

14Q4_Supplemental Answers_South Carolina

Connected Nation, Inc.

Grant Number 45-50-M09044

Reporting Period End Date 12-31-14

14 a_Project Attachment_Data Collection

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).

Following the final semi-annual broadband data submission, maps were updated on the program website and were provided to stakeholders during this quarter. Items updated with the October 1, 2014, datasets include the following:

- Broadband Availability Maps at 768 Kbps (kilobytes per second) Download/200 Kbps Upload
- Unserved Density Maps
- Broadband Availability Maps at 3 Mbps (megabytes per second) Download/768 Kbps Upload
- Maximum Advertised Download Speed Maps (Residential)
- Providers by County Lists (PDF and XLS)
- Underserved Area Maps
- Multi-Single Platform Maps
- Provider Density Maps
- My ConnectView Interactive Map
- County Availability Statistic Maps
- Broadband Growth Maps
- Congressional District Broadband Availability Maps

The interactive mapping web application, called My ConnectView, continued to be maintained. The application is housed in a highly available, monitored, and managed environment. My ConnectView is publicly available on the program website (<http://www.connectsc.org>). There were a total of 113 visits to the interactive map between October 1 and December 31, 2014.

One consumer e-mail was received that was also used for verification purposes. Users may request non-confidential mapping data produced for the State Broadband Initiative (SBI) grant program; 1 such data request was received between October 1 and December 31, 2014.

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

Geographic Information Systems (GIS) staff created Connect America Fund maps that displayed census blocks challenged by both price-cap and non-price cap carriers.

Engineering and Technical Services (ETS) staff continued working with providers this quarter in an effort to maintain relationships that might further assist the state as well as the provider community. In

conjunction with other program resources, ETS staff helped providers to process their service data and maps. Furthermore, as a result of the providers' comfort level with the program staff, ETS representatives responded to a number of varied questions and requests.

Additionally, special effort was made to keep providers and state stakeholders informed of broadband data collection activities. This included distributing materials and discussing information regarding the Federal Communications Commission (FCC) Form 477 and changes that were implemented by the FCC for the SBI final semi-annual data submission. Staff kept providers up-to-date on the various changes that took place between October and December. ETS staff also assisted many providers in obtaining and formatting the necessary data for the deployment portions of the Form 477, as much of this data paralleled the SBI data collection activities.

The ETS group worked to conduct in-depth reviews of unserved and underserved areas, with particular interest paid to those areas with close proximity to existing services. The goal of this review was to bring awareness of these areas to existing local providers and to further understand the dynamics of particular census blocks and the challenges that exist to offering services.

During Q4 2014 program staff also reached out to Community Anchor Institution (CAI) contacts that submitted data to the program in the past to ensure we have the most current broadband information available. Additionally, staff worked with South Carolina's Division of State Information Technology DSIT's State E-Rate Coordinator to secure a data update for public school district entities. On November 17, 2014, 28 new and 696 updated/revised CAI records, with the original ObjectID, were presented to the National Telecommunications and Information Administration (NTIA). To date, the program has been able to present information on 4,500 CAIs throughout the state.

Team members continue to collaborate with the state's residents about resolving broadband access issues. In response to an Aiken County resident's plea for assistance, team members are working to equip the neighborhood homeowners' group and the developer with information that may encourage the local service provider to meet their broadband needs. Also, the Connect South Carolina team met with a group of six local stakeholders in Newberry County who have been searching for broadband access solutions in the community. The town has fiber present, but cannot attract a provider willing to provide service in the area, which has very poor access. Team members continue to relay Newberry County's issues in discussions with various potential partners, such as the State Director of South Carolina's Rural Development office, Clemson University Community Development representatives, and others, in hopes of collaboration.

During 2014, the Connect South Carolina team responded to and worked with each South Carolina resident who reached out with questions about broadband concerns, including underserved and unserved areas, questions about municipal broadband programs, and other issues. Also, the team was able to connect those who inquired about Rural Broadband Experiment and other programs with the Policy and Research staffs for additional information.

14 b_Project Attachment_Technical Assistance

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.

Technical Assistance Milestones Year 5, Quarter 4 per approved project plan:

Milestone: Analyze 2014 residential survey research results and present initial findings to Stakeholders.

This milestone was met. Research staff finalized the data collection process and had the cross-tabulated results peer reviewed. Upon completion of the peer review, the results were sent to NTIA and state stakeholders, offering the opportunity for questions or further information.

Milestone: Peer review of 2014 residential survey research completed.

This milestone was met. Research staff completed its data analysis and sent the cross-tabulated results, the survey instrument, and a document outlining the methodology used in the survey to Dr. Mingjie Sun of Iowa State University for peer review. Dr. Sun noted that she was able to replicate cross-tabulated results; she found nothing in the survey instrument that would create bias in the responses and noted possible ways to improve the response rate of the survey.

Milestone: Finalize and distribute 2014 residential survey research results

This milestone was partially met. Research staff provided a spreadsheet to state stakeholders that outlined the results of the 2014 residential survey and offered opportunities for stakeholders to provide feedback or ask for further information. Furthermore, staff updated the website to reflect the newest data and shared the results with stakeholders and NTIA. A press release was not issued in Q4 2014 for fear that such a release would not garner sufficient media attention during the holidays. The project team instead opted to wait until Q1 2015 to issue the press release.

Milestone: Wrap Up Technical Assistance Activities.

This milestone was partially met. Although the completion of the analysis and peer review of the 2014 residential survey represented the last research activity funded through the Technical Assistance project. Team members anticipate incorporating the results from this final survey into a final Performance Progress Report for NTIA. The preparation and filing of this report will occur in Q1 2015.

Technical Assistance Milestones Outstanding (not met or partially met) from previous quarters:

Year 5, Quarter 3 Milestone: Initiate 2014 residential survey research

This milestone was met. In Q3 2014, research staff used data from the 2013 United States Census estimate to create a spreadsheet with census-defined quotas for the 2014 residential survey research. Data collection began in September 2014 to ensure that results were comparable to previous annual surveys conducted at a similar time of the year, thereby eliminating potential seasonal differences from affecting trended results. Data collection finished in Q4 2014, at which time research staff created a data file with weighted results and sent that file to Dr. Mingjie Sun of Iowa State University for peer review.

Technical Assistance Annual Milestones Year 5 per approved project plan:

Annual Milestone 2014: Finalize and distribute 2013 statewide residential and economic survey research results. Incorporate stakeholder recommendations and create final report detailing results of 2013 business residential and economic surveys. Deliver in person presentation of research results to the Task Force, South Carolina Governor's Office, and other stakeholders. Announce the release of data via press release, website update, and meetings with stakeholders.

This milestone was met. Research staff finalized and distributed the 2013 residential and economic survey research results through updates to the website, in report format, and through meetings with stakeholders. Final reports outlined results from the 2013 business, residential, and economic development surveys. Survey results and presentations were provided to state stakeholders, NTIA, and the governor's office. Data releases were announced through statewide press releases, updates to the program website, and through meetings and conversations with stakeholders.

Annual Milestone 2014: Initiate the 2014 statewide residential survey and 2014 statewide business survey by writing survey instruments, creating spreadsheets with census defined quotas and weights for 2014, collecting respondent data and creating data file with weighted results. After analysis and the review process that includes collaborating with the South Carolina Governor's Office, the 2014 residential and business survey results will be delivered in person to the Task Force, South Carolina Governor's Office, and other stakeholders. Also survey results will be announced via press release, website update, and meetings with stakeholders.

This milestone was met. Research staff initiated and completed the 2014 statewide residential and business surveys. Staff wrote the survey instruments for each survey, created spreadsheets with quotas based on the most recent United States Census estimates of the adult population in the state, and after collection of the data, weighted the results of the survey and created a file with the weighted results. The results were analyzed, and the cross-tabulated results, the survey instrument, and the methodology used in the survey were peer reviewed by Dr. Mingjie Sun of Iowa State University. Survey results were shared with the public via press release for the business survey, website updates for both surveys, and stakeholder presentations of results from both surveys.

Annual Milestone 2014: Facilitate Year 5 peer review of survey results and resulting analysis for peer review. Review peer recommendation and update program as required.

This milestone was met. Research staffs worked with Dr. Mingjie Sun of Iowa State University who peer reviewed the 2014 business survey and the 2014 residential survey. Dr. Sun reviewed the survey instruments, the cross-tabulated results, and the methodology used in each survey. Dr. Sun noted that she was able to replicate the cross-tabulated results, saw no issues with the methodology that could cause response biases, noted that the response rate in the residential survey had increased from previous years, and provided recommendations for further improving the response rates in each survey.

Annual Milestone 2014: Year 5 of the project will yield the successful execution of the second community broadband summit. Connect South Carolina in conjunction with the local technology planning teams and the other key state agencies, will host this open forum and present a unified front on broadband decisions. The summit will provide a means to gather and discuss broadband accomplishments, best practices, and to identify areas of need in the overall South Carolina broadband plan. Activities leading to the completion of the summit

include planning and coordinating action items, preparing and distributing materials and information, tracking and logging attendance, closing the venue, and recording and archiving lessons learned.

This milestone was met. On June 11, 2014, the project team conducted a summit called "Connections 2014." Connections 2014 welcomed 152 (9 via Livestream) attendees from across the state to Columbia, South Carolina to learn about developments in hardware and software, state technology innovations, and community engagement. Community Technology Advisors hosted a breakout session to provide support to Community Champions and to inform local leaders on the status of broadband in their communities, the possibilities coming from future funding opportunities such as the Department of Commerce's Office of Innovation grants, and how they might get involved in their area's broadband planning efforts. The issues of broadband adoption and use were particularly relevant for attendees at this year's summit as leaders asked questions about harnessing the power of the technology they already possess to improve the lives of citizens in their communities. In particular, Lexington County School District One's enterprise information technology officer has continued discussions with Connected Nation leaders in attendance about ways to ensure students have broadband access after school hours for the one-to-one devices the District provides. An AARP representative in attendance voiced the lack of technology adoption in the senior population, which continues to be addressed by program officials. As a result, discussions of a partnership with AARP and the South Carolina Telecommunications Association to use the physical locations of local telecoms around the state, where seniors are already comfortable paying their telephone bills, for places to provide basic computer training to local seniors.

Technical Assistance Annual Milestones Outstanding (not met or partially met) from previous year:

Annual Milestone 2013: Initiate the 2013 residential survey research and the 2014 business surveys by writing survey instruments, creating spreadsheets with census-defined quotas and weights for 2013, collecting respondent data, and creating data file with weighted results.

This milestone was met. In 2013, the 2013 statewide residential survey was initiated, incorporating feedback from state stakeholders, through the creation of survey instruments and generating spreadsheets with census-defined quotas. Data collection was completed in Q4 2013 resulting in the creation of a data file with weighted results. In Q1 2014, the 2014 business survey was initiated through discussions with state stakeholders where stakeholders were provided opportunity to request information or changes to the survey instrument. No such requests were received. Program staff created the survey instrument, undertook the data collection process, and generated data files with weighted results in 2014.

Annual Milestone 2013: After analysis and the review process that includes collaborating with the South Carolina Governor's Office, the 2013 residential survey will be delivered in-person to the Task Force, South Carolina Governor's Office, and other stakeholders. Also survey results will be announced via press release, website update, and meetings with stakeholders.

This milestone was met. Data collection of the 2013 residential survey concluded late in Q4 2013. Data analysis concluded in Q1 2014, at which point the survey results and the survey instrument were peer reviewed by Dr. Lori Dickes of Clemson University. Upon completion of Dr. Dickes peer review, the results were shared with NTIA, state stakeholders, and the public through the issuance of a press release and updates on the program website.

Annual Milestone 2013: Facilitate Year 4 peer review of survey results and resulting analysis for peer review. Review peer recommendation and update program as required.

This milestone was met. Peer review activities of the 2013 economic development survey and the 2013 residential survey were completed in Q2 2014 by Dr. Lori Dickes of Clemson University. Regarding the residential survey, Dr. Dickes reported that she was able to replicate and substantiate the survey results, the methodology was solid, and the script was well-designed considering important research questions regarding technology adoption and use in South Carolina. Regarding the economic development survey, Dr. Dickes recommended increasing the sample size in subsequent surveys.

Technical Assistance Planned Major Activities for Next Quarter (Q1 2015):

Closeout Technical Assistance Activities

4. Provide any other information that you think would be useful to NTIA as it assesses this project's progress.

The 2014 residential survey revealed that 69% of adults in the state subscribe to home broadband service, up from 62% in 2010. During that same time, mobile broadband usage has nearly doubled, from 29% in 2010 to 55% in 2014. Despite these gains, approximately 1.16 million adults in the state still do not have broadband service at home. Among these broadband non-adopters, the top barriers to home broadband adoption include cost, the belief that broadband is not relevant, and a lack of digital literacy skills.

In partnership with IT-oLogy, CSC hosted a conference on The Internet of Things on November 6, 2014, which was the second conference the two organizations hosted together in 2014.

14b_Project Attachment_Planning Teams

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.

Planning Team Milestones Year 5, Quarter 4 per approved project plan:

Milestone: Assist in development and implementation of local regional technology growth strategies.

This milestone was met. Thirty-five communities in the state have been engaged, with each having received the opportunity for assistance in assessing their current state of broadband access, adoption, and use followed by a detailed Technology Action Plan. To date, there have been 11 Technology Action Plans presented to communities, with 4 of those communities reaching the designation of certified Connected communities.

Abbeville County, Lexington County, and the Town of Hilton Head Island held certification events during Q4 2014, joining Anderson County, which was certified in 2013. Among the 18 local stakeholders

attending Abbeville County's October 2014 event were a local mayor, South Carolina House of Representatives member, a member of the South Carolina Broadband Advisory Council, local media, and other officials. Lexington County's December 2014 event had nearly 80 in attendance, including the Chairman of Lexington County Council, the federally appointed State Director of the United States Department of Agriculture's South Carolina Rural Development office, local school board superintendent and members, chamber executives, and other high profile individuals. There was a strong media contingent with every local television station represented, as well as numerous print and online publications. Hilton Head Island's event gathered just under 40 attendees, which included a state senator, mayor and council members, chamber executives, and local business people, among others. In addition, many members of the local Information Technology Task Force, who were very involved in the assessment process, attended the celebration. Later in the day, program representatives presented the certification award to the Mayor at the Town Council meeting with approximately 80 in attendance.

Community Tech Team Specialists continue to work closely with 4 communities actively involved in the assessment process. The City of Hartsville and Berkeley County have completed gathering data for their assessments and have received the necessary scores to be certified. Both are working to prioritize action items, with plans to submit and hold certification events in January 2015. Greenwood County has updated their 2013 assessment after Tech Specialists notified them that their most recent data availability scores increased, giving them the necessary scores to qualify for certification after falling short in their previous assessment. Greenwood County plans to host a certification event in January 2015. The Richland County team is assembling data gathered for their assessment with the assistance of the University of South Carolina ITEC 545 class. Richland County's team plans to complete its assessment in January 2015.

Community Tech Team Specialists participated in many programs and meetings statewide during the year, such as The Governor's Original Six Foundation, the South Carolina Rural Summit, South Carolina EdTech conference, and chamber events, among many others. Team members seized these opportunities to engage additional communities and share program successes.

While the project team has worked with a majority of the state's communities in some capacity, thereby reaching 741 planning team members, there are still a number of communities that have expressed the desire to participate in the Connected program. If the program is able to secure funding and continue the program at the conclusion of the federally-funded grant period, Newberry, Edgefield, Fairfield, and Beaufort are a few of the counties that would begin right away. The most current version of the Community Engagement map has been provided as an attachment via the "14Q4_Project Attachment_Question 5_South Carolina" document.

Milestone: Wrap Up Regional Planning Activities

This milestone was not met. Per a grant amendment initiated by the SBI Program Office, the South Carolina SBI grant will continue through January 2015. Close out procedures, as given by the NTIA, and in coordination with state stakeholders, are currently underway and are anticipated to be completed in 2015.

Planning Team Annual Milestones Year 5 per approved project plan:

Annual Milestone 2014: The regional technology consultants will schedule meetings, set agendas, taking meeting notes, and work with local regional teams to identify target sectors

and regional and local subject matters for the train the trainer sessions. They will develop local regional training toolkit from local information, task force recommendations, research data, best practices, and provider data. They will also facilitate training session, provide training toolkits for team members to use in their own communities, document training session attendance, and add attendees to regional contact database. The regional technology consultants will hold 5 to 10 planning meetings in year 5.

This milestone was met. Program staff has currently engaged over 35 communities statewide with more wanting to join. The program team conducted and/or supported over 45 meetings in 2014 and more than 110 over the life of the program. Although not all meetings were formal they were all conducted to support the local planning team process. The South Carolina SBI program has offered an avenue for which communities could comprehensively discuss and assess their current state of broadband assets as they pursue improvements in the areas of broadband access (often a concern for more rural areas), adoption, and use. Through planning team meetings, communities could identify their strengths and weaknesses in broadband-related areas, catalog their technology inventory, and review the mapping and research data made available to them by the program.

Annual Milestone 2014: It is projected that the South Carolina Broadband Advisory Council will meet quarterly to review program progress and offer recommendations for the program and other related programs. South Carolina Broadband Advisory Council recommendations will be communicated with stakeholders via stakeholder meetings, Connect South Carolina website updates, blogs, press releases, reports, or as required by South Carolina Broadband Advisory Council.

This milestone was met. During 2014, four Broadband Advisory Council meetings were hosted at which updates on the Connected community engagement program, the latest information on broadband policy and research, updated survey results and mapping data, and the future of Connect South Carolina with potential collaboration efforts were provided. In addition, members were encouraged to give feedback on their thoughts about the state of broadband efforts in South Carolina. The Program Manager was able to expand the council to include representatives from the entrepreneur sector of the state, South Carolina Telecommunications and Broadband Association, South Carolina Department of Employment and Workforce, and other high profile organizations. He met with each council member separately to encourage open dialogue about ways the SBI program could benefit their organizations and the state. In addition to Council meetings, members were provided updates via e-mail on any related news. The next Council meeting will be held on January 28, 2015.

Annual Milestone 2014: Assist in development and implementation of local regional technology growth strategies by helping to track local Broadband projects, add to regional database, and bring awareness to projects through Connect South Carolina website, blog, press releases, reports, or as required by local regional team and providing technical assistance (research data) and mapping tools to assist teams in implementation of local initiatives.

This milestone was met. Program staff has been working with South Carolina communities in the development and implementation of local and regional technology growth strategies through the use of the Connected community engagement program. Through these efforts greater awareness on a local, state, and national level has been demonstrated including local broadband projects being publicized through various communication channels such as the www.connectsc.org website, blog postings, press releases, e-newsletters, or reports. Research data has been provided to communities, and Community

Tech Team Specialists have offered technical assistance and mapping tools to assist teams in the implementation of local initiatives. As of the end of Q4 2014, there were 35 communities that have either achieved or are working to attain the certification status of being a Connected community. Through collaborative work with local community team members and program staff, Connect South Carolina has facilitated efforts to create awareness of the necessity of broadband expansion and use throughout the state.

To date, there have been 11 Technology Action Plans presented to communities, with 4 of those communities reaching the designation of Certified connected communities.

While the project team has worked with a majority of the state's communities in some capacity, thereby reaching 471 planning team members, there are still a number of communities that have expressed the desire to participate in the Connected program. If the program is able to secure funding and continue at the conclusion of the federally-funded grant period, Newberry, Edgefield, Fairfield, and Beaufort are a few of the counties that would begin right away.

Various blog posts, press releases, and e-newsletters have been presented via the "14Q4_Project Attachment_Question 5_South Carolina" enclosure.

Planning Team Planned Major Activities for Next Quarter (Q1 2015):

Closeout activities will continue through Q1 2015 as the team plans to host at least two certification events in January 2015, with the possibility of two additional events during the month.

4. Provide any other information that you think would be useful to NTIA as it assesses this project's progress.

On November 6, 2014, the Broadband Advisory Council held its quarterly meeting with 7 members in attendance, 3 of which attended remotely. Program staff attending provided updates to the group on the communities involved in the Connected community engagement program, with the group continuing to stress the importance of sustaining the program upon completion of the federally-funded grant period. The President & COO attended the meeting where he informed the group of a soon-to-be released study that would show high impact data demonstrating the advantages of organizing and cultivating community technology teams as encouraged by the Connected program. This data reveals these organized communities have employment rates trending upward and the group agreed that the survey results would build the case for future funding and continuation of the program. Potential collaboration opportunities at the conclusion of the grant period were discussed and Council members were encouraged to visit the website to review the recent business survey results and updated maps.

The 35 multi-sector technology planning teams currently participating in the Connected community engagement program, including their 741 team members, have identified the following technology assets within their own communities:

- Public computer centers: 79
- Digital literacy programs: 66
- Broadband awareness programs: 97
- Broadband programs focused on vulnerable populations: 87

These assets are inventoried during each community's assessment of local broadband access, adoption, and use and can be leveraged to develop locally relevant digital inclusion strategies during the community team's action planning process in an effort to continue to close the digital gaps in their communities.