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SUMMARY

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# Tribal Broadband Deployment: Federal Funding and Considerations for Congress

The *digital divide* refers to the gap between individuals who have access to broadband (i.e., high-speed internet) and those who do not. Federal agencies have observed the digital divide on *tribal lands*—areas associated with *federally recognized Tribes* (hereinafter *Tribes*) and other Indigenous entities (hereinafter referred to collectively as *tribal entities*). The most recent data from the Federal Communications Commission (FCC) show that approximately 24% of Americans living on tribal lands lack broadband access, in contrast to about 7% of Americans broadly. Tribal entities seek access to broadband to participate in a wide range of applications—including voice communications, entertainment, telemedicine, distance education, telework, e-commerce, civic engagement, and public safety. Further, a majority of these applications are increasingly moving online.

Congress may consider whether, and, if so, how, to assist in addressing tribal lands' digital divide. Deploying broadband infrastructure—particularly fiber—in remote and rural regions, including on tribal lands, can be physically challenging because of the expansive areas and geographic barriers. It is also financially challenging given the high cost for deployment and low rate of return in areas where there are few customers to support ongoing operations and network improvements. As a result, deployments in these regions have been limited, meaning that some individuals remain without access to broadband.

To address this, a growing number of tribal entities are deploying their own broadband networks. Some tribal entities seek federal funding, and tribal entities are eligible for nearly all federal programs that support broadband deployment. However, navigating these programs can be challenging. There are some instances where Congress has directed dedicated funding streams for tribal entities in the form of programs in which tribal entities are the only eligible applicants or in the form of set-asides for tribal entities; these programs have not received ongoing funding. Congress may contemplate whether dedicated funding streams for tribal entities could address—and close—the digital divide on tribal lands, including whether funding for a particular component of a broadband network (e.g., middle mile, funding for broadband network sustainability) may be an option. Congress could also choose to maintain the status quo with respect to federal funding for tribal entities or reduce funding for tribal broadband.

Relatedly, congressional debates may continue on whether to streamline federal broadband programs (e.g., consolidate them under a single agency or eliminate or combine programs at an agency). For example, Congress may evaluate whether, and, if so, how, to address the complexities in identifying and applying for federal funding for broadband deployment. Congress could also seek to examine and address the accuracy of the FCC's National Broadband Map and whether to continue the map's role in directing federal funding for broadband, including on tribal lands.

The physical characteristics (geography) of the service area are part of what shapes the digital divide on tribal lands and—relatedly—what shapes the technologies, cost, and policy options for addressing this divide. Congressional debate on what types of federal assistance would be most effective and efficient for addressing tribal lands' digital divide (if any) may also include considerations of the eligibility of technologies used to provide these services. For instance, there are differences in the technologies in terms of their costs, performance (e.g., speed and reliability under various weather conditions), ease of deployment, and advantages and disadvantages for serving communities in different geographies. Some tribal entities (e.g., ones that live in geographically challenging terrain) may require uniquely tailored plans to close the digital divide. Given these factors, Congress could weigh technological considerations for tribal entities using federal funding.

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# Background

The *digital divide* refers to the gap between individuals who have access to broadband[1] (i.e., high-speed internet) and those who do not. Federal agencies have observed the digital divide on *tribal lands*—areas associated with *federally recognized Tribes* (hereinafter *Tribes*) and other Indigenous entities (hereinafter referred to collectively as *tribal entities*).[2] Specifically, the Federal Communications Commission (FCC) has reported that approximately 24% of people living on tribal lands lack access to broadband, compared with about 7% nationally.[3]

Broadband access on tribal lands is seen by many stakeholders as a necessity in order to participate in a wide range of applications—including voice communications, entertainment, telemedicine, distance education, telework, e-commerce, civic engagement, and public safety. Further, a majority of these applications are increasingly moving online. Some stakeholders argue that "without broadband, Tribal communities are unable to equally access adequate education, employment, health, or emergency services."[4] Further, as stated by both tribal and public interest groups, tribal entities "find that the continued shift of economic, educational, and civic activity online increases the need for greater [broadband] capacity to keep pace."[5] For example, according to a study by the Center for Retirement Research at Boston College, "[the] Social Security [Administration]'s growing reliance on the internet creates access issues" as "broadband connections that could link Native Americans to the agency over the internet are either spotty or nonexistent."[6]

Access to broadband can also provide Tribes with a pathway for opportunities, such as self-employment. For example, some researchers have observed that many tribal individuals "have found success on online platforms such as Etsy, where they sell beadwork, jewelry, crafts, clothing, hats, cosmetics, food, travel cases, rugs and spiritual items, among other goods" and argue that "these private businesses are often small, but they provide an important source of income for individuals who live in isolated areas with few employment opportunities."[7]

A barrier to broadband access on tribal lands is a lack of infrastructure and, relatedly, the cost to deploy the infrastructure.[8] Broadband is primarily deployed by private providers, and many

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[1] The Federal Communications Commission (FCC) defines broadband as speeds of 100 megabits per second download and 20 megabits per second upload.

[2] A *federally recognized Tribe* (hereinafter *Tribe*) is an entity that is generally "eligible for the special programs and services provided by the United States to Indians because of their status as Indians" (25 C.F.R. §83.2). *Other Indigenous entities* include non-federally recognized Indigenous groups such as Native Hawaiians and Alaska Native corporations (ANCs). For more information on ANCs, see CRS Report R46997, *Alaska Native Lands and the Alaska Native Claims Settlement Act (ANCSA): Overview and Selected Issues for Congress*, by Mariel J. Murray.

[3] FCC, *2024 Section 706 Report*, March 18, 2024, p. 3, https://docs.fcc.gov/public/attachments/FCC-24-27A1.pdf.

[4] Kori Cordero et al., *Tribal Broadband*, UCLA School of Law Native Nations Law & Policy Center, September 2022, p. 8, https://law.ucla.edu/sites/default/files/PDFs/Native_Nations/245939%20UCLA%20Law%20publications%20broadband_R5_ONLINE.pdf.

[5] National Congress of American Indians et al., Comments on Proposed Competitive Bidding Rules for Auction of AWS-3 Licenses (March 31, 2025), p. 3, https://www.fcc.gov/ecfs/document/1033167864849/1.

[6] Kimberly Blanton, "Lack of Broadband Impedes Native American Access to Aid," Center for Retirement Research at Boston College, April 18, 2024, https://crr.bc.edu/lack-of-broadband-impedes-native-american-access-to-aid/.

[7] Jordan K. Lofthouse, "Internet Access Is a Key Component of Native American Economic Development," *Discourse*, November 15, 2023, https://www.discoursemagazine.com/p/internet-access-is-a-key-component.

[8] Alexandra Walsh et al., "Hacking Broadband Access in Tribal Lands," *Regulatory Review*, September 17, 2022, https://www.theregreview.org/2022/09/17/saturday-seminar-hacking-broadband-access-in-tribal-lands/.

hesitate to deploy it on tribal lands. For instance, in a 2019 report on improving and increasing broadband deployment on tribal lands, the FCC stated,

> Tribal lands are located disproportionately in rural areas, and that rural Tribal areas tend to be less densely populated than rural non-Tribal areas. The [FCC] has noted that the remote and often isolated nature of these areas, often combined with challenging terrain and lower incomes, increases the costs of network deployment and entry and reduces the profitability of providing service.[9]

Therefore, some tribal entities have committed to deploying their own broadband networks to bridge the digital divide. Some tribal entities may finance these networks themselves; other tribal entities may find it challenging for the same reasons as private providers (i.e., cost). Some tribal entities have utilized federal funding to help offset costs; however, addressing the digital divide on tribal lands remains an ongoing challenge.

This report provides a snapshot of the status of broadband on tribal lands and federal broadband funding that has been made available for tribal entities. The report includes a related discussion of policy issues facing Congress, including the complexities in federal broadband funding for tribal entities; potential funding considerations for tribal broadband—including increasing, reducing, or maintaining the status quo; technological considerations for projects using federal broadband funding by tribal entities; and the accuracy of the National Broadband Map for tribal lands, which is often used to direct federal funding.

# Status of Tribal Broadband

Data collected by the Census Bureau, the FCC, and the National Telecommunications and Information Administration (NTIA) illustrate broadband availability on tribal lands.

**Table 1** shows FCC data on fixed terrestrial broadband availability within the various categories of tribal lands.[10] Fixed terrestrial technologies that are capable of providing consumers with broadband service include digital subscriber line, cable, fiber, and fixed wireless (see **text box**).

**Types of Fixed Broadband Technologies**

- Digital subscriber line (DSL) transmits data over copper-wire telephone lines.
- Cable uses the same coaxial cables that deliver pictures and sound to TV sets.
- Fiber transmits data via pulses of light.
- Fixed wireless transmits data between two fixed locations wirelessly.

Areas with the least amount of broadband access are rural federal reservations, including trust lands located on and off the reservation and joint use areas (legal), and rural Alaska Native village

[9] Native Nations Communications Task Force, "Improving and Increasing Broadband Deployment on Tribal Lands," November 5, 2019, pp. 4-5, https://www.fcc.gov/sites/default/files/nnctf_tribal_broadband_report.pdf.

[10] The FCC uses Census Bureau data as the source for tribal lands classification but combined the Census Bureau's tribal land categories as explained in footnote 11. See FCC, *2024 Section 706 Report*, https://docs.fcc.gov/public/attachments/DOC-400675A1.pdf. See also Census Bureau, "Geographic Shapefile Concepts Overview," in *TIGER/Line Shapefiles: Technical Documentation*, 2024, https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2024/TGRSHP2024_TechDoc_Ch4.pdf.

statistical areas.[11] According to FCC broadband deployment data collected in December 2022, around 24% of people living on tribal lands lacked access to fixed terrestrial broadband service. FCC data in **Table 1** show that 76.3% of the population on (all) tribal lands have access to fixed terrestrial broadband services at speeds of 100 megabits per second (Mbps) download and 20 Mbps upload (100/20 Mbps).[12] This is compared to 72% of the population in rural areas and 98% of the population in urban areas who have access to fixed terrestrial broadband services at speeds of 100/20 Mbps.[13] The data in **Table 1** also illustrate that there is a digital divide among tribal areas—in terms of both urban and rural areas in the same major tribal land category (e.g., Alaska Native village statistical areas: 44.2% rural vs. 90.6% urban) and among the populations of major tribal land categories (e.g., federal reservations: 56.7% vs. Hawaiian Home Lands: 94.7%).

**Table 1. Percentage of Population on Tribal Lands with Access to Fixed Terrestrial Broadband Services (at Speeds of 100/20 Mbps)**

2022 Data According to the FCC

| Category | Percentage of Population |
|---|---|
| All tribal lands | 76.3% |
| Rural areas | 60.3% |
| Urban areas | 95.9% |
| Alaska Native village statistical areas[a] | 60.4% |
| Rural areas | 44.2% |
| Urban areas | 90.6% |
| Federal reservations[b] | 56.7% |
| Rural areas | 46.1% |
| Urban areas | 86.6% |
| Hawaiian Home Lands[c] | 94.7% |
| Rural areas | 78.9% |
| Urban areas | 99.6% |
| Tribal statistical areas[d] | 85.5% |
| Rural areas | 71.3% |
| Urban areas | 97.9% |

[11] The FCC maintained the Census Bureau's tribal lands definitions for Hawaiian Home Lands and Alaska Native village statistical areas, but combined the Census Bureau's other tribal land definitions. For example, FCC defines *federal reservations* to include lands reserved for a Tribe (or multiple Tribes) under treaty, statute, or other agreement where the Tribe has jurisdiction, including trust lands located on and off the reservation and "joint use areas (legal)." *Trust lands* are lands or interests in land that are held in trust by the federal government for the benefit of a Tribe or tribal citizen. *Joint use areas (legal)* designate land administered jointly and/or claimed by two or more Tribes. The FCC defines *tribal statistical areas* as statistical entities identified and delineated for the Census Bureau by Tribes that do not currently have an on- or off-reservation trust land, to include Oklahoma tribal statistical areas and joint use areas in Oklahoma. See FCC, *2024 Section 706 Report*, and Census Bureau, "Geographic Shapefile Concepts Overview," in *TIGER/Line Shapefiles: Technical Documentation*.

[12] The FCC's benchmark for fixed broadband service is 100/20 Mbps. See FCC, "FCC Increases Broadband Speed Benchmark," March 14, 2024, https://docs.fcc.gov/public/attachments/DOC-401205A1.pdf.

[13] See FCC, *2024 Section 706 Report*, March 18, 2024, p. 33, https://docs.fcc.gov/public/attachments/FCC-24-27A1.pdf.

**Source:** Federal Communications Commission (FCC), *2024 Section 706 Report*, p. 34, https://docs.fcc.gov/public/attachments/DOC-400675A1.pdf. See also Census Bureau, "Geographic Shapefile Concepts Overview," in *TIGER/Line Shapefiles: Technical Documentation*, 2024, https://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2024/TGRSHP2024_TechDoc_Ch4.pdf.

**Notes:** Data are current as of December 31, 2022. *Broadband* refers to a network capable of delivering 100 megabits per second (Mbps) download speed paired with 20 Mbps upload speed. The FCC maintained the Census Bureau's tribal lands definitions for Hawaiian Home Lands and Alaska Native village statistical areas, but combined the Census Bureau's other tribal land definitions. For example, FCC defines *federal reservations* to include lands reserved for a Tribe (or multiple Tribes) under treaty, statute, or other agreement where the Tribe has jurisdiction, including trust lands located on and off the reservation and "joint use areas (legal)." *Trust lands* are lands or interests in land that are held in trust by the federal government for the benefit of a Tribe or tribal citizen. *Joint use areas (legal)* designates land administered jointly and/or claimed by two or more Tribes.

a. *Alaska Native village statistical areas* are geographical entities that represent the residences, permanent and/or seasonal, of Alaska Natives who are members of, or are primarily receiving governmental services from, the defining Alaska Native village and that are located within the region and vicinity of the village's historic and/or traditional location.

b. *Federal reservations* consist of lands reserved for a Tribe (or multiple Tribes) under treaty, statute, or other agreement where the Tribe has jurisdiction, including trust lands located on and off the reservation and joint use areas (legal).

c. *Hawaiian Home Lands* are areas held in trust for Native Hawaiians by Hawaii (Hawaiian Homes Commission Act of 1920, as amended).

d. *Tribal statistical areas* are entities identified and delineated for the Census Bureau by Tribes that do not currently have a reservation or off-reservation trust land. These include Oklahoma tribal statistical areas, which are entities identified and delineated by the Census Bureau in consultation with Tribes that formerly had a reservation in the Indian and Oklahoma territories (prior to Oklahoma statehood in 1907). These also include joint use areas designating land administered jointly and/or claimed by two or more Tribes in Oklahoma.

**Table 2** shows the percentage of households with no home internet users because broadband is unavailable in the surrounding area, according to race or ethnicity. As the table shows, the highest percentage of households identified as not having broadband available are American Indian or Alaska Native (AI/AN) households.[14] This figure is lower than the 24% figure estimated by the FCC, as many AI/AN households are in non-tribal areas.

**Table 2. Percentage of Households Not Online Because Broadband Is Unavailable in the Surrounding Area**

2023 Data According to the NTIA

| Race or Ethnicity | Percentage of Households |
|---|---|
| American Indian or Alaska Native | 8.4% |
| White, non-Hispanic | 3.6% |
| Other, non-Hispanic | 3.3% |
| Asian American | 2.2% |
| Hispanic | 1.6% |
| African American | 1.0 |

[14] There is no uniform definition of American Indian or Alaska Native (AI/AN) populations or tribal enrollment, and federal agencies rely on different sources for these data. The Census Bureau relies on individual self-identification as AI/AN using the Office of Management and Budget's (OMB's) standardized definitions for racial and ethnic categories. These numbers are different from tribal enrollment/membership, which is maintained by each Tribe and submitted to the Bureau of Indian Affairs (BIA). For more information, see CRS In Focus IF12612, *American Indian, Alaska Native, and Tribal Population Data*, by Ben Leubsdorf, Mariel J. Murray, and Nik Taylor.

**Source:** National Telecommunications and Information Administration (NTIA), "NTIA Data Explorer," June 6, 2024, https://www.ntia.gov/data/explorer#sel=unavailableMainReason&demo=race&pc=count&disp=chart.

**Notes:** Data were obtained from a survey conducted by the NTIA in November 2023.

# Federal Funding for Tribal Broadband Deployment

In general, federal support for broadband deployment comes primarily from three agencies—the FCC, the NTIA, and the U.S. Department of Agriculture (USDA)—which each administer multiple broadband programs. Programs under the Universal Service Fund at the FCC are funded through fees from service providers; the broadband programs at the NTIA were given one-time appropriations; and the broadband programs at the USDA are typically provided with annual appropriations.

Each agency plays a different role in addressing the digital divide. Whereas the FCC works to ensure universal access to broadband, the USDA mainly focuses on rural communities. Over the past few years, the NTIA has been charged with administration of several federal grant programs that support broadband deployment and access, with a focus on collaborating and coordinating with state, local, and tribal entities.

In addition to the FCC, the NTIA, and the USDA, other federal agencies have programs that fund broadband deployment as one among many possible activities.[15] While tribal entities are eligible for nearly all of these programs, most are not exclusive to tribal entities, and thus they compete with other communities and broadband providers for funding.

In some instances, Congress has directed funding specifically for tribal entities.[16] Examples of these are provided below.

- **The Tribal Broadband Connectivity Program**, administered by the NTIA. This program supports broadband connectivity on tribal lands throughout the country. Under the Tribal Broadband Connectivity Program, established through the Consolidated Appropriations Act, 2021 (CAA 2021; P.L. 116-260), a tribal entity may use the grant funds for activities such as broadband infrastructure deployment. The CAA 2021 provided $1 billion for the program, and the Infrastructure Investment and Jobs Act (IIJA; P.L. 117-58) provided an additional $2 billion for the program. No further funding has been provided.
- **The Capital Projects Fund**, administered by the U.S. Department of the Treasury. Of the $10 billion appropriated under the American Rescue Plan Act of 2021 (ARPA 2021; P.L. 117-2), $100 million was directed to tribal

[15] The National Telecommunications and Information Administration (NTIA) houses and updates a comprehensive listing of federal funding opportunities that can support broadband planning, digital inclusion, and/or infrastructure deployment projects. See NTIA, "Federal Funding," https://broadbandusa.ntia.doc.gov/resources/federal.

[16] While the Broadband Equity, Access, and Deployment (BEAD) Program—a $42.45 billion program administered by the NTIA—does not have a tribal set-aside, the program's focus is on deploying broadband service to unserved and underserved locations, which will likely include tribal reservations and communities. States are required to engage with tribal governments to further understand broadband availability in their areas. The BEAD program is unique in this regard that states and tribes have "not been required to work together at this capacity before" for previous broadband programs. See Sharayah Lane, "How Effective Engagement with Tribal Nations Can Shape the Success of the BEAD Program," Benton Institute for Broadband & Society, March 12, 2025, https://www.benton.org/blog/how-effective-engagement-tribal-nations-can-shape-success-bead-program.

governments.[17] Examples of eligible uses of grant funding related to broadband deployment include installing or enhancing broadband infrastructure. No further funding has been provided.

- **The Coronavirus State and Local Fiscal Recovery Funds**, administered by the U.S. Department of the Treasury. Of the $350 billion appropriated under ARPA 2021, $20 billion was directed by Congress to tribal governments.[18] Among the many, various eligible uses, tribal governments could use the funding to invest in broadband infrastructure and to expand affordable access to broadband.[19] No further funding has been provided.
- **The National Tribal Broadband Grant**, administered by the U.S. Department of the Interior and authorized under the Snyder Act (25 U.S.C. §13); the Consolidated Appropriations Act, 2022 (P.L. 117-103); and ARPA 2021 (P.L. 117-2). This grant program provides an opportunity for Tribes to explore developing or extending broadband services in their communities through feasibility studies.[20] It appears that the most recent grant opportunity closed in 2022 (using FY2023 appropriations in the amount of $2.7 million), and according to BroadbandUSA, no funding was available for FY2024.[21] It appears that no further funding has been provided for FY2025.[22]

# Policy Issues for Congress

Tribal entities may experience challenges related to federal funding for broadband deployment. Congress may seek to address specific topics, which could include

- the complexities in identifying and applying for federal funding for broadband;
- potential funding considerations—including increasing, reducing, or maintaining the status quo;

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[17] U.S. Department of the Treasury, "Capital Projects Fund for Tribal Governments," https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/capital-projects-fund/cpf-fund-for-tribal-governments.

[18] U.S. Department of the Treasury, "State and Local Fiscal Recovery Funds," https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds.

[19] The Treasury website states that the agency has obligated and distributed 99.9% of funds to eligible tribal governments. See Treasury, "State and Local Recovery Funds."

[20] According to a 2022 notice by the U.S. Department of the Interior Indian Affairs Bureau,

> The Snyder Act authorizes the BIA to expend such moneys as Congress may appropriate for the benefit, care, and assistance of Indians for the purposes listed in the Act. Broadband deployment or expansion facilitates two of the purposes listed in the Snyder Act: "General support and civilization, including education" and "industrial assistance and advancement." The Consolidated Appropriations Act authorizes the BIA to "carry out the operation of Indian programs by direct expenditure, contracts, cooperative agreements, compacts, and grants, either directly or in cooperation with States and other organizations.

See U.S. Department of the Interior, "National Tribal Broadband Grant; Solicitation of Proposals," 87 *Federal Register* 50875, August 18, 2022, https://www.federalregister.gov/documents/2022/08/18/2022-17783/national-tribal-broadband-grant-solicitation-of-proposals.

[21] NTIA, "Department of Interior-National Tribal Broadband Grant," March 2023, https://broadbandusa.ntia.doc.gov/resources/federal/federal-funding/department-interior-national-tribal-broadband-grant.

[22] U.S. Department of the Interior, "National Tribal Broadband Grant (NTBG)," https://www.bia.gov/service/grants/ntbg#eligibility-information.

- technological considerations for projects using federal broadband funding; and
- the accuracy of the National Broadband Map, which is often used to direct federal funding.

Each of these issues is discussed in greater detail below.

## Federal Broadband Program Complexities for Tribal Entities

Outside of the programs with dedicated funding streams, tribal entities are eligible for nearly all federal programs that provide funding support for broadband—of which there are more than 133 programs administered by 15 agencies—according to the Government Accountability Office (GAO).[23] Thus, tribal entities may experience difficulties in identifying and applying for this funding, including in selecting programs—many of which have their own unique application processes, that suit their needs.[24] Further, tribal entities may not have sufficient capacity to prepare grant applications, and they compete with other eligible entities (e.g., private providers) that may have more resources and experience in applying for federal funding.[25]

Efforts have been made by federal agencies to coordinate and potentially streamline efforts related to federal broadband programs generally, but efforts have not been specific to the challenges tribal entities may face.[26] Congress could consider legislation such as the Proper Leadership to Align Networks for Broadband Act (PLAN for Broadband Act; S. 323/H.R. 2805), which would direct the NTIA to develop a national strategy to synchronize federal broadband programs, and among other things, address specific issues relating to closing the broadband gap on tribal lands. Congress could direct this agency to include issues relating to federal funding.

Congress could also consider, for example, the establishment of a tribal broadband interagency working group to help improve coordination across federal broadband programs for tribal applicants. The working group could consider streamlining the grant application process to support the deployment of broadband on tribal lands. This could include the development of one common application that only tribal entities could use to apply to several federal opportunities at once. Some states and localities have undertaken similar efforts for their grants, though not exclusive to tribal entities. For example, the State of New York created the Consolidated Funding Application (CFA).[27] In addition to allowing all applicants to access multiple state funding sources through one application, the CFA allows them to clone an application—meaning applicants can copy most of their responses from a prior application to a new application for the current year's funding announcements.[28] While a CFA for federal broadband funding could help simplify the application process, federal agencies and programs may still require tailored information based on program objectives and eligibility requirements. As part of this process,

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[23] Government Accountability Office (GAO), *Broadband: A National Strategy Needed to Coordinate Fragmented, Overlapping Federal Programs*, GAO-23-106818, May 10, 2023, https://www.gao.gov/products/gao-23-106818.

[24] GAO, *Tribal Broadband: National Strategy and Coordination Framework Needed to Increase Access*, GAO-22-104421, June 22, 2022, https://www.gao.gov/products/gao-22-104421.

[25] GAO, *Tribal Broadband: Additional Assistance to Recipients Would Better Support Implementation of $3 Billion in Federal Grants*, GAO-24-106541, June 24, 2024, https://www.gao.gov/products/gao-24-106541.

[26] For examples of these coordination efforts, see NTIA, "Interagency Coordination Milestones: A Decade of Progress," https://broadbandusa.ntia.doc.gov/NTIA_Interagency_Coordination_Milestones.

[27] New York State, "Consolidated Funding Application," https://apps.cio.ny.gov/apps/cfa/.

[28] New York State, "Cloning an Application in the CFA," https://apps.cio.ny.gov/apps/cfa/assets/clone/Cloned%20Applications%202024.pdf.

Congress could consider whether consolidating federal programs or establishing consistent definitions and eligibility criteria would help alleviate some of these challenges.[29]

Congress could also contemplate waivers for tribal entities for certain application and compliance requirements. For example, the NTIA did not require applicants to provide a nonfederal cost contribution or match for the Tribal Broadband Connectivity Program.[30] As another example, on January 10, 2025, several federal agencies jointly issued a five-year waiver of the Buy America Preference included in the IIJA.[31] During tribal consultations held with the agencies, "Tribes consistently provided feedback that the BABA [Build America, Buy America Act] compliance is overly complex and excessively burdensome. Tribes stated that BABA compliance would limit Tribes' ability to secure contracts and financing for high priority needs."[32] Congress could consider tasking a federal agency (e.g., the NTIA) to hold similar consultations to understand which application or compliance requirements tribal entities encounter the most difficulty with and explore whether codification of tribal waivers across all federal programs that provide funding for broadband could help encourage more tribal entities to apply. A consideration is that other entities that might apply for this funding (e.g., smaller providers) could push back on these types of waivers if they have similar issues meeting requirements and are not included.

Alternatively, Congress could explore how technical assistance could be provided to help interested tribal entities navigate federal programs that support broadband, as well as technical assistance for applying for grant opportunities. For tribal entities that do not have dedicated resources, such as a grant writer, "assistance with the application process could make the difference between future internet connectivity or none at all."[33] Some federal agencies already provide varying forms of technical assistance for the navigation of grant programs. For example, BroadbandUSA at the NTIA offers a self-serve Technical Assistance Hub, "designed as a one-stop shop for resources and tools in support of NTIA's grant programs."[34] As another example, the Broadband Technical Assistance Program at the USDA is a competitive program that assists rural communities in accessing broadband funding opportunities at the USDA, including the identification of funding resources and assistance with the preparation of grant applications.[35] Tribal entities are among the multiple entities that may receive technical assistance from this program. The Rural Broadband Assistance Act (H.R. 3125) was introduced in the 119th Congress to codify this program. When considering this legislation, Congress could also weigh whether a technical assistance program specific to tribal entities—and for the navigation and assistance of all federal broadband programs—may be warranted and which agency could be tasked with this undertaking. The NTIA, for example, compiles information on federal broadband funding opportunities across the entire federal government and could be considered as an agency to lead

[29] For more information on how this could be achieved—as well as potential considerations—see the section "Consolidation Under a Single Agency" in CRS Report R47883, *Federal Funding for Broadband Deployment: Agencies and Considerations for Congress*, coordinated by Colby Leigh Pechtol.

[30] NTIA, "Tribal Broadband Connectivity Program: Frequently Asked Questions," September 27, 2023, p. 2, https://broadbandusa.ntia.gov/sites/default/files/2023-10/TBCP2_FAQs_2023.09.27.pdf.

[31] Department of the Interior et al., "General Applicability Public Interest Waiver to Indian Tribes," January 10, 2025, https://www.doi.gov/sites/default/files/documents/2025-01/doi-multi-agency-tribal-public-interest-waiver.pdf.

[32] Department of the Interior, "General Applicability Public Interest Waiver to Indian Tribes," p. 3.

[33] Rep. Dave Taylor, "Congressman Taylor Introduces Bill to Help Rural Communities Navigate Broadband Expansion Programs," April 30, 2025, https://taylor.house.gov/media/press-releases/congressman-taylor-introduces-bill-help-rural-communities-navigate-broadband.

[34] NTIA, "Technical Assistance Hub," https://broadbandusa.ntia.gov/technical-assistance-hub.

[35] U.S. Department of Agriculture, "Broadband Technical Assistance," https://www.rd.usda.gov/programs-services/telecommunications-programs/broadband-technical-assistance-program.

this effort.[36] Congress could also consider directing the Office of Native Affairs and Policy (ONAP) at the FCC to provide technical assistance. Although ONAP primarily focuses on the FCC's efforts to close the digital divide, it "works with Commissioners, Bureaus, and Offices, as well as with other government agencies and private organizations, to develop and implement policies for assisting Native communities."[37] A consideration is that other entities applying for federal funding could see tribal technical assistance for grant applications as an unfair advantage.

## Potential Considerations for Dedicated Funding Streams

Congress could consider several options related to dedicated funding streams for tribal entities—which, in addition to the options discussed in the previous section, could assist in alleviating some of the challenges discussed in the previous section.

### Funding for Specific Programs

The Tribal Broadband Connectivity Program has been funded in two pieces of legislation; this funding has not been incorporated into annual budget requests or annual discretionary appropriations legislation. Congress could consider providing annual appropriations to make the Tribal Broadband Connectivity Program an ongoing grant program. An annual funding source may enable Congress, through grant reporting, to continually assess the progress of broadband deployment on tribal lands and track how a dedicated funding stream impacts deployment. A potential disadvantage is that the program would be reliant on continued funding through the annual appropriations process, which could be subject to uncertainties (e.g., annual funding amounts could change, or Congress could decide not to fund the program).

Congress could also consider providing additional discrete appropriations for the Tribal Broadband Connectivity Program, the National Tribal Broadband Grant, or for the tribal set-asides in the Capital Projects Fund and Coronavirus State and Local Fiscal Recovery Funds. Determining the appropriate amount of a single appropriation to each of these programs could be difficult; estimating potential costs to close the digital divide on tribal lands can be challenging. It was reported that "initial estimates for achieving tribal broadband access before the pandemic totaled $7-8 billion. Post-COVID, these figures now reach as high as $11 billion. Rising construction costs and more expensive materials account for these increases, further making it difficult."[38]

Congress could commission a study—to be conducted by the FCC or the NTIA, for example, and in consultation with Tribes—to determine how much it may cost to close the digital divide on the entirety of tribal lands.[39] Alternatively, Congress could contemplate whether to provide federal funding to tribal entities on an as-needed basis if it does not wish to provide funding aimed at closing the digital divide for the entirety of tribal lands. Although the digital divide is more

[36] NTIA, "Federal," https://broadbandusa.ntia.doc.gov/resources/federal.

[37] The Office of Native Affairs and Policy (ONAP) was created by the FCC in 2010 and "assists the [FCC] in developing policies and programs to address the lack of adequate communications services on Tribal lands nationwide." For more information, see FCC, "Office of Native Affairs and Policy," January 17, 2025, https://www.fcc.gov/office-native-affairs-and-policy.

[38] Bold Business, "Expanding Broadband Access in Indian Country," August 11, 2023, https://www.boldbusiness.com/communications/expanding-broadband-access-in-indian-country/.

[39] For example, some stakeholders have estimated that the cost to close the broadband gap on tribal lands is around $11 billion. See Bold Business Insights, "Expanding Broadband Access in Indian Country," August 11, 2023, https://www.boldbusiness.com/communications/expanding-broadband-access-in-indian-country/.

apparent on tribal lands than in non-tribal areas, not all Tribes have unequal access to broadband—with Tribes in some areas potentially in greater need than others (see **Table 1**). Congress could consider tasking an agency, such as the Census Bureau, to collect and provide updated data that reflects which Tribes or tribal lands may be in greatest need of broadband.

## Funding for Middle Mile Infrastructure

Another consideration for Congress is a specific component of broadband, called *middle mile infrastructure*. Middle mile "is the physical mid-section of the infrastructure required to enable [last mile] internet connectivity (**Figure 1**)."[40] Middle mile is often delivered via fiber but can also include microwave (i.e., towers) or satellites.[41] Much of the federal funding for broadband focuses on support for *last mile infrastructure*, though some programs allow support for middle mile infrastructure. Some industry advocates have noted that more federal funding for middle mile may be needed.[42] Specifically, according to media reports, there is a "vast 'missing middle mile' problem" on tribal lands.[43] Congress may consider whether to target federal funding support on tribal lands for middle mile infrastructure. For example, Congress could appropriate and direct additional funding for the Enabling Middle Mile Broadband Infrastructure Program specifically for tribal entities.[44]

[40] California Department of Technology, "Middle-Mile Broadband Initiative FAQ," https://cdt.ca.gov/middle-mile-advisory-committee/middle-mile-faq/.

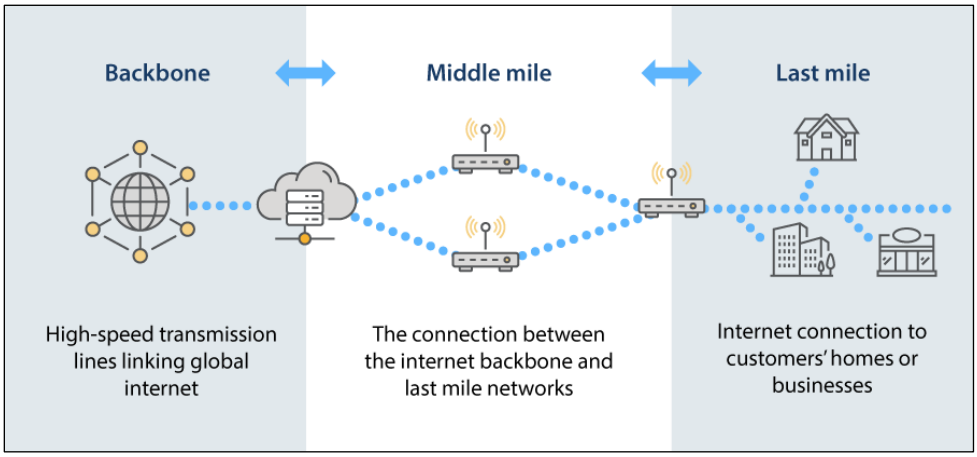
[41] For an example of the distinction between middle mile and last mile, a "microwave middle mile network transmits data wirelessly using radio frequencies sent between towers. The towers that transmit this data make up the middle-mile network, while last-mile services are delivered by sending this data to a wireless radio with a small microwave antenna attached." See Quintillion, "What Is the Middle Mile in Broadband?," April 7, 2022, https://www.quintillionglobal.com/what-is-the-middle-mile-in-broadband/.

[42] Julia King, "Heed the Middle Mile For Rural Broadband, Industry Leaders Caution," Fierce Network, May 16, 2024, https://www.fierce-network.com/broadband/heed-middle-mile-industry-leaders-caution.

[43] Jessica Auer, "BEAD's Match Exemption for High-Cost Areas May Be Challenging for Tribal ISPs," Institute for Local Self-Reliance, December 18, 2023, https://ilsr.org/articles/beads-match-exemption-for-high-cost-areas-may-challenge-tribal-isps/.

[44] For more information on the Enabling Middle Mile Broadband Infrastructure Program, see NTIA, "Enabling Middle Mile Broadband Infrastructure Program," https://broadbandusa.ntia.doc.gov/funding-programs/enabling-middle-mile-broadband-infrastructure-program, and CRS Report R46967, *The Infrastructure Investment and Jobs Act (P.L. 117-58): Summary of the Broadband Provisions in Division F*, coordinated by Patricia Moloney Figliola.

**Figure 1. Broadband Infrastructure Components**




**Source:** CRS, adapted from Government Accountability Office (GAO), *Broadband: Middle-Mile Grant Program Lacked Timely Performance Goals and Targeted Measures*, GAO-24-106131, October 19, 2023, https://www.gao.gov/products/gao-24-106131.

## Funding for Network Sustainability

Dedicated funding streams for tribal entities may not bridge the digital divide on tribal lands without additional resources for funding the sustainability of broadband networks. For instance, according to GAO, tribal entities have told the NTIA that "it will be difficult to financially sustain networks built under [the Tribal Broadband Connectivity Program]."[45] Further, GAO found that recipients of the Tribal Broadband Connectivity Program, for example, "would benefit from additional NTIA assistance in identifying other sources of funding to support network operations and from NTIA outlining the financial sustainability needs [of the projects] to Congress."[46]

Therefore, funding for the sustainability (i.e., operation and maintenance of existing infrastructure) of broadband networks for tribal entities may be another avenue for Congress to explore, as there are few funding opportunities that provide support for this purpose.[47] Without funding for sustainability, broadband on tribal lands, where it is available, might be lost. Congress may consider establishing a federal program for tribal entities that provides financial assistance—and technical assistance, if needed—for the sustainability of broadband networks built with federal funding. A consideration is that it may be difficult to determine how long sustainability funding should be provided for (i.e., while broadband networks are typically constructed within a certain time frame, sustainability needs could go on in perpetuity). Congress also could contemplate shifting or establishing new priorities within an existing federal program for sustainability purposes, as some policymakers have raised concerns about the number of federal broadband programs already in existence and may oppose the creation of a new broadband

[45] GAO, *Tribal Broadband: Additional Assistance to Recipients Would Better Support Implementation of $3 Billion in Federal Grants*, GAO-24-106541, June 24, 2024, https://www.gao.gov/products/gao-24-106541.

[46] GAO, *Tribal Broadband: Additional Assistance to Recipients Would Better Support Implementation of $3 Billion in Federal Grants*, pp. 30-31.

[47] Karina V. Korostelina and Jocelyn Barrett, "Bridging the Digital Divide for Native American Tribes: Roadblocks to Broadband and Community Resilience," *Policy & Internet*, vol. 15, no. 3 (March 8, 2023), pp. 306-326, https://doi.org/10.1002/poi3.339.

program.[48] Congress may also weigh whether to wait until 100% broadband connectivity—or close to it—across the United States is achieved and then shift the focus to sustainability efforts.

### Other Funding Options

Congress could choose not to pursue dedicated funding streams for tribal broadband. Alternatively, it could examine how legislation, such as the Broadband Grant Tax Treatment Act (H.R. 1873/S. 674), which would ensure that federal broadband deployment grants are excluded from taxable income, could help tribal recipients maximize investments in broadband expansion for existing federal broadband programs.

Congress could also choose to eliminate or reduce funding for tribal broadband if it decides to focus spending on other congressional priorities.

## Technological Considerations for Projects Using Federal Funding for Broadband Deployment by Tribal Entities

Broadband infrastructure is delivered through technologies such as

- cable modem, which delivers TV and broadband internet simultaneously through the same coaxial cables (with TV and internet provisioned on separate frequency channels);
- digital subscriber line, which transmits data over traditional copper-wire telephone lines;
- fiber, which transmits data via pulses of light, is hung (aerially) on poles or buried in the ground and can be connected directly to individual residences ("fiber to the home");
- satellite, which delivers wireless service through satellites either in geostationary or geosynchronous orbit (GEO) or in low Earth orbit (LEO); and
- fixed wireless, which uses radio spectrum and transmits data between two fixed locations wirelessly.[49]

Each of these technologies has differing download and upload speeds (see **Table 3**), which may make one more desirable (e.g., fiber can achieve the highest speeds) than others. However, there is no one-size-fits-all technological broadband solution on tribal lands.

[48] Rep. Scott Peters, "Reps. Peters, Walberg Introduce Bipartisan Bill to Bridge Digital Divide," April 10, 2025, https://scottpeters.house.gov/2025/4/reps-peters-walberg-introduce-bipartisan-bill-to-bridge-digital-divide.

[49] For more information, see CRS In Focus IF12441, *Fixed Technologies Used to Deliver Broadband Service: A Primer and Considerations for Congress*, by Colby Leigh Pechtol.

**Table 3. Sampling of Broadband Technology Speed Ranges**

Download and Upload Speeds

| Technology | Download Speed | Upload Speed |
|---|---|---|
| Cable | 10-1,000 Mbps | 5-50 Mbps |
| Digital subscriber line | 5-120 Mbps | 1-20 Mbps |
| Fiber | 200-20,000 Mbps | 200-20,000 Mbps |
| Satellite (geosynchronous orbit) | 25-150 Mbps | 3 Mbps |
| Satellite (low Earth orbit) | 25-220 Mbps | 25 Mbps |
| Fixed wireless | 25-300 Mbps | 1-50 Mbps |

**Source:** Kate Fann, "DSL vs. Cable vs. Fiber: What's the Best Wired Internet?," *BroadbandNow*, May 30, 2025, https://broadbandnow.com/guides/dsl-vs-cable-vs-fiber; Trey Paul, "Best Satellite Internet Providers for 2025," *CNET*, April 8, 2025, https://www.cnet.com/home/internet/best-satellite-internet/; Peter Christiansen, "What Is a Good Download and Upload Speed?," *HighSpeedInternet.com*, April 3, 2025, https://www.highspeedinternet.com/resources/what-is-a-good-download-upload-speed.

**Notes:** Mbps = megabits per second.

Decisions around which broadband technology to deploy in a given area are typically based on factors such as geography and deployment cost. Specific costs to deploy a technology in a given area vary. For example, cost estimates of underground fiber deployment can be markedly different between regions, given that costs are more sensitive to terrain.[50] Such variations may present each tribal entity with decisions in choosing a technology that best suits their needs. For instance, as fixed wireless provider Tarana stated about connecting tribal communities,

> Fiber is often seen as a preferred technology due to its faster speeds, however it can be quite expensive and time-consuming to deploy. This is particularly true in difficult terrain (mountains, valleys, lakes, rivers) or where extensive right of way permitting is required (railroad tracks, public lands, sacred sites). Wireless offers speedy deployments due to the fact that it does not require trenching to bury fiber in the ground. This also makes it easier to overcome difficult terrain and requires less permitting. A wireless radio tower can immediately begin servicing locations for many miles around it once it is installed where fiber can only service locations one at a time as the fiber is brought to each location.[51]

Some tribal entities (e.g., ones that reside in challenging terrain) may require uniquely tailored technological plans to close the digital divide, which could prove challenging if federal agencies require, discourage, or prefer certain technologies to be deployed using federal funding. It may even deter some tribal entities from applying for federal broadband funding opportunities altogether.

For instance, historically, satellite has not been considered a preferred technology for deployment of broadband using federal funding.[52] Some federal agencies have had concerns with using

[50] Linda Hardesty, "Underground Fiber Deployment Costs Rise Due to Labor, Materials," Fierce Network, February 12, 2025, https://www.fierce-network.com/broadband/fba-cartesian-spell-out-costs-deploy-fiber-2024.

[51] Tarana, "Connecting Tribal Communities with Next-Generation Fixed Wireless," August, 16, 2023, https://www.taranawireless.com/connecting-tribal-communities-with-next-generation-fixed-wireless/.

[52] Gregory Rosston and Scott Wallsten, "Should Satellite Broadband Be Included in Universal Service Subsidy Programs?," *Journal of Law & Innovation*, vol. 6, no. 1 (November 2023), p. 139, https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=1029&context=jli.

federal dollars for a technology they do not consider to be as reliable as fiber.[53] As a tribal-specific example, as outlined in the Tribal Broadband Connectivity Program notice of funding opportunity (NOFO),

> NTIA requires construction of networks that use commercial grade equipment that will meet current needs and be scalable to meet future needs. Infrastructure may include, but is not limited to, cable, fiber, wireless, fixed wireless, and satellite (existing and operational), or a combination thereof. Applicants may propose the technology or technologies that best meets or meet Tribal needs; however, NTIA encourages the submission of project proposals that deploy future-proof infrastructure to the extent feasible, e.g., fiber. NTIA reserves the right not to fund project proposals that depend on the deployment or launch of new satellites.[54]

Some federal agency decisions about technology eligibility for federally funded broadband deployment projects have been a source of debate in the 119th Congress. For example, the NOFO for the Broadband Equity, Access, and Deployment (BEAD) program excluded the use of certain technologies; these technologies were mobile, satellite, and fixed wireless over unlicensed spectrum (i.e., Wi-Fi). Separately, but also in the BEAD NOFO, the NTIA required that in determining how funding is distributed to sub-grantees, the states must give priority to projects that plan to use fiber.[55]

As of May 2025, the BEAD program is on hold and under review, with indications that the program may be revamped.[56] Therefore, some Members of Congress have advocated for a more technology-neutral approach in the BEAD program. For example, the SPEED for BEAD Act (H.R. 1870) would require inclusion of any broadband technology as long as it meets the BEAD performance criteria.[57] Other Members of Congress have concerns about expanding the role of satellite in the BEAD program.[58] Policy decisions on this issue may especially impact tribal lands where fiber deployment may not be feasible, and wireless options—such as LEO satellites or fixed wireless—may provide a solution.[59] For example, according to tribal member nonprofit Alaska Tribal Spectrum, "there is no fiber connection because wiring all of Alaska with a fiber middle mile is an overwhelming and expensive task, due to the challenging environment."[60] As an

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[53] For example, see FCC, "FCC Rejects LTD Broadband, Starlink Bids for Broadband Subsidies," August 10, 2022, https://www.fcc.gov/document/fcc-rejects-ltd-broadband-starlink-bids-broadband-subsidies.

[54] NTIA, *Notice of Funding Opportunity: Tribal Broadband Connectivity Program*, March 2024, p. 6, https://www.ntia.gov/sites/default/files/2024-03/ntia_tribal_broadband_connectivity_program_round_2_nofo_amendment_03_2024.pdf.

[55] NTIA, "Notice of Funding Opportunity: Broadband Equity, Access, and Deployment Program," p. 14, https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf.

[56] U.S. Department of Commerce, "Statement from U.S. Secretary of Commerce Howard Lutnick on the BEAD Program," March 5, 2025, https://www.commerce.gov/news/press-releases/2025/03/statement-us-secretary-commerce-howard-lutnick-bead-program.

[57] The performance criterion is outlined as the capability of delivering service at "(i) a speed of not less than 100 Mbps for downloads; and (ii) a speed of not less than 20 Mbps for uploads; and (iii) latency less than or equal to 100 milliseconds." See NTIA, "Notice of Funding Opportunity: Broadband Equity, Access, and Deployment Program," p. 37, https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf.

[58] Joe Gillard, "Here's What Arielle Roth Said About Starlink and BEAD in Her Confirmation Hearing," ICT Solutions and Education, March 28, 2025, https://www.isemag.com/directory/bead-baba-funding/news/55278340/heres-what-arielle-roth-said-about-starlink-and-bead-in-her-confirmation-hearing.

[59] For more information on low Earth orbit satellites for broadband service, see CRS Report R46896, *Low Earth Orbit Satellites: Potential to Address the Broadband Digital Divide*, by Colby Leigh Pechtol.

[60] Alaska Tribal Spectrum, "Alaska Broadband Basics," https://aktribalspectrum.org/alaska-broadband-basics/.

alternative to fiber, Alaska Tribal Spectrum advocates for the use of LEO satellites, which "can provide fiber-like speed and capacity to create a broadband middle mile solution."[61]

Given these factors, Congress could weigh considerations for existing or future federal programs and whether technological neutrality should be considered for tribal entities, who may encounter challenging terrain or high deployment costs. Congress could weigh the potential benefits and drawbacks of this approach. For instance, while connection to broadband services through LEO satellites may be a quicker and more cost-effective solution than the build-out of fiber, users can experience bandwidth or capacity issues, as well as interference from weather.[62]

Along these lines, another consideration for Congress is tribal access to spectrum—which uses radio waves to transmit and receive information, including internet signals. Tribal governments have raised the issue that lack of spectrum access is a top barrier to tribal broadband.[63] For example, as the Navajo Nation Telecommunications Regulatory Commission states, "the [FCC's] Tribal Broadband Connectivity Program, the NTIA grants, and Treasury's Capital Projects Fund are injecting resources into tribal broadband projects. But without access to spectrum, Tribes like Navajo often cannot fully leverage these funds to deploy wireless 5G networks."[64] By allowing tribal entities to access spectrum, Congress could encourage more opportunities for tribally owned broadband networks and help tribal entities utilize federal funding.[65]

## Accuracy of the National Broadband Map for Directing Federal Funding to Tribal Lands

The FCC's National Broadband Map is a tool that can be used to determine the status of broadband deployment across the United States, including in tribal areas.[66] The Broadband Deployment Accuracy and Technological Availability Act (Broadband DATA Act; P.L. 116-130) established specific requirements for the FCC's collection of broadband data for the National Broadband Map, including location-level collection, called the *Broadband Serviceable Location Fabric*.[67] The act also codified the role of stakeholder input by directing the FCC to assess the accuracy of provider data using challenges, crowdsourcing, and verified data from state, local, and tribal governmental entities; third parties; and other federal agencies.[68]

[61] Alaska Tribal Spectrum, "Alaska Broadband Basics."

[62] Masha Abarinova, "Is Satellite Broadband Good Enough to Deliver Internet For All?," Fierce Network, November 15, 2024, https://www.fierce-network.com/broadband/satellite-broadband-good-enough-deliver-internet-all.

[63] Navajo Nation Telecommunications Regulatory Commission, Comments on Proposed Competitive Bidding Rules for Auction of AWS-3 Licenses (March 31, 2025), p. 11, https://www.fcc.gov/ecfs/document/1033124339192/1.

[64] Navajo Nation Telecommunications Regulatory Commission, Comments on Proposed Competitive Bidding Rules for Auction of AWS-3 Licenses, p. 11.

[65] For more information, see CRS In Focus IF13014, *Tribal Spectrum and Broadband Access: Background and Considerations for Congress*, by Colby Leigh Pechtol and Jill C. Gallagher.

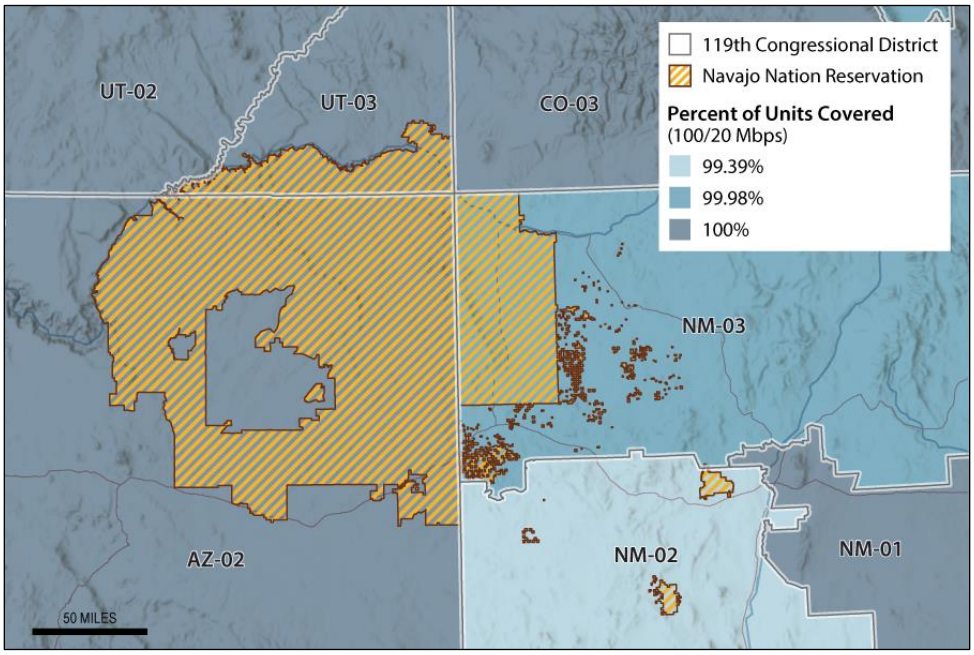
[66] For the purposes of the National Broadband Map, the FCC uses the term "Tribal Area." FCC, "FCC National Broadband Map," https://broadbandmap.fcc.gov/location-summary/fixed.

[67] FCC, "What Is the Location Fabric?," August 2, 2023, https://help.bdc.fcc.gov/hc/en-us/articles/5375384069659-What-is-the-Location-Fabric.

[68] See FCC, "How to Use the FCC's National Broadband Map," May 7, 2024, https://help.bdc.fcc.gov/hc/en-us/articles/10467446103579-How-to-Use-the-FCC-s-National-Broadband-Map.

To determine the availability of broadband, users can search the National Broadband Map by tribal area. The map provides data on units[69] covered by various download and upload speeds in Mbps (e.g., 100/20). See **Figure 2** for an example map of the Navajo Nation Reservation.

**Figure 2. FCC National Broadband Map: Coverage for the Navajo Nation Reservation**




**Source:** Created by CRS using data from the FCC, Census Bureau, and Esri. FCC, "Data Download Fixed Broadband Summary by Geography Type (Congressional District)," https://broadbandmap.fcc.gov/data-download. Broadband availability data as of June 30, 2024.

**Notes:** This map includes satellite. FCC availability data for satellite broadband indicate that satellite service is available to nearly all of the population. Because broadband service providers self-report data not only on where broadband is currently available but also on where it could be available within 10 days of a request for information, the map contains prospective data and may not be completely accurate (see the text for further information).

The telecommunications industry has raised questions about the accuracy of the National Broadband Map.[70] For example, broadband service providers self-report data on where broadband is or *could be* made available within 10 days of a request for data. Thus, broadband may not already be available at a particular location, which makes the map potentially misleading. The map could also be overstating availability of a particular broadband technology. For example, satellite providers may claim that every location can receive high-speed service, showing 100%

[69] Units are defined by the FCC as "buildings or structures—such as a home, apartment or condo building, or small business building—where internet service is, or could be, available." FCC, "How to Use the FCC's National Broadband Map," May 7, 2024, https://help.bdc.fcc.gov/hc/en-us/articles/10467446103579-How-to-Use-the-FCC-s-National-Broadband-Map.

[70] Brad Randall, "Advocacy Group Claims Overreported Data Is Diminishing the Accuracy of the FCC's Broadband Map," *Broadband Communities*, February 27, 2024, https://bbcmag.com/advocacy-group-claims-overreported-data-is-diminishing-the-accuracy-of-the-fccs-broadband-map/.

coverage on the National Broadband Map.[71] Although satellite broadband is available nearly everywhere, there could be capacity issues—for example, in November 2024, there was a waiting list for SpaceX's Starlink LEO satellite broadband service in some areas of the United States.[72] Further, according to an April 2025 report by GAO, the "FCC has not documented or assessed the sufficiency of its processes" for confirming the accuracy of the National Broadband Map data.[73]

In some instances, the National Broadband Map is used to determine where federal funding should be directed, which means that some tribal lands may not be eligible for federal funding because the map shows them as already receiving broadband.[74] As an example, the National Broadband Map shows that the Rosebud Sioux Tribe of South Dakota is served with broadband, which some tribal members have stated is not accurate. This error may be related to serviceable addresses.[75] Households on tribal lands typically do not use standardized home addresses, so they do not fit in the National Broadband Map Fabric data, which use traditional street addresses.[76] This means that the map will potentially understate the households needing broadband access on tribal lands.

Congress has considered this issue of potential underestimation of broadband needs on tribal lands. For example, in the 118th Congress, S.Rept. 118-206, accompanying a version of a Financial Services and General Government Appropriations Act, 2025 (S. 4928), stated that the Senate Committee on Appropriations urged the FCC to "(1) provide the number of locations associated with individual Tribal areas and; (2) offer an aggregated rollup of the number of Tribal locations and Tribal broadband availability nationwide."[77] Congress could examine whether to instead direct the FCC, which has not implemented this recommendation, to provide this information within the National Broadband Map, or Congress could direct the FCC to incorporate this information into a separate Tribal National Broadband Map that includes data on tribal areas only.

Another consideration is that states, local and tribal communities, the public, and broadband service providers can challenge the National Broadband Map. However, challenging the data can present particular hardships for Tribes that may not have the capacity or time to devote to this

[71] H Trostle, "Inaccurate Data Could Hinder Broadband Access in Indian Country," Federal Reserve Bank of Minneapolis, October 11, 2023, https://www.minneapolisfed.org/article/2023/inaccurate-data-could-hinder-broadband-access-in-indian-country.

[72] Jon Brodkin, "A Year After Ditching Waitlist, Starlink Says It Is 'Sold Out' in Parts of U.S.," *Ars Technica*, November 19, 2024, https://arstechnica.com/tech-policy/2024/11/starlink-brings-back-waitlist-in-parts-of-us-says-service-is-sold-out/.

[73] GAO, *Broadband Programs: Agencies Need to Further Improve Their Data Quality and Coordination Efforts*, GAO-25-107207, April 17, 2025, https://www.gao.gov/products/gao-25-107207.

[74] For instance, a member of the Rosebud Sioux Tribe of South Dakota stated, "if the FCC's fabric were the only tool that were used to allocate these funds [for the Broadband Equity, Access, and Deployment program], Indian country would be left out." See Drew Clark, "Tribal Ready Wants Better Broadband Data to Benefit Indian Country," *Broadband Breakfast*, February 23, 2023, https://broadbandbreakfast.com/tribal-ready-wants-better-broadband-data-to-benefit-indian-county/.

[75] Drew Clark, "Tribal Ready Wants Better Broadband Data to Benefit Indian Country," *Broadband Breakfast*, February 23, 2023, https://broadbandbreakfast.com/tribal-ready-wants-better-broadband-data-to-benefit-indian-county/.

[76] Chris Teale, "Broadband Maps for Indian Country Called 'Horrible,' 'Egregious' and 'Negligent,'" *Route Fifty*, January 10, 2023, https://www.route-fifty.com/infrastructure/2023/01/broadband-maps-indian-country-called-horrible-egregious-and-negligent/381675/?oref=rf-related-article.

[77] U.S. Congress, Senate Appropriations Committee, *Financial Services and General Government Appropriations Bill, 2025*, report to accompany S. 4928, 118th Cong., 2nd sess., August 1, 2024, p. 67, https://www.congress.gov/congressional-report/118th-congress/senate-report/206.

effort, which reportedly can be complicated and time consuming.[78] This may result in the continued misrepresentation of broadband availability on tribal lands. Thus, Congress could contemplate directing the FCC's ONAP to provide educational outreach and technical assistance to Tribes to assist with the submission of challenges. Congress could also decide not to utilize the National Broadband Map when deciding where to direct targeted federal funding to tribal entities.

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[78] Jessica Auer, "Old Data Woes Could Hinder Round Two of Tribal Broadband Connectivity Program," Institute for Local Self-Reliance, November 29, 2023, https://communitynets.org/content/old-data-woes-could-hinder-round-two-tribal-broadband-connectivity-program.