Montana Broadband Advisory Commission Meeting

June 12, 2023

Agenda

As of 12 June 2023

1. ARPA Program Update
2. IIJA: BEAD Overview
3. FCC Mapping Update
4. IIJA: DOP Overview
5. BEAD Deployment Scenarios

1 Status Update: 2022 ConnectMT ARPA Awards

As of 12 June 2023

Total Funding Available:	**$ 310,898,748**
SLFRF – 602 Funds	$ 190,964,215
CPF – 604 Funds	$ 119,934,533
Total Awards:	**$ 298,750,674**
Signed Contracts:	$ 149,231,514
Sent/Unsigned Contracts:	$ 0
Final Statement of Works Under Review:	$ 149,519,160
Declined/Unclaimed Funds:	**$ 12,148,074**
No Startup Documents Received:	$ 4,011,693
Awardee Withdrawals:	$ 2,538,021
Awardee Scope Reductions:	$ 3,780,212
Funding Not Previously Allocated:	$ 1,818,148
Total Remaining Funding to Allocate:	**$ 12,148,074**

During the 68th Legislative Session (LC 1234) a shift of $44,148,748 of SLFRF 602 funds to this program was passed by an appropriation change.

The State applied to Treasury and has received verbal approval for the $119.9M of CPF 604 funds.

1 Treasury Supplementary Broadband Guidance

As of 12 June 2023

Background: On May 17, 2023, Treasury provided additional guidance for Broadband Grants funded by The Coronavirus State and Local Fiscal Recovery Funds (SLFRF) program and the Capital Project Fund (CPF). The supplementary guidance includes several important clarifications and updates to the requirements for both ISPs and the state of Montana. Key changes impacting ConnectMT awardees:

- **Procurement flexibility**: "ISPs that receive **fixed amount** subawards …. are not required to comply with the cost principles and procurement practices of the Uniform Guidance."
- **Extension of service obligations and subsidy participation**: Service must be maintained and ISPs must participate in federal broadband service subsidy programs until **December 31, 2034.**
- **Clarification on real property and equipment standards**: Treasury clarified administrative requirements applicable to property and equipment acquired with ConnectMT funds, including insurance, recording title, transfer and disposal requirements

Next Steps: The ConnectMT team will work with ISPs to make the necessary amendments to existing grant agreements; provide ISPs additional training resources to ensure that they understand the changes to their responsibilities; and implement appropriate monitoring procedures to ensure compliance with the updated requirements from Treasury.

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1 IIJA BROADBAND FUNDING STREAMS

As of 12 June 2023

Details to follow

BEAD

$42.45B

Broadband Equity, Access & Deployment Program

A program to get all Americans online by funding partnerships between states or territories, communities, and stakeholders to build infrastructure where we need it and increase adoption of high-speed internet.

DIGITAL EQUITY

$2.75B

Digital Equity Act

Three programs that provide funding to promote digital inclusion and advance equity for all. They aim to ensure that all communities can access and use affordable, reliable high-speed internet to meet their needs and improve their lives.

TRIBAL

$2.00B

Tribal Connectivity Technical Amendments

A program to help tribal communities expand high-speed internet access and adoption on tribal lands.

MIDDLE MILE

$1.00B

Enabling Middle Mile Broadband Infrastructure

A program to expand middle mile infrastructure, to reduce the cost of connecting unserved and underserved areas.

2 BEAD program timeline

As of 12 June 2023

2023

Jun 30 — NTIA issues Notice of Available Amounts (NOAA)

Sep 12 — BEAD 5-year action plan due

Dec 30 — BEAD Initial Proposal due *(180 days after NOAA)*

2024

1st Half — Final location classifications due *(>60 days before fund allocation to subgrantees)*

2nd Half — Approval of BEAD Initial Proposal & release of 20% of funds

1st Half '25 — Initial report due *(90 days after release of funds)*

BEAD Final Proposal & release of remaining 80% of funds

2025 - 2029

Ongoing — Semiannual reporting *(starts 1 year after release of funds)*. Audit subgrantee progress with site visits and analysis. Respond to auditing requests.

1st Half '29 — Broadband deployment deadline (*4 years after allocation to sub-grantees, unless extended*[1])

State challenge process

Grant evaluation

Implementation of priority BEAD projects *(first 20% of funds)*

Implementation of remaining BEAD projects *(remaining 80%)*

1. "An Eligible Entity may extend the four-year network deployment deadline for subgrantees by not more than one year if: (1) the subgrantee has a specific plan for use of the grant funds, with project completion expected by a specific date not more than one year after the four-year deadline; (2) the construction project is underway; or (3) extenuating circumstances require an extension of time to allow the project to be completed." cit. BEAD NOFO pg. 18

2 Where are we now: BEAD progress to date

As of 12 June 2023

Context

The next year will be an extremely important one for the State of Montana and its goals related to broadband connectivity.

The Infrastructure & Investment Jobs Act provides unprecedented funding to close the digital divide in America, including $42.45B under the BEAD Program.

Montana has received planning funds for the BEAD program and must submit a Five-Year Action Plan as the first step in an extensive process to access the funds and impact the lives of Montanans.

Montana Broadband Office BEAD progress to date

1. Conducted rigorous analysis to understand Montana's current state of connectivity and what it will take to meet BEAD NOFO guidelines
2. Executed extensive stakeholder engagement across the state and incorporated broad feedback into the draft plan
3. Produced comprehensive initial draft of the Five-Year Action Plan
4. Now seeking input from the Commission to ensure the plan aligns to state priorities in order to finalize and submit the plans to NTIA

Source: BEAD and DE Guidance documents

2 Overview of the current state of broadband in Montana

AS OF 11 MAY 2023

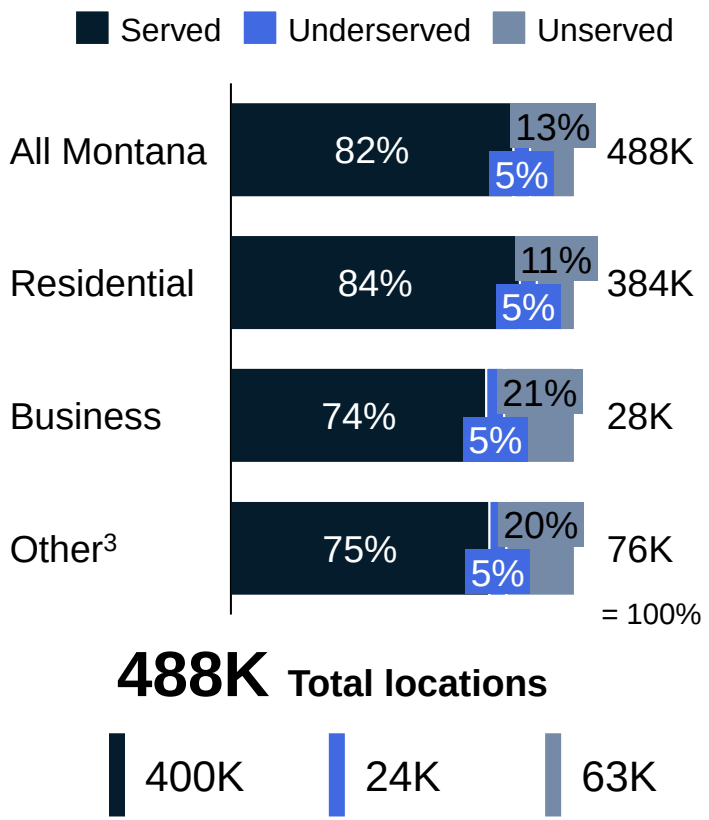
Montana trails peers on key measures of broadband access and digital equity.	**50th in BroadbandNow's ranking of high-speed internet availability (2023),[1] and 44th in high-speed internet adoption,[2]** Montana is farther behind on key measures of internet availability and adoption.
18% of Montana locations are unserved or underserved and it could cost up to $830M in subsidies to serve them all.[3]	Based on an estimated allocation of BEAD funding, **~72% of unserved and underserved locations will be able to be served if only fiber optic cable is deployed.**
67% of Montanan households have adopted terrestrial broadband.[2]	**Variation in terrestrial broadband adoption exists between larger metropolitan areas and more rural parts of Montana**. However, after layering in cellular and satellite technologies, **internet adoption is 85% statewide.**
79% of eligible Montana households have not enrolled in ACP.[4]	Compared to other US states, **Montana is 41st in ACP enrollment** and uptake based on eligibility and **12% lower than the nationwide average**. **A survey of Montana residents suggests only ~30% of the population knows ACP exists.**
5.8% of Montana households do not have any kind of computing device.[2]	**12.3% of Montana households with internet access only have access through a cellular data plan.** Furthermore**,** 5.8% of Montana households do not have any kind of computing device (e.g., laptop, smartphone, tablet).

1 BroadbandNow; https://broadbandnow.com/Montana
2 U.S. Census Bureau, American Communities Survey (ACS), 2021; https://data.census.gov/cedsci/table?q=internet&g=0400000US30&tid=ACSST1Y2021.S2801
3 FCC DATA Maps as of 18 November 2022
4 Education Superhighway. https://www.educationsuperhighway.org/no-home-left-offline/acp-data/#dashboard

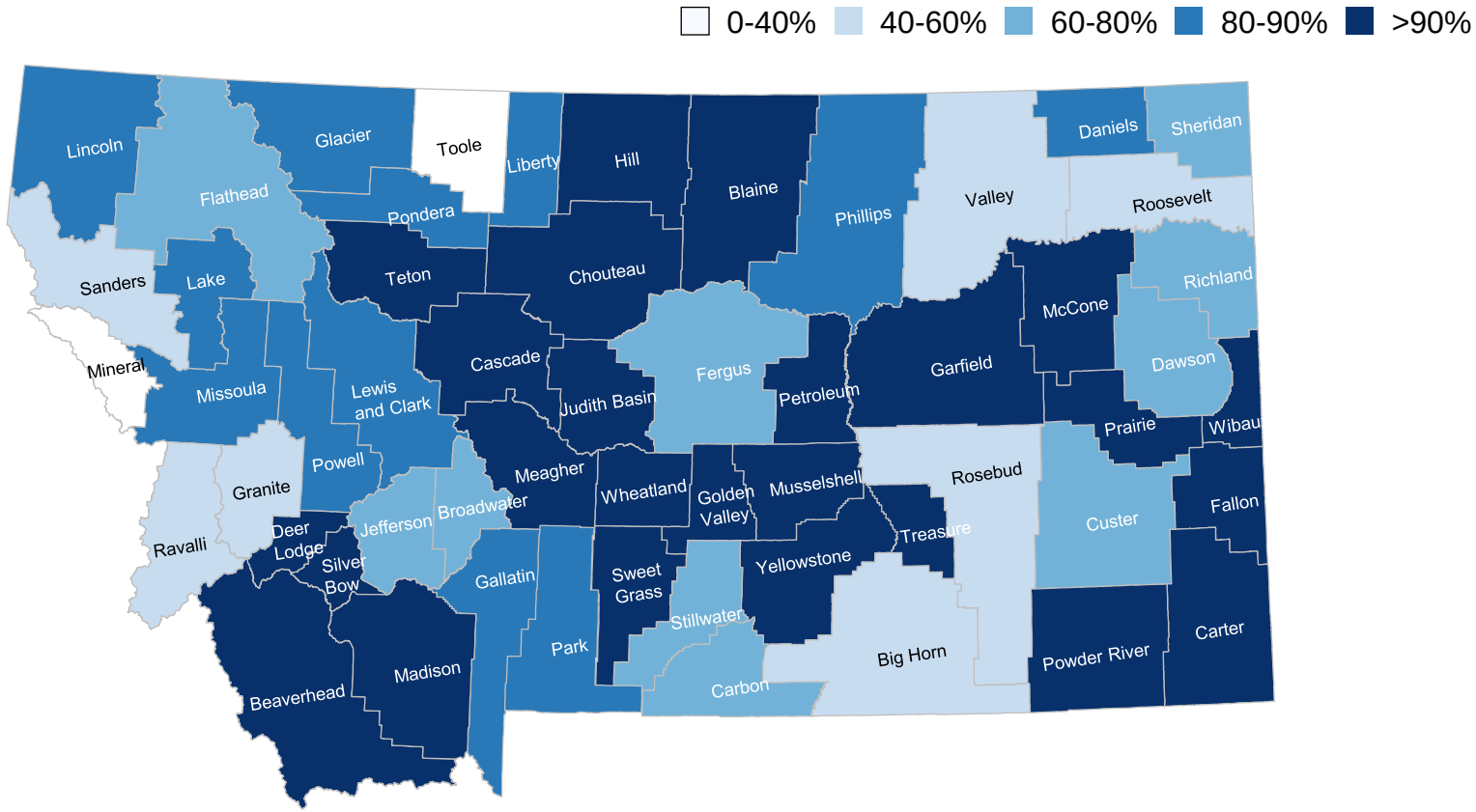
2 According to the FCC Broadband Map, 18% of Montana locations are unserved or underserved[1]

AS OF 11 MAY 2023

By the numbers: Montana broadband deployment[1]



Percentage of served locations in Montana counties

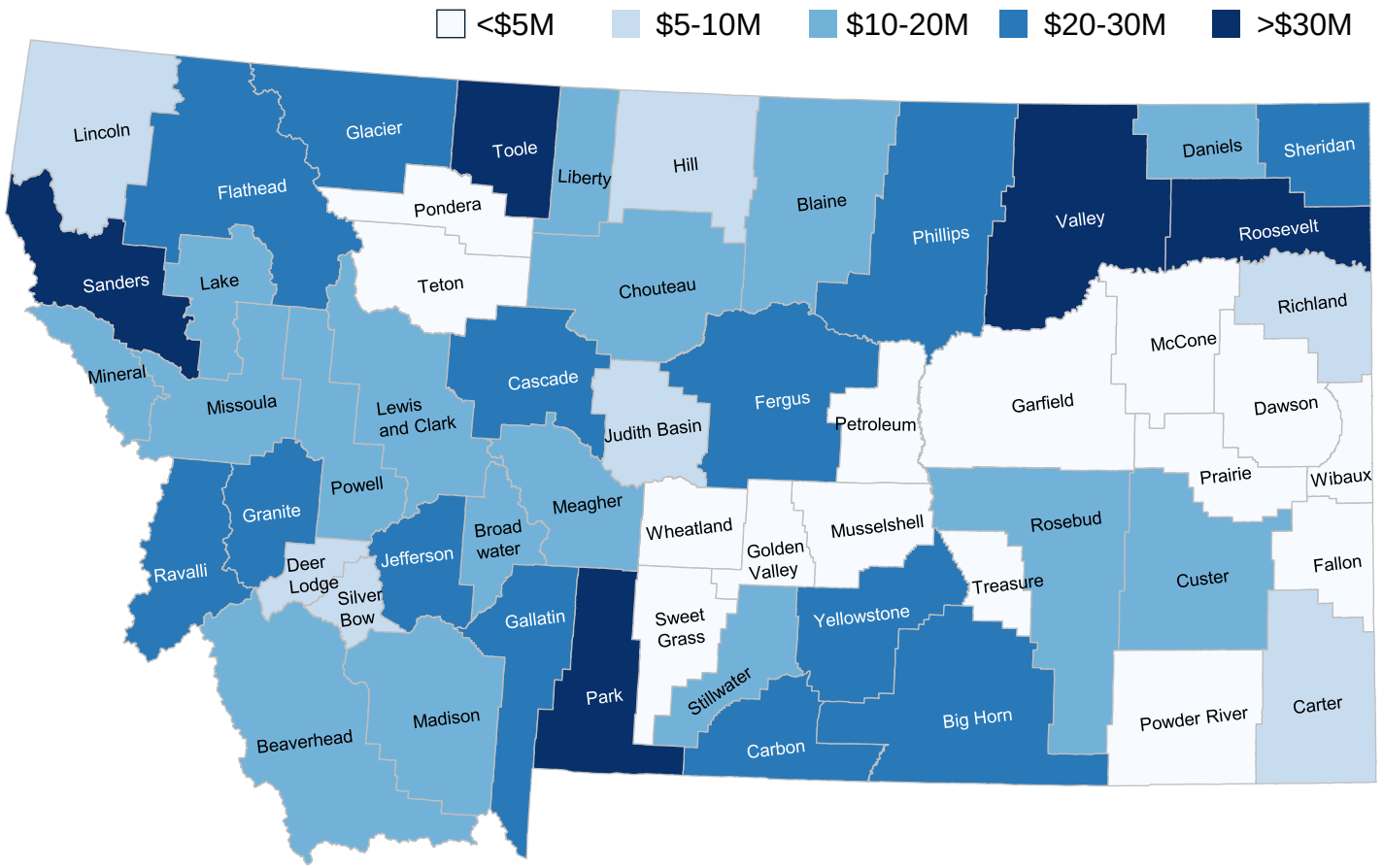


1.Values for served, underserved, and unserved locations reflect location totals when project areas / locations to be served by RDOF, CAFII, NTIABIP, RUS and Reconnect (up until May 2023) are considered served
2.'Business' includes the land use designations as estimated by the local county assessor information: BUSINESS, INDUSTRIAL, RECREATION
3.'Other' includes the land use designations as estimated by local county assessor information: LAND, AGRICULTURE, COMMUNITY, TRANSPORTATION, COMMUNICATION, UNKNOWN, OTHER
Source: Service availability based on FCC Broadband Map as of November 18, 2022

2 It may take up to $830M in subsidies to reach all un- and underserved locations with fiber

AS OF 11 MAY 2023

Total subsidy required to serve by county



$690-830M

Total subsidies needed to deploy fiber to all underserved and unserved locations in Montana. Assumes:

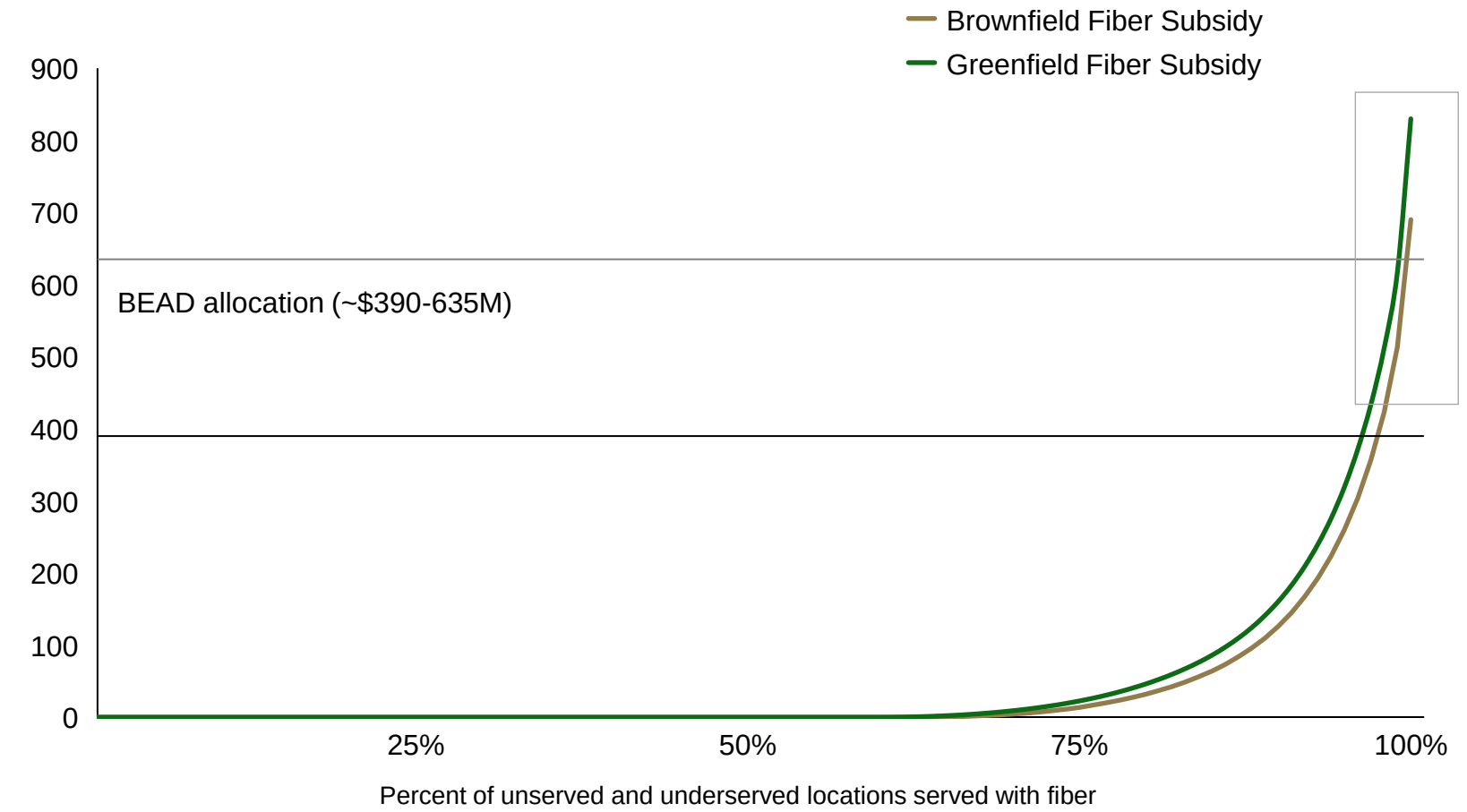
- Aerial deployment
- Other federal awards counted as served (RDOF, RUS, CAF II, NTIABIP, Reconnect up until May 2023)
- A subgrantee match estimate based on the applicant's expected business case
- Range dependent on estimated brownfield or greenfield costs, respectively

Source: Service availability based on FCC Broadband Map as of November 18, 2022; Cost estimates based on CostQuest v5 cost model

2 In a 100% fiber buildout scenario, ~10% of the un- & underserved locations may account for 81% of total subsidy needed

AS OF 11 MAY 2023

Montana fiber subsidy cost curve for unserved and underserved locations[1], $M



1. Estimates for fiber subsidy required assumes that locations connected by RDOF, RUS, CAF II, NTIABIP, and Reconnect (up to May 2023) are considered served. Subsidy required by location represents the NPV investment required for the location, estimated future cash flows and estimated ISP investment for each location

Source: Service availability based on FCC Broadband Map as of November 18, 2022 Cost estimates based on CostQuest v5 cost model

Key Takeaways

A relatively small number of locations are driving a disproportionate amount of the cost, when considering fiber build out

The last 1% of locations accounts for 25% of total cost, with an average subsidy per location of $240K

These locations likely represent some of the most remote locations in Montana and may have additional barriers to deployment (e.g., topography)

2 Stakeholder engagement process

As of 12 June 2023

Summit Consulting, LLC conducted multi-modal stakeholder engagement across Montana in 2022

Two public surveys (survey field lasted from August 24th, 2022 to September 30th, 2022)	
Montana Internet Access Household Survey	Designed for any Montanan over the age of 18
Montana Internet Access Community Leader Survey	Designed for community groups (such as libraries, public health organizations, religious organizations, city and county officials, and chambers of commerce)

Two rounds of in-person and virtual outreach sessions with the public and identified stakeholder groups	
Round 1	**In-person (September 7th to 14th):** focused on identifying challenges to internet access and digital opportunity
	Virtual: conducted before, during, and after the in-person sessions timeframe
Round 2	**In-person (December 5th to 9th):** focused on soliciting feedback to specific preliminary elements required by the BEAD and DEA NOFOs and report templates provided by NTIA
	Virtual: conducted before, during, and after the in-person sessions timeframe

2 Key Takeaways / Findings

	Theme	Key Findings
Round 1	**Barriers to being online**	Lack of availability in rural areas; Often not affordable even where available; Lack of options (competition); Available options not always reliable; Lack of device ownership; Aging infrastructure
	Technology preferences	Preference for local providers; No preference on technology type, just want good service; Recognition that 100% fiber is not feasible; No one-size-fits-all solution for all communities
	Cost	“Affordable” estimates ranged from $25 to $50 (per month); People using ACP pay $15 to $20; Can be difficult to estimate because internet service is often bundled with phone service
	Prioritization of access	Rural areas; Anchor institutions; Unserved with no internet options rather than underserved with options; Low-income areas
	Groups that lack access	Families with children; Low-income individuals; Tribal communities; People with disabilities; Senior citizens; Veterans; Businesses; Farmers
	ISP-specific	Matching is harder for smaller ISPs; Recommendation to lower the match requirement (lower than 25%); Low-cost offering thresholds were in the $40 to $60 range (w/o ACP); Cost per location (willing and able to contribute) ranged from $2,000 to $4,000; Some rural areas are impossible to provide service without subsidy; Hiring, retaining, and training issues; Buy America is a challenge
Round 2	**Access strategies**	Deployment Scenario 3 that covers all un- and underserved was the most common preferred option; Almost no respondents preferred Scenarios 1 or 2; Several sessions noted that going straight to unserved areas would mean going through underserved areas, which may benefit the underserved areas anyway; Skepticism that speed data provided by ISPs are accurate for existing broadband map; Significant support for investing in CAIs; Concern that ISPs will provide lower service with low-cost options, or that prices will skyrocket over time
	Digital opportunity strategies	ACP application is cumbersome, could simply give it to eligible people; create info packets that CAIs can share about ACP, device lending programs, how to access trainings; Challenges with theft and damage for device lending programs; Low-cost devices are often poor quality; Need for digital skills trainings around cybersecurity and internet safety; Leverage existing resources and partnerships
	ISP-specific	General preference was for Deployment Scenario 3 that covers all un- and underserved; Suggested auto-enrollment for ACP; Increased State ACP advertising; Apprenticeship programs; Potentially work with OPI and state agencies to develop local curricula for workforce development; Supply chain planning should be part of the evaluation and planning for the grant; Several ISPs raised inaccuracies with the current broadband map; Potentially let ISPs draw map and let state review

2 Tribal Outreach Sessions

Great Falls (in-person)	Virtual	Billings (in-person)
September 2022	October 2022	December 2022
10 Tribal community leaders and members	Two sessions with Tribal colleges	23 Tribal community leaders and members
Participants across sessions were affiliated with multiple Tribal Nations		

	Key Takeaways
Barriers and access strategies	• Affordability is the largest barrier to access • Sovereignty – Federal regulations can create bureaucratic barriers; Providers must also navigate unfamiliar Tribal laws; Incumbent ISPs have taken advantage of Tribes and are favored by the state – state should let market develop competition • Topography – line of sight issues • Reliability – everyone shares the same fiber line, not enough capacity and speeds vary greatly • Reservations struggle with right-of-way issues that have prevented co-ops from building out service in the past • Monopolies in all industries/businesses on reservations create higher costs generally, leaving less money to spend on broadband (gas, food, etc.) • Suggested cost of broadband should be free, or $30-40/month, and some people would still struggle to pay $20/month
Technology preferences	• Preference for local providers, but expressed frustration with lack of options (competition) • Preference that the money goes to non-incumbent provider – need competition to drive the price down • Issues with co-op providers given differing interests between native and non-native members • Recognition that 100% is not feasible, need satellite and wireless • Satellite is often more affordable, especially with ACP
Application involvement	• State should employ native liaison to Tribes for application • Obtain Tribal council sign-off on application
Digital equity	• Few digital equity programs for Tribes exist • Workforce development programs suffer from lack of digital literacy • General lack of awareness around the ACP, need improved marketing
Other considerations	• Broadband maps are inaccurate due to ISP misrepresentation of data • Tribal populations rely more on anchor institutions • ISP applicants should be required to hire Tribal members, especially on Tribal lands • Suggest continued monitoring of BEAD outcomes and deployment long-term to ensure ISPs are complying over time • Overall perception that ISPs underdeliver in tribal communities (high cost for inadequate service) – no regulation/plan to hold them accountable • Concern that BEAD low-cost offering of 100/25 speeds would not be sufficient to operate or grow business on reservations • Questioning if the state prefers co-ops over other providers

2 Potential BEAD program goals

As of 12 June 2023

Vision statement: To narrow the digital divide in support of Montana's economic, workforce, health, and educational goals by ensuring reliable, affordable internet access for all Montanans

Area	Program goals
Broadband Deployment	Use federal funding efficiently and effectively to develop and implement lasting broadband infrastructure for a future connected Montana
Broadband Access	Ensure all Montana residents have access to internet and necessary devices in their homes, schools, libraries, and businesses
Broadband Adoption	Further broadband adoption through programs and partnerships with community stakeholders
Broadband Affordability	Leverage existing programs to ensure that cost is not a barrier to accessing broadband for all Montanans, irrespective of their income level
Digital Opportunity	Reduce the digital divide among all Montana residents by increasing high-speed internet adoption among covered populations
Economic Growth and Job Creation	Bolster the economic competitiveness of Montana by ensuring widespread access to high-speed internet

1. Covered populations include (see SDEPG NOFO Section I.C.g): 1. Individuals who live in covered households (i.e., income not greater than 150% of poverty level); 2. Aging individuals; 3. Incarcerated individuals, other than individuals who are incarcerated in a Federal correctional facility; 4. Veterans; 5. Individuals with disabilities; 6. 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 8. Individuals who primarily reside in a rural area.

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3 Overview of challenge processes to inform the BEAD program

As of 12 June 2023

The term "challenge process" is commonly used to refer to two different processes in the BEAD program, one run by the FCC and the other run by Montana. Each process is slightly different as clarified below.

1. FCC Challenge Process

The FCC manages the **National Broadband Map, which serves as the basis for the BEAD program, per the requirements of the BEAD NOFO.**

Through the FCC challenge process, anyone can submit challenges to both the locations that need broadband and the determination of broadband service available at those locations.

The FCC incorporates updates to the Broadband Serviceable Locations (fabric) approximately every 6-months, though updates to the service availability for each location are completed on an ongoing basis.

2. Montana Challenge Process

The BEAD NOFO requires each state, including MT, to **run a challenge process to refine the national broadband map's service availability**

Through the state challenge process, a unit of local government, nonprofit organization, or broadband service provider may challenge whether a particular location or community anchor institution is eligible for BEAD funds (i.e., unserved or underserved).

Before conducting the subgrantee process to award funds for the BEAD program, MT must conduct a state-level challenge process and submit the final locations eligible for BEAD funding to NTIA

Source: NTIA BEAD Challenge Process Policy Note

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As of 12 June 2023

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Three programs that provide funding to promote digital inclusion and advance equity for all. They aim to ensure that all communities can access and use affordable, reliable high-speed internet to meet their needs and improve their lives.

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Tribal Connectivity Technical Amendments

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MIDDLE MILE

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Enabling Middle Mile Broadband Infrastructure

A program to expand middle mile infrastructure, to reduce the cost of connecting unserved and underserved areas.

2 Digital Opportunity Program timeline

As of 12 June 2023

2023

Dec

Digital Opportunity Plan due *(12/12)*

1st Half

Submit State DO Capacity Grant Application to NTIA ($1.44B, formula)

Receive Year 1 of DO Capacity Grant Funds from NTIA

2024

2nd Half

Conduct grant process (or transfer funds to other state agencies)

NTIA holds competitive DO grant program for implementing entities ($1.25B)

2025 - 2029

1st Half '25

NTIA disburses competitive DO grant funds to implementing entities

Annually

Receive DO Capacity Grant funding annually from NTIA and disburse funds to implementing entities, as needed

1st Half '29

Digital Opportunity program concludes (*5 years after initial allocation to sub-grantees*)

4 Digital Opportunity Program overview

As of 12 June 2023

Summary: Three programs that provide funding to promote digital inclusion and advance equity for all. They aim to ensure that all communities can access and use affordable, reliable high-speed internet to meet their needs and improve their lives.

Funding Overview

Program	National	MT Allocation
State Planning	$60M	$600K
State Capacity Grant (formula)	$1.44B	TBD
Competitive program	$1.25B	N/A[1]

Key Considerations

- Current planning efforts will inform the State Capacity Grant Application (Formula funding)
- Program will cover a period of 5 years
- Funding will be provided on an annual basis
- Detailed information on the application for funds has not yet been released

1. The Digital Equity Act Competitive Grant Program will be run by the NTIA and will select sub-recipients directly through a competitive process.

4 Potential digital opportunity program goals

As of 12 June 2023

Vision statement: To narrow the digital divide in support of Montana's economic, workforce, health, and educational goals by ensuring reliable, affordable internet access for all Montanans

Area	Program goals
Broadband Availability & Affordability	Ensure all Montana residents have access to affordable internet and necessary devices in their homes, schools, libraries, and businesses irrespective of their income level
Online Accessibility & Inclusivity	Reduce the digital divide among all Montana residents by increasing broadband adoption by covered populations and increasing access to online resources for all residents
Digital Literacy	Build digital skills to enhance broadband use through programs and partnerships with community stakeholders
Device Availability & Affordability	Reduce the digital divide among Montana residents by ensuring widespread access to internet-capable devices Reduce the digital divide among state agencies by ensuring adequate internet-capable device inventory
Online Privacy and Cyber-security	Ensure all Montana residents have access to internet that meets online privacy and cybersecurity standards

1. Sensitive information defined in "Fact Sheet: The FCC Adopts Order to Give Broadband Consumers Increased Choice Over Their Personal Information,"

4 Potential avenues to improve digital opportunity

As of 12 June 2023

BEAD requirements
Potential focus areas

Barrier		Potential programming or opportunity	Existing efforts
	**Access**	A **Connect the unserved:** Last-mile and associated middle-mile deployment of broadband technologies to areas without service of at least 25/3	✓
		B **Upgrade the underserved:** Deploying and/or upgrading technologies to areas with service below 100/20	✓
		C **Invest in community anchor institutions:** Ensure reliable high-speed access at CAIs or identify opportunities in non-traditional CAIs	✓
	**Affordable subscriptions**	D **Increase ACP uptake:** Educate, support & encourage uptake among eligible subscribers	
		E **Subscription subsidies:** Provide additional subsidies to further reduce broadband cost	
		F **Offer low-cost plans:** Partner with ISPs to develop and promote low-cost high-speed internet plans	✓
	**Devices access**	G **CAI loan programs:** Allow Montanans to rent devices for free or low-cost from CAIs	✓
		H **CAI access points:** Create device access terminals in CAIs, taking advantage of the high-speed broadband and existing community access	✓
		I **Device subsidies:** Provide direct subsidies to purchase internet-capable devices	
		J **Through strategic partnerships:** Working with businesses or community organizations, share device funding and distribution responsibilities, negotiate bulk rates with device manufacturers	
	**Digital literacy**	K **Develop digital skills curricula:** Deploy training programs through state entities and targeted industries	✓
		L **Fund targeted training programs:** Upskill individuals through classes and training programs, with potential focus on Covered Populatoins (e.g., aging individuals, individuals in rural areas, veterans)	
		M **Stand-up digital navigator programs:** Deploy navigators in communities to develop specific understanding of barriers in community, and coordinate resourcing as needed	

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5 Overview of potential BEAD deployment scenarios

As of 12 June 2023

Overview of deployment scenarios

What are they?

Deployment scenarios are potential options that the State of Montana could pursue to deploy BEAD funding taking into account BEAD NOFO requirements, various technologies, estimated cost, and overall priorities.

Why they matter?

Deployment scenarios are important to maximize the impact of federal investment in broadband that accomplishes the following:

1. Achieves the broadband connectivity goals for the state of Montana
2. Meets the requirements of the BEAD program
3. Efficiently utilizes public funds by maximizing private investment

Key considerations

The deployment scenarios laid out in this document are based on available data at the time of analysis.

The deployment scenarios are subject to change based on updated data from the FCC and the Notice of Available Amounts which will determine how much funding is available to the State of Montana.

The deployment scenarios are anticipated to be directionally accurate for the purposes of collecting input on Montana's potential path forward.

5 Potential deployment scenarios to close the broadband access gap in Montana

As of 12 June 2023

Base Scenario

1

Scenario 1

Fiber access to as many unserved as possible

In keeping with the BEAD NOFO, Montana has analyzed the total cost to provide fiber to all Montana residents

Even when considering the total allocations from BEAD and other funding sources (e.g., RDOF, ARPA, etc.), Montana will likely have a shortfall to provide fiber for all

Thus, Montana will explore other scenarios to achieve BEAD program goals

Alternative Scenarios

	Considerations	Implications
2 **Scenario 2** Broadband access for all unserved (mix of technologies)	Achieves BEAD program goals of high-speed internet for all unserved Maximizes fiber deployment, while optimizing use of other technologies Provides service to locations where fiber is not economically feasible	Underserved will not be upgraded May be less efficient use of funding than upgrading underserved Alternative technologies (fixed wireless, satellite) are less scalable and may require maintenance investment in the future
3 **Scenario 3** Broadband access for all unserved + all underserved (mix of technologies)	Achieves BEAD program goals of high-speed internet for all unserved Extends federal dollars furthest by employing alternative technologies Provides universal coverage to all, even where fiber is not feasible	Fewer unserved and underserved locations will receive fiber Alternative technologies (fixed wireless, satellite) are less scalable and may require maintenance investment in the future

Next steps

In developing the initial proposal Montana will do the following:

Weigh the various considerations and implications associated with the deployment scenario archetypes to best meet the needs of its constituents

Outline the detailed deployment plan and associated grant process

5 Summary of the potential impact of various deployment scenarios on broadband access in Montana[1]

As of 12 June 2023

Scenario	EHCT, $K	Estimated cost by technology mix, $M[2]	Estimated technology mix for unserved locations	Estimated technology mix for underserved locations	Summary of potential impact[2]
1 **Scenario 1** Fiber to as many unserved as possible	N/A	635 / 635	100.0% / 63.1K	0% / N/A	**360** locations remain **unserved** **~24K** locations remain **underserved**
2 **Scenario 2** Broadband for all unserved (mix of technologies)	$206K	626 / 8 / 634	99.4% / 0.5% / 0.1% / 63.4K	0% / N/A	Enables all ~**63K unserved** locations to receive **broadband** (~400 receive alternative technologies) **~24K** locations remain **underserved**
3 **Scenario 3** Broadband for all unserved + underserved (mix of technologies)	$151K	624 / 1 / 10 / 634	98.7% / 1.1% / 0.2% / 63.4K	99.8% / 0.1% / 0% / 24.0K	Enables all ~**87K un- & underserved** locations to receive **broadband** **~800 unserved** and **~40 underserved** locations will receive **alternative technologies**

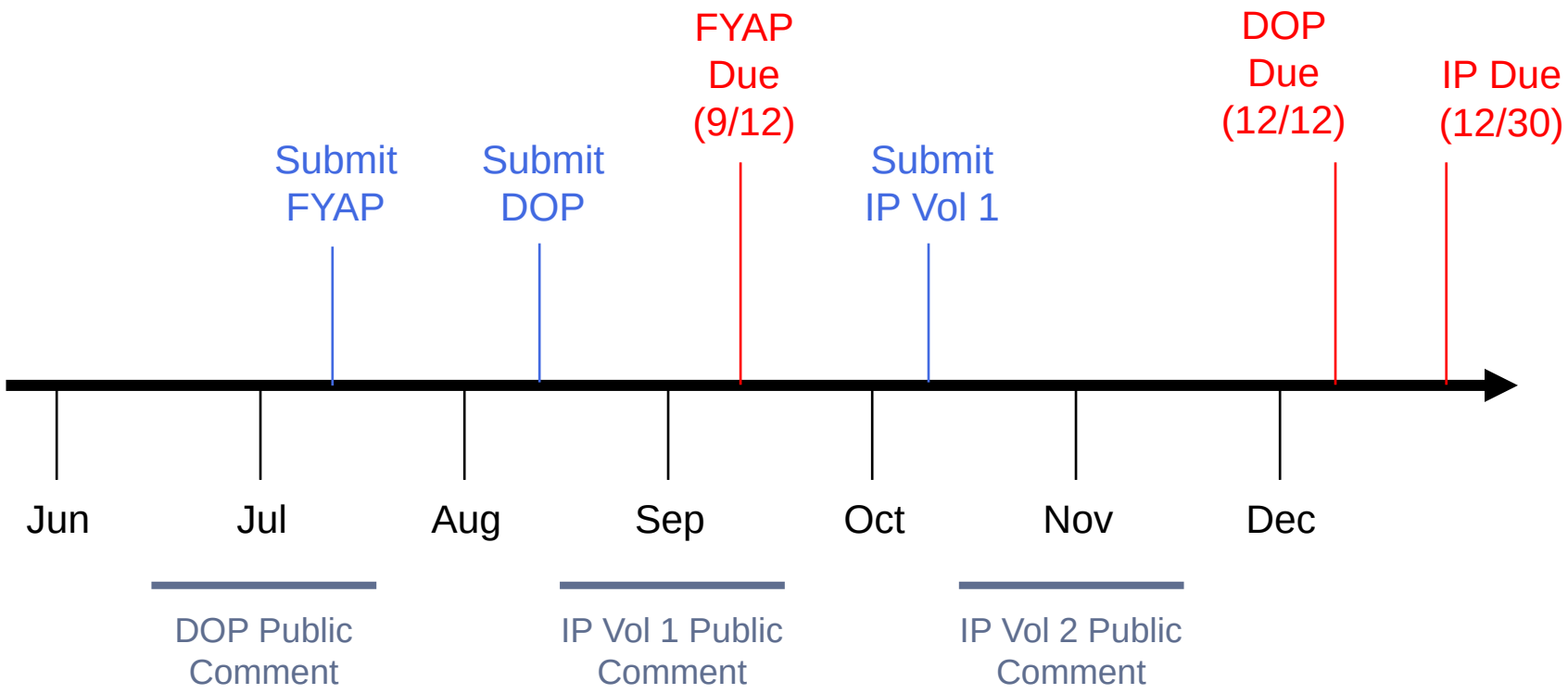
1. Based on estimated greenfield costs; Assumes potential BEAD allocation of $635M. Locations to be served by RDOF, CAFII, NTIABIP, and RUS / Reconnect are considered served for this analysis
2. Satellite cost is estimated at $881 per location

Source: Service availability per FCC DATA Maps as of 18 November 2022; Cost estimates per CostQuest v5 cost model

Next steps

As of 12 June 2023

Timeline of key milestones for BEAD & DO



Potential Future Commission Meeting Topics

July
- DOP approval
- Intro Initial Proposal key themes

August
- IP Volume 1 (Challenge Process)

September
- IP Volume 2 (EHCT, Subgrantee process)

October
- IP Volume 2 (Workforce, Affordability)

November
- IP Volume 2 approval

December
- Finalize any pending items for IP or DOP

Appendix: Subgrantee process requirements

As of 12 June 2023

BEAD subgrantee process requirements (1 of 3)

As of 12 June 2023

Key differences from ARPA

None · Very limited · Limited

Element of process	Description of requirement	Flexibility
Allocation requirements and process design	Prioritize based on Unserved, Underserved, and CAIs in accordance with eligible uses of BEAD funding while ensuring that 100% of unserved locations will be reached	None
	Deploy to CAIs rather than choosing non-deployment uses of funds	Very limited
	Prioritize projects in high poverty areas if funding is limited	Very limited
	Design safeguards that ensure a fair process	Very limited
	Prioritize high-poverty areas in case of a funding shortfall	Very limited
	Ensure no classes of applicants (e.g., local governments, public-private partnerships) are excluded	Very limited
	Make funding available for projects that meet the definitions of “unserved service projects” and “underserved service projects” under federal law, and prioritize Unserved Service Projects to ensure coverage of all unserved locations	Limited
	Either prescribe project areas or incorporate deconflicting step	Limited
	Include middle-mile if preferred	Limited
	Deploy to multi-family buildings, prioritizing unserved and low-income households where applicable	Limited
	Choose any competitive process	Limited
	Invite broad participation in the development of the subgrantee process from women- and minority-owned firms	Limited
	Conduct outreach to potential applicants regarding locations for which no applications were received, only after the application deadline has passed	Limited

Source: BEAD NOFO

BEAD subgrantee process requirements (2 of 3)

As of 12 June 2023

Key differences from ARPA

None · Very limited · Limited

Element of process	Description of requirement	Flexibility
Application requirements	Require information about any other public funding requested	None
	Require ownership information	None
	Require managerial and financial competence as well as technical and operational capacity in subgrantees	Very limited
	Require financial qualifications such as audited financial statements	Very limited
	Require managerial competence including exhibits such as resumes and org charts	Very limited
	Require technical capability such as project timeline and network design	Very limited
	Require certification of operational capability such as operating or financial reports	Very limited
Scoring requirements	Ensure that where only one project has been proposed and meets requirements, that is the default winner	None
	Ensure that fiber projects exceeding the Extremely High Cost Per Location Threshold may but do not have to be preferred where projects using other technologies have been proposed	Limited
	Ensure that where two or more projects have been proposed, once priority has been given to fiber projects, the state gives >75% of total benefits (e.g., weight, points) to: - minimal BEAD funding, by incentivizing a match of >25% from subgrantees - broadband affordability - fair labor practices	Limited
	Consider speed to deployment as a secondary criterion for fiber projects and additionally consider network speed for non-fiber projects	Limited
	Consider other secondary criteria for fiber and non-fiber projects, e.g., equitable workforce, open access, tribal coordination considerations, including additional secondary criteria developed by the state	Limited
	Consider workforce development goals	Limited

Source: BEAD NOFO

BEAD subgrantee process requirements (3 of 3)

As of 12 June 2023

Key differences from ARPA

None · Very limited · Limited

Element of process	Description of requirement	Flexibility
Compliance requirements	Require Buy America compliance	None
	Require network capabilities, speed and latency to meet set standards	None
	Require interspersed conduit access points for interconnection by other entities	None
	Require consumer protections e.g., no caps on data usage, reasonable and non-discriminatory terms	None
	Require Middle-Mile subgrantees to allow just, reasonable and nondiscriminatory interconnection for other providers	None
	Require the subgrantee, if no longer able to provide service, to sell to another provider that will meet BEAD commitments	None
	Require compliance with non-discrimination laws	None
	Require public awareness campaigns meeting specific requirements	Very limited
	Require a cyber risk management plan	Very limited
	Require a supply chain risk management plan	Very limited
	Require compliance with provisions such as non-discrimination in construction contracts, including non-discrimination on religious grounds	Very limited
	Require compliance with labor laws	Very limited
	Ensure small, women- and minority-owned businesses are used where possible	Very limited
	Require biannual submission of reports to be provided to NTIA on request	Very limited
	Require subgrantee agreements to make deployment feasible	Very limited
	Require network outage levels to meet set standards	Limited

Source: BEAD NOFO