

# Compare Results

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**STATE OF HAWAI'I BEAD  
INITIAL PROPOSAL  
VOLUME 1**

**APPROVED BY THE NTIA**

**April 24, 2024**

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## Introduction

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### Background

A high-speed Internet connection used to be a nice-to-have, but today, it is a necessity. In 2020, the coronavirus pandemic highlighted Internet access disparities between urban and rural areas, between O‘ahu and the neighbor islands, and between socioeconomic groups reinforcing that the Internet is for more than just entertainment; it is *essential* to have continuous access to education, work, healthcare, and other professional services. Especially for Hawai‘i, a high-speed Internet connection is critical to ensure Hawai‘i does not get left behind in the global economy as one of the most geographically isolated populations in the world.

Hawai‘i’s challenge involves ensuring all residents: from urban to rural areas, from Ni‘ihau to Hawai‘i Island, from keiki (children) to kūpuna (elderly) of all backgrounds have meaningful access to reliable and affordable high-speed Internet. To achieve this, Hawai‘i must lay the foundation by investing in quality broadband infrastructure in our first mile (transpacific), middle mile (inter-island), and last mile (to the home) connections.

Since March 2020, the federal government has dedicated over \$65 billion in federal funding to make sure that no one in the country is ever left behind because of a lack of Internet access again. Hawai‘i is on track to receive more than \$400 million from this historic investment of federal and state funding.

The largest of all funding sources is the Broadband Equity, Access, and Deployment (BEAD) Program, administered by the National Telecommunications and Information Administration (NTIA), prioritizing the construction of high-speed Internet access to unconnected (i.e., unserved) locations, and to communities with underperforming Internet connections (i.e., underserved). Hawai‘i will see approximately \$149.5 million under the BEAD Program alone to connect an estimated 10,568 locations<sup>1</sup> statewide who cannot connect to the Internet at home or are relying on outdated technology to get it. Designated by Governor David Ige in August 2021, the University of Hawai‘i (UH) is responsible for implementing the BEAD Program for Hawai‘i in addition to coordinating all other broadband efforts in the State.

Since then, UH has completed the first major milestone of the BEAD Program by developing the State’s BEAD Five-Year Action Plan and has worked with various stakeholders on other broadband efforts to bolster Hawai‘i’s broadband infrastructure. UH is currently working on the next major milestone of the BEAD Program developing the State’s Initial Proposal due at the end of 2023.

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<sup>1</sup> As of June 30, 2023

This Initial Proposal is the “first draft” of the Final Proposal for BEAD grant funding, and, among other things, explains how Hawai‘i ensures every resident has access to a reliable, affordable, and high-speed broadband connection. The twenty requirements of the Initial Proposal are developed in two parts: Volume 1 & 2. Volume 1 will describe UH’s plan for the Challenge Process and includes the sections Existing Broadband Funding (Requirement 3), Unserved and Underserved Locations (Requirement 5), Community Anchor Institutions (Requirement 6), and Challenge Process (Requirement 7). Volume 2 will include the remaining Initial Proposal Requirements, Requirements 1, 2, 4 and 8-20.

### **About Connect Kākou**

Connect Kākou is the Hawai‘i statewide broadband initiative to ensure people from all walks of life have reliable and affordable access to high-speed Internet. The name “Connect Kākou” was chosen to reflect Hawai‘i’s goal of using high-speed internet to connect everyone across the state. The Hawaiian word “kākou” is used to convey the idea of “all of us,” and underscores the sense of collective responsibility and unity that this initiative represents.

Led by Lieutenant Governor Sylvia Luke with partners from the Hawai‘i Broadband and Digital Equity Office, the University of Hawai‘i, the Department of Hawaiian Home Lands, and multiple state and county agencies, Connect Kākou encompasses BEAD and other broadband efforts across the State.

The initial landing page for Connect Kākou can be found at <https://www.connectkakou.org/>. The website will eventually serve as the centralized hub for residents and community partners to access resources and learn about Hawai‘i’s current and future broadband efforts.

## Volume I (Requirements 3, 5 – 7)

### 1.1 Existing Broadband Funding (Requirement 3)

1.1.1 Submit the file identifying sources of funding, a brief description of the broadband deployment and other broadband-related activities, the total funding, the funding amount expended, and the remaining funding amount available. Eligible Entities may copy directly from their Five-Year Action Plans.

<b>Source</b> <i>Name of federal agency/ other source of funding.</i>	<b>Purpose</b> <i>Indicate whether the broadband funding program was federal, state/territory, or locally funded.</i>	<b>Total</b> <i>Total amount of funds awarded by the listed source.</i>	<b>Expended</b> <i>Total amount of funds expended to date.</i>	<b>Available</b> <i>Total amount of remaining funds available to date.</i>
Broadband Equity, Access, and Deployment Program	Funds will be broadly used to provide last mile connectivity to unserved and underserved homes throughout the State, to be followed by connecting community anchor institutions, and will supplement digital equity, workforce development, and build other related connection gaps and needs. Funds will also cover Department of Hawaiian Home Lands locations (to the extent not already covered by Tribal Broadband Connectivity program funds or other federally funded programs).	\$149,484,493.57 (plus State match of \$33,000,000 appropriated for FY24 by Legislature; together with additional public and private sector match - at least an additional \$13,356,627.25 needed)	\$10,982.12 as of 06/30/2023	\$149,473,511.45 as of 06/30/2023
Coronavirus Capital Projects Fund (States)	The State CPF allocation will be used for two primary activities. The first major investment is projected to attract and leverage private investment in new subsea construction, with State allocations planned to support the design, permitting, and	\$115,475,318	\$354,854.23 as of 10/30/2023	\$115,120,463.77 as of 10/30/2023

	<p>construction of a new inter-island submarine fiber optic cable system, together with associated terrestrial assets to provide interconnection with terrestrial telecommunications network backbones. The second major investment will be the creation of community hubs at HPHA public housing facilities, coupled with free and reduced access to broadband for public housing residents for a limited term through ACP enablement.</p>			
<p>Coronavirus Capital Projects Fund (DHHL)</p>	<p>DHHL proposes to utilize CPF funds for the pre-construction engineering and design to support the deployment of infrastructure delivering service under multiple 2.5GHz licenses allocated under the FCC 2.5GHz Rural Tribal Window program, together with the potential for unlicensed CBRS 3.5GHz use. The engineering and design outcomes will be utilized to support the construction of the wireless ISP deployment as an integral part of the DHHL effort to deploy comprehensive last mile services consisting of hybrid fiber and wireless infrastructure; the buildout will primarily be</p>	<p>\$167,504</p>	<p>\$0</p>	<p>\$167,504</p>

	<p>funded by the \$90m allocated to DHHL under the Tribal Broadband Connectivity (TBC) program (\$30m under CAA2021, and \$60m under IIJA statutory allocations to DHHL for the benefit of the Native Hawaiian communities). The robust combination of the hybrid fiber and wireless infrastructure deployments under TBC, together with braided support from the State of Hawai'i's BEAD, CPF, and ARPA funds, will ensure that all of our Native Hawaiian communities are fully connected to robust, resilient, and affordable broadband infrastructure.</p>			
<p>Coronavirus State and Local Fiscal Recovery Funds</p>	<p>State inter-island submarine cable system desktop design and cable landing station site surveys and pre-permitting work.</p>	<p>\$1,500,000  <span style="color: red;">*</span> COMPLETE  D</p>	<p>\$1,500,000</p>	<p>\$0</p>
<p>Enabling Middle Mile Infrastructure Grant Program</p>	<p>On September 29, 2022, the University of Hawai'i submitted its competitive application in collaboration with Hawaiian Electric Co. (HECO), UH and HECO proposed to build terrestrial fiber along the public right-of-ways and offer open-access at a reasonable cost to the dark fiber infrastructure. The resulting terrestrial</p>	<p>\$43,941,543  NOT  AWARDED</p>	<p>\$0</p>	<p>\$0</p>

	<p>fiber assets would combine with the subsea build to create new, robust, and geographically diverse routes to stabilize and enhance Hawai'i's critical middle mile broadband infrastructure. All broadband uses, including access by incumbents and new competitive entrants, would benefit from the significant increases in capacity and reliability, and the significantly lower capital cost resulting from the public middle mile investments.</p>			
Enabling Middle Mile Infrastructure Grant Program	Project URGENT by Hawaiian Telcom awarded under the program on June 16, 2023. Builds a combination of subsea and terrestrial middle mile segments.	\$37,356,955 Total project: \$87,466,529		
FCC, ACP Outreach Grant Program	Facilitate promotion, awareness, and participation in the Affordable Connectivity Program (ACP). Two awards were issued, one to DBEDT and the other to Elepaio Social Services.	\$740,000 (DBEDT) \$350,000 (Elepaio Social Services)		
Rural Digital Opportunity Fund (Hawaiian Telcom)	In February 2021, \$24 million in RDOF funding was awarded to Hawaiian Telcom to deploy fiber broadband service to over 8,000 unserved and	\$24,000,000		

	underserved locations in rural areas of Hawai'i. By 2027, all identified locations will be serviced with 1 Gbps download and 500Mbps upload internet speeds.			
Connect America Fund II Auction	In 2018, Hawaiian Telcom won the auction bid to provide fixed broadband over the next six years to 3,936 unserved and underserved locations in Hawai'i. By 2025, all identified locations will be serviced with 1 Gbps download and 500Mbps upload internet speeds.	\$18,160,637.80		
State Digital Equity Planning Program (State)	The Department of Business, Economic Development, and Tourism's Broadband and Digital Equity Office, will lead the charge in the Digital Equity Program. The Digital Equity Plannings funds will be used to hire a contractor to assist in developing the plan, with other labor contracted out as necessary to deploy data collection initiatives to develop the plan accordingly.	\$570,883.08	\$353,652.56	\$227,230.44
State Digital Equity Planning Program (DHHL)	In July 2022, DHHL submitted a Letter of Intent to receive funding under the tribal allocation of the Digital Equity Planning Grant. These funds will be used to	TBD		

	develop a unique digital equity plan for the Hawaiian Home Lands.			
Digital Equity Capacity Grant Program	Following the completed State Digital Equity Plan, states will be allocated formula funding to support Digital Equity capacity building. Allocation is expected to be known around April 2024.	TBD		
State Digital Equity Capacity Program (DHHL)	NTIA funded initiative. Allocation is expected to be known around April 2024.	TBD		
Tribal Broadband Connectivity Program	Use and adoption plus mapping. Infrastructure assessment and last mile deployment awarded following the initial NOFO. Award amount \$17.2m (deployment will be in the follow-up award subject to the tranche 2 NOFO).	\$90,000,000		

## 1.2 Unserved and Underserved Locations (Requirement 5)

1.2.1 Attach two CSV files with the location IDs of all unserved and underserved locations, respectively, including unserved and underserved locations in applicable Tribal Lands.

CSV files can be viewed here:

[https://drive.google.com/drive/folders/13inDp8SmQAw\\_JCiDqBpkgXyyB1--yWXV?usp=drive\\_link](https://drive.google.com/drive/folders/13inDp8SmQAw_JCiDqBpkgXyyB1--yWXV?usp=drive_link)

1.2.2. Identify the publication date of the National Broadband Map that was used to identify the unserved and underserved locations.

Consistent with the BEAD Notice of Funding Opportunity (NOFO) definitions of unserved<sup>2</sup> and underserved<sup>3</sup>, the University of Hawai'i Broadband Office will submit two comma-separated value (csv) files named "unserved.csv" and "underserved.csv" containing the location IDs of all locations from the Federal Communication Commission (FCC)'s National Broadband Map of unserved and underserved locations respectively.

The "unserved.csv" and "underserved.csv" files will be available as part of the official public comment period of the Initial Proposal. The "unserved.csv" and "underserved.csv" files will be available for download at <https://www.hawaii.edu/broadband/initial-proposal/> along with a map visualization on the University of Hawai'i Broadband website at <https://www.hawaii.edu/broadband/state-broadband-service-map/>.

The University of Hawai'i Broadband Office will be using the 06/30/2023 version of the FCC's National Broadband Map published on 03/26/2024 as the data set to identify unserved and underserved locations.

See [Appendix A](#) for the unserved and underserved locations files.

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<sup>2</sup> BEAD NOFO, page 17, Section 1(C)(dd)

<sup>3</sup> BEAD NOFO, page 16, Section 1(C)(bb)

## 1.3 Community Anchor Institutions (Requirement 6)

1.3.1 Describe how the statutory definition of “community anchor institution” (e.g., schools, libraries, health clinics) was applied, how eligible CAIs were identified, and how network connectivity needs were assessed, including the types of CAIs that the Eligible Entity intends to serve.

Based on the statutory definition of “community anchor institution” as defined in 47 USC 1702 (a)(2)(E), the University of Hawai‘i Broadband Office (UHBO) applied the definition of “community anchor institution” to mean 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 (e.g., telehealth, workforce development, online learning, digital literacy, etc.) by vulnerable populations, including, but not limited to, Native Hawaiians, low-income individuals, unemployed individuals, children, the incarcerated, and aged individuals.

Based on the statutory definition above, the following criteria were used to determine the inclusion or exclusion of community support organizations not specifically listed in 47 USC 1702(a)(2)(E):

1. Whether the community support organization has physical location(s) in a permanent structure to facilitate greater use of broadband service by vulnerable populations, including, but not limited to, Native Hawaiians, low-income individuals, unemployed individuals, children, the incarcerated, and aged individuals.

*For example, if the physical location of the organization performs their work out of a tent or some other temporary structure, this would not meet the CAI criteria because wired broadband infrastructure cannot be deployed to the location.*

2. Whether the physical location(s) of the community support organization is dedicated to the organization’s usage for activities to facilitate greater use of broadband service by vulnerable populations (e.g. not a residential house) and, as part of the organization’s mission, involves or plans to involve activities that facilitate greater use of broadband service by vulnerable populations.

*For example, if the physical location of the organization is a co-working space, this would not meet the CAI criteria because the physical location is not dedicated to facilitating broadband services, nor is the co-working space’s mission to facilitate broadband services by vulnerable populations.*

*For example, the Hawai'i American Red Cross is an organization that is important to the community, but part of its mission does not involve activities that facilitate greater use of broadband by vulnerable populations and would not meet the CAI criteria.*

3. Whether the physical location(s) of the community support organization is public facing in nature, meaning the organization does not require paid or unpaid membership before using its services.

*For example, Mō'ili'ili Community Center is a community support organization on O'ahu that meets the two requirements above, but requires paid membership to utilize the space. Therefore, the center would not meet the CAI criteria since only those who can afford to pay the monthly membership would have access to services.*

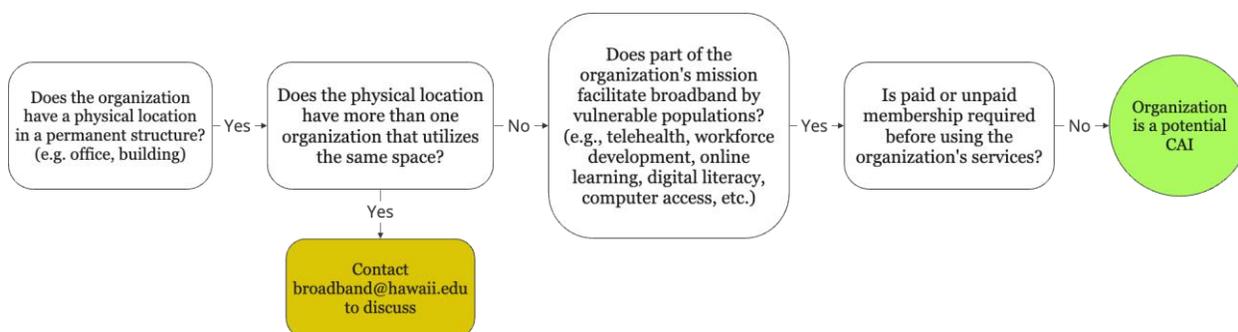


Figure 1: Flowchart to help identify community support organizations that are CAIs

The following definitions and sources were used to identify the types of community anchor institutions (CAI):

**Schools:** The list of Hawai'i Department of Education K-12 public and public charter schools, the U.S. Department of Health & Human Services Head Start schools, and private/independent schools. The list and locations of K-12 schools were sourced from the Hawai'i Department of Education (HIDOE) website and the Hawai'i Office of Planning and Sustainable Development's GIS data.<sup>4</sup> The list and locations of Head Start schools were sourced from the U.S. Department of Health & Human Services Office of Head Start ECLKC website. The list and locations of private/independent schools were sourced from the Hawai'i Association of Independent Schools.

**Libraries:** The list of public libraries part of the Hawai'i State Public Library System. The list and locations of libraries were sourced from the Hawai'i State Public Library's website and the Hawai'i Office of Planning and Sustainable Development's GIS data.

<sup>4</sup> <https://planning.hawaii.gov/gis/download-gis-data-expanded/> Section 017 - Facilities and Structures

**Health clinic, health center, hospital, or other medical providers:** The list of rural health clinics, federally qualified community health centers, Native Hawaiian health centers, hospitals, critical access hospitals, public health nursing centers, and family guidance centers. The list of rural health clinics, hospitals, critical access hospitals, public health nursing centers, and family guidance centers was sourced from the Hawai'i Department of Health website. The list of federally qualified community health centers was sourced from the Hawai'i Primary Care Association website. The Native Hawaiian community health centers were sourced from the Papa Ola Lōkahi website and the U.S. Department of Health & Human Services Bureau of Primary Health Care website.

**Public safety entity:** The list of public safety entities includes fire stations and police stations. The list of public safety entities was sourced from the County police and fire department websites and the Hawai'i Office of Planning and Sustainable Development's GIS data.

**Institutions of higher education:** The list of institutions of higher education includes accredited universities, community colleges, community schools for adults, university centers, and education centers. The list of community schools for adults was sourced from the Hawai'i Department of Education's website. The list of universities, community colleges, university centers, and education centers was sourced from the respective entity's website (e.g., University of Hawai'i campuses were sourced from the University of Hawai'i's website).

**Public housing organizations:** The list of public housing locations managed by the Hawai'i Public Housing Authority websites and county-owned public housing. The list and locations of public housing were sourced from the Hawai'i Public Housing Authority's websites and the Hawai'i Office of Planning and Sustainable Development's GIS data.

**Community support organizations:** The University of Hawai'i Broadband Office (UHBO) included any organizations that facilitate greater use of broadband service by vulnerable populations, including Native Hawaiians, low-income individuals, unemployed individuals, and aged individuals following the criteria stated above as candidate CAIs. Native Hawaiians are specifically included as vulnerable populations due to their indigenous identity in Hawai'i and as a population that is vulnerable to losing its indigenous identity in Hawai'i through various overlapping socioeconomic factors. In addition to these community support organizations, UHBO included jails and prisons, juvenile correction

centers, job training centers, houseless support centers, and community centers as subcategories to be included.

- **Jails and Prisons**

Jails and prisons were included as candidate CAIs due to their vital role in facilitating broadband usage by incarcerated individuals. The State of Hawai'i Digital Equity Plan states that incarcerated individuals are a covered population vulnerable to digital inequality due to the lack of digital literacy and access to devices or the internet while incarcerated and post-incarceration. On top of that, Native Hawaiians are overrepresented in the incarcerated population. The Hawai'i Department of Public Safety's Comprehensive Offender Reentry Plan (CORP<sup>5</sup>), outlines how incarcerated individuals in jails and prisons reenter society successfully. Part of the plan incorporates employment, vocational, and educational opportunities, including obtaining proper identification documents. Therefore, providing access to high-speed internet at jails and prisons assists in facilitating greater use of broadband services by incarcerated individuals.

The list of jails and prisons was sourced from the Hawai'i Department of Public Safety Corrections Division websites.

- **Youth Correctional Centers**

UHBO included youth correctional centers as candidate CAIs due to their role in facilitating broadband usage by incarcerated or detained youth. The State of Hawai'i has one statewide juvenile correctional center, one juvenile detention facility, and one juvenile shelter. The Hawai'i Department of Human Services manages the Hawai'i Youth Correctional Facility (HYCF), housing incarcerated youth aged 12-19 years old while providing rehabilitation services to them. Such services include mental health telehealth visits with licensed therapists, workforce development, and educational opportunities to deter youth from participating in at-risk activities post-incarceration. The Hale Ho'omalua Juvenile Detention Facility and Home Maluhia Shelter provide therapy, telehealth, educational services, and outside community contact to ensure continuity of care for juveniles.

 The list of youth correctional centers was sourced from the Hawai'i Department of Health websites.

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<sup>5</sup> <https://dps.hawaii.gov/wp-content/uploads/2019/01/Comprehensive-Reentry-Plan-190115.pdf>

- **Job Training Centers**

The Department of Labor maintains a database of “American Job Training” training centers, established as part of the Workforce Investment Act, and reauthorized in the Workforce Innovation and Opportunities Act of 2014. The database can be accessed at the American Job Center Finder. American Job Centers from this database were included as CAIs due to their role in helping the public, including vulnerable populations such as youth, unemployed, or veterans, with employment and training services for workers and employers, information on unemployment benefits, and links to other related social services. Therefore, job training centers are included as candidate CAIs for facilitating greater use of broadband services by vulnerable populations.

Job training centers were sourced from the U.S. Department of Labor “American Job Training” training centers database<sup>6</sup>.

- **Houseless Support Centers**

Hawai‘i’s houseless population is 43.2 people per 10,000. This is over 2x the national rate according to 2023 data<sup>7</sup>. The problem is severe enough that Hawai‘i has an emergency proclamation<sup>8</sup> to expedite solutions to address this vulnerable population. Houseless support centers facilitate greater use of broadband by providing access to the internet and supporting houseless families and individuals through employment and health services so they can get stabilized and out of homelessness as soon as possible.

The list of locations was sourced from the houseless support organizations’ websites and then geolocated using Google Maps.

- **Community Centers**

Community centers are important gathering places for communities in Hawai‘i due to their public access, flexibility in usage, and space for larger gatherings. Some are located within parks and schools, and some are standalone buildings in the community. They are ubiquitous, well-known, and, for some communities, the only means to receive access to the internet and online services. Community centers vary in the services they offer, and the audience ranges from children to seniors, including vulnerable populations. These services include but are not limited to, digital literacy, computer access, and employment services. UHBO

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<sup>6</sup> <https://www.careeronestop.org/localhelp/americanjobcenters/find-american-job-centers.aspx>

<sup>7</sup> <https://www.hawaiihealthmatters.org/indicators/index/view?indicatorId=5223&localeId=14&comparisonId=7227>

<sup>8</sup> <https://homelessness.hawaii.gov/emergency-proclamations-and-supplementary-proclamations/>

recognizes that some community centers are exclusive to certain communities such as home associations or have membership requirements that will not meet the criteria above. However, given the importance of their presence in facilitating broadband usage to vulnerable populations in their respective communities, community centers are candidate CAIs and will be evaluated against the set criteria.

The list of locations was sourced from the respective county websites and community center websites and then geolocated using Google Maps.

In each case, UHBO also drew on state and county resources to identify additional eligible community anchor institutions that were not contained in the data sources listed above. In addition, UHBO used the Initial Proposal public comment process and community engagement events to ensure that all relevant institutions meeting the CAI criteria are included.

UHBO received public comments that advocated for the inclusion of affordable housing locations, places of worship, and comfort stations at public parks to be classified as community anchor institutions. Since, the three proposed categories are not a “school, library, health clinic, health center, hospital or other medical provider, public safety entity, institution of higher education, public housing organization”, the proposed categories fall under “community support organizations” and is therefore subject to the the criteria set above. After consideration, UHBO determined that these proposed categories of institutions do not meet all three of the community support organization criteria required by NTIA; the UHBO will continue to consider how various non-deployment supports may be applied to support community need.

Example: UHBO evaluated whether affordable housing locations should be included as a category of community anchor institutions. Based on the requirement for public access, these locations would not ideally match the CAI requirements. While those locations may not directly qualify as CAIs, they would be locations that could receive support from various wrap-around support organizations that reach into these communities, and could be afforded support from other broadband related funding sources.

UHBO recognizes that affordable housing locations, places of worship, and comfort stations at public parks are important to communities in Hawai‘i and will consider these institutions in strategically implementing other non-deployment efforts.

To assess the network connectivity needs of the types of eligible community anchor institutions listed above, UHBO:

#### **Engaged government agencies**

UHBO inquired with the respective state and county agencies for each CAI category to understand what records they have available regarding community

anchor institution 1 Gbps symmetrical broadband service access. For example, to assess the connectivity needs of the Hawai'i Department of Education (HIDOE) K-12 public schools, UHBO inquired with the HIDOE Office of Information Technology Services if there were any HIDOE public schools lacking access to 1 Gbps symmetrical speeds. HIDOE identified that most schools are part of the State's Institutional Network (INET) fiber, with the exception of one school in Hana, Maui. Therefore, most HIDOE public schools have access to 1 Gbps symmetrical with the exception of the school in Hana, Maui. The school in Hana, Maui was added to the State's eligible community anchor institutions list that requires qualifying broadband service in section 1.3.2. This process was done for other state and county agencies to identify any eligible community anchor institutions that lack access to 1 Gbps symmetrical broadband service.

### **Engaged relevant umbrella organizations and nonprofits**

UHBO recognized that candidate CAIs subscribing to mass-market broadband are more likely to know what broadband service tier and provider they are subscribing to rather than what the highest tier of speed and technology for every internet service provider (ISPs) are available at their location. Therefore, for CAI candidates that are not state or county owned, UHBO engaged with internet service providers (ISPs) in Hawai'i to identify CAIs lacking access to 1 Gbps symmetrical broadband service. UHBO provided a list of CAIs in the ISP-specified data format and requested the ISP indicate if the address has infrastructure capable of supporting 1 Gbps symmetrical speeds. In addition, UHBO utilized the FCC's National Broadband Map<sup>9</sup> to assess CAI connectivity. CAIs lacking access to 1 Gbps symmetrical were added to the State's eligible community anchor institutions list that requires qualifying broadband service in section 1.3.2.

Using the responses received, UHBO then compiled the list of those CAIs that do not have adequate broadband service, attached in question 1.3.2.



1.3.2 Submit the CSV file (named cai.csv) that lists eligible community anchor institutions that require qualifying broadband service and do not currently have access to such service, to the best of the Eligible Entity's knowledge.

See [Appendix C](#) for the current list of eligible community anchor institutions that require qualifying broadband service and do not currently have access to 1 Gbps symmetrical speeds.

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<sup>9</sup> <https://broadbandmap.fcc.gov/location-summary/fixed>

## 1.4 Challenge Process (Requirement 7)

### NTIA BEAD Model Challenge Process Adoption

1.4.1 Select if the Eligible Entity plans to adopt the NTIA BEAD Model Challenge Process for Requirement 7.

**NTIA BEAD Model Challenge Process Answer:**

Eligible Entities must indicate their plan to adopt the NTIA BEAD Model Challenge Process answer in question 1.4.1 by selecting “Yes.”

- Yes
- No

The University of Hawai'i Broadband Office will be adopting the NTIA BEAD Model Challenge Process.

### Modifications to Reflect Data Not Present in the National Broadband Map

1.4.2 If applicable, describe any modifications to the classification of broadband serviceable locations (BSL) in the Eligible Entity's jurisdiction as “served,” “underserved,” or “unserved,” and provide justification for each modification.

**DSL Modifications**

The University of Hawai'i Broadband Office 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 because 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.

### Deduplication of Funding

1.4.3 Select if the Eligible Entity plans to use the BEAD Eligible Entity Planning Toolkit to identify existing federal enforceable commitments.

**NTIA BEAD Model Challenge Process Answer:**

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. Eligible Entities adopting the Model must indicate their plan to use the BEAD Eligible Entity Planning Toolkit by selecting “Yes.”

- Yes
- No

The University of Hawai'i Broadband Office will be using the BEAD Eligible Entity Planning Toolkit to identify existing federal enforceable commitments.

#### 1.4.4 Describe the process that will be used to identify and remove locations subject to enforceable commitments.

##### **NTIA BEAD Model Challenge Process Answer:**

The University of Hawai'i Broadband Office (UHBO) will enumerate locations subject to enforceable commitments by using the BEAD Eligible Entity Planning Toolkit, and consult at least the following data sets:

1. The Broadband Funding Map published by the FCC pursuant to IIJA § 60105.<sup>10</sup>
2. 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.
3. State and local data collections of existing enforceable commitments.

UHBO will make a best effort to create a list of BSLs subject to enforceable commitments based on state/territory or local grants or loans. If necessary, UHBO will translate polygons or other geographic designations (e.g., a county or utility district) describing the area to a list of Fabric locations. UHBO will submit this list, in the format specified by the FCC Broadband Funding Map, to NTIA.<sup>11</sup>

UHBO 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 in which the State or local program did not specify broadband speeds, or when there was reason to believe a provider deployed higher broadband speeds than required, UHBO will reach out to the provider to verify the deployment speeds of the binding commitment. UHBO will document this process by requiring providers to sign a binding agreement certifying the actual broadband deployment speeds deployed.

UHBO drew on these provider agreements, along with its existing database on state and local broadband funding programs' binding agreements, to determine the set of State and local enforceable commitments.

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<sup>10</sup> The broadband funding map published by FCC pursuant to IIJA § 60105 is referred to as the "FCC Broadband Funding Map."

<sup>11</sup> Guidance on the required format for the locations funded by state or territorial and local programs will be specified at a later date, in coordination with FCC.

1.4.5 List the federal, state, or territorial, and local programs that will be analyzed to remove enforceable commitments from the set of locations eligible for BEAD funding.

Deduplication of Funding source is the National Broadband Availability Map (NBAM) Eligible Entity (EE) Toolkit using data as of June 30, 2023, deduplicated via Section 60105 map as of 12/14/23.

1. Connect America Fund (CAF) Phase II Auction - 2018 (Hawaiian Telcom)
2. Connect America Fund (CAF) Phase II Model - ~2018 (Hawaiian Telcom)
3. Coronavirus Capital Projects Fund - 2022 (B&F; UH)
4. Coronavirus State and Local Fiscal Recovery Funds - 2022 (UH)
5. Enabling Middle Mile Broadband Infrastructure Grant Program - 2023 (Hawaiian Telcom)
6. Hawai'i Department of Transportation HI Connect Program - Federal Highway Administration Funds 2021 (DOT)
7. Rural Digital Opportunity Fund - 2021 (Hawaiian Telcom)
8. Tribal Broadband Connectivity Program Round 1 - 2022 Award (DHHL)
9. Tribal Broadband Connectivity Program Round 2 - 2024 Awaiting Submission and Award (DHHL)

## Challenge Process Design

1.4.6 Describe the plan to conduct an evidence-based, fair, transparent, and expeditious challenge process.

### NTIA BEAD Model Challenge Process Answer:

Based on the NTIA BEAD Challenge Process Policy Notice, as well as the University of Hawai'i Broadband Office's understanding of the goals of the BEAD program, the proposal represents a transparent, fair, expeditious, and evidence-based challenge process.

### Permissible Challenges

The University of Hawai'i Broadband Office will only allow challenges on the following grounds:

- The 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.

## Permissible Challengers

During the BEAD Challenge Process, the University of Hawai'i Broadband Office (UHBO) will only allow challenges from nonprofit organizations, units of local governments, and broadband service providers.

Nonprofit organizations include U.S. Internal Revenue Service non-profit organizations,<sup>12</sup> and Native Hawaiian Homestead & Beneficiary Associations registered with the U.S. Department of the Interior.<sup>13</sup>

Units of local government include the City and County of Honolulu, the County of Hawai'i, the County of Kaua'i, and the County of Maui (inclusive of Kalawao County) along with each county's respective agencies, and other State of Hawai'i agencies.

Permissible challengers interested in participating in the challenge process will register using a form to gain access to the challenge process web tool.

## Challenge Process Overview

The challenge process conducted by the University of Hawai'i Broadband Office will include four phases, spanning 90 days:

1. **Publication of Eligible Locations:** Prior to beginning the Challenge Phase, the University of Hawai'i Broadband Office 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). The office will also publish locations considered served, as they may be challenged. The University of Hawai'i Broadband Office will publish the set of served and BEAD-eligible locations on June 1, 2024, tentatively.
2. **Challenge Phase:** During the Challenge Phase, the challenger will submit a challenge through a challenge portal. This challenge will be visible to the service provider whose service availability and performance is being contested. The portal will notify the provider of the challenge through an automated email, which will include related information about timing for the provider's response. After this stage, the location will enter the "challenged" state.
  - a. **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 broadband serviceable location (BSL). The challenge portal will confirm that the challenged service is listed in the National

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<sup>12</sup> <https://www.irs.gov/charities-and-nonprofits>

<sup>13</sup> <https://www.doi.gov/hawaiian/homestead-beneficiary-associations-list>

Broadband Map and meets the definition of reliable broadband service. The challenge will confirm that the email address is reachable by sending a confirmation message to the listed contact email. For scanned images, the challenge portal will determine whether the quality is sufficient to enable optical character recognition (OCR). For availability challenges, the University of Hawai'i Broadband Office 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.

- b. **Timeline:** Challengers will have 30 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. The Challenge Phase will tentatively run from **July 15, 2024 to August 14, 2024 11:59 PM Hawai'i Standard Time.**
3. **Rebuttal Phase:** Only the challenged service provider may rebut the reclassification of a location or area with evidence, causing the location or locations to enter the “disputed” state. If a challenge that meets the minimum level of evidence is not rebutted, the challenge is sustained. A provider may also agree with the challenge and thus transition the location to the “sustained” state. Providers must regularly check the challenge portal notification method (e.g., email) for notifications of submitted challenges.
  - a. **Timeline:** Providers will have 30 calendar days from notification of a challenge to provide rebuttal information to the University of Hawai'i Broadband Office. The Rebuttal Phase will tentatively run from **August 15, 2024 to September 14, 2024 11:59 PM Hawai'i Standard Time.**
4. **Final Determination Phase:** During the Final Determination phase, the University of Hawai'i Broadband Office will make the final determination of the classification of the location, either declaring the challenge “sustained” or “rejected.”
  - a. **Timeline:** Following intake of challenge rebuttals, the University of Hawai'i Broadband Office will make a final challenge determination within 30 calendar days of the challenge rebuttal. Reviews will occur on a rolling basis, as challenges and rebuttals are received. The Final Determination Phase will tentatively run from **September 15, 2024 to October 15, 2024 11:59 PM Hawai'i Standard Time.**

## Evidence & Review Approach

To ensure that each challenge is reviewed and adjudicated based on fairness for all participants and relevant stakeholders, the University of Hawai'i Broadband Office (UHBO) will review all applicable challenge and rebuttal information in detail without bias, before deciding to sustain or reject a challenge. UHBO will document the standards of review to be applied in a Standard Operating Procedure and will require reviewers to document their justification for each determination. UHBO plans to ensure reviewers have sufficient training to apply the standards of review uniformly to all challenges submitted. UHBO will also require that all reviewers submit affidavits to ensure that there is no conflict of interest in making challenge determinations. Unless otherwise noted, "days" refers to calendar days.

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).	<ul style="list-style-type: none"> <li>• Screenshot of provider webpage.</li> <li>• A service request was refused within the last 180 days (e.g., an email or letter from provider).</li> <li>• Lack of suitable infrastructure (e.g., no fiber on pole).</li> <li>• 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 10 business</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• The provider submits evidence that service is now available as a standard installation,          </li> </ul>

Code	Challenge Type	Description	Specific Examples	Permissible rebuttals
			<p>days of a request.<sup>14</sup></p> <ul style="list-style-type: none"> <li>• 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 in order to connect service at the location.</li> </ul>	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. <sup>15</sup>	Speed test by subscriber, showing the insufficient speed and meeting the requirements for speed tests.	Provider has countervailing speed test evidence showing sufficient speed, e.g., from their own network

<sup>14</sup> A standard broadband installation is defined in the Broadband DATA Act (47 U.S.C. § 641(14)) as “[t]he initiation by a provider of fixed broadband internet access service [within 10 business days of a request] in an area in which the provider has not previously offered that service, with no charges or delays attributable to the extension of the network of the provider.”

<sup>15</sup> The challenge portal has to gather information on the subscription tier of the household submitting the challenge. Only locations with a subscribed-to service of 100/20 Mbps or above can challenge locations as underserved, while only locations with a service of 25/3 Mbps or above can challenge locations as unserved. Speed challenges that do not change the status of a location do not need to be considered. For example, a challenge that shows that a location only receives 250 Mbps download speed even though the household has subscribed to gigabit service can be disregarded since it will not change the status of the location to unserved or underserved.

Code	Challenge Type	Description	Specific Examples	Permissible rebuttals
				management system. <sup>16</sup>
L	Latency	The round-trip latency of the broadband service exceeds 100 ms. <sup>17</sup>	Speed test by subscriber, showing the excessive latency.	Provider has countervailing speed test evidence showing latency at or below 100 ms, e.g., from their own network management system or the CAF performance measurements. <sup>18</sup>
D	Data cap	The only service plans marketed to consumers impose an unreasonable capacity allowance (“data cap”) on the consumer. <sup>19</sup>	<ul style="list-style-type: none"> <li>• Screenshot of provider webpage.</li> <li>• Service description provided to consumer.</li> </ul>	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	Provider has countervailing evidence from their network management system showing an appropriate

<sup>16</sup> 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.

<sup>17</sup> Performance Measures Order, including provisions for providers in non-contiguous areas (§21).

<sup>18</sup> Ibid.

<sup>19</sup> An unreasonable capacity allowance is defined as a data cap that falls below the monthly capacity allowance of 600 GB listed in the FCC 2023 Urban Rate Survey (FCC Public Notice DA 22-1338, December 16, 2022). Alternative plans without unreasonable data caps cannot be business-oriented plans not commonly sold to residential locations. A successful challenge may not change the status of the location to unserved or underserved if the same provider offers a service plan without an unreasonable capacity allowance or if another provider offers reliable broadband service at that location.

Code	Challenge Type	Description	Specific Examples	Permissible rebuttals
			the service is delivered via a specific technology.	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 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).
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	<ul style="list-style-type: none"> <li>Construction contracts or similar evidence of on-going deployment, along with evidence that all necessary permits have been applied for.</li> </ul>	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

Code	Challenge Type	Description	Specific Examples	Permissible rebuttals
		broadband offering performance beyond the requirements of an enforceable commitment.	<p>for or obtained.</p> <ul style="list-style-type: none"> <li>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.</li> </ul>	does not meet the required technology or performance requirements.
N	Not part of enforceable commitment.	This location is in an area that is subject to an enforceable commitment to less than 100% of locations and the location is	Declaration by service provider subject to the enforceable commitment.	

Code	Challenge Type	Description	Specific Examples	Permissible rebuttals
		not covered by that commitment. (See BEAD NOFO at 36, n. 52.)		
C	Location is a CAI	The location should be classified as a CAI.	Evidence that the location falls within the definitions of CAIs set by the Eligible Entity. <sup>20</sup>	Evidence that the location does not fall within the 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.

### Area and MDU Challenge

The University of Hawai'i Broadband Office will administer area and multi-dwelling unit (MDU) challenges for challenge types Availability (A), Speed (S), Latency (L), Data cap (D), and Technology (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 requirement, 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.<sup>21</sup>

<sup>20</sup> For example, eligibility for FCC e-Rate or Rural Health Care program funding or registration with an appropriate regulatory agency may constitute such evidence, but the Eligible Entity may rely on other reliable evidence that is verifiable by a third party.

<sup>21</sup> A successful MDU challenge converts the status of the location to the lowest level of service across all units. For example, the location is considered unserved if one unit is found to be unserved, even if other units within the MDU reach the underserved or served speed thresholds.

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.<sup>22</sup> An MDU challenge counts towards an area challenge (i.e., six successful MDU challenges in a census block group may trigger an area challenge).

Each type of challenge and each technology and provider is considered separately, i.e., 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 are likely to have different availability and performance.

Area challenges for availability need to be rebutted in whole or by location 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 by subscriber information. For fixed wireless service, the challenge system will offer representative random, sample of the area in contention, but no fewer than 10, where the provider must 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.

## Speed Test Challenge

The University of Hawai'i Broadband Office is adopting the speed test challenge module that will treat as “underserved” locations that the National Broadband Map shows to be “served” and if rigorous speed test methodologies (i.e., methodologies aligned to the BEAD Model Challenge Process Speed Test Module) demonstrate that the “served” locations can **only** receive internet service that is materially below 100 Mbps downstream and 20 Mbps upstream.

The speed test challenge module would allow permissible challengers to submit speed challenges or rebuttals using speed tests as evidence during the Challenge or Rebuttal Phase. Speed tests must follow the requirements set forth below to be considered acceptable evidence. Providers will be given the opportunity to rebut the speed test challenge with evidence that the location has broadband infrastructure to subscribe to speeds greater than 100 Mbps downstream and 20 Mbps upstream or concede the location can only receive internet service that is materially below 100 Mbps downstream and 20 Mbps during the Rebuttal Phase.

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<sup>22</sup> For example, a complex of apartment buildings may be represented by multiple BSLs in the Fabric.

This speed test challenge module will not change a location's status from "served" to "underserved" if the location's broadband infrastructure supports the ability for a consumer to subscribe to speeds greater than 100 Mbps downstream and 20 Mbps upstream via fixed wired (i.e. cable or fiber) by a service provider. Example scenarios are provided below to assist with determining how the speed test challenge module is applicable.

*Scenario 1:* A consumer's address has broadband infrastructure up to 1000 Mbps download and 35 Mbps upload internet speeds via cable technology. They are subscribed to a 100 Mbps download and 20 Mbps upload internet plan. The consumer takes speed tests at night and the results are 60 Mbps download and 10 Mbps upload. A speed challenge most likely would not change the consumer's address to "underserved" because the consumer has access to 1000 Mbps download and 35 Mbps upload broadband infrastructure. The consumer should call their internet service provider to troubleshoot the lower speeds received.

*Scenario 2:* A consumer's address has broadband infrastructure up to 100 Mbps download and 20 Mbps upload internet speeds only via fixed licensed wireless technology. They are subscribed to a 100 Mbps download and 20 Mbps upload internet plan. The consumer takes speed tests at night, and the results are 80 Mbps download and 11 Mbps upload. A speed challenge can likely change the consumer's address to "underserved" because they can only access 100 Mbps download and 20 Mbps upload, but cannot receive the subscribed speeds via fixed licensed wireless. The consumer should call their internet service provider to troubleshoot the lower speeds received.

*Scenario 3:* A consumer's address has broadband infrastructure up to 300 Mbps download and 300 Mbps upload internet speeds via fiber technology from provider X and up to 100 Mbps download and 20 Mbps upload via cable technology from provider Y. They are subscribed to a 100 Mbps download and 20 Mbps upload internet plan from provider Y. The consumer takes speed tests at night, and the results are 50 Mbps download and 10 Mbps upload. A speed challenge most likely would not change the consumer's address to "underserved" because they have access to 300 Mbps download and 300 Mbps upload via provider X. The consumer should call their internet service provider to troubleshoot the lower speeds received.

## Speed Test Requirements

The University of Hawai'i Broadband Office will accept speed tests as evidence for substantiating challenges and rebuttals. 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 five forms:

1. A reading of the physical line speed provided by the residential gateway, (i.e., DSL modem, cable modem for hybrid fiber-coax (HFC)).
2. Optical Network Terminal (ONT) for fiber-to-the-home (FTTH), or fixed wireless subscriber module.
3. A reading of the speed test available from within the residential gateway (i.e., router or modem) 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, desktop computer, or mobile device within immediate proximity of the residential gateway (i.e., as close as possible to the router or modem), using a speed test application provided by M-Lab, Ookla Speedtest, Cloudflare or another commonly used speed test application provider.

Each speed test measurement must include:

- 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 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 the Eligible Entity, that grants access to these information elements to the Eligible Entity, any contractors supporting the challenge process, and the service provider.

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

Each location must conduct three speed tests on three different days; 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 measured upload speed marks the location as underserved.

Speed tests may be conducted by subscribers, but speed test challenges must be gathered and submitted by units of local government, nonprofit organizations, or a broadband service provider.

Subscribers submitting a speed test must indicate the speed tier they are subscribing to. Since speed tests can only be used to change the status of locations from “served” to “underserved”, only speed tests of subscribers that subscribe to tiers at 100/20 Mbps and above are 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 considered served. However, even if a particular service offering is not meeting 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. Providers must apply the 80/80 rule,<sup>23</sup> 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, the University of Hawai'i Broadband Office (UHBO) 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. This documentation will be posted publicly for at least a week prior to opening the challenge submission window. Information on the challenge process will be posted at <https://www.hawaii.edu/broadband/challenge-process/> in addition to the Connect Kākou website. UHBO also plans to actively inform all units of local government of its

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<sup>23</sup> The 80/80 threshold is drawn from the requirements in the CAF-II and RDOF measurements. See BEAD NOFO at 65, n. 80, Section IV.C.2.a.

challenge process and set up training sessions and regular touchpoints to address any comments, questions, or concerns from local governments, nonprofit organizations, and Internet service providers. Training sessions will tentatively be held in **April through June 2024** and will include virtual and in-person training when appropriate. UHBO will also work with local government and leaders to communicate the state challenge process via appropriate channels.

UHBO will utilize its existing weekly meetings with local government entities to address any comments, questions, or concerns that arise for the duration of the challenge phase. Weekly virtual office hours held by UHBO will be available to participating nonprofit organizations for the duration of the challenge phase to address any comments, questions, or concerns. A weekly meeting with all participating Internet service providers will also be established to address any comments, questions, or concerns from local government during the challenge and rebuttal phases.

Relevant stakeholders, such as permissible challengers, can sign up at <https://cloud.broadband.hawaii.edu/sign-up> for challenge process updates, reminders, and newsletters. Relevant stakeholders can engage with UHBO by contacting [broadband@hawaii.edu](mailto:broadband@hawaii.edu).

Providers will be notified of challenges via email and have access to the list of challenges submitted via the challenge portal.

Beyond actively engaging relevant stakeholders, UHBO will also post all submitted challenges and rebuttals before final challenge determinations are made, including:

- 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.

UHBO will not publicly post any personally identifiable information (PII) or proprietary information, including subscriber names, street addresses, and customer internet protocol (IP) addresses. To ensure all PII is protected, UHBO will review the basis and summary of all challenges and rebuttals to ensure PII is removed prior to posting them on the website. Additionally, guidance will be provided to all challengers as to which information they submit may be posted publicly.

UHBO 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 do contain information or data that the submitter deems to be

confidential commercial information that should be exempt from disclosure under state open records laws or is protected under applicable state privacy laws, that information should be identified as privileged or confidential. Otherwise, the responses will be made publicly available. All PII and data will be encrypted during transmission, and the challenge portal will be password-protected according to Hawaii Revised Statutes 487N.<sup>24</sup>

### **Lahaina & Upcountry Maui**

The University of Hawai'i Broadband Office (UHBO) acknowledges the difficulties and grieves with the people of Maui over the devastating wildfires that destroyed Lahaina and parts of Upcountry Maui in August 2023. UHBO has made aware to NTIA the situation in Maui and has asked for guidance regarding BEAD's role in the recovery efforts while remaining sensitive to the situation at hand. At this time, NTIA has provided verbal guidance to utilize the pre-fire Internet connectivity status of these locations to determine BEAD eligibility, with the understanding that the data will not accurately reflect the current situation in Lahaina and Upcountry Maui. The exact details of BEAD's broadband infrastructure deployment role in the areas affected by the wildfires are still in discussion between UHBO and other federal and state partners. UHBO will continue to work closely with Maui County to identify unserved, underserved, and community anchor institutions within the county and support Maui County's participation in the upcoming Challenge Process as described above. UHBO is committed to ensuring that Lahaina and Upcountry receive access to high-speed Internet.

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<sup>24</sup> <http://labor.hawaii.gov/ui/files/2014/12/PII-HRS-487N.pdf>

## 1.5 Volume 1 Public Comment

1.5.1 Text Box: 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:

- The public comment period was no less than 30 days; and
- Outreach and engagement activities were conducted to encourage feedback during the public comment period.

The University of Hawai'i Broadband Office (UHBO) released a draft of the Initial Proposal Volume 1 & 2 in early November for public comment. The public comment period began on November 7, 2023, and concluded on December 10, 2023. During this 33-day period, the public was able to submit comments in writing via mail, telephone, or electronically through email or an online form. UHBO also conducted in-person and virtual meetings across Hawai'i, informing the public on BEAD and the Initial Proposal comment period, where public comment could also be received. The public was encouraged to register for events using the form:

<https://forms.gle/RDWWtP1ZJjEg47wK8>.

The public was encouraged to submit their comments during the 33-day period for the best possibility of impacting the Initial Proposal's final draft. All public comments received during the official public comment period were published to the UHBO Initial Proposal webpage once the public comment period concluded. UHBO will continue to consider and incorporate any additional comments and feedback throughout the BEAD implementation effort.

During the public comment period, UHBO took various steps to spread awareness and encourage feedback.

UHBO collaborated with the Office of the Lieutenant Governor to issue a press release on the Initial Proposal's public comment period launch, in concert with the announcement of the state's Connect Kākou statewide broadband initiative, resulting in local media coverage.

UHBO began promoting the Initial Proposal public comment period in early October 2023 through email to over 800 contacts subscribed to the UHBO mailing list, and general announcements on the weekly Broadband Hui calls. Once the Initial Proposal became publicly available, all contacts received an additional email notice that the draft Initial Proposal was available on the UH broadband website at [hawaii.edu/broadband/](http://hawaii.edu/broadband/). Additional reminders to submit public comments were sent out in the November & December newsletters.

During the public posting period, UHBO held four virtual information sessions breaking down components of the Initial Proposal into digestible components for the public. Each Wednesday in November, UHBO provided a brief overview of the session topic at the Broadband Hui to a weekly audience of over 50 attendees via Zoom. The slides from each session were posted to the UH broadband website for the general

public to view. Each Monday in November, UHBO held a follow-up virtual information session via Zoom to go over the session topic in more detail as well as take any questions or comments. These sessions covered the following sections:

- Session 1: Volume 1
- Session 2: Volume 2, Sections 1 - 6
- Session 3: Volume 2, Section 7 - 11
- Session 4: Volume 2, Section 12 - 16
- Session 5: General session

At public engagement events, UHBO handed out bifold brochures to attendees on the Initial Proposal's public comment period. Organizations at public engagement events received brochures as well and mentioned their willingness to distribute electronic copies of the brochure to their members.

During the 33-day period, UHBO received over 55 written public comments, with numerous verbal comments also made at public engagement events, which were noted and discussed throughout the development of the Initial Proposal. Written public comments received on Volume 1 were primarily related to the Challenge Process and Community Anchor Institutions sections.

Comments on the Challenge Process included:

- Support for the DSL pre-challenge modification
- Modifications to include a pre-challenge modification for locations with only access to fixed wireless as underserved
- Modifications to remove the Area and MDU challenge module and speed test challenge module
- Modifications to the evidence & review approach, including eliminating the need for contracts or other evidentiary requirements to rebut a challenge
- Modifications to the challenge process timeline

Comments on Community Anchor institutions included:

- Addition of a CAI to the state's CAI list
- Requests for the addition of CAI categories
- Modifications to the CAI definition
- Recommendations to identify CAIs eligible for BEAD funding

UHBO considered all public comments received and applied recommendations that fit within the scope and objectives of the BEAD program. This included additions to the CAI list. A number of comments and suggestions were in conflict with NTIA guidelines, in particular around the NTIA Model Challenge Process (which the State adopted to ensure full compliance with NTIA guidance). UHBO will continue to take all comments under advisement as the BEAD process continues through the State Challenge Process, Final Proposal, and implementation. Some recommendations will also be shared with stakeholders and advisory groups as appropriate.

## Appendix A: Hawai'i Unserved and Underserved Locations

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FCC National Broadband Map June 30, 2023 version. NBAM Published 03/26/2024.

[https://drive.google.com/drive/folders/13inDp8SmQAaw\\_JCiDqBpkgXyyB1--yWXV?usp=sharing](https://drive.google.com/drive/folders/13inDp8SmQAaw_JCiDqBpkgXyyB1--yWXV?usp=sharing)

## Appendix B: Hawai'i CAI List v2

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Community Anchor Institution list as of December 14, 2023

[https://docs.google.com/spreadsheets/d/1QZU3ivvt2tDVd\\_IdOpD-S5352Nk7N28aNMPoMitD6ps/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1QZU3ivvt2tDVd_IdOpD-S5352Nk7N28aNMPoMitD6ps/edit?usp=sharing)

Community Anchor Institution map as of December 14, 2023

<https://lookerstudio.google.com/s/sC4Dzegj52Q>

## Appendix C: Hawai'i BEAD Eligible CAI List

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Community Anchor Institutions without 1 Gbps download and upload broadband infrastructure access.

<https://docs.google.com/spreadsheets/d/1qU8ofty7WgAc162WclGqPqkKAXCrmsMI92m2jfVSx5U/edit?usp=sharing>

## Appendix D: CAI Data Sources

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### Schools

Department of Education K-12 Schools (includes charter schools)

- <https://www.hawaiipublicschools.org/ParentsAndStudents/EnrollingInSchool/SchoolFinder/Pages/home.aspx>
- <https://geoportal.hawaii.gov/datasets/HiStateGIS::public-schools/about>

Head Start/Early Learning

- <https://eclkc.ohs.acf.hhs.gov/center-locator?latitude=19.899&longitude=-155.666&state=HI&radius=5>

Private/Independent Schools

- <https://www.hais.us/find-a-school>

### Libraries

- <https://www.librarieshawaii.org/visit/branches/all-branches/>

- <https://geoportal.hawaii.gov/datasets/HiStateGIS::public-libraries-in-the-state-of-hawaii/about>

## Medical Facilities

### Federally Qualified Community Health Centers

- <https://www.hawaii-pca.net/health-centers-here-for-you>
- [https://health.hawaii.gov/docd/files/2013/07/VFC\\_Centers.pdf](https://health.hawaii.gov/docd/files/2013/07/VFC_Centers.pdf)

### Hospitals / Critical Access Hospitals

- <https://geoportal.hawaii.gov/datasets/HiStateGIS::hospitals-1/about>
- <https://health.hawaii.gov/ohca/medicare-facilities/hospitals/>
- <https://health.hawaii.gov/opcrh/files/2020/08/Hawaii-Healthcare-Facilities-and-Systems.pdf>

### Native Hawaiian Health Centers

- <https://bphc.hrsa.gov/funding/funding-opportunities/native-hawaiian-health-care-improvement-act>
- <https://www.papaolalokahi.org/>

### Public Health Nursing Centers

- Hawai'i/O'ahu - <https://health.hawaii.gov/phnb/files/2023/06/TB-Clinic-Schedule-Revised-6.15.2023.pdf>
- Kaua'i - <https://health.hawaii.gov/kauai/communicable-disease-and-public-health-nursing-services/>
- Maui - <https://health.hawaii.gov/maui/public-health-nursing/>

### Family Guidance Centers

- Hawai'i - <https://health.hawaii.gov/camhd/hawaii-family-guidance-centers/>
- O'ahu - <https://health.hawaii.gov/camhd/oahu-services-branch/>
- Maui - <https://health.hawaii.gov/camhd/maui-family-guidance-centers/>
- Kaua'i - <https://health.hawaii.gov/camhd/kauai-family-guidance-center/>

### Rural Health Clinics

- <https://health.hawaii.gov/ohca/medicare-facilities/rural-health-clinics/>

## Public Safety

### Fire Stations

- Hawai'i County
  - Official <https://geoportal.hawaii.gov/datasets/HiStateGIS::fire-stations-island-of-hawaii/explore?location=19.640081%2C-155.471750%2C9.97>
  - Volunteer <https://geoportal.hawaii.gov/datasets/volunteer-fire-stations-island-of-hawaii/explore>
- Honolulu County
  - <https://geoportal.hawaii.gov/datasets/HiStateGIS::fire-stations-island-of-oahu/explore?location=21.473929%2C-157.943250%2C11.59>
- Maui County
  - <https://geoportal.hawaii.gov/datasets/HiStateGIS::fire-stations-maui-county/explore?location=20.863506%2C-156.521453%2C9.94>
  - <https://www.mauicounty.gov/Facilities?clear=False>
- Kaua'i County
  - <https://geoportal.hawaii.gov/datasets/HiStateGIS::fire-stations-island-of-kauai/explore?location=22.047818%2C-159.489100%2C11.85>
  - <https://www.kauai.gov/Government/Departments-Agencies/Fire-Department/Operations>

## Police Stations

- Hawai'i County
  - <https://geoportal.hawaii.gov/datasets/HiStateGIS::police-stations-island-of-hawaii/explore?location=19.615219%2C-155.610055%2C9.62&showTable=true>
- Honolulu County
  - <https://geoportal.hawaii.gov/datasets/cchnl::police-stations-1/about>
  - <https://www.honolulupd.org/contact-us/office-locations/>
- Maui County
  - <https://geoportal.hawaii.gov/datasets/HiStateGIS::police-stations-maui-county/explore?location=20.846218%2C-156.488281%2C10.37>
  - <https://www.mauicounty.gov/Facilities?clear=False>
- Kaua'i County
  - <https://geoportal.hawaii.gov/datasets/HiStateGIS::police-stations-island-of-kauai/explore?location=22.061924%2C-159.545106%2C11.52>

- <https://www.kauai.gov/Government/Departments-Agencies/Police-Department/Patrol-Services-Bureau>

## Higher Education

Adult Education -

<https://www.hawaiipublicschools.org/TeachingAndLearning/AdultEducation/Pages/home.aspx>

Community Colleges - <https://uhcc.hawaii.edu/>

University/Education Centers - <http://www.hawaii.edu/campuses/learning-centers/>

University of Hawai'i - <https://www.hawaii.edu/>

John A. Burns School of Medicine - <https://jabsom.hawaii.edu/>

Brigham Young University - <https://www.byuh.edu/>

Chaminade University - <https://chaminade.edu/>

Hawai'i Pacific University - <https://www.hpu.edu/about-us/information/campuses-facilities.html>

## Public Housing

- [http://www.hpha.hawaii.gov/housingprograms/projects/proj\\_loc.html](http://www.hpha.hawaii.gov/housingprograms/projects/proj_loc.html)
- <https://www.hphaishereforyou.org/contact-your-hpha>

## Community Support Organizations

- American Jobs Centers
  - <https://www.careeronestop.org/LocalHelp/AmericanJobCenters/find-american-job-centers.aspx?location=Hawaii&radius=25&ct=0&y=0&w=0&e=0&sortcolumns=Location&sortdirections=ASC>
- Children's Justice Centers
  - [https://www.courts.state.hi.us/services/hawaii\\_childrens\\_justice\\_centers/contact\\_us](https://www.courts.state.hi.us/services/hawaii_childrens_justice_centers/contact_us)
- Community/Neighborhood Centers
  - Kaua'i County - <https://www.kauai.gov/Government/Departments-Agencies/Parks/Neighborhood-Centers>
  - Maui County - <https://www.mauicounty.gov/248/Community-Centers>
- Community Media

- 'Ōlelo Community Media - <https://olelo.org/locations/>
- Nā Leo O Hawai'i - <https://nloh.org/>
- Akakū Maui Community Media - <https://www.akaku.org/>
- Hō'ke Kauai Community Television - <https://www.hoike.org/>
- Houseless Support
  - Institute for Human Services - <https://ihshawaii.org/contact/>
- Jails/Prisons
  - <https://dps.hawaii.gov/about/divisions/corrections/>
- Native Hawaiian Community Support
  - Lili'uokalani Trust - <https://onipaa.org/contact-us>
  - Alu Like - <https://www.alulike.org/services/hoomanea-oiwi/>
- Youth Correctional Centers
  - <https://health.hawaii.gov/camhd/hawaii-youth-correctional-facility/>
  - <https://health.hawaii.gov/camhd/family-court-services/>

## Appendix E: Glossary of Acronyms

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- **ACP:** Affordable Connectivity Program <https://www.fcc.gov/acp>
- **ARPA/CSFRF:** American Rescue Plan Act / Coronavirus State Fiscal Relief Funds
- **ARRA:** American Recovery and Reinvestment Act
- **BDA:** Broadband DATA Act
- **BEAD:** Broadband Equity Access and Deployment Program
- **BSL:** Broadband Serviceable Location (a location that can receive mass-market Internet)
- **BTOP:** Broadband Technology Opportunities Program
- **CAI:** Community Anchor Institution (e.g., school, library, hospital)
- **CAF:** Connect America Fund
- **CLEC:** Competitive Local Exchange Carrier
- **CONUS:** Continental United States
- **CPF:** Coronavirus Capital Project Funds
- **CQA:** CostQuest Associates (the entity that FCC contracted to create, manage and distribute the Fabric and data map)
- **DBEDT:** Hawai'i State Department of Business, Economic Development, and Tourism
- **DE:** Digital Equity
- **DEP:** Digital Equity Plan
- **DHHL:** Department of Hawaiian Home Lands

- **DOT:** Hawai'i State Department of Transportation
- **DSL:** Digital Subscriber Line (copper wiring)
- **EBB:** Emergency Broadband Benefit
- **EHCPLT:** Extremely High Cost Per Location Threshold
- **FCC:** Federal Communications Commission
- **FEMA:** Federal Emergency Management Agency
- **FPO:** Federal Program Officer
- **HBDEO:** Hawai'i Broadband & Digital Equity Office (under DBEDT)
- **HIDEC:** Hawai'i Island Digital Equity Coalition
- **HPHA:** Hawai'i Public Housing Authority
- **ILEC:** Incumbent Local Exchange Carrier
- **ISP:** Internet Service Providers
- **INET:** Institutional Network
- **IJA:** Infrastructure Investment and Jobs Act
- **MDU:** Multi Dwelling Unit (condo, townhouse, apartment, etc.)
- **MMG:** Enabling Middle Mile Infrastructure Grant Program
- **MOU:** Memorandum of Understanding (sometimes referred to Agreement)
- **NELHA:** Natural Energy Laboratory of Hawaii Authority
- **NOFO:** Notice of Funding Opportunity
- **NTIA:** National Telecommunications and Information Administration
- **ODEC:** O'ahu Digital Equity Coalition
- **PIO:** Public Information Officer
- **RCUH:** Research Corporation of the University of Hawai'i
- **RDOF:** Rural Digital Opportunity Fund
- **RFP:** Request for Proposal
- **SBLN:** State Broadband Leaders Network
- **TBC:** Tribal Broadband Connectivity Program
- **UH:** University of Hawai'i
- **UHBO:** University of Hawai'i Broadband Office