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

CONNECT ALASKA.

April 1, 2014

TABLE OF CONTENTS

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 Alaska Department of Commerce, Community, and Economic Development, please accept this submission from Connected Nation on behalf of the state of Alaska's State Broadband Initiative (SBI) Grant Program, known as Connect Alaska.

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 Alaska 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 Alaska: 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
Appendix A: 4	BB_Service_CAInstitutions	Community Anchor Institutions- Listing
Appendix A: 4	n/a	Community Anchor Institutions- Narratives
VII.A.1(a)	n/a	Accuracy and Verification Report
n/a	DataPackage.xlsx	Worksheets of Contact Information, Record Count, and Provider Summary Table
n/a	n/a	List of Changes and Corrections to the Dataset
n/a	n/a	Broadband Provider Roster and Participation Status

In addition, this data update submission should be found to be compliant with the additional program requirements instituted by the National Telecommunications and Information Administration since the time of the October 2013 SBI data submission for the Connect Alaska 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 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 100 percent of the Alaska provider community, or 27 total providers. Of the 27 participating providers, 20 supplied an update to their network or coverage area(s), while 5 have reported no change. The remaining 2 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.

This submission also includes business/commercial providers; of the 25 residential providers represented in the above section, 20 are providers that do not distinguish between serving primarily residential or primarily non-residential users (end user category 5). Two 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 Alaska principals that all commercially reasonable efforts were made to account for 100 percent of the known Alaska broadband provider community, pursuant to this semi-annual data update submission.

Connect Alaska has also continued to perform broadband verification activities through several means. In addition to confirmation of service area(s) by each provider, Connect Alaska conducts field validation efforts. To date, 22 (81.48 percent) viable providers have been validated through field verification activities. Additional details on verification activities are contained within the Field Validation Methodology.

The Connect Alaska website (www.connectak.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 Alaska website encountered 1,631 unique visits during this reporting period (18,584 total to date for the life of the grant awarded on June 1, 2010). 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 Alaska website and the Connect Alaska 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 Alaska mapping artifacts. Since the initial data collection and release of corresponding maps, feedback in the form of broadband inquiries has allowed Connect Alaska to identify additional areas that are in need of field validation, which is scheduled as soon as possible.

Community Anchor Institutions

Connect Alaska 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 Alaska Department of Commerce, Community, and Economic Development, outreach was conducted during this data update reporting period by Connect Alaska 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 Alaska 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 Alaska 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.
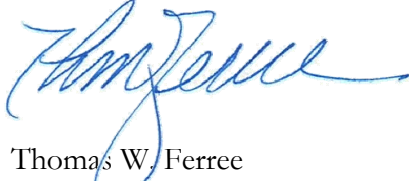
The value of these relationships continues to impact the entire success of the Grant Program, and the CAI engagement is a logical extension of new and existing relationships. Connect Alaska will continue to expand on these relationships over the coming months and utilize its contacts throughout the state to collect data and raise awareness of this project.

From our work in Alaska 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 Alaska 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 Alaska 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 Alaska, 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.

ALASKA COMMUNITY ANCHOR INSTITUTIONS METHODOLOGY

Connect Alaska remains committed to working with Alaska 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 Alaska 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 Alaska through Esri ArcGIS software.

Connect Alaska continues to utilize a customized online survey hosted through SurveyMonkey, with a landing page on the Connect Alaska 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 Alaska 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/YD6MFC9

Connect Alaska 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 Alaska 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 Alaska 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 Alaska 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 Alaska 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 Alaska 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 Alaska works with the Alaska Department of Commerce, Community and Economic Development to identify existing relationships that can support CAI outreach.

Connect Alaska 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 Alaska project as well as self-awareness of their own broadband connectivity (specifically upload and download speeds). Connect Alaska will continue to research key CAI organizations and agency contacts in an effort to raise awareness of this project among CAI. When applicable, the Alaska Department of Commerce, Community, and Economic Development 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	685	685	457	328	314
Libraries	132	132	52	80	81
Healthcare	276	276	179	176	7
Public Safety	324	324	17	16	16
Higher Ed Institutions	23	22	8	8	8
Other Government	537	536	29	26	25
Other Non-Government	493	492	12	10	7
Total	2470	2467	754	644	458

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 88.76% of the CAI IDs accounted for in the records. Library records now have 98.48% of the CAI IDs accounted for in the records, an increase of 17 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 Alaska team. The CAI data is proving an invaluable resource to all components of the Connect Alaska 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 Alaska.

Inventory of Deliverables, Connect Alaska: 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. |
| Appendix A: 4 | BB_Service_CAInstitutions | Community Anchor Institutions-Listing. |

The provider data collected by CN on behalf of the state of Alaska 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 Alaska 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 was completed in Alaska to evaluate an analysis process on terrain shadow areas.

Geostationary satellite information was acquired for a satellite broadband service provider to determine azimuth and altitude angle for a location within the pilot study area specific to that satellite. A hillshade analysis was then run, modeling shadows, returning an output of locations within the study area that are likely not able to access satellite broadband services due to obstructions. Below are images of the resulting hillshade analysis.

Dark gray areas show where satellite service from the provider is likely not available.

Higher transparency shows the location of mountain features obstructing satellite service.

Connected Nation will continue evaluating additional study areas for the creation of satellite broadband service areas at a more granular level for the October 2014 submission.

DATASETS FOR IN-KIND MATCH

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

- CAI Datasets: State Community Anchor Institution (CAI) Dataset including K-12 School Address and Speed Test data was provided by the Alaska Department of Education and Early Development. The dataset is a spreadsheet of 506 K-12 schools and includes the district name and, where known, Internet connectivity information, such as the technology type and download and upload speeds. This dataset also will serve as the starting point for the Alaska School Connectivity Census project which will go beyond the spreadsheet to present a comprehensive picture of actual school and classroom connectivity throughout the state.
- Municipal Boundaries and Land Ownership Datasets: This dataset contains municipal boundaries according to the State of Alaska Department of Commerce, Community, and Economic Development. The majority of the information was created using legal descriptions within the individual city certificates. This dataset was provided as a GIS format file for the whole state and includes attributes of town square mileage, incorporation date, and city class type.
- Orthoimagery Dataset: State Orthoimagery Dataset provided at various resolutions, the best combination of which is 0.8 meters (m) and 1m. Aerial imagery data is extremely valuable to the work performed for the SBI grant. The higher resolution allows for more accurate mapping of local citizen feedback, especially where there is demand for service, as well as desktop research that can be completed prior to or instead of field validation.

ALASKA 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 has conducted on-site validation tests in Alaska on the following viable providers: Ace Tekk Wireless Internet; AlasConnect, Inc.; Alaska Communications Systems Holding, Inc. (ACS); Alaska Power & Telephone, Inc.; American Broadband Communications; Arctic Slope Tel. Assn. Coop. Inc.; AT&T Corp, Inc.; Borealis Broadband Inc.; Copper Valley Telephone Cooperative, Inc.; Cordova Telephone Cooperative, Inc.; Craig Cable TV, Inc.; Futaris Inc.; GCI Internet; Hughes Network Systems, LLC; Ketchikan Public Utilities; Kodiak Kenai Cable Company; Matanuska Telephone Association, Inc.; OTZ Telephone Cooperative, Inc.; SPITwSPOTS LLC; Verizon Communications, Inc.; and Yukon Tech Inc.

Additionally Connected Nation had previously validated one provider which is now considered non-viable, due to a merger/acquisition: Clearwire.

From program initiation through this reporting period, CN has completed field validation testing against 22 viable companies (out of a universe of 27 viable providers) totaling 81.48 percent within the state of Alaska.

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.

Alaska Wireless Network, LLC (Subsidiary: TurboZone)
Issue: Fixed wireless platform with maximum advertised download speed in tier 9, higher than expected value range for the technology.
Resolution: Provider confirmed that 50 Mbps download service is available in some areas.

GCI Internet
Issue: Technology of transmission code 40 with maximum advertised download speeds in tiers 6 and 7, lower than expected value range for the technology.
Resolution: Provider confirmed that DOCSIS 3.0 is in use, but plant is not ready to provide the higher speeds.

SPITwSPOTS LLC
Issue: Fixed wireless platform with maximum advertised download speed in tier 8, as well as maximum advertised upload speed in tier 8, higher than expected value range for the technology.
Resolution: Provider website advertises 25 Mbps service; screenshot below. Provider confirmed that service is symmetrical, so the 25 Mbps service advertised is for both download and upload speeds.

Extreme

15Mb Service..$154 monthly
20Mb Service..$205 monthly
25Mb Service..$250 monthly

Yukon Tech Inc. (d.b.a. Supervision Inc.)
Issue: Technology of transmission code 40 with maximum advertised download speed in tier 7, lower than the expected value range for the technology.
Resolution: It was confirmed that provider is using DOCSIS 3.0, but there is limited backhaul, which keeps speeds lower.

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 borough-level availability are produced and made publicly available. In addition, consumers can visit

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

Estimates derived from provider-validated data indicate that approximately 7.41 percent of Alaska households do not have terrestrial fixed broadband service available, and approximately 3.51 percent of Alaska households have neither mobile nor fixed broadband service available.

Within rural areas of the state, results derived from provider-validated data indicate that approximately 14.46 percent of rural Alaska households do not have terrestrial fixed broadband service available, and approximately 7.09 percent of rural Alaska households have neither mobile nor fixed broadband service available. Please note that the availability estimates presented are based on Census 2010 household information.

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

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

WIRELESS METHODOLOGY

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

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

1. The name of the structure.
2. Whether the transmitting device is operational or proposed.
3. The maximum advertised downstream speed, the maximum advertised upstream speed.
4. The typical downstream speed, the typical upstream speed (peak periods for both).
5. The frequency range of spectrum being used (as prescribed by NTIA). This may include (but is not limited to) spectrum authorizations identified within the Federal Communications Commission (FCC) Universal Licensing System (ULS) database or located on the FCC's Spectrum Dashboard.
6. The primary population center(s) being served (for geopolitical boundary reference).
7. The physical address of the transmit site (in the event latitude/longitude is unavailable from the provider this allows a quick reference point for geocoding).
8. Latitude in either Degrees, Minutes, and Seconds and/or in Decimal Degrees (typically received as NAD 27 or NAD 83).
9. Longitude in either Degrees, Minutes and Seconds and/or in Decimal Degrees (typically received as NAD 27 or NAD 83).
10. Antenna pattern (e.g. omnidirectional, 180°, 120°, 90°, etc.).
11. Azimuth of antenna (e.g. 360° with magnetic declination if known).
12. Approximate transmit radius (in feet, miles, or kilometers).
13. Polarity of transmit antenna (Vertical or Horizontal).
14. Transmit antenna gain (in dBi).
15. Line loss (applicable only to providers using coax, heliax, waveguide or other forms of cabling – excludes power-over-Ethernet devices).
16. Mechanical and/or Electrical beam tilt (if applicable).
17. Equipment Manufacturer (allows easy cross-reference against manufacturer's specification sheet).
18. Power output of the transmitting device (if unknown, FCC standards or manufacturer specifications are applied).
19. AMSL at base of tower site.
20. Antenna centerline AGL (height of antenna above ground level measured at the centerline of the actual antenna).
21. Foliage factors (Evergreens/Deciduous and percent of ground cover).
22. Ground Clutter (primarily used in rural areas to account for foliage and in metropolitan areas to account for types and heights of buildings if known).
23. Average gain of receive antenna.

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

25. Federal Registration Numbers (if applicable) which may allow opportunities to cross-reference and/or obtain additional data from the FCC's ULS and the **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); 50 have been received to date. 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 Alaska 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 Alaska project has received no inquiries; however, they have received a total of 50 from grant inception to date. As more inquiries are submitted to Connect Alaska, 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 Alaska project launched My ConnectView on April 2, 2012 and has received 339 visits this reporting period; to date the interactive mapping application has received 3,357 visits.

SPEED TEST METHODOLOGY

The 86 speed tests that are represented in the Connect Alaska Speed Test Report during this reporting period (2,978 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 Alaska 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 borough-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 Alaska 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 Alaska 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 Alaska.

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	650Net	http://www.650net.net	Website references emergency food and power items.
2	AAA Internet Service	http://aaainter.net/dsl	Dial-up service with nonfacilities-based DSL. Does not offer in Alaska on searches.
3	Access123.net	http://www.access123.net	Not a broadband provider; website directs to adult content.
4	ACERX.NET	http://acerx.net	Nonfacilities-based reseller of national and regional broadband companies with cable, DSL, and mobile wireless applications.
5	ADAK Telephone	http://adaktu.net/	Reporting speeds are below Minimum speed requirements for participation in Mapping project.
6	Airewaves Broadband, LLC	www.airewaves.com	Airewaves website is an audio-based web service (and domain is listed as "for sale").
7	Alaska Wireless Cable	n/a	Provider is no longer in business; URL is inactive.

8	Alaska Wireless Systems	n/a	Provider is no longer in business; URL is inactive.
9	Angoon Cablevision	n/a	Provider is no longer in business; URL is inactive.
10	Broadband National	http://www.broadbandnational.com	Nonfacilities-based reseller of national and regional broadband companies offering residential/business cable and DSL services.
11	Bush-Tell Inc.	n/a	Per CSR, they are local exchange services only; no website.
12	Camino-Net Internet Services	http://www.camino-net.com	Website is redirected to http://www.mytechproservices.com/offering ancillary (not broadband) services.
13	Circle Telephone Co.	n/a	Per CSR, they are local exchange services only; no website.
14	Communications Unlimited	http://www.cuicable.com/	Communications services company; does not provide broadband.
15	Core Communications	http://www.corecomm.us/	Printer and visual communications supplier.
16	deluxehost.com	http://deluxe-host.com	Company delivers web hosting services.
17	Denali Wireless Television	http://www.denalitelevision.com/	Nonfacilities-based web engine reseller for multiple companies.
18	DGUI	http://www.dgui.com/	No longer in business; phone and website are both inactive.
19	Dialer.net	www.dialer.net	England-based, international pay-as-you-go mobile wireless and hot spot reseller.
20	DTS-NET.COM	http://www.dts-net.com/	Web-hosting and non-facilities based reseller.
21	Echostar	http://www.echostar.com/	General reseller of Hughes Net satellite service. Does not provide service in Alaska.
22	Eyecom Cable	www.telalaska.com	Subsidiary company of Tel Alaska and Eyecom; does not provide broadband service.

23	Freedom Internet	http://freedominternet.net/	Dial-up services only.
24	Haines Cable TV	http://www.hainescable.com/	Company offers cable TV services only.
25	High Frequency Wireless	http://www.hfwireless.com/	Company is a reseller of GCI services and Clearwire and is an electronics repair depot.
26	Hoonah.Net	n/a	Information located on company is not viable; phone number inactive.
27	ICE Communications	http://www.ice-com.net	Information located on company is not viable; phone number inactive.
28	IMGISP.NET	http://www.imgisp.net/	Domain name is for sale.
29	Incredible Networks	www.incredible-networks.com	Incredible Networks is an independent network engineering services business based in Adelaide Australia.
30	Interactiveinfo.com Inc.	http://interactiveinfoservice.com/	Performs internet search services.
31	iRadical	n/a	Could not locate any information on company.
32	ISPartner.net	n/a	Could not locate any information on company.
33	LCSisp.com	http://www.lcsisp.com/index.cfm	Website no longer in service.
34	Lou's TV & Satellite Service, Inc.	http://www.lousatellite.biz/	Website inactive; when website was last active they were a reseller of Wild Blue services.
35	MainBoard	http://www.mainboard.cc/internet.htm	Website no longer in service.
36	Maine Cable and Wireless	http://www.mainecableandwireless.com	Could not locate any information on company. Redirects to a "coming soon" website for Maine Culinary Workshop.
37	Marcin Company	n/a	No longer in business; phone and website are both inactive.
38	MCI Communications Services, Inc.	http://www22.verizon.com/	Acquired by Verizon Communications, Inc.

39	Microcom	http://www.microcom.tv/	Reseller of Hughesnet, Starband, and Spacenet.
40	Millenicom Inc.	http://www.millenicom.com	Reseller of 3G and 4G mobile wireless services.
41	Mitkof.net	n/a	Information located on company is not viable; phone number inactive.
42	Nanomega.Com	www.nanomega.com	Website is listed on Go-Daddy as for sale.
43	NetAccess, Inc.	http://www.nas.net/	Canadian based ISP; does not offer service in U.S.
44	NetSpeed Online	http://www.netspeed-online.net	Website no longer in service.
45	Nook Net	n/a	Information located on company is not viable; phone number inactive.
46	Overarch Broadband	http://www.overarch.com	Provider does not offer service in Alaska; provides services in Treasure Valley, Idaho.
47	Pacific Internet Exchange	http://www.pie.us/	Website is for sale.
48	PremoWeb	http://www.premoweb.com/about_us/contact_us.html	Website no longer in service.
49	Qwest Communications Company, LLC	www.qwest.com/	Provider acquired by CenturyLink.
50	Sea Lion International, LLC	http://www.sealioncompanies.com	Provider funding was rescinded and there are no plans for project SABRE going forward.
51	Simply Dialup A Metrogeek Company	http://www.simplydialup.com	Dial-up services and general reseller of DSL, satellite and cable modem.
52	Skagway Cable TV	www.hainescable.com	Cable TV services only.
53	SkyFrames	http://www.skyframes.com	Information located on company is not viable; phone number and URL inactive.
54	Smith Cable Systems	n/a	Company is a contractor for the installation of cable; no ISP operations.

55	Surferz.Net	http://www.surferz.net	Website manager and developer.
56	The Summit Telephone and Telegraph Company of Alaska, Inc.	n/a	Provider does not meet the broadband speed requirements in either upload or download.
57	Total Access Networks, Inc.	http://www.totalaccess.net	Website no longer in service.
58	TransAria	http://www.transaria.net	Website points to backhaul provider, Cutthroat Communications which recently sold to Blackfoot Telecommunications group which serves Montana.
59	TSISP.NET	www.tsisp.net	Website no longer in service.
60	University Corporation for Advanced Internet Development	n/a	Nationwide GBit network for anchor institutions; network under testing and construction; no website found.
61	VPM Global Internet Services, Inc.	http://www.vpm.com	Reseller of HughesNet services.
62	Wireless Roanoke, Inc.	http://www.wirelessroanoke.com	Information located on company is not viable; phone number and URL inactive.
63	wisbin	http://www.wisbin.com	Reseller of DSL Internet service in Wisconsin.
64	www.AmericanAngel.us	http://www.americanangel.us	Website no longer in service.
65	YEYZOO.NET	http://t1.vedy.net	Appears to no longer be in business.
66	YLISP (Your Local ISP)	http://www.itsyournet.com	Redirects to https://www.securepaynet.net - website and indicates for sale.

APPENDIX A: BROADBAND PROVIDER LOG

Broadband Provider Log

Complete	46
Non-Responsive/Refused	1
In Progress	0
Reseller Providing Data	0
Count of Datasets by Status	47
Total Unique Providers Represented	28

Provider Name	Platform	Status	NDA Execution Date	Notes	End User Category
Alaska Communications Systems Holding, Inc. (ACS)	DSL	Data Added to Statewide Inventory	6/2/2011	[MAR-04-14 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous dataset; entirely new dataset provided for April 2014 submission. Provider indicated they changed their business rules, and because of this, they no longer report maximum advertised download speeds of tier 3 due to 1 Mbps service no longer being offered. The previously submitted tier 4 service has gone away as well. Coverage has significantly	1 – Residential Only
Alaska Power & Telephone, Inc.	Fixed Wireless	Data Added to Statewide Inventory	2/26/2010	[FEB-12-14 Brian Dudek] Change/Correction: Provider no longer services the city of Ketchikan. Five previously underserved locations now reach minimum broadband speeds. Four of the prior locations have been corrected to more accurate coverage levels. Most are on the power level of WiFi. It has also been determined that the provider offers service to both residential and	5 – Both Residential/Business
Alaska Wireless Network, LLC	Mobile Wireless	Data Added to Statewide Inventory	1/30/2014	[MAR-06-14 Brian Dudek] Change/Correction: Possible service expansion or corrections to previous datasets after merger; entirely new dataset provided for April 2014 submission as a	5 – Both Residential/Business
Alaska Wireless Network, LLC	Fixed Wireless	Data Added to Statewide Inventory	1/30/2014	[MAR-07-14 Brian Dudek] Change: Provider has high speed wireless hot spots for use with mobile devices only, operating throughout the state for residential and business users within	5 – Both Residential/Business
AT&T Corp, Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/16/2009	[JAN-31-14 Brian Dudek] Change/Correction: Provider increased their 3G, HSPA and LTE coverage. Expanded coverage into new areas including southeast AK, north of Valdez, Anderson, Cantwell and Delta Junction. Small revisions made to propagations in a few areas.	5 – Both Residential/Business
Copper Valley Telephone Cooperative, Inc.	DSL	Data Added to Statewide Inventory	1/11/2010	[JAN-21-14 Brian Dudek] Change: Provider upgraded infrastructure with additional remote terminals, which increased speed in some areas and expanded coverage slightly near one. It has also been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
GCI Internet	Cable	Data Added to Statewide Inventory	2/25/2010	[FEB-17-14 Brian Dudek] Change/Correction: Provider upgraded infrastructure increasing maximum advertised download speeds to tier 10 in their redefined regions. Moreover, upgraded max upload speeds to tier 4 in their other service areas. Technology of transmission also changed to DOCSIS 3.0 in numerous areas where cards are installed, but may not yet reach 3.0 speeds. Small expansions noted in Fairbanks, Anchorage, Kodiak, Ketchikan, and north of Wasilla. Changes also noted near Petersburg, Girdwood, and Wrangell, but these are likely boundary corrections. It has also been	5 – Both Residential/Business
GCI Internet	Fixed Wireless	Data Added to Statewide Inventory	2/25/2010	[JAN-28-14 Brian Dudek] Change/Correction: Provider added 12 additional transmission areas in SW Alaska as part of the Terra SW project. Furthermore, provider indicated prior propagations were too optimistic in coverage. Radius reduced roughly two miles. It has also been determined that the provider offers service	5 – Both Residential/Business
Level 3 Communications, LLC	Fiber	Data Added to Statewide Inventory	12/14/2009	[JAN-29-14 Brian Dudek] Change: New data indicates provider no longer services one census block in Anchorage.	2 – Business Only
SPITwSPOTS LLC	Fixed Wireless	Data Added to Statewide Inventory		[FEB-04-14 Brian Dudek] Change: Provider added two transmission locations and removed one. Provider also upgraded infrastructure increasing max advertised download and upload speeds to tier 8 in various areas. Coverage	5 – Both Residential/Business

Provider	Technology	Processing Status	Date	Change Notes	End User Category
Verizon Communications, Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/14/2009	[FEB-04-14 Brian Dudek] Change: Provider's entirely new dataset shows coverage around its previously existing LTE areas have slightly	5 – Both Residential/Business
Alaska Wireless Network, LLC	Backhaul	Backhaul Provider Only Processing Complete	1/30/2014		N/A - Backhaul
Cordova Telephone Cooperative, Inc.	Backhaul	Backhaul Provider Only Processing Complete			N/A - Backhaul
GCI Internet	Backhaul	Backhaul Provider Only Processing Complete	2/25/2010		N/A - Backhaul
Alaska Power & Telephone, Inc.	DSL	Speed Only Update; Data Processing Complete	2/26/2010	[FEB-11-14 Brian Dudek] Change/Correction: Provider upgraded infrastructure in Craig, Hollis, Hydaburg, and Tok, increasing maximum advertised download speeds to tier 6. Corrected speeds for the Tetlin area to tier 3 download and upload. It has also been determined that the provider offers service to both residential and	5 – Both Residential/Business
Copper Valley Telephone Cooperative, Inc.	Mobile Wireless	Speed Only Update; Data Processing Complete	1/11/2010	[JAN-23-14 Brian Dudek] Change: Provider upgraded infrastructure for 4G LTE service and now offers maximum advertised download and upload speeds of tier 7 and tier 5, respectively.	5 – Both Residential/Business
Matanuska Telephone Association, Inc.	DSL	Speed Only Update; Data Processing Complete	6/15/2010	[JAN-03-14 Brian Dudek] Change: Provider upgraded infrastructure increasing maximum advertised download speeds to tier 7 in between Talkeetna and Trapper Creek. It has also been determined that the provider offers service to	5 – Both Residential/Business
OTZ Telephone Cooperative, Inc.	DSL	Speed Only Update; Data Processing Complete		[JAN-23-14 Brian Dudek] Change: Provider upgraded infrastructure and increased maximum advertised download and upload speeds to tier 5 and tier 3, respectively. It has also been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Yukon Tech Inc	Cable	Speed Only Update; Data Processing Complete	6/23/2010	[JAN-23-14 Brian Dudek] Change: Provider upgraded infrastructure and increased maximum advertised download and upload speeds to tier 7 and tier 5, respectively. It has also been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Yukon Tech Inc	Fiber	Speed Only Update; Data Processing Complete	6/23/2010	[JAN-23-14 Brian Dudek] Change: Provider upgraded infrastructure and increased maximum advertised download and upload speeds to tier 4 and tier 3, respectively. It has also been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Ace Tekk Wireless Internet	Fixed Wireless	End User Category Update Only; Data Processing Complete		[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
AlasConnect, Inc.	Fixed Wireless	End User Category Update Only; Data Processing Complete		[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
Arctic Slope Tel. Assn. Coop. Inc.	DSL	End User Category Update Only; Data Processing Complete		[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
Arctic Slope Tel. Assn. Coop. Inc.	Fixed Wireless	End User Category Update Only; Data Processing Complete		[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
Borealis Broadband Inc.	Fixed Wireless	End User Category Update Only; Data Processing Complete	2/1/2010	[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
Bristol Bay Telephone Cooperative, Inc.	DSL	End User Category Update Only; Data Processing Complete		[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

Provider	Technology	Status	Date	Change Notes	End User Category
Cordova Telephone Cooperative, Inc.	DSL	End User Category Update Only; Data Processing Complete		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
Craig Cable TV, Inc.	Cable	End User Category Update Only; Data Processing Complete	7/27/2010	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
Ketchikan Public Utilities	Fiber	End User Category Update Only; Data Processing Complete	1/8/2010	[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
Ketchikan Public Utilities	Fixed Wireless	End User Category Update Only; Data Processing Complete	1/8/2010	[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
Ketchikan Public Utilities	DSL	End User Category Update Only; Data Processing Complete	1/8/2010	[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
Nushagak Electric & Telephone Cooperative Inc.	DSL	End User Category Update Only; Data Processing Complete		[JAN-28-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Yukon Tech Inc	Fixed Wireless	End User Category Update Only; Data Processing Complete	6/23/2010	[JAN-23-14 Brian Dudek] Change: It has been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Cordova Telephone Cooperative, Inc.	Fixed Wireless	Approval for Update Not Received – Data Still Submitted		[FEB-04-14 Brian Dudek] Change: Provider expanded coverage near Whittier, Port Wells and Point Pigot through WiMAX. It has also been determined that the provider offers service to both residential and business users.	5 – Both Residential/Business
Alaska Communications Systems Holding, Inc. (ACS)	Backhaul	No Update to Provide	6/2/2011		N/A - Backhaul
American Broadband Communications	DSL	No Update to Provide	6/7/2010		5 – Both Residential/Business
Borealis Broadband Inc.	Backhaul	No Update to Provide	2/1/2010		N/A - Backhaul
Cordova Telephone Cooperative, Inc.	Mobile Wireless	No Update to Provide			5 – Both Residential/Business
Futaris Inc.	Backhaul	No Update to Provide			N/A - Backhaul
Hughes Network Systems, LLC	Satellite	No Update to Provide	2/5/2010		1 – Residential Only
Nushagak Electric & Telephone Cooperative Inc.	Cable	No Update to Provide			5 – Both Residential/Business
Skycasters	Satellite	No Update to Provide	10/16/2012		1 – Residential Only
ViaSat, Inc.	Satellite	No Update to Provide	1/8/2010		1 – Residential Only
Yukon Tech Inc	Backhaul	No Update to Provide	6/23/2010		N/A - Backhaul
Kodiak Kenai Cable Company	Backhaul	No Update Provided – Use Last Submission Data	2/7/2011		N/A - Backhaul
Spacenet, Inc.	Satellite	No Update Provided – Use Last Submission Data			1 – Residential Only
Alaska Communications Systems Holding, Inc. (ACS)	DSL	Refused to Participate	6/2/2011	[MAR-11-14 John Determan] Provider supplied part of the business only data however would not allow us to submit for this submission.	2 – Business Only