A fiber contractor's truck is loaded onto a barge on its way to build a broadband network on one of Maine's unbridged islands.

Photo courtesy of Jack Sullivan and the Island Insitute

State of Maine
BEAD Initial Proposal, Volume 1
Broadband Equity Access and Deployment Program

1

BEAD Initial Proposal Volume 1
// For Submission to NTIA //

MAINE CONNECTIVITY AUTHORITY

Table of Contents

BEAD Initial Proposal Volume 1
// For Submission to NTIA //

MAINE CONNECTIVITY AUTHORITY

Introduction

On behalf of the Maine Connectivity Authority (MCA), we are pleased to submit Maine's Broadband Equity Access and Deployment Program (BEAD) Initial Proposal Volume I. The BEAD Program is a vital part of Maine's connectivity strategy and will be central to achieving our vision of everyone in Maine having access to affordable, reliable, high-speed internet for a future of increased connectivity and digital inclusion.

Through BEAD funding, MCA will deploy $272 million for broadband infrastructure to ensure high-speed internet service for households, businesses, and institutions with no internet connection and at locations throughout the state where service is slow and unreliable. To access these funds, MCA has produced a comprehensive Broadband Action Plan and Digital Equity and Inclusion Strategy to help inform the production of an Initial Proposal to the National Telecommunications and Information Administration (NTIA). This initial proposal includes two volumes that outline how the BEAD program will function.

Volume 1 of Maine's Initial Proposal is included below. It focuses on identifying available funding for broadband, the locations of unserved, underserved, and community anchor institutions, and the process of submitting challenges to the location lists. The State Led Challenge Process will utilize NTIA's model process with a few pre-approved modifications intended to maximize potential public involvement through crowdsourced speed testing, optimize all available data for consumer protection, and designate locations with DSL service as "underserved" as defined by the BEAD program.

MCA will submit the BEAD Initial Proposal Volume 2 on December 22, 2023. It will provide further details about how MCA will administer the BEAD program, including an overview of Project Service Areas and the subgrantee selection process. These work products (The Initial Proposals Volumes 1&2, The Broadband Action Plan and The Digital Equity Plan) reflect extensive engagement, input and feedback collected over the last year from thousands of perspectives. Thank you to all who contributed.

Once submitted and approved by NTIA, this proposal, and Volume 2 to follow, will allow MCA to begin to implement the strategies and activities we describe in our Five-Year Action Plan and, more specifically, in these two proposals. Towards a more connected future!

We can get there from here,

Andrew Butcher
President, Maine Connectivity Authority

BEAD Initial Proposal Volume 1
// For Submission to NTIA //

MAINE CONNECTIVITY AUTHORITY

1.1 Existing Broadband Funding (Requirement 3)
Identify existing efforts funded by the federal government or an Eligible Entity within the jurisdiction of the Eligible Entity to deploy broadband and close the digital divide, including in Tribal Lands.

1.1.1 Existing Broadband Funding Sources and Information: The State of Maine has a strong legacy of leveraging state and federal investment to address the digital divide. These varied funding programs will complement funding from the BEAD program to achieve the goals set out in Maine's Broadband Action Plan.

The table of Broadband Funding Sources is included as Attachment 1. MCA will ensure that funding to specific locations is not duplicated throughout the BEAD process. The table can also be downloaded at:
https://www.maineconnectivity.org/bead.

1.2 Unserved and Underserved Locations (Requirement 5)
Identify each unserved location and underserved location under the jurisdiction of the Eligible Entity, including unserved and underserved locations in applicable Tribal Lands, using the most recently published Broadband DATA Maps as of the date of submission of the Initial Proposal, and identify the date of publication of the Broadband DATA Maps used for such identification.

The BEAD Program establishes a two-tiered definition of areas that lack qualifying broadband service at or above the level of 100 megabits per second (Mbps) download and 20 Mbps upload (100/20). In accordance with this definition, for the purposes of the BEAD Program:

- Those locations without access to internet speeds at or above 25/3 are considered **unserved**.
- Those locations without access to internet speeds at or above 100/20 are considered **underserved**.

To identify all unserved and underserved locations in the State of Maine, the Maine Connectivity Authority (MCA) has provided two .csv files that list each location and provide a unique location ID.

1.2.1 Attachment: A CSV file with the location IDs of each unserved location, including unserved locations in applicable Tribal Lands, is included as Attachment 2. This table can also be downloaded here:
https://www.maineconnectivity.org/bead.

1.2.2 Attachment: A CSV file with the location IDs of each underserved location, including underserved locations in applicable Tribal Lands, is included as Attachment 3. This table can also be downloaded here:
https://www.maineconnectivity.org/bead.

1.2.3 Date Selection:

When identifying all unserved and underserved locations for purposes of preparing this draft version of Volume I as well as the .csv files identified in Section 2.1 for public comment and review by the NTIA, MCA utilized the Broadband Data Collection (BDC) data as of June 30, 2023, and last updated on December 12, 2023, from the National Broadband Map. The state challenge process will utilize the most current information available. MCA plans to utilize the BDC data as of June 30, 2023 (BDC Version 3) as the baseline for the state challenge process.

1.3 Community Anchor Institutions (CAIs) (Requirement 6)
Describe how the Eligible Entity applied the statutory definition of the term "community anchor institution," identified all eligible CAIs in its jurisdiction, identified all eligible CAIs in applicable Tribal Lands, and assessed the needs of eligible CAIs, including what types of CAIs it intends to serve; which institutions, if any, it considered but declined to classify as CAIs; and, if the Eligible Entity proposes service to one or more CAIs in a category not explicitly cited as a type of CAI in Section 60102(a)(2)(E) of the Infrastructure Act, the basis on which the Eligible Entity determined that such category of CAI facilitates greater use of broadband service by vulnerable populations.

1.3.1 Definition & Identification of Community Anchor Institutions (CAIs)

MCA's Community Anchor Institution (CAI) definition began with the definition in 47 USC 1702 (a)(2)(E):

> *An entity such as a school, library, health clinic, health center, hospital or other medical provider, public safety entity, institution of higher education, public housing organization (including any public housing agency, HUD-assisted housing organization, or Tribal housing organization), or community support organization that facilitates greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals.*

After research and deliberation, including public comment, MCA has opted to add the following institution types to this statutory definition as <u>community support organizations</u>:

1. Government facilities (meaning local, state, federal or tribal government buildings that facilitate greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals)

2. Correctional Facilities and Juvenile Detention Centers

3. Public Access Television Station Facilities

Further, MCA clarifies that it interprets community support organizations to include YMCA/YWCAs, Boys and

Girls Clubs, and food pantries/food banks. The justification for these inclusions is detailed below. Maine includes the following types of Community Anchor Institutions in the definition used for the BEAD Program.

- **Schools:** K-12 schools, including all K-12 schools participating in the FCC E-Rate program or that have an NCES (National Center for Education Statistics) ID in the categories "public schools" or "private schools," and institutions of higher education.

- **Libraries**: Libraries may include all libraries that participate in the FCC E-Rate program as well as all member libraries, and their branches, of the American Library Association (ALA).

- **Health Clinic, Health Center, Hospital, or Other Medical Providers:** The list of health clinics, health centers, hospitals and other medical providers may include all institutions that have a CMS (Centers for Medicare and Medicaid Services) identifier. In remote or rural locations, a health clinic may be the only CAI that residents have access to, and facilitating broadband service there can facilitate access to many other key services, such as online prescription management and telehealth for other providers, including specialty providers.

- **Public Safety Entities:** Public safety entities may include firehouses, emergency medical service stations, and police stations, among others. MCA plans to obtain records of primary and secondary Public Safety Answering Points (PSAP) to determine the network connectivity needs of public safety organizations across the state.

- **Institutions of Higher Education:** Institutions of higher education may include all institutions with an NCES ID in the category "college," including junior colleges, community colleges, universities, or other educational institutions.

- **Public Housing Organizations, including Publicly-Funded and/or Non-Profit Funded MDU Affordable Housing:** Public housing organizations were identified by contacting the Public Housing Agencies (PHAs) enumerated for the state by the U.S. Department of Housing and Urban Development (HUD). The nonprofit organizations Public and Affordable Housing Research Corporation (PAHRC) and National Low-Income Housing Coalition (NLIHC) maintain a database of nationwide public housing units at the National Housing Preservation Database (NHPD), and the organizations providing those units were also identified to ensure they were included. Maine Housing provided a data set directly to MCA as well. Public housing organizations and/or publicly-funded or non-profit funded Multi-Dwelling Unit (MDU) residential affordable housing includes organizations in Maine that facilitate decent and safe housing for vulnerable populations and were identified by contacting the Public Housing Agencies (PHAs) enumerated for the state by the U.S. Department of Housing and Urban Development, as well as other sources. Public housing organizations often provide services to residents, such as family self-sufficiency programming, workforce training and education, and childcare. Public housing organizations can also be leveraged as device distribution centers, hosts for digital skills programs, and in many other ways to provide and improve access to broadband for vulnerable populations.

- **Community Support Organizations:** MCA has included community support organizations that facilitate greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals. MCA further clarifies that community support

6

organizations include senior centers, job training centers, YMCA/YWCA and Boys and Girls Clubs, tribal centers, and food pantries/banks.

○ **Government Buildings:** Government Buildings: Local and/or state government buildings (such as town halls, city halls, town clerk offices, public safety buildings, and courthouses). These facilities are central to community life and easily accessible to all, with no barrier to entry. Government facilities support many functions critical to vulnerable populations, such as social service and welfare programs, affordable housing, job training and employment programs, healthcare and mental health services, legal aid and advocacy, substance abuse prevention and treatment, community outreach and engagement, transportation services including public transit and paratransit, and emergency assistance and disaster relief. Government buildings are also often used as shelters or gathering places during times of community crisis, making it even more important that they have critical connectivity infrastructure in place. Government buildings were identified using the U.S. General Services Administration's (GSA) "Inventory of GSA Owned and Leased Properties" to identify federal buildings in our state. State, local, and tribal government buildings were identified by consulting state, local, and tribal records. Included are facilities where members of the public can generally access online meetings and services. These buildings also support staff with various needs to provide current online information regarding emergency services, utilities, and current events to citizens of all populations. MCA did not include government buildings that are not easily accessible to the public and do not facilitate greater use of broadband services by vulnerable populations, such as wastewater treatment facilities, public works, maintenance facilities, or those used primarily for storage.

○ **Tribal Centers:** Tribal centers serve as a critical community resource for tribal communities and allow tribal members to access broadband service, digital skills programming, and affordable devices in a safe, comfortable environment. Tribal members are often also considered vulnerable populations, fitting into multiple categories - being disproportionately affected by being rural, low-income, and minority populations. Strategies such as establishing public computer centers with access to devices and services can reduce the barriers to tribal members accessing online services, empowering tribal members with digital skills. Community support organizations such as the new Wabanaki Cultural Center in downtown Bangor can serve as a resource hub for tribal members and the general public. In this particular example, Wabanaki Public Health and Wellness, a nonprofit organization that serves the four federally recognized tribes in Maine (the Houlton Band of Maliseet Indians, the Aroostook Band of Micmacs, the Passamaquoddy Tribe and the Penobscot Nation), delivers health, wellness and recovery services for Tribal members, which is now combined with the new Wabanaki Youth and Cultural Center, a new venture for the organization that will add a public-facing element and welcome the general public into the space with tribal members for classes, meetings, and groups.

○ **Food Pantries and Banks:** These community support organizations offer low- or no-barrier access to critical resources by providing free food and household products to low-income individuals and families and others struggling to meet basic needs, and are vital to fighting hunger. Food pantries are utilized in some areas as device distribution centers or as points of contact for awareness and enrollment in initiatives such as the Affordable Connectivity Program. These facilities can play a

significant role in a full digital equity ecosystem by providing access to digital devices for enrollment in programs and services.

- **YMCA/YWCA and Boys and Girls Clubs:** These are community support organizations that offer low- or no-barrier access to critical resources such as childcare, senior, and teen programming, all of which can include digital literacy, homework support, access to computers for those without access at home, particularly in low-income neighborhoods.

- **Job Training Centers:** Vocational training centers provide individuals with skills and knowledge to enter or advance in occupations, and offer opportunities to develop practical skills such as digital literacy and many other digital device-dependent skills. While job training centers may serve the general public, they typically have targeted benefits and programming for unemployed, underemployed, and target populations such as dislocated workers, low-income individuals, and individuals with disabilities. Ensuring the accessibility of broadband services at job training centers will ensure that all of these job training centers have the appropriate broadband infrastructure to support job growth opportunities for vulnerable populations.

- **Senior Centers:** Senior centers recognize that older adults may not have prior experience with technology, so they offer regular training sessions and workshops covering various digital skills. These sessions teach seniors how to use digital devices, navigate the internet, browse websites, utilize online services, and communicate through email and social media. Senior centers can also emphasize the social aspect of technology, encouraging seniors to use online platforms to connect with family and friends, participate in virtual activities, and engage with online communities. Senior centers are excellent gathering points for this covered population to access broadband service, digital skills programming, and device distribution in a safe, comfortable environment.

- **Correctional Facilities and Juvenile Detention Centers:** To close the digital divide for currently incarcerated Maine people, MCA must ensure all of Maine's correctional facilities (including state prisons, jails, and juvenile detention centers) have reliable, high-capacity broadband available. This will also allow these facilities to improve offerings for digital skills, inmate education, and workforce training.

- **Public and Nonprofit Media Organizations:** Public and nonprofit media organizations serve as critical information resources, bringing low- and no-barrier resources and educational programming to Maine people. Maine has a unique news and content ecosystem, with weekly papers churning out of tiny towns alongside big city daily papers and community radio stations covering vast, remote regions, all laboring to find models of sustainability to deliver the news and information that Maine people rely on. Digital equity education from these trusted resources can help facilitate greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals, as these trusted local news organizations, spread throughout the state, serve a critical role in the digital equity infrastructure. With the addition of BEAD-funded broadband connectivity, local media organizations can further solidify their role as gathering places for covered populations to access broadband service, digital skills education and programming, and device distribution in a familiar local environment. In addition, public and nonprofit media organizations also play a critical role in sharing

information during natural disasters and other crises, making it particularly important that the facilities housing these stations have the most robust, resilient, and highest-capacity broadband service possible.

Additional suggestions MCA received included houses of worship, public outdoor spaces, local news outlets, and public transit providers. MCA staff considered the role of each of these institutions in the lives of Maine people, particularly their role in digital equity and inclusion solutions, and considered the public comment feedback received. Based on this process and criteria, MCA decided not to include faith-based organizations, public outdoor spaces, public transit providers, and media outlets that are not publicly owned or operated by a 501c3 not for profit. Digital equity partners did not explicitly cite these entities as a significant resource for broadband service for vulnerable populations, mention them extensively during public comment, or note them during the broadband digital equity planning process.

MCA's research to assemble and verify a comprehensive list of Community Anchor Institutions (CAIs) utilized a robust methodology implemented over 15 weeks. Data was collected and cleaned from various databases, including Maine's research and education network, NetworkMaine. The sources included Maine's previous CAI database, lists of CAIs collected by Maine state agencies for related projects, State of Maine GeoLibrary, Department of Homeland Security, NTIA, Institute of Museum and Library Service, E-Rate, and Google. MCA identified correctional facilities and juvenile detention centers from resources listed on the Maine Department of Corrections website. MCA staff contacted Maine DOC for lists and supplemented all information provided with internet searches for addresses and additional locations and information. YMCAs, YWCAs and Boys and Girls Clubs were identified using the national websites for these organizations. Food pantries and food banks were identified through Good Shepherd Food Bank. This statewide organization works with nearly 600 food assistance programs throughout Maine to help distribute food to Maine people at risk of going hungry. They have an extensive network of over 600 partner agencies, including community food pantries, soup kitchens, senior centers, shelters, schools, and youth programs. This data was then shared with Regional and Tribal Broadband Partners for their review and input, given their local knowledge.

CAI locations were labeled and placed in their respective categories based on the types listed above. Many locations were manually entered or updated. Each data set was then remapped and correctly formatted for the BEAD requirements. The next task was to remove duplicate entries from overlapping sources. Machine-learning techniques were implemented using Python scripts, loops, and decision trees to identify duplicate locations with slight input variations. Once a list of all CAIs was compiled, Google's Places API was used to find the latitude and longitude based on address information for each respective location.

For entities without address information, MCA's research team used publicly available websites to find this information. Using that information, locations without latitude/longitudes were geocoded using Google's Places API. After latitudes and longitudes were obtained, these were overlaid with the broadband serviceable location fabric and broadband data collection data (BDC). Location IDs were matched from the fabric and applied to the geocoded locations with a close match. Similarly, entities without availability data were given availability data from the BDC, where there was a close geographic match. A limitation of the provided template for CAIs is that only a single column is provided for download speed. Locations where the speed was identified as 1 gig

symmetrical or better were removed from the eligible list. Locations where the speed was 1 gig download but a lesser upload were left on the eligible list. Many locations fell in the latter category.

An initial eligible CAI list was published for public comment along with the draft of Volume 1 of MCA's Initial Proposal. The list was simultaneously shared with MCA's Regional and Tribal Broadband Partners, Digital Equity Taskforce, and other key stakeholders who assisted with collecting data about the list of CAIs and the network connectivity needs for the CAIs in each region. To assess the connectivity needs and supplement data available from the FCC, MCA state and regional partners followed NTIA recommendations, including utilizing government agencies and nonprofit organizations, making phone calls, sending emails, and having conversations directly with CAIs. CAIs were asked to assess connectivity needs based on organizational goals and user needs, analyze existing network infrastructure and service, and project future demands based on growth projections and emerging technologies. This allowed MCA to better assess the need for infrastructure support for these crucial community institutions.

The list of CAIs attached to this Initial Proposal is a starting point and will be further refined through additional geospatial analysis and public outreach during Spring 2024. Specifically, MCA will continue to utilize its strong network of Regional and Tribal Broadband Partners to work collaboratively with potential CAIs to identify current service availability, service needs, and any other relevant data that will assist in the efficient deployment of funds. These partners continue to share updated data on a weekly basis and MCA will aggregate and process this information in a consistent manner to provide a clearer picture of how to apply BEAD funds to support these CAIs.

The template provided for the collection of CAI data included only one field for broadband service availability data instead of two separate fields for download and upload speed. A significant number of CAIs are reporting available service above 1000 Mbps. Given the proportionally lower statewide distribution of fiber technology currently capable of delivering truly symmetrical 1G service, MCA believes many of these locations to be served by hybrid fiber coax systems with reported service availability of 1000 Mbps download and 35 Mbps upload. MCA will conduct additional geospatial analysis to compare the locations of the CAIs with the currently available max speeds provided by the infrastructure in those areas and identify those CAIs that will need additional investment to receive true symmetrical 1G service.

MCA will also use the Broadband Investment Notification & Demonstration (BIND) process to monitor private investments in infrastructure around the state to understand where CAIs will see upgraded speeds in the coming 18-24 months as a result of ISP builds.

1.3.2 Attachment: A CSV file that lists eligible community anchor institutions that note those that require qualifying broadband service and do not currently have access to such service (to the best of the MCA's knowledge) is included as Attachment 4.

Commented [1]: This list of CAIs was refined and uploaded.

1.4 Challenge Process (Requirement 7)

Include a detailed plan to conduct a challenge process as described in Section IV.B.6 of the BEAD Challenge Process Guidance Documentation.

1.4.1 NTIA BEAD Model Challenge Process Adoption: MCA plans to adopt the NTIA Challenge Process Model for Requirement 7, but with four pre-challenge modifications (DSL, FWA, FCC area modification, and crowdsourced speed tests) and two optional modules (speed test challenges and area/MDU challenges).

1.4.2 Modifications to Reflect Data Not Present in the National Broadband Map: MCA plans to make the following modifications:

1. **DSL Modifications -** MCA will treat locations that the National Broadband Map shows to have available qualifying broadband service (i.e., a location that is "served") delivered via DSL as "Underserved." This modification will better reflect the locations eligible for BEAD funding, as it will facilitate the phase-out of legacy copper facilities and ensure the delivery of "future-proof" broadband service. This designation cannot be challenged or rebutted by the provider.

2. **Cellular Fixed Wireless Access (FWA) Availability Modification -** MCA will treat as "underserved" locations that the National Broadband Map shows to have available qualifying broadband service (i.e., a location that is "served") due solely to the availability of Cellular Fixed Wireless Access (CFWA) as "underserved." MCA has determined that this modification, and the corresponding rebuttal opportunity, will assist the office in determining the availability of networks with sufficient capacity to meet the expected consumer demand for qualifying broadband in the relevant area. MCA has determined that approximately 1,000 BSLs are affected by this modification. The affected CFWA provider will have an opportunity to rebut this modification. To successfully rebut this modification, the cellular fixed wireless provider must demonstrate that it:
    - is providing 100/20 Mbps or better service at the relevant locations (e.g., by using the rebuttal approach for the speed test area challenge); and
    - has sufficient network capacity to simultaneously serve (i.e., as concurrently active subscribers) at least 80% of locations in the claimed coverage area reported as served only by cellular fixed wireless. As one option for making such a showing, a provider may describe how many fixed locations it serves from each cell tower and the amount of per-user averaged bandwidth it uses for capacity planning. A capacity of 5 Mbps for each claimed location is considered sufficient.

3. **Crowdsourced Speed Test Modification -** MCA may treat as "underserved" locations that the National Broadband Map shows to be "served" if speed test data collected demonstrate that the "served" locations actually receive service that is materially below 100 Mbps downstream and 20 Mbps upstream. MCA will use measurements collected by OOKLA or MLAB no earlier than 12 months before the release date of the National Broadband Map used for the challenge process.

Commented [2]: Removed: MCA may treat locations that the National Broadband Map shows to have available qualifying broadband service (i.e., a location that is "Served") as "Underserved" if a rigorous spatial analysis of historical crowdsourced speed test data from a network performance tool, such as M-Lab and Ookla, shows that the area is not receiving the speeds advertised by providers in the National Broadband Map. This modification will better reflect the locations eligible for BEAD funding because it will consider the actual speeds available at those locations. As described below, the provider can rebut speed tests during the rebuttal period. ... [1]

Commented [3]: Removed: Based on MCA's analysis, the number of BSLs pre-modified through this additional modification to the model process is relatively low. MCA believes that the locations with a single provider that claim speeds above 100/20 are in the low thousands, and these will most likely be candidates altered through this premodification.

Crowdsourced speed test data from approved platforms, including M-Lab (Maine's current platform) and/or Ookla, will be used in the analysis. Historic ... [2]

Commented [4]: Removed: Since speed tests from many of these platforms generally lack precise location information, the speed tests will be joined to a larger geography, specifically census block groups. Speed tests collected from these crowdsourcing platforms provide location information that identifies the location of the speed test within a few dozen meters. This distance may need to be more specific to tie individual locations to BSLs. Still, it does provide enough information to reasonably assume that the locations are within larger geographies like census block groups ... [3]

Commented [5]: Removed: Two different passes will be employed to understand the nature of the speeds available in these census block groups (or appropriate polygon). The first pass will look for census block groups where no speed tests (or an overwhelming minority, less than 10%) were taken that show speeds meeting the minimum requirement of 80% of 100 Mbps download / 20 Mbps upload. While crowdsourced speed tests do not come with data indicating which speed tier a household or business has subscribed to, the lack of speed testing showing anything close t ... [4]

Commented [6]: Removed: The second pass of the census block groups (or appropriate polygon) will compare individual providers' advertised maximum download and upload speed claims (as provided in the National Broadband Map) against speed tests taken through providers' infrastructure. Only cable, fiber, and fixed wireless claims of Served locations will be included in this analysis. Due to the inability to confirm what speed tier a household or provider has subscribed to, MCA must accept the lowest package offered by a provider. If a provider's lowest tier is 100/20 or abc ... [5]

Tests that indicate poor Wi-Fi connectivity, indicated by high first-hop latency, and tests where the speed test server was chosen manually will be excluded. The broadband office will create a speed area challenge for a provider in census block groups where the data set contains at least 54 measurements from at least 12 different locations and the 75th percentile is below 100 Mbps download speed or 20 Mbps upload speed for that provider. Consistent with industry practices, only measurements that can be located with GPS-quality measurements within 300 meters and are located within residential areas are included. This modification will better reflect the locations eligible for BEAD funding because it will consider the actual network performance available. This challenge can be rebutted like an area speed test challenge (see pg. 20 of the BEAD Model Challenge Process).

4. **FCC Area Modification -** MCA will treat locations within a census block group that the National Broadband Map shows to be served as unserved or underserved if (1)(a) six or more broadband serviceable locations using a particular technology from the same provider within a census block group or (b) 30 or more broadband serviceable locations using a particular technology from the same provider within a census tract and at at least one within each census block group within that census tract were subject to successful availability challenges through the Federal Communications Commission's challenge process and (2) the location would be unserved or underserved if not for the challenged service. The location's status would change to the status that would have been assigned to the location without the challenged service. For locations that do not meet condition 2 (e.g., because other reported options are "served" by BEAD definitions), service meeting condition 1 will be removed to consider challenges during the state challenge process. Challenge records will be taken from broadbandmap.fcc.gov/data-download/challenge-data.
The following entries in the outcome field will be treated as a successful challenge:
   ○ Challenge Upheld - Provider Conceded
   ○ Upheld - Service Change
   ○ Challenge Upheld - Adjudicated by FCC
   ○ Providers whose reported service is removed by this modification will be allowed to overturn this pre-challenge modification by submitting the evidence required for a rebuttal of an area challenge.

1.4.3 Deduplication of Funding: MCA plans to use the BEAD Eligible Entity Planning Toolkit to identify existing federal enforceable commitments. The BEAD Eligible Entity Planning Toolkit is a collection of NTIA-developed technology tools that, among other things, overlay multiple data sources to capture federal, state, and local enforceable commitments.

1.4.4 Process to Identify and Remove Locations Subject to Enforceable Commitments: MCA will enumerate locations subject to enforceable commitments by using the BEAD Eligible Entity Planning Toolkit and consulting at least the following data sets:

- The Broadband Funding Map published by the FCC pursuant to the Infrastructure Investment and Jobs Act §60105.
- Data sets from state broadband deployment programs that rely on funds from the Capital Projects Fund and the State and Local Fiscal Recovery Funds administered by the U.S. Treasury.
- State of Maine and local data collections of existing enforceable commitments.

MCA will make its best effort to create a list of BSLs subject to enforceable commitments based on state/ territory or local grants or loans.

If necessary, MCA will translate polygons or other geographic designations (e.g., a county or utility district) describing the area to a list of Fabric locations. MCA will submit this list to NTIA in the format specified by the FCC Broadband Funding Map.

MCA will review its repository of existing state and local broadband grant programs to validate the upload and download speeds of existing binding agreements to deploy broadband infrastructure. In situations where the State of Maine or local program did not specify broadband speeds or when there was reason to believe a provider deployed higher broadband speeds than required, MCA will reach out to the provider to verify the deployment speeds of the binding commitment. MCA will document this process by requiring providers to sign a binding agreement certifying actual broadband deployment speeds. MCA drew on these provider agreements and its existing database on state and local broadband funding programs' binding agreements to determine the set of State of Maine and local enforceable commitments. Additionally, MCA has created a proactive data-sharing process to encourage internet service providers to share material information confidentially to reflect active construction efforts such as pole licenses and permitting applications.

1.4.5 List of Programs Analyzed to Remove Enforceable Commitments: MCA has compiled a list of federal, state, and local broadband funding as documented in Requirement 3 of Volume 1 of the Initial Proposal. Those programs listed, except for FCC - ACAM/ACAM II, USDA - ReConnect CAF II, Treasury - CARES, NTIA - BTOP, and FCC - CAF BLS, are considered enforceable commitments. These noted programs are not enforceable commitments, as they did not require the delivery of qualifying broadband service. This table is included as Attachment 5. This table can also be downloaded here: **https://www.maineconnectivity.org/bead**.

1.4.6 Describe the plan to conduct an evidence-based, fair, transparent, and expeditious challenge process: Based on the NTIA BEAD Challenge Process Policy Notice and MCA's understanding of the goals of the BEAD program, the proposal represents a transparent, fair, expeditious and evidence-based challenge process.

Permissible Challenges: MCA will only allow challenges on the following grounds:
- Identification of eligible community anchor institutions, as defined by the Eligible Entity,
- Community anchor institution BEAD eligibility determinations,
- BEAD eligibility determinations for existing broadband serviceable locations (BSLs),
- Enforceable commitments, or

- Planned service as documented with specific timelines and evidence of current or anticipated construction

Permissible Challengers: During the BEAD Challenge Process, MCA will only allow (as outlined in NTIA guidance materials) challenges from nonprofit organizations, units of local and tribal governments, and internet service providers.

Challenge Process Overview: The challenge process conducted by MCA will include four phases, spanning 90 calendar days.

1. **Publication of Eligible Locations**: Before beginning the Challenge Phase, MCA will publish the set of locations eligible for BEAD funding, which consists of the locations resulting from the activities outlined in Sections 5 and 6 of the NTIA BEAD Challenge Process Policy Notice (e.g., administering the deduplication of funding process). MCA will also publish locations considered served, as they may be challenged. *(tentatively scheduled for March 1, 2024)*

2. **Challenge Phase**: During the Challenge Phase, the challenger will submit the challenge through the MCA challenge portal. This challenge will be visible to the internet service provider whose service availability and performance are being contested. Upon opening the rebuttal phase, the portal will notify the provider of all challenges through an automated email. This message will include related information about the timing of the provider's response. After this stage, the location will enter the "challenged" state.

   - **Minimum Level of Evidence Sufficient to Establish a Challenge:** The challenge portal will verify that the address provided can be found in the Fabric and is a BSL.
     The challenge portal will also confirm that the challenged service is listed in the National Broadband Map and meets the definition of reliable broadband service. The challenge portal will ensure the email address is reachable by sending a confirmation message to the contact email listed. The challenge portal will determine whether the quality of scanned images is sufficient for optical character recognition (OCR). For availability challenges, MCA will manually verify that the evidence submitted falls within the categories stated in the NTIA BEAD Challenge Process Policy Notice and the document is unredacted and dated.

   - **Service provider challenges to their own network based on pre-modifications of the National Broadband map or to the National Broadband Map data:** If a service provider challenges pre-modifications or service availability for their own network (e.g., a provider wants to submit a challenge against a location on the speeds or technology attributed to their network), the evidence required from the provider will follow the rebuttal phase evidence to substantiate a challenge of this type. Where a provider submits a challenge against the attributes of their own network, there is no permissible challenger who would submit rebuttal evidence. Therefore, the provider is submitting their challenge against either the Federal National Broadband Map (where they filed data) or against the State's pre-modifications of the National Broadband Map. In either of these cases, the next step would be adjudication by MCA based on the evidence submitted by the provider.

   - **Timeline:** Challengers will have 25 calendar days to submit a challenge from when the initial list

of unserved and underserved locations, community anchor institutions, and existing enforceable commitments are posted. *(tentatively scheduled for March 1 to March 25, 2024)*

3. **Rebuttal Phase**: For challenges related to location eligibility, only the challenged service provider may rebut the reclassification of a location or area with evidence. If a provider claims gigabit service availability for a CAI or a unit of local government disputes the CAI status of a location, the CAI may rebut. All types of challengers may rebut planned service (P) and enforceable commitment (E) challenges. The challenge is sustained if a challenge that meets the minimum level of evidence is not rebutted. A provider may also agree with the challenge and thus transition the location to the "sustained" state. When the rebuttal phase opens, providers will be notified of all submitted challenges by email. The MCA staff will verify each provider's email recipient before the Rebuttal phase.

   ○ **Timeline:** Providers will have 25 calendar days from the opening of the rebuttal phase to provide rebuttal information to MCA. The rebuttal period begins once the provider is notified of the challenge. *(tentatively scheduled for April 1 to April 25, 2024)*

4. **Final Determination Phase**: During the Final Determination phase, MCA will make the final determination of the location's classification, declaring the challenge "sustained" or "rejected."

   ○ **Timeline:** Following the intake of challenge rebuttals, MCA will make a final challenge determination within 25 calendar days of the challenge rebuttal. Reviews will occur on a rolling basis as challenges and rebuttals are received. *(tentatively scheduled for May 1 to May 25, 2024)*

Evidence & Review Approach

To ensure that each challenge is fairly adjudicated for all participants and relevant stakeholders, MCA will review all applicable challenge and rebuttal information in detail without bias before deciding to sustain or reject a challenge. MCA will document the standards of review applied in an SOP (Standard Operating Procedure) and require reviewers to document their justification for each determination. MCA plans to ensure reviewers have sufficient training to apply the standards of review uniformly to all challenges submitted.

MCA will also require all reviewers to submit affidavits to ensure no conflict of interest exists while making challenge determinations. Unless otherwise noted, "days" refers to calendar days.

A list of challenge types with specific examples is provided in the following table attached as Attachment 6. This table can also be downloaded at **https://www.maineconnectivity.org/bead**.

To clarify, MCA adopts the compliance standards and testing protocols for speed and latency established and used in the BEAD Notice Of Funding Opportunity.

Code	Challenge Type	Description	Specific Examples	Permissible rebuttals
A	**Availability**	The broadband service identified is not offered at the location, including a unit of a multiple dwelling unit (MDU).	Screenshot of provider webpage. A service request was refused within the last 180 days (e.g., an email or letter from a provider). Lack of suitable infrastructure (e.g., no fiber on poles). A letter or email dated within the last 365 days that a provider failed to schedule a service installation or offer an installation date within ten business days of a request. A letter or email dated within the last 365 days indicating that a provider requested more than the standard installation fee to connect this location or that a Provider quoted an amount in excess of the provider's standard installation charge to provide service at the location.	Provider shows that the location subscribes or has subscribed within the last 12 months, e.g., with a copy of a customer bill. If the evidence was a screenshot and believed to be in error, a screenshot that shows service availability. The provider submits evidence that service is now available as a standard installation, e.g., via a copy of an offer sent to the location.
S	**Speed**	The actual speed of the service tier falls below the unserved or underserved thresholds.	Speed test by a subscriber, showing insufficient speed and meeting the requirements for speed tests.	The provider has countervailing speed test evidence showing sufficient speed, e.g., from their own network management system. (As described in the NOFO, a provider's countervailing speed test should show that 80 percent of a provider's download and upload measurements are at or above 80 percent of the required speed. *See Performance*

				Measures Order, 33 FCC Rcd at 6528, para. 51. *See* BEAD NOFO at 65, n. 80, Section IV.C.2.a.)
Code	**Challenge Type**	**Description**	**Specific Examples**	**Permissible rebuttals**
L	**Latency**	The round-trip latency of the broadband service exceeds 100 ms.	Speed test by a subscriber, showing excessive latency.	Provider has countervailing speed test evidence showing latency at or below 100 ms, e.g., from their own network management system.
D	**Data cap**	The only service plans marketed to consumers impose an unreasonable capacity allowance ("data cap") on the consumer.	Screenshot of provider webpage. Service description provided to the consumer.	The provider has terms of service showing that it does not impose an unreasonable data cap or offers another plan at the location without an unreasonable cap.
T	**Technology**	The technology indicated for this location is incorrect.	Manufacturer and model number of residential gateway (CPE) that demonstrates the service is delivered via a specific technology.	The provider has countervailing evidence from their network management system showing an appropriate residential gateway that matches the provided service.
B	**Business service only**	The location is residential, but the service offered is marketed or available only to businesses.	Screenshot of provider webpage.	Provider documentation that the service listed in the BDC is available at the location and is marketed to consumers.

E	Enforceable Commitment	The challenger has knowledge that broadband will be deployed at this location by the date established in the deployment obligation.	Enforceable commitment by the service provider (e.g., authorization letter). In the case of Tribal Lands, the challenger must submit the requisite legally binding agreement between the relevant Tribal Government and the service provider for the location(s) at issue (see Section 6.2 above).	Documentation that the provider has defaulted on the commitment or is otherwise unable to meet the commitment (e.g., is no longer a going concern).
Code	**Challenge Type**	**Description**	**Specific Examples**	**Permissible rebuttals**
P	Planned service	The challenger has knowledge that broadband will be deployed at this location by June 30, 2024, without an enforceable commitment, or a provider is building out broadband offering performance beyond the requirements of an enforceable commitment.	Construction contracts or similar evidence of ongoing deployment, along with evidence that all necessary permits have been applied for or obtained. Contracts or a similar binding agreement between the Eligible Entity and the provider committing that planned service will meet the BEAD definition and requirements of reliable and qualifying broadband even if not required by its funding source (*i.e.*, a separate federal grant program), including the expected date deployment will be completed, which must be on or before June 30, 2024.	Documentation showing that the provider is no longer able to meet the commitment (e.g., is no longer a going concern) or that the planned deployment does not meet the required technology or performance requirements.
N	Not part of an enforceable commitment	This location is in an area subject to an enforceable commitment to less than 100% of locations, and that commitment does not cover the location (See BEAD NOFO at 36, n. 52.)	Declaration by service provider subject to the enforceable commitment.	
C	Location is a CAI	The location should be classified as a	Evidence that the location falls within the definitions of CAIs set by the Eligible	Evidence that the location does not fall within the

		CAI.	Entity.	definitions of CAIs set by the Eligible Entity or is no longer in operation.
R	**Location is not a CAI**	The location is currently labeled as a CAI but is a residence, a non-CAI business, or is no longer in operation.	Evidence that the location does not fall within the definitions of CAIs set by the Eligible Entity or is no longer in operation.	Evidence that the location falls within the definitions of CAIs set by the Eligible Entity or is still operational.

Optional Area Challenge Module - Area and MDU Challenge

MCA will administer area and MDU challenges for challenge types A, S, L, D, and T. An area challenge reverses the burden of proof for availability, speed, latency, data caps and technology if a defined number of challenges for a particular category, across all challengers, have been submitted for a provider. Thus, the provider receiving an area challenge or MDU must demonstrate that they are indeed meeting the availability, speed, latency, data cap, and technology requirements, respectively, for all (served) locations within the area or all units within an MDU. The provider can use any of the permissible rebuttals listed above.

An area challenge is triggered if six or more broadband serviceable locations using a particular technology and a single provider within a census block group are challenged. An MDU challenge requires challenges for one unit for MDUs having fewer than 15 units, for two units for MDUs of between 16 and 24 units, and at least three units for larger MDUs. Here, the MDU is defined as one broadband serviceable location listed in the Fabric. An MDU challenge counts towards an area challenge (i.e., six successful MDU challenges in a census block group would trigger an area challenge).

Each type of challenge and each technology and provider is considered separately, e.g., an availability challenge (A) does not count towards reaching the area threshold for a speed (S) challenge. If a provider offers multiple technologies, such as DSL and fiber, each is treated separately since they will likely have different availability and performance.

Area challenges for availability need to be rebutted with evidence that service is available for all BSLs within the census block group, e.g., by network diagrams that show fiber or HFC infrastructure or customer subscribers. For fixed wireless service, the challenge system will offer a representative random sample of the area in contention (with no fewer than ten samples). The provider will then be asked to demonstrate service availability and speed (e.g., with a mobile test unit). For MDU challenges, the rebuttal must show that the inside wiring is reaching all units and is of sufficient quality to support the claimed level of service.

Optional Speed Test Module - Speed Test Requirements

The MCA will accept speed tests as evidence for substantiating challenges and rebuttals. Subscribers may

conduct speed tests, but speed test challenges must be gathered and submitted by units of local government, nonprofit organizations, or a broadband service provider. Each speed test consists of three measurements taken on different days. Speed tests cannot predate the beginning of the challenge period by more than 60 calendar days. Speed tests can take multiple forms:

1. A reading of the physical line speed provided by the residential gateway (e.g.., DSL modem, cable modem (for HFC),
2. ONT (for FTTH) or fixed wireless subscriber module.
3. A reading of the speed test available within the residential gateway web interface.
4. A reading of the speed test found on the service provider's web page.

5. A speed test performed on a laptop or desktop computer within immediate proximity of the residential gateway, using an NTIA-approved speed test application:
    a. Ookla (https://www.speedtest.net/)
    b. M-Lab (https://speed.measurementlab.net/#/)
    c. Cloudflare (https://speed.cloudflare.com/)
    d. Netflix (https://fast.com/)
    e. Speed test sites operated by Breaking Point Solutions (https://sites.google.com/site/breakingpointsolutionsllc/home) and hosted by Maine Connectivity Authority (https://www.maineconnectivity.org/)

Each speed test measurement must include the following:

- The time and date the speed test was conducted.
- The provider-assigned internet protocol (IP) address, either version 4 or version 6, identifying the residential gateway conducting the test.

Each group of three speed tests must include the following:

- The name and street address of the customer conducting the speed test.
- A certification of the speed tier the customer subscribes to (e.g., a copy of the customer's last invoice).
- An agreement, using an online form provided by MCA, granting access to these information elements to the Eligible Entity, any contractors supporting the challenge process, and the service provider.

The IP address, subscriber's name, and street address are considered personally identifiable information (PII). They will not be disclosed to the public as part of a challenge dashboard or open data portal.

Each location must conduct three speed tests on three different days, although the days do not have to be adjacent. The median of the three tests (i.e., the second highest (or lowest) speed) is used to trigger a speed-based (S) challenge for either upload or download. For example, if a location claims a broadband speed of 100

Mbps/25 Mbps and the three speed tests result in download speed measurements of 105, 102 and 98 Mbps and three upload speed measurements of 18, 26 and 17 Mbps, the speed tests qualify the location for a challenge, since the median upload speed of 18 Mbps marks the location as underserved.

Subscribers submitting a speed test must indicate the speed tier they subscribe to. Since speed tests can only be used to change the status of locations from "served" to "underserved," and only speed tests of subscribers that subscribe to tiers at 100/20 Mbps and above can be considered. If the household subscribes to a speed tier of 100/20 Mbps or higher and the speed test yields a speed below 100/20 Mbps, this service offering will not count towards the location being classified as served. However, even if a particular service offering does not meet the speed threshold, the eligibility status of the location may not change.

For example, if a location is served by 100 Mbps licensed fixed wireless and 500 Mbps fiber, conducting a speed test on the fixed wireless network that shows an effective speed of 70 Mbps does not change the status of the location from served to underserved.

A service provider may rebut an area speed test challenge by providing speed tests, in the manner described above, for at least 10% of the customers in the challenged area. The customers must be randomly selected. As outlined in NTIA guidance - providers must apply the 80/80 rule, i.e., 80% of these locations must experience a speed that equals or exceeds 80% of the speed threshold. For example, 80% of these locations must have a download speed of at least 20 Mbps (that is, 80% of 25 Mbps) and an upload speed of at least 2.4 Mbps to meet the 25/3 Mbps threshold and must have a download speed of at least 80 Mbps and an upload speed of 16 Mbps to be meet the 100/20 Mbps speed tier. Only speed tests conducted by the provider between the hours of 7 p.m. and 11 p.m. local time will be considered as evidence for a challenge rebuttal.

Transparency Plan

To ensure that the challenge process is transparent and open to public and stakeholder scrutiny, MCA will, upon approval from NTIA, publicly post an overview of the challenge process phases, challenge timelines, and instructions on how to submit and rebut a challenge through an interactive website integrated with associated data and tools. This documentation will be posted publicly for at least one week before opening the challenge submission window. MCA also plans to actively inform all units of local and tribal government of its challenge process and set up regular touchpoints to address any comments, questions, or concerns from local or tribal governments, nonprofit organizations, and Internet service providers. MCA already has a strong network of partners from the local and tribal governments and nonprofits interested in broadband expansion across the State of Maine.

MCA will rely on this network or partners to amplify the State-Led Challenge process engagement campaign and to help educate those wishing to participate in submitting challenges. Specifically, MCA will leverage capacity and networks with the Regional and Tribal Broadband Partners, a group of stakeholders with deep connections to communities, to ensure open and transparent communication about the process and encourage involvement from all types of participants. MCA will also rely on its ongoing relationships and open

lines of communication with the internet service providers in the state. MCA will conduct dedicated outreach to each provider to determine the best points of contact to receive updates about the State-Led Challenge Process and challenges to these providers. To ensure no one is left out, relevant stakeholders can sign up on the MCA website at **https://maineconnectivity.org/bead** for challenge process updates and newsletters. Questions and feedback can also be directed to MCA at the following email address **bead@maineconnectivity.org**. With a deep commitment to proactive community engagement and stakeholder collaboration, MCA will facilitate numerous informational sessions to ensure substantive public input and feedback. Building from similar efforts through the last two years, MCA anticipates a series of virtual informational sessions where content will be broadly shared with stakeholders around the sequence and rationale of the Challenge Process.

These sessions have previously included demonstrations of portals or applications to help make complicated systems more approachable. Where possible, these sessions have encouraged an interactive structure so audience members can both prompt questions, provide comments and share ideas in real time. A schedule for multiple public events is being developed and will build on prior engagement efforts. MCA will record these sessions and make them available for review and reference on the MCA website.

Beyond actively engaging relevant stakeholders, MCA will publicly post all submitted challenges and rebuttals before final challenge determinations are made. The information posted will include:
- the provider, nonprofit, or unit of local government that submitted the challenge,
- the census block group containing the challenged broadband serviceable location,
- the provider being challenged,
- the type of challenge (e.g., availability or speed), and
- a summary of the challenge, including whether a provider submitted a rebuttal.

MCA takes confidential information very seriously and will not publicly post any personally identifiable information (PII) or proprietary information, including subscriber names, street addresses and customer IP addresses. To ensure all PII is protected, MCA will review the basis and summary of all challenges and rebuttals to ensure PII is removed before posting them on the website. Additionally, guidance will be provided to all challengers regarding which submitted information may be posted publicly.

MCA will treat information submitted by an existing broadband service provider designated as proprietary and confidential, consistent with applicable federal law. If any of these responses contain information or data that the submitter deems confidential commercial information that should be exempt from disclosure under state open records laws or protected under applicable state privacy laws, that information should be identified as privileged or confidential. Otherwise, the responses will be made publicly available.

In 2019, Maine passed a first-in-the-nation internet privacy law, requiring internet service providers (ISPs) to obtain a customer's express, affirmative consent before using personal information, including browsing history. MCA will ensure all elements of the state-led challenge design comply with this important protection for Maine people.

In addition to these state laws, Maine businesses and organizations are also subject to any and all federal laws

that protect PII, such as the Gramm-Leach-Bliley Act (GLBA), the Fair Credit Reporting Act (FCRA), and the Health Insurance Portability and Accountability Act (HIPAA).

State-Led Challenge Process Anticipated Timeline

State Led Challenge Process Phase	Length	Begin	End
Phase 1: Publication of Eligible Locations:		March 1, 2024	
Before beginning the Challenge Phase, MCA will publish the set of locations eligible for BEAD funding.			
Phase 2: Challenge Phase	25 Days	March 1, 2024	March 25, 2024
Eligible challengers will submit the challenge through the MCA challenge portal.			
Phase 3: Rebuttal Phase	25 Days	April 1, 2024	April 25, 2024
Challenged service providers may rebut or accept the reclassification of a location or area with evidence.			
Phase 4: Final Determination Phase	25 Days	May 1, 2024	May 25, 2024
MCA will make the final determination of the classification of the location, either declaring the challenge "sustained" or "rejected."			
Phase 5: Final BEAD Locations Published	60 Days	June 1, 2024	July 31, 2024
MCA will publish the final list of locations used for the BEAD Subgrantee Selection process.			

BEAD Initial Proposal Volume 1
// For Submission to NTIA //

MAINE
CONNECTIVITY
AUTHORITY

1.5 Volume 1 Public Comment
Describe the public comment period and provide a high-level summary of the comments received during the Volume I public comment period and how they were addressed by the Eligible Entity. The response must demonstrate: a. The public comment period was no less than 30 days; and b. Outreach and engagement activities were conducted to encourage feedback during the public comment period.

1.5.1 Public Comment Summary

Maine's BEAD Initial Proposal Volume 1 was published for public comment on November 3, 2023. The document was posted on the Maine Connectivity Authority website, and emails were sent to all MCA distribution list recipients, notifying recipients of the posting and public comment period. The public comment period was also featured prominently on all Maine Connectivity Authority's social media channels (LinkedIn, Facebook, X, Instagram). In addition, the publication was shared with stakeholders via communications through the Maine Broadband Coalition, MCA's stakeholder groups, including the Regional and Tribal Broadband Partners, Digital Equity Taskforce members, Broadband Infrastructure Capital Markets Taskforce, Workforce Advisory Committee, and Interagency Broadband Working Group.

Open public comment sessions were held online on November 9, 16, 28, and 30, 2023. An additional, targeted public comment session for internet service providers and industry representatives was held on November 28, 2023, to collect more technical comments. MCA staff members also attended regularly scheduled sessions of the Maine Broadband Coalition "Let's Talk Broadband" open discussion forum, held Fridays at 11 a.m., to receive comments and answer questions. Public comment for Volume 1 was closed on December 3, 2023. The public comment session lasted 31 days (comments were accepted on both the opening and closing days).

Comments were collected through an online form and compiled in a spreadsheet. Comments received during the public comment sessions were recorded in the meetings, documented via meeting minutes, and added to the spreadsheet along with the comments submitted through the online form. This allowed all comments to be tracked in one location. Other stakeholders submitted pages of written comments via email, and these were aggregated in the central spreadsheet.

Comments were then sorted into two groups. First, those that were straightforward to incorporate, such as edits, technical clarifications, or those that had already been addressed by NTIA technical guidance. The second group required some level of consideration among staff and stakeholders. Those comments were discussed in meetings with MCA staff members, and then reviewed with appropriate stakeholders or board members with subject matter expertise to learn best practices and confirm alignment on the most challenging issues. Other state plans were also examined for comparison. Sample public comment themes included suggestions for additional types of community anchor institutions, technical suggestions for the state lead challenge process and speed test process, the classification of MDUs and fixed wireless, the definition of latency, an FCC area modification used in other states, data caps, and clarification on the definition of correctional institutions previously offered.

BEAD Initial Proposal Volume 1
// For Submission to NTIA //

MAINE CONNECTIVITY AUTHORITY

Attachment list (folder)

1. Existing Broadband Funding Sources: Updated table Existing Broadband Funding Sources.xlsx
2. CSV file with the location IDs of each unserved location: unserved.csv
3. CSV file with the location IDs of each underserved location: underserved.csv
4. CSV file that lists eligible community anchor institutions: NEED TO ADD
5. Deduplication of Funding Programs:BEAD Initial Proposal_Volume I_Deduplication of Funding Programs
6. Challenge types: Challenge Types

1.4.6.1 Optional Attachment: As a required attachment only if the Eligible Entity is not using the NTIA BEAD Model Challenge Process, outline the proposed sources and requirements that will be considered acceptable evidence. Instructions: If the Eligible Entity plans to adhere to the sources outlined in Table 3, "Examples of Acceptable Evidence for BEAD Challenge and Rebuttals," in the NTIA BEAD Challenge Process Policy Notice, the Eligible Entity will not be required to complete the attachment. Otherwise, the Eligible Entity must list any proposed data sources that will be accepted as sufficient evidence that are not included in the NTIA BEAD Challenge Process Policy Notice. Additionally, the Eligible Entity must also indicate any data sources that are included in the NTIA BEAD Challenge Process Policy Notice that will not be accepted as sufficient evidence. • To add an additional data source: the Eligible Entity must complete all columns and indicate in column 3 ("Proposed Change to NTIA BEAD Policy Notice") whether the Eligible Entity will add or remove this data source as outlined in the NTIA BEAD Challenge Process Policy Notice. • To remove an approved data source: the Eligible Entity can skip columns 3 and 4 (i.e., "Data Source Requirements" and "Permissible Rebuttal") and fill out only columns 1 and 2 (i.e., "Challenge Type" and "Data Source"). Refer to the NTIA BEAD Challenge Process Policy Notice for additional guidance.

1.5.2 Optional Attachment: *As an optional attachment, submit supplemental materials to the Volume I submission and provide references to the relevant requirements. Note that only content submitted via text boxes, certifications, and file uploads in sections aligned to Initial Proposal requirements in the NTIA Grants Portal will be reviewed, and supplemental materials submitted here are for reference only.*

Removed: MCA may treat locations that the National Broadband Map shows to have available qualifying broadband service (i.e., a location that is "Served") as "Underserved" if a rigorous spatial analysis of historical crowdsourced speed test data from a network performance tool, such as M-Lab and Ookla, shows that the area is not receiving the speeds advertised by providers in the National Broadband Map. This modification will better reflect the locations eligible for BEAD funding because it will consider the actual speeds available at those locations. As described below, the provider can rebut speed tests during the rebuttal period.

MCA has determined that this pre-modification is necessary for the success of our challenge process for several reasons. A consistent complaint received by MCA staff through engagement in the Broadband Action Plan, and reflected by the patterns of the Maine Speed Testing Initiative's 46,000 speed tests utilizing the M-Lab platform, is that the speeds experienced by internet users do not meet publicly advertised speeds. While MCA's inclusion of the optional module for speed test modification during the state challenge process provides a venue for the individual subscriber to submit results to a non-profit or local or tribal unit of government, the bar is quite high to meet the requirements. If the user can meet the requirements and is willing to share their personally identifiable information, this can put a lot of power in the hands of a single individual to challenge their broadband serviceable location. This additional pre-modification provides insights into network performance patterns and potential shortcomings by harnessing the power of distributed data generation using statistically sound practices. Maine has a track record of leveraging crowdsourced speed-testing data to inform funding prioritization through the Maine Speed Testing Initiative.

Removed: Based on MCA's analysis, the number of BSLs pre-modified through this additional modification to the model process is relatively low. MCA believes that the locations with a single provider that claim speeds above 100/20 are in the low thousands, and these will most likely be candidates altered through this premodification.

Crowdsourced speed test data from approved platforms, including M-Lab (Maine's current platform) and/or Ookla, will be used in the analysis. Historical data dating back to February 1, 2023, will be used. MCA plans to analyze 12 months of data (February 1, 2023 - February 1, 2024). This data will be cleaned, removing any speed tests that have no location data, that are in areas unlikely to take mass-market service (e.g., college campuses, military bases, etc.), or are tests that are potentially altered negatively by the user (e.g., poor wifi connection, user-chosen testing server).

Choosing the correct geographic scale for analyzing the aggregated speed tests is crucial due to the significant variability of population density in Maine. In densely populated areas such as Portland or Bangor, too large of a geographic area, such as a single zip code, would not allow for finely identifying areas with potential shortcomings in the infrastructure. In rural areas with highly dispersed populations, such as Millinocket or Moosehead Lake, the H3 Level 8 hexagons may only have a single or no BSLs. For this reason, the analysis will start with Census Block Groups, intended to have between 600 and 3,000 people in them. If the census block group is too large a geography for understanding the broadband availability in an area, then MCA will use the H3 Level 8 hexagons for refinement.

Removed: Since speed tests from many of these platforms generally lack precise location

information, the speed tests will be joined to a larger geography, specifically census block groups. Speed tests collected from these crowdsourcing platforms provide location information that identifies the location of the speed test within a few dozen meters. This distance may need to be more specific to tie individual locations to BSLs. Still, it does provide enough information to reasonably assume that the locations are within larger geographies like census block groups. Census block groups with fewer than ten speed tests, or 25% of the number of BSLs in the census block group (whichever is smaller), will be removed from the analysis. Within each census block group, an outlier analysis will be conducted to identify faulty or erroneous speed tests that positively or negatively impact summary statistics. The results of census block group speed test statistics will include an investigation of the deviation between the speed test summary statistics and the speeds claimed by the individual providers.

Page 11: [4] Commented [5]   Brian Allenby   3/1/2024 3:04:00 AM

Removed: Two different passes will be employed to understand the nature of the speeds available in these census block groups (or appropriate polygon). The first pass will look for census block groups where no speed tests (or an overwhelming minority, less than 10%) were taken that show speeds meeting the minimum requirement of 80% of 100 Mbps download / 20 Mbps upload. While crowdsourced speed tests do not come with data indicating which speed tier a household or business has subscribed to, the lack of speed testing showing anything close to the required 100/20 indicates a shortcoming of either the infrastructure or another factor. When this minimum is not met, all BSLs identified as Served in the census block group (or appropriate polygon) will be classified as Underserved.
Any provider that has claimed service levels above 100/20 can contest this pre-modification in the rebuttal process. MCA has deemed it is fair to place the onus on a provider to provide evidence of the claimed advertised speeds when there is a plethora of evidence showing the opposite.

Page 11: [5] Commented [6]   Brian Allenby   3/1/2024 3:05:00 AM

Removed: The second pass of the census block groups (or appropriate polygon) will compare individual providers' advertised maximum download and upload speed claims (as provided in the National Broadband Map) against speed tests taken through providers' infrastructure. Only cable, fiber, and fixed wireless claims of Served locations will be included in this analysis. Due to the inability to confirm what speed tier a household or provider has subscribed to, MCA must accept the lowest package offered by a provider. If a provider's lowest tier is 100/20 or above, they will be included in this analysis. Speed tests for the included providers will be summarized for the census block group (or appropriate polygon).

If 80% of the speed tests show a download or an upload speed below 80% of 100/20, those locations will be premodified from Served to Underserved for that provider in that polygon. If all providers for those BSLs are premodified, then the BSL is premodified to Underserved.

This process of premodification will be conducted before the deduplication of locations. Locations with enforceable commitments will not become eligible for BEAD funding. The locations premodified in this manner will be eligible for rebuttal by the impacted internet service providers through the state-led challenge process. Internet service providers will follow the rebuttal evidence process for area challenges if the provider wishes to rebut the determinations made by MCA in premodifying locations based on the crowdsourced speed test methodology.