# OFFICIAL OCTOBER 2012 UPDATE SUBMISSION TO THE NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION UNDER THE STATE BROADBAND INITIATIVE GRANT PROGRAM FOR THE STATE OF MINNESOTA

October 1, 2012

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October 1, 2012

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

Dear Ms. Neville:

As the State Broadband Designated Entity, in partnership with the Minnesota Department of Commerce, please accept this submission from Connected Nation on behalf of the state of Minnesota's State Broadband Initiative (SBI) Grant Program, known as Connect Minnesota.

The Connect Minnesota program and its collective stakeholder community continue to be faithful and energized contributors to the National Telecommunications and Information Administration's (NTIA) SBI program. Now more than ever, the significance of complete and validated data as compiled through the Federal Communications Commission's (FCC) National Broadband Map is instrumental in forging the innovation economy of the 21st century. As the Commission relies upon this unique resource to distribute monies under the Connect America Fund, through the Universal Service Fund reform, the Connect Minnesota program equally values this data in informing meaningful program interventions relating to broadband access, adoption, and use initiatives. Truly, this coordination embodies the spirit of the SBI and demonstrates the joint effort of the NTIA, FCC, state governments, industry, and non-profits like Connected Nation as it continues to serve as a key tool for the American public and policymakers. We are proud of the role that Connect Minnesota has played in creating and maintaining such a powerful tool that has benefitted and surely will continue to benefit broadband providers, consumers, and businesses nationwide.

The artifacts that comprise this submission should be found to be compliant with the October 1, 2012, 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: October 1, 2012***

| NOFA Requirement | Data Transfer Model | Data Description |
|---|---|---|
| Appendix A: 1(a)(i) | BB_Service_CensusBlock | Broadband Service Availability of Facilities-Based Providers in Census Blocks of No Greater Than Two Square Miles in Area |

| | | |
|---|---|---|
| Appendix A: 1(a)(ii) | BB_Service_RoadSegment | Broadband Service Availability of Facilities-Based Providers by Road Segment in Census Blocks Larger in Area Than Two Square Miles |
| Appendix A: 1(b) | BB_Service_Wireless | Broadband Service Availability of Wireless Services Not Provided to a Specific Address |
| Appendix A: 3(b) | BB_ConnectionPoint_MiddleMile | Broadband Service Infrastructure Middle-Mile and Backbone Interconnection Points |
| Appendix A: 4 | BB_Service_CAInstitutions | Community Anchor Institutions-Listing |
| Appendix A: 4 | n/a | Community Anchor Institutions-Narratives |
| VII.A.1(a) | n/a | Accuracy and Verification Report |
| n/a | DataPackage.xlsx | Worksheets of Contact Information, Record Count, and Provider Summary Table |
| n/a | n/a | List of Changes and Corrections to the Dataset |
| n/a | n/a | Non-Participating Provider (NPP) Narratives |
| 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 April 2012 SBI data submission for the Connect Minnesota program. Specifically, these new requirements are:

**SBI Data Transfer Model**
The submission of the broadband dataset for October 1, 2012, is contained within the SBI Data Transfer Model as released on the Grantee Workspace on August 9, 2012. All efforts have been made to comply with formatting, domain, and metadata requirements to include as much information on each provider as possible.

**Additional Submission Guidance**
New to the semi-annual submission for October 2012 is a more robust version of the ReadMe text file. As per the template released on the Grantee Workspace on May 18, 2012, this file contains a high-level summary of the items contained within the submission, including the exact file deliverables, a description of the errors and warnings from the Check Submission report, and extraneous information of which the NTIA and other users of the dataset should be made aware.

This submission continues to follow the speed technology guidance released by the Program Office on August 9, 2012, to review speed tier codes in correspondence with technology of

transmission codes. In the April 2012 submission, descriptions were provided in the methodology paper that offered an explanation for any submitted technology of transmission and speed combinations that were outside of the expected value range. That practice continues in this submission as technology and speed combinations are reviewed and scrutinized; any questionable information supplied by providers is reviewed more in depth with the provider to ensure the information is accurately captured or a proper explanation is provided as to why the speed information should be submitted as supplied even if it falls outside the expected value range.

Also in this submission are narratives describing the data and coverage estimation of non-participating providers. While Connect Minnesota continues outreach to all providers prior to each submission period, the need to submit broadband service data for all providers regardless of their participation is evident as the SBI program continues into this sixth round of data submissions. The submission of this estimated broadband service area for providers that have not supplied data to Connect Minnesota is essential in being able to portray a more accurate depiction of the current broadband landscape.

In addition to the requirements mentioned above, please find this methodology paper to be inclusive of the ongoing section pertaining to industry mergers and acquisitions – specifically this section details any and all mergers or acquisitions that have taken place in Minnesota since the April 2012 submission. The intent of this updated section is to provide a better understanding of how the broadband provider landscape has changed since the last submission cycle.

This October 2012 semi-annual data update under the SBI Grant Program continues to demonstrate our dedication to implementing the joint purposes of the Recovery Act and the Broadband Data Improvement Act (BDIA) by gathering comprehensive and accurate state-level broadband mapping data, developing state-level broadband maps, aiding in the development and maintenance of the National Broadband Map, and undertaking statewide initiatives for broadband planning.

### *Broadband Service Availability — Provider Outreach and Verification*

This data update submission under the SBI program includes datasets for approximately 97.52 percent of the Minnesota provider community, or 118 of 121 total providers. There are 115 participating providers and 3 additional non-participating providers whose estimated coverage areas have been submitted. Of the 115 participating providers, 46 supplied an update to their network or coverage area(s), while 61 have reported no change. The remaining 8 represent providers who previously supplied data but were non-responsive in the October 2012 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 3 providers that are not represented in the attached datasets, one has refused to participate in the voluntary program, and 2 providers are currently in some form of progress toward data submission but were not able to submit 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 percent 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, 89(73.55 percent) providers have been validated through field verification activities. Additional details on verification activities are contained within the Field Validation Methodology.

The Connect Minnesota website, (www.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 5,073 unique visits during this reporting period (23,835 total to date for the life of the grant awarded on December 20, 2009). Additionally, this pronounced Web activity netted 19 broadband inquiries over this same reporting period (169 grant inception to date). The website also provides access to the My ConnectView™ interactive mapping application, which allows consumers and broadband providers to confirm or dispute the coverage represented on the broadband inventory map. These consumer-initiated actions are facilitated through the Connect Minnesota website and the Connect Minnesota interactive mapping tool (My ConnectView™) that offer the stakeholders the vehicles to provide information regarding availability in their respective service area, either in affirmation or contest of the reported data represented in the Connect Minnesota mapping artifacts. Since the initial data collection and release of corresponding maps, feedback in the form of broadband inquiries has allowed Connect Minnesota 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 SBI NOFA Technical Appendix. Since the April 2012 data submission, the CAI outreach process method has been modified to improve data collection. Specifically, the outreach process is a more focused sector-specific and relationship-oriented approach that generates more responses than general contact.

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. 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 following:

Minnesota Department of Education
Minnesota Department of Health Rural Health Policy

Minnesota Department of Public Safety
Minnesota Health Association
Minnesota State Colleges and Universities
Minnesota's Private Colleges
Office of Rural Health and Primary Care
University of Minnesota

Building relationships with entities such as these yields a positive impact in promoting the importance of broadband connectivity at anchor institutions and participation in this data collection process. It became apparent that these relationships are beneficial to the entire success of the Grant Program, and the CAI engagement is a logical extension of new and existing relationships. Connect Minnesota will continue to build upon these new relationships over the coming months and utilize its contacts throughout the state to collect data and raise awareness of this project.

In addition to fostering and building relationships with state agencies, associations, and organizations, Connect Minnesota has also developed a sector-specific calendar that supports CAI outreach as well as research and communications efforts. This focused approach allows a corporate commitment to capturing CAI data in addition to developing meaningful sector-specific content.

Connect Minnesota is also working hard to clarify CAI information associated with wireless broadband. NTIA has requested in-depth questioning of CAI listing a wireless broadband service as their sole form of connectivity. This follow-up allows us to better understand the reason for adopting the wireless broadband service.

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 as well as its value to the 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.

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 and its territories through contribution to the National Broadband Map. We look forward to the continuing work ahead and improving upon our data collection methods.

Respectfully submitted,

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

## DATA ACQUISITION: MINNESOTA COMMUNITY ANCHOR INSTITUTIONS METHODOLOGY

In this sixth reporting period of the SBI, Connect Minnesota, working in close coordination with the state of 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 SBI NOFA Technical Appendix. Since the April 2012 data submission, the CAI outreach process method has been modified to improve data collection. Specifically, the outreach process is a more focused sector-specific and relationship-oriented approach that generates more responses than general contact.

Connect 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 on a regular basis to a targeted list of CAI throughout the state as well as organizations and agencies that work closely with the CAI. The distributions were completed with the support of the state client. Connect 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 SBI NOFA.

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

In addition to the survey, Connect Minnesota has developed a number of new relationships with statewide associations such as: Minnesota Department of Education, Minnesota Department of Health Rural Health Policy, Minnesota Department of Public Safety, Minnesota Health Association, Minnesota State Colleges and Universities, Minnesota's Private Colleges, Office of Rural Health and Primary Care, and University of Minnesota to promote the importance of broadband connectivity at Community Anchor Institutions and participation in this data collection process. It is apparent that these relationships are beneficial to the entire success of the grant program, and the CAI engagement is a logical extension of new and existing relationships. Connect Minnesota will continue to build upon these new relationships over the coming months and utilize its contacts throughout the state to collect data and raise awareness of this project.

In addition to fostering and building relationships with state agencies, associations, and organizations, Connect Minnesota has also developed a sector-specific calendar that supports CAI outreach as well as research and communications efforts. This focused approach allows a corporate commitment to capturing CAI data in addition to developing meaningful sector-specific content.

Connect Minnesota conducts significant research as part of an ongoing process to identify existing, centralized sources for CAI connectivity data. In tandem with these efforts to identify existing data,

Connect Minnesota continues to identify key CAI contacts in an effort to distribute and promote the online survey and raise awareness of the importance of CAI broadband connectivity. Also, when possible, Connect Minnesota works with the Minnesota Department of Commerce to identify existing relationships that can support CAI outreach.

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.

The greatest challenge with collecting CAI data continues to be educating the CAI about the Connect Minnesota project as well as self-awareness of their own CAI connectivity (specifically upload and download speeds). Connect Minnesota will continue to research key CAI organizations and agency contacts in an effort to raise awareness of this project among CAI. When applicable, the Minnesota Department of Commerce will continue to be briefed on the current CAI data and provided information so it can assist with outreach and promotion within the state.

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** | 3,592 | 3,592 | 3,564 | 703 | 611 | 155 |
| **Libraries** | 1,207 | 1,207 | 1,128 | 265 | 490 | 11 |
| **Healthcare** | 192 | 192 | 191 | 57 | 56 | 56 |
| **Public Safety** | 1,558 | 1,558 | 1,553 | 60 | 49 | 49 |
| **Higher Ed Institutions** | 271 | 271 | 267 | 83 | 82 | 83 |
| **Other Government** | 139 | 139 | 135 | 34 | 32 | 32 |
| **Other Non-Government** | 141 | 141 | 127 | 32 | 32 | 31 |
| **Total** | 7,100 | 7,100 | 6,965 | 1,234 | 1,352 | 417 |

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

## SBI Data Submission Methodology

The submission of the broadband dataset for October 1, 2012, is contained within the SBI Data Transfer Model and additional components as released on the Grantee Workspace on August 9, 2012. Connected Nation (CN) has reviewed all literature that relates to the release and use of this

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

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

- Technical Mapping Guide, as released on the Grantee Workspace on March 24, 2011, was followed to ensure the completeness and validity of the submission through completion steps and checklists, completing the DataPackage spreadsheet, uploading broadband datasets into the Data Transfer Model, and checking the dataset using the SBDD_CheckSubmission receipt process.
- Naming Conventions and Category of End User, as released on the Grantee Workspace on March 26, 2012, was followed to ensure the consistency of individual file and zip package naming.

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

***Inventory of Deliverables, Connect Minnesota: October 1, 2012***

| NOFA Requirement | Data Transfer Model | Data Description |
|---|---|---|
| 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. |

The provider data collected by CN on behalf of the state of Minnesota have been formatted per the given specifications and uploaded into the appropriate feature classes of the SBI Data Transfer Model. Wireline availability is contained within census blocks and road segments, wireless availability is contained as polygons of coverage areas, and middle-mile connections and Community Anchor Institutions are contained as point data. All speed data is contained at the census block, road segment, or wireless polygon level of availability. All efforts have been made to comply with formatting, domain, and metadata requirements to include as much information as possible.

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

## MINNESOTA FIELD VALIDATION METHODOLOGY

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

- conducting random spectrum analysis studies throughout the state using an Avcom PSA-37-XP spectrum analyzer;
- conducting mobile speed tests throughout the state using an iPhone, Android (or other smart phone) as well as provider-specific aircards (Sprint 3G/4G, Clearwire et al);
- identifying pre-selected, provider-submitted wireless transmit tower sites and cross-referencing data about that tower against the Federal Communications Commission (FCC) databases such as Antenna Structure Registration and/or the Universal Licensing System;
- cross-referencing Federal Registration Number data against available FCC Form 477 data as well as the FCC **CO**mmission **RE**gistration **S**ystem (CORES);
- validating provider submitted data (for example: latitude/longitude) using a handheld Garmin eTrex Summit GPS unit or GPS enabled software such as Microsoft Streets and Trips;
- locating physical wire-line attributes (such as Central Offices, Remote Terminals, CATV plant, etc.) and comparing them against provider submitted data; and
- conducting on-net and off-net speed tests using the FCC portal at http://www.broadband.gov/qualitytest/about/ or using the Ookla Net Metrics enabled speed test utility located on each of CN's program specific websites.

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

To date, Connected Nation's staff conducted on-site validation tests in Minnesota on the following providers: A Better Wireless NISP LLC; Ace Telephone Association; Airlink; Albany Mutual Telephone Association; Alliance Communications; Arrowhead Communications Corporation (also d.b.a. Hector Communications Corporation); Arvig Communications Systems (d.b.a. East Ottertail Telephone and ACS Communications); AT&T; Barnesville Municipal Telephone; Benton Cooperative Telephone Company; Bevcomm (also d.b.a. Blue Earth Valley Telephone Company); Bradco-WISP Inc.; Broadband Corp.; CenturyLink (formerly d.b.a. Qwest Corporation); Charter Communications; Chaska Net; Christensen Communications Company; CitEscape

Communications; City of Detroit Lakes ; City of Windom; Clear Choice; Clearwire Corporation; Cloudnet Inc.; Comcast Cable Communications LLC; Cross Lake; CTC Telecom; diversiCOM; Emily Cooperative Telephone Company; Enterpoint; Evertek Enterprises LLC; Farmers Mutual Telephone; Fibernet Monticello; Frontier Communications Corporation; FTTH Communications; Garden Valley Telephone Company; Gardonville Cooperative Telephone Association (also d.b.a. Wisper Wireless); Genesis Wireless; Granada Telephone Company; Halsted Telephone; Harmony Telephone Company; Hickory Tech Corporation (also d.b.a. IdeaOne); Info Link Wireless Inc.; Interstate Telecommunications Cooperative Inc.; Invisimax; JAB Wireless (formerly d.b.a. KeyOn Communications); Jaguar Communications; Johnson Telephone Company; Kassor and Manterville Telephone Company; Lonsdale Telephone; Loretel Systems Inc.; Mabel Cooperative Telephone Company; Manchester Hartland Telephone; Mediacom; Midcontinent Communications (d.b.a. US Cable); Mille Lacs Electric Cooperative; Minnesota Valley Telephone Company; Minnesota Valley TV Improvement Corporation; New Ulm Telecom Inc.; Nextera Communications; Northfield Wireless; Park Region Mutual Telephone (d.b.a. Otter Tail Telecom); Paul Bunyan Telephone; Pine Island Telephone Company; Polar Telcom Inc.; Red River Rural Telephone Association; River Valley Telecommunications Cooperative; Rothsay Telephone; SCI Cable; Scott Rice Telecommunications Cooperative; Sioux Valley Wireless; Sleepy Eye Telephone Company; SMBS (Southwest Minnesota Broadband Services); Southern Cablevision; Spring Grove Cooperative Telephone Company; Sprint; Starpoint Communications Inc. (d.b.a. Netpoint); TDS Telecommunications Corporation; T-Mobile USA; TotheHome; U.S. Internet Corporation (d.b.a. USI Wireless); Upsala Cooperative Telephone Company; VAL-ED Joint Venture; Verizon Communications; Western Telephone Company; Wide Open West (formerly d.b.a. Knology of the Plains ); Windstream Communications (acquired Lakedale LINK); Winnebago Cooperative Telephone Association; Wolverton Telephone; and Woodstock Telephone Company.

In addition to the field verification tests that have been conducted, Connected Nation has also conducted work in the field to collect information for the non-participating providers (NPP), A Better Wireless NISP LLC, Nextera, and TotheHome which, by nature of the methodology required for this collection, are also included in the above list.

From program initiation through this reporting period, CN has completed in-the-field validation testing against 89 companies (out of a universe of 121 viable providers) totaling 73.55 percent within the state of Minnesota. This percentage also considers the non-participating provider records submitted to NTIA as may be contained herein (see "Data Submission and Coverage Estimation of Non-Participating Providers" below).

CN has also continued to review provider datasets for accurate speed information, platform listings, and other intricacies that may fall outside of the standard SBI Data Transfer Model parameters, as published on the NTIA Grantee Workspace on August 9, 2012. Any providers whose submitted coverage and attributes are anticipated to come into question have been further reviewed and confirmed; details on a case-by-case basis are presented below.

**Ace Telephone Association**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 15 Mbps service; screenshot below.

**If you have Ace Digital TV–Expanded package:**

| | |
|---|---|
| Ace High-speed – up to 8Mbps | **$34.95 per month** |

**If you have Ace High-speed by itself:**

| | |
|---|---|
| Ace High-speed (basic) – up to 1Mbps | **$39.95 per month** |
| Ace High-speed – up to 15Mbps | **$49.95 per month** |

**Arvig Communication Systems**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 20 Mbps service; screenshot below.

- **Lightning**, up to 20Mb/512Kb
  - with Arvig Phone and Digital TV..... $79.95
  - with Arvig Phone or Digital TV..... $85.95
  - without Arvig Phone or Digital TV ..... $154.95

**Blue Earth Valley Telephone Company**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 15 Mbps service; screenshot below.

Surf the Internet at speeds from 1Mb to 15Mb/second. All plans allow for multiple users at the same location, business or residential. Stop wasting time waiting for web sites and files to download and see the benefits of BEVCOMM High Speed Internet today!

**Broadband Corp**
Issue: Fixed wireless platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: The equipment being used for the 3650 MHz spectrum allows for 14 Mbps speeds. Provider website advertises 10 Mbps service and custom plans with higher bandwidth; screenshot below.

| | |
|---|---|
| **MAXX Premium** - Up to 10mb/1mb*<br>*Includes 100GB of usage, $1.50 per gb of over usage.* | ***$99.95 per month*** |
| **Custom Service Level Agreement**<br>*Custom Plan with Performance Guarantees (call for info)* | ***Starting at $199.95*** |

**CenturyLink**

Issue: DSL platform with maximum advertised download speed in tiers 7 and 8, higher than expected value range for the technology.

Resolution: Provider website advertises 25 and 40 Mbps service; screenshot below.

**Christensen Communications Company**

Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.

Resolution: Provider website advertises 12 Mbps service; screenshot below.

**CitEscape Wireless Internet, LLC**
Issue: Fixed wireless platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: The documentation on the equipment being used indicates that 16.5 Mbps is achievable speed depending on the settings. Provider website advertises 10 Mbps service; screenshot below.

| Plan | Download* | Upload* | Price Per month |
|---|---|---|---|
| Silver | 1.5 Mbps | 512 Kbps | $39.99 |
| Gold | 2.5 Mbps | 768 Kbps | $49.99 |
| Platinum** | 5.0 Mbps | 768 Kbps | $69.99 |
| Ruby** | 7.5 Mbps | 1 Mbps | $89.99 |
| Titanium** | 10 Mbps | 1.5 Mbps | $129.99 |

**Clara City Telephone Company**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Confirmed with provider that 12 Mbps service is available, but speeds are not advertised.

**Crosslake Telephone Company**
Issue: Technology of transmission 40 with maximum advertised download speed in tier 7, lower than expected value range for the technology.
Resolution: Provider representative indicated that DOCSIS 3.0 has been installed, but speeds across their service area have not been bumped up yet. That will occur after the connectivity to fiber backbone is complete and middle-mile bandwidth is increased.

**Crosslake Telephone Company**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider representative indicated that tier 7 speeds are indeed available to all customers.

**Frontier Communications of Minnesota**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 12 Mbps service; screenshot below.

**High-Speed Internet Max**

With Max speeds as high as 12 Mbps, get the reliability, security and ease of installation with Frontier's acclaimed customer service.

**Garden Valley Telephone Company**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 20 Mbps service; screenshot below.

Internet service is available in 100% of Garden Valley's service area, allowing access to streaming video, email, and all you favorite sites, with fast and reliable speeds up to 20 MB.

**Granada Telephone Company**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 15 Mbps service; screenshot below.

| Plan | Speed | Monthly Fee |
|---|---|---|
| Basic | 1 Mb | $74.95 |
| Silver | 5 Mb | $94.95 |
| Gold | 15 Mb | $114.95 |

**Hiawatha Broadband Communications, Inc.**
Issue: Technology of transmission 40 with maximum advertised download speed in tier 8, lower than expected value range for the technology.
Resolution: Provider website advertises 25 Mbps service; screenshot below.

**Digital Value: $114.84/month**

| TV – | Internet – | Phone – |
|---|---|---|
| Expanded Plus Lineup | 25 Mbps | Local Service |
| Music Choice | 6 E-mails | 60 min. Long Distance |
| VOD (Where Available) | 100 MB Server Space | 2 Features |
| | SpamCu s | |

**Hickory Tech Corporation**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 20 Mbps service; screenshot below.

| Plans: | Lite | Prime | Pro | Premium |
|---|---|---|---|---|
| Download Speeds: | 1 Mbps* | 6 Mbps* | 9 Mbps* | 20 Mbps* |
| Emails: | 5 | 5 | 5 | 5 |
| Web Space: | 20 MB | 30 MB | 40 MB | 50 MB |

**Hutchinson Telecommunications, Inc.**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 10 Mbps service; screenshot below.

| | |
|---|---|
| 10 Mbps | $66.95 |
| 10 Mbps + NU-Basic TV | $82.90 |
| 10 Mbps + NU-Entertainment TV | $103.90 |
| 10 Mbps + NU-Variety TV | $116.90 |

**InvisiMax, Inc.**
Issue: Fixed wireless platform with maximum advertised download and upload speeds in tier 7, higher than expected value range for the technology.
Resolution: Provider confirmed that tier 7 download and upload speeds are indeed available.

**Jaguar Communications**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider representative confirmed that 10 Mbps service is available.

**Knology of the Plains, Inc.**
Issue: Technology of transmission 40 with maximum advertised download speed in tier 8, lower than expected value range for the technology.
Resolution: Provider website advertises 25 Mbps service; screenshot below.

**MegaPath Inc.**
Issue: DSL platform with maximum advertised download speed in tiers 7 and 8, higher than expected value range for the technology.
Resolution: Provider website advertises 20 Mbps and 45 Mbps service; screenshots below.

> DSL service provides download speeds up to 20 Mbps over a nationwide, multi-redundant private network that optimizes performance and security. DSL is an ideal broadband solution for small and medium-sized businesses that download large files or use the Internet extensively.
>
> For maximum connectivity at a minimum cost, there's no greater value than MegaPath Business Ethernet. Choose the bandwidth—2 Mbps up to 45 Mbps—that best fits your business' needs.

**Midcontinent Communications**
Issue: Technology of transmission 41 with maximum advertised download speed in tier 8, higher than expected value range for the technology.
Resolution: Provider website advertises 30 Mbps service; screenshot below.

> Speed things up!
>
> MidcoNet Xstream® Wideband 1.0
>
> Remember the files that normally took minutes to download over a typical dial-up or DSL connection? With MidcoNet Xstream® Wideband 1.0, you've got them in just seconds! MidcoNet Xstream® Wideband 1.0 packs your computer with download speeds up to 30 Mbps and uploads up to 5 Mbps.* It's amazing speed at a very affordable price – and backed by our friendly, 24/7 customer service.

**Minnesota Valley Telephone Company**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider confirmed that 10 Mbps service is available.

**New Ulm Telecom, Inc.**
Issue: Technology of transmission 40 with maximum advertised download speed in tier 8, lower than expected value range for the technology.
Resolution: Provider website advertises 25 Mbps; screenshot below.

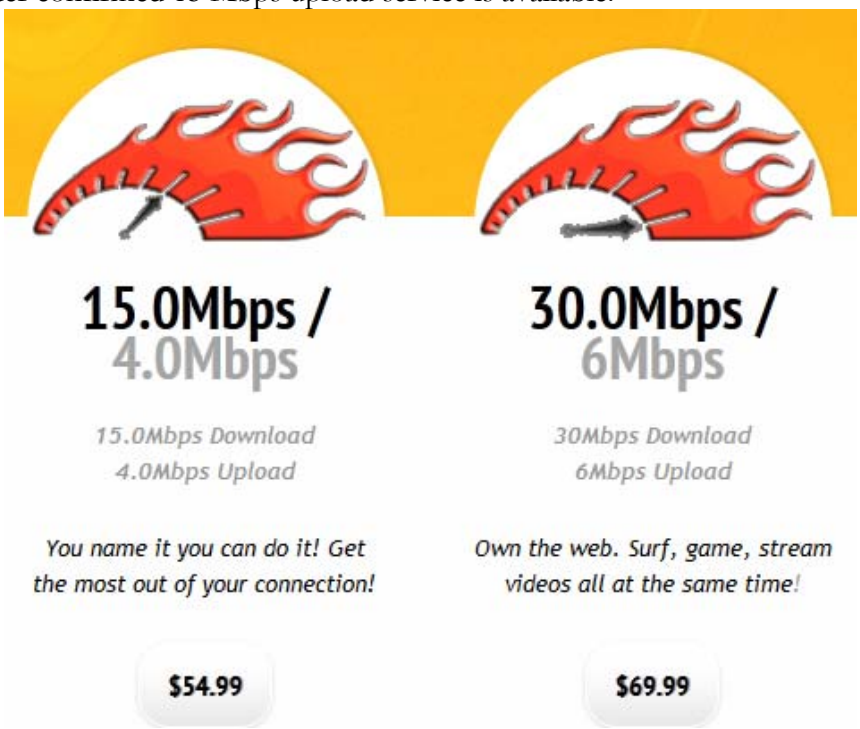
**Internet Pricing**

| | |
|---|---|
| Download speeds up to 1 mbps | $29.95 |
| Download speeds up to 15 mbps | $44.95 |
| Download speeds up to 25 mbps | $64.95 |

**New Ulm Telecom Inc.**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 10 Mbps service; screenshot below.

| | |
|---|---|
| 10 Mbps | $59.95 |
| 10 MBps + NU-Basic TV | $71.90 |
| 10 Mbps + NU-Entertainment TV | $104.90 |
| 10 Mbps + NU-Variety TV | $109.90 |

**NorthfieldWiFi LLC**
Issue: Fixed wireless platform with maximum advertised download speed in tiers 7 and 8, as well as maximum advertised upload speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 15 Mbps and 30 Mbps service; screenshot below. In addition, provider confirmed 15 Mbps upload service is available.




**Park Region Mutual Telephone Company**
Issue: DSL platform with maximum advertised download speed in tiers 7 and 9, higher than expected value range for the technology.
Resolution: Provider website advertises 16, 25, and up to 50 Mbps service; screenshot below.

| | |
|---|---|
| **Up to 16Mb** | $59.95 |
| **Up to 25Mb** | $74.95 |
| **Up to 50Mb** | $149.95 |

**Paul Bunyan Rural Telephone Cooperative**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 25 Mbps service; screenshot below.

| Broadband Service Plans | Fee |
|---|---|
| Up to 10 Mb | $44.95/mo. |
| Up to 15 Mb | $54.95/mo. |
| Up to 20 Mb | $64.95/mo. |
| Up to 25 Mb | $74.95/mo. |

**Pine Island Telephone Company**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 15 Mbps service; screenshot below.

High Speed Internet - Residential

| Plan | Speed | E-Mail Boxes | Monthly Fee |
|---|---|---|---|
| Silver DSL* | 1 Mb | 5 | $49.95 |
| Platinum DSL* | 5 Mb | 5 | $59.95 |
| Platinum Plus* | 15 Mb | 5 | $64.95 |

**Polar Telcom, Inc.**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider representative indicated that tier 7 speeds are indeed available to all customers.

**Radio Link Internet**
Issue: Fixed wireless platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 20 Mbps service; screenshot below.

20 mbps down, 4 mbps up
$85.00/month

**Runestone Telecom Association**
Issue: DSL platform with maximum advertised download speed in tier 8, higher than expected value range for the technology.
Resolution: Provider website advertises 30 Mbps service; screenshot below.

- 15 Mbps - 20 Mbps.....$68.95/month
- 25 Mbps - 30 Mbps.....$78.95/month

**Sacred Heart Telephone Company**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Confirmed with provider that 12 Mbps service is available, but speeds are not advertised.

**Scott Rice Telephone Co.**
Issue: DSL platform with maximum advertised download speed in tiers 7 and 8, higher than expected value range for the technology.
Resolution: Provider representative confirmed that 10 Mbps service is available in some areas and 30 Mbps service is also available in some areas.

**Sjoberg's Inc.**
Issue: Technology of transmission 40 with maximum advertised download speed in tiers 7 and 8, lower than expected value range for the technology.
Resolution: Provider representative confirmed that 40 Mbps service is available to all customers using DOCSIS 3.0. Provider website advertises 11 Mbps and 40 Mbps service; screenshot below.

**Platinum** - $49.95 with cable - $56.95 without cable – (11 Meg) 11 MEG dowload/1024 upload – **

**Extreme -** $119.95 with cable - $126.95 without cable – (40 Meg) 40 MEG dowload/6 MEG upload – ** (only available in Roseau & Warroad)

**Sleepy Eye Telephone Company**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 10 Mbps service; screenshot below.

**Residential Rates**
Various options for Internet speeds are available.

- 256k DSL $39.95
- 2Mbps DSL $44.95
- 5Mbps DSL $59.95
- 10Mbps DSL $79.95

**Southern Cablevision, Inc.**
Issue: Technology of transmission 40 with maximum advertised download speed in tier 7, lower than expected value range for the technology.
Resolution: Provider representative confirmed that service area is DOCSIS 3.0, but lower speeds are still advertised and in use while customers move modems up to DOCSIS 3.0.

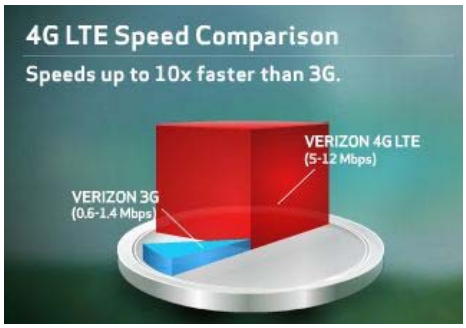
**TDS Telecommunications Corporation**
Issue: DSL platform with maximum advertised download speed in tiers 7 and 8, higher than expected value range for the technology.
Resolution: Provider website advertises 15 Mbps service; screenshot below.

**T-Mobile USA, Inc.**
Issue: Mobile wireless platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website confirms that service greater than speed tier 6 is available; screenshot below.

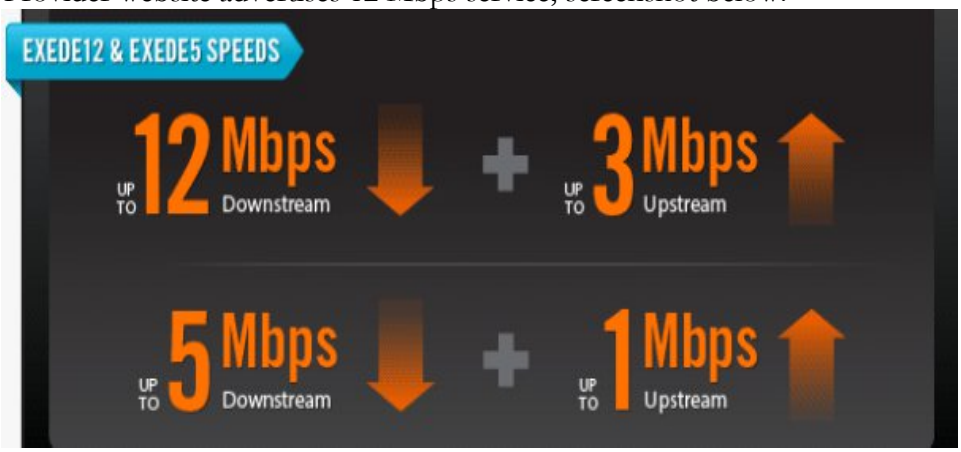
T-Mobile customers with 4G phones are already experiencing data speeds that are comparable to or faster than the speed of a home broadband network. And with recent improvements to our 4G network-doubling our theoretical download speeds-we're giving our customers enhanced 4G data speeds. We've seen average download speeds on our HSPA+ 42 Mbps-capable data stick approaching 10 Mbps with peak speeds of 27 Mbps, and download speeds approaching 8 Mbps with peak speeds of 20 Mbps on our upcoming HSPA+ 42 Mbps-capable smartphones.

**VAL-ED Joint Venture, LLP**
Issue: Fixed wireless platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: The equipment being used allows for 14 Mbps speeds.

**Verizon Communications, Inc.**
Issue: Mobile wireless platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 12 Mbps service; screenshot below.




**ViaSat, Inc.**
Issue: Satellite platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 12 Mbps service; screenshot below.




**Western Telephone Company**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 10 Mbps service; screenshot below.

| | |
|---|---|
| 10 Mbps | $59.95 |
| 10 MBps + NU-Basic TV | $71.90 |
| 10 Mbps + NU-Entertainment TV | $104.90 |
| 10 Mbps + NU-Variety TV | $109.90 |

**Wikstrom Telephone Company**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider confirmed that tier 7 service is available to customers that want it within the allowable distance.

**Windstream Communications**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider website advertises 12 Mbps service; screenshot below.

| See which of our speeds matches your online activities.<br>Choose the right Internet speed (WATCH VIDEO) | 3 Mbps<br>(Basic Use) | 6 Mbps<br>(Most Popular) | 12 Mbps<br>(Fastest Option) |
|---|---|---|---|

**Wolverton Telephone Company**
Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.
Resolution: Provider representative indicated that tier 7 speeds are indeed available to all customers.

## DATA SUBMISSION AND COVERAGE ESTIMATION OF NON-PARTICIPATING PROVIDERS

As part of its ongoing broadband mapping efforts, CN has developed a series of processes with the goal of submitting coverage estimation mapping data to NTIA for every known and qualifying last-mile broadband provider, regardless of platform type (cable modem, DSL, fixed wireless, etc.). This state specific collection of coverage estimation methodology papers (see Appendix A) demonstrates the estimated broadband service territory for the providers in this state that have either been non-responsive or that have refused to participate in the SBI mapping initiative.

## ACCURACY AND VERIFICATION: PROVIDER VALIDATION METHODOLOGY

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

Once the data collection has been aggregated at a statewide level, static maps of statewide and county-level availability are produced and made publicly available. In addition, consumers can visit the interactive online tool, My ConnectView, to create customized views of broadband service areas and analyze corresponding demographic information. Leveraging broadband service data on various platforms allows for public users, providers, and other stakeholders to review, scrutinize, and provide feedback on the represented data. This feedback becomes a validation method in itself as consumers submit inquiries to CN either affirming where service is not available or identifying areas where broadband service is shown on the map, but in actuality is not available. This allows for a follow-up to providers regarding revisions to the data as it is represented; it also allows for CN to identify locations where on-site visits may be necessary to complete field validation of available services. Public feedback on all forms of mapping products serves as a localized validation method for provider-supplied information and allows CN to resolve inaccuracies as they are identified to ensure that only the highest quality information is provided to stakeholders.

Additionally, NPP narratives that were submitted in previous mapping cycles are subjected to the same level of scrutiny. Occasionally, a provider may elect to voluntarily participate (thus eliminating the need for future data estimation activities in the field). However, more often than not, the NPP narrative is updated with a combination of data gleaned from the provider's website, data obtained through FCC research and/or data collected/verified in the field by a CN staff engineer.

Estimates derived from provider-validated data indicate that approximately 2.01 percent of Minnesota households do not have terrestrial fixed broadband service available, and approximately 0.08 percent of Minnesota households have neither mobile nor fixed broadband service available.

Within rural areas of the state, results derived from provider-validated data indicate that approximately 4.66 percent of rural Minnesota households do not have terrestrial fixed broadband service available, and approximately 0.18 percent of rural Minnesota households have neither mobile nor fixed broadband service available. Please note that the availability estimates presented are based on Census 2010 household information.

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

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

## WIRELESS METHODOLOGY

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

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

1. The name of the structure.
2. Whether the transmitting device is operational or proposed.
3. The maximum advertised downstream speed, the maximum advertised upstream speed.
4. The typical downstream speed, the typical upstream speed (peak periods for both).
5. The frequency range of spectrum being used (as prescribed by NTIA). This may include (but is not limited to) spectrum authorizations identified within the Federal Communications Commission (FCC) Universal Licensing System (ULS) database or located on the FCC's Spectrum Dashboard. This research often proves to be exceptionally effective when estimating the coverage area of an NPP.
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.
20. Antenna centerline AGL (height of antenna above ground level measured at the centerline of the actual antenna).
21. Foliage factors (Evergreens/Deciduous and percent of ground cover).
22. Ground Clutter (primarily used in rural areas to account for foliage and in metropolitan areas to account for types and heights of buildings if known).

23. Average gain of receive antenna.
24. Receive antenna is estimated at height above average terrain (HAAT) of 6.2 meters/20 feet.
25. Federal Registration Numbers (if applicable) which may allow opportunities to cross-reference and/or obtain additional data from the FCC's ULS and the **CO**mmission **RE**gistration **S**ystem.

Propagation modeling combines scientific data and empirical mathematical formulation for the characterization of radio wave propagation as a function of frequency, distance, and other conditions. Propagation software(s) typically use the Irregular Terrain Model (also known as Longley-Rice) of radio propagation for frequencies between 20 MHz and 20 GHz. This model is based on electromagnetic theory and statistical analyses of the combination of terrain features and radio measurements, then predicting the median attenuation of a radio signal as a function of distance and the variability of the signal in time and in space. For metropolitan areas, the software can typically be adjusted to use the Okumura-Hata model which accounts for predicting the behavior of cellular transmissions in areas where buildings are the primary obstructions. The resulting product from either model depicts a graphical illustration of the theoretical propagation characteristics of a selected frequency range based on defined variables (receiver sensitivity of the home/mobile device, foliage factor, and digital elevation terrain input).

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

## BROADBAND INQUIRIES METHODOLOGY

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

indicate that they do; 4) residents who have broadband but want a faster connection speed; and 5) residents who have broadband but want a less expensive service option.

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

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

The broadband inquiry process has been implemented in each of the CN state programs with successful results. Altogether CN has received over 18,600 broadband inquiries since 2007, allowing the state programs to evaluate each inquiry for broadband demand and data verification. These inquiries are continuously examined against current broadband availability, updated every six months, to determine if previously unserved households have been expanded to and can now receive broadband at their residence. This database of broadband inquiries has also allowed the CN state programs to aggregate demand in concentrated areas to show providers the exact locations where the population has made it clear that they would purchase broadband if it was made available to them. Providers in the states have responded to this process and have expanded to areas knowing that their investment will be worthwhile. Data verification methods have also proven successful, as the state programs have been able to show those inquiries that indicate the broadband service areas are misrepresented on the map to providers, who then verify where service cannot reach in regard to that residence(s). The broadband coverage in these states has been altered to create a more accurate map based on the inquiries submitted by the public.

During this reporting period, the Connect Minnesota project has received a total of 19 inquiries (169 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.

## MY CONNECTVIEW METHODOLOGY

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

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

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

The Connect Minnesota project launched My ConnectView on April 2, 2012, and has received 1,461 visits this reporting period; to date the interactive mapping applications have received 5,340 visits.

## SPEED TEST METHODOLOGY

The 1,244 speed tests that are represented in the Connect Minnesota Speed Test Report during this reporting period (11,143 grant inception to date) are the result of a partnership between CN and Ookla Net Metrics. Utilizing this relationship increases the level of confidence in the data being collected and provides for a far greater sample size than could be collected by a single testing site.

Ookla owns and operates Speedtest.net, as well as develops and deploys speed tests, such as the Connect 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.

## Providers Deemed Non-Viable

The following list of companies represents the remainder of the broadband provider universe that was originally identified as complete for outreach to begin for the State Broadband Initiative. These providers are not included in the Data Package for the October 2012 submission because they have been deemed non-eligible under the parameters and guidance of the SBI grant program. This list of companies includes, but is not limited to: providers offering service but below the current definition of broadband, those that have gone out of business, technology consulting firms, infrastructure or network construction companies, non-facilities based general resellers, etc.

| | Company Name | URL | Comments |
|---|---|---|---|
| 1 | 360networks | http://www.360networks.com/ | Acquired by another company. |
| 2 | Access Media 3, Inc. | http://www.am3inc.com | Company is a bulk reseller to MDU and commercial properties. |
| 3 | Airespring, Inc. | http://www.airespring.com | Company is a nonfacilities-based reseller. |
| 4 | Akeva | n/a | Reseller of Verizon Mobile phones in mall kiosk. |
| 5 | Arrowhead Electric Cooperative, Inc. | http://www.aecimn.com/ | Construction is underway; may need to indicate provider viable for April 2013 Submission. |
| 6 | Boreal Access | http://boreal.org/drupal/ | Provider does not meet minimum speed requirements for participation. |
| 7 | Broadcore, Inc. | www.broadcore.com/ | Broadcore is a national provider of business-class hosted unified communications services and has no ISP offerings. |

| | | | |
|---|---|---|---|
| 8 | BullsEye Telecom, Inc. | http://www.bullseyetelecom.com | Company is a nonfacilities-based reseller. |
| 9 | Carver County Fiber Initiative | www.co.carver.mn.us | Construction underway for middle mile project. Request for Bid on Equipment expected 3rd quarter 2012. |
| 10 | Cbeyond Communications, LLC | http://www.cbeyond.net/index.htm | Company is a nonfacilities-based reseller. |
| 11 | City of Bagley | http://www.bagleymn.us/ | Cable system does not offer Internet service currently. City has released an RFP to get their HFC Plant upgrade to include ISP services. |
| 12 | Cloudnet Inc. | http://www.cloudnet.com | Nonfacilities-based reseller for DSL services and wireless coverage upgrading to meet minimum speed requirements. Will make viable April 2013 Submission. |
| 13 | Computer Pro Inc. | www.hickorytech.com | Company reporting data is provided by Hickory Tech. |
| 14 | Delavan Telephone Company | http://www.bevcomm.net/ | Company reporting data is provided by Blue Earth Valley Telephone Company (BEVCOMM). |
| 15 | Digital Telecommunications, Inc | http://www.pickdti.com/ | No longer in business. |
| 16 | Dunnell Telephone Company | http://bevcomm.net/ | Provider does not meet minimum speed requirements for participation. |
| 17 | EN-TEL Communications, LLC | http://www.en-tel.com/ | Acquired by another company. |
| 18 | Enventis Telecom, Inc. | http://www.enventis.com/ | Provider does not offer broadband in Minnesota. |
| 19 | Global Crossing Telecommunications, Inc. | http://www.globalcrossing.com/ | Acquired by another company. |
| 20 | GN Wireless | n/a | Local phone disconnected and website not located; provider no longer in business. |
| 21 | Home Telephone Company | http://www.hmtel.com | Company reporting data is provided by Arvig Communications Services. |

| | | | |
|---|---|---|---|
| 22 | Lake County Fiber Network | http://www.co.lake.mn.us/ | Phase-One construction underway with service being offered as Lake Connections to select areas in late 2012. Will be Viable next submission. |
| 23 | Lakedale LINK | http://www.lakedaletelephone.com/ | Acquired by another company. |
| 24 | Lakedale Telephone | http://www.lakedaletelephone.com/ | Acquired by another company. |
| 25 | LightEdge Solutions, Inc. | http://www.lightedge.com | Provider does not offer residential broadband service in Minnesota. |
| 26 | Lightyear Network Solutions, LLC | www.lightyear.net | Nonfacilities-based reseller for DSL services. |
| 27 | Lowry Telephone LLC | www.home.runestone.net/rta | Company acquired by Runestone Telecom Association. |
| 28 | Maple Leaf Networks | http://www.mleaf.net/ | No longer in business. |
| 29 | Merit Network, Inc. | www.merit.edu | Provider has operations in Michigan; no operations in Minnesota completed to date. |
| 30 | Metropolitan Telecommunications Holding Company | n/a | Nonfacilities-based reseller for DSL services. |
| 31 | MLM Project Services, Inc. | http://www.mlmpsinc.com | Company does not offer residential broadband service in Minnesota. |
| 32 | M-Tek Systems | www.mteksystems.com | Company does not offer residential broadband service in Minnesota. |
| 33 | Nates Net | http://www.natesnet.com/ | Wireless services upgrading to meet minimum speed requirements. Will make viable April 2013 Submission. |
| 34 | New Edge Network, Inc. | http://www.newedgenetworks.com/ | Nonfacilities-based backhaul reseller. |
| 35 | North American Communications Corp (NACC) | http://www.jaguarcommunications.com | Maps and data are supplied by d.b.a. Jaguar Communications. |
| 36 | Northeast Service Cooperative | http://www.nesc.k12.mn.us/ | Middle mile fiber construction is underway; expect data for April 2013 submission. |

| | | | |
|---|---|---|---|
| 37 | OrbitCom, Inc. | http://www.orbitcom.biz | Reseller of Qwest Services and has been non-responsive to multiple contact attempts. |
| 38 | PAETEC Communications, Inc. | http://www.paetec.com/ | Acquired by another company. |
| 39 | Popp.com, Inc. | http://www.popp.com/ | Provider is a supplier of business services only. |
| 40 | Reliance Globalcom Services, Inc. | http://www.relianceglobalcom.com/ | Wholesale reseller of backhaul and managed B2B circuits. |
| 41 | Renville-Sibley Fiber to the Farm | http://www.scfiber.com/Sibley_County_Fiber/Home.html | Fiber to the Farm project still seeking funding. |
| 42 | Ridge Runner Internet Services Inc. | http://www.ridge-runner.com/index.html | No longer in business. |
| 43 | Sihope Communications | http://www.sihope.com/ | Facilities-based company offering B2B solutions and reseller of circuits (non-residential). |
| 44 | Sioux Valley Rural Television, Inc. | n/a | Company does not offer broadband services; affiliate Sioux Valley Wireless coverage and data is provided. |
| 45 | St. Olaf College Telecommunications | http://www.stolaftelephone.com/ | Company does not offer broadband services. |
| 46 | Tekstar Communication Systems, Inc. | n/a | Company reporting data is provided by Arvig Communications Services. |
| 47 | Telefonica USA, Inc. | http://www.us.telefonica.com/ | Provider does not offer services in Minnesota. |
| 48 | Terril Telephone Cooperative | http://www.terril.com | Provider does not offer services in Minnesota. |
| 49 | The City of Boyd, Minnesota | n/a | The City of Boyd offers cable television only over cable plant; leases cable spectrum to ISP, MVTV Wireless. |
| 50 | United States Cellular Corporation | http://www.uscellular.com/uscellular/index.jsp | Provider does not offer broadband services in Minnesota. |
| 51 | University Corporation for Advanced Internet Development | n/a | Nationwide Gbit network for anchor institutions; under construction utilizing existing fiber and new installations. |

| | | | |
|---|---|---|---|
| 52 | US Cable Corporation | http://www.uscablegroup.com/ | Acquired by another company. |
| 53 | US Family Internet | http://www.usfamily.net/ | Nonfacilities-based reseller of Qwest Services. |
| 54 | US Internet of Minnetonka | http://www.usiwireless.com/ | Provider coverage and data is reported by d.b.a. USI Wireless. |
| 55 | Velocity Telephone, Inc. | http://www.velocitytelephone.com | Nonfacilities-based reseller of Qwest Services. |
| 56 | WilTel Communications, LLC. | n/a | As of December 23, 2005, WilTel Communications Group Inc. operates as a subsidiary of Level 3. |

# APPENDIX A: ESTIMATION OF NON-PARTICIPATING PROVIDERS

**A Better Wireless**

**Nextera Communications**

**TotheHome.com**

# A BETTER WIRELESS

As part of its ongoing broadband mapping efforts, Connected Nation has developed a series of processes with the goal of submitting mapping data to NTIA for every known and qualifying broadband provider, regardless of whether the provider has chosen to support and participate in the SBI mapping initiative.

The following narrative provides detail regarding the recent data collection activities related to A Better Wireless, a wireless Internet service provider (WISP), located in Henning, MN, with a service area around Henning, Deer Creek, and Leaf Lakes. The narrative will include information regarding how and where CN obtained publicly available data and the on-the-ground validation techniques that support the underlying data.

**Background**

CN staff members have continued trying to obtain the participation of the provider with 27 instances of communication via telephone and e-mail sessions since January 26, 2010, through August 10, 2012. Communication replies were received from a company representative on July 19, 2011, with the response of electing not to participate. Additionally, a CN staff member visited the website of A Better Wireless on August 10, 2012 and could not identify any changes to the service area or maximum advertised speeds. Additionally, a CN engineer attempted an unannounced office visit (September 21, 2011) to discuss the broadband mapping project in person with A Better Wireless staff but no one was available.

**The Issue**

A Better Wireless, by its lack of responsiveness since January 26, 2010, has predicated its unwillingness to participate in the Connect Minnesota broadband mapping initiative.

**Identification of Provider's Service Plans, Service Area, Legal Name, d.b.a., FRN, and Licensing**

CN has built a file for this non-participating provider based on data collected through the public domain (such as the provider's website), through anecdotal discussions with citizens in the area and enriched by on-the-ground research. For example, CN reviewed the provider's website (www.abetterwireless.com) to determine the residential service plans **(Exhibit A)** and the service area **(Exhibit B)** of the provider's wireless network. A search for a Federal Registration Number (FRN) on the FCC **CO**mmission **RE**gistration **S**ystem (CORES) system yielded an FRN of 0015093073 **(Exhibit C)** with contact information relative to the owner of the company. Also, to support field validation of access points, the FRN was referenced to the FCC Universal Licensing System (ULS) to identify any licenses the provider may hold which could possibly enhance locating active access points for the service area. This process yielded license WQKB862 **(Exhibit D)**, Radio Service: WQKB862 with 0 unique locations. As of August 28, 2012, a more extensive search of the FCC ULS demonstrates the variety of application amendments that have been filed by the provider and either dismissed by the FCC or set aside as inactive (see third illustration under Exhibit D).

## Exhibit A: Service Plans

# A Better Wireless Internet

Introducing a Better Wireless to Rural Minnesota

A BETTER WIRELESS

- A Better Wireless
- About Us
- Installation
- Service Packages
- Contact Us
- Privacy Policy
- Terms and Conditions
- Domain Name Dispute Policy
- Refund Policy
- Customer Login
- Customer Webmail
- Find Wi-Fi Hotspots
- Access Denied

Service Packages

| | Home Packages | | Business Packages | | Enterprise Packages | | |
|---|---|---|---|---|---|---|---|
| | Freedom | Eagle | Business Freedom | Business Eagle | 1000 kb | 1500 kb | 1500 kb |
| Downlink Speed (up to) | 512 kb | 768 kb | 512 kb | 768 kb | 1000 kb | 1500 kb | 1500 kb |
| Uplink Speed (up to) | 256 kb | 256 kb | 384 kb | 384 kb | 512 kb | 768 kb | 1500 kb |
| Data Transfer per month | 10,240 MB (10 GB) | 15,360 MB (15 GB) | 20,480 MB (20 GB) | 25,600 MB (25 GB) | 51,200 MB (50 GB) | 102,400 MB (100 GB) | unlimited |
| Additional Bandwidth | $5 per 5 GB | $5 per 5 GB | $5 per 5 GB | $5 per 5 GB | $5 per 5 GB | $5 per 5 GB | $5 per 5 GB |
| Email Address* | 3 | 3 | 5 | 5 | Unlimited | Unlimited | Unlimited |
| Static IP Address* | optional | optional | 1 | 1 | up to 20 | up to 20 | up to 20 |
| Set Up Fee | $40.00 | $40.00 | $40.00 | $40.00 | $60.00 | $60.00 | $60.00 |
| Monthly Billing | $37.45 | $47.45 | $67.45 | $77.45 | $177.49 | $267.49 | $307.49 |
| Equipment Lease* | $5.99/month | $5.99/month | $5.99/month | $5.99/month | $5.99/month | $5.99/month | $5.99/month |
| Total Base Monthly w/ Tax | $43.44 | $53.44 | $73.44 | $83.44 | $183.48 | 263.48 | $313.48 |
| One-Time Installation Fee | $75 for 2.4 GHz $150 for 900 MHz | $75 for 2.4 GHz $150 for 900 MHz | $75 for 2.4 GHz $150 for 900 MHz | $75 for 2.4 GHz $150 for 900 MHz | $75 for 2.4 GHz $150 for 900 MHz | $75 for 2.4 GHz $150 for 900 MHz | $75 for 2.4 GHz $150 for 900 MHz |
| | • 3 email addresses<br>• Dynamic IP address | | • 5 email addresses*<br>• 1 static IP address* | | • Unlimited email addresses<br>• Up to 10 static IP addresses* | | |

## Exhibit B: Service Area

## Exhibit C: Federal Registration Number

| Registration Detail | |
|---|---|
| FRN: | 0015093073 |
| Registration Date: | 05/24/2006 10:32:00 PM |
| Last Updated: | 10/16/2009 11:27:17 AM |
| Business Name: | A Better Wireless, NISP, LLC |
| Business Type: | Private Sector , Limited Liability Corporation |
| Contact Organization: | A Better Wireless, NISP, LLC |
| Contact Position: | Consultant |
| Contact Name: | Mr Mitchell D Koep |
| Contact Address: | 25215 480 AVE<br>Henning, MN 56551<br>United States |
| Contact Email: | support@abetterwireless.com |
| ContactPhone: | (218) 583-2234 |
| ContactFax: | (218) 583-2234 |

## Exhibit D: WQKB862 License Reference

ULS License - 3650-3700 MHz License - WQKB862 - A ...

ULS License

**3650-3700 MHz License - WQKB862 - A Better Wireless, NISP, LLC**

New Search | Refine Search | Return to Results | Printable Page | Reference Copy | Map License

MAIN | ADMIN | LOCATIONS

| | | | |
|---|---|---|---|
| Call Sign | WQKB862 | Radio Service | NN - 3650-3700 MHz |
| Status | Active | Auth Type | Regular |
| **Dates** | | | |
| Grant | 03/24/2009 | Expiration | 12/29/2018 |
| Effective | 03/24/2009 | Cancellation | |

**Area of Operation: N**

Operating Nationwide including Hawaii, Alaska, and US Territories.

**Frequency Bands**

003650.00000000-003700.00000000

**Licensee**

| | | | |
|---|---|---|---|
| FRN | 0015093073 (View Ownership Filing) | Type | Limited Liability Company |

**Licensee**

A Better Wireless, NISP, LLC
25215 480 AVE
Henning, MN 56551
ATTN Lillian Koep

P:(218)583-2234
F:(218)583-2234
E:support@abetterwireless.com

**Contact**

A Better Wireless, NISP, LLC

25215 480 AVE
Henning, MN 56551
ATTN Lillian Koep

P:(218)583-2234
F:(218)583-2234
E:support@abetterwireless.com

3650-3700 MHz License - WQKB862 - A Better Wireless, NISP, LLC

**Locations Summary**

New Search | Refine Search | Return to Results | Printable Page | Reference Copy | Map License

MAIN | ADMIN | LOCATIONS

| Call Sign | WQKB862 | Radio Service | NN - 3650-3700 MHz |
|---|---|---|---|

**0 Total Locations**
10 Locations per Summary Page

**No Locations**

**0 Total Locations**
10 Locations per Summary Page

---

MAIN | ADMIN | LOCATIONS

| Call Sign | WQK3862 | Radio Service | NN - 3650-3700 MHz |
|---|---|---|---|

Return to Admin

**Applications**

| Date | File Number and Type | Status |
|---|---|---|
| 11/10/2009 | 0004011785<br>AM - Amendment | Dismissed |
| 11/10/2009 | 0004011786<br>AM - Amendment | Dismissed |
| 10/28/2009 | 0004011786<br>RL - Register Link/Location | Inactive |
| 10/28/2009 | 0004011785<br>RL - Register Link/Location | Inactive |
| 10/28/2009 | 0004011784<br>RL - Register Link/Location | Dismissed |
| 10/28/2009 | 0004011781<br>RL - Register Link/Location | Dismissed |
| 10/28/2009 | 0004011778<br>RL - Register Link/Location | Dismissed |
| 10/28/2009 | 0004011773<br>RL - Register Link/Location | Dismissed |
| 10/28/2009 | 0004011772<br>RL - Register Link/Location | Dismissed |
| 10/28/2009 | 0004011770<br>RL - Register Link/Location | Dismissed |
| 10/28/2009 | 0004011768<br>RL - Register Link/Location | Dismissed |
| 10/28/2009 | 0004011767<br>RL - Register Link/Location | Dismissed |
| 10/28/2009 | 0004011766<br>RL - Register Link/Location | Dismissed |

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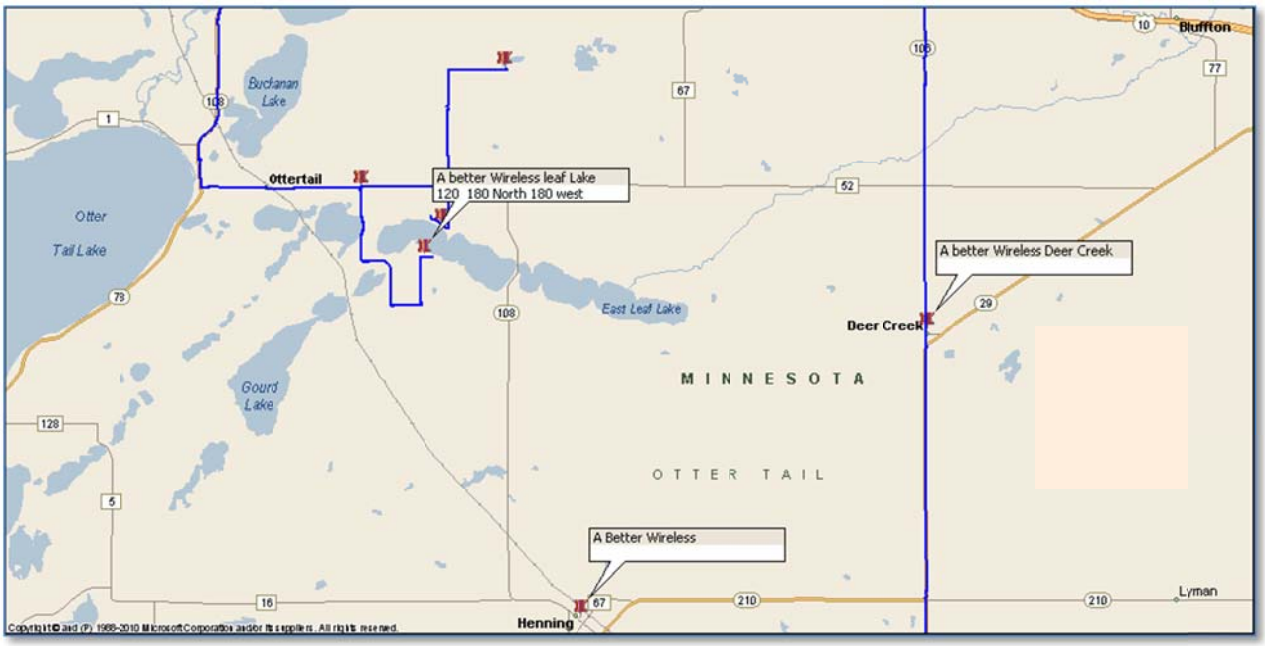
**Preliminary Identification of Provider's Coverage Area**

Connected Nation extracted the A Better Wireless service area locations from its website and the information through the FCC ULS database in reference to license WQKB862. The website service area locations were utilized to create a Google Earth image overlay **(Exhibit E).** The image overlay was positioned to match the Google Earth base map's roadways, county boundaries, and water bodies. The degree of accuracy of the image overlay was maintained at less than 1 mile (5280 ft.) to establish a minimum search criteria of a given access point. The provider's service area depiction is represented by tower symbols as shown in **Exhibit B**. Using the coordinates determined to be center coordinates, search rings were created with the image overlay to determine the feasibility of locating the Structures to identify coordinates of the locations. The location's center coordinates were inputted into Google Earth and examined utilizing the zoom option of the aerial imagery. A portion of the Transmitting locations structures were identified. This resulted in the means of establishing coordinates for the access point locations. A site validation trip was also planned and executed to the area. All 3 locations were entered into the Microsoft *Streets and Trips* mapping application **(Exhibit F)** to develop a route for the validation process.

## Exhibit E: Google Earth: Provider's Service Area Image Overlay

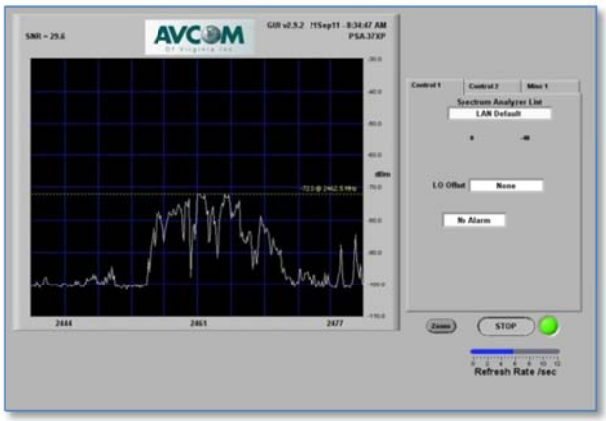
## Exhibit F: Validation Points for AP Structures

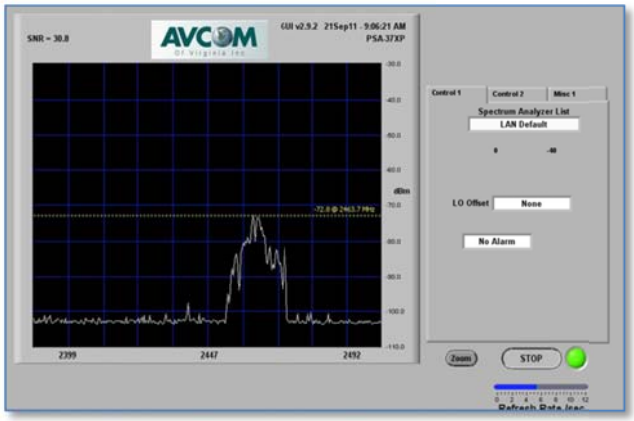


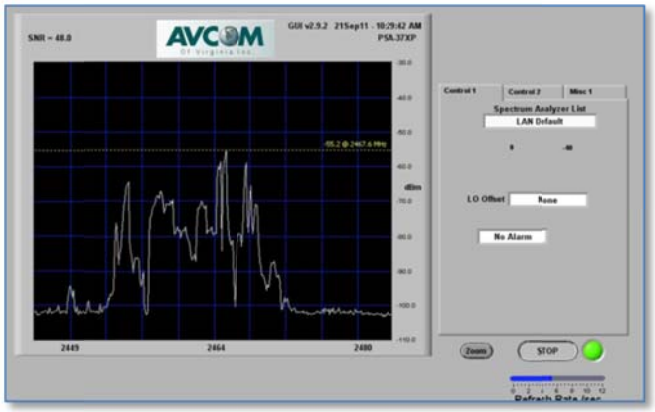

**Testing Techniques**

Connected Nation staff developed a site validation route based on data established with the Google Earth image overlay and publicly available data through the FCC ULS database for A Better Wireless WQKB862 radio service. The CN wireless engineer was equipped with an AVCOM PSA-37XP analyzer with RF detection from 1 MHz to 6 GHz and an array of antennas tuned specifically for the 900 MHz, 2.4 GHz, 3.65 GHz, and 5 GHz frequency bands **(Exhibit G)**. Each validation point was scrutinized for frequency of operation. A screen image of the operating frequency (or frequencies) was captured; general notes were recorded for each location-approximate antenna height, frequency of operation, antenna type (omnidirectional or sectored), and photographs were taken of the access points.

## Exhibit G: Field Data for A Better Wireless Hub Location




| Provider | Area Covered | Structure type | Longitude | Latitude | Frequency Band | TX Ant Height | Notes |
|---|---|---|---|---|---|---|---|
| A Better Wireless | Henning | Water Tower | 46.31916667 | -95.44777778 | 2400 Mhz | 120feet | Ant Ht 120' Omni |
| A Better Wireless | Deer Creek | Water Tower | 46.39138889 | -95.32666667 | 2400 Mhz | 120feet | Ant Ht 120' Omni |
| A Better Wireless | Leaf Lake Area | Grain Silo's | 46.41001000 | -95.50138889 | 2400 Mhz | 120feet | 120' 180 North 180 west Farm 2 silos |

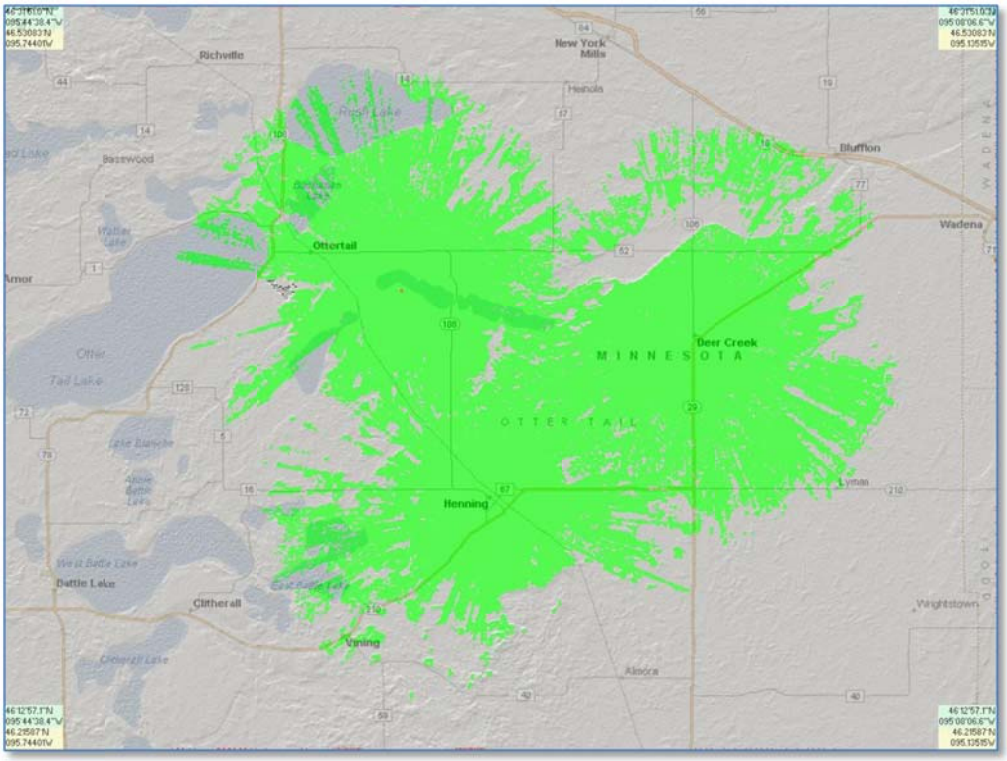
**Results and Submission for October 2012**

Of the 3 locations visited during the validation point route, 3 access points were identified and relative information was logged into the A Better Wireless field validation notes file **(Exhibit H)**. The field and the publicly available data were transferred to the Connected Nation Provider Information file. A composite propagation study was completed based on the field data **(Exhibit I)**. Both documents were forwarded to A Better Wireless and advised the information will be submitted to Connect Minnesota and the NTIA broadband mapping project for processing if there are no discrepancies of the estimated coverage received from the provider within a 48-hour period. On August 23, 2012, a resprentative of the company responded by e-mail and, in a brief but caustic e-mail, refused to participate in this (and future) mapping cycles.

## Exhibit H: Field Validation Notes

| Provider | | Test Site Info | | Coordinates NAD 83 | | Platform Type | | Test Data | |
|---|---|---|---|---|---|---|---|---|---|
| Provider | FRN Validation | Test City | Location Description | Lat Decimal | Long Decimal | Type | Presence Confirmed | Type | Pass or Fail? |
| A Better Wireless | Yes | Henning | South edge town | 46.319167 | -95.447778 | Fixed Wireless | Yes | Signal Verification | Pass |
| A Better Wireless | Yes | Deer Creek | West Part of Town | 46.391389 | -95.326667 | Fixed Wireless | Yes | Signal Verification | Pass |
| A Better Wireless | Yes | Leaf Lake | Leaf Lake area | 46.410000 | -95.501389 | Fixed Wireless | Yes | Signal Verification | Pass |

## Exhibit I: A Better Wireless Composite Coverage



# NEXTERA COMMUNICATIONS

As part of its ongoing broadband mapping efforts, Connected Nation has developed a series of processes with the goal of submitting mapping data to NTIA for every known and qualifying last-mile broadband provider, regardless of whether the provider has chosen to support and participate in the State Broadband Initiative (SBI) mapping program.

The following narrative provides detail regarding the recent data collection and coverage estimation activities related to Nextera Communications, a wireless Internet service provider (WISP), located in Baxter, Minnesota, with a service area around Minneapolis, St. Paul, and the surrounding areas. The narrative will include information regarding how and where CN obtained publicly available data and the on-the-ground validation and site verification techniques that support the underlying data.

## Background

CN staff members have continued trying to obtain the participation of the provider with 27 cumulative instances of communication via telephone and e-mail messages from February 8, 2010 through August 14, 2012. Ultimately, CN flagged this provider record indicating that a coverage estimation document would like be required given the provider's unwillingness to participate. On March 16, 2010 a CN staff member visited the Nextera Communications office on to discuss the broadband mapping project in person with Nextera Communications staff, but the appropriate contact person was unavailable at the time of the visit.

## The Issue

Nextera Communications, by its lack of responsiveness since February 8, 2010, has predicated its unwillingness to participate in the Connect Minnesota broadband mapping initiative.

## Identification of Provider's Service Plans, Service Area, Legal Name, d.b.a., FRN, and Licensing

CN has built a file based on research information and, as time progressed, enriched the file with information obtained through the public domain, on-the-ground site verification and data collection activities. As a starting point, CN reviewed the provider's website (http://nextera.net/) to determine the residential service plans **(Exhibit A)** and the service area **(Exhibit B)** of the provider's wireless network. A search for a Federal Registration Number (FRN) on the FCC **CO**mmission **RE**gistration **S**ystem (CORES) system yielded an FRN of 0012927992 **(Exhibit C)** with contact information relative to the owner of the company. Recent review of the FCC CORES sites yielded additional information identifying multiple FRNs for this provider as follows: 0012927992 (Nextera Communications), 0018152579 (Nextera Holdings LLC), and 0017230699 (Nextera Wireless) as illustrated on (**Exhibit D**). Also, to support field validation of access points, these FRNs were referenced against the FCC Universal Licensing System (ULS) to identify any licenses the provider may hold which could possibly enhance locating active access points for the service area. This process yielded an FCC authorization for Stations WQLV608 (3 locations), WQIR453 (27 locations) and WQJG250 (37 locations) **(Exhibit E)**.

## Exhibit A: Service Plans

### NEXTERA HIGH SPEED INTERNET ACCESS

Nextera is poised and ready to act as your primary access point or to supplement your current Internet connection over our wireless backbone. As a Nextera customer, you receive carrier class service with access to three Central Offices.

| Symmetrical Speed (Upload/Download) | Email Addresses Included | Scalable | 1 Static IP | Price |
|---|---|---|---|---|
| Burstable T-1 (1.544Mbps) upload & download | 10 | Yes | Yes | $189 **New Customers Only!** |
| Burstable 3000Kbps (3.0Mbps) upload & download | 10 | Yes | Yes | $399 **New Customers Only!** |

## Exhibit B: Service Area As Submitted in April 2012

## Exhibit C: Originally Identified Federal Registration Number

| Registration Detail | |
|---|---|
| FRN: | 0012927992 |
| Registration Date: | 03/04/2005 12:19:12 PM |
| Last Updated: | 08/31/2009 04:36:54 PM |
| Business Name: | Nextera Communications |
| Business Type: | Private Sector , Limited Liability Corporation |
| Contact Organization: | Nextera Communications |
| Contact Position: | President |
| Contact Name: | Mr Greg G Arvig |
| Contact Address: | 619 Maple Street<br>Brainerd, MN 56401<br>United States |
| Contact Email: | garvig@nextera.net |
| ContactPhone: | (218) 824-6400 |
| ContactFax: | (218) 824-6401 |

## Exhibit D: Recently Identified FRNs

| FRN | Registrant | Contact | Address |
|---|---|---|---|
| 0007186513 | NextEra Energy Seabrook, LLC | Dunstan, Andrew F | 700 Universe Blvd. |
| 0009729534 | NextEra Energy Operating Services, LLC | Dunstan, Mr. Andrew F | 700 Universe Blvd, Maile Stop FEU/B |
| 0012927992 | Nextera Communications | Arvig, Mr. Greg G | 619 Maple Street |
| 0013826037 | NextEra Energy Duane Arnold, LLC | Dunstan, Mr. Andrew F | 700 Universe Blvd. |
| 0016057101 | NextEra Energy Point Beach, LLC | Dunstan, Mr. Andrew F | 700 Universe Blvd. |
| 0017230699 | Nextera Wireless | Arvig, Mr. Greg G | 7115 Forthun Rd, Suite 100 |
| 0018152579 | Nextera Holdings LLC | Arvig, Mr. Greg G | 7115 Forthun Rd, Suite 100 |

## Exhibit E: WQLV608 License Reference

MAIN | ADMIN | LOCATIONS

| Call Sign | WQLV608 | Radio Service | NN - 3650-3700 MHz |
|---|---|---|---|

3 Total Locations
10 Locations per Summary Page

| | Location | Latitude,Longitude | Transmitter Azimuth |
|---|---|---|---|
| 1 | NDT1 | 46-47-14.0 N, 092-06-54.0 W | 45.0 degrees |
| 2 | Not Assigned | 46-47-14.0 N, 092-06-54.0 W | 165.0 degrees |
| 3 | Not Assigned | 46-47-14.0 N, 092-06-54.0 W | 285.0 degrees |

3 Total Locations
10 Locations per Summary Page

MAIN | ADMIN | LOCATIONS

| Call Sign | WQJG250 | Radio Service | NN - 3650-3700 MHz |
|---|---|---|---|

37 Total Locations
10 Locations per Summary Page

1 2 3 4 [Next >>]

| | Location | Latitude,Longitude | Transmitter Azimuth |
|---|---|---|---|
| 1 | BLMN1 | 44-51-23.3 N, 093-19-41.6 W | 45.0 degrees |
| 2 | BLMN1 | 44-51-23.3 N, 093-19-41.6 W | 135.0 degrees |
| 3 | BLMN1 | 44-51-23.3 N, 093-19-41.6 W | 225.0 degrees |
| 4 | BLMN1 | 44-51-23.3 N, 093-19-41.6 W | 315.0 degrees |
| 5 | LKVN | 44-42-04.5 N, 093-15-26.2 W | 0.0 degrees |
| 6 | ARLK | 44-38-24.5 N, 093-13-32.8 W | 360.0 degrees |
| 7 | WING | 44-44-02.1 N, 093-12-56.0 W | 0.0 degrees |
| 8 | WING | 44-44-02.1 N, 093-12-56.0 W | 90.0 degrees |
| 9 | WING | 44-44-02.1 N, 093-12-56.0 W | 180.0 degrees |
| 10 | WING | 44-44-02.1 N, 093-12-56.0 W | 270.0 degrees |

MAIN | ADMIN | LOCATIONS

| Call Sign | WQIR453 | Radio Service | NN - 3650-3700 MHz |
|---|---|---|---|

27 Total Locations
10 Locations per Summary Page

1 2 3 [Next >>]

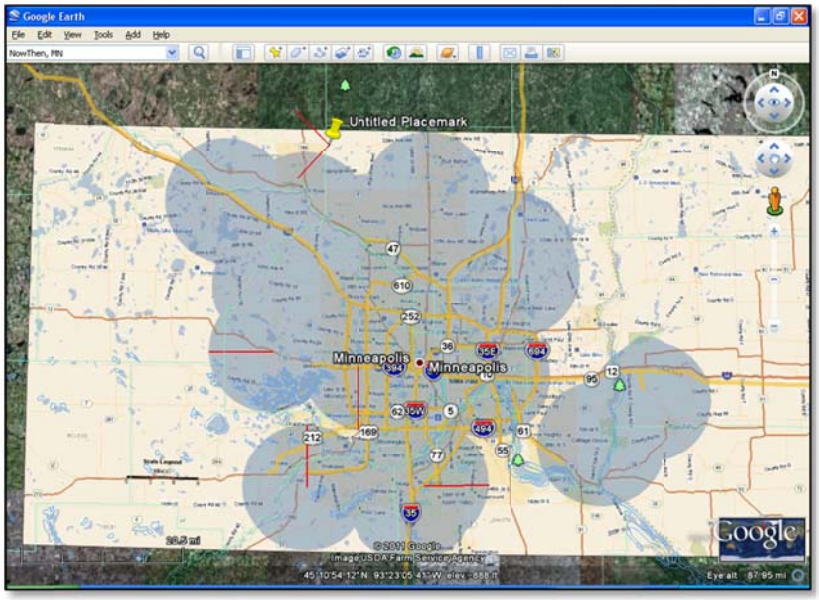
| | Location | Latitude,Longitude | Transmitter Azimuth |
|---|---|---|---|
| 1 | IDS | 44-58-34.0 N, 093-16-21.0 W | 348.0 degrees |
| 2 | Heather Hills | 44-45-34.0 N, 093-15-29.0 W | 180.0 degrees |
| 3 | Colonial Hills | 44-45-11.5 N, 093-17-28.0 W | 315.0 degrees |
| 4 | IDS | 44-58-34.0 N, 093-16-21.0 W | 348.0 degrees |
| 5 | IDS | 44-58-34.0 N, 093-16-21.0 W | 168.0 degrees |
| 6 | IDS | 44-58-34.0 N, 093-16-21.0 W | 168.0 degrees |
| 7 | Buck Hill Burnsville | 44-43-21.5 N, 093-17-18.5 W | 180.0 degrees |
| 8 | Arden Hills | 45-03-47.0 N, 093-09-19.0 W | 225.0 degrees |
| 9 | River Falls | 44-54-10.0 N, 092-41-28.0 W | 315.0 degrees |
| 10 | Interchange | 44-58-31.0 N, 093-24-11.0 W | 30.0 degrees |

**Preliminary Identification of Provider's Coverage Area**

Connected Nation extracted the Nextera Communications service area map from its website. The website service area was utilized to create a Google Earth image overlay **(Exhibit F).** The image overlay was positioned to match the Google Earth base map's roadways, county boundaries, and water bodies. The degree of accuracy of the image overlay was maintained at less than .2 mile (1058 ft.) to establish a minimum search criteria of a given access point. The provider's service area

depiction is represented by polygons as shown in Exhibit B. Using the coordinates determined to be center coordinates a search ring was created with the image overlay to determine the feasibility of locating the towers to identifying coordinates of the locations. The centerline coordinates for the initial 16 locations displayed on the provider's website were then entered into Google Earth and examined utilizing the zoom option of the aerial imagery. Then, the data from the recently identified 3650 licenses were added to the review process. This exercise allowed the CN engineer to establish approximate coordinates for the remaining access point locations. A site validation trip was planned and executed to the area. All 16 locations were entered into the Microsoft *Streets & Trips* mapping application to develop a route for the validation process.

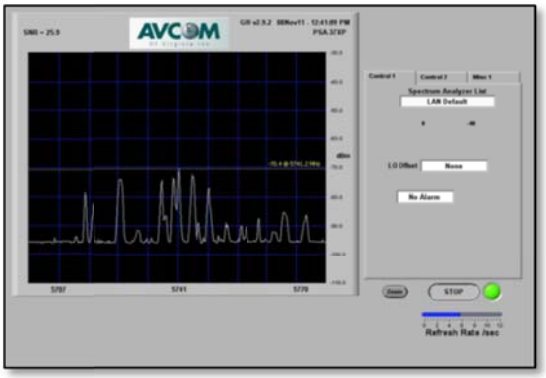
**Exhibit F: Google Earth - Provider's Service Area Image Overlay**

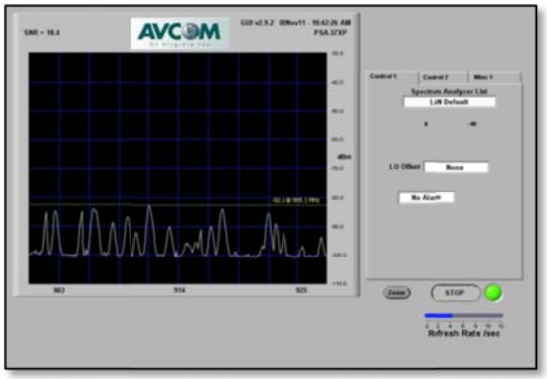


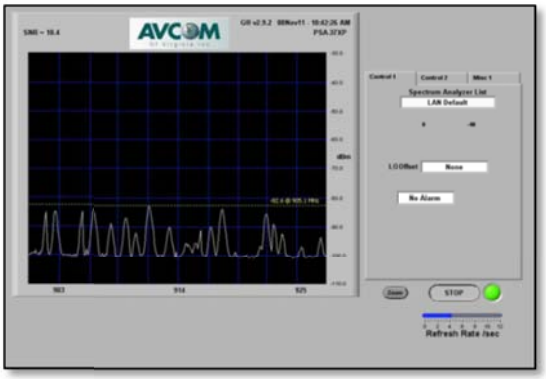

## Testing Techniques

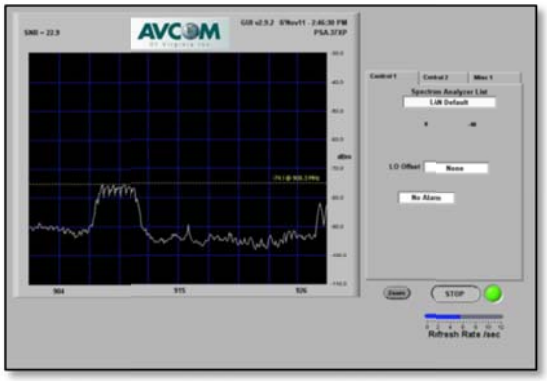
Connected Nation's staff developed a site validation route based on this original data and created a Google Earth image overlay for Nextera Communications' transmit sites. A CN wireless engineer was then dispatched into the service area equipped with an AVCOM PSA-37XP analyzer with RF detection from 1 MHz to 6 GHz and an array of antennas tuned specifically for the 900 MHz, 2.4 GHz, 3.65 GHz, and 5 GHz frequency bands **(Exhibit H)**. Each validation point was scrutinized for frequency of operation. A screen image of the operating frequency (or frequencies) was captured; general notes were recorded for each location-approximate antenna height, frequency of operation, antenna type (omnidirectional or sectored), and photographs were taken of the access points.

## Exhibit H: Field Data for Nextera Communications



| Test Site Info | Coordinates NAD 83 REQUIRED | | Platform Type | | Visual Confirmation | | Signal Verification/Spectrum Analyzer | | Notes |
|---|---|---|---|---|---|---|---|---|---|
| Test City | (N) Lat Decimal | (-)(W) Long Decimal | Type | Presence Confirmed | Type | Images | Peak Freq | Peak Sig Strength | |
| Monticello | 45.279167 | -93.768333 | Fixed Wireless | Yes | Headend | Yes | 914 | -71 | On tower Approx 220 Feet Sectors 900 Mhz |
| Hanover | 45.124167 | -93.633333 | Fixed Wireless | Yes | Headend | Yes | 2400 | -70 | On tower 280' 260 feet Sectors |
| Ostego | 45.254722 | -93.652500 | Fixed Wireless | Yes | Headend | Yes | 914 | -65 | 188' 3 sectors on watertower |
| Maple Plain | 45.003333 | -93.652500 | Fixed Wireless | Yes | Headend | Yes | 914 | -71 | 300' 3 sectors 900 Mhz on Tower no access |
| Chaska | 44.751111 | -93.553056 | Fixed Wireless | Yes | Headend | Yes | 914 | -72 | 250' 3 sectors 900 Mhz FCC ID 1200989 |
| Cedar | 45.345140 | -93.233990 | Fixed Wireless | Yes | Headend | Yes | 5741 | -71 | 160' 3 sectors 5700 Mhz Tower |
| Hugo-LinoLakes | 45.182510 | -93.000900 | Fixed Wireless | Yes | Headend | Yes | 5742 | -72 | 140' 3 Sectors 5750 Mhz Watertower |
| Hugo-WhiteBearLake | 45.138579 | -93.005850 | Fixed Wireless | Yes | Headend | Yes | 2467 | -61 | 140' 3 sectors 900 Mhz/2400 Mhz Watertower |
| St Paul | 44.950880 | -93.096760 | Fixed Wireless | Yes | Headend | Yes | 2484 | -74 | 250' 3 sectors 2400 mhz Building |
| Burnsville-AppleValley | 44.752680 | -93.291370 | Fixed Wireless | Yes | Headend | Yes | 914 | -74 | 80 feet 3 sectors 900 Mhz Watertower/Tower near |
| Hastings-Afton | 44.826990 | -92.796690 | Fixed Wireless | Yes | Headend | Yes | 2434 | -63 | 188 Omni 2400Mhz Tower |
| River Falls-Lakeland | 44.902600 | -92.689890 | Fixed Wireless | Yes | Headend | Yes | 5756 | -63 | 200 feet 3 sectors 5700 Mhz tower |
| Medicine Lake | 44.929770 | -93.223220 | Fixed Wireless | Yes | Headend | Yes | 2434 | -73 | 140' 2400 Mhz sectors Elevator |
| Powderhorn Park | 44.937860 | -93.231520 | Fixed Wireless | Yes | Headend | Yes | 2462 | -59 | 188' Sectors 24090 mhz building |
| Ankoa | 45.208130 | -93.384420 | Fixed Wireless | Yes | Headend | Yes | 5743 | -56 | 140' sectors 5700 Mhz tower |
| Spring Lake Park | 45.118200 | -93.231990 | Fixed Wireless | Yes | Headend | Yes | 5755 | -64 | 140' Sectors' 5700 Mhz Watertower |

# TOTHEHOME.COM

As part of its ongoing broadband mapping efforts, Connected Nation has developed a series of processes with the goal of submitting mapping data to NTIA for every known and qualifying broadband provider, regardless of whether the provider has chosen to support and participate in the SBI program.

The following narrative provides detail regarding the recent data collection and coverage estimation activities related to TotheHome.com a wireless Internet service provider (WISP), located in Carver County, Minnesota, with a service area around Cologne. The narrative will include information regarding how and where CN obtained publicly available data and the on-the-ground validation techniques that support the underlying data.

## Background

CN staff members have continued trying to obtain the participation of the provider with 5 instances of communication via telephone and e-mail sessions since June 1, 2012, through August 20, 2012. None of the attempts at communication with a company representative have received a reply. Additionally, a CN staff member reviewed the TotheHome.com website on June 11, 2012, and there were no changes to the service area or the maximum advertised speeds. On August 20, 2012, a CN engineer again visited the website of TotheHome.com website and, while no changes to the service area were identified, a change was noted for the maximum advertised speeds (the maximum advertised speed listed as of April 2012 mapping submission was 2 Mbps and the current maximum advertised speed, for this October 2012 mapping submission, is listed as 3 Mbps). See comparison of website data at Exhibit A.

## The Issue

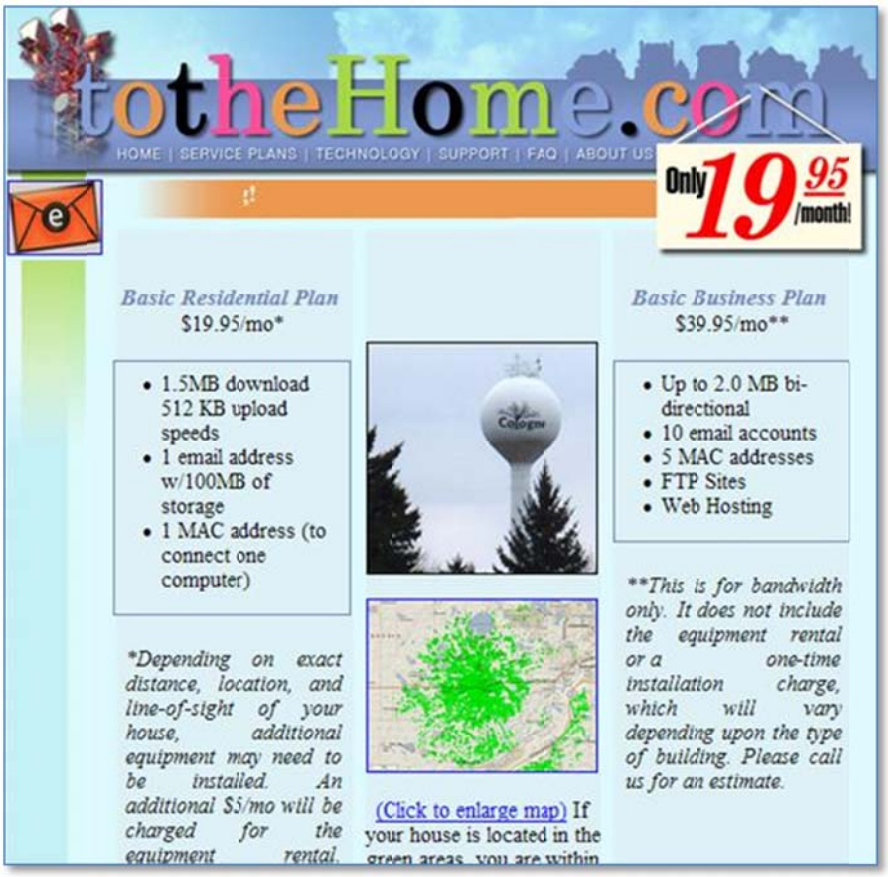
TotheHome.com, by its lack of responsiveness since June 1, 2012, has predicated its unwillingness to participate in the Connect Minnesota broadband mapping initiative.

## Identification of Provider's Service Plans, Service Area, Legal Name, d.b.a., FRN, and Licensing

CN began building a file based on research information and, as time progressed, enriched the file with information obtained through the public domain. For example, CN reviewed the provider's website (www.tothehome.com) to determine the residential service plans **(Exhibit A)** and the service area **(Exhibit B)** of the provider's wireless network. A search for a Federal Registration Number (FRN) on the FCC **CO**mmission **RE**gistration **S**ystem (CORES) system yielded an FRN of 0021284443 **(Exhibit C)** with contact information relative to the owner of the company. Also, to support field validation of wireless access points, the FRN was referenced against the FCC Universal Licensing System (ULS) to identify any spectrum authorizations that may be held by the provider that could supplement the dataset of estimated coverage by isolating and identifying active wireless access points for the service area. This process yielded no licenses through the FCC ULS search **(Exhibit D)**.

## Exhibit A: April 2012 and October 2012 Service Plans

*April 2012*



*October 2012*

**Pricing & Plans**

| Plan | Internet Only | Internet + Phone |
|---|---|---|
| Basic (1.5Mb/s) | $19.95/mo | $29.99/mo |
| Standard (3.0Mb/s) | $24.95/mo | $39.99/mo |

Add-On Services: (not available in all locations)

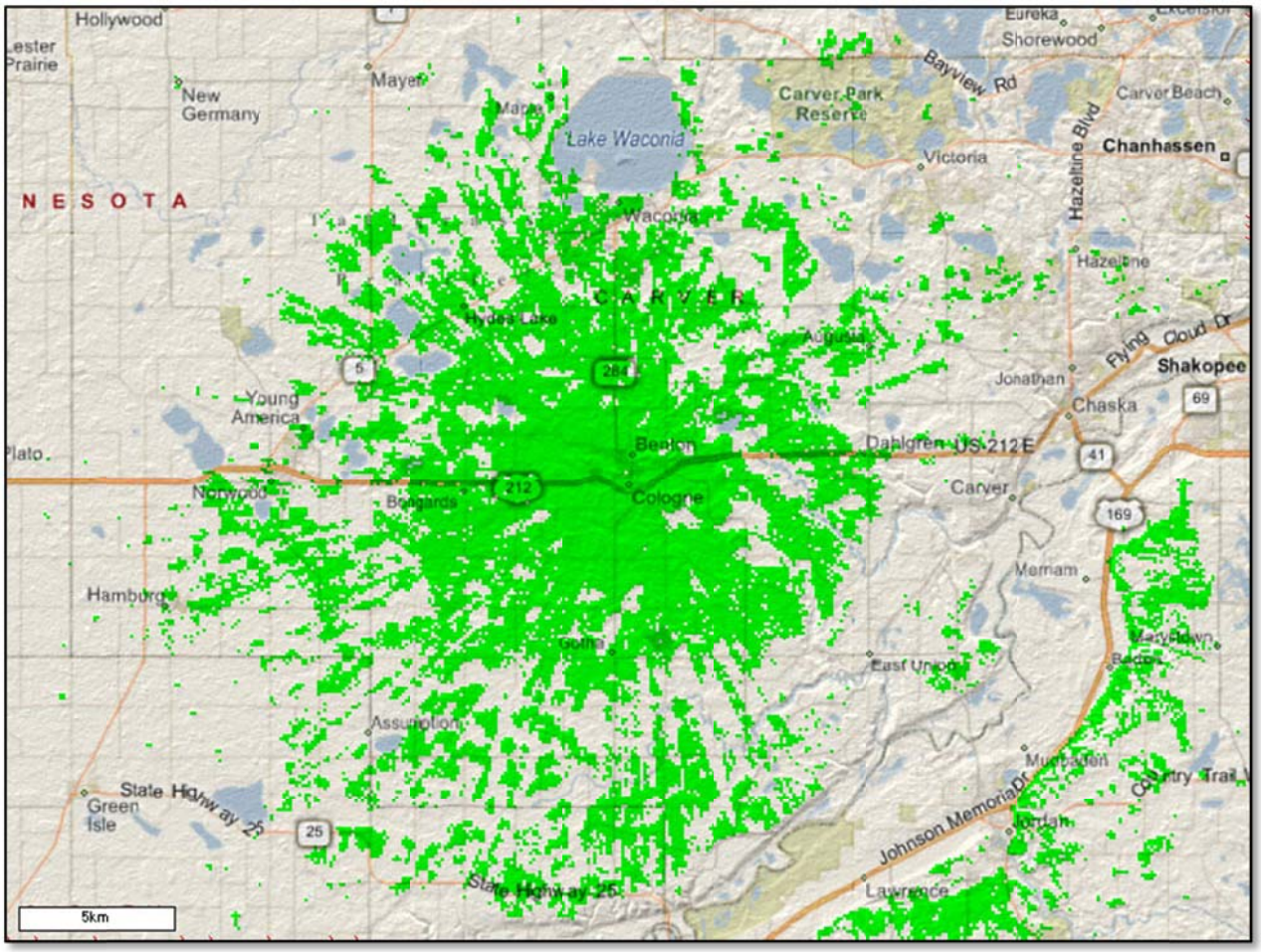
| | |
|---|---|
| Online Storage(unlimited) | $2.95/mo |
| Home Video Surveillance | $9.95/mo |

totheHome.com is a broadband Internet provider bringing High Speed Broadband Internet and Home Phone Service to communities through the use of the latest 4G wireless technology. These communities will be among the first in the country to receive totheHome.com's fast, affordable, reliable and local service. While other companies sell fixed-line internet service, we free communities from wires with cutting-edge wireless broadband technology. Fast and reliable service is only part of the story with totheHome.com. Residents will also be able to take advantage of totheHome.com's innovative Wi-Fi technology.

totheHome.com can save customers hundreds of dollars a year with no contracts, cancellation fees or long term commitments. We offer a fast and reliable choice for High Speed Wireless Internet at a lower price than other cable and DSL providers. totheHome.com's high speed wireless Internet covers rural areas and provides service that is portable within coverage areas.

totheHome.com is so confident of their fast and reliable service that they offer a 30-day Money back guarantee. Customers can download music, shop online and make unlimited local/long distance calls. Those who try it will lower their monthly bill. That is our bottom line.

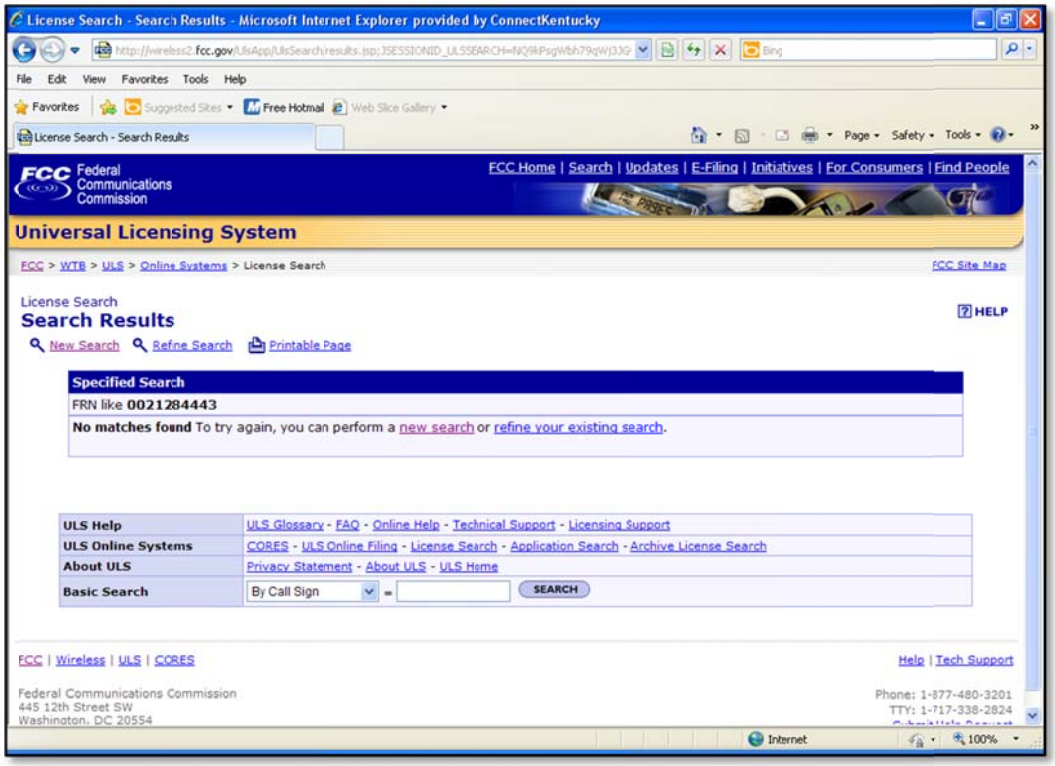
## Exhibit B: Service Area



## Exhibit C: Federal Registration Number

| Registration Detail | |
|---|---|
| FRN: | 0021284443 |
| Registration Date: | 11/11/2011 12:22:00 PM |
| Last Updated: | |
| Business Name: | totheHome.com, LLC |
| Business Type: | Private Sector , Limited Liability Corporation |
| Contact Organization: | totheHome.com, LLC |
| Contact Position: | President |
| Contact Name: | Mr Shawn L Sprengeler |
| Contact Address: | 2195 Grimm Rd<br>Chaska, MN 55318<br>United States |
| Contact Email: | |
| ContactPhone: | (952) 454-0716 |
| ContactFax: | |

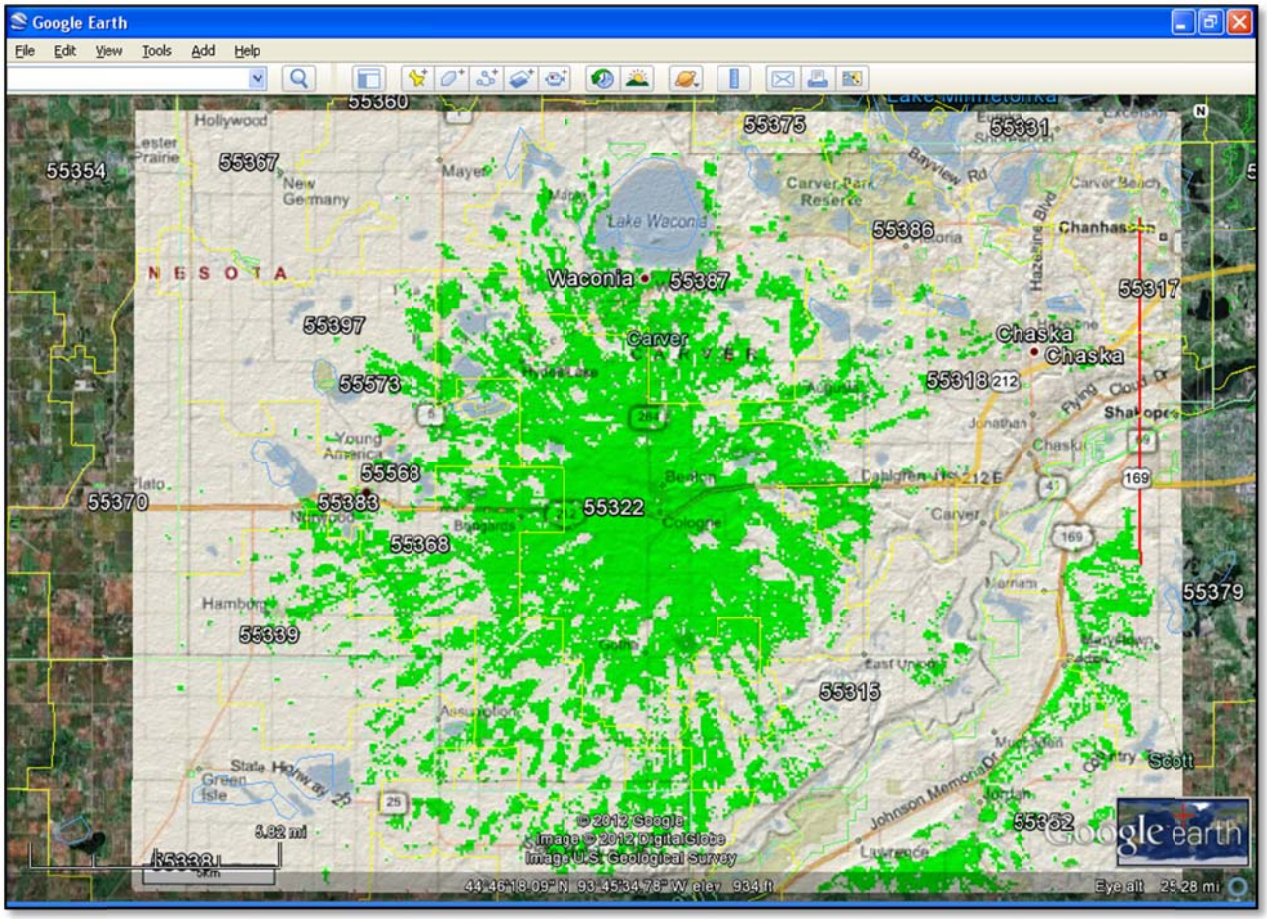
## Exhibit D: License Search Reference



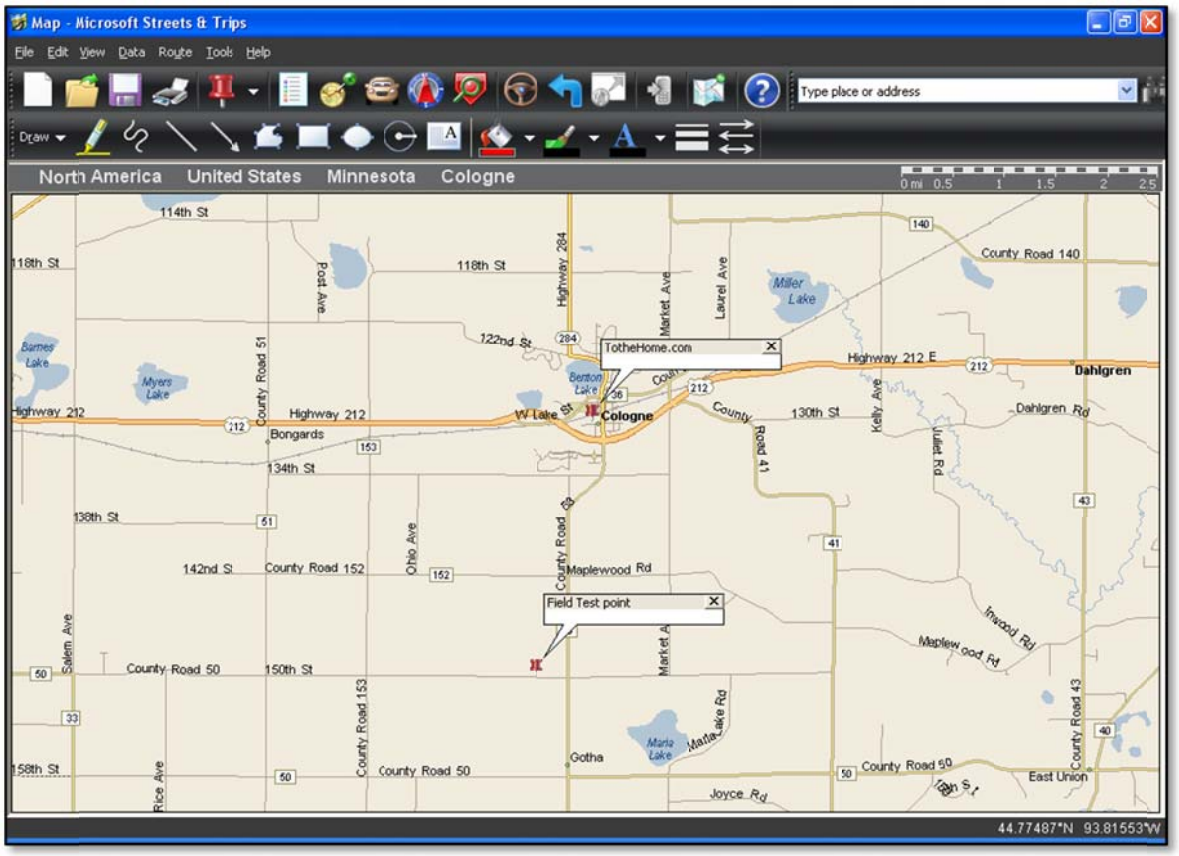
**Preliminary Identification of Provider's Coverage Area**

CN extracted the TotheHome.com service area map directly from the provider's website. Information from that website was utilized to create a Google Earth image overlay **(Exhibit E).** The image overlay was positioned to match the Google Earth base map's roadways, county boundaries, and water bodies. The degree of accuracy of the image overlay was maintained at less than .2 mile (1058 ft.) to establish a minimum search criteria of a given wireless access point. The provider's estimated service area depiction is represented by the wireless propagation model as shown in Exhibit B. The location's center coordinates were populated into Google Earth and examined utilizing the zoom option of the aerial imagery. An on-site trip was conducted in the area utilizing Microsoft *Streets & Trips* mapping application **(Exhibit F)** to develop a route for the coverage estimation and validation process.

**Exhibit E: Google Earth: Provider's Service Area Image Overlay**



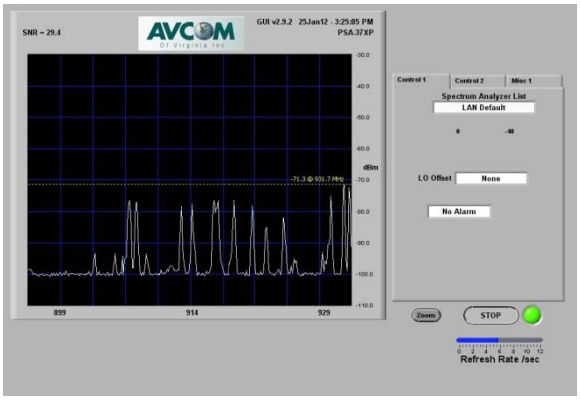
## Exhibit F: Validation Points for AP Structures

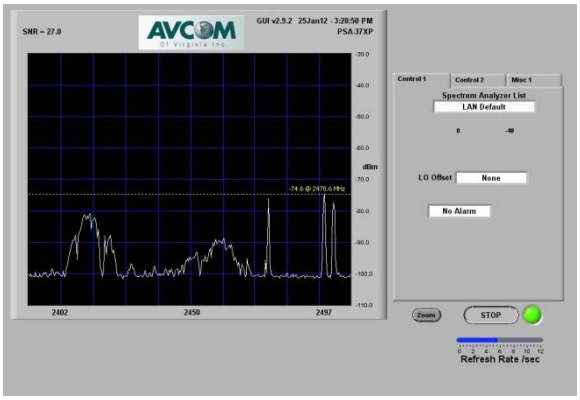


## Testing Techniques

CN staff developed a data collection and site validation route based on information derived from the Google Earth image overlay and from data gleaned from the provider's website. The CN wireless engineer was equipped with an AVCOM PSA-37XP analyzer with RF detection from 1 MHz to 6 GHz and an array of antennas tuned specifically for the 900 MHz, 2.4 GHz, 3.65 GHz, and 5 GHz frequency bands **(Exhibit G)**. Two validation points were scrutinized for frequency of operation. General notes were recorded for each location-approximate antenna height, frequency of operation, antenna type (omnidirectional or sectored), and photographs were taken of the access points.

### Exhibit G: Field Data for TotheHome.com Hub Location




| Name of Access Point/Transmission Location: | DL Speeds | UL Speeds | lat | Long | Frequency | Ant type | Antenna Height |
|---|---|---|---|---|---|---|---|
| Cologne | 1.5 Mbps | 512 Mbps | 44.7701 | -93.7829 | 2400 | 120 Deg | 140 feet |

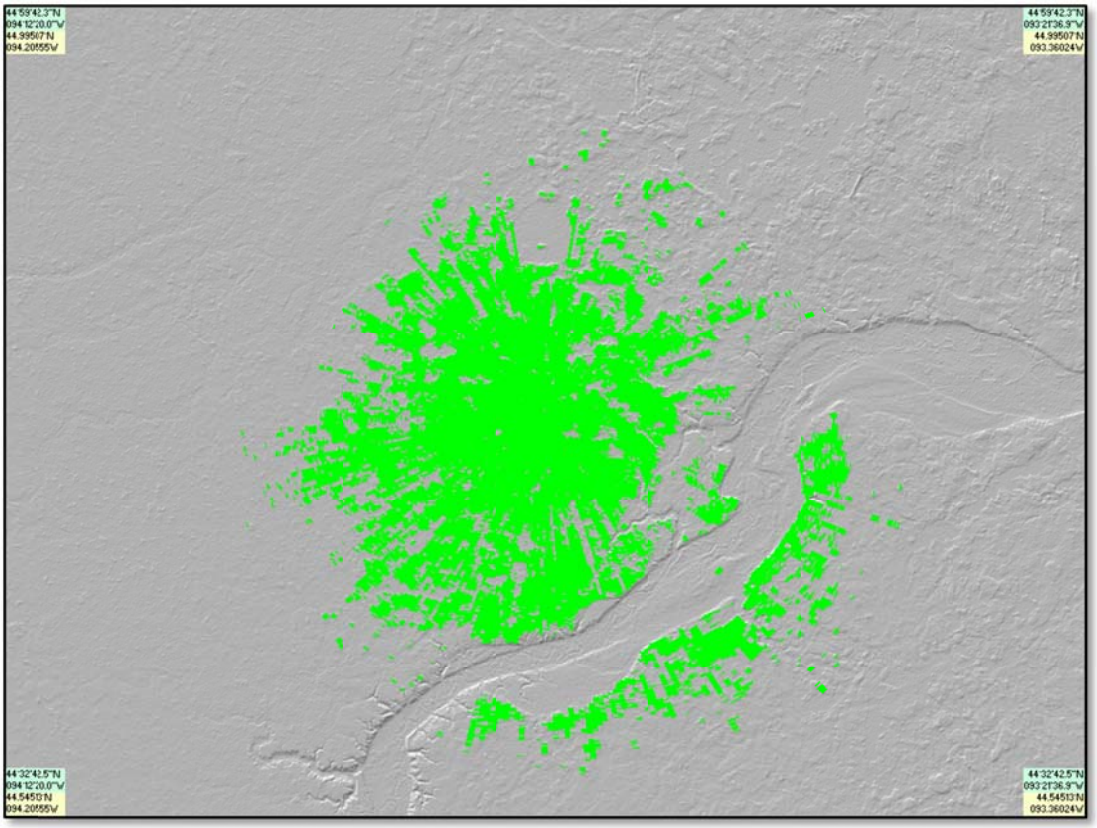
**Results and Submission for October 2012**

Of the 2 locations visited during the validation point route, 1 access point was identified and relative information was logged into the TotheHome field validation notes file **(Exhibit H)**. The field and the publicly available data were transferred to the Connected Nation Provider Information file. A composite propagation study was completed based on the field data and goggle earth overlay information. **(Exhibit I)**. Both documents were forwarded to TotheHome.com and advised the information will be submitted to Connect Minnesota and the NTIA broadband mapping project for processing if there are no discrepancies of the estimated coverage received from the provider within a 48-hour period.

## Exhibit H: Field Validation Notes

| | Provider | Test Site Info | | | | | | | Platform Type | | Test Data | | Visual Confirmation | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Provider | Test City | Test State | Test County | Physical Address | Location Description | Lat Decimal | Long Decimal | Type | Presence Confirmed | Type | Pass or Fail? | Type | Images | |
| 1/25/12 | TotheHome | Cologne | MN | Carver | 111 Village Parkway | Security bank | 44.764080 | -93.783070 | Fixed Wireless | Yes | Signal Verification | Pass | Wi-Fi/AP | Yes | Security Bank Parking lot |
| 1/25/12 | TotheHome | Cologne | MN | Carver | 124 S Market Lane | Watertower | 44.770100 | -93.782900 | Fixed Wireless | Yes | Signal Verification | Pass | Wi-Fi/AP | Yes | 140' sectors 3 120 degree 2400 Mhz |

## Exhibit I: TotheHome.com Composite Coverage



# APPENDIX B: BROADBAND PROVIDER LOG

# Broadband Provider Log

| | |
|---|---|
| Complete | 186 |
| Non-Responsive/Refused | 2 |
| In Progress | 4 |
| | |
| Count of Datasets by Status | **192** |
| Total Unique Providers Represented | **121** |

| Provider Name | Platform | Status | NDA Execution Date | Notes |
|---|---|---|---|---|
| Arvig | Fiber | Data Added to Statewide Inventory | 4/20/2010 | [MAY-30-12 Brian Dudek] Change: Provider has decided to move away from the diversiCOM name after purchase from Arvig Communications Systems. Provider name and DBA names have changed, but spatial data remains the same. |
| Arvig | Cable | Data Added to Statewide Inventory | 4/20/2010 | [MAY-30-12 Brian Dudek] Change: Provider has decided to move away from the diversiCOM name after purchase from Arvig Communications Systems. Provider name and DBA names have changed, but spatial data remains the same. Max advertised download speed increased to tier 6 and upload decreased to tier 2. |
| Arvig | DSL | Data Added to Statewide Inventory | 4/20/2010 | [JUN-14-12 Brian Dudek] Change: Provider expanded DSL territory in their Greenwald, Richmond and St. Martin exchanges. Now also reporting symmetrical offering. |
| Arvig Communication Systems | Fiber | Data Added to Statewide Inventory | 2/2/2011 | [JUL-18-12 Brian Dudek] Change/Correction: Provider expanded fiber territory slightly to the south of Flom. Provider indicated fiber is not present in Flom, Ogema, Osage, Waubun, and White Earth cities. |
| Arvig Communication Systems | DSL | Data Added to Statewide Inventory | 2/2/2011 | [JUL-18-12 Brian Dudek] Change: Provider removed DSL areas where fiber to the home infrastructure is in place. |
| AT&T Corp, Inc. | Mobile Wireless | Data Added to Statewide Inventory | 12/16/2009 | [AUG-21-12 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2012 submission. Noticeable expansion in NE Minnesota. Also increased speeds to tier 5 in HSPA+ areas. |
| Benton Cooperative Telephone Company | Mobile Wireless | Data Added to Statewide Inventory | 6/16/2010 | [AUG-24-12 Brian Dudek] Change: Provider expanded mobile territory into west Saint Stephen and Royalton. |
| Blue Earth Valley Telephone Company | Fiber | Data Added to Statewide Inventory | 6/16/2010 | [JUN-12-12 Brian Dudek] Change: Provider expanded fiber territory within the towns of Blue Earth and New Prague. |
| Blueprint America, Inc. | Fixed Wireless | Data Added to Statewide Inventory | 8/16/2012 | [AUG-31-12 Brian Dudek] Correction: Initial submission of provider's coverage, but they were in service previously. |
| Broadband Corp | Fixed Wireless | Data Added to Statewide Inventory | 5/11/2010 | [AUG-08-12 Brian Dudek] Change: Provider added 5 transmission points. Coverage expanded into towns of Blomkest and Svea. |
| CenturyLink | DSL | Data Added to Statewide Inventory | 12/4/2009 | [AUG-22-12 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2012 submission. |

| | | | | |
|---|---|---|---|---|
| Charter Communications, Inc. | Cable | Data Added to Statewide Inventory | 12/15/2009 | [AUG-01-12 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2012 submission. |
| CitEscape, LLC | Fixed Wireless | Data Added to Statewide Inventory | 1/25/2010 | [AUG-17-12 Brian Dudek] Change: Provider added 2 transmission points. Coverage expanded into Crown, Saint Francis, and rural areas. |
| Comcast Cable Communications, LLC | Cable | Data Added to Statewide Inventory | 12/7/2009 | [AUG-17-12 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2012 submission. |
| Consolidated Telephone Company | Fixed Wireless | Data Added to Statewide Inventory | 3/1/2012 | [JUL-11-12 Brian Dudek] Change: New fixed wireless service areas offered. Purchased from Windstream Lakedale Inc. |
| Fallsnet | Fixed Wireless | Data Added to Statewide Inventory | | [AUG-09-12 Brian Dudek] Change: Provider added an additional transmission point to cover rural Little Falls. Increased maximum advertised upload speed to tier 3. |
| Federated Telephone Cooperative | Fiber | Data Added to Statewide Inventory | 4/1/2010 | [MAY-11-12 Brian Dudek] Change: Provider expanded fiber coverage in two exchanges. Completed fiber rollout in Morris exchange and rural Appleton exchange. |
| Frontier Communications of Minnesota, Inc. | DSL | Data Added to Statewide Inventory | 1/22/2010 | [AUG-13-12 Brian Dudek] Change/Correction: Provider expanded DSL territory by adding additional remote terminals. Also fixed a few locations with incorrect DSLAM coordinates. |
| Garden Valley Telephone Company | Fiber | Data Added to Statewide Inventory | 2/17/2010 | [JUL-31-12 Brian Dudek] Change: Provider expanded fiber coverage into Mentor exchange. |
| Garden Valley Telephone Company | DSL | Data Added to Statewide Inventory | 2/17/2010 | [JUL-31-12 Brian Dudek] Change: Provider converted DSL infrastructure in Mentor exchange to fiber. |
| Gardonville Cooperative Telephone Association | Fixed Wireless | Data Added to Statewide Inventory | 2/23/2010 | [AUG-16-12 Brian Dudek] Change: Gardonville Telephone purchased diversiCOM's wireless facilities operating under DBA Wisper Wireless and provides this data going forward. |
| Gardonville Cooperative Telephone Association | Fiber | Data Added to Statewide Inventory | 2/23/2010 | [AUG-09-12 Brian Dudek] Change: Provider expanded fiber territory. |
| Gardonville Cooperative Telephone Association | DSL | Data Added to Statewide Inventory | 2/23/2010 | [AUG-09-12 Brian Dudek] Change: Provider changed to asymmetrical service and converted some infrastructure to fiber. |
| Genesis Wireless | Fixed Wireless | Data Added to Statewide Inventory | | [AUG-30-12 Brian Dudek] Change: Provider added 6 transmission locations increasing coverage in the Kroschel and Pine Lake townships. Increased max advertised download tier to 5. |
| Halstad Telephone Company | Fiber | Data Added to Statewide Inventory | 6/16/2010 | [JUL-13-12 Brian Dudek] Change: New provider platform in service for October 2012 submission. |
| Hutchinson Telecommunications, Inc. | DSL | Data Added to Statewide Inventory | 4/14/2010 | [JUL-12-12 Brian Dudek] Change/Correction: Provider now submitted symmetrical offerings for same coverage area. Reduced upload speed of asymmetrical offering to tier 3. Increased download to tier 7. Symmetrical is tier 7. |
| Lonsdale Telephone Company, Inc. | Fiber | Data Added to Statewide Inventory | | [AUG-03-12 Brian Dudek] Change: Provider increased fiber territory to the entire Lonsdale exchange that was converted from prior DSL. |

| | | | | |
|---|---|---|---|---|
| MegaPath Inc. | DSL | Data Added to Statewide Inventory | 2/15/2010 | [AUG-30-12 Brian Dudek] Correction: Service was offered previously, but data is being submitted for the first time in the October 2012 submission. |
| Mille Lacs Energy Cooperative | Fixed Wireless | Data Added to Statewide Inventory | | [AUG-08-12 Brian Dudek] Change: Provider expanded territory with unlicensed towers primarily in Aitkin, Crow Wing, and Mille Lacs Counties. |
| Minnesota Valley TV Improvement Corporation | Fixed Wireless | Data Added to Statewide Inventory | 4/13/2010 | [JUL-17-12 Brian Dudek] Change: Provider added additional transmission points in the 3650 and BRS spectrum. |
| New Ulm Telecom, Inc. | DSL | Data Added to Statewide Inventory | 2/25/2010 | [JUL-12-12 Brian Dudek] Change/Correction: Provider now submitted symmetrical offerings for same coverage area. Reduced upload speed of asymmetrical offering to tier 3. Symmetrical is tier 7. |
| NorthfieldWiFi LLC | Fixed Wireless | Data Added to Statewide Inventory | 2/4/2011 | [AUG-21-12 Brian Dudek] Change: Provider added a transmission point expanding into Cannon Falls and Miesville. Advertising tier 8 download speeds. |
| Park Region Mutual Telephone Company | Fiber | Data Added to Statewide Inventory | 3/18/2010 | [SEP-11-12 Brian Dudek] Change/Correction: Provider indicated they needed to correct a provider name to match the corresponding Provider DBA of Ottertail Telcom. Also upgraded speed capabilities and expanded fiber into Valley Telephone exchange area. |
| Park Region Mutual Telephone Company | Fixed Wireless | Data Added to Statewide Inventory | 3/18/2010 | [SEP-11-12 Brian Dudek] Change: New provider platform that previously did not meet broadband requirements. |
| Park Region Mutual Telephone Company | DSL | Data Added to Statewide Inventory | 3/18/2010 | [SEP-11-12 Brian Dudek] Change/Correction: Provider indicated they needed to correct two of their provider names to match the corresponding Provider DBAs of Ottertail Telcom and Valley Telephone. Also upgraded speed capabilities. |
| Paul Bunyan Rural Telephone Cooperative | Fiber | Data Added to Statewide Inventory | 6/24/2010 | [JUL-25-12 Brian Dudek] Change: Provider expanded fiber territory in and around Grand Rapids. |
| Paul Bunyan Rural Telephone Cooperative | DSL | Data Added to Statewide Inventory | 6/24/2010 | [JUL-25-12 Brian Dudek] Change: Provider expanded DSL territory in and around Grand Rapids. |
| Polar Telcom, Inc. | Fiber | Data Added to Statewide Inventory | 2/11/2010 | [AUG-20-12 Brian Dudek] Change: New provider platform for the October 2012 submission. |
| Polar Telcom, Inc. | DSL | Data Added to Statewide Inventory | 2/11/2010 | [AUG-20-12 Brian Dudek] Change: Provider converted some infrastructure over to fiber. |
| Radio Link Internet | Fixed Wireless | Data Added to Statewide Inventory | | [AUG-07-12 Brian Dudek] Correction: Initial submission of provider coverage, but they have been in service previously. |
| RRC Net | Fixed Wireless | Data Added to Statewide Inventory | | [AUG-09-12 Brian Dudek] Change: New provider for October 2012 submission that previously did not reach broadband speeds. |
| Runestone Telecom Association | Fiber | Data Added to Statewide Inventory | 4/14/2010 | [JUN-12-12 Brian Dudek] Change/Correction: Provider expanded fiber territory and increased maximum speed to tier 8. Provider corrected coverage related to issues with past CAD files. |

| | | | | |
|---|---|---|---|---|
| Runestone Telecom Association | DSL | Data Added to Statewide Inventory | 4/14/2010 | [JUL-03-12 Brian Dudek] Change/Correction: Provider's expanded fiber territory affected their DSL territory. Increased maximum download speed to tier 8. Provider corrected coverage related to issues with past CAD files. |
| Savage Communications Inc. | Cable | Data Added to Statewide Inventory | 2/19/2010 | [JUL-31-12 Brian Dudek] Change: Provider expanded cable territory to the east of the town of Hinckley. |
| Scott Rice Telephone Co. | Fiber | Data Added to Statewide Inventory | 2/15/2010 | [JUN-14-12 Brian Dudek] Change: Provider increased fiber territory slightly. |
| Sjoberg's Inc. | Cable | Data Added to Statewide Inventory | 12/21/2009 | [JUL-03-12 Brian Dudek] Change/Correction: Provider expanded cable coverage into Red Lake Falls. Speeds increased to tier 8 download, tier 6 upload in Thief River Falls, Warren, and Viking. Corrected speeds in Warroad and Roseau as indicated by provider. |
| Spacenet Inc. | Satellite | Data Added to Statewide Inventory | | [SEP-04-12 Brian Dudek] Correction: Initial submission of provider's coverage, but they were in service previously. |
| Sprint Nextel Corporation | Mobile Wireless | Data Added to Statewide Inventory | 1/14/2010 | [JUL-12-12 Brian Dudek] Change: Provider expanded mobile territory in multiple regions. |
| T-Mobile USA, Inc. | Mobile Wireless | Data Added to Statewide Inventory | 1/8/2010 | [AUG-09-12 Brian Dudek] Change/Correction: Expansions and corrections to previous dataset; entirely new dataset provided for October 2012 submission. Expansions in Morrison County and the town of Emily. |
| TDS Telecommunications Corporation | Fiber | Data Added to Statewide Inventory | 1/27/2010 | [AUG-20-12 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2012 submission. |
| TDS Telecommunications Corporation | DSL | Data Added to Statewide Inventory | 1/27/2010 | [AUG-20-12 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2012 submission. |
| Verizon Communications, Inc. | Mobile Wireless | Data Added to Statewide Inventory | 12/14/2009 | [JUL-18-12 Brian Dudek] Change: Provider increased 3G mobile territory in SW Minnesota. Increased LTE coverage in state from Albany west to Alexandria. |
| ViaSat, Inc. | Satellite | Data Added to Statewide Inventory | 1/8/2010 | [AUG-08-12 Brian Dudek] Change: Provider altered speed boundaries significantly according to their Exede and ProPlus services. |
| Western Telephone Company | DSL | Data Added to Statewide Inventory | 4/14/2010 | [JUL-12-12 Brian Dudek] Change/Correction: Provider now submitted symmetrical offerings for same coverage area. Reduced upload speed of asymmetrical offering to tier 3. Symmetrical is tier 7. |
| Wolverton Telephone Company | Fiber | Data Added to Statewide Inventory | 6/22/2010 | [AUG-20-12 Brian Dudek] Change: New provider platform for the October 2012 submission. |
| Wolverton Telephone Company | DSL | Data Added to Statewide Inventory | 6/22/2010 | [AUG-20-12 Brian Dudek] Change: Provider converted some infrastructure over to fiber. |
| TDS Telecommunications Corporation | Backhaul | Backhaul Provider Only Processing Complete | 1/27/2010 | |
| Verizon Communications, Inc. | Backhaul | Backhaul Provider Only Processing Complete | 12/14/2009 | |
| HomeTown Solutions LLC | Fiber | Speed Only Update; Data Processing Complete | 4/1/2010 | [MAY-11-12 Brian Dudek] Change: Provider increased maximum advertised download/upload speed to tier 8. |

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| Minnesota Valley Telephone Company | DSL | Speed Only Update; Data Processing Complete | 4/29/2010 | [JUL-24-12 Brian Dudek] Change: Provider increased download and upload speeds in their four exchanges covering MN Valley Telephone and Winthrop Telephone. |
| Rothsay Telephone Company Inc. | DSL | Speed Only Update; Data Processing Complete | 2/18/2010 | [AUG-08-12 Brian Dudek] Change: Provider increased maximum advertised upload speed to tier 3 in entire exchange. |
| Scott Rice Telephone Co. | DSL | Speed Only Update; Data Processing Complete | 2/15/2010 | [JUN-14-12 Brian Dudek] Change: Provider increased maximum advertised download and upload speeds within their existing service area. |
| A Better Wireless, NISP, LLC | Fixed Wireless | No Update-Estimated Coverage Submitted for Non-Participating Provider | | |
| tothehome.com, LLC | Fixed Wireless | No Update-Estimated Coverage Submitted for Non-Participating Provider | | |
| Nextera Communications | Fixed Wireless | Updated-Estimated Coverage Submitted for Non-Participating Provider | | [AUG-30-12 Brian Dudek] Change: Received word that the provider launched 3650 sites. Connected Nation estimated coverage for this provider. |
| Ace Telephone Association | Backhaul | No Update to Provide | 8/3/2010 | |
| Ace Telephone Association | DSL | No Update to Provide | 8/3/2010 | |
| AirLink Broadband, LLC | Fixed Wireless | No Update to Provide | | |
| Albany Mutual Telephone Association | DSL | No Update to Provide | 3/4/2010 | |
| Albany Mutual Telephone Association | Fiber | No Update to Provide | 3/4/2010 | |
| Alliance Communications Cooperative, Inc. | Backhaul | No Update to Provide | 3/2/2012 | |
| Alliance Communications Cooperative, Inc. | Fiber | No Update to Provide | 3/2/2012 | |
| Arrowhead Communications Corporation | DSL | No Update to Provide | 4/14/2010 | |
| Arvig Communication Systems | Fixed Wireless | No Update to Provide | 2/2/2011 | |
| AT&T Corp, Inc. | Backhaul | No Update to Provide | 12/16/2009 | |
| Barnesville Municipal Telephone | DSL | No Update to Provide | 3/4/2010 | |
| Benton Cooperative Telephone Company | Cable | No Update to Provide | 6/16/2010 | |
| Benton Cooperative Telephone Company | Cable | No Update to Provide | 6/16/2010 | |
| Benton Cooperative Telephone Company | DSL | No Update to Provide | 6/16/2010 | |
| Benton Cooperative Telephone Company | Fiber | 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 | DSL | No Update to Provide | 6/16/2010 | |
| Cable ONE Inc. | Cable | No Update to Provide | 12/7/2009 | |
| CenturyLink | Backhaul | No Update to Provide | 12/4/2009 | |
| Christensen Communications Company | Backhaul | No Update to Provide | 2/2/2010 | |
| Christensen Communications Company | DSL | No Update to Provide | 2/2/2010 | |
| City of Chaska | Fixed Wireless | No Update to Provide | | [AUG-15-12 Brian Dudek] Provider has approved the Connected Nation coverage estimation from last submission; also indicated there are no updates for that estimation. |
| City of Detroit Lakes | Fixed Wireless | No Update to Provide | 5/10/2010 | |
| City of Windom | Fiber | No Update to Provide | | |
| Clara City Telephone Company | DSL | No Update to Provide | 2/5/2010 | |
| Clear Choice Communications | Fixed Wireless | No Update to Provide | | |
| Clearwire Corporation | Fixed Wireless | No Update to Provide | 3/3/2010 | |
| Clearwire Corporation | Mobile Wireless | No Update to Provide | 3/3/2010 | |
| Consolidated Telephone Company | DSL | No Update to Provide | 3/1/2012 | |
| Consolidated Telephone Company | Fiber | No Update to Provide | 3/1/2012 | |
| Consolidated Telephone Company | Fixed Wireless | No Update to Provide | 3/1/2012 | |
| Crosslake Telephone Company | Cable | No Update to Provide | 6/16/2010 | |
| Crosslake Telephone Company | DSL | No Update to Provide | 6/16/2010 | |
| Crosslake Telephone Company | Fiber | No Update to Provide | 6/16/2010 | |
| Eagle Valley Telephone Company | DSL | No Update to Provide | 4/14/2010 | |
| 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 | Fiber | No Update to Provide | 4/1/2010 | |
| Farmers Mutual Telephone Company | Fixed Wireless | No Update to Provide | 4/1/2010 | |
| Federated Telephone Cooperative | Fixed Wireless | No Update to Provide | 4/1/2010 | |
| Felton Telephone Company | DSL | No Update to Provide | 4/14/2010 | |
| Fibernet Monticello | Fiber | No Update to Provide | | |
| Frontier Communications of Minnesota, Inc. | Backhaul | No Update to Provide | 1/22/2010 | |
| FTTH Communications | Fiber | No Update to Provide | | |
| Granada Telephone Company | DSL | No Update to Provide | 4/14/2010 | |
| Halstad Telephone Company | DSL | 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 | |
| Hiawatha Broadband Communications, Inc. | Fiber | No Update to Provide | 3/8/2010 | |
| Hiawatha Broadband Communications, Inc. | Fixed Wireless | No Update to Provide | 3/8/2010 | |
| Hickory Tech Corporation | DSL | No Update to Provide | | |
| Hickory Tech Corporation | DSL | No Update to Provide | | |
| Hickory Tech Corporation | Fixed Wireless | No Update to Provide | | |

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| Hughes Network Systems, LLC | Satellite | No Update to Provide | 2/5/2010 | |
| Hutchinson Telecommunications, Inc. | Fixed Wireless | No Update to Provide | 4/14/2010 | |
| Info Link Wireless, Inc. | Fixed Wireless | No Update to Provide | 4/19/2010 | |
| Interstate Telecommunications Cooperative, Inc. | DSL | No Update to Provide | 2/10/2010 | |
| Interstate Telecommunications Cooperative, Inc. | Fiber | No Update to Provide | 2/10/2010 | |
| InvisiMax, Inc. | Fixed Wireless | No Update to Provide | 2/29/2012 | |
| Jab Wireless, Inc. | Fixed Wireless | No Update to Provide | 6/14/2010 | [JUL-10-12 Dwayne Goodman] Jab Wireless acquired all KeyOn Communications, Inc. assets; now becoming a broadband provider for the state. |
| Johnson Telephone Company | DSL | No Update to Provide | | |
| Kasson & Mantorville Telephone Company | DSL | No Update to Provide | 6/30/2010 | |
| Lismore Cooperative Telephone Company | Fiber | No Update to Provide | | |
| Loretel Systems, Inc. | DSL | No Update to Provide | 4/14/2010 | |
| Mabel Cooperative Telephone Company | DSL | No Update to Provide | 4/7/2010 | |
| Manchester-Hartland Telephone Company | Fiber | No Update to Provide | 4/14/2010 | |
| MegaPath Inc. | Backhaul | No Update to Provide | 2/15/2010 | |
| Midcontinent Communications | Backhaul | No Update to Provide | 12/9/2009 | |
| Midcontinent Communications | Cable | No Update to Provide | 12/9/2009 | |
| Minnesota Valley TV Improvement Corporation | Cable | No Update to Provide | 4/13/2010 | |
| New Ulm Telecom, Inc. | Cable | No Update to Provide | 2/25/2010 | |
| Pine Island Telephone Company | DSL | No Update to Provide | 4/14/2010 | |
| Red River Rural Telephone Association | DSL | No Update to Provide | 3/17/2010 | |
| Red River Rural Telephone Association | Fiber | No Update to Provide | 3/17/2010 | |
| Red River Rural Telephone Association | Fixed Wireless | No Update to Provide | 3/17/2010 | |
| River Valley Telephone Coop. | Fixed Wireless | No Update to Provide | 4/28/2010 | |
| Sacred Heart Telephone Company | DSL | No Update to Provide | 2/5/2010 | |
| Savage Communications Inc. | Backhaul | No Update to Provide | 2/19/2010 | |
| Sheehan Gas | Fixed Wireless | No Update to Provide | | |
| Sioux Valley Rural Television, Inc. | Fixed Wireless | No Update to Provide | 4/21/2010 | |
| Sleepy Eye Telephone Company | DSL | No Update to Provide | 4/14/2010 | |
| SMBS | Fiber | No Update to Provide | | |
| Southern Cablevision, Inc. | Cable | No Update to Provide | 3/30/2010 | |
| Spring Grove Cooperative Telephone Co. | Fiber | No Update to Provide | 1/12/2010 | |
| Starbuck Telephone Company | DSL | No Update to Provide | 2/5/2010 | |
| Starpoint Communications, Inc. | Fixed Wireless | No Update to Provide | 2/18/2011 | |
| T-Mobile USA, Inc. | Backhaul | No Update to Provide | 1/8/2010 | |
| tw telecom of minnesota, llc | Backhaul | No Update to Provide | 4/20/2010 | |
| Upsala Cooperative Telephone Association | DSL | No Update to Provide | 2/29/2012 | |
| Upsala Cooperative Telephone Association | Fiber | No Update to Provide | 2/29/2012 | |
| US Internet of Minnetoka | Fixed Wireless | No Update to Provide | 2/29/2012 | |
| VAL-ED Joint Venture, LLP | DSL | No Update to Provide | 4/21/2010 | |
| VAL-ED Joint Venture, LLP | Fixed Wireless | No Update to Provide | 4/21/2010 | |
| West Central Telephone Association | DSL | No Update to Provide | 2/18/2010 | |
| West Central Telephone Association | Fiber | No Update to Provide | 2/18/2010 | |
| Wikstrom Telephone Company | DSL | 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 | DSL | 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 | |
| Woodstock Telephone Company | DSL | No Update to Provide | 2/18/2010 | |
| Woodstock Telephone Company | Fiber | No Update to Provide | 2/18/2010 | |
| XO Communications, LLC | Backhaul | No Update to Provide | 2/12/2010 | |
| Zumbrota Telephone Company | DSL | No Update to Provide | 2/5/2010 | |
| Bradco-Wisp, Inc. | Fixed Wireless | No Update Provided - Use Last Submission Data | | |
| Charter Communications, Inc. | Backhaul | No Update Provided - Use Last Submission Data | 12/15/2009 | |
| Cogent Communications, Inc. | Backhaul | No Update Provided - Use Last Submission Data | | |
| Jaguar Communications | DSL | No Update Provided - Use Last Submission Data | 4/12/2010 | |
| Jaguar Communications | Fiber | No Update Provided - Use Last Submission Data | 4/12/2010 | |
| Jaguar Communications | Fixed Wireless | No Update Provided - Use Last Submission Data | 4/12/2010 | |
| Knology of the Plains, Inc. | Cable | No Update Provided - Use Last Submission Data | 7/13/2011 | |
| Level 3 Communications, LLC | Backhaul | No Update Provided - Use Last Submission Data | 12/14/2009 | |
| Mediacom Communications Corporation | Backhaul | No Update Provided - Use Last Submission Data | 1/12/2010 | |
| Mediacom Communications Corporation | Cable | No Update Provided - Use Last Submission Data | 1/12/2010 | |
| Sprint Nextel Corporation | Backhaul | No Update Provided - Use Last Submission Data | 1/14/2010 | |
| Windstream Communications | Backhaul | No Update Provided - Use Last Submission Data | | |
| Windstream Communications | DSL | No Update Provided - Use Last Submission Data | | |
| Zayo Group, LLC | Backhaul | No Update Provided - Use Last Submission Data | | |
| Access Broadband | Fixed Wireless | Solicited Initial Data | | |

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| Superior Broadband | Backhaul | Solicited Initial Data | | |
| Windstream Communications | DSL | Solicited Initial Data | | |
| River Valley Telephone Coop. | Mobile Wireless | Other | 4/28/2010 | [JUL-24-12 Brian Dudek] Provider has ownership in I-Wireless (T-Mobile) Mobile system that is currently in the process of being upgraded to 4G multi-meg services. Currently under test. Will seek to obtain data for the April 2013 submission. |
| Reliance Globalcom Services, Inc. | Backhaul | Refused to Participate | | [JUN-08-12 Wes Kerr] A company Representative responded "no thank you" when asked if they would be participating this round. |
| Knology of the Plains, Inc. | Backhaul | Non-Responsive to Multiple Attempts | 7/13/2011 | In addition to numerous contact attempts made during past mapping submission periods, 5 contact attempts were made this period. |