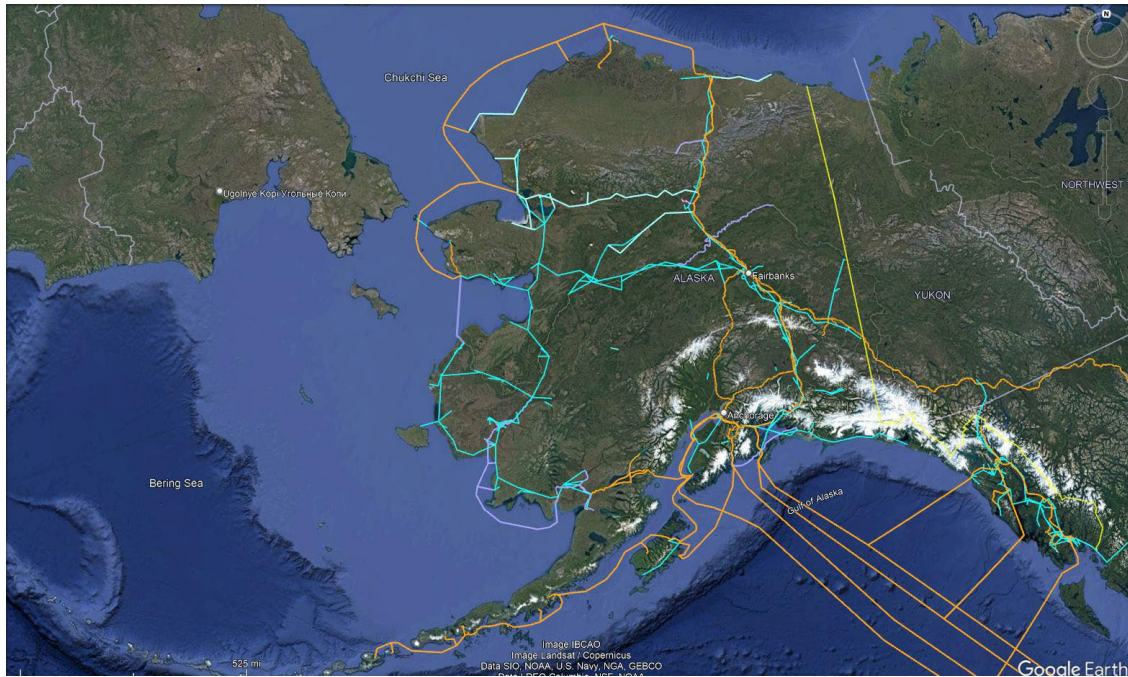
3.3 Asset Inventory

3.3.1 Broadband Deployment

The State of Alaska (SOA), the Eligible Entity, will own none of the assets associated with the continued build-out. In an assessment of current assets providing telecommunications, the SOA does not currently have any assets. The SOA will require prospective subgrantees to outline in their grant applications the ways in which they are using existing infrastructure and assets to maximize efficient use of BEAD funding. The ABO has worked closely with the various providers in the state to understand where the current broadband deployment has taken place.

The map below shows a representation of the current fiber (orange), the current microwave (bright sky blue), the funded and in progress fiber projects (purple), and the funded and in progress microwave projects (light blue).

Map 1: Current and In-progress Infrastructure



The ABO has the precise maps, but they are proprietary. The ABO recreated the representation of the routes to show the approximate locations of the assets.

In addition to the middle mile infrastructure, the ABO also reviewed the providers' service maps and service locations to determine the communities that have 80% or greater percentage of households with at least 100/20 Mbps available. As a final check, the ABO evaluated Version 2 of the FCC Broadband Map to confirm "served" status. Where there is a difference between the ABO's research and the FCC Broadband Map, the ABO defaulted to the FCC Broadband Map as the authority. The Map below shows the "served" communities in Alaska.

3.4.1 Broadband Affordability

In the ultra-rural communities of Alaska, broadband service is simply not affordable. The next two tables demonstrate that the lowest bandwidth services cost the most in two ways. The first is simply the monthly price of the service. For comparison the table below compares the average price of a sub 25Mbps service (generally either 1Mbps or 10Mbps) to the average costs of the underserved locations (greater than 25Mbps and less than 100Mbps), and the Served locations. Average capacity is the average bandwidth in the unserved, underserved, and served markets.

Table 6: Comparison of cost between unserved, underserved, and served services

	Community Count ⁴	Average Capacity	Average Price
Unserved	270	6	\$321.96
Underserved	22	36	\$143.20
Served	82	1,638	\$188.69
	374		

Source: Appendix A – Affordability and Availability

The second table shows the increased costs of the unserved locations if customer used 400GB of data, or 66% of the average need.⁵

Table 7: Comparison of overage cost by bandwidth

Unserved Broadband Mbps	Average Monthly Cost	Overage Cost at 400GB Usage	Total Monthly Costs at 400GB Usage
1	\$121.05	\$2,849.63	\$2,970.68
3	\$89.00	\$0.00	\$89.00
4	\$1,249.93	\$1,386.43	\$2,636.36
6	\$89.95	\$0.00	\$89.95
10	\$290.28	\$2,283.21	\$2,573.49
Weighted Average	\$321.96	\$2,623.54	\$2,945.50

3.4.2 Broadband Access

Like the cost in the ultra-rural unserved locations, there are many villages that have no wired or licensed fixed wireless service at all. The table below shows the number of communities that have no broadband service at all.

⁴ The breakdown of served, underserved and unserved appears different due to referencing marketing data for broadband services vs the FCC mapping fabric. Additionally, this chart does not exclude projects that will increase the number of served locations

⁵ From Peter Holslin writing on the website HighSpeedInternet.com, “Most people need around 600 GB of data per month for their home internet connection.”

Table 8: Comparison of communities between unserved (with and without wired or licensed fixed wireless broadband, underserved, and served

Community Count	
Unserved (No Service)	134
Unserved (Under 25)	136
Underserved	22
Served	82
Total	374

Tribal Communities

	Served	Underserved	Unserved	Total
Community Count	28	4	160	192
Weighted Average Bandwidth	1,565	31	4	
Housing Unit Count	30,681	371	22,493	53,545
Weighted Average Bandwidth	2,218	31	3	

3.4.3 Digital Equity

Alaska’s residents know what adversity looks like when it comes to accessing high-speed internet, with many experiencing barriers such as high costs, connectivity limitations and training to fully use the Internet when it is available.

The scale of unserved and underserved communities across Alaska is an obstacle to community and economic development. Rural communities are particularly vulnerable. Each year, many of the State’s rural communities shrink due in part to limited employment opportunities. Outmigration impacts the viability of rural schools⁶, and can disrupt cultural practices and lifestyles that are a central part of many Alaskans’ identity.

Connectivity is a key ingredient to addressing these challenges. With federal resources and strong collaboration with Tribal partners, the nonprofit sector serving Alaska’s most vulnerable communities, and cities and boroughs, the State of Alaska is working toward changing this landscape.

Investment in the state’s broadband infrastructure and focus on digital equity provide an opportunity to overcome the challenges Alaskans have faced, and to accomplish the state’s vision that every Alaskan, as part of their quality of life, will have the digital tools, access, and skills to affordably participate online, wherever they are.

Alaska’s expansive geography and small population play an outsized role in the high costs that contribute to the digital divide. By pulling together, Alaskans have developed a pathway to digital inclusion. Some of the challenges facing Alaska:

- Alaska ranks 51st in BroadbandNow’s annual rankings of internet coverage, speed, and availability.⁷

⁶ <https://www.washingtonpost.com/nation/2023/07/06/alaska-karluk-school-families-needed/>

⁷ Alaska’s Internet Ranking, <https://broadbandnow.com/Alaska>

- 9% of Alaskans don't have internet access or a device.⁸
- 80% of Alaskans cannot get broadband at an affordable price (\$60/month or less excluding promotions and government programs).⁹
- 21% of Alaskans are not able to purchase a broadband plan that is considered "high speed" internet (connection speeds of at least 25Mbps download and 3Mbps upload).¹⁰
- Anecdotally, based on approximately 196 community meetings conducted across Alaska over the last year, many Alaskans lack adequate digital skills training.

To address these challenges, Alaska's Digital Equity Plan focuses on four key strategies:

- Develop an affordability initiative.
- Launch statewide digital literacy activities.
- Strengthen institutions to provide access to and delivery of critical services.
- Create device refurbishment, distribution, and maintenance programs.

The ABO knows that the implementation of these strategies rest both on the effective buildout of Alaska's broadband infrastructure, and coordination of State, Tribal, public, and private efforts.

An extensive outreach campaign informs this digital equity plan. More than a dozen nonprofits representing organizations that serve the intended beneficiaries, hosted approximately 196 community meetings. Alaskans were clear in articulating the disadvantages they experience. Successful implementation of this Digital Equity Plan will require similar determination.

Shaping the Plan to Address Barriers for Alaskans

The following themes emerged over the course of Alaska's statewide digital equity planning campaign:

- **Broadband access in rural Alaska is expensive, limited, and inconsistent:** BroadbandNow ranks Alaska last amongst states and the District of Columbia for internet coverage, speed and availability, and statistics from the National Telecommunications and Information Administration show that rural communities experience the brunt of the service limitations.¹¹ Anecdotally, listening session participants in low population, rural, and Tribal communities reported that service disruptions are part of daily life.

Many rural communities still lack any access to internet service and most that do don't have alternative options. When ice severed a sub-sea fiber-optic cable providing service to Utqiagvik, Point Hope, Wainwright, Kotzebue, and Nome, internet and cellular service was disrupted and

⁸ Alaska Population Metrics, <https://www.internetforall.gov/interactive-map/Alaska>

⁹ Access to wired, low-cost broadband plan, <https://broadbandnow.com/Alaska>

¹⁰ Access to Wired or Fixed Wireless Broadband, <https://broadbandnow.com/Alaska>

¹¹https://broadbandusa.maps.arcgis.com/apps/webappviewer/index.html?id=50c64e2c028d46a58247125e4bcdcd8&_gl=1%2A1fuw9bw%2A_ga%2AMTE0OTE3NjcwOC4xNjg2ODc3Mjky%2A_ga_XL1D9JMC1%2AMTY5MDY3ODA xNy4xMS4wLjE2OTA2NzgwMTcuMC4wLjA.&_ga=2.68033617.1510052865.1690678017-1149176708.1686877292

telecommunications companies scrambled to provide alternative options, although at reduced service levels.

- **Vulnerable populations in all communities lack access:** While Alaskans living in urban communities do have access to multiple providers and plans, service was still inaccessible to vulnerable populations due to factors like cost, no access to devices and limited digital skills.
- **The digital divide results in uneven educational opportunities:** Rural communities are particularly vulnerable to educational disparities caused by lack of affordable and reliable internet; most Alaska communities are considered rural or remote and not connected to any roads. Not every community has a facility (including libraries) with reliable public internet access, proper equipment, devices, software, IT Support services and management tools to accommodate community use. Many rural schools are closed to the public during the summer leaving no public access option.

Residents in urban communities also experienced challenges. Some listening session participants weren't aware of the public resources available to them while others couldn't access them for reasons ranging from physical limitations to language and cultural barriers.

- **The workforce supply and training opportunities are limited by a lack of internet access:** Communities without internet access are limited to in-person training opportunities often held in regional hubs, when not otherwise provided online or when online access isn't available. This can be costly, time-consuming, and otherwise difficult to access for individuals with families. And once trained, remote employment often isn't a possibility—leading to outmigration.
- **Better health outcomes are a challenge without reliable access to internet services:** Healthcare services in Alaska—particularly the Tribal healthcare system—have been a national leader in telemedicine. And that's with the digital divide. Still, with telemedicine as the only way to talk to a doctor in most rural communities, lack of connectivity or reliable connectivity creates life and death situations.

“I got a lifeline phone, but you only get 8 gigs and a lot of times I am out and about and I have to use the data for the maps so that smokes it. It stops me in my tracks from getting where I need to go for jobs, treatments, for this class or that class... Slow data, not enough data....It drops off. For a week and a half, we didn't have data. Now I am doing mental health treatment through telehealth so I have to have data or I can't do it.”

- Listening Session Participant

- **The internet is the easiest way to access many civic and social services:** Accessing critical services becomes much more challenging without reliable, high-speed internet. Alaskans use the internet to access public benefits like the Supplemental Nutrition Assistance Program, Low Income Home Energy Assistance Program, and Veteran's Affairs services. Fishing and hunting licenses, and the application for the annual Alaska Permanent Fund Dividend are also available via the internet. Additionally, participation in online public processes (like streaming legislative committees on Gavel Alaska) or accessing self-help legal resources is not possible.

- **Alaskans can't live where they want to live:** Without internet access, many Alaskans have to relocate to communities on the road system with greater opportunities for education, career advancement and more. This outmigration erodes a community's culture, separates individuals from their families and cultural way of life, eliminates access to their traditional way of life, and reduces the local workforce pool.
- **Community Anchor Institutions have a key role to play:** Alaska's local and Tribal governments, state agencies, public entities, school districts, nonprofits, and other institutions have played a role in mitigating challenges in communities across Alaska and will be critical to ensuring success as digital equity is addressed in the coming years.

3.5 Digital Equity Needs and Gaps Assessment

3.5.1 Broadband Deployment

The Eligible Entity may identify and detail the needs and gaps in the State, which may include, but is not limited to the following need for:

- Service to unserved and underserved locations
 - In the FCC's Version 2 (V2) Broadband Data Map there are:
 - 88,188 unserved, and
 - 16,378 underserved locations.

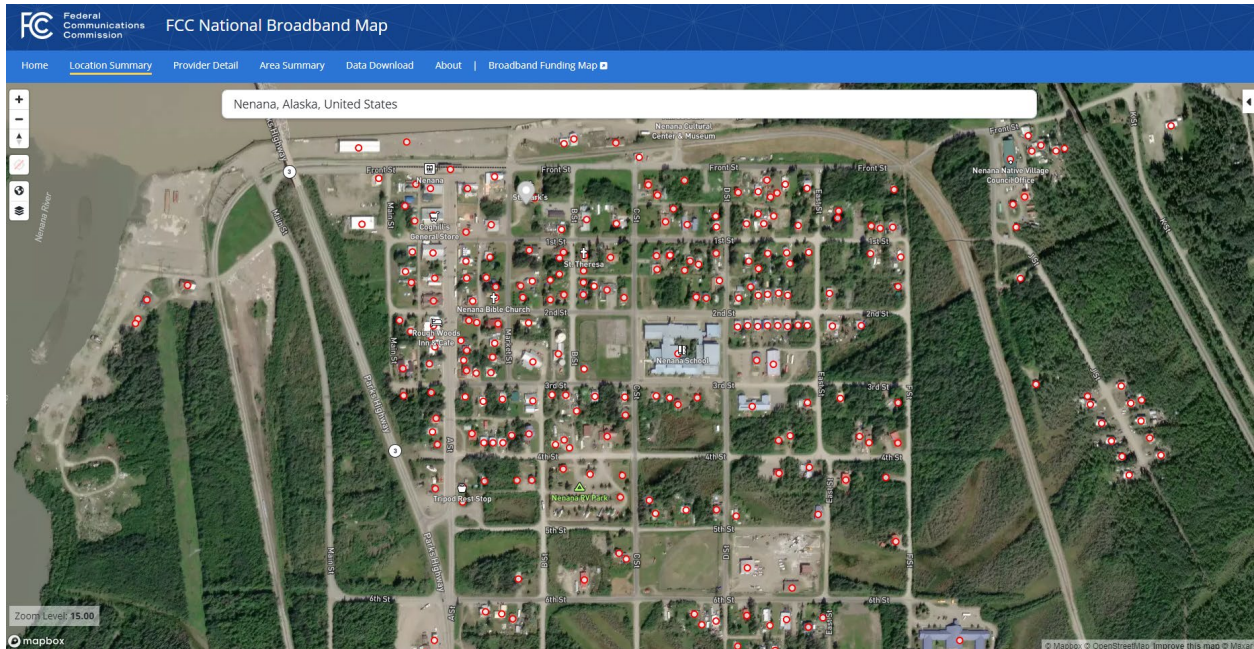
Table 9: The total counts for the FCC V2 Mapping Fabric, broken down by Alaska Native Claims Settlement Act (ANSCA) regions are below:

ANSCA Region	Number of Tribes In Region	51%	Served Count	Underserved Count	Unserved Count	Sum Total
Needs Removed by FCC (Not a BSL)	N/A	N/A	- 0.0%	- 0.0%	10 100%	10
1 Ahтна	8	5	795 49.1%	178 11.0%	645 40%	1,618
2 Aleut	15	8	26 1.0%	- 0.0%	2,485 99%	2,511
3 Arctic Slope	8	5	2,140 73.1%	189 6.5%	598 20%	2,927
4 Bering Straits	20	11	1,232 31.2%	165 4.2%	2,556 65%	3,953
5 Bristol Bay	29	15	- 0.0%	- 0.0%	5,669 100%	5,669
6 Calista	57	30	- 0.0%	- 0.0%	8,614 100%	8,614
7 Chugach	9	5	3,428 62.0%	1,582 28.6%	523 9%	5,533
8 Cook Inlet	12	7	114,129 70.6%	10,507 6.5%	37,086 23%	161,722
9 Doyon	45	23	23,164 49.7%	3,222 6.9%	20,209 43%	46,595
10 Koniag	17	9	3,278 68.6%	- 0.0%	1,498 31%	4,776
11 NANA	11	6	802 32.6%	1 0.0%	1,660 67%	2,463
12 Sealaska	21	11	21,253 72.2%	1,534 5.2%	6,635 23%	29,422
Total	252		170,247 61.7%	17,378 6.3%	88,188 32%	275,813

The ABO is continuing to review all the unserved and underserved locations to determine the most efficient way to distribute the funding (the full detailed analysis is attached at Appendix D).

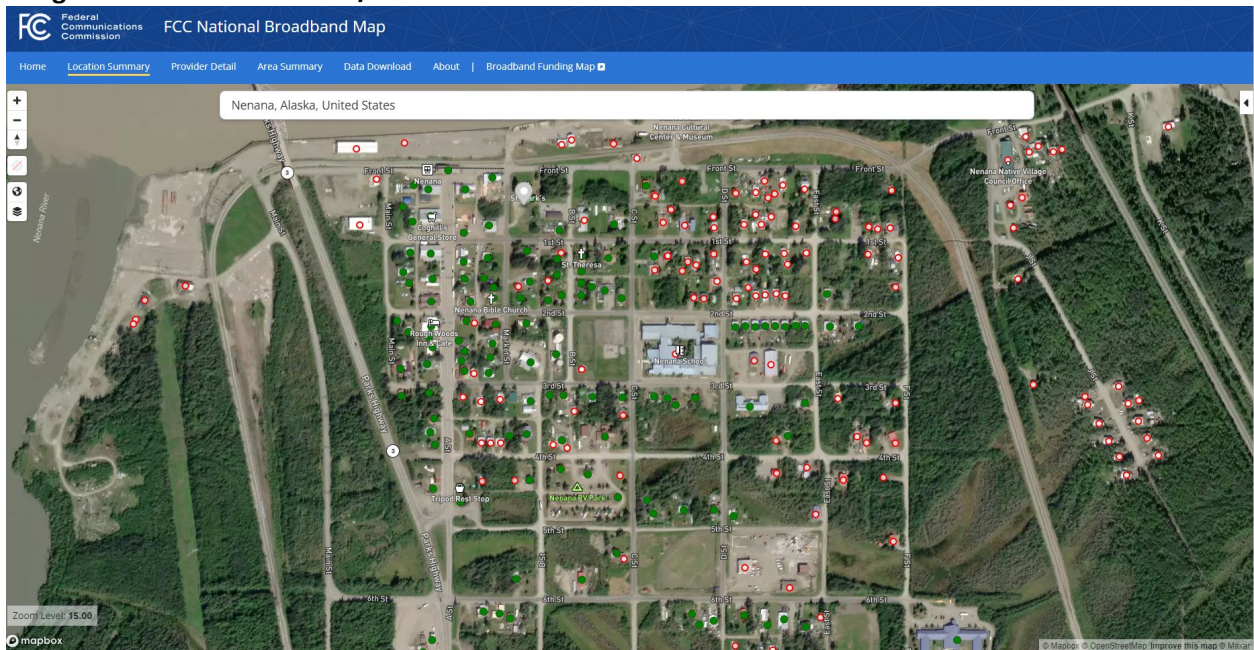
An example of continuing evaluation is the community of Nenana. In Image A, the FCC Broadband Data Map filter is all BSLs with an upper filter of 100Mbps/20Mbps. This is the minimum threshold of BEAD to be considered “served.”

Image A: Nenana w/ the 100/20 filter



With this filter, all of Nenana is unserved or underserved (all red dots). By changing the filter to the threshold of 25Mbps/3Mbps (see Image B), about half of Nenana’s BSLs show that about half of Nenana can reach 25Mbps/3Mbps.

Image B: Nenana with the 25/3 filter



This will cause anomalous subgrant award and construction timelines in that the “unserved” in Nenana, and the rest of the state must be completed before the “underserved” in Nenana can be completed. The ABO is evaluating each of the unserved and underserved locations (additional examples in Images C, D, E, & F). The ABO will be formulating the network ideas and capital costs to each unserved location.

Image C: Exemplar of a Typical Community – Aniak

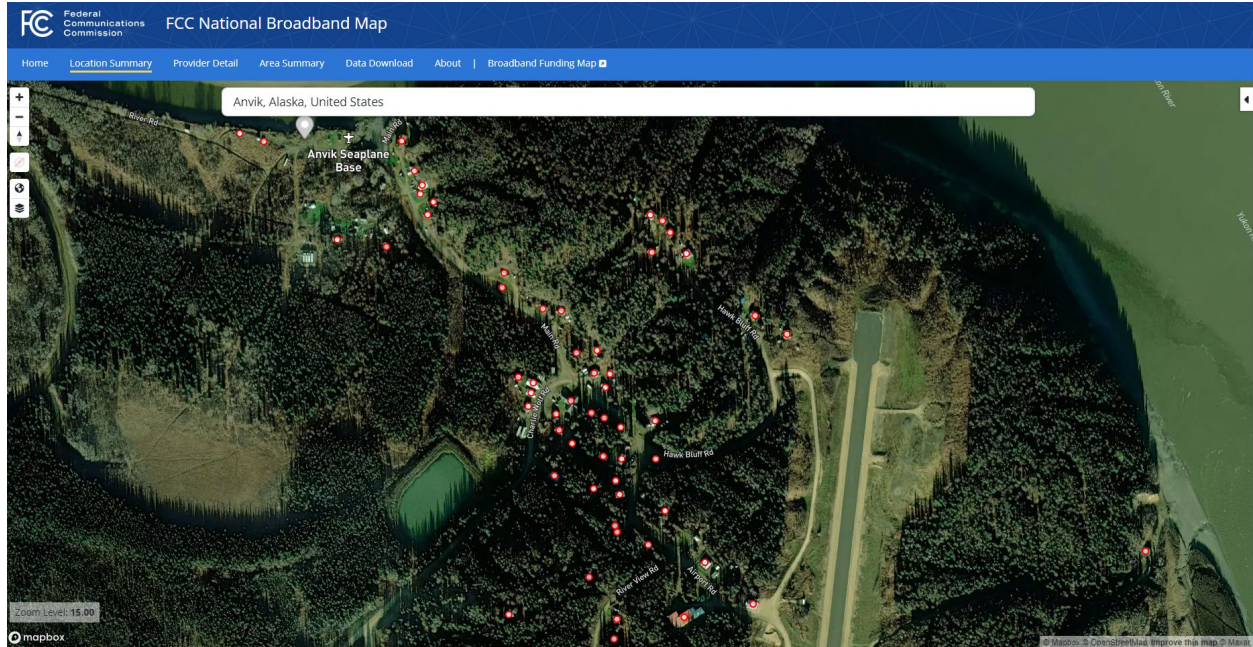


Image D: Exemplar of a Typical Community – Seldovia

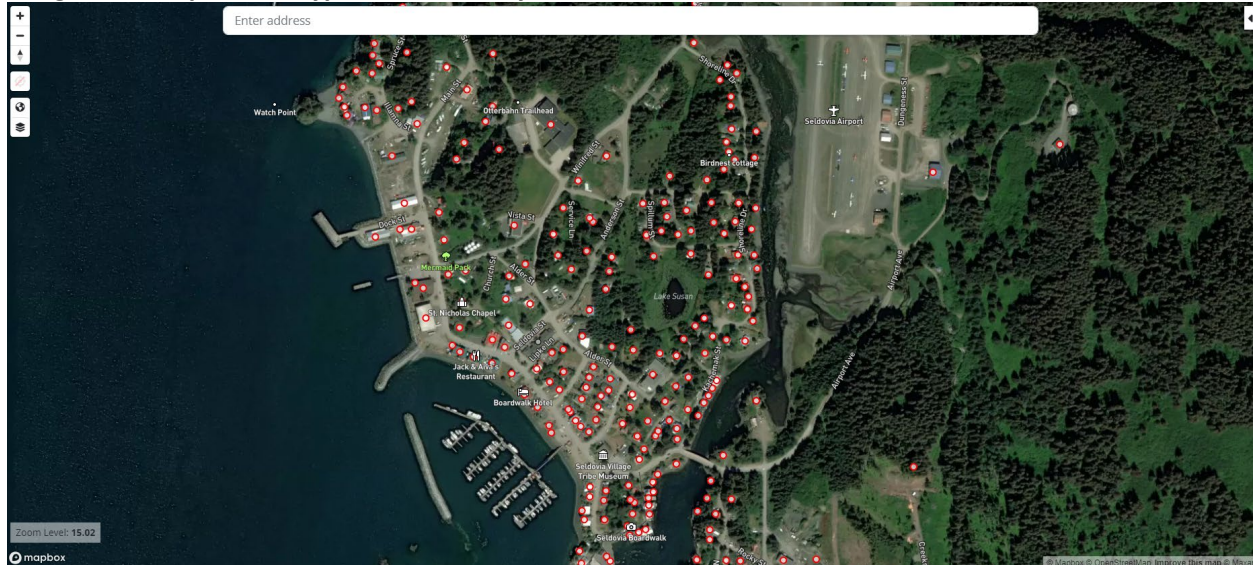


Image E: Exemplar of Unserved Locations within Metropolitan Areas – Rabbit Creek

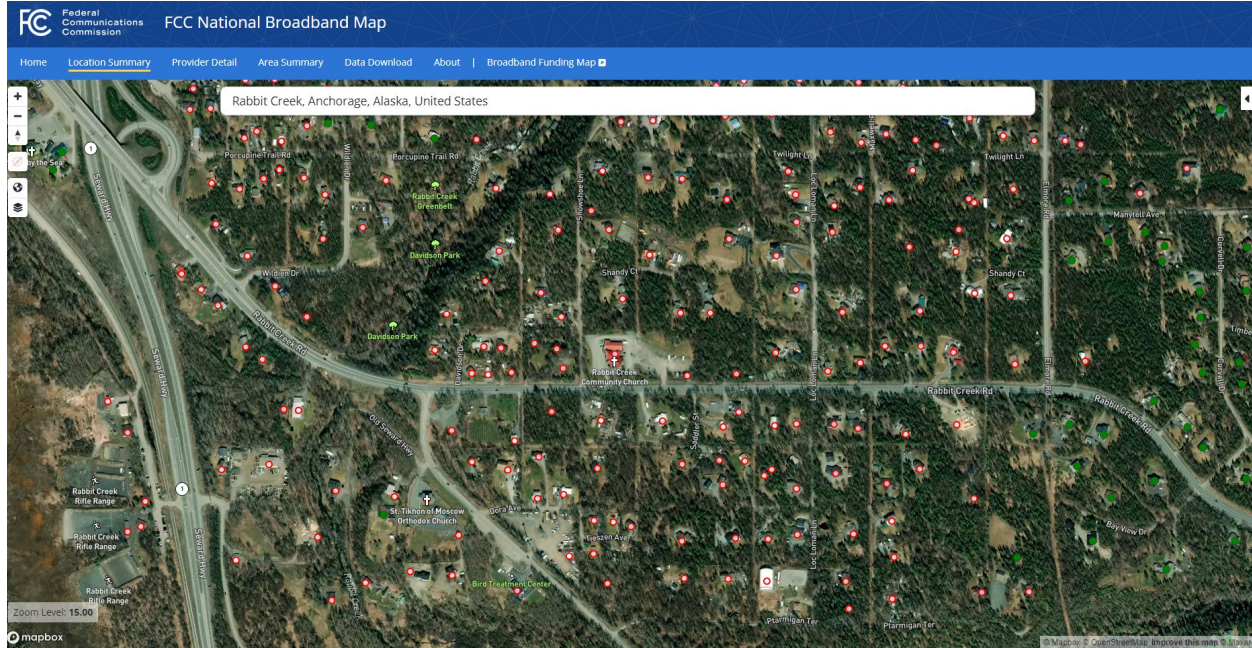
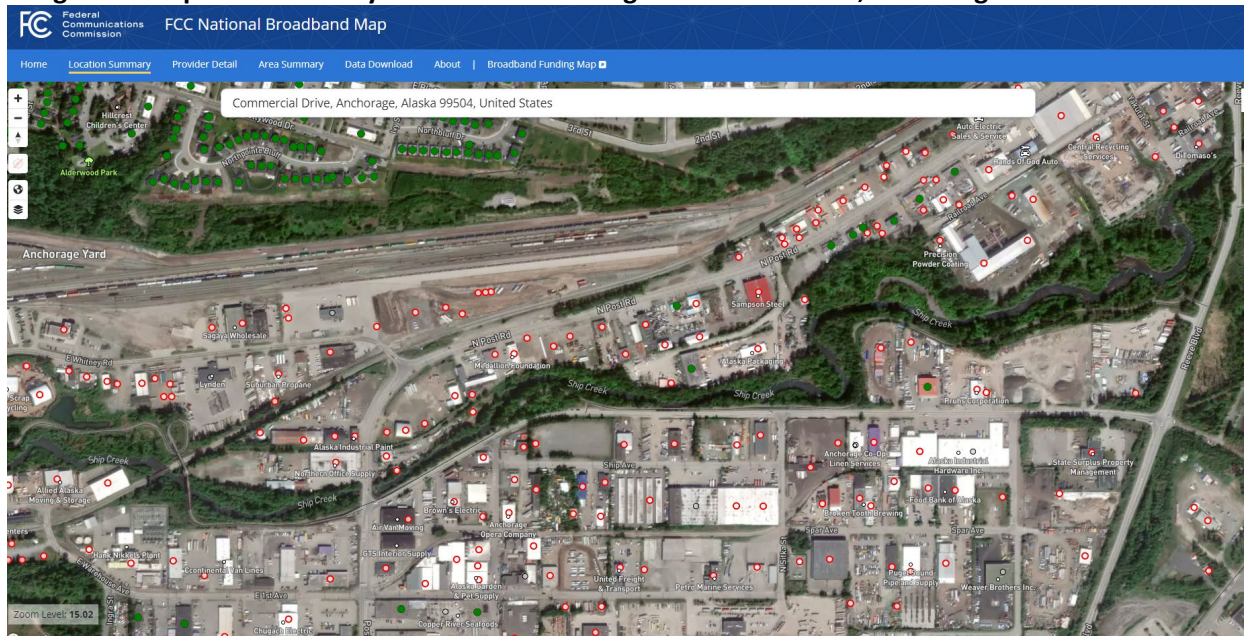


Image F: Exemplar of Primarily Commercial Buildings – Commercial Dr, Anchorage



Service to Community Anchor Institutions (CAIs) without gigabit service.

- The ABO has compiled a list of just under 7,300 potential CAIs and expects that number to increase during the Challenge Process. CAIs have been prioritized in the following hierarchy:
 1. Healthcare Facilities
 2. Educations Institutions
 3. Public Safety Entities
 4. Federal, State, Tribal, or Local Government Locations
 5. Libraries
 6. Public Housing Organizations
 7. Community Support Organizations

- The detailed list of the state and local CAIs is at Appendix E. A summary of the CAIs by community and priority is a Table 10.

Table 10: Summarized State and Local CAI Counts by Community and Priority:

Community	1. Health Care Facility	2. Public Safety	3. Educational Institution /Library	4. Local, State, Federal, or Tribal Government Building	5. Public Housing Organization	6. Community Support Organization	Total
Adak	1	1	1	6	-	1	10
Afognak	-	-	-	1	-	-	1
Akhiok	1	1	2	6	-	1	11
Akiachak	1	1	23	1	-	-	26
Akiak	1	1	18	5	-	-	25
Akun Island	-	-	-	3	-	-	3
Akutan	1	2	2	25	-	-	30
Alakanuk	1	1	14	3	-	3	22
Alatna	-	-	-	1	-	-	1
Aleknagik	1	2	4	6	-	-	13
Allakaket	2	-	15	2	-	-	19
Alpine	-	1	-	-	-	-	1
Ambler	1	1	5	7	-	1	15
Anaktuvuk Pass	1	1	1	3	1	1	8
Anchor Point	1	3	4	-	-	11	19
Anchorage	67	30	290	20	60	423	890
Anderson	-	2	1	3	-	1	7
Angoon	-	1	8	2	-	1	12
Aniak	1	5	9	11	-	2	28
Anvik	2	1	3	7	-	-	13
Arctic Village	1	1	5	2	-	-	9
Atka	1	3	5	10	-	2	21
Atmautluak	1	1	7	2	-	-	11
Atqasuk	1	-	1	4	-	1	7
Auke Bay	-	-	1	2	-	1	4
Beaver	1	-	3	1	-	-	5
Beluga	-	1	-	-	-	-	1
Bethel	5	13	42	39	3	31	133
Bettles	-	2	-	1	-	-	3
Big Lake	1	2	2	1	-	3	9
Birch Creek	1	1	-	1	-	-	3
Bird Creek	-	-	-	-	-	1	1
Brevig Mission	1	1	13	2	-	1	18
Buckland	1	1	15	3	-	-	20
Butte	-	-	2	1	-	1	4
Canton	-	-	-	-	-	1	1

Cantwell	1	2	3	4	-	2	12
Caswell Lakes	-	1	-	-	-	-	1
Central	-	-	3	-	-	2	5
Chalkyitsik	1	1	6	2	-	-	10
Chefornak	1	1	17	4	-	1	24
Chenega Bay	1	1	4	2	-	-	8
Chevak	1	1	17	2	-	1	22
Chickaloon	2	2	1	1	-	3	9
Chignik Bay	1	1	4	9	-	-	15
Chignik Lagoon	1	1	4	1	-	-	7
Chignik Lake	1	1	1	7	-	-	10
Chiniak	-	-	3	1	-	1	5
Chistochina	1	1	1	1	-	-	4
Chitina	1	4	-	2	-	2	9
Chuathbaluk	1	2	3	5	-	1	12
Chugiak	-	9	4	2	1	12	28
Chuloonawick	-	-	-	1	-	-	1
Circle	1	-	2	2	-	-	5
Clarks Point	1	1	2	7	-	-	11
Coffman Cove	1	2	5	4	-	1	13
Cold Bay	2	-	1	7	-	3	13
Cooper Landing	-	2	2	-	-	1	5
Copper Center	5	3	1	1	-	8	18
Cordova	3	4	4	54	4	9	78
Craig	2	4	13	36	-	8	63
Crooked Creek	1	1	5	1	-	-	8
Deering	1	2	9	8	-	-	20
Delta Junction	3	4	15	13	1	16	52
Denali	-	1	-	-	-	-	1
Denali Park	-	-	-	-	-	5	5
Dillingham	2	7	14	22	2	21	68
Diomedede	-	1	3	2	-	-	6
Dot Lake	1	1	2	1	-	-	5
Douglas	-	1	3	1	1	5	11
Dutch Harbor	-	-	-	1	-	1	2
Eagle	1	3	4	2	-	2	12
Eagle River	2	3	25	1	4	20	55
Eagle Village	-	-	-	1	-	-	1
Edna Bay	-	1	2	2	-	1	6
Eek	1	1	11	2	-	-	15
Egegik	1	1	6	16	-	1	25
Eielson AFB	-	-	2	4	-	-	6
Ekuak	-	-	-	1	-	-	1
Ekwok	1	2	3	3	-	-	9

Elfin Cove	-	1	-	-	-	-	1
Elim	1	1	9	2	-	-	13
Elmendorf AFB	-	-	3	-	-	-	3
Emmonak	1	2	15	7	-	5	30
Endicott	-	1	-	-	-	-	1
Ester	-	-	-	1	-	4	5
Evansville	1	-	-	1	-	-	2
Eyak	-	-	-	1	-	-	1
Fairbanks	19	32	92	53	24	93	313
False Pass	1	2	2	11	-	-	16
Fort Greely	-	-	2	-	-	1	3
Fort Wainwright	-	-	1	3	-	-	4
Fort Yukon	1	1	8	8	-	2	20
Fritz Creek	-	-	1	-	-	-	1
Ft. Yukon	1	-	-	-	-	-	1
Gakona	1	2	2	1	-	1	7
Galena	2	2	19	17	-	4	44
Gambell	1	2	9	4	-	1	17
Georgetown	-	-	-	1	-	-	1
Girdwood	1	2	3	1	1	4	12
Glennallen	1	3	10	1	-	13	28
Golovin	1	1	11	9	-	1	23
Goodnews Bay	1	2	10	5	-	-	18
Grayling	1	1	3	3	-	-	8
Gulkana	-	-	-	1	-	-	1
Gustavus	1	2	4	8	-	5	20
Haines	1	4	8	24	2	15	54
Halibut Cove	-	-	-	-	-	1	1
Healy	1	2	6	4	-	7	20
Healy Lake	1	-	1	1	-	-	3
Hollis	-	-	3	-	-	-	3
Holy Cross	1	1	2	3	-	1	8
Homer	13	8	19	30	13	24	107
Hoonah	1	2	4	17	-	4	28
Hooper Bay	1	3	6	6	1	2	19
Hope	-	1	2	-	-	1	4
Houston	-	4	2	7	3	1	17
Hughes	1	-	8	13	-	-	22
Huslia	1	1	14	12	-	1	29
Hydaburg	1	2	11	10	-	-	24
Hyder	-	1	2	-	-	2	5
Igiugig	1	1	6	2	-	-	10
Iliamna	1	1	1	1	-	1	5
Ivanof Bay	-	-	2	1	-	-	3

JBER	-	-	4	-	-	-	4
Juneau	13	9	45	142	20	57	286
Juneau	2	-	-	-	-	-	2
Kachemak	-	2	-	1	-	-	3
Kaguyak	-	-	-	1	-	-	1
Kake	1	2	9	11	1	4	28
Kaktovik	1	1	1	5	1	-	9
Kalskag	-	-	2	-	-	-	2
Kaltag	1	1	12	5	-	1	20
Kanatak	-	-	-	1	-	-	1
Karluk	1	1	-	3	-	-	5
Kasaan	-	1	6	4	-	1	12
Kasigluk	1	1	1	1	-	-	4
Kasigluk (Akiuk)	-	-	6	-	-	-	6
Kasigluk (Akula)	-	-	13	-	-	-	13
Kasilof	-	1	1	-	-	2	4
Kenai	1	6	24	49	7	25	112
Kenny Lake	-	1	4	-	-	1	6
Ketchikan	7	18	26	134	6	24	215
Ketchikan	2	-	-	-	-	-	2
Kiana	1	3	9	8	-	1	22
King Cove	1	2	1	19	-	2	25
King Salmon	1	2	2	8	1	2	16
Kipnuk	1	1	10	2	-	1	15
Kivalina	1	1	17	2	-	-	21
Klawock	-	4	10	17	1	6	38
Klukwan	-	1	2	1	-	-	4
Knik	-	1	1	-	-	-	2
Kobuk	1	1	9	2	-	-	13
Kodiak	7	8	25	58	5	24	127
Kokhanok	1	-	7	2	-	-	10
Koliganek	1	1	5	5	-	-	12
Kongiganak	1	1	11	2	-	-	15
Kotlik	1	1	13	9	-	1	25
Kotzebue	4	6	19	17	1	15	62
Koyuk	2	2	8	7	-	1	20
Koyukuk	1	-	6	3	-	1	11
Kuparuk	-	1	-	-	-	-	1
Kupreanof	-	-	-	4	-	-	4
Kwethluk	2	1	13	12	-	-	28
Kwigillingok	1	1	6	2	-	-	10
Lake Minchumina	-	-	1	-	-	2	3
Larsen Bay	1	2	2	15	-	-	20
Levelock	1	1	4	2	-	1	9

Lime Village	-	-	-	1	-	-	1
Little Diomede	1	-	-	1	-	1	3
Lower Kalskag	1	1	2	9	-	-	13
Mamakotak	-	-	-	1	-	-	1
Manley Hot Springs	1	1	-	1	-	1	4
Manokotak	1	3	5	10	1	-	20
Marshall	3	3	5	12	-	2	25
McCarthy	-	2	-	-	-	-	2
McGrath	2	1	7	7	-	4	21
Meadow Lakes	-	2	-	-	1	-	3
Mekoryuk	1	2	7	11	-	1	22
Mentasta	-	1	2	-	-	-	3
Mentasta Lake	1	-	1	1	-	-	3
Mertarvik	-	-	3	-	-	-	3
Metlakatla	1	4	15	11	-	1	32
Meyers Chuck	-	1	-	-	-	-	1
Milne Point	-	1	-	-	-	-	1
Minto	1	1	12	1	-	-	15
Moose Pass	-	1	2	-	-	2	5
Mountain Village	1	2	30	16	3	2	54
Naknek	2	2	4	19	1	1	29
Nanwalek	1	1	3	1	-	-	6
Napaimute	-	-	-	1	-	-	1
Napakiak	1	4	11	11	-	-	27
Napaskiak	2	3	8	12	-	-	25
Naukati	-	2	5	2	-	-	9
Nelchina	-	1	-	-	-	-	1
Nelson Lagoon	1	1	-	3	-	-	5
Nenana	1	2	8	2	-	8	21
New Stuyahok	1	3	7	8	1	-	20
Newhalen	3	2	9	7	-	1	22
Newtok	1	-	13	2	-	1	17
Nightmute	1	1	9	7	-	1	19
Nikiski	-	4	5	3	-	2	14
Nikolaevsk	-	1	1	-	-	2	4
Nikolai	1	1	2	11	-	1	16
Nikolski	1	1	2	1	-	-	5
Ninilchik	2	1	5	1	2	8	19
Noatak	1	1	12	3	1	-	18
Nome	3	4	16	19	3	14	59
Nondalton	1	1	4	6	-	-	12
Noorvik	1	3	12	4	-	-	20
North Pole	-	12	22	6	2	20	62
Northstar	-	1	-	-	-	-	1

Northway	1	1	4	-	-	2	8
Northway Village	-	-	-	1	-	-	1
Nuiqsut	1	1	1	5	1	1	10
Nulato	1	1	11	7	-	1	21
Nunam Iqua	1	1	6	12	-	1	21
Nunapitchuk	1	2	17	11	-	1	32
Ohogamiut	-	-	-	1	-	-	1
Old Harbor	1	2	3	10	-	-	16
Oscarville	1	-	5	1	1	-	8
Ouzinkie	1	2	3	12	-	3	21
Paimiut	-	-	-	1	-	-	1
Palmer	10	25	35	74	13	27	184
Pedro Bay	1	1	3	3	-	-	8
Pelican	1	3	5	20	-	2	31
Perryville	1	1	4	3	-	1	10
Petersburg	1	3	7	31	1	4	47
Pilot Point	2	4	4	7	-	-	17
Pilot Station	1	3	12	14	-	3	33
Pitka's Point	1	-	-	1	-	-	2
Platinum	1	1	5	5	-	-	12
Point Hope	1	1	1	6	1	4	14
Point Lay	1	1	1	1	-	-	4
Port Alexander	-	2	3	3	-	-	8
Port Alsworth	-	1	1	6	-	4	12
Port Graham	1	1	2	1	-	1	6
Port Heiden	1	2	1	11	-	-	15
Port Lions	1	3	4	8	-	1	17
Port Mackenzie	-	-	-	1	-	-	1
Port Protection	-	-	3	-	-	-	3
Portage Creek	-	-	-	1	-	-	1
Prudhoe Bay	-	2	-	-	-	-	2
Quinhagak	1	1	4	9	2	1	18
Rampart	1	-	2	1	-	-	4
Red Devil	-	-	-	1	-	-	1
Red Dog Mine	-	2	-	-	-	-	2
Ruby	1	2	11	7	-	1	22
Russian Mission	1	1	8	4	-	1	15
Salamatof	-	-	-	1	-	-	1
Salcha	-	3	-	3	-	3	9
Sand Point	2	1	1	24	-	3	31
Savoonga	1	1	15	2	-	1	20
Saxman	-	1	-	14	-	-	15
Scammon Bay	1	1	11	5	-	2	20
Selawik	1	-	9	2	-	-	12

Seldovia	1	3	5	8	-	3	20
Seward	5	6	8	44	8	8	79
Seward	1	-	-	-	-	-	1
Shageluk	1	-	6	3	-	1	11
Shaktoolik	1	1	7	3	-	1	13
Shishmaref	1	2	15	3	-	-	21
Shungnak	1	2	9	4	-	-	16
Sitka	5	3	18	40	6	14	86
Sitka	3	-	-	-	-	-	3
Skagway	2	2	4	23	-	5	36
Skwentna	-	-	-	1	-	-	1
Slana	-	-	2	-	-	1	3
Sleetmute	1	1	2	1	-	-	5
Soldotna	16	11	23	68	9	33	160
Solomon	-	-	-	1	-	-	1
South Naknek	1	2	2	3	-	-	8
SPENARD	-	-	-	-	-	2	2
St Michael	-	-	-	1	-	-	1
St. George	1	1	-	3	-	-	5
St. Mary's	1	2	23	9	-	2	37
St. Michael	1	-	12	1	-	2	16
St. Paul	1	2	12	34	-	1	50
Stebbins	1	1	12	4	-	2	20
Sterling	-	2	1	1	-	6	10
Stevens Village	1	1	4	1	-	-	7
Stony River	1	1	2	1	-	-	5
Sutton	1	4	2	4	3	3	17
Sutton-Alpine	-	-	-	-	-	1	1
Takotna	1	1	4	2	-	2	10
Talkeetna	-	3	4	7	-	7	21
Tanacross	1	1	1	1	1	-	5
Tanana	2	2	5	2	-	1	12
Tatitlek	1	1	5	2	-	-	9
Tazlina	-	-	-	1	-	-	1
Telida	-	-	-	1	-	-	1
Teller	1	-	9	6	-	2	18
Tenakee Springs	1	1	3	12	-	-	17
Tetlin	-	-	3	1	-	1	5
Thorne Bay	-	4	17	11	-	1	33
Togiak	1	2	10	11	2	2	28
Tok	2	2	13	-	-	14	31
Toksook Bay	2	2	11	6	-	1	22
Tolsona	-	2	-	-	-	-	2
Toolik Lake	-	-	1	-	-	-	1

Trapper Creek	-	2	2	3	-	6	13
Tuluksak	1	-	18	1	-	-	20
Tuntutuliak	1	1	12	1	-	-	15
Tununak	1	-	10	1	-	1	13
Twin Hills	1	1	3	1	-	-	6
Two Rivers	-	-	-	-	-	1	1
Tyonek	2	1	4	1	-	1	9
Ugashik	-	-	-	1	-	-	1
Umkumiut	-	-	-	1	-	-	1
Unalakleet	1	3	24	10	-	3	41
Unalaska	2	5	7	46	1	6	67
Unga	-	-	-	1	-	-	1
Upper Kalskag	1	2	9	6	-	2	20
Utqiagvik	2	-	8	12	-	15	37
Valdez	2	4	10	2	3	13	34
Venetie	1	1	4	3	-	-	9
Voznesenka	-	-	1	-	-	-	1
Wainwright	1	1	1	3	1	2	9
Wales	1	1	4	3	-	-	9
Ward Cove	-	-	-	-	-	2	2
Wasilla	14	27	60	86	20	52	259
Whale Pass	-	1	4	1	-	-	6
White Mountain	1	2	13	3	-	1	20
Whittier	2	3	3	29	-	2	39
Willow	2	12	3	4	2	9	32
Wiseman Village	-	-	-	-	-	1	1
Woody Island	-	-	-	1	-	-	1
Wrangell	5	4	7	17	2	9	44
Yakutat	1	2	7	19	1	1	31
Total	436	622	2,257	2,361	257	1,364	7297

- Solutions to funding barriers in designated “high-cost areas,” as defined by the BEAD NOFO, Section I.C.m
 - The ABO has sorted the “network ideas” by system (generally a group of communities along a transportation route (river, road, coastline, etc.) to identify and prioritize the least cost per home passed. The ABO will also evaluate the impact all other capital infrastructure grant and loan programs. Examples of these are the NTIA, Tribal Broadband Connectivity Program (TBCP) and USDA’s REConnect programs. Once the evaluation of all programs has been considered, the ABO will draw a line at the conjunction of the funding between where can be built with fiber and where will need alternate, non-fiber, technology.
- Improved databases and/or systems that enhance use of information to inform broadband deployment; and/or increased workforce available to deploy broadband.
 - The ABO will have a two-pronged approach to managing data that will be a part of the subgrantees’ evaluation and management:

- The first is a GIS mapping database that will keep track of:
 - All BSLs
 - Unserved
 - Underserved
 - Community Anchor Institutions
 - Served
 - All federal lands
 - Federal Parks
 - Federal Reserves
 - National Forests
 - Other
 - All state lands
 - State parks
 - State Reserves
 - Alaska Mental Health Trust lands
 - University of Alaska lands
 - Other
 - All native/tribal lands
 - Regional Corporation lands
 - Village Corporation lands
 - Tribal Lands
 - Community Lands
 - Individual Allocations
 - Municipal lands
 - Municipal owned lands
 - Municipal entitlement lands
 - Other
 - NEPA
 - SHIPO
- The second approach is a grant management program to facilitate the development and execution of the Subgrant awards.

3.5.2 Digital Equity

The Eligible Entity may identify and detail the needs and gaps in the State or Territory, which may include, but is not limited to the following need for:

- Increased workforce development training and employment services related to broadband deployment and adoption.
- Increased participation in the digital economy by communities traditionally disengaged.
- Greater resources to support digital inclusion (i.e., organizations and/or funding for Digital Navigators), and/or
- Increased engagement with community-based organizations, CAIs, digital inclusion/equity coalitions, state agencies, local community champions, tribal leaders, and federal landowners.

3.5.3 Digital Equity Broadband Adoption

The ABO is working concurrently on the State of Alaska’s Digital Equity Plan. Below are the high-level anticipated outcomes regarding broadband adoption within that plan:

Goal	Digital Skills, Privacy, and Cybersecurity
Strategy	Launch a statewide digital literacy campaign
KPIs	<ul style="list-style-type: none"> • Increase the number of Alaskans who are digitally literate & use the internet safely <ul style="list-style-type: none"> ○ Baseline: To be determined during the first year of planning ○ Near-term: Establish digital literacy partnerships with organizations operating in 75 distinct municipalities; increase the number of digital literacy programs ○ Long-term: All Alaskans are digitally literate

3.5.4 Digital Equity Broadband Affordability

The ABO is working concurrently on the State of Alaska’s Digital Equity Plan. Below are the anticipated outcomes regarding affordability within that plan:

Goal	Affordable Internet
Strategy	Develop an initiative for broadband affordability that includes policy advocacy, ACP enrollment, and identification of new funding strategies
KPIs	<ul style="list-style-type: none"> • Increase ACP Enrollment <ul style="list-style-type: none"> ○ Baseline: 17,552 households ○ Near-term: Increase enrollment by 33% per year for 3 years ○ Long-term: All eligible households will be enrolled • Increase share of Alaskans for whom broadband is affordable <ul style="list-style-type: none"> ○ Baseline: To be determined following affordability study ○ Near-term: Increase covered share of Alaskans by 50% ○ Long-term: 100% of households in all communities in Alaska have access to an affordable broadband plan

In addition to the efforts under the Digital Equity Plan, the ABO will be, as close as economically practicable, adhering to the proposed “low-cost option” language in the BEAD NOFO.

3.5.5 3.4.5 Digital Equity Broadband Access

The ABO is working concurrently on the State of Alaska’s Digital Equity Plan. Below are the anticipated outcomes regarding broadband access within that plan:

Goal	Affordable Devices, Maintenance, and Support
Strategy	Create a device refurbishment, distribution, and maintenance program

KPIs	<ul style="list-style-type: none"> • Increase the number of residents who have access to an affordable device that meets their needs <ul style="list-style-type: none"> ○ Baseline: 30% of Alaskans don't use a computer or tablet ○ Near-term: Reduce baseline by 10% ○ Long-term: 100% have access to an affordable device that meets their needs • Maintenance and repair activities offered locally and expediently <ul style="list-style-type: none"> ○ Baseline: To be determined following survey of qualified maintenance and repair facilities across Alaska ○ Near-term: To be determined upon completion of baseline assessment ○ Long-term: 80% of maintenance and repair will occur in Alaska and have an end-to-end turnaround time of less than two weeks • Provide access to basic technical support for all Alaskans, including options for face-to-face basic technical support in local communities <ul style="list-style-type: none"> ○ Baseline: Unevenly distributed face-to-face support at CAIs across the state; exact baseline to be determined. ○ Near-term: Engage with partners from all 8 covered populations to identify, develop, and expand the number of in-person technical support opportunities at CAIs ○ Long-term: All Alaskans can easily access technical support for their devices
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4 Obstacles or Barriers

Alaska faces numerous challenges to broadband infrastructure deployment, many of which are orders of magnitude greater than experienced in the rest of the contiguous United States.

4.1 Geographic Size and Distance

Alaska is by far the largest state in the country encompassing 586,412 miles² or 365 million acres and equaling one-fifth the total size of the contiguous states. East to west Alaska spans 2,400 miles, and north to south the distance is 1,420. Deploying and maintaining a broadband network connecting communities at the farthest directional points in the state is a monumental task.

4.2 Population

Alaska does not have the lowest population of any state at 736,556 (2022 estimate), but at .93 square miles for each person, the state does have the lowest population density. Ultra-low populations in many of the communities in Alaska means there simply are not enough rate payers (at any cost, let-alone a low-cost option) to cover the lifespan operations and maintenance costs of broadband infrastructure without some type of continuous or ongoing subsidy.

4.3 Topography¹²

Alaska has 39 mountain ranges containing 17 of the 20 highest peaks in the United States; 3 million lakes; and 3,000 rivers including the mighty Yukon River, of which 1,875 miles of the total 2,298 are in the state. Additionally, about 85% of Alaska's area is underlain by permafrost. Alaska also has the most shoreline of any state at 33,904 miles. Complicating the span of vast distances, broadband infrastructure must cross and be deployed directly over/on mountain tops; in lakes, rivers, and the ocean; and through the tundra underlain with permafrost. These topographical features require specialized engineering, equipment, and mobilization increasing the cost of deployment and maintenance.

4.4 Existing Assets and Infrastructure

The State of Alaska does not have a centralized repository or map of State assets and infrastructure. Some large municipalities in Alaska have this capability, but most small municipalities do not. Unincorporated communities certainly lack this type of documentation and mapping. Conducting a comprehensive statewide inventory of existing public hard assets like utility poles, rights-of-ways, etc., has been very challenging and is an ongoing effort.

4.5 Land Ownership, Land and Water Designations, Culturally Sensitive / Significant Areas

4.5.1 Federal Land

Alaska is home to an incredible number of federally designated land and water areas. In fact, 61 percent of all land in Alaska is federally owned¹³.

Alaska includes nine National Conservation Land Units encompassing 1.526 million acres of conservation area, 418 miles of national historic trails, and 952 miles of wild and scenic rivers. The Bureau of Land Management manages these units:

- Steese National Conservation Area (1.2 million acres)
- Iditarod National Historic Trail (418 Miles), for which the BLM is the administrator
- Beaver Creek Wild and Scenic River (111 miles)
- Birch Creek Wild and Scenic River (126 miles)
- Delta Wild and Scenic River (62 miles)
- Fortymile Wild and Scenic River (392 miles)
- Gulkana Wild and Scenic River (181 miles)
- Unalakleet Wild and Scenic River (80 miles)
- Central Arctic Management Area (326,000 acres)

The National Park System manages 18 assets in Alaska totaling nearly 59 million acres:

- Aniakchak National Monument & Preserve (603,497 acres)
- Cape Krusenstern National Monument (659,807 acres)
- Denali National Park & Preserve (6 million acres)
- Gate of the Arctic National Park & Preserve (8.5 million acres)
- Glacier Bay National Park & Preserve (3.3 million acres)
- Katmai National Park & Preserve (4.3 million acres)

¹² Features information obtained from the State of Alaska website: alaska.gov.

¹³ Source RDC website: rdc.net.

- Lake Clark National Park & Preserve (4 million acres)
- Wrangell-St. Elias National Park & Preserve (13.2 million acres)
- Bering Land Bridge National Preserve (2.8 million acres)
- Noatak National Preserve (6.6 million acres)
- Yukon-Charlie Rivers National Preserve (2.5 million acres)
- Kenai Fjords National Park (607,805 acres)
- Kobuk Valley National Park (1.75 million acres)
- Aleutian Islands World War II National Historic Area (134 acres)
- Klondike Gold Rush National Historic Park (12,996 acres)
- Sitka National Historic Park (59 acres)
- Alagnak Wild River (64 miles)
- Inupiat Heritage Center

The National Forest Service manages two national forests in Alaska, including the largest in the United States.

- Tongass National Forest (17 million acres)
- Chugach National Forest (5.5 million)

4.5.2 State Land

The State of Alaska owns approximately 28 percent of the land in Alaska. Part of this includes 156 units comprising 3 million acres of State Park lands. The Alaska Office of History and Archaeology is responsible for managing the Alaska Heritage Resources Survey, a data repository with information about more than 45,000 cultural resources, from prehistoric to modern, and some paleontological sites within the state.

4.5.3 Alaska Native Land (Private)

Under the Alaska Native Claims Settlement Act (ANCSA) of 1971 which created and mandated the settlement of 44 million acres of land to the Alaskan Natives through the creation of twelve regional corporations and over 200 village corporations throughout the state. These private lands are being held in corporate ownership on behalf of the Alaska Native shareholders enrolled in their regional and village corporation. The ANCSA lands which are considered private lands provide access for cultural heritage activities, including traditional subsistence, hunting, fishing, and gathering as well as opportunities for economic development. To further complicate this, the regional corporations own the subsurface rights in their regions and around their village corporations' communities while the village corporations own the surface rights around their communities.

4.5.4 Other Program Funding and Projects

The BEAD program will be competing for human capital and supply chain resources with other federal broadband programs providing significant deployment investment in Alaska. These include USDA ReConnect, USDA Community Connect, NTIA Tribal Broadband Connectivity Program, NTIA Enabling Middle Mile Program, and US Treasury Capital Projects Fund. Thankfully, Alaska is the recipient of substantial funding for other infrastructure programs in the Infrastructure, Investment, and Jobs Act (IIJA), including transportation, maritime, and energy, all with similar funding windows.

4.5.5 Climate

Alaska's climate is as diverse as the state is big. Alaska is a very seasonal location. In many parts of the state construction halts 6-7 months of the year due to snow, ice, and/or frigid temperatures. These conditions result in seasonal road closures, frozen rivers, and sea ice. This limits transportation and construction to just a few short months of the year. Alternatively, where there is tundra and permafrost

in the northern areas of the state, the only available access to a site, to mobilize equipment, and deploy infrastructure (like ground-lay fiber) is when an ice road can be built in the winter. Seasonal construction limitations reduce the available amount of time to complete a project within funding windows as construction year-round is not possible.

4.5.6 Access/Transportation

When considering the remoteness of an area it needs to be judged on the standard of rurality (road distance from population areas), but to also evaluate the remoteness on the level of difficulty in accessibility. The ABO has looked at the accessibility needs of every unserved and underserved community in the state of Alaska and the table is the result of that evaluation:

Table 8: Evaluation of Transport and Accessibility Methods.

Accessibility Means	Accessibility Count of the Unserved and Underserved Communities	Accessibility % of the Unserved and Underserved Communities	Cumulative %	Degree of Accessibility Difficulty
Seasonal River Barge Only	6	3.2%	3.2%	Extremely Difficult
Seasonal Summer Road	5	2.6%	5.8%	
Small Aircraft Only	21	11.1%	16.9%	
Seasonal River Barge and Small Aircraft	31	16.4%	33.3%	
Seasonal Ocean Barge and Small Aircraft	27	14.3%	47.6%	
Year-Round Ocean Barge	19	10.1%	57.7%	
Year-Round Ocean Barge and Small Aircraft	25	13.2%	70.9%	Very Difficult
Year-Round Ocean Barge and Jet Aircraft	1	0.5%	71.4%	
Jet Aircraft Cargo Only	1	0.5%	72.0%	
Road System (through Canada) and Year-Round Ocean Barge	1	0.5%	72.5%	
On the Road System	52	27.5%	100.0%	High-Cost Area Equivalent to the contiguous 48 States

For more than 70% of the unserved and underserved communities in Alaska there is either a seasonal restriction, or a limitation associated with the number of trips per year. For example, while some of the communities have year-round open ports, due to the size of the communities, there may only be one or two barges per year. This absolutely the case for the seasonal ocean barges. There is a spring barge and a fall barge. Once the barge has sailed in the fall, the shipper has two options, wait until the ice clears in the spring, or charter a C-130 Hercules aircraft. While most locations do have accessibility via small aircraft, this will not accommodate large fiber spools, electronic racks, generators, fuel tanks and shelters. Finally, all the evaluations in Table 1 have a starting point of Anchorage or Fairbanks. Prior to arriving in Alaska, the materials must make a ~1500-mile ocean journey or a ~2,200-to-2,600-mile road journey through Canada. All of this has the potential to increase the costs by an order of magnitude or more. It can also cause game-changing project delays if there are upstream supply chain delays. If

materials are delayed at the supplier such that a seasonal barge is missed, it can turn into an entire year's postponement of the project.

4.5.7 Permitting

Alaska's unique topography, wildlife, coastline, and wetlands require significant state and federal environmental permitting. This can often add a year or more to project implementation. If compensatory mitigation is required, especially for disturbed wetlands, project costs can skyrocket.

4.5.8 Workforce Availability

Alaska has unique workforce development challenges due to its vast size, geography, arctic climate, and distance between communities not connected by road. Several populations are underrepresented in the telecom workforce. Broadband industry employers will need a qualified supply of labor to fill industry jobs and priority occupations in every region of the state now and into the future. Alaska also has significant labor shortages in other industries; construction, oil, mining and maritime, for example, that need surveyors, skilled trades workers, engineers, safety personnel and other occupations. There will be a great deal of competition for resident workers with cross-industry skills. Recruiting, training, and assisting rural residents to enter broadband employment are critical for supplying new workers to fill construction and deployment jobs as well as a legacy workforce to support the industry and use of internet services in rural communities. Due to the remoteness of many of these communities it would be very beneficial to have residents trained to be able to assist in the operations and maintenance of the infrastructure once it is put in place.

4.5.9 Communication

The Broadband Office is challenged in its ability to communicate effectively, and in real time with rural residents. In ultra-rural locations reliable broadband non-existent, phone service, both wireless and landlines, is unreliable, and mail service can be seasonal or experience significant delays.

5 Implementation Plan

5.1 Stakeholder Engagement Process

The ABO is engaged in a robust outreach and engagement program. This will continue over the BEAD program lifespan.

The engagement program will ensure:

- Establishment, documentation, and adherence to clear procedures to ensure transparency.
- Meaningful engagement and outreach to diverse stakeholder groups.
 - Outreach and engagement of unserved and underserved communities, including historically underrepresented and marginalized groups and/or communities.
 - Community Anchor Institutions
 - Native Entities
 - Local Governments
 - State Agencies
- Full geographic coverage.
- Multiple participation mechanisms
 - Newsletters
 - Interactive ABO Website
 - Weekly engagement (for each below)
 - Native Entity Concerns

- Infrastructure Development Concerns
 - Access and Affordability Concerns.
- Digital Equity Listening Sessions
- Digital Equity Summit

Alaska’s plan for this program includes:

- **Tribal Liaison and Tribal Consultations:** The ABO has hired a Tribal Liaison effective October 1, 2022. That individual is responsible for leading Tribal consultation process with Alaska’s 229 federally recognized Tribes, 12 Alaska Native regional corporations, over 200 Alaska Native village corporations, and 12 Alaska Native regional non-profit organizations. The Tribal Liaison will be attending several listening sessions around the state.

The ABO will conduct four separate and distinct consultations:

1. Where we are now (in advance of and to inform the Initial Proposal). There are four consultations within this part of the effort
 - a. May 25 – As part of the Indigenous Connectivity Summit
 - b. June 2
 - c. June 22
 - d. June 29
2. Alaska’s Instate Mapping Challenge. These will be held in the fall of 2023, after the subsistence period during the summer. The ABO is looking to help facilitate the Alaska Tribes in-state mapping challenge.
3. Resolutions of Consent for the Final Proposals. The ABO anticipates four additional consultations to be held in the spring of 2024.
4. Cyber security. The ABO is looking to solicit feedback and provide tools for improving cyber security for new and current broadband users.

- **Partner with Digital Equity Listening Sessions:** The ABO has partnered and continues to partner with the Rasmuson Foundation (Digital Equity Administering Entity) and its subgrantees to address broadband issues concurrently by participating in statewide digital equity listening sessions.

5.2 Priorities

Table 11: Priorities for Broadband Deployment and Digital Inclusion

Priority	Description
Infrastructure Builds to Unserved Communities and locations	Develop effective broadband deployment strategies that utilize available funding sources and resources to deliver “Internet for All” Alaskans
Remove barriers to deployment	Streamline permitting processes, reduce cost barriers with build once and coupled projects, and leverage

	existing state and local assets to support infrastructure deployment.
Support workforce development initiatives that provide broadband deployment and digital employment opportunities for Alaskans.	Partner with Department of Labor, Alaska Workforce Investment Board (AWIB), universities, vocational schools, unions, and industry to build the broadband network, develop workers’ skills for digital jobs, and enable remote work opportunities.
Continue outreach and engagement	Continue outreach to Native entities, covered populations, municipalities, and all other interested parties to ensure that all voices are heard.
Digital Equity Need Identification and Prioritization	Promote digital literacy, equity, and inclusion is incorporated into this plan and will be outlined in greater detail in the State of Alaska Digital Equity Plan.

5.3 Planned Activities

5.3.1 Activities Supporting Universal Service

- Develop a Digital Equity Plan to address and eliminate digital equity deficiencies.
- Work jointly with Native and local entities, the telecommunications industry, community anchor institutions, and the public at large to design the most strategic network to reach all unserved and underserved communities.
- Distribute BEAD funding through a subgrant program to prospective awardees to deploy broadband infrastructure to unserved and underserved communities.
- Coordinate with industry, organized labor, universities and trade programs, workforce alliances, Native entities, local governments, economic development organizations, the Alaska Department of Labor and Workforce Development, the Governor’s Office of Infrastructure Coordination, and other state agencies to develop a plan ensuring an available and qualified workforce.

5.3.2 Key Players Supporting Universal Service

Key players supporting Universal Service include:

- Telecommunications Industry
- Alaska Federation of Natives
- Alaska’s Regional Native Corporations
- Alaska’s University System
- AVTEC
- Alaska’s Construction Industry
- Organized Labor
- Alaska Department of Natural Resources
- Alaska Department of Labor and Workforce Development
- Alaska Division of Community & Regional Affairs

5.3.3 Funding Sources for Universal Service Activities

Universal Service funding will come primarily from the State’s BEAD allocation, and funding from additional broadband infrastructure funding programs like NTIA’s Tribal Broadband Connectivity

Program and Enabling Middle Mile Program, and USDA's ReConnect and Community Connect Programs. The ABO is partnering with the Alaska Federation of Natives to understand how Tribal Capital Projects Fund allocations may be used as match funding for Alaska's Tribes to obtain partial or sovereign ownership of local/regional networks. The ABO is also exploring options for Department of Defense support for broadband infrastructure in Alaska's strategic Arctic ports.

5.3.4 Expected Outcomes for Universal Service Activities

- The most efficiently designed network possible for achieving Universal Service.
- Network sections that are sustainable throughout full lifecycle and replacement.
- An available and qualified workforce.

5.3.5 Universal Service Expected Funding Gaps

The ABO has estimated the cost to achieve Universal Service to be ~\$1.8 billion. The funding gap is estimated to nominally be \$800 million. The ABO expects that other funding sources, such as the Tribal Broadband Connectivity Round 2 and the USDA's Rural Electric Connect (REConnect) Round 4 and Community Connect programs, will offset a substantial portion of the \$800 million.

5.4 Key Execution Strategies

5.4.1 Public-Private Partnerships

The State of Alaska has no broadband infrastructure, and has no plans to build, own, or operate state-owned broadband infrastructure. Except for operation of the ABO, the state will be deploying 100% of the BEAD funding through a subgrant program to eligible entities. Therefore, no consideration was given to public-private partnerships.

5.4.2 Strategies to Address Affordability Issues

5.4.2.1 Federal Subsidies

Alaska's ultra-low population density (.93 acres per person statewide) in many of Alaska's communities means there simply are not enough rate payers (at any cost, let-alone a low-cost option) to cover the lifespan operations and maintenance costs of broadband infrastructure without some type of subsidy. This is true even if one hundred percent of the capital costs are covered by grant funds. The ABO has completed an Operations & Maintenance (OPEX) model for the draft network design to achieve universal service. In some locations the OPEX margin is negative 700%. It is essential the existing federal subsidies in place for Alaska's carriers remain in place.

5.4.2.2 Affordable Connectivity Program

As part of the subgrant award program, State of Alaska will require all potential subgrantees to participate in the Affordable Connectivity Program (ACP), and to actively solicit participation. The ABO will continue to support RurAL Cap, Alaska Federation of Natives, and other Native Entity recipients, in their efforts to assist enrolling households in ACP as part of the FCC grants, they received.

5.4.2.3 Parity Endowment & Grant Funding

The ABO expects many types of organizations and companies to participate in parity funding. This will likely include grant making by philanthropic organizations, like the Rasmuson Foundation; agency grants from non-profit entities supporting covered populations; and grants from major Alaska corporations through charitable giving programs.

5.4.2.4 Broadband Parity Adjustment Fund

House Bill 363 that established the ABO and the Statewide Broadband Advisory Board, also established the Broadband Parity Adjustment Fund for the purpose of offsetting the costs of broadband services for the consumer and making grants to eligible beneficiaries to improve the performance of and access to broadband across the state. Criteria for fund management need to be set by regulation. Capitalization of the fund is at the sole discretion of the Alaska legislature.

5.4.2.5 Subgrantee State-Specific Rate Requirements

In the development of the subgrant program the ABO will consider the sustainability of requiring state-specific rate requirements as part of the application grading criteria.

5.4.2.6 Tribal Offsets

Some Native Entities, which include federally recognized tribes, regional, and village corporations are using alternative funding sources to offset, complement or fully cover the cost of broadband services for their community members. This may be a practice that continues.

5.4.2.7 Strategies to Ensure Available and Highly Skilled Workforce

Early in the BEAD and Digital Equity planning process the ABO summarized intent to approach broadband workforce development as a three-legged stool. 1. Workforce for Deployment, Construction, and Installation; 2. Workforce for Operations and Maintenance (some carry over from Deployment); and 3. Workforce Training after Universal Broadband Deployment. Two other core priorities emerged: a) the need to have a workforce capable of more than just broadband specialized work (e.g., maintenance of broadband infrastructure and alternative energy technology in remote locations); and b) importance of local training and hiring, especially in legacy jobs.

The BEAD Workforce Planning Guide outlines the plan pacing for each of the three BEAD milestone deliverables: Five-Year Action Plan, Initial Proposal, and Final Proposal. For the Five-Year Action Plan the ABO should have their team in place, understand the workforce landscape, and set workforce goals. The team should be starting to think about strategies used to promote fair labor standards, ensuring a highly skilled workforce, and encouraging equitable training and workforce development. By completion of the Five-Year Action Plan, the ABO should have engaged partners and collaborated with them to understand the workforce landscape and set goals, with engagement expected to continue throughout the BEAD award performance.

To that end, workforce development planning has been a priority since January for the ABO. A Broadband Workforce Core Planning Group was established in January including representatives from the ABO (Tribal Liaison and Deputy Director), the University of Alaska, the Alaska Department of Labor and Workforce Development (Alaska Vocational Technical Center and the Alaska Workforce Investment Board), the Alaska Safety Alliance, and the Alaska Works Partnership.

In April, the ABO entered a subgrant award agreement with the Alaska Works Partnership to help lead Broadband Workforce Development.

A Broadband Workforce Development Team (BWDT) has been established to provide oversight to the planning process. The BWDT includes all of the aforementioned Core Planning Group members and representatives from the following organizations: Rasmuson Foundation (Digital Equity Administering Entity), the Alaska Native Science and Engineering Program (ANSEP); Associated General Contractors, Alaska Telecom Association (ATA); Alaska Chapter of the National Association of Electrical Contractors (NECA); Alaska Joint Electrical Apprenticeship & Training Trust (AJEATT); Alaska AFL-CIO; Denali

Commission; Calista Corporation; Alaska Municipal League (AML); NANA Corporation; Alaska Federation of Natives (AFN); Alaska Primary Care Association (APCA); and Iġisaġvik College. A representative of K-12 school programs will be added.

The BWDT has established a draft vision, mission, and goals as outlined below. As the planning process progresses the items will evolve.

Draft Vision Statement:

Alaskans from every region of the state, and from diverse backgrounds, will learn about, train for, and fill broadband industry jobs to meet the needs of industry employers.

Draft Mission Statement:

Alaska's Broadband Industry Sector Workforce Plan will support development of a diverse and inclusive skilled labor force to meet the needs of employers who build, deploy, operate, maintain, and upgrade telecommunication and internet infrastructure in every region of Alaska.

Draft Goals:

Three Primary Goals

Primary Goal #1: Training and Employment

Increase the number of Alaskans qualified to fill broadband industry occupations in every region of the state.

As an increasing number of broadband construction projects come online throughout the state, telecommunications firms, Internet Service Providers (ISPs), construction contractors and material suppliers will need to employ hundreds of technically trained workers in a variety of occupations to complete projects and deploy services. Most of the federal BEAD investment will be to expand broadband to rural and remote communities. Preparing rural residents for these jobs will result in a skilled, diverse, and inclusive labor force to meet broadband job demand.

Primary Goal # 2: Developing a diverse and inclusive industry workforce.

Increase training opportunities for broadband occupations and skills, while ensuring demographic and geographic equity.

Alaska has unique workforce development challenges due to its vast size, geography, arctic climate, and distance between communities not connected by road. Several populations are underrepresented in the telecom workforce. Broadband industry employers will need a qualified supply of labor to fill industry jobs and priority occupations in every region of the state now and into the future. Alaska also has significant labor shortages in other industries; construction, oil, mining and maritime, for example, that need surveyors, skilled trades workers, engineers, safety personnel and other occupations. There will be a great deal of competition for resident workers with cross-industry skills. Recruiting, training, and assisting rural residents to enter broadband employment critical for supplying new workers to fill construction and deployment jobs as well as a legacy workforce to support the industry and use of internet services in rural communities.

Primary Goal # 3: Ensuring maximum career opportunities post broadband deployment.

Strengthen and expand a robust and sustainable on-line career guidance, employment and training system that continuously informs rural students and adult job seekers so they can learn about and navigate occupational and career pathways, including self-employment opportunities.

Five Ancillary Goals:

Goal 1A: Increase knowledge of broadband industry occupations and the skills, training, and credentials needed for employment.

To prepare a workforce for the broadband industry, Alaskans must know about priority occupations, the skills, training, and credentials needed to fill jobs, and about career pathways in the industry. This will require increasing awareness among students, counselors, parents, teachers, and others about Alaska's broadband industry opportunities.

Goal 2A: Increase the diversity of Alaska's broadband workforce.

Historically underrepresented populations (as defined by NTIA and the Alaska ABO) must be reached to achieve broadband workforce diversity. Training, recruitment, and employment efforts must target under-represented populations. This goal will work in concert with Goal #2 above, to increase broadband training opportunities while ensuring demographic and geographic equity.

Goal 3A: Establish contracting requirements to ensure diversity while developing legally compliant BEAD projects.

Federal requirements include activities such as establishing community hire and project labor agreements, utilizing contracting requirements for Minority Business Enterprises (MBE), Women-owned Business Enterprises (WBE), and other small or economically disadvantaged businesses. The ABO may develop and implement Alaska Bidder, Offeror, and Alaska Hire procurement preferences and apprentice utilization goals for broadband projects.

Goal 4A: Ensure ongoing industry, education, labor and workforce partner involvement throughout the planning, implementation, assessment, and continuous improvement stages of the Broadband Workforce Plan.

Continued partner involvement is critical to successful implementation of the broadband workforce plan and completion of Alaska's broadband projects.

Goal 5A: Develop and carry out processes for implementation, evaluation, and continuous improvement of broadband workforce plan.

Regular assessment of and improvement is necessary as broadband projects progress and as economic or labor market conditions change or state and federal priorities shift.

Ancillary goals associated with Primary Goal #3 are in progress. To ensure the appropriate intersection with Digital Equity the BWDT will use the measurable objectives developed for the covered populations in the Digital Equity Plan to ensure broadband workforce goals align with the needs of vulnerable populations and groups traditionally un/underrepresented in the telecommunications industry.

The next step in progress for workforce development includes additional acquisition and analysis of workforce landscape data. Data will be obtained from the Alaska Department of Labor and Workforce Development, and from survey of nine classes of entities (e.g., ISPs, apprenticeship programs, education institutions, etc.) to understand existing resources and gaps.

The ABO is working closely with other State of Alaska departments, including Labor and Workforce Development, Transportation, and the Governor’s Office of Infrastructure Coordination to ensure the Broadband Workforce Development Plan becomes the first module in a broader statewide workforce development plan. The ABO is also coordinating with the Alaska Safety Alaska’s BEAD Deployment Subgrant Program.

5.4.4 Statewide Broadband Advisory Board Meetings:

- On August 9, 2022, Governor Mike Dunleavy signed House Bill 363 into law creating the ABO. The bill also establishes the Statewide Broadband Advisory Board comprised of a diverse group of stakeholders. The appointment of that Board occurred in late January 2023, and the Board will meet regularly to provide feedback on Alaska’s broadband program, milestones, and deliverables.
 - **Technical Working Group:** House Bill 363 also created a Technical Working Group to provide technical expertise to the Broadband Advisory Board and Broadband Office staff regarding broadband infrastructure and technologies. This group will be appointed by the Advisory Board once the Board is seated. This is expected in the spring of 2023. The Technical Working Group will meet regularly.

5.5 Estimated Timeline for Universal Service

The ABO estimates the timeline for universal service to be complete in April 2029, or within four years after the final BEAD funding to the state. The ABO intends to release grant funding in tranches. The purpose of this is to ensure Alaska’s workforce and supply chain is not overwhelmed with all broadband projects requiring completion within the same timeframe. The system is already stressed with existing projects funded by USDA ReConnect, NTIA Tribal Broadband Connectivity Program, and NTIA Middle Mile projects. Many other programs funded under the Infrastructure Investment and Jobs Act of 2021 have similar construction and deployment timeframes further compounding the need for qualified workers from a limited pool (due to the state’s small population). This same trend is occurring throughout the entire country significantly limiting the potential for out-of-state workers to supplement Alaska’s local workforce. It is a priority of the ABO to ensure maximum work for Alaskans, particularly maximum work for rural Alaskans. The release of grant funds in tranches is a strategic action to enable the utmost work for Alaskans.

Year-round construction is precluded in much of Alaska:

- Winter weather conditions generally prohibit work. Except for Ground Lay Fiber, which is exclusively a winter build.
- Access only available in winter (ice road access over frozen tundra).
- Barge shipping schedules for supply chain access.
 - For Many villages, barges only run twice a year
- Subsistence hunting/fishing/gathering.

The proposed “network ideas” to Alaska’s unserved and underserved locations is to understand what the cost might be to achieve “Internet for All.” The subnetworks are listed below in prioritized order by

level of service availability, funding tranche, and estimated completion timeframe. Grant funding for network projects will be released in accordance with Section IV.B.7.b.1 [*Complete Coverage of Unserved Locations and Underserved Locations, Followed by Prioritization of Eligible CAIs.*] of the NOFO in conjunction with the other grant funding opportunities. The ABO recognizes that it will have to be a combination of the BEAD program funding, the Tribal Broadband Connectivity Programs, the USDA Community Connect and Rural Electric Connect (REConnect) programs and potentially additional new grant programs to ensure that all the unserved, underserved and Community Anchor Institutions are fully connected. The ABO also understand that there will need to be updates to the timeline and costs in the table below due to economic and social impacts that may arise.

Table 12: Estimated Universal Service Timeline by Subnetwork

Subnetwork	Locations to be Served	Grant Funding Tranche (1-X)	Estimated	Estimated Project Completion Date
IN-01	Summit Lake	\$660,000	Aug-24	Aug-28
IN-02	Gold Sands Acre	\$453,750	Aug-24	Aug-28
IN-03	Lake Louise	\$5,842,980	Aug-24	Aug-28
IN-04	Dry Creek	\$2,682,744	Aug-24	Aug-28
IN-05	Tanacross	\$2,600,275	Aug-24	Aug-28
IN-06	Northway, Northway Junction	\$4,087,290	Aug-24	Aug-28
IN-07	Livengood	\$2,171,112	Aug-24	Aug-28
IN-08	Tetlin	\$5,312,646	Aug-24	Aug-28
YK-01	Kotlik, Scammon Bay, Nunam Iqua, Alakanuk, Emmonak, Mountain Village, Saint Mary's, Pitkas Point, Pilot Station, Marshall, Russian Mission	\$118,392,268	Aug-24	Aug-28
IN-09	Whitestone	\$2,217,070	Aug-24	Aug-28
IN-11	Minto, Manley Hot Springs	\$18,029,890	Aug-24	Aug-28
IN-12	Eagle Village, Eagle, Chicken	\$31,672,098	Oct-24	Oct-28
IN-13	Circle, Central, Eagle Creek, Chantanika	\$29,893,284	Aug-24	Aug-28
IN-14	Holy Cross, Shageluk, Anvik, Grayling, Kaltag, Nulato, Koyukuk, Galena, Poorman, Ruby	\$133,903,771	Aug-24	Aug-28

IN-15	Dot Lake	\$1,987,608	Aug-24	Aug-28
IN-16	Arctic Village, Venetie, Chalkyitsik, Birch Creek, Birch Creek	\$59,765,569	Aug-24	Aug-28
IN-17	Nabesna	\$7,962,290	Aug-24	Aug-28
IN-18	Four Mile Road	\$2,031,905	Aug-24	Aug-28
IN-19	Chisana, Alcan Border	\$18,334,420	Sep-24	Sep-28
SE-01	Craig	\$5,082,000	Dec-24	Dec-28
CI-01	Trapper Creek	\$4,735,500	Aug-25	Aug-29
SE-02	Thorne Bay	\$3,184,500	Aug-25	Aug-29
CI-02	Whittier	\$2,334,750	Dec-24	Dec-28
CR-01	Paxson	\$2,120,250	Oct-25	Oct-29
CR-02	Slana	\$1,872,750	Oct-25	Oct-29
CI-03	Moose Pass	\$1,666,500	Oct-25	Oct-29
SE-03	Hydaburg	\$1,386,000	Aug-25	Aug-29
CR-03	Mentasta Lake	\$1,245,750	Oct-25	Oct-29
BB-01	Nondalton	\$1,014,750	Oct-25	Oct-29
CI-04	Primrose	\$915,750	Oct-25	Oct-29
BB-02	Port Alsworth	\$726,000	Oct-25	Oct-29
BB-03	Kokhanok	\$651,750	Aug-25	Aug-29
CR-04	Mendeltna	\$643,500	Oct-25	Oct-29
BB-04	Iliamna	\$610,500	Oct-25	Oct-29
SE-04	Lutak	\$610,500	Oct-25	Oct-29
IN-20	Deltana	\$10,943,500	Oct-25	Oct-29
BB-05	Pedro Bay	\$462,000	Aug-25	Aug-29
CI-05	Cohoe	\$13,271,041	Oct-25	Oct-29
CR-05	Nelchina	\$387,750	Oct-25	Oct-29
BB-06	Igiugig	\$379,500	Oct-25	Oct-29
CI-06	Chickaloon	\$3,997,662	Oct-25	Oct-29
CI-07	Funny River, Cooper Landing	\$23,989,940	Oct-25	Oct-29
CR-06	Meiers Lake	\$280,500	Oct-25	Oct-29
SE-05	Mud Bay	\$4,610,030	Oct-25	Oct-29
CH-01	Port Graham, Nanwalek, Halibut Cove, Seldovia Village, Seldovia, Fox River, Fritz Creek	\$49,389,168	Aug-25	Aug-29
CI-08	Petersville	\$5,776,494	Oct-25	Oct-29

KD-01	Chiniak, Womans Bay	\$10,482,179	Dec-24	Dec-28
CI-09	Nikolaevsk	\$4,995,195	Aug-25	Aug-29
CI-10	Crown Point	\$2,350,608	Aug-25	Aug-29
CR-07	Chistochina	\$2,334,108	Oct-25	Oct-29
SE-06	Tenakee springs, Pelican, Elfin Cove, Gustavus, Excursion Inlet, Hoonah	\$59,962,652	Oct-24	Oct-28
SE-07	Kake	\$16,781,872	Oct-25	Oct-29
YK-02	Chefornak, Kipnuk, Kwigillingok, Kongiganak	\$30,240,438	Jul-25	Jul-29
CI-11	Beluga, Skwentna, Alexander Creek	\$30,112,550	Aug-25	Aug-29
CI-12	Hope, Sunrise	\$15,041,060	Oct-25	Oct-29
BB-07	Ekuk	\$2,114,480	Oct-25	Oct-29
BR-01	Savoonga, Gambell	\$39,087,204	Jun-25	Jun-29
BB-08	Twin Hills, Twin Hills, Togiak	\$37,923,170	Jun-25	Jun-29
YK-03	GoodNews Bay	\$4,725,672	Jul-25	Jul-29
NS-01	Nuiqsut	\$16,582,824	Oct-24	Oct-28
CH-02	Tatitlek	\$8,398,880	Oct-25	Oct-29
SE-08	Meyers Chuck, Port Alexander, Point Baker, Port Protection, Edna Bay, Whale Pass, Naukati Bay	\$49,915,762	Oct-25	Oct-29
IN-21	Wiseman, Coldfoot	\$6,325,104	Oct-25	Oct-29
AW-01	Nelson Lagoon, Port Heiden, Ugashik, Pilot Point, Egegik, South Naknek	\$82,100,776	Oct-24	Oct-28
KD-02	Karluk, Uyak	\$10,852,150	Oct-25	Oct-29
KD-03	Akhiok, Old Harbor, Pasagshak	\$35,834,952	Oct-25	Oct-29
BR-02	Council, Solomon	\$14,932,430	Oct-25	Oct-29
CI-13	Rainbow	\$1,831,740	Oct-25	Oct-29
IN-22	Lake Minchumina, Telida, Nikolai,	\$145,184,192	Oct-25	Oct-29

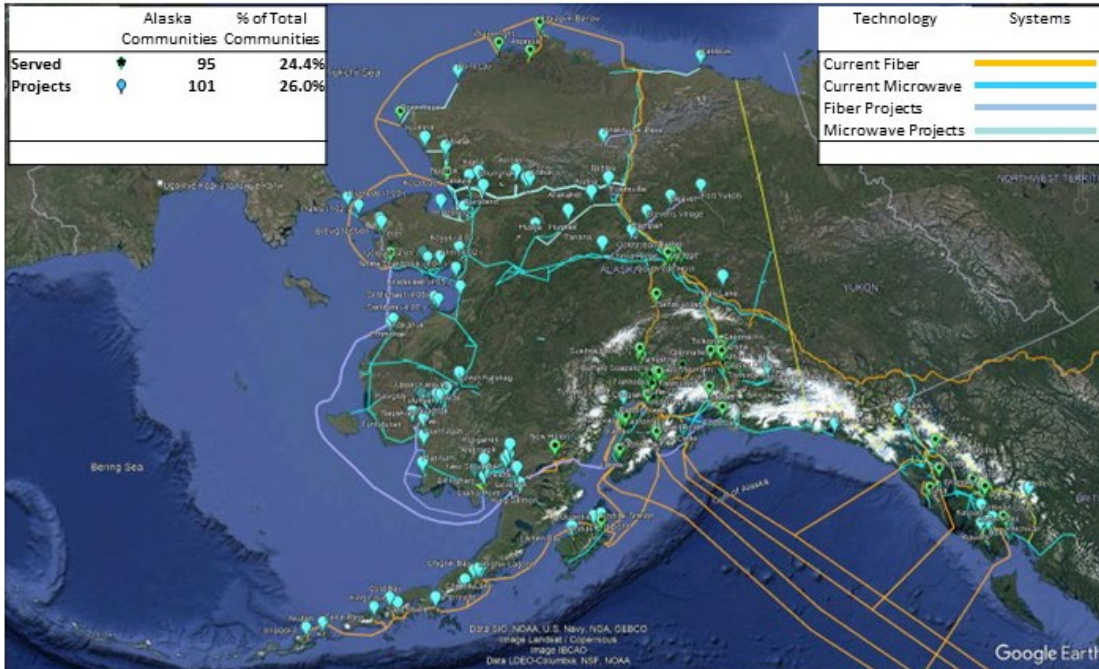
	Medfra, Takotna, McGrath, Lime Village, Stony River, Sleetmute, Red Devil, Crooked Creek, Chuathbaluk, Aniak			
YK-04	Mekoryuk, Nightmute, Toksook Bay, Tununak, Mertarvik, Chevak, Hooper Bay,	\$79,730,346	Apr-24	Apr-28
BR-03	Shishmaref	\$30,643,410	Oct-25	Oct-29
AW-02	Atka, Adak, Nikolski	\$140,223,882	Oct-25	Oct-29
SE-09	Annette	\$3,263,630	Oct-25	Oct-29
AW-03	Saint Paul, Saint George	\$88,847,974	Sep-24	Sep-28
BB-09	Ivanof Bay	\$7,148,510	Sep-24	Sep-28
BB-10	Portage Creek	\$9,538,445	Sep-24	Sep-28
BB-11	Pope Vannoy Landing	\$5,544,314	Sep-24	Sep-28
KD-04	Aleneva	\$5,628,992	Sep-24	Sep-28
BR-04	Mary's Igloo	\$13,631,435	Sep-24	Sep-28

5.6 Estimated Cost for Universal Service

The ABO estimates the cost to bring universal service to all unserved and underserved communities to be \$1.8 Billion.

In late 2022, and early 2023 the ABO mapped the existing fiber and microwave networks within the state.

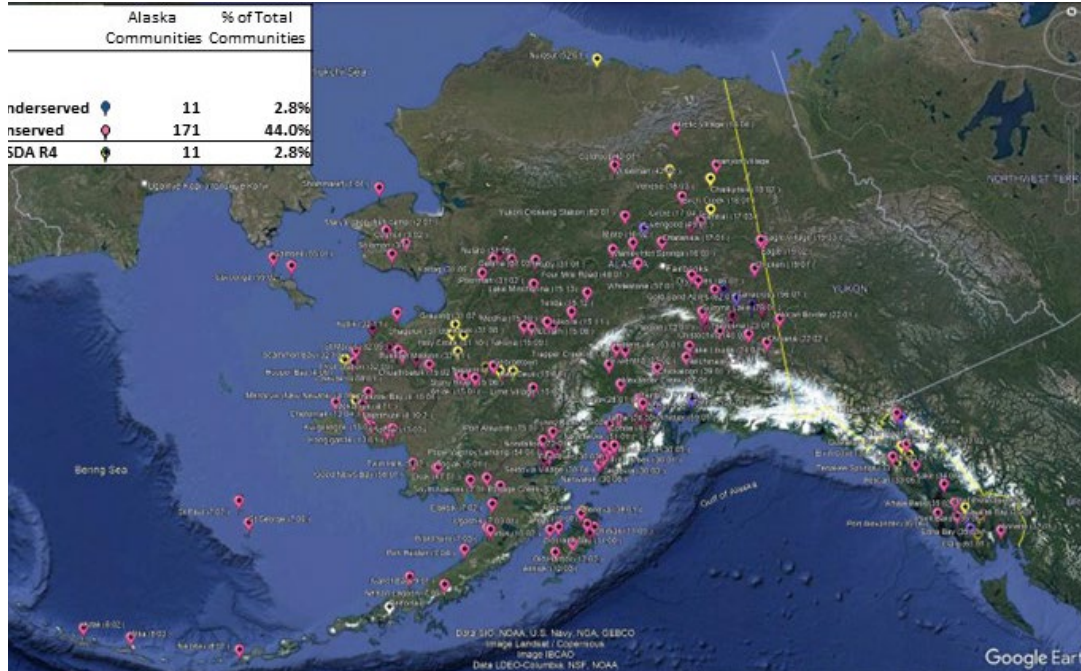
Map 3. Existing and Funded Alaska Fiber and Microwave Networks



The map was augmented by adding the fiber and microwave projects in progress and/or awarded funding through other broadband grant programs including USDA ReConnect I-IV; USDA Community Connect; and NTIA Tribal Broadband Connectivity.

Nearly 30% of Alaska’s communities, or 95, are considered served. Another 101 communities will be considered served when funded projects are complete. Once existing networks were identified, the ABO overlaid that on a map of the unserved and underserved communities in the state. Pink is unserved locations (171). Dark blue is underserved communities (11). This represents approximately 47% of the communities in Alaska.

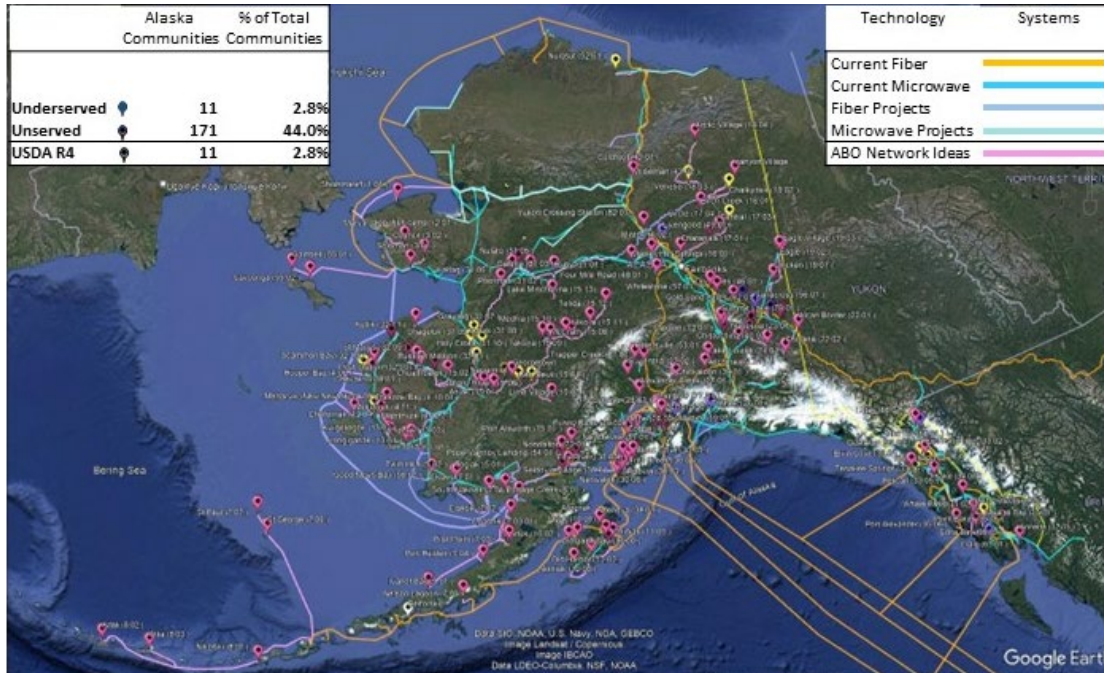
Map 4. Unserved and Underserved Alaska Communities (Appendix A)



The Broadband Office designed a “draft” network to all unserved, and underserved locations. Those proposed network routes can be seen in dark blue in the figure below. The “draft” network was accompanied by a cost estimate for each Subnetwork. The cost estimate is attached as Appendix A.

The “draft” network map and cost estimate spreadsheet were modified into interactive formats for industry and public crowd sourcing and uploaded to the ABO website.

Map 5. “Draft” Network Ideas to Connect Unserved and Underserved Alaska Communities



5.7 Alignment

The ABO has reviewed several statewide and regional plans to understand the interconnections between existing plans/planning efforts and the work of the ABO and the Five-Year Action Plan. Below is an example of the alignment crosswalk between three different plans. This effort will continue and will be expanded in the Initial and Final Proposals.

5.7.1 State Digital Equity Plan

The State’s Digital Equity Plan (due September 30, 2023) will be incorporated into the Five-Year Action Plan.

5.7.2 Governor’s Task Force on Broadband Final Report

The Governor’s Task Force on Broadband completed their work in November 2021. The Task Force developed a Buildout Plan as a roadmap to success identifying a matrix of short-term, intermediate, and long-term goals ensuring high-quality broadband for every Alaskan. The information that follows outlines how the Five-Year Action Plan is in alignment with the short-term action recommendations. Alignment with the intermediate and long-term actions will be addressed in the Initial and Final Proposals.

5.7.3 Short-Term Action

Closing the Needs Gap	<ul style="list-style-type: none"> ● Evaluate and prioritize unserved and underserved communities. <ul style="list-style-type: none"> ○ The ABO has identified and mapped all unserved and underserved communities. The BEAD program requires the prioritization of unserved and underserved locations in the allocation of funding for projects.
	<ul style="list-style-type: none"> ● Establish speed benchmark or standard of service. <ul style="list-style-type: none"> ○ The ABO has adopted the standards of service identified by the NTIA (Unserved >25/3 Mbps, Underserved >100/20 Mbps).
	<ul style="list-style-type: none"> ● Establish cost/rate benchmark.

	<ul style="list-style-type: none"> ○ As part of the Initial Proposal the ABO will identify the requirements for each deployment project to include a low-cost service option in conformance with NTIA guidelines.
	<ul style="list-style-type: none"> ● Identify current and needed workforce needs. <ul style="list-style-type: none"> ○ The ABO has established a Broadband Workforce Development Team, and the Alaska Works Partnership is leading the workforce development planning effort.
Technology Solutions	<ul style="list-style-type: none"> ● Consider the roles for fiber, microwave, LEO, and GEO <ul style="list-style-type: none"> ○ The ABO is working within the confines of the BEAD program requirements to remain technology neutral and recognizes all technologies will have a place in a statewide solution for universal service.
	<ul style="list-style-type: none"> ● Host technology education sessions. <ul style="list-style-type: none"> ○ The ABO hosts Technology Listening Session accessible via phone and the internet every Thursday at 2pm.
	<ul style="list-style-type: none"> ● Consider last mile improvements. <ul style="list-style-type: none"> ○ Last mile improvements will be an integral part of the BEAD program project funding allocations.
	<ul style="list-style-type: none"> ● Explore increased wireless technologies. <ul style="list-style-type: none"> ○ In remaining technology neutral, the ABO will consider wireless technologies as possible solutions.
Overcoming Hurdles	<ul style="list-style-type: none"> ● Identify project capital needs and public investment necessary. <ul style="list-style-type: none"> ○ The ABO has designed and sought public input on a capital cost model for a draft network design to achieve universal service. The public investment necessary, based on the most recent project awards is approximately \$1.8 Billion.
	<ul style="list-style-type: none"> ● Establish a broadband permitting coordinator. <ul style="list-style-type: none"> ○ The ABO has established a partnership with the Office of Project Management and Permitting (OPMP) in the Department of Natural Resources. Funding is in place in the BEAD budget for a Permit Coordinator position within OPMP.
	<ul style="list-style-type: none"> ● Identify ways in which operating expenses can be reduced. <ul style="list-style-type: none"> ○ The ABO has developed an Operating Expense (OPEX) model and is still evaluating ongoing operations and maintenance sustainability.
Alaska Broadband Policy	<ul style="list-style-type: none"> ● Establish state goals for broadband deployment <ul style="list-style-type: none"> ○ The ABO is working within the parameters of the program requirements of the BEAD program to establish broadband deployment guidelines.
	<ul style="list-style-type: none"> ● Develop criteria to help the State prioritize investment. <ul style="list-style-type: none"> ○ The BEAD program allocates 75% of the scoring prioritization for three established criteria. In the State’s Subgrant award program, as part of the Initial Proposal, the ABO will be identifying the prioritization criteria for the remaining 25%.
	<ul style="list-style-type: none"> ● Deploy federal funding to meet short and long-term need. <ul style="list-style-type: none"> ○ The ABO will work within the structure of the BEAD program to deploy funding for projects sustainable and scalable.
Equitable Funding Strategy	<ul style="list-style-type: none"> ● Identify buckets into which available funding may be available. <ul style="list-style-type: none"> ○ The ABO will only have access to deployment funds through the BEAD program. The ABO will make the funding available in conformance with program requirements.
	<ul style="list-style-type: none"> ● Develop draft grants process for consideration by SBAB and RBPCs. <ul style="list-style-type: none"> ○ Volume II of the State’s Initial Proposal will include a draft of the State’s Subgrant award program. It will be made available to the SBAB for review.
	<ul style="list-style-type: none"> ● Encourage stabilization of the Alaska Universal Service Fund.

	<ul style="list-style-type: none"> ○ This is not work in which the ABO has engaged.
	<ul style="list-style-type: none"> ● Evaluate metrics and functionality of Parity Adjustment. <ul style="list-style-type: none"> ○ House Bill 363 established a Broadband Parity Adjustment Fund. The criteria need to be established by regulation.
Office of Broadband Deployment	<ul style="list-style-type: none"> ● Establish Office with authority allowed by Executive Order. <ul style="list-style-type: none"> ○ House Bill 363 established the ABO within the Department of Commerce, Community, and Economic Development in August 2022.
	<ul style="list-style-type: none"> ● Establish State Broadband Advisory Board (SBAB). <ul style="list-style-type: none"> ○ House Bill 363 also established the State Broadband Advisory Board. Members were appointed by the Governor’s Office in February 2023.
	<ul style="list-style-type: none"> ● Establish Regional Broadband Planning Committees (RBPCs). <ul style="list-style-type: none"> ○ RBPCs have not currently been contemplated.
	<ul style="list-style-type: none"> ● Develop the internal controls for project management. <ul style="list-style-type: none"> ○ The ABO is assembling the team necessary to effectively manage the BEAD program.

5.7.4 Comprehensive Economic Development Strategy (CEDS)

The State of Alaska just completed a revision of the Comprehensive Economic Development Strategy. The CEDS includes important actions for Broadband.

Goal 4 of the CED is titled Build and Update Economic Foundations. This is summarized that all economies depend on basic foundations to function and grow. These foundations include infrastructure, housing, recreational amenities, energy, and other factors influencing living costs and quality of life (e.g., health, safety, and education). When these foundations are strong, they help to attract and retain human capital, and support the wellbeing of communities. Objective 4.1 is dedicated to broadband.

Objective 4.1: Ensure access to broadband in all Alaska communities that meets an acceptable standard for speed, reliability, and affordability.

- Action 1: Develop a plan to maximize the value of broadband funds coming to Alaska under the BEAD, Digital Equity, and other federal programs.
 - The ABO has established a draft network design and capital cost model to achieve universal coverage in the most efficient manner possible. The ABO will also be establishing a deconfliction process to ensure duplication of projects does not occur between multiple federal programs.
- Action 2: Establish and fully staff the State of Alaska Office of Broadband.
 - The ABO was officially established in House Bill 363 in August 2022. The office is currently staffed with four individuals but will be increasing staff to accommodate for grant management and permit coordination in the future.
- Action 3: Build middle and last mile broadband infrastructure to increase access and reduce costs in unserved and underserved areas.
 - The Broadband Office will be establishing a Subgrant award program to award BEAD funds for middle and last mile projects increasing access across Alaska.
- Action 4: Utilize funding under the Digital Equity Act to close the digital divide and promote equity and digital inclusion.
 - The Broadband Office will use Digital Equity Capacity Grant funding to award grants to entities proposing solutions identified in the State Digital Equity Plan to achieve digital equity and inclusion.
- Action 5: Connect tribal communities to affordable broadband through the Tribal Broadband Connectivity Program as well as other state and federal programs.

- Tribal communities and tribal entities are considered eligible entities to apply for funding under the BEAD program, in addition to the Tribal Broadband Connectivity Program.

5.7.5 Alaska Works Matters Task Force Final Report

In early 2021, Governor Mike Dunleavy initiated the formation of the Alaska Work Matters Task Force under the umbrella of the Governor’s Council on Disabilities and Special Education (GCDSE) and the Alaska Mental Health Trust Authority (Mental Health Trust). The directors of the state Division of Vocational Rehabilitation (DVR) and the GCDSE were named as chair and co-chair, and 22 additional individuals representing state agencies and boards, Tribal Vocational Rehabilitation, Mental Health Trust beneficiaries, employers, and educators were selected to participate. The purpose of the Task Force was to review and analyze existing policies, practices, and procedures, barriers, and workforce utilization data regarding the employment of people with disabilities in the State of Alaska. The Task Force identified 11 areas for possible enhancement. As one would imagine non were specific to broadband, but three recommendations relate directly to the broadband effort.

- SECTION 1: STATE OF ALASKA AS A MODEL EMPLOYER FOR INDIVIDUALS WITH DISABILITIES
 - Recommendation 5: Ensure that all State of Alaska online platforms are fully accessible.
 - The ABO is incorporating a review of State online platform accessibility as part of the Digital Equity Plan which will be completed on September 30, 2023.
- SECTION 2: BUILDING THE CAPACITY OF THE PRIVATE SECTOR TO ENHANCE EMPLOYMENT OPPORTUNITIES FOR INDIVIDUALS WITH DISABILITIES
 - Recommendation 10: Increase the number of people with disabilities involved in apprenticeships and internships.
 - As part of the Broadband Workforce Development Plan the ABO is working directly with the state’s apprenticeship program managers. A primary broadband workforce goal is to have a diverse and inclusive a workforce, including persons traditionally underrepresented in the telecommunications industry.
- SECTION 5: STAY AT WORK, RETURN TO WORK
 - Recommendation 21: Support and encourage teleworking where possible and desirable.
 - This recommendation is only possible statewide with universal broadband deployment throughout Alaska. That is the primary focus of the ABO.
 - Recommendation 23: Support and expand the Senior Employment Initiative.
 - Like the alignment with Recommendation 10 above, primary broadband workforce goal is to have a diverse and inclusive a workforce, including persons traditionally underrepresented in the telecommunications industry. Strategies for how to attain a diverse workforce, including seniors, will be included in the Broadband Workforce Development Plan.

5.8 Technical Assistance

Technical Assistance

The ABO expects to need technical assistance in two areas, both requiring approval by NTIA. Those two milestones are the State Mapping Challenge and State Subgrant Program. Alaska has chosen a more aggressive completion timeframe than the maximum allowable time limits for the Five-Year Action Plan, Initial Proposal, and Final Proposal. Alaska will be requesting an early review of these deliverables. The ABO’s need will be more for timing for review and approval than detailed technical assistance.

The ABO respectfully requests the release at the soonest time possible of any planned guidance documents for the Initial Proposal, Final Proposal, or any component therein.

The ABO does not anticipate any additional technical assistance, other than interpretation clarifications answered by NTIA and NIST.

Incomplete/Draft Data in Five-Year Action Plan

Through its Administering Entity, the Rasmuson Foundation, the ABO has been engaged in Digital Equity planning since August 2022, prior to the Digital Equity Planning Grant award. Significant progress has been made, and a draft of the Digital Equity Plan is complete and is included with the Five-Year Action Plan submittal. The final Digital Equity Plan will be complete by September 30, 2023, and the Five-Year Action Plan will be updated to include any new or supplemental data.

The Digital Equity Plan includes statewide Tribal consultation and outreach. However, the delay of the Tribal Digital Equity Planning funds means the ABO will need to update the Digital Equity Plan with additional Tribal information once planning has taken place with individual Tribal entities or Tribal consortiums.

6 Conclusion

The ABO has collaborated with multiple partners to develop the most efficient fiber network design to achieve Universal Service in Alaska's unserved and underserved communities. This design reflects the needs of Alaska rural and Indigenous populations.

Concurrently with network construction, Alaska will begin implementing the solutions outlined in the draft Digital Equity Plan to bridge the identified gaps in digital equity.

7 Appendices

See external files