# Initial Proposal Vol. I

Draft Date: August 29, 2023

Public Comment Begins: August 30, 2023

## State of West Virginia

West Virginia Department of Economic Development

INTERNET FOR ALL **West Virginia**

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# 1. Executive Summary and Introduction

In 2021, Congress passed the Infrastructure Investment and Jobs Act (IIJA), which launched the Broadband, Equity, Access and Deployment (BEAD) program and Digital Equity program, among others. The focus on this document, the BEAD program, is administered by the National Telecommunication and Information Administration (NTIA) and allocates $42.5 billion to help states issue competitive grants to deploy broadband funding and close the digital divide. The West Virginia Department of Economic Development, Office of Broadband (collectively, "WVDED") is tasked with deploying local and federal broadband funds, including those from the BEAD program. In June 2023, NTIA announced that West Virginia would be awarded $1.21 billion of this funding to provide highspeed broadband access to its residents. This historic investment in broadband infrastructure and related digital inclusion efforts will support West Virginia's universal broadband access vision:

## West Virginia Vision for Digital Equity and BEAD

Achieve universal broadband coverage and digital equity throughout the State through aggressive broadband deployment goals and a commitment to closing the digital divide through robust equity and inclusion initiatives.

This document—the Initial Proposal Volume 1—is the third component in the multi-stage grant process. Prior to this, WVDED developed a Five-Year Action Plan, which details the data analysis, community engagement, cost estimation, and other preparatory activities that the State has undertaken as a part of the program. WVDED also developed and published its Digital Equity Plan, which forms the groundwork for realizing affordable connectivity, securing device access and affordability, and elevating digital skills. These and the rest of BEAD program are summarized in Figure 1.

*Figure 1: Overview of the BEAD Program*

West Virginia's Initial Proposal Volume 1 builds upon the goals, objectives, and strategies outlined in West Virginia's BEAD Five-Year Action Plan and meets four of the 21 BEAD program requirements:

1. **Existing broadband funding** available to WVDED;
2. **Unserved and underserved locations** eligible for BEAD funding;
3. **Definitions and locations of Community Anchor Institutions** (CAIs) in West Virginia; and
4. Plans for an evidence-based, transparent, fair, and expeditious BEAD **challenge process**, as well as the **process to de-duplicate funding** in West Virginia.

This document relies heavily on data provided by the Federal Communications Commission (FCC) in the form of a base map of all business and residential locations in the United States and information on the broadband availability at Broadband Serviceable Locations (BSLs), i.e., locations where fixed broadband is or can be installed). The base map is referred to as "the fabric" because it weaves together numerous data sources to determine the BSLs. According to the FCC, the fabric is a, "mix of aerial and satellite imagery, address databases, land and local tax records, and other sources." As required by the BEAD program, fabric data must be the sole method of determining BSLs. Together, the fabric and broadband availability data form the National Broadband Data Collection Availability Data. For the purposes of this document, WVDED uses the December 31, 2022, version of this data provided by the FCC. The data throughout this document is subject to change leading up to the Challenge Process noted in Figure 1.

**Tribal Entities**

It is also important to note that while the BEAD program emphasizes collaboration with tribal entities, West Virginia does not have any federally recognized tribes or tribal lands. Accordingly, tribes and tribal lands are not discussed in this document.

**Matching Funds Waivers**

In limited circumstances, and upon approval from NTIA, WVDED will consider granting waivers to the BEAD Program matching funds requirement for certain projects.[1]

The WVDED will consider granting matching funds waivers, in full or in part, for projects containing not less than 80% of locations within High-Cost Areas.[2] Matching funds are not required in High-Cost Areas.[3]

WVDED will also consider waiving the matching funds requirement, in full or in part, for projects where a match requirement could deter participation in the BEAD Program by small and Non-Traditional Providers[4] in marginalized or low-income communities.[5]

WVDED may also grant matching funds waivers for projects where potential subgrantees can demonstrate the 25% matching fund requirement could threaten affordability (i.e., if an applicant seeks to offset the cost of a substantial match through higher end user prices).[6] Potential subgrantees may be allowed to demonstrate the effect of match on affordability by, for example, submitting pro forma financial statements with different capex assumptions based on different matching funds requirements, showing the effects on service costs to achieve a given ARPU. WVDED will determine an affordability threshold that is appropriate for West Virginia.

WVDED will also consider waiving the matching funds requirement, in full or in part, for Priority Broadband Projects where the average cost per location is above the Extremely High Cost Per Location Threshold established by the WVDED.[7]

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[1] *"A "project" may constitute a single unserved or underserved broadband-serviceable location, or a grouping of broadband-serviceable locations in which not less than 80 percent of broadband-serviceable locations served by the project are unserved locations or underserved locations."*
https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf Page 14

[2] *"The term "high-cost area" means an unserved area in which the cost of building out broadband service is higher, as compared with the average cost of building out broadband service in unserved areas in the United States.*
https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf Page 13

[3] *"Except in certain specific circumstances described herein (including projects in designated "high-cost areas" and other cases in which NTIA has waived the matching requirement) each Eligible Entity shall provide, require its subgrantee to provide, or provide in concert with its subgrantee matching funds of not less than 25 percent of project costs."*
https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf Page 20

[4] *The term "non-traditional broadband provider" means an electric cooperative, nonprofit organization, public-private partnership, public or private utility, public utility district, Tribal entity, or local government (including any unit, subdivision, authority, or consortium of local governments) that provides or will provide broadband services."*
https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf Page 14

[5] *"In some cases, though, a match requirement could deter participation in the BEAD Program by small and non-traditional providers in marginalized or low-income communities, or could threaten affordability (i.e., if an applicant seeks to offset the cost of a substantial match through higher end user prices)."*
https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf Page 20

[6] Ibid.

[7] *"The term "Priority Broadband Project" means a project that will provision service via end-to-end fiber-optic facilities to each end-user premises. Eligible Entity may disqualify any project that might otherwise qualify as a Priority Broadband Project from Priority Broadband Project status, with the approval of the Assistant Secretary, on*

**Key Takeaways for Initial Proposal Volume 1**:

- WVDED is coordinating the deployment of BEAD funding with nine existing broadband infrastructure programs in the state.
- Only 65% of broadband serviceable locations in West Virginia are served, according to NTIA's definitions.
- BEAD funding will support deployment to the 167,965 unserved and underserved locations that do not have existing enforceable commitments.
- In addition to NTIA's community anchor institution categories, WVDED will consider adding correctional and rehabilitation facilities, courthouses, job training centers, and senior centers because they facilitate greater use of broadband service by vulnerable populations.
- To ensure "future-proof" broadband service, any location served through DSL will be considered "underserved" for the purposes of the BEAD program.
- Using NTIA's model, WVDED will launch its own challenge process in December 2023 to give nonprofit organizations, units of local governments, and broadband service providers the opportunity to confirm which locations will be eligible for BEAD funding.
- Prior to the challenge process, WVDED will complete a pre-challenge modification.
- WVDED is planning modifications to NTIA's model to support efficient speed testing.
- WVDED will consider BEAD Program matching fund waivers in limited circumstances.

WVDED's forthcoming Initial Proposal Volume 2 will address the remaining BEAD requirements and allow West Virginia the opportunity to request initial BEAD funds. Taken together, Volume I and Volume II will serve as the backbone for deploying affordable and reliable high-speed broadband internet to all West Virginians, drawing on all funding available to accomplish this goal.

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*the basis that the location surpasses the Eligible Entity's Extremely High Cost Per Location Threshold (as described in Section IV.B.7 below), or for other valid reasons subject to approval by the Assistant Secretary."*
https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf Page 14

# 2. Existing Broadband Funding

In June 2023, NTIA announced that it would award the State of West Virginia approximately $1.21 billion to execute the BEAD Program to achieve universal broadband coverage across the State. West Virginia has already made significant progress: it has launched or otherwise participates in nine programs to spur investment in broadband infrastructure, with each program addressing a different component or type of broadband deployment. Each of the following programs have already been awarded funding, unless otherwise specified. In some cases, this funding has already led to additional broadband deployment; in other cases, broadband deployment activities are underway.

Table 1 below summarizes existing WVDED programs and funding sources. For the three American Rescue Plan Act (ARPA) funded West Virginia Broadband Investment Plan (WVBIP) programs, WVDED has allocated an additional reserve for administrative costs and reserves for the WVBIP projects. Additionally, all funding and expenditure figures are based on the latest data available and allocations. The "Total funding available" for non-WVBIP projects refers to what is available nationally, not just for West Virginia.

*Table 1: Summary of Broadband Infrastructure Programs in West Virginia*

| Program name | Administered by | Total funding awarded ($) |
|---|---|---|
| Rural Digital Opportunity Fund (RDOF) | FCC | 362 million |
| Connect America Fund II Auction | FCC | 12 million |
| USDA ReConnect | USDA | 34 million |
| USDA Community Connect | USDA | 10.9 million |
| Community Development Block Grant | HUD/WVDED | 7 million |
| Appalachian Regional Commission-POWER | ARC/WVDED | 11 million |
| Appalachian Regional Commission-North Central Appalachian Broadband | ARC/WVDED | 21 million |
| Appalachian Regional Commission-Central Appalachian Broadband | ARC/WVDED | 5.3 million |
| U.S. Treasury ARPA SLFRF/WVBIP: GigReady | WVDED | 25.25 million |
| U.S. Treasury ARPA CPF/WVBIP: GigReady | WVDED | 40 million |
| U.S. Treasury ARPA SLFRF/WVBIP: Line Extension Advancement and Development | WVDED | 35 million |
| U.S. Treasury ARPA CPF/WVBIP: Line Extension Advancement and Development | WVDED | 25 million |
| U.S. Treasury ARPA SLFRF/WVBIP: MBPS | WVDED | 25.25 million |
| U.S. Treasury ARPA CPF/WVBIP: MBPS | WVDED | 45 million |
| WVBIP Wireless Internet Networks | WVDED | 20 million |

Source: WVDED

More details on Table 1 can be found in the attached Excel Workbook entitled "Existing Broadband Funding Sources – West Virginia." Please note that funding sources may change. For more details on these programs, please see the West Virginia Five-Year Action Plan.

# 2.1 Federally Administered Programs

Across West Virginia, Federal Communications Commission's (FCC) RDOF and CAF II, USDA ReConnect and Community Connect, CDBG, and ARC funding programs have commitments to build or expand broadband service in unserved or underserved areas. WVDED is the administrative agency for ARC and CDBG broadband projects in West Virginia. To the greatest extent possible, and in keeping with West Virginia's mission to provide broadband connectivity to all locations, WVDED will monitor broadband expansion projects under all funding programs to ensure that they comply with applicable regulations.

At $362 million in funding over 10 years, the FCC's RDOF program is the largest in West Virginia, excluding the upcoming BEAD program. Figure 2 depicts the locations of all Census blocks with committed RDOF funding across the State.

*Figure 2: Federally-Run Broadband Deployment Program Funded Areas Map — RDOF*
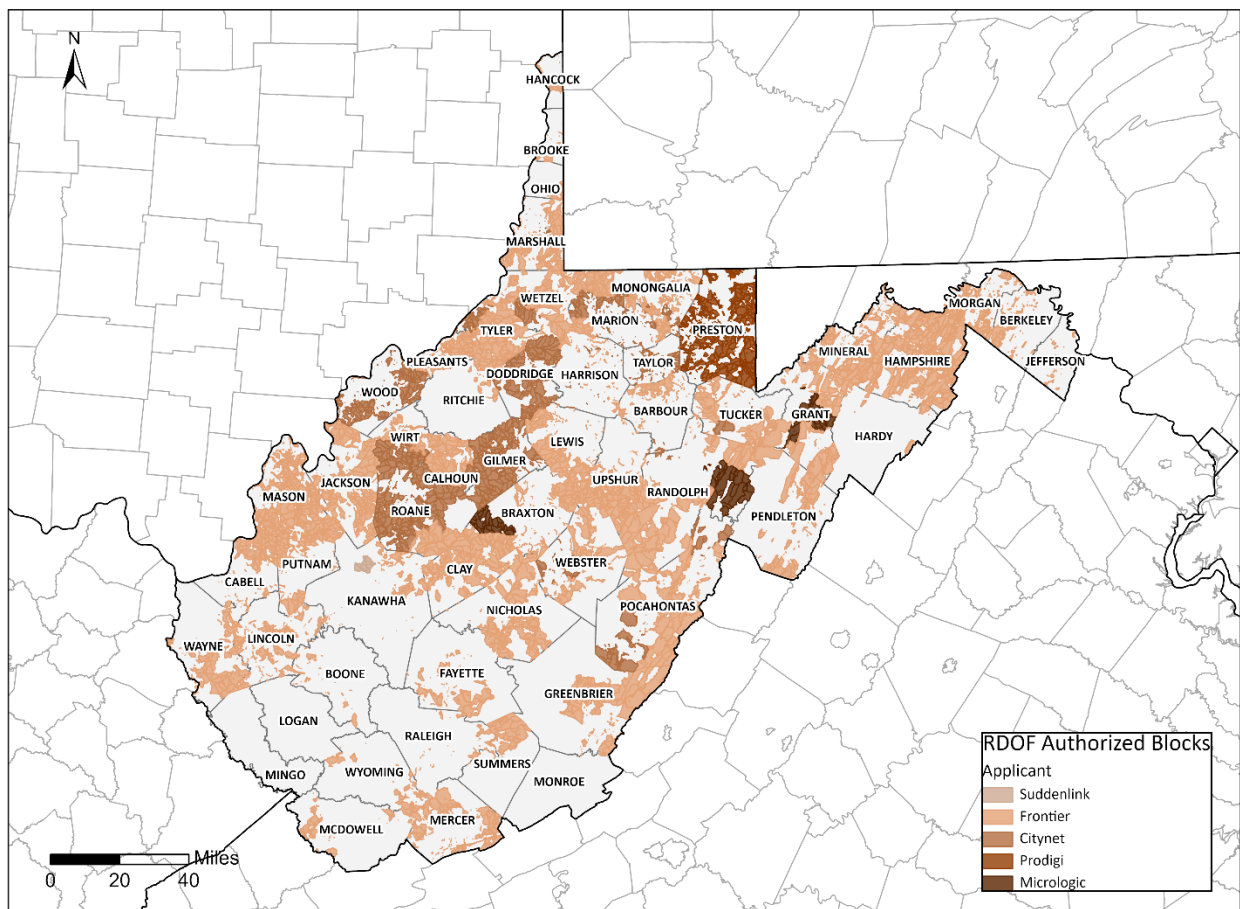


Source: WVDED

Table 3 indicates the number of Broadband Serviceable Locations (BSLs) covered under these programs. Each BSL represents at least one unit, which can be any combination of residential, non-residential, or mixed-use space. For example, an apartment building will only count towards one BSL but will contain many individual units.

*Table 2: BSL Units Covered by RDOF*

| BEAD Service Type | BSL Units Count |
|---|---|
| Unserved – No Service | 24,536 |
| Unserved – Slow Service | 61,587 |
| Underserved | 10,269 |

Source: WVDED

In addition, the geographic area of the four other federally administered programs is displayed in Figure 3 below, with the largest non-RDOF federal programs—ReConnect and CAF II—focused in the north and center of the State.

*Figure 3: Federally-Run Broadband Deployment Program Funded Areas Map — All Other*
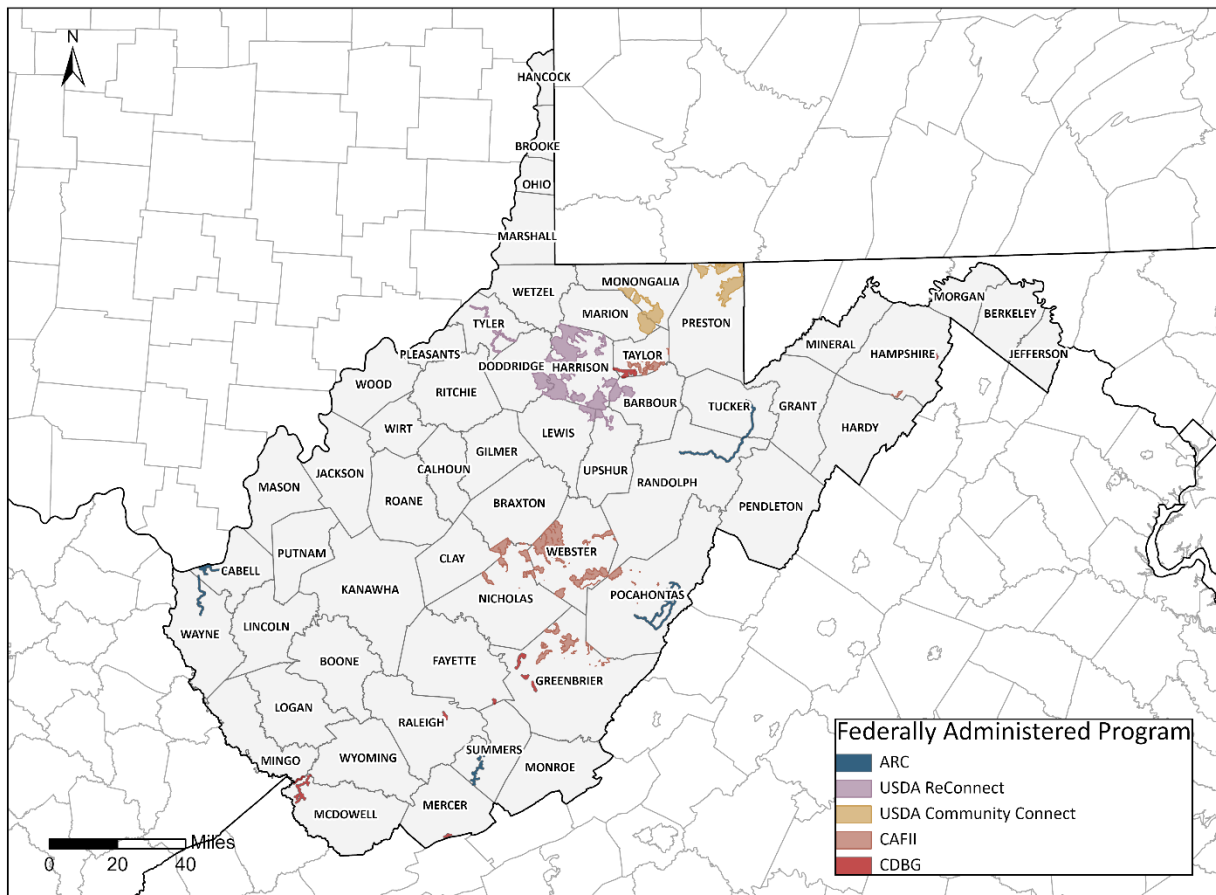


Source: WVDED

Table 3 indicates the number of Broadband Serviceable Locations (BSLs) covered under these other federal programs.

*Table 3: BSL Units Covered by ARC, USDA ReConnect, USDA Community Connect, CAF II, and CDBG*

| BEAD Service Type | BSL Units Count |
|---|---|
| Unserved – No Service | 6,835 |
| Unserved – Slow Service | 11,114 |
| Underserved | 1,698 |

Source: WVDED

## 2.1.1 RDOF – Details

To provide additional details on RDOF, as it is the most commonly asked about federally funded program, RDOF offers internet service providers funding to extend service to designated underserved areas. The program centers on a reverse auction in which internet service providers compete for grants to connect underserved Census blocks; each block is awarded to the internet service provider that can connect it with the least amount of requested federal funding.

The FCC conducted Phase 1 of the RDOF multi-round, reverse auction in October and November 2020. Through the entire RDOF program, the FCC outlined plans to award up to $20.4 billion to support fixed broadband development nationwide. Phase 1 of the RDOF auction program included $16 billion in potential funding. Of the $16 billion, $9.2 billion, or 57.5%, was awarded through a competitive, reverse auction framework designed to reduce costs through repetitive rounds of bidding by location(s). Winning bidders were announced on December 7, 2020.

West Virginia's initial auction eligibility profile, as determined by the FCC, included 120,506 locations. The maximum statewide award possible was slightly more than $766 million, or $76 million per year, for 10 years. This figure was the maximum potential subsidy to be awarded by the FCC to carriers that competed in the auction process. However, through the reverse auction process, the ultimate subsidy amount awarded in West Virginia was $362 million, approximately 47.2% of the maximum amount. Additionally, of the 120,506 initially eligible locations, 119,267 (98.9%), were 'won' by auction participants.[8]

Of these, six service providers serving 109,087 RDOF locations in West Virginia have been approved to provide broadband service under RDOF. All six will offer service that meets the fully served BEAD classification.[9] Of these, approximately 80,000 of those are assigned to Frontier.[10]

All six service providers bid and won in the auction's Gigabit Performance Tier, specifying the use of "Optical Carrier – Fiber to the End-User" as the technology to be utilized to satisfy deployment obligations. All auction winners must fulfill deployment obligations to serve 40% of the total locations won in a state by the end of year three (starting when the FCC announces final approval of auction winners to receive

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[8] WVOB, West Virginia Broadband Enhancement Council, 2022 Annual Report, https://www.wvlegislature.gov/legisdocs/reports/agency/B19_CY_2022_15837.pdf, p. 52
[9] "Auction 904: Rural Digital Opportunity Fund," Federal Communications Commission, accessed May 19, 2023, https://www.fcc.gov/auction/904.
[10] WVOB, West Virginia Broadband Enhancement Council, 2022 Annual Report, https://www.wvlegislature.gov/legisdocs/reports/agency/B19_CY_2022_15837.pdf, p. 52

Universal Service Funds) and an additional 20% of auction subsidized locations per year until 100% completion by the end of year six.

The specification of "Optical Carrier – Fiber to the End User" as a technology necessitates the deployment of a Gigabit Passive Optical Network (GPON) as a fiber-to-the-home (FTTH) network that is able to provide service to each of the subsidized locations in West Virginia.

All auction winners must fulfill deployment obligations to serve 40% of total locations won across West Virginia by the end of the third year from RDOF Final Approval. An additional 20% must be served each following year until 100% completion is achieved by the end of year six.[11] See Table 4 for each.

These deployment milestones apply to all auction participants and represents a significant investment in broadband infrastructure in West Virginia.

*Table 4: RDOF Milestones*

| Internet Service Provider | Date of RDOF Final Approval | 40% Milestone Date |
|---|---|---|
| Citynet | 11/12/2021 | 12/31/2024 |
| Micrologic | 02/14/2022 | 12/31/2025 |
| PRODIGI | 03/15/2022 | 12/31/2025 |
| Frontier | 05/12/2022 | 12/31/2025 |
| GigaBeam Networks | 12/15/2022 | 12/31/2025 |
| Suddenlink | 08/05/2022 | 12/31/2025 |

Source: WVDED

In addition to the RDOF milestones highlighted in Table 4, Table 5 provides a summary of the number of locations and assigned and authorized funding per RDOF recipient in West Virginia. This excludes projects that providers have defaulted on already and were announced as such by the FCC. The table is up-to-date as of August 15, 2023. Note that Space Exploration Technologies Corp. is included even though their service is not classified as a BEAD-relevant service.

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[11] "Rural Digital Opportunity Fund," Universal Service Administrative Company, accessed May 19, 2023, https://www.usac.org/high-cost/funds/rural-digital-opportunity-fund/.

*Table 5: The Number of Locations and Assigned and Authorized Funding per RDOF Recipient in West Virginia*

| Provider | Assigned Locations | Assigned Support/funding | Authorized Locations | Authorized Support/funding |
|---|---|---|---|---|
| Altice USA, Inc. | 502 | $120,968.00 | 502 | $120,968.00 |
| Citynet West Virginia, LLC | 13,458 | $53,513,114.30 | 13,448 | $53,486,649.80 |
| Digital Connections Inc. dba PRODIGI | 4,771 | $8,583,001.40 | 4,771 | $8,583,001.40 |
| Frontier Communications Corporation, DIP | 79,390 | $247,625,130.30 | 79,334 | $247,538,077.60 |
| GigaBeam Networks, LLC | 8,956 | $27,972,938.90 | 8,956 | $27,972,938.90 |
| Micrologic Inc. | 2,076 | $10,036,047.70 | 2,076 | $10,036,047.70 |
| Shenandoah Cable Television, LLC | 419 | $91,867.00 | 0 | $0 |
| Space Exploration Technologies Corp. | 9,337 | $13,822,221.30 | 0 | $0 |

Source: FCC, Auction 904: Rural Digital Opportunity Fund

# 2.2 State-Administered Programs

The West Virginia Broadband Investment Plan (WVBIP) includes State-administered programs funded by the Federal government to expand broadband into unserved and underserved areas. Funds were provided under the American Rescue Plan Act (ARPA). ARPA funding sources include a $136 million award of Capital Projects Funds provided by the U.S. Department of the Treasury (U.S. Treasury) in June 2022. The allocation of CPF funding followed the West Virginia Legislature's allocation of $90 million in State Local Fiscal Recovery Funds, also funded by the U.S. Treasury, in October 2021. The State has established three distinct programs to execute ARPA funded projects. These programs include the GigReady, Major Broadband Project Strategies (MBPS), and the Line Extension Advancement and Deployment (LEAD) programs. In addition, the West Virginia Legislature has allocated $20 million in State funding for the Wireless Internet Networks (WIN) program. These existing programs complement the forthcoming infrastructure program developed for BEAD.

The geographic areas of the GigReady, MBPS, and LEAD programs are displayed in Figure 4 below. In line with the Governor's Billion-Dollar Broadband Strategy effort, the WVBIP programs cover a larger geographic area than all but the federal RDOF program.

Figure 4: Funded Areas of State-Run Funding Programs
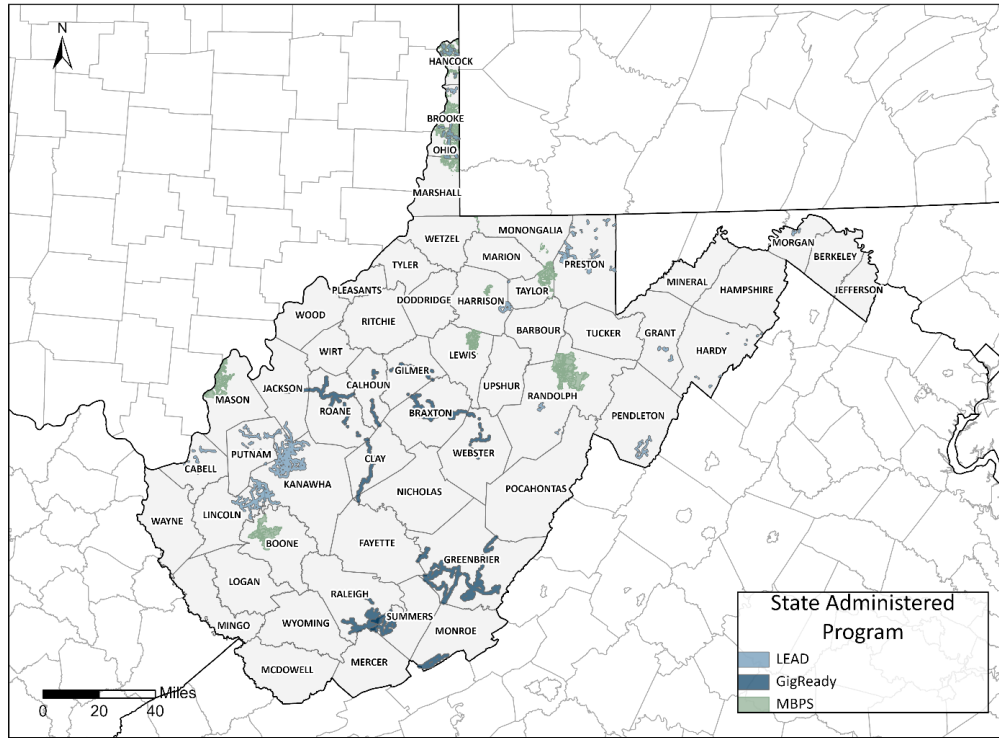
Source: WVDED

Table 6 indicates the number of Broadband Serviceable Locations (BSLs) covered under the LEAD, GigReady, and MBPS programs.

Table 6: BSLs Covered by LEAD, GigReady, and MBPS

| BEAD Service Type | BSL Units Count |
|---|---|
| Unserved – No Service | 2,976 |
| Unserved – Slow Service | 22,313 |
| Underserved | 5,751 |

Source: WVDED

# 3. Unserved and Underserved Locations

To generate an updated database and file of unserved locations (BSLs with maximum available speeds lower than 25/3 Mbps) and underserved locations (BSLs with maximum available speeds between 25/3 Mbps and 100/20 Mbps), WVDED used the FCC's Fixed Broadband Availability Data from the National Broadband Map on July 31, 2023. WVDED merged this dataset with the set of BSLs to establish a complete set of unique BSLs with their appropriate connection information and created an additional column that indicates whether the highest-speed, lowest-latency offering of Reliable Broadband Service at a given

location meets Fully Served (speeds of at least 100/20 Mbps), Underserved, or Unserved BEAD requirements.

Below, Table 7 displays the overall counts and frequency of Broadband Serviceable Locations by BEAD Service Type using the December 31, 2022, dataset (version 7/25/23).

*Table 7: BEAD Service Type of Broadband Serviceable Locations in West Virginia*

| BEAD Service Type | *Broadband Serviceable Locations* | |
| --- | --- | --- |
| | Count | Percentage (%) |
| Served | 583,180 | 64.8% |
| Unserved | 271,623 | 30.2% |
| Underserved | 45,604 | 5.1% |

Source: WVDED

Figure 5 visualizes the spatial distribution of these served, underserved, and unserved broadband serviceable locations.

*Figure 5: Broadband Serviceable Locations by BEAD Service Classification*
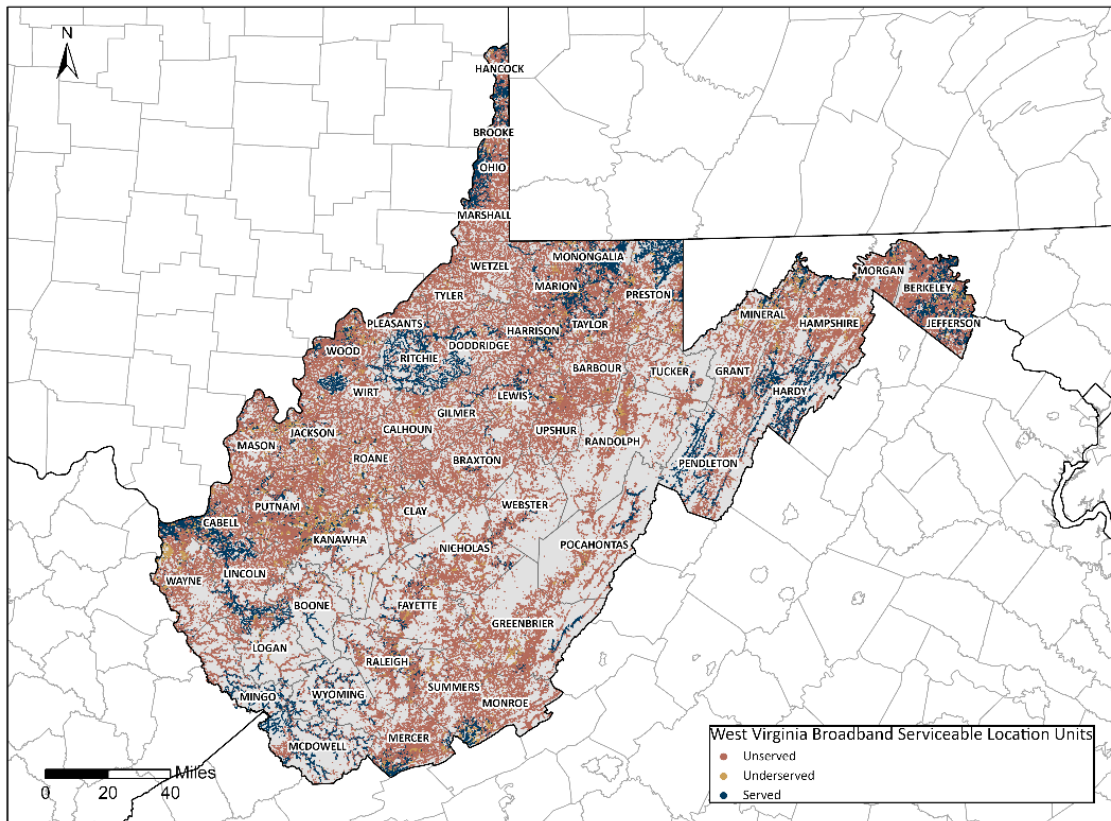
Source: Calculated using December 31, 2022, National Broadband Data Collection Availability Data provided by the Federal Communications Commission

Of the remaining 35.2% of underserved and unserved locations, 149,262 (or an additional 16.6% of all addresses) are currently part of previously funded project areas that, by virtue of the federal award, establish an enforceable funding commitment.[12]

Please note that determinations of funded project areas and associated broadband serviceable locations are subject to change. More details about these programs and covered locations can be found in Section 2 of this Volume, or in West Virginia's Five-Year Action Plan.

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[12] NTIA, "Notice of Funding Opportunity: Broadband Equity, Access, and Deployment Program," https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf, p28

Table 8 displays the counts of unserved and underserved locations in West Virginia net of funded areas, and is reflective of re-classifying "Served" DSL service availability to "Underserved."

*Table 8: BEAD Service Type of BSL, Including Funded Areas*

| BEAD Service Type | Broadband Serviceable Locations | |
| --- | --- | --- |
| | Count | Percentage (%) |
| Served | 583,180 | 64.8% |
| Funded | 149,262 | 16.6% |
| Underserved | 27,631 | 3.1% |
| Unserved | 140,334 | 16.4% |

Source: WVDED

A complete list of unserved and underserved broadband serviceable locations without existing enforceable funding commitments across West Virginia is provided below.



WV_Underserved_8_3_23.csv

**Underserved**:



WV_Unserved_8_3_23.csv

**Unserved**:

Please note that these locations are subject to change. WVDED will additionally publish a final version of all eligible unserved and underserved broadband serviceable locations following the completion of the challenge process in early 2024.

# 4. Community Anchor Institutions

Based on the statutory definition of "community anchor institution" in 47 USC 1702 (a)(2)(E), WVDED defines "community anchor institution" 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 or HUD-assisted housing organization), or community support organization that facilitates greater use of broadband service by vulnerable populations, including, but not limited to, low-income individuals, unemployed individuals, children, the incarcerated, and aged individuals.

WVDED created four additional subcategories of community support organizations not specifically listed in statute because they "facilitate greater use of broadband service by vulnerable populations."[13]

Justifications for including these additional subcategories are provided below.

>*Correctional and Rehabilitation Facilities*: West Virginia's correctional and rehabilitation facilities provide access to education, healthcare, and other community support services to an NTIA covered population—incarcerated West Virginians. With a high population density and limited ability to change physical space outside facilities, high-capacity broadband access is critical to access advanced educational and healthcare services not available inside facilities, attend remote hearings or meetings with attorneys, and gain access to forthcoming Digital Equity Act resources.

>*Courthouses:* Federal and state courthouses in West Virginia serve vulnerable populations in two distinct ways. Primarily, courthouses serve as spaces where vulnerable populations who may not be able to physically appear, such as incarcerated or aging individuals, are able to access community services by virtually attending court hearings or filing paperwork with the court. Additionally, as public spaces, courthouses also serve as a free and safe space for everyone, including vulnerable populations, to access public WiFi. Providing high-capacity, high-speed broadband service in courthouses will facilitate greater use by all West Virginians, including but not limited to those who are incarcerated, aging, or low-income.

>*Job Training Centers*: NTIA's Initial Proposal Volume 1 guidance identifies job training centers as an encouraged subcategory. Offering high-speed, high-capacity broadband will allow West Virginia's nineteen job training centers to better offer training referrals, career counseling, job listings, and similar employment-related services to all West Virginians, including low-income and unemployed residents.

>*Senior Centers*: Senior Centers serve as gateways to many community services, including nutrition and meal programs, health advice, transportation services, public benefits counseling, social activities, and more.[14] Providing these high-capacity centralized locations with high-speed

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[13] 47 USC 1702 (a)(2)(E), https://www.govinfo.gov/content/pkg/USCODE-2019-title47/html/USCODE-2019-title47-chap5-subchapII-partII-sec254.htm
[14] "Senior Centers Fact Sheet" (National Council on Aging, 2015), https://ctcwcs.files.wordpress.com/2017/12/ncoa-senior-centers-fact-sheet-12-5-17.pdf.

broadband will help facilitate broadband use by West Virginian aging and low-income populations.

# 4.1 Methodology: Identification and Assessment

**Definitions and Data Sources:** West Virginia used the following definitions and data sources to identify West Virginian community anchor institutions:

*Schools*: A list of public and private K-12 schools across West Virginia was derived from a combination of the U.S. Department of Homeland Security Homeland Infrastructure Foundation-Level Dataset and the WV State GIS Data Clearinghouse.[15]

*Libraries*: A list of public libraries in West Virginia was derived from a combination the Institute of Museum and Library Services Public Library Survey and the WV State GIS Data Clearinghouse Libraries dataset.[16]

*Healthcare Facilities*: A list of healthcare facilities across West Virginia was derived from a combination of the West Virginia Department of Health and Human Services Office of Health Facility Licensure and Certification dataset and the West Virginia GIS Data Clearinghouse Health category datasets.[17]

*Public Safety Entity*: A list of public safety entities was derived from the U.S. Department of Homeland Security Homeland Infrastructure Foundation-Level fire station and local law enforcement location datasets and the West Virginia GIS Data Clearinghouse Law Enforcement dataset.[18]

*Higher Education*: A list of higher education institutions was derived from the U.S. Department of Homeland Security Homeland Infrastructure Foundation-Level Colleges and Universities and

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[15] *Public Schools* (U.S. Department of Homeland Security, December 7, 2022), https://hifld-geoplatform.opendata.arcgis.com/datasets/geoplatform::public-schools/explore?location=52.496911,-114.391884,5.80.
*Child Care Centers* (U.S. Department of Homeland Security, December 8, 2022), https://hifld-geoplatform.opendata.arcgis.com/datasets/child-care-centers/explore.
"Schools K-12 (WVGISTC)," 2021, http://wvgis.wvu.edu/data/dataset.php?ID=503.
[16] WVGISTC: GIS Data Clearinghouse, "Libraries," 2002, http://wvgis.wvu.edu/data/dataset.php?ID=174.
*Libraries* (U.S. Department of Homeland Security, March 1, 2023), https://hifld-geoplatform.opendata.arcgis.com/datasets/libraries/explore.
[17] "WV State GIS Data Clearinghouse," West Virginia GIS Technical Center, accessed July 31, 2023, http://wvgis.wvu.edu/data/data.php.
"Health Facility/Provider Search," WVDHHR Office of Health Facility Licensure & Certification, 2013, https://ohflac.wvdhhr.org/Apps/Lookup/FacilitySearch.
[18] "Law Enforcement - State and Local (WVDEM)," 2020, http://wvgis.wvu.edu/data/dataset.php?ID=497.
*Local Law Enforcement Locations* (U.S. Department of Homeland Security, February 2, 2021), https://hifld-geoplatform.opendata.arcgis.com/datasets/local-law-enforcement-locations/explore.
*Fire Stations* (U.S. Department of Homeland Security, September 11, 2020), https://hifld-geoplatform.opendata.arcgis.com/datasets/fire-stations/explore.

Supplemental Colleges dataset, the WVU Extension Offices dataset, and the West Virginia GIS Data Clearinghouse Higher Education Facilities dataset.[19]

***Public Housing***: A list of public housing in West Virginia was derived from NTIA-recommended sources: the National Housing Preservation Database, maintained by the Public and Affordable Housing Research Corporation (PAHRC) and National Low-Income Housing Coalition.[20]

***Community Support Organizations***: As noted above, WVDED added four subcategories to the statutory definition of Community Support Organizations:

- correctional and rehabilitation facilities
- courthouses (including federal, state, and local courthouses within the State),
- job training centers, and
- senior centers.

A list of correctional and rehabilitation facilities was derived from the U.S. Department of Homeland Security Homeland Infrastructure Foundation-Level Local Law Enforcement dataset and the West Virginia GIS Data Clearinghouse Courthouse dataset.[21] A list of courthouses was derived from the U.S. Department of Homeland Security Homeland Infrastructure Foundation-Level Courthouse dataset and the West Virginia GIS Data Clearinghouse Courthouse dataset.[22] A list of job training centers was derived from the American Job Center Finder through CareerOneStop.[23] A list of senior centers were derived from the National Council on Aging.[24]

To then assess broadband availability and need for eligible CAIs, WVDED identified the fabric IDs associated with these locations from the FCC Broadband Serviceable Location Fabric Version 2. This then allowed WVDED to match the broadband availability data with the CAIs. For this, WVDED used the availability data from the December 31, 2022, version of the National Broadband Data Collection. Factoring the maximum download and upload speeds of the CAI locations, WVDED created a list of entities that do not have symmetrical gigabit internet service. This constitutes the eligible CAI list. Furthermore,

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[19] "Higher Education Facilities (WVEMD)," 2020, http://wvgis.wvu.edu/data/dataset.php?ID=504.
*Colleges and Universities* (U.S. Department of Homeland Security, December 7, 2022), https://hifld-geoplatform.opendata.arcgis.com/datasets/colleges-and-universities/explore.
*Supplemental Colleges* (U.S. Department of Homeland Security, December 7, 2022), https://hifld-geoplatform.opendata.arcgis.com/datasets/supplemental-colleges/explore.
"County Offices," WV Extension, March 7, 2022, https://extension.wvu.edu/offices.
[20] "National Housing Preservation Database (NHPD)," 2020, https://preservationdatabase.org/.
[21] "Correctional Institutions - Federal, State and Local (HSIP)," 2009, http://wvgis.wvu.edu/data/dataset.php?ID=401.
*Local Law Enforcement Locations* (U.S. Department of Homeland Security, February 2, 2021), https://hifld-geoplatform.opendata.arcgis.com/datasets/local-law-enforcement-locations/explore.
[22] "Courthouses," 2002, http://wvgis.wvu.edu/data/dataset.php?ID=172.
*Courthouses* (U.S. Department of Homeland Security, September 20, 2019), https://hifld-geoplatform.opendata.arcgis.com/datasets/courthouses/explore.
[23] "American Job Centers in West Virginia," CareerOneStop, 2023, https://www.careeronestop.org/LocalHelp/AmericanJobCenters/find-american-job-centers.aspx?location=West%20Virginia&radius=25&ct=0&y=0&w=0&e=0&sortcolumns=Location&sortdirections=ASC
[24] National Institute of Senior Centers, accessed July 31, 2023, https://ncoa.org/page/the-national-institute-of-senior-centers.

CAIs that could not be matched to a fabric location ID were added to the eligible CAI list. WVDED is distributing, along with the public comment materials, a mechanism for ISPs to report on their service availability at CAIs that could not be matched with fabric location IDs.

Throughout the development of the Five-Year Action and Digital Equity Plans, WVDED engaged stakeholders—including state agencies, nonprofits, and umbrella organizations—to understand their network connectivity and digital equity needs. Umbrella organizations work with CAIs to gather information on the needs of their members. This engagement took the form on one-on-one meetings, inclusion on the Broadband Enhancement Council, solicitation of feedback via the Digital Equity Asset Inventory Survey, assessment of their organizational goals in relation to the goals of BEAD and Digital Equity, and more. While many of the discussions did not focus directly on the topic of CAIs or levels of connectivity, they helped shape WVDED's understanding of their role.

## Engaged Nonprofits and Umbrella Organizations

- AARP West Virginia
- Appalachian Prison Book Project
- Appalachian Regional Commission
- Black by God
- Career Tech West Virginia
- Catalyst Ministries
- Communication Service for the Deaf
- ConnecTrain Corp and U.S. Economic Development Administration
- CyberGenerations
- Digitunity
- EducationSuperHighway and 50 State
- Food banks
- Gassaway Public Library
- Generation West Virginia
- Grow with Google Initiative West Virginia Participants
- Herbert Henderson Office of Minority Affairs
- Highland Community Builders
- Innovative Community Solutions
- Jobs and Hope West Virginia
- Learning.com
- Literacy Volunteers of Monogalia and Preston Counties
- Marshall University
- Mary H. Weir Public Library
- Morgantown Public Library System
- Mountain State Digital Literacy Project
- Multiple Senior Centers
- National Skills Coalition
- Other Public Libraries
- Putnam County Library System
- Rural Local Initiatives Support Corporation (LISC)
- Summers County Adult Education
- Tech for Troops
- The Partnership for African American Churches
- The Restore Empower & Attain Connections with Hope (REACH) Initiative and West Virginia Reentry Councils
- The West Virginian
- West Virginia Alliance of Recovery Residences
- West Virginia Community Health Worker Workforce Advisory Consortium
- West Virginia Economic Justice Project
- West Virginia NAACP Chapters
- West Virginia State University
- West Virginia University Center for Excellence in Disabilities
- West Virginia Veterans Upward Bound
- West Virginia's 11 Regional Planning and Development Councils
- Workforce West Virginia

- Housing and Urban Development Charleston Field Office
- Randolph County Housing Authority
- West Virginia Bureau of Senior Services
- West Virginia Department of Education
- West Virginia Department of Environmental Protection
- West Virginia Department of Health and Human Resources
- West Virginia Department of Homeland Security
- West Virginia Housing Development Fund
- West Virginia Library Commission
- Services

- West Virginia Office of Technology
- West Virginia Department of Rehabilitation
- West Virginia Department of Tourism
- West Virginia Department of Transportation
- West Virginia Department of Veterans Assistance
- West Virginia Division of Corrections and Rehabilitation
- West Virginia Human Rights Commission
- West Virginia Schools of Diversion and Transition
- West Virginia Veterans Home

# 4.2 List of Eligible CAIs

Using the data discussed above, WVDED compiled a list of CAIs without access to gigabit service, which are therefore eligible for the BEAD Program. As of August 24, 2023, the majority of the eligible CAI locations have been identified, but ahead of submitting the Initial Proposal Volume 1 to NTIA, WVDED will continue to revise, expanding or contracting, the list. The current list of eligible CAI locations is linked below. Note the following conditions may appear in the CAI list.

- A "0" in the location_id field means WVDED was unable to match the location to the fabric.
- No or null values in the explanation, FRN, or entity_num fields means there is no filing number for that location or it is not applicable to that location.
- A "0" in the max_down or max_up fields means availability info was unavailable and WVDED will therefore assume it does not have gigabit service.

cai_IPv1.csv

Eligible CAI list:

# 5. Challenge Process

To ensure all West Virginians are accurately represented on the National Broadband Map, WVDED collaborated with the Governor's Office and urged residents to submit individual challenges to the FCC's

broadband location and availability map. This effort resulted in over 177,398 challenges that improved the map data and helped West Virginia access vital BEAD funding for broadband deployment.

Upon approval from the NTIA, WVDED will launch its own BEAD Challenge Process to confirm which locations should be eligible for BEAD funding. WVDED's BEAD Challenge Process will seek challenges from nonprofit organizations, units of local governments, and broadband service providers. This section details WVDED's proposed BEAD challenge process.

# 5.1 NTIA BEAD Model Challenge Process Adoption

To ensure a robust and comprehensive challenge process for the locations eligible for BEAD funding, WVDED will adopt the NTIA's BEAD Model Challenge Process.

## 5.1.1 Pre-Challenge Modifications

WVDED will treat locations that the National Broadband Map lists as having 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.

**Additional Modifications: Speed Test Analysis**

Prior to the start of the challenge process, WVDED will produce and make available a speed-test-based analysis of service availability ("WV Speed Test Analysis") across all Broadband Serviceable Locations in West Virginia utilizing the methodology outlined in Appendix B.

WVDED will subsequently treat as "underserved" locations that the National Broadband Map shows to be served if these rigorously performed speed tests, as determined by the WV Speed Test Analysis, demonstrate that "served" locations instead receive service materially below 100 Mbps download and 20 Mbps upload.

Pursuant to NTIA guidance, WVDED will accept challenges to the WV Speed Test Analysis from units of local government, nonprofit organizations, or a broadband service provider. Eligible challengers may challenge individual locations by, at minimum, submitting the following to WVDED:

- The Location ID of the Broadband Serviceable Location to be challenged;
- A reading of the physical line speed provided by the residential gateway, (i.e., DSL modem, cable modem (for HFC), ONT (for FTTH), or fixed wireless subscriber module);
- The date, time, and evidence of the location of the reading of the physical line speed;
- The name and street address of the entity submitting the challenge; and
- Certification by an individual representing and acting on behalf of the entity submitting the challenge that, to the best of their knowledge, submitted evidence is true.

WVDED will adjudicate challenges to the WV Speed Test Analysis based on a preponderance of the evidence standard.

Inclusion of this modification is contingent on approval by NTIA, and details may be substantially revised prior to publication.

## 5.1.2 Deduplication of Funding

WVDED will use the BEAD Eligible Entity Planning Toolkit to identify existing federal enforceable commitments. WVDED will enumerate locations subject to enforceable commitments by using the BEAD Eligible Entity Planning Toolkit, and consult at least the following datasets:

1. The Broadband Funding Map published by the FCC pursuant to IIJA § 60105.
2. Datasets 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. West Virginia and local data collections of existing enforceable commitments.

WVDED will make its best effort to create a list of broadband serviceable locations subject to enforceable commitments. If necessary, the broadband office will translate polygons or other geographic designations (e.g., a municipality or utility district) describing the area to a list of Fabric locations. The broadband program will submit this list, in the format specified by the FCC Broadband Funding Map, to NTIA.

WVDED 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 do not specify broadband speeds, or when there is reason to believe a provider deployed higher broadband speeds than required, WVDED will verify the deployment speeds of the binding commitment and document this process by requiring providers to sign a binding agreement certifying the actual broadband deployment speeds. WVDED will draw 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.

Table 9 lists the programs that will be analyzed to remove the enforceable commitments from the set of locations eligible for BEAD funding. Additional information can be found in the West Virginia Five Year Action Plan.

When compiling a list of broadband deployment projects with enforceable commitments, WVDED did not include projects that did not yet have a formal, legally-binding commitment signed by both an internet service provider and the appropriate federal, state, and/or local entities. As an illustrative example, the Appalachian Regional Commission projects that do not currently have an internet service provider associated with them were excluded from the list of projects considered to have an enforceable commitment. Furthermore, WVDED reserves the right to continue categorizing broadband deployment projects as such through the start of the challenge process.

*Table 9: Deduplication of Funding Programs*

| Program | Funding Source | Starting Year of Funded Awards |
|---|---|---|
| Rural Digital Opportunity Fund | Federal | 2020 |
| Connect America Fund II Auction | Federal | 2018 |
| USDA ReConnect | Federal | 2018 |
| Community Development Block Grant | Federal | 2019 |
| Appalachian Regional Commission | Federal | 2020 |
| USDA Community Connect | Federal | 2017 |
| U.S. Treasury WVBIP: GigReady | Federal | 2022 |
| U.S. Treasury WVBIP: Major Broadband Project Strategies | Federal | 2022 |
| U.S. Treasury WVBIP: Line Extension Advancement and Development | Federal | 2022 |
| WVBIP: Wireless Internet Networks | State | 2022 |

Following the conclusion of the challenge process, WVDED reserves the right to reclassify the BEAD funding eligibility of Broadband Serviceable Locations previously determined to be subject to an existing enforceable commitment if by the determination of the federal or state agency administering the grant, loan, or loan guarantee, an internet service provider subject to an enforceable commitment defaults or otherwise irrevocably fails to complete its contractual obligation. If following the completion of an enforceable commitment, service reported by the provider at Broadband Serviceable Location(s) does not meet the BEAD 100/20 Mbps "fully served" standards, then WVDED will help the impacted community identify alternative federal or other funding sources that can be used to rectify the situation.

In the event that Broadband Serviceable Locations previously determined to be subject to an enforceable commitment are reclassified following the challenge process, WVDED will follow all deployment project subgrantee selection procedures outlined in its forthcoming Initial Proposal Volume 2 to select subgrantees for these Locations.

Additionally, WVDED has yet to completely apportion the State's ARPA CPF allocation but will do so prior to the start of the BEAD competitive subgrantee selection process. When fully dispersed, funded locations will be categorized as Ineligible—due to an enforceable federal funding commitment—prior to WVDED conducting their BEAD competitive subgrantee process.

## 5.1.3 Challenge Process Design

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

**Permissible Challenges**

WVDED will only allow challenges on the following grounds:

- The identification of eligible CAIs, as defined by WVDED,
- CAI BEAD eligibility determinations,
- BEAD eligibility determinations for existing broadband serviceable locations (BSLs),
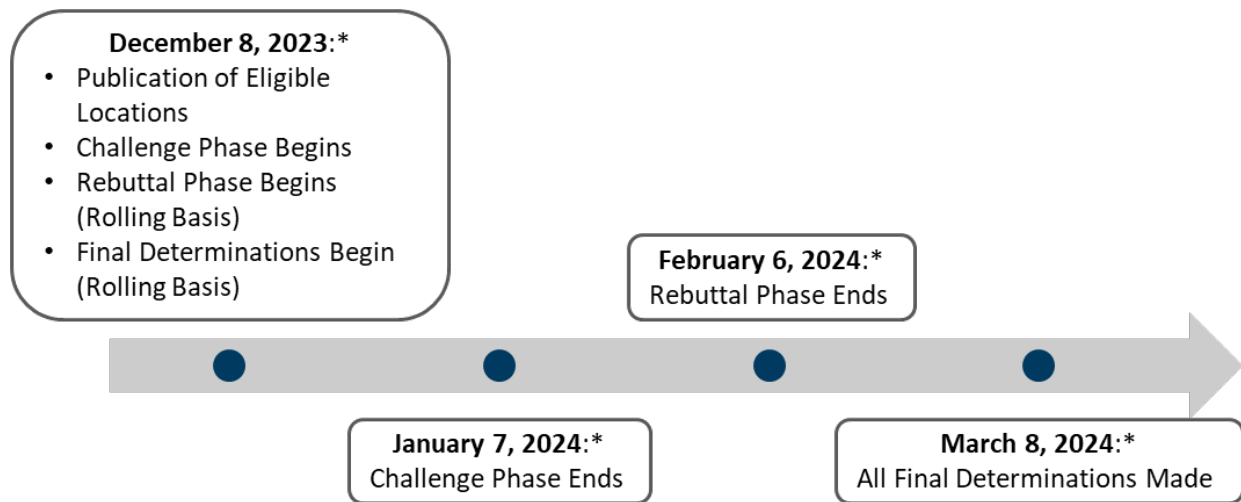- Enforceable commitments, or
- Planned service.

**Permissible Challengers**

During the BEAD Challenge Process, WVDED will only allow challenges from nonprofit organizations, units of local governments, and broadband service providers.

## 5.1.4 Challenge Process Overview

The challenge process conducted by WVDED will include four phases, spanning 90 days. Figure 6 below outlines a tentative timeline for West Virginia's BEAD Challenge Process.

*Figure 6: Tentative BEAD Challenge Process Timeline*



**December 8, 2023**:*
- Publication of Eligible Locations
- Challenge Phase Begins
- Rebuttal Phase Begins (Rolling Basis)
- Final Determinations Begin (Rolling Basis)

**February 6, 2024**:*
Rebuttal Phase Ends

**January 7, 2024**:*
Challenge Phase Ends

**March 8, 2024**:*
All Final Determinations Made

**\***All dates subject to change in accordance with NTIA approvals.

**1. Pre-Challenge Modifications**

If modifications specified in Section 5.1.1 Pre-Challenge Modifications are approved by NTIA, WVDED will modify and make available the set of unserved and underserved Broadband Serviceable Locations it intends to make eligible for BEAD funding.

**2. Publication of Eligible Locations:**

Prior to beginning the Challenge Phase, WVDED 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). WVDED will also publish locations considered served, as they may be challenged.

**3. Challenge Phase:**

During the Challenge Phase, challenges will be submitted through the WVDED 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.

### 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. The challenge portal will confirm that the challenged service is listed in the National Broadband Map and meets the definition of reliable broadband service. The challenge portal 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, WVDED 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.

### Timeline:
Challengers will have 30 calendar days to submit a challenge from the time the initial list of unserved and underserved locations, community anchor institutions, and existing enforceable commitments are posted.

## 4. 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.

### Timeline:
Providers will have 30 calendar days from notification of a challenge to provide rebuttal information to WVDED.

## 5. Final Determination Phase:

During the Final Determination phase, WVDED will make the final determination of the classification of the location, either declaring the challenge "sustained" or "rejected."

### Timeline:
Following intake of challenge rebuttals, WVDED 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.

## Evidence & Review Approach

To ensure that each challenge is reviewed and adjudicated based on fairness for all participants and relevant stakeholders, WVDED will review all applicable challenge and rebuttal information in detail without bias, before deciding to sustain or reject a challenge. WVDED 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. WVDED plans to ensure reviewers have sufficient training to apply the standards of review uniformly to all challenges submitted. WVDED will also require that all reviewers submit affidavits to ensure that there is no conflict of interest in making challenge determinations.

For examples from the NTIA of acceptable evidence for BEAD Challenges and Rebuttals, see Table 10 in the Appendix.

### Area and Multi-Dwelling Unit (MDU) Challenge

WVDED 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 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.

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 by at least three units or 10% of the unit count listed in the Fabric within the same broadband serviceable location, whichever is larger.

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 with evidence that service is available for all BSL 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 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).[25]

**Transparency Plan**
To ensure that the challenge process is transparent and open to the public and stakeholders, WVDED will, upon approval from NTIA, publicly post an overview of the challenge process phases, challenge timelines, and instructions on challenge submissions. This documentation will be posted publicly for at least a week prior to opening the challenge submission window. WVDED also plans to actively inform all units of local government of its challenge process and set up regular touchpoints to address any comments, questions, or concerns from local governments, nonprofit organizations, and Internet service providers. Relevant stakeholders can sign up on the WVDED website https://broadband.wv.gov/ for challenge process

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[25] A mobile test unit is a testing apparatus that can be easily moved, which simulates the equipment and installation (antenna, antenna mast, subscriber equipment, etc.) that would be used in a typical deployment of fixed wireless access service by the provider.

updates and newsletters. WVDED will engage with stakeholders about the challenge process through a designated email address and will notify providers of challenges by email.

Beyond actively engaging relevant stakeholders, WVDED 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 (if applicable),
- 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.

WVDED 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, the broadband office 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.

WVDED 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 open records laws or is protected under applicable privacy laws, that information should be identified as privileged or confidential. Otherwise, the responses will be made publicly available. WVDED will also adhere to all State-level laws and regulations pertaining to the protection of PII.

# 6. Volume I Public Comment

## 6.1 Public Comment

WVDED will initiate a 30-day public comment period on this Initial Proposal Volume 1 draft document. Through a public hearing, physical copies, mail, and an online form, WVDED invites West Virginians to share their thoughts and comments on the content of this draft prior to submission to NTIA.

The Initial Proposal Volume 1 draft document will be posted online at broadband.wv.gov. Physical copies will be provided to the public at select community anchor institutions and to each of the 11 West Virginia Regional Planning and Development Council (RPDC) offices.

WVDED will host at least one public hearing during the comment period. The public hearing will be advertised one week in advance. WVDED encourages all West Virginians, including representatives from local community organizations, worker groups, or underrepresented individuals, to participate.

West Virginians may submit comments to WVDED in three ways:

1. Through an online comment form,
2. By mail to:
   c/o West Virginia Department of Economic Development
   1900 Kanawha Boulevard East, Building 3, Suite 600
   Charleston, WV 25303, or
3. A brief oral presentation during a public hearing.

## 6.2 Outreach and Engagement

WVDED will continue to coordinate with local community organizations, unions and worker organizations, and underrepresented groups to gather feedback on the Initial Proposal. Feedback from public comments and engagement will be reflected in the Initial Proposal Volume 1 submitted to NTIA.

WVDED is additionally soliciting community feedback to identify locations in West Virginia that meet the definition of a community anchor institution (CAI) as proposed in Section 4 and which currently lack access to gigabit service. WVDED has requested government agencies and each of the RPDCs review locations in their region and provide relevant activities and service speeds of additional locations. West Virginians seeking to include qualifying CAIs without current access to gigabit service may contact their local RPDC directly or contact WVDED using one of the three methods identified in Section 6.1.

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# Appendices

## Appendix A. Examples of Acceptable Evidence for BEAD Challenges and Rebuttals

*Table 10: Examples of Acceptable Evidence for BEAD Challenges and Rebuttals*

| 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.<br>• A service request was refused within the last 180 days (e.g., an email or letter from provider).<br>• Lack of suitable infrastructure (e.g., no fiber on pole).<br>• 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 days of a request.<br>• 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. | • Provider shows that the location subscribes or has subscribed within the last 12 months, e.g., with a copy of a customer bill.<br>• If the evidence was a screenshot and believed to be in error, a screenshot that shows service availability.<br>• 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 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 management system. |

| L | Latency | The round-trip latency of the broadband service exceeds 100 ms. | 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. |
|---|---|---|---|---|
| D | Data cap | The only service plans marketed to consumers impose an unreasonable capacity allowance ("data cap") on the consumer. | • Screenshot of provider webpage.<br>• Service description provided to consumer. | 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. | 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 service provider (e.g., authorization letter). | 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 | • Construction contracts or similar evidence of on-going deployment, along with evidence that all necessary permits have been applied for or obtained.<br>• Contracts or a similar binding agreement committing that planned service will meet the BEAD definition and requirements of | 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. |

| | | commitment or a provider is building out broadband offering performance beyond the requirements of an enforceable commitment. | 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. | |
|---|---|---|---|---|
| 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 not covered by that commitment. (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 CAI. | Evidence that the location falls within the definition of CAIs in West Virginia. | 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 WVDED 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. |

# Appendix B. Proposed Additional Speed Test Methodology for Pre-Challenge Modifications

## Introduction

Providing universal access to fast, reliable internet service is a key priority for state governments and a critical driver behind the current funding made possible by the Infrastructure Investment and Jobs Act. To facilitate informed eligibility decisions, stakeholders need high-quality, comprehensive, and unbiased data.

The pre-approved modules in the Challenge Process set a very high bar and the data points that meet those demands are sparse and sometimes non-existent in many target areas. As valuable as those records are, there simply are not enough of them to ensure that many communities are properly represented in the efforts to expand broadband access.

Bringing orders of magnitude greater data than what has been collected through federal, state, and local efforts, crowdsourced data provides a well-established and trusted source of independent and objective measurement and is particularly well suited to addressing current questions regarding broadband availability and performance.

By painting a broad and detailed picture of the current connectivity landscape, crowdsourced data helps ensure unserved and underserved locations receive the funding needed to bring to life the current generational and transformative opportunity to improve connectivity for all.

To that end, the following is a draft of the proposed sources and requirements for defining acceptable evidence of unserved and underserved locations when using crowdsourced test results to complete the Volume I requirement for Eligible Entities, as provided by Ookla in collaboration with a collection of Eligible Entities.

For readers who wish to skip to a certain section, the document has been divided into two complementary parts:

- Part one provides recommendations for completing the Volume 1 requirements for Eligible Entities to identify each unserved and underserved location. It includes:
  - Step-by-step guidelines for identifying areas of need using crowdsourced measurements
  - Answers to frequently asked questions about how to best use crowdsourced measurements as part of the BEAD challenge process
- Part two provides an overview of the methodological rigor behind crowdsourced data, including rebuttals of common misconceptions regarding crowdsourced data

# Part One: A step-by-step guide to identify unserved and underserved locations

## Step One: Define criteria for underserved

- Areas where speeds lag behind the current 100 Mbps download and 20 Mbps upload requirements are considered underserved and can be prioritized for BEAD funding.
- Note that when classifying an area as underserved, *both* download *and* upload speed thresholds are considered. That is, an area will be considered underserved if *either* the relevant download *or* upload threshold is not met.

## Step Two: Filter to exclude non-relevant speed tests

Measurement accuracy is critical to painting a clear picture of performance and to the equitable distribution of funding. Including results from corporate campuses or without adequate location precision harms the goal of showing a true view of residential service.

- Remove any speed tests that do not have a GPS-defined location. Most browser-based tests use GeoIP resolved to the centroid of a zip code (or similarly defined area) and do not provide adequate location precision.
- Exclude measurements identified as originating from corporate campuses and other business-only areas.
- Exclude tests that show a GPS location precision of no better than 300 meters in rural areas or 100 meters in urban areas.

## Step Three: Use census blocks as evaluation areas

The 2020 census block polygons will be used as the basis for aggregating and evaluating the speed test data, providing the state important census data to best understand and prioritize areas due to economic need, equitable distribution of resources, and other key goals.

- Overlay the speed test points on the map containing the BSL data and the 2020 US census blocks.
- Calculate the 75th percentile speed as well as maximum and median speeds for comparison that are captured within each census block.
- Communities and areas that do not meet the broadband minimum standards will stand out, often in clusters on the map.
- Although individual census blocks will often include enough BSLs and test measurements to stand on their own, many census blocks have very low numbers of both BSLs and speed test measurements.

- If a geographically large census block includes disparate and unrelated areas, a custom polygon can be used to more selectively define the eligible area
  - Sparsely populated areas contain fewer data points for most human activity, including speed test measurements — so-called "doughnut holes" are common and contiguous census blocks should be used to judge the area as a whole.
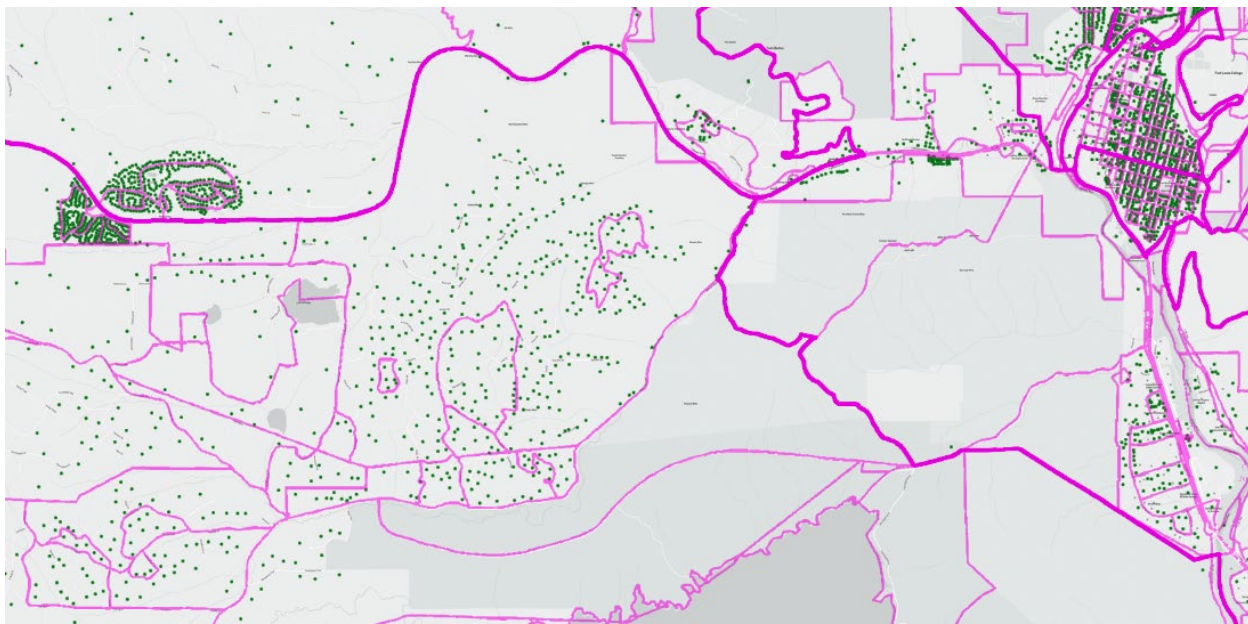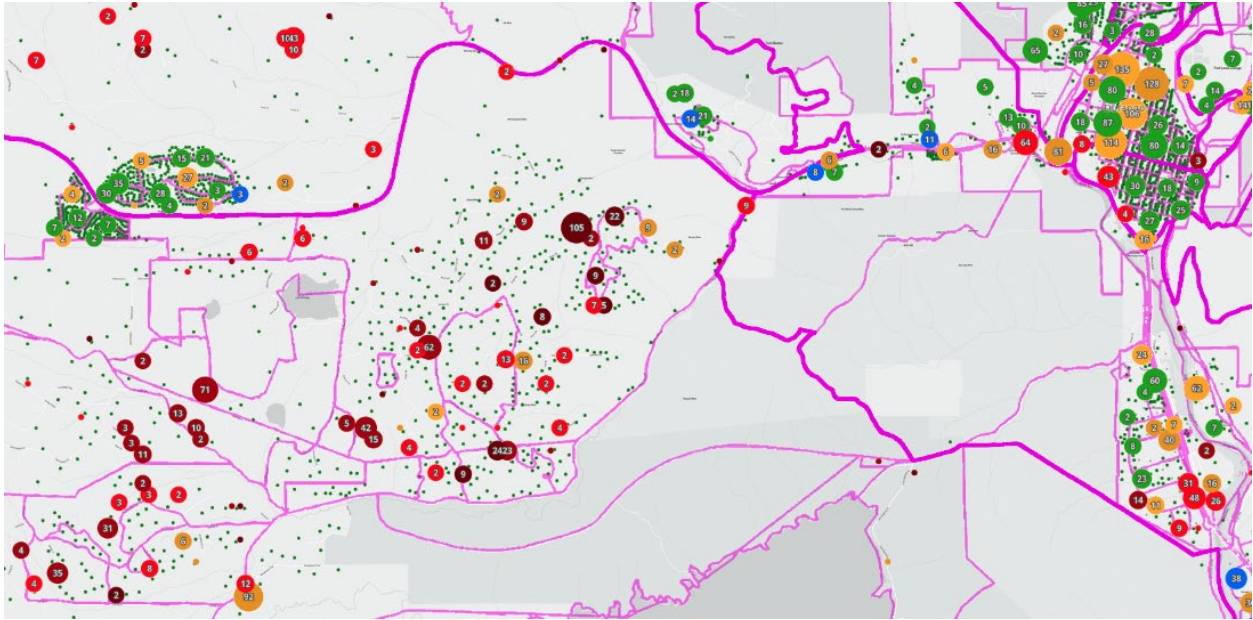


Source: Ookla, "Using crowdsourced data to identify unserved and underserved locations for broadband funding eligibility", Version 1.0, Last updated: August 11, 2023

## Step Four: Evaluate the block or other polygon area based on best speed results

Speed test results include average, median, and best speeds. Each of these has its advantages. For identifying areas of need, however, Ookla recommends using best speeds.

- Best speeds act as a particularly strong indicator of need: if the highest speeds measured are below the 100/20 Mbps thresholds, the defined area simply cannot meet the minimum requirements.
  - Even if a small number of tests measure slightly above the minimums, the tested network may not be providing "reliable" service as required in the IIJA legislation.
- The term "best speeds," for this purpose, is defined as the 75th percentile, respectively, for download and upload speeds.
  - An area with speeds above the numbers listed in the definitions of "underserved" listed above will be considered ineligible for their respective categories unless qualifying under a separate module.
- This approach also ensures that outlier data points do not exaggerate the performance of the available network(s).

- Although it is expected that peak internet usage hours can create temporarily slower throughput speeds, hours of lowest usage, such as early morning hours, can also provide an overly optimistic assessment of network performance.
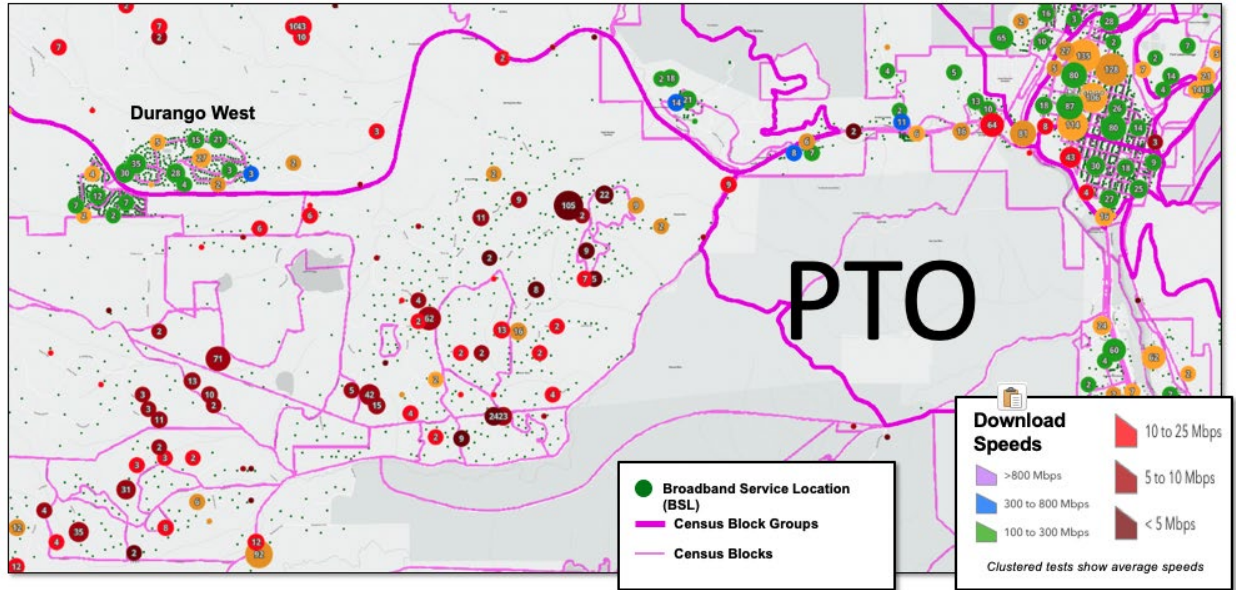


Source: Ookla, "Using crowdsourced data to identify unserved and underserved locations for broadband funding eligibility", Version 1.0, Last updated: August 11, 2023
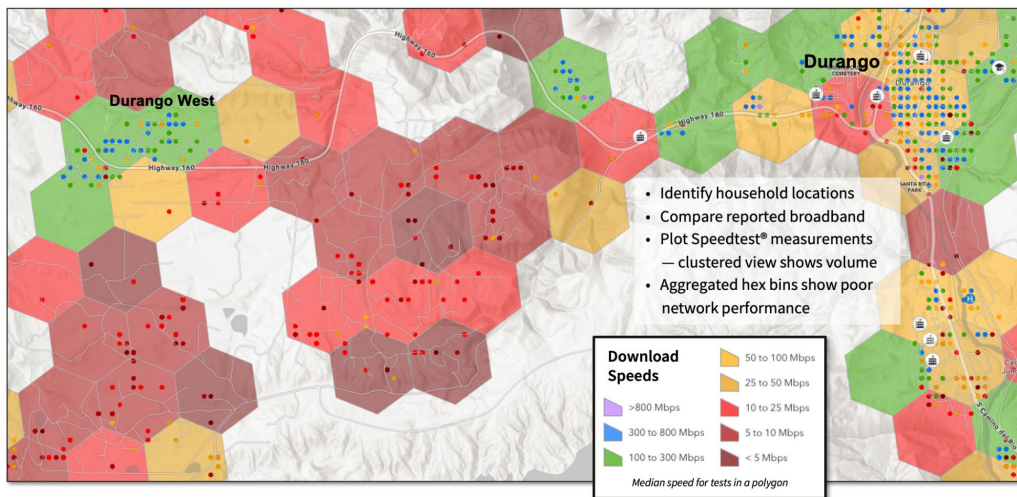


Source: Ookla, "Using crowdsourced data to identify unserved and underserved locations for broadband funding eligibility", Version 1.0, Last updated: August 11, 2023

Source: Ookla, "Using crowdsourced data to identify unserved and underserved locations for broadband funding eligibility", Version 1.0, Last updated: August 11, 2023

## Step Five: Compare with reported speeds and known funding decisions

Once areas have been identified where best speeds at the census block level show service lagging behind the 100/20 Mbps threshold, compare results with those reported on the FCC national map. The goal is to identify areas where broadband service is reported but evidence indicates it is not available and no other funding has been made available.

- If an area has already been funded through another program, it will not be eligible unless separate proof is presented that the responsible party does not plan to build out the area or other evidence can prove they will not be able to complete the build.
- Using best speeds as described above, areas identified with service lagging behind the 100/20 Mbps threshold will be considered eligible.

## Step Six: Choose the census blocks that best define the target area or create a custom polygon

- Demarcate the area of concern by drawing a polygon around the areas identified as eligible for funding.
    - This can include neighboring locations that are not immediately contiguous but can be considered part of the same area.
- NOTE: Recognizing that the national map uses hexagons to define broadband availability, overlaying and comparing the FCC hexagons against the results shown in the census block will likely help facilitate additional evaluation.

○ Offering a hex-based view in addition to a census-block view can help local constituents, municipalities, and nonprofits make apples-to-apples comparisons between state eligibility maps and the FCC visualizations.
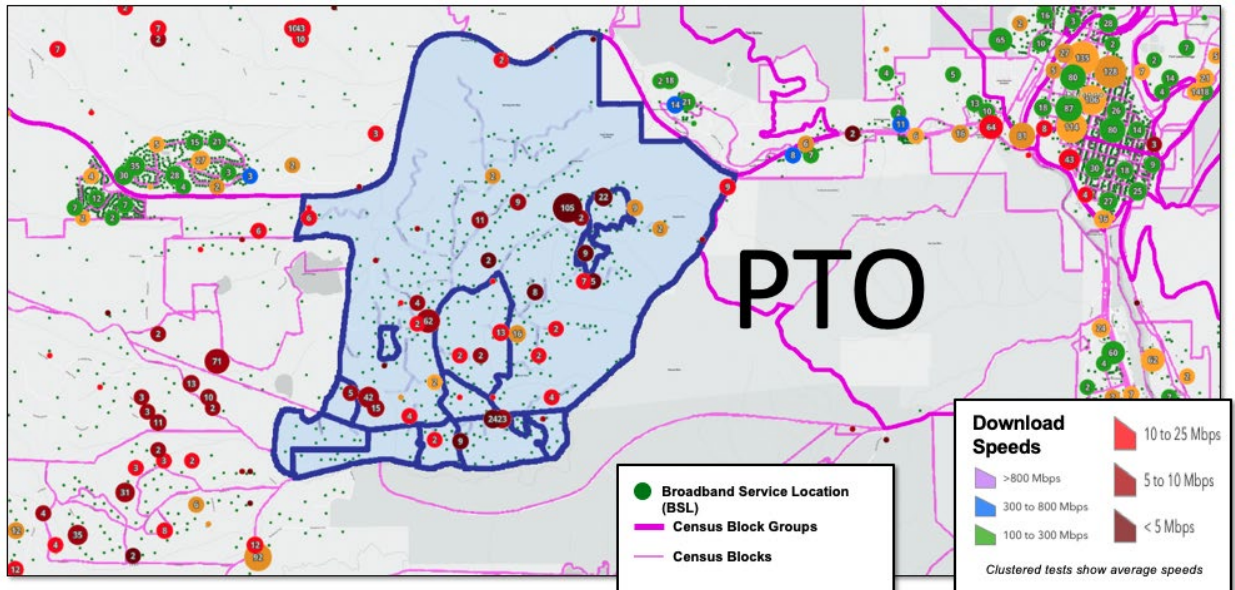


Source: Ookla, "Using crowdsourced data to identify unserved and underserved locations for broadband funding eligibility", Version 1.0, Last updated: August 11, 2023

## Step Seven: Import BSLs

The challenge submission process is built around the Location ID for each BSL.

- Once a polygon has been created around the area of concern, select the BSLs that lie within that newly defined area.
- Every BSL Location ID targeted should be captured within the census block(s) or polygon that will be considered eligible

# Frequently Asked Questions:

**Why is third-party crowdsourced is needed during the challenge process?**

Many state and local governments have made significant efforts to drive public engagement of reporting throughput speeds and latency. Some have set up their own speed testing websites using popular tools such as those provided by Ookla and M-Labs. Others have built their own. These state-sponsored collection efforts provide valuable information about the availability of broadband services.

Participation in state-sponsored efforts, however, is often uneven, with an initial spike of interest tied to promotional efforts followed by a sharp decline in citizen engagement. The reasons for this pattern of declining usage vary, but continued promotion efforts from a state to ensure participation is difficult to maintain as other important issues eventually supplant public attention. Moreover, even when individuals do visit these state-sponsored sites, participation is often limited by the fact that individuals are sometimes reluctant to include the personally identifiable information required by the challenge process.

Although valuable, there is simply not enough evidence resulting from these efforts. Measurements gathered from public participation represent a very small fraction of data available compared to that which is offered by leveraging existing crowdsourced datasets. Offering measurement and evidence at scale, crowdsourced data provides key insights into broadband availability and performance not available through other methods of collection.

**Why use hexagons in addition to census blocks to evaluate service and shape polygons around areas of concern?**

Used by both the FCC and NTIA, hexagons have become the de facto system of measurement for the federal entities involved in mapping broadband coverage, challenging reported service levels, and for distributing funds to improve connectivity. Using hexagons along with the associated BSLs will facilitate area challenges and allow for easier ingestion of data into existing systems.
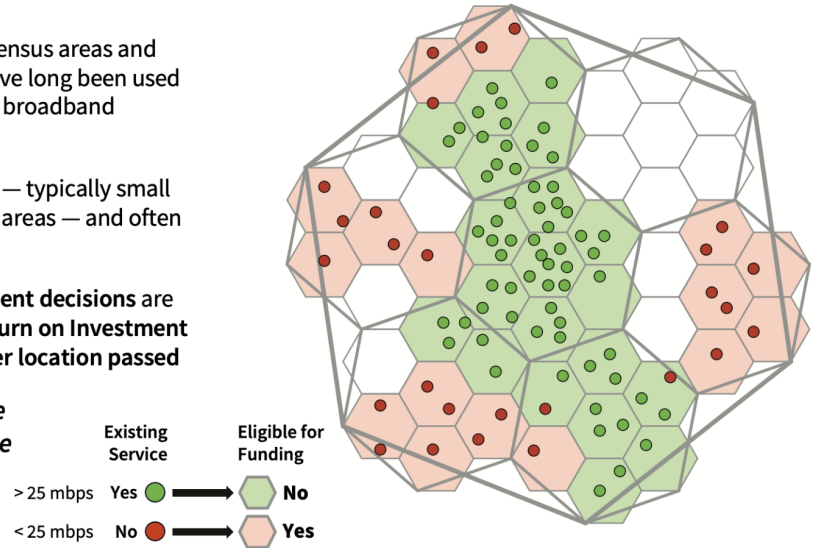
**How did WVDED decide what zoom level to use when evaluating results on the map?**

Identifying underserved areas is a balance between the granularity of zoom level used and the insights that are revealed. In general, a greater density of samples provides increased evidence, offers more indicators of available service levels, and results in greater precision regarding the estimate of cost to service each location. However, sample density varies by area, with fewer results typically available in rural areas than urban areas.

For most areas, the census block level is the sweet spot for Volume 1 of the challenge process, providing the best combination of data density and BSL density: it helps easily identify areas of need and can later be rolled-up as needed into associated hex-8 bins to help the NTIA efficiently review results that can be correlated with the existing National Broadband Map and platform.

# Standardizing geography for service area size

- Boundaries such as postal codes, census areas and political or administrative zones have long been used for aggregating and understanding broadband availability and performance

- These areas can vary greatly in size — typically small in urban areas to very large in rural areas — and often reflect population density

- Broadband infrastructure **deployment decisions** are generally based on anticipated **Return on Investment** (ROI) which is calculated on **cost per location passed**

- *The more granular the data, the more precise the estimate on the cost to serve each location*



|  | Existing Service | | Eligible for Funding |
|---|---|---|---|
| > 25 mbps | Yes 🟢 ➡️ | | **No** |
| < 25 mbps | No 🔴 ➡️ | | **Yes** |

Source: Ookla, "Using crowdsourced data to identify unserved and underserved locations for broadband funding eligibility", Version 1.0, Last updated: August 11, 2023

**Why is location accuracy important to the challenge process?**

While all crowdsourced data, regardless of source, can provide valuable information on the state of broadband across America, sources that include geographically-precise location data allow for greater defensibility when identifying areas of need. While crowdsourced data in general can provide important views of broadband availability and performance, speed test data also includes GPS-accurate location data that is a key component for effectively challenging the National Broadband Map.

Browser-based tests typically do not include GPS precision and instead rely on GeoIP data that is resolved to the centroid of the nearby zip code or other similar boundary set. Because this process results in measurements that lack the required location precision, Ookla recommends filtering to only use tests captured by GPS-enabled iOS or Android devices.

Ookla further recommends filtering to include results with location accuracy set at 300 meters or better. The level-8 hex bins that the FCC and NTIA are familiar with have a diameter roughly 1 kilometer across (a bit more or less between minimum and maximum distances). Filtering to include tests with an accuracy of 300 meters or better should therefore offer acceptable location accuracy when performing an area challenge and offers a unit of measurement tied to the same level-8 hexagons relied on by the funding authorities.

However, in rural areas, where sample density often trails what is found in more populated areas, location accuracy can potentially be expanded to filter for all results at 500 meters or better. This 500 meter limit is still within the average Hex-8 edge length. This is particularly valid if the area being investigated is constituted of multiple hexagons that may represent several square kilometers. This should be particularly true if the area includes multiple neighboring hexagons.

# Standardizing geography for service area size
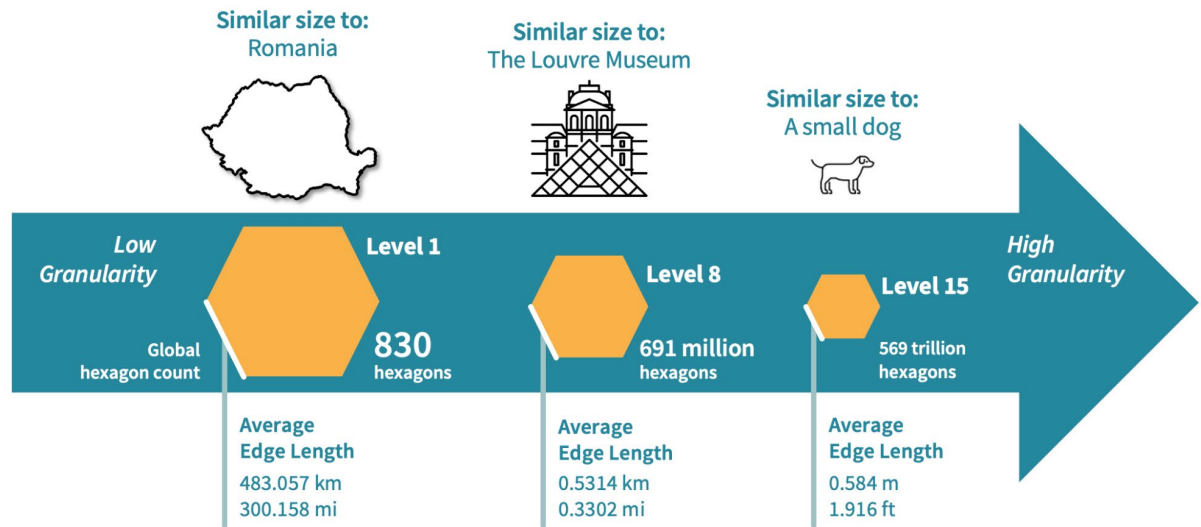


Source: Ookla, "Using crowdsourced data to identify unserved and underserved locations for broadband funding eligibility", Version 1.0, Last updated: August 11, 2023

**How will WVDED determine an acceptable ratio of speed test measurements to Broadband Serviceable Locations (BSLs)?**

At the census block level, a minimum of ten total tests from at least five unique users are required.

**How will WVDED prove that no service exists?**

Identifying areas completely devoid of service can be particularly difficult. After all, testing cannot be completed if service is unavailable. In this scenario, the challenge process is asking for evidence to prove a negative, and this creates a catch-22: how can WVDED show a crowdsourced test that proves service is nonexistent if individuals cannot complete a testing precisely because service is nonexistent?

In these cases, Ookla recommends looking for areas in which clearly poor crowdsourced results (i.e., those in which max speeds are below the 100/20 Mbps threshold) create a ring or rough perimeter around locations in which zero additional test results are found. This is likely a situation in which poor service at the edges degrades into complete lack of service farther along. Though not conclusive, using crowdsourced results in this way is similar to finding evidence of a black hole by looking for where light is expected but no longer exists.

Note also that the FCC National Broadband Map commonly shows isolated hexagons where only a single BSL may exist with no others nearby. This is expected where population density is very low. Examples can include locations with difficult terrain or more arid farmlands where properties can be measured in thousands of acres. These types of BSLs will often be categorized as high-cost locations.

**Why are propagation models of service availability and performance inadequate for understanding real-world performance?**

Providers often use propagation models that use mathematical models to estimate broadband coverage. While helpful as a first step for planning, propagation models often do not paint a true picture of coverage and performance because they do not adequately take into consideration elements that impact signal strength and signal travel: for instance, dense foliage or changes in terrain can interrupt signals and lead to an experience that is worse than a propagation model estimates.

# Part Two: crowdsourced data methodology overview

## Controlling for variables and common misconceptions regarding crowdsourced data

Distributing $42 billion in funding is not a trivial task. The challenge process should offer a fair and equitable avenue to ensure funding decisions are backed by data and objective in nature. Making data-backed decisions is of course ultimately reliant on the quality of data used. Crowdsourced data offers a readily-available, peer-reviewed, and statistically-valid data source at scale.

Despite its widespread utility and well-established methodological rigor, crowdsourced data is often erroneously associated with characteristics that can lead to its preemptive dismissal. The following entries address typical misconceptions regarding crowdsourced data.

**Objection: "People only take a speed test when something is wrong."**

Certainly, a perceived network or performance issue can drive an individual to take a speed test as a quick, high-level diagnostic tool. If speed or latency measurements are lower than normal, this can often signal a temporary drop in service levels from the ISP due to spike in demand causing capacity issues or to temporary network technical problems. A widely distributed network of test servers is more likely to measure the performance of the local network, whereas a limited number of server locations may be measuring the performance of either the local network or the backbone serving the broader internet.

User experience can also be impacted by a third-party dependency such as Netflix, Amazon, Google, gaming platforms or others. Speed tests often show that service from the ISP is providing the expected throughput speeds and latency performance but the service the user is attempting to access is providing a sluggish response or even suffering an outage. In these instances, a speed test validates the ISP's ability to deliver the services promised.

However, diagnosing network issues or outages is only one among many reasons users undertake a speed test. Validation and curiosity, for instance, are two additional common motivations. Examples of validation would include purchasing new equipment (such as a new mobile phone, wifi router or laptop) or changing service tiers and running a speed test to confirm that the investment made has resulted in an improved connectivity experience. An example of curiosity might be making sure that throughput speed and latency are adequate for an upcoming video call or gaming session.

Moreover, crowdsourced speed tests at times show performance that exceeds what is measured by controlled drive and walk testing. This highlights another reason why individuals might undertake a speed test: rather than only testing when performance lags, users can also test to see speeds when service is particularly fast or responsive.

*The key point to keep in mind is that large speed test platforms include results across a full variety of connectivity experiences available within a given geographic area. The power of crowdsourced comes from this breadth and density: testing at scale (e.g., Ookla and M-Lab each generate tens of millions of tests each day) helps eliminate outliers and results in a statistically-valid, objective view of performance that is trusted by the industry, governments, press, and public alike.*

### Objection: "Tests over Wi-Fi cannot be trusted to show full performance"

This objection originates from the recognition that many Wi-Fi routers cannot measure the gigabit speeds some providers are now offering. This objection, however, is mistaking the goal of measurement associated with the challenge process. The requirement is not for ISPs to deliver gigabit speeds but rather to confirm that citizens have access to the current thresholds of 25/3 Mbps and 100/20 Mbps.

Reframed in this way, the question should not be whether a router can achieve gigabit speeds but instead if it is capable of delivering speeds of at least 100 Mbps download and 20 Mbps upload. Virtually every modern Wi-Fi router can measure throughputs at those speeds and higher. As a result, when the WiFi connection is good, limitations that contribute to speeds lower than the 100/20 Mbps thresholds can be primarily attributed to the service itself, not to the router used to deliver that service within the home.

Likewise, while it is true that network speeds can be intentionally throttled for users in hotels, coffee shops and other facilities offering public WiFi, these locations are not considered for funding. Residential mesh systems, in contrast, nearly always support distributed service that exceeds the 100/20 Mbps requirement. In short, residential Wi-Fi router and mesh systems are not the causal factor for test results below the 100/20 Mbps thresholds.

What can occur with WiFi connections is that the device performing a speed test is too far away or something between the device and the router is causing interference – for example, someone may initiate a test from their backyard or they have placed their router inside of a steel cabinet. There is no doubt that these types of scenarios can sometimes cause the network performance readings to fall well below the actual service being delivered to the building.

To control for these occurrences, filtering for tests that do not meet minimum criteria for latency can minimize impacts from unusual user behavior. When latency can be measured between each hop along the traceroute from the device to the testing server and back, the first hop represents the one from the device to the WiFi router. If the latency measurement for this first hop is unacceptably high (e.g., greater than 10 ms), that is a strong indicator that the device is having a difficult time connecting and the test should not be used as an indicator of insufficient service levels.

But even if the test fails to meet that standard, that doesn't mean that the test has no value. First and foremost, tests with high latency still serve as "proof of life" that connectivity exists in that location. More importantly, if the tests show speeds higher than 25/3 Mbps or 100/20 Mbps while contending with significant interference (as, again, represented by latency greater than 10ms), it can be assumed that the actual speeds being delivered would represent an even higher rate had the connection quality been

improved. As a result, Ookla recommends considering *any and all* samples that show speeds above 25/3 Mbps, regardless of the latency measured. This can assist in avoiding overbuilding an area already receiving the target service levels.

## Why Ookla data can be trusted as part of this process

**What is Ookla's mission?**

Ookla's mission is to measure, understand, and help improve connected experiences. Every day, over 10 million people use Speedtest to better understand and troubleshoot the performance of their internet connections. Additionally, the Speedtest app automatically runs 300+ million daily background tests to measure mobile network coverage. The Speedtest application is available on numerous platforms, including the web, mobile phones, tablets, desktop computers and TVs. Speedtest is also embedded in routers, gateways, IoT and other connected devices to improve networking software and hardware. To date, consumers have actively initiated tens of billions of tests. In short, consumers, governments, regulators, and press rely on our data to show an accurate, unbiased picture of connectivity.

**What else is Ookla doing to help facilitate the challenge process?**

Unbiased and trusted, Ookla helps create a bridge between the industry, government, and consumers. This role is especially critical when considering the challenge process, which can feel complicated and burdensome. Our goal is to help streamline the submission of evidence and facilitate better and more efficient communication between states and the NTIA/FCC.

**Ookla industry leadership and partnerships**



Ookla mobile and fixed network data is used by the U.S. Federal Communications Commission (FCC) for internal analysis, reports to Congress, and public documents on the status of the telecommunications marketplace.



Ookla is the exclusive provider of global network performance data to GSMA Intelligence (GSMAi), a trade body that represents the interests of mobile operators worldwide, uniting more than 750 operators with almost 400 companies in the broader mobile ecosystem.



As an official member of the ITU-T (Study Group 12), Ookla partners with leading global operators, test and measurement companies, infrastructure and hardware providers, network analytics providers, and regulators to help develop and define quality of service (QoS) and experience (QoE) standard

# Appendix C. Crosswalk

| NTIA Requirement Key | |
|---|---|
| **NTIA Broadband Equity, Access, and Deployment Guidance Requirement** | **Addressed in West Virginia IPV1 Section:** |
| Existing Broadband Funding (Requirement 3)<br>• 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.<br>• An Eligible Entity that has already completed its Five-Year Action Plan may directly copy Existing Programs (Requirement 3 in the Five-Year Action Plan) into the Initial Proposal to satisfy this Requirement. | 2. Existing Broadband Funding |
| Unserved and Underserved Locations (Requirement 5)<br>• An Eligible Entity is required to identify each unserved and underserved location under its jurisdiction, including unserved and underserved locations in applicable Tribal Lands. | 3. Unserved and Underserved Locations |
| Community Anchor Institutions (Requirement 6):<br><br>An Eligible Entity must:<br>• Document standardized criteria used to include or exclude classes of CAIs.<br>• Include definitions and sources used to support identification of CAIs and types of CAIs.<br>• How the Eligible Entity engaged relevant government agencies and stakeholders across the state to better understand needs. | 4. Community Anchor Institutions |
| Challenge Process (Requirement 7)<br>• If adopted, an Eligible Entity should include NTIA's Model Challenge Process for Requirement 7<br>• An Eligible Entity should describe and justify any modifications to Model Challenge Process<br>• An Eligible Entity should provide details around the deduplication of funding and | 5. Challenge Process<br>Appendix A<br>Appendix B |

| | |
|---|---|
| removal of locations subject to existing enforceable commitments.<br>• An Eligible Entity should describe its plan to conduct an evidence-based, fair, and transparent challenge process. | |
| Volume I Public Comment<br>• An Eligible Entity must describe a public comment period, provide a high-level summary of comments received, and provide details of how they were addressed. Responses must demonstrate that the period was no less than 30 days, and that outreach and engagement activities were conducted. | 6. Volume I Public Comment |