Broadband Access in Indian Country

Best Practices for Tribal Nations in Navigating the Federal Funding Landscape

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Executive Summary

Internet access has become critical for connecting Americans to work opportunities, health services, and education. But not all communities have adequate access to broadband infrastructure, which is the physical hardware required to bring internet service to those communities. According to the Federal Communications Commission (FCC), as of 2024, 93 percent of all US residents had access to internet services with "advanced telecommunications capability"—that is, 100 megabits per second of download speed and 20 megabits per second of upload speed (represented as 100/20 Mbps)—compared with only 76 percent of people living on tribal lands (FCC 2024). And 76 percent may be an overestimate—FCC data have been criticized for overstating broadband access on tribal lands (GAO 2018).

Over the past two decades, the federal government has developed various programs to support the development and maintenance of broadband infrastructure across the US, especially in rural and Native communities. The number and breadth of these programs expanded through the Infrastructure Investment and Jobs Act of 2021 (IIJA) after the COVID-19 pandemic spotlighted the importance of connectivity. These investments have expanded broadband access in many Native communities, but some communities still struggle with accessing federal broadband funds, constructing and operating large-scale broadband infrastructure, and sustaining this infrastructure absent continued federal funding. Without reliable internet service, Native communities will continue to be excluded from economic, educational, and health care opportunities that require digital access.

In this report, we provide an overview of the major federal programs aimed at supporting broadband infrastructure and share findings and best practices from 15 interviews conducted with individuals working to expand access to high-speed internet in Native communities. Interviewees represented tribal broadband providers, tribal governments, state governments, technical assistance providers, nonprofit and philanthropic organizations, and other advocates supporting tribal broadband access and sovereignty, defined as the right of tribes to govern their communities without interference (Klingbeil et al. 2023).

Informed by these interviews and a review of federal funding opportunities, we find the following:

- Federal investments have significantly expanded internet access in many Native communities, but others are still left out.

- Some tribal governments that received these initial broadband infrastructure investments may face challenges maintaining and operating service into the future because of limited administrative, financial, or technical capacity.

- To overcome unfavorable relationships with private internet providers and to sustain adequate internet service in the long run, many tribal governments, tribal broadband providers, and other stakeholders are prioritizing tribal ownership of broadband infrastructure.

Based on these conversations, we identify best practices for tribal governments and tribal broadband providers seeking to access federal broadband funding, build necessary infrastructure, and maintain reliable broadband access. These include the following:

- When applying for federal grant opportunities, plan early, leverage technical assistance and partnerships, and prepare applications that can be adapted for other programs.

- Develop business, operations, and maintenance plans early in the application process to ensure the proposed broadband project will be financially, technically, and statutorily viable for the community.

- Invest in workforce development and build external partnerships to boost local technical capacity without compromising sovereignty.

These conversations also elevated recommendations for other stakeholders seeking to expand and maintain broadband infrastructure in Native communities:

- Federal agencies could refine funding opportunities to be more responsive to community needs by providing technical assistance throughout the grant application process, prioritizing tribal ownership of broadband infrastructure, and waiving matching requirements. To make investments more effective in the long run, agencies could provide technical assistance or additional financial support for infrastructure maintenance (not only for construction).

- State and local governments could offer more direct technical assistance and provide alternative funding sources to tribal governments and tribal broadband providers.

- Philanthropic organizations can increase their support by focusing investments on capacity building, training, and technical assistance, while organizations with the financial capacity can contribute directly to infrastructure deployment and operations.

Broadband Access in Indian Country

High-speed broadband internet is a critical component of public infrastructure. Internet access affects one's ability to participate in education, employment, health care, and other social services. Yet many people in the US—especially those living in Indian Country—still lack reliable broadband access. According to the Federal Communications Commission (FCC), as of 2024, 93 percent of all US residents had access to internet services with "advanced telecommunications capability"—that is, 100 megabits per second of download speed and 20 megabits per second of upload speed (represented as 100/20 Mbps)—compared with 76 percent of people living on tribal lands and only 60 percent of people living on tribal lands in rural areas (FCC 2024). These numbers may represent an overestimate—FCC data have been criticized for inaccuracies, including overstating broadband access on tribal lands (GAO 2018, 2025). Several factors contribute to this "digital divide" in internet access between Native communities and other areas of the country.[1] Closing this gap is key to ensuring access to opportunity and quality of life for everyone in the US.

This report explores the current state of broadband access in Indian Country, available federal broadband funding mechanisms supporting projects in Native communities, and the experiences of tribal governments and tribal internet service providers (ISPs) applying for and implementing federal broadband grants. Informed by interviews with tribal leaders and industry stakeholders, we share best practices for tribal governments and service providers for accessing federal funds and building sustainable broadband networks. We also offer policy recommendations for federal, state, and local governments and other stakeholders in this space to close funding gaps and to support tribal governments in their broadband efforts.

BOX 1
Overview of Key Terms

This report uses various terms to describe Native communities, depending on the context and source material. Our working definitions of these terms (informed by interviews and independent research) are described here.

- **Indian Country**. The definition of Indian County has changed throughout history, but we use it here as a broad term to describe Native spaces and places within the United States, including those in Alaska and Hawaii. It is not used as a legal term in this report.

- **tribe or tribal nation.** The terms tribe or tribal nation refer in this report to specific legal entities that are sovereign governments with inherent authority over their lands and citizens. The 574

federally recognized tribes in the US have government-to-government relationships with the federal government. But there are also state-recognized and other tribes that do not have federal recognition. Members of tribes are **tribal citizens**. Not all tribes have tribal lands or reservations. Tribal citizens do not necessarily need to live on tribal lands to be considered citizens.

▪ **tribal lands.** We use tribal lands to refer both to lands held in trust on behalf of tribes and tribal citizens and to land that tribes own outright. Ninety-five percent of tribal lands are **trust lands**, or lands the federal government holds in trust on behalf of federally recognized tribes or tribal citizens. **Reservations** are lands reserved for a tribe under treaty or statute. Many reservations may be at least partially made up of trust lands, though not all trust lands are part of reservations. Many communities in Indian Country include a checkerboard of tribal lands and nontribal, privately owned lands.

▪ **Native communities.** We use Native communities as a broad term that encompasses all communities that are primarily made up of Native Americans, Alaska Natives, or Native Hawaiians, regardless of their legal status or technical designation.

▪ **tribal sovereignty.** Tribal sovereignty refers to tribal nations' right as sovereign nations to govern their communities without interference and to protect and enhance the health, safety, and welfare of tribal citizens within tribal lands. Tribal governments exercise these inherent rights by developing distinct forms of government; determining citizenship; establishing and enforcing civil and criminal laws; taxing, licensing, and regulating within their jurisdictions; and exercising the power to exclude wrongdoers from tribal lands.

Sources: Interviews; "Tribal Lands: An Overview," Congressional Research Service, October 14, 2021, https://www.congress.gov/crs-product/IF11944; Kevin Klingbeil, Chloe Adler, Amanda Hermans, Harry Maher, Nancy Pindus, and Devoni Whitehead, *Community Economic Development in Indian Country: Market Research Report* (CDFI Fund, Big Water Consulting, and the Urban Institute, 2023); "NCAI Response to Usage of the Term 'Indian Country'," National Congress of American Indians blog, December 27, 2019, https://www.ncai.org/news/ncai-response-to-usage-of-the-term-indian-country; "Tribal Nations and the United States: An Introduction," National Congress of American Indians, accessed December 1, 2025, https://archive.ncai.org/about-tribes; and Mariel J. Murray, "About Tribal Nations, Tribal Citizens, and the United States," Native American Rights Fund, November 12, 2025, https://narf.org/about-tribal-nations-united-states-treaties/.

Methods

This analysis draws on both quantitative and qualitative data to understand Native communities' experiences navigating federal broadband grants and implementing broadband infrastructure projects. We used mixed methods to both quantify and analyze available federal broadband resources and to understand how broadband projects (including, but not exclusively, those that are federally funded) in Native communities are working on the ground.

We conducted 15 interviews, including with tribal broadband providers and tribal government leaders directly involved in applying for and implementing federally funded broadband projects and with other relevant stakeholders in this space, including state governments, technical assistance providers, nonprofit and philanthropic organizations, former federal agency staff members, and other advocates supporting tribal broadband access and sovereignty. The tribal leaders with whom we spoke represent a diverse range of tribal nations, which varied in size, structure, capacity, and expertise in broadband infrastructure. The interviewees reflect experiences leading tribal ISPs, applying for federal broadband grants, implementing federally funded broadband projects, providing technical assistance to tribal nations, and managing state broadband programs.

To supplement these interviews, we conducted a quantitative analysis of broadband awards using data from USAspending.gov. We downloaded obligated assistance spending data from fiscal years 2020 through 2025 for six major broadband programs, including grants, loans, and other direct payments in the database as of October 30, 2025. We summed up obligated awards and loan subsidy amounts to calculate how much broadband funding was contractually promised to award recipients.

Limitations

This research includes several limitations. First, although the analysis incorporates diverse perspectives, our research team does not include any tribal citizens or individuals with lived experience in Native communities. This may limit the cultural and contextual depth with which we interpret certain findings. Second, the interview sample represents only a portion of the stakeholders in this space and thus does not capture the full range of experiences, perspectives, and regional variation across Indian Country. Although we interviewed former federal agency staff members, our attempts to contact current federal agency staff members were unsuccessful. The absence of current federal agency perspectives is a notable gap, as those viewpoints would have provided critical insight into program design and administration. Finally, the federal broadband funding landscape has undergone significant change. Program rules and disbursement timelines shifted during the course of this research, making it difficult to track funds and track the effectiveness of implementation. For example, publicly available data on outlayed (or disbursed) funds is limited, making it difficult to capture what funds communities have received after award announcements and funding obligations were made. This rapidly changing landscape limits our ability to identify best practices and offer long-term policy recommendations, as future program operations may differ substantially.

Current Conditions

Beginning with their forced relocation and the dispossession of land and political power by European colonizers, tribes and Native communities have had to continuously adapt to threats to their sovereignty and economic independence. This tension can be seen in the development and management of public infrastructure. The federal government plays a critical role in funding the building and maintenance of public infrastructure, such as roads and highways, clean drinking water systems, and communication networks, including broadband (Freemark et al. 2023). Federally recognized tribes' unique peer relationship with the federal government as sovereign, self-governing nations should allow for significant control over infrastructure development in tribal lands. Yet historical actions by the federal government have undermined tribal sovereignty and made it harder for tribal governments to build infrastructure.[2] For example, the federal government relocated many tribal nations to remote, unpopulated, or challenging geographies and provided incentives to tribal citizens to relocate away from traditional lands and into urban centers. As a result, many Native communities now face challenges accessing broadband and other infrastructure because of physical geographic barriers (e.g., canyons or mountain ranges) and low population densities that make such investments economically challenging (Kitch and Barron 2022). That the federal government holds many tribal lands in trust means that tribes cannot always use their lands as collateral for development. And overlapping jurisdictions between tribes, states, counties, neighboring municipalities, and the federal government can make economic development complicated (Klingbeil et al. 2023).

These challenges and others have prevented many Native communities from receiving necessary capital for development, including federal funding. In general, federal programs in Native communities have chronically been underfunded and inefficiently structured (US Commission on Civil Rights 2018). As a result, infrastructure throughout Indian Country has not met communities' needs. According to the National Congress of American Indians, more than 70 percent of housing in Native communities requires repairs and improvements, many communities have unpaved or poorly maintained roads and bridges, and there is a lack of adequate public transportation access.[3]

Broadband development in Indian Country has faced similar challenges. One person we interviewed stated that many tribal governments "do not have enough homes to serve to make enough money to sustain" broadband infrastructure because, typically, providers rely on revenue from subscribers to cover operating costs. This perpetuates a cycle of disinvestment where dominant (non-Native) ISPs have few incentives to provide high-quality internet to Native communities (Kitch and Barron 2022). More concerningly, some ISPs have used inaccurate federally recognized broadband maps to claim Native communities are covered by their services even where service is poor, effectively blocking those

communities from accessing funding for their own infrastructure development (Lane 2025). This challenge is exacerbated by the fact that the map denotes entire census blocks as being "served" even if only one household in the census block has access (GAO 2018).

The substandard state of broadband access in Native communities was further illuminated during the COVID-19 pandemic as community members were unable to access school, work, health care, and other social services that had quickly shifted online. One interviewee shared a story of a college student in their community who had to drive to the yard of a non-Native neighbor's home to submit their papers. Other students missed entire years of education, leading to physical and mental health challenges. In some cases, a lack of broadband access became a matter of life or death. Research indicates that a lack of adequate access to telehealth services contributed to increased rates of suicide among young adults in Native communities (Pruitt et al. 2022). As one tribal citizen shared, it was "offensive that people had to die" for others to notice the gap in broadband access that had existed for years.

> **"When [the COVID-19 pandemic] came, that…was the major punch to the tribe to say this is incredibly important."**
> **—Chief information officer for a tribe**

In spite of these barriers, many tribal governments and tribal ISPs have made strides in increasing broadband access for their communities, taking on complex and challenging broadband infrastructure projects both with and without federal support. Native communities pursue broadband infrastructure projects to serve many goals. Reliable internet access is necessary for supporting access to other socioeconomic pillars, such as jobs, education, and health care. Tribal leaders describe broadband as a tool for creating "communities of choice," or places where people want to live and invest. Some tribal leaders see broadband access as a strategy for creating opportunities, preventing population loss that has plagued many rural and Native communities,[4] and inducing a return to reservation communities.

Throughout our conversations with stakeholders, tribal sovereignty emerged consistently as a key consideration for supporting broadband infrastructure development in Native communities. Despite their status as sovereign nations and their peer relationship with the federal government, tribes have been inadequately supported by the federal government and have faced a lack of full recognition, hindering efforts in social and economic development (US Commission on Civil Rights 2018). In response to a historical lack of control over their broadband infrastructure and access, Native broadband leaders have stressed the importance of tribal nations' rights to assert their sovereignty in ongoing and future broadband infrastructure projects. Many interviewees stressed that non-Native partners—whether in federal, state, or local governments or other organizations—must take steps to

understand and respect tribal sovereignty before pursuing partnerships with tribal nations on broadband projects. Further, many stakeholders emphasized the importance of tribal digital sovereignty—that is, tribal nations' rights to design, control, and own their digital data and the physical infrastructure and networks through which information is transferred—as essential for broadband infrastructure development by tribal nations.

Tribal Digital Sovereignty

Tribal digital sovereignty refers to a tribal nation's right to its own "information and the physical means by which that information transfers, governed by a community's policies and codes that control the data, infrastructure, and networks." Tenets of tribal digital sovereignty affirm that tribal nations should be empowered to control broadband and other technological assets that transmit tribal data, are on tribal lands, or serve tribal citizens, without interference or infringement from external stakeholders. It does not preclude partnerships or interactions with non-Native entities, but those partnerships should be entered into on a tribe's terms and should respect tribal sovereignty. Concepts related to tribal digital sovereignty include tribal data sovereignty (i.e., sovereignty over information) and network sovereignty (i.e., sovereignty over physical infrastructure). Tribal nations have advocated for digital sovereignty since the 1990s, when broadband was first developed nationwide.

Depending on a tribal nation's needs and internal capacity, tribes assert tribal digital sovereignty in different ways. Some tribal nations set up tribally owned ISPs to manage broadband infrastructure and service in house, while others retain ownership of the physical assets but contract out the management and operations to a trusted third party. The goal of tribal digital sovereignty is to give tribal nations voice and control in providing internet service to their communities. Organizations such as the Internet Society and Tribal Ready have focused efforts to expand tribal sovereignty so that tribal nations and communities can effectively and comfortably own, manage, and operate their own networks.

Sources: Interviews; Traci Morris, "Tribal Digital Sovereignty Defined," American Indian Policy Institute blog, July 14, 2023, https://aipi.asu.edu/blog/2023/07/tribal-digital-sovereignty-defined; the website for the Internet Society at https://www.internetsociety.org/; and "Data Sovereignty," Tribal Ready, accessed December 2, 2025, https://tribalready.com/data-sovereignty.

What Is Broadband?

Broadband, or high-speed internet service, connects individuals, households, and businesses to global internet networks. Broadband infrastructure comprises three parts: (1) the backbone, or the primary high-speed transmission lines that link global networks; (2) the last mile, or the connection that a local service provider provides for an end user at a home or business; and (3) the middle mile, the mid-range

infrastructure that connects the last mile to the backbone (GAO 2023). ISPs work in an interconnected way at all three levels and can take various forms. For example, small local ISPs may provide last-mile or middle-mile connections in one community or region, while large national companies may provide internet service in many communities across the country. ISPs can be private, nonprofit, or public entities.

Broadband Infrastructure Components
How the three components of broadband infrastructure work together

Backbone
The primary high-speed transmission lines that link global networks.

Middle Mile
The mid-range infrastructure that connects the last mile to the backbone.

Last Mile
The connection that an internet service provider provides for an end user at a home or business.
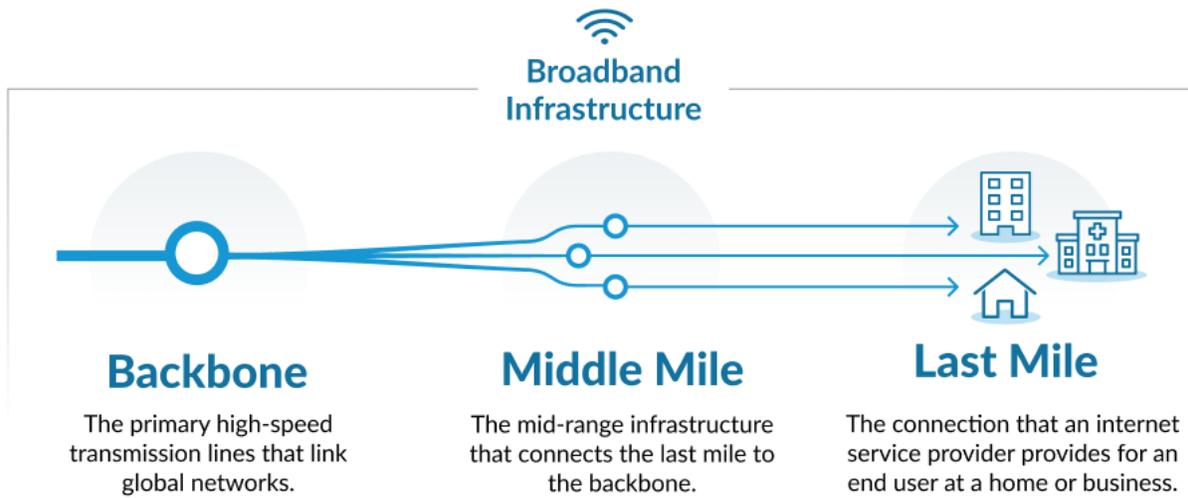
The FCC sets broadband service standards and has adjusted them over time to track with new technology. As of 2024, the benchmark for high-speed fixed broadband is download speeds of 100 megabits per second and upload speeds of 20 megabits per second.[5] Broadband infrastructure networks can comprise a range of internet technologies, and technologies are continually being developed and updated. These different modes of delivering broadband services each have benefits and drawbacks in terms of implementation cost, lifespan, and quality of service. Technologies may also become more viable or less viable with shifting policy priorities, technology trends, and consumer preferences. For example, the federal Broadband Equity, Access, and Deployment (BEAD) Program, introduced under IIJA, originally included a preference for fiber broadband projects, but the second Trump administration removed that preference and opened up applications for other technologies that meet the program's performance requirements (US Department of Commerce 2025).

Below, we summarize the leading infrastructure options and some of their benefits and drawbacks:

- **Fiber:** Fiber is commonly considered the highest-quality, most reliable type of broadband infrastructure.[6] This technology offers faster speeds (i.e., how long it takes to download data) and lower latencies (i.e., how long it takes for an internet user to be acknowledged by the web server from which they are seeking to download data) than other technologies. But it requires significant up-front investment of time and resources, including laying miles of physical fiber-optic cable underground or overhead. That expenditure may be worth it; once built, fiber systems often have lower operation and maintenance costs than other technologies and enable quicker upgrades in internet speeds. It is generally the preferred technology for middle-mile infrastructure.

- **Cable and digital subscriber lines (DSL):** Cable internet and DSL leverage existing infrastructure used for other needs—coaxial television service cables and copper telephone lines, respectively—to provide internet service, reducing construction costs. But compared with fiber, both these options suffer from slower service speeds and less reliable service. Cable connections are predominantly available in urban and suburban areas and may be unviable for many rural or remote Native communities. DSL, the oldest internet infrastructure, is generally being phased out of use.

- **Fixed wireless:** Wireless broadband connections involve beaming internet signals through the air from towers and require the provider to obtain a spectrum license from the FCC. Although wireless systems can suffer from speed issues farther from towers, they can be a useful solution for connecting rural and remote communities where fiber or cable infrastructure is prohibitively difficult or expensive to build because of challenging geography or low population density. These systems can also be used in hybrid configurations with other technologies.

- **Satellite:** Satellite broadband provides internet service by sending signals from satellites orbiting the earth. Low Earth orbit (LEO) satellites use networks of satellites that orbit 200 to 800 miles above the Earth, lower than the traditional geostationary satellites, which orbit 22,000 miles above the Earth. Satellite provides another solution for connecting rural and remote communities where physical, on-the-ground infrastructure is difficult to build. The drawbacks of satellite service are that satellites need frequent maintenance and replacement, and subscription costs are often more expensive than they are for other infrastructure options.

Federal Funding Mechanisms

Until the late 2010s, federal broadband funding was limited. The US Department of Agriculture's (USDA's) Rural Utilities Service administered the first federal broadband supports, including through early internet-focused initiatives (e.g., the Community Connect Grant Program, established in 2002) and by repurposing exisitng telecommunications programs (e.g., the Telecommunications Loan Program, established in 1949). In 2009, the American Recovery and Reinvestment Act funded the National Telecommunications and Information Administration (NTIA) Broadband Technology Opportunities Program (BTOP) to increase broadband adoption and use in areas with no service. The law also funded the Rural Utilities Service's Broadband Initiatives Program (BIP) to accelerate broadband deployment in rural areas. Today, the Rural Utilities Service also administers the Rural Development Broadband ReConnect Program (ReConnect), established in 2018 through the Congressional Appropriations Act. Alongside these initiatives, the US Department of the Interior's Office of Indian Economic Development promotes economic growth in Indian Country through various loan guarantees, technical assistance, and grant programs such as the National Tribal Broadband Grant, established in early 2020.

Federal investment in broadband increased dramatically, beginning in 2020 when the pandemic revealed a profound lack of internet access in many rural and Native communities. Emergency relief legislation—including the Coronavirus Aid, Relief, and Economic Security Act in 2020 and the American Rescue Plan Act in 2021—provided critical funding to support telehealth, remote learning, and general community connectivity. These programs directly funded broadband deployment and affordability efforts that tribal, state, and local governments could not have launched previously, because of low prepandemic funding levels. One interviewee from a tribal government described using pandemic relief funds to support the planning and early implementation of a project for which the tribal nation eventually received a federal broadband grant.

As part of IIJA, the government deployed unprecedented funding for broadband infrastructure, adoption, and affordability (Hermans et al. 2025). IIJA established several new grant programs— including the Affordable Connectivity Program (ACP), the BEAD Program, and the Enabling Middle Mile Grant Program—and expanded funding for existing programs, such as Rural ReConnect. The law also marked an unprecedented investment in broadband infrastructure support specifically for Native communities, with $3 billion allocated to the NTIA's Tribal Broadband Connectivity Program (TBCP) between IIJA and the Consolidated Appropriations Acts in 2020.[7] As of 2025, several federal agencies continue to administer programs to expand broadband access throughout the US (table 1).

TABLE 1
Federal Broadband Investments Skyrocketed after the COVID-19 Pandemic

Major federal broadband programs

Program	Federal agency	Authorization year	Program description
Telecommunications Loan Program	USDA, RUS	1949 amendment to the Rural Electrification Act of 1936	This program provides loans to telecommunications companies to build and maintain telephone and broadband infrastructure in rural areas.
Community Connect Grant Program	USDA, RUS	Pilot program in FY 2002 federal budget, formal launch in 2004	This program offers funding to expand broadband access in rural, "economically challenged" communities with no existing broadband access. It is intended to support local growth and improve education, health care, and public safety.
Rural Development Broadband ReConnect Program	USDA, RUS	Consolidated Appropriations Act (2018) and IIJA (2021)	This program offers states, local governments, territories, tribal nations, corporations, and cooperatives or mutual aid organizations funding to construct, improve, and maintain modern, reliable, high-speed internet service (100 megabits per second) in rural America.
Affordable Connectivity Program (ACP)	FCC	IIJA (2021)	This program offered qualifying low-income households subsidies to make broadband access affordable. The ACP Outreach Grant Program offered funding to increase awareness of and participation in the ACP. The program closed in 2024 after one round of awards.
Tribal Broadband Connectivity Program	DOC, NTIA	Consolidated Appropriations Act (2020) and IIJA (2021)	This program offers tribal governments, tribal organizations, colleges or universities, the Department of Hawaiian Home Lands, and Alaska Native corporations funding to deploy broadband and to advance telehealth, distance learning, and digital inclusion efforts on tribal lands.
Broadband Equity, Access, and Deployment Program	DOC, NTIA	IIJA (2021)	This program offers states and territories funding to expand high-speed internet access through planning, infrastructure deployment and upgrades, provision of devices to promote broadband adoption, digital equity programs, and reduced-cost internet access to multifamily housing units.
Enabling Middle Mile Grant Program	DOC, NTIA	IIJA (2021)	This program offers states, counties, cities, tribal governments, economic development authorities, regional planning councils, technology and utility companies, and nonprofits funding to reduce the costs of connecting unserved and underserved areas by expanding middle-mile internet infrastructure.

Sources: Program descriptions adapted from "Teleom Programs," US Department of Agriculture Rural Development, accessed January 29, 2026, https://www.rd.usda.gov/programs-services/telecommunications-programs; "Overview," US Department of the Interior, Office of Indian Affairs, Office of Indian Economic Development, accessed January 29, 2026, https://www.bia.gov/as-ia/ied; "Affordable Connectivity Outreach Grant Program," Federal Communications Commission, last updated July 3, 2024, https://www.fcc.gov/acp-grants; and the website for BroadbandUSA at https://broadbandusa.ntia.gov.

Notes: DOC = US Department of Commerce; FCC = Federal Communications Commission; FY = fiscal year; IIJA = Infrastructure Investment and Jobs Act; NTIA = National Telecommunications and Information Administration; RUS = Rural Utilities Service; USDA = US Department of Agriculture.

Federal broadband programs differ not only in their administering agencies but in the types of funding mechanisms they employ. Most of these programs provide grants through a discretionary (competitive) process. Rural ReConnect offers both grants and loans, while the ACP provided direct household subsidies. BEAD is the only *formula* grant program among current broadband supports, meaning that states and territories receive federal funds according to a formula predetermined by Congress; they then disperse those funds internally through a competitive process. Since 2020, the federal government has obligated approximately $64.2 billion in broadband investments across the US (table 2).

TABLE 2
Recent Federal Broadband Investments Surpassed $64 Billion
Total obligated funding from broadband-related programs, fiscal years 2020–25

Program	Funding since 2020	Funding to tribal entities
Community Connect Grant Program	$132.5 million	Tribal entities can directly apply for grants.
Rural Development Broadband ReConnect Program[a]	$2.9 billion[b]	Tribal entities can directly apply for grants and loans.
Affordable Connectivity Program	$16.7 billion	Tribal households can receive monthly subsidies.
Tribal Broadband Connectivity Program	$2.2 billion	All funding is dispersed to tribal entities.
Broadband Equity, Access, and Deployment Program	$41.3 billion	Funding is dispersed to states and territories. Tribal entities are eligible to apply through each state's competitive process.
Enabling Middle Mile Grant Program	$940.3 million	Tribal entities can directly apply for grants.

Source: USAspending, retrieved from https://www.usaspending.gov/.
Notes: Dollars are not inflation adjusted. The Affordable Connectivity Program did not obligate funds until 2021; the Tribal Broadband Connectivity Program and the Broadband, Equity, Access, and Deployment Program did not obligate funds until 2022; Middle Mile did not obligate funds until 2023.
[a] Funds for programs that were obligated before 2020 are not captured in this table.
[b] ReConnect has obligated $1.8 billion in grants and $1.1 billion in loans that recipients will need to pay back to the federal government.

Most of these federal broadband programs are not meant exclusively for use by tribal entities. Some programs, such as BEAD, are designed (and mandated) to connect residents in all states and territories, while other programs, such as Rural ReConnect, serve only rural areas. Tribal nations are eligible applicants for these programs alongside state and local governments, private ISPs, and other entities. Several tribal leaders we interviewed emphasized how these programs—and especially Rural ReConnect—have been crucial for their communities.

For many broadband programs, tribal nations are competing for funds not only with other tribal nations but with other communities across the country. This experience can be different from applying

for a program such as TBCP, which directs 100 percent of its funds to tribal entities. In interviews, tribal leaders described TBCP as more responsive to the realities of broadband access in Indian Country while promoting long-term economic growth and tribal digital sovereignty. Also, unlike many federal grants geared toward broadband development, TBCP does not have matching cost requirements, which have historically made it difficult for Native communities to access available funds and make necessary infrastructure improvements.[8]

> **"TBCP was probably the single most effective federal program for broadband infrastructure in tribal communities."**
> **—Tribal citizen working at a charitable organization**

To date, $2.2 billion of TBCP's authorized $3 billion has been obligated to tribal entities. The program was originally authorized to administer $1 billion through the Consolidated Appropriations Act of 2020 and was renewed and expanded with another $2 billion through IIJA. Nevertheless, the need for broadband infrastructure and adoption in Native communities far exceeds what TBCP can currently support. During the second round of TBCP funding in 2024, the NTIA offered $980 million in available funding but received more than 160 applications requesting a total of more than $2.6 billion in project funding.[9]

Though significant needs remain, early evidence suggests that Indian Country's efforts to leverage these unprecedented levels of federal investment may indeed be moving the needle (figure 2). Internet access rates among households headed by American Indian and Alaska Native residents still trail rates among the country as a whole, but the gap has started to close, from a 15.5 percentage-point gap in 2015 to a 3.6 percentage-point gap in 2024. (Figure 2 includes all heads of household who identified as American Indian or Alaska Native in the American Community Survey, regardless of whether they live in Indian Country or elsewhere.)

FIGURE 2

Tribal Broadband Access Still Trails the Rest of the Nation, but the Gap Is Closing

Share of population in households with broadband internet subscription, by year
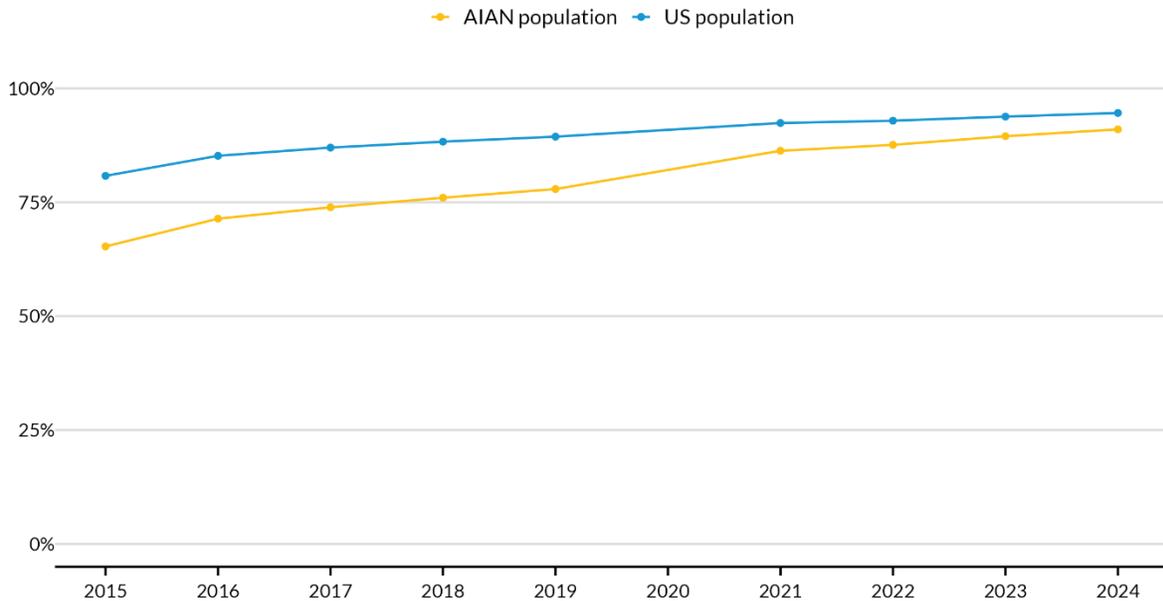
Source: American Community Survey (ACS), one-year estimates.

Notes: AIAN = American Indian or Alaska Native. This group does not include Native Hawaiians. There are no one-year ACS data available for 2020. In the ACS, households with broadband internet subscriptions responded "yes" to the following question: "Do you or any member of this household have access to the internet using a broadband (high speed) internet service such as cable, fiber optic, or DSL service installed in this household?" (See "Why We Ask Questions About Computer and Internet Use," US Census Bureau, accessed January 29, 2026, https://www.census.gov/acs/www/about/why-we-ask-each-question/computer/.) Household demographic characteristics are based on the head of household.

Applying for Federal Broadband Grants

The recent expansion of federal investment has created opportunities for communities to pursue broadband projects, but it has also introduced new challenges. Some tribal nations have developed strong administrative and technical capacity to compete for these grants, while others, along with many nontribal applicants, continue to face barriers throughout the application process.

Securing funding can be complex and resource intensive. First, a federal agency releases a notice of funding opportunity (NOFO) outlining program eligibility, evaluation criteria, and application requirements. After reviewing the NOFO, applicants must compile detailed engineering designs, broadband network maps, budget narratives, and financial statements demonstrating project feasibility. Some programs also require environmental assessments and permitting documentation.

Once submitted, applications undergo a federal review process that evaluates each application in alignment with program goals. The timeline for review varies across agencies and can be lengthy; one tribal leader noted that it took an entire year for the relevant federal agency to complete only the environmental assessment. Such delays in the application process can impede project managers' ability to procure materials and deliver on time because a dollar may not have the same purchasing power when the project is approved as it did when the application was submitted. Several interviewees expressed concern that the federal review and approval process could slow even further amid recent cuts to federal staffing and administrative budgets, driving up project costs and complicating construction timelines.

The Power of Incumbent Providers

For many tribal nations, the greatest challenge in receiving support for broadband infrastructure is navigating eligibility criteria, inconsistent application requirements across programs, and bureaucratic delays. Many federal broadband programs have clauses that prohibit the "overbuilding" of existing broadband infrastructure. This means that if a tribal nation has won an existing BEAD grant, for example, it would not be eligible to apply for another grant from TBCP or Rural ReConnect.[10] Interviewees conceded that the overbuild prohibition may be effective in preventing the duplication of broadband infrastructure and ensuring federal dollars go to communities with the greatest need, but it often has unintended consequences for Indian Country. When the incumbent ISP in the region, for example, has previously received a federal grant to provide internet access to a Native community but never actually built the promised infrastructure, the federal government may bar the local tribal nation from applying for other federal broadband funding because they are considered already "served" by an existing grant. These determinations of what areas are "served" are based on an often-inaccurate national broadband map released by the FCC[11] that relies on self-reported data from private broadband providers.[12] On this map, the FCC considers census blocks to be "served" by existing broadband infrastructure even if only one household in the census block has adequate broadband access (GAO 2018). In rural areas where households are spread out and census blocks cover vast geographic areas, a tribal community could be marked as "served" because a neighboring community has access.

Tribal nations can challenge the FCC broadband map, but the process demands financial resources, technical expertise, and administrative capacity that impose burdens on tribal governments. At the same time, interviewees noted that private ISPs can leverage proprietary data (to which tribal nations usually lack access) to falsely claim or oversell how well tribal citizens are being served by existing infrastructure to block competitors from entering the market. For some federal programs, private ISPs

may apply for and receive federal broadband grants to serve tribal lands without consulting with or receiving consent from the tribal government (though this is beginning to change). Together, these practices undermine tribal digital sovereignty by making it difficult for tribal nations to assert authority over data about their own communities, the infrastructure in their communities, and funding for work in their communities.

> **"[Certain ISPs] have pulled the wool over the FCC's eyes by reporting [broadband coverage] reports that were untrue."**
> **—Tribal broadband specialist**

Interviewees did point out steps that federal agencies have taken to preserve tribal digital sovereignty and uplift Native voices and experiences throughout broadband eligibility and application processes. The Rural ReConnect Program's Tribal Government Resolution of Consent requires nontribal applicants to obtain a formal resolution of consent from the tribal nation to be considered for funding that would serve the tribal lands (Rural Development 2024). Similarly, the BEAD Program initially directed state governments dispersing BEAD funding to engage directly with tribal nations to accurately assess and address their broadband needs (though those requirements were removed under the Trump administration) (Lane 2025).[13] As one interviewee noted, these types of engagement requirements demonstrate cultural competency and a practical understanding of the broadband funding landscape for tribal nations—one that recognizes the persistent friction between tribal nations and the nontribal ISPs that serve, or claim to serve, their communities.

Complex and Misaligned Application Processes Require High Levels of Capacity

Applications for federal grants require deep technical knowledge and administrative capacity.[14] These standards can ensure applicants are prepared to effectively implement proposed projects, but they can also create challenges. Applying for federal broadband grants can be complex and difficult to navigate, particularly for first-time applicants. Applications are competitive, and most programs are not exclusively designed for tribal entities, meaning tribal nations must compete both with other tribal applicants and with nontribal applicants, some of whom may have prior experience with the process or have more resources, technical knowledge, and administrative capacity (GAO 2024). Interviewees described how applications demand extensive technical knowledge and documentation (e.g., engineering diagrams, geographic information system data, and environmental assessments), compliance with multiple statutory requirements, and high levels of administrative coordination. Federal program officers often expect or require a certain format or style of application, which may or

may not be clear in the application instructions. Several interviewees noted that it was essential to have someone on staff with federal grant writing experience who understands the nuances of the process or, if not, to hire an external consultant. This requires fiscal and administrative resources that some tribal nations might not have.

We also heard that tribal applicants faced challenges meeting certain application requirements. Many federal funding applications include matching requirements, which require the awardee to match some portion of a federal award with its own funds from other sources. For tribal broadband projects in particular, these requirements can be prohibitive. Broadband projects require significant capital to build, and tribes have limited capacity to raise funds from conventional sources (e.g., property, income, or sales tax bases) and cannot use tribal trust lands as collateral for financing (Klingbeil et al. 2023). To address these issues, TBCP waived matching requirements, but other federal broadband programs still have such requirements.

Several interviewees also described challenges with the environmental assessment portion of applications (i.e., National Environmental Policy Act, or NEPA, review) and similar reviews related to historic preservation. For one applicant, the NEPA review took six months and was "the biggest hurdle" to making progress. Even though some tribal nations have the capacity and legal authority to conduct their own NEPA review, federal agencies often rejected them. One interviewee conducted an environmental assessment thinking the agency would accept it and later found out that the agency "wanted to do their own," leading to delays. Additionally, some tribal leaders noted high turnover among project officers within federal agencies, which required time spent onboarding new project officers and rehashing previous conversations. Many interviewees suggested that federal agencies should allow tribal governments, who understand the environmental implications of projects on their own lands, to complete their own NEPA reviews when feasible. This can streamline and simplify the application process while preserving tribal sovereignty.

On the other hand, interviewees noted that it is helpful for grant programs to have clear application requirements and technical guidelines to ensure the proposed projects are efficient and feasible in the long run. For example, we heard that the first round of TBCP funding lacked technical guidelines about how deep fiber needed to be buried underground, potentially risking the construction of infrastructure that may not last. A lack of sufficient technical requirements may also put tribal nations at risk of being taken advantage of by external contractors who could cut corners on industry standards without tribal leaders realizing. Interviewees noted that USDA programs provide strong guidelines and that the NTIA should continue taking steps to follow suit.

Although overbuilding prohibitions prevent overlapping awards from multiple programs, many representatives of tribal nations with whom we spoke reported that they sometimes apply to several programs simultaneously to increase their odds of success. This, once again, demonstrates that demand for broadband funding exceeds available resources. But inconsistent eligibility and application requirements across programs complicate these efforts. For example, TBCP requires projects to provide internet connection speeds of at least 25/3 Mbps (NTIA 2025a), while BEAD requires a minimum of 100/20 Mbps (NTIA 2025b). Any necessary duplication of application efforts can place additional burdens on tribal governments.

> **"Make it the same across the board so that when the tribal nation does the work, they know that that work is going to be applicable to multiple opportunities. That's not the case right now."**
> **—Nonprofit leader**

Implementing Federally Funded Broadband Projects

Once a tribal nation secures funding for a broadband infrastructure project, it can begin implementation. Broadband infrastructure projects, particularly those involving new infrastructure construction, are often complex and time consuming. Tribal nations must decide the type of broadband infrastructure to install; how to structure their team for construction, operation, and maintenance; and how to set up their infrastructure for long-term success. Tribal nations face decision points and challenges throughout this process, some of which may be addressed during the application or financing process, while others may be dealt with as they come up during implementation.

Tribal nations and other Native communities pursue broadband infrastructure projects with varying scopes and goals in mind, depending on the tribal nation's size and capacity and their communities' connectivity conditions. Many tribal leaders we spoke with pursued projects to connect all tribal citizens' households or at least ensure all households can connect to a network. In addition to building the physical infrastructure, tribal broadband administrators have to ensure service is affordable. Another common goal tribal leaders expressed was to retain all or some of the physical assets constructed during the project. Others used projects as an opportunity to build relationships, either by providing broadband connection to neighboring communities while building middle-mile connections or by building collaborative partnerships with nontribal entities to complete projects and provide service.

> **"Even if the home doesn't want internet service…we'll still construct it to your home. Now you have the ability to have internet at your home, and you get to choose. There's not a situation where you just don't have it because people never wanted to build here."**
> **—Chief information officer for a tribal nation**

Establishing a Team

Tribal leaders' first step in implementing a broadband project involves establishing the team that will build, operate, and maintain broadband services for their community. Given the demanding nature of broadband operations, several interviewees highlighted the importance of establishing dedicated staff members, and ideally a dedicated team or organization, to take on this work. Tribal nation representatives have identified several team structures that have worked for implementing broadband projects. The most effective enterprise structure depends on the tribal nation's existing assets, capacity, and appetite for taking on long-term operation and maintenance.

Regardless of how the broadband enterprise is structured, the team will have to either establish or enlist an existing ISP. Some tribal nations have created new tribally owned businesses to provide their internet services. Others have housed ISP functions within a new government agency or as part of an existing government information technology (IT) or economic development department. Others have placed broadband service within existing public utilities (e.g., water and power) to leverage their structure and service provision expertise.

Tribal nations can also consider leveraging partnerships with nontribal construction firms, ISPs, neighboring communities, or other entities in operating their broadband systems. Partnerships can help tribal nations quickly expand their capacity or leverage existing technical knowledge and skills in their work (Levy et al. 2025). But forming partnerships, particularly with incumbent internet providers, can be complicated. Some interviewees have had negative experiences with incumbent internet providers, with some providers claiming to serve Native communities despite slow speeds and low levels of connectivity.

> **"These telecoms in my area have been taking advantage of our dollar ever since the beginning of time. That's the truth."**
> **—Tribal broadband specialist**

Because of this legacy of underservice, distrust, and disrespect for tribal sovereignty, many interviewees noted that they would prefer to keep the construction, operation, and maintenance of broadband systems as tribally controlled as possible. If a tribal nation simply does not have the capacity to manage the maintenance and operations themselves, some interviewees suggested partnerships among tribal nations could be a strategy for protecting tribal sovereignty, sharing resources and capacity, and allowing for more efficient ISP operations. Multiple tribal-led ISPs, possibly led by a larger or more established one, could join in a cooperative structure to share costs and increase technical capacity. Such a model could support a more sustainable network and revenue flow and would allow tribal nations to consolidate smaller networks into their system.

Many tribal nations have also found success in partnering with incumbent ISPs to varying degrees. Broadband projects can be an opportunity to foster new relationships. Some tribal nations have built the physical broadband infrastructure themselves and then contracted an external ISP to manage system operations and maintenance.[15] This allows the tribal nation to maintain control of its assets while taking advantage of other organizations' industry experience and operational capacity.

Where incumbent ISPs do not yet exist, some tribal nations have found success partnering with nearby utility cooperatives to provide internet service to portions of their service areas. Other tribal nations have built strong relationships with nearby providers who own and operate broadband networks that serve Native communities. Especially in cases where tribal nations do not have the capacity to run their own ISPs, establishing a strong partnership can help ensure tribal nations have a say in their internet service. Some federal programs, such as Rural ReConnect, helped establish these partnerships by encouraging cooperative agreements for entities to receive broadband technical assistance and training. One tribal interviewee said, "Business partnerships can be really powerful because they fight narratives" of historical mistrust, racism, and political differences.

> **"It has to be earnest and open. [The external partner] was very transparent with what their [return] was going to be on this investment so that we were comfortable that we were understanding their business model enough to know they were not taking advantage of us. At the same time, we had to be very up front to say that it's not fair for the tribe to walk away without any ownership, without assets. And they agreed."**
> **—Chief information officer for a tribal nation**

Similarly, some tribal nations have challenging relationships with neighboring communities that may make it hard to collaborate on infrastructure projects. One interviewee said, "Typically, the tribal

nation's first neighbor is their worst neighbor." But tribal nations can also use broadband projects as an opportunity to establish or reestablish mutually beneficial relationships with neighboring communities. For example, it may be necessary to collaborate with a neighboring community to build middle-mile infrastructure. One interviewee who worked for a tribal government noted that bringing a neighboring community into their broadband plan created the foundation for more productive relationships going forward.

These examples show that it is possible to build sustainable and mutually beneficial partnerships with external stakeholders. These relationships may help expand the capabilities and capacity of tribal broadband operations. At the same time, these partnerships need to be built on trust, shared understanding, and respect for tribal sovereignty. And within partnerships, tribal nations can look for opportunities to retain decisionmaking power and protect their assets and tribal citizens.

> **"We want to provide support for our citizens, but we also want to provide support beyond that. We want to be able to support the city and county and have them support our citizens. Building those relationships is huge."**
> **—IT director for a tribal nation**

BOX 3

The Benefits and Challenges of Tribal Telcos

Tribally owned telecommunications companies (i.e., tribal telcos) are one possible vehicle for delivering internet service to Native communities. Although telecommunications companies have historically specialized in telephone service, most have since branched out to also become ISPs, providing mobile and fixed internet service.

Establishing telcos requires significant effort, including navigating a complex regulatory landscape with potential oversight from federal, state, and tribal bodies. If their management wishes to participate in federal or state universal service programs, telcos also need to receive an eligible telecommunications carrier (ETC) designation, either from the state or the FCC, depending on their regulatory setup.[a] Telcos also have more limitations than general ISPs on their ability to apply for grant funding. These challenges mean that establishing a telco may not be a feasible or attractive solution for some tribal nations. As of November 2025, there were only 14 tribal telcos in the US.[b]

Once established, telcos can access resources that other ISPs cannot access. For example, established ETCs can leverage the Universal Service Fund, established in 1996 to improve telephone access for all. Interviewees from tribal telcos pointed to the fund as a primary strategy for maintaining and operating telephone and broadband systems, particularly for ensuring services could stay affordable for communities.

[a] Susie Margolin, _Launching Tribal Telcos: A Decision Analysis Toolkit for Tribes_ (Harvard University, 2003).
[b] "Members," National Tribal Telecommunications Association, accessed January 29, 2026, https://nationaltribaltelecom.org/members/.

Choosing the Right Technology for the Job

Any tribal nation pursuing a broadband project needs to decide what technology is right for them. Their decision will depend on their service area's particular circumstances, including the tribal nation's capacity and budget, available services, existing infrastructure and middle-mile connections, community geography and layout, and community needs and affordability considerations.

Each available broadband technology has benefits and drawbacks. Many tribal leaders we spoke with noted their goal of a tribally owned fiber-to-the-home network because of fiber's quality, speed, and longevity. Fiber was the primary choice for any tribe looking to build a middle-mile network to connect its community to a backbone network because of fiber's reliability over long distances. Cable and DSL did not often come up as preferred options for tribes. Preexisting cables or lines are most often available in urban and suburban areas and so might not be an option for rural or remote Native communities.

Fixed wireless also came up as a solution for connecting tribal households, particularly where difficult geography or low population density prohibit fiber connections. Many tribal nations were able to receive a spectrum license assignment during the FCC's 2020 Rural Tribal Priority Window, making this tool widely available in Indian Country.[16] We heard from tribal leaders that wireless towers are also often used in hybrid configurations with other technologies. Several projects have used fiber infrastructure to connect their wireless towers, providing consistent and reliable service without having to string fiber directly to every home. Another tribal leader noted their tribe was using fiber to connect a community center while towers provided service to residents farther out. One interviewee used mobile towers—or "cells on wheels"—to quickly connect communities amid the permitting challenges of permanent towers.

Similarly, rural and Native communities have used satellite infrastructure to provide connections to remote areas where physical infrastructure is difficult or expensive to build. One tribal ISP representative with whom we spoke has become a certified reseller for Starlink, an internet service that uses LEO satellites to provide service directly to homes and businesses. But others expressed concerns that because of satellite infrastructure's frequent maintenance needs and high service costs, they would not close the digital divide for Native communities. One interviewee also noted that the night sky is culturally significant for many Native communities and worried that satellite technology would also interfere with that important cultural resource.

Construction Challenges and Considerations

Even for the most well-planned projects, broadband construction can produce challenges. Building broadband infrastructure on tribal lands, especially in rural or remote communities, can present challenges that are unique to tribal and rural contexts. In addition, working with federal resources can have its own unique considerations, such as the following:

- **Geography:** Tribal nations are often located in remote or rural areas. They sometimes include topographies such as mountains or bodies of water that can make construction more difficult, time consuming, or expensive. Tribal nations with reservation lands in the northern part of the country may deal with short construction seasons (fiber cannot be installed in frozen ground). Elsewhere, roads and other infrastructure may not accommodate large construction vehicles. These geography-related challenges may make materials and labor more expensive.

- **Middle-mile connections:** Relatedly, tribal nations may be confronted with a lack of middle-mile infrastructure to which they can connect their broadband systems once they are built.

Areas near tribal lands might not have any middle-mile infrastructure. This means that in addition to building out a system on its own lands, a tribal nation may need to find resources to build the middle mile themselves or partner with neighboring communities to do so.

- **Permitting:** Construction projects in Native communities often require complex sets of permits. Because the federal government holds tribal lands in trust, tribal nations may need permits from the Department of the Interior's Bureau of Indian Affairs before beginning construction. In addition, the checkerboard nature of many reservations (the mix of tribal and nontribal plots adjacent to each other) may require additional permits from neighboring communities or landowners or other federal agencies such as the US Forest Service. These various permitting processes can take time and may have varying requirements.

- **Capacity and buy-in:** Interviewees noted that they expect the typical fiber installation project to last at least four years. These projects require a dedicated team and specific technical expertise and skills that tribal nations may need to seek out before beginning work. The projects also require understanding and support from tribal leadership to allow for successful follow-through.

> **"We do experience all four seasons here. Winters, sometimes they're bad, sometimes they're good. So we're trying to get [as much underground work as possible] done before they stop us around November. It's a big crunch."**
> **—Chief information officer for a tribal nation**

Setting Up Broadband for Long-Term Sustainability

Once a broadband system is built, tribal nations need a plan for long-term system sustainability and maintenance. One interviewee noted that they think of their broadband infrastructure in terms of the Seven Generations Principle, the idea that decisions made today should be sustainable for the next seven generations.[17] This requires a forward-looking approach to keeping broadband service sustainable, affordable, and technologically up to date. Historically, there has been federal support for the capital lift of *building* broadband infrastructure, but limited or no ongoing federal programs support operations and affordability. TBCP, for example, allows for only 2 percent of grant funds to be spent on direct or indirect administrative costs, meaning even projects with significant funds for capital construction may need additional funding for broadband administration and operations (NTIA 2023). The FCC's Universal Service Fund[18] is designed to subsidize service for low-income households and

high-cost areas, but most tribal ISPs do not have access to it unless they are set up as telcos. Congress allowed the ACP, which provided a discount on internet service for low-income families, to expire in 2024.

Consumer Base and Affordability

In general, ISPs earn revenue by charging internet customers for services. Combined with the challenges of building and maintaining broadband infrastructure in rural areas, low population densities and a limited customer base mean that the costs of providing service are often higher in tribal areas than in other parts of the country (Kitch and Barron 2022). ISPs must balance considerations between taking in enough revenue to maintain service and keeping service affordable for community members. Many interviewees mentioned that they saw their broadband as a community service, and their goal was not to make a profit but to break even.

Even so, some interviewees noted that maintaining services for their communities would require an ongoing subsidy, likely from the tribal government. With more limited property tax bases of non-Native communities, many tribal nations have difficulty raising funds for such a subsidy (Klingbeil et al. 2023). Given that the ACP has disappeared and future federal appetite for funding broadband maintenance and operations is unclear, tribal nations have had to get creative to support their broadband systems. Some have found success in creating secondary revenue streams from their capital investments, such as leasing tower space to other providers.

> **"To accomplish a community network takes understanding of the community needs, it takes involvement by all community members, and it takes some innovation and creativity for financing mechanisms. Because it's not going to be profitable, but it does need to be sustainable."**
> **—Tribal citizen at a charitable organization**

Workforce Development and Capacity

To establish a sustainable broadband system, tribal nations need to ensure they have the talent and capacity to maintain and operate service into the future. Several interviewees noted challenges recruiting people for broadband-related roles—and retaining them. Some noted a lack of higher education programs focused on broadband and internet service provision, noting that many people in the industry are self-taught. Others noted challenges recruiting new talent to live and work in remote or rural locations.

The federal government may consider providing additional resources for training and workforce development in the broadband field. Some tribal nations have leveraged their federal grants to help with workforce development and capacity, investing in training resources and the creation of new teams and salaried positions. One tribal nation used a portion of its TBCP money to pay for interested tribal citizens to take an IT course. Although this course was not specific to broadband, the goal was to create technical knowledge and capacity within the community. The federal government could use existing programs to encourage broadband-related workforce development activities or provide additional dedicated support for those uses. Alternatively, tribal ISPs may consider partnering with Tribal Colleges and Universities or other local technical colleges to develop courses to educate a new generation of broadband professionals.

> **"You look out there to colleges and universities around the United States, say I want a degree in telecommunications. Where do I go to get one? There is no one that provides that kind of training to have those core competencies to be able to run a company."**
> **—General manager of a tribal telco**

Navigating the Changing Federal Funding Landscape

Responses to Shifting Federal Priorities

During the second Trump administration, the federal government has drastically shifted its funding priorities, a move that has already affected broadband funding to tribal and rural communities.[19] Broadband projects have not seen the same level of program or award cancellations as other areas of infrastructure, but there remains a sense of uncertainty among interviewees.[20] Communications about the distribution of remaining Round 2 TBCP funds have been unclear, even as the NTIA has announced streamlined processes for Round 3.[21] In addition, uncertainty and policy changes have affected other areas of federal funding that benefit Native communities and will continue to do so, not only through direct cuts to federal investment but also through reductions in staff at federal agencies, making it harder for applicants and award recipients to engage with government staff.[22]

Among some stakeholders we interviewed, there was a sense of uncertainty and concern not only about current broadband funding but about tribal nations' ability to maintain their broadband development plans without future federal support. One interviewee expressed that they were "worried

we're going backwards [and] will lose a lot" and that they "don't think there's anything we can do about it." Another said that they expected "a lot of scaling back [and] freezing in place." They expressed concerns about the amount of investment that would disappear and about the loss of institutional knowledge in the federal government, as tribal leaders noted that some government partners had left their posts. They have noticed frequent staff turnover among program officers assigned to their grants.

At the same time, some interviewees noted that the lack of reliance on federal funding could be an opportunity to increase internal capacity and push for greater tribal sovereignty. An executive director of a tribal telecom company said it was "nice to have the up-front investment, but to meet ongoing needs, we will need to look elsewhere." Many tribal nations may take advantage of this moment to build their long-term capacity and pursue self-funded models and new revenue streams, but opportunities remain for outside funding to support these efforts.

> **"[We will need to] be more self-sustaining in our networks in the future because clearly the federal government isn't a trustworthy or reliable partner moving forward."**
> **—Executive director of a tribal telco**

State Governments and Philanthropic Organizations Can Help Fill Funding Gaps

Interviewees noted that demand for federal broadband funding for tribal nations is high and that available funding has never fully met needs. Broadband infrastructure is expensive and requires significant up-front investment. No other sources have the capacity to fund broadband infrastructure projects on the same level as the federal government, but state governments and nonprofit and philanthropic organizations are stepping up to fill some of these funding gaps.

The California Public Utilities Commission offers several programs to ensure broadband access for all residents, including those in Indian Country.[23] In addition to implementing the state's BEAD Program, the commission offers programs such as the Tribal Technical Assistance Grant Program, which supports studies, planning, and grant writing; the California Advanced Services Fund, which subsidizes the cost of middle-mile and last-mile broadband infrastructure; the Last Mile Federal Funding Account, which expands investments in fiber infrastructure; the Broadband Public Housing Account, which funds free broadband for low-income residents living in public or nonprofit-owned housing; and the Broadband Adoption Account, which funds broadband access for after-school programs and the broader public. These state programs can supplement tribal nations' federal awards

and provide tribal nations the resources and additional capacity to apply for federal broadband programs.

Other states are following suit. Washington offers several programs to build broadband infrastructure in rural and Native communities that lack access or have low internet speeds[24] and offers technical assistance for tribal nations applying for BEAD funding and subsequently deploying broadband infrastructure.[25] In Minnesota, the Border-to-Border Broadband Development Grant Program provides funding to get broadband into areas that are underserved.[26] Tribal nations can leverage these state programs in combination with federal funds to support different elements of the same broader infrastructure projects.

Philanthropies and grantmakers have not yet played a major role in the broadband infrastructure space, but several interviewees spoke about the need for additional support amid uncertain federal funding and argued philanthropy could step up. One interviewee with experience in the philanthropic sector described broadband as a "high-ticket item" in which philanthropic organizations need to figure out where to fit. Some organizations in the philanthropic and nonprofit sectors may not have the capacity to support the level of investment needed for physical broadband infrastructure deployment, but there may be other roles to play, such as grantwriting support or technical assistance. Some organizations, such as the Internet Society,[27] already support capacity building by training tribal nations and other communities on how to build, operate, and sustain broadband networks.

> **"If [federal funding] completely dries up, philanthropy will need to step up a bit."**
> **—Technical assistance provider**

Best Practices for Tribal Nations

Drawing from interviews with tribal ISPs, tribal governments, technical assistance providers, and other advocates supporting tribal broadband access and tribal digital sovereignty, we outline practices that have helped some tribal nations navigate federal broadband funding and deploy broadband infrastructure. Although these insights can guide tribal governments, tribal ISPs, and other partners, no single model will work for all communities. Given the diversity of tribal geographies, governance structures, populations, regional contexts, and relationships with incumbent ISPs, each tribal government or ISP will need to adapt these approaches to their unique contexts.

Submitting Strong Federal Grant Applications

- **Plan early and prepare reusable materials.** Tribal applicants can begin planning before federal NOFOs are released by identifying broadband needs, mapping unserved areas, drafting application narratives, and working to build buy-in from tribal leadership. Though program requirements vary, applicants may consider creating standardized data tables, maps, and narratives that can be repurposed across multiple funding opportunities.

- **Leverage technical assistance and expert partnerships.** Engaging early with technical assistance providers, grantwriters, engineering consultants, and tribal peers who have experience with the federal grant application process can help applicants navigate complex requirements, avoid common mistakes, and put their best application forward.

- **Document and track communications with federal agencies.** Interviewees noted that turnover among federal program officers and shifting guidelines from agencies can cause delays in the application process and force applicants to resubmit materials. To prepare for these potential obstacles, tribal applicants should maintain well-organized records of all correspondence and approvals from the agency and follow up if they have questions or have not received a response regarding the status of their application.

- **Conduct financial planning up front.** Given the significant ongoing costs of operating and maintaining broadband systems, it is important to include detailed financial forecasting, pricing, and rate design and analysis early in the planning and application process to ensure the financial viability of broadband deployment and the affordability of adoption.

Identifying Appropriate Broadband Structures and Implementation Strategies

- **Select the technology that best serves local needs.** Interviewees emphasized that decisions about which broadband technology to deploy should depend on specific community context, such as geographic features, population density, economic capacity, and the tribal nation's long-term goals. Although fiber offers reliable connections and the lowest maintenance costs, fixed wireless or LEO satellites may be more practical in remote and sparsely populated areas. Some interviewees said they used a hybrid model with fiber-to-the-home networks in more densely populated areas and wireless connections in less populated areas.

- **Develop internal capacity and buy-in.** Broadband projects require focus from a dedicated team with useful skills and experience. In addition, buy-in from tribal leaders who will advocate for

the project can help maintain resources and community support and form partnerships. Regular communication with key stakeholders is needed to maintain support across any changes in tribal leadership.

- **Build partnerships that expand capacity without compromising sovereignty.** Several interviewees described successful collaborations with non-Native entities that allowed them to maintain some control over broadband assets while augmenting limited staffing capacity or technical expertise. Tribal governments may consider partnering with incumbent providers, regional broadband offices, or other local or tribal governments to reduce equipment costs, share operational and maintenance responsibilities, and build necessary middle-mile infrastructure. Mutual recognition of tribal authority and sovereignty is critical for making these partnerships successful.

Sustaining Broadband Networks Beyond Federal Grants

- **Invest in workforce development and build local technical capacity.** There is a lack of dedicated degree or training programs focused on broadband, making it difficult to recruit and retain the best talent. Tribal nations and others should consider investing in education in this field to develop a pipeline of available talent. Cultivating talent internally has the added benefit of reducing reliance on outside contractors, protecting tribal sovereignty, creating local jobs, and boosting tribal economies.

- **Integrate operations and maintenance into project design.** Federal broadband grants typically fund the construction of new infrastructure but may not provide adequate resources for ongoing maintenance, staffing, and operational costs. Incorporating forward-looking maintenance, training, and technology upgrade activities into the original scope of a broadband project can help ensure tribal grantees can maintain their networks beyond the grant period.

Tapping into Nonfederal Funding Streams

- **Leverage state and regional broadband funds to complement federal investments.** Several states, including California and Washington, offer broadband programs that provide planning funds, match grants, and technical assistance to tribal governments and tribal ISPs. These resources can be critical for expanding broadband access amid fluctuations in federal funding priorities.

- **Consider partnering with philanthropic and nonprofit organizations to boost tribal capacity.** Although philanthropic funds available for broadband are limited, foundations and other nonprofit organizations can help build the internal capacity of tribal governments and tribal ISPs to build, manage, and sustain complex broadband networks. Given their existing relationships with technical experts, advocacy groups, and other funders, these organizations may also help connect tribal governments to additional resources and valuable partnerships.

Policy and Stakeholder Recommendations

Given the historical underinvestment in broadband infrastructure in Native communities, federal agencies, state and local governments, nonprofits, and philanthropic organizations have many opportunities to better support these efforts.

Federal Agencies

Federal agencies—namely, the NTIA, the USDA, and the FCC—have already offered significant support to tribal governments and ISPs through their recent investments into broadband. Yet they can do more to maximize the impact of these investments and promote sustainability after the federal grant period. Based on the reflections of stakeholders who applied for federal funding, as well as our review of federal programs, we recommend that federal agencies do the following:

- **Provide technical assistance for grant applications.** In nearly every interview, participants highlighted the value of technical assistance in the application process to better support tribal nations and other applicants that may have limited experience applying for federal funds. The NTIA and the USDA were praised for offering strong technical assistance supports to applicants through Rural ReConnect and TBCP, respectively. In the case of TBCP, one tribal government staff member highlighted that, although there was a lot of paperwork, applicants were in open conversation with NTIA staff members to get the clarifications and support they needed. By strengthening and expanding technical assistance programs in future funding opportunities, agencies can better guide tribal applicants through the application process and ensure awards do not always go to applicants with the most capacity.

- **Prioritize tribal sovereignty in program NOFOs.** Agencies can design NOFOs in a way that promotes tribal sovereignty and ownership throughout the process. The initial design of the BEAD Program, which required states receiving program funding to engage directly with the

tribal nations within their borders, represents a model for this type of funding opportunity (these beneficial requirements were repealed under the second Trump administration). Similar engagement requirements could ensure that tribal governments have an opportunity to give input in the funding allocation process (Lane 2025). Discretionary programs could also incorporate this requirement in requests for proposals for programs that are not exclusively designed for tribal entities.

▪ **When relevant, defer to tribal environmental review processes.** Review processes for NEPA and historic preservation conducted by federal agencies often take significant time, delaying project timelines and increasing costs. Many tribal nations have the capacity and legal authority to conduct their own environmental and historic preservation reviews. But many federal agencies do not consider these as meeting application requirements. Federal agencies should honor tribally conducted reviews to support tribal sovereignty, avoid duplicative efforts, and improve project timelines.

▪ **Waive matching requirements.** Many federal funding opportunities require applicants to obtain matching grants as a means of securing more long-term funding and demonstrating institutional capacity. But many tribal nations have difficulty accessing matching funds because of centuries of disinvestment, limited tax-raising ability, and the inability to use tribal lands as collateral for financing. Several interviewees appreciated TBCP's lack of matching fund requirements, suggesting other programs should consider doing the same.

▪ **Include clear technical requirements and guidance in application materials.** Some interviewees were concerned about a lack of clear technical guidelines for broadband projects, particularly in the first round of TBCP. For example, there were no requirements for how deep fiber needed to be buried, leading to worries that some tribal nations might not install their fiber in compliance with industry safety standards. Some also worried that without federal guardrails, external partners could take advantage of tribal nations by cutting costs and compromising project quality.

▪ **Support operation and maintenance with more flexible funding.** The direct government funding from broadband projects has played a valuable role in helping tribal governments afford and construct broadband lines, but tribal nations could further benefit from continued support for operations and maintenance throughout the process. Given low population densities and limited consumer bases, many tribal nations have had limited capacity to support broadband service at affordable levels without a subsidy and, as such, face challenges

sustaining the networks. The general manager of a tribal-run telecom equated the lack of sustained guidance and operational support built into federal programs to the federal government giving tribal nations "an Escalade with all the bells and whistles they could put on it but not the driver's license to drive it or the gas to get it down the road." Making more flexible funding opportunities available could help tribal nations sustain their broadband infrastructure and withstand unpredictable changes in federal funding. To meet this need, the federal government could expand access to the Universal Service Fund, facilitated by the FCC, for more than just formally recognized ETCs, or provide support to tribal nations to help them establish ETCs and more readily tap into this resource designed to maintain service affordability.[28]

- **Maintain broadband opportunities for rural communities.** Interviewees highlighted that although tribal nations need additional broadband investment, neighboring rural communities also need support and deal with many of the same challenges as tribal nations. Building full-coverage broadband networks in rural communities will help sustain broadband access in Native communities by increasing middle-mile connections and providing opportunities for local partnerships.

State and Local Governments

Once funds have reached communities, state and local governments can also support broadband development and access in Native communities. Although tribal nations operate independently of the states and communities that surround them, partnering on tribal broadband projects can provide mutually beneficial opportunities, strengthen relationships, and increase broadband access across regions. As such, we recommend the following:

- **Prioritize tribal digital sovereignty and engage Native communities through transparent communication.** The BEAD Program initially required state governments to engage with tribal nations that were requesting federal funds (this requirement was removed by the second Trump administration). Yet the degree of such engagement was up to the states and varied significantly. States should strive for effective engagement. For example, states that demonstrated highly effective engagement had identified tribal nations as priority areas with connectivity needs, held regular engagement activities with tribal nations, and planned for Native communities' unique connectivity challenges (Lane 2025).

- **State governments can step up in the wake of federal funding laws.** Interviewees highlighted a few states that have offered alternative funding opportunities to tribal nations, including California and Washington. Other states can follow suit. States can offer planning grants, technical assistance, and resources to support tribal governments in the federal broadband application process or can provide direct investments in infrastructure.

- **Local governments can form mutually beneficial partnerships with tribal nations.** The deployment of middle-mile broadband is the most straightforward case in which tribal and local governments can support each other's priorities. Broadband networks in tribal nations need to connect to neighboring networks to connect back to global internet backbones and vice versa. Collaborating with local governments on broadband projects can set the groundwork for future collaboration: one interviewee, who directs IT for a tribal government, described their IT-related collaboration with the bordering county's sheriff's department as an important relationship, citing that they want to be able to provide support for their neighbors during natural disasters. But these relationships must be built on a foundation of trust and respect for tribal sovereignty.

Philanthropic and Nonprofit Organizations

Philanthropic organizations do not currently play a major role in supporting tribal broadband infrastructure development given the high cost of entry into the space. But opportunities remain for philanthropies and other mission-driven organizations to support tribal nations' efforts to build their broadband networks. To this end, we recommend they do the following:

- **Invest in capacity building, training, and technical assistance.** If federal and state programs supporting technical assistance and capacity building fall through, these organizations can fill the gap. This can be a meaningful role for organizations that care about supporting broadband but do not have the financial resources to fund infrastructure development. Workforce development programs that increase the pipeline of tribal citizens prepared to work in broadband-related fields, with a focus on youth and others who have not yet entered the job market, were highlighted by interviewees as important areas of focus. Nonprofit and philanthropic organizations can work with tribal nations to identify which communities might benefit from support building broadband expertise and operational capacity.

- **For organizations looking to directly contribute to investments or operations, pursue projects in need of significant funding.** Given the prevailing costs of building and maintaining

broadband infrastructure, small investments scattered to multiple tribal nations may not be as impactful as large investments to support one or two tribal governments or tribal-run ISPs. Such investments could be targeted toward tribal areas with the greatest need or to tribal nations that serve as anchors to surrounding communities. Investments in the latter could facilitate a domino effect of increased tribal capacity for broadband management.

Conclusion

As federal priorities change and threats of discontinuing major infrastructure programs loom, the future of federal funding for broadband infrastructure is uncertain. Interviewees noted that unprecedented levels of federal broadband funding in recent years have funded significant and much-needed infrastructure, but there is more work to be done, particularly in ensuring tribal nations can maintain their broadband systems and protect their digital sovereignty. Success will require collective, collaborative efforts between tribal governments and ISPs; federal, state, and local governments; nonprofit organizations; and private ISPs and partners.

When asked about their visions for the future of connectivity in Indian Country, many interviewees expressed a desire for tribal digital sovereignty and an increased ability for tribal nations to develop, own, and operate their own broadband assets and ISPs to serve their communities. A broadband development specialist for a tribal government expressed the hope that, for once, their tribal nation "will have control over its communications." More resources and technical assistance are needed to expand broadband infrastructure and boost administrative and technical capacity in tribal nations, but there is hope that this deeper capacity and predominant tribal control will have a positive impact on these communities' health, educational attainment, and economies. Despite historical disinvestment and ongoing challenges, much progress has been made in terms of access to broadband for tribal nations. To quote one participant, "Tomorrow doesn't have to be the same as yesterday."

Notes

1 Charlie Muller and João Paulo de Vasconcelos Aguiar, "What Is the Digital Divide?" Internet Society blog, March 3, 2022, https://www.internetsociety.org/blog/2022/03/what-is-the-digital-divide/.

2 Randall Akee, "Sovereignty and Improved Economic Outcomes for American Indians: Building on the Gains Made Since 1990," Washington Center for Equitable Growth, January 14, 2021, https://equitablegrowth.org/sovereignty-and-improved-economic-outcomes-for-americanindians-building-on-the-gains-made-since-1990.

3 "Infrastructure and Community Development: Policy Issues," National Congress of American Indians, accessed January 29, 2026, https://www.ncai.org/section/policy/portfolios/infrastructure-and-community.

4 "A Look at the Latest Population Trends for Native Children," Annie E. Casey Foundation blog, last updated November 10, 2024, https://www.aecf.org/blog/a-look-at-the-latest-population-trends-for-native-children.

5 Federal Communications Commission, "FCC Increases Broadband Speed Benchmark," press release, March 14, 2024, https://docs.fcc.gov/public/attachments/DOC-401205A1.pdf.

6 Kathryn de Wit, "Broadband Basics: How It Works, Why It's Important, and What Comes Next," Pew Charitable Trusts, August 18, 2023, https://www.pew.org/en/research-and-analysis/fact-sheets/2023/08/broadband-basics-how-it-works-why-its-important-and-what-comes-next.

7 "Tribal Broadband Connectivity Program," National Telecommunications and Information Administration, accessed January 29, 2026, https://www.ntia.gov/funding-programs/internet-all/tribal-broadband-connectivity-program.

8 "Funding and Programs Meant to Help Tribes May Not Be Reaching Them," US Government Accountability Office blog, December 3, 2024, https://www.gao.gov/blog/funding-and-programs-meant-help-tribal nations-may-not-be-reaching-them.

9 National Telecommunications and Information Administration, "More Than 160 Applications Submitted to the Biden-Harris Administration's 'Internet for All' Tribal Broadband Connectivity Program," press release, April 18, 2024, https://www.ntia.gov/press-release/2024/more-160-applications-submitted-biden-harris-administration-s-internet-all-tribal-broadband.

10 "Tribal Broadband Connectivity Program Frequently Asked Questions," National Telecommunications and Information Administration, BroadbandUSA, accessed January 29, 2026, https://broadbandusa.ntia.gov/sites/default/files/2023-10/TBCP2_FAQs_2023.09.27.pdf.

11 "National Broadband Map," Federal Communications Commission, accessed January 29, 2026, https://broadbandmap.fcc.gov/home.

12 H. Trostle, "Inaccurate Data Could Hinder Broadband Access in Indian Country," Tribal Business News, October 12, 2023, https://tribalbusinessnews.com/sections/economic-development/14499-inaccurate-data-could-hinder-broadband-access-in-indian-country.

13 National Telecommunications and Information Administration, "Trump Administration Announces the Benefit of the Bargain BEAD Program That Removes Regulatory Burdens, Lowers Costs and Expands Use of All Technologies," press release, June 6, 2025, https://www.ntia.gov/press-release/2025/trump-administration-announces-benefit-bargain-bead-program-removes-regulatory-burdens-lowers-costs.

14 Amanda Hermans and Tomi Rajninger, "Local Governments with More Staff and Bigger Budgets Are More Likely to Win Federal Infrastructure Grants," *Urban Wire*, Urban Institute, May 6, 2024, https://www.urban.org/urban-wire/local-governments-more-staff-and-bigger-budgets-are-more-likely-win-federal.

15 Skip Descant, "For Tribal Communities, Self-Owned, Open-Access Networks," Government Technology, June 12, 2025, https://www.govtech.com/network/for-tribal-communities-self-owned-open-access-networks.

16 "2.5 GHz Rural Tribal Window," Federal Communications Commission, accessed January 29, 2026, https://www.fcc.gov/25-ghz-rural-tribal-window.

17 Breanne Smith, "Seven Generations Principle: Healing the Past and Shaping the Future," The Indigenous Foundation, accessed January 29, 2026, https://www.theindigenousfoundation.org/articles/seven-generations-principle-healing-the-past-amp-shaping-the-future.

18 "Universal Service Fund," Federal Communications Commission, accessed January 29, 2026, https://www.fcc.gov/general/universal-service-fund.

19 Melissa Dai, "Broadband's Broken Promise: How Federal Failures and Funding Fights Keep Native and Black Farmers Offline," Investigate Midwest, October 22, 2025, https://investigatemidwest.org/2025/10/22/broadbands-broken-promise-how-federal-failures-and-funding-fights-keep-native-and-black-farmers-offline/.

20 Devin O'Connor and Sam Berger, "The Trump Administration Is Purposefully Inflicting Unnecessary Pain During the Shutdown," Center on Budget and Policy Priorities blog, October 24, 2025, https://www.cbpp.org/blog/the-trump-administration-is-purposefully-inflicting-unnecessary-pain-during-the-shutdown.

21 US Senate Committee on Commerce, Science, and Transportation, "Cantwell, Schatz Demand Answers on Trump Administration's Delay of Nearly $1 Billion in Tribal Broadband Grants," press release, November 6, 2025, https://www.commerce.senate.gov/2025/11/cantwell-schatz-demand-answers-on-trump-administration-s-delay-of-nearly-1-billion-in-tribal-broadband-grants; and National Telecommunications and Information Administration, "NTIA Awards $6.5 Million in Equitable Distribution Funding to Advance Tribal Broadband Access," press release, December 23, 2025, https://www.ntia.gov/press-release/2025/ntia-awards-65-million-equitable-distribution-funding-advance-tribal-broadband-access.

22 The National Center for American Indian Enterprise Development, "The National Center Releases Assessment of Impacts of Administration Policy on Indian Country," press release, May 13, 2025, https://ncaied.org/stories-media/archive.html/article/2025/05/13/the-national-center-releases-assessment-of-impacts-of-administration-policy-on-indian-country.

23 "Broadband Funding Programs: Resources for Last-Mile Projects and Other Broadband Needs," California Public Utilities Commission, accessed January 29, 2026, https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/broadband-implementation-for-california/broadband-caseworkers/broadband-funding-and-programs.

24 "Washington State Broadband Office (WSBO)," Washington State Department of Commerce, accessed January 29, 2026, https://www.commerce.wa.gov/wsbo/.

25 "Grant Application Opportunity—BEAD Technical Assistance," Washington State Association of Counties, August 1, 2024, https://wsac.org/bead-grant/.

26 "Broadband Grant Program," Minnesota Employment and Economic Development, Office of Broadband Development, accessed January 29, 2026, https://mn.gov/deed/programs-services/broadband/grant-program/.

27 See the website for the Internet Society at https://www.internetsociety.org/.

28 "Universal Service Fund," Federal Communications Commission.

References

FCC (Federal Communications Commission). 2024. "Eighteenth Section 706 Report Notice of Inquiry." FCC.

Freemark, Yonah, Mel Langness, Amanda Hermans, Gabe Samuels, Tomi Rajninger, and David Blount. 2023. *Is Federal Infrastructure Investment Advancing Equity Goals? Examining How the Distribution of New Infrastructure Funding May Address Historic Racial and Economic Inequities*. Urban Institute.

GAO (Government Accountability Office). 2018. *Broadband Internet: FCC's Data Overstate Access on Tribal Lands*. GAO.

GAO (Government Accountability Office). 2023. *Broadband Infrastructure: Middle-Mile Grant Program Lacked Timely Performance Goals and Targeted Measures*. GAO.

GAO (Government Accountability Office). 2024. *Tribal Broadband: Additional Assistance to Recipients Would Better Support Implementation of $3 Billion in Federal Grants*. GAO.

GAO (Government Accountability Office). 2025. *Broadband Programs: Agencies Need to Further Improve Their Data Quality and Coordination Efforts*. GAO.

Hermans, Amanda, Teddy Maginn, Yonah Freemark, Gabe Samuels, Tomi Rajninger, and Sam Lieberman. 2025. "Are Federal Broadband Investments Meeting the Need? A Snapshot of Recent Federal Broadband Funding." Urban Institute.

Kitch, Douglas K., and Christopher S. Barron. 2022. *Evaluating the Critical Need for Broadband Sustainability Funding on Rural Tribal Lands*. National Tribal Telecommunications Association.

Klingbeil, Kevin, Chloe Adler, Amanda Hermans, Harry Maher, Nancy Pindus, and Devoni Whitehead. 2023. *Community Economic Development in Indian Country: Market Research Report*. CDFI Fund, Big Water Consulting, and the Urban Institute.

Lane, Sharayah. 2025. *The Effective Engagement Scale: Measuring How States and Tribes Are Collaborating in the BEAD Program*. Benton Institute for Broadband and Society.

Levy, Diane K., Nancy M. Pindus, and Ilina Mitra. 2025. "Opportunities and Best Practices for Tribal Partnerships." Urban Institute.

Margolin, Susie. 2003. *Launching Tribal Telcos: A Decision Analysis Toolkit for Tribes*. Harvard University.

NTIA (National Telecommunications and Information Administration). 2023. *Tribal Broadband Connectivity Program: Budget Forms and Documents*. NTIA.

NTIA (National Telecommunications and Information Administration). 2025a. *Tribal Broadband Connectivity Program: Reporting Guidance and Instructions*. NTIA.

NTIA (National Telecommunications and Information Administration). 2025b. *Frequently Asked Questions and Answers Version 14: Broadband Equity, Access, and Deployment (BEAD) Program*. NTIA.

Pruitt, Zachary, Kate P. Chapin, Haley Eakin, and Annie L. Glover. 2022. "Telehealth During COVID-19: Suicide Prevention and American Indian Communities in Montana." *Telemedicine and e-Health* 28 (3): 325–33.

Rural Development. 2024. *ReConnect (Rural E-Connectivity) Program Guide for Fiscal Year 2024*. US Department of Agriculture, Rural Development.

US Commission on Civil Rights. 2018. *Broken Promises: Continuing Federal Funding Shortfall for Native Americans*. US Commission on Civil Rights.

US Department of Commerce. 2025. "BEAD Restructuring Policy Notice." National Telecommunications and Information Administration.

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