

JOINT REPORT in Response to SECTION 6212 of the 2018 FARM BILL



U.S. Department of Agriculture



Federal Communications Commission



National Telecommunications and Information Administration

Table of Contents

EXECUTIVE SUMMARY	3
INTRODUCTION AND OVERVIEW	3
BACKGROUND	4
OVERVIEW OF USDA PROGRAMS	5
Rural e-Connectivity Pilot Program (ReConnect)	6
Telecommunications Infrastructure Loan Program	9
Rural Broadband Program	10
Community-Oriented Connectivity Grant Program	11
Distance Learning and Telemedicine Grant Program (DLT), including DLT Opioids	11
OVERVIEW OF FEDERAL COMMUNICATIONS COMMISSION UNIVERSAL SERVICE PROGRAMS	12
High-Cost Program	12
Schools and Libraries (E-Rate) Program	14
Rural Health Care Program	14
Low-Income (Lifeline) Program	15
OVERVIEW OF NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION PROGRAMS	15

NTIA Mission	15
Institute for Telecommunication Sciences.....	16
NTIA’s BroadbandUSA Program Overview	16
National Broadband Availability Map.....	17
COLLABORATION AND COORDINATION OF FEDERAL BROADBAND PROGRAMS AND ACTIVITIES	18
ABI and Section 6214 of 2018 Farm Bill	18
Consultation Between USDA and NTIA	19
Consultation Between USDA and the FCC	20
USDA, FCC, and NTIA Examine Future Needs and Technical Capabilities of Rural Broadband	22
USDA, FCC, and NTIA Data Collection, Exchange and Verification	25
CONCLUSION.....	27

EXECUTIVE SUMMARY

The United States Department of Agriculture (USDA), Federal Communications Commission (FCC or Commission), and National Telecommunications and Information Administration (NTIA) (collectively, the Agencies) are working together to deploy broadband to rural areas. The USDA has loan and grant programs in which billions of dollars have been provided to deploy rural broadband and has developed an innovative broadband platform designed to avoid duplication of federal funding and ease the application process. The FCC's universal service programs provide approximately \$8.3 billion annually to facilitate broadband deployment and ensure that consumers in all areas of the nation have access to advanced services. The FCC also helps to close the digital divide through a variety of data collection and policy initiatives, intended to identify gaps in broadband availability and stimulate deployment by removing barriers to infrastructure. The NTIA's BroadbandUSA program promotes innovation and economic growth by supporting efforts to expand broadband access and meaningful use across America. BroadbandUSA serves local and state governments, industry, and nonprofits that seek to expand broadband connectivity and promote digital inclusion. NTIA is also responsible for developing the National Broadband Availability Map (NBAM), which will promote more efficient targeting of state and federal funding to unserved and underserved rural areas. The Agencies routinely work together to exchange information and ideas and coordinate programs. This report highlights those individual and collective efforts.

INTRODUCTION AND OVERVIEW

This report is submitted pursuant to Section 6212 of the Agriculture Improvement Act of 2018 (2018 Farm Bill), Public Law 115-334, which directs the Secretary of USDA, the FCC, and the Assistant Secretary for Communications and Information at the NTIA to report to Congress on "how best to coordinate federally supported broadband programs and activities."

The joint report outlines the individual and cooperative efforts of the Agencies to "promote high-quality broadband service that meets the long-term needs of rural residents and businesses," to "support the long-term viability, sustainability and utility of federally supported rural

broadband infrastructure” and to “identify and quantify the availability of broadband service and ongoing broadband deployment in rural areas” as required by Section 6212.

BACKGROUND

The 2017 “Report to the President of the United States from the Task Force on Agriculture and Rural Prosperity” prepared by USDA, the FCC, and NTIA and 18 other federal agencies, in consultation with local, state, and Tribal leaders, concluded that broadband access “is fundamental for economic development, innovation, advancements in technology, workforce readiness, and an improved quality of life” and “will transform rural America as a key catalyst for prosperity.” As Task Force Chair USDA Secretary Sonny Perdue noted, broadband access is no longer an “amenity” but has become “essential” for rural America. Building on the work of the Task Force, the Administration launched the American Broadband Initiative (ABI) in February 2019 with the release of its [“Milestones Report,”](#) outlining a vision for how the federal government can encourage the expansion of broadband access and actions that agencies are taking to increase private-sector investment in broadband. Since its formation, the ABI has been working diligently to fulfill its mission of ensuring that government processes are clear and responsive to stakeholders, that government assets provide the greatest possible benefit to the public, and that the government is performing its duties as a steward of taxpayer funds. The ABI provides a valuable forum to continue the coordination directed by Congress.

Though access to affordable high-speed Internet service is universally recognized as vital to a healthy and growing rural economy, the latest [FCC Broadband Deployment Report](#) found that over 21 million rural Americans still lacked access to broadband service with speeds of 25 Mbps downstream and 3 Mbps upstream (25/3 Mbps) in 2017. These numbers are improving but rural broadband deployment continues to be hampered by barriers resulting from distance, low population density and demographics. The high costs of building broadband service to remote communities and diminished financial incentives resulting from the reduced size of the potential customer market combine with relatively low rural income, high unemployment, poverty and

outmigration, makes it difficult to build a business case to deliver broadband to unserved and underserved areas without providing government incentives.

Understanding the importance of broadband to rural America and the challenges facing the commercial marketplace, USDA, FCC, NTIA, and other federal agencies are working closely together to identify solutions to the problem and maximize the effectiveness of federal spending and resources. Each of the Agencies have active programs and policies designed to increase broadband deployment in rural communities. They also collaborate to better understand market needs and potential solutions, to ensure their programs complement each other, and to avoid duplication and maximize collective effort. This report will discuss our continuing individual and joint efforts to close the digital divide and deliver broadband to areas that remain unserved or underserved.

OVERVIEW OF USDA PROGRAMS

In 2019, the USDA's Rural Utilities Service (RUS) oversees five loan and grant programs described below which provide funding to expand and improve telecommunications and broadband services in rural areas. They include the Rural e-Connectivity Pilot Program (ReConnect), Telecommunications Infrastructure Loan Program (Infrastructure Program), Rural Broadband Program, the Community-Oriented Connectivity Grant Program (Community Connect) and the Distance Learning and Telemedicine Grant Program (DLT). RUS has provided more than \$7 billion in funding to more than 1,500 projects serving approximately 1,380,000 rural households for new or improved broadband connectivity since 2010.

Since 2017 alone, USDA has provided more than \$1.5 billion in funding for telecommunications projects that deployed broadband and, thereby, improved quality of rural life, enhanced economic development, and improved health care and education throughout the U.S. Except for the Telecommunications Infrastructure Program which provides funding for communities with a population of 5,000 or fewer, all of these programs fund broadband service to rural communities defined as having a population of 20,000 or less. Changes mandated by the 2018 Farm Bill will require expanding searchable databases and public notice filing requirements, additional reporting requirements for providers, including subscriber

latitude/longitude information, new consultation and coordination requirements, and field validation.

In addition to broadband programs, the RUS Electric Infrastructure Program also financed the installation of more than 9,500 miles of fiber optic cable for SmartGrid applications in 2019. SmartGrid investments can be catalysts for additional broadband deployment. This SmartGrid and middle-mile capacity-building are simply the latest in USDA's 80-plus year history of working with rural communities to provide power, safe water, housing and business offerings as economic development tools fundamental to the growth and prosperity of rural communities.

Rural e-Connectivity Pilot Program (ReConnect)

ReConnect, a pilot program created through a \$600 million appropriation in the 2018 Omnibus Appropriations Act, is the newest RUS broadband program. Its purpose is to expand broadband services and infrastructure to areas which lacked access to service with speeds of at least 10 Mbps downstream and 1 Mbps upstream (10/1 Mbps) (Round 1).

USDA published its Round 1 ReConnect Funding Opportunity Announcement on December 14, 2018, which outlined the general requirements for the program. Those included mandatory reporting requirements following awards at the latitude/longitude GIS level, which will be made available for the national broadband mapping and shared with NTIA and the FCC. The program specified that \$200 million would be available for each of three programs: 100 percent grants, 50-50 loan-grant combinations, and 100 percent loans.

The guidance for Round 1 outlined a scoring criterion for applications providing points for certain best practices. State actions, including developing broadband plans within the past five years, expediting right-of-way access, and allowing electric utilities to provide broadband services, were given additional points. Further points were allocated to applicants deploying fiber with the capacity to meet the growing demand for increased speed, ensuring that federal funds are providing long-term broadband solutions rather than soon-to-be obsolete technology. The program requires a Professional Engineer's certification that the proposed system can deliver the necessary speeds to every customer in the proposed service area.

USDA also works to avoid funding of broadband services that duplicate existing service, and to target rural areas with the greatest need. USDA uses the best available tools and information to determine if the proposed new service area in a ReConnect Round 1 application

already has 10/1 Mbps speed connections at the household level. USDA then posts a Public Notice Filing (PNF) of the proposed service area on the ReConnect webpage at <https://reconnect.usda.gov>. Service providers in those areas can submit a Public Notice Response if they are already providing 10/1 Mbps and there is subscription service on the ReConnect webpage that allows companies and individuals to request notification whenever a PNF is posted. Finally, USDA sends staff to the proposed service area and conducts an on-site review to determine if 10/1 Mbps service is available.

On April 23, 2019, USDA announced that it would begin accepting applications on a new custom-designed customer-friendly portal as follows: 100 percent grant applications (\$25 million maximum with a 25 percent matching requirement) were due by May 31, 2019; 50/50 loan/grant combination applications (\$50 million maximum at US Treasury rates) were due by June 21, 2019; and 100 percent loan applications (\$50 million maximum with 2 percent interest rate) were due by July 12, 2019. ReConnect Round 1 efforts to inform potential applicants were significant with six technical Assistance Workshops with over 400 participants, 13 Technical Assistance Webinars with over 2,400 participants, and USDA responded to over 1,100 inquiries.

In Round 1, USDA received 146 applications across the three ReConnect program offerings for projects totaling \$1.416 billion in 41 states as follows:

- Grants: 78 applications were received in the 100 percent grant offering requesting more than \$522 million to serve 1,688 farms and 1,716 businesses across 34 states. Forty grants totaling approximately \$243 million have been obligated;
- Loan/Grant Combinations: 53 applications for the 50/50 loan/grant program were received requesting more than \$636 million to serve 1,099 farms and 859 businesses across 32 states. Thirty-four loan/grant combinations have been obligated totaling approximately \$408 million;
- Loans: 15 applications for 100 percent loans were received which requested \$258 million in funding. Eight loans have been obligated totaling approximately \$100 million.

USDA had budget authority of \$600 million but is expected to award \$751 million by offering loans and loan-grant combinations in addition to grants. ReConnect awards are expected to support more than 80 infrastructure projects which will benefit more than 162,000 rural households in 34 states who are currently without 10/1 Mbps service. Examples of

ReConnect projects include funding for a fiber-to-the-home (FTTH) network at 100 Mbps or greater broadband speeds to service areas with more than 1,000 households in the Seneca Nation's Cattaraugus Territory in western New York through a \$4.3 million grant, to areas with 8,749 households in North Carolina through a \$23.7 million grant to a local telephone cooperative, to areas with 320 rural households in Wyoming through a \$4.79 million grant, and to areas with 1,254 rural households in Virginia through a \$3.8 million award to a local electric cooperative.

Even with this coverage, however, there were ReConnect Round 1 projects worth more than \$650 million that were not funded and seven states where applications were made received no funding through the program. An additional \$1.105 billion for the program was appropriated in 2019 and 2020 to enable USDA to host further rounds of ReConnect awards (Round 2 and potentially Round 3), and every effort is being made to expedite 2019 and 2020 funding. With over 12 million people lacking access at basic speeds of 10/1 service, there is not only a high demand for this critical infrastructure, but it is a national priority to expedite delivery of broadband services to rural America. The Round 2 rules were published on December 12, 2019. See <https://www.federalregister.gov/documents/2019/12/12/2019-26522/reconnect-pilot-program>. Round 2 applications will be accepted from January 31 through March 16, 2020 through the RUS on-line application portal. The Round 1 filing requirements and scoring criteria were adjusted in several respects for the Round 2 applicants, but the applications will continue to be made using the advanced ReConnect on-line application process with its capability of mapping network shapefiles using multiple mapping tool layers. Though there is no single accurate, complete and granular national broadband map, this mandatory application platform will protect against the filing of applications for service areas identified to already have 10/1 service and will provide tools for identifying existing resources to enhance efficient network design. It is expected that many unfunded ReConnect 1 applicants will reapply for Round 2 with minor adjustments to their initial applications. The following are the changes made from Round 1 to Round 2:

- Definitions have been added for healthcare and educational facilities.
- For 100 percent grants, 90 percent of the proposed funded service area (PFSA) must lack sufficient access to broadband, as opposed to 100 percent under Round 1.

- The requirement for two years of unqualified, comparative, audited financial statements has been changed to unqualified, comparative, audited financial statements for the previous year from the date the application has been submitted.
- The requirement that applicants must submit certifications from the appropriate state or tribal broadband office has been changed to a voluntary request.
- Pre-application expenses that were incurred for Round 1, but benefit an application for Round 2, may be funded up to the 5 percent of the total award in Round 2.
- Under certain conditions, a subsidiary may use the unqualified, comparative, audited statements of the parent to meet certain eligibility requirements.
- The scoring criteria for farms has been changed. Applicants will receive one point for every 10 farms served up to a maximum of 20 points. Farms will be counted using 2017 Census of Agriculture data.
- Tribal leaders can submit documentation supporting scoring points for the number of healthcare, educational and essential community facilities.
- The time period incumbent service providers will be able to challenge whether sufficient service is present in an applicant's PFSA is being increased from 30 days to 45 days.

Telecommunications Infrastructure Loan Program

The Telecommunications Infrastructure Loan Program provides direct cost-of-money loans and guaranteed loans for the construction, maintenance, improvement and expansion of telephone and broadband service in rural communities of 5,000 or less. Since 2010, 185 projects were approved for approximately \$3 billion to provide service to more than 961,000 households. More than \$180 million was obligated for 12 infrastructure loans in 2019, which reflected a 10 percent increase in obligated funds over those made in 2018. A representative Infrastructure loan for \$21.4 million was awarded to the Chibardun Telephone Cooperative, Inc. in Wisconsin to construct 675 miles of fiber-to-the-premises (FTTP) and improve outside plant facilities in four of its six exchanges. The cooperative plans to build a FTTH network capable of sustaining

customer demands in broadband connectivity for the foreseeable future. Approximately 2,700 subscribers will receive improved service as a result of this loan.

Rural Broadband Program

The Rural Broadband Program provides cost-of-money loans for the construction, maintenance, improvement and expansion of broadband service in rural communities of 20,000 or less. Since 2011, the Rural Broadband Program has approved more than \$270 million in last mile funding for eight broadband projects to provide broadband service to approximately 64,000 Americans living in rural areas. In 2019, three broadband loans were obligated for a total of almost \$48 million – a 140 percent increase over that of 2018. This program is expected to grow substantially under new guidelines established in the 2018 Farm Bill. An example of a loan funded under this program is the \$20 million loan to Arkansas Rural Internet Services, Inc. (ARIS), a partnership between electric cooperative Ouachita Electric Services, Inc. and telephone company AIRECAST LLC. The electric coop provided the equity needed for the project and the telephone company provided in-kind operations, management, and support services. The loan, coupled with awardee funds, financed the construction of a network of approximately 500 miles of aerial and buried FTTP to serve over 5,000 households in three counties in southern Arkansas.

The Farm Bill expanded funding opportunities under this historically loan-only program to include grants, loan guarantees, and payment assistance and will change various other requirements, such as increases to the “unserved” household requirement from 15 to 50 percent for loans and loan guarantees and 90 percent for loan/grant combinations. The program also establishes a new broadband buildout standard to align with the term of the loan and increases the authorized funding level for the program from \$25 million to \$350 million. New capacity for the program provides guarantees through banks for private funding to leverage and expedite buildouts; however, at present, the agency has not received funding for this new authority.

USDA expects to publish updated program regulations in the second quarter of the 2020 fiscal year.

Community-Oriented Connectivity Grant Program (Community Connect)

The Community Connect program provides grants with a 15 percent matching fund requirement for the construction and expansion of broadband service in rural communities of 20,000 or less where broadband service does not currently exist. RUS provided funding for 91 projects with a total expenditure of almost \$145 million between 2011 and 2018 which provided service to more than 20,000 rural households. In 2019, 12 awards were obligated for more than \$24 million. Six additional projects, which were undergoing pending environmental clearance, were obligated in FY 2020 for another \$12 million. Section 6204 of the 2018 Farm Bill codified the program, and updated program regulations are expected in the second quarter of the 2020 fiscal year. A Community Connect grant awarded to Osage Innovative Solutions, LLC demonstrates the program's reach. Osage will use a \$2.7 million Community Connect grant to construct a hybrid FTTP and fixed wireless system in an unserved and economically depressed portion of the Osage Nation in Osage County, Oklahoma. The company will offer speeds of up to 100 Mbps download and 10 Mbps upload to 139 households and 22 businesses. This project will give customers access to high-quality telecommunications services to improve economic, education and health care opportunities. Osage will also provide a community center with Internet access for a minimum of two years free of charge.

Distance Learning and Telemedicine Grant Program (DLT), including DLT Opioids

The Distance Learning and Telemedicine program provides grants with a 15 percent matching fund requirement for the equipment needed to deliver telemedicine service and distance learning curriculums benefiting rural communities of 20,000 or less. The DLT program has provided more than \$250 million in funding for over 880 projects nationwide since 2011. In 2019, 133 grants were obligated for grants totaling more than \$42.6 million. Twelve grants totaling \$2.75 million were made through a sister program, DLT Opioids, which provided funding to support opioid treatment programs. These two parts of the DLT program provided new broadband uses to the residents of rural America. Examples of DLT awards include \$488,315 to Mississippi State University to implement a new Applied Science Distance Learning

Project. This funding will provide updated video conferencing and cloud-based equipment at 93 sites to enable participants in extension offices and experiment stations to deliver interactive educational programming. This project will benefit an estimated 28,500 residents, students, extension educators and faculty. Besides distance learning, the program also funds telemedicine and telehealth services. As an example, the Pikeville Medical Center in Kentucky received \$357,167 to install a telehealth center platform and equip 10 public schools with mobile telehealth carts, exam cameras and equipment which will connect to the center. It is expected to benefit a population estimated at 476,087.

OVERVIEW OF FEDERAL COMMUNICATIONS COMMISSION UNIVERSAL SERVICE PROGRAMS

The FCC disburses approximately \$8.3 billion annually through the universal service fund (USF or Fund). This support helps ensure that consumers, businesses and community anchor institutions in rural, insular and high-cost areas have access to the same voice and broadband services that are available in urban areas, and at reasonably comparable rates. The Fund targets support to rural areas through four main support mechanisms: High-Cost, E-rate, Rural Health Care, and Lifeline. Eligibility for universal service support is determined on a program-by-program basis, consistent with statutory obligations and program objectives. Support is generally awarded through incentive and market-based mechanisms whether by a reverse auction or model-based support (as is largely the case with the High-Cost Program), a competitive bid solicitation process (as in the case with Schools and Libraries and Rural Health Care programs) or consumer choice among eligible providers (as in the case of the Lifeline Program). The Fund is supported by charging telecommunications carriers and interconnected VoIP providers a fee, which is set quarterly, and which companies may pass along to their customers.

High-Cost Program

The FCC disbursed approximately \$4.68 billion in 2018 through the Connect America Fund (CAF) to maintain and expand fixed and mobile voice and broadband networks in rural areas. The FCC uses a tailored approach to award support efficiently while maximizing the number of rural Americans with access to modern broadband networks. Through the CAF, the FCC expects

to deploy and upgrade broadband networks to expand the availability of 25/3 Mbps or better service to nearly 2.8 million homes and businesses over a ten-year term.

Consistent with its policy awarding support through incentive-based mechanisms, the Commission concluded a reverse auction in August 2018 to allocate \$1.49 billion in funding to be distributed over 10 years to expand rural broadband service to over 700,000 rural homes and small businesses in unserved areas in 45 states through a variety of technologies, including terrestrial- and satellite-based solutions. Approximately 99 percent of those homes and businesses will receive 25/3 Mbps service or better and more than half will receive at least 100 Mbps downstream and 20 Mbps upstream. More than \$1.11 billion in support has been authorized as of December 2019. Building on the success of the [CAF auction](#), the Commission established the [Rural Digital Opportunity Fund](#), which will direct up to \$20.4 billion over 10 years to expand broadband to unserved homes and businesses in rural areas. Support will be awarded through an auction mechanism that favors faster services with lower latency, encourages intermodal competition, and incentivizes deployment to unserved Tribal lands. The Commission expects to commence an auction in 2020 for Phase I, in order to expeditiously award support for up to 6 million rural homes and businesses in areas where current data confirm are wholly unserved, while also ensuring that other areas are not left behind by holding a second phase auction that will award support for partially deployed rural areas and areas not won in Phase I. For the second auction, the Commission will use data collected in the newly established Digital Opportunity Data Collection to identify precisely the areas that lack service and that are therefore eligible for support. Implementation of the Digital Opportunity Data Collection is well underway and will enable the Commission to facilitate the fastest deployment of service to Americans in these partially deployed areas.

In addition, recognizing the particular challenges of serving parts of the non-contiguous United States, the Commission supports carriers serving [Alaska](#) with almost \$75 million annually and has allocated nearly a billion dollars in support for carriers serving [Puerto Rico and the U.S. Virgin Islands](#).

In areas historically served by small, rural carriers known as rate-of-return carriers, the Commission allows providers to elect model-based support, known as the [Alternative Connect America Cost Model](#), and receive predictable, fixed support amounts for a 10-year term in

exchange for meeting certain broadband deployment obligations. At the end of the ten-year term, rate-of-return carriers electing model-based support will have deployed 25/3 Mbps broadband to nearly 852,000 locations. Carriers remaining on legacy support, which covers a portion of a carrier's costs, are also subject to broadband deployment obligations. Consistent with those deployment obligations, carriers remaining on legacy support must offer 25/3 Mbps (or better) broadband to more than 473,000 locations by the end of 2024. As of August 2019, approximately 60 percent of rate-of-return companies elected model-based support; the rest remain on legacy mechanisms.

On December 4, 2019, Chairman Pai announced plans to establish the 5G Fund, which would make up to \$9 billion in universal service support available over the next decade to carriers to deploy advanced 5G mobile wireless services in rural America. Under the proposal, at least \$1 billion of the 5G Fund would be set aside for deployments facilitating precision agriculture needs. Support will be allocated through a reverse auction and would target hard-to-serve areas with sparse populations and/or rugged terrain. The 5G Fund would replace the planned Mobility Fund Phase II, which would have provided federal support for 4G LTE service in unserved areas. Commission staff found that 4G LTE coverage data submitted by providers is not sufficiently reliable for the purpose of moving forward with Mobility Fund Phase II.

Schools and Libraries (E-Rate) Program

The Commission's E-rate program makes telecommunications and information services more affordable for schools and libraries. Eligible schools and libraries may receive discounts on telecommunications, telecommunications services and Internet access, as well as internal connections, managed internal broadband services, and basic maintenance of internal connections. Though E-rate funding recipients must pay some portion of their service costs, program discounts range from 20 to 90 percent, with higher discounts for higher poverty and rural schools and libraries. In 2018, \$2.20 billion was committed to schools and libraries under the E-rate program.

Rural Health Care Program

The Commission's Rural Health Care (RHC) program provides support to rural health care providers, including those on Tribal lands, to fund broadband connectivity to support

telemedicine services. The RHC program allows rural health care providers to pay rates for telecommunications services that are like those of their urban counterparts, making telehealth services affordable, and subsidizes Internet access. The overall funding cap for the RHC program in 2019 is approximately \$594 million; the cap is adjusted annually to account for inflation. The Commission recently [comprehensively reformed the RHC](#) program to promote efficiency and reduce incentives that encourage waste, fraud, and abuse, as well as to streamline and simplify the process for calculating and applying for support.

Low-Income (Lifeline) Program

The Lifeline program assists low-income consumers by helping to pay for monthly telephone charges so that telephone service is more affordable. Lifeline provides eligible low-income subscribers, including those living in rural areas, with a discount on monthly telephone or broadband service of \$9.25 per month. On Tribal lands, an enhanced \$25 subsidy is available. The discounts can be applied to stand-alone broadband, bundled voice-broadband packages (fixed or mobile), and stand-alone voice service. Subscribers may receive a Lifeline discount on either a wireline or a wireless service but may not receive a discount on both services at the same time, and Commission rules prohibit more than one Lifeline service per household. In 2018, authorized disbursements for the Lifeline program totaled approximately \$1.14 billion.

OVERVIEW OF NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION PROGRAMS

NTIA Mission

NTIA, in the Department of Commerce, is responsible for advising the President on telecommunications and information policy. NTIA's programs and policymaking focus on a broad range of issues that include spectrum management and availability, broadband connectivity, and the growth and stability of the Internet. NTIA coordinates Executive Branch communications activities and represents the Administration's policies before the FCC.

NTIA is also home to [extensive data and research](#) on how Americans use the Internet and related technologies. Since 1994, NTIA has regularly commissioned the U.S. Census Bureau to

conduct surveys on Internet use. NTIA's most recent Internet Use Survey was fielded in November of 2019, with results expected in the second quarter of 2020.

Institute for Telecommunication Sciences

The Institute for Telecommunication Sciences (ITS), located in Boulder, Colorado, is the research and engineering arm of NTIA. ITS provides core telecommunications research and engineering services to promote enhanced domestic competition and new technology deployment, advanced telecommunications and information services, and more efficient use of the radio frequency spectrum. ITS also serves as a principal federal resource for investigating the telecommunications challenges of other federal agencies, state and local governments, private corporations and associations, and international organizations. This includes assisting federal public safety agencies, the FCC, and agencies that use federal spectrum.

NTIA's BroadbandUSA Program Overview

NTIA launched BroadbandUSA in 2015, in response to community demand, to promote innovation and economic growth by supporting efforts to expand broadband access and digital inclusion across America. BroadbandUSA assists state and local leaders during each stage of a broadband infrastructure project – planning, funding, and implementation – and can provide expert guidance to public and private partners. BroadbandUSA provides technical assistance by directly engaging with project leaders, focusing on specific issues and circumstances of an individual project. BroadbandUSA also offers group technical assistance through webinars, meetings and workshops that present educational materials and best practices while facilitating small group discussions and relationships among attendees. Since 2015, BroadbandUSA has provided support to more than 1,000 communities through its regional events, workshops, educational webinars and technical assistance activities. Demand is expected to grow to reach over 300 direct technical assistance engagements by the end of 2019.

BroadbandUSA partners with various stakeholders to advance broadband priorities, including the State Broadband Leaders Network (SBLN), which brings together representatives of state broadband programs. SBLN provides a forum for state leaders who work on broadband initiatives to share priorities and best practices; discuss emerging telecommunications policy issues; and address barriers to collaboration across states and agencies. BroadbandUSA hosts

monthly web conferences with SBLN participants, in addition to an annual meeting. SBLN currently includes participants who represent 48 states and 2 territories.

National Broadband Availability Map

Given the importance of accurate data regarding broadband availability, Congress directed NTIA to augment the National Broadband Availability Map (NBAM). The NBAM is a geographic information system that allows policymakers to compare federal, state, and commercially available data sets. In FY18, Congress directly appropriated \$7.5 million for NTIA's mapping initiative. NTIA has continued to fund the map at that same level in FY19 and FY20, for a total of \$22.5 million. This funding has allowed NTIA to dedicate staff to the mapping program; acquire GIS technology and professional services; procure commercial data sources to augment its understanding of broadband availability and acquire professional services to support the mapping program.

In October 2019, NTIA launched a pilot version of NBAM in partnership with an initial eight states-California, Maine, Massachusetts, Minnesota, North Carolina, Tennessee, Utah, and West Virginia. These states participate in NTIA's State Broadband Leaders Network (SBLN) and have active broadband plans or programs. As the pilot moves forward, NTIA will test the map's functionality and expand it to other states, and add data from additional partners, federal agencies, industry and accessible commercial datasets.

The NBAM will help identify regions with insufficient service, compare multiple datasets to identify discrepancies in broadband availability, and produce reports and analyses that can be used for broadband policy, planning, and investment decision-making. It will be accessible only by state and federal partners to allow for the inclusion of non-public, proprietary data that may have licensing restrictions. As the pilot moves forward, NTIA will test and refine the map's functionality and expand it to other states and territories, while also seeking to incorporate data from other partners and the broadband industry. To date, NTIA has incorporated more than 100 layers of data into the NBAM, including: FCC Form 477 Fixed Broadband Availability; FCC

Connect America Fund (CAF) 2; USAC High Cost Universal Broadband (HUBB); USDA-RUS / ReConnect Eligibility Data; M-Lab Fixed Speed Test; and data from the 8 partner states.

The NBAM allows users to compare different layers of data to improve their understanding of broadband availability. For example, data from different time periods can be compared to understand the expansion and contraction or lack of broadband services. Similarly, users could compare broadband availability with population density or socioeconomic data to prioritize the planning or funding of broadband projects to meet various policy objectives. NTIA is working on a combination of visual and automated tools within the NBAM to deliver these capabilities.

During 2020, NTIA expects to make numerous enhancements to the NBAM. Work is underway to improve NBAM usability, expand the platform's analytical capabilities, and incorporate additional states into the program. NTIA also expects to augment the NBAM with numerous additional data sets.

COLLABORATION AND COORDINATION OF FEDERAL BROADBAND PROGRAMS AND ACTIVITIES

Collaboration of broadband programs and activities among the USDA, FCC, and NTIA has routinely occurred at both staff and leadership levels and has recently intensified. The Agencies will maintain and, where needed, expand their coordination efforts to meet the objectives identified in Section 6212.

ABI and Section 6214 of 2018 Farm Bill

USDA and NTIA have worked closely on the leadership team of the American Broadband Initiative ([ABI](#)), the Administration's signature strategy to stimulate increased private investment in broadband infrastructure and services to fill broadband connectivity gaps in America. The FCC, as an independent regulatory agency, participates as a consulting member. The three ABI workstreams – Leveraging Federal Assets, Streamlining Federal Permitting, and Maximizing the Impact of Federal Funding – address barriers that delay or prevent rural broadband deployment. The Federal Funding workstream members are focused on improving the coordination and efficacy of federal broadband programs in ways that will maximize their impact. Building on existing coordination mechanisms between the FCC and USDA, the workstream members are

exploring opportunities to promote coordination between USDA, FCC, NTIA and other federal agencies that support broadband expansion. Further, given that many states are operating broadband programs in parallel with federal programs, the SBLN provided input to the Federal Funding workstream with respect to improving coordination between federal actions and those state-level programs. The workstream is exploring options to implement the SBLN recommendations. In recognition of the crucial role played by accurate, complete, and verifiable service data in federal funding, the team has formed a Mapping Subgroup jointly co-chaired by the Agencies to develop recommendations for improving current broadband mapping efforts.

The ABI fulfills the requirements established in Section 6214 of the 2018 Farm Bill, which mandated the creation of an interagency working group to identify, assess, and determine possible actions relating to barriers and opportunities for broadband deployment in rural areas and report to the Executive Office of the President regarding recommendations agencies can take. The report was submitted to the Executive Office of the President in June 2019.

Consultation between USDA and NTIA

Section 6212 directs that USDA consult with NTIA to “assist in the verification of eligibility of the broadband loan and grant programs” it offers and that NTIA should make available its broadband assessment and mapping capabilities. This consultation and collaboration commenced during the roll-out of the complementary NTIA Broadband Technology Opportunities Program (BTOP) and USDA Broadband Infrastructure Program (BIP) stimulus programs almost a decade ago and continues today. USDA worked closely with NTIA in the roll-out of its ReConnect program and first-generation online mapping tool for applicants. NTIA promoted the program through its State Broadband Leaders Network; participated in training at ReConnect workshops through an inter-agency agreement with USDA; and provided technical assistance during the development of the program guidelines based on its experiences in the BTOP grant program and knowledge of state and local broadband deployment efforts. USDA and NTIA continue to collaborate on outreach efforts to unserved communities and are hosting state workshops across the country to assist communities in identifying opportunities to expand broadband access.

In recognition that one of the most significant challenges to expanding broadband connectivity is determining which parts of the country remain unconnected, NTIA will consult

with USDA and other federal agencies that support broadband deployment in the development of the NBAM. USDA and other federal agencies have “use cases” specific to their underwriting processes and statutory requirements. In addition, USDA and other federal agencies may gather information about local broadband availability through their application processes which may be useful to the development of the NTIA NBAM. While still in the early stages, the team working on the development of the NBAM will gather relevant information from USDA and other funding agencies about their processes and requirements to determine commonly needed functionality and options for meeting the needs of policymakers. Once completed, the NBAM will be a valuable tool for USDA to use in its validation process and is expected to better target and supplement the on-site survey process. Over time, it also may be able to serve as a standardized geospatial validation process for broadband programs across the Federal government.

Consultation Between USDA and the FCC

Section 6212 also directs the USDA and FCC consult with each other prior to providing broadband support in order to maximize the scope and benefit of scarce federal resources. For example, USDA is directed to consult with the FCC “before providing broadband assistance for a project to serve an area with respect to which another entity is receiving Connect America Fund or Mobility Fund support under the Federal universal service support mechanisms established under section 254 of the Communications Act of 1934 (47 U.S.C. § 254).” Similarly, the statute directs the FCC to consult with USDA before offering universal service support “to serve an area with response to which another entity has received broadband assistance under a loan or grant program of the Department of Agriculture.”

The USDA and FCC leverage their close relationship to meet Section 6212 obligations. In 2014, USDA’s Rural Utilities Service and the FCC entered into a Memorandum of Understanding to facilitate the exchange of information between the two agencies. Through that agreement, and on a more informal basis, the agencies have been able to exchange information regarding policy and funding efforts to protect the integrity of their respective rural broadband support programs and maximize their reach. For example, to ensure that there was no duplicative support awarded through the FCC’s CAF auction and USDA’s ReConnect funding initiative, the USDA incorporated a geographic information system (GIS) mapping layer during Round 1 of its

ReConnect program that identified the boundaries of the CAF auction winners. The USDA has since worked with the FCC to ensure it reflected the most recent award winners. The USDA also provided the FCC with GIS information regarding the applications received during Round 1 of ReConnect funding. Both agencies are working to modernize and streamline the exchange of location and funding data by transitioning to the use of shapefiles. The FCC and USDA also coordinate prior to authorizing funds for rural broadband deployment to ensure that USDA loan and grant funds and the FCC universal service funds are not being spent on projects that are already funded through other federal programs. Finally, the ongoing coordination effort enables the agencies to leverage their respective areas of expertise to implement and manage broadband funding programs.

The USDA has found the FCC to be a valuable resource as it develops programs to provide broadband market incentives because of the size and scope of its funding mechanisms, the depth of expertise, and the knowledge the Commission brings to telecommunications system design. The FCC has found the USDA's experience with rural providers and users to also be of great value as broadband is deployed outside urban and suburban centers.

These coordination efforts have led to greater efficiency and reduced redundancy in the agencies' respective funding programs. But ongoing success depends on sustained cooperation between the agencies. The agencies will work to enhance these effects by maintaining a greater level of coordination as new broadband funding programs are implemented. For example, the senior staff at the FCC and USDA have initiated regular meetings to discuss issues related to their respective broadband funding programs that are about to launch, including the Rural Digital Opportunity Fund and Round 2 of the ReConnect program. These coordination efforts will help to avoid duplication of efforts or overbuilding by, for example, structuring relevant timeframes for each program, where feasible, so that areas awarded funds through one program can be excluded from the areas eligible for support in the other. Through a focus on sharing viewpoints and expertise relating to the structure and operation of funding programs early in the process, the FCC and USDA anticipate they will realize additional gains in efficiency.

NTIA and the FCC engage in regular, extensive coordination with spectrum-related matters, given their shared responsibility for managing the nation's radio spectrum resources in the public interest. NTIA manages spectrum and assigns frequencies to federal stations, while the FCC has

regulatory authority, including licensing, over non-federal stations. Similarly, given Congressional mandates and each agency's role and respective initiatives with respect to broadband mapping, there is a shared understanding of the importance that both agencies coordinate and share broadband data. NTIA's NBAM includes data the FCC gathers from broadband providers. NTIA submitted comments regarding the modernization of the FCC Form 477, and supports the intent of the Digital Opportunity Data Collection "to enhance the accuracy and usefulness of broadband deployment reporting." As the FCC gathers more granular broadband data, NTIA welcomes the opportunity to integrate the data into the NBAM for an enhanced understanding of the state of broadband availability across the country.

USDA, FCC, and NTIA Examine Future Needs and Technical Capabilities of Rural Broadband

Since all three agencies are committed to funding programs that will have a lasting impact on rural communities, the Agencies actively collaborate on questions concerning future rural broadband service needs as required by Section 6212(c)(1) and analysis of the technical capabilities of current and future technologies available by performance, suitability, and cost as required by Section 6212 (c)(2).

All three agencies are working to ensure that the policies and programs they support will meet the broadband needs and technical requirements that rural America demands. NTIA's interaction with state and local communities seeking local broadband solutions through its BroadbandUSA program and State Broadband Leaders Network provides insight into future rural broadband needs, which are shared with the USDA and the FCC. USDA and FCC funding programs have established minimum speed and latency standards designed to ensure that federal dollars support the growing demand for modern broadband networks. USDA makes this evaluation by reviewing performance of current loans and grants to ensure that funded service offerings remain viable and debt can be repaid. Similarly, the FCC analyzes existing and developing technological capabilities in establishing minimum speed and latency requirements and by periodically reviewing funding and performance obligations required of its universal service recipients. Recognizing that access to robust broadband service is important to all Americans, both USDA and FCC proposed minimum speeds of 25/3 Mbps for the ReConnect and Rural Digital Opportunity Fund programs, with priority given for faster, up-to gigabit speeds

and lower latency. The Agencies will continue to tailor their programs to keep pace with demand for faster broadband service in rural America.

Through its policymaking function, the Commission adopts rules to promote technological advancement, increase competition, and reduce barriers to broadband deployment. As an example, in December 2017, to remove the 1930s-era, utility-style regulatory impediments that Title II classification imposed on broadband investment and deployment, the Commission adopted an [Order](#) that reinstated the pre-2015 “information service” classification of broadband Internet access service and restored the determination that mobile broadband is not a commercial mobile radio service. As the Commission found, “reports of industry efforts and plans for broadband expansion support our belief that the Commission’s actions to date to encourage and stimulate broadband deployment and innovation are in fact working as intended.” Broadband providers’ capital expenditures increased by approximately \$3.1 billion in 2018 and fiber was deployed to 5.9 million new homes in 2018, the largest number ever recorded.

Similarly, the Commission has taken steps to remove barriers to deployment and accelerate the transition to Internet Protocol-based networks. In November 2017, the Commission [reformed](#) its copper retirement, network change disclosure, and discontinuance processes to remove regulatory barriers causing unnecessary costs or delay to deployment of next-generation networks. It enacted [further reforms](#) in June 2018 to eliminate unnecessary impediments and costs to timely network upgrades, while maintaining protections for consumers and enabling providers to invest in next-generation networks.

In August 2018, the Commission [adopted measures](#) to expedite the process and reduce the costs of attaching new network facilities to utility poles. Most significantly, the Commission established a new “One Touch Make Ready” pole attachment process that allows the party with the strongest incentive to prepare the pole quickly for new attachments, rather than spreading the work across multiple parties. The Commission also addressed two forms of state and local regulatory barriers to deployment, clarifying that (1) it will preempt, on a case-by-case basis, state and local laws that inhibit the rebuilding or restoration of broadband infrastructure after a disaster; and (2) state and local moratoria on the deployment of telecommunications services and facilities are barred by section 253(a) by the Communications Act because they “prohibit or have

the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service.”

To help inform policymaking, the FCC has established a number of federal advisory committees. For example, the Broadband Deployment Advisory Committee (BDAC), chartered on March 1, 2017, and re-chartered on March 1, 2019, makes recommendations to the Commission on how to accelerate broadband deployment by reducing and/or removing regulatory barriers to infrastructure investment. The BDAC provides a means for stakeholders to exchange ideas and develop recommendations to the Commission on broadband deployment, thereby enhancing the Commission’s ability to carry out its statutory responsibility to encourage broadband deployment to all Americans. The BDAC’s efforts have been influential in the Commission’s infrastructure proceedings. The re-chartered BDAC is continuing its efforts with three newly formed working groups: (1) Disaster Response and Recovery Working Group; (2) Broadband Infrastructure Deployment Job Skills and Training Opportunities Working Group; and (3) Increasing Broadband Investment in Low-Income Communities Working Group.

In addition, the FCC established the Precision Agriculture Task Force to ensure that the rapidly growing broadband needs of unserved agricultural lands will be met, both now and in the future. In consultation with USDA, and in collaboration with public and private stakeholders in the agriculture and technology fields, the Task Force will take concrete steps to identify and measure current gaps in the availability of broadband Internet access service on agricultural lands. These steps will include developing policy recommendations to promote the rapid, expanded deployment of broadband Internet access service on unserved agricultural land and recommending specific steps that the Commission should consider to ensure that the expertise of the USDA and available farm data are reflected in future programs of the Commission. As part of this joint effort, USDA will share its farmland mapping and analytical resources and practical knowledge of the national agricultural ecosystem and serve as a non-voting ex officio member of the Precision Agriculture Task Force. USDA will also provide dedicated staff to support the Task Force and each of its working groups. Members of the Precision Agriculture Task Force

were announced on November 19, 2019, and the first meeting of the Task Force took place on December 9, 2019.

Finally, the Technological Advisory Council (TAC), which is comprised of a diverse array of industry experts, provides technical advice to the FCC. The TAC focuses on key issues affecting the deployment of new broadband technologies and services seeking to spur opportunities for innovation, greater efficiencies and job creation.

The Commission also undertakes broadband reporting pursuant to Congressional directives. In the annual Broadband Deployment Report, issued pursuant to section 706 of the Telecommunications Act of 1996, the FCC must “determine whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion.” In addition, the bi-annual Communications Marketplace Report, required by Section 401 of the RAY BAUM’S Act of 2018, requires the FCC to assess the state of all forms of competition in the communications marketplace; the state of deployment of communications capabilities; and barriers to competitive entry, including market entry barriers for entrepreneurs and other small businesses. The FCC also is required to describe the actions taken by the Commission in the previous two years to address challenges and opportunities in the communications marketplace, and the FCC’s agenda for continuing to address those challenges and opportunities over the next two years. These reports, which inform the FCC’s policy efforts, provide an opportunity to assess both the state of broadband deployment and the FCC’s efforts to bridge the digital divide.

USDA, FCC, and NTIA Data Collection, Exchange and Verification

Section 6212(a)(3)(A-D) urges the USDA, the FCC, and NTIA to examine ways to harmonize broadband notification and reporting requirements and develop common verification procedures across all federally supported broadband programs, to consolidate and use existing broadband service data, and to collect and share data on those projects in rural areas where Federal programs are supporting broadband deployment. The USDA, FCC, and NTIA are working to implement this mandate.

The FCC has instituted compliance measures to ensure that carriers are using universal service funding for its intended purpose. For example, carriers participating in CAF programs are required to file broadband deployment data with the Universal Service Administrative

Company's High Cost Universal Broadband (HUBB) portal showing where they are building out mass-market, high-speed Internet service. This information includes latitude and longitude coordinates for every location where service is available, and is the foundation for the [CAF Map](#), which shows the impact of CAF support on broadband expansion in rural America.

Additionally, the FCC recently approved [revised performance measures](#) for high-cost funding recipients. These minimum service standards ensure accountability for consumers, taxpayers, and the Commission and ensure that carriers deploy networks that meet the performance requirements they committed to deliver. At the same time, the FCC recognized that each carrier faces unique circumstances, and that one set of prescriptive rules may not make sense for every carrier. To accommodate this practical reality, the FCC's rules provide flexibility, considering the operational, technical, and financial differences among providers when establishing minimum testing standards, to ensure that even the smallest rural carriers can meet testing requirements without facing excessive burdens. The FCC has briefed USDA on its performance measures and is a resource as USDA implements a similar program.

USDA, NTIA and the FCC, as members of the ABI's Federal Funding workstream, acknowledge the need for collection and exchange of more consistent data across the programs that support the deployment of broadband service. Such data can ensure that agencies make more informed programmatic and policy decisions about the state of broadband availability, and in targeting funding in support of additional broadband deployment. In particular, sharing geospatial data about the availability of broadband, including both current and planned deployments supported by federal funding, has been valuable for coordinating among federal agencies to maximize the reach of scarce federal resources. The agencies will evaluate opportunities to enhance their geospatial data collections and to formalize the exchange of such data.

On August 1, 2019, the FCC adopted a [Report and Order and Second Further Notice of Proposed Rulemaking](#) that established the Digital Opportunity Data Collection, a new broadband data collection that will gather geospatial broadband service availability data specifically targeted toward advancing universal service goals. The Digital Opportunity Data Collection will require all broadband service providers to submit granular maps of the areas where they have broadband-capable networks and make service available, providing a more precise depiction of

broadband coverage than is currently available. The information collected through the Digital Opportunity Data Collection will be publicly available and will ultimately include a platform for stakeholders, including governmental entities, to submit information that disputes the broadband deployment information submitted by providers. In the accompanying Second Further Notice of Proposed Rulemaking, the FCC sought comment on incorporating a broadband-serviceable location tool into the Digital Opportunity Data Collection to create a comprehensive, geospatial database of all locations that have, or could have broadband services. The Digital Opportunity Data Collection will result in broadband deployment maps that will allow the FCC to precisely target scarce universal service dollars to where broadband service is lacking. Broadband notification and reporting requirements are not yet uniform. Information transfers are, by necessity, conveyed through formal and informal communication between the Agencies. The use of a common data collection standard by both the USDA in its ReConnect program and ultimately its other telecommunications offerings along with the FCC's adoption of a similar tool in its new Digital Opportunity Data Collection program will make it possible to harmonize notification and reporting. Enhanced broadband availability accuracy through NTIA's mapping initiative and integration into federal policymaking and funding decisions, along with the FCC's new data collection tool, will make common verification procedures across all federally supported broadband programs less difficult.

CONCLUSION

The USDA, FCC, and NTIA are working to deploy broadband to rural areas. The USDA loan and grant programs, the FCC universal service programs, and NTIA's BroadbandUSA program and National Broadband Availability Map not only bring broadband resources to rural areas, but also provide information about where service is needed to allow agencies to avoid waste and duplicative federal funding. Through regular and routine exchange of program and technical information, the Agencies are partnering to close the rural digital divide and multiplying the effect of their respective efforts. Common data standards, such as those proposed by the FCC's new Digital Opportunity Data Collection program and those in use by the USDA in the ReConnect program, routine digital information exchanges, and a complete, accurate and verifiable mapping tool will ensure that federal funding is targeted and does not overlap.

Maintaining the current level of cooperation between the USDA, FCC, and NTIA, and evaluating opportunities to further share data and coordinate efforts, will ensure that federal support for broadband deployment and access will provide rural America with the tools it needs to improve the quality of rural life for decades to come. The strong working relationships developed through past cooperative efforts has built a comfortable platform for mutual information exchange and “as needed” contact and collaboration. These relationships are expected to continue to grow as the three agencies partner in eliminating the digital divide for rural Americans.