



Wyoming Draft Digital Access Plan

In compliance with all requirements of the NTIA's State Digital Equity Planning Grant Program

Project Name: State Digital Equity Planning Grant Program

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Project Abstract

The Wyoming Broadband Office (WBO), part of the Wyoming Business Council (WBC), is eligible to participate in the National Telecommunications and Information Administration's (NTIA) State Digital Equity Capacity Grant (DE) Program, a program that funds a variety of efforts to improve the affordability, adoption and use of broadband. To receive NTIA funding for the DE program, WBO was required to first apply for a State Digital Equity Planning Grant and complete a State Digital Equity Plan. This document is WBO's draft Digital Equity Plan, which is named the Wyoming Digital Access Plan. It includes a vision for digital equity, a set of goals to action that vision within the DE program, current assets and barriers, and an implementation plan to achieve the goals and address the barriers identified.

The draft Digital Access Plan was informed by significant stakeholder engagement, which is described within this document, and the updated Digital Access Plan is stronger because of continued public review and feedback. The WBO also posted the draft Digital Access Plan for Public Comment from July 17th to August 17th, 2023. This draft has been updated based on Public Comments received, which are further documented in Section 7 of this document, as well as feedback from the NTIA.



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1 Executive Summary

The Wyoming Broadband Office's (WBO) vision for broadband and digital access is as expansive as the state itself: ensure that **every citizen and business can connect to and effectively use affordable, reliable, and future-proof broadband**. To do this, WBO will align activities with existing policies, strengthen current initiatives, and steward new public investments, making the most efficient use of each available dollar. While the Wyoming Digital Access Plan (DAP) specifically focuses on overcoming the barriers to broadband affordability and adoption, particularly for Covered Populations, its success will rest equally on the Broadband Office's infrastructure programs, which seeks to bring new or upgraded services to all residences and businesses in Wyoming. The DAP will guide WBO's digital access efforts and will inform its funding application to the National Telecommunications and Information Administration's (NTIA) forthcoming State Digital Equity Capacity Grant Program.

To develop the Broadband Equity, Access, and Deployment (BEAD) program's Five-Year Action Plan and the DAP, WBO combined stakeholder engagement and research efforts to assess the state's needs and identify potential solutions. The data analysis focused on current infrastructure and availability, adoption, affordability, and digital skills across Wyoming geographies and populations. This analysis uncovered significant challenges related to digital access; for example:

- Only six counties across the state of Wyoming have at least 70% adoption of terrestrial broadband. The five counties with the lowest rates of terrestrial broadband adoption (between 44%-55%) are all located on the eastern side of the state.
- The largest gap in adoption is across income levels. 94.7% of households earning more than \$75K per year subscribe to broadband while only 68.2% of households earning less than \$20K per year do.
- 57% of Native Americans (primarily members of the Eastern Shoshone and Northern Arapaho tribes), and Black citizens subscribe to terrestrial broadband compared to 71% of all Wyomingites. Similarly, 62% of Wyomingites aged 60+ subscribe to terrestrial broadband, while 73% of working age adults do.
- Approximately 10% of households only access broadband through a cellular data connection, typically a smartphone.
- While overall device ownership is at 88%, Black citizens, lower-income citizens, Native Americans (primarily members of the Eastern Shoshone and Northern Arapaho tribes), and individuals with a disability are less likely to own a computer or tablet than other groups.

In addition to data analysis, WBO engaged in a robust stakeholder engagement effort, anchoring discussions in the analytic baseline developed through analysis. The broadband office held 24 in-person and virtual meetings across all parts of the state, fielded six organizational surveys to hear from stakeholder groups (e.g., local governments, Community Anchor Institutions, organizations representing Covered Populations), and collaborated with multiple state agencies and other stakeholders via 1:1 engagement. This process uncovered a range of additional assets within the state that can provide a foundation for digital access efforts (e.g., current grants focused on Affordable Connectivity Program [ACP] outreach and teaching digital skills, device lending programs at public libraries and colleges). Engagement with various stakeholders also helped WBO determine how the Digital Access Plan could align with existing policies and initiatives such as the Wyoming Innovation Partnership, the Department of Education's Digital Learning Plan, and activities taking place throughout Wyoming's 23 county libraries.

As a result of these efforts, WBO developed a set of six goals with key activities and corresponding metrics:

1. Provide all Wyoming citizens and businesses with access to reliable, high-speed internet at home and in their communities.



2. Increase the number of Wyoming citizens who subscribe to broadband, including low-cost programs.
3. Increase the number of Wyoming citizens with the opportunity to use one or more computing devices.
4. Increase the number of Wyoming citizens who are equipped to use the internet and internet-enabled devices to support their economic, educational, health and related goals.
5. Create a safe environment (e.g., privacy and cybersecurity) for citizens to engage with broadband enabled devices.
6. Promote a range of internet-enabled government service offerings which meet citizen needs.

These goals respond directly to the barriers WBO identified during this planning process as well as the state's priorities around education, economic and workforce development, and health. Governor Gordon has prioritized both "an exceptional education, economy and workforce" and "safe and healthy communities".¹ Successfully implementing this Digital Access Plan will enable Wyoming to build on a foundation of in-flight efforts as it continues to innovate in these areas.

As described in Section 5, WBO intends to develop a competitive, statewide grant program that will provide funds to state agencies or other organizations involved in expanding digital access in Wyoming. The grant program will be directly linked to achieving near-term and long-term targets associated with the metrics for each of the six goals outlined above. As some of the goals are directly linked to the deployment of new or enhanced broadband infrastructure in the State, WBO also intends to use funding allocated through NTIA's BEAD program. Given Wyoming's anticipated shortfall in funding to achieve the goals of the BEAD program, WBO will rely on funding provided as part of the Digital Equity Capacity Grant program to fund non-deployment activities associated with increasing broadband adoption for Covered Populations (e.g., digital skills training, cybersecurity/privacy trainings, promotion of the ACP program, device availability and affordability programs).

¹ Wyoming Governor's Office Priorities. <https://governor.wyo.gov/priorities>



2 Introduction and Vision for Digital Equity

2.1 Vision

Wyoming’s vision is to ensure that **every citizen and business can connect to and effectively use affordable, reliable, and future-proof broadband**.

The **first part of this vision – connecting** – is critical to success for Wyoming. Today, approximately 77% of Wyoming’s broadband serviceable locations (BSLs) are served.² With a combination of new programs (e.g., BEAD and Connect Wyoming 2 [CPF]) and private investment, WBO believes that all locations will soon be able to access broadband reliably and, wherever possible, through a future-proof technology. This bold vision will not be easily achieved. Three factors make deployment in Wyoming especially challenging – population density, land area, and topography. Wyomingites are dispersed across the state, resulting in a population density of only 6 people per square mile.³ Wyoming is also a frontier state with the smallest population of any of the 50 states but the 9th largest land area. Finally, with an average elevation of 6,700 feet, Wyoming’s mountainous terrain can pose logistical and cost challenges to deploying fiber optic cable. Through the state’s BEAD plans (Five-Year Action Plan and Initial Proposal), Wyoming will propose a sustainable strategy for bringing all citizens and businesses online.

The **second part of this vision – affordability** – will be realized through both Wyoming’s BEAD Five-Year Action Plan and Digital Access Plan. These plans support an increase in the affordable supply of broadband by engaging with providers to participate in the Affordable Connectivity Program (ACP) and offer low-cost plans, driving citizen awareness of affordable plans, and supporting ongoing efforts to increase affordable devices (e.g., through device loans or refurbishment). Together, these activities will increase broadband adoption across the state.

Lastly, the **third part of this vision – effective use of broadband** – will be achieved by increasing the number of people and businesses who both find value in broadband internet access and make meaningful use of it. This can be achieved in three ways:

- Digital skill development at schools, libraries, workplaces, community colleges, and universities
- Government services delivered more effectively and efficiently online, particularly for Covered Populations⁴
- Safe and secure online environments for Wyoming’s citizens

As WBO considers the strategies it will undertake to implement the Digital Access Plan, it will focus on increasing the number of citizens with access to **affordable broadband and devices**. It will prioritize **digital skills and online privacy**. Wyoming will also build on these actions to **improve the delivery and accessibility of online government services for its citizens**. These initiatives will enable **greater economic resilience and growth**, both bringing new citizens to the state and

² Service estimation based on the Federal Communication Commission’s (FCC) National Broadband Map (<https://broadbandmap.fcc.gov>) as of 07 Nov 2023, not including existing federal funding commitments. WBO will update estimates regularly as new data becomes available.

³ *Economic Analysis Division: Just the Facts*. (2022). Wyoming Department of Administration & Information. https://eadiv.state.wy.us/Wy_facts/Facts2022.pdf

⁴ Covered Populations are defined in Section 1.C. of the State Digital Equity Capacity Grant Program Notice of Funds Availability: “1. Individuals who live in covered households; 2. Aging individuals; 3. Incarcerated individuals, other than those who are incarcerated in a Federal correctional facility; 4. Veterans; Individuals with disabilities; Individuals with a language barrier, including individuals who – a. Are English Learners; and b. Have low levels of literacy; 7. Individuals who are members of a racial or ethnic minority group; and Individuals who primarily reside in a rural area.” Covered Households are those earning not more than 150% of the poverty level.



helping current Wyomingites grow their diverse businesses (e.g., via new business starts and expansions of family-owned businesses).

To accomplish this effort, WBO has built a team of technical experts and advisors. Concurrently, agencies across the Executive Branch are identifying key personnel to support both planning and implementation. With this talented, multi-disciplinary team, WBO is well positioned to act on this ambitious Digital Access Plan.

WBO recognizes that the nature of this federal funding is one-time, which has different implementation implications for broadband infrastructure and digital access. While investment in infrastructure can be successful on a one-time basis, the same is not universally true for other areas related to digital access. Therefore, WBO is focused on designing efforts with an eye towards sustainability. To start, WBO has identified existing efforts and potential partners that can help the state accelerate and sustain the impact of these foundational investments.



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2.2 Alignment with Existing Efforts to Improve Outcomes

The Digital Access Plan's goals align with multiple state-level efforts, including two of Governor Gordon's priorities, 1) an exceptional education, economy, and workforce, and 2) safe and healthy communities.⁵ Across economic and workforce development, education, health, civic and social engagement, and delivery of other essential services, it is critical for citizens and businesses to connect to and effectively use affordable, reliable, and future-proof broadband. As WBO begins implementation of the Digital Access Plan, it will continue to review existing public and private efforts in the state to identify additional ways to ensure sustainability through alignment with existing efforts, especially those that serve Covered Populations.

Sections 2.2.1.- 2.2.5 detail key state of Wyoming initiatives that can support (or be supported by) increased broadband access and use.

2.2.1 Economic and workforce development

Wyoming Business Council

The Wyoming Business Council (WBC) is the economic development agency for the state of Wyoming. Led by a Board of Directors, including business leaders from across the state and co-chaired by Governor Gordon, WBC provides recruitment, development, and investment services to support a resilient economic framework for Wyoming businesses and communities to thrive. WBC views broadband access and use as critical enablers of economic development, making it the ideal organization to house WBO and operate the state's broadband initiatives. For example, WBC was a primary partner of the Economically Needed Diversity Options for Wyoming (ENDOW) initiative, which recommended expanding broadband as a key lever to support the state's future growth. ENDOW also served as a foundation for similar, recent efforts to strengthen and diversify the economy, such as WBC's partnership with the Harvard Growth Lab which focuses on identifying opportunities to develop stronger pathways to sustainable prosperity across the State of Wyoming.⁶ WBC is committed to work in partnership with organizations across the state to promote an increase in broadband adoption, higher ACP enrollment, increased number of device loans, and greater digital literacy and privacy and cybersecurity awareness among Wyoming's Covered Populations.

The following measurable objectives from section 2.3 align with the Wyoming Business Council's goals: Goal 1 Objectives 1-5; Goal 2 Objectives 1 and 4-6; Goal 3 Objectives 1-3; Goal 4 Objectives 1-4; and Goal 5 Objective 2.

Wyoming Innovation Partnership

The Wyoming Innovation Partnership (WIP) is a collaboration to align education and workforce development and support innovation, entrepreneurship, and research to help drive Wyoming's economy.⁷ WIP supports economic growth and diversification to build a highly skilled, ambitious, and qualified workforce by linking community goals with the state's economic strategy. With projects at UW and across the state's community colleges, WIP's Digital Innovation and Technology component can serve as a catalyst for coordinated digital skills training, research, and capacity building to support "smart" rural places. This partnership will be driven by data to ensure a strong return on investment for the people of Wyoming.

⁵ Wyoming Governor's Office Priorities. <https://governor.wyo.gov/priorities>

⁶ Pathways to prosperity in Wyoming. Harvard Growth Lab. <https://growthlab.cid.harvard.edu/policy-research/pathways-prosperity-wyoming>

⁷ Wyoming Innovation Partnership (WIP). (n.d.). Wyoming Innovation Partnership, <https://wip.wyo.gov/home>



The following measurable objectives from section 2.3 align with the Wyoming Innovation Partnership’s goals: Goal 1 Objective 5; Goal 4 Objectives 1-4; and Goal 5 Objective 2.

Wyoming Department of Workforce Services

The Wyoming Department of Workforce Services (DWS) assists Wyoming’s communities to adapt and thrive. The Workforce Programs Division oversees 55 state and federal programs administered in 18 Workforce Centers across the state. The Workforce Centers are a central point of service for Wyomingites seeking employment and training, including resume and cover letter assistance. DWS also supports IT apprenticeships and other training programs (some of which are in partnership with employers) that rely on digital skills and broadband infrastructure. The Wyoming Workforce Development Council (WWDC) – comprised of private and public sector leaders – advises DWS, determines federal workforce grant allocations, and oversees Next Gen Sector Partnerships, which are industry-led, community-supported partnerships that strengthen regional economies and connect people to jobs.

Additionally, DWS manages Wyoming Relay, which includes digital literacy and device lending/ownership programs for Wyoming residents with disabilities. Wyoming Relay offers accessibility benefits for deaf, hard-of-hearing, deaf-blind, or speech impaired individuals such as teletypewriters, voice carry-over, captioned telephones, hearing carry-over, and video-assisted speech-to-speech technologies, in both English and Spanish. These offerings spearheaded by DWS can enable Covered Populations with disabilities to increase enrollment in services and programs like ACP, and increase accessibility to digital literacy and privacy and cybersecurity learning.

The following measurable objectives from section 2.3 align with the Wyoming Department of Workforce Services’ goals: Goal 1 Objective 5; Goal 2 Objectives 4-6; Goal 3 Objectives 1-3; Goal 4 Objectives 1-4; Goal 5 Objective 2; and Goal 6 Objectives 1-3.

University of Wyoming Business Resource Network

The Business Resource Network, supported by the University of Wyoming Office of Research and Economic Development and the WBC, supports the Wyoming Small Business Development Center (SBDC) Network and Impact 307.⁸ The SBDC network supports small businesses through online training and services, particularly those in rural areas which rely on e-commerce. Impact 307 is a statewide innovation-driven incubator system focusing on technology-oriented high-growth companies and start-ups.

The following measurable objectives from section 2.3 align with the University of Wyoming Business Resource Network’s goals: Goal 1 Objective 5; Goal 4 Objectives 1-3; and Goal 5 Objective 2.

2.2.2 Education (K-12, Higher Education, and Adult Education)

University of Wyoming

The University of Wyoming, the leading academic research institution in the state, offers online education to ensure that higher education is available to students unable to commute to Laramie. It hosts the Wyoming Telehealth Network and the Wyoming Institute for Disabilities and plays a leading role in helping students develop advanced technology skills (e.g., computer science). UW’s new interdisciplinary School of Computing, established in 2022, will provide University of Wyoming students, faculty and staff,

⁸ *Business Resource Network*. University of Wyoming. <https://www.uwyo.edu/research/business-resource-network/index.html>



and Wyoming businesses and citizens with the computational tools, skills and approaches to drive transformation and innovation in the state. The School of Computing will champion broader efforts to make the University of Wyoming more digital, inclusive, interdisciplinary, and entrepreneurial through computing partnerships across Wyoming. The Wyoming Center on Aging, housed at the University, also helped older adults and adults with disabilities connect to remote social services and healthcare as part of its response to COVID-19.⁹

The following measurable objectives from section 2.3 align with the University of Wyoming's goals: Goal 1 Objective 5; Goal 4 Objectives 1-4; and Goal 5 Objective 2.

Wyoming Community College Commission

The Wyoming Community College Commission's 2021-2025 Strategic Plan announced a commitment to expand access to remote learning for all programs (including non-credit, community/cultural enrichment, and lifelong learning).¹⁰ Through partnerships with other entities, made possible by broadband connectivity, the Commission aims to attract, develop, retain, and advance a skilled, technical, and scientifically oriented workforce.

The Wyoming Community College Commission also plays an important role in delivering Wyoming's Adult Education program, targeted towards residents 16 years of age or older looking to improve their basic math and literacy skills, obtain a high school credential, or needing to learn English. The curriculum includes digital literacy instruction coursework. As a result of the pandemic, the Wyoming Adult Education revised its distance learning policy to allow for more flexibility in how students attend classes and now includes hybrid, virtual, and distance learning classes to better serve its students¹¹

The following measurable objectives from section 2.3 align with the Wyoming Community College Commission's goals: Goal 1 Objective 5; Goal 4 Objectives 1-4; and Goal 5 Objective 2.

Wyoming Department of Education

The Wyoming Department of Education (WDE) provides digital access and digital literacy to Wyoming students to give them a foundation for future success in the workforce and higher education. WDE's priorities include ensuring "all students leave Wyoming schools career or college ready" and the Department has published multiple guides and strategies to support the use of technology on and off campus.¹² This includes the 2022-2023 Distance Learning guide, the 2017-2021 Digital Learning Plan (currently being updated), and the Future Ready Framework which provides "a robust structure for Digital Learning visioning, planning, and implementation focused on Personalized Student Learning."¹³ This research-based framework includes seven key areas that are critical to address during a comprehensive planning process.

⁹ UWYO-Distance Education. (n.d.). University of Wyoming. <https://www.uwyo.edu/distance/>; Tech2Connect | Wyoming center on aging. (n.d.). UWYO-Center on Aging Initiative. <https://www.uwyo.edu/wycoa/tech2connect-folder/>

¹⁰ Strategic Plan 2021 to 2025. (2021). Wyoming Community College Commission. <https://wyoleg.gov/InterimCommittee/2020/S23-202010162021-2025StrategicPlanCommunityCollegeSystem.pdf>

¹¹ Distance Learning Policy. (2021, November 30) Wyoming Adult Education. https://drive.google.com/file/d/1_7V1m91zS-c-NsqZ9sf0JllyxX2PoC86/view?pli=1

¹² Wyoming Statutes Title 21. Education § 21-2-204

¹³ 2022-23 Distance Learning: Guidance for Wyoming School Districts. (n.d.). Wyoming Department of Education. <https://edu.wyoming.gov/wp-content/uploads/2022/07/2022-23-Distance-Learning-Guidance-1.pdf>; Digital learning plan. (2022, February 17). Wyoming Department of Education. <https://edu.wyoming.gov/educators/technology/digital-learning-plan/>



The following measurable objectives from section 2.3 align with the Wyoming Department of Education’s goals: Goal 1 Objective 5; Goal 4 Objectives 1-4; and Goal 5 Objective 2.

Wyoming Institute for Disabilities

The Wyoming Institute for Disabilities (WIND) offers statewide technology assistance through Wyoming’s Assistive Technology Program (WATR) to increase individuals with disabilities’ ability to participate in life activities. WATR’s offerings include device demonstrations, device loans, device reutilization, training, and technical assistance, etc. WIND and WATR can increase device affordability, accessibility, and ACP awareness among Covered Populations throughout the Digital Access process.

The following measurable objectives from section 2.3 align with the Wyoming Institute for Disabilities’ goals: Goal 1 Objectives 3 and 5; Goal 2 Objectives 4-6; Goal 3 Objectives 1-3; Goal 4 Objectives 1-4; Goal 5 Objective 2; and Goal 6 Objective 2.

Wyoming Adult Education

Wyoming Adult Education programs offer academic education and career development training to residents in the state, with an emphasis on English as a Second Language for English language learners. Adult Education programs provide participants with digital literacy training and guaranteed access to a computer for every participant. Covered Populations are encouraged to access Adult Education programs with 645 participants from a racial or ethnic minority group, 20 participants aged 60 and over, 195 participants with English as a Second Language, 49 participants previously incarcerated, 70 participants with disabilities, and 127 participants identified as low-income between 2021 and 2022. Wyoming Adult Education programs serve as a primary pathway for adult learners to gain digital access and literacy and be prepared for the Wyoming workforce.

The following measurable objectives from section 2.3 align with the Wyoming Adult Education’s goals: Goal 3 Objectives 1-3; Goal 4 Objectives 1-4; and Goal 5 Objective 2.

2.2.3 Health

Statewide Collaborations

Wyoming has strong network collaborations around issues related to poverty, housing, health, and education. The state utilizes strong community-based organizations such as the Head Start Collaborative, the Family Resource Center Network, Continuum of Care for housing, Federally Qualified Healthcare Centers, Community Mental Health Centers, the Community Services Network of Wyoming (CSNOW), Wyoming 211, Visiting Nurse programs, home visitation programs, Aging and Disabilities Resource Centers, Kinship Programs, Veteran Services, and more. These community-based organizations currently provide case management and resource navigation for Covered Populations. The partnerships across these organizations are strong and collaborative in nature and can be found in every county in Wyoming.

The following measurable objectives from section 2.3 align with Statewide Collaborations goals: Goal 1 Objectives 1-5; Goal Objectives 1-6; Goal 3 Objectives 1-3; Goal 4 Objectives 1-4; Goal 5 Objective 2; and Goal 6 Objectives 1-3.

Wyoming Telehealth Network

The Wyoming Telehealth Network (WyTN), administered by the University of Wyoming – College of Health Sciences, supports healthcare entities, providers, and specialists to increase access to care and improve health outcomes for Wyomingites, through professional development, collaboration, and use of telecommunications technology. The Wyoming Telehealth Consortium, part of



WyTN, was created by legislation in 2009 to develop and promote standards for telemedicine and telehealth networks. The Consortium recently engaged in a strategic planning process that identified lack of broadband infrastructure and affordable access in the state as a barrier to telemedicine adoption.¹⁴ WyTN members receive no-cost HIPAA-secure Zoom licenses for providing telehealth services. Both the Department of Health Services (DHS) and Department of Enterprise Technology Services (ETS) are involved in WyTN.

The following measurable objectives from section 2.3 align with the Wyoming Telehealth Network’s goals: Goal 3 Objectives 1-3; and Goal 4 Objectives 3-4.

2.2.4 Civic and Social Engagement

Wyoming’s Library Systems

Each of Wyoming’s 23 counties has a library system and there are a combined 54 branches across these systems. Each library system reflects the unique characteristics of its county, offering diverse print, digital, and special collections (e.g., a Library of Things). Many libraries have explicit goals that require both robust broadband and device access (e.g., supporting lifelong learning, facilitating information and digital literacy skills, helping small businesses thrive).

The following measurable objectives from section 2.3 align with Wyoming’s Library Systems’ goals: Goal 3 Objectives 1-3; Goal 4 Objectives 1-3; and Goal 5 Objective 2.

2.2.5 Delivery of Other Essential Services

Department of Enterprise Technology Services

The Department of Enterprise Technology Services (ETS) develops and executes the statewide information technology strategy while providing services and infrastructure to ensure the continuity of mission-critical and essential state systems. ETS administers the Wyoming Unified Network (WUN), which connects K-12 schools, community colleges, and the Executive Branch. One of ETS’ strategic themes is modernizing digital government. In its most recent Strategic Plan, the Department includes a goal to “enhance citizen services,” explaining that “Wyoming citizens use technology to access state resources when working with the state. Citizens expect applications to be easy to use and immediately available, utilizing contemporary capabilities for compatibility with today’s modern devices. Digital government transformation efforts play a major role in making this happen.”¹⁵

The following measurable objectives from section 2.3 align with Department of Enterprise Technology Services’ goals: Goal 6 Objectives 1-3.

Wyoming Department of Transportation

¹⁴ *Strategic Plan and Governance Structures*. (2021). University of Wyoming: Wyoming Telehealth Consortium. <https://wyomingtelehealth.org/wp-content/uploads/2022/09/wtc-strategic-plan.pdf>

¹⁵ *2022-2026 Strategic Plan*. (2022). Wyoming Department of Enterprise Technology Services. <https://drive.google.com/file/d/1Kpy7QmQOHmv9iDZtXEbPBS70CJQvtkaw/view>



The Wyoming Department of Transportation (WYDOT) is proactively preparing the state’s transportation system for a future that requires broadband (e.g., to support adoption of connected, autonomous vehicles used by residential commuters and tourists).¹⁶ WYDOT has supported broadband deployment by helping providers size the number of conduits and fiber strands to reduce the need for multiple visits in right-of-way (ROW) corridors and bringing Wi-Fi access to rest areas. WYDOT also uses a dig-once policy to facilitate statewide infrastructure development for telecommunication and broadband services.

The following measurable objectives from section 2.3 align with Wyoming Department of Transportation’s goals: Goal 1 Objectives 1-2 and 4.

Wyoming Geospatial Data Hub

The Wyoming Geographic Information Science Center’s Geospatial Data Hub provides access to publicly accessible geospatial data that is produced, maintained, and shared by various partners such as Federal agencies, State agencies, county and municipal governments, tribal governments, private industry, and the general public. General data, such as agency reports, can also be accessed through the Hub. Such a comprehensive geospatial database provides critical data and expertise to be leveraged to efficiently deploy broadband enabling infrastructure changes.

The following measurable objectives from section 2.3 align with Wyoming Geospatial Data Hub’s goals: Goal 1 Objectives 1-2 and 4.

¹⁶ 2020-2023 Strategic plans. (n.d.). Wyoming Department of Transportation. https://www.dot.state.wy.us/home/administration/strategic_performance/strategic-plans-1.html



2.3 Strategy and Objectives

To achieve the vision outlined in Section 2.1, WBO has identified a holistic set of goals across six dimensions of broadband deployment and digital access: broadband availability, broadband affordability and adoption, device availability and affordability, digital skills, privacy and cybersecurity, and online accessibility and inclusivity. Together, these goals enable the realization of Wyoming’s integrated vision for broadband and digital connectivity, drawing on a range of capital streams including BEAD and the Digital Equity programs. Therefore, these goals are also included in Section 2.2 (Goals and Objectives) of Wyoming’s Five-Year Action Plan.

For each dimension, WBO has identified a potential objective or strategy, potential KPI(s), the current baseline, future goals, and a data collection approach. Future goals include both near-term goals that are within 2 years of beginning BEAD and Digital Access implementation and long-term goals that are within 5 years of beginning implementation. In addition, per NTIA’s requirements, WBO has defined a measurable objective per Covered Population for each of the five areas outlined in the NOFO. For the measurable objective pertaining to:

- *The availability of, and affordability of access to, fixed and wireless broadband technology*, please see row 3 in Exhibit 1 and row 6 in Exhibit 2
- *The online accessibility and inclusivity of public resources and services*, please see rows 1-3 in Exhibit 6
- *Digital literacy*, please see row 3 in Exhibit 4
- *Awareness of, and the use of, measures to secure the online privacy of and cybersecurity with respect to an individual*, please see row 2 in Exhibit 5
- *The availability and affordability of consumer devices and technical support for those devices*, please see rows 5-6 in Exhibit 2 and rows 1-4 in Exhibit 3

2.3.1 Broadband Availability

Connecting to and effectively using affordable, reliable, and future-proof broadband is important to reaching many of Wyoming’s current goals, particularly around economic and workforce development, education, and health. Using broadband, however, first requires having it, and today too many Wyomingites do not. Consequently, WBO’s most urgent focus is increasing broadband availability and reaching its goal to provide all Wyoming citizens and businesses – including all Covered Populations – access to reliable, high-speed internet at their homes, in their communities, and at their businesses (Exhibit 1).



Exhibit 1: Objectives related to broadband availability

Goal 1: Provide all Wyoming citizens and businesses, including all covered populations, with access to reliable high-speed internet at home and in their communities

Objective/Strategy	KPI	Baseline	Near-Term ¹⁷	Long-Term ¹⁸	Data Collection
Provide all Wyoming citizens and businesses, including all covered populations, with access to reliable high-speed internet at home and in their communities	% (and #) of unserved locations	15% (39,215) unserved, includes all currently unserved locations (i.e., those with and without federal funding commitments to serve). ¹⁹	12% (~20% decrease in unserved locations)	0%	BEAD subrecipient reporting ²⁰
	% (and #) of underserved locations	8% (20,403) underserved, includes all currently underserved locations (i.e., those with and without federal funding commitments to upgrade).	6.4% (~20% decrease in underserved locations)	0%	BEAD subrecipient reporting
	% of Wyoming Covered Populations that have adopted broadband	Native Americans (primarily members of the Eastern Shoshone and Northern Arapaho tribes): 57% Black Wyomingites: 57% Other (non-white) Wyomingites: 70% Hispanic Wyomingites: 70% Wyomingites aged 60+: 62% Veteran Wyomingites: 68% Wyomingites with disabilities: 64% Rural Residents: 0% (NA) Individuals with a language barrier including individuals who are English learners and those with low levels of literacy: 0% (NA) Individuals living in households under 150% of the federal poverty line: 0% (NA) Individuals previously incarcerated: 0% (NA) <i>Baseline information not currently available for the following Covered Populations: rural residents, individuals with a language barrier including individuals who are English learners and those with low levels of literacy, individuals living in households under 150% of the federal poverty line. Please</i>	1% increase (tentative) <i>For Covered Populations without a baseline, please see Section 2.3.7 for information on how WBO intends to refine near-term targets</i>	3% increase (tentative) <i>For Covered Populations without a baseline, please see Section 2.3.7 for information on how WBO intends to refine long-term targets</i>	American Community Survey, Digital Access subrecipient reporting

¹⁷ WBO has defined near-term goals in this plan as two years.

¹⁸ WBO has defined long-term goals in this plan as five years.

¹⁹ NTIA Eligible Entity Planning Toolkit based on the FCC National Broadband Map. 07 Nov 2023. <https://experience.arcgis.com/experience/634f354d7004487a9bc6617efcde6646/page/Wyoming/>

²⁰ WBO refers to BEAD subgrantees as “subrecipients,” per the BEAD NOFO guidelines which state that applicable regulations governing federal financial assistance generally use the term “subrecipient” to refer to what the Infrastructure Act calls “subgrantees” and the term “subaward” to refer to what the Infrastructure Act calls “subgrants.”



Goal 1: Provide all Wyoming citizens and businesses, including all covered populations, with access to reliable high-speed internet at home and in their communities

Objective/Strategy	KPI	Baseline	Near-Term ¹⁷	Long-Term ¹⁸	Data Collection
		<i>see Section 2.3.7 for information on how WBO intends to collect baseline data for these populations as part of the Digital Access Grant Program</i>			
Enable workforce training for broadband-deployment roles	% (and #) of subrecipients reporting labor as a barrier to timely construction of BEAD-funded projects	0% because BEAD has not started	<10%	0%	BEAD subrecipient reporting
	# of workers re-skilled/up skilled; # of training programs	0; 0 because the Digital Access Program has not yet started	100; 5 (tentative) <i>To be refined with Department of Workforce Services through Initial Proposal planning</i>	500; 25 (tentative) <i>To be refined with Department of Workforce Services through Initial Proposal planning</i>	Department of Workforce Services

2.3.2 Broadband Affordability and Adoption

Increasing broadband adoption across the state is critical to the state’s future. WBO is also keenly aware that its share of the State Digital Equity Capacity Grant Program is likely to be modest. As a result, Wyoming will accelerate broadband adoption through strategies related to both its BEAD implementation (e.g., ACP participation by subrecipients, subrecipient marketing plans) and Digital Access Plan implementation (e.g., raising awareness of ACP among Covered Populations, increasing the number of state programs that promote ACP), with a focus on reducing disparities in adoption by Covered Populations (Exhibit 2). In addition, the Community Services Network of Wyoming (CSNOW) and the Council of Community Services (CCS) have received a total of \$475,000 in grants from the Federal Communications Commission (FCC) to increase ACP enrollment. WBO expects that these initiatives will have a substantial impact on ACP enrollment and broadband adoption among Covered Populations.

Exhibit 2: Objectives related to broadband affordability and adoption

Goal 2: Increase the number of Wyoming citizens who subscribe to broadband, including low-cost programs

Objective/ Strategy	Potential KPI	Baseline	Near-Term	Long-Term	Data Collection
Require all BEAD subrecipients to participate in ACP	% of BEAD subrecipients participating in ACP	0% because BEAD has not started	100% of subrecipients participate in ACP	100% of subrecipients participate in ACP	BEAD subrecipient reporting
Require all BEAD subrecipients to offer a low-cost plan	% of BEAD subrecipients offering low-cost plans	0% because BEAD has not started	100% of subrecipients offer a low-cost plan	100% of subrecipients offer a low-cost plan	BEAD subrecipient reporting



Goal 2: Increase the number of Wyoming citizens who subscribe to broadband, including low-cost programs

Objective/ Strategy	Potential KPI	Baseline	Near-Term	Long-Term	Data Collection
Increase adoption of new services through broad awareness of BEAD subrecipients' new infrastructure buildouts and low-cost plans	% of locations newly served or upgraded through BEAD that received marketing / outreach about new service and low-cost plans	0% because BEAD has not started	100% of newly served / upgraded BEAD locations receive outreach from subrecipient	100% of newly served / upgraded BEAD locations receive outreach from subrecipient	BEAD subrecipient reporting
Grow number of relevant state programs that promote ACP or other low-cost program enrollment (e.g., SNAP)	% of state programs that promote ACP or other low-cost program enrollment through existing channels which serve large portions of ACP-eligible citizens	0% (NA) <i>Baseline to be further refined through planning process</i>	75% state program participation	100% state program participation	Data reporting
Boost enrollment of ACP among eligible households	% of households eligible for ACP that subscribe (includes device subsidy to promote affordability)	24% ACP enrollment	Increase ACP enrollment to highest rate in the Rocky Mountain region (currently 29% but subject to change before program start)	Maintain ACP enrollment at highest rate in the Rocky Mountain region (currently 29% but subject to change before program start)	ACP enrollment data
	% of households with a Covered Population eligible for ACP that subscribe (includes device subsidy to promote affordability)	Native Americans (primarily members of the Eastern Shoshone and Northern Arapaho tribes): 0% (NA) Black Wyomingites: 0% (NA) Other (non-white) Wyomingites: 0% (NA) Hispanic Wyomingites: 0% (NA) Wyomingites aged 60+: 0% (NA) Veteran Wyomingites: 0% (NA) Wyomingites with disabilities: 0% (NA) Rural Residents: 0% (NA) Individuals with a language barrier including individuals who are English learners and those with low levels of literacy: 0% (NA) Individuals living in households under 150% of the federal poverty line: 0% (NA) Individuals previously incarcerated: 0% (NA) <i>Baseline information regarding Covered Populations and their enrollment in ACP is currently</i>	Increase ACP enrollment to highest rate in the Rocky Mountain region (same as overall Wyoming rate – currently 29% but subject to change before program start)	Maintain ACP enrollment at highest rate in the Rocky Mountain region (same as overall Wyoming rate – currently 29% but subject to change before program start)	Digital Access subrecipient reporting



Goal 2: Increase the number of Wyoming citizens who subscribe to broadband, including low-cost programs

Objective/ Strategy	Potential KPI	Baseline	Near-Term	Long-Term	Data Collection
		<i>unavailable. Please see Section 2.3.7 for information on how WBO intends to collect baseline data for these populations as part of the Digital Access Grant Program</i>			

2.3.3 Device Availability and Affordability

While 94% of households earning more than \$75,000/year own a computer, only 83% of households earning between \$20,000 and \$75,000 do. For households earning less than \$20,000, the computer ownership rate is ~66%. Supporting short- and longer-term device loans through Community Anchor Institutions (CAIs) such as schools, libraries, affordable housing communities, health care providers, etc. can help bridge the gap for citizens who do not own computers.

The Wyoming State Library may soon have funding from other sources to start a new device loan program that will combine devices and access points by offering laptops or tablets with built in Wi-Fi at public libraries around the state. As the largest program of its kind in Wyoming, it will be important to measure impact and, if needed, consider awarding Digital Access funding to further scale the program in later years. This will enable WBO to focus its funding on areas not currently supported by other investments (Exhibit 3).

Exhibit 3: Objectives related to device availability and affordability

Goal 3: Increase the number of Wyoming citizens with the opportunity to use one or more computing devices

Objective/ Strategy	Potential KPI	Baseline	Near-Term	Long-Term	Data Collection
Expand access to affordable, workable devices (i.e., laptop, tablet, hotspot)	# of loanable devices available for free from libraries or colleges	Zero laptops / tablets available ~120 loanable hotspots available at libraries	2,000 devices and/or hotspots available (requested through separate funding source)	Add devices as needed to maintain 75% utilization	Utilization numbers and waitlist data from State Library and Colleges
	Utilization rate of free, loanable devices at libraries or colleges	0% (NA) <i>To be identified through further baseline assessment</i>	100% utilization - hotspots are continuously checked-out and have a waitlist	75% utilization	Utilization numbers and waitlist data from State Library and Colleges
	% of Covered Populations with access to at least one workable device	Native Americans (primarily members of the Eastern Shoshone and Northern Arapaho tribes): 70% Black Wyomingites: 64% Other (non-white) Wyomingites: 87% Hispanic Wyomingites: 84% Wyomingites aged 60+: 85%	1% increase for each Covered Population (tentative) <i>For Covered Populations without a baseline, please see</i>	3% increase for each Covered Population (tentative) <i>For Covered Populations without a baseline, please</i>	Digital Access subrecipient reporting



Goal 3: Increase the number of Wyoming citizens with the opportunity to use one or more computing devices

Objective/Strategy	Potential KPI	Baseline	Near-Term	Long-Term	Data Collection
		Veteran Wyomingites: 89% Wyomingites with disabilities: 80% Rural Residents: 0% (NA) Individuals with a language barrier including individuals who are English learners and those with low levels of literacy: 0% (NA) Individuals living in households under 150% of the federal poverty line: 0% (NA) Individuals previously incarcerated: 0% (NA) Incarcerated individuals: 0% (NA) <i>Baseline information not currently available for the following Covered Populations: rural residents, individuals with a language barrier including individuals who are English learners and those with low levels of literacy, individuals living in households under 150% of the federal poverty line, incarcerated individuals. Please see Section 2.3.7 for information on how WBO intends to collect baseline data for these populations as part of the Digital Access Grant Program</i>	Section 2.3.7 for information on how WBO intends to set near-term targets	see Section 2.3.7 for information on how WBO intends to set long-term targets	
	# of libraries that provide technical support with device challenges for all citizens, including all covered populations, at no cost	0 (NA). Baseline information to be collected from libraries at program launch	50%	75%	State Library

2.3.4 Digital Skills

Increased digital skills (i.e., digital literacy) for all Wyomingites ensures that citizens can effectively use the internet – once broadband is available and they have adopted it – to support their economic, educational, health and related goals. WBO’s goals focus on education and jobs for students and adults, as well as health access for all citizens (Exhibit 4).

Exhibit 4: Objectives related to digital skills

Goal 4: Increase the number of Wyoming citizens who are equipped to use the internet and internet-enabled devices to support their economic, educational, health and related goals

Objective/Strategy	Potential KPI	Baseline	Near-Term	Long-Term	Data Collection
Grow the number of Wyomingites who possess the	# of workers re-skilled/up skilled	0 as the Digital Access Program has not yet started	100 (tentative)	500 (tentative)	Digital Access subrecipient



Goal 4: Increase the number of Wyoming citizens who are equipped to use the internet and internet-enabled devices to support their economic, educational, health and related goals

Objective/Strategy	Potential KPI	Baseline	Near-Term	Long-Term	Data Collection
digital skills to support an exceptional education, economy, and workforce	# of K-12 students participating in basic and advanced skills training		<i>Please see Section 2.3.7 for information on how WBO intends to refine near-term targets</i>	<i>Please see Section 2.3.7 for information on how WBO intends to refine long-term targets</i>	reporting
	# of Covered Populations participating in a digital skills training	Native Americans (primarily members of the Eastern Shoshone and Northern Arapaho tribes): 0 Black Wyomingites: 0 Other (non-white) Wyomingites: 0 Hispanic Wyomingites: 0 Wyomingites aged 60+: 0 Veteran Wyomingites: 0 Wyomingites with disabilities: 0 Rural Residents: 0 Individuals with a language barrier including individuals who are English learners and those with low levels of literacy: 0 Individuals living in households under 150% of the federal poverty line: 0 Individuals previously incarcerated: 0 <i>Baseline information regarding Covered Populations and their participation in digital skills trainings is 0 because the Digital Access Program has not yet started</i>	Native Americans (primarily members of the Eastern Shoshone and Northern Arapaho tribes): 100 Black Wyomingites: 100 Other (non-white) Wyomingites: 100 Hispanic Wyomingites: 100 Wyomingites aged 60+: 100 Veteran Wyomingites: 100 Wyomingites with disabilities: 100 Rural Residents: 100 Individuals with a language barrier: 100 Individuals living in households under 150% of the federal poverty line: 100 Individuals previously incarcerated: 100 <i>Please see Section 2.3.7 for information on how WBO intends to refine near-term targets</i>	Native Americans (primarily members of the Eastern Shoshone and Northern Arapaho tribes): 500 Black Wyomingites: 500 Other (non-white) Wyomingites: 500 Hispanic Wyomingites: 500 Wyomingites aged 60+: 500 Veteran Wyomingites: 500 Wyomingites with disabilities: 500 Rural Residents: 500 Individuals with a language barrier: 500 Individuals living in households under 150% of the federal poverty line: 500 Individuals previously incarcerated: 500 <i>Please see Section 2.3.7 for information on how WBO intends to refine long-term targets</i>	Digital Access subrecipient reporting
Increase the number of Wyomingites who are trained to use telehealth services to access medical care	# of patients who are trained to use telehealth services	0 as the Digital Access Program has not yet started	100 (tentative) <i>Please see Section 2.3.7 for information on how WBO intends to refine near-term targets</i>	500 (tentative) <i>Please see Section 2.3.7 for information on how WBO intends to refine long-term targets</i>	Digital Access subrecipient reporting



2.3.5 Privacy and Cybersecurity

Trust is a key component in driving adoption and use of the internet. To support citizen trust as they use broadband, WBO will monitor subrecipient cybersecurity risk through their adoption of the National Institute of Standards and Technology (NIST) cybersecurity framework. WBO’s discussions with stakeholders across the state indicate that privacy and security are already included in basic digital skills classes, and it is WBO’s expectation that this continues (Exhibit 5).

Exhibit 5: Objectives related to online privacy and cybersecurity

Goal 5: Create a safe environment (e.g., privacy and cybersecurity) for citizens to engage with broadband-enabled devices					
Objective/ Strategy	Potential KPI	Baseline	Near-Term	Long-Term	Data Collection
Require subrecipients to adopt the NIST cybersecurity framework	% of subrecipients that have adopted NIST’s cybersecurity framework	0% because BEAD has not started	100%	100%	BEAD subrecipient reporting
Grow the number of Wyomingites who have received training regarding best practices for cybersecurity and privacy when using the internet	# of Covered Populations participating in a digital skills training	<p>Native Americans (primarily members of the Eastern Shoshone and Northern Arapaho tribes): 0</p> <p>Black Wyomingites: 0</p> <p>Other (non-white) Wyomingites: 0</p> <p>Hispanic Wyomingites: 0</p> <p>Wyomingites aged 60+: 0</p> <p>Veteran Wyomingites: 0</p> <p>Wyomingites with disabilities: 0</p> <p>Rural Residents: 0</p> <p>Individuals with a language barrier including individuals who are English learners and those with low levels of literacy: 0</p> <p>Individuals living in households under 150% of the federal poverty line: 0</p> <p>Individuals previously incarcerated: 0</p> <p><i>Baseline information regarding Covered Populations and their participation in cybersecurity/privacy trainings is currently 0 as the Digital Access Program has not yet started.</i></p>	<p>Native Americans (primarily members of the Eastern Shoshone and Northern Arapaho tribes): 100</p> <p>Black Wyomingites: 100</p> <p>Other (non-white) Wyomingites: 100</p> <p>Hispanic Wyomingites: 100</p> <p>Wyomingites aged 60+: 100</p> <p>Veteran Wyomingites: 100</p> <p>Wyomingites with disabilities: 100</p> <p>Rural Residents: 100</p> <p>Individuals with a language barrier: 100</p> <p>Individuals living in households under 150% of the federal poverty line: 100</p> <p>Individuals previously incarcerated: 100</p> <p><i>Please see Section 2.3.7 for information on how WBO intends to refine near-term targets</i></p>	<p>Native Americans (primarily members of the Eastern Shoshone and Northern Arapaho tribes): 500</p> <p>Black Wyomingites: 500</p> <p>Other (non-white) Wyomingites: 500</p> <p>Hispanic Wyomingites: 500</p> <p>Wyomingites aged 60+: 500</p> <p>Veteran Wyomingites: 500</p> <p>Wyomingites with disabilities: 500</p> <p>Rural Residents: 500</p> <p>Individuals with a language barrier: 500</p> <p>Individuals living in households under 150% of the federal poverty line: 500</p> <p>Individuals previously incarcerated: 500</p> <p><i>Please see Section 2.3.7 for information on how WBO intends to refine long-term targets</i></p>	Digital Access subrecipient reporting



2.3.6 Online Accessibility and Inclusivity

Online accessibility and inclusivity will enable Wyoming citizens and businesses to interact with government more easily. Accessible online services make government services more intuitive and user-friendly for all citizens and provide special consideration for Wyomingites with lower literacy levels, disabilities, or those who primarily speak another language (e.g., Spanish). Importantly, accessibility also means meeting people where they are in terms of technology and skills and driving change through the lens of citizen experience. This may include ensuring that government services work as well for someone on the newest laptop or the oldest cell phone, that language is clear and easy to understand, and that the steps to complete a task or activity have been built through ongoing discussion and feedback from stakeholders. WBO plans to first partner with the Department of Enterprise Technology Services, Department of Workforce Services, and Department of Education to support the assessment of current state services and prioritize areas for enhancement, with a particular focus on those that most impact Covered Populations (Exhibit 6).

Exhibit 6: Objectives related to online accessibility and inclusivity

Goal 6: Promote a range of internet-enabled government service offerings which meet citizen needs					
Objective/ Strategy	Potential KPI	Baseline	Near-Term	Long-Term	Data Collection
Expand the number of state government services delivered online, with emphasis on those which primarily serve Wyomingites aged 60+, incarcerated individuals, veterans, members of a racial or ethnic minority group, rural residents, or residents with incomes under 150% of the federal poverty line	% of state government services which are online	0% (NA) <i>Baseline information regarding the accessibility of government services delivered online is currently unavailable. Please see Section 2.3.7 for information on how WBO intends to collect baseline data for these populations as part of the Digital Access Grant Program</i>	20% (tentative) <i>Conduct current state assessment in collaboration with ETS, DWS, and WDE. Prioritize services for enhancement. Goal may shift as baseline is fully established.</i>	50% (tentative) <i>Implement enhancement in collaboration with ETS. Goal may shift as baseline is fully established.</i>	Data from relevant state departments
Incorporate accessibility for those who possess auditory, visual, or other impairments	% (and #) of state government services which are accessible	0% (NA) <i>Baseline information regarding the accessibility of government services delivered online is currently unavailable. Please see Section 2.3.7 for information on how WBO intends to collect baseline data for these populations as part of the Digital Access Grant Program</i>	20% (tentative) <i>Conduct current state assessment in collaboration with ETS, DWS, and WDE. Prioritize services for enhancement. Goal may shift as baseline is fully established.</i>	50% (tentative) <i>Implement enhancement in collaboration with ETS. Goal may shift as baseline is fully established.</i>	
Offer state services online in Spanish and / or other languages	% (and #) of state online services offered in Spanish and / or other languages	0% (NA) <i>Baseline information regarding the accessibility of government services delivered online is currently unavailable. Please see Section 2.3.7 for information on how WBO intends to collect baseline data for these populations as part</i>	20% (tentative) <i>Conduct current state assessment in collaboration with ETS, DWS, and WDE. Prioritize services for enhancement. Goal may shift as baseline is fully established.</i>	50% (tentative) <i>Implement enhancement in collaboration with ETS. Goal may shift as baseline is fully established.</i>	



Goal 6: Promote a range of internet-enabled government service offerings which meet citizen needs

Objective/ Strategy	Potential KPI	Baseline	Near-Term	Long-Term	Data Collection
		<i>of the Digital Access Grant Program</i>			

2.3.7 Approach to Measurement During Implementation of the Digital Access Grant Program

As detailed in-depth in Section 5, WBO intends to create a statewide, competitive grant program to distribute funds received as part of the Digital Equity Capacity Grant Program to achieve meaningful improvement in the availability/affordability of broadband, the online accessibility of public resources, digital literacy, cybersecurity/privacy awareness, and availability/affordability of devices for Wyoming Covered Populations. As part of this process, WBO intends to cooperate closely with subrecipients to improve its fact base around digital access. Specifically, for measurable objectives that do not currently have a baseline, near-term, or long-term objective, WBO plans to take the following approach:

Defining a baseline: For measurable objectives which do not currently have a baseline, WBO will incorporate baseline measurement into grant terms and conditions for subrecipients. During year one of a subrecipient’s grant period, they will be required to work with WBO to establish a baseline for the relevant measurable objective per Covered Population (if indicated in the measurable objective). Given Wyoming’s small population (smallest in the U.S. at 576,851, according to the 2020 U.S. Census), WBO will use the baseline determined by the subrecipient as representative of the Covered Population in the State writ large.

Defining near-term and long-term objectives: For measurable objectives which do not currently have near-term or long-term targets, WBO will once again incorporate long-term targets into the grant terms and conditions for subrecipients. After receiving baseline data during year one of the subrecipient’s grant period, WBO will engage its subrecipients in a discussion about reasonable near-term and long-term targets (per Covered Population if applicable) rooted in the baseline the subrecipient developed. WBO will work with subrecipients to ensure that these targets align with the overall goals and policy priorities of WBO and the State. Similar to the approach taken to defining a baseline, due to Wyoming’s small population, WBO will consider the near-term and long-term targets and the subrecipient’s progress towards meeting them as representative of the Covered Population in the State writ large.

Regular evaluation / updates to the plan: After WBO determines the baseline, as well as after near-term and long-term targets have been achieved, the Digital Access Plan will be updated to reflect those changes. WBO will also utilize annual reporting from successful sub-recipients to update the plan as needed, understanding that funds for this could be utilized from the allocated funds.

3 Current State of Digital Equity: Barriers and Assets

3.1 Asset Inventory

WBO has developed an Asset Inventory to support implementation of the BEAD Five-Year Action Plan and the Digital Access Plan within the state of Wyoming. The inventory places each asset in a single category, but WBO recognizes that some assets may have relevance in multiple areas. There are five sub-categories of assets – Digital Inclusion Assets by Covered Population (Section 3.1.1), Existing Digital Equity Plans (Section 3.1.2), Existing Digital Equity Programs (Section 3.1.3), Broadband Adoption (Section 3.1.4), and Broadband Affordability (Section 3.1.5).



3.1.1 Digital Inclusion Assets by Covered Population

Section 3.1.1 includes digital inclusion assets that focus on training opportunities for specific Covered Populations (e.g., rural, 60+, incarcerated). In most instances, programs are available for anyone to participate (e.g., libraries), though organizations may conduct specific outreach to Covered Populations. The robust list of assets (considering Wyoming’s distinction as the least populous state in the Union with only 576,851 residents according to 2020 U.S. Census data) was provided by state agencies, the University of Wyoming, nonprofit organizations, businesses, and schools. The asset inventory includes a “Covered Populations Served” column, which identifies (where possible) the Covered Populations served by the individual asset. All Covered Populations appear at least once in the table below. *This section is nearly identical to Wyoming’s Five-Year Action Plan Section 3.3.4 (Digital Equity).*

Exhibit 7: Digital inclusion assets that focus on or support Covered Populations

Organization Name	Asset Name	Description	Covered Populations Served
University of Wyoming	Distance Learning Programs	The University of Wyoming helps meet the educational needs of Wyomingites through distance learning programs. Degree programs and certifications are available online, greatly expanding educational opportunities for rural citizens. Through the Wyoming Innovation Partnership, UW collaborates with the Wyoming Community College System to provide these programs.	Individuals who primarily reside in a rural area; Individuals who are members of a racial or ethnic minority group; Aging individuals; Veterans; Incarcerated individuals including previously incarcerated and/or justice-impacted individuals; Individuals with disabilities; Individuals who live in covered households; Individuals with a language barrier including individuals who are English learners and those with low levels of literacy
Wyoming Community College System	Distance Learning and Digital skills training	Wyoming’s seven community colleges offer certificates in a variety of technology-related fields and provide distance learning courses. Additionally, each campus (and several outreach sites) offers digital literacy training through their adult education programs. Through the Wyoming Innovation Partnership, the Wyoming Community College System collaborates with UW to provide these programs.	Individuals who primarily reside in a rural area; Individuals who are members of a racial or ethnic minority group; Aging individuals; Veterans; Incarcerated individuals including previously incarcerated and/or justice-impacted individuals; Individuals with disabilities; Individuals who live in covered households; Individuals with a language barrier including individuals who are English learners and those with low levels of literacy
Wyoming library systems	Digital skills training and online resources	Libraries throughout Wyoming offer in-person and online technology training classes. For example, the Laramie County Library provides training classes that include using a mouse, learning to type, navigating webpages, using email, and online safety for social media. The State Library provides access to LinkedIn	Individuals who live in covered households; Individuals with disabilities; Individuals with a language barrier including individuals who are English learners and those with low



		Learning, an online career development resource, for all library systems in the state.	levels of literacy; Aging individuals; Individuals who primarily reside in a rural area; Individuals who live in covered households
Various K-12 schools and school districts	Digital skills classes, 1:1 device programs, online learning, technical support	School districts provide a variety of services to support adoption and training. For example, Carbon County District #1 offers technical support during parent/teacher nights, digital skills classes, and 1:1 device programs; Laramie School District #2 provides Wi-Fi on its buses; Big Horn County School District #1 offers the Wyoming Connections Academy, which is a tuition-free, K–12 online program that students attend from home.	Individuals who primarily reside in a rural area; Individuals who are members of a racial or ethnic minority group; Veterans; Incarcerated individuals including previously incarcerated and/or justice-impacted individuals; Individuals with disabilities; Individuals who live in covered households; Individuals with a language barrier including individuals who are English learners and those with low levels of literacy
Boards of Cooperative Educational Services (BOCES)	Digital skills training, public computer lab	BOCES are unique to each district in the educational roles they fill. For example, the Oyster Ridge BOCES has a computer lab that is open to the public and Western Sublette 9 BOCES offers computer courses for adults.	Individuals with disabilities; Individuals with a language barrier including individuals who are English learners and those with low levels of literacy
Wyoming State Museum	Digital skills for seniors	The State Museum offers a free, eight-week course that introduces digital skills that older adults can use to simplify and improve their everyday lives.	Aging individuals
Department of Workforce Services (DWS) and Department of Corrections (DOC)	Digital skills training	The Pathway Home 3 grant provides the opportunity for individuals to successfully re-enter communities and the labor force by providing justice-involved individuals and incarcerated adults with critical skill building and support services prior to – and after – release. DWS and DOC will teach returning citizens foundational skills, such as job readiness, employability, digital literacy, and job search strategies.	Incarcerated individuals including previously incarcerated and/or justice-impacted individuals
Small Business Development Center Network (SBDC)	Small business digital skills training	The Wyoming SBDC network aims to support small businesses through online training and services, particularly those businesses in rural areas which rely on e-commerce. The SBDC network offers a select number of digital skills training (e.g., creating successful ad campaigns on Facebook, creating Energized Web Content).	Individuals who primarily reside in a rural area; Individuals who are members of a racial or ethnic minority group; Aging individuals; Veterans; Incarcerated individuals including previously incarcerated and/or justice-impacted individuals; Individuals with disabilities; Individuals who live in covered households; Individuals with a language barrier including individuals who



			are English learners and those with low levels of literacy
Wyoming American Association of Retired Persons (WY AARP)	Digital skills training, ACP outreach	Each month, AARP and CyberWyoming collaborate on a one-page flyer that is distributed with meals to inform senior adults about online scams and how to avoid them. The back of the flyer highlights AARP's program, Harnessing the Power of Technology to Change the Way We Age (OATS) program and the Affordable Connectivity Program. AARP also previously established the Senior High-Tech Program, in which local high school students would help seniors to better use their smartphones. Though AARP is not currently running the program, it continues in parts of the state.	Aging individuals
Various broadband providers and technology firms	Digital skills training and assistance in finding resources	Multiple broadband providers and technology firms offer digital skills training, open computer lab space, and assistance finding resources such as ACP (e.g., Vistabeam, Microsoft, and Union Wireless).	Individuals who primarily reside in a rural area; Individuals who are members of a racial or ethnic minority group; Aging individuals; Veterans; Incarcerated individuals including previously incarcerated and/or justice-impacted individuals; Individuals with disabilities; Individuals who live in covered households; Individuals with a language barrier including individuals who are English learners and those with low levels of literacy
University of Wyoming - Wyoming Institute for Disabilities (WIND)	No-cost devices and device loans for Wyomingites with disabilities	WIND manages two programs for the state: a) iCanConnect program, which provides communications technology free of charge to income eligible people of all ages who have combined vision and hearing loss. b) Assistive technology services, which provide a variety of support, including device loans, demonstrations, and financial support.	Individuals with disabilities
Department of Workforce Services (DWS) – Division of Vocational Rehabilitation	Digital skills training	In addition to partnering with AARP and the State Museum on digital literacy efforts, the DWS Division of Vocational Rehabilitation offers one-on-one and group training, technology demonstrations, technical support, and accommodation assistance	Individuals with disabilities; Aging individuals; Individuals who are members of a racial or ethnic minority group; Veterans; Individuals who live in covered households
Wyoming Department of Health	GetSetUp Virtual Classes for Older Adults	The Wyoming Department of Health has partnered with GetSetUp to provide live virtual classes taught by older adults. Older citizens in the state have the opportunity for free access to a variety of health and technology-focused classes.	Aging individuals



University of Wyoming and Public Libraries	Telehealth	Several libraries either have or are in the process of placing a sound-proof telehealth kiosk in the library for citizens to use. These kiosks are provided through grants from the University of Wyoming.	Individuals who primarily reside in a rural area; Individuals who are members of a racial or ethnic minority group; Aging individuals; Veterans; Incarcerated individuals including previously incarcerated and/or justice-impacted individuals; Individuals with disabilities; Individuals who live in covered households; Individuals with a language barrier including individuals who are English learners and those with low levels of literacy
Wyoming Business Council (WBC)	Framework - Seven Steps to Better Community Broadband	WBC developed this framework in 2021. The Framework outlines Seven Steps to Better Community Broadband which breaks the steps down in simple pieces and provides guidelines for communities on how to have conversations with stakeholders and providers.	Individuals who primarily reside in a rural area; Individuals who are members of a racial or ethnic minority group; Aging individuals; Veterans; Incarcerated individuals including previously incarcerated and/or justice-impacted individuals; Individuals with disabilities; Individuals who live in covered households; Individuals with a language barrier including individuals who are English learners and those with low levels of literacy
U.S. Department of Education Office of Educational Technology	Advancing Digital Equity for All	This guidance resource illuminates insights from a series of national learner-centered listening sessions to highlight the barriers faced by learner communities and promising solutions for increasing access to broadband and technology for learning	Individuals who primarily reside in a rural area; Individuals who are members of a racial or ethnic minority group; Incarcerated individuals including previously incarcerated and/or justice-impacted individuals; Individuals with disabilities; Individuals with a language barrier including individuals who are English learners and those with low levels of literacy; Individuals who live in covered households
U.S. Department of Education Office of Educational Technology	Digital Equity Story Engine	OET will publish stories of impact throughout 2023 to provide examples of different sectors advancing digital equity in education.	Individuals who primarily reside in a rural area; Individuals who are members of a racial or ethnic minority group; Incarcerated individuals including previously incarcerated and/or justice-impacted individuals; Individuals with disabilities; Individuals with



			a language barrier including individuals who are English learners and those with low levels of literacy; Individuals who live in covered households
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3.1.2 Existing Digital Equity Plans

WBO believes its Digital Access Plan is the first comprehensive, digital equity-focused plan developed by a state agency or organization in Wyoming. Throughout its extensive stakeholder engagement and research process, WBO has not identified any other comprehensive digital equity plans in Wyoming (including any comprehensive digital equity plans developed by other State, Tribal, or local organizations). However, there are multiple plans supporting aspects of digital equity (e.g., online learning, telemedicine) and those are incorporated into Section 2.2 (Alignment with Existing Efforts to Improve Outcomes).

3.1.3 Existing Digital Equity Programs

WBO has included existing digital equity programs within Sections 3.1.1 (Digital Inclusion Assets by Covered Population), 3.1.4 (Broadband Adoption), and 3.1.5 (Broadband Affordability).

3.1.4 Broadband Adoption

Below are current assets in the state related to broadband adoption. Data regarding broadband adoption (overall and by Covered Population) is located in Sections 3.2.1 (Covered Population Needs Assessment) and 3.2.2 (Broadband Adoption). *Assets listed below include relevant items from Wyoming’s Five-Year Action Plan Section 3.3.4 (Broadband Access) and all of 3.3.2 (Broadband Adoption).*

Exhibit 8: Broadband adoption assets

Organization Name	Asset Name	Description	
Wyoming Library Systems	Public Computer Labs, device lending and Wi-Fi access	Wyoming’s public library systems have a total of 721 computers available for public use, which were used a total of 172,000+ times in 2021. All library systems also offer free Wi-Fi at branches. Some branches have begun Wi-Fi hotspot lending programs and the State Library may begin a laptop/hotspot lending program. There were 214,000+ wireless sessions in 2021.	Individuals who live in covered households; Individuals with disabilities; Individuals with a language barrier; Aging individuals; Individuals who primarily reside in a rural area; Individuals who live in covered households
State and local rest stops and visitor centers	Wi-Fi access	Free Wi-Fi is available at WYDOT rest stops across the state, select state Welcome Centers (e.g., the Southeast Welcome Center), local visitor centers (e.g., Town of Guernsey Visitors Center), and public spaces (e.g., Cheyenne’s Depot Plaza).	Individuals who primarily reside in a rural area; Individuals who are members of a racial or ethnic minority group; Aging individuals; Veterans; Incarcerated individuals including previously incarcerated and/or justice-



Organization Name	Asset Name	Description	
			<p>impacted individuals; Individuals with disabilities; Individuals who live in covered households; Individuals with a language barrier including individuals who are English learners and those with low levels of literacy</p>
<p>Community Colleges</p>	<p>Wi-Fi access and device lending</p>	<p>Campuses have extended Wi-Fi to their parking lots, and many have device lending programs for students.</p>	<p>Individuals who primarily reside in a rural area; Individuals who are members of a racial or ethnic minority group; Aging individuals; Veterans; Incarcerated individuals including previously incarcerated and/or justice-impacted individuals; Individuals with disabilities; Individuals who live in covered households; Individuals with a language barrier including individuals who are English learners and those with low levels of literacy</p>
<p>University of Wyoming</p>	<p>Wi-Fi access and device lending</p>	<p>Campus provides students and guests with Wi-Fi access and have device lending programs for UW students</p>	<p>Individuals who primarily reside in a rural area; Individuals who are members of a racial or ethnic minority group; Aging individuals; Veterans; Incarcerated individuals including previously incarcerated and/or justice-impacted individuals; Individuals with disabilities; Individuals who live in covered households; Individuals with a language barrier including individuals who are English learners and those with low levels of literacy</p>



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Organization Name	Asset Name	Description	
Department of Workforce Services	Public Computer Labs, device lending and Wi-Fi access	DWS manages the Wyoming Relay Equipment Distribution Program (WYRED), which distributes and loans specialized wireless devices and accessories (e.g., smartphones, tablets) to Wyoming residents with disabilities. Low-income residents with a disability could qualify for a free device, while all residents with a disability are eligible to participate in the device loan program. DWS also provides free public computer access for use in the job search process at all Workforce Centers.	Individuals with disabilities; Aging individuals; Individuals who are members of a racial or ethnic minority group; Veterans; Individuals who live in covered households
Office of Educational Technology	Home Access Playbook	The Playbook outlines seven strategies, or “plays,” that state leaders are taking to address issues of home internet and device access for students.	Individuals who are members of a racial or ethnic minority group; Individuals who primarily reside in a rural area; Individuals who live in covered households; Individuals with disabilities; Individuals with a language barrier including individuals who are English learners and those with low levels of literacy
Office of Educational Technology	Wireless Brief	The brief lays out a strategy for deploying off-campus wireless networks as a solution to provide home connectivity to students and educators.	Individuals who are members of a racial or ethnic minority group; Individuals who primarily reside in a rural area; Individuals who live in covered households; Individuals with a language barrier including individuals who are English learners and those with low levels of literacy

3.1.5 Broadband Affordability

Below are current assets in the state related to broadband affordability. These assets are primarily provided by non-profit organizations and funded by federal programs to support ACP outreach and enrollment in Wyoming. Wyoming organizations are eligible for two additional federal ACP outreach programs (the FCC’s National Competitive Outreach Program [NCOP] and Tribal Competitive Outreach Program [TCOP] grants) and if more funds are awarded within the state, WBO will update the inventory.



Data regarding broadband affordability is located in Section 3.2.3 (Broadband Affordability). *This list of assets is identical to Wyoming's Five-Year Action Plan Section 3.3.3 (Broadband Affordability).*

Exhibit 9: Broadband affordability assets

Organization Name	Asset Name	Description	
Affordable Connectivity Program (ACP)	ACP	The federal ACP provides eligible households with a discount on broadband service and connected devices: up to \$30 per month for high-speed internet services and up to \$75 per month for households on Tribal lands (i.e., the Wind River Indian Reservation).	Individuals who live in covered households
Community Services Network of Wyoming (CSNOW)	Program to support ACP adoption	In March 2023, CSNOW, a nonprofit organization, was awarded a \$325,000 grant from the Federal Communications Commission (FCC) to support ACP outreach and enrollment in Wyoming.	Individuals who live in covered households
Community Services Network of Wyoming (CSNOW)	Program to pay internet and other utility bills during a crisis	CSNOW has limited funding available to pay people's internet (and other utility) bills in emergency / crisis situations.	Individuals who live in covered households
Council of Community Services (CCS)	Program to support ACP adoption	In March 2023, CCS, a nonprofit organization, received a \$150,000 grant to support ACP outreach and enrollment. They will also be teaching digital skills.	Individuals who live in covered households
Various school districts	ACP adoption	Select school districts have invested significant time to conduct ACP outreach (e.g., Laramie County School District #1).	Individuals who live in covered households
Online for All	Outreach initiative to support ACP adoption	Campaign that leverages a coalition of corporate, philanthropic, government, community based, and national organizations to consolidate resources to support households to get and stay online	Individuals who live in covered households



3.2 Needs Assessment

3.2.1 Covered Population Needs Assessment

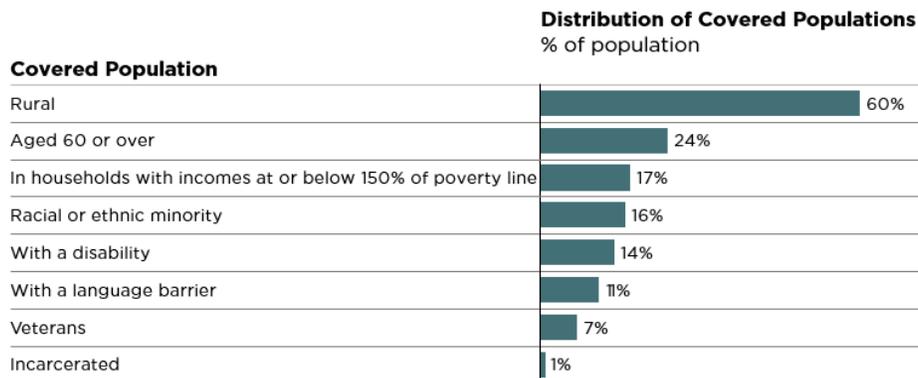
This section is identical to Section 3.4.5 (Digital Equity) of the Five-Year Action Plan.

Wyoming's Covered Populations

NTIA identifies eight categories of Covered Populations that have traditionally had less access to and lower adoption of broadband. The categories are rural citizens, those 60 and over, those at or below 150% of the federal poverty line, racial and ethnic minorities, those with a disability, those with a language barrier including individuals who are English learners and those with low levels of literacy, veterans, and incarcerated individuals including previously incarcerated and/or justice-impacted individuals, with individuals often belonging to more than one population. In Wyoming, rural citizens (60% of the total population) and those aged 60 or over (24%) comprise the largest share of Wyoming's Covered Populations (Exhibit 10). Low-income households, defined as those at or below 150% of the federal poverty line, racial and ethnic minorities, citizens with a disability, and those with a language barrier are all between 11% and 17% of the total statewide population. Veterans and incarcerated individuals comprise less than 10% of Covered Populations.

Throughout WBO's engagement with each Covered Population and the organizations that represent them, WBO found that availability and affordability were consistently raised as the most important issues. In a state like Wyoming, with its predominantly rural population, broadband availability can be challenging outside of population centers and frequently more expensive, which could reduce adoption rates. As a result of these conversations, WBO has focused on providing an in-depth account of broadband affordability and availability for each Covered Population in addition to highlighting additional needs raised throughout the stakeholder engagement process.

Exhibit 10: Distribution of Covered Populations in Wyoming²¹



Broadband availability by Covered Population

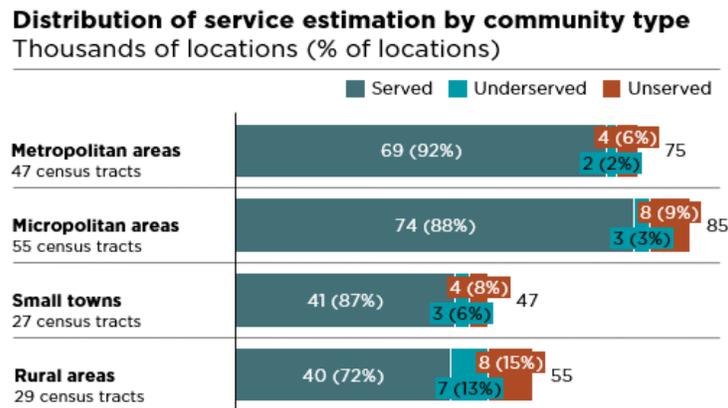
WBO analyzed the impact of broadband availability on various Covered Populations across the state. For most Covered Populations,

²¹ Digital Equity Act Population Viewer. <https://www.census.gov/data/data-tools/digital-equity-act-population.html>. Rounded to nearest whole number. Covered Population percentages based on total population estimate of ~580K. Rural is defined as any area that is not urban. An urban area will comprise a densely settled core of census blocks with at least 2,000 housing units or have a population of at least 5,000.



WBO did not find a difference in broadband availability. However, three Covered Populations (rural, those aged 60+, and veterans) were all found to have at least some gaps in broadband availability. Wyomingites who live in rural areas are the most likely to live in areas that are unserved or underserved; and both those aged 60+ and veterans are more likely to live in unserved or underserved communities, a critical barrier to closing the digital divide. At 28%, rural areas have the highest proportion (and total number) of unserved and underserved locations in Wyoming (Exhibit 11).

Exhibit 11: Distribution of service estimation by community type²²



Citizens over 60 and veterans are slightly more likely to live in areas with less broadband availability. For example, approximately 17% of both Veterans and 60+ live in areas where >30% of locations are unserved or underserved (Exhibit 12)

Exhibit 12: Broadband availability for veterans and 60+²³

Broadband availability for veterans and 60+
% of locations unserved or underserved in block group

% of locations un- or underserved	Veterans	Non-Veterans	Individuals aged 60+	Individuals aged < 60
80-100% Un or Underserved	3.2%	2.8%	3.2%	2.8%
30-80% Un or Underserved	13.4%	11.6%	13.7%	11.4%
0-30% Un or Underserved	83.4%	85.5%	83.2%	85.8%

Incarcerated individuals currently face broadband availability challenges as well. The Wyoming Department of Corrections is in the process of installing WiFi across its five facilities to increase the availability of reliable, high-speed internet to incarcerated individuals; however, just two of five facilities currently have access.

²² Community type determined by the USDA rural-urban commuting area (RUCA) codes at the Census Tract level: Codes 1-3 Metropolitan area (an Urban Area by the US Census and geographies within its primary commuting radius); Codes 4-6 Micropolitan area (a large Urban Cluster (population 10k – 50k) and its primary commuting radius); Codes 7-9 Small Town (defined as a small Urban Cluster (population 2.5k – 10k) and its primary commuting radius); Code 10 Rural area (defined as geographies outside of both an Urban Area and Urban Cluster). Excludes 1 Census Tract which is “Not Coded” by USDA (21 locations). Values for served, unserved, and underserved locations reflect location totals when locations to be served by RDOF, CAFII, and USDA ReConnect are considered served

²³ U.S. Census Bureau, *American Community Survey (ACS), 5-Year Estimates* (Table B21001-Veterans and B01001-Population aged 60+ years). <https://www.census.gov/data.html>; FCC National Broadband Map. 18 Nov 2022; US Census Bureau block group boundaries (2020). Locations are not presently served with 100/20 Mbps and/or not covered by RDOF, CAF II, or USDA Reconnect

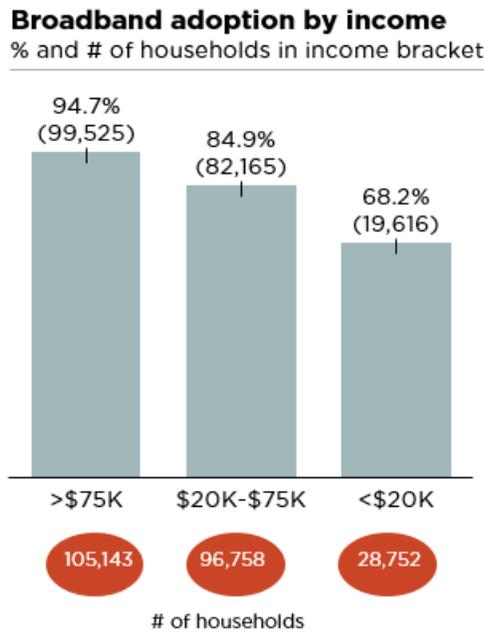


Across other Covered Populations (e.g., low income, racial/ethnic minorities, disability status), access to broadband is approximately the same as or slightly greater than the statewide average.

Broadband adoption by Covered Population

Broadband adoption varies significantly by Covered Population (e.g., veteran, rural, racial or ethnic minorities, persons with disabilities, and low-income). The largest gap in adoption is across income levels. While nearly one-third (31.8%) of households earning less than \$20,000 per year have not adopted broadband, only 5.3% of those earning \$75,000 or more per year do not subscribe (Exhibit 13).

Exhibit 13: Broadband adoption by income²⁴



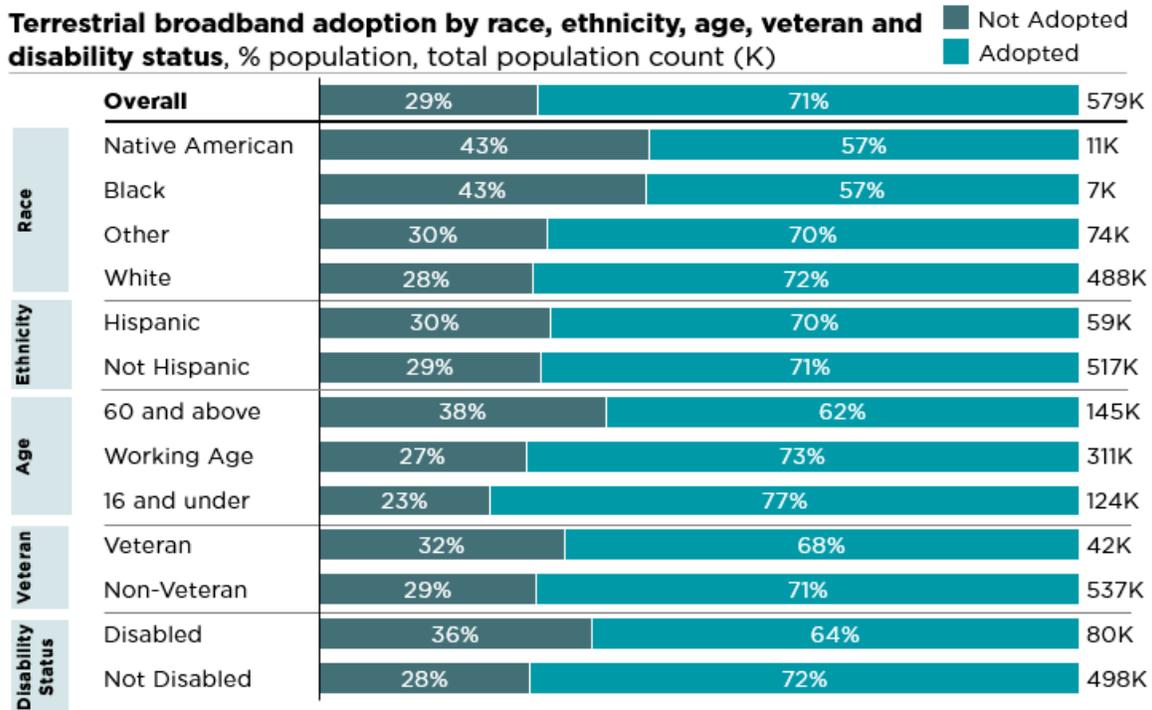
There is also a significant gap in broadband adoption between citizens over 60 and those of working age or younger. 62% of Wyomingites aged 60+ subscribe to terrestrial broadband, while 73% of working age adults do. Similarly, 57% of both Native Americans²⁵ (primarily members of the Eastern Shoshone and Northern Arapaho tribes) and Black Wyomingites subscribe compared to 71% of the population overall. Veterans and disabled citizens have also adopted terrestrial broadband at a slightly lower rate than non-veterans or non-disabled (Exhibit 14).

²⁴ Broadband adoption includes any internet subscriptions except dial-up, U.S. Census Bureau, American Community Survey (ACS), 2021 5-Year Estimates. Table S2801, <https://www.census.gov/data/>

²⁵ Census data categorizes groups as Native American rather than referring to members of specific tribes. Members of the Eastern Shoshone and Northern Arapaho tribes comprise most Native Americans living in Wyoming.



Exhibit 14: Terrestrial broadband adoption by race, age, veteran and disability status²⁶

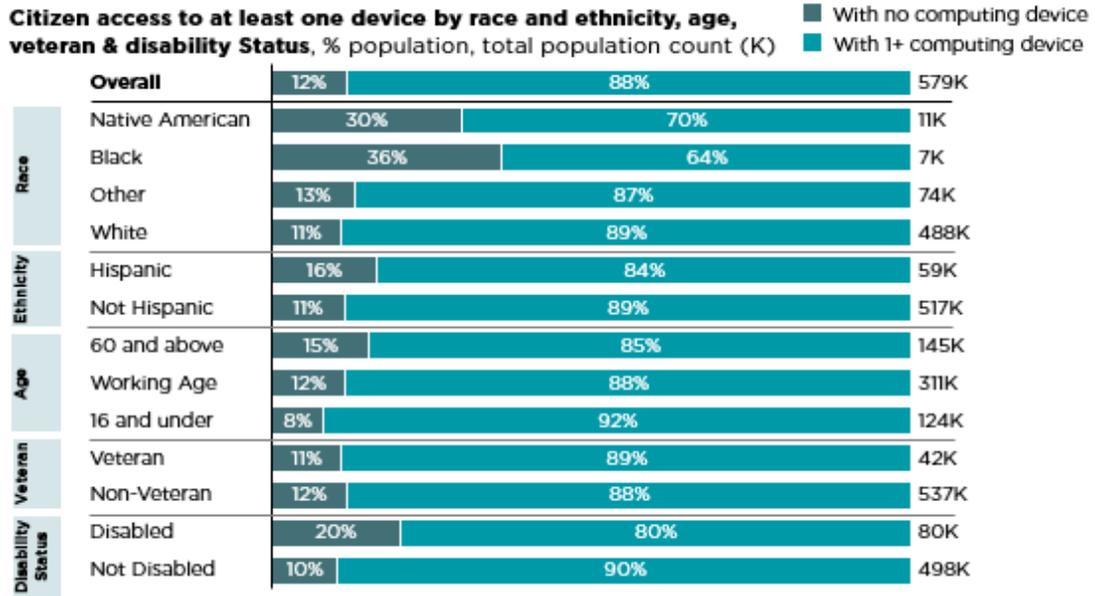


Covered Populations also face gaps in access to internet-capable devices

Black Wyomingites, Native Americans (primarily members of the Eastern Shoshone and Northern Arapaho tribes), and individuals with a disability are less likely to own internet-capable devices compared to the rest of the Wyoming population. The gaps are significant and represent a critical barrier to digital access. Overall device ownership is at 88%, but Black Wyomingites, Native Americans²⁷ (primarily members of the Eastern Shoshone and Northern Arapaho tribes), and individuals with a disability are far less likely to own a computer or tablet than other groups, with adoption rates of 64%, 70%, and 80% respectively. By comparison, 90% of citizens without a disability and 89% of white citizens have a device at home. Individuals 16 and under have the smallest gap in device adoption across all demographic groups in Wyoming (Exhibit 15).

²⁷ Census data categorizes groups as Native American rather than referring to members of specific tribes. Members of the Eastern Shoshone and Northern Arapaho tribes comprise most Native Americans living in Wyoming.

Exhibit 15: Wyoming citizen access to at least one device by race, age, veteran & disability status²⁸



Most of Wyoming’s incarcerated population currently accesses the internet via computer labs in their assigned facility. As part of a partnership with the Department of Workforce Services on implementing the Pathway Home 3 grant, the Department of Corrections has purchased 1,000 tablets that will increase the device availability for inmates (e.g., in living areas, potentially in cells); however, this purchase will not provide improved access for the entire inmate population.

Wyoming does not currently have survey data indicating broadband adoption or device ownership levels for rural citizens or citizens with a language barrier.

Other barriers to digital equity faced by Wyoming Covered Populations

Incarcerated individuals: Given funding shortfalls, the Wyoming Department of Corrections has been unable to prioritize improved, secure digital services for incarcerated individuals. For example, inmates currently do not use any digital systems to access institutional services like setting up an appointment for health services, purchasing items from the canteen, or requesting an appointment to talk with the warden; whereas, non-incarcerated individuals can readily access telehealth services, online grocery ordering, or digital scheduling services.

Veterans: WBO learned that increased digital equity could play a role in helping to solve one of the most fundamental challenges faced by veterans—improving access to healthcare. While the U.S. Department of Veterans Affairs manages outpatient clinics throughout Wyoming, there are just two medical centers: one in Sheridan and one in Cheyenne. Improved access to telehealth

²⁸ U.S. Census Bureau, American Community Survey (ACS), 2021 5-Year Estimates (IPUMS). Excludes smartphones, <https://www.census.gov/data/>

services could cut down on travel time from more rural counties, allowing for veterans to be treated at their home.

Residents aged 60+: WBO heard from organizations representing senior citizens in Wyoming that there is often a skepticism towards the internet harbored by elderly Wyoming populations resulting from low digital literacy. Residents aged 60+ are afraid to access the internet out of a fear of getting scammed and therefore avoid it in general.

Residents with a disability: The challenges surrounding device availability for Wyoming residents with a disability are often compounded by lack of access to a device with accessible features (e.g., tablets that are compatible with hearing aids or cell phones with larger buttons). Wyomingites with a disability also face digital literacy challenges—even with computer applications that may have accessible features, they are unsure how to enable them to improve their experience.

Individuals with a language barrier: While some Wyoming digital government services include content in a second language, it is not consistent across the State’s digital properties, indicating that inaccessibility is a barrier for English learners and those with low levels of literacy.

3.2.2 Broadband Adoption

This section is identical to Section 3.4.2 (Broadband Adoption) in the Five-Year Action Plan.

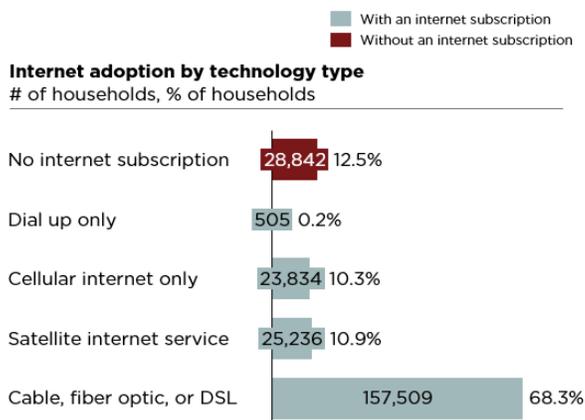
Adoption by technology

While the majority of Wyoming households have an internet subscription (87.5%), there are significant gaps by type of technology. Approximately 10% of households only access the internet through a cellular data connection. While this may be sufficient service for some, for others it can be a product of limited home broadband access options or an inability to afford separate home broadband and phone plans. When more than one person lives in a household, cellular-only plans can be limiting given that the household’s access to the internet may travel with the person who owns the phone. A similar share of households (11%) subscribes to satellite service. Satellite service is typically available in locations where terrestrial broadband may not be viable (e.g., fiber, cable, DSL) and could contribute to overall internet subscription rates in Wyoming (Exhibit 16).

At present, the U.S. Census does not track subscriptions to fixed wireless services. This could result in an undercount of total households that subscribe to broadband (e.g., households with fixed wireless may have responded that they did not have broadband at all because their specific connection type was not included). However, it is also possible that fixed wireless subscribers simply chose the category they thought was closest to their connection type. While this likely would not change overall adoption numbers, it could produce variation across types of services.

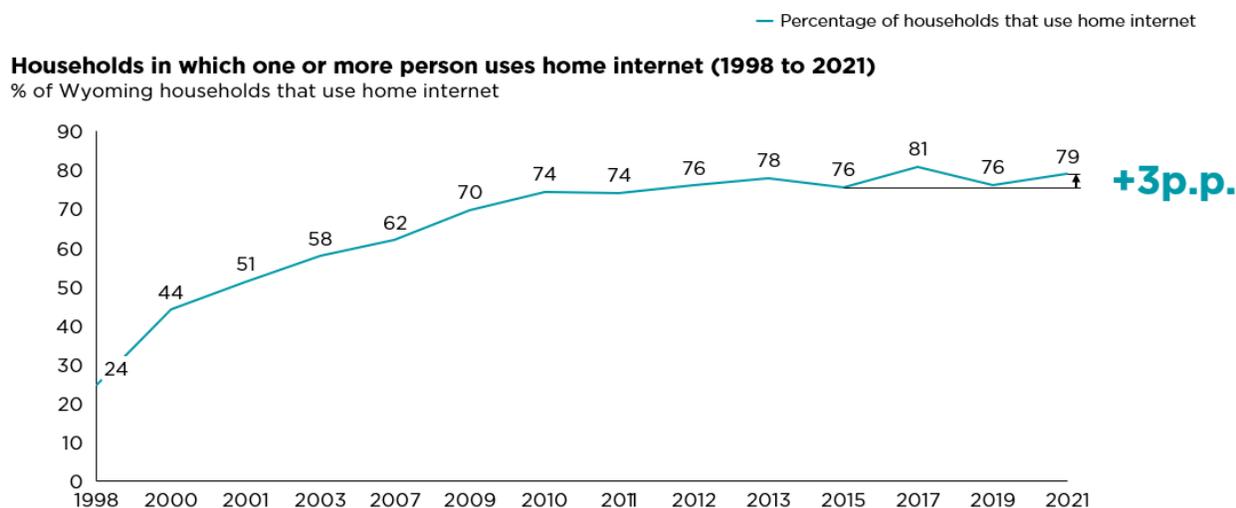


Exhibit 16: Wyoming internet adoption by technology type²⁹



According to NTIA’s Internet Use Survey data for Wyoming, home internet use by anyone in the household has increased by 3 percentage points since 2015 (Exhibit 17). Drivers of low usage could include lack of availability, affordability, device access, or digital skills.

Exhibit 17: Households in which one or more person uses the internet³⁰



Adoption by geography

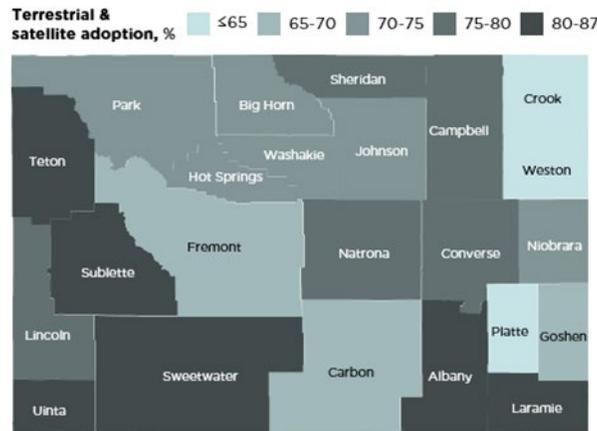
Adoption rates of high-speed internet also vary across geographies in Wyoming, particularly when comparing across technologies. When considering both terrestrial (fiber optic, cable, and DSL) and satellite technologies, all counties have subscription rates of at

²⁹ U.S. Census Bureau, American Community Survey (ACS), 2021 5-Year Estimates. Table S2801 “Types of Computers and Internet Subscriptions” Based on 230,653 households in Wyoming according to ACS 2021 5-year estimates. Note: Percentages may not add to 100% as households may be subscribed to multiple types of internet service (e.g., satellite and cable, fiber optic, or DSL). <https://www.census.gov/data/>

³⁰ Digital nation data explorer | National telecommunications and information administration. National Telecommunications and Information Administration. <https://ntia.gov/other-publication/2022/digital-nation-data-explorer>

least 63%, although no county has a subscription rate greater than 87%. The four counties with the lowest terrestrial (i.e., fiber optic, cable, DSL) and satellite broadband adoption are Crook, Weston, Goshen and Platte, all of which are located on the eastern side of the state (Exhibit 18). Notably, two of these four counties, Crook and Weston, also have a relatively low percentage of served locations and the highest cellular-only subscription rates in the state, likely driven in part due to low service availability (Exhibit 21).

Exhibit 18: Terrestrial and satellite broadband adoption by county³¹

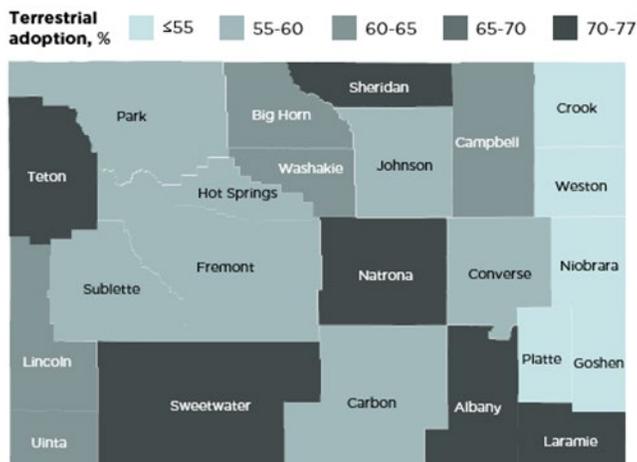


When satellite is removed from the analysis, there is still significant variation in adoption of terrestrial broadband across Wyoming counties. Only six counties across Wyoming have at least 70% adoption of terrestrial broadband (i.e., fiber optic, cable, DSL). The five counties with the lowest rates of terrestrial broadband adoption (between 44%-55%) are all located on the eastern side of the state, which is typically more rural. Two of these five counties (Goshen and Platte) border other counties with significantly higher terrestrial adoption rates (70-77%), which could be due to topography, population density, or other factors such as speed or reliability of terrestrial broadband (Exhibit 19).

³¹ US Census Bureau, American Community Survey (ACS), 2021 5-Year Estimates. Table S2801. <https://www.census.gov/data/>

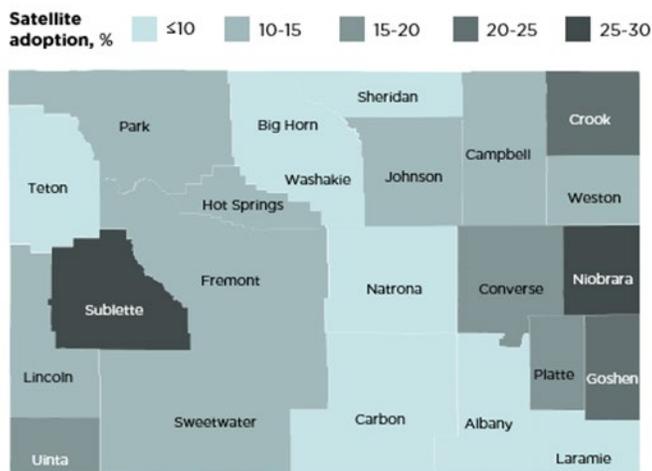


Exhibit 19: Terrestrial broadband adoption by county³²



Satellite internet adoption is largely concentrated in the Western and Eastern regions of the state. Two counties – Sublette and Niobrara – rely on satellite for a sizeable portion (>25%) of their internet usage (Exhibit 20).

Exhibit 20: Satellite broadband adoption by county³³

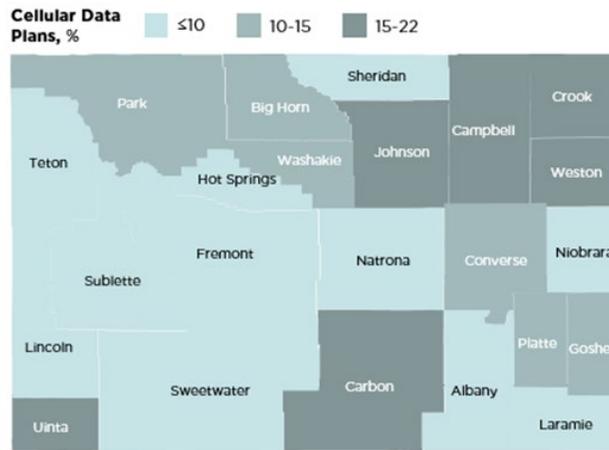


In addition to terrestrial and satellite, there are also households that rely only on cellular data for their broadband needs. Cellular-only adoption is highest in the northern and eastern regions of the state of Wyoming. In six counties (Carbon, Campbell, Crook, Johnson, Weston, and Uinta) 15-22% of the population rely on cellular data as their only means to access the internet (Exhibit 21).

³² Ibid 24

³³ Ibid 24

Exhibit 21: Cellular-only adoption by county³⁴



As noted above, broadband adoption differs significantly across counties in Wyoming. Challenges in broadband adoption may be driven by a variety of factors, including the availability of high-speed internet as outlined in Section 3.2.1 and affordability as outlined in Section 3.2.3 below. Strengthening the state’s holistic approach to accessibility of affordable broadband infrastructure is a key step in moving the needle on adoption.

3.2.3 Broadband Affordability

This section is identical to Section 3.4.3 (Broadband Affordability) in the Five-Year Action Plan.

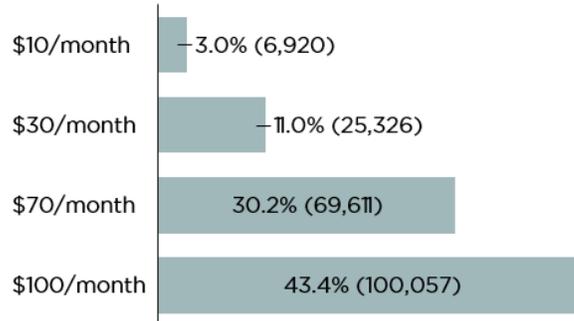
In line with national trends, affordability is likely a significant driver of the gap in broadband adoption. In Wyoming, there is a 26.5 percentage point gap in broadband adoption between households earning <\$20K/year and those earning >\$75K/year (68.2% compared to 94.7%, respectively) (Exhibit 13). Given the variation in broadband plan prices, one way to consider affordability is by assessing the proportion of a monthly plan’s price relative to household income. For example, using the 2% of income threshold set by the Broadband Commission for Sustainable Development, more than 40% of Wyoming households may not be able to afford internet that costs \$100/month. This falls precipitously when broadband is \$10/month; at that price point, only 3% of Wyoming households may not be able to afford internet (Exhibit 22).

³⁴ Ibid 24



Exhibit 22: Households that would pay more than 2% of income for broadband at various price points³⁵

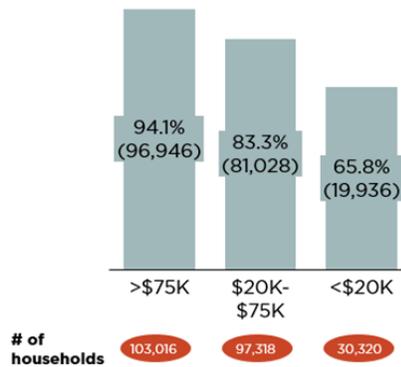
Households that would pay more than 2% of income for broadband at various price points
% and # of households



These analyses indicate broadband adoption varies by income group among Wyoming households, and an analysis of device access shows similar trends. Approximately 67% of households with incomes <\$20K/year have a desktop, laptop, or tablet at home compared to 94% of households with incomes >\$75K/year (Exhibit 23).

Exhibit 23: Access to one or more computing devices by income

Access to ≥1 computing device by income
% and # of households in income group



At least 80% of households in every county have access to one or more devices including a laptop, computer, smartphone, or tablet (Exhibit 24).³⁶ Statewide, 19% of Wyomingites do not have access to a laptop or desktop, while 8% only have access to a smartphone, and 1% only have access to a tablet. To connect to and effectively use the internet, Wyomingites need access to both

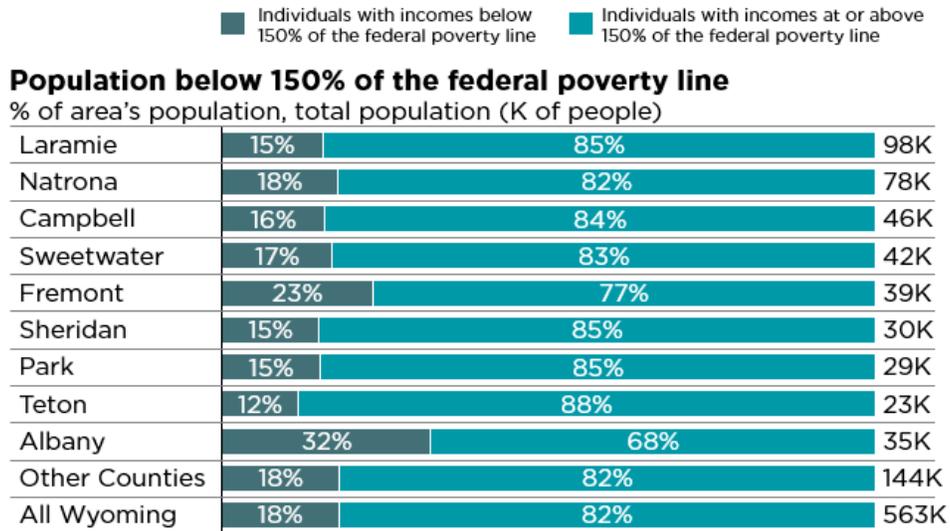
³⁵ *Broadband targets 2025*. (2022, March 2). Broadband Commission for Sustainable Development. <https://www.broadbandcommission.org/broadband-targets/>. Affordability model assumes straight-line income distribution between intervals \$0-\$10k, \$10k-\$15k, \$15k-\$25k, \$25k-\$35k, \$35k-\$50k, \$50k-\$75k, \$75k-\$100k, \$100k-\$150k, \$150k-\$200k, and \$200k and up. Affordability model qualifies a plan as affordable if it costs no more than 2% of a person’s annual income.

³⁶ US Census Bureau, American Community Survey (ACS), 2021 5-Year Estimates. Table S2801. <https://www.census.gov/data.html>



Approximately 18% of Wyoming citizens live in a household with income below 150% of the federal poverty line and therefore count as a Covered Population (Exhibit 26). Given the cost of broadband, this could suggest a barrier to adoption.

Exhibit 26: Population below 150% of the federal poverty line³⁹.



While WBO’s research of existing broadband plans in the state indicates most plans are above \$30/month, the price a household pays could be significantly less if it participates in the Affordable Connectivity Program (ACP). ACP reimburses a provider up to \$30/month (or \$75/month on tribal lands), significantly reducing the net cost for eligible households.⁴⁰ In Wyoming, there are 85,414 households (~37%) eligible for ACP and 20,891 households were enrolled in ACP (~24% of all eligible households) as of October 2023; this is 17 percentage points lower than the national average. Currently, 76% of eligible households in Wyoming are not enrolled, making Wyoming 42nd in percentage ACP enrollment compared to other states (Exhibit 27). Given the high rate of ACP eligibility and low rate of enrollment, many Wyomingites may lack awareness of internet subsidy programs that could help improve broadband affordability (and by extension, adoption).

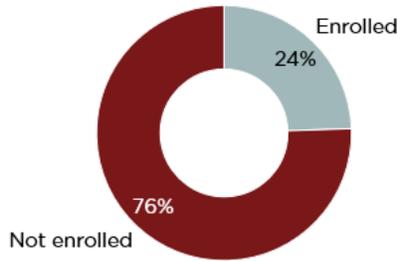
³⁹ US Census Bureau, American Community Survey (ACS), 2021 5-Year Estimates. Data pulled from Tables C17002 (Ratio of Income to Poverty Levels). Population numbers may vary as values capture the population for whom poverty status is known. <https://www.census.gov/data/>. 9 largest counties by population, other includes 14 counties not listed

⁴⁰ Affordable connectivity program. (2022, November 22). Federal Communications Commission. <https://www.fcc.gov/acp>

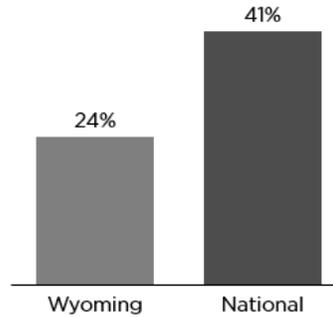


Exhibit 27: ACP enrollment in Wyoming relative to the nation⁴¹

Wyoming ACP enrollment
% of eligible households (85,414)

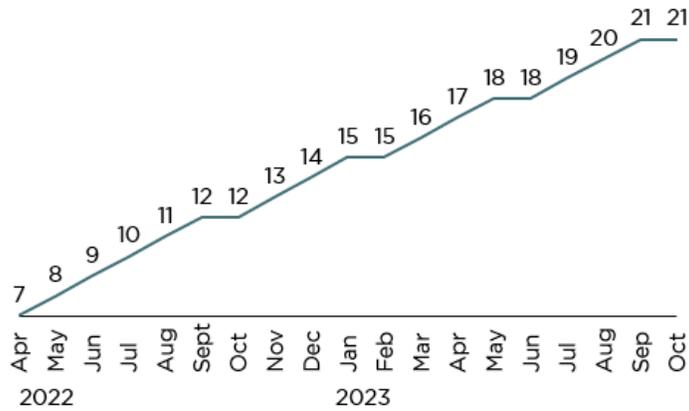


Wyoming vs. Federal ACP enrollment
% of eligible households



42nd in ACP enrollment compared to other US states

Wyoming ACP enrollment over time
Eligible households, thousands



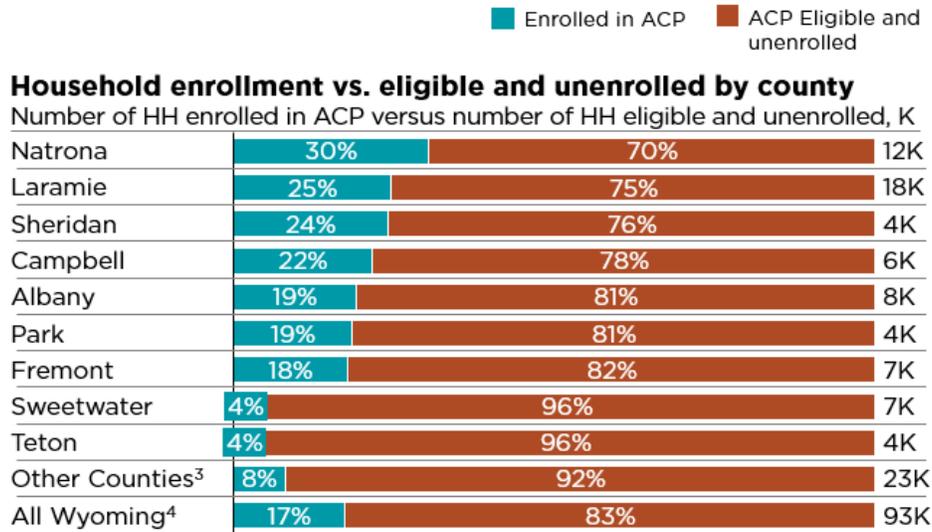
Approximately 64,500 eligible households are estimated to not be enrolled in ACP across the state.⁴² There is significant variation across even similarly populated counties. For example, Sweetwater and Fremont counties have similar populations (~39K and ~41K citizens, respectively). However, as of April 2023, ACP enrollment in Sweetwater stood at 4%, while 18% of Fremont’s eligible population was enrolled (Exhibit 28). Wyoming may have an opportunity to increase high-speed broadband adoption by creating affordable internet subscriptions and increasing awareness efforts to drive enrollment in available assistance programs.

⁴¹ ACP data. (2023, October)) (Most recent data at time of publication) Education Superhighway ACP Enrollment dashboard. <https://www.educationsuperhighway.org/no-home-left-offline/acp-data/>. ACP enrollment ranking excludes Washington D.C and territories.

⁴² Ibid



Exhibit 28: Household ACP enrollment vs. eligible and unenrolled by county⁴³



⁴³ Total eligibility estimated by CTC Technology & Energy analysis; enrollment numbers provided by USAC as of April 2023. The CTC Technology & Energy estimate for eligibility (93K) is slightly higher than the EducationSuperhighway estimate for eligibility (85K), yielding a slightly lower enrollment rate estimate of 17%. 9 largest counties by population, includes 14 counties not listed above; US Census Bureau, American Community Survey (ACS), 2021 5-Year Estimates. Table S2801.



4 Collaboration and Stakeholder Engagement

This section is nearly identical to Section 5.1 (Stakeholder Engagement Process) in Wyoming's Five-Year Action Plan.

4.1 Introduction

The Wyoming Broadband Office (WBO) recognizes that successful stakeholder engagement creates a crucial input to understanding the unique internet accessibility challenges of Wyoming's population. To develop a sustainable, holistic stakeholder strategy, WBO integrated stakeholder engagement for development of both the Five-Year Action Plan and Digital Access Plan. WBO also collaborated with state and local leaders, increasing the likelihood of reaching all stakeholder groups and fostering open dialogue. The organizations mentioned in Exhibit 30, Exhibit 34, Exhibit 35, and Exhibit 36 each played an active role in providing input and feedback that shaped the development of the State's Digital Access Plan.

WBO designed its engagement strategy to reach a broad audience, holding 24 large events (in-person and virtual), fielding six organizational surveys, and offering focused 1-1 sessions to collect more in-depth stakeholder input. Given Wyoming's large rural population – approximately 60% – WBO leveraged a variety of engagement formats such as virtual sessions, in-person sessions, surveys, and phone calls to reach as many groups as possible. See Section 4.2 for more detail around each engagement format.

WBO also wanted to develop a sustainable path for future stakeholder engagement. To accomplish that, WBO built on the trust the Wyoming Business Council (WBC) has created with communities across the state. WBO partnered with WBC's six Regional Directors, all of whom have deep ties with communities in their regions.

The Regional Directors recommended WBO localize marketing and outreach efforts for all sessions. In addition, Regional Directors recommended WBO host in-person listening sessions across all six WBC regions at convenient and familiar locations such as colleges and community centers. WBO ensured each in-person location met accessibility needs and were proximate to underserved and unserved citizens. *For more information on WBO's strategy for virtual and in-person listening sessions across the six regions, please see Section 4.2.*

WBO believes that investing in an ongoing, comprehensive stakeholder engagement process that incorporates feedback into both the BEAD and Digital Access Plan will help create an approach that best reflects the unique needs of Wyoming citizens. To date, the stakeholder engagement process has enabled WBO to:

- Disseminate information and frameworks to all stakeholder entity groups (public, private, community based, and Covered Populations) to support decision making;
- Initiate and maintain an open dialogue with stakeholders by structuring engagement touchpoints (including listening sessions);
- Identify and learn about obstacles and barriers for all Wyomingites (and Covered Populations in particular) to inform approaches to deployment and digital access; and
- Establish channels for future engagement and collaboration.

This process has successfully established a common pathway across regions in the state for collaborating with myriad stakeholder groups to support the development of the BEAD Five-Year Action Plan and the Digital Access Plan.

The following sections provide an in-depth overview of WBO's stakeholder engagement process:



- **Section 4.2** – describes the overall stakeholder engagement plan and process used to successfully gather feedback from a variety of stakeholder groups, including Covered Populations in Wyoming.
- **Section 4.3** – identifies key stakeholders and potential collaborators including state agencies, associations, community organizations, the Eastern Shoshone and Northern Arapaho tribes, and other Covered Populations.
- **Section 4.4** – summarizes key takeaways and learnings that WBO will incorporate into its iterative process for future stakeholder engagement.
- **Section 4.5** – outlines WBO’s plan for continued engagement with Covered Populations and other important stakeholders

4.2 Engagement Plan and Process

WBO plays a critical role within Wyoming to increase prosperity for Wyoming communities, businesses, and citizens. WBO has worked closely with the Governor’s Office, legislators, broadband providers, WBC’s Broadband Advisory Council, and community stakeholder groups to ensure funding it pursues fits state needs and priorities.

To support the development of the BEAD Five-Year Action Plan and Digital Access Plan, WBO implemented several types of stakeholder engagement touchpoints:

- Statewide virtual listening sessions (9)
- Regional in-person listening sessions (15)
- 1:1 Engagements with state agencies and other stakeholders (10)
- Surveys to community leaders, organizational stakeholders, and representatives of organizations that serve Covered Populations (6)

WBO launched and executed a marketing strategy for all the listening sessions and surveys, using an email marketing tool to send emails to individual stakeholders and ensure emails were successfully delivered to key stakeholders. See the following subsections on statewide virtual listening sessions, regional in-person listening sessions, and surveys to key stakeholders and Covered Populations for more detail around WBO’s marketing efforts.

WBO’s stakeholder engagement team has extensive experience gathering input and feedback from broadband providers, citizens, private and nonprofit organizations, and rural and tribal authorities. The engagement team tailored the stakeholder engagement process to reach key stakeholder groups for input on the potential future-state of broadband in Wyoming. WBO’s stakeholder engagement team sought personalized responses from stakeholders by presenting a range of data elements, including current state of broadband availability, service speeds, Affordable Connectivity Program (ACP) uptake, and subscriptions to fiber, cable, or DSL internet.

Statewide Virtual Listening Sessions

WBO’s strategy for virtual listening sessions was to take a broad approach for outreach by partnering with state leaders and hosting statewide sessions. WBO successfully marketed, organized, and led one virtual meeting on February 28th (2023) and held seven virtual meetings during the week of April 24th (2023) for state agencies, local and regional governments, Community Anchor Institutions (CAIs), service providers, organizations representing Covered Populations, workforce development organizations, and business and economic development organizations. WBO also held an additional virtual session on June 13th (2023) for those who



could not attend one of the in-person regional listening sessions. Marketing materials for the April events included information about all seven listening sessions, so stakeholders could decide whether to attend all events or those most convenient for their schedules (Exhibit 29).

Exhibit 29: Wyoming Broadband Office’s online marketing of statewide virtual listening sessions in April 2023⁴⁴

BROADBAND LISTENING SESSIONS

Broadband Access in Wyoming

A series of online meetings to understand broadband funding opportunities and accessibility throughout the state.

MEETING SCHEDULE & REGISTRATION LINKS

- **April 24, 2023, State Agencies**
 - 3:30 – 5:00 pm MT
 - Register at https://us06web.zoom.us/webinar/register/WN_uU6-ckafSuyUFDy8yp12EQ
- **April 25, 2023 Local and Regional Governments**
 - 11:00 am – 12:30 pm MT
 - Register at https://us06web.zoom.us/webinar/register/WN_gK4jn4UX7yELufTssmCg
- **April 26, 2023 Community Anchor Institutions**
 - Noon – 1:30 pm MT
 - Register at https://us06web.zoom.us/webinar/register/WN_Ddv3J_-BQH-YxEkE2WJte_g
- **April 26, 2023 Internet Service Providers**
 - 3:00 – 4:30 pm MT
 - Register at https://us06web.zoom.us/webinar/register/WN_2dPhBqWLSsaSW7nVAZrFWA
- **April 27, 2023 Organizations Focused on Digital Access and Supporting Covered Populations**
 - 1:00 – 2:30 pm MT
 - Register at https://us06web.zoom.us/webinar/register/WN_4pw9guj_RbyLK_jLvaMqQ
- **April 27, 2023 Workforce Development Organizations**
 - 4:00 – 5:30 pm MT
 - Register at https://us06web.zoom.us/webinar/register/WN_wErl4GQ5S-umhADkbbXq2Q
- **April 28, 2023 Business and Economic Development Organizations**
 - 9:00 – 10:30 am MT
 - Register at https://us06web.zoom.us/webinar/register/WN_w8IYMtEcSqtPk-eWmhhtQ

Exhibit 30 provides a detailed summary of each of the nine statewide virtual listening sessions. Across the nine statewide virtual listening sessions, WBO successfully conducted outreach to a total of 935 stakeholders; and WBO successfully hosted a total of 127 stakeholders. Each attendee listed in the table below played an active role in providing input and feedback that shaped the development of the State’s Digital Access Plan.

Exhibit 30: Summary of statewide virtual listening sessions

Date of Event	Total Attendance	Focus Area(s)	Attendees by Stakeholder Entity Type
02/28/2023	34	<ul style="list-style-type: none"> • IJJA/DE/BEAD programs • Inputs and timelines 	Public Entities <ul style="list-style-type: none"> • Healthcare Professionals
04/24/2023	11	<ul style="list-style-type: none"> • State Agencies 	Public Entities <ul style="list-style-type: none"> • Academic Community • House of Representatives (staff member) • State Departments (infrastructure) Private Sector <ul style="list-style-type: none"> • Community Development Groups Community Based Organizations <ul style="list-style-type: none"> • Representing People with Disabilities • Rural Community
04/25/2023	14	<ul style="list-style-type: none"> • Local and Regional Government 	Public Entities <ul style="list-style-type: none"> • Local Government • Elected Officials • Public Housing Authorities • State departments (infrastructure) Private Sector

⁴⁴ WBC hosts in-person broadband meetings across Wyoming June 5 to 9. (2023, May 22). Wyoming Business Council. <https://wyomingbusiness.org/news/wbc-hosts-in-person-broadband-meetings-across-wyoming-june-5-to-9/>

Date of Event	Total Attendance	Focus Area(s)	Attendees by Stakeholder Entity Type
			<ul style="list-style-type: none"> Broadband Providers Economic Development Groups Community Based Organizations <ul style="list-style-type: none"> Representing People with Disabilities Rural Community
04/26/2023	8	<ul style="list-style-type: none"> Community Anchor Institutions 	Public Entities <ul style="list-style-type: none"> Academic Community Libraries Private Sector <ul style="list-style-type: none"> Broadband Providers Economic Development Groups
04/26/2023	24	<ul style="list-style-type: none"> Broadband Service Providers 	Private Sector <ul style="list-style-type: none"> Broadband Providers Community Based Organizations <ul style="list-style-type: none"> Community Development Groups
04/27/2023	4	<ul style="list-style-type: none"> Digital Access 	Private Sector <ul style="list-style-type: none"> Broadband Providers Community Based Organizations <ul style="list-style-type: none"> Representing People with Disabilities
04/27/2023	3	<ul style="list-style-type: none"> Workforce development 	Private Sector <ul style="list-style-type: none"> Broadband Providers Economic Development Groups
04/28/2023	12	<ul style="list-style-type: none"> Business and economy 	Public Entities <ul style="list-style-type: none"> Local Government Private Sector <ul style="list-style-type: none"> Broadband Providers Chambers of Commerce Economic Development Groups
6/13/2023	17	<ul style="list-style-type: none"> Listening session 	Private Sector <ul style="list-style-type: none"> Broadband Providers Economic Development Groups Community Based Organizations <ul style="list-style-type: none"> Representing Aging Populations Representing Rural Populations Public Entities <ul style="list-style-type: none"> Local and State Government Citizen

Regional In-Person Listening Sessions

WBO took a regional approach to in-person listening sessions by partnering with WBC Regional Directors and local leaders. WBO successfully advertised, organized, and led 15 in-person regional listening sessions during the week of June 5, 2023.



WBO hosted an initial planning session with Regional Directors across the state to determine the marketing and location strategies for all in-person listening sessions. For the location strategy, WBO and the Regional Directors decided to host 15 in-person listening sessions at sites located centrally within communities and at Community College facilities. Central locations provided the benefit of convenience and familiarity for stakeholders. Community College facilities offered a variety of benefits, including ample space; video and projection capabilities for presentations; and physical components to support accessibility needs, familiarity, and positive association. To conduct the in-person sessions, WBO organized the engagement team into three groups, each with ownership over a geographic segment to ensure coverage of all of Wyoming’s regions. In those locations where a community college was not present or available, Regional Directors and WBO chose to host sessions at publicly used and accessible facilities.

For marketing efforts, WBO coordinated with state agencies, Regional Directors, and public-entity associations to cast a wider net on outreach. Regional Directors amplified marketing efforts by sending email notices out directly to their networks. In addition, when attending conferences of county or municipal associations, Regional Directors distributed hard copies of the marketing materials (Exhibit 31). WBO marketed the events on WBO’s website and weekly newsletter (Exhibit 32).

Exhibit 31: Wyoming Broadband Office’s flyer marketing of regional in-person listening sessions



Exhibit 32: Wyoming Broadband Office’s online marketing of regional in-person listening sessions⁴⁵



In addition, WBO engaged state agencies and anchor institutions to ensure sessions were widely marketed. For example, the Wyoming State Library marketed the in-person listening sessions on Twitter to its approximately 1,700 followers (Exhibit 33).

⁴⁵ WBC hosts in-person broadband meetings across Wyoming June 5 to 9. (2023, May 22). Wyoming Business Council. <https://wyomingbusiness.org/news/wbc-hosts-in-person-broadband-meetings-across-wyoming-june-5-to-9/>

Exhibit 33: Wyoming State Library Twitter marketing of WBO's regional in-person listening sessions⁴⁶



WBO also partnered with the Wyoming Association of Municipalities (WAM), Wyoming County Commissioners Association (WCCA), and Wyoming Association of County Officers (WACO) to market the in-person listening sessions digitally and through flyers. WBO communicated directly with leaders of each association to gather feedback and collaborate on the preferred approach for marketing and attendance. Working with WAM, WCCA, and WACO enabled WBO to further personalize its outreach approach and successfully reach employees across municipalities and counties.

To increase effectiveness of marketing efforts to reach key target stakeholder groups, WBO contacted community college, library, senior center, and veteran networks and requested they post flyers and include marketing materials in digital newsletters.

Exhibit 34 provides a detailed summary of each of the 15 regional in-person listening sessions. Across these sessions, WBO successfully engaged a total of 117 attendees across 96 organizations. Entities representing rural populations attended every meeting, and there were also groups that worked with low-income, disabled, aging and veteran populations, as well as incarcerated citizens, those with language barriers or lower literacy, and members of racial or ethnic minorities. Organizations that served housing insecure individuals, youth, and farmers and ranchers also attended listening sessions. Each session covered a broad range of topics, including existing assets for broadband deployment and digital access, existing and potential partners, and obstacles and barriers for implementation.

As noted under the statewide virtual listening sessions, WBO also hosted a virtual session for those who were unable to attend any of the in-person regional listening sessions. Each organization listed in the table below played an active role in providing input and feedback that shaped the development of the State’s Digital Access Plan.

Exhibit 34: Summary of In-Person Regional Listening Sessions

Date	Location	Attendance	Attendees by Stakeholder Entity Type
June 5, 2023	Alpine	3	Public Entities <ul style="list-style-type: none"> Teton County Library

⁴⁶ Wyoming State Library Twitter message marketing the in-person listening sessions. <https://twitter.com/WyoLibraries/status/1662187639531814936?ctx=HHwWslC2xb-2o5EuAAAA>

Date	Location	Attendance	Attendees by Stakeholder Entity Type
			<ul style="list-style-type: none"> Wyoming House of Representatives
	Evanston	10	Public Entities <ul style="list-style-type: none"> Evanston City Council Uinta County Lincoln County Private Sector <ul style="list-style-type: none"> Union Wireless Wazi Technical Solutions All West Communications Community Based Organizations <ul style="list-style-type: none"> Wyoming Business Council Board
	Powell	5	Public Entities <ul style="list-style-type: none"> Dossie Overfield Park County Commission Private Sector <ul style="list-style-type: none"> Nemont Telephone TCT Range Communications
	Pinedale	9	Public Entities <ul style="list-style-type: none"> State House of Representatives Sublette County Sweetwater County Town of Pinedale
June 6, 2023	Greybull	3	Public Entities <ul style="list-style-type: none"> South Big Horn Conservation District Private Sector <ul style="list-style-type: none"> TCT Community Based Organizations <ul style="list-style-type: none"> Big Horn County Citizens for Economic Development
	Riverton	15	Public Entities <ul style="list-style-type: none"> Central Wyoming College and Wyoming PBS City of Lander City of Riverton Fremont County Private Sector <ul style="list-style-type: none"> Range Communications Teton Therapy Wind River Internet Community Based Organizations <ul style="list-style-type: none"> Idea Inc. (Improve and Develop Economic Activity)
	Rock Springs	13	Public Entities <ul style="list-style-type: none"> City of Green River Sweetwater County Library System Sweetwater County School District #2 Wyoming Legislature District 17 Western Wyoming Community College Private Sector <ul style="list-style-type: none"> All West Communications Union Telephone Company Genesis Alkali



Date	Location	Attendance	Attendees by Stakeholder Entity Type
			<ul style="list-style-type: none"> • Silver Star Communications • Rocky Mountain Power • Rock Springs Chamber of Commerce Community Based Organizations <ul style="list-style-type: none"> • Rock Springs Housing Authority • Equality State Center
June 7, 2023	Casper	6	Public Entities <ul style="list-style-type: none"> • City of Casper • City of Green River • State House of Representatives • Department of Workforce Services Private Sector <ul style="list-style-type: none"> • Union Telephone • Casper Area Chamber of Commerce
	Rawlins	8	Public entities <ul style="list-style-type: none"> • Carbon County • Carbon County Library System • Carbon County School District 1 • Town of Riverside • Carbon County Higher Education Center Community Based Organizations <ul style="list-style-type: none"> • Rawlins Downtown Development Authority • Wyoming Business Council
	Sheridan	8	<ul style="list-style-type: none"> • Private Sector • Range Communications • Century Link • Quest Communications • Sheridan County Chamber of Commerce • Sheridan Press • Visionary Broadband Community Based Organizations <ul style="list-style-type: none"> • Community Services Network of Wyoming
June 8, 2023	Gillette	4	Public entities <ul style="list-style-type: none"> • City of Gillette Private Sector <ul style="list-style-type: none"> • Visionary Broadband Community Based Organizations <ul style="list-style-type: none"> • Council of Community Services
	Laramie	9	Public entities <ul style="list-style-type: none"> • Albany County Commission • City of Laramie • Department of Workforce Services • Wyoming State Museum Private Sector <ul style="list-style-type: none"> • LARIAT • Lumen
	Torrington	11	Public entities <ul style="list-style-type: none"> • City of Torrington • Department of Workforce Services • Eastern Wyoming College • Town of Fort Laramie



Date	Location	Attendance	Attendees by Stakeholder Entity Type
			Private Sector <ul style="list-style-type: none"> • Vistabeam Internet • Wyoming Newspapers Inc. Community Based Organizations <ul style="list-style-type: none"> • Goshen County Senior Friendship Center • WYO Help
	Cheyenne	10	Public entities <ul style="list-style-type: none"> • Department of Workforce Services • Laramie County Library • Laramie County School District 1 • Platte County Library • Public Service Commission • Wyoming Department of Transportation Community Based Organizations <ul style="list-style-type: none"> • AARP Wyoming
June 9, 2023	Sundance	3	Public entities <ul style="list-style-type: none"> • Crook County Library • Crook County Museum & 1875 Art Gallery

1:1 Engagements with State Agencies and Other Stakeholders

Interagency cooperation is paramount to ensuring the BEAD and Digital Access plans support and further enhance state initiatives and priorities. Several departments participated in listening sessions (e.g., Department of Workforce Services, Department of Transportation), which provided opportunities for direct discussions with stakeholder attendees. WBO also engaged state agencies directly to understand how their visions align with broadband deployment and skills needs, identify opportunities for partnership in achieving the state’s broadband goals and objectives, and explore potential gaps across the state in broadband deployment and digital access that impact service delivery. In addition to state agencies, WBO has also engaged several other stakeholders (e.g., nonprofit organizations, internet service providers) that have reached out and requested meetings. In each case, WBO hosted 1:1 virtual engagement sessions and discussed a broad range of strategic priorities in May and June 2023 (Exhibit 35). WBO will continue to engage with stakeholders in this format throughout the planning process. Each organization listed in the table below played an active role in providing input and feedback that shaped the development of the State’s Digital Access Plan.

Exhibit 35: Summary of 1:1 virtual engagement sessions with state departments and other stakeholders

Stakeholder Title	Date	Topics Discussed/Addressed
State Agency: Enterprise Technology Services	5/24/2023	<ul style="list-style-type: none"> • Broadband outcomes for Wyoming • E-commerce + digital government services • Virtual classrooms, learning opportunities • Remote healthcare • Promoting benefits with citizens
State Agency: State Library	6/1/2023	<ul style="list-style-type: none"> • Potential areas for collaboration with the Wyoming Unified Network • Aspirations for broadband and internet connectivity at all state libraries • Broadband adoption programs including loaned devices and hot spots, free of charge • Marketing and outreach campaigns on digital access programs for Wyoming Citizens
State Agency: Department of Health	6/7/2023	<ul style="list-style-type: none"> • Last mile connectivity challenges • Agency promotion of telehealth services and programs



Stakeholder Title	Date	Topics Discussed/Addressed
		<ul style="list-style-type: none"> • Opportunities for telepsychiatry and remote patient monitoring • Cultural adoption of telehealth services
State Agency: Community Colleges Commission	6/12/2023	<ul style="list-style-type: none"> • Broadband redundancy / resiliency throughout the community college system • Refreshing laptops that are too old and purchasing more computer equipment • Connectivity for rural communities • Training on cybersecurity best practice
State Agency: Department of Education	6/14/2023	<ul style="list-style-type: none"> • ETS as the main source of conduit to central district offices • Deployment barriers due to rurality by providing vendors access to right of way (ROW) • School broadband infrastructure and activity to increase access at underserved locations • Sustainability of devices on loan for tele-education
State Agency: Department of Workforce Services	6/15/2023	<ul style="list-style-type: none"> • Affordability and accessibility challenges for citizens to access services and programs • Partnership opportunities related to training future labor skills for broadband deployment and adoption • Current programming supporting digital skills as well as potential future programming
American Association of Retired Persons (AARP)	6/21/2023	<ul style="list-style-type: none"> • Collaboration in promoting ACP adoption • Current programming supporting digital skills • Key partners in promoting digital skills and home internet use
Wyoming Rural Electric Association, Rocky Mountain Power, Black Hills Energy	6/22/2023	<ul style="list-style-type: none"> • Overview of the BEAD and Digital Access planning process • Engagement of electric cooperatives in the BEAD program
International Brotherhood of Electrical Workers (IBEW) District 8	6/26/2023	<ul style="list-style-type: none"> • Potential collaboration on workforce development • Continued engagement throughout planning and implementation
State Agency: Veterans Commission	6/28/2023	<ul style="list-style-type: none"> • Limited connectivity (broadband and cell service) in rural communities • Telehealth services and programs • Online service delivery • Cross-agency partnership opportunities
State Agency: Department of Corrections	10/27/2023	<ul style="list-style-type: none"> • Barrers to digital access faced by incarcerated individuals • Current broadband availability at state and local correctional facilities • Existing programs to promote digital access among incarcerated and formerly incarcerated individuals • Measurable objectives to improve digital access for incarcerated and formerly incarcerated individuals

Surveys to Key Stakeholders and Covered Populations

In addition to meetings and listening sessions, WBO developed and fielded six stakeholder surveys across the following topics: infrastructure assets, digital skills and tools assets, workforce development training and readiness programs, CAI broadband access, Covered Population broadband barriers, and broadband provider engagement. These surveys provided WBO with insights about barriers and assets present in the state, as well as ideas about how barriers could be alleviated through strategies designed to provide broadband access, devices, training and support, and data privacy and cybersecurity. Example responses include –

- One respondent noted that her broadband was unreliable and expensive and that this made it very difficult to attract remote workers.



- Another wrote that many of his adult education students did not have broadband at home and only had a cell phone to access digital resources. He expressed that students having broadband and devices would improve their outcomes and opportunities for academic and professional success.
- A library worker explained that many people in her community did not have broadband infrastructure. While the library offers on-site desktop computers and Wi-Fi, she noted that it “is very inconvenient... to have to drive many miles away just to have access to something most people have in their own homes.”
- A person who works with Wyomingites who have disabilities discussed the difficulty of poor or no internet connections for members of the deaf community who rely on video relay service or remote interpreting. She also shared the challenges people face when employers, educational providers, or broadband provider staff do not know how to turn on accessibility settings in webinars and similar situations.

These are but a few of the powerful and informative responses Wyomingites provided via surveys. To generate interest, WBO included links to the surveys in all communication that was sent out to stakeholders. During in-person and online meetings, WBO also shared the survey with all meeting attendees. WBO received 40 responses from entities across the state. These responses provided additional context that further supported WBO’s assessment of broadband and digital access in Wyoming today (Exhibit 36). Each of the responses listed in the table below shaped the development of the State’s Digital Access Plan.

Exhibit 36: Public Survey Engagements

Survey title	Key stakeholder groups	Total # of respondents
Wyoming Agency Asset Inventory Survey	State, local, and regional government agencies	4
Wyoming Digital Access Program Inventory	Stakeholders with knowledge of programs helping the community use broadband technologies	8
Wyoming Workforce Development Opportunity Survey	Stakeholders with input into broadband workforce development	8
Wyoming Community Anchor Institution Broadband Access Survey	Schools, libraries, health providers, public safety, housing, faith-based and other community organizations	5
Wyoming Covered Populations Broadband Barriers Survey	Organizations that serve or represent unserved and underserved populations	9
Wyoming Broadband Provider Engagement Survey	Broadband Providers	6
TOTAL NUMBER OF RESPONSES		40

4.3 Stakeholders, Collaborators, and Constituencies

WBO’s outreach strategy targeted a broad range of stakeholders in Wyoming. In line with NTIA guidance issued in March 2022 in preparation for IJIA Broadband Programs,⁴⁷ WBO has categorized stakeholders into three segments: Public Service, Private Sector,

⁴⁷ Broadband, NTIA. (2022). *Stakeholder Engagement Overview: NTIA Guidance for IJIA Broadband Programs*. https://broadbandusa.ntia.doc.gov/sites/default/files/2022-03/Engagement%20Overview%20for%20States%20Localities_FINAL.pdf



and Community Service. To date, WBO has identified and conducted outreach to a total of 935 stakeholders. This number continues to grow as stakeholder engagement is ongoing throughout the planning process. Exhibit 37 displays more detail on the total stakeholders that were emailed invitations for participation within each category.

Exhibit 37: Stakeholders invited to attend during engagement outreach

Public Service	
Academic Community (local schools, adult education programs, colleges)	26
Congressional Field Representatives	4
Libraries	7
Local Elected Officials	408
Local Government Staff	42
Local Public Safety Officials	20
Members of the State Legislature or their staff	89
Public Utility Commissions and equivalent	16
State Departments Dealing with Infrastructure (e.g., Transportation)	9
State Infrastructure Coordinators	2
State Public Safety	1
Workforce Development Agencies and Organizations	4
Total Public Service	628
Private Sector	
Chambers of Commerce	75
Economic Development Agencies and Organizations	15
Broadband Providers	55
Labor Unions	2
Total Private Sector	147
Community Service	
Civil Rights Organizations	8
Communities Who Have Language Barriers	4
Community Anchor Institutions	6
Community Development	28
Faith-Based Community	7
Healthcare Community	10
LGBTQIA+	2
Other	
Stakeholders in organizations that Represent and Support Aging Populations	38



Stakeholders in organizations that Represent and Support Incarcerated Individuals	5
Stakeholders in organizations that Represent and Support People with Disabilities	8
Stakeholders in organizations that Represent and Support Racial and Ethnic Minorities	6
Stakeholders in organizations that Represent and Support the Agricultural Industry	3
Stakeholders in organizations that Represent and Support Veterans	6
Public Housing Authorities or Owners of HUD-assisted Housing	6
Rural Community	11
Tribal Communities	12
Total Community Service	160

Total Key Stakeholders **935**

Tribal Consultation

As part of Wyoming’s outreach and planning work for BEAD and Digital Equity, WBO has reached out to the Northern Arapaho Tribe of Wyoming and Eastern Shoshone Tribe. These are the only two federally recognized Tribal governments in Wyoming and both reside on the Wind River Reservation. WBO has met with the Governor’s Tribal Liaisons for the Northern Arapaho Tribe and the Eastern Shoshone Tribe. As a result of that communication, WBO has also sent a Tribal consultation letter to Tribal leadership via certified mail to request a separate meeting with each Tribe to discuss broadband planning, infrastructure deployment, and digital access programming. On July 6, WBO conducted a presentation to the Northern Arapaho Tribal Council explaining the BEAD and Digital Access programs and their implications for tribal members, including information about program eligibility and feedback on the Digital Access Plan. Four members of the Tribal Council were present. Meetings are recorded and later published to a website for viewing by all tribal members. These coordination meetings will support and enhance Wyoming’s Five-Year Action Plan and Digital Access Plan.

4.4 Key Takeaways

Stakeholder input has been critical to the development of the draft BEAD Five-Year Action Plan and Digital Access Plan. The breadth of outreach and diversity of engagement resulted in robust discussions and new ideas. WBO employed a variety of methods to reach potential attendees, including digital (e.g., email, social media, websites), phone, and traditional (e.g., print). However, a key to this success was also working directly with state, regional, and local leaders, who provided WBO with a large set of contacts across stakeholder groups and directly supported outreach efforts. Local leaders also helped WBO tailor engagement sessions by identifying trusted and convenient locations to hold listening sessions.

The stakeholder engagement sessions proved immensely valuable in surfacing common themes for Wyomingites related to challenges and opportunities across infrastructure deployment, affordability and adoption, and digital skills programs. In addition, the in-person regional engagement sessions had unexpected positive outcomes such as cross-collaboration and the incubation of new ideas from groups of stakeholders that do not regularly interact. Stakeholder groups expressed a common desire for improvements in overall broadband infrastructure and Wi-Fi connectivity, citing the rurality and topography of Wyoming as common challenges. In addition, attendees discussed the challenge of affordability for satellite service for all citizens (and low-income citizens in particular). Participants discussed the importance of promoting services and programs, and noted that challenges in this space were mostly due to the remoteness of Wyoming stakeholders. Stakeholders did share a few examples where promotion has



been successful. For example, senior centers, libraries, court houses, counties, schools, and higher education institutions (universities and colleges) have been successful with promoting digital programs.

Below is a detailed synopsis of the key takeaways from all the stakeholder listening sessions.

Deployment

- **The many unserved areas in Wyoming and the unreliability of some existing broadband services** impede a range of activities from everyday tasks to those related to educational and economic growth. For example:
 - A museum's alarm system can be triggered erroneously because of its poor internet connection
 - Businesses cannot take credit cards because of an inconsistent broadband connection
 - Low broadband availability in some communities requires teachers to send home paper packets
 - Limited and inconsistent connections make it difficult for businesses to create an online presence
 - Farmers are unable to use new technologies, such as autonomous tractors
 - Citizens drive to served locations to call and report emergencies because of unreliable cellular and broadband connectivity in a community
- **The rural/frontier nature (e.g., population density, topography) of many unserved and underserved locations is an obstacle to deployment:**
 - There is a short annual construction window due to weather conditions and hardened soil
 - There is a lack of broadband provider coverage in sparsely populated areas near Wyoming's eastern state border
 - There are difficulties with middle mile and last mile deployment, overall, and especially for servicing areas with high volumes of outdoor recreation
 - New developments are bringing in new citizens, but even with increased population density, the developments and the communities in which they are located are not always finding improved broadband access
 - In select areas of the state, county and local facilities could improve their services with access to faster broadband speeds
- **Labor costs and shortages have increased the challenge of expanding broadband in unserved areas due to:**
 - Limited pipeline of skilled and unskilled workers, resulting in recruitment from other states or abroad to find qualified workers
 - Longer construction times (e.g., when drops are 6-7 miles apart) that amplify labor costs
- **The process to attain permits, especially on federally owned lands, results in delayed or more expensive projects; for example:**
 - An application to the Bureau of Land Management (BLM) had still not been approved after three years
 - Respondents reported varied experience when working with offices within BLM
 - Providers may be required to create more expensive routes to avoid federal land



- **While all public libraries and K-12 schools have broadband access, the quality and reliability vary considerably:**
 - Schools are connected to the Wyoming Unified Network, but remote locations may not have sufficient broadband
 - Connectivity limitations at libraries can be a result of availability or affordability
 - Public Wi-Fi is available at libraries, but with limited connectivity in some cases

Affordability

- **High prices keep broadband and satellite service out of reach for low-income Wyomingites:**
 - Families tend to prioritize costs related to housing- and food-insecurities over costs of connectivity
 - Satellite service, which is sometimes the only available service, can be unaffordable for many citizens
 - Nonprofit organizations, school districts, and broadband providers have an opportunity to conduct additional outreach to increase ACP participation
- **Device lending programs could be more impactful if expanded:**
 - Program size and capacity vary across organizations or geographies, with some school districts and libraries offering device lending programs, and several social service non-profits incorporating these programs into their operating models, but few doing this work at scale

Digital Skills

- **Multiple organizations across the state offer digital skills training and there is informal coordination that could be expanded:**
 - Organizations providing training range from broadband providers to libraries to nonprofit organizations and could be expanded to further support Covered Populations (e.g., at VA hospitals, public housing authorities, rural schools, senior centers, jails)
 - More coordination among training providers could increase the number of citizens who could benefit from training
- **Transportation is an issue that can affect multiple Covered Populations:**
 - Members of the public without broadband or a device at home often want to visit a library or similar organization providing access and skills, but may not be able to if they lack transportation and the nearest location is 1-2 hours away.
- **Organizations in Wyoming are undertaking innovative work with their physical spaces:**
 - Libraries are coordinating with the University of Wyoming to offer telehealth kiosks in their public areas
 - Gillette College has built Area 59, which is a large makerspace and technology learning center

4.5 Plan for Ongoing Engagement

Continued engagement with stakeholders is important to achieving the WBO vision for broadband and digital access. For the program to continue to reflect the needs of Wyoming citizens and overcome barriers, particularly for Covered Populations, stakeholder outreach and collaboration must continue through the implementation phases of the program. WBO has engaged with a robust group of stakeholders across the state and plans to maintain and grow its broadband and digital equity stakeholders as part



of its ongoing communication and outreach strategy. WBO intends to collaborate and seek feedback from its stakeholder community that includes representatives from organizations representing all Covered Populations, unions and worker organizations, local and Tribal governments, state agencies and ISPs. As outreach and engagement continues throughout the execution phase of the broadband program, WBO will continue to expand its list of stakeholders.

WBO's future engagement outreach strategy also includes attendance at conferences and events to engage with and be available to key broadband stakeholders that represent Covered Populations. Regular conference attendance is an effective strategy to build a network of relationships and collaborate with these groups where they are. Regular newsletter updates will also be a part of the WBO outreach strategy.

WBO's future engagement collaboration strategy includes hosting webinars, providing training as it identifies needs within the state, providing opportunities for stakeholders to share lessons, and creating topic-specific meetings to provide partnership opportunities within Wyoming. For example, WBO may provide information regarding ACP enrollment, digital skills resources, and economic development issues focused on Covered Populations which will promote collaboration with organizations representing Covered Populations and further advance the vision for digital access in the state. WBO's collaboration can be further advanced by drawing people into the State Digital Equity Capacity Grant Program and seeking feedback on the plan. In particular, WBO will seek feedback on the plan and the impact of Digital Access efforts via the following:

- Regular communication with ISPs to better understand broadband availability, as well as broadband adoption rates and key drivers of adoption among various covered populations
- Ongoing coordination with relevant state agencies to better understand the needs of Covered Populations as it relates to broadband adoption, digital skills, and access to devices, including the State Library, Department of Education, Department of Corrections, Department of Health, Community Colleges Commission, and the Veterans Commission, among others
- Regular discussions with labor organizations, workforce development organizations, and community-based organizations that serve covered populations to better understand barriers to Digital Access and the impact of efforts to close the digital divide via conferences and various partnerships
- Regular touchpoints with Enterprise Technology Services regarding the availability and accessibility of online services and relevant cybersecurity topics

4.6 Public Comment Summary

WBO solicited public comments on its Digital Access Plan from July 17, 2023 thru August 17, 2023. WBO posted the draft on its website and directed users to submit feedback via a Google Form. To encourage participation in the public comment period, WBO emailed all stakeholders (representative of all covered populations) who were invited to previous BEAD engagements (totaling more than 1,300 people) or who had indicated their interest in broadband issues on the WBC website.

At the close of the public comment period, WBO received 23 comments submitted via its Google Form and a handful of others that were emailed directly to the Broadband Manager. The comments principally came from other Wyoming state agencies and non-



profit organizations that focus on increasing digital equity. Most comments were related to additional programs and services that could be included as part of WBO's mention of aligned State programs/resources or as part of the asset inventory serving Covered Populations. Other commenters thanked WBO for engaging in an in-depth stakeholder engagement process and writing a comprehensive document focused on digital equity. WBO reviewed every single comment received via email or Google Form and incorporated updates to its Digital Access Plan where it deemed appropriate.



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5 Implementation

5.1 Implementation Strategy & Key Activities

WBO's implementation goals for the Wyoming Digital Access Plan build on the existing activities taking place in schools, businesses, libraries, colleges, universities, and nonprofit organizations across the state. By building upon existing assets and evaluating and learning from best practices, the state will amplify the impact of the funding and increase sustainability in the future. At present, WBO plans to use most of its Digital Equity Act funding to set-up a statewide competitive grant program to support Covered Populations that will prioritize organizations that have been in the state for at least three years with a demonstrated record of impact in advancing digital access. WBO believes that a grant program is the best way to address the gaps in existing State, local and private efforts to reduce the barriers for Covered Populations that are outlined in Section 3.2 and make progress against the measurable objectives for each Covered Population outlined in Section 2.3. A statewide, competitive grant program will allow WBO to distribute funds directly to those regularly engaged with the State's Covered Populations, who are intimately familiar with their barriers to digital access, and who have creative solutions to close the digital access gap. Grants will be directed to supporting one of WBO's six goals:

1. Provide all Wyoming citizens and businesses with access to reliable high-speed internet at home and in their communities.
2. Increase the number of Wyoming citizens who subscribe to broadband, including low-cost programs.
3. Increase the number of Wyoming citizens with the opportunity to use one or more computing devices.
4. Increase the number of Wyoming citizens who are equipped to use the internet and internet-enabled devices to support their economic, educational, health and related goals.
5. Create a safe environment for citizens to engage with broadband-enabled services.
6. Promote a range of internet-enabled offerings which meet citizen needs.

Implemented together, these goals will also support many of Wyoming's other statewide objectives related to education, the economy, and healthcare. As some of the goals are directly linked to the deployment of new or enhanced broadband infrastructure in the State, WBO also intends to use funding allocated through NTIA's BEAD program. Given Wyoming's anticipated shortfall in funding to achieve the goals of the BEAD program, WBO will rely on funding provided as part of the Digital Equity Capacity Grant program to fund non-deployment activities associated with increasing broadband adoption for Covered Populations (e.g., digital skills training, cybersecurity/privacy trainings, promotion of the ACP program, device availability and affordability programs, etc.).

As part of its statewide, competitive grant program, WBO hopes to receive qualified proposals from workforce agencies, community-based or labor organizations, as well as institutions of higher learning. WBO anticipates that these three types of organizations will play a central role in helping the State to achieve the objectives outlined above.

- WBO believes that **workforce agencies** could play a key role in helping Wyoming residents use the internet and internet-enabled devices to support their economic and educational goals and increase the number of Wyoming citizens with the opportunity to use one or more computing devices
- WBO believes that **community-based or labor organizations** could play a key role in increasing the number of Wyoming residents who subscribe to low-cost broadband programs; increasing the number of Wyoming residents who use the internet



and internet-enabled devices to support their economic, educational, health, and related goals; and, creating a safe environment for citizens to engage with broadband-enabled services

- WBO believes that **institutions of higher learning** could play a key role in helping Wyoming residents use the internet and internet-enabled devices to support their economic and educational goals; increasing the number of Wyoming citizens with the opportunity to use one or more computing devices; and, creating a safe environment for citizens to engage with broadband-enabled services

WBO will continue its regular communication with each of these types of organizations, ensuring they are aware of opportunities to participate in the Digital Access Program. WBO will send out email notifications, press releases, and monthly Business Council updates to these groups, in addition to attendance at and announcements via conferences and regular meetings. WBO is currently housed in the Wyoming Business Council and the Director of Wyoming Innovation Partnership also serves as the liaison between the Governor's Office and WBO, which represents an additional channel WBO will use to disseminate information. The Business Resource Network is also partially funded by the WBC, so WBO is already in regular communication with many organizations via this network. In addition to the previously mentioned organizations, WBO's list serv also includes the Head Start Collaborative, the Family Resource Center Network, Continuum of Care for housing, Federally Qualified Healthcare Centers, Community Mental Health Centers, the Community Services Network of Wyoming (CSNOW), Wyoming 211, Visiting Nurse programs, home visitation programs, Aging and Disabilities Resource Centers, Kinship Programs, and Veteran Services. An annual conference, Wyoming Working Together, provides networking opportunities as well as presentations from the Wyoming Business Council, Wyoming Workforce Services, the Wyoming Innovation Partnership, and others as requested. WBO participates in and provides updates at the Wyoming Telehealth Consortium monthly meeting and the quarterly IJJA broadband update meeting that includes the Wyoming Community College Consortium, Adult Education, Department of Enterprise Services, Wyoming Governor's Office, and the Wyoming Air National Guard. WBO anticipates continuing participation in these meetings as another channel to share updates and encourage participation in the Digital Access Program.

WBO's implementation strategy for the Digital Access Program is detailed below. This section details each goal, the barriers it addresses, the strategies WBO plans to implement to reach the goal, the related activities, and the corresponding measurable goal(s) (i.e., KPIs) and timeline. The activities listed below address the barriers described in Section 3.2, build on the Asset Inventory in 3.1, and align with existing state policies and strategies in Section 2.2. Goals, strategies, and KPIs in this section match those detailed in Section 2.3. For ease of reference, goals are placed within the related dimension (e.g., Broadband Availability, Digital Skills) from Section 2.3.



5.1.1 Broadband Availability

Goal 1: Provide all Wyoming citizens and businesses, including all covered populations, with access to reliable, high-speed internet at home and in their communities.

Barriers

While Goal 1 will be accomplished through other funding sources (e.g., BEAD, Capital Projects Fund), WBO includes it here because without increasing access to broadband throughout the state, Wyoming’s significant rural populations, which also include many older and lower-income citizens, cannot take advantage of the benefits broadband adoption and digital skills confer. Current internet infrastructure efforts have left 15% of locations unserved and 8% underserved (described in section 2.1), many of which fall within Covered Populations. Without BEAD funding, ISPs and potential subgrantees may not have sufficient resources to connect and upgrade these communities in the foreseeable future.

Strategies and Activities

WBO will meet this goal by making grants to broadband providers to connect all unserved and upgrade all underserved homes and businesses (i.e., Broadband Serviceable Locations – BSLs) in the state. Key features of this implementation strategy will be ensuring that Wyoming has the workforce necessary to build and maintain broadband networks and promoting cost-effective deployment strategies (e.g., promoting “dig-once” policies with WYDOT and at CAIs). WBO’s proposal for fully deploying broadband throughout the state is described in detail in the state’s BEAD Initial Proposal.

Measurable Goals and Timeline

As outlined in Footnote 17 and 18, WBO has identified its near-term goals as achievable within two years and its long-term targets within five years. See Section 2.3, Exhibit 1 for more detail.



5.1.2 Broadband Affordability and Adoption

Goal 2: Increase the number of Wyoming citizens who subscribe to broadband, including low-cost programs

Barrier

This goal addresses one of the largest drivers of the gap in broadband adoption – affordability. In Wyoming, there is a 26.5 percentage point gap in broadband adoption between households earning <\$20K/year vs. those earning >\$75K/year (68.2% adoption compared to 94.7% adoption (*Exhibit 13*). There’s a lack of households who have enrolled in ACP among those who are eligible to be enrolled. Current programs to support ACP adoption (e.g., Community Services Network of Wyoming, the Council of Community Services, and various school districts) have not reached all eligible individuals, as there remains only an approximate 24% enrollment rate among eligible groups (described in section 2.1). Digital Access Plan funding will allow for more programs to raise awareness and to help guide individuals through the enrollment process. Additionally, this goal addresses adoption for those households and businesses that do not have access today but will gain access through BEAD.

Strategies and Activities

By requiring BEAD subrecipients to offer a low-cost plan and participate in the Affordable Connectivity Program (ACP), Wyoming can ensure rural citizens who receive new service over the coming years will be able to afford it. It is equally important for BEAD subrecipients to engage in active outreach about their new services to all members of the communities they are serving, which will support both overall adoption and adoption by Covered Populations. Promoting the ACP program through state programs in which many low-income Wyomingites participate is also a potentially effective and low-cost way to increase awareness of the program. Lastly, WBO will support ACP awareness building by trusted organizations.

Wyoming has an ambitious plan to increase broadband subscribership that relies on five strategies and, if required, additional related activities:

- Require all BEAD subrecipients to participate in ACP.
- Require all BEAD subrecipients to offer a low-cost plan.
- Increase adoption of new services through broad awareness of BEAD subrecipients’ new infrastructure buildouts and low-cost plans.
 - Related activities: Monitor implementation of marketing plans as part of WBO’s subrecipient monitoring and evaluation activities.
- Increase the number of relevant state programs that promote ACP enrollment (e.g., SNAP).
 - Related activities: Request state agencies to identify which of their programs have the greatest share of participation by members of Covered Populations and support these programs in promoting ACP enrollment to their participants.
- Drive awareness of ACP among Covered Populations.
 - Related activities:
 - Coordinate with existing grant-funded programs (e.g., FCC subrecipients CSNOW and CCS) to avoid duplication of services in geographies or by Covered Populations.



- Award State Digital Equity Capacity Grant Funds to trusted community organizations (e.g., libraries, nonprofit organizations, healthcare entities) as needed in response to identified gaps (e.g., ACP application assistance).

Measurable Goals and Timeline

As outlined in Footnote 17 and 18, WBO has identified its near-term goals as achievable within two years and its long-term targets within five years. See Section 2.3, Exhibit 2 for more detail.



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5.1.3 Device affordability and availability

GOAL 3. Increase the number of Wyoming citizens with the opportunity to use one or more computing devices

Barrier

Overall device ownership and use is high across the state (88%), but is significantly lower for specific groups (e.g., Native Americans [primarily members of the Eastern Shoshone and Northern Arapaho tribes], lower-income households, Black citizens, and Disabled Wyomingites).⁴⁸ Without a computing device, the utility of a broadband connection is extremely limited.

Wyoming has existing services to provide public devices and lending programs, through the Department of Workforce Services, the University of Wyoming, community colleges, and Wyoming Library Systems. However, current efforts have not been enough to close the gap for specific covered populations as listed above. The Wyoming Library System has seen success in their lending programs at existing branches, and Digital Access Plan funding would allow device lending programs to be available at more branches.

Strategy and Activities:

If funding is secured, the State Library may deploy approximately 2,000 tablets with Wi-Fi hotspots through local library systems across the state.

- These devices will be available for community members to check-out and use at home. This would be the first large-scale community device lending program in Wyoming.
- WBO will collaborate with the State Library to monitor implementation and evaluate the need for additional devices, particularly as utilization reaches 75% or higher (to ensure sufficient slack in the system to make devices available to citizens).
- It is additionally possible that some Covered Populations who need device access may be more effectively reached through other channels (e.g., schools, healthcare centers).
- WBO will continue stakeholder engagement throughout the five-years of the Digital Access Plan's implementation and will consider additional device loans if required to meet the needs of Wyoming's citizens.

All of these devices will also include Wi-Fi access, which can support those citizens who lack both devices and affordable broadband service. One limitation of these Wi-Fi hotspots is that they will only work in areas of the state with existing cellular data service. While there will likely always be some need for hotspot access, WBO expects the demand to decrease as broadband availability and affordability improves.

Additional programs could also start soon (e.g., a state refurbishing program) if external funding is approved. WBO will continue to monitor new programs as they begin throughout the state.

⁴⁸ U.S. Census Bureau, American Community Survey (ACS), 2021 5-Year Estimates (IPUMS). Census data categorizes groups as Native American rather than referring to specific tribes. However, members of the Eastern Shoshone and Northern Arapaho tribes comprise most Native Americans living in Wyoming. <https://www.census.gov/data.html>



Measurable Goals and Timeline

As outlined in Footnote 17 and 18, WBO has identified its near-term goals as achievable within two years and its long-term targets within five years. See Section 2.3, Exhibit 3 for more detail.



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5.1.4 Digital Skills (Literacy)

GOAL 4. Increase the number of Wyoming citizens who are equipped to use the internet and internet-enabled devices to support their economic, educational, health and related goals

Barriers

Nearly 33% of America’s workers lack digital skills.⁴⁹ These skills span a wide array of complexity, from creating an email account for the first time to writing a first line of code. Significant activity to bolster digital skills already exists across Wyoming and it is important to strengthen these existing efforts. Libraries, adult education, and community organizations (e.g., AARP) provide basic digital skills training in Wyoming, through formal classes and workshops and informal 1-1 tutoring. Wyoming’s workforce system, located across the state at community college campuses and 18 workforce centers, collaborates with employers and workers to provide upskilling and reskilling opportunities to meet the demands of today’s marketplace. Some of these training opportunities include occupational digital skill development. The state’s K-12 and college systems also offer basic and advanced digital skills to students. As Wyomingites adopt broadband in greater numbers, particularly among Covered Populations, there could be a greater demand to develop these skills. In addition, new government and health programs are growing their online service options, creating a new need for training to utilize these services. While the State and other community partners are actively running digital literacy programs, there is a continued expansion of digital skill needs in Wyoming and more broadly. Digital Access Plan funding will be essential to ensuring digital literacy among new technology and internet users and bolstering current programs.

Strategies and Activities

To meet this goal, WBO has developed two strategies:

- Grow the number of Wyomingites who possess the digital skills to support an exceptional education, economy, and workforce
 - Expand access to basic digital skills training in local organizations (e.g., libraries, health-related organizations, adult education, nonprofit organizations, senior services). These organizations may have staff or volunteers who can help citizens navigate opportunities for digital skills training and, if needed, provide citizens with support in signing up for low-cost broadband programs or checking-out a device from the library.
 - Support additional training contextualized to occupational digital skills in partnership with workforce stakeholders, including with lower-wage employers. While some basic skills are applicable across a wide variety of contexts, others are specific to a type of job (e.g., construction, quick service).
 - Increase opportunities for advanced skill training as part of workforce upskilling or reskilling, primarily through the community college system and in response to employer needs.
 - Strengthen investment in K-12 and college STEM training at basic and advanced levels.
- Increase the number of Wyomingites who use telehealth services to access medical care.

⁴⁹ The New Landscape of Digital Literacy, National Skills Coalition. (2020). <https://nationalskillscoalition.org/resource/publications/the-new-landscape-of-digital-literacy/>. While this research was conducted using 2012-2014 data, 2017 data, the most recently available, showed no measurable difference in digital problem solving. See https://nces.ed.gov/surveys/piaac/national_results.asp for more information.



- Expand training opportunities alongside partner institutions (e.g., telehealth centers and other providers, state agencies, etc.) for citizens who may benefit from telehealth services such as individuals living in rural areas, senior populations, or those without access to easy and reliable transportation or flexible work schedules.

Measurable Goals and Timeline

As outlined in Footnote 17 and 18, WBO has identified its near-term goals as achievable within two years and its long-term targets within five years. See Section 2.3, Exhibit 4 for more detail.



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5.1.5 Online Privacy and Cybersecurity

GOAL 5: Create a safe environment (e.g., privacy and cybersecurity) for citizens to engage with broadband enabled devices.

Barriers

While privacy and cybersecurity are often not the primary reasons for non-adoption (only 1.4% of Wyoming citizens cite privacy or security as their primary reason for non-adoption⁵⁰), it is still imperative to have a safe environment for citizens to engage with broadband enabled devices. Without BEAD funding, additional infrastructure may not be built, nor will it require NIST cybersecurity framework adoption. Funding towards the Digital Access Plan will allow increased digital literacy training programs (described above in 5.1.4) that will in turn increase safer usage of the internet on an individual level.

Strategy and Activities

- To deliver on this goal, WBO will ensure subrecipients follow-through with commitments to adopt the NIST cybersecurity framework.
 - This will be accomplished through implementation of the BEAD program.

Measurable Goals and Timeline

As outlined in Footnote 17 and 18, WBO has identified its near-term goals as achievable within two years and its long-term targets within five years. See Section 2.3, Exhibit 5 for more detail.

⁵⁰ *Digital nation data explorer | National telecommunications and information administration.* (2023). National Telecommunications and Information Administration. <https://ntia.gov/other-publication/2022/digital-nation-data-explorer#sel=internetUser&disp=map>



5.1.6 Online Accessibility & Inclusivity

GOAL 6. Promote a range of internet-enabled government service offerings which meet citizen needs.

Barriers:

Greater digital service delivery can support all citizens, and at present, many services are not delivered digitally (e.g., paper forms, applications that do not work on mobile devices). Advancing online government services that better reflect the needs of users offer an additional opportunity to accelerate the impact of broadband expansion. Given the state's low population density and high rurality, strategies to improve online accessibility and inclusivity could vastly expand the opportunity for participation in state services or programs for all Wyomingites, especially those who are unable to travel to government offices for a variety of reasons. For example, rural and low-income citizens may be unable to access the paper forms required to apply for food benefits due to rural isolation. Digital Access Plan funding will play a crucial role in offering more accessible government services online, filling a major gap for individuals in rural areas, who are non-native English speakers, and with disabilities. Without the funding, the process of increasing online government services and increasing accessibility for Covered Populations may not happen in the timeframe WBO has outlined for its broadband program.

Strategy and Activities:

WBO has identified three key strategies which can support the state in creating accessible and inclusive online government services:

- Increase the number of government services delivered online with a particular emphasis on those that primarily serve Covered Populations.
- Incorporate accessibility for hearing, visual, or other challenges.
- Offer online services in Spanish and/or other languages.

To identify existing programs that support Covered Populations and could benefit from both greater digital delivery and citizen experience improvements, WBO intends to collaborate with Enterprise Technology Services (ETS) on an assessment of current state services. As a result of this initial assessment, ETS will have data to better understand the potential impact of various interventions and could then prioritize services for enhancement.

Measurable Goals and Timeline

As outlined in Footnote 17 and 18, WBO has identified its near-term goals as achievable within two years and its long-term targets within five years. See Section 2.3, Exhibit 6 for more detail.



5.2 Timeline

WBO will complete all activities within five years of receiving approval of its Digital Access Plan and funding via NTIA’s Digital Equity Capacity Grant Program. As mentioned above, WBO conceived of near-term goals as two years and long-term goals as five years to align with program timelines. Detailed objectives can be found in Section 2.3 and Section 5.1. NTIA has not yet provided a timeline for the opening of its Digital Equity Capacity Grant Program, so WBO does not yet know the exact start date; however, WBO will refine its implementation timeline once more details are provided by NTIA. An approximate timeline for each implementation goal is included in the Exhibits below. The timelines are subject to change pending further details released by the NTIA.

Exhibit 38: Five-year implementation timeline for Goal 1

Goal 1: Provide all Wyoming citizens and businesses with access to reliable, high-speed internet at home and in their communities

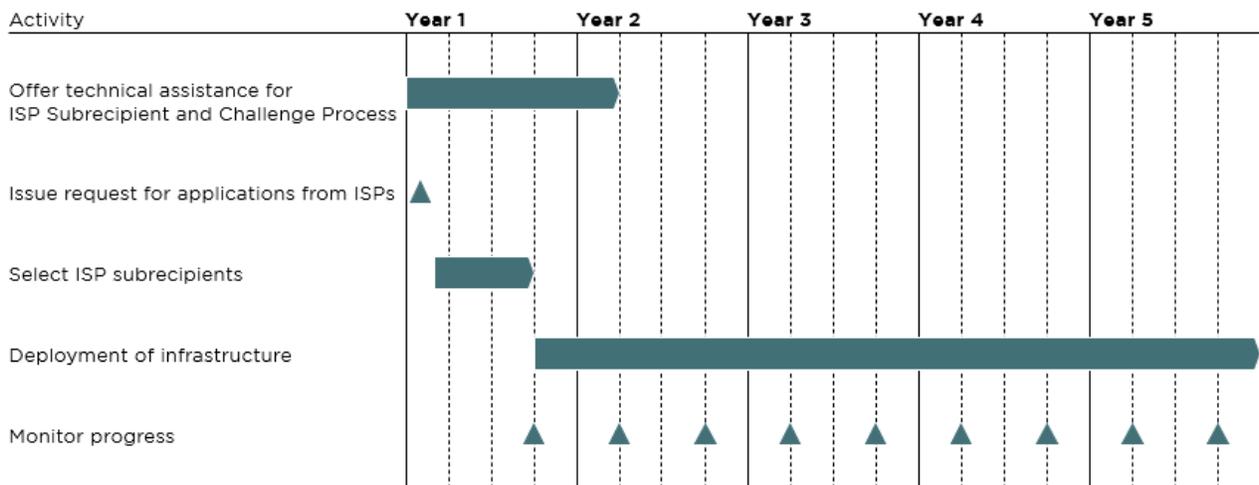
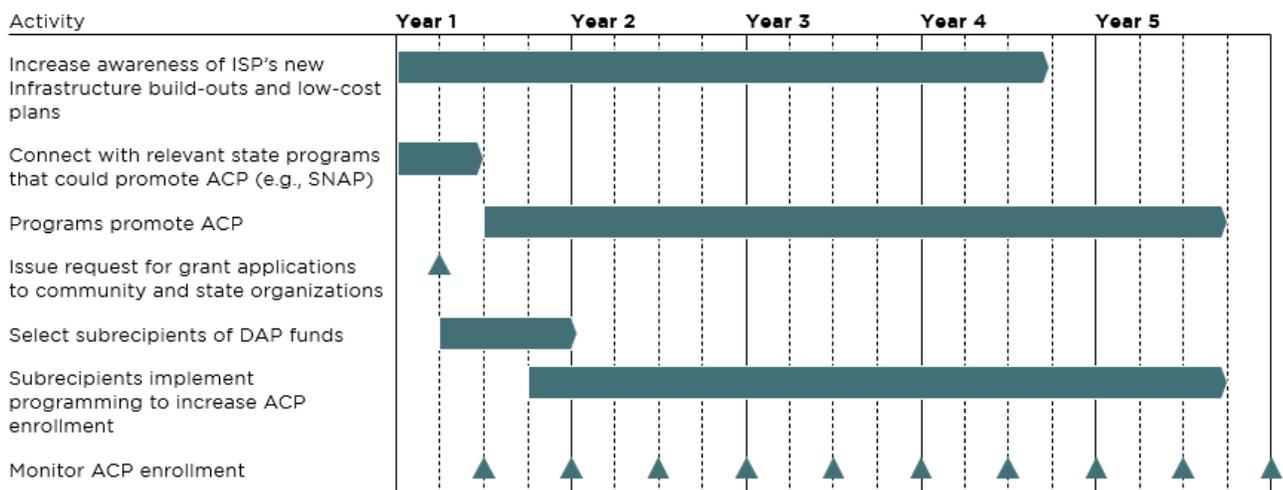


Exhibit 39: Five-year implementation timeline for Goal 2

Goal 2: Increase the number of Wyoming citizens who subscribe to broadband, including low-cost programs



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Exhibit 40: Five-year implementation timeline for Goal 3

Goal 3: Increase the number of Wyoming citizens with the opportunity to use one or more computing devices

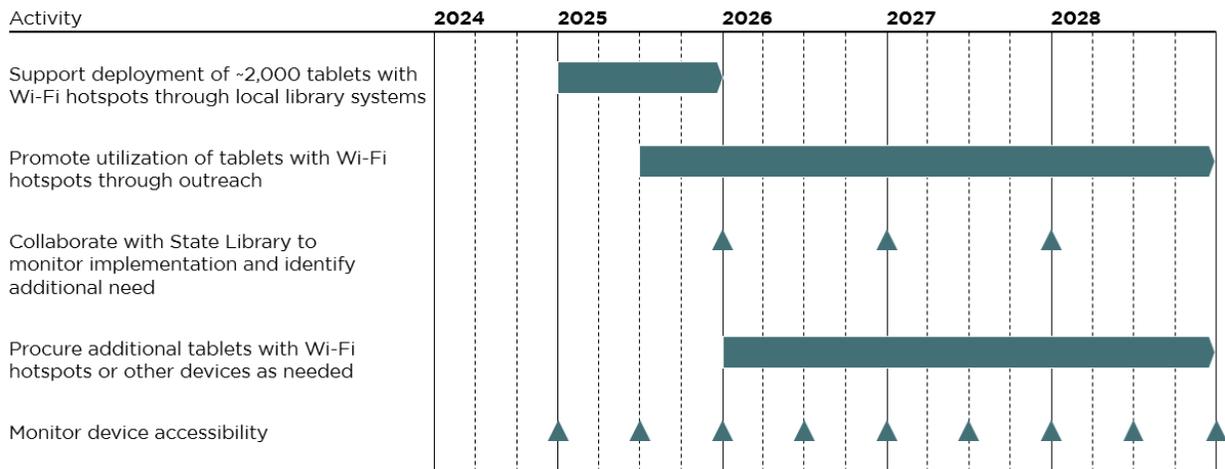
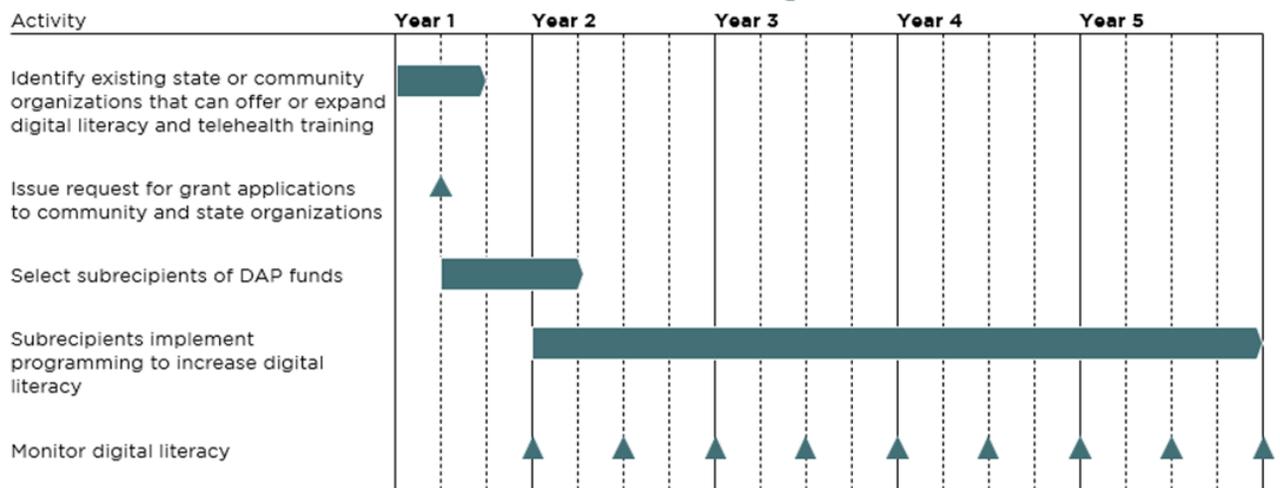


Exhibit 41: Five-year implementation timeline for Goal 4

Goal 4: Increase the number of Wyoming citizens who are equipped to use the internet and internet-enabled devices to support their economic, educational, and health-related goals



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Exhibit 42: Five-year implementation timeline for Goal 5

Goal 5: Create a safe environment (e.g., privacy and cybersecurity) for citizens to engage with broadband enabled devices

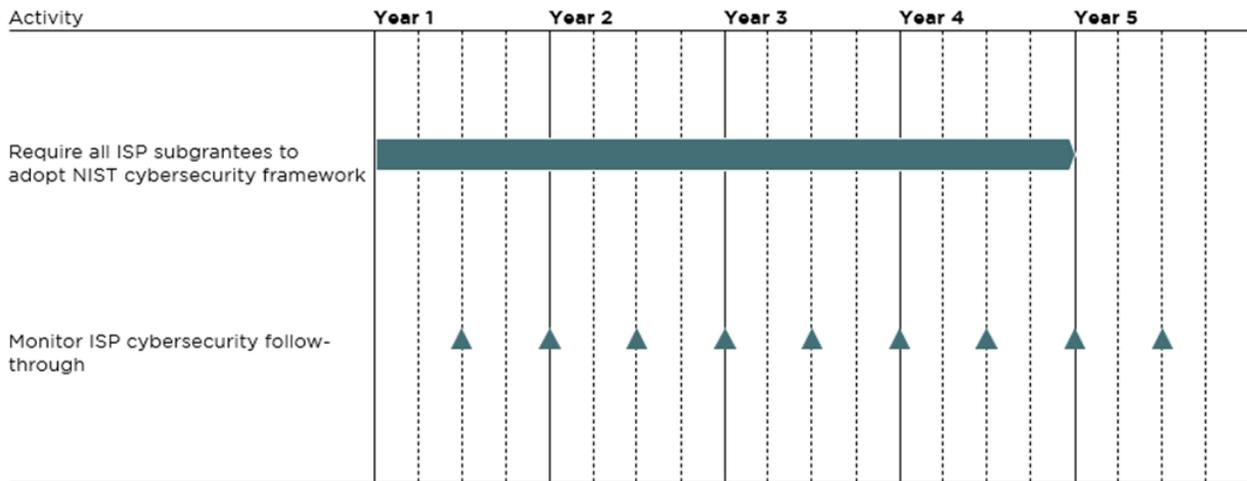
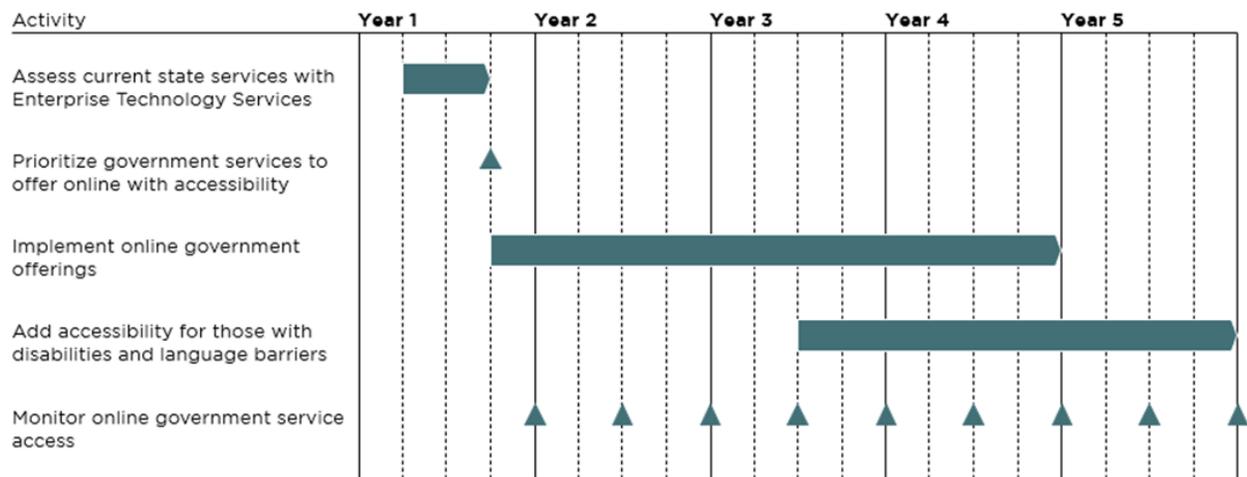


Exhibit 43: Five-year implementation timeline for Goal 6

Goal 6: Promote a range of internet-enabled government service offerings which meet citizen needs



5.3 Coordination of funding

As noted above, WBO took a holistic approach to the planning process for both its BEAD and Digital Access Programs. The set of objectives and strategies laid out here represent a comprehensive view of how WBO plans to close the digital divide to ensure 100% alignment across both funding sources. The BEAD funding will be used to address the availability barriers, while the Digital Access funding will be used to address other barriers to Digital Access. While WBO does not anticipate funds left over from the BEAD program for non-deployments uses, should there be remaining funds WBO will consider using them to bolster the Digital Access Program efforts. While WBO is not aware of any private funding that will be used to support implementation of the Digital Access Plan, should private funding sources be identified, WBO will work closely with the relevant parties to ensure close coordination and alignment of efforts in order to maximize impact.



6 Conclusion

Through rigorous research and a comprehensive stakeholder engagement process, WBO has developed a plan to address the hardest digital access challenges facing the state. Once funding is in-hand (currently anticipated in early 2024), WBO will transition from planning to implementation. Throughout the implementation journey, WBO will continue to engage stakeholders and leverage a rigorous, data-driven approach to decision-making. Doing so will ensure that these investments will make the most difference for Wyomingites.



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Public Comment Response

6.1.1 Anonymous comment received on July 17, 2023

In reference to the overall document: *I got confused trying to understand the tables feeling the need to go back and see what ACP, BEAD, mean. I am not qualified to understand this document. I see the need for access to education for our young. Access for health information for our seniors. I see access for the different categories of poor, underprivileged as local issues with state assistance not control. Many in this state do not want a lot new growth, in the form of people looking for 40 acres and trying to change us into what they are leaving.*

WBO response: Thank you for taking the time to share your thoughts about Wyoming's Digital Access Plan. WBO recognizes that the length of this document, which is necessary to meet the federal requirements associated with grant funding, can be difficult to follow. WBO agrees that improved broadband access is central to Wyomingites' education, access to quality health care, and economic ambitions, which is why WBO is proud to participate in the BEAD and Digital Equity program and other federal initiatives that will serve to bring much-needed broadband access to those in our State.

6.1.2 Comment from [REDACTED] at the Wyoming Community College Commission received on July 18, 2023

In reference to the overall document: *Adult Education is a critical service provider for digital literacy skill instruction in Wyoming; yet these services have not been addressed nor included in this report (except for one sentence). There seems to be a misunderstanding of what is meant by the term Adult Education (AE). WY AE offers academic instruction, college and career readiness skills, English as a Second Language classes for English Language Learners, and much more. AE focuses on strengthening basic reading, writing, math, digital & financial literacy skills for adults 16 years of age or older. Enhancement of basic academic skills prepares students to transition into employment, to skills training, and prepare for postsecondary education. We are here to help you become college and career ready. The WY AE program partners with the Department of Workforce Services and Vocational Rehabilitation to meet the requirement of the Workforce Innovation Opportunity Act.*

The facts: 1) AE centers are supported at both the federal and state level. 2) Wyoming typically enrolls over 2,000 students per year in these programs that reach the very rural areas of the state. 3) AE centers are required by federal mandate to partner with DWS for the delivery of services to enrolled participants; this includes digital literacy skill instruction

The problems: 1) Although AE centers are typically located on the college campus and outreach sites, the internet and devices services provided to college students are NOT made available to enrolled Adult Education centers. AE centers must be able to provide these resources to this population. 2) AE students are typically at-risk, low-income individuals who do NOT have the resources to access internet and computer devices. 3) AE centers are located in VERY rural areas of the state where access to internet is not always affordable to the population served by AE.

As a WIOA core partner, like DWS, AE serves students who are considered at-risk, low income, and have other barriers to employment that may prevent them from accessing broadband services. As such, AE centers have to be able to provide internet services, computer equipment, along with digital literacy skill instruction to these learners. At some centers, computer devices are available through loan programs from the AE centers to enrolled participants but access to internet is not widely available. AE goals for digital literacy mirror the goals in this plan, but AE has not been included in the plan.



In reference to the overall document: “Communities served by AE centers in Wyoming include: Casper, Riverton, Lander, Dubois, Jackson, Ethete, Fort Washakie, Thermopolis, Sundance, Upton, Moorcroft, Newcastle, Lusk, Torrington, Wheatland, Douglas, Glenrock, Cheyenne, Pine Bluffs, Laramie, Gillette, Sheridan, Buffalo, Basin, Cody, Lovell, Powell, Greybull, Worland, Evanston, Afton, Big Piney, Green River, Kemmerer, Mountain View, Pinedale, Rock Springs, Rawlins”

In reference to Section 2.2.2: Adult Education is mentioned in the Sub-heading but is not elaborated on.

The Adult Education program is managed by the Wyoming Community College Commission, but there are AE centers in located in both large and rural communities throughout Wyoming. These centers provide a comprehensive robust digital literacy skill instruction to out of school individuals 16 years of age and older so that they are equipped with the tools needed to successfully enter the workforce. The centers utilize multiple research and evidenced-based strategies to support the implementation of digital literacy skills (see distance learning policy at: https://drive.google.com/file/d/1_7V1m91zS-c-NsqZ9sf0JIsyxX2PoC86/view?pli=1) along multiple career pathways tracks.

In reference to Exhibit 7: Under Wyoming Community College Commission: Should amend it to say: “Additionally, each campus and through numerous outreach sites, offer digital literacy skill training through their adult education programs.”

In reference to Exhibit 10: This is just additional information as it relates to Exhibit 10. Over 2,000 individuals per year are served by AE centers in Wyoming. Barriers faced by AE students in Wyoming: Language barrier or low literacy=100%, Racial or Ethnic minority=44%, Incarcerated=21%, Low income=21%, Disabled=15%, Single Parents=12%.

WBO response: Thank you so much for your partnership in helping to develop Wyoming’s Digital Access Plan and for taking the time to submit public comment. The information you provided was helpful in ensuring we had an accurate depiction of the Adult Education program in Wyoming. Below is a list of the changes to the final version of the Digital Access Plan that WBO made in response to your comments:

- In Section 2.2.2, WBO included a description of the Adult Education program in Wyoming, including mention of the distance learning policy
- In Exhibit 7, WBO updated the entry for the Wyoming Community College System to include mention of the outreach sites

WBO looks forward to continued collaboration between the Broadband Office and the Wyoming Community College Commission on broadband-related issues in Wyoming.

6.1.3 Anonymous comment received on July 18, 2023

In reference to Exhibit 5: Goal 5 should be expanded to include other industry standard cybersecurity frameworks as well.

WBO response: Thank you for taking the time to submit a public comment on WBO’s Digital Access Plan. As this is a federal program and to avoid placing additional requirements on sub-recipients, WBO has decided to focus on the cybersecurity standard issued by NIST, or the National Institute of Standards and Technology.

6.1.4 Comment from [REDACTED] at a nonprofit organization received on July 18, 2023

In reference to Section 3.2.2: Your report acknowledges, but does not do anything to correct the fact, that you have inadequate data regarding adoption of fixed wireless Internet service. This is a serious deficiency, since it fails to acknowledge the pivotal role of fixed



wireless (in which Wyoming was a pioneer; the world's first WISP was founded here) in providing service to sparsely populated areas where deployment of fiber is uneconomic or financially infeasible. The report should not be submitted before this deficiency is corrected.

WBO response: Thank you for your continued engagement on broadband issues in Wyoming and for taking the time to submit a public comment on Wyoming's Digital Access Plan. To measure broadband adoption in the State in the most resource-efficient manner, WBO relies on data from the U.S. Census American Community Survey, which is published each year. The American Community Survey contains information on broadband adoption for several technologies across a number of Covered Populations mentioned in this Plan; however, WBO recognizes that it does not have information for all technologies or Covered Populations. Where WBO is missing information, it will work with subrecipients of the Digital Access grant program to conduct baseline measurement and identify near- and long-term goals. To more explicitly reflect WBO's intentions around data gathering and measurement, WBO has included Section 2.3.7 in the final version of its Digital Access Plan. Thank you again for your comment, and WBO looks forward to further discussions on how it can best measure and report on broadband-related metrics.

6.1.5 Comment from [REDACTED] at the Wyoming Department of Public Health received on July 27, 2023

In reference to the overall document: I really appreciate the robust nature of the assessment conducted and the planning to address digital equity. This is something that can have profound impact on health and wellbeing outcomes as well. You all have done a great job engaging an in-depth set of stakeholders in the process, consulting with communities and organizations that experience less access. I would offer that the department of health (WDH), particularly the public health division, might be an overlooked asset/potential partner in this work. Most of the WDH references were with respect to telehealth and the aging population. In addition to healthcare access, broadband is considered a "super determinant of health" (see this article as a reference, much of which intersects with your plan in ways already identified: <https://www.networkforphl.org/news-insights/broadband-access-as-a-super-determinant-of-health/>). Many public health programs are invested in identifying, understanding, and in partnership with others, addressing the "social determinants of health" (SDOH) - the social and economic community conditions that influence health outcomes and access to opportunities and resources. They may have additional communication channels and partners to engage in outreach and awareness about ACP, potentially have resources to support the non-infrastructure related aspects of increasing digital equity (such as supporting device access programs), may reach other demographics of the population (e.g., younger populations, etc.), and could potentially support other aspects of the plan.

In reference to the overall document: The Maternal and Child Health (MCH) Unit, within the Public Health Division, will be undergoing a needs assessment in the near future and can use this plan/assessment to inform our efforts, as we intend to move toward a SDOH lens/framework for our assessment. As we advance our assessment and identify priorities, this could very well be an area of partnership opportunity. We would like to have open communication channels and start building relationships to help identify if/how we might engage if this should be a priority resulting from our assessment too. I'm responding as the [REDACTED], [REDACTED]. I can be reached at [REDACTED] or [REDACTED] if there is interest in exploring opportunities for collaboration and intersection, especially as we undergo our assessment.

WBO response: Thank you so much for your comment on our Digital Access Plan and to the team at the Department of Health who have been critical partners in this Plan's development. WBO appreciates the additional information regarding broadband access as a social determinant of health and offering to be a resource as WBO deploys federal funds to expand access to broadband throughout the State. WBO will ensure to remain in close coordination with the Wyoming Department of Health as a valued State partner as



WBO prepares its grant application and plans for implementation. Thank you again for your engagement and work on behalf of families across the State.

6.1.6 Anonymous comment received on July 29, 2023

In reference to the overall document: No resident should have to give up their property to implement broadband. Every property has private utility easements and providers needs to be held accountable to following these. Entrapping residents to give up property for these services is uncalled for. Pass and support laws requiring the above protecting land owners from unlawful communication companies.

WBO response: Thank you for submitting a comment to Wyoming's Digital Access Plan. If you feel that a provider has violated any state, federal, local, or Tribal easement law, then a complaint can be filed online with the Wyoming Public Service Commission.

6.1.7 Anonymous comment received on August 2, 2023

In reference to the overall document: This is a great report, but not much of a "plan". It is a shame we have monopolies of ISP's that block competition, and promise broadband/fiber in large mailing campaigns so that they can block other ISP initiatives from other companies.

WBO response: Thank you for submitting a comment on Wyoming's Digital Access Plan. We recognize that these documents can be a bit lengthy and often times confusing, as they have to adhere to federal government guidelines. While there are several sections related to goals, stakeholder engagement, and a needs assessment for Covered Populations, you can find WBO's planned implementation strategy in Section 5.

6.1.8 Comment from [REDACTED] at the Wyoming Telehealth Network received on August 2, 2023

In reference to the overall document: Overall, the plan lacks teeth. The work of a large-scale deployment of this kind of activity is only as good as it is communicated to the public. There must be a communications goal about this work incorporated into the plan using partners like BOCES, Senior Centers, Libraries, Hospitals and other healthcare entities, community healthcare workers and others to be pushing these communications as well. Addressing the capacity to write a grant for receiving funding should also be explored, especially as we look at communities most rural and most affected. This is an opportunity to address some of the systemic reasons race, age and income level are deeply affected by lack of access. When doing community outreach for feedback, more elected officials should be involved and the importance of incorporating community partners like libraries is critical. I see the WyCOA is listed but not engaged as much as AARP. Why is that? UWYO extension offices are not mentioned either. Incentivizing participation and data collection is not prioritized. How will Wyoming know it is successful in deployment? Hosting listening sessions is a great first step but most of the people you need to hear from would never attend a broadband meeting because there is not the digital literacy in the communities most affected to know why that is important so plain language must be used for engagement. Meet people where they are already at by amplifying existing programs with partners with a call for more digital literacy. It's great that we are laying down fiber, but how does that translate to more people using it? Again, we must communicate and actually extend funding to do so. I cannot stress how important it is that libraries are support--you cannot ban information on the web so why would we do that in public libraries. Digital inclusion means access to information, devices and broadband that best fulfills the need of the users. Bans deny that. Please see National Digital Inclusion Alliance website for more information on inclusion.



WBO response: Thank you for taking the time to submit a comment on Wyoming’s Digital Access Plan and for your continued engagement around broadband issues in Wyoming.

WBO appreciates your feedback regarding stakeholder engagement, measurement, and programming for its Digital Access Plan. WBO also agrees with the importance of partnerships with libraries, senior centers, healthcare entities, and others to achieve its digital access goals. As a result of your comments, WBO has made the following adjustments to the Plan submitted to the NTIA:

- In Section 4.5, WBO has provided more detail on its forward-looking stakeholder engagement in addition to updating Exhibit 35 with more meetings WBO has hosted since publishing its draft plan for public comment. WBO has conducted additional 1:1 stakeholder engagement with elected officials, other State agencies, community organizations, and more since the publication of the draft Plan. In addition, WBO will continue to regularly update and solicit feedback from Covered Populations and others in the future
- In Section 2.3, WBO has updated its measurable objectives to be more tailored to specific Covered Populations and in Section 2.3.7, WBO has specified how it will collect baseline data and set near- and long-term goals for measurable objectives where there are currently unknowns. WBO plans to work closely with grant subrecipients to measure outcomes on a programmatic level to ensure the best use of funds on behalf of Wyomingites everywhere.

Thank you again for taking the time to provide your comments, and WBO looks forward to engaging with the University of Wyoming and the Wyoming Telehealth Network further as soon as NTIA provides additional information on grant funds and timing.

6.1.9 Anonymous comment received on August 2, 2023

In reference to the overall document: I do not believe that this is something that the average person in Wyoming can understand. It's 50+ pages of acronyms and jargon.

In reference to the overall document: In a state with as low of a population density as Wyoming, utilities like - electricity, phones, water, gas, and in current times, Internet - should be provided at cost by the state to the citizens. No business is going to make enough money, fast enough, or for long enough to stick with this. And, we must consider a preferential option for the poor.

WBO response: Thank you for taking the time to submit a public comment on Wyoming’s Digital Access Plan. WBO recognizes that these documents can oftentimes be difficult to interpret given the length required to meet the guidelines provided by the federal government in what the response must contain. WBO recognizes the importance of ensuring every Wyomingite has access to affordable broadband and hopes the strategies contained both in this document as well as Wyoming’s BEAD Initial Proposal will take great strides toward achieving this goal.

6.1.10 Comment from [REDACTED] at a nonprofit organization received on August 3, 2023

In reference to the overall document: On behalf of [REDACTED] in Wyoming, I am reaching out regarding the opportunity to enhance the state’s high-speed internet efforts thanks to the Federal Infrastructure Investment and Jobs Act (IIJA). Specifically, I wanted to take this opportunity to comment on the state’s Digital Access Plan.

First and foremost, I want to thank the Wyoming Broadband Office, its consultants, and the Governor’s Office for seeking out the thoughts of [REDACTED] as it developed the Digital Access Plan. It is clear that the state understands the importance of broadband



internet to older adults, as well as the need to include older adults in digital equity and training efforts. There has been nothing but open and frequent communication between our offices and we thank you for that.

Reliable, affordable high-speed internet access is of utmost importance to older adults because it enables them to age safely in their homes and communities. Once access is secured, older adults then need to acquire digital navigation skills to effectively utilize the internet. These skills enable older adults to proficiently use telehealth applications, fight social isolation through virtual connections with family and friends, gain access to online shopping and services, and pursue remote work and learning opportunities.

I appreciate the data in the Digital Access Plan as it relates to older adults. We see two areas we would like the State to consider in more detail as it implements the Digital Asset Plan - 1) greater outreach regarding the Affordable Connectivity Program, and 2) continued digital skills training for older adults.

We have long believed older adults subscribe less to broadband, your report suggests just 62% of Wyoming households age 60 and over subscribe to broadband, compared to 73% of working age adults. We also note from your report that finances of a household makes a big impact on its ability to afford and take advantage of high speed internet offerings.

According to the Healthy Wyoming Aging Data Report, the average median income of Wyomingites age 65+ is \$47,223. Households led by those age 65 and over in Converse, Weston, and Crook Counties have a median income of between \$32,000-37,760. While Niobrara, Platte, and Goshen County older adults average no more than \$43,775 per household.

Platte County (median age of 47.7); Niobrara County (44.9); Weston County (44.7); and Goshen County (43.2 years old) are four counties that rank among the state's older, and poorer counties. They also have the lowest broadband subscription rates in the state, drawing a correlation between internet subscription rates and financial means. For this reason, we appreciate the Broadband Office's interest in increasing outreach and sign-ups for the Affordable Connectivity Program (ACP) and highly encourage you to make extra emphasis in communicating the benefits of the program in eastern and North Central Wyoming.

[REDACTED] advertises the ACP to our members in newsletters, scam prevention fliers, and social media. We will continue to do so, but we think person-to-person discussions may be a needed tactic and we appreciate the state's contracting with the CSNOW and Council of Community Services programs to do just that. If those entities have ideas to partner with [REDACTED] in this effort, we are certainly all-ears.

As you consider strategies for expanding digital inclusion for older adults in Wyoming, we also urge you to provide guidance on digital content of interest to older adults that will promote high-speed internet adoption. [REDACTED] also suggests working with internet service providers on helping all Wyomingites best understand what sort of equipment is needed to get online.

As you correctly point out in your inventory of available digital inclusion assets, [REDACTED] has been an active participant in teaching digital skills to older adults in Wyoming through the Senior High Tech program. More recently, the OATS from [REDACTED] (Older Adults Technology Services) flagship program, Senior Planet, is offering a free licensing program and works with community-based organizations to develop local trainers to deliver a digital literacy curriculum designed to meet the needs of older adults. Expanding effective programs like Senior Planet to anchor institutions in every county would help the state achieve the goal of ensuring older adults are fully connected in today's digital economy.

As we move into our state planning period for 2024, we will make sure to consider what we can do to help older adults with access to high speed internet. We are happy to communicate those ideas to you for your inventory of efforts. Once again, thank you for being a willing partner in the effort to help older adults to get online through affordable high speed internet, as well as skills development.



WBO response: WBO appreciates your partnership in the development of Wyoming’s Digital Access Plan and is thankful for your participation in the public comment period. WBO understands that broadband affordability and digital literacy training are of the utmost importance to Wyomingites over the age of 60, which is why WBO has set a target of having the highest ACP enrollment rate in the Rocky Mountain region as well as increasing the digital literacy of Wyomingites across the State. As part of updates before final submission to NTIA, WBO has added a measurable objective specific to increasing the digital literacy rate of elderly Wyomingites. WBO looks forward to receiving grant applications focused on increasing digital literacy as part of its open and competitive grant process.

6.1.11 Comment from [REDACTED] at a nonprofit organization received on August 11, 2023

In reference to Section 2.1: [REDACTED] is a national 501c3 nonprofit whose mission is to provide technology access and education to under-resourced youth and their communities. In the 16+ years since our founding, we have distributed over 77,000+ FREE computers to students and their families across 19 states and 40 cities. In addition to providing refurbished computers, we also offer numerous afterschool STEM and digital literacy programs aimed at encouraging the use of computing devices to accomplish personal, professional and academic goals for the communities we serve. We encourage the Wyoming Broadband Office to explore ways to collaborate with us in order to provide the citizens of Wyoming with a true, holistic solution to the digital divide in the state. Our programs are scalable, impactful and quickly deployable in a range of environments, whether urban or rural.

WBO response: Thank you for participating in the public comment period for Wyoming’s Digital Access Plan and for sharing more about your organization. WBO intends to use federal funding to sponsor an open and competitive grant process to accomplish the goals it has outlined in its Digital Access Plan. WBO looks forward to reviewing applications from relevant organizations concerning device availability and affordability.

6.1.12 Comment from [REDACTED] at a nonprofit organization received on August 11, 2023

In reference to Section 2.1: One key requirement of state digital equity plans is that they include a state’s vision of digital equity. The National Telecommunications and Information Administration (NTIA) suggests that digital equity visions address at least these two questions:

- 1. What will digital equity look like in the context of your state?*
- 2. What are the broad goals that should be accomplished in executing this plan (e.g., improve rural health outcomes, increase underrepresented youth employment in technology-related fields)?*

NTIA has specifically advised states to lead with equity, intentionally identifying, amplifying, and centering the voices of those most affected by the digital divide and disconnected communities.

With the extraordinary task and responsibility of state policymakers and local communities in mind, the [REDACTED] launched the Visions of Digital Equity project to aid both in ensuring that more community voices are heard in crafting visions that increase opportunity for all.

Through surveys, community meetings, interviews, conversations, and a collaborative writing process with community contributors, we have arrived at a set of principles to help guide both the process and the resulting visions of digital equity.

We learned that a well-crafted vision of digital equity has the potential to be very powerful. It can:



- Offer a glimpse of a state transformed by universal connectivity,
- Provide a roadmap and resources for the digital inclusion efforts to come, and
- Act as a north star for goal setting, planning, and implementation efforts over the months and years to come.

The best visions of digital equity will be community centered and focused on creating change, specific and clearly articulated, and ambitious but attainable.

The [REDACTED] reviewed the Wyoming Digital Access Plan at <https://www.benton.org/blog/wyoming-seeks-feedback-digital-access-plan> In response, at <https://www.benton.org/sites/default/files/VisionsDigitalEquity.pdf> we share 10 Principles for Digital Equity Visions, organized around five themes. We hope these principles help the people of Wyoming evaluate both the Wyoming Digital Access Plan and the Wyoming Broadband Office’s revision of the plan. To that end, we also offer A Checklist for Evaluating Digital Equity Visions https://www.benton.org/sites/default/files/DEV_checklist.pdf

WBO response: On behalf of the Wyoming Broadband Office, thank you for participating in the public comment period for Wyoming’s Digital Access Plan and for posting a review of the Plan on the [REDACTED] website. WBO looks forward to reviewing the materials as it prepares for the implementation phase of its Plan.

6.1.13 Comment from [REDACTED] at a nonprofit organization received on August 15, 2023

In reference to the overall document: *The [REDACTED] strongly believes that digital equity and inclusion are crucial to ensuring equal access to healthcare for all individuals. It is encouraging to see efforts being made to promote digital equity and address the barriers that hinder people’s access to essential broadband services. Sufficient broadband is essential for participation in society, including managing one’s health, and we fully support the efforts outlined in Wyoming’s Draft Digital Access Plan.*

One key aspect of this plan is focused on expanding broadband infrastructure to underserved areas, primarily rural, remote, and tribal communities. We applaud the initiatives for this outlined in Goal 1. By investing in broadband expansion, we can ensure that individuals in these areas have reliable and high-speed internet connections, enabling them to access expanded healthcare offerings and telehealth services without interruption. We have reviewed the aspects of this as outlined in your digital equity plan, and would only suggest that healthcare and telehealth have more initiatives here.

Education and digital literacy initiatives are an integral part of the Wyoming plan. Many individuals from different backgrounds have limited technology experience and may face challenges in navigating telehealth platforms and utilizing digital healthcare resources. By providing training programs and user-friendly resources, we can empower individuals to confidently engage in telehealth services, online patient portals, and other tools for managing their own health. Thank you so much for including the connection to telehealth in this plan and noting that you are actively pursuing digital health skills training in this plan. Please consider the [REDACTED] as a partner in these efforts outlined in goal 4, as well have much digital health literacy programing.

Also highlighting what the outreach efforts might look like should also be important to this section. Tools and trainings that are being offered must meet the public, or they will go un-utilized. Partnerships with Telehealth Resource Centers, rural and urban healthcare facilities, and community health centers can facilitate outreach efforts to inform the public about available healthcare tools and telehealth services and promote their adoption. By working together, we can ensure that every individual, regardless of their socio-economic status or geographic location, has equal opportunities to benefit from the digital advancements in healthcare and participate more in the management of their own health. Thank you for actively pursuing partnerships with the Wyoming Telehealth



network. We collaborate with them frequently and support their mission fully. Please feel free to call us out as an asset in exhibit 7, as we would be happy to partner and assist as the [REDACTED].

Additionally, it is vital to address the affordability aspect of broadband access. Lower-income individuals and families may struggle to afford internet service and devices necessary for telehealth. Therefore, collaborations with internet service providers, device manufacturers, and government agencies can help develop subsidized programs, discounted rates, or even provide free internet access and devices to those in need. Please ensure there is a plan for defining what is “affordable” in goal 2, and also define more entities that support assistance with broadband plans, in the case that ACP is discontinued (Exhibit 9).

In conclusion, we applaud and support the goals of this robust digital access plan for Wyoming. We emphasize efforts to collaborate with healthcare and telehealth entities, as it is a very central consideration for the plan. It is essential to increase the public's awareness of how broadband access and digital skills affect their health and well-being. By prioritizing health in the plans for infrastructure development, education, and community partnerships, we can make significant progress toward achieving a more equitable healthcare system for all.

The [REDACTED] is a non-profit entity and serves a seven-state region (AK, WA, OR, MT, ID, WY, UT). We work to advance the development, implementation and integration of telehealth through sharing information, leveraging resources, and creating a synergistic telehealth community. The [REDACTED] draws on the experience of UETN, Board Members, and that of our regional partners to assist healthcare providers and organizations throughout the region through technical assistance, tools and training. Our resources and technical assistance are free and open to the public.

If you would like to know more about the [REDACTED] and about digital equity initiatives, please visit our website listed above, or feel free to reach out to us for more information or to set up a brief introductory Meeting.

WBO response: Thanks to you and [REDACTED] for participating in the public comment process for Wyoming’s Digital Access Plan. WBO shares the belief that broadband access and affordability, digital literacy, and more are crucial to enable more convenient and affordable access to healthcare services for Wyomingites. As outlined in Section 5, WBO plans to distribute federal funds through an open, competitive grant program that will help the State achieve the goals outlined at the start of the Plan. WBO looks forward to reviewing applications from relevant organizations once the competitive grant program is released.

6.1.14 Comment from [REDACTED] at a nonprofit organization received on August 16, 2023

In reference to the overall document:

Background

Approximately 28 million households in the United States do not have high-speed broadband. Seventeen million of these households are offline because they cannot afford an available internet connection. This broadband affordability gap has become one of the primary inhibitors of access to economic security and opportunity. It is a reality centered in our nation's poorest communities and disproportionately impacts people of color. The Affordable Connectivity Program (ACP) can connect millions of unconnected households. Achieving national best practice ACP adoption rates can significantly accelerate closing the broadband affordability gap, connecting two-thirds of the 17 million households impacted by this gap. States should use Digital Equity Act plans and funding to implement key strategies to increase ACP adoption.



The impact of the ACP can be felt equally across partisan lines, with participation rates nearly identical in Republican (31.2% of eligible households) and Democrat states (30.8%). Our analysis of ACP enrollment data also shows that both rural and urban households benefit greatly from the program, with 13% of rural households and 15% of households in metro or urban areas enrolled in the ACP.

Millions of eligible households are not taking advantage of the program as they are unaware that the ACP exists. Surveys of low- and lower-middle-income households have found that in some communities, up to 75% of eligible households are unaware that they might be eligible for federal broadband benefits. Trust in the program is another critical barrier, as many eligible households are concerned about sharing personal information as part of the enrollment process. Finally, enrollment barriers such as application accessibility, language assistance, and documentation challenges necessitate direct support for a portion of eligible households that cannot complete the enrollment process independently.

Broad outreach alone often fails to build the trust needed to drive people to action and should be paired with outreach and enrollment support from trusted sources such as government agencies that administer benefit programs, school districts, community health centers, faith leaders, community-based organizations, and businesses they regularly interact with. These organizations have existing relationships with eligible households, know the most effective time, place, and manner to increase awareness in the communities they serve, and have established outreach channels such as in-person community events, digital marketing, emailing, phone banking, text messaging, physical information distribution and posters in high-traffic target areas. Furthermore, they provide trusted space and avenues to support enrollment in the ACP, and can help mitigate some of the challenges households face when they enroll.

To overcome the complex barriers that keep under-resourced households offline, [REDACTED] believes that state leaders should take action to convene a state-wide ACP-focused cohort that brings together these critical trusted institutions, leveraging Digital Equity Act funds to enable outreach to and support for unconnected households. At a micro level, the cohort will provide a collective framework to ensure the creation and sustainability of an ecosystem of organizations and stakeholders working on digital equity initiatives, with a particular focus on the ACP. At a macro level, this work can provide a model for what state-wide ACP implementation could look like, as well as confirm the most effective role that the state may play in supporting future capacity or competitive grant-funded recipients in alignment with Digital Equity Plans.

The cohort should consist of a series of workshops intended to promote ways in which leveraging the ACP contributes to achieving digital equity across the state. To facilitate this, [REDACTED] can provide pro bono co-facilitation of the cohort and serve as a subject matter expert and technical advisor, providing its expertise to the cohort community. This group should strive to create a collaborative space where organizations can learn from and inform one another's work across the state. It should also promote coordination and collaboration between the state and other stakeholders, alleviating the unintentional creation of silos, gaps, and/or redundancies in programming.

To date, [REDACTED] has partnered with broadband offices in several states to implement the cohort model and equip FCC grant recipients, as well as other digital equity-minded and focused organizations, with foundational knowledge on the ACP and how leveraging this program contributes to achieving digital equity across the state. This includes: 1) how the ACP operates; 2) tools, training, and resources with respect to awareness and enrollment activities and tactics; 3) the intricacies of cross-sector partnerships and campaign execution; and 4) best practices for implementing digital and on-the-ground ACP campaigns.

Roles & Responsibilities



State Broadband Offices and their staff are uniquely positioned to lead the creation and facilitation of a statewide ACP Cohort. In order to ensure an effective and streamlined cohort implementation, a Broadband Office staff member should be designated to lead the cohort engagement. It is also a best practice to include additional staffing resources with a focus on communications, who can assist with managing state-led communications, campaigns, messaging and awareness initiatives related to the cohort. A critical element of the state's role will be to incentivize motivation and participation, and states should set an ACP enrollment goal in order to achieve this that is measurable and can be used to regularly assess progress and course-correct where appropriate.

Objectives and Programming

The main objective of the ACP Cohort is to combine the expertise and experience of key institutions, organizations, and stakeholders to make a larger impact on the state's most unconnected communities. An important output of this cohort should be to increase ACP enrollment across the state. Through the creation of curated resources and programming, and a series of workshops, the cohort should:

- *Create a forum for knowledge sharing, including an understanding of current ACP-related work across the state through guest speakers and cohort member updates*
- *Share lessons learned and emerging best practices*
- *Address common barriers*
- *Provide opportunities for cohort members to support and reinforce one another*
- *Supplement and leverage needed resources where possible (i.e., cross-posting marketing outreach and sharing digital equity advocate personnel)*
- *Create a pipeline for future funding opportunities, including identifying funding intermediaries that can help expand the funds' reach and impact by supporting smaller and less resourced organizations, to ensure that key state organizations can contribute to ACP adoption*

In closing, the creation of a statewide ACP-focused cohort will serve to ensure that mechanisms for increasing broadband affordability and connecting unconnected households remain a cornerstone of the state's Digital Equity Plan. The cohort will secure cohesion between the state's plan, the execution of their capacity grant funds, and alignment with the ecosystem of competitive grant funded institutions to create the conditions for successful ACP adoption statewide.

APPENDIX

Resources & Tools

The following are examples of the tools and resources that [REDACTED] can incorporate into an ACP-focused Cohort curriculum.

PromoteACP Resource Hub: A hub of free-to-download awareness and marketing materials (collateral, social media text, event toolkits and resources, FAQs, and more) developed based on partner and consumer feedback. The materials complement resources provided by USAC and the FCC, and serve as a strong foundation for new and improved promotional materials for the pilot.

<https://www.educationsuperhighway.org/acpbenefit/resource-hub/>



LearnACP Certification Course: An interactive and self-paced online course that equips community advocates with the knowledge and resources to support its members when applying to the ACP. In addition to an overview of the benefit and how the applicant can enroll, the course provides practical scenarios for the advocate to confirm their understanding of ACP eligibility, common issues, and considerations.

<https://www.educationsuperhighway.org/learnacp/>

GetACP.org pre-enrollment tool: This mobile website helps applicants find out if they're eligible for the ACP, determine the easiest way to qualify, identify documents they'll need for the application, and find broadband plans in their area. In addition, the tool provides a personalized checklist of documents the applicant should have available when they apply, and key information for enrollment in an internet service plan. The tool supplies a list of low-cost and eligible plans in the applicant's area with direct contact information for providers.

<https://getacp.org/>

ACP Enrollment Dashboard: An easy-to-navigate dashboard of state and city enrollment data. Users can navigate to a state, see city-specific data, filter, and download reports. With data updated monthly, the dashboard can help local leaders effectively target ACP awareness and adoption efforts, and demonstrate the impact that programming is having on ACP adoption.

<https://www.educationsuperhighway.org/no-home-left-offline/acp-data/#dashboard>

WBO response: Thank you for taking the time to submit a public comment on Wyoming's draft Digital Access Plan. WBO shares the belief that increasing ACP enrollment is a simple and efficient way to make broadband access more affordable for Wyomingites, which is why the State has previously partnered with the Community Services Network of Wyoming to promote ACP enrollment across the State. WBO intends to run an open and competitive grant program to distribute any funds that it receives from the NTIA's Digital Equity Capacity Grant Program to achieve the goals outlined in the Plan, one of which is to ensure that Wyoming has the highest ACP enrollment rate in the Rocky Mountain region. WBO looks forward to reviewing applications from relevant organizations. Thank you again for your dedication to improving broadband access and affordability for Wyomingites.

6.1.15 Comment from [REDACTED] at a nonprofit organization received on August 16, 2023

In reference to the overall document: As a national nonprofit organization focused on the device ownership aspect of digital equity, we are delighted to see the inclusion of devices as a goal within Wyoming's plan. This is a watershed moment for advancing digital equity. We offer this feedback as a means to share our unique perspective, leveraging nearly 40 years of work on the issue of device ownership, a national lens into how states are approaching the issue, and our role in administering a nationwide practitioner network. We are truly and sincerely vested in your success.

We would like to emphasize four overarching points:

Large screen device ownership: Owning a computer is crucial for thriving in the modern economy. Those without a computer are unable to harness the vast opportunities that the internet provides, such as employment, education, telehealth, commerce, finance, communication, and much more. Everyone who needs a computer should have one. Personal device ownership provides a unique computing experience that cannot be replicated through public use of computers or shared devices. Large screen devices such as laptops, desktops, Chromebooks, and tablets, are critical for a full and equitable computing experience. While smartphones are



often more affordable than the upfront cost of a computer, evidence shows the use of smartphones alone may limit the range of one's online activity and depth of overall digital skills.

Ecosystem approach: To ensure that all Wyoming residents are able to obtain a free or low cost computer, establishing a robust supply of applicable devices through accessible, resilient, community-level distribution systems is critical. Systems thinking is required, with active involvement from a diverse range of actors and stakeholders. [REDACTED'S] Methodology for a Sustainable Device Ecosystem provides a framework for addressing this issue on a large scale.

Sustainability: While short-term gains are possible, our collective efforts must aim for sustainable solutions that far outlast this five-year federal investment. Building a plan around merely making grants to procure devices would be shortsighted, missing this landmark opportunity to create comprehensive change. Instead, we must develop solutions that transform the way corporate, government, and institutional IT assets are managed at scale. Repurposing previously used technology for community support can make computer ownership more accessible. Technology reuse is a practical and environmentally friendly solution for expanding device ownership.

Device quality and intended use: Affordable devices must be reliable; quantity cannot replace quality. It is also critical that the choice of device matches a recipient's intended use and context. While less expensive devices may be a quick win within a limited budget, a healthy device ecosystem will provide economical solutions that meet the full range of recipients' needs.

Regarding Wyoming's plan, we offer the following specific feedback and recommendations:

Aim high: Working to ensure that Covered Populations have the ability to obtain a large screen device is achievable. While intermediate steps of loaning programs and computer labs through schools and libraries may be necessary, true equity is when residents have full access to the devices that meet their needs. As noted in the plan "Transportation is an issue that can affect multiple Covered Populations. Members of the public without broadband or a device at home often want to visit a library or similar organization providing access and skills, but may not be able to if they lack transportation and the nearest location is 1-2 hours away." The plan has several strong building blocks toward achieving this goal and we encourage the state to strive for universal device ownership. This also applies to ensuring that households have a sufficient number of devices for concurrent use by multiple members of the household, rather than "one internet enabled device per household." We highly recommend a measurable objective based on device ownership, not short-term or periodic access to a device.

Regenerative process: The plan mentions refurbishment. Devices do have a lifecycle, from acquisition to end of use. Within this cycle are several opportunities for devices to go from their first place of use to their second, community-level use. We encourage the development of a more detailed strategy and plan to ensure that this lifecycle is understood by stakeholders, and that end of use options such as recycling, repair, or refurbishing for further use are easily accessible and fully operationalized.

We'd like to also offer the following considerations as the state moves into the implementation stage of the plan:

Support for device deployment: Device deployment to Covered Populations involves a multi-step, multifaceted process. Specific training and support should be provided to entities that are tasked with providing devices to Covered Populations. We highly recommend that trusted community organizations with specific training and support regarding device deployment be engaged to help residents obtain devices. Intentional effort should be placed on developing a deployment network through community-based organizations, with formalized connections made between device sources in populated hubs and rural deployment points. While public libraries are often thought of in this role, many libraries played this role during the pandemic (via federal Emergency



Connectivity Funds) and found that they were ill-equipped and, in several cases, not interested in further serving as deployment partners in the future. It will be important to ensure that deployment partners are interested, have the capacity, and are supported in this role.

Supply is critical: Generating a robust and ongoing supply of technology to be refurbished is necessary for a sustainable device ecosystem. This supply can be generated through donations from individuals, corporations, government and other organizations. In December 2022, [REDACTED] helped to pass the federal Computers for Veterans and Students Act which will soon direct repairable, out of service federal computers to nonprofit technology refurbishers. Wyoming can be a potential beneficiary of this program. Efforts such as a statewide campaign for businesses donations will be extremely helpful to the state's efforts. [REDACTED] has deep knowledge on generating supply.

Connecting supply to deployment: [REDACTED] has a longstanding online technology donation matching platform that connects the supply of new and refurbished devices to vetted community organizations for deployment. This is a critical and often overlooked part of the overall device ecosystem, and we'd be happy to share more about this with the state.

Workforce opportunity: Refurbishing is also a very viable workforce development program with a low entry point for staff and a robust career ladder to family sustaining wages, and may come with its own set of funding sources such as the Workforce Innovation and Opportunity Act to support the work on an ongoing basis. Developing a new program or integrating into an existing refurbishing program that is designed to train personnel in technical skills and refurbishment would not only increase the State's capacity but also create a pipeline of technology talent for future initiatives.

Evaluation: We strongly recommend that performance indicators should be expanded beyond the number of devices distributed to also include establishing and monitoring the performance of elements within the device ecosystem, and the ecosystem itself.

Technical support: Stronger emphasis and planning for help desk and technical support of devices is needed in the plan. Digital Navigators are typically not equipped to provide this type of in-depth technical support.

Leveraging the support of outside entities, such as [REDACTED] or other national actors engaged in this work, could help speed and inform the implementation process and enhance the capacity investments made in Wyoming's local practitioners, stakeholders and government departments. We firmly believe that with a shared vision, engagement of non-traditional partnerships, and creative approaches, there are ample resources available to significantly increase device ownership, both now and in the years beyond this federal investment.

We wish you great success in this important endeavor.

WBO response: Thank you for taking the time to comment on Wyoming's Digital Access Plan. WBO share's a strong belief that device ownership and affordability is necessary for Wyomingites to take advantage of broadband internet access. WBO intends to use its Digital Equity Capacity Grant funds to run an open, competitive grant program aimed at closing the digital access gap in Wyoming and achieving the goals laid out in this plan, one of which is increasing access to devices. WBO looks forward to reviewing grant applications from relevant organizations to help WBO achieve this goal. Again, WBO appreciates you taking the time to provide comment and looks forward to your continued engagement.



6.1.16 Comment from [REDACTED] at the Wyoming Telehealth Consortium received on August 16, 2023

In reference to the overall document: I want to compliment the State of Wyoming on the work it has done on its Digital Access Plan. The authors of the plan have taken the time to collect a tremendous amount of data and made that information accessible as well as actionable.

I also want to thank the plan's authors for recognizing the value of telehealth. In addition to my work as the state's [REDACTED], I am also the [REDACTED] of the Wyoming Telehealth Consortium. The members of the Telehealth Consortium believe we can play a key role in helping the Wyoming State Broadband Office achieve its goal of increasing Wyomingites' understanding of telehealth's benefits and uses.

About the Consortium

The Wyoming Telehealth Consortium exists to enhance collaboration and alignment between organizations, key stakeholders, and consumers to promote telehealth initiatives in order to improve equity in and access to health services in Wyoming. The Wyoming Telehealth Consortium considers itself the central meeting space to discuss the progress of telehealth in the state, and is available to the public and all telehealth stakeholders in Wyoming.

Among our members are representatives from the state's hospitals, physicians, The Department of Enterprise Services, The Department of Health, private and public insurance companies, and consumer groups. In short, we feel the greatest depth and breadth of telehealth knowledge in the state is contained within our membership.

The Consortium's Interest in The Digital Access Plan

In reading the state's Digital Access Plan, I noticed Goal Four in your list of objectives related to digital skills lists is "increasing the number of Wyomingites who are trained to use telehealth services to access medical care." The near and long term metrics you selected were an "increase in telehealth training, specific activities and scope to be refined pending public comment and further evaluation."

We would love to learn more details regarding this goal. Specifically, is it this goal's intention to train healthcare providers, the public or both? Are there preferred methods for doing so? Does the Broadband Office have a timeline for doing so? We also wondered if you had metrics that could be used as a baseline for determining success for the goal of increasing the number of Wyomingites trained to use telehealth?

Currently, The Wyoming Telehealth Consortium is working with private payers (insurance companies) to collect data on just how many telehealth visits take place in Wyoming annually, as well as who is and isn't attending telehealth visits. While we aren't going to be able to get statistics for all Wyoming patients, we are likely to get the most complete numbers the state has seen. This includes data on visits, and by specialty for Medicare, and Medicaid patients, as well as members of the State Employees Insurance Group, and at least some data from Blue Cross Blue Shield of Wyoming. We would be very interested to know if you have similar efforts underway.

Telehealth and its reach remains important for Wyoming



Wyoming's rural nature affords it wide open spaces and unrivaled beauty, but also provides healthcare challenges.

According to The Healthy Wyoming Aging Data Report, 74% of Wyoming's counties are classified as "Frontier Counties," which means they have fewer than seven residents per square mile. Frontier counties in Wyoming have, on average 39 primary care providers per county, compared to 245 per urban county. At the Wyoming Telehealth Consortium, we believe telehealth can be a force multiplier for our state's healthcare system, minimizing the role distance plays in being able to see a provider.

The Wyoming Telehealth Consortium has been studying barriers to telehealth access for years and understands the role that available, affordable broadband plays in getting patients and healthcare providers together via telehealth. We appreciate the work that is being done by the Wyoming Broadband Office to support the installation and use of high-speed internet. We look forward to working together with the Broadband Office to increase our state's digital literacy skills.

WBO response: Thank you for taking the time to comment on Wyoming's Digital Access Plan. WBO shares a vision where telehealth provided via broadband services could increase access to high-quality, affordable care for Wyomingites. Unfortunately, given resource constraints, WBO does not have access to a rich set of baseline data that could inform near- and long-term goals for improving telehealth access in Wyoming. WBO appreciates any baseline data the Wyoming Telehealth Consortium is able to share regarding telehealth use in Wyoming. WBO intends to use the federal funds received as part of the Digital Equity Capacity Grant Program to run an open and competitive grant program for organizations willing to partner with WBO to achieve the goals outlined in the Plan. Where WBO does not currently have baseline data, it will work closely with grant subrecipients to conduct baseline measurement and set near- and long-term goals, as outlined in Section 2.3.7. WBO looks forward to reviewing grant applications from relevant organizations centered on increasing telehealth training for Wyomingites. Thank you again for your engagement, and WBO looks forward to continued collaboration.

6.1.17 Comment from [REDACTED] at the City of Laramie received on August 16, 2023

***In reference to the overall document:** The Laramie City Council suggested possible incentives or processes that would prioritize local ISPs and small internet providers, rather than the large multi-State corporations that could use this funding to potentially gain a disproportionate competitive advantage. There could be benefits from providing some sort of bonus funding to Wyoming ISPs, or smaller scale ISPs, in order to help our small businesses grow as well as to encourage healthy competition in business.*

Concerned residents from the City of Laramie shared their personal experience with the ACP enrollment process; these residents indicated the process for enrolling is onerous and a barrier to access for older individuals or those who do not possess extensive computer literacy skills. An application assistance program offered by the State was recommended to help ensure eligible Wyomingites are able to successfully take advantage of the ACP program.

***In reference to Section 2.2.5:** The one-dig policy for WYDOT discussed in the draft Digital Access Plan should be further emphasized to both entities conducting public works projects like State, city and county, school district entities, as well as ISPs (of varying sizes), to ensure the maximum application of this policy. With enhanced awareness, there is less chance of wasteful digging when an opportunity to also implement broadband infrastructure is present.*

***In reference to Section 3.2.1:** Surveying citizens of Wyoming to gather the absent data on device ownership and broadband adoption for incarcerated individuals and those who don't speak English as a first language would be valuable to both State and local governmental entities. Better quality data could facilitate more effective, rapid and directed deployment of financial assistance to persons without device access.*



In reference to Section 3.2.3: Albany County is characterized as a “medium-to-small sized county” but there is no definition provided to define such categorization. Albany County is the 6th most populous of Wyoming’s 23 counties. Further, an assertion is made in the draft Plan that medium-to-small sized counties are more prone to having greater rates of poverty, yet the majority of smaller population Wyoming counties have lower poverty rates. It is inaccurate to interpret Exhibit 26 poverty rates in Albany County as being a factor or result of population. (Page 30) Federal wage data shows that median income is especially low for working age individuals in Albany County for reasons that have no relation to population or post-secondary students residing here. Two thirds of workers in Albany County are employed in four, non-traded industry sectors paying wages that fall below the County median wage (THRIVE Laramie: A Community and Economic Development Action Strategy for the Next 10 Years, 2020, p. 39-41) We suggest the following revision of the interpretative text for Exhibit 26 of the draft digital access plan on page 30: Removing the Bracketed words in the following “[Wyoming counties with small to medium sized population, such as Fremont and] Albany County has a relatively higher percentage of households with income below 150% of the federal poverty line due to wages for working age individuals, ages 25-44, being largely derived from non-traded industry sectors that pay below the County median wage (Exhibit 26).” References: City of Laramie & Fourth Economy. (2020). THRIVE Laramie: A Community and Economic Development Action Strategy for the Next 10 Years. 16 August 2023. Retrieved from <https://cityoflaramie.org/DocumentCenter/View/18759/Thrive-Laramie-Community-and-Economic-Development-Action-Strategy-2020>

There could be benefit in further emphasizing the accessibility settings and providing more specific detail, especially with the push to increase telehealth, remote education, remote work, and government site accessibility within Wyoming.

In reference to Section 5.1.3: The Draft Digital Access Plan suggested a potential refurbishing program whereby State government, University of Wyoming, and local governments might be granted statutory allowances to donate older or unused devices to a State-run program that would repurpose devices to qualifying low- income residents, local organizations serving disadvantaged communities, or library systems.

WBO response: Thank you for your continued engagement throughout the Digital Access Plan planning process and for participating in the public comment period. As a result of your comments, WBO has made the following changes to its Digital Access Plan prior to submission to the NTIA:

- WBO has updated its measurable objectives to highlight where it is lacking baseline data that could inform near- and long-term goals and included information on how it plans to form a baseline in Section 2.3.7
- Section 3.2.3 was updated to remove the characterization of Albany as a “medium-to-small sized county”
- WBO included the Department of Workforce Services and Department of Education as participants in the review of accessible government services in Section 2.3.6 due to an emerging emphasis on remote work and distance learning

WBO looks forward to using its BEAD funds, which are linked to broadband deployment, and its Digital Access Plan funds, which are dedicated to non-deployment purposes to increase broadband accessibility, affordability, and digital literacy across the State. WBO intends to distribute all funds through an open, competitive grant program, and WBO looks forward to potentially receiving applications that could be relevant to some of the ideas contained in your comments (e.g., device refurbishment program, ACP assistance program). Thank you for your partnership in helping the State to develop its Digital Access Plan, and WBO looks forward to continuing the conversation.



6.1.18 Comment from [REDACTED] at a nonprofit organization received on August 17, 2023

In reference to the overall document: *As the leading digital equity nonprofit in the nation with more than a decade of experience providing digital inclusion services, we believe access to technology is a right, not a privilege and that the following best practices are critical to best bridge the digital divide:*

Holistic Digital Navigation: Focus on addressing all aspects of digital inclusion, including connectivity, access to devices, digital skills, and technical support. Provide comprehensive support to individuals or communities to ensure they have the necessary resources and knowledge to fully participate in the digital world.

Assisted at Time of Call, Not 'Air Traffic Control': Be responsive and proactive in assisting individuals seeking support. Instead of acting as a controlling authority, aim to provide personalized assistance in real-time, addressing their specific needs and challenges, with solutions in-the-moment rather than pushing them to make additional phone calls or visit additional websites.

Culturally Competent Services: Recognize and respect the diverse cultural backgrounds and identities of the communities served. Tailor services to meet the unique needs and preferences of different cultural groups, ensuring that everyone feels included and valued.

Collaborative Process with Trusted Partners: Foster partnerships with community-based organizations (CBOs), local governments, educational entities, and other trusted stakeholders. Work together to identify and address digital inequities, leveraging collective expertise and resources to achieve more significant impact.

In-person and Remote Support through Various Communication Channels: Offer both in-person and remote support options to accommodate different circumstances and preferences. Utilize multiple communication channels, such as phone, email, chat, or video conferencing, to ensure accessibility and convenience for individuals seeking assistance.

Providing broadband alone is not enough. We need to provide devices, digital literacy training, and technical support. It is not "if you build it, they will come." Without providing these critical wrap-around services, broadband will go unused and there will still be a significant portion of the population on the wrong side of the digital divide. Furthermore, as a technology refurbisher we support programs that refurbish and redistribute existing devices.

By implementing these best practices, your state can enhance digital equity and digital inclusion efforts, making a positive impact on individuals and communities. Digital equity is social equity.

WBO response: Thank you for participating in the public comment period for WBO's Digital Access Plan. As described in Section 5, WBO intends to run an open, competitive grant process to distribute funds received as part of the Digital Equity Capacity Grant Program and looks forward to potentially reviewing applications that touch on some of the programs mentioned in your comments (e.g., digital literacy training, device refurbishment, etc.). Thank you again for your engagement, and WBO looks forward to continuing the conversation.

6.1.19 Comment from [REDACTED] at a union received on August 17, 2023

In reference to the overall document: *[REDACTED] represents hard working men and women throughout the entire state of Wyoming in many different sectors. We are skilled and trained laborers in not only building and heavy highway work, but also with*



gas distribution and all forms of renewable energy. From the beginning to the end of the project from coast to coast, our members are trained to work in any industry to help build this country, this state and even this county.

The below suggestions are recommendations made in regards to the Digital Access Plan being proposed by the Wyoming Business Council and the Wyoming Broadband Office.

In reference to Section 1: While we appreciate the goals laid out by the WBO in the plan, we do believe that one of the goals should also be to create family sustaining jobs for Wyoming residents in the broadband industry.

In reference to Section 2.2.2: We suggest an additional section to this portion that provides resources for registered apprenticeship programs as a resource for employment in the broadband industry. Registered apprenticeship programs consistently provide success in hiring local workers, providing good pay and benefits, and supplying a diverse workforce to the contractors. Registered apprenticeship programs furthermore provide a safe and trained workforce that is vital in industries like broadband.

WBO response: Thank you for participating in the public comment period for Wyoming's Digital Access Plan and for attending several of the stakeholder engagement sessions held by the WBO earlier this year. WBO shares the belief that registered apprenticeships could be a valuable resource for employment in the broadband industry and in broadband-enabled jobs, which is why WBO has included reference to the Department of Workforce Services' registered apprenticeship program in Section 2.2.1. Again, thank you for taking the time to provide your feedback.

6.1.20 Comment from [REDACTED] at the Department of Workforce Services received on August 17, 2023

In reference to the overall document: Excellent job on the development a comprehensive and thorough plan!

In reference to Section 2.3.2: A critical issue to increase the number of Wyoming citizens with disabilities participating in ACP is requiring all BEAD subrecipients to document staff training and other efforts to ensure their programs and services are accessible. Many are not.

In reference to Section 2.3.3: Wyoming Relay distributes tablets and smartphones to individuals with hearing and speech disabilities.

In reference to Section 3.1.1: Wyoming Relay, a Department of Workforce Services program, provides technology demonstrations, training, 1:1 assistance, distribution of devices, including tablets and smartphones, at no charge, loaning of devices, ACP referral, and enrollment assistance.

In reference to Section 3.1.4: Workforce centers have computers for public use for job search, resume development, interesting testing, etc.

WBO response: Thank you for all of the feedback and information that you provided during the course of the stakeholder engagement process. And thank you once more for participating in the public comment period. As a result of your input, WBO has updated the asset inventories in Sections 2.2.1, 3.1.1, and 3.1.4 to include further detail on the services offered to Wyomingites with disabilities through the Wyoming Relay program and note that Workforce Centers have computers for public use for career development purposes. We look forward to continued engagement with you and your team on expanding broadband access, affordability, and digital literacy for Wyomingites.



6.1.21 Comment from the University of Wyoming School of Computing received on August 17, 2023

In reference to the overall document: *The School of Computing at the University of Wyoming appreciates the opportunity to comment on the July 17, 2023 draft of Wyoming’s Digital Access Plan and applauds the Wyoming Broadband Office’s (WBO) vision of ensuring every Wyoming citizen and business can connect to and effectively use affordable, reliable, and future-proof broadband.*

The UW School of Computing (SoC; <https://www.uwyo.edu/soc/index.html>) was established in January 2022 as a hub of innovation and knowledge exchange for computing and digital skills. The new school will provide university students, faculty and staff, and Wyoming businesses and citizens with the computational tools, skills and approaches to drive transformation and innovation in the state. The SoC will champion broader efforts to make the University of Wyoming more digital, inclusive, interdisciplinary, and entrepreneurial through computing partnerships across Wyoming. Academic programs within the SoC include emerging coursework and credentials in applied computing and data science. The SoC houses UW’s Data Science Center as well as the Wyoming Geographic Information Science Center (WyGIS) and its academic programs in Geospatial Information Science & Technology. The SoC is the lead unit for UW’s involvement in the Digital Information and Technology component of the Wyoming Innovation Partnership.

The SoC submits the following comments for consideration on the draft Wyoming Digital Access Plan. [Table 1, beginning on page 2 of this memo.] While most comments directly apply to possible connections to the School of Computing and its programs, a few more broadly relate to UW or other entities that we have identified as being suitable for consideration. We feel these suggestions may strengthen an already impactful document by providing additional context to policy makers about relevant expertise and resources available through the School of Computing at the University of Wyoming.

Thank you for your attention to this feedback. The SoC is committed in its support to your ongoing efforts in implementing the state’s Digital Access Plan and looks forward to opportunities to work collaboratively toward its success. Please don’t hesitate to contact [REDACTED] if you have questions about this input, require additional information, or would like to schedule a follow-up meeting. The SoC would be happy to do so, and can arrange to include representation from UW’s Libraries, Division of Information Technology, the Research and Economic Development Division, and the Department of Electrical engineering and Computer Science, if appropriate.

In reference to Section 2.1: *Suggest adding language to reinforce importance of a comprehensive, accurate and up-to-date state spatial data infrastructure (enterprise GIS) to understand and address “connecting”-related barriers.*

While this may be more central to the BEAD documents, it could be valuable to note it here for readers as well.

In reference to Section 2.2.1: *Suggest additional mention of WIP’s Digital Innovation and Technology (DIT) component. For example: “With projects at UW and across the state’s community colleges, WIP’s Digital Innovation and Technology component can serve as a catalyst for coordinated digital skills training and research and capacity building to support ‘smart’ rural places.”*

In reference to Section 2.2.2: *Suggest addition of following text: “UW’s new interdisciplinary School of Computing, established in 2022, will provide University of Wyoming students, faculty and staff, and Wyoming businesses and citizens with the computational tools, skills and approaches to drive transformation and innovation in the state. The School of Computing will champion broader efforts to make the University of Wyoming more digital, inclusive, interdisciplinary, and entrepreneurial through computing partnerships across Wyoming.”*

In reference to Section 2.2.4: *Suggest adding mention of relevant community-oriented professional organizations in this section - e.g., Wyoming Association of Municipalities, the Wyoming County Commissioners Association, Wyoming Planners Association.*



In reference to Section 2.2.5: Consider adding Wyoming Geographic Information Science Center’s Geospatial Data Hub as a source of critical infrastructure data and expertise.

In reference to Exhibit 4: A specific near-term (and long-term) action to consider is engaging UW School of Computing, Wyoming Workforce Services, and Wyoming Department of Education in collaborative research partnership assessing digital literacy levels across the state.

In reference to Exhibit 7: It could be valuable to note that UW and community colleges are now working together on coordinated distance learning programs through the Wyoming Innovation Partnership.

In reference to Section 3.1.4: Similar to the community colleges, we believe UW also provides ‘near-campus’ Wi-Fi access and device lending. Such resources may not only be limited to Laramie and UW-Casper but may include other UW units around the state (Cooperative Extension Service, etc.). [This should be confirmed with UWIT and UW Libraries.]

In reference to Section 4.3: A UW resource that works with both of the Wind River tribes and the School of Computing is the High Plains American Indian Research Institute (HPAIRI; <https://www.uwyo.edu/hpairi/index.html>). With these connections, HPAIRI could be a useful entity to engage if seeking guidance on social equity research approaches involving potential collaboration with the tribes and UW.

In reference to Sections 4.4 and 5: The issues summarized in Section 4.4 and the implementation strategies and key activities presented in Section 5 provide opportunity to identify potential research partnerships with WIP and entities like UW’s School of Computing (including its data Science Center and WyGIS) to carry out collaborative research and build statewide information and communication technology capacity for and in coordination with state agencies and private partners. Examples from other rural states include the University of Indiana’s Polis Center SAVI platform which provides community and regional level socioeconomic data dashboards and data science analysis services to support community economic development including equity and digital divide assessment, and the Illinois Broadband Lab, a collaboration on broadband data, mapping, research, and publication driven by the Illinois Office of Broadband and the University of Illinois System, that includes facilitation of grants to higher education partners working on, for example, digital disparity among ‘covered populations’ (e.g., Chicago State University grant from Connecting Minority Communities Pilot Program within the U.S. Department of Commerce’s National Telecommunications and Information Administration (NTIA)).

WBO response: Thank you for taking the time to provide public comment on Wyoming’s Digital Access Plan. WBO shares the vision of increasing access to the digital economy throughout the State, and your input helped to refine the final version of the Plan submitted to the NTIA:

- Updated Section 2.2.1 to include mention of WIP’s Digital Innovation and technology component
- Included a description of the UW School of Computing in Section 2.2.2
- Mentioned the Wyoming Geospatial Data Hub in Section 2.2.5
- Updated the University of Wyoming line in Exhibit 7 to note that UW and community colleges are working together as part of the Wyoming Innovation Partnership
- Updated Exhibit 8 to note that UW has a guest Wi-Fi and device lending program (available to UW students)



Again, WBO appreciates you taking the time and looks forward to finding ways that UW and WBO could once again closely collaborate to achieve the goals outlined in the Digital Access Plan.

6.1.22 Comment from [REDACTED] at the Department of Workforce Services received on August 18, 2023

In reference to Section 2.2.1: Wyoming Department of Workforce Services – Within this section, Wyoming Relay (WYRED) should be mentioned as the program is underneath this department and offers free specialized telecommunication equipment (smartphones, tablets, iPads, iPhones, etc.) to individuals with hearing loss, vision loss, and speech impairments. We also are huge advocates for bridging the digital divide by giving state-wide group, one-on-one, etc. trainings. We serve any age and resident as long as they're in Wyoming and can verify their disability.

In reference to Sections 2.3.3 and 5.1.3: There are programs already established that have loaner device programs for eligible applicants to utilize and this includes Wyoming Relay and WATR at the University of Wyoming, even offering permanent equipment for those who are eligible. I think being cognizant of referring individuals to the right entity will be crucial for the best outcome. While it might be appropriate for one individual to receive a device through the State Library loan program, it might be more appropriate for another individual to go through the WATR or Wyoming Relay program.

In reference to Sections 2.3.4 and 5.1.4: It is extremely important that not only are state and local entities like the libraries offering digital skill training opportunities, but the ACP providers also have that understanding of teaching digital skills. They need to have a better understanding of how to work with the covered populations and understand the built-in accessibility features of the wireless devices being offered. Another thing to be mindful of is that digital skills training and classes work best IN PERSON. An individual that does not know how to turn on their laptop or phone, will not know how to find how to turn on the virtual class that is being offered. We have found that the most impactful way to teach digital skills and bridge the digital divide is to have the classes set up how the State Museum has put them together. This includes an 8-week course and booklet going through how to utilize the Apple or Android device. Everything from turning it on, to the class Wyoming Relay teaches about accessibility features built into the device that could be beneficial. While AARP's High-tech events were really great, I noticed that it is ideal for quick fixes or troubleshooting issues, but not for actually learning how to use the wireless device to its full potential.

In reference to Sections 2.3.6 and 5.1.6: Partnering with only ETS to establish online accessibility and inclusivity will not be enough in the sense of ensuring everything is accessible to the covered populations. One thing that always stuck with me was when a client said, "Don't plan for me, without me." Please also consider adding other individuals and entities to the partnership who know accessibility like Wyoming Relay, WATR, Vision Outreach Services, SPED, etc. While ETS has the technical expertise, others working with or who are the covered populations will have the experience to provide suggestions.

In reference to Exhibit 7: Wyoming Relay was not mentioned as an organization that offers training opportunities for the covered populations. Wyoming Relay is a state program under the Department of Workforce Services, Division of Vocational Rehabilitation and offers a wide array of assistive technology to individuals who experience hearing loss, vision loss, and/or speech impairment. We partnered with the State Museum, and have partnered with AARP during their Senior High Tech Programs, to offer digital skills and trainings to our Wyoming Seniors. We also offer one-on-one and group trainings, technical support, online resources, no-cost and loan devices, demonstrations, accommodation assistance, and so much more.

In reference to Section 3.1.4: Department of Workforces Services, Employment and Training all have computers for the public to utilize where they can sign up for Wyoming at Work, build a resume, take interest tests, attend trainings, and more. If they have their own device, they could utilize the guest WiFi too. The Division of Vocational Rehabilitation recently applied for a grant that would



allow youth to obtain a wireless device for job searches, school, and other vocational needs so this could also be a possibility if it is granted.

In reference to Exhibit 10: It is important to be mindful that these covered populations are going to overlap. For example, we will have rural residents who are 60+ with a disability or a Veteran from a rural area with co-occurring disabilities. This will be essential in training ACP providers to understand this.

In reference to Exhibit 34: While Wyoming Relay Equipment Distribution Program (WYRED) went to the listening session representing the community members of Wyoming who we serve, we are a government agency under the Department of Workforce Services (DWS), Division of Vocational Rehabilitation (DVR). We are not considered a community-based organization but instead a public entity since we are under DWS.

In reference to Exhibit 35: Again, Wyoming Relay was not included in this section while the services we offer are extremely beneficial within this plan - promoting ACP registration, accessibility, digital skills, wireless devices and assistive technology, accommodations, permanent distribution and loan programs, understanding of disabilities, technical support, and breaking the digital divide.

In reference to Section 5.1.5: The digital skills training offered through the BEAD program will play a large role in keeping a safe, virtual environment for the covered populations. It will be imperative that classes and trainings on privacy, cybersecurity, and scams are given to those under the covered populations, especially Seniors.

WBO response: Thank you for taking the time to prepare such a detailed and insightful comment for the public comment period. WBO has appreciated the Department's collaboration over the past several months on how to improve broadband access, affordability, and digital literacy for Wyomingites across the State. In response to your feedback, WBO has updated its Digital Access plan prior to submission to the NTIA:

- Updated Section 2.2.1 to include mention of Wyoming Relay as a program of the Department of Workforce Services
- Added detail concerning the WATR program in Section 2.2.2
- Included mention of the WyRED program in the asset inventory as part of Exhibit 8
- Updated Section 3.2.1 to note that a Wyoming resident could pertain to multiple Covered Populations
- Changed Exhibit 34 and Exhibit 35 to reflect the attendance of the Department of Workforce Services
- Mentioned in Section 3.1.4 that Wyoming Workforce Centers have publicly available devices for career development

Thank you again for taking the time to participate in the public comment period, and WBO is looking forward to continuing to work closely with the Department of Workforce Services team to accomplish our shared goal of increasing broadband accessibility, affordability, and digital literacy for Wyoming's Covered Populations.

