**OFFICIAL APRIL 2014 UPDATE SUBMISSION TO
THE NATIONAL TELECOMMUNICATIONS AND
INFORMATION ADMINISTRATION UNDER THE
STATE BROADBAND INITIATIVE GRANT PROGRAM
FOR THE STATE OF MINNESOTA**

CONNECT
Minnesota®

April 1, 2014

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April 1, 2014

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.

Truly, now more than ever, the significance of complete and validated data through this effort is impacting lives in communities all across our great country. The Connect Minnesota program and its collective stakeholder community continue to be faithful and energized contributors, and we are proud to play a part in forging the innovation economy of the twenty-first century.

The artifacts that comprise this submission should be found to be compliant with the April 1, 2014, deadline for the semi-annual data update and in accordance with the terms of the July 1, 2009, Notice of Funds Availability (NOFA) and all subsequent clarifications pertaining to delivery of state-level mapping of broadband service availability. This packet includes:

Inventory of Deliverables, Connect Minnesota: April 1, 2014

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
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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 October 2013 SBI data submission for the Connect Minnesota program. Specifically, these new requirements are:

SBI Data Transfer Model

The submission of the broadband dataset for April 1, 2014, is contained within the SBI Data Transfer Model as provided to SBI Grantees on January 24, 2014. 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

In collecting broadband service area datasets for inclusion on the National Broadband Map, this April 2014 submission includes business/commercial broadband service areas in addition to the residential datasets that have been collected for the SBI program. Following guidance from the program office, the end user category appropriately delineates the differences in residential service area, business service areas, and combination residential/business service areas. Further, all contacted providers were asked if they provide broadband services to business customers within their existing coverage areas and, if so, this information was noted.

This submission also includes information regarding the data and coverage estimation of a non-participating provider. 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 ninth 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.

This April 2014 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 99.19 percent of the Minnesota provider community, or 123 of 124 total providers. There are 119 participating providers and 4 additional non-participating providers whose estimated coverage areas have been submitted. Of the 119 participating providers, 73 supplied an update to their network or coverage area(s), while 41 have reported no change. The remaining 5 represent providers who previously supplied data but were non-responsive in the April 2014 update effort; therefore, their previous dataset is being put forward as part of this compilation. A complete roster by provider depicting participation status and contact history is contained herein. The one provider that is not represented in the attached datasets was non-responsive to multiple contact attempts.

This submission also includes business/commercial providers; of the 115 residential providers represented in the above section, 97 are providers that do not distinguish between serving primarily residential or primarily non-residential users (end user category 5). 18 business-only providers (end user category 2) are also included in 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, 115 (92.74 percent) viable 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 6,935 unique visits during this reporting period (42,045 total to date for the life of the grant awarded on December 20, 2009). Additionally, this pronounced Web activity netted 16 broadband inquiries over this same reporting period (199 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 remains committed to gathering data regarding the location and broadband connectivity of Community Anchor Institutions in accordance with the data requirements of the SBI NOFA Technical Appendix. Multiple agencies and leaders have taken the opportunity to recommit to CAI data collection, reiterating the importance of a relationship-oriented approach with state-level agencies and organizations that generates more responses than local outreach.
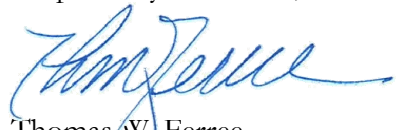
In conjunction with the Minnesota Department of Commerce, outreach was conducted during this data update reporting period by Connect Minnesota to continue identification of existing, centralized sources for CAI connectivity data. Additionally, outreach was coordinated to distribute the CAI survey to institutions throughout the state through multiple methods including a customized online survey available on the Connect Minnesota website. Building on the success of past campaigns to generate excitement about CAI outreach, research, and mapping, there has been one campaign conducted since the previous NTIA data submission: Economic Development (November 2013). The Connect Minnesota Economic Development Campaign highlighted the benefits of broadband for economic development by building awareness, engaging stakeholders, and enlisting new stakeholders through events and a coordinated release of business surveys, widgets, infographics, policy analyses, maps, and stories from around our states and partnerships. Each release included a call to action to complete a CAI Survey and allowed the opportunity to conduct outreach outside of the releases. Survey of the government sector helped to build awareness and to establish a centralized database of key connectivity data for the mapping project. This building on existing relationships with statewide associations promotes the importance of broadband connectivity at anchor institutions and encourages participation in this data collection process.

The value of these relationships continues to impact the entire success of the Grant Program, and the CAI engagement is a logical extension of new and existing relationships. Connect Minnesota will continue to expand on these relationships over the coming months and utilize its contacts throughout the state to collect data and raise awareness of this project.

From our work in 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.

MINNESOTA COMMUNITY ANCHOR INSTITUTIONS METHODOLOGY

Connect Minnesota remains committed to working with Minnesota to gather data on the location and broadband connectivity of Community Anchor Institutions (CAI), in accordance with the data requirements of the SBI NOFA Technical Appendix. This commitment continued based on NTIA's encouragement to improve data numbers specifically in the K-12 school and library sectors to support the ConnectED White House Initiative, launched in June 2013. This encouragement translated very well with the state client as well as K-12 school and library points of contact. The impact will be seen in this submission as well as the upcoming October 2014 submission.

In addition to the encouragement from NTIA, Connect Minnesota continues to promote sector-specific campaigns every quarter and focused on economic development in November 2013, specifically reaching out to and education local governments. Information received from these campaign outreaches is processed and compiled with all currently collected CAI data. 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

Connect Minnesota realizes the value of key relationships, new and old, 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 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. Since the October 2013 submission, the sector-specific approach included an economic development campaign in November 2013 geared toward local governments. During these campaigns, Connect Minnesota committed to engage key stakeholders to educate them about the importance of our CAI data gathering efforts, distribute survey requests to sector representatives to gather CAI information, and provide campaign-specific education through communications and webinar resources. Continued outreach to and survey of schools, libraries, hospitals, local law

enforcement, and fire stations helps build awareness and establishes a centralized database of key connectivity data for planning.

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 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 broadband 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	Lat/Long	Technology of Transmission	Download Speed	Upload Speed
K-12 Schools	3307	3274	1024	927	497
Libraries	1133	1121	417	529	354
Healthcare	199	198	59	59	59
Public Safety	1575	1571	98	82	83
Higher Ed Institutions	274	273	96	95	96
Other Government	163	147	57	55	54
Other Non-Government	164	147	35	36	36
Total	6815	6731	1786	1783	1179

The CAI increases in Minnesota are due to engagement of the state client and Danna MacKenzie, the newly appointed executive director of the Office of Broadband Development. Both have been consistent resources to identify and contact potential CAI resources. Data over the last six months was received from the Minnesota Educational Telecommunications Networks, the Minnesota Public Libraries, and the Carver County IT staff.

Additionally, efforts were made to increase the number of CAI IDs, or federal ID codes, submitted for K-12 school and library records. The K-12 schools now have 88.24% of the CAI IDs accounted for in the records. Library records now have 99.73% of the CAI IDs accounted for in the records,

an increase of 731 since the October 2013 submission; additional work will be completed prior to the October 2014 submission to further increase the number of CAI IDs submitted.

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 April 1, 2014, is contained within the SBI Data Transfer Model and additional components as provided to SBI Grantees on January 24, 2014. Connected Nation (CN) has reviewed all literature that relates to the release and use of this data transfer model and recognizes that it does not replace or dictate how data is stored, processed, or displayed for the state, as it is meant primarily as a means to transfer the broadband data from all states and territories and populate the National Broadband Map in a seamless fashion. Connected Nation has complied with the following guidance documents published by NTIA:

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

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

Inventory of Deliverables, Connect Minnesota: April 1, 2014

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Appendix A:	1(b)	BB_Service_Wireless	Broadband Service Availability of Wireless Services Not Provided to a Specific Address.
Appendix A:	3(b)	BB_ConnectionPoint_MiddleMile	Broadband Service Infrastructure Middle-Mile and Backbone Interconnection Points.
Appendix A:	4	BB_Service_CAInstitutions	Community Anchor Institutions-Listing.

The provider data collected by 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.

In collecting broadband service area datasets for inclusion on the National Broadband Map, this April 2014 submission includes business/commercial broadband service areas in addition to the residential datasets that have been collected for the SBI program. Following guidance from the program office, the end user category appropriately delineates the differences in residential service area, business service areas, and combination residential/business service areas.

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 continues as well to be able to create more granular satellite coverage based on satellite equipment positioning and geographic inputs; a pilot study has been initiated in Alaska to evaluate the analysis.

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 & 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 viable providers: A Better Wireless, NISP, LLC; Access Broadband; Ace Telephone Association; AirFiber; AirLink Broadband, LLC; Albany Mutual Telephone Association; Alliance Communications Cooperative, Inc.; Arrowhead Electric Cooperative, Inc.; Arvig; Arvig Communication Systems ; AT&T Corp, Inc.; Barnesville Municipal Telephone; Benton Cooperative Telephone Company; Blue Earth Valley Telephone Company; Blue Sky Broadband; Blueprint America, Inc.; Bradco-Wisp, Inc.; Broadband Corp; Cable ONE Inc.; CenturyLink; Charter Communications, Inc.; Christensen Communications Company; CitEscape, LLC; City of Bagley; City of Chaska; City of Windom; Clara City Telephone Company; Cloudnet, Inc.; Cogent Communications, Inc.; Comcast Cable Communications, LLC; Consolidated Telephone Company; Crosslake Telephone Company; Emily Cooperative Telephone Company; Enterpoint Wireless; Fallsnet; Farmers Mutual Telephone Company; Federated Telephone Cooperative; Fibernet Monticello; Frontier Communications of Minnesota, Inc.; FTTH Communications; Garden Valley Telephone Company; Gardonville Cooperative Telephone Association; Genesis Wireless; Great Lakes Communication Corp.; Halstad Telephone Company; Harmony Telephone Company; Hiawatha Broadband Communications, Inc.; Hickory Tech Corporation; Hughes Network Systems, LLC; Info Link Wireless, Inc.; Interstate Telecommunications Cooperative, Inc.; InvisiMax, Inc.; Jab Wireless, Inc.; Jaguar Communications; Johnson Telephone Company; Kasson & Mantorville Telephone Company; Lakenet Communications; Level 3 Communications, LLC; Lismore Cooperative Telephone Company; Lonsdale Telephone Company, Inc. ; LTD Broadband LLC; Mabel Cooperative Telephone Company; Manchester-Hartland Telephone Company; Mediacom Communications Corporation ; Midcontinent Communications; Mille Lacs Energy Cooperative; Minnesota Valley Telephone Company; Minnesota Valley TV Improvement Corporation; Minnesota WiFi LLC; Moose-Tec; Nates Net, Inc.; New Ulm Telecom, Inc.; NewCore Wireless LLC; Nextera Communications; NorthfieldWiFi LLC; Park Region Mutual Telephone Company; Paul Bunyan Rural Telephone Cooperative; Polar Telcom, Inc.; Radio Link Internet; Red River Rural Telephone Association; River Valley Telephone Coop.; Rothsay Telephone Company Inc.; RRC Net;

Runestone Telecom Association; Sacred Heart Telephone Company; Savage Communications Inc.; Scott Rice Telephone Co.; Sheehan Gas; Sioux Valley Rural Television, Inc.; Sjoberg's Inc.; SMBS; Southern Cablevision, Inc.; Spring Grove Cooperative Telephone Co.; Sprint Nextel Corporation; St. Olaf College Telecommunications; Starbuck Telephone Company; Starpoint Communications, Inc.; Synkro Southwest; TDS Telecommunications Corporation; T-Mobile USA, Inc.; Upsala Cooperative Telephone Association; US Internet of Minnetoka; VAL-ED Joint Venture, LLP; Verizon Communications, Inc.; ViaSat, Inc. ; West Central Telephone Association; Western Telephone Company; WideOpenWest Finance, LLC; Wikstrom Telephone Company; Windstream Communications; Winnebago Cooperative Telecom Association; Wolverton Telephone Company; Woodstock Telephone Company; Zayo Group, LLC; and Zumbrota 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 provider, Synkro Southwest, and non-participating business provider St. Olaf College Telecommunications which, by nature of the methodology required for this collection, is also included in the above list.

Additionally Connected Nation had previously validated 18 providers which are now considered non-viable, due to mergers and acquisitions or because they are no longer in business: Arrowhead Communications Corporation; City of Detroit Lakes; Clear Choice Communications; Clearwire Corporation; Evertek Enterprises, Inc.; Felton Telephone Company; Granada Telephone Company; Lakedale LINK; LakesArea Wireless; Loretel Systems, Inc.; Maple Leaf Networks; Pine Island Telephone Company; Qwest Corporation; Ridge Runner Internet Services Inc.; Sleepy Eye Telephone Company; tothehome.com, LLC; US Cable Corporation; and Utopian Wireless Corporation.

From program initiation through this reporting period, CN has completed in-the-field validation testing against 115 companies (out of a universe of 124 viable providers) totaling 92.74 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 included with the submission materials provided to grantees on January 24, 2014. 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.

A Better Wireless, NISP, LLC (Business Services)

Issue: Fixed wireless platform with maximum advertised download and upload speeds in tier 8, higher than the expected value range for the technology.

Resolution: Provider website advertises business customers can get service of up to 45 Mbps download and upload; screenshot below.

Service Packages

		Home Packages		Business Packages		Home/Business Custom Packages	Dedicated with 99.99% uptime service level agreement
		Freedom	Eagle	Business Freedom	Business Eagle	TBD	Dedicated
Downlink Speed (up to)		3Mb	5Mb	5Mb	7Mb	up to 45Mb	5Mb to 100Mb
Uplink Speed (up to)		1Mb	1Mb	2Mb	2Mb	up to 45Mb	5Mb to 100Mb

AirFiber (Business Services)

Issue: Fixed wireless platform with maximum advertised download and upload speeds in tier 8, higher than expected value range.

Resolution: Provider website advertises business customer services at 25 Mbps for both download and upload speeds; screenshot below.

THE "ENTERPRISE"

$124.95/MONTH

25/25 Mbps

Cloudnet, Inc. (Business Services)

Issue: Fixed wireless platform with maximum advertised download and upload speeds in tier 8, higher than the expected value range for the technology.

Resolution: Provider confirmed that tier 8 business services are available, but they are advertised as custom services and require a quote; screenshot below.

Business Accounts	Down/Up Speeds*	Monthly Fee
1M	1M/768K	$59
3M	3M/1M	$89
5M	5M/1.5M	$119
CUSTOM	5+ Mbps**	Quote Only

* Best available speed class of service, not guaranteed.
** CUSTOM accounts are available via a point to point wireless service by custom quote only as additional charges

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.

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 WiFi LLC (Business Services)

Issue: Fixed wireless platform with maximum advertised download and upload speeds in tier 10, higher than expected value range for the technology.

Resolution: Provider website advertises that while business service is similar to the residential offerings, the business speeds can be customized to be within tier 10; screenshot below.

Business Pricing:

We offer business service with speeds similar to our residential offerings. We can also customize a package to fit your specific needs with dedicated bandwidth, VPN connections, remote access, custom support hours, and guaranteed Service Level Agreements (SLA). We can offer speeds from 2 Megs to over 1000 Megs of bandwidth.

Minnesota WiFi LLC (Residential Services)

Issue: Fixed wireless platform with maximum advertised download and upload speeds in tier 8, higher than expected value range for the technology.

Resolution: Provider website advertises that speeds in tier 8 are available, but are considered a custom offering; screenshot below.

30 Megs to 1000 Megs Download Speeds	30 Megs to 1000 Megs Upload Speeds	Call	This is great for dedicated, fast speeds. Please contact us for speeds above 30 Megs.

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

NorthfieldWiFi LLC

Issue: Fixed wireless 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.

30.0Mbps / 6Mbps

30Mbps Download
6Mbps Upload

Own the web. Surf, game, stream videos all at the same time!

$69.99

Radio Link Internet (Business Services)
Issue: Fixed wireless platform with maximum advertised download and upload speeds in tier 10, higher than expected value range for the technology.
Resolution: Provider website advertises that for business services, speeds up to 300 Mbps are available; screenshot below.

Call   -other speeds up to 300mbps are available-

Radio Link Internet (Residential Services)
Issue: Fixed wireless 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.

Internet Service Plans

Monthly

$10	1.5mbps down / 1.5mbps up (Economy/12month commitment)
$45	5mbps down / 3mbps up
$55	15mbps down / 5mbps up
$65	22mbps down / 7mbps up
$85	30mbps down / 10mbps up

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.

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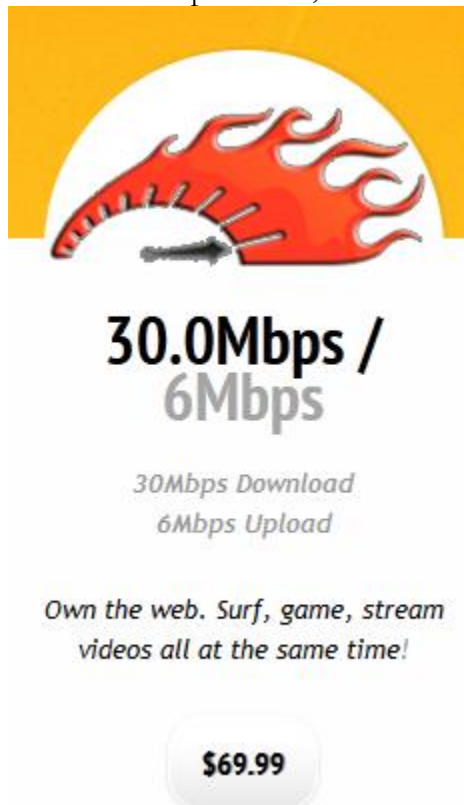Resolution: Provider website advertises 25 Mbps service; screenshot below.

25/30 Mbps

The optimal choice for multi-user households, frequent gaming, regular video streaming and file sharing. (5 Mbps upload)

DATA SUBMISSION AND COVERAGE ESTIMATION OF NON-PARTICIPATING PROVIDERS (NPP)

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.).

The section below provides a summary of the status of CN's outreach and findings on all non-participating provider coverage for the April 2014 SBI submission.

AirFiber
The coverage estimation for AirFiber was updated based on the identification of a new site during field validation and the discovery of businesses at higher speeds. The full white paper containing the methodology for the initial coverage estimation for this provider can be found within the April 2013 submission to the NTIA

NatesNet
The coverage estimation for this provider was not updated from the prior submission in October 2013. The full white paper containing the most recent coverage estimation for this provider can be found within the April 2013 submission to NTIA.

Nexterra
The coverage estimation for Nexterra was updated based on an audit and field validation which resulted in coverage reduction in many areas and expansion in some others. The full white paper containing the methodology for the initial coverage estimation for this provider can be found within the October 2012 submission to NTIA.

St. Olaf Telephone
Coverage for this NPP is being submitted for the first time; please find white paper on provider outreach and coverage estimation in Appendix A.

Synkro Wireless
Coverage for this NPP is being submitted for the first time; please find white paper on provider outreach and coverage estimation in Appendix A.

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. However, if approval is not received from a provider in time for the submission, but CN believes the new/updated service area to be accurate, then the coverage will be submitted to NTIA without final provider approval with a note regarding the situation made in the provider log.

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, non-participating provider 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 1.24 percent of Minnesota households do not have terrestrial fixed broadband service available, and approximately 0.05 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 2.77 percent of rural Minnesota households do not have terrestrial fixed broadband service available, and approximately 0.11 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. omnidirectional, 180°, 120°, 90°, etc.).
11. Azimuth of antenna (e.g. 360° with magnetic declination if known).
12. Approximate transmit radius (in feet, miles, or kilometers).
13. Polarity of transmit antenna (Vertical or Horizontal).
14. Transmit antenna gain (in dBi).

15. Line loss (applicable only to providers using coax, heliax, waveguide or other forms of cabling – excludes power-over-Ethernet devices).

16. Mechanical and/or Electrical beam tilt (if applicable).

17. Equipment Manufacturer (allows easy cross-reference against manufacturer's specification sheet).

18. Power output of the transmitting device (if unknown, FCC standards or manufacturer specifications are applied).

19. AMSL at base of tower site.

20. Antenna centerline AGL (height of antenna above ground level measured at the centerline of the actual antenna).

21. Foliage factors (Evergreens/Deciduous and percent of ground cover).

22. Ground Clutter (primarily used in rural areas to account for foliage and in metropolitan areas to account for types and heights of buildings if known).

23. Average gain of receive antenna.

24. Receive antenna is estimated at height above average terrain (HAAT) of 6.2 meters/20 feet.

25. Federal Registration Numbers (if applicable) which may allow opportunities to cross-reference and/or obtain additional data from the FCC's ULS and the **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, hill shade, etc., and the limitations of the software itself to display a broadband service area as accurately as possible. Generally, these random pixel striations appear as a result of signal levels reaching the highest elevated points within the prescribed radius. Typically, while this pixilation anomaly shows legitimate areas where signals can be received, these highly elevated points may have exceedingly sparse populations or are entirely void of population. As a result, and congruent to the *Wireless Technology Methodologies and Business Logic* white paper submitted to NTIA on January 20, 2011, all independent pixels representing service that are less

than 0.125 square miles in area have been removed from the geospatial representation of each wireless provider.

BROADBAND INQUIRIES METHODOLOGY

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

BBIs are submitted frequently by consumers via the Connect 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 entered by the consumer. Many BBIs can be resolved through desktop research; however, if a BBI requires research in the field, the assigned ETS team member conducts such research when performing field validations in the area of the inquiry, or at another such time as is practical and appropriate. GIS and ETS team members respond to and conclude BBIs via telephone contact and/or e-mail communication.

The broadband inquiry process has been implemented in each of the CN state programs with successful results. Altogether CN has received over 19,196 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 16 inquiries (199 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 interactive online mapping tool for viewing, analyzing, and validating broadband data. Developed using Esri's ArcGIS for Server and Adobe's Flex Framework and hosted and maintained by Connected Nation, My ConnectView is a multi-functional, user-friendly way for local leaders, policymakers, consumers, and technology providers to devise a plan for the expansion and adoption of broadband.

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

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

The Connect Minnesota project launched My ConnectView on April 2, 2012 and has received 2,126 visits this reporting period; to date the interactive mapping application has received 11,091visits.

SPEED TEST METHODOLOGY

The 1,365 speed tests that are represented in the Connect Minnesota Speed Test Report during this reporting period (15,639 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 may be received through the data collection process, the use of speed tests provide real-world information on the speeds that currently exist within the state of 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 April 2014 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 that have not provided sufficient mapping information, 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	Boreal Access	http://boreal.org/drupal/	Provider does not meet minimum speed requirements for participation.
6	Broadcore, Inc.	www.broadcore.com/	Broadcore is a national provider of business-class hosted unified communications services and has no ISP offerings.
7	BullsEye Telecom, Inc.	http://www.bullseyetelecom.com	Company is a nonfacilities-based reseller.
8	Cbeyond Communications, LLC	http://www.cbeyond.net/index.htm	Cbeyond is a national provider of business-class hosted unified communications services and has no ISP offerings.
9	Computer Pro Inc.	www.hickorytech.com	Company reporting data is provided by Hickory Tech.
10	Delavan Telephone Company	http://www.bevcomm.net/	Company reporting data is provided by Blue Earth Valley Telephone Company (BEVCOMM).
11	Digital Telecommunications, Inc.	http://www.pickdti.com/	No longer in business.
12	Dunnell Telephone Company	http://bevcomm.net/	Provider does not meet minimum speed requirements for participation.
13	EN-TEL Communications, LLC	http://www.en-tel.com/	Acquired by another company.
14	Global Crossing Telecommunications, Inc.	http://www.globalcrossing.com/	Acquired by another company.
15	GN Wireless	n/a	Local phone disconnected and website not located; provider no longer in business.
16	Home Telephone Company	http://www.hmtel.com	Company reporting data is provided by Arvig Communications Services.
17	Lakedale LINK	http://www.lakedaletelephone.com/	Acquired by another company.

18	Lakedale Telephone	http://www.lakedaletelephone.com/	Acquired by another company.
19	LightEdge Solutions, Inc.	http://www.lightedge.com	Provider does not offer residential broadband service in Minnesota.
20	Lightyear Network Solutions, LLC	www.lightyear.net	Nonfacilities-based reseller for DSL services.
21	Lowry Telephone LLC	www.home.runestone.net/rta	Company acquired by Runestone Telecom Association.
22	Maple Leaf Networks	http://www.mleaf.net/	No longer in business.
23	Merit Network, Inc.	www.merit.edu	Provider has operations in Michigan; no operations in Minnesota completed to date.
24	Metropolitan Telecommunications Holding Company	n/a	Nonfacilities-based reseller for DSL services.
25	MLM Project Services, Inc.	http://www.mlmpsinc.com	Company does not offer residential broadband service in Minnesota.
26	M-Tek Systems	www.mteksystems.com	Company does not offer residential broadband service in Minnesota.
27	New Edge Network, Inc.	http://www.newedgenetworks.com/	Nonfacilities-based backhaul reseller.
28	North American Communications Corp (NACC)	http://www.jaguarcommunications.com	Maps and data are supplied by DBA Jaguar Communications.
29	OrbitCom, Inc.	http://www.orbitcom.biz	Reseller of CenturyLink Services and has been non-responsive to multiple contact attempts.
30	PAETEC Communications, Inc.	http://www.paetec.com/	Acquired by another company.
31	Popp.com, Inc.	http://www.popp.com/	Provider is a supplier of business services only.
32	Renville-Sibley Fiber to the Farm (RSFiber Cooperative	http://www.scfiber.com	Fiber to the Farm project still seeking funding, however they are performing engineering functions.
33	Ridge Runner Internet Services Inc.	http://www.ridge-runner.com/index.html	No longer in business.

34	Sihope Communications	http://www.sihope.com/	Facilities-based company offering B2B solutions and reseller of circuits (non-residential).
35	Sioux Valley Rural Television, Inc.	n/a	Company does not offer broadband services; affiliate Sioux Valley Wireless coverage and data is provided.
36	Tekstar Communication Systems, Inc.	n/a	Company reporting data is provided by Arvig Communications Services.
37	Telefonica USA, Inc.	http://www.us.telefonica.com/	Provider does not offer services in Minnesota.
38	Terril Telephone Cooperative	http://www.terril.com	Provider does not offer services in Minnesota.
39	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.
40	United States Cellular Corporation	http://www.uscellular.com/uscellular/index.jsp	Provider does not offer broadband services in Minnesota.
41	University Corporation for Advanced Internet Development	n/a	Nationwide Gbit network for anchor institutions; under construction utilizing existing fiber and new installations.
42	US Cable Corporation	http://www.uscablegroup.com/	Acquired by another company.
43	US Family Internet	http://www.usfamily.net/	Nonfacilities-based reseller of CenturyLink Services.
44	US Internet of Minnetonka	http://www.usiwireless.com/	Provider coverage and data is reported by DBA USI Wireless.
45	Velocity Telephone, Inc.	http://www.velocitytelephone.com	Nonfacilities-based reseller of CenturyLink Services.
46	WilTel Communications, LLC.	n/a	As of December 23, 2005, WilTel Communications Group Inc. operates as a subsidiary of Level 3.

APPENDIX A: BROADBAND PROVIDER LOG

Broadband Provider Log

Complete	227
Non-Responsive/Refused	1
In Progress	1
Reseller Providing Data	0
Count of Datasets by Status	**229**
Total Unique Providers Represented	**125**

Provider Name	Platform	Status	NDA Execution Date	Notes	End User Category
A Better Wireless, NISP, LLC	Fixed Wireless	Data Added to Statewide Inventory		[JAN-06-14 Brian Dudek] Change/Business Provider: Provider has been in service offering commercial broadband, but is being submitted for the first time. Provider added a transmission location west of the city of Henning and removed a transmission location around Richdale due to lack of interest.	2 – Business Only
A Better Wireless, NISP, LLC	Fixed Wireless	Data Added to Statewide Inventory		[JAN-02-14 Brian Dudek] Change: Provider added a transmission location west of the city of Henning and removed a transmission location around Richdale due to lack of interest.	1 – Residential Only
Access Broadband	Fixed Wireless	Data Added to Statewide Inventory		[FEB-24-14 Brian Dudek] Correction: Previously non-responsive provider is now participating in the program. Coverage more extensive than initially estimated and available to both residential and business users.	5 – Both Residential/Business
Ace Telephone Association	Fiber	Data Added to Statewide Inventory	8/3/2010	[JAN-23-14 Brian Dudek] Change: Provider expanded fiber coverage in multiple areas in Houston and Winona County.	5 – Both Residential/Business
Ace Telephone Association	Fixed Wireless	Data Added to Statewide Inventory	8/3/2010	[JAN-24-14 Brian Dudek] Change: Provider cut back on coverage near the community of Pickwick. Only aimed at a specific valley. It has also been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Arrowhead Electric Cooperative, Inc.	Fiber	Data Added to Statewide Inventory		[MAR-06-14 Brian Dudek] Change: New provider recently started offering services.	5 – Both Residential/Business
Arvig	DSL	Data Added to Statewide Inventory	4/20/2010	[JAN-28-14 Brian Dudek] Change/Correction: Provider expanded DSL territory slightly between the cities of Eden Valley and Watkins. Validation turned up additional serviced areas in Grand Meadow, Wykoff and Racine as part of Home Telephone Company. Provider assumed these areas were being reported, but they in fact were not in prior submissions.	5 – Both Residential/Business
AT&T Corp, Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/16/2009	[FEB-03-14 Brian Dudek] Change: Provider increased their 3G, HSPA, and LTE coverage. Expanded coverage south of Red Lake, south of Grygla, Southwest Lake County, and in other small areas where gaps existed.	5 – Both Residential/Business
Benton Cooperative Telephone Company	Fiber	Data Added to Statewide Inventory	6/16/2010	[JAN-27-14 Brian Dudek] Change: Provider expanded fiber service around the city of Rice.	5 – Both Residential/Business
Blue Earth Valley Telephone Company	Fiber	Data Added to Statewide Inventory	6/16/2010	[FEB-14-14 Brian Dudek] Change: Provider expanded fiber service to a small subdivision in the city of Oronoco and area near New Prague. It has also been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Blueprint America, Inc.	Fixed Wireless	Data Added to Statewide Inventory	8/16/2012	[FEB-26-14 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2014 submission. Coverage increased and decreased in multiple areas.	5 – Both Residential/Business
Broadband Corp	Fixed Wireless	Data Added to Statewide Inventory	5/11/2010	[FEB-21-14 Brian Dudek] Change: Provider added three 3650 Mhz transmission locations, particularly increasing 3650 coverage in the Howard Lake area. Removed transmission point in Blomkest decreasing coverage to the west.	5 – Both Residential/Business

CenturyLink	DSL	Data Added to Statewide Inventory	12/4/2009	[FEB-18-14 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2014 submission.	5 – Both Residential/Business
CenturyLink	Fiber	Data Added to Statewide Inventory	12/4/2009	[FEB-18-14 Brian Dudek] Change/Correction: Provider expanded fiber service into seven additional blocks in the counties of Hennepin, Ramsey and Washington. Reduced maximum advertised upload speeds to tier 8.	5 – Both Residential/Business
Christensen Communications Company	Fiber	Data Added to Statewide Inventory	2/2/2010	[JAN-28-14 Brian Dudek] Change/Business Provider: Provider has been in service offering commercial broadband, but is being submitted for the first time.	2 – Business Only
Christensen Communications Company	Fixed Wireless	Data Added to Statewide Inventory	2/2/2010	[FEB-04-14 Brian Dudek] Change: New provider platform for the April 2014 submission.	5 – Both Residential/Business
CitEscape, LLC	Fixed Wireless	Data Added to Statewide Inventory	1/25/2010	[JAN-06-14 Brian Dudek] Correction: Resident feedback indicated service was not available along a street near the city of Zimmerman.	5 – Both Residential/Business
Cloudnet, Inc.	Fixed Wireless	Data Added to Statewide Inventory	5/7/2013	[JAN-27-14 Brian Dudek] Change/Business Provider: Provider indicated they offer a higher advertised speed to business customers in the same area as their residential service.	2 – Business Only
Comcast Cable Communications, LLC	Cable	Data Added to Statewide Inventory	12/7/2009	[FEB-07-14 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2014 submission.	5 – Both Residential/Business
Emily Cooperative Telephone Company	Fiber	Data Added to Statewide Inventory	6/24/2010	[JAN-21-14 Brian Dudek] Change: Provider expanded fiber territory to a couple small areas on the southern border of their coverage area. Additionally, provider now offers max advertised à la carte upload speeds of tier 7.	5 – Both Residential/Business
Fallsnet	Fixed Wireless	Data Added to Statewide Inventory		[JAN-30-14 Brian Dudek] Change: Provider expanded coverage to the north and east of Little Falls with additional transmission locations.	5 – Both Residential/Business
Frontier Communications of Minnesota, Inc.	DSL	Data Added to Statewide Inventory	1/22/2010	[FEB-12-14 Brian Dudek] Change: Provider upgraded infrastructure increasing speeds in some areas. Very minor coverage expansion.	5 – Both Residential/Business
Garden Valley Telephone Company	DSL	Data Added to Statewide Inventory	2/17/2010	[FEB-27-14 Brian Dudek] Change/Correction: Provider converted DSL infrastructure to fiber in rural Erskine and Maple Bay area, and in the city and rural areas of Shevlin and Leonard. Provider indicated a small correction where DSL exists and is not actually fiber. Upgraded infrastructure in the previously maximum tier 3 download/tier 2 upload areas, increasing maximum advertised download and uploads speeds to tier 8.	5 – Both Residential/Business
Garden Valley Telephone Company	Fiber	Data Added to Statewide Inventory	2/17/2010	[FEB-27-14 Brian Dudek] Change/Correction: Provider expanded fiber territory into rural Erskine and Maple Bay, along with the Shevlin and Leonard exchange areas. Provider also indicated a correction around Maple Lakes where fiber is not yet available.	5 – Both Residential/Business
Gardonville Cooperative Telephone Association	Fiber	Data Added to Statewide Inventory	2/23/2010	[FEB-28-14 Brian Dudek] Change/Correction: Provider expanded fiber territory in four small areas that were previously DSL. Provider also indicated that they advertise custom speed requests and residents can acquire download and upload speeds of tier 9.	5 – Both Residential/Business
Gardonville Cooperative Telephone Association	DSL	Data Added to Statewide Inventory	2/23/2010	[JAN-07-14 Brian Dudek] Change: Provider converted some DSL infrastructure to fiber. Upgrades to infrastructure increased maximum advertised download speeds to tier 6 and decreased upload speeds to tier 4.	5 – Both Residential/Business
Great Lakes Communication Corp.	Fixed Wireless	Data Added to Statewide Inventory	6/25/2013	[FEB-21-14 Brian Dudek] Change: Provider upgraded infrastructure with an additional transmission location in IA which had a very minor effect in MN near Round Lake.	5 – Both Residential/Business

Provider	Technology	Status	Date	Change Notes	Service Type
Halstad Telephone Company	Fixed Wireless	Data Added to Statewide Inventory	6/16/2010	[JAN-03-14 Brian Dudek] Change: Removed licensed tower out of East Grand Forks as site will be turned off by December 31, 2013. Provider upgraded infrastructure to unlicensed Crookston site that increased max advertised upload speeds to tier 4. Also licensed Crookston site is now active. Further, its been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Harmony Telephone Company	Fixed Wireless	Data Added to Statewide Inventory	1/12/2010	[JAN-27-14 Brian Dudek] Change: Provider expanded service area into rural Preston and the rural community of Greenleafton. It has also been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Hiawatha Broadband Communications, Inc.	Fiber	Data Added to Statewide Inventory	3/8/2010	[FEB-03-14 Brian Dudek] Change: Provider extended fiber services to businesses only along a route from western Red Wing to the city of Hastings.	2 – Business Only
InvisiMax, Inc.	Fixed Wireless	Data Added to Statewide Inventory	2/29/2012	[FEB-21-14 Brian Dudek] Change/Correction: Provider indicated to pull coverage from towercoverage.com. Increases in coverage in some areas and decreases in others. Reported one maximum advertised speed tier combination for entire service area. It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Jaguar Communications	Fiber	Data Added to Statewide Inventory	4/12/2010	[FEB-17-14 Brian Dudek] Change: Provider expanded fiber territory in a number of areas. Largest expansion was into Carver County.	5 – Both Residential/Business
Lake County Fiber Network	Fiber	Data Added to Statewide Inventory		[FEB-05-14 Brian Dudek] Change: New fiber broadband provider offering higher speeds for business services for the April 2014 submission.	2 – Business Only
Lake County Fiber Network	Fiber	Data Added to Statewide Inventory		[FEB-05-14 Brian Dudek] Change: New fiber broadband provider for the April 2014 submission.	1 – Residential Only
Lakenet Communications	Fixed Wireless	Data Added to Statewide Inventory	10/18/2012	[JAN-22-14 Brian Dudek] Change: Provider expanded coverage north of Duluth and west of Two Harbors with additional transmission locations.	5 – Both Residential/Business
Level 3 Communications, LLC	Fiber	Data Added to Statewide Inventory	12/14/2009	[JAN-30-14 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2014 submission.	2 – Business Only
LTD Broadband LLC	Fixed Wireless	Data Added to Statewide Inventory	11/18/2013	[FEB-21-14 Brian Dudek] Correction: New provider for the April 2014 submission, but was previously in service.	5 – Both Residential/Business
MegaPath Corporation	DSL	Data Added to Statewide Inventory	2/15/2010	[FEB-20-14 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2014 submission. Provider added additional blocks in areas of existing DSL, but with different technology codes. Provider also removed coverage in a portion of East Washington County.	2 – Business Only
Midcontinent Communications	Fiber	Data Added to Statewide Inventory	12/9/2009	[FEB-14-14 Brian Dudek] Change/Business Provider: Provider has been in service offering commercial broadband at higher speeds, but is being submitted for the first time.	2 – Business Only
Midcontinent Communications	Cable	Data Added to Statewide Inventory	12/9/2009	[FEB-13-14 Brian Dudek] Change: Provider expanded broadband service into seven additional census blocks. It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Minnesota Valley TV Improvement Corporation	Fixed Wireless	Data Added to Statewide Inventory	4/13/2010	[FEB-14-14 Brian Dudek] Change: Provider added three transmission locations increasing coverage near cities and communities of Westbrook, Worthington, Rushmore and Reading. Provider also upgraded infrastructure in increasing maximum advertised download speeds to tier 6.	5 – Both Residential/Business

Minnesota WiFi LLC	Fixed Wireless	Data Added to Statewide Inventory	1/28/2013	[FEB-21-14 Brian Dudek] Change: Provider expanded coverage west and east to the Claremont area and to rural Byron. Provider also upgraded infrastructure increasing maximum advertised upload speeds to tier 8.	2 – Business Only
Minnesota WiFi LLC	Fixed Wireless	Data Added to Statewide Inventory	1/28/2013	[FEB-21-14 Brian Dudek] Change: Provider expanded coverage west and east to the Claremont area and to rural Byron. Provider also upgraded infrastructure increasing maximum advertised download and upload speeds to tier 8.	1 – Residential Only
Paul Bunyan Rural Telephone Cooperative	Fiber	Data Added to Statewide Inventory	6/24/2010	[FEB-21-14 Brian Dudek] Change: Provider expanded fiber territory in rural Park Rapids. Provider also upgraded infrastructure and can now offer maximum advertised download and upload speeds of tier 10.	5 – Both Residential/Business
Radio Link Internet	Fixed Wireless	Data Added to Statewide Inventory		[FEB-19-14 Brian Dudek] Change/Correction: Provider supplied entirely new dataset indicating expansion primarily to the northwest, northeast, east, and to the south. Slight reductions in a few areas.	2 – Business Only
Radio Link Internet	Fixed Wireless	Data Added to Statewide Inventory		[FEB-19-14 Brian Dudek] Change/Correction: Provider supplied entirely new dataset indicating expansion primarily to the northwest, northeast, east and to the south. Slight reductions in a few areas.	1 – Residential Only
Red River Rural Telephone Association	Fiber	Data Added to Statewide Inventory	3/17/2010	[FEB-14-14 Brian Dudek] Change: Provider expanded fiber service SW of the city of Hawley.	5 – Both Residential/Business
Red River Rural Telephone Association	Fixed Wireless	Data Added to Statewide Inventory	3/17/2010	[FEB-14-14 Brian Dudek] Change: Provider decommissioned Breckenridge 3650 site. It has also been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Runestone Telecom Association	DSL	Data Added to Statewide Inventory	4/14/2010	[FEB-19-14 Brian Dudek] Change/Correction: Provider converted some DSL infrastructure to fiber. Slightly altered fiber boundary also altered DSL boundary.	5 – Both Residential/Business
Runestone Telecom Association	Fiber	Data Added to Statewide Inventory	4/14/2010	[FEB-17-14 Brian Dudek] Change/Correction: Provider expanded fiber territory with a few minor adjustments to the boundary. Much of the expansion is near Elbow Lake and south of Kensington.	5 – Both Residential/Business
Savage Communications Inc.	Fiber	Data Added to Statewide Inventory	2/19/2010	[JAN-23-14 Brian Dudek] Change: Provider expanded FTTB coverage to the towns of Warba and Garrison.	2 – Business Only
Scott Rice Telephone Co.	DSL	Data Added to Statewide Inventory	2/15/2010	[FEB-06-14 Brian Dudek] Change: Provider converted some DSL infrastructure to fiber.	5 – Both Residential/Business
Scott Rice Telephone Co.	Fiber	Data Added to Statewide Inventory	2/15/2010	[FEB-06-14 Brian Dudek] Change: Provider expanded fiber service in a few small areas within their exchange. It has also been determined that the provider offers this service only to residential locations.	1 – Residential Only
Scott Rice Telephone Co.	Fiber	Data Added to Statewide Inventory	2/15/2010	[FEB-06-14 Brian Dudek] Change: Provider indicated they have specific commercial areas that are business fiber only and that they also offer higher max advertised download and upload speeds.	2 – Business Only
Sprint Nextel Corporation	Mobile Wireless	Data Added to Statewide Inventory	1/14/2010	[FEB-05-14 Brian Dudek] Change: Provider expanded territory very slightly in middle central MN. Data also contains acquired Clearwire data. In addition, upgraded infrastructure increasing the areas in which have max advertised download and upload speeds of tier 6 and tier 4, respectively.	5 – Both Residential/Business
Starpoint Communications, Inc.	Fixed Wireless	Data Added to Statewide Inventory	2/18/2011	[FEB-18-14 Brian Dudek] Change: Provider added a transmission location near Minneota and Ghent. Majority of its coverage already covered by other transmissions.	5 – Both Residential/Business
T-Mobile USA, Inc.	Mobile Wireless	Data Added to Statewide Inventory	1/8/2010	[FEB-17-14 Brian Dudek] Change/Correction: Provider increased their non-3G coverage, particularly their HSPA+ and LTE coverage. Very small overall increases in coverage as well as decreases.	5 – Both Residential/Business

Provider	Technology	Status	Date	Notes	Service Type
TDS Telecommunications Corporation	DSL	Data Added to Statewide Inventory	1/27/2010	[FEB-10-14 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2014 submission. Clear expansion evident in Cass County.	5 – Both Residential/Business
TDS Telecommunications Corporation	Fiber	Data Added to Statewide Inventory	1/27/2010	[FEB-10-14 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2014 submission.	5 – Both Residential/Business
tw telecom of minnesota llc	DSL	Data Added to Statewide Inventory	4/20/2010	[FEB-04-14 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2014 submission.	2 – Business Only
tw telecom of minnesota llc	Fiber	Data Added to Statewide Inventory	4/20/2010	[FEB-04-14 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2014 submission.	2 – Business Only
VAL-ED Joint Venture, LLP	DSL	Data Added to Statewide Inventory	4/21/2010	[FEB-14-14 Brian Dudek] Change: Provider increased coverage in additional housing complexes around Moorhead and Dilworth, which also have higher download and upload speed tiers. It has also been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Verizon Communications, Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/14/2009	[FEB-12-14 Brian Dudek] Change/Correction: Provider increased their LTE coverage in multiple locations in the state. Slight increase in new coverage areas, but also a small refinement in northeast Minnesota.	5 – Both Residential/Business
ViaSat, Inc.	Satellite	Data Added to Statewide Inventory	1/8/2010	[FEB-14-14 Brian Dudek] Change: Provider no longer offers Pro Plus service in the state.	1 – Residential Only
Windstream Communications	DSL	Data Added to Statewide Inventory		[MAR-05-14 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2014 submission.	1 – Residential Only
Carver County Open Fiber Initiative	Backhaul	Backhaul Provider Only Processing Complete	10/31/2013		N/A - Backhaul
Northeast Service Cooperative	Backhaul	Backhaul Provider Only Processing Complete	9/30/2013		N/A - Backhaul
Savage Communications Inc.	Backhaul	Backhaul Provider Only Processing Complete	2/19/2010		N/A - Backhaul
Sprint Nextel Corporation	Backhaul	Backhaul Provider Only Processing Complete	1/14/2010		N/A - Backhaul
Albany Mutual Telephone Association	Fiber	Speed Only Update; Data Processing Complete	3/4/2010	[JAN-21-14 Brian Dudek] Change: Provider upgraded infrastructure and increased their max advertised download speeds to tier 8.	5 – Both Residential/Business
Arvig	Fiber	Speed Only Update; Data Processing Complete	4/20/2010	[JAN-30-14 Brian Dudek] Change: Provider upgraded infrastructure in the city of Melrose increasing maximum advertised download and upload speeds to tier 11 and tier 7, respectively. It has also been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Arvig	Cable	Speed Only Update; Data Processing Complete	4/20/2010	[JAN-30-14 Brian Dudek] Change: Provider upgraded infrastructure in Sauk Centre to DOCSIS 3.0 increasing maximum advertised download and upload speeds to tier 9 and tier 3, respectively.	5 – Both Residential/Business
Arvig Communication Systems	DSL	Speed Only Update; Data Processing Complete	2/2/2011	[JAN-31-14 Brian Dudek] Change: Provider upgraded infrastructure increasing maximum advertised download speeds to tier 7 around Belview, Wood Lake, and in rural Redwood Falls.	5 – Both Residential/Business
Benton Cooperative Telephone Company	Cable	Speed Only Update; Data Processing Complete	6/16/2010	[JAN-27-14 Brian Dudek] Change: Provider upgraded infrastructure to DOCSIS 3.0 increasing maximum advertised download and upload speeds to tier 8 and tier 7, respectively.	5 – Both Residential/Business
Benton Cooperative Telephone Company	Cable	Speed Only Update; Data Processing Complete	6/16/2010	[JAN-27-14 Brian Dudek] Change: Provider upgraded infrastructure to DOCSIS 3.0 increasing maximum advertised download and upload speeds to tier 8 and tier 7, respectively.	5 – Both Residential/Business

Benton Cooperative Telephone Company	DSL	Speed Only Update; Data Processing Complete	6/16/2010	[JAN-27-14 Brian Dudek] Change: Provider upgraded infrastructure increasing maximum advertised download and upload speeds to tier 8 and tier 7, respectively.	5 – Both Residential/Business
Benton Cooperative Telephone Company	DSL	Speed Only Update; Data Processing Complete	6/16/2010	[JAN-27-14 Brian Dudek] Change: Provider upgraded infrastructure increasing maximum advertised upload speeds to tier 8.	5 – Both Residential/Business
Fibernet Monticello	Fiber	Speed Only Update; Data Processing Complete		[FEB-07-14 Brian Dudek] Change: Provider upgraded infrastructure increasing both maximum advertised download and upload speeds to tier 10.	5 – Both Residential/Business
Hutchinson Telecommunications, Inc.	DSL	Speed Only Update; Data Processing Complete	4/14/2010	[DEC-16-13 Brian Dudek] Change: Provider upgraded infrastructure and increased their max advertised asymmetrical DSL download to tier 8. Upload was altered to tier 4 due to shared bandwidth.	5 – Both Residential/Business
Kasson & Mantorville Telephone Company	Fiber	Speed Only Update; Data Processing Complete	6/30/2010	[JAN-21-14 Brian Dudek] Change: Provider upgraded infrastructure and increased their max advertised download and upload speeds to tier 10.	5 – Both Residential/Business
Mediacom Communications Corporation	Cable	Speed Only Update; Data Processing Complete	1/12/2010	[MAR-04-14 Brian Dudek] Change: Provider upgraded infrastructure increasing maximum advertised download and upload speeds to tier 10 and tier 7, respectively in multiple areas throughout the state. Speeds increased to tier 9 and tier 5 in Lake City.	1 – Residential Only
Minnesota Valley TV Improvement Corporation	Cable	Speed Only Update; Data Processing Complete	4/13/2010	[FEB-14-14 Brian Dudek] Change: Provider upgraded infrastructure increasing maximum advertised download and upload speeds to tier 6 and tier 5, respectively.	5 – Both Residential/Business
New Ulm Telecom, Inc.	DSL	Speed Only Update; Data Processing Complete	2/25/2010	[DEC-16-13 Brian Dudek] Change: Provider upgraded infrastructure and increased their max advertised asymmetrical DSL download speeds to tier 8. Upload was altered to tier 4 due to shared bandwidth.	5 – Both Residential/Business
Rothsay Telephone Company Inc.	DSL	Speed Only Update; Data Processing Complete	2/18/2010	[JAN-03-14 Brian Dudek] Change: Provider indicates that they are now primarily using VDSL to offer higher download speeds. Increased their maximum advertised download speeds to tier 9.	5 – Both Residential/Business
Rothsay Telephone Company Inc.	Fiber	Speed Only Update; Data Processing Complete	2/18/2010	[JAN-03-14 Brian Dudek] Change: Provider upgraded infrastructure and increased their max advertised download speeds to tier 9.	5 – Both Residential/Business
Savage Communications Inc.	Cable	Speed Only Update; Data Processing Complete	2/19/2010	[JAN-23-14 Brian Dudek] Change: Provider upgraded infrastructure to DOCSIS 3.0 in some areas increasing maximum advertised download speeds to tier 9.	1 – Residential Only
Sjoberg's Inc.	Cable	Speed Only Update; Data Processing Complete	12/21/2009	[FEB-10-14 Brian Dudek] Change: Provider upgraded their infrastructure increasing maximum advertised download and upload speeds to tier 9 and tier 7, respectively. It has also been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Southern Cablevision, Inc.	Cable	Speed Only Update; Data Processing Complete	3/30/2010	[JAN-30-14 Brian Dudek] Change: Provider upgraded infrastructure in Detroit Falls and Perham increasing maximum advertised download speeds tier 10 and 9 and upload speeds to tier 3.	5 – Both Residential/Business
Western Telephone Company	DSL	Speed Only Update; Data Processing Complete	4/14/2010	[DEC-16-13 Brian Dudek] Change: Provider upgraded infrastructure and increased their max advertised asymmetrical DSL download to tier 8. Upload was altered to tier 4 due to shared bandwidth. Also it has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Ace Telephone Association	DSL	End User Category Update Only; Data Processing Complete	8/3/2010	[JAN-24-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Benton Cooperative Telephone Company	Fixed Wireless	End User Category Update Only; Data Processing Complete	6/16/2010	[MAR-06-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business

Blue Earth Valley Telephone Company	Cable	End User Category Update Only; Data Processing Complete	6/16/2010	[MAR-06-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Blue Earth Valley Telephone Company	DSL	End User Category Update Only; Data Processing Complete	6/16/2010	[MAR-06-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Blue Earth Valley Telephone Company	DSL	End User Category Update Only; Data Processing Complete	6/16/2010	[MAR-06-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Blue Earth Valley Telephone Company	DSL	End User Category Update Only; Data Processing Complete	6/16/2010	[MAR-06-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Blue Sky Broadband	Fixed Wireless	End User Category Update Only; Data Processing Complete	12/4/2012	[MAR-06-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
City of Bagley	Cable	End User Category Update Only; Data Processing Complete		[MAR-07-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Cloudnet, Inc.	Fixed Wireless	End User Category Update Only; Data Processing Complete	5/7/2013	[JAN-27-14 Brian Dudek] Change: It has been determined that the provider offers residential service at lower advertised speeds compared to business.	1 – Residential Only
Federated Telephone Cooperative	Fixed Wireless	End User Category Update Only; Data Processing Complete	4/1/2010	[MAR-07-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Gardonville Cooperative Telephone Association	Fixed Wireless	End User Category Update Only; Data Processing Complete	2/23/2010	[JAN-13-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Genesis Wireless	Fixed Wireless	End User Category Update Only; Data Processing Complete		[MAR-07-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Harmony Telephone Company	DSL	End User Category Update Only; Data Processing Complete	1/12/2010	[JAN-27-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Hickory Tech Corporation	Fixed Wireless	End User Category Update Only; Data Processing Complete		[MAR-07-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Hutchinson Telecommunications, Inc.	Fixed Wireless	End User Category Update Only; Data Processing Complete	4/14/2010	[JAN-13-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Info Link Wireless, Inc.	Fixed Wireless	End User Category Update Only; Data Processing Complete	4/19/2010	[MAR-07-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Interstate Telecommunications Cooperative, Inc.	DSL	End User Category Update Only; Data Processing Complete	2/10/2010	[MAR-07-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Interstate Telecommunications Cooperative, Inc.	Fiber	End User Category Update Only; Data Processing Complete	2/10/2010	[MAR-07-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Jab Wireless, Inc.	Fixed Wireless	End User Category Update Only; Data Processing Complete	6/14/2010	[MAR-03-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Mille Lacs Energy Cooperative	Fixed Wireless	End User Category Update Only; Data Processing Complete		[MAR-07-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
NorthfieldWiFi LLC	Fixed Wireless	End User Category Update Only; Data Processing Complete	2/4/2011	[MAR-07-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Park Region Mutual Telephone Company	Fixed Wireless	End User Category Update Only; Data Processing Complete	3/18/2010	[MAR-07-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
RRC Net	Fixed Wireless	End User Category Update Only; Data Processing Complete		[MAR-07-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business

Provider	Type	Status	Date	Notes	End User Category
Sioux Valley Rural Television, Inc.	Fixed Wireless	End User Category Update Only; Data Processing Complete	4/21/2010	[FEB-21-14 Brian Dudek] Change/Correction: Provider responded indicating they refuse to participate. Therefore, the last coverage data they provided is being submitted. It has also been determined that the provider offers their service to both residential and business users. Business offerings were in service previously.	5 – Both Residential/Business
VAL-ED Joint Venture, LLP	Fixed Wireless	End User Category Update Only; Data Processing Complete	4/21/2010	[JAN-13-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Wikstrom Telephone Company	DSL	End User Category Update Only; Data Processing Complete	4/12/2010	[MAR-07-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Wikstrom Telephone Company	Fixed Wireless	End User Category Update Only; Data Processing Complete	4/12/2010	[MAR-07-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Wikstrom Telephone Company	Fiber	End User Category Update Only; Data Processing Complete	4/12/2010	[FEB-17-14 Brian Dudek] Correction: Provider indicated that their actual advertised business speed tiers align with their residential tiers.	5 – Both Residential/Business
Wolverton Telephone Company	Fiber	End User Category Update Only; Data Processing Complete	6/22/2010	[MAR-07-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Nates Net, Inc.	Fixed Wireless	No Update-Estimated Coverage Submitted for Non-Participating Provider		[MAR-12-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
AirFiber	Fixed Wireless	Updated-Estimated Coverage Submitted for Non-Participating Provider		[DEC-17-13 Brian Dudek] Change: Coverage now portrayed in the city of Wrenshall after Connected Nation went to the area and conducted data acquisition/validation. Provider offers residential and business service at different maximum advertised speeds.	1 – Residential Only
AirFiber	Fixed Wireless	Updated-Estimated Coverage Submitted for Non-Participating Provider		[JAN-06-14 Brian Dudek] Change/Business Provider: Provider has been in service offering commercial broadband, but is being submitted for the first time. Coverage now portrayed in the city of Wrenshall after Connected Nation went to the area and conducted data acquisition/validation. Provider offers residential and business service at different maximum advertised speeds.	2 – Business Only
Nextera Communications	Fixed Wireless	Updated-Estimated Coverage Submitted for Non-Participating Provider		[NOV-22-13 Brian Dudek] Correction: All unlicensed and 3650 sites were audited and field validated, which resulted in coverage reduction in many areas and expansion in some others. Connected Nation estimated coverage for this provider. It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
St. Olaf College Telecommunications	Fiber	Estimated Coverage Submitted for Non-Participating Provider		[JAN-29-14 Brian Dudek] Change: New provider for this submission. Provider indicated that they have no interest in being included in the broadband project for the NTIA. Connected Nation estimated coverage for this provider. It was determined to be business only.	2 – Business Only
Synkro Southwest	Fixed Wireless	Estimated Coverage Submitted for Non-Participating Provider		[MAR-03-14 Brian Dudek] Correction: New provider for this submission that was previously in service; provider indicated that they will not be submitting any data this year. Connected Nation estimated coverage for this provider in the counties of Jackson, Nobles, Martin, and Cottonwood.	1 – Residential Only
Ace Telephone Association	Backhaul	No Update to Provide	8/3/2010		N/A - Backhaul
AirLink Broadband, LLC	Fixed Wireless	No Update to Provide			5 – Both Residential/Business
Albany Mutual Telephone Association	DSL	No Update to Provide	3/4/2010		5 – Both Residential/Business
Alliance Communications Cooperative, Inc.	Backhaul	No Update to Provide	3/2/2012		N/A - Backhaul
Alliance Communications Cooperative, Inc.	Fiber	No Update to Provide	3/2/2012		5 – Both Residential/Business
Arvig Communication Systems	DSL	No Update to Provide	2/2/2011		5 – Both Residential/Business
Arvig Communication Systems	Fixed Wireless	No Update to Provide	2/2/2011		5 – Both Residential/Business
Arvig Communication Systems	DSL	No Update to Provide	2/2/2011		5 – Both Residential/Business
Arvig Communication Systems	DSL	No Update to Provide	2/2/2011		5 – Both Residential/Business

Company	Type	Update	Date		Customer Type
Arvig Communication Systems	DSL	No Update to Provide	2/2/2011		5 – Both Residential/Business
Arvig Communication Systems	Fiber	No Update to Provide	2/2/2011		5 – Both Residential/Business
AT&T Corp, Inc.	Backhaul	No Update to Provide	12/16/2009		N/A - Backhaul
Barnesville Municipal Telephone	DSL	No Update to Provide	3/4/2010		5 – Both Residential/Business
Benton Cooperative Telephone Company	Mobile Wireless	No Update to Provide	6/16/2010		5 – Both Residential/Business
Benton Cooperative Telephone Company	Fiber	No Update to Provide	6/16/2010		5 – Both Residential/Business
Bradco-Wisp, Inc.	Fixed Wireless	No Update to Provide			5 – Both Residential/Business
Cable ONE Inc.	Cable	No Update to Provide	12/7/2009		5 – Both Residential/Business
CenturyLink	Backhaul	No Update to Provide	12/4/2009		N/A - Backhaul
Charter Communications, Inc.	Cable	No Update to Provide	12/15/2009		5 – Both Residential/Business
Charter Communications, Inc.	Backhaul	No Update to Provide	12/15/2009		N/A - Backhaul
Christensen Communications Company	Backhaul	No Update to Provide	2/2/2010		N/A - Backhaul
Christensen Communications Company	DSL	No Update to Provide	2/2/2010		5 – Both Residential/Business
City of Windom	Fiber	No Update to Provide			5 – Both Residential/Business
Clara City Telephone Company	DSL	No Update to Provide	2/5/2010		5 – Both Residential/Business
Consolidated Telephone Company	DSL	No Update to Provide	3/1/2012		5 – Both Residential/Business
Consolidated Telephone Company	Fixed Wireless	No Update to Provide	3/1/2012		5 – Both Residential/Business
Consolidated Telephone Company	Fixed Wireless	No Update to Provide	3/1/2012		5 – Both Residential/Business
Consolidated Telephone Company	Fiber	No Update to Provide	3/1/2012		5 – Both Residential/Business
Crosslake Telephone Company	Fiber	No Update to Provide	6/16/2010		5 – Both Residential/Business
Crosslake Telephone Company	Cable	No Update to Provide	6/16/2010		5 – Both Residential/Business
Crosslake Telephone Company	DSL	No Update to Provide	6/16/2010		5 – Both Residential/Business
Enterpoint Wireless	Fixed Wireless	No Update to Provide			5 – Both Residential/Business
Farmers Mutual Telephone Company	Fiber	No Update to Provide	4/1/2010		5 – Both Residential/Business
Farmers Mutual Telephone Company	Fixed Wireless	No Update to Provide	4/1/2010		5 – Both Residential/Business
Federated Telephone Cooperative	Fiber	No Update to Provide	4/1/2010		5 – Both Residential/Business
Frontier Communications of Minnesota, Inc.	Backhaul	No Update to Provide	1/22/2010		N/A - Backhaul
FTTH Communications	Fiber	No Update to Provide			5 – Both Residential/Business
Halstad Telephone Company	Fiber	No Update to Provide	6/16/2010		5 – Both Residential/Business
Halstad Telephone Company	DSL	No Update to Provide	6/16/2010		5 – Both Residential/Business
Hiawatha Broadband Communications, Inc.	Cable	No Update to Provide	3/8/2010		5 – Both Residential/Business
Hiawatha Broadband Communications, Inc.	Fixed Wireless	No Update to Provide	3/8/2010		5 – Both Residential/Business
Hiawatha Broadband Communications, Inc.	Fiber	No Update to Provide	3/8/2010		5 – Both Residential/Business
Hickory Tech Corporation	DSL	No Update to Provide			5 – Both Residential/Business
Hickory Tech Corporation	DSL	No Update to Provide			5 – Both Residential/Business
Hughes Network Systems, LLC	Satellite	No Update to Provide	2/5/2010		1 – Residential Only
Jaguar Communications	Fixed Wireless	No Update to Provide	4/12/2010		5 – Both Residential/Business
Jaguar Communications	DSL	No Update to Provide	4/12/2010		5 – Both Residential/Business
Johnson Telephone Company	DSL	No Update to Provide			5 – Both Residential/Business
Kasson & Mantorville Telephone Company	DSL	No Update to Provide	6/30/2010		5 – Both Residential/Business
Level 3 Communications, LLC	Backhaul	No Update to Provide	12/14/2009		N/A - Backhaul
Lismore Cooperative Telephone Company	Fiber	No Update to Provide			5 – Both Residential/Business
Lonsdale Telephone Company, Inc.	Fiber	No Update to Provide			5 – Both Residential/Business
Mabel Cooperative Telephone Company	DSL	No Update to Provide	4/7/2010		5 – Both Residential/Business
Manchester-Hartland Telephone Company	Fiber	No Update to Provide	4/14/2010		5 – Both Residential/Business
Mediacom Communications Corporation	Backhaul	No Update to Provide	1/12/2010		N/A - Backhaul
MegaPath Corporation	Backhaul	No Update to Provide	2/15/2010		N/A - Backhaul
Midcontinent Communications	Backhaul	No Update to Provide	12/9/2009		N/A - Backhaul
Minnesota Valley Telephone Company	DSL	No Update to Provide	4/29/2010		5 – Both Residential/Business
Moose-Tec	Fixed Wireless	No Update to Provide	2/22/2013		5 – Both Residential/Business
New Ulm Telecom, Inc.	Cable	No Update to Provide	2/25/2010		5 – Both Residential/Business
New Ulm Telecom, Inc.	DSL	No Update to Provide	2/25/2010		5 – Both Residential/Business
NewCore Wireless LLC	Mobile Wireless	No Update to Provide	4/25/2013		5 – Both Residential/Business
NewCore Wireless LLC	Mobile Wireless	No Update to Provide	4/25/2013		5 – Both Residential/Business
NewCore Wireless LLC	Mobile Wireless	No Update to Provide	4/25/2013		5 – Both Residential/Business
Park Region Mutual Telephone Company	Fiber	No Update to Provide	3/18/2010		5 – Both Residential/Business
Park Region Mutual Telephone Company	DSL	No Update to Provide	3/18/2010		5 – Both Residential/Business
Paul Bunyan Rural Telephone Cooperative	DSL	No Update to Provide	6/24/2010		5 – Both Residential/Business
Polar Telcom, Inc.	Fiber	No Update to Provide	2/11/2010		5 – Both Residential/Business

Company	Technology	Update Status	Date	Notes	Customer Type
Polar Telcom, Inc.	DSL	No Update to Provide	2/11/2010		5 – Both Residential/Business
Red River Rural Telephone Association	DSL	No Update to Provide	3/17/2010		5 – Both Residential/Business
River Valley Telephone Coop.	Fixed Wireless	No Update to Provide	4/28/2010		2 – Business Only
River Valley Telephone Coop.	Fixed Wireless	No Update to Provide	4/28/2010		1 – Residential Only
Sacred Heart Telephone Company	DSL	No Update to Provide	2/5/2010		5 – Both Residential/Business
Sheehan Gas	Fixed Wireless	No Update to Provide			1 – Residential Only
Sheehan Gas	Fixed Wireless	No Update to Provide			2 – Business Only
Skycasters	Satellite	No Update to Provide	10/16/2012		1 – Residential Only
SMBS	Fiber	No Update to Provide			5 – Both Residential/Business
Spring Grove Cooperative Telephone Co.	Fiber	No Update to Provide	1/12/2010		5 – Both Residential/Business
Starbuck Telephone Company	DSL	No Update to Provide	2/5/2010		5 – Both Residential/Business
T-Mobile USA, Inc.	Backhaul	No Update to Provide	1/8/2010		N/A - Backhaul
TDS Telecommunications Corporation	Backhaul	No Update to Provide	1/27/2010		N/A - Backhaul
tw telecom of minnesota llc	Backhaul	No Update to Provide	4/20/2010		N/A - Backhaul
Upsala Cooperative Telephone Association	DSL	No Update to Provide	2/29/2012		5 – Both Residential/Business
Upsala Cooperative Telephone Association	Fiber	No Update to Provide	2/29/2012		5 – Both Residential/Business
US Internet of Minnetoka	Fixed Wireless	No Update to Provide	2/29/2012		1 – Residential Only
Verizon Communications, Inc.	Backhaul	No Update to Provide	12/14/2009		N/A - Backhaul
West Central Telephone Association	Fiber	No Update to Provide	2/18/2010		5 – Both Residential/Business
West Central Telephone Association	DSL	No Update to Provide	2/18/2010		5 – Both Residential/Business
Winnebago Cooperative Telecom Association	Backhaul	No Update to Provide	6/17/2010		N/A - Backhaul
Winnebago Cooperative Telecom Association	DSL	No Update to Provide	6/17/2010		5 – Both Residential/Business
Winnebago Cooperative Telecom Association	Fiber	No Update to Provide	6/17/2010		5 – Both Residential/Business
Wolverton Telephone Company	DSL	No Update to Provide	6/22/2010		1 – Residential Only
Woodstock Telephone Company	Fiber	No Update to Provide	2/18/2010		5 – Both Residential/Business
XO Communications, LLC	Backhaul	No Update to Provide	2/12/2010		N/A - Backhaul
Zumbrota Telephone Company	DSL	No Update to Provide	2/5/2010		5 – Both Residential/Business
Broadband Corp	Fixed Wireless	No Update Provided – Use Last Submission Data	5/11/2010	[FEB-11-14 John Determan] Broadband Corp has acquired the previously tothehome/ISP-Cologne.net. However they are performing a complete network integration and optimization on the acquired assets which will result in some assets being decommissioned so therefore will report any changes next submission. Submitting data as it was, but under the Broadband Corp legal name.	5 – Both Residential/Business
City of Chaska	Fixed Wireless	No Update Provided – Use Last Submission Data			5 – Both Residential/Business
Cogent Communications, Inc.	Backhaul	No Update Provided – Use Last Submission Data			N/A - Backhaul
Consolidated Telephone Company	Fiber	No Update Provided – Use Last Submission Data	3/1/2012		2 – Business Only
Spacenet, Inc.	Satellite	No Update Provided – Use Last Submission Data			1 – Residential Only
WideOpenWest Finance, LLC	Cable	No Update Provided – Use Last Submission Data			1 – Residential Only
Windstream Communications	Backhaul	No Update Provided – Use Last Submission Data			N/A - Backhaul
Zayo Group, LLC	Backhaul	No Update Provided – Use Last Submission Data			N/A - Backhaul
Windstream Communications	DSL	Solicited Initial Data			1 – Residential Only
Reliance Globalcom Services, Inc.	Backhaul	Non-Responsive to Multiple Attempts			N/A - Backhaul

APPENDIX B: NON-PARTICIPATING PROVIDERS

St. Olaf Telephone

Synkro Wireless

ST. OLAF COLLEGE TELEPHONE COMPANY

As part of its ongoing broadband mapping efforts, Connected Nation (CN) 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 St. Olaf College Telephone Company (St. Olaf Telephone), a Business Internet service provider located in Northfield, Minnesota. The narrative will include information regarding how and where CN obtained publicly available data, provider feedback, and the on-the-ground validation techniques that support the underlying data.

Background
CN staff members have attempted to obtain the participation of the provider with at least 13 recorded instances of outreach communication via telephone and e-mail from July 6, 2012, through January 29, 2014.

During the site visit to Northfield in October 2013, the CN staff member visited the St. Olaf College Telephone Company office and spoke to a representative; however, the provider has still refused to participate when provided requests for confirmation of CN's research.

The Issue
Connected Nation has been able to obtain this provider's broadband coverage information through typical outreach efforts. St. Olaf College Telephone Company has, since July 2012, responded to CN outreach efforts, however it has declined participation 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. As a first step, CN reviewed the provider's website http://www.stolaftelephone.com to determine the business service plans **(Exhibit A).** Additionally the service area provided by St. Olaf College Telephone through research **(Exhibit B)** is representative of the provider's fiber network.

Exhibit A: Advertised Service Plans

Business Internet Features	1 Meg $57.47	3 Meg $67.62	5 Meg $77.78	10 Meg $133.60
No Contract	·	·	·	·
Symmetrical Speed	·	·	·	·
Upload Speed	1 Mb per Second	3 Mb per Second	5 Mb per Second	10 Mb per Second
Download Speed	1 Mb per Second	3 Mb per Second	5 Mb per Second	10 Mb per Second
Included Hosting Package				

Exhibit B: Provider Supplied Service Area
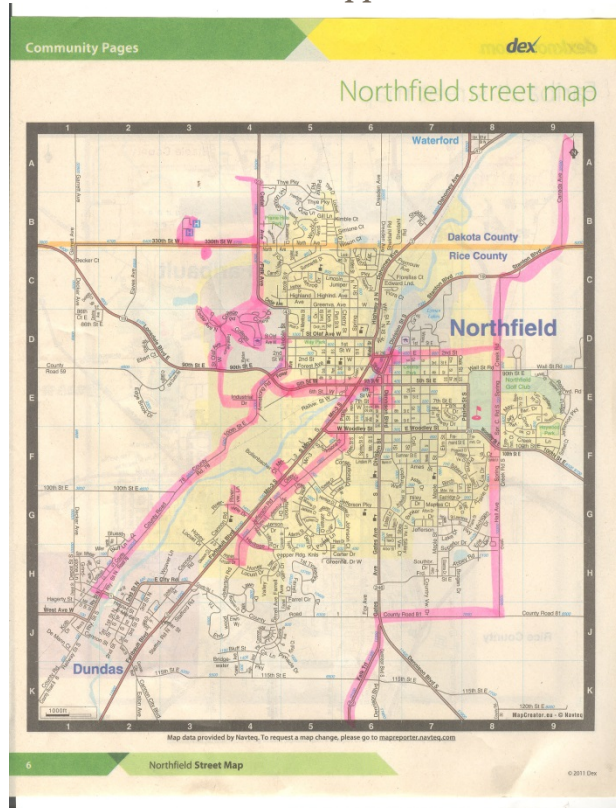
2

A search for a Federal Registration Number (FRN) on the FCC **CO**mmission **RE**gistration **S**ystem (CORES) system using the business name resulted in the information in **Exhibit C**. Additionally a Certificate of Authority to Provide Local Exchange and Interexchange has been granted in Minnesota (**Exhibit D**) confirming that the company is a facilities-based provider of fiber service in Minnesota and is based in Northfield.

Exhibit C: Federal Registration Number(s)

Registration Detail

FRN:	0002646461
Registration Date:	06/24/2000 10:13:00 PM
Last Updated:	01/10/2014 04:49:38 PM
Business Name:	St Olaf College
Business Type:	Private Sector , Corporation
Contact Organization:	
Contact Position:	FCC CONTACT
Contact Name:	Mr Michael Sjulstad
Contact Address:	1520 St Olaf Ave Northfield, MN 55057 United States
Contact Email:	
ContactPhone:	(507) 786-3461
ContactFax:	(507) 786-8051

Registration Detail

FRN:	0009967837
Registration Date:	12/04/2003 12:47:40 PM
Last Updated:	08/09/2012 03:00:46 PM
Business Name:	ST OLAF COLLEGE(TELECOMMUNICATIONS)
Business Type:	Private Sector , Corporation
Contact Organization:	
Contact Position:	DIRECTOR
Contact Name:	Mr CRAIG DUNTON
Contact Address:	1520 ST OLAF AVE. NORTHFILED, MN 55057 United States
Contact Email:	dunton@stolaf.edu
ContactPhone:	(507) 646-3818
ContactFax:	

Exhibit D: Authority to Provide

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

LeRoy Koppendrayer	Chair
Marshall Johnson	Commissioner
Ken Nickolai	Commissioner
Phyllis A. Reha	Commissioner
Gregory Scott	Commissioner

In the Matter of the Application of St. Olaf College for a Certificate of Authority to Provide Local Exchange and Interexchange Services

ISSUE DATE: March 18, 2004

DOCKET NO. P-6285/NA-03-1361

ORDER GRANTING CERTIFICATE OF AUTHORITY, AS CONDITIONED

PROCEDURAL HISTORY

On August 26, 2003, St. Olaf College (St. Olaf) submitted a petition for authority to provide facilities-based local exchange and interexchange services. St. Olaf also submitted its proposed tariff.

On October 10, 2003, the Minnesota Department of Commerce (the Department) filed comments recommending approval of St. Olaf 's certificate to provide facilities-based local exchange and interexchange services upon meeting certain specified conditions.

Also on October 10, 2003, Qwest filed comments recommending that the petition for authority be denied because

1. the Articles of Incorporation of St. Olaf College appear to be inconsistent with commercial offering of telecommunications services;

2. St. Olaf College may have the intent of reducing its own telecommunications costs through the bypass of retail telecommunications providers rather than intending to provide a service that benefits the general public; and

3. St. Olaf College lacks the management ability to operate a telephone company.

On October 30, 2003, the Department filed responsive comments arguing that Qwest has not provided any evidence that the College of St. Olaf is not qualified to provide telecommunications services and therefore continued to recommend approval of St. Olaf College's petition.

On October 31, 2003, St. Olaf College filed responsive comments arguing that it has the legal ability and necessary qualifications to operate as a competitive local exchange company (CLEC) and that it will provide services that will benefit the community as well as its students.

On January 9, 2004, Commission staff sent a memo to St. Olaf College recommending revisions to its tariff.

1

On January 12, 2004, St. Olaf College filed tariff revisions with the Commission.

On March 3, 2004, the Department commented that St. Olaf College's revised tariff did not include prices for its services and cannot be approved at this time. The Department noted that St. Olaf College intends to file a tariff with the prices for Commission approval at a later date.

The Commission met to consider this matter on March 11, 2004.

FINDINGS AND CONCLUSIONS

I.   St. Olaf's Application

St. Olaf College requested a certificate of authority to provide facilities-based interexchange service statewide and a conditional certificate of authority to provide facilities-based local service in the Northfield exchange.

II.   The Department's Recommendation

The Department found no merit in the three objections to St. Olaf's application that Qwest raised in its initial comments. The Department stated that the record did not support Qwest's arguments.

Based on its review, the Department stated that St. Olaf possessed the managerial, technical, and financial abilities required under Minnesota law to provide telecommunications service, but had not filed several items required in order to receive an operational certificate of authority to provide local service. Accordingly, the Department recommended that the Commission grant St. Olaf a conditional certificate of authority to provide facilities based local exchange services in Qwest's Northfield exchange and facilities based interexchange (long distance) services statewide.

The Department identified five conditions to receipt of operational authority for facilities based local exchange services:

1. Commission approval of St. Olaf's interconnection agreement;
2. Commission approval of St. Olaf's 911 plan;
3. Commission approval of St. Olaf's tariff;
4. St. Olaf filing a narrative description of service area; and
5. St. Olaf filing a toll free number.

The Department identified one condition to receive operational authority for interexchange services: Commission approval of a tariff.

III.   Qwest's Comments

At the hearing on this matter, Qwest stated that it no longer maintained the objections to St. Olaf's certificate that it had raised in its initial written comments (October 10, 2003) and was content that its additional concern about non-profit organizations undertaking to "bypass" Qwest's network was raised.

2

IV.   Commission Analysis and Action

One of the goals of the Commission is to increase competition in the provision of local telecommunications service. In this case, the applicant St. Olaf has demonstrated that it has the managerial, technical, and financial abilities required under Minnesota law to operate the small telephone company proposed. In addition, granting the requested authority is in the public interest because it will provide the students, as well as the citizens of Northfield, more options when choosing their telecommunications carrier.

The Commission clarifies that the certificates of authority granted St. Olaf is subject to the conditions identified by the Department, i.e. the conditions specified in the Order Paragraph 1. St. Olaf will not be allowed to provide local services until the listed conditions for that authority have been fulfilled and will not be allowed to provide interexchange services until the condition listed for that authority has been fulfilled

ORDER

1. The Commission hereby grants St. Olaf College a Certificate of Authority to provide local exchange services in the Northfield exchange. This Certificate of Authority will become operational once St. Olaf

   a.   obtains Commission approval of an interconnection agreement;
   b.   obtains Commission approval of a 911 plan;
   c.   obtains Commission approval of a tariff for these services;
   d.   files a narrative description of service area; and
   e.   files a toll free number.

2. The Commission hereby grants St. Olaf College a Certificate of Authority to provide interexchange services in the state of Minnesota. This Certificate of Authority will become operational once St. Olaf obtains Commission approval of a long distance tariff for these services.

3. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Burl W. Haar
Executive Secretary

(S E A L)

This document can be made available in alternative formats (i.e., large print or audio tape) by calling (651) 297-4596 (voice), or 1-800-627-3529 (MN relay service).

3

Initial Identification of Provider's Coverage Area

The fiber service area map provided by St. Olaf College Telephone Company (Exhibit B) was utilized to determine the likely locations of the provider's fiber facilities. Utilizing Google Earth (GE), the CN staff member was able to search street views and identify reasonable locations and buildings for facilities, and corresponding GPS coordinates for each location **(Exhibit E)**.

Exhibit E: Initial Research for Provider's Facility Locations
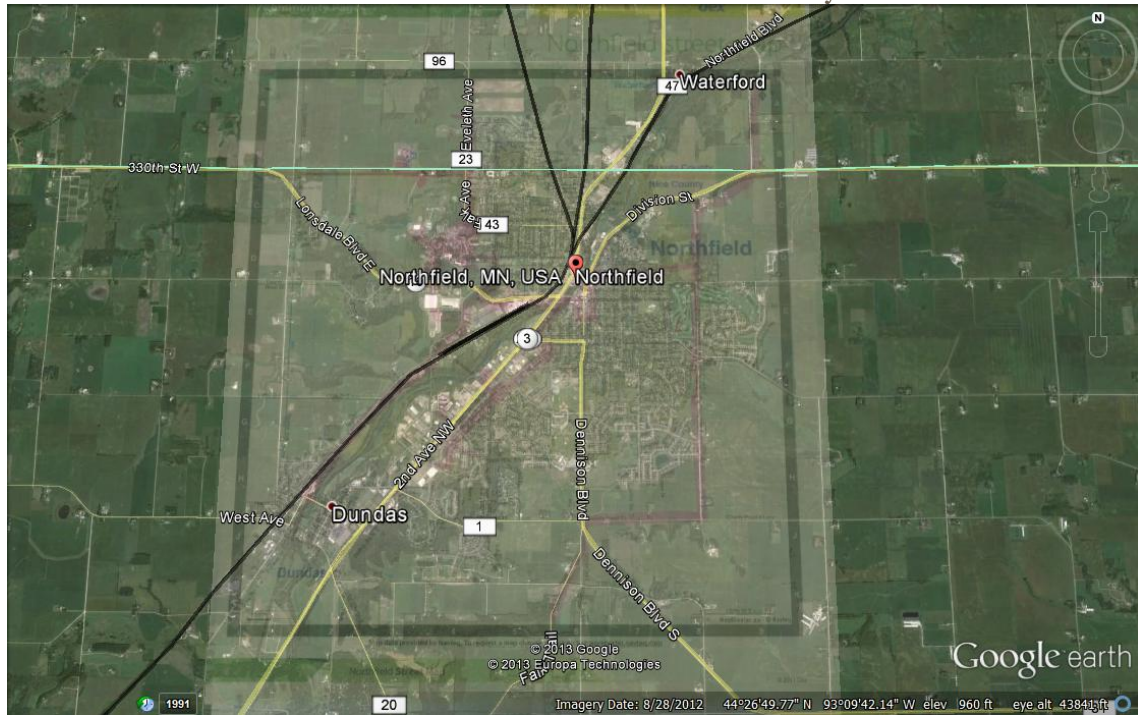
Field Research and Testing Techniques

During the visit to Northfield, the CN technician was able to verify locations that have fiber present **(Exhibit F)**. Based on the pinpointed locations, CN performed a detailed network analysis of the fiber coverage utilizing ArcGIS software including provider supplied maps **(Exhibit G)**.

Exhibit F: Field Research of Provider's Actual Facilities

Exhibit G: Creation of Existing Coverage in GIS Software
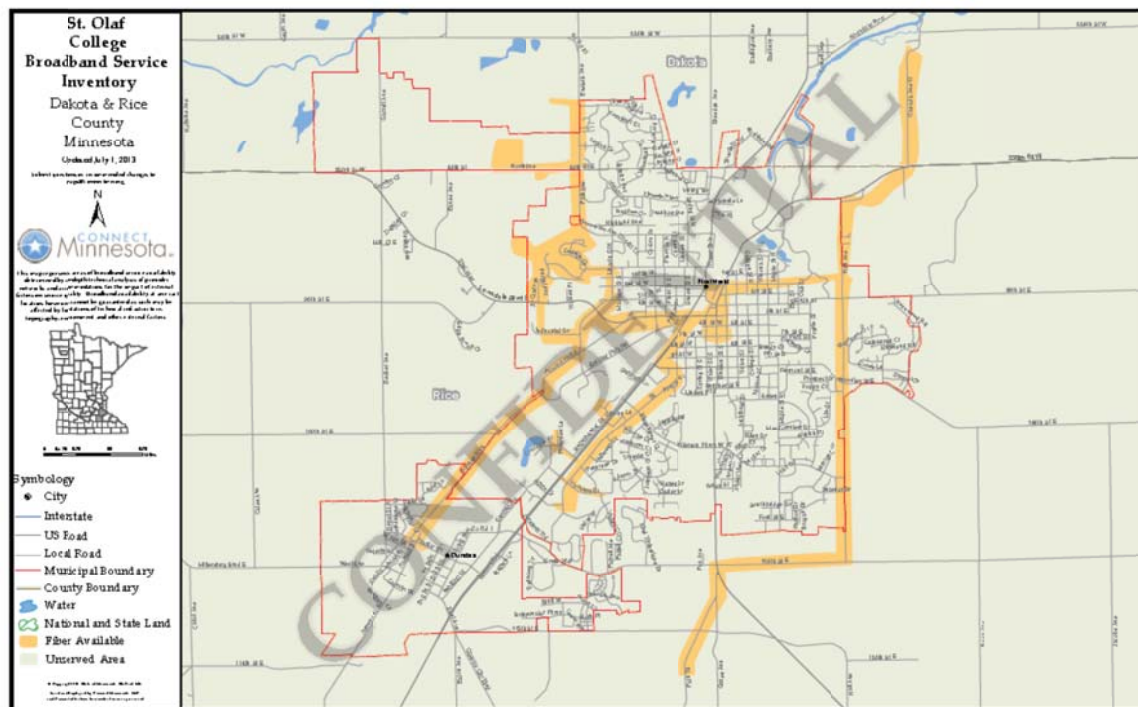
Results and Submission for April 2014

This desktop and field research was performed using publicly available data. The fiber network analysis (Exhibit G) fairly represents the broadband coverage area for St. Olaf College Telephone Company.

SYNKRO SOUTHWEST

As part of its ongoing broadband mapping efforts, Connected Nation (CN) 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 Synkro Southwest, a 4G wireless Internet service provider (WISP), located in Lakefield, Minnesota, with a service area around Lakefield, Windom, and Jackson, Minnesota. 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 nine instances of communication via telephone and e-mail sessions since January 3, 2014, through February 8, 2014. A communication reply was received from a managing partner and company representative on February 3, 2014, indicating they will not be submitting this year. Additionally, a CN staff member visited the Synkro Southwest office on February 25, 2014, to discuss the broadband mapping project in person with Synkro Southwest staff but the local sales representative was not available.

The Issue
Synkro Southwest, by its lack of responsiveness since February 3, 2014, has predicated its unwillingness to participate in the 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.synkrosouthwest.com) and also obtained a sales flyer to determine the residential service plans **(Exhibit A)** and the service area **(Exhibit B)** of the provider's wireless network. No specific coverage or speed information was available, so a Synkro employee contact was gained through Facebook to obtain speed and coverage information. A search for a Federal Registration Number (FRN) on the FCC **CO**mmission **RE**gistration **S**ystem (CORES) system yielded an FRN of 0020216909 **(Exhibit C)** with contact information relative to the owner of the company, Localoop. 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 WQMY983 **(Exhibit D)**, Radio Service: NN-3650-3700 MHz, yielding ten 3.65 GHz tower locations within Jackson, Cottonwood and Nobles County in Minnesota, the service area of the Synkro Southwest system, each site licensed with multiple sectors.

Exhibit A: Service Plans

SynKro's Broadband Internet service offering

Do you need fixed broadband Internet at home?
Unlimited Premium Fixed is for you! $39/month
No data usage limits.
- Fixed outdoor modem rental $7/month
- Professional Installation by trained technician $109
- Do-It-Yourself Installation $49
New account set up fee $39

Sign Up Now!!!
www.synkrosouthwest.com
Or Call
(507) 832-2000

Want to upgrade your Web-Apps experience?
Accelerated Performance Services will do it for you!
Takes your online experience far beyond just speed! SynKro's Dynamic
Intelligence optimizes the use of favorite Web-apps!

Gaming $5/month
Optimize your Internet gaming experience by reducing the delay between you, .
other gamers and the cloud.
Voice & Video calling $4/month
Use a third party application for voice and video calling? Improve voice and
image quality for both sides of the conversation.
Downloads $6/month
Do you download big music files or documents? Then this is a time saver for
you!
Media streaming $5/month
Enjoy your favorite show or your music videos in a seamless flow.

About us

SynKro Southwest is a locally operated subsidiary of LocalLoop Inc., a company created exclusively
for advancement, management and deployment of affordable wireless broadband Internet services in
rural and underserved communities throughout America.
SynKro Southwest has partnered with **Southwest Minnesota Broadband Services (SMBS)** with a
common goal to offer leading edge broadband Internet services to a majority of the consumer, busi-
ness and government users in Jackson, Cottonwood & Nobles Counties. SynKro's 4G mobile network
reaches beyond SMBS's fiber network and increases the broadband Internet coverage in the area.

Customer Service (507) 832-2000

Exhibit B: Service Area/Speeds/via Facebook Contact

⁄nKro Southwest   **+ New Message   ❅ Actions ▼**

Thanks, do you have a map of your service you could send
me?

synKro Southwest
We don't have a coverage map, but we have service
surrounding the following areas: Jackson, Lakefield, Round
Lake, Bingham Lake, Wilder, Bergen & Alpha. We are in the
process of getting service to the Loon Lake area. If you
wanted to tell me your address I could let you know if you are
in the service area, too.

Ok, great one last question what is your best service as far as
speeds, downstream and upstream....

synKro Southwest
We only offer one service, called Unlimited Premium. The
speeds are 4 Mbps down and 1 Mbps. Before signing up, we
suggest a site survey where we will come to your house and
test the signal to ensure you'll get these speeds all the time,
day and night no matter the weather.

1 Mbps uplink**

Exhibit C: Federal Registration Number

Registration Detail	
FRN:	0020216909
Registration Date:	09/22/2010 02:14:00 PM
Last Updated:	

FCC Home | Search | Updates | E-Filing | Initiatives | For Consumers | Fin

Federal Communications Commission

Universal Licensing System

FCC > WTB > ULS > Online Systems > License Search

3650-3700 MHz License - WQMY983 - LocaLoop, Inc.
Locations Summary

🔍 New Search 🔍 Refine Search ➡ Return to Results 🖨 Printable Page 📑 Reference Copy ✥ Map License

MAIN	ADMIN	LOCATIONS

Call Sign	WQMY983		Radio Service	NN - 3650-3700 MHz

34 Total Locations
10 Locations per Summary Page

1 2 3 4 [Next >>]

	Location	Latitude,Longitude	Transmitter Azimuth
1	Gorham Avenue	44-56-30.0 N, 093-22-08.0 W	360.0 degrees
2	Bingham Lake North	43-54-22.0 N, 095-02-48.0 W	0.0 degrees
3	Bingham Lake East	43-54-22.0 N, 095-02-48.0 W	90.0 degrees
4	Bingham Lake South	43-54-22.0 N, 095-02-48.0 W	180.0 degrees
5	Bingham Lake West	43-54-22.0 N, 095-02-48.0 W	270.0 degrees
6	Windom WT 1	43-52-41.0 N, 095-07-07.3 W	140.0 degrees
7	Windom WT 2	43-52-41.0 N, 095-07-07.3 W	205.0 degrees
8	Windom BP 1	43-52-16.0 N, 095-06-22.0 W	200.0 degrees
9	Windom BP 2	43-52-16.0 N, 095-06-22.0 W	265.0 degrees
10	Willow Lake Farm	43-50-58.0 N, 095-01-50.0 W	235.0 degrees

tpu//www.fcc.gov/

Exhibit D: WQMY983 License Reference

FCC Home | Search | Updates | E-Filing | Initiatives | For Consumers | Find F

Federal Communications Commission

Universal Licensing System

FCC > WTB > ULS > Online Systems > License Search   FCC Si

License Search
Search Results

🔍 New Search 🔍 Refine Search 🖨 Printable Page 📥 Query Download ✥ Map License

Specified Search
FRN like 0020216909
Matches 1- 1 (of 1)

PA = Pending Application(s)
TP = Termination Pending
L = Lease

Page 1

	Call Sign/Lease ID	Name	FRN	Radio Service	Status	Expiration Date
1	WQMY983	LocaLoop, Inc.	0020216909	NN	Active	11/13/2020
	Call Sign/Lease ID	Name	FRN	Radio Service	Status	Expiration Date

Page 1

ULS Help	ULS Glossary - FAQ - Online Help - Technical Support - Licensing Support
ULS Online Systems	CORES - ULS Online Filing - License Search - Application Search - Archive License Search
About ULS	Privacy Statement - About ULS - ULS Home
Basic Search	By Call Sign ⌄ = [ ] (SEARCH)

http://www.fcc.gov/

3

Preliminary Identification of Provider's Coverage Area

Connected Nation extracted the Synkro Southwest service area information gained through Synkro's Facebook Sales Representative and from technical information through the FCC ULS database in reference to license WQMY983. Both were used 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 (528 ft.) to establish a minimum search criteria of a given access point. The provider's service area depiction is represented by active tower locations as described in Exhibit B and then confirmed in the FCC ULS database, as well as from Facebook conversations with Synkro sales staff, and a verbal conversation directly at the Synkro office in Lakefield, Minnesota. The ten licensed locations' coordinates were entered into Microsoft's *Streets & Trips* mapping application **(Exhibit F)** to develop a route for the validation process.

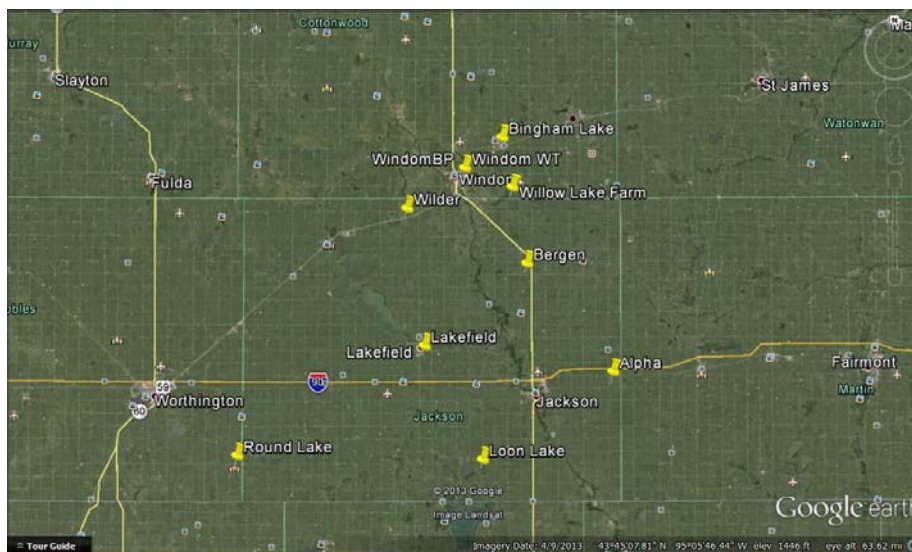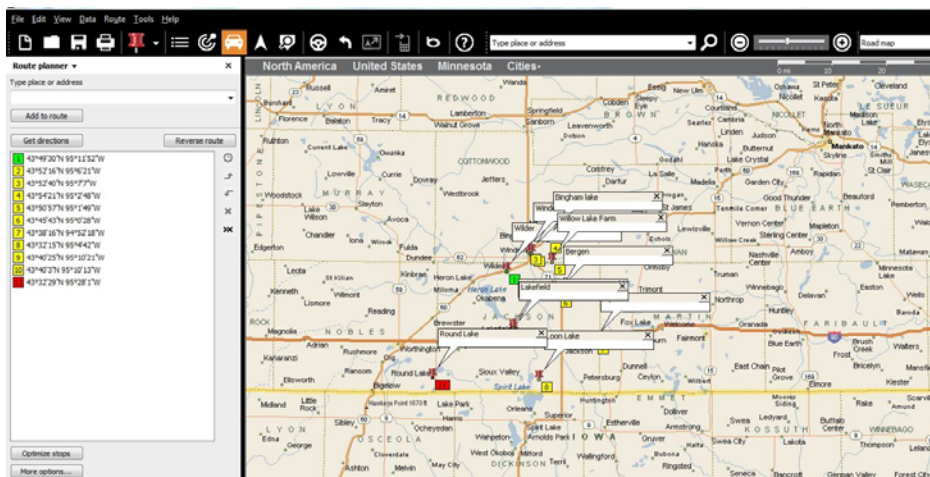**Exhibit E: Google Earth: Synkro's Service Area Image Overlay**

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 Synkro Southwest 3650-3700 MHz 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 antenna tuned specifically for 3.65-3.70 GHz frequency band. **(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 Synkro Southwest Round Lake Location
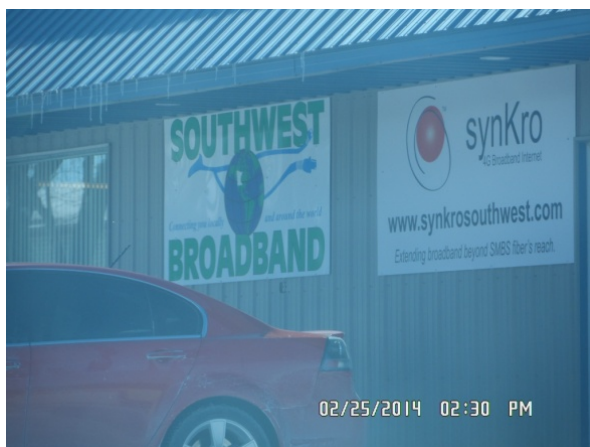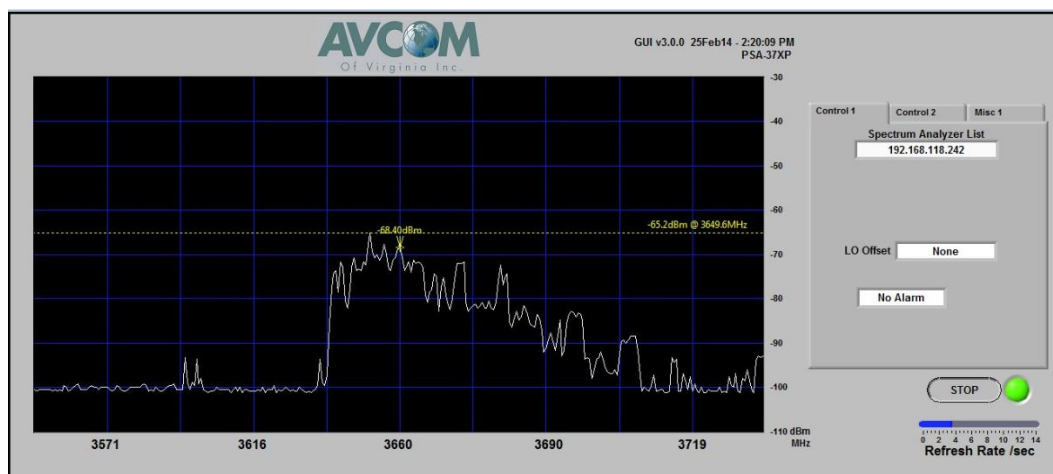
Results and Submission for April 2014

Of the eleven locations visited during the validation point route, nine access points were identified and relative information was logged into the Synkro Southwest 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 Synkro Southwest 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	Date	Location	Latitude	Longitude	Frequency	Structure	Antenna Height	Notes	Engineer
1	Synkro	Feb 25, 2014	Wilder	43 49 30	95 11 53	3650-3700Mhz	Grain Leg	80' Actual	Sectors verified at 75,165,255,345 degrees	J.Brick
	Southwest							License 121'		
2	Synkro	Feb 25, 2014	Window BP	43 52 16	95 06 22	3650-3700Mhz	Tank	151'	Sectors verified at 200,265 degrees	J.Brick
	Southwest									
3	Synkro	Feb 25, 2014	Window WT	43 52 41	95 07 7.3	3650-3700Mhz	Water tower	148'	Sectors verified at 140,205 degrees	J.Brick
	Southwest									
4	Synkro	Feb 25,2014	Bingham Lake	43 54 22	95 02 48	3650-3700Mhz	Rural Silo	177'	Sectors verified at 0,90,180,270 degrees	J.Brick
	Southwest									
5	Synkro	Feb 25,2014	Willow Lake Farm	43 50 58	95 01 50	3650-3700Mhz	Rural Silo	52'	Isolated farm did not appear on-air	J.Brick
	Southwest								Snow prevented close access,road closed	
6	Synkro	Feb 25,2014	Bergen	43 45 43	95 00 28.1	3650-3700Mhz	Silo grain leg	102'	Sectors verified at 0,90,180,270 degrees	J.Brick
	Southwest									
7	Synkro	Feb 25,2014	Alpha	43 38 16.5	94 52 18.4	3650-3700Mhz	Silo flat top	102'	Sectors verified at 0,90,180,270 degrees	J.Brick
	Southwest									
8	Synkro	Feb 25,2014	Loon Lake	43 32 15	95 04 43	3650-3700Mhz	Lattice tower	164'	No tower found, upcoming service	J.Brick
	Southwest						Listed license	Listed license	No signals found on-air	
9	Synkro	Feb 25,2014	Business Office	43 40 25.76	95 10 21.66		Office w/SMBS		Business office shared with	J.Brick
	Southwest								Southwest MN Broadband Services	
10	Synkro	Feb 25,2014	Lakefield	43 40 3.7	95 10 13.6	3650-3700Mhz	Guy end Tower	217'	Sectors verified at 0,90,180,279 degrees	J.Brick
	Southwest									
11	Synkro	Feb 25,2014	Round Lake	43 32 30	95 28 02	3650-3700Mhz	Rural Silo	95'	Sectors verified at 0,90,180,270 degrees	J.Brick
	Southwest									

Exhibit I: Synkro Southwest Composite Coverage