

PERFORMANCE PROGRESS REPORT

11.b. Describe any challenges encountered with vendors or subrecipients.

PROJECT CHALLENGES:

- [1] Broadband Mapping - The team has experienced some challenges in obtaining the full cooperation of some broadband providers and outreach continues to improve participation levels among the provider community.
- [2] State Capacity Building & Planning - Due to various factors including an administration change, agency reorganizations, personnel changes, and National Public Safety Broadband Network (PSBN) developments, it was necessary to reevaluate and delay these components to ensure the best approach and address sustainability. Decision-making with regard to organization direction is expected in Q2-2013, with an interagency meeting scheduled for mid-May 2013 to discuss next steps. Resolution of this matter will allow for launch of any outstanding components.

REPORTING NOTES:

- [1] In #9, Row 3, the % of Total Federal Funding Expended for this component (Capacity Building) equals 0.002% or, when rounded, 0%, however this field within the PDF template does not appear to calculate and return a value for percentages less than 1%, nor is the field editable to make the appropriate correction.
- [2] In #10.b, per revised guidance of the Federal Program Office, this table now includes only federally paid recipient staff. Please note that 100% of the recipient-employed State Broadband Director's time continues to be paid using approved match and her time is distributed as follows:

Job Title	FTE %	Project(s) Assigned	Change
State Broadband Director	35%	Data Collection	No Change
	25%	Technical Assistance	No Change
	30%	Capacity Building	No Change
	5%	Original Planning Grant	No Change
	5%	Other - Research	No Change

The percentage of time dedicated to each project by the two recipient staff currently working on the program has not changed since Q4-2012, but will over time as additional project components are launched, stabilized, and completed.

- [3] In the prior Q4-2012 report #11.a, Row 7 represented an amendment in process to the agreement shown in Row 4 related to administration of the implementation micro-grant assistance fund. This amendment was fully executed in Q1-2013. Therefore, in this report, the dollar amounts in Row 4 have been increased accordingly and Rows 8 and 9 have become Rows 7 and 8.

PERFORMANCE PROGRESS REPORT (continued)

- [4] In #11.a above, Rows 7-8 represent subcontract agreements yet to be determined.
- [5] In #12, any difference found between the figures in the budget table and the sum of the individual project budgets included in the Excel attachments is due to rounding.
- [6] In #12, the Total Matching Funds Expended column includes some costs not reflected in PA's approved match budget, but that were expended in carrying out the grant activities.

Given Commonwealth accounting practices to automatically code and track all expenses associated with the federal grant, these state-paid expenses (e.g. travel to SBDD events, specialized services associated to grant administration, etc.) are tracked and reported each quarter as part of our PPR and SF425 reporting. This does not suggest that our approved match sources have or will change, rather it simply reports overmatch in some categories.

We are hesitant to remove such expenses costs from our PPR reporting, as this action would: (1) result in a discrepancy between the matching expenses reported on the PPR and the SF425, and (2) require us to maintain a second financial tracking system to back-out such costs, which may increase the chances for error or confusion.

This situation has been discussed with the Federal Program Officer and we welcome guidance from NTIA and/or NIST on how to best address this situation in the event that our ongoing reporting of excess match dedicated to the project raises issues and/or is burdensome to federal program staff.

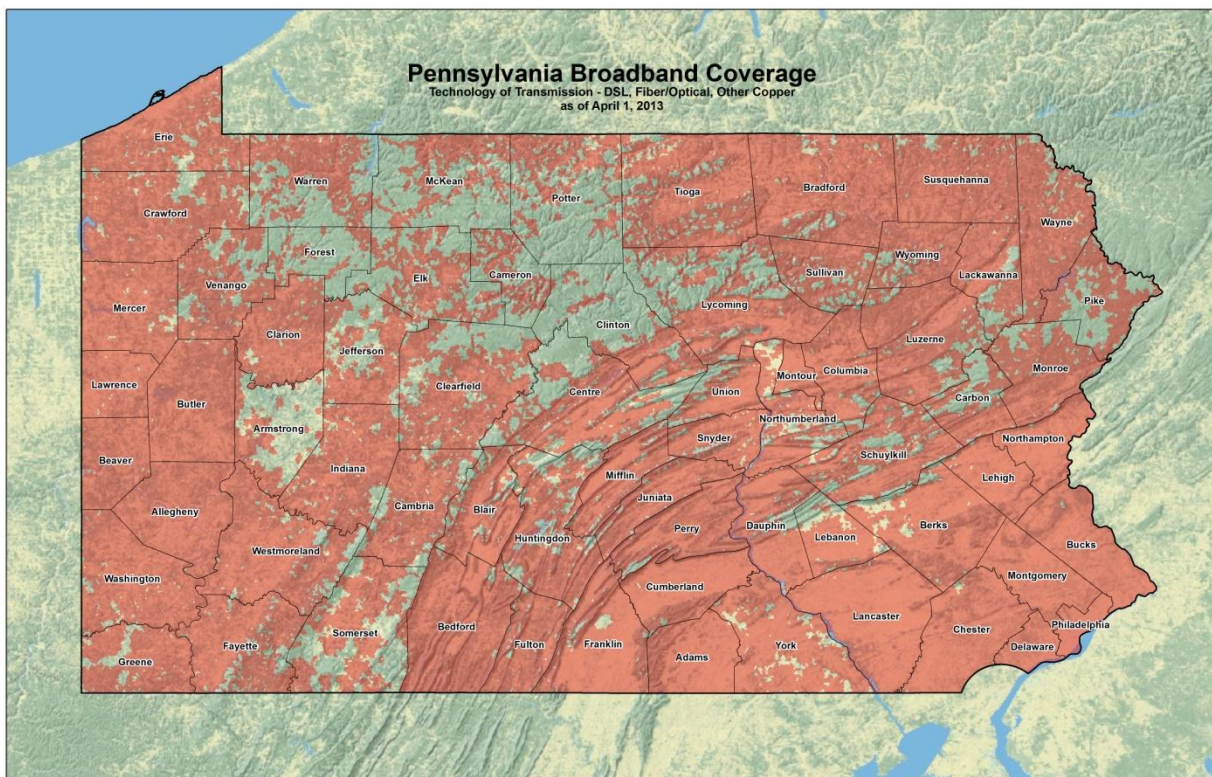
DATA COLLECTION

14.a.2. Describe any additional project milestones that have been accomplished over this reporting period (Ex. Updates to state broadband maps and websites, map outreach activities)?

PA Broadband Map Continues to Be Updated

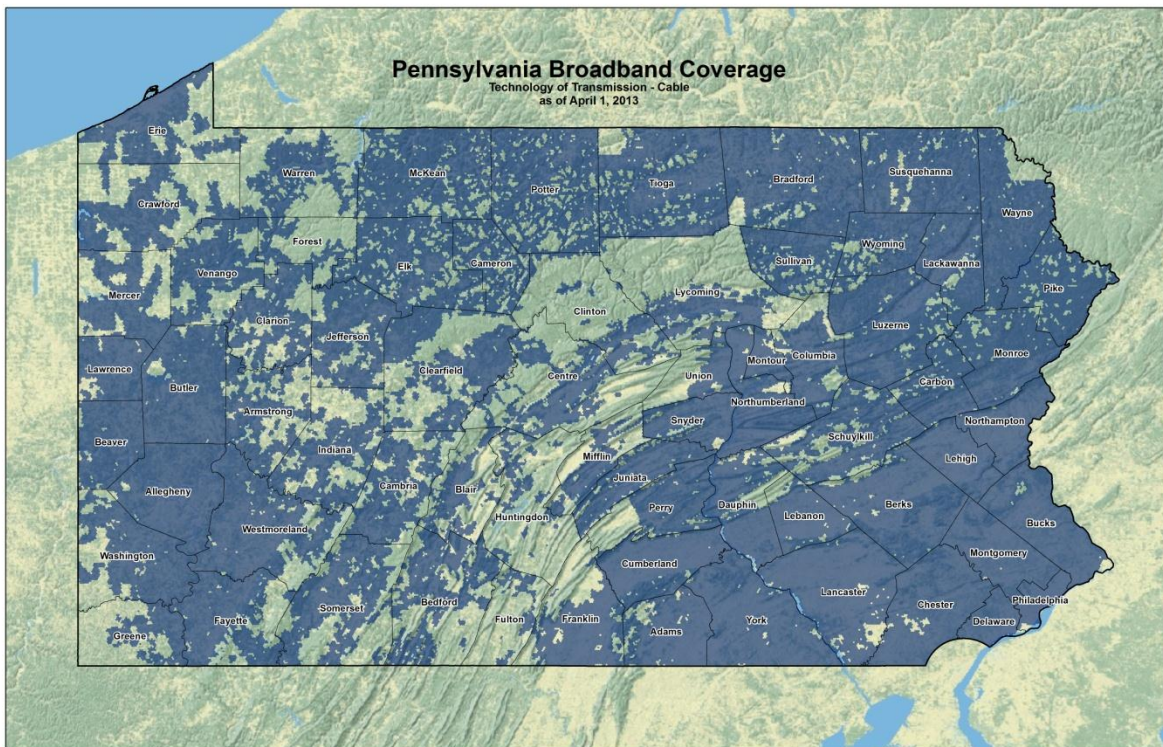
- In accordance with Pennsylvania's work plan, the data collected through the SBDD program is being made available to the public online via a searchable, interactive interface. This mapping tool is available at www.broadbandinpa.com. An official press release about the public mapping tool was released in November 2010. Through Q1-2013, it has received 14,491 hits to the state broadband mapping entry page.
- Following are a series of maps that provide a geographic representation of the reported broadband coverage (excluding satellite provider data) included in the April 2013 data submission. The PA map is refreshed with each semi-annual data delivery to NTIA.

REPORTED WIRELINE/DSL COVERAGE:

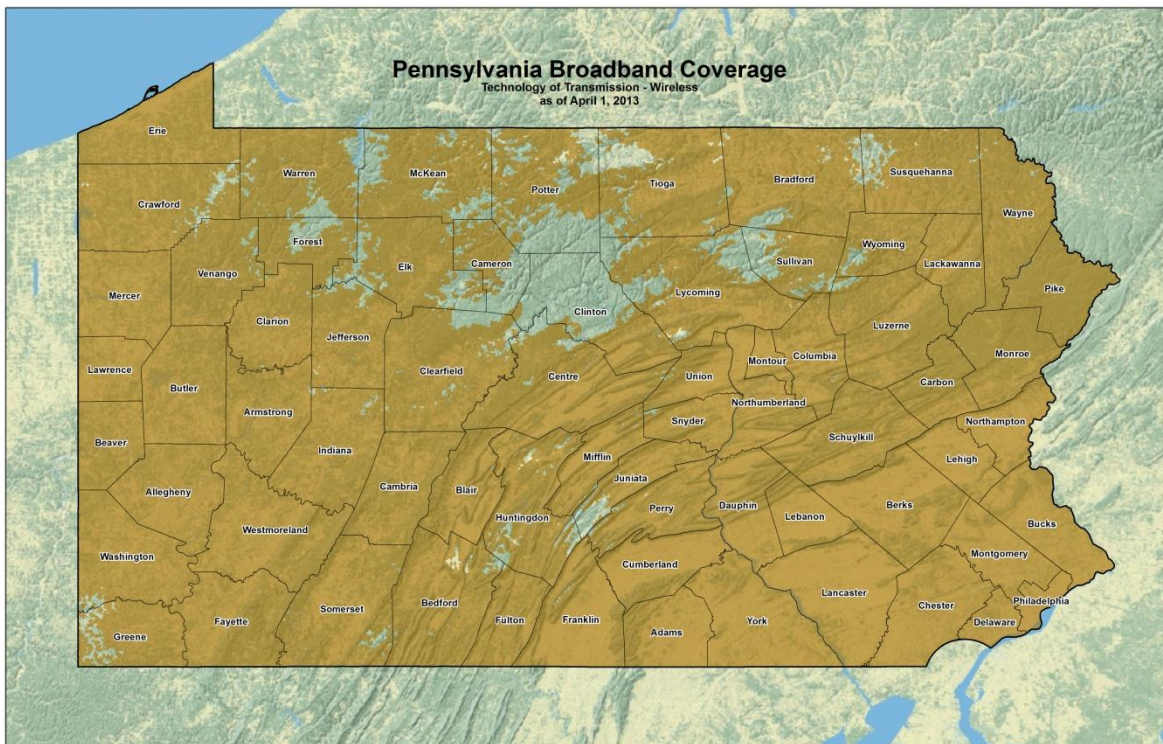


DATA COLLECTION (continued)

REPORTED CABLE COVERAGE:

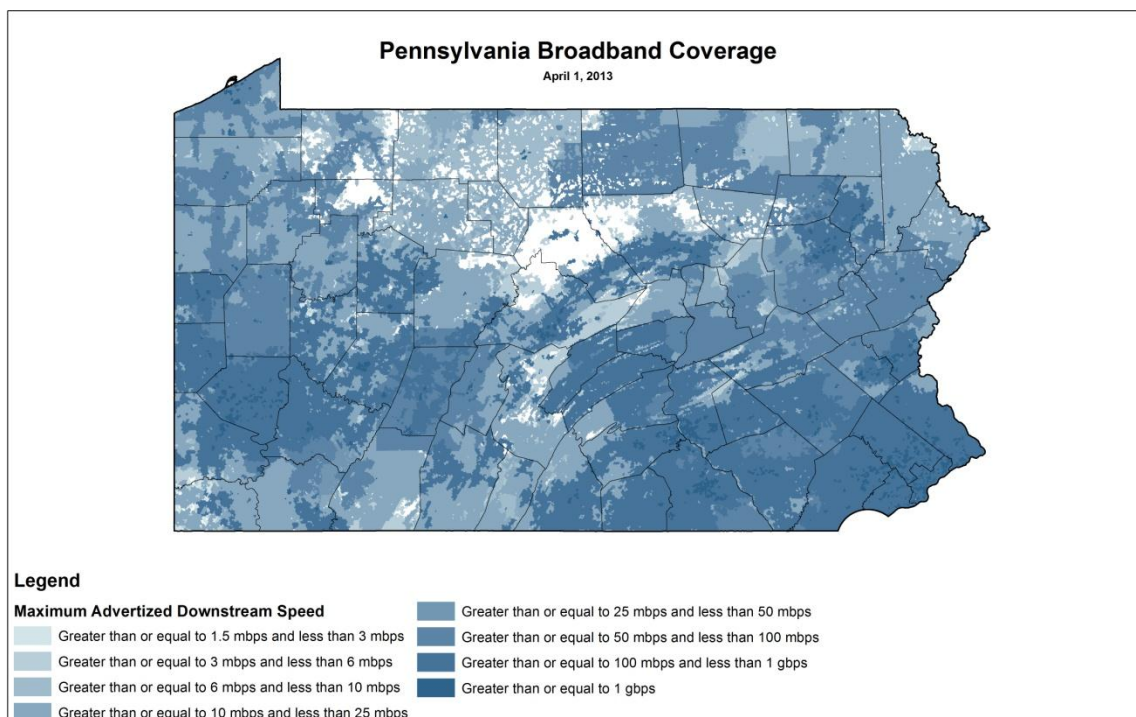


REPORTED WIRELESS COVERAGE:



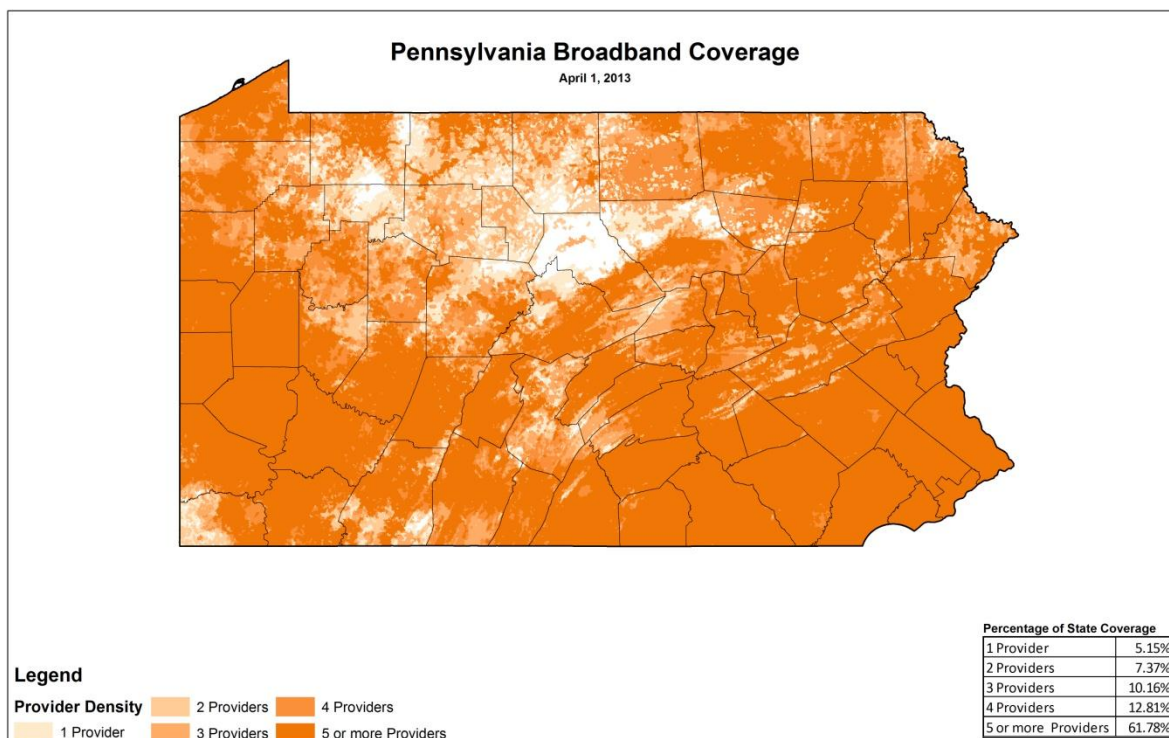
DATA COLLECTION (continued)

- **Data Confidence Scale Published:** With each NTIA data submission, the state broadband mapping website is updated with the latest data and data confidence scale. When someone queries the state broadband mapping website for available broadband service at a specific location, the data confidence scale is shown with each provider's service that is listed. The data confidence scale will be updated on the state broadband mapping website in Q2-2013 based on the April 2013 data submission.
- **Small Provider Technical Support:** Technical assistance was provided to small providers, in preparation of their data updates for the April 2013 NTIA data submission and will continue to be provided for future data submission cycles.
- **Data Quality Feedback Loop with Providers:** With each NTIA data submission, the project team provides data quality feedback to the providers based upon findings during the validation process. In Q2-2012, Provider confidence maps will be produced and distributed for corrective actions by the Providers for the October 2013 NTIA data submission.
- **Speed Geography:** The following speed tier map shows the maximum advertised download speeds offered across Pennsylvania that is reported in the April 2013 data submission.



DATA COLLECTION (continued)

- **Provider Density:** The following map shows the density of providers offering service in Pennsylvania, derived from the data reported in the April 2013 data submission.



Specific Mapping Enhancements Implemented or In Process:

- **Mobile Device Accessibility Deployed:** During Q1-2013, the beta version was deployed (www.bakerbb.com/pamobileapp/map.html) of the Pennsylvania's broadband map that is accessible from mobile devices, including the iPhone (iOS), Android, Windows Phone, and Blackberry.
- **Provider Submission Portal Utilized:** For the April 2013 data submission, the project team witnessed increased usage of the new broadband mapping provider submission portal. It is anticipated the usage will increase even more with the October 2013 data submission. This secure, web-based application is designed specifically for providers to streamline the transmission of coverage data between providers and the project team and improve accuracy.

DATA COLLECTION (continued)

- Secure Map Updated:** Recognizing that broadband data collected is most powerful as an economic development and planning tool when viewed and analyzed in context, Pennsylvania is building out a secure version of its public broadband. This interface is accessible by various state agencies, along with select internal and external partners.

Permissions ensure the confidentiality of the data and enable users to access additional non-broadband data in the GIS interface and/or upload their own datasets to view in relation to broadband. This application is also used as a tool to facilitate stakeholder participation in data validation. During Q2-2013, the data on the website will be refreshed with the April 2013 data submission information. The update of the secure website will continue for subsequent update cycles.

- Additional Propagated Coverages Generated:** For the April 2013 NTIA data submission, propagated wireless coverages were generated for the final 50% of the fixed wireless providers who either refused to participate, were non-responsive, or had supplied a questionable coverage.

CAI Outreach Enhanced: Pennsylvania implemented an online survey tool and leveraged existing data sources to amass data on 65% of identified community anchor institutions (CAI) collected for the April 2013 update. The previous NTIA data submission in October 2012 had 58.5% of identified community anchors collected which is an increase of 6.5% between the two submissions. Part of the increase in connectivity information for K-12 schools and libraries is attributed to a web scraping of www.usac.org website. The following table shows the current CAI outreach results. Data collection continues, with additional responses to be included in the April 2013 update.

<i>Community Anchor Institution Type</i>	<i>Number of Community Anchor Institutions Identified</i>	<i>Number of Institutions with Connectivity Attributes</i>
<i>K-12 Schools</i>	<i>3,304</i>	<i>3,219</i>
<i>Libraries</i>	<i>699</i>	<i>508</i>
<i>Post-Secondary Schools</i>	<i>539</i>	<i>98</i>
<i>Police Departments</i>	<i>1,025</i>	<i>280</i>
<i>Hospitals</i>	<i>278</i>	<i>63</i>
<i>Health Departments</i>	<i>616</i>	<i>30</i>
<i>Other Non-Governmental</i>	<i>7</i>	<i>7</i>
<i>Other Governmental</i>	<i>5</i>	<i>5</i>
<i>Total:</i>	<i>6,473</i>	<i>4,210</i>

• DATA COLLECTION (continued)

- **Improved Middle Mile Inventory:** During outreach activities to providers, the project team continues to emphasize the importance of supplying middle mile with their service data. For the October 2013 data submission, the project team anticipates including additional middle mile points.
- **Reseller Data Included:** For the April 2013 data submission, additional reseller data was included. Although it has been a challenge getting resellers to participate, outreach will continue to increase their participation in the program in the coming data submissions. During Q2-2013, the state broadband mapping website will be updated to include the participating resellers.
- **Typical Speed from Public Sources:** During outreach activities, the project team continues to emphasize the importance of supplying complete data. Where typical speed values will not be supplied by the provider, the missing typical speeds are calculated from public speed tests supplied by the FCC and collected from the state broadband mapping website.
- **WiFi Hotspots Published:** WiFi hotspots continue to be made available on the secure map and on the state broadband mapping website. In addition, a WiFi self-reporting application is available on the state broadband mapping website.
- **Data Sharing:** The project continues to make the raw data available for use by municipal and other entities to support their specific planning and mapping needs. The project team has provided the ability for municipal and other entities to download the non-confidential data from the public website after completing a short request form.

DATA COLLECTION (continued)

14.a.4. Provide any other information or statistics that you think would be useful to NTIA as it assesses your broadband data collection, validation and publication activities.

Provider Stats: The Pennsylvania broadband mapping team is working hard to fulfill the obligations under the program and we are pleased with the progress thus far. To summarize the Commonwealth of Pennsylvania's broadband mapping project progress, the following table outlines Broadband Provider participation through March 31, 2013.

<i>Status Categories</i>	<i># of Providers</i>
<i>Total ISPs/Providers Identified/Contacted</i>	<i>294</i>
<i>Providers That Report They Do Not Provide Broadband Service in PA</i>	<i>122</i>
<i>Providers That Report They Are Resellers</i>	<i>27</i>
<i>Companies In Which We Are Unsure If They Provide Broadband Service</i>	<i>20</i>
<i>Known Broadband Provider Universe</i>	<i>125</i>
<i>Providers That Have Not Yet Responded to Contacts from the Project Team</i>	<i>11</i>
<i>Providers That "Will Not Provide Data"</i>	<i>11</i>
<i>Providers That "Have Submitted Partial Data"</i>	<i>0</i>
<i>Providers That "Will Provide Data" But Have Not Yet</i>	<i>1</i>
<i>Provider Data That Has Been Validated</i>	<i>102</i>
<i>Providers Included in the April 1, 2013 Delivery</i>	<i>102</i>
<i>Resellers Included in the April 1, 2013 Delivery</i>	<i>5</i>

The matrix below indicates the progress made with each SBI data submittal through April 2013.

	As of May 2010	As of Oct. 2010	As of Apr. 2011	As of Oct. 2011	As of Apr. 2012	As of Oct. 2012	As of Apr. 2013
Total Number of Broadband Providers Identified	101	113	115	120	121	121	125
Providers that Have Agreed to Participate	75	93	99	101	95	98	103
Entities with which we have executed NDAs	40	40	41	41	41	41	41
Entities which we are actively negotiating NDAs	2	1	0	0	0	0	0
Providers that have submitted data	69	89	94	94	92*	96	102

* NOTE: Three (3) broadband providers who supplied data in previous data submissions but are no longer providing service and one (1) broadband provider supplying data for the 1st time.

We welcome feedback on any aspect of the project so that we can improve our processes for subsequent data update cycles and report submissions.

TECHNICAL ASSISTANCE

14.b.2. Describe your progress meeting each major activity/milestone approved in the Project Plan for this project; any challenges or obstacles encountered and mitigation strategies you have employed; planned major activities for the next quarter; and any additional project milestones or information.

During Q1-2013, the network of 20 economic, community, and workforce development partners involved in this effort continued to carry out this scope of work to assist businesses and community anchor institutions adopt and/or make better use of broadband.

Technical Assistance cases are underway statewide and small business clients/community anchor institutions are being referred to and assisted through the program. During Q1-2013:

- The Pennsylvania Technical Assistance Program (PennTAP) closed 17 one-on-one technical assistance cases with small business or community anchor institution clients and had another 37 in process. This brings the number of closes cases to 130 (54% of commitment).
- PennTAP provided training or assistance to 204 individuals, bringing the cumulative total to 1,098 individuals impacted (63% of commitment).
- PennTAP continued to recruit businesses and Penn State undergraduate IT students as interns for participation in the intensive technical assistance component to address specific technology issues and business problems related to broadband adoption by implementing broadband solutions
 - Prospective technical assistance clients continue to be referred to this educational webinar: https://online.ist.psu.edu/sites/ist402penntap/files/presentation/penntap_broadband.swf
 - During Q1-2013, 15 students were assigned to 12 businesses through the intensive technical assistance program.
 - The intensive assistance not only includes those cases with students assigned, but specialists have begun providing more one-on-one Search Engine Optimization training with assistance for Mobile accessibility and utilizing Credit Card tools on mobile devices.
- PennTAP has partnered with Penn State University College of Information Sciences and Technology (IST) personnel to involve client businesses with their “Google Adwords” National Competition. A PennTAP specialist “Skyped” with the classroom to provide a profile of 11 different businesses – four (4) of which were chosen. The competition runs from mid-January through April 30 2013 and is free to the business. This is a win-win situation for the business. PennTAP is checking in on a bi-weekly basis to see how things are going with the business and the students. Additional details will be available in future quarterly reports.

TECHNICAL ASSISTANCE (continued)

- PennTAP also began developing a broadband related online course targeting IT professionals and this will become available as an open source course through Penn State University in Fall 2013.
- The Industrial Resource Center (IRC) Network and its partners completed 24 Broadband Assessments and 22 Technology Strategic Plans for manufacturers, bringing the total to 104 Broadband Assessments (52% of commitment) and 83 Broadband Technology Strategic Plans (42% of commitment) to date. Outreach and communication continue throughout the state and the subrecipients are actively engaging manufacturers to strengthen their knowledge and use of Broadband technology. Some manufacturers are now positioned to implement recommendations made in the Technology Strategic Plans are beginning to apply for Broadband Implementation Micro-grants to support their project implementations.
- The IRC Network and its partners shared the following observations related to assisting small and medium-sized manufacturers located within Pennsylvania include:
 - More emphasis on new broadband and cloud services, as well as customer access to information about available inventory and order status via the web, is being incorporated into the assessments. This will not only have a greater impact on our clients, but may position the recommendations as a higher priority investment.
 - Many companies in the urban centers are found to be in good shape with regard to broadband speeds and utilization. However, in some cases IT issues were found to be outdated for the current marketplace.
 - Some companies, particularly in the rural areas, find they are in need of faster broadband services. However, this may not be possible in their area depending on the provider and many companies do not have a choice in providers.
 - Most of the critical Broadband Technology needs of the manufacturers in the southwest relate directly to the challenge of developing new or improved Internet Marketing and web-based capabilities, which are necessary for the company to compete more effectively in the global market place. More specifically, in order to grow their business and job opportunities, many of these manufacturers want to utilize Broadband Technologies to identify new prospects and win new customers (e.g. web sites, social media tools, product videos, increased access to on-line product data, on-line customer contact tools, and other similar technologies).
 - Some companies participating in the Broadband Technology Program move slowly to provide the necessary time and information required to complete and review the assessment and technology plan. In smaller companies especially, many personnel are covering several roles and jobs, so it takes a lot of coordination and persistence to get everyone together that is involved in the Broadband project. Hence, sometimes there is a bit of longer lead time between when the initial assessment is completed and when the technology plan is completed and reviewed.
 - One notable challenge is companies not having the funds to implement some or all of the recommendations. The Broadband Implementation Micro-grant component provides financial incentive to these companies to move forward with their project implementations.

TECHNICAL ASSISTANCE (continued)

- The Local Development District network prepared a Request for Proposal (RFP) for release related to the identification of a qualified vendor to support the rollout of its municipal/community broadband outreach/training program.
- The micro-grant implementation assistance fund was launched, which will assist and incent clients of this program to implement the recommended broadband solutions. Eight applications were received during Q1-2013 as part of the initial pilot application round and were reviewed by the Funding Committee for eligibility and funding consideration. Application rounds will be held monthly and additional details will be shared with NITA on the status of this component in the next quarterly report for the period Q2-2013.

14.b.5. Attach as a separate document any success stories or best practices you have identified. Please be as specific as possible.

PennTAP reported the following case studies during Q1-2013:

CASE STUDY: BROADBAND TECHNICAL ASSISTANCE TO PA'S BUSINESS SECTOR

- **Intellectual Property Services, Edinboro (Erie County)** www.ipservicesinc.com
This company provides services to customers who have concerns, issues, etc. regarding protected assets. They had a 20mb cable connection that was proving inadequate for their needs. They had tried to secure additional Internet access from the cable company without success. Specialist met with the client to discuss in detail their needs and explore several options. It was decided specialist would attempt to persuade the coax company that they should provide an additional Internet connection, even though the client had been told there was not more capacity available. Following the specialist's contact with the cable company, the client was able to order a second 20mb connection. Had no additional Internet connection been available the client was considering relocating some of their staff to a location that would have a better Internet connection, which would have needlessly cost money and resulted in two locations instead of one.

This project is completed with the following statement from the client: 'Don was a huge help to our organization. We had been struggling to secure additional bandwidth from our local ISP, and one visit from Don was all it took to turn it around. We were able to secure an additional line that effectively doubled our bandwidth. Thanks again for all your help!'

TECHNICAL ASSISTANCE (continued)

CASE STUDY: BROADBAND TECHNICAL ASSISTANCE TO PA'S HEALTH CARE SECTOR TO SUPPORT TELEMEDICINE AND HEALTH INFORMATION EXCHANGE

- **Bucktail Medical Center, Renovo (Clinton County)** www.bucktailmed.org

This is an ongoing project. This 'Critical Care Hospital' has a coax Internet connection that is both insufficient in capacity and is not 100% reliable. They utilize the Internet to transmit EMR as well as x-rays, etc. The facility needs additional bandwidth and a reliable Internet connection. Several options are being explored including:

- wireless connection to a local high school that has a fiber Internet connection
- private wireless connection
- potential interconnection with the Commonwealth's BTOP-funded 'Northern Tier Middle Mile Broadband Project to transport an Internet connection on State towers and facilities.

The IRC Network reported the following case studies during Q1-2013:

CASE STUDIES: BROADBAND TECHNICAL ASSISTANCE TO PA'S MANUFACTURING SECTOR

Everything Ice (Johnstown, PA in rural Cambria County outside of Pittsburgh)

- As a result of the assessment findings and recommendations, Everything Ice requested additional technical assistance to develop a web marketing strategy as Phase I of the project. Everything Ice has also requested a proposal for Phase 2 of the project to implement the strategy which will provide an improved web site to optimize the use of high speed Broadband Internet and that will incorporate best practices into the functionality of the site. See Attached detailed E-strategy assessment report for Everything Ice.

QE Manufacturing - 69 employees. NAICs Machine Shops/332710 (Union County)

- QE Manufacturing is a small company that has been struggling with cash flow in recent years and has not invested in IT infrastructure or new Broadband technologies. The company has been sharing computing assets with another manufacturer in the area by accessing programs remotely on the other company's systems. The speed for the shared programs is very slow. The TS uncovered opportunities for potential cloud-based access to these programs and, also uncovered were deficiencies in the website and the email. These issues will be addressed in a Broadband solution that will be submitted for Broadband Micro-grant approval.

OTHER - RESEARCH

14.b.2. Describe your progress meeting each major activity/milestone approved in the Project Plan for this project; any challenges or obstacles encountered and mitigation strategies you have employed; planned major activities for the next quarter; and any additional project milestones or information.

Manufacturing Benchmarking Study:

Progress Highlights:

- Research methodology, approach, and timeline have been developed.
- Secondary research completed.
- Survey methodology was agreed upon.
- Survey questions were finalized.
- On-line survey tool was selected.
- On-line survey was designed and questions uploaded.
- Survey was deployed to manufacturers within Pennsylvania.
- Received more than 70 survey responses.
- Survey data analysis was initiated.

In addition to contract management and reporting, activity during this quarter included deploying the online survey to collect primary data. The survey was distributed to the Industrial Resource Centers' databases of manufacturing establishments in Pennsylvania. The survey remained open for four weeks and we collected data from more than 70 manufacturers. This data is now in the process of being analyzed by Trendscape, who will identify trends based on the responses. Following the analysis, we will conduct one on one company interviews for further detail on the company's use of broadband.

The main components in the approach to this research initiative are as follows:

- Secondary Research
- Study Approach
- Survey Design
- Finalize and Pilot Survey
- Revise survey if needed
- Distribute Survey
- Complete survey process
- Annotated analysis
- Determine face to face interview questions
- Complete face to face
- Annotated data outputs – key themes
- Compile final report - presentation
- Begin design – communications plan

OTHER - RESEARCH (continued)

As a result of analyzing survey software packages and interfacing with that software directly, our timeline has been pushed back slightly. Plans are now in place to deploy the primary research tool in mid-January 2013. Following the survey responses and analysis, we will conduct one-on-one company interviews for further detail on the company's use of broadband. The main components in the approach to this research initiative are as follows:

- Secondary Research
- Study Approach
- Survey Design
- Finalize and Pilot Survey
- Revise survey if needed
- Distribute Survey
- Complete survey process
- Annotated analysis
- Determine face to face interview questions
- Complete face to face
- Annotated data outputs – key themes
- Compile final report - presentation
- Begin design – communications plan

Our timeline has been somewhat affected due to additional research and effort that went into the selection of the online survey tool and development of the survey. In addition, the previous grant manager, whose role with the Broadband research grant was extensive, has transitioned into a new position. She continues to stay involved during the transition to ensure continuity.

We are now identifying the final components of this project and developing efficient plans to accomplish the grant goals by June 30, 2013.

The next phases are to conduct one on one company interviews for further detail on the company's use of broadband, analysis of the interview data, and the compilation of the final report.

Cost Modeling

Organizational change and strategic visioning related to the reevaluation of the capacity building component has delayed the launch of the Cost Modeling Study component. This process is necessary to ensure the best use of limited state/federal funds, leverage operational efficiencies, increase program impact, and promote sustainability. Decision-making with regard to organization direction is expected in Q2-2013, with an interagency meeting scheduled for mid-May 2013 to discuss next steps. Resolution of this matter will allow for launch of any outstanding components.