

OFFICIAL APRIL 2011 UPDATE SUBMISSION TO
THE NATIONAL TELECOMMUNICATIONS AND INFORMATION
ADMINISTRATION UNDER THE
STATE BROADBAND DATA AND DEVELOPMENT GRANT PROGRAM
FOR THE STATE OF MINNESOTA



CONNECT
Minnesota®

April 1, 2011

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MINNESOTA COVER LETTER

April 1, 2011

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:

It is with highest regard that the collective stakeholders of Connect Minnesota offer congratulations to the U.S. Department of Commerce's National Telecommunications & Information Administration (NTIA) on the recent release of the National Broadband Map. This extraordinary milestone demonstrates the intense and joint effort of the NTIA, FCC, state governments, industry, and non-profits like Connected Nation and will serve as a key tool for the American public and policymakers resulting in smarter investments and targeted state and local broadband policies and programs. We are proud of the role that Connect Minnesota has played in creating such a powerful tool that will surely benefit not just Minnesotans, but consumers and businesses nationwide.

Therefore, Connected Nation as the State Broadband Designated Entity, in partnership with the Minnesota Department of Commerce, is pleased to present this submittal of the state of Minnesota's State Broadband Data and Development (SBDD) Grant Program, known as Connect Minnesota.

These artifacts should be found to be compliant with the April 1, 2011, 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 Minnesota: April 1, 2011

<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.xlsx	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 October 2010 SBDD data submission for the Connect Minnesota program. Specifically, these new requirements are:

SBDD Data Transfer Model

The submission of the broadband dataset for April 1, 2011, is contained within the SBDD Data Transfer Model as released on the Grantee Workspace on January 14, 2011. 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

This submission also includes the updated DataPackage spreadsheet with enhanced provider listings as well as satisfactory outputs from the SBDD_Check toolbox to ensure fewer unexpected values with the submitted broadband datasets prior to federal processing for the National Broadband Map update.

It is therefore with great pleasure that the Connect Minnesota program submits this April 2011 semi-annual data update under the State Broadband Data and Development Grant Program. We will continue to implement 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 SBDD includes the participation of approximately 89.92% of the Minnesota provider community, or 107 of 119 total providers. Of the 107 participating providers, 50 supplied an update to their network or coverage area(s), while 54 have reported no change. The remaining 3 represent providers who previously supplied data but were non-responsive in the April 2011 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 record is contained herein. Of the 12 providers that are not represented in the attached datasets, 8 have

either refused to participate in the voluntary program or have remained unresponsive to the numerous attempts at contact by Connect Minnesota. The remaining 4 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 Minnesota principals that all commercially reasonable efforts were made to account for 100% of the known Minnesota broadband provider community, pursuant to this semi-annual data update submission.

Connect Minnesota has also continued to perform broadband verification activities through several means. In addition to confirmation of service area(s) by each provider, Connect Minnesota conducts field validation efforts. To date, 52 (43.70%) providers have been validated through field verification activities. Additional details on verification activities are contained within the Field Validation Narrative.

At the program's inception, Connect Minnesota launched a website to create awareness about the initiative. Connectmn.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 Minnesota website encountered 4,098 unique visits during this reporting period (10,841 total to date for the life of the grant awarded on December 20, 2009). Additionally, this pronounced Web activity netted 39 broadband inquiries over this same reporting period (102 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 Minnesota website and the Connect Minnesota Interactive Mapping Tool (BroadbandStat) that offer the citizens 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 Minnesota 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.

Community Anchor Institutions

Connect Minnesota 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 Minnesota Department of Commerce, outreach was conducted during this data update reporting period by Connect Minnesota to continue identification of existing, centralized sources for CAI connectivity data. Connect Minnesota worked closely with the Minnesota Office of Enterprise Technology to gain access to data from its state network for inclusion during this reporting submission. 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 Minnesota website. During this reporting period Connect Minnesota has developed a number of new relationships with statewide associations such as the Minnesota League of Cities, Minnesota Private College Council, and Minnesota Department of Education to promote the importance of broadband connectivity at anchor institutions and participation in this data collection process. Connect Minnesota will continue to build upon these new relationships over the coming months and utilize their contacts throughout the state to collect data and raise awareness of this project.

While we continue to document institutions and the related addresses, the connectivity data collected in most categories remains incomplete at this time. Connect Minnesota will be implementing a number of new processes to increase participation including launching a CAI newsletter to connect communities across the state, increased industry-specific planning to target new community contacts, and revising the CAI portion of our website to increase visibility and content. From our work in Minnesota, as well as other states, we recognize the great value of this data to future collaboration efforts within the state and its value to the recently released National Broadband Map. We plan to continue to bring best practices to the Connect Minnesota 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.

In acquiring both broadband availability and CAI data within the state of Minnesota, Connected Nation has previously engaged all of the eleven (11) federally recognized tribal lands in the area covered by the Connect Minnesota SBDD grant and reported that outreach as part of past submissions. Throughout the next reporting period Connect Minnesota plans to engage directly with these tribal communities and will also conduct affirmative outreach with Native American tribal organizations that are active within the area. Connect Minnesota understands the connectivity challenges facing these tribes, and we have identified a need to include their data as part of our upcoming submissions.

The Connect Minnesota 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 Minnesota, as well as the United States through contribution to the National Broadband Map. We look forward to the continuing work ahead.

Respectfully submitted,



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

DATA ACQUISITION: MINNESOTA COMMUNITY ANCHOR INSTITUTIONS

In this third reporting period of the SBDD, Connect Minnesota, working in close coordination with the Minnesota Department of Commerce, 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. During this reporting period Connect Minnesota has continued to focus efforts on conducting outreach and raising awareness of this important project.

Connect Minnesota 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 Minnesota through ESRI ArcGIS software.

Connect Minnesota continues to utilize a customized online survey hosted through SurveyMonkey, with a landing page on the Connect Minnesota 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 Minnesota 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.

The survey can be accessed at this link using the following password:

http://connectmn.org/mapping/Community_Anchor_Institution_Data_Collection.php

Password: CAI_MN_7611

Connect Minnesota and the Minnesota Department of Commerce have worked closely during this reporting period to conduct research as part of an ongoing process to identify existing, centralized sources for CAI connectivity data. The Minnesota Office of Enterprise Technology (OET) has provided Connect Minnesota a file of approximately 1,000 CAI that utilize its state-owned network. These CAI include education, healthcare, public safety, higher education, and government sectors and provide full connectivity data for each institution. Additional information on the names and addresses of these institutions is still being extracted from the OET database, and Connect Minnesota should be reporting this data in the next reporting submission.

In tandem with these efforts to identify existing data, Connect Minnesota continues to identify key 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.

During this last reporting period outreach has occurred to introduce the CAI project to key contacts at the Minnesota Department of Education, Minnesota Library Association, Minnesota Hospital Association, Minnesota Department of Public Safety, Minnesota Private College Council, Association of Minnesota Counties, and the League of Minnesota Cities. This outreach has resulted in many new contacts in the state and Connect Minnesota is encouraged that survey results will increase in all sectors within the coming months.

Connect Minnesota 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. To assist with our data collection efforts, Connect Minnesota is developing a CAI newsletter to be distributed quarterly beginning in April 2011. The newsletter will highlight a CAI in Minnesota, encourage institutions to share their data, and highlight the National Broadband Map.

The greatest challenge with collecting this data continues to be the difficulty in securing CAI broadband connectivity data. Connect Minnesota will continue its ongoing work with the Minnesota Department of Commerce and key organization contacts in an effort to raise awareness of this project among CAI. Additionally, the Minnesota Broadband Advisory Task Force will be briefed at an upcoming meeting on the CAI project and will be made aware of the challenges we have faced in the state with collecting this data. The Task Force members will be provided information regarding how they can assist with outreach and promotion over the coming months.

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	3,624	3,624	3,624	0	0	0
Libraries	1,708	1,708	1,706	10	10	10
Healthcare	180	180	180	58	57	57
Public Safety	1,544	1,544	1,544	4	4	4
Higher Ed Institutions	138	138	138	0	0	0
Other Government	117	117	116	26	26	26
Other Non-Government	1	1	1	0	0	0
Total	7,312	7,312	7,309	98	97	97

SBDD DATA SUBMISSION METHODOLOGY

The submission of the broadband dataset for April 1, 2011, is contained within the SBDD Data Transfer Model and additional components as released on the Grantee Workspace on January 14, 2011. 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 or territory, 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. Guidance from the Technical Mapping Guide, as released on the Grantee Workspace on March 24, 2011, was also 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.

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 Minnesota.

Inventory of Deliverables, Connect Minnesota: April 1, 2011

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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 Connected Nation on behalf of the state of Minnesota 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, 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 it is not included in this submission dataset. Additional information is necessary to be able to show where service satisfactorily exists in the state, rather than submitting the entire boundary of the state as the serviceable area. Analysis information distributed and discussed with the satellite providers, as well as any additional guidance from the Program Office on the desired analysis for satellite-serviceable areas, will be implemented for the October 2011 data submission.

MINNESOTA FIELD VALIDATION NARRATIVE

Connected Nation 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 and Trips;
- locating physical wire-line attributes (such as 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 Connected Nation's state specific websites.

Additionally, Connected Nation cross-referenced numerous public documents in order to ensure that all known broadband providers were located and contacted. This included searching membership logs from the 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 Minnesota on the following providers: Albany Mutual Telephone Association, Alliance Communications, Arvig Communications Systems, AT&T, Barnesville Municipal Telephone, Bradco-WISP Inc., CenturyLink, Charter Communications, Chaska Net, CitiScape Communications, Clear Choice, Clearwire Corporation, Comcast Cable Communications LLC, CTC Telecom, diversiCOM, Enterpoint, Evertex Enterprises LLC., Farmers Mutual Telephone, Frontier Communications Corporation, Garden Valley Telephone Company, Gardonville Cooperative Telephone Association, Genesis Wireless, Halsted Telephone, Harmony Telephone Company, Info Link Wireless Inc., Invisimax, Jaguar Communications, Lakedale LINK, Loretel Systems Inc., Mabel Cooperative Telephone Company, Maple Leaf Networks, Midcontinent Communications, Min-Kota Wireless, Minnesota Valley Telephone Company, Minnesota Valley TV Improvement Corporation, Otter tail Telecom, Polar Telcom Inc., Qwest Corporation, Red River Telephone Association, Ridge Runner Internet Services Inc., River Valley Telecommunications Cooperative, Scott Rice Telecommunications Cooperative, Sioux Valley Wireless, Sleepy Eye Telephone Company, Spring Grove Cooperative Telephone Company, T-Mobile USA, U.S. Internet Corporation, US Cable Corporation, VAL-ED Joint Venture, Verizon Communications, and Winnebago Cooperative Telephone Association.

During this reporting period, Connected Nation conducted 21 additional on-site validation tests with Alliance Communications, AT&T, Clear Choice, CTC Telecom, Enterpoint, Farmers Mutual Telephone, Halsted Telephone, Invisimax, and Sprint.

From program initiation through this reporting period, Connected Nation has completed in-the-field validation testing against 52 companies (out of a universe of 119 viable providers) totaling 43.70% within the state of Minnesota.

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 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.

Estimates derived from provider-validated data indicate that approximately 3.02% of Minnesota households do not have terrestrial fixed broadband service available, and approximately 0.27%¹ of Minnesota households have neither mobile nor fixed broadband service available.²

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

Within rural areas of the state, results derived from provider-validated data indicate that approximately 6.58% of rural Minnesota households do not have terrestrial fixed broadband service available, and approximately 0.53%³ of rural Minnesota households have neither mobile nor fixed broadband service available.⁴

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)
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. 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 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

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 See footnote 1.

⁴ See footnote 2.

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 Federal Communications Commission Universal Licensing System and the **CO**mmission **RE**gistration **S**ystem

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(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).

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 territory in which broadband is not available, the 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 each of the Connected Nation state programs with successful results. Altogether Connected Nation has received over 16,000 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 Connected Nation 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 Minnesota project has received a total of 39 inquiries (102 grant inception to date). As more inquiries are submitted to Connect Minnesota, 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.

New functionality in BroadbandStat allows the consumer to 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 Connected Nation 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 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.

The Connect Minnesota project launched BroadbandStat on May 21, 2010, and has received a total of 2,332 visits to date, of which 923 occurred this reporting period.

SPEED TEST METHODOLOGY

The 2,846 speed tests that are represented in the Connect Minnesota Speed Test Report during this reporting period (5,920 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 Minnesota 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 Minnesota 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 Minnesota 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 Minnesota.



Broadband Provider Log

Complete	166
Non-Responsive/Refused	9
In Progress	14
Count of Datasets by Viable Status	189
Total Unique Providers Represented	119

Provider Name	Platform	Status	NDA Execution Date	Notes
Ace Telephone Association	ILEC/CLEC	Data Added to Statewide Inventory	8/3/2010	
Alliance Communications	ILEC/CLEC	Data Added to Statewide Inventory		
Alliance Communications	Fiber	Data Added to Statewide Inventory		
Arvig Communications Systems	Fixed Wireless	Data Added to Statewide Inventory	2/2/2011	
Arvig Communications Systems	Fiber	Data Added to Statewide Inventory	2/2/2011	
Arvig Communications Systems	ILEC/CLEC	Data Added to Statewide Inventory	2/2/2011	
AT&T Corp, Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/16/2009	
Barnesville Municipal Telephone	ILEC/CLEC	Data Added to Statewide Inventory	3/4/2010	
Blue Earth Valley Telephone Company	ILEC/CLEC	Data Added to Statewide Inventory	6/16/2010	
Bradco-Wisp, Inc.	Fixed Wireless	Data Added to Statewide Inventory		
Cable ONE Inc.	Cable	Data Added to Statewide Inventory	12/7/2009	
CenturyLink	ILEC/CLEC	Data Added to Statewide Inventory	12/4/2009	
Charter Communications, Inc.	Cable	Data Added to Statewide Inventory	12/15/2009	
Christensen Communications Company	ILEC/CLEC	Data Added to Statewide Inventory	2/2/2010	
CitEscape Wireless Internet, LLC	Fixed Wireless	Data Added to Statewide Inventory	1/25/2010	
Clear Choice Communications	Fixed Wireless	Data Added to Statewide Inventory		
Clearwire Corporation	Mobile Wireless	Data Added to Statewide Inventory	3/3/2010	
Clearwire Corporation	Fixed Wireless	Data Added to Statewide Inventory	3/3/2010	
Comcast Cable Communications, LLC	Cable	Data Added to Statewide Inventory	12/7/2009	
Consolidated Telephone Company	Fiber	Data Added to Statewide Inventory		
Consolidated Telephone Company	ILEC/CLEC	Data Added to Statewide Inventory		
diversiCOM	Fiber	Data Added to Statewide Inventory	4/20/2010	
diversiCOM	ILEC/CLEC	Data Added to Statewide Inventory	4/20/2010	
Frontier Communications of Minnesota, Inc.	ILEC/CLEC	Data Added to Statewide Inventory	1/22/2010	
FTTH Communications	Fiber	Data Added to Statewide Inventory		
Hiawatha Broadband Communications, Inc.	Fiber	Data Added to Statewide Inventory	3/8/2010	
Info Link Wireless, Inc.	Fixed Wireless	Data Added to Statewide Inventory	4/19/2010	
Interstate Telecommunications Cooperative, Inc.	ILEC/CLEC	Data Added to Statewide Inventory	2/10/2010	
Interstate Telecommunications Cooperative, Inc.	Fiber	Data Added to Statewide Inventory	2/10/2010	
InvisiMax, Inc.	Fixed Wireless	Data Added to Statewide Inventory		
Lonsdale Telephone Co., Inc.	Fiber	Data Added to Statewide Inventory		
Manchester-Hartland Telephone Company	Fiber	Data Added to Statewide Inventory	4/14/2010	
Minnesota Valley TV Improvement Corporation	Fixed Wireless	Data Added to Statewide Inventory	4/13/2010	
New Ulm Telecom Inc.	ILEC/CLEC	Data Added to Statewide Inventory	2/25/2010	
NorthfieldWiFi LLC	Fixed Wireless	Data Added to Statewide Inventory	2/4/2011	
Park Region Mutual Telephone Company	Fiber	Data Added to Statewide Inventory	3/18/2010	
Park Region Mutual Telephone Company	ILEC/CLEC	Data Added to Statewide Inventory	3/18/2010	
Paul Bunyan Rural Telephone Cooperative	Fiber	Data Added to Statewide Inventory	6/24/2010	
Paul Bunyan Rural Telephone Cooperative	ILEC/CLEC	Data Added to Statewide Inventory	6/24/2010	
Polar Telcom, Inc.	ILEC/CLEC	Data Added to Statewide Inventory	2/11/2010	
Qwest Corporation	ILEC/CLEC	Data Added to Statewide Inventory	1/4/2010	
Red River Rural Telephone Association	Fiber	Data Added to Statewide Inventory	3/17/2010	
Red River Rural Telephone Association	ILEC/CLEC	Data Added to Statewide Inventory	3/17/2010	
Red River Rural Telephone Association	Fixed Wireless	Data Added to Statewide Inventory	3/17/2010	
Savage Communications Inc.	Cable	Data Added to Statewide Inventory	2/19/2010	
Scott Rice Telephone Co.	Fiber	Data Added to Statewide Inventory	2/15/2010	
Scott Rice Telephone Co.	ILEC/CLEC	Data Added to Statewide Inventory	2/15/2010	
Sprint Nextel Corporation	Mobile Wireless	Data Added to Statewide Inventory	1/14/2010	
Starpoint Communications, Inc.	Fixed Wireless	Data Added to Statewide Inventory	2/18/2011	
T-Mobile USA, Inc.	Mobile Wireless	Data Added to Statewide Inventory	1/8/2010	
TDS Telecommunications Corporation	ILEC/CLEC	Data Added to Statewide Inventory	1/27/2010	
TDS Telecommunications Corporation	Fiber	Data Added to Statewide Inventory	1/27/2010	
Upsala Cooperative Telephone Association	ILEC/CLEC	Data Added to Statewide Inventory		
Upsala Cooperative Telephone Association	Fiber	Data Added to Statewide Inventory		
US Internet of Minnetoka	Fixed Wireless	Data Added to Statewide Inventory		
VAL-ED Joint Venture, LLP	Fixed Wireless	Data Added to Statewide Inventory	4/21/2010	
Verizon Communications, Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/14/2009	
Western Telephone Company	ILEC/CLEC	Data Added to Statewide Inventory	4/14/2010	
Wolverton Telephone Company	ILEC/CLEC	Data Added to Statewide Inventory	6/22/2010	
Woodstock Telephone Company	ILEC/CLEC	Data Added to Statewide Inventory	2/18/2010	
Woodstock Telephone Company	Fiber	Data Added to Statewide Inventory	2/18/2010	
CenturyLink	Backhaul	Backhaul Provider Only Processing Complete	12/4/2009	
Cogent Communications, Inc.	Backhaul	Backhaul Provider Only Processing Complete		
Level 3 Communications, LLC	Backhaul	Backhaul Provider Only Processing Complete	12/14/2009	
Mediacom Minnesota LLC	Backhaul	Backhaul Provider Only Processing Complete	1/12/2010	
Savage Communications Inc.	Backhaul	Backhaul Provider Only Processing Complete	2/19/2010	
T-Mobile USA, Inc.	Backhaul	Backhaul Provider Only Processing Complete	1/8/2010	
Zayo Group, LLC	Backhaul	Backhaul Provider Only Processing Complete		
McLeodUSA Telecommunications Services, Inc.	ILEC/CLEC	Provider Approval Solicited		

360networks	Backhaul	No Update to Provide	1/19/2010
Ace Telephone Association	Backhaul	No Update to Provide	8/3/2010
Albany Mutual Telephone Association	ILEC/CLEC	No Update to Provide	3/4/2010
Albany Mutual Telephone Association	Fiber	No Update to Provide	3/4/2010
Alliance Communications	Backhaul	No Update to Provide	
Arrowhead Communications	ILEC/CLEC	No Update to Provide	4/14/2010
AT&T Corp, Inc.	Backhaul	No Update to Provide	12/16/2009
Benton Cooperative Telephone Company	Cable	No Update to Provide	6/16/2010
Benton Cooperative Telephone Company	Fiber	No Update to Provide	6/16/2010
Benton Cooperative Telephone Company	ILEC/CLEC	No Update to Provide	6/16/2010
Benton Cooperative Telephone Company	Mobile Wireless	No Update to Provide	6/16/2010
Blue Earth Valley Telephone Company	Cable	No Update to Provide	6/16/2010
Blue Earth Valley Telephone Company	Fiber	No Update to Provide	6/16/2010
Broadband Corp	Fixed Wireless	No Update to Provide	5/11/2010
Christensen Communications Company	Backhaul	No Update to Provide	2/2/2010
City of Windom	Fiber	No Update to Provide	
Clara City Telephone Company	ILEC/CLEC	No Update to Provide	2/5/2010
Consolidated Telephone Company	Fixed Wireless	No Update to Provide	
Crosslake Telephone Company	Fiber	No Update to Provide	6/16/2010
Crosslake Telephone Company	ILEC/CLEC	No Update to Provide	6/16/2010
Crosslake Telephone Company	Cable	No Update to Provide	6/16/2010
DIECA Communications, Inc.	Backhaul	No Update to Provide	1/19/2010
diversiCOM	Fixed Wireless	No Update to Provide	4/20/2010
diversiCOM	Cable	No Update to Provide	4/20/2010
Eagle Valley Telephone Company	ILEC/CLEC	No Update to Provide	4/14/2010
Emily Cooperative Telephone Company	ILEC/CLEC	No Update to Provide	6/24/2010
Emily Cooperative Telephone Company	Fiber	No Update to Provide	6/24/2010
Enterpoint Wireless	Fixed Wireless	No Update to Provide	
Evertek Enterprises, Inc.	Fixed Wireless	No Update to Provide	6/17/2010
Farmers Mutual Telephone Company	Fixed Wireless	No Update to Provide	4/1/2010
Farmers Mutual Telephone Company	Fiber	No Update to Provide	4/1/2010
Federated Telephone Cooperative	Fixed Wireless	No Update to Provide	4/1/2010
Federated Telephone Cooperative	Fiber	No Update to Provide	4/1/2010
Felton Telephone Company	ILEC/CLEC	No Update to Provide	4/14/2010
Frontier Communications of Minnesota, Inc.	Backhaul	No Update to Provide	1/22/2010
Garden Valley Telephone Company	Fiber	No Update to Provide	2/17/2010
Garden Valley Telephone Company	ILEC/CLEC	No Update to Provide	2/17/2010
Gardonville Cooperative Telephone Association	ILEC/CLEC	No Update to Provide	2/23/2010
Gardonville Cooperative Telephone Association	Fixed Wireless	No Update to Provide	2/23/2010
Gardonville Cooperative Telephone Association	Fiber	No Update to Provide	2/23/2010
Genesis Wireless	Fixed Wireless	No Update to Provide	
Granada Telephone Company	ILEC/CLEC	No Update to Provide	4/14/2010
Halstad Telephone Company	ILEC/CLEC	No Update to Provide	6/16/2010
Halstad Telephone Company	Fixed Wireless	No Update to Provide	6/16/2010
Harmony Telephone Company	Fiber	No Update to Provide	1/12/2010
Hiawatha Broadband Communications, Inc.	Cable	No Update to Provide	3/8/2010
Hickory Tech Corporation	ILEC/CLEC	No Update to Provide	
HomeTown Solutions LLC	Fiber	No Update to Provide	4/1/2010
Hutchinson Telecommunications, Inc.	ILEC/CLEC	No Update to Provide	4/14/2010
Hutchinson Telecommunications, Inc.	Fixed Wireless	No Update to Provide	4/14/2010
Jaguar Communications	Cable	No Update to Provide	4/12/2010
Jaguar Communications	Fiber	No Update to Provide	4/12/2010
Jaguar Communications	Fixed Wireless	No Update to Provide	4/12/2010
Jaguar Communications	ILEC/CLEC	No Update to Provide	4/12/2010
Johnson Telephone Company	ILEC/CLEC	No Update to Provide	
Kasson & Mantorville Telephone Company	ILEC/CLEC	No Update to Provide	6/30/2010
Lonsdale Telephone Co., Inc.	ILEC/CLEC	No Update to Provide	
Loretel Systems, Inc.	ILEC/CLEC	No Update to Provide	4/14/2010
Mabel Cooperative Telephone Company	ILEC/CLEC	No Update to Provide	4/7/2010
Manchester-Hartland Telephone Company	ILEC/CLEC	No Update to Provide	4/14/2010
Mediacom Minnesota LLC	Cable	No Update to Provide	1/12/2010
Midcontinent Communications	Cable	No Update to Provide	12/9/2009
Midcontinent Communications	Backhaul	No Update to Provide	12/9/2009
Minnesota Valley Telephone Company	ILEC/CLEC	No Update to Provide	4/29/2010
Pine Island Telephone Company	ILEC/CLEC	No Update to Provide	4/14/2010
Qwest Corporation	Backhaul	No Update to Provide	1/4/2010
River Valley Telecommunications Coop	Fixed Wireless	No Update to Provide	4/28/2010
Rothsay Telephone Company Inc.	ILEC/CLEC	No Update to Provide	2/18/2010
Runestone Telecom Association	Fiber	No Update to Provide	4/14/2010
Runestone Telecom Association	ILEC/CLEC	No Update to Provide	4/14/2010
Sacred Heart Telephone Company	ILEC/CLEC	No Update to Provide	2/5/2010
Sheehan Gas	Fixed Wireless	No Update to Provide	
Sioux Valley Wireless	Fixed Wireless	No Update to Provide	4/21/2010
Sjoberg's Inc.	Cable	No Update to Provide	12/21/2009
Sleepy Eye Telephone Company	ILEC/CLEC	No Update to Provide	4/14/2010
Southern Cablevision, Inc.	Cable	No Update to Provide	3/30/2010
Spring Grove Cooperative Telephone Co.	Fiber	No Update to Provide	1/12/2010
Sprint Nextel Corporation	Backhaul	No Update to Provide	1/14/2010
Starbuck Telephone Company	ILEC/CLEC	No Update to Provide	2/5/2010
TDS Telecommunications Corporation	Backhaul	No Update to Provide	1/27/2010
tw telecom of minnesota llc	Backhaul	No Update to Provide	4/20/2010
US Cable Corporation	Cable	No Update to Provide	5/20/2010
VAL-ED Joint Venture, LLP	ILEC/CLEC	No Update to Provide	4/21/2010
Verizon Communications, Inc.	Backhaul	No Update to Provide	12/14/2009
West Central Telephone Association	ILEC/CLEC	No Update to Provide	2/18/2010

West Central Telephone Association	Fiber	No Update to Provide	2/18/2010	
Wikstrom Telephone Company	ILEC/CLEC	No Update to Provide	4/12/2010	
Wikstrom Telephone Company	Fixed Wireless	No Update to Provide	4/12/2010	
Winnebago Cooperative Telecom Association	Backhaul	No Update to Provide	6/17/2010	
Winnebago Cooperative Telecom Association	Fiber	No Update to Provide	6/17/2010	
Winnebago Cooperative Telecom Association	Fixed Wireless	No Update to Provide	6/17/2010	
Winnebago Cooperative Telecom Association	ILEC/CLEC	No Update to Provide	6/17/2010	
XO Communications, LLC	Backhaul	No Update to Provide	2/12/2010	
Zumbrot Telephone Company	ILEC/CLEC	No Update to Provide	2/5/2010	
EN-TEL Communications, LLC	ILEC/CLEC	No Update Provided - Use Last Submission Data		
Lakedale LINK	ILEC/CLEC	No Update Provided - Use Last Submission Data		
Lakedale LINK	Fixed Wireless	No Update Provided - Use Last Submission Data		
Lakedale Telephone	ILEC/CLEC	No Update Provided - Use Last Submission Data		
Knology of the Plains, Inc.	Cable	Solicited Initial Data		
Knology of the Plains, Inc.	Backhaul	Solicited Initial Data		
Reliance Globalcom Services, Inc.	Backhaul	Solicited Initial Data		
A Better Wireless, NISP, LLC	Fixed Wireless	Non-Responsive to Multiple Attempts		[FEB-16-11 John Determan] While attempting to solicit data in accordance with the NOFA and the Clarification, A Better Wireless has not responded to our multiple inquiries. We have completed validation work in the area, provided results from interactive map, asked for input and still no response. We will continue to attempt to gain A Better Wireless's participation in Minnesota's broadband mapping project.
Chaska Net	Fixed Wireless	Non-Responsive to Multiple Attempts		[FEB-16-11 John Determan] While attempting to solicit data in accordance with the NOFA and the Clarification, ChaskaNet has not responded our multiple inquiries. We have created the dataset during validation work in the area, provided it for approval, and still have received no response. We will continue to attempt to gain Chaska Net's participation in Minnesota's broadband mapping project.
City of Detroit Lakes	Fixed Wireless	Non-Responsive to Multiple Attempts	5/10/2010	In addition to multiple contact attempts made between April 7, 2010 and August 4, 2010, nine attempts have been made during this submission period.
Fibernet Monticello	Fiber	Non-Responsive to Multiple Attempts		[FEB-24-11 John Determan] While attempting to solicit data in accordance with the NOFA and the Clarification Fibernet Monticello has not responded our multiple inquiries. We have created the dataset during validation work in the area, provided it for approval and still received no response. We will continue to attempt to gain Fibernet Monticello's participation in Minnesota's broadband mapping project.
Ideaone Telecom Group, LLC	Fixed Wireless	Non-Responsive to Multiple Attempts		[FEB-16-11 John Determan] While attempting to solicit data in accordance with the NOFA and the Clarification, Ideaone has not responded to our multiple inquiries. We will continue to attempt to gain Ideaone's participation in Minnesota's broadband mapping project.
Ideaone Telecom Group, LLC	ILEC/CLEC	Non-Responsive to Multiple Attempts		[FEB-16-11 John Determan] While attempting to solicit data in accordance with the NOFA and the Clarification, Ideaone has not responded our multiple inquiries. We will continue to attempt to gain Ideaone's participation in Minnesota's broadband mapping project.

Maple Leaf Networks	Fixed Wireless	Non-Responsive to Multiple Attempts		[JAN-14-11 John Determan] While attempting to solicit data in accordance with the NOFA and the Clarification, Maple Leaf Networks has not responded our multiple inquiries. We have created 90% of dataset during validation work in the area, provided for approval, but still no response. We will continue to attempt to gain Maple Leaf Networks' participation in Minnesota's broadband mapping project.
Nextera Communications	ILEC/CLEC	Non-Responsive to Multiple Attempts		[FEB-18-11 John Determan] While attempting to solicit data in accordance with the NOFA, Ridge Runner has not responded to our multiple inquiries by USPS, e-mail, or telephone.
Ridge Runner Internet Services Inc.	Fixed Wireless	Non-Responsive to Multiple Attempts		[FEB-15-11 John Determan] While attempting to solicit data in accordance with the NOFA and the Clarification, Ridge Runner has not responded to our multiple inquiries by USPS, e-mail or telephone.
Ace Telephone Association	Fiber	Other	8/3/2010	[JAN-20-11 John Determan] Provider clarified corrections and the entire coverage is Fiber to the Node and DSL to subscribers. Was previously displayed as FTTH.
Arvig Communications Systems	Cable	Other	2/2/2011	[JAN-21-11 John Determan] Cable properties are reported under Arvig Communications' Subsidiary Company Home Telephone, dba Southern Cablevision.
Christensen Communications Company	Fiber	Other	2/2/2010	[FEB-15-11 John Determan] Fiber is B2B and backhaul only. Created Backhaul DCU.
DIECA Communications, Inc.	ILEC/CLEC	Other	1/19/2010	[FEB-18-11 Wes Kerr] Provider doesn't offer residential DSL, and the last mile data will not be included in the data submission.
DISH Network Corporation	Satellite	Other	1/27/2010	[MAR-9-11 Brian Dudek] 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.
Farmers Mutual Telephone Company	ILEC/CLEC	Other	4/1/2010	[JAN-27-11 John Determan] There is no DSL currently in coverage. All has been transferred to fiber.
Global Crossing Telecommunications, Inc.	Backhaul	Other		[FEB-17-11 Wes Kerr] Received word from a provider representative that they still have a Network Security agreement with several Federal agencies and cannot provide data at this time.
Hughes Network Systems, LLC	Satellite	Other	2/5/2010	[MAR-9-11 Brian Dudek] 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.
West Central Telephone Association	Fixed Wireless	Other	2/18/2010	[FEB-22-11 John Determan] Created new provider entry as Clear Choice Communications (a partnership between West Central Telephone and CTC Telcom) is a separate company.
WildBlue Communications, Inc.	Satellite	Other	1/8/2010	[MAR-09-11 Brian Dudek] 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.

Hiawatha Broadband Communications, Inc.	Mobile Wireless	Offers Service but Below FCC Definition	3/8/2010	
Park Region Mutual Telephone Company	Fixed Wireless	Offers Service but Below FCC Definition	3/18/2010	
Starpoint Communications, Inc.	ILEC/CLEC	Inactive - No Longer in Business	2/18/2011	
Interstate Telecommunications Cooperative, Inc.	Satellite	Not a Broadband Provider	2/10/2010	