Broadband Technology Opportunities Program (BTOP) Quarterly Program Status Report

Submitted to the

Committee on Appropriations
United States Senate

the

Committee on Appropriations
United States House of Representatives

the

Committee on Commerce, Science and Transportation
United States Senate

and the

Committee on Energy and Commerce
United States House of Representatives

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National Telecommunications and Information Administration
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I. INTRODUCTION AND BACKGROUND

Pursuant to Section 6001(d)(4) of the American Recovery and Reinvestment Act of 2009 (ARRA or Recovery Act) (Public Law No. 111-5), the National Telecommunications and Information Administration (NTIA) provides this Quarterly Report on the status of the Broadband Technology Opportunities Program (BTOP or Program). This Report focuses on the Program's activities from October 1 to December 31, 2012.

The Recovery Act appropriated $4.7 billion for NTIA to establish BTOP to increase broadband access and adoption; provide broadband training and support to schools, libraries, healthcare providers, and other organizations; improve broadband access to public safety agencies; and stimulate demand for broadband.[1] The Recovery Act also provided funding for NTIA to develop and maintain a comprehensive nationwide map of broadband service capability and availability, and to implement the State Broadband Data and Development Act and the Broadband Data Improvement Act.

In 2009 and 2010, NTIA invested approximately $4 billion in 233 BTOP projects benefitting every state, as well as five territories and the District of Columbia. The portfolio of projects initially included:

- 123 infrastructure projects totaling $3.5 billion in federal grant funds to construct broadband networks;
- 66 Public Computer Center (PCC) projects totaling $201 million in federal grant funds to provide access to broadband, computer equipment, computer training, job training, and educational resources to the public and vulnerable populations; and
- 44 Sustainable Broadband Adoption (SBA) projects totaling nearly $251 million in federal grant funds to support innovative projects that promote broadband adoption, especially among vulnerable population groups where broadband technology traditionally has been underutilized.

As of December 31, 2012, 209 BTOP projects remained in active status.[2] Fifteen BTOP projects completed their award activities under their award and were in the process of closing out their awards.[3]

Additionally, through the State Broadband Initiative (SBI), NTIA granted approximately $293 million to 56 recipients, which included one grant for each of the 50 states, five territories, and the District of Columbia. With this funding, states are collecting and validating data biannually on the availability, speed, type, and location of broadband services, as well as the broadband services used by community anchor institutions, such as schools, libraries, and hospitals. NTIA makes the data available in several formats and uses the data to update the publicly searchable, interactive National Broadband Map,[4] launched on February 17, 2011, in accordance with the Recovery Act's requirements.[5] These grants also support states' efforts to

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[1] On August 10, 2010, Congress rescinded $302 million from BTOP, reducing the Program's funding to approximately $4.4 billion. *See* Pub. Law No. 111-226.

[2] The total number of BTOP awards announced by September 30, 2010 was 233. As of March 15, 2013, this number was 224, excluding awards to Leech Lake Band of Ojibwe (approximately $1.7 million), which ultimately did not accept its award; Education Networks of America, Inc. (approximately $14 million), the State of Wisconsin Department of Administration (approximately $22.9 million), the City of Tallahassee (approximately $1.2 million), and DigitalBridge Communications (three separate awards totaling approximately $4.2 million), each of which voluntarily terminated its project; and the Louisiana Board of Regents (approximately $80.6 million) and Trillion Communications, Inc. (approximately $59 million), which NTIA terminated for material noncompliance with their grant terms and conditions. Funds from these projects will be returned to the U.S. Treasury.

[3] A list of projects that completed their award activities is available in the Grant Closeout Activities section of this report.

[4] The National Broadband Map can be found at http://broadbandmap.gov.

[5] *See* American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009).

foster the efficient and creative use of broadband technology to better compete in the digital economy. These state-led efforts vary depending on local needs, but include programs to assist small businesses and community anchor institutions in using technology more effectively, investigate barriers to broadband adoption, develop innovative applications that increase access to government services and information, and establish state and local task forces to expand broadband access and adoption.

II. SUMMARY

This Quarterly Report focuses on four areas of BTOP implementation and project oversight:
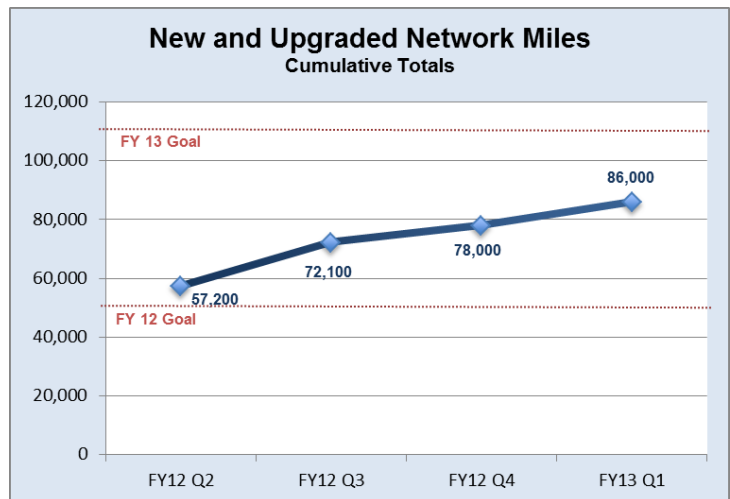
- **Status and Progress** of broadband projects and Program expenditures.
- **Supporting Initiatives**, including the SBI mapping and capacity-building efforts.
- **Monitoring, Grants Administration, and Closeout Efforts** for broadband projects and the results of those efforts.
- **Program Communications** supporting outreach with and among BTOP stakeholders.

III. PROGRAM STATUS AND PROGRESS

From October to December 2012, NTIA's broadband grant recipients continued to demonstrate strong performance and helped to achieve the Program's FY13 goals. Ten projects also completed their activities during this quarter on budget and on schedule, delivering the promised benefits to communities. These positive results helped the Program deliver significant progress in areas such as constructing new fiber-optic infrastructure, opening new PCCs, training to drive broadband adoption, and adding new broadband subscribers who now experience the benefits of high-speed Internet service. Recipients' quarterly progress reports, which were made public at the beginning of March 2013, provide a more granular depiction of these results.[6]

A. New and Upgraded Network Miles

BTOP infrastructure projects deploy new or upgraded network miles, connect community anchor institutions, and facilitate enhanced access to broadband Internet services for households and businesses. These new deployments and enhancements to existing broadband infrastructure also provide the basis for new and expanding innovations in many fields, such as healthcare, where BTOP is connecting more than 2,800 healthcare facilities throughout the United States. Through increased broadband capacity, healthcare facilities in rural communities are offering patients improved service using remote access

New and Upgraded Network Miles
Cumulative Totals

to medical specialists in distant locations. Now, these rural healthcare facilities also have greater access to training and resources to increase the knowledge of local healthcare professionals.

This quarter, BTOP recipients made considerable progress deploying network miles, and leasing dark fiber and existing broadband facilities. Recipients deployed more than 8,100 network miles during the past quarter, bringing the total number of miles to more than 86,000. Through December 2012, recipients were

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[6] Quarterly reports for each BTOP and SBI recipient project can be found at http://www2.ntia.doc.gov/awards.

deploying infrastructure in 53 states and territories. NTIA expects the pace of network construction to remain strong through the summer of 2013. Many grant recipients are in the final phases of construction and are currently conducting testing and provisioning activities as they prepare to move to the operational phases of their projects. Many infrastructure projects have already realized the initial benefits of their BTOP grant in their local and regional communities. Two examples of projects improving the healthcare industry in their communities are detailed below:

As of December 2012, **Critical Hub Networks, Inc.** deployed a total of nearly 4,100 miles of network infrastructure, including an undersea cable that connects Puerto Rico to Internet hubs in Miami and New York, as part of the Puerto Rico Bridge Initiative (PRBI). Approximately 123 wireless and microwave miles were deployed in this quarter alone. In a 2008 study by the Communications Workers of America, Puerto Rico was identified as an area of great need for improved service. With BTOP funds, Critical Hub purchased two 10 Gbps undersea fiber-optic cable lines, significantly increasing Internet capacity for Puerto Rico and lowering the costs of broadband service across the island. Supporting the goal of using broadband to enhance the life of Puerto Ricans, Critical Hub established interconnection with the Puerto Rico Health Information Network (PRHIN). PRHIN is improving healthcare delivery on the island, serving as an electronic data exchange which will, among other things, allow Puerto Rico to establish, store, and transmit electronic health records. The infrastructure deployed by Critical Hub allows PRHIN to exchange data between doctors, laboratories, pharmacies, and other healthcare entities. Health Information Technology (HIT), which facilitates more affordable and higher quality healthcare services, is a key driving factor in the increase in broadband demand in Puerto Rico's medical community.

Two workers install broadband equipment in Cayey, Puerto Rico, to increase Internet capacity and support an electronic health exchange.
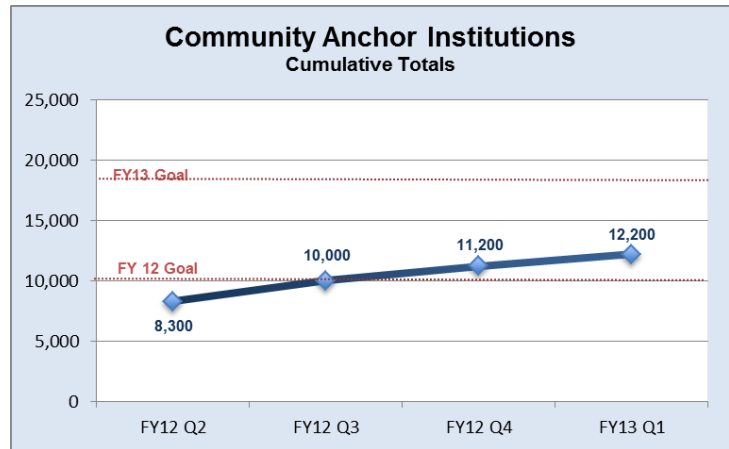
The University of Arkansas System deployed more than 760 miles of fiber through December 2012. The Arkansas e-Link project is integrating two existing, previously unconnected networks, the Arkansas Telehealth Network and the Arkansas Research and Education Optical Network (AREON). It is providing upgraded broadband and/or equipment to more than 400 community anchor institutions in order to create a comprehensive statewide network for healthcare, higher education, research, and public safety services. Through Arkansas e-Link, rural patients receive real-time consultation from medical specialists through interactive video telemedicine, allowing local doctors to collaborate with medical specialists to manage complex conditions. For instance, OB-GYN specialists in Little Rock are available to provide treament, diagnoses, and prenatal care protocols before the delivery of a baby at a remote clinic. After delivery, the local doctor and specialist collaborate on high-risk cases to determine if a Medical Evacuation (MEDEVAC) transportation to a Little Rock Intensive Care Unit (ICU) is necessary for either the infant or mother. This collaboration is critical to save lives and reduce medical costs as the cost of transportation is approximately $25,000 per instance. In addition, BTOP funds are used to help fund the Arkansas SAVES (Stroke Assistance through Virtual Emergency Support) program. With telemedicine, patients suffering from stroke symptoms receive life-saving, specialized treatment from a neurologist at another location. One patient from Searcy, Arkansas, said, "I didn't know anything about the SAVES program, but I am so thankful it was there for me…I went back to teaching a month after the stroke; I'm fine. The doctor said it was as if I had never had the stroke."

A doctor at the University of Arkansas for Medical Sciences in Little Rock, Arkansas, uses telemedicine to monitor an ultrasound.

B. Community Anchor Institutions

BTOP infrastructure projects focus on connecting community anchor institutions, such as schools, libraries, hospitals, and public safety facilities, which require faster Internet speeds to provide essential community services. This quarter, BTOP recipients connected and/or improved service to more than 1,000 community anchor institutions, which is an increase of nine percent from last quarter and brings the total number of institutions connected to more than 12,200 across 49 states and territories.

Community Anchor Institutions
Cumulative Totals

- FY13 Goal
- FY 12 Goal
- FY12 Q2: 8,300
- FY12 Q3: 10,000
- FY12 Q4: 11,200
- FY13 Q1: 12,200

As BTOP recipients deploy additional new network miles, they will continue to provide more institutions with faster and more reliable high-speed Internet access. Below are examples of how BTOP projects are working to connect community anchor institutions and improving public safety across two states:

Columbia County, Georgia, has connected 100 community anchor institutions to its network as part of a 205-mile, county-wide fiber middle mile network. The county is improving access to healthcare, public safety, and government facilities, as well as providing dozens of free Wi-Fi hotspots to community locations, including parks, libraries, and community centers. So far, the county constructed seven wireless towers (five are BTOP-funded) to improve wireless communications capabilities throughout the region. One of the primary goals of the network is to enhance public safety communications in the county. Using the new towers, the county has connected more than 30 public safety entities and also connected traffic devices, including stop lights, surveillance equipment, and notification boards, to the statewide Intelligent Transportation System (ITS) to improve public safety and traffic flow along the major transportation corridors. The first entity to benefit from the high-speed access is the Sheriff's Office. "This is 10 years in the making. This is huge…No matter where they are, with this portable radio, they've got coverage…It's like going from a tin can and string to a real radio," Sheriff Clay Whittle said.

One of seven wireless towers in Columbia County that provides enhanced communications capabilities for local public safety entities.

The **District of Columbia** has connected more than 200 community anchor institutions to its network as part of the DC Community Access Network (DC-CAN) project. The 170-mile high-speed middle mile network is serving the city's economically distressed areas, including approximately 56 schools, 23 libraries, 67 healthcare facilities, and 59 public safety sites. The Metropolitan Police Department (MPD) and Fire and Emergency Management Services (FEMS) are one core group using the increased speed to improve communications and access to bandwidth-intensive applications. "As Internet use moves toward video and other data-intensive applications, this network is well-positioned to support such next-generation apps without the need for further infrastructure upgrades for at least
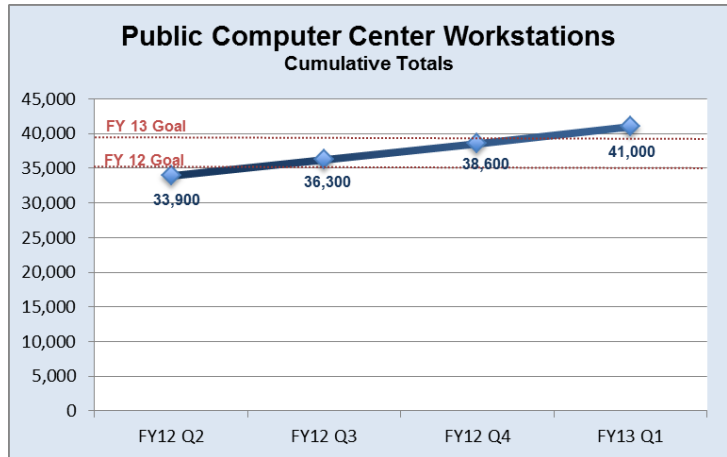
DC FEMS employees use Internet-based applications to improve communications between public safety agencies.

a decade," said DC Chief Technology Officer Rob Mancini. "By expanding to an established 100 Gbps platform, the District has invested in an efficient and economically viable solution based on proven technology."

C. Public Computer Center Workstations

Public Computer Centers (PCCs) provide broadband access and training that help individuals advance in the workforce. Many PCCs find that patrons continue to rely on the PCCs for assistance in finding and applying for jobs. PCCs offer access to job search databases, and staff members assist patrons in preparing resumes and submitting online job applications. PCCs provide training on basic computer and Internet skills, as well as advanced educational courses and certificate programs that can help individuals qualify for jobs. Many PCC recipients have reported

Public Computer Center Workstations
Cumulative Totals

FY 13 Goal
FY 12 Goal

- 33,900 (FY12 Q2)
- 36,300 (FY12 Q3)
- 38,600 (FY12 Q4)
- 41,000 (FY13 Q1)

individual success stories, where patrons have found employment with the help of the training and assistance they received at PCC sites. For example, the Housing Authority of San Bernardino reported that it has helped more than 200 people get placed in jobs through its job development activities.

Through December 2012, 65 BTOP recipients installed more than 41,000 new workstations in PCCs across 40 states. Recipients installing workstations also continue to develop and implement training programs and educational courses, including workforce development training. During the quarter, public computer centers provided 1.1 million hours of training to 433,000 users. Below are examples of PCC recipients providing greater public access to high-speed Internet and training aimed at enhancing workforce and digital literacy skills:

The **Kentucky Arts, Education, and Humanities Cabinet's** Workforce Opportunity Expansion project is targeting areas of Kentucky with high poverty and unemployment levels. In these communities, public libraries are, for many, the only source of online access to employment information, unemployment benefits, and training opportunities. The project has installed more than 730 workstations to encourage workforce development and is partnering with community organizations to provide workforce training to approximately 13,400 community members. For example, Adult Education offices are providing training to help community members prepare for the GED, even using mobile labs to reach out to students. The libraries are also actively helping job seekers gain and build skills to help them find jobs in the region. For

Martin County Public Library, in Inez, Kentucky, hosts a job fair to help library patrons find employment opportunities.

example, many libraries generate weekly lists of jobs available in their areas. After hearing about these efforts, a local small business contacted a library and asked for help finding a part-time employee. The library referred several people who had attended their classes to the business, which ultimately hired one of those candidates. Governor Steve Beshear said, "Our local public libraries have become an important community access point for people to search for jobs, write resumes and learn computer skills. These centers will provide a direct link to help for people in areas with high unemployment levels."

The **Delaware Department of State's Division of Libraries** is upgrading equipment and expanding training programs at libraries across the state. The computer centers at the Dover, Georgetown, Seaford, and Wilmington libraries now serve as job and learning labs to help unemployed citizens learn resume building, job search, and interview skills. So far, the project has installed nearly 80 new workstations. This quarter, staff at the Job Centers helped more than 1,800 visitors with job searches, applications, resumes, and other computer skills. In addition, visitors participated in training classes such as Adult GED, job preparation workshops, and entrepreneurial workshops. The Division of Libraries also developed an online Job & Career Accelerator that provides job search resources, including resume and cover letter assistance. One woman, for example, who had earned a college degree in her native country used the resources offered by the Seaford Job Center to secure a teaching position for English as a Second Language classes. "The Job Centers are equipping Delawareans with the tools they need to get back to work or to change careers," said Delaware Secretary of State Jeffrey Bullock. "We have already seen the positive effect they have had on numerous people. In some cases, people who took advantage of the resources available there were able to secure a job within days."
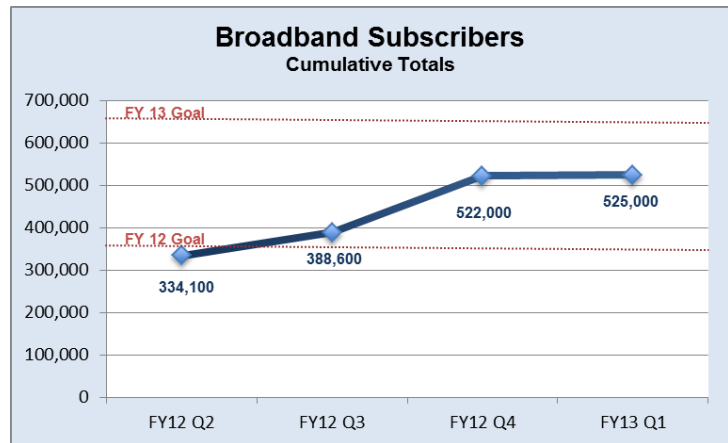

Senator Tom Carper visits the Job Center at the public library in Georgetown, Delaware, to talk with job seekers.

D. Broadband Subscribers

SBA projects increase broadband Internet usage and adoption by consumers, businesses, and institutions. In addition to providing a range of digital literacy classes, many recipients are increasing awareness of how broadband can improve education, health, and human services. A number of recipients are working with schools, colleges, and universities, demonstrating how broadband access can improve student learning. Some provide training, computers, and discounted subscriptions to families so that children can use the Internet to complete homework and parents can be more engaged in their children's learning. Others provide professional development training and coaching to educators so they can integrate web resources, online networking, and software into their classroom activities. Video conferencing equipment allows for distance learning so students can access a greater range of courses. Recipients also provide new equipment and technical support to schools so that educators can take full advantage of available tools and resources.

Broadband Subscribers
Cumulative Totals

- FY 13 Goal
- FY 12 Goal
- FY12 Q2: 334,100
- FY12 Q3: 388,600
- FY12 Q4: 522,000
- FY13 Q1: 525,000

Through December 2012, 36 of the SBA grant recipients reported that more than 521,000 households and 4,400 businesses subscribed to broadband services after receiving digital literacy classes or job training. NTIA expects the number of new subscribers to continue to increase as more households complete training programs, receive subsidized computer equipment or broadband service, and take advantage of workstations and discounted subscriptions provided by BTOP funds.

The following projects further demonstrate how BTOP recipients are driving broadband adoption and increasing subscribers in the field of education:

The **Eastern Upper Peninsula Intermediate School District** in Michigan is emphasizing computer usage in its classrooms to improve digital literacy among economically disadvantaged students and families in Chippewa, Luce, and Mackinac Counties. So far, the

District has encouraged nearly 250 households to subscribe to broadband. The District believes that a key component of increasing digital literacy among students is to expand technology use in their classrooms. As part of the program, the school district hired an instructional technologist to help teachers identify ways to incorporate digital technology into their lesson plans and homework assignments. The schools now use cloud computing, educational websites, online lesson plans, and web-based software to administer quizzes and facilitate student-teacher communication outside of normal school hours. Barbara Light, the district's BTOP project director, said, "The impact of BTOP has been huge! It has provided both a catalyst for change and the means to make change. Due to the commitment of our teachers and administrators to 21st century teaching methods, the provision of computer netbooks, the support of our technology consortium staff, and the work of the instructional technologist, BTOP is transforming the way education happens in our classrooms."

Students receive digital literacy training and Netbook computers in DeTour Village, Michigan.

The **University of Alaska Fairbanks** is encouraging broadband use in remote villages across the state. Through the Bridging the E-Skills Gap project, the university is partnering with approximately 20 non-profit, educational, and for-profit organizations to create distance learning, public safety, and telehealth opportunities. So far, the University has encouraged more than 7,800 households and nearly 900 businesses to subscribe to broadband service. The University is working with several partners to support education in the state. For example, the Alaska Library Network provides free access to two new distance learning tools at state libraries. The first, Live Homework Help, is an online educational portal that offers live homework tutors to K-12 students seven days a week.

K-12 students in Angoon, Alaska, participate in a digital storytelling presentation.

The second, the Testing Educational Reference Center, is an online resource where patrons can access study guides, practice tests, and tutoring videos for school entrance and career certification exams. Library visitors can use the tool to prepare for tests, such as the GED, SAT, and the Reciprocal Electrician Journeyman License exam. The University also created the Digital Storytelling-Performance Literacy program to teach K-12 students how to digitally write and tell their own culturally relevant stories. For example, Angoon, Alaska, is a small village with a population of less than 500 people, the majority of whom identify as Tlingit Indians. The Digital Storytelling program taught K-12 students at Angoon City Schools how to turn their stories into podcasts and share them with family members and friends around the country. This program improves the familiarity of students with computers and mobile devices, and encourages participants to use broadband technology to stay connected with loved ones.

E. Expenditures

During the first quarter of FY13, BTOP recipients spent more than $280 million in federal grant funds. These funds were matched by recipient contributions of nearly $114 million. Cumulatively, federal outlays for the Program totaled $2.6 billion, while total recipient matching contributions exceeded $1 billion.

IV. SUPPORTING INITIATIVES

A. State Broadband Initiative

The State Broadband Initiative (SBI) consists of the State Broadband Data and Development Program and the National Broadband Map. SBI grants also play a critical role in helping states and territories identify and address obstacles to broadband deployment and adoption. SBI empowers states to tailor solutions to their unique broadband needs, supports state and local task forces and planning teams to expand broadband awareness and adoption, implements innovative applications that increase access to government services and information including job resources, and enables government to be more responsive to citizens. By helping to coordinate this new network of state broadband activity, SBI facilitates collaboration among the states and enables the exchange of best practices and lessons learned.

This quarter, NTIA collected data from states and their designees to update the National Broadband Map, which included more than 20 million new records from 3,961 broadband providers and 1,977 distinct holding companies across all 50 states, five territories, and the District of Columbia. As of January 31, 2013, NTIA updated Broadbandmap.gov to display this information, including broadband availability, the name of broadband providers, the technology used to provide service, and the maximum advertised speeds of service by census block. The data also includes broadband adoption statistics for schools, libraries, hospitals, and other community anchor institutions. Broadband availability data are available in a number of different formats, including Application Programming Interfaces (APIs) and as files for download. Website users can compare availability and speeds across different geographic regions and can view the service area, speeds, technology, and demographic information for any broadband provider. Since its launch in 2011, the National Broadband Map has attracted more than 850,000 users. Each state also hosts its state-level data in a variety of ways, using this information to drive strategic planning and economic development.

Below are two examples of SBI projects increasing job opportunities and supporting economic growth:

The **Rhode Island Economic Development Corporation's** Broadband Rhode Island (BBRI) used grant funds to improve their train-the-trainer program and digital literacy curriculum by working with TechACCESS, a nonprofit with expertise in assistive technologies, especially for disabled communities. When designing the curriculum, BBRI and TechACCESS made it a priority to develop curriculum that was accessible for all users, including people with disabilities. To meet their goal, they used Universal Design for Learning (UDL) principles, including using multiple formats that focus on visual and auditory learning for

Rhode Island's digital literacy trainers brainstorm ways to incorporate mutifaceted elements, such as audio clips, into curriculum.

presentation of information. Through this effort, BBRI has been able to provide nearly 100 volunteer instructors with digital literacy curricula designed to reduce access barriers and increase adult students' engagement with the Internet. For example, the digital literacy curriculum teaches instructors ways to increase font size on a webpage for individuals with visual impairment. BBRI's digital literacy train-the-trainer materials also provide resources and tutorials for making different software, such as Office, more accessible to people with visual or hearing impairments. "BBRI has done an excellent job of establishing a structure for digital literacy to be available to the public," one instructor said.

The **Pennsylvania Technical Assistance Program (PennTAP)** helps smaller Pennsylvania companies improve their competitiveness by providing the expertise and resources to resolve technology questions and needs. For example, PennTap assisted the owner of a hospitality business located in rural Jefferson County in negotiating with Internet service providers to obtain a better Internet connection as part of the statewide broadband technical assistance program that targets small businesses and community anchor institutions. The assistance, expertise, and persistence

provided through PennTap helped the business obtain a waiver from the local electric utility company to gain access to an aerial path to run fiber, saving the business 50 percent in costs and resulting in better and more reliable Internet service. As a result of the improved broadband service, the business was able to employ student interns to implement employee training on new technologies and developed a social media marketing plan to increase visibilities and sales. Through these efforts, the business reported more than $360,000 in total economic benefits, as well as the retention of 32 jobs. In addition, the owner reported that the business expects to improve sales by 40 to 50 percent in 2013 as a result of these initiatives. "The assistance I've received from PennTAP provided resources that were invaluable to me as a small business owner," stated the owner. "The level of skill and knowledge that both PennTAP and our interns offered was instrumental to making our business more technologically relevant to the demands of our city-based market."

B. Evaluation Study

In September 2010, NTIA contracted with ASR Analytics, LLC (ASR) to conduct an evaluation of BTOP's economic and social impacts. This study will assess the degree to which NTIA's implementation of BTOP has met the Recovery Act goals by measuring the short- and long-term economic gains in grant-funded communities. This past quarter, NTIA accepted the ASR deliverable, "Progress Towards BTOP Goals: Interim Report 1 on PCC and SBA Case Studies."[7] This quarter, ASR prepared for the follow-up visits to PCC and SBA sites scheduled to begin in the first quarter of 2013. Evaluation studies for 12 infrastructure grant recipients are in the planning stages and will begin in the fall of 2013.[8]

V. MONITORING, GRANTS ADMINISTRATION, AND CLOSEOUT EFFORTS

NTIA continues to execute against its BTOP Monitoring and Assessment Plan, which includes individual grant monitoring, day-to-day portfolio management, technical assistance, and corrective action support as part of a comprehensive oversight strategy for BTOP awards.[9] These activities are designed to protect taxpayer investments, offer strong stewardship over the grant funds, and monitor recipients' progress and performance against project schedules and budgets. NTIA proactively engages grant recipients to monitor project and compliance efforts, regularly communicating with recipients to ensure successful oversight of grant funds, identifying potential risks affecting recipients and their projects, and providing corrective action guidance to resolve issues promptly.

In addition, NTIA continues to assess each grant to review potential risks affecting the recipient and assigns one of three levels for monitoring – standard, intermediate, or advanced – based on the total award amount, number of subrecipients, project complexity and duration, as well as the organizational type (*e.g.*, for-profit; nonprofit; and state, local, or tribal government). BTOP Federal Program Officers (FPOs) carry out appropriate oversight and intervention activities based on these three levels in cooperation with the National Institute of Standards and Technology (NIST) and National Oceanic and Atmospheric Administration (NOAA). NTIA also works closely with the Department of Commerce's Office of Inspector General (OIG) to improve Program monitoring of recipients' compliance with applicable statutes, regulations, and guidance.

As recipients complete their projects, NTIA continues to work with the NIST and NOAA Grants Offices to verify that each recipient has completed all applicable administrative actions and required work. This process occurs over several months and includes a review of the technical obligations, financial accounting,

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[7] The Interim Report is available at http://www.ntia.doc.gov/report/2012/progress-towards-btop-goals-interim-report-pcc-and-sba-case-studies.
[8] More information about the ASR Evaluation Study and the Interim Report is available at http://www2.ntia.doc.gov/BTOP-Reports#evaluation.
[9] The BTOP Monitoring and Assessment Plan is available at http://www2.ntia.doc.gov/files/BTOPFY12MonitoringandAssessmentPlan_111611.pdf.

and administrative requirements before concluding the grant agreements between NTIA and BTOP recipients.[10]

A. Monitoring Activities

NTIA engages grant recipients regularly to monitor project performance and compliance with Program requirements. NTIA collects regular reports; performs case reviews evaluating projects' successes and challenges in meeting milestones; and conducts site visits assessing the recipients' compliance with federal grant rules and requirements. These activities help NTIA understand the progress made by recipients, devise proactive interventions to get projects on track, and inform appropriate corrective actions and enforcement measures, if needed. NTIA also conducts status meetings with recipients and key project members to review project milestones, gather additional information, and provide guidance on federal grant requirements. These monitoring efforts help ensure that taxpayer dollars are used in an appropriate and responsible manner.

1. Financial, Project Performance, and ARRA Reporting

Quarterly, BTOP recipients must report their financial, project performance, and ARRA-related activities. NTIA reviews these reports – the Federal Financial Report (FFR), BTOP Performance Progress Report (PPR), and ARRA report – to monitor project progress against established baselines, expenditures of grant funds, and contribution of non-federal cost share. This quarter recipients also submitted Annual Performance Progress Reports (APR), which included additional details about their project achievements. FPOs provide feedback and additional guidance, as necessary, to ensure that each recipient is providing sufficient detail to allow NTIA to determine that the projects are meeting programmatic objectives and delivering promised project benefits. From these reviews, NTIA analyzes data to identify emerging trends and better measure individual project and overall programmatic progress.

2. Site Visits

NTIA uses site visits to closely monitor recipients and provide technical assistance through in-person meetings with project leadership and grant and financial management teams. During site visits, NTIA observes facilities and equipment procured with federal funds, visits computer centers, observes training classes, reviews project activities and fiscal management practices, identifies and addresses any areas of concern, and pinpoints best practices that could benefit other projects.

In addition, site visits help NTIA identify and address performance issues and other potential areas of concern. Following each site visit, NTIA documents any findings in a summary report. Some issues are corrected immediately, while others are addressed through a Performance Improvement Plan (PIP) or by working with the Grants Offices to create a Corrective Action Plan (CAP). These tools direct recipients to

A NTIA Federal Program Officer visits Contact Network in Jackson, Mississippi, discussing the cable staged for installation along the route of a BTOP-funded fiber-optic network.

take specific actions in a defined timeframe to improve project management or compliance with award terms.

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[10] See notification of BTOP Closeout Award Audit available at http://www.oig.doc.gov/OIGPublications/Notification-NTIA-BTOP-Closeout.pdf.

Over the past two quarters, NTIA has focused site visits on larger projects, as well as projects finalizing construction and beginning operational activities. Additionally, NTIA has revisited projects initially assigned an "advanced monitoring" level to provide technical assistance. This quarter, NTIA visited a total of 11 BTOP recipients responsible for $464 million in grant funds. To date, NTIA has conducted more than 150 site visits representing more than 95 percent of the total BTOP funds, including all of the projects initially assigned an "advanced" monitoring level. NTIA also has conducted site visits for more than 31 percent of total SBI funds.

3. Environmental and Historic Preservation Assistance

BTOP infrastructure awards, as well as some PCC projects, are subject to applicable federal, state, local, tribal, and other environmental and historic preservation (EHP) policies, most notably the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), and the Endangered Species Act (ESA). NTIA works with recipients to achieve and maintain compliance with applicable EHP policies, including active monitoring of project-specific EHP requirements. NTIA also works with recipients through an established EHP review process when project or route modifications become necessary due to field conditions, changing engineering requirements, or other factors. NTIA has successfully completed EHP clearance for all but one of its recipients.[11]

B. Grants Administration Activities

NTIA provides guidance and support to projects needing assistance in addressing potential risks or issues delaying their progress. NTIA also performs a variety of support and intervention activities based on the project's identified issues and risks, including identifying a course of action to improve a project's performance, providing customized guidance, and working with the appropriate Grants Office to develop a CAP to mitigate unresolved project setbacks. As a result of NTIA's grant administration and proactive intervention activities, BTOP projects are stronger, more successful, and more responsible stewards of taxpayer dollars.

1. Cost Share Monitoring and Review

BTOP recipients must contribute a minimum of 20 percent of the cost for the project in funds or in-kind assets, also known as "match," toward the total cost of a project. This translates into a total of $1.45 billion in match across all BTOP projects. As of December 2012, recipients' contributions exceeded $1 billion in match. NTIA instituted a program review of the match requirement to ensure that grant recipients are compliant with this important condition of their grant awards and to address potential issues regarding the allowability, consideration, source, consistency, and valuation of each recipient's proposed cash and in-kind matches.

Through December 2012, NTIA and recipients continued to work together to finalize match reviews for the Infrastructure portfolio. In some cases, these reviews are ongoing due to the complex process for certain types of valuation (e.g., real estate and telecommunications infrastructure). Ninety-two percent of match reviews have been completed in total. FPOs continue to work with recipients to assist in resolving any new cost share issues that arise over the life of the awards.

In June 2012, the OIG finalized a report assessing whether NTIA had processes in place to ensure that BTOP recipients' match contributions meet federal administrative requirements and OMB cost principles. The OIG report recognized one of NTIA's monitoring tools as a best practice. In addition, the OIG recommended expanding the use of the monitoring tool to a greater percentage of the portfolio, and in

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[11] One of the seven suspended Public Safety 700 MHz projects has outstanding EHP requirements. See the "Public Safety 700 MHz Projects" section of this Report for more information about the partial suspension of this public safety grant.

response, NTIA completed match reviews for an additional 24 recipients. The OIG also suggested NTIA communicate other improvements to recipients regarding recordkeeping and internal controls for cash distribution. NTIA finished implementing these recommendations in December 2012.[12]

2. Non-Duplication of Federal Funds

Since the Program's inception, NTIA has worked to prevent duplication between BTOP projects and broadband projects funded by other federal agencies. NTIA has conducted in-depth reviews of infrastructure awards to validate that BTOP projects do not duplicate other federally-funded projects, including broadband networks funded by BIP and the Federal Communications Commission's (FCC) Telehealth/Telemedicine and e-Rate programs. As of December 2012, NTIA has resolved 97 percent of the instances of potential overlap between a BTOP award and another BTOP, BIP, or FCC award. NTIA expects to resolve the remaining three percent in 2013 through ongoing negotiations with recipients seeking ways to leverage the respective investments, such as joint-build solutions.

3. Subrecipient Monitoring

In January 2012, the OIG initiated an audit to assess NTIA's efforts to verify that BTOP recipients have properly classified subrecipients and established effective controls to monitor subrecipients' compliance with all BTOP award terms and conditions. As part of the audit, the OIG selected 26 BTOP awards to review. NTIA and BTOP recipients continue to work cooperatively with the OIG on this matter, and stand ready to respond to or address any findings reported by the OIG once the audit is complete.

4. Technical Assistance

NTIA provides a wide range of technical assistance to support recipients in successfully implementing their projects, including producing guidance documents on common topics of interest; assessing projects relative to schedule, budget, or sustainability; and providing customized assistance to specific BTOP recipients based on need. NTIA developed a set of diagnostic frameworks and tools to help BTOP management evaluate and address common challenges that may delay a project's success, including schedule, financial information, organizational constraints, and other project-specific issues.

Based on previous schedule and budget assessments of a select number of infrastructure grants, which helped to identify the most common causes of schedule delays, NTIA prioritized recipients' needs and focused on providing customized technical assistance this quarter. NTIA assisted recipients with developing solutions to address EHP compliance documentation; local permitting; agreements for rights-of-way and other land easements; utility pole agreements and make-ready work; and other pre-deployment activities that have affected implementation schedules for a number of grant awards. Through December 2012, NTIA provided technical assistance to 79 infrastructure recipients to help address specific project obstacles, such as overcoming implementation and schedule challenges. NTIA also provided feedback and recommendations related to project management approaches and technological choices so recipients could more rapidly implement their objectives. This feedback has been incorporated into decisions by the projects to reassess network requirements.

In addition, NTIA provided technical assistance to PCC, SBA, and CCI recipients through regular webinars on topics of broad interest and conference calls for thematic affinity groups. From October through December 2012, the program conducted five webinars on subjects such as working with seniors, understanding discount broadband programs, providing services to veterans, and sustaining infrastructure efforts. NTIA also organized two conference calls for affinity groups of recipients that are supporting

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[12] See *NTIA Needs Stronger Monitoring of BTOP Grant Recipients' Match* (OIG-12-029-A) available at http://www.oig.doc.gov/OIGPublications/OIG-12-029-A.pdf.

entrepreneurship efforts and conducting formal evaluations. More than 415 individuals participated in these events, taking advantage of opportunities to learn strategies for successful program implementation, and to network and share information with other recipients. Some of the webinars also have motivated recipients to expand their programming to include new audiences. For example, a few recipients reached out to local Veterans Affairs' offices and other veteran groups to explore partnership opportunities after attending the recent veterans-focused webinar.

For SBI recipients, NTIA provided technical assistance as needed to its 56 recipients on topics such as project management, reporting, data gathering, and mapping issues. In addition, three webinars were conducted during this quarter on data gathering and submission requirements. NTIA also maintains an online team collaboration tool utilized by NTIA, the FCC, recipients, and project partners to share information and documents on project management, mapping and data gathering, and best practices.

5. Public Safety 700 MHz Projects

NTIA's seven public safety recipients engaged in initial discussions with the First Responder Network Authority (FirstNet) to determine a path forward for the partially suspended awards. The awards have remained under partial suspension since May 2012 after the passage of H.R. 3630, The Middle Class Tax Relief and Job Creation Act of 2012.[13] The Act authorized and provided funding to FirstNet to implement a nationwide public safety broadband network. In response to the Act's directives,[14] NTIA partially suspended the projects to ensure the investments would be compatible with the nationwide network that FirstNet will develop and operate.

In September 2012, FirstNet held its inaugural board meeting during which the board adopted a resolution to review and examine the seven BTOP public safety projects. The board created a subcommittee to determine whether and how these projects could potentially support the development of the nationwide network. Throughout November and December 2012, select FirstNet board members, with the NTIA FPO, conducted seven site visits, meeting with each BTOP public safety recipient. The BTOP public safety recipients engaged with the FirstNet board members, presented project plans and detailed project progress. NTIA, FirstNet, and the BTOP recipients continue to work to understand whether and how these projects may continue within the framework of the nationwide network.[15] At the FirstNet board meeting on December 11, 2012, board members identified pressing issues facing the BTOP recipients, and resolved to provide input to NTIA as to the terms and conditions under which NTIA may lift the partial suspension and the projects may proceed.

6. Equipment Acquisition Monitoring and Assessment

In December 2012, the OIG initiated an audit to evaluate NTIA's processes for monitoring and assessing BTOP recipients' equipment acquisitions. As part of the audit, the OIG will be selecting BTOP projects to determine whether NTIA has the personnel and processes in place to effectively monitor recipients' equipment acquisitions, including security, inventory control, and report submittals. In addition, the OIG will assess whether recipients have appropriately acquired, tested, and implemented the most effective equipment and evaluate whether recipients are on track to complete the BTOP projects on schedule and achieve project goals.

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[13] See the Middle Class Tax Relief and Job Creation Act of 2012 (Public Law 112-96) available at http://www.gpo.gov/fdsys/pkg/BILLS-112hr3630enr/pdf/BILLS-112hr3630enr.pdf.
[14] NTIA appointed the FirstNet Board of Directors on August 20, 2012, and released the requirements for the State and Local Implementation Grant Program on August 21, 2012. See NTIA's website for more details: http://www.ntia.doc.gov/category/public-safety.
[15] See, e.g., Letter from NTIA Assistant Secretary Strickling to Adams County Communications Center, (May 11, 2012), available at http://www2.ntia.doc.gov/files/grantees/20120511095538760.pdf.

C. Grant Closeout Activities

NTIA provides guidance to recipients to facilitate the closeout of their grants, and continues to refine the closeout guidance and process with the Grants Offices and OIG based on lessons learned from recipients that have completed all activities according to their awards requirements. For example, NTIA has been distributing an award closeout notification package to recipients that are nearing the completion of all activities under their awards.[16] NTIA also monitors the status and conducts analysis on when projects are likely to close out based on monitoring and administrative actions, such as reports, site visits, and requested technical assistance. Based on this analysis, NTIA has identified recipients that may have faced challenges beyond their control and sought to grant extensions for recipients that need additional time to achieve the full benefits of their project.

1. Completed Projects

As of December 31, 2012, NTIA and the Grants Offices were working to close out 15 BTOP awards based on the completion of all award activities. These include: Michigan State University ($895,482); the New York Department of Labor ($536,737); the Santa Fe Civic Housing Authority ($176,400); the City of Williamstown ($535,308); the Georgia Partnership for Telehealth, Inc. ($2.5 million); South Dakota Network, LLC ($20.5 million); North Georgia Network Inc. ($33.5 million); Arizona State Library Archives and Public Records ($1.3 million); Tincan (PCC) ($1.3 million); Hardy Telecommunications, Inc. ($3.2 million); Silver Star Telephone Company, Inc. ($5.0 million); Mitchell County Historic Courthouse Foundation ($239,194); the City of Los Angeles ($7.5 million); Regents of the University of Minnesota ($2.8 million); and Connected Living, Inc. ($4.7 million). NTIA will continue to work with these projects and the Grants Offices to verify that the recipients have met their requirements and officially close out these grants in the coming months.

2. Project Extensions

Some recipients have faced factors beyond their control and unanticipated in their project plans, which have caused project delays and hindered BTOP project deployment. Some of these factors include issues securing necessary capital to meet match requirements, adherence to complex Environmental and Historic Preservation requirements, global supply shortages, and unpredictable weather events. In recognition of the difficult circumstances faced by some BTOP recipients, NTIA has provided these recipients with extensions until no later than September 30, 2013 to allow for the successful completion of their BTOP projects.[17] Consistent with the Recovery Act, the Uniform Administrative Requirements, and guidance from OMB, NTIA is extending the award period for a select number of recipients after significant review to help them fully deliver on the benefits promised under the award, maximize taxpayer investment in the project, and further the goals of the Recovery Act.[18]

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[16] The Award Closeout Notification Package is available at http://www2.ntia.doc.gov/compliance#closeout.

[17] In accordance with the OMB Memorandum M-11-34, released in September 2011, NTIA has submitted information to OMB about extending BTOP awards beyond September 30, 2013. In its submission, NTIA explained the complex nature of a limited number of projects and the special circumstances these projects have faced to justify an extension beyond September 30, 2013.

[18] See Pub. L. No. 111-5, 123 Stat. 115, 128, 512 (Feb. 17, 2009); 15 C.F.R. § 14.28; 15 C.F.R. § 24.23 (allowing recipients to carry over funds from the initial award period upon approval of the grants office); OMB memorandum M-11-34 (Sept. 15, 2011).

VI. PROGRAM COMMUNICATIONS

NTIA maintains ongoing communications and outreach efforts to share BTOP progress and accomplishments with interested stakeholders and to assist grant recipients in achieving project success. To support stakeholder communications about BTOP project accomplishments and community benefits, NTIA also developed more than 100 BTOP in Action articles that are posted to the BTOP website. Visitors to the site can access these articles as well as photos that highlight project milestones and community members benefiting from the projects. NTIA, recipients, and others also provide first-person reports on BTOP's progress in postings on the Program's blog.

In response to discussions during the "Multiplying Economic and Social Impact through Technology: An Interagency and Funder Symposium" held on May 21, 2012, NTIA began to develop the Sustainable Adoption Toolkit. The toolkit is intended to provide community organizations and organizers across the country with replicable and promising practices to increase broadband adoption. Illustrative examples of activities implemented by BTOP recipients will demonstrate how recipients overcame common barriers to adoption and reached vulnerable populations such as seniors, unemployed professionals, and people with limited proficiency in English. The toolkit is scheduled for release in the second quarter of 2013.

VII. PROGRAM MILESTONES

The following list includes upcoming broadband grant milestones. Future dates and activities may change based upon developments or circumstances.

Milestone	Date
Recipient Quarterly ARRA Reports Due	January 10, 2013
Recipient Quarterly ARRA Reports Posted to Web	January 30, 2013
Recipient Quarterly PPRs and Financial Reports Due	January 30, 2013
Recipient Annual PPRs Due	January 30, 2013
Update of the National Broadband Availability Dataset and Map	January 30, 2013
Recipient Quarterly PPRs Posted to Web	March 1, 2013
Update of the BTOP Connecting America's Communities Map	April 15, 2013
Recipient Quarterly ARRA Reports Due	April 10, 2013
Recipient Quarterly ARRA Reports Posted to Web	April 30, 2013
Recipient Quarterly PPRs and Financial Reports Due	April 30, 2013
Recipient Quarterly PPRs Posted to Web	May 30, 2013
Recipient Quarterly ARRA Reports Due	July 10, 2013
Recipient Quarterly ARRA Reports Posted to Web	July 30, 2013
Recipient Quarterly PPRs and Financial Reports Due	July 30, 2013
Recipient Quarterly PPRs Posted to Web	August 30, 2013
Recipient Quarterly ARRA Reports Due	October 10, 2013

Milestone	Date
Recipient Quarterly ARRA Reports Posted to Web	October 30, 2013
Recipient Quarterly PPRs and Financial Reports Due	October 30, 2013
Recipient Quarterly PPRs Posted to Web	November 30, 2013

VIII. NEXT REPORT

The next quarterly report to Congress will cover January 1 to March 31, 2013.

IX. ADDITIONAL PROGRAM MATERIALS

Additional BTOP materials are available at http://www2.ntia.doc.gov/, including prior quarterly reports, press releases, Congressional testimony, information on grants awarded, and quarterly performance progress reports for each funded project.