

OFFICIAL APRIL 2013 UPDATE SUBMISSION TO
THE NATIONAL TELECOMMUNICATIONS AND INFORMATION
ADMINISTRATION UNDER THE
STATE BROADBAND INITIATIVE GRANT PROGRAM FOR THE
STATE OF SOUTH CAROLINA



April 1, 2013

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April 1, 2013

Ms. Anne W. Neville
SBI Grant Program Director
National Telecommunications and Information Administration
U.S. Department of Commerce
Room 4716
1401 Constitution Avenue, NW
Washington, DC 20230

Dear Ms. Neville:

As the State Broadband Designated Entity, Connected Nation, in cooperation with South Carolina's broadband provider community, our state-based partners, and the Office of the Governor, is pleased to present this submittal of the state of South Carolina's State Broadband Initiative (SBI) Grant Program, known as Connect South Carolina.

Connected Nation and Connect South Carolina congratulate the National Telecommunications and Information Administration (NTIA) and the Federal Communications Commission (FCC) on achieving the two-year anniversary of the National Broadband Map. Truly, now more than ever, the significance of complete and validated data through this effort is impacting lives in communities all across our great country. The Connect South Carolina program and its collective stakeholder community continue to be faithful and energized contributors, and we are proud to play such a part in forging the innovation economy of the twenty-first century.

The artifacts that comprise this submission should be found to be compliant with the April 1, 2013, deadline for the semi-annual data update and in accordance with the terms of the July 1, 2009, Notice of Funds Availability (NOFA) and all subsequent clarifications pertaining to delivery of state-level mapping of broadband service availability. This packet includes:

Inventory of Deliverables, Connect South Carolina: April 1, 2013

<u>NOFA Requirement</u>	<u>Data Transfer Model</u>	<u>Data Description</u>
Appendix A: 1(a)(i)	BB_Service_CensusBlock	Broadband Service Availability of Facilities-Based Providers in Census Blocks of No Greater Than Two Square Miles in Area
Appendix A: 1(a)(ii)	BB_Service_RoadSegment	Broadband Service Availability of Facilities-Based Providers by Road Segment in Census Blocks Larger in Area Than Two Square Miles

Appendix A: 1(b)	BB_Service_Wireless	Broadband Service Availability of Wireless Services Not Provided to a Specific Address
Appendix A: 3(b)	BB_ConnectionPoint_MiddleMile	Broadband Service Infrastructure Middle-Mile and Backbone Interconnection Points
Appendix A: 4	BB_Service_CAInstitutions	Community Anchor Institutions-Listing
Appendix A: 4	n/a	Community Anchor Institutions-Narratives
VII.A.1(a)	n/a	Accuracy and Verification Report
n/a	DataPackage.xlsx	Worksheets of Contact Information, Record Count, and Provider Summary Table
n/a	n/a	List of Changes and Corrections to the Dataset
n/a	n/a	Broadband Provider Roster and Participation Status

In addition, this data update submission should be found to be compliant with the additional program requirements instituted by the National Telecommunications and Information Administration since the time of the October 2012 SBI data submission for the Connect South Carolina program. Specifically, these new requirements are:

SBI Data Transfer Model

The submission of the broadband dataset for April 1, 2013, is contained within the SBI Data Transfer Model as released on the Grantee Workspace on December 14, 2012. All efforts have been made to comply with formatting, domain, and metadata requirements to include as much information on each provider as possible.

Additional Submission Guidance

On February 8, 2013, NTIA released new guidance regarding the processing of wireless data, for both fixed and mobile broadband providers. All wireless provider coverage records have been reviewed and are in compliance with this grantee guidance for this April 2013 submission period. Even providers that did not have an update for this submission cycle were reviewed and data reprocessed as necessary for those records that were not yet in compliance with the new guidance.

This submission continues to follow the speed technology guidance released by the Program Office on August 9, 2012, to review speed tier codes in correspondence with technology of transmission codes. In the October 2012 submission, descriptions were provided in the methodology paper that offered an explanation for any submitted technology of transmission and speed combinations that were outside of the expected value range. That practice continues in this submission as technology and speed combinations are reviewed and scrutinized; any questionable information supplied by providers is reviewed more in

depth with the provider to ensure the information is accurately captured or a proper explanation is provided as to why the speed information should be submitted as supplied even if it falls outside the expected value range.

This April 2013 semi-annual data update under the SBI Grant Program continues to demonstrate our dedication to implementing the joint purposes of the Recovery Act and the Broadband Data Improvement Act (BDIA) by gathering comprehensive and accurate state-level broadband mapping data, developing state-level broadband maps, aiding in the development and maintenance of the National Broadband Map, and undertaking statewide initiatives for broadband planning.

Broadband Service Availability — Provider Outreach and Verification

This data update submission under the SBI program includes datasets for 97.83 percent of the South Carolina provider community, or 45 of 46 total providers. Of the 45 participating providers, 22 supplied an update to their network or coverage area(s), while 21 have reported no change. The remaining 2 represent providers who previously supplied data but were non-responsive in the April 2013 update effort; therefore, their previous dataset is being put forward as part of this compilation. A complete roster by provider depicting participation status and contact history is contained herein. The remaining provider that is not represented in the attached was non-responsive to multiple contact attempts.

As the aforementioned roster and attached methodology documentation will attest, it is the collective opinion of the Connect South Carolina principals that all commercially reasonable efforts were made to account for 100 percent of the known South Carolina broadband provider community, pursuant to this semi-annual data update submission.

Connect South Carolina has also continued to perform broadband verification activities through several means. In addition to confirmation of service area(s) by each provider, Connect South Carolina conducts field validation efforts. To date, 36 (78.26 percent) providers have been validated through field verification activities. Additional details on verification activities are contained within the Field Validation Methodology.

The Connect South Carolina website, (www.connectsc.org), continues to serve a prominent role in the outreach and data collection effort. This program asset provides a way for the general public to participate in the process by offering interactive tools for users to test their connection speed, submit broadband inquiries, or contact a program representative.

As an indicator of stakeholder penetration, the Connect South Carolina website encountered 2,758 unique visits during this reporting period (19,348 total to date for the life of the grant awarded on December 20, 2009). Additionally, this pronounced Web activity netted 7 broadband inquiries over this same reporting period (145 grant inception to date). The website also provides access to the My ConnectView™ interactive mapping application, which allows consumers and broadband providers to confirm or dispute the coverage represented on the broadband inventory map. These consumer-initiated actions are facilitated through the Connect South Carolina website and the Connect South Carolina interactive mapping tool (My ConnectView™) that offer the stakeholders the vehicles to

provide information regarding availability in their respective service area, either in affirmation or contest of the reported data represented in the Connect South Carolina mapping artifacts. Since the initial data collection and release of corresponding maps, feedback in the form of broadband inquiries has allowed Connect South Carolina to identify additional areas that are in need of field validation, which is scheduled as soon as possible.

Community Anchor Institutions

Connect South Carolina continues to make significant inroads to gather data on the location and broadband connectivity of Community Anchor Institutions (CAI), in accordance with the data requirements of the SBI NOFA Technical Appendix. This uptick in CAI data collection was further supported by NTIA's outreach to grantees reiterating the importance of this outreach. With the continued commitment of the state of South Carolina, we have continued to focus on a relationship-oriented approach with state-level agencies and organizations that generates more responses than general contact.

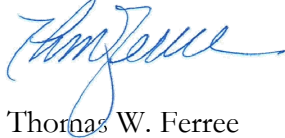
In conjunction with the state of South Carolina, outreach was conducted during this data update reporting period by Connect South Carolina to continue identification of existing, centralized sources for CAI connectivity data. Additionally, outreach was coordinated to distribute the CAI survey to institutions throughout the state through multiple methods including a customized online survey available on the Connect South Carolina website. Building on past success of the September 2012 Education Campaign, February 2013 was recognized as Public Safety Month where the public safety sector was the focus of CAI data collection, research, and public affairs outreach. Connect South Carolina has developed new relationships with statewide associations such as the South Carolina State Firefighters Association and re-engaged existing partners including the South Carolina Municipal League and the South Carolina Association of Counties, to promote the importance of broadband connectivity at anchor institutions and participation in this data collection process. The value of these relationships continues to impact the entire success of the Grant Program, and the CAI engagement is a logical extension of new and existing relationships. Connect South Carolina will continue to build upon these new relationships over the coming months and utilize its contacts throughout the state to collect data and raise awareness of this project.

From our work in South Carolina, as well as other states, we recognize the great value of this data to future collaboration efforts within the state as well as its value to the National Broadband Map. We plan to continue to bring best practices to the Connect South Carolina efforts, along with an investment of both human and technical resources required to reach our goal of increasing the data that is secured and reported as part of this process.

The Connect South Carolina program exists to improve data on the deployment and adoption of broadband services and to assist in the extension of broadband technology across all regions of the

great state of South Carolina, as well as the United States and its territories through contribution to the National Broadband Map. We look forward to the continuing work ahead and improving upon our data collection methods.

Respectfully submitted,



Thomas W. Ferree
President and Chief Operating Officer
Connected Nation, Inc.

SOUTH CAROLINA COMMUNITY ANCHOR INSTITUTIONS METHODOLOGY

In this seventh reporting period of the SBI, Connect South Carolina, working in close coordination with the state of South Carolina, has established an ongoing mechanism for gathering data on the location and broadband connectivity of Community Anchor Institutions (CAI), in accordance with the data requirements of the SBI NOFA Technical Appendix. Since the October 2012 data submission, the CAI outreach process method has been modified to improve data collection. Specifically, the outreach process is a more focused sector-specific and relationship-oriented approach that generates more responses than general contact.

Connect South Carolina has continued to identify and process CAI data obtained through an ongoing statewide outreach campaign. Physical address information continues to be augmented through manual sourcing and geocoded by Connect South Carolina through Esri ArcGIS software.

Connect South Carolina continues to utilize a customized online survey hosted through SurveyMonkey, with a landing page on the Connect South Carolina website that was developed during the first reporting period. This survey, in combination with a customized data-gathering spreadsheet, was distributed on a regular basis to a targeted list of CAI throughout the state as well as organizations and agencies that work closely with the CAI. The distributions were completed with the support of the state client. Connect South Carolina will continue to use these data-gathering tools for future targeted outreach efforts throughout the coming months leading up to the next reporting period. These materials are customized to fit the CAI categories as defined in the SBI NOFA.

The survey can be accessed at this link: <http://www.surveymonkey.com/s/RJH5DMW>.

In addition to the survey, Connect South Carolina has developed a number of new relationships with statewide associations, such as the South Carolina Municipal League and the South Carolina Association of Counties, to promote the importance of broadband connectivity at Community Anchor Institutions and participation in this data collection process. It is apparent that these relationships are beneficial to the entire success of the grant program, and the CAI engagement is a logical extension of new and existing relationships. Connect South Carolina will continue to build upon these new relationships over the coming months and utilize its contacts throughout the state to collect data and raise awareness of this project.

In addition to fostering and building relationships with state agencies, associations, and organizations, Connect South Carolina has also developed a sector-specific calendar that supports CAI outreach as well as research and communications efforts. This focused approach allows a corporate commitment to capturing CAI data in addition to developing meaningful sector-specific content. Since the October 2012 submission, the sector-specific approach included a month-long public safety campaign in February 2013. During this campaign, Connect South Carolina committed to improve relationships with key stakeholders, distribute survey requests to sector representatives, and provide sector-specific education through communications and webinar resources. Outreach to and survey of hospitals, local law enforcement, and fire stations helps build awareness and establishes a centralized database of key connectivity data for planning.

Connect South Carolina conducts significant research as part of an ongoing process to identify existing, centralized sources for CAI connectivity data. In tandem with these efforts to identify existing data, Connect South Carolina continues to identify key CAI contacts in an effort to distribute and promote the online survey and raise awareness of the importance of CAI broadband connectivity. Also, when possible, Connect South Carolina works to identify existing relationships that can support CAI outreach.

Connect South Carolina has an ongoing mission to educate CAI throughout the state on the importance of participating in the project. Participation by these institutions will raise awareness about the importance of broadband connectivity and the need to report the requested data for inclusion on the National Broadband Map.

The greatest challenge with collecting CAI data continues to be educating the CAI about the Connect South Carolina project as well as self-awareness of their own broadband connectivity (specifically upload and download speeds). Connect South Carolina will continue to research key CAI organizations and agency contacts in an effort to raise awareness of this project among CAI.

A CAI summary of all processed and submitted data is provided below:

CAI Type	Total	Physical Address	Lat/Long	Technology of Transmission	Download Speed	Upload Speed
K-12 Schools	1758	1758	1752	1098	1097	1097
Libraries	284	284	284	184	183	183
Healthcare	295	295	295	198	199	199
Public Safety	793	793	790	336	310	309
Higher Ed Institutions	232	232	232	139	137	137
Other Government	944	944	943	865	864	864
Other Non-Government	98	98	98	86	86	85
Total	4404	4404	4394	2906	2876	2874

During the coming months, CAI data collection will be supported by regular reporting to the Connect South Carolina team. The CAI data is proving an invaluable resource to all components of the Connect South Carolina effort. The data identifies potential local champions, sector trends, and opportunities for improvement as well as opportunities to educate CAI not familiar with their current connectivity.

SBI DATA SUBMISSION METHODOLOGY

The submission of the broadband dataset for April 1, 2013, is contained within the SBI Data Transfer Model and additional components as released on the Grantee Workspace on December 14, 2012. Connected Nation (CN) has reviewed all literature that relates to the release and use of this

data transfer model and recognizes that it does not replace or dictate how data is stored, processed, or displayed for the state, as it is meant primarily as a means to transfer the broadband data from all states and territories and populate the National Broadband Map in a seamless fashion.

Connected Nation has complied with the following guidance documents published by NTIA:

- Technical Mapping Guide, as released on the Grantee Workspace on March 24, 2011, was followed to ensure the completeness and validity of the submission through completion steps and checklists, completing the DataPackage spreadsheet, uploading broadband datasets into the Data Transfer Model, and checking the dataset using the SBDD_CheckSubmission receipt process.
- Naming Conventions and Category of End User, as released on the Grantee Workspace on March 26, 2012, was followed to ensure the consistency of individual file and zip package naming.
- Wireless Data Processing Guidance, as sent to SBI grantees on February 8, 2013, was followed to ensure that all fixed and mobile wireless provider coverage records are submitted to NTIA as separate, closed polygons whenever there is a variation in any of the required fields.

In addition to the methodologies contained herein, the Changes and Corrections documentation, as well as the DataPackage.xls containing contact information, the data dictionary, and a provider summary table, the following feature classes are submitted within the SBI Data Transfer Model for the state of South Carolina.

Inventory of Deliverables, Connect South Carolina: April 1, 2013

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Appendix A: 1(a)(ii)	BB_Service_RoadSegment	Broadband Service Availability of Facilities-Based Providers by Road Segment in Census Blocks Larger in Area Than Two Square Miles.
Appendix A: 1(b)	BB_Service_Wireless	Broadband Service Availability of Wireless Services Not Provided to a Specific Address.
Appendix A: 3(b)	BB_ConnectionPoint_MiddleMile	Broadband Service Infrastructure Middle-Mile and Backbone Interconnection Points.
Appendix A: 4	BB_Service_CAInstitutions	Community Anchor Institutions-Listing.

The provider data collected by CN on behalf of the state of South Carolina have been formatted per the given specifications and uploaded into the appropriate feature classes of the SBI Data Transfer Model. Wireline availability is contained within census blocks and road segments, wireless availability is contained as polygons of coverage areas, and middle-mile connections and Community Anchor

Institutions are contained as point data. All speed data is contained at the census block, road segment, or wireless polygon level of availability. All efforts have been made to comply with formatting, domain, and metadata requirements to include as much information as possible.

Connected Nation has continued outreach to satellite providers on their availability, technology, and speed information, but granular coverage is not yet available. Submitted within the wireless feature class are the satellite companies providing service to South Carolina as a polygon of the state boundary. Efforts will continue to collect, process, or otherwise create more granular satellite data based on availability analyses and guidance received from NTIA. Process development continues as well to be able to create more granular satellite coverage based on satellite equipment positioning and geographic inputs.

DATASETS FOR IN-KIND MATCH

Connect South Carolina received an in-kind match contribution to assist with SBI mapping goals which has been beneficial to the program in the following ways:

Connect South Carolina received a Community Anchor Institution (CAI) connectivity information dataset for a variety of institution types including higher education, state and local governments, public safety, and more from the South Carolina Budget and Control Board - Department of State Information Technology as part of an in-kind match contribution to Connect South Carolina - \$107,548.

Connect South Carolina received a CAI dataset for schools and libraries from the South Carolina Budget and Control Board - Department of State Information Technology as part of an in-kind match contribution to Connect South Carolina - \$71,232.

SOUTH CAROLINA FIELD VALIDATION METHODOLOGY

CN focused a portion of its time on specific validation processes such as:

- conducting random spectrum analysis studies throughout the state using an Avcom PSA-37-XP spectrum analyzer;
- conducting mobile speed tests throughout the state using an iPhone, Android (or other smart phone) as well as provider-specific aircards (Sprint 3G/4G, Clearwire et al);
- identifying pre-selected, provider-submitted wireless transmit tower sites and cross-referencing data about that tower against the Federal Communications Commission (FCC) databases such as Antenna Structure Registration and/or the Universal Licensing System;
- cross-referencing Federal Registration Number data against available FCC Form 477 data as well as the FCC **CO**mmission **RE**gistration **S**ystem (CORES);

- validating provider submitted data (for example: latitude/longitude) using a handheld Garmin eTrex Summit GPS unit or GPS enabled software such as Microsoft *Streets & Trips*;
- locating physical wire-line attributes (such as Central Offices, Remote Terminals, CATV plant, etc.) and comparing them against provider submitted data; and
- conducting on-net and off-net speed tests using the FCC portal at <http://www.broadband.gov/qualitytest/about/> or using the Ookla Net Metrics enabled speed test utility located on each of CN's program specific websites.

Additionally, CN cross-referenced numerous public documents in order to ensure that all known broadband providers were located and contacted. This included searching membership logs from trade associations (WISPA, WCAI, PCIA, etc.), the Cable Television Fact Book, Public Utility Commission records, Public Service Commission records, Chamber of Commerce, etc.

To date, Connected Nation's staff conducted on-site validation tests in South Carolina on the following providers: AT&T; Atlantic Broadband; CenturyLink; Charter Communications; Chesnee Telephone Company; Chester Telephone Company (d.b.a. Fairfield Communications); Clearwire Corporation; Comcast; Countrywide Wireless; Electronics Service Company of Hamlet LLC; Family View Cable; Farmers Telephone Cooperative Inc. (d.b.a. FTC Communications); Frontier Communications of the Carolinas; Hargray Communications Group; Harron Communications (d.b.a. MetroCast); Home Telephone Company Inc.; Horry Telephone Cooperative Inc.; Northland Communications Corporation; NTInet Inc.; Palmetto Rural Telephone (d.b.a. Low Country); Pee Dee Online; PRT Communications; Rock Hill Telephone Company (d.b.a. Comporium Communications), PBT Communications, and Fort Mill Telephone Company); Sandhill Telephone Cooperative; SkyRunner; Southern Coastal Cable; Sprint; TDS Telecom; Time Warner Cable Inc.; T-Mobile; tw telecom; US Cellular; Verizon South Inc.; West Carolina Telephone; Wide Open West (formerly d.b.a. Knology); and Windstream.

From program initiation through this reporting period, CN has completed in-the-field validation testing against 36 companies (out of a universe of 46 viable providers) totaling 78.26 percent within the state of South Carolina.

CN has also continued to review provider datasets for accurate speed information, platform listings, and other intricacies that may fall outside of the standard SBI Data Transfer Model parameters, as published on the NTIA Grantee Workspace on December 14, 2012. Any providers whose submitted coverage and attributes are anticipated to come into question have been further reviewed and confirmed; details on a case-by-case basis are presented below.

Comcast Cable Communications, LLC

Issue: Technology of transmission code 40 with maximum advertised download speed in tier 7, lower than expected value range for the technology.

Resolution: Confirmed use of DOCSIS 3.0 with speed tier 7. Speeds are kept lower currently to be backwards compatible.

Northland Communications Corp.

Issue: Technology of transmission code 40 with maximum advertised download speed in tier 7, lower than expected value range for the technology.

Resolution: Provider website advertises up to 24 Mbps service; screenshot below.

Northland Internet Service

It's Turbo fast with speeds up to 24 Mbps!

We are proud to announce that we have made significant upgrades to our advanced fiber optic infrastructure, allowing us to provide even faster Internet service! We'd like to invite you to experience the Internet in a whole new way with Northland's Internet Service!

PROVIDER VALIDATION METHODOLOGY

Broadband providers maintain their service area data in many different formats, all in varying levels of complexity and granularity. In order to ensure that the data required by the NTIA is standardized across all providers and that it is as accurate as possible, CN translates and formats the data that providers are able to supply into a GIS shapefile and produces maps for the provider to review. The resulting map(s) and review process allow for providers to see their service area in a geographic format – for some providers, this is the first time they have seen maps of their broadband service area. Having the mapped service area allows providers to quickly identify any issues that appear in the data representation, whether the issue is in the data translation into a GIS format or from the original data collection and submission. Often data is provided from various sources and through the review and revision process, local engineers who operate the networks and work in the field are able to ensure that the tabular data that has been submitted is accurate and represents the real-world network extent. Any issues in how the service area is represented on the map(s) are remedied by CN, whether they are additions, removal of service, or any other revisions. Revised maps of service area representations are sent to the provider for review and approval; CN will revise data and return maps as many times as necessary until the provider is in agreement that the map represents their service area as accurately as possible. Once the review process has been completed and final approval of the data is provided, the data is deemed ready for NTIA submission.

Once the data collection has been aggregated at a statewide level, static maps of statewide and county-level availability are produced and made publicly available. In addition, consumers can visit the interactive online tool, My ConnectView, to create customized views of broadband service areas and analyze corresponding demographic information. Leveraging broadband service data on various platforms allows for public users, providers, and other stakeholders to review, scrutinize, and provide feedback on the represented data. This feedback becomes a validation method in itself, as consumers submit inquiries to CN either affirming where service is not available or identifying areas where broadband service is shown on the map, but in actuality is not available. This allows for a follow-up to providers regarding revisions to the data as it is represented; it also allows for CN to

identify locations where on-site visits may be necessary to complete field validation of available services. Public feedback on all forms of mapping products serves as a localized validation method for provider-supplied information and allows CN to resolve inaccuracies as they are identified to ensure that only the highest quality information is provided to stakeholders.

Estimates derived from provider-validated data indicate that approximately 3.15 percent of South Carolina households do not have terrestrial fixed broadband service available, and approximately 0.10 percent of South Carolina households have neither mobile nor fixed broadband service available.

Within rural areas of the state, results derived from provider-validated data indicate that approximately 4.08 percent of rural South Carolina households do not have terrestrial fixed broadband service available, and approximately 0.13 percent of rural South Carolina households have neither mobile nor fixed broadband service available. Please note that the availability estimates presented are based on Census 2010 household information.

The estimates above, in accordance with NTIA's definition of available broadband service as specified in the SBI NOFA, include broadband service with download speeds of at least 768 Kbps and upload speeds greater than 200 Kbps.

In addition, due to the nature of the SBI data collection methodology as defined by the NTIA and based on both census block geographic units and street segment data, the estimates of broadband availability derived from provider-validated data may include an overstatement of the actual number of households with broadband availability. Under the census block-based data collection method, a provider will typically report broadband availability for an entire census block whether its network is present across the whole or only a subset of that census block. This potential overestimation at the census block level can be amplified as the data is aggregated across the entire state.

WIRELESS METHODOLOGY

Broadband Service Availability in Provider's Service Area Wireless Services Not Provided to a Specific Address

Data solicited from a fixed wireless provider to create propagation models include, but are not limited to:

1. The name of the structure.
2. Whether the transmitting device is operational or proposed.
3. The maximum advertised downstream speed, the maximum advertised upstream speed.
4. The typical downstream speed, the typical upstream speed (peak periods for both).
5. The frequency range of spectrum being used (as prescribed by NTIA). This may include (but is not limited to) spectrum authorizations identified within the Federal Communications Commission (FCC) Universal Licensing System (ULS) database or located on the FCC's Spectrum Dashboard.

6. The primary population center(s) being served (for geopolitical boundary reference).
7. The physical address of the transmit site (in the event latitude/longitude is unavailable from the provider this allows a quick reference point for geocoding).
8. Latitude in either Degrees, Minutes, and Seconds and/or in Decimal Degrees (typically received as NAD 27 or NAD 83).
9. Longitude in either Degrees, Minutes and Seconds and/or in Decimal Degrees (typically received as NAD 27 or NAD 83).
10. Antenna pattern (e.g. omnidirectional, 180°, 120°, 90°, etc.).
11. Azimuth of antenna (e.g. 360° with magnetic declination if known).
12. Approximate transmit radius (in feet, miles, or kilometers).
13. Polarity of transmit antenna (Vertical or Horizontal).
14. Transmit antenna gain (in dBi).
15. Line loss (applicable only to providers using coax, heliax, waveguide or other forms of cabling – excludes power-over-Ethernet devices).
16. Mechanical and/or Electrical beam tilt (if applicable).
17. Equipment Manufacturer (allows easy cross-reference against manufacturer's specification sheet).
18. Power output of the transmitting device (if unknown, FCC standards or manufacturer specifications are applied).
19. AMSL at base of tower site.
20. Antenna centerline AGL (height of antenna above ground level measured at the centerline of the actual antenna).
21. Foliage factors (Evergreens/Deciduous and percent of ground cover).
22. Ground Clutter (primarily used in rural areas to account for foliage and in metropolitan areas to account for types and heights of buildings if known).
23. Average gain of receive antenna.
24. Receive antenna is estimated at height above average terrain (HAAT) of 6.2 meters/20 feet.
25. Federal Registration Numbers (if applicable) which may allow opportunities to cross-reference and/or obtain additional data from the FCC's ULS and the **COMmission REgistration System**.

Propagation modeling combines scientific data and empirical mathematical formulation for the characterization of radio wave propagation as a function of frequency, distance, and other conditions. Propagation software(s) typically use the Irregular Terrain Model (also known as Longley-Rice) of radio propagation for frequencies between 20 MHz and 20 GHz. This model is based on electromagnetic theory and statistical analyses of the combination of terrain features and radio measurements, then predicting the median attenuation of a radio signal as a function of distance and the variability of the signal in time and in space. For metropolitan areas, the software can typically be adjusted to use the Okumura-Hata model, which accounts for predicting the behavior of cellular transmissions in areas where buildings are the primary obstructions. The

resulting product from either model depicts a graphical illustration of the theoretical propagation characteristics of a selected frequency range based on defined variables (receiver sensitivity of the home/mobile device, foliage factor, and digital elevation terrain input).

After converting propagation models into a geospatial format, additional processing is completed to remove the small pixels representing service present in the resulting dataset. These areas are initially created based on the parameters entered in the software from the provider equipment information, the underlying data parameters of elevation, hill shade, etc., and the limitations of the software itself to display a broadband service area as accurately as possible. Generally, these random pixel striations appear as a result of signal levels reaching the highest elevated points within the prescribed radius. Typically, while this pixilation anomaly shows legitimate areas where signals can be received, these highly elevated points may have exceedingly sparse populations or are entirely void of population. As a result, and congruent to the *Wireless Technology Methodologies and Business Logic* white paper submitted to NTIA on January 20, 2011, all independent pixels representing service that are less than 0.125 square miles in area have been removed from the geospatial representation of each wireless provider.

BROADBAND INQUIRIES METHODOLOGY

CN collects consumer feedback in the form of broadband inquiries (BBIs). These inquiries represent any type of communication received from the public regarding broadband service. Once BBIs are received across the state, this information is overlaid with the broadband availability information which was collected through the SBI program. This allows for a real-world comparison of the broadband landscape to the information received from broadband inquiries. Consumers submitting these inbound comments and/or inquiries are able to provide information regarding five categories: 1) residents who do not have broadband but want it; 2) residents who have broadband but want a different provider; 3) residents who do not have broadband, but the broadband inventory maps indicate that they do; 4) residents who have broadband but want a faster connection speed; and 5) residents who have broadband but want a less expensive service option.

BBIs are submitted frequently by consumers via the Connect South Carolina website. Inquiries often seek help to identify local broadband provider options, or to learn when a specific provider may be able to provide service to that consumer. Consumer comments also provide information which may help modify maps with actual service area information. The primary objectives of CN regarding these inquiries are 1) to improve the accuracy of the state maps with submitted consumer information and follow-up field research; 2) to provide broadband options to consumers through cooperation with mapped providers and by facilitating new broadband service options; and 3) to map and analyze information from consumers about areas of unmet broadband demand and alternatives to currently mapped services. A prime example of the second option is the utilization of the Rural Utility Service satellite eligibility tool. By simply entering the consumer's address, the CN engineer can quickly determine if the consumer meets the initial qualification status for BIP satellite subsidies.

New BBIs are assigned to either the GIS department or the Engineering & Technical Services (ETS) team depending on the category entered by the consumer on the website submission form. The GIS or ETS team members respond to each inquiry according to the information entered by the consumer. Many BBIs can be resolved through desktop research; however, if a BBI requires research in the field, the assigned ETS team member conducts such research when performing field validations in the area of the inquiry, or at another such time as is practical and appropriate. GIS and ETS team members respond to and conclude BBIs via telephone contact and/or e-mail communication.

The broadband inquiry process has been implemented in each of the CN state programs with successful results. Altogether CN has received over 18,839 broadband inquiries since 2007, allowing the state programs to evaluate each inquiry for broadband demand and data verification. These inquiries are continuously examined against current broadband availability, updated every six months, to determine if previously unserved households have been expanded to and can now receive broadband at their residence. This database of broadband inquiries has also allowed the CN state programs to aggregate demand in concentrated areas to show providers the exact locations where the population has made it clear that they would purchase broadband if it was made available to them. Providers in the states have responded to this process and have expanded to areas knowing that their investment will be worthwhile. Data verification methods have also proven successful, as the state programs have been able to show those inquiries that indicate the broadband service areas are misrepresented on the map to providers, who then verify where service cannot reach in regard to that residence(s). The broadband coverage in these states has been altered to create a more accurate map based on the inquiries submitted by the public.

During this reporting period, the Connect South Carolina project has received a total of 7 inquiries (145 grant inception to date). As more inquiries are submitted to Connect South Carolina, a more thorough validation of the broadband landscape can be performed, while also allowing providers to see which areas have a high demand for broadband adoption.

MY CONNECTVIEW METHODOLOGY

My ConnectView is an interactive online mapping tool for viewing, analyzing, and validating broadband data. Developed using Esri's ArcGIS for Server and Adobe's Flex Framework and hosted and maintained by Connected Nation, My ConnectView is a multi-functional, user-friendly way for local leaders, policymakers, consumers, and technology providers to devise a plan for the expansion and adoption of broadband.

First and foremost, My ConnectView allows consumers to locate their residence and identify providers that offer broadband Internet service to that location. The interactive platform allows for users to build and evaluate broadband expansion scenarios using a wealth of data, including several coverage analysis layers, speed analyses, Community Anchor Institutions, and tools to search and export household demographic information, as well as extract data in GIS, spreadsheet, and/or PDF formats.

My ConnectView also features more interactive data layers and additional tools than ever before to allow the consumer to explore the broadband data. My ConnectView provides consumers with the ability to print, e-mail, and provide feedback on the broadband data displayed on the interactive map. Through the collection of this feedback, a visual demand for broadband is presented. This visualization allows the CN state programs the ability to validate the broadband availability for accuracy. If residents within a region state they are without broadband, but the interactive map shows otherwise, this allows CN to approach the providers within that area in an effort to trim down their coverage to more accurately represent real-world availability on the ground.

The Connect South Carolina project launched My ConnectView on April 2, 2012, and has received 428 visits this reporting period; to date the interactive mapping application has received 7,690 visits.

SPEED TEST METHODOLOGY

The 133 speed tests that are represented in the Connect South Carolina Speed Test Report during this reporting period (641 grant inception to date) are the result of a partnership between CN and Ookla Net Metrics. Utilizing this relationship increases the level of confidence in the data being collected and provides for a far greater sample size than could be collected by a single testing site.

Ookla owns and operates Speedtest.net, as well as develops and deploys speed tests, such as the Connect South Carolina speed test website, for partners around the world. This network of sites that is developed and run on its testing technology provides Ookla with a vast dataset that, due to the variability of geographic information collected across the varying speed test sites, is geocoded utilizing Geo-IP technology. This technology allows for tests to be geocoded to points of aggregation, typically larger nodes across provider networks. While there are hundreds of thousands of tests that have been conducted, the level of aggregation is only sufficient for county-level detail due to the test results being located at these larger nodes and not at an absolute location for each speed test.

In an effort to validate broadband data from the Connect South Carolina project, speed test information is collected throughout the state. Speed tests provide speed information on the path taken through all networks (a provider's network as well as additional networks) a local machine must connect to in order to reach the host test. The benefit of this collection of speed information is two-tiered. First, it allows for a comprehensive dataset of speeds, while also providing Connect South Carolina with the information on where broadband services are available. Second, unlike theoretical speed information which may be received through the data collection process, the use of speed tests provide real-world information on the speeds that currently exist within the state of South Carolina.

PROVIDERS DEEMED NON-VIABLE

The following list of companies represents the remainder of the broadband provider universe that was originally identified as complete for outreach to begin for the State Broadband Initiative. These providers are not included in the Data Package for the April 2013 submission because they have been deemed non-eligible under the parameters and guidance of the SBI grant program. This list of companies includes, but is not limited to: providers offering service but below the current definition of broadband, those that have gone out of business, technology consulting firms, infrastructure or network construction companies, non-facilities based general resellers, etc.

	Company Name	URL	Comments
1	ACSinc.net	www.acsinc.net	This company does not provide residential Internet service.
2	Aero Networks	www.aeronetworks.net	This company does not provide Internet services in the state.
3	Aerolina Wireless Networks	www.aerolina.com	This company provides commercial services only.
4	Airespring, Inc.	www.airespring.com	This company is a non-facilities-based reseller.
5	Airimba	website not operational - www.airimba.com	This provider offers service to select MDUs.
6	Beyond Communications	www.discoverbeyond.com	This provider offers service to select MDUs and HOAs, but not to public communities; non-responsive to multiple attempts.
7	Birch Communications	www.birch.com	This company does not provide residential Internet service.
8	Broadstar	www.broadstar.com	This provider offers service to select MDUs.
9	Broadview Networks Holdings, Inc.	www.broadviewnet.com	Non-facilities-based reseller to businesses.
10	Community Connect	unknown	This company does not provide residential Internet services.
11	Contractdata.net	n/a	This company is out of business.

12	County of Oconee	www.oconeefocus.com	BIP recipient promotes the construction of a fiber optic broadband network in the county.
13	Digital Bridge	www.bridgemaxx.com	This company does not provide Internet services in the state.
14	Genesis Telecommunications	www.genesistelcom.com	Dial-up services in Greenwood only.
15	Global Crossing Telecommunications, Inc.	http://www.globalcrossing.com	Acquired by another company.
16	Grand Strand Communications	n/a	This company is out of business.
17	Hickory Tech Corporation	www.enventis.com	B2B services.
18	Hotwire Communications	www.gethotwired.com	Offers residential service to one multi-dwelling unit.
19	LightEdge Solutions, Inc.	www.lightedge.com	Illinois provider; no service in SC.
20	Lightyear Network Solutions, LLC	www.lightyear.net	Non-facilities-based reseller.
21	Main Street Wireless	http://www.mainstreetsc.com	Provider may no longer be in business.
22	MegaPath Inc.	www.megapath.com	This company does not provide Internet services in the state.
23	Metropolitan Telecommunications Holding Company	www.mettel.net	Non-facilities-based reseller of business services.
24	Net Doctors	www.netmds.com	This company does not offer high-speed Internet; dial-up only.
25	New Edge Network, Inc.	www.newedgenetworks.com	Acquired by Earthlink. Company does not offer residential service; resells backhaul.
26	NuVox, Inc.	n/a	Acquired by another company.

27	Open Range Communications, Inc.	http://www.openrangecom.com	No longer in business.
28	PAETEC Communications, Inc.	http://www.paetec.com/	Acquired by another company.
29	Pee Dee Net	website not operational - www.pdnet.net	This company does not provide residential Internet services.
30	Personally Complete	www.personallycomplete.com	This company does not provide Internet access.
31	Pine Tree Cablevision	www.ptc-me.net	This company is out of business.
32	PM Broadband	www.pmc.com	This company is out of business.
33	Qwest Communications Company, LLC	www.qwest.net	Acquired by CenturyLink.
34	Shentel Converged Services, Inc.	www.shentel.com	This company is a private cable provider serving a few campuses and related MDUs, but not public residences.
35	Techcore Consultants II	www.almega.com	This company is no longer in business in South Carolina.
36	TeleSouth Wireless	www.telesouth1.com	The company appears to be out of business.
37	Telovations, Inc.	www.telovations.com	This company does not provide residential Internet services.
38	Tri-County Electric	www.tri-countyelectric.net	This company does not provide residential Internet services.
39	University Corporation for Advanced Internet Development	www.internet2.edu	This consortium is a BIP/BTOP recipient with no Internet network.
40	WilTel Communications, LLC.	n/a	Acquired by Level 3.
41	WP Media	www.wpmedia.com	This company is a consulting firm.
42	Zayo	www.zayo.com	Not a broadband provider in this state.

APPENDIX A: BROADBAND PROVIDER LOG



Broadband Provider Log

Complete	100
Non-Responsive/Refused	1
In Progress	1
Reseller Providing Data	0
Count of Datasets by Status	102
Total Unique Providers Represented	46

Provider Name	Platform	Status	NDA Execution Date	Notes
AT&T Inc.	DSL	Data Added to Statewide Inventory	12/16/2009	[FEB-14-12 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission.
AT&T Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/16/2009	[FEB-13-13 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission.
Atlantic Broadband, LLC	Cable	Data Added to Statewide Inventory	2/3/2010	[FEB-11-13 Matthew Brunt] Change: Provider expanded cable coverage area.
CenturyLink	DSL	Data Added to Statewide Inventory	12/4/2009	[FEB-14-13 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission.
Charter Communications, Inc.	Cable	Data Added to Statewide Inventory	12/15/2009	[FEB-14-13 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission.
Electronics Service Company of Hamlet, LLC	Fixed Wireless	Data Added to Statewide Inventory	3/24/2010	[FEB-19-13 Matthew Brunt] Change: Provider added one tower which provides Tier 5 download speeds.
Farmers Telephone Cooperative, Inc.	Fiber	Data Added to Statewide Inventory	1/22/2010	[FEB-11-13 Matthew Brunt] Change: Provider expanded fiber coverage.
Farmers Telephone Cooperative, Inc.	Fiber	Data Added to Statewide Inventory	1/22/2010	[FEB-11-13 Matthew Brunt] Change: Provider expanded fiber coverage.
Farmers Telephone Cooperative, Inc.	Mobile Wireless	Data Added to Statewide Inventory	1/22/2010	[FEB-11-13 Matthew Brunt] Change: Provider expanded mobile coverage.
Frontier Communications Corporation	DSL	Data Added to Statewide Inventory	1/22/2010	[FEB-18-13 Matthew Brunt] Change: Provider added new DSLAM locations.
Horry Telephone Cooperative, Inc.	DSL	Data Added to Statewide Inventory	1/22/2010	[JAN-17-13 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission.
Horry Telephone Cooperative, Inc.	Cable	Data Added to Statewide Inventory	1/22/2010	[JAN-17-13 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission.
Horry Telephone Cooperative, Inc.	Fiber	Data Added to Statewide Inventory	1/22/2010	[JAN-17-13 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission.
Horry Telephone Cooperative, Inc.	Mobile Wireless	Data Added to Statewide Inventory	1/22/2010	[JAN-17-13 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission.
Leap Wireless International, Inc.	Mobile Wireless	Data Added to Statewide Inventory	4/6/2010	[FEB-12-13 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission.
Northland Communications Corp.	Cable	Data Added to Statewide Inventory		[FEB-11-13 Matthew Brunt] Change: Provider changed technology type to 40. Speeds upgraded to Tier 7 download and Tier 5 upload, and provider expanded cable coverage.
Skycasters	Satellite	Data Added to Statewide Inventory	10/16/2012	[DEC-04-12 Matthew Brunt] Correction: Initial submission of provider's coverage, but they were in service previously.
Sprint Nextel Corporation	Mobile Wireless	Data Added to Statewide Inventory	1/14/2010	[FEB-12-13 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission.
T-Mobile USA, Inc.	Mobile Wireless	Data Added to Statewide Inventory	1/8/2010	[FEB-17-13 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission.
TDS Telecommunications Corporation	DSL	Data Added to Statewide Inventory	1/27/2010	[FEB-20-13 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission.

Time Warner Cable Inc.	Cable	Data Added to Statewide Inventory	12/21/2009	[AUG-20-12 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission. Time Warner has changed their reported provider name to "Time Warner Cable Inc." and their FRN to 0007556251.
Verizon South Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/14/2009	[FEB-13-13 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission.
West Carolina Rural Telephone Cooperative, Inc.	Fiber	Data Added to Statewide Inventory	1/22/2010	[JAN-17-13 Matthew Brunt] Change and Correction: Provider indicated that some fiber coverage was being displayed within city limits incorrectly. Provider also upgraded speeds to tier 8 download.
Conterra Ultra Broadband Holdings	Backhaul	Backhaul Provider Only Processing Complete	11/8/2011	
Level 3 Communications, LLC	Backhaul	Backhaul Provider Only Processing Complete	12/14/2009	
Hughes Network Systems, LLC	Satellite	Speed Only Update; Data Processing Complete	2/5/2010	[MAR-06-13 Matthew Brunt] Change: Provider now offers tier 7 download speeds.
West Carolina Rural Telephone Cooperative, Inc.	DSL	Speed Only Update; Data Processing Complete	1/22/2010	[FEB-19-13 Matthew Brunt] Change: Provider upgraded speeds to tier 8 download.
Windstream Communications	DSL	Speed Only Update; Data Processing Complete	1/20/2010	[MAR-01-13 Matthew Brunt] Change and/or Correction: Provider sent updated speeds for portions of their service area.
Comcast Cable Communications, LLC	Cable	Approval for Update Not Received – Data Still Submitted	12/7/2009	[FEB-20-13 Matthew Brunt] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2013 submission.
AT&T Inc.	Backhaul	No Update to Provide	12/16/2009	
CenturyLink	Backhaul	No Update to Provide	12/4/2009	
Charter Communications, Inc.	Backhaul	No Update to Provide	12/15/2009	
Chesnee Telephone Company, Inc.	Cable	No Update to Provide	1/25/2010	
Chesnee Telephone Company, Inc.	DSL	No Update to Provide	1/25/2010	
Clearwire Corporation	Mobile Wireless	No Update to Provide	3/17/2011	
Countrywide Wireless	Fixed Wireless	No Update to Provide		
DeltaCom, Inc.	Backhaul	No Update to Provide	2/16/2010	
Family View CableVision	Cable	No Update to Provide		
Farmers Telephone Cooperative, Inc.	Backhaul	No Update to Provide	1/22/2010	
Farmers Telephone Cooperative, Inc.	Backhaul	No Update to Provide	1/22/2010	
Farmers Telephone Cooperative, Inc.	DSL	No Update to Provide	1/22/2010	
Farmers Telephone Cooperative, Inc.	DSL	No Update to Provide	1/22/2010	
Frontier Communications Corporation	Fiber	No Update to Provide	1/22/2010	
Hargray Communications Group, Inc.	Backhaul	No Update to Provide	1/25/2010	
Hargray Communications Group, Inc.	Backhaul	No Update to Provide	1/25/2010	
Hargray Communications Group, Inc.	Backhaul	No Update to Provide	1/25/2010	
Hargray Communications Group, Inc.	Cable	No Update to Provide	1/25/2010	
Hargray Communications Group, Inc.	Cable	No Update to Provide	1/25/2010	
Hargray Communications Group, Inc.	DSL	No Update to Provide	1/25/2010	
Hargray Communications Group, Inc.	DSL	No Update to Provide	1/25/2010	
Hargray Communications Group, Inc.	DSL	No Update to Provide	1/25/2010	
Harron Communications LP	Cable	No Update to Provide		
Home Telephone Company, Inc.	Backhaul	No Update to Provide	1/22/2010	
Home Telephone Company, Inc.	Backhaul	No Update to Provide	1/22/2010	
Home Telephone Company, Inc.	Cable	No Update to Provide	1/22/2010	
Home Telephone Company, Inc.	Cable	No Update to Provide	1/22/2010	
Home Telephone Company, Inc.	DSL	No Update to Provide	1/22/2010	
Home Telephone Company, Inc.	Fiber	No Update to Provide	1/22/2010	
Home Telephone Company, Inc.	Fiber	No Update to Provide	1/22/2010	
Horry Telephone Cooperative, Inc.	Backhaul	No Update to Provide	1/22/2010	
NTInet, Inc	Fixed Wireless	No Update to Provide	2/9/2010	
Palmetto Rural Telephone Cooperative, Inc.	DSL	No Update to Provide	1/22/2010	
Palmetto Rural Telephone Cooperative, Inc.	DSL	No Update to Provide	1/22/2010	
Pee Dee Online Consulting	Fixed Wireless	No Update to Provide	2/24/2010	
Piedmont Rural Telephone Cooperative, Inc.	DSL	No Update to Provide	1/28/2010	
Piedmont Rural Telephone Cooperative, Inc.	Mobile Wireless	No Update to Provide	1/28/2010	
Rock Hill Telephone Company	Backhaul	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	Backhaul	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	Backhaul	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	Cable	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	Cable	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	Cable	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	Cable	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	DSL	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	DSL	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	DSL	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	DSL	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	Fiber	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	Fiber	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	Fiber	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	Fiber	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	Fixed Wireless	No Update to Provide	1/25/2010	
Rock Hill Telephone Company	Mobile Wireless	No Update to Provide	1/25/2010	
Sandhill Telephone Coop., Inc.	Backhaul	No Update to Provide	1/25/2010	
Sandhill Telephone Coop., Inc.	DSL	No Update to Provide	1/25/2010	
Skyrunner, Inc.	Fixed Wireless	No Update to Provide		
Southern Coastal Cable, LLC	Cable	No Update to Provide	6/30/2010	
Spacenet, Inc.	Satellite	No Update to Provide		

Sprint Nextel Corporation	Backhaul	No Update to Provide	1/14/2010	
TDS Telecommunications Corporation	Backhaul	No Update to Provide	1/27/2010	
tw telecom of south carolina, llc	Backhaul	No Update to Provide	4/26/2010	
United States Cellular Corporation	Mobile Wireless	No Update to Provide	2/15/2011	
ViaSat, Inc.	Satellite	No Update to Provide	1/8/2010	
West Carolina Rural Telephone Cooperative, Inc.	Backhaul	No Update to Provide	1/22/2010	
WideOpenWest Finance, LLC	Cable	No Update to Provide		[MAR-07-13 Matthew Brunt] Change: WideOpenWest Finance, LLC acquired Knology; they are now a broadband provider for the state.
ATG Communications, LLC	Backhaul	No Update Provided – Use Last Submission Data	1/14/2010	
Chester Telephone Company	Backhaul	No Update Provided – Use Last Submission Data	1/25/2010	
Chester Telephone Company	DSL	No Update Provided – Use Last Submission Data	1/25/2010	
Chester Telephone Company	Fiber	No Update Provided – Use Last Submission Data	1/25/2010	
Chester Telephone Company	Cable	No Update Provided – Use Last Submission Data	1/25/2010	
Windstream Communications	Backhaul	No Update Provided – Use Last Submission Data	1/20/2010	
Windstream Communications	Backhaul	Solicited Initial Data	1/20/2010	
Atlantic Tele-Network, Inc.	Mobile Wireless	Non-Responsive to Multiple Attempts		In addition to multiple contact attempts made during previous mapping submission periods, 5 contact attempts were made this period.