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Federal Broadband Data Sources: Frequently Asked Questions

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SUMMARY

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Rachael D. Roan
Research Librarian

Federal Broadband Data Sources: Frequently Asked Questions

This report provides an overview of select federal broadband data sources and answers frequently asked congressional questions concerning these sources. The answers to frequently asked questions include links to available funding sources, service maps, provider speeds and technologies, and guidance resources.

This report highlights reports and data sources from federal entities, including the Federal Communications Commission (FCC), the National Telecommunications and Information Administration (NTIA), the Department of Agriculture (USDA), and the U.S. Census. Types of reports and data sources include federal survey data, congressionally mandated reports, federal assistance data, and select programmatic reports.

The Broadband Deployment Accuracy and Technological Availability Act (Broadband DATA Act; P.L. 116-130), enacted in March 2020, highlights congressional interest in accurate broadband data. The FCC is in the process of creating systems and processes for the broadband data collection requirements included in the Broadband DATA Act.

This report also references relevant CRS products that provide additional background information on related topics.

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What Is Broadband?

The term *broadband* commonly refers to high-speed internet access that is faster than dial-up access. Broadband includes several high-speed transmission technologies, such as digital subscriber line (DSL), cable modem, fiber, wireless, satellite, and broadband over power lines (BPL).

CRS Reports

CRS Report R45962, *Broadband Data and Mapping: Background and Issues for the 117th Congress*, by Colby Leigh Rachfal

CRS In Focus IF12030, *The Broadband Digital Divide: What Comes Next for Congress?*, by Colby Leigh Rachfal

Federal Broadband Reports and Data Sets

Various federal entities produce broadband information, including reports and data sets. Reports may describe the state of broadband generally or discuss specific federal broadband programs or activities. Data sets may focus on funding agencies, grant programs, geographic and demographic information, grant awardees, speeds deployed, and more.

Which Federal Entities Support Broadband Programs?

The following federal entities provide broadband support and may make available reports, data, and other broadband information:

- Federal Communications Commission (FCC),
- National Telecommunications and Information Administration (NTIA),
- Department of Agriculture (USDA),
- Department of Health and Human Services (HHS),
- Department of Housing and Urban Development (HUD),
- Department of the Treasury, and
- Institute of Museum and Library Services (IMLS).

CRS Reports

CRS Report R47075, *The National Telecommunications and Information Administration (NTIA): Current Roles and Programs*, by Ling Zhu

CRS Report R46780, *Overview of the Universal Service Fund and Selected Federal Broadband Programs*, coordinated by Patricia Moloney Figliola

CRS Report R46912, *USDA Rural Broadband, Electric, and Water Programs: FY2022 Appropriations*, by Lisa S. Benson

What Types of Broadband Reports and Data Sets Are Publically Available?

Census Bureau

- Computer and Internet Use in the United States—The Broadband Data Improvement Act of 2008 (P.L. 110-385) required the Census to amend the American Community Survey (ACS) to determine internet access by household. The ACS asks questions about the type of computer used, whether the household has internet access, and the type of internet access. Examples of internet subject-related data tables include types of computers and internet subscriptions and types of internet subscriptions by selected characteristics.

FCC and the Universal Service Administrative Company

- Broadband Progress Reports (1999-current)—Section 706(b) of the Telecommunications Act of 1996 (P.L. 104-104) requires the FCC to annually assess the availability of advanced telecommunications capability to Americans, determine if the deployment is reasonable and timely, and take action to remove deployment barriers. The progress report analyzes FCC Form 477 data providing deployment estimates by
  - geographical areas (rural areas, urban areas, tribal lands);
  - speed data, including
    - fixed terrestrial speed (10/1 Mbps, 25/3 Mbps, 50/5 Mbps, 100/10 Mbps, 250/25 Mbps)
    - minimum advertised speed (5/1 Mbps)
    - median speed (10/3 Mbps);
  - demographic data, including
    - for Americans with and without coverage fixed terrestrial 25/3 Mbps service and mobile 4G LTE
    - the percentage of population with fixed terrestrial services by census block group-level demographic variables; and
  - adoption data by speed, including
    - the rate of adoption for fixed terrestrial services at different speed tiers and
    - the rate of adoption at different speed tiers by county-level demographic variables, such as median house income, population density, household poverty rate, and rural population rate.
- Federal-State Joint Board Monitoring Reports (1987-current)—The reports provide National Exchange Carrier Association (NECA) and Universal Service Administrative Company (USAC) data on universal service support. The data includes, but is not limited to, the following:
  - telecommunications industry revenues;
  - universal service programs, including
    - funding claims, commitments, and disbursements;

        - subscribership; and
    - residential internet subscribership and expenses.
- Fixed Broadband Deployment Data from FCC Form 477—FCC requires that
    - facilities-based broadband providers file data with the FCC twice a year (Form 477) on which they offer Internet access service at speeds exceeding 200 kbps in at least one direction;
    - fixed providers file lists of census blocks in which they can, or do, offer service to at least one location, with additional information about the service; and
    - mobile providers file maps of their coverage areas for each broadband technology.
- Form 499 Filer Database—Internet service providers are required to file annually (Form 499) to report a company's actual revenue billed during the prior calendar year. The filer database contains the following information:
    - company's current and prior business name(s) and primary address(es),
    - state or jurisdiction where the company provides services or is planning to provide service,
    - names and business addresses of select company officers, and
    - company's designated agent for service of process.
- FCC's Open Data platform—Subsets of the Form 477 data are available, including data by geographic area and the average download/upload speeds by state.
- USAC Annual Report—USAC files an annual report with the FCC and Congress by March 31, reporting on the prior year's operations, activities, and accomplishments. Annual Reports from 1999 to current are available. Content includes, but is not limited to,
    - annual disbursement amounts,
    - quantity of participating entities, and
    - information about training resources.
- USAC's Open Data platform—USAC administers the Universal Service Fund (USF) under the FCC's direction. The USF provides support through a number of direct mechanisms that target both providers of and subscribers to telecommunications services. The open data platform includes interactive datasets, visualization tools, and exports. The datasets contain universal service program participants' data for the
    - E-rate,
    - Rural Health Care,
    - Lifeline,
    - High Cost, and
    - COVID-19 broadband programs.
- FCC's Office of Economics and Analytics Industry Analysis Division releases additional periodic reports and data, such as

- Urban Rate Survey Data & Resources—The survey provides comparability benchmarks for fixed voice and broadband rates for universal service purposes. The results include
    - provider name,
    - state in which the Census tract is located,
    - technology used to provide the residential service,
    - advertised download and upload speeds, and
    - monthly and total costs.

NTIA

- Access Broadband Reports—The Consolidated Appropriations Act of 2021 mandated an annual report to Congress, which highlights NTIA's Office of Internet Connectivity and Growth's yearly accomplishments, covers investments in federal broadband support programs and USF programs, and makes improvement recommendations for tracking broadband spending and outcomes.
- American Broadband Initiative (ABI) Progress Reports—In February 2019, the NTIA, in coordination with over 20 other agencies, launched the ABI to establish strategies for streamlining federal permitting, leveraging federal assets, and maximizing the effectiveness of federal funding for broadband.
- Digital Nation Reports—NTIA's analysis of the data collected through the Census' ACS survey questions on broadband internet usage.
- Digital Nation Data Explorer—Tracked metrics include, but are not limited to,
    - device use, such as desktop, laptop, tablet, smartphone, smart TV, and wearable;
    - internet use by age (15 and older), location (state, home, work, school, public place), and no home internet use;
    - reasons for non-use of the internet at home, such as do not need or not interested, too expensive, can use elsewhere, no/inadequate computer, or privacy or security concerns;
    - types of internet service plans (mobile, satellite, wired, and dial-up) and how the plan is purchased or provided (e.g., by company, included with housing, public service at no cost); and
    - online activities, such as using email, using social networks, working remotely, and selling goods.

USDA

- Congressional Justifications for the Rural Utilities Service, included in the annual USDA Budget Explanatory Notes—Provides appropriations, by state, for telecommunications grants (e.g., the Community Connect Program, Rural Broadband Access Program, and Telecommunications Infrastructure Program).
- Rural Development Grant Awards—Lists Rural Development grant awards, including telecommunications grants, by fiscal year. The downloadable lists can be sorted by city, state, recipient, amount, program, and congressional representative.

- Rural Development Reports—Selected broadband programmatic reports for the Broadband Initiatives Program funded by the American Recovery and Reinvestment Act of 2009 (P.L. 111-5).
- ReConnect Loan and Grant Program—The ReConnect program provides funds construction, improvement, or acquisition of facilities and equipment costs for broadband service in eligible rural areas. Awardee summaries include the state, total square miles, funded service area households, award amount, and description.
- Distance Learning & Telemedicine—The program helps rural communities use telecommunications to connect to each other and to the world. Awardee summaries include the state, award amount, and description.

Which Reports and Datasets Include Congressional-District, City, or County-Level Data?

FCC

- Broadband Progress Reports provide selected data by city, county, or county.
- Fixed Broadband Deployment map provides an "Area Summary" search that includes broadband provider information by state, county, congressional district, census place, tribal area, and core-based statistical area.

USAC

- USAC's Open Data platform provides keyword searching across datasets to identify those with geographic data of interest. Datasets include,
    - E-Rate Recipient Details and Commitments dataset includes city, state, zip code, county, latitude, longitude, and congressional district data.
    - Rural Health Care Commitments and Disbursements dataset includes city, state, zip code, county, latitude, and longitude data.

USDA

- Rural Development Grant Awards provide select Rural Development grant awards, including telecommunications grants, spreadsheets by fiscal year. Award information includes city, state, recipient, amount, program, and the associated congressional-district representative.

Federal Broadband Assistance

The primary source of federal grant information is SAM.gov.[1] The website describes more than 2,200 federal assistance programs that can be located by searching the "Assistance Listings." Note that funding of specific grant programs depends upon annual congressional budget appropriations.

[1] The System for Award Management (SAM), or SAM.gov, is the official government source for contract opportunities and assistance listings. Assistance listings include projects, services, and activities the federal government provides to the public.

Which Broadband Activities Does Federal Assistance Support?

Federal assistance programs fund a variety of broadband activities, including planning, infrastructure deployment, mapping, equipment, public connectivity, research, training, and telehealth. Entities interested in applying for federal assistance are encouraged to review program information—including eligibility requirements—to determine if the program will meet their needs.

NTIA's Federal Funding Guide provides general descriptions of broadband assistance programs, including funding agencies' programmatic websites and contact information; purpose of the program; funding type (e.g., formula, grant, loan); important dates (e.g., application submission date, if applicable); appropriation amounts (if available); eligibility requirements, among other information. The guide is downloadable in PDF and XLS formats.

Entities seeking federal funding for specific purposes can use the guide's "Program Purpose" filter to identify programs with the following stated purpose:

- broadband adoption/digital literacy/tech support,
- broadband infrastructure deployment,
- data/mapping,
- devices/equipment,
- digital skills training,
- planning,
- public connectivity/computer access,
- research/evaluation,
- smart communities/cities/regions,
- telehealth, and
- other.

CRS Report

CRS Report R46780, *Overview of the Universal Service Fund and Selected Federal Broadband Programs*, coordinated by Patricia Moloney Figliola

Who Can Apply for Federal Broadband Assistance?

Eligibility requirements for federal broadband grants and loans vary by program. Entities interested in applying for federal grant or loan funding should check the eligibility requirements and contact program offices before starting the application process.

With federal grants and loans, it is important to understand who is eligible to *apply* and who is eligible to *receive* the funding. In some instances, localities can apply directly (i.e., the locality can apply for funding and the locality can receive the funding). In other instances, localities must submit proposal to the state, through a designated state agency (also known as a state administrative agency, or SAA). The SAA then decides with state officials whether the project will be included in the state's application. The SAA submits the state's application to the federal funding agency. If funds are awarded, the state passes the funds to localities for proposed project.

NTIA's Federal Funding Guide lists the following eligible recipients:

- electric utilities/co-ops;
- healthcare facilities;
- higher education institutions;
- financial institutions;
- for-profit organizations (including internet service providers);
- libraries;
- local governments;
- K-12 schools;
- nonprofit organizations;
- public safety entities;
- state governments;
- territorial governments; and
- Tribal/Native American governments, Alaska Native controlled organizations, and Native Hawaiian organizations.

When seeking federal assistance, the above entities should:

- Explore NTIA's Federal Funding Guide: select the program that best fits the project, then click on the program to see eligibility requirements. (The guide includes eligibility-related filter options, such as agency/department and eligible recipients.)
- Check the eligibility requirements for the program through federal grants websites (e.g., Sam.gov).
- Contact the funding agency to clarify specific questions.

CRS Products

CRS In Focus IF11795, *COVID-19 Response: Broadband Funding for Tribes, Tribal Colleges and Universities, the Bureau of Indian Affairs, the Bureau of Indian Education, and the Indian Health Service*, coordinated by Patricia Moloney Figliola

CRS Report RL34012, *Resources for Grantseekers*, by Maria Kreiser

Which Programs Fund Broadband Projects in U.S. Territories and the Freely Associated States?

NTIA's Federal Funding Guide includes an "Eligible Recipients" filter for "Territorial Governments" that provides a listing of eligible grants and loans for U.S. territories.

The guide's PDF and spreadsheet formats allow for keyword searches, such as "Freely Associated States" and "rural," to identify additional relevant programs.

Which Programs Fund Broadband Projects for Tribal Organizations?

NTIA's Federal Funding Guide includes an "Eligible Recipients" filter for "Tribal/Native American governments, Alaska Native controlled organizations, and Native Hawaiian organizations" that provides a listing of eligible grants and loans for U.S. territories.

The guide's PDF and spreadsheet formats allow for keyword searches, such as "tribe" and "rural," to identify additional relevant programs.

Which Programs Fund Broadband Projects in Rural Areas?

Eligibility by type of area depends on the specific program. Selected programs that include eligible rural areas:

- USDA's Rural Utilities Service (RUS) provides several telecommunications loan and grant programs.
- The Rural Health Care program provides two types of services to eligible healthcare facilities.
  - Telecommunications Program—provides funding for voice and telecommunications services.
  - Healthcare Connect Fund Program—provides funding for broadband services and network equipment.

CRS Reports

CRS Report R47017, *USDA's ReConnect Program: Expanding Rural Broadband*, by Lisa S. Benson

CRS Report R46108, *Demand for Broadband in Rural Areas: Implications for Universal Access*, by Brian E. Humphreys

How Much Funding Has My Locality Received?

USASpending.gov includes profiles of funding information by agency, federal accounts, states, and recipients.[2] The "Award Search" option provides filters by city, county, state, and congressional district. SAM.gov's "Assistance Listings" offers programmatic funding searchable by keyword or the program-specific CFDA number.[3]

The sources below provide funding by locality for select programs:

- Congressional Justifications for the Rural Utilities Service provides appropriations, by state, for USDA telecommunications grants.
- USAC Annual Report provides disbursement amounts for USF programs.

[2] USASpending.gov is the official open data source of federal spending information. For more information, see https://www.usaspending.gov/about.

[3] The System for Award Management (SAM), or SAM.gov, is the official government source for contract opportunities and assistance listings. Assistance listings include projects, services, and activities the federal government provides to the public.

- USAC's Open Data platform includes USF programmatic funding. Geographic data varies by dataset and may include city, county, state, zip code, congressional district, latitude, and longitude.

CRS Reports

CRS Report R47017, *USDA's ReConnect Program: Expanding Rural Broadband*, by Lisa S. Benson

CRS Report R44027, *Tracking Federal Awards: USAspending.gov and Other Data Sources*, by Jennifer Teefy

Which Awardees Received Grants and Loans in My Locality?

USASpending.gov includes select recipient profiles and federal funds award entities, and it provides the capacity to search by recipient name and recipient type (e.g., small business, nonprofit, higher education, U.S. territory). Location filters include city, county, state, and congressional district.

The sources below provide awardee names by locality for select programs:

- USAC's Open Data platform includes keyword searching across the universal service datasets to identify those with recipient, applicant, participant, entity, carrier, or name data. Geographic data varies by dataset and may include city, county, state, zip code, congressional district, latitude, and longitude.
- USDA's Rural Development Grant Awards provide spreadsheets of Rural Development grant awards, including telecommunications grants, grouped by fiscal year. Award information includes county, state, recipient, amount, program, and congressional-district representative.

Broadband Availability

Broadband maps provide details on broadband deployment locations, including select programmatic data for deployment based on obligated federal assistance. Select broadband provider information is included in mapping and location-related resources.

What Types of Maps Are Available?

NTIA Maps

- National Broadband Availability Map (NBAM)—A nonpublic source, available to state and federal partners, to visualize and compare federal, state, and commercial data sets. Additional information is available on the NBAM FAQs.
- Indicators of Broadband Need Map—The mapping application uses several data sources, including, but not limited to, the Census' American Community Survey, the FCC, and NTIA's Connecting Minority Communities grant program. It shows the data in layers, including a layer designating American Indian, Alaska Native, and Native Hawaiian Areas by the 2020 U.S. Census. Additional information is available in the user guide.

FCC and USAC Maps

- Fixed Broadband Deployment Map—Provides a visualization of the FCC's Form 477 residential fixed broadband deployment data.
- Additional FCC maps include specific-program-related data, such as
  - Emergency Connectivity Fund Program Demand by State and
  - Rural Digital Opportunity Fund Phase I Results.
- USAC's Open Data platform—Includes visualization tools to create maps based on the available data. Select programmatic-level maps are also available, such as the High-Cost: Connect America Fund Broadband Map (CAF Map). The CAF map includes the geographic areas eligible for the program and locations where participating carriers have built out broadband service.

USDA Maps

- Telecommunications Program Funded Service Areas Map—Includes the service areas of the entities that received select Rural Utilities Service (RUS) loans or grants.
- Distance Learning and Telemedicine (DLT) Grant Recipients Map—Includes the DLT grant approved entity sites, and those with obligated funds.

CRS Report

CRS Report R45962, *Broadband Data and Mapping: Background and Issues for the 117th Congress*, by Colby Leigh Rachfal

Which Broadband Providers Serve My Locality?

FCC

- Fixed Broadband Deployment map—The "Search by Address" function provides a list of area broadband providers along with their technologies and speeds.
- Form 499 Filer Database—The "State or Jurisdiction Where Services Provided" function provides a list of providers by state, territory, and selected freely associated states

USAC

- Lifeline's Companies Near Me tool provides a search by zip code or city and state to identify companies that offer Lifeline and the Affordable Connectivity Program service.[4]

Broadband Technology and Speed

Broadband is delivered through a variety of technology types and speeds. The type of technology used may depend on the provider, the service locality, and the location type (e.g., residential or

[4] Formerly the Emergency Broadband Benefit Program.

commercial). Select broadband programmatic data include geographic and demographic data along with speed and or technology-related data.

What Are the Deployed Speeds Reported by Locality?

FCC Broadband Progress Reports provide speed data by state, county, or county equivalent. Speed data contain demographic information, such as household poverty rate, median household income, population density, rural and urban areas, and tribal lands.

Federal-State Joint Board Monitoring Reports and USAC's Open Data platform include speed along with funding disbursements for select universal service programs.

What Are the Broadband Technologies Reported by Locality?

Federal-State Joint Board Monitoring Reports Supplementary Materials and the USAC's Open Data platform include technologies deployed by select universal service programs, such as

- Emergency Connectivity program provides connection type (e.g., leased lit fiber, cable modem, mobile broadband) by city, state, and zip code;
- E-Rate program provides fiber type (e.g., lit fiber, dark fiber, self-provisioned fiber) by city, state, zip code, or congressional district;
- Lifeline program provides technology (e.g., wireline, wireless, or both) by state; and
- Rural Health Care program provides service type (e.g., wireless, cable modem service, dark fiber, DSL, internet, Ethernet) by city, state, county, and zip code.

Urban Rate Survey Data & Resources include technologies used to provide residential service in urban areas by state.

Guidance and Informational Resources

Federal entities publish resources to assist the public, grant seekers, researchers, and others. Broadband-related federal entities provide guidance resources for federal assistance, broadband deployment and adoption planning, and programmatic information.

What Resources Are Available to Entities Seeking Federal Assistance Projects?

NTIA's BroadbandUSA program publishes glossaries, guidance on cost and financing broadband, a monthly broadband newsletter, and provides topical webinars (e.g., grant programs, federal data sources, stakeholder engagement). The NTIA website provides webinars on selected materials, including

- Broadband Glossary;
- Smart Communities Glossary;
- A Guide to Federal Funding of Broadband Projects; and
- Costs at-a-Glance: Fiber and Wireless Networks.

USAC's website includes programmatic webinars and newsletters for universal service programs' participants.

Agency programmatic websites contain funding eligibility requirement resources for entities. NTIA's Federal Funding Guide provides programmatic websites and agency contacts.

What Broadband Planning Resources Are Available?

NTIA's BroadbandUSA program publishes broadband roadmaps and toolkits to assist communities with planning broadband adoption, including stakeholder outreach and public-private partnerships. Selected materials include the following:

- Broadband Adoption Toolkit;
- Introduction to Effective Public-Private Partnerships;
- Introduction to Stakeholder Outreach;
- Planning a Community Broadband Roadmap: A Toolkit for Local and Tribal Governments;
- The Power of Broadband Partnership: A Toolkit for Local and Tribal Governments;
- Implementing a Broadband Network Vision: A Toolkit for Local and Tribal Governments; and
- Sustaining Broadband Networks: A Toolkit for Local and Tribal Governments.

What State-Specific Broadband Resources Are Available?

NTIA's BroadbandUSA program provides information on state broadband programs, including

- state broadband websites,
- state broadband coordinators,
- broadband program descriptions and websites,
- funding information, and
- state broadband plans.

BroadbandUSA gathers state information using publically available sources (e.g., state websites).

CRS Report

CRS Report R46307, *State Broadband Initiatives: Selected State and Local Approaches as Potential Models for Federal Initiatives to Address the Digital Divide*, by Colby Leigh Rachfal

Author Information

Rachael D. Roan
Research Librarian

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