

**OFFICIAL OCTOBER 2010 UPDATE SUBMISSION TO
THE NATIONAL TELECOMMUNICATIONS AND INFORMATION
ADMINISTRATION UNDER THE
STATE BROADBAND DATA AND DEVELOPMENT GRANT PROGRAM
FOR THE STATE OF IOWA**



October 1, 2010

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COVER LETTER

September 29, 2010

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

Dear Ms. Neville:

As the Designated Entity, and in partnership with the Iowa Utilities Board (IUB), please accept this submission from Connected Nation on behalf of the state of Iowa's State Broadband Data and Development (SBDD) Grant Program, Connect Iowa.

These artifacts should be found to be compliant with the October 1, 2010, 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 Iowa: October 1, 2010

<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	n/a DataPackage.xls	Accuracy and Verification Report Worksheets of Contact Information, Data Dictionary, and Provider Summary Table
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 initial SBDD data submission for the Connect Iowa program, on May 31, 2010. Specifically, these new requirements are:

Census Blocks

This dataset should be found to be in full compliance with the request to use Census 2000 geography with the availability of wireline broadband services in census blocks with area of no greater than two square miles.

SBDD Data Transfer Model

The submission of the broadband dataset for October 1, 2010, is contained within the SBDD Data Transfer Model as released on the Grantee Workspace on September 9, 2010. All efforts have been made to comply with formatting, domain, and metadata requirements to include as much information on each provider as possible.

It is therefore with great pleasure that the Connect Iowa program submits this first, semi-annual data update under the State Broadband Data and Development Grant Program. We will continue in partnership with IUB to implement the joint purposes of the Recovery Act and the BDIA by the gathering of comprehensive and accurate state-level broadband mapping data, developing state-level broadband maps, aiding in the development and maintenance of a national broadband map, and undertaking statewide initiatives for broadband planning.

As the submission of this semi-annual data update is concentrated on the delivery of Broadband Service Availability and Community Anchor Institutions (CAI) data, we provide the following insight into the compilation of these datasets contained herein.

Broadband Service Availability — Provider Outreach

This data update submission under the SBDD includes the participation of approximately 88.8% of the Iowa provider community, or 183 of 206 total providers. Of the 183 participating providers, 37 supplied an update to their network or coverage area(s), while 106 have reported no change. The remaining 40 represents providers who supplied initial submission data but were non-responsive in the October 2010 update effort or could not verify coverage areas at the time of this submission; therefore their initial dataset is being put forward as part of this compilation. A complete roster by provider depicting participation status and contact record is contained herein. Of the 23 providers that are not represented in the attached datasets, 3 have refused to participate in the voluntary

program. The remaining 20 providers are currently in some form of progress toward data submission but were not able to either submit or verify coverage areas at the time of this submission.

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

At the program's inception, Connect Iowa launched a website to create awareness about the initiative. Connectiowa.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. These program stakeholders are an essential component in the larger Connect Iowa data validation methodology.

As an indicator of stakeholder penetration, the Connect Iowa website encountered 8,098 unique visits during this reporting period, (11,417 total to date for the life of the grant which was awarded on January 1, 2010). Additionally, this pronounced Web activity netted 104 broadband inquiries over this same reporting period (119 grant inception to date). The website also provides the BroadbandStat application, which allows the consumer to confirm or dispute the coverage represented on the broadband inventory map. These consumer initiated actions are facilitated through the Connect Iowa website and offer the citizens a vehicle to provide information regarding availability in their respective service area, either in affirmation or contest of the reported data represented in the Connect Iowa mapping artifacts. Since the initial data collection and release of corresponding maps, feedback in the form of broadband inquiries has allowed Connected Nation to identify additional areas that are in need of field validation, which is scheduled as soon as possible. Additional information on field validation can be found in the Field Validation Narrative.

Community Anchor Institutions

Connect Iowa 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 SBDD NOFA Technical Appendix.

In conjunction with the IUB, significant additional research and outreach was conducted during this data update reporting period by Connect Iowa to continue identification of existing, centralized sources for CAI connectivity data. Outreach was coordinated with the IUB to distribute the CAI survey to institutions throughout the state. The IUB assisted in the outreach effort by providing their contact information for their CAI partners. Connect Iowa has identified and processed a list of CAI through a combination of datasets including publicly available and privately held datasets from online sources, including:

- The National Public Safety Information Bureau
<http://www.safetysource.com>

- American Hospital Association
http://www.hospitalconnect.com/hospitalconnect_app/hospitalfinder
- National Center for Education Statistics
Public Schools: <http://nces.ed.gov/ccd/schoolsearch/>
Private Schools: <http://nces.ed.gov/surveys/pss/privateschoolsearch/>
Colleges: <http://nces.ed.gov/collegenavigator>
Libraries: <http://nces.ed.gov/surveys/libraries/librarysearch/>
- United States Fire Administration
<http://www.usfa.dhs.gov/applications/census/search.cfm>

As of this semi-annual reporting period, a total of 99.4% Iowa CAI were identified, addressed, and geocoded. As is evident in the datasets being conveyed, while we were able to document institutions and the related addresses, the connectivity data collected in most categories remains less than complete. From our work in Iowa, as well as other states, we recognize the great value of this data to future collaboration efforts within the state, and to the accomplishment of the purposes in the recently released National Broadband Plan. We plan to continue to bring best practices to the Iowa efforts, along with an investment of both human and technical resources required to reach these goals in advance of the submission of the semi-annual update of this data due in April 2011.

In acquiring both broadband availability and CAI data within the state of Iowa, Connected Nation made special effort to engage all federally recognized tribal lands in the area covered by the Iowa SBDD grant. According to the U.S. Department of the Interior — Bureau of Indian Affairs, there is one Native-American land, Sac & Fox Tribe of the Mississippi, in the area covered by the Iowa SBDD grant. Connected Nation has successfully contacted this tribe as part of the SBDD program and is accounting for the resulting data in the creation of the artifacts for this submission.

The Connect Iowa 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 Iowa, as well as the United States through contribution to the National Broadband Map. Please accept this submission by Connected Nation and on behalf of Krista Tanner, Board Member of the Iowa Utilities Board. It is through the partnership that we have formed that we have been able to accomplish this valuable undertaking together. We look forward to the remaining work ahead.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Tom Ferree', written over a faint blue line.

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

DATA ACQUISITION: IOWA COMMUNITY ANCHOR INSTITUTIONS

In this second reporting period of the SBDD, Connect Iowa, working in coordination with the Iowa Utilities Board (IUB) 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 SBDD NOFA Technical Appendix. Connect Iowa has focused efforts during this reporting period on conducting outreach and raising awareness of this important project.

Connect Iowa 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 Iowa through ESRI ArcGIS software.

Connect Iowa is utilizing a customized online survey hosted through SurveyMonkey, with a landing page on the Connect Iowa website, that was developed during the first reporting period. This survey in combination with a customized data-gathering spreadsheet was distributed to a targeted list of CAI throughout the state. Connect Iowa 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 SBDD NOFA.

Survey Link:

http://www.connectiowa.org/mapping/Community_Anchor_Institution_Data_Collection.php

Connect Iowa continues to conduct 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 Iowa and the IUB working together to identify CAI contacts among all CAI categories in an effort to distribute and promote the online survey and raise awareness of the importance of CAI broadband connectivity. This coordination has resulted in the identification of key contacts at numerous statewide organizations including the Department of Education, Iowa Community Action Association, Department of Human Services, League of Cities, and the Iowa Hospital Association. This list is just a small representation of the long list of contacts that Connect Iowa has formed and will continue to utilize over the coming months leading up to the next reporting period. Connect Iowa will be working closely with these organizations over the coming months to reinvigorate and build upon the successes that we were able to achieve during the first reporting period. Connect Iowa also continues to operate a CAI hotline to answer questions related to the survey tools and CAI data collection.

Connect Iowa 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 Connect Iowa interactive map.

The greatest challenge faced in this reporting period has been the difficulty in securing CAI broadband connectivity data from institutions that did not respond during the first reporting period. Connect Iowa will continue its ongoing work with Iowa's key CAI contacts in an effort to raise awareness of this project among Iowa CAI. Future efforts will involve targeted planning with

representatives from each of the CAI categories, as well as a structured outreach to each category, supported by messaging and meetings showcasing the value of these data for planning and collaboration purposes. Targeted outreach efforts will be conducted through phone calls and industry/trade association meetings and newsletters, among other methods.

SBDD DATA TRANSFER MODEL METHODOLOGY

The submission of the broadband dataset for October 1, 2010, is contained within the SBDD Data Transfer Model as released on the Grantee Workspace on September 9, 2010. Connected Nation 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.

In addition to the narratives and methodologies contained herein, 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 SBDD Data Transfer Model for the state of Iowa.

Inventory of Deliverables, Connect Iowa: October 1, 2010

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The provider data collected by Connected Nation on behalf of the state of Iowa have been formatted per the given specifications and uploaded into the appropriate feature classes of the SBDD Data Transfer Model. Wireline availability is contained within census blocks and road segments, wireless availability is contained as polygons of coverage areas, middle-mile connections and community anchor institutions are contained as point data, and the subscriber weighted nominal speed (if available) is contained within the overview feature class. 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.

IOWA FIELD VALIDATION NARRATIVE

Iowa is comprised of 99 counties, encompasses 56,272 square miles and boasts the largest number of broadband providers (206) out of all of the states where Connected Nation is engaged. The sheer number of broadband providers has given rise to an increased focus for field validation efforts in the state. Connected Nation has conducted in-field validation tests against 31 of Iowa's 206 broadband providers representing a 15.05% field validation rate through Q3, 2010.

John Determan, Layne Wagner, Chip Spann, Mike Iverson, Jill Lindgren, and Terry Holmes completed 64 field validation tests such as (a) spectrum analysis studies of licensed and unlicensed frequencies, (b) cross-referencing data submissions against actual findings (e.g. physical coordinates, grades, throughput speeds, etc.); and (c) identification and photography of wire-line attributes (such as remote terminals, DSLAMs, central office switching stations, etc.).

Connected Nation's staff also conducted cross-reference of public domain and compared that data to those contributed by the broadband providers. This included review of the Federal Communications Commission Form 477 data, the federal Communications Commission's "spectrum dashboard" at www.reboot.fcc.gov, the NTIA and USDA/RUS BIP & BTOP awards, Federation of Internet Service Providers of America, the Cable Television Fact Book, etc.

Site validation visits occurred in Kalona, Sioux City, Ainsworth, Wellman, Wayland, Keosauqua, Mount Pleasant, Everly, Sioux Center, Lawton, Sanborn, Spencer, Honey Creek, Iowa City, Cedar Falls, Coralville, Shenandoah, College Springs, and other randomly selected locations (such as Wi-Fi hotspots, public libraries, etc.).

Providers whose data has been subjected to stringent field testing includes: AT&T, Iowa Telecom, Hot Spots, Cloudburst 9, Cramer IT, Kalona Cooperative, SparkPlug, Sharon Telephone, IAMO, Wellman Cooperative Telephone, Premier Communications, Danville Mutual Telephone, O'Brien County Communications Agency, MTC Technologies, Cable One, Mutual Telephone of Morning Sun, Fibercomm, Panora Telephone & CATV, Western Iowa Telephone, ICS Advanced, Evertex, Media Com, Long Lines, NetConX, T-Mobile, Verizon, Van Buren Telephone, Qwest, Farmers Merchants Mutual Telephone, and Walnut Telephone.

ACCURACY AND VERIFICATION: METHODOLOGY - PROVIDER VALIDATION

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, Connected Nation 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 Connected Nation, 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; Connected Nation 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 to 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, BroadbandStat, 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 Connected Nation 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 Connected Nation 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 Connected Nation to resolve inaccuracies as they are identified to ensure that only the highest quality information is provided to stakeholders.

DATA VALIDATION: SURVEY RESEARCH

Between June and July 2010, Connect Iowa conducted a statistically significant telephone survey of 803 businesses, to offer as a comparison against the provider-validated statewide broadband inventory. The survey provides an estimate of the percentage of all Iowa businesses and a subset percentage of *rural* Iowa businesses that report that they are unaware of available broadband service at their location. These figures are then compared against broadband availability estimates derived from provider-supplied data to provide a macro-level comparison to the provider-validated data. This test measures how state businesses' awareness of broadband availability compares to provider-validated availability information. Results are reported below.

DATA VALIDATION: METHODOLOGY

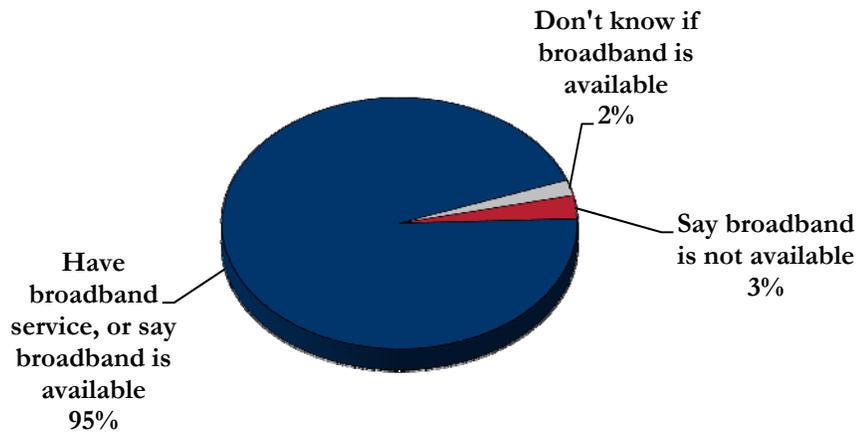
Connect Iowa conducted a random digit dial (RDD) survey of 803 businesses contacted between June 22 and July 19, 2010. Data were collected by telephone through live, computer-assisted interviews, with quotas set

by business size and industry sector to ensure adequate representation of all businesses across the state. Weights were applied to correct for minor variations and ensure that the sample matched U.S. Census estimates of the state’s business establishments, as reported in their County Business Patterns Report. The statewide full sample (n=803) provides a margin of error of $\pm 4.9\%$ at the 95% level of confidence. The full sample of rural businesses (n=394 businesses located in rural counties) provides a margin of error of $\pm 6.8\%$ at the 95% level of confidence. These sample errors account for sample weighting, using the effective sample size. For the purposes of this survey, broadband is defined as “an Internet connection with speeds of 768 kilobits per second or higher in at least one direction.”

Results

Statewide, 3% of Iowa businesses report that broadband service is not available at their location, 2% don’t know if broadband is available, and 95% report with certainty that broadband is available (Figure 1).

Figure 1.
Awareness of broadband availability among Iowa businesses

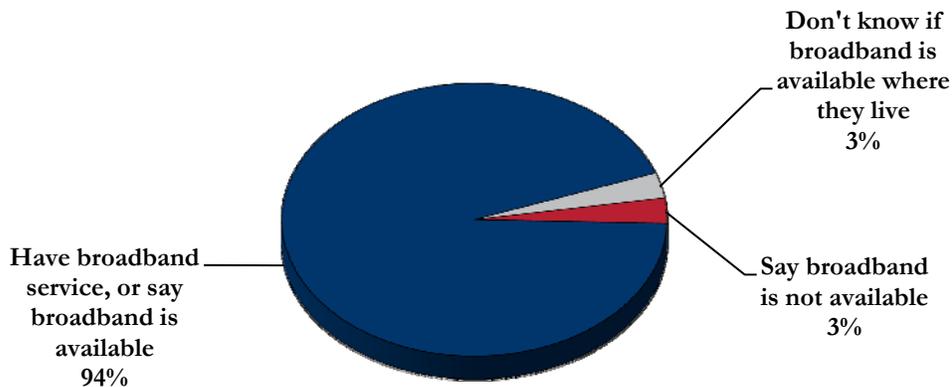


Taking into account the survey’s margin of error, the results estimate that between 0% and 7.9% of Iowa businesses do not have broadband service available. Estimates derived from provider-validated data indicate that approximately 3.84% of Iowa households do not have terrestrial fixed

broadband service available, and approximately 0.38%¹ of Iowa households have neither mobile nor fixed broadband service available.²

Among rural businesses, 3% of respondents report that broadband service is not available at their location, 3% do not know if broadband is available, and 94% report with certainty that broadband is available (Figure 2).

Figure 2.
Awareness of broadband availability among *rural* Iowa businesses



Taking into account the survey’s margin of error, the results estimate that between 0% and 9.8% of rural Iowa businesses do not have broadband service available.

Results derived from provider-validated data indicate that approximately 6.79% of rural Iowa households do not have terrestrial fixed broadband service available, and approximately 0.67%³ of rural Iowa households have neither mobile nor fixed broadband service available.⁴

¹ In accordance with NTIA’s definition of available broadband service as specified in the SBDD NOFA, this estimate includes both terrestrial fixed *and* mobile broadband service, if the service offers download speeds of at least 768 Kbps and upload speeds greater than 200 Kbps.

² Due to the nature of the SBDD 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.

³ Ibid.

⁴ Ibid.

WIRELESS METHODOLOGY

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

Data is solicited from the wireless provider to include, but is not limited to:

1. The name of the structure
2. Whether the transmitting device is operational or proposed
3. The maximum advertised downstream speed and the maximum advertised upstream speed
4. The typical downstream speed and the typical upstream speed (peak periods for both)
5. The frequency range of spectrum being used (as prescribed by NTIA)
6. The primary population center(s) being served (for geopolitical boundary reference)
7. Latitude in either Degrees, Minutes and Seconds and/or in Decimal Degrees (typically received as NAD 27 or NAD 83)
8. Longitude in either Degrees, Minutes and Seconds and/or in Decimal Degrees (typically received as NAD 27 or NAD 83)
9. 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)
10. Antenna pattern (e.g. omni-directional, 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 manufacturers' specification sheet)
18. Power output of the transmitting device (if unknown FCC standards 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 only in metropolitan areas – accounts for types and heights of buildings)

Propagation modeling is an empirical mathematical formulation for the characterization of radio wave propagation as a function of frequency, distance, and other conditions. Propagation software typically uses 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, 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).

BROADBAND INQUIRIES METHODOLOGY

Connected Nation collects consumer feedback in the form of broadband inquiries. These inquiries represent any type of communication received from the public regarding broadband service. Once broadband inquiries are received across the state, this information is overlaid with the broadband availability information which was collected through the SBDD program. This allows for a real-world comparison of the broadband landscape to the information received from broadband inquiries. Broadband inquiries are able to provide three types of information: 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.

Through the collection of broadband inquiries, a visual demand for broadband is presented. This visualization allows Connected Nation the ability to validate broadband availability maps for accuracy. If residents within a region state that they are without broadband, but the broadband inventory maps show otherwise, this allows Connected Nation 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. On the other hand, if there is a region in the state in which broadband is not available, broadband inquiries allow providers close to that region to see where they can successfully expand their broadband networks, leading to a high return on investment. In short, the higher number of inquiries leads to a higher level of certainty in regard to the broadband availability maps. Since the initial data collection and release of corresponding maps, feedback in the form of broadband inquiries has allowed Connected Nation to identify additional areas that are in need of field validation, which are scheduled as soon as possible. Additional information on field validation can be found in the Field Validation Narrative.

The broadband inquiry process has been implemented in several other Connected Nation state programs with successful results. Citizens in the State of Tennessee have submitted over 10,000 broadband inquiries since 2007, allowing the Connected Tennessee program to evaluate each inquiry for broadband demand and data verification. These inquiries are continuously examined against current broadband availability, updated every three months, to determine if previously unserved households have been expanded to and can now receive broadband access at their residence. This database of broadband inquiries has also allowed Connected Tennessee 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 state 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 Connected Tennessee has 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 Tennessee has been altered to create a more accurate map based on the inquiries submitted by the public.

During this reporting period, the Connect Iowa project has received a total of 104 inquiries (119 grant inception to date). As more inquiries are submitted to Connect Iowa, 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.

BROADBANDSTAT METHODOLOGY

BroadbandStat is an online, interactive mapping tool for viewing, analyzing, and validating broadband data. Developed through a partnership with ESRI, the market leader in geographic information system (GIS) software, BroadbandStat 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, BroadbandStat 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 education and population demographics, broadband availability, and research about the barriers to adoption.

On June 18, 2010, BroadbandStat was published to the Connect Iowa website following a previous demonstration for the Iowa Broadband Deployment Governance Board. The public launch webinar for media and stakeholders was held on June 22, 2010. The application has received a total of 4,201 visits to date.

SPEED TEST METHODOLOGY

The 1,501 speed tests that are represented in the Connect Iowa Speed Test Report during this reporting period (2,420 grant inception to date) are the result of a partnership between Connected Nation 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 Iowa speed test website, for partners around the world. This network of sites that is developed and run on their 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 Iowa 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. This collection of speed information is two tiered. First, it allows for a comprehensive dataset of speeds, while also providing Connect Iowa with the information on where broadband services are available. Second, unlike theoretical speed information which was 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 Iowa.



Broadband Provider Log

Complete	210
Non-Responsive/Refused	3
In Progress	18
Count of Datasets by Status	231
Total Unique Providers Represented	206

Provider Name	Platform	Status	NDA Execution Date	Notes
Alliance Communications Cooperative, Inc	Fiber	Data Added to Statewide Inventory	1/28/2010	
Alliance Communications Cooperative, Inc	ILEC/CLEC	Data Added to Statewide Inventory	1/28/2010	
AT&T Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/16/2009	
Aventure Communications	Fixed Wireless	Data Added to Statewide Inventory	4/8/2010	
Bernard Telephone Company, Inc.	ILEC/CLEC	Data Added to Statewide Inventory	5/19/2010	
Board of Water Electric & Communication Trustees of the City of Muscatine	Cable	Data Added to Statewide Inventory	5/14/2010	
Board of Water Electric & Communication Trustees of the City of Muscatine	Fiber	Data Added to Statewide Inventory	5/14/2010	
Cascade Communications Company	ILEC/CLEC	Data Added to Statewide Inventory	1/23/2010	
Cedar Falls Utilities	Cable	Data Added to Statewide Inventory	6/16/2010	
Cedar Falls Utilities	Fiber	Data Added to Statewide Inventory	6/16/2010	
CenturyLink	ILEC/CLEC	Data Added to Statewide Inventory	12/4/2009	
Circle Computer Resources	Fixed Wireless	Data Added to Statewide Inventory	7/6/2010	
Clear Lake Independent Telephone Company	ILEC/CLEC	Data Added to Statewide Inventory	5/6/2020	
Clear Lake Independent Telephone Company	Fiber	Data Added to Statewide Inventory	5/6/2020	
Community Cable Television Agency of O'Brien County	Cable	Data Added to Statewide Inventory	5/5/2010	
Community Cable Television Agency of O'Brien County	Fixed Wireless	Data Added to Statewide Inventory	5/5/2010	
Corn Belt Telephone Company	Fixed Wireless	Data Added to Statewide Inventory	2/15/2010	
Corn Belt Telephone Company	Fiber	Data Added to Statewide Inventory	2/15/2010	
Cox Communications, Inc	Cable	Data Added to Statewide Inventory	1/29/2010	
Dynamic Broadband	ILEC/CLEC	Data Added to Statewide Inventory	5/13/2010	
Dynamic Broadband	Fixed Wireless	Data Added to Statewide Inventory	5/13/2010	
Farmers Mutual Cooperative Telephone Company - Harlan	ILEC/CLEC	Data Added to Statewide Inventory	2/5/2010	
Farmers Mutual Cooperative Telephone Company - Harlan	Fiber	Data Added to Statewide Inventory	2/5/2010	
Farmers Mutual Cooperative Telephone Company - Harlan	Cable	Data Added to Statewide Inventory	2/5/2010	
Frontier Communications Corporation	ILEC/CLEC	Data Added to Statewide Inventory	1/22/2010	
Grand Mound Cooperative Telephone Association	Fiber	Data Added to Statewide Inventory		
Heart of Iowa Communications Cooperative	Fiber	Data Added to Statewide Inventory	1/7/2010	
ImOn Communications, LLC	Cable	Data Added to Statewide Inventory		
ImOn Communications, LLC	Fiber	Data Added to Statewide Inventory		
Kalnet	Fixed Wireless	Data Added to Statewide Inventory	5/21/2010	
Leap Wireless International, Inc.	Mobile Wireless	Data Added to Statewide Inventory	4/6/2010	
LISCO Wireless	ILEC/CLEC	Data Added to Statewide Inventory	1/28/2010	
LISCO Wireless	Fiber	Data Added to Statewide Inventory	1/28/2010	
Modern Cooperative Telephone Company Inc.	ILEC/CLEC	Data Added to Statewide Inventory		
Nexgen Integrated Communications LLC	ILEC/CLEC	Data Added to Statewide Inventory		
Nexgen Integrated Communications LLC	Fiber	Data Added to Statewide Inventory		
Northeast Iowa Telephone Company	Fixed Wireless	Data Added to Statewide Inventory	4/13/2010	
Osage Municipal Communications Utility	Fixed Wireless	Data Added to Statewide Inventory	5/18/2010	
Palmer Mutual Telephone Company	ILEC/CLEC	Data Added to Statewide Inventory	1/21/2010	
Panora Communications Cooperative	Fiber	Data Added to Statewide Inventory	1/29/2010	
Qwest Corporation	ILEC/CLEC	Data Added to Statewide Inventory	1/4/2010	
SpeedNet, LLC	Fixed Wireless	Data Added to Statewide Inventory		
Sprint Nextel Corporation	Mobile Wireless	Data Added to Statewide Inventory	1/14/2010	
Superior Telephone Cooperative	ILEC/CLEC	Data Added to Statewide Inventory	5/24/2010	
T-Mobile USA, Inc.	Mobile Wireless	Data Added to Statewide Inventory	1/8/2010	
Verizon Communications Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/14/2009	
Villisca Farmers Telephone Company	ILEC/CLEC	Data Added to Statewide Inventory	5/20/2010	
Winnebago Cooperative Telecom Association	Fiber	Data Added to Statewide Inventory	1/22/2010	
WTC Communications, Inc.	ILEC/CLEC	Data Added to Statewide Inventory	3/22/2010	
CenturyLink	Backhaul	Backhaul Provider Only Processing Complete	12/4/2009	
LISCO Wireless	Backhaul	Backhaul Provider Only Processing Complete	1/28/2010	
Sprint Nextel Corporation	Backhaul	Backhaul Provider Only Processing Complete	1/14/2010	
Colo Telephone Company	Fiber	Approval for Update Not Received - Use Initial Data	1/28/2010	
Walnut Telephone Company	ILEC/CLEC	Approval for Update Not Received - Use Initial Data	4/14/2010	
Walnut Telephone Company	Cable	Approval for Update Not Received - Use Initial Data	4/14/2010	
Walnut Telephone Company	Fiber	Approval for Update Not Received - Use Initial Data	4/14/2010	
West Liberty Telephone Company	Fiber	Approval for Update Not Received - Use Initial Data	1/25/2010	
MidIowa Net	Fixed Wireless	Provider Approval Solicited		
Midwest Broadband LLC	Fixed Wireless	Provider Approval Solicited	7/6/2010	
McLeodUSA Telecommunications Services, Inc.	ILEC/CLEC	All Data Received		
Eastlight, LLC		Partial Data Received		
Loganet		Provider Gathering Data		
360networks		No Update to Provide	1/19/2010	
Ace Telephone Association		No Update to Provide	3/8/2010	
Alpine Communications, LC		No Update to Provide	2/24/2010	
Aita Municipal Utilities		No Update to Provide	5/18/2010	
Andrew Telephone Company		No Update to Provide	1/19/2010	
Atkins Telephone Company		No Update to Provide	5/14/2010	
Ayrshire Farmers Mutual Telephone Company		No Update to Provide	2/17/2010	
Baldwin Nashville Telephone Company, Inc.		No Update to Provide	2/3/2010	
Bellevue Municipal Utilities		No Update to Provide	5/20/2010	
Brooklyn Mutual Telecommunications Cooperative		No Update to Provide	4/21/2010	
Butler-Bremer Communications		No Update to Provide	4/20/2010	
Cable ONE Inc.		No Update to Provide	12/7/2009	
Casey Mutual Telephone Company		No Update to Provide	5/3/2010	
Center Junction Telephone Company		No Update to Provide	3/12/2010	
Central Scott Telephone Company, Inc.		No Update to Provide	4/22/2010	
Chat Mobility		No Update to Provide	1/19/2010	
City of Hawarden		No Update to Provide	5/20/2010	
CML Telephone Cooperative, Association of Meriden, Iowa		No Update to Provide	1/25/2010	
Comelec Services, Inc.		No Update to Provide	5/7/2010	
Communications 1 Network, Inc.		No Update to Provide	4/14/2010	
Community Digital Wireless, LLC		No Update to Provide	5/6/2010	
Complete Communication Services		No Update to Provide	6/17/2010	
Coon Rapids Municipal Utilities		No Update to Provide	4/22/2010	
Coon Valley Co-op Telephone Association, Inc.		No Update to Provide		

Cooperative Telephone Exchange	No Update to Provide	2/2/2010
Corn Belt Telephone Company	No Update to Provide	2/15/2010
Cumberland Telephone Company	No Update to Provide	4/27/2010
Dixon Telephone Company	No Update to Provide	5/5/2010
Dunkerton Telephone Cooperative	No Update to Provide	4/15/2010
East Buchanan Telephone Cooperative	No Update to Provide	4/30/2010
Ellsworth Cooperative Telephone Association	No Update to Provide	1/25/2010
Evertex Enterprises	No Update to Provide	2/3/2010
F&B Communications, Inc.	No Update to Provide	2/19/2010
Farmers Mutual Cooperative Telephone Company - Harlan	No Update to Provide	2/5/2010
Farmers Mutual Cooperative Telephone Company-Moulton	No Update to Provide	5/21/2010
Farmers Mutual Telephone Company of Stanton, Iowa	No Update to Provide	4/9/2010
Farmers Mutual Telephone Company-Jesup	No Update to Provide	4/20/2010
Farmers Telephone Company-Essex	No Update to Provide	1/27/2010
Fenton Co-Op Telephone Company	No Update to Provide	4/16/2010
Fibernet Communications, LLC	No Update to Provide	3/9/2010
Goldfield Access Network, L.C.	No Update to Provide	1/22/2010
Griswold Cooperative Telephone Company	No Update to Provide	4/21/2010
Harlan Municipal Utilities	No Update to Provide	5/5/2010
Harmony Telephone Company	No Update to Provide	1/12/2010
Hawkeye Telephone Company	No Update to Provide	2/12/2010
Hickory Tech Corporation	No Update to Provide	2/2/2010
Hospers Telephone Exchange, Inc.	No Update to Provide	1/11/2010
Huxley Communications Cooperative	No Update to Provide	1/25/2010
IAMO Telephone Company	No Update to Provide	1/25/2010
Independence Telecommunications Utility	No Update to Provide	4/9/2010
Internet Consulting Services, LLC	No Update to Provide	5/19/2010
Iowa Connect, Inc.	No Update to Provide	5/12/2010
Iowa Telecom	No Update to Provide	6/18/2010
KDSC, Inc.	No Update to Provide	5/18/2010
KeyOn Communications, Inc.	No Update to Provide	10/15/2009
Keystone Farmers Cooperative Telephone Company	No Update to Provide	4/12/2010
La Motte Telephone Company, Inc.	No Update to Provide	2/16/2010
Laurens Municipal Communications Utility	No Update to Provide	6/2/2010
Lenox Municipal Utilities	No Update to Provide	4/20/2010
Lone Rock Cooperative Telephone Company	No Update to Provide	2/15/2010
Long Lines	No Update to Provide	5/4/2010
Lost Nation-Elwood Telephone Company	No Update to Provide	4/13/2010
Mabel Cooperative Telephone Company	No Update to Provide	4/8/2010
Mahaska Communication Group	No Update to Provide	5/10/2010
Manning Municipal Communication & Television System Utility	No Update to Provide	4/22/2010
Marne & Elk Horn Telephone Company	No Update to Provide	2/11/2010
Martelle Cooperative Telephone Association	No Update to Provide	5/5/2010
Mediacom Iowa, LLC	No Update to Provide	1/12/2010
Mediapolis Telephone Company	No Update to Provide	4/14/2010
Miles Cooperative Telephone Association	No Update to Provide	5/17/2010
Milford Cable TV Inc.	No Update to Provide	4/21/2010
Minburn Communications	No Update to Provide	4/7/2010
Minerva Valley Telephone Cablevision, Inc.	No Update to Provide	4/7/2010
Mutual Telephone Company	No Update to Provide	1/25/2010
Mutual Telephone Company of Morning Sun, Iowa	No Update to Provide	5/5/2010
NetConx	No Update to Provide	4/6/2010
New Ulm Telecom, Inc.	No Update to Provide	3/10/2010
North English Cooperative Telephone Company	No Update to Provide	5/12/2010
Northwest Telephone Cooperative Association	No Update to Provide	2/17/2010
Onslow Cooperative Telephone Association	No Update to Provide	2/3/2010
Oran Mutual Telephone Company	No Update to Provide	2/8/2010
Palo Cooperative Telephone Association	No Update to Provide	5/19/2010
Panora Communications Cooperative	No Update to Provide	1/29/2010
Partner Communications Cooperative	No Update to Provide	5/15/2010
Prairie iNet	No Update to Provide	3/16/2010
Prairieburg Telephone Company, Inc	No Update to Provide	3/25/2010
Preston Telephone Company	No Update to Provide	2/5/2010
Readlyn Telephone Company	No Update to Provide	2/23/2010
River Valley Telecommunications Coop	No Update to Provide	3/23/2010
Rockwell Cooperative Telephone Association	No Update to Provide	5/12/2010
Royal Telephone Company	No Update to Provide	2/12/2010
Scranton Telephone Company	No Update to Provide	2/1/2010
Sharon Telephone Company	No Update to Provide	5/20/2010
Sioux Valley Wireless	No Update to Provide	6/7/2010
Spencer Municipal Utilities	No Update to Provide	2/18/2010
Spring Grove Cooperative Telephone Co	No Update to Provide	
Springville Cooperative Telephone Association, Inc.	No Update to Provide	2/15/2010
Sully Telephone Association Inc	No Update to Provide	4/28/2010
Templeton Telephone Company	No Update to Provide	3/12/2010
Terril Telephone Cooperative	No Update to Provide	2/12/2010
Titonka Telephone Company	No Update to Provide	5/4/2010
Traer Municipal Utilities	No Update to Provide	4/14/2010
USA Communications	No Update to Provide	1/27/2010
Van Buren Telephone Co Inc	No Update to Provide	1/26/2010
Van Home Cooperative Telephone Company	No Update to Provide	5/18/2010
Wellman Cooperative Telephone Association	No Update to Provide	5/19/2010
West Iowa Telephone Company	No Update to Provide	1/27/2010
Western Iowa Networks	No Update to Provide	2/22/2010
Winnebago Cooperative Telecom Association	No Update to Provide	1/22/2010
Winnebago Cooperative Telecom Association	No Update to Provide	1/22/2010
WMTel.net	No Update to Provide	5/19/2010
WTC Communications, Inc.	No Update to Provide	3/22/2010
WTC Communications, Inc.	No Update to Provide	3/22/2010
Wyoming Mutual Telephone Company	No Update to Provide	2/19/2010
Algona Municipal Utilities	No Update Provided - Use Initial Data	2/9/2010
Arcadia Telephone Cooperative	No Update Provided - Use Initial Data	5/6/2010
BEVCOMM	No Update Provided - Use Initial Data	6/16/2010
Citizens Mutual Telephone Cooperative	No Update Provided - Use Initial Data	2/26/2010
Clarence Telephone Company, Inc.	No Update Provided - Use Initial Data	
Cooperative Telephone Company	No Update Provided - Use Initial Data	2/2/2010
Cramer IT Consulting, Inc	No Update Provided - Use Initial Data	1/20/2010
Darville Mutual Telephone Company	No Update Provided - Use Initial Data	
Dumont Telephone Company	No Update Provided - Use Initial Data	2/25/2010
Farmers & Merchants Mutual Telephone Company	No Update Provided - Use Initial Data	5/7/2010
Farmers Cooperative Telephone Company-Dysart	No Update Provided - Use Initial Data	3/12/2010
Farmers Mutual Telephone Company - Nora Springs	No Update Provided - Use Initial Data	1/26/2010
FiberComm L.C.	No Update Provided - Use Initial Data	2/15/2010
Grand River Mutual Telephone Corporation	No Update Provided - Use Initial Data	2/5/2010
Hubbard Cooperative Telephone Association and Cable	No Update Provided - Use Initial Data	5/14/2010

I-35 Telephone Company		No Update Provided - Use Initial Data	2/2/2010	
Iowa Network Services		No Update Provided - Use Initial Data	3/5/2010	
Jefferson Telephone Company		No Update Provided - Use Initial Data	1/22/2010	
Kalona Cooperative Telephone Company		No Update Provided - Use Initial Data	1/20/2010	
Killduff Telephone Company		No Update Provided - Use Initial Data		
LaPorte City Telephone Co		No Update Provided - Use Initial Data	2/22/2010	
Lehigh Valley Cooperative Telephone Association		No Update Provided - Use Initial Data	4/16/2010	
Level 3 Communications, LLC		No Update Provided - Use Initial Data	12/14/2009	
Lynnvilleville Telephone Company, Inc.		No Update Provided - Use Initial Data		
Massena Telephone Company		No Update Provided - Use Initial Data	6/18/2010	
Northern Iowa Telephone Company		No Update Provided - Use Initial Data	1/25/2010	
Ogden Telephone Company		No Update Provided - Use Initial Data	3/17/2010	
Olin Telephone Company, Inc.		No Update Provided - Use Initial Data	2/23/2010	
Premier Communications		No Update Provided - Use Initial Data	1/25/2010	
Radcliffe Telephone Company, Inc.		No Update Provided - Use Initial Data	4/26/2010	
Reasnor Telephone Company, LLC		No Update Provided - Use Initial Data		
RingTel Communications		No Update Provided - Use Initial Data	2/17/2010	
Sac County Mutual Telephone Co.		No Update Provided - Use Initial Data	2/15/2010	
Searsboro Telephone Company		No Update Provided - Use Initial Data		
South Slope Cooperative Telephone Company		No Update Provided - Use Initial Data	2/2/2010	
Swisher Telephone Company		No Update Provided - Use Initial Data	2/2/2010	
Webb-Dickens Telephone Corporation		No Update Provided - Use Initial Data	1/25/2010	
Webster-Calhoun Cooperative Telephone Association		No Update Provided - Use Initial Data	5/21/2010	
Western Iowa Telephone Association		No Update Provided - Use Initial Data	4/22/2010	
Amberwave Communications		Solicited Initial Data		
Benton/Linn Wireless, L.L.C.		Solicited Initial Data		
Coon Creek Telecommunications Corp.		Solicited Initial Data		
Grundy Center Municipal Utilities		Solicited Initial Data		
Knology of the Plains, Inc.		Solicited Initial Data		
Mechanicsville Telephone Company		Solicited Initial Data		
Nexgen Integrated Communications LLC		Solicited Initial Data		
Schaller Telephone Company		Solicited Initial Data		
United States Cellular Corporation		Solicited Initial Data		
BitWind Communications, LLC		Refused to Participate		[JUL-13-10 Lindgren] Received an e-mail from a company representative stating he will not participate.
Netconnect		Refused to Participate		[JUL-14-10 Jill Lindgren] Received e-mail from a company representative indicating he has not changed his mind and does not want to participate Email as follows: "Nope, until I see some legislation that prevents the FCC from meddling with the internet, I'm not going to participate. Contact me in 2013 after the transition to a new administration is complete."
RuralWaves Wireless Internet		Refused to Participate		[Aug-5-10 Mark Messer] Spoke with a company representative on the phone and he indicated that he is too busy and is not willing to participate at this time. He indicated he is in the process of trying to sell the company.
DISH Network Corporation		Other	1/27/2010	[SEPT-16-10 Matthew Brunt] Satellite data will not be submitted due to additional information being necessary to show where service is available in the state, rather than submitting the entire state boundary as serviceable area.
Global Crossing Telecommunications, Inc.		Other		[JUL-26-10 Ira Dye] Global Crossing responded to follow-up and, due to legal constraints, they are unable to participate at this time.
Hughes Network Systems, LLC		Other	2/5/2010	[SEPT-16-10 Matthew Brunt] Satellite data will not be submitted due to additional information being necessary to show where service is available in the state, rather than submitting the entire state boundary as serviceable area.
WildBlue Communications, Inc.		Other	1/8/2010	[SEPT-16-10 Matthew Brunt] Satellite data will not be submitted due to additional information being necessary to show where service is available in the state, rather than submitting the entire state boundary as serviceable area.