

Broadband Issues and Opportunities for Alaska

Professor Heather E. Hudson

March 28, 2014



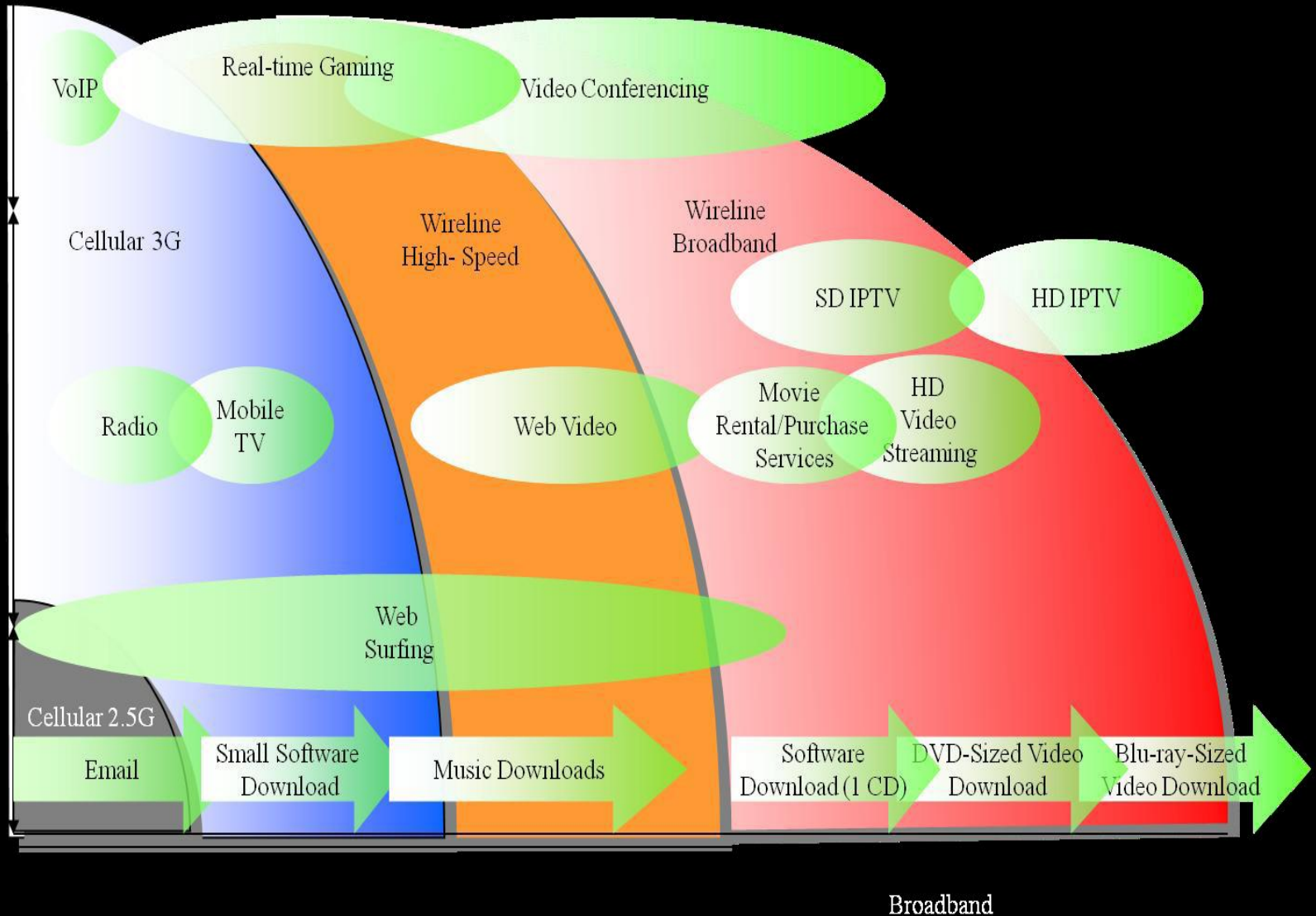
*Institute of Social and Economic Research:
More than 50 years of public policy research in
Alaska*

 UNIVERSITY of ALASKA ANCHORAGE

Goals of the Seminar

- **Share information:**
 - What is the status of broadband in Alaska?
 - What are the particular challenges to extend RURAL broadband?
 - What technological solutions are promising?
 - What current opportunities are there:
 - For funding rural broadband?
 - For developing applications for rural broadband?
 - What policy initiatives are relevant for rural broadband in Alaska?
 - At the federal level
 - At the state level
- **How can Alaskans become involved in the next steps?**
 - Users and consumers
 - Business and organizational users
 - Native and Tribal organizations
 - Providers of communications facilities and services
 - Potential new Alaska entrants to provide facilities and services
 - Providers of public services: education, health care, social services
 - Public sector agencies

Why Broadband?



Why Broadband?

Alaska has been a pioneer in harnessing telecommunications for its socio-economic and rural development

Benefits of broadband:

- *Efficiency*
 - saving time in applying for grants and filing online reports and business data keeping track of inventory; and managing operations
- *Effectiveness*
 - quality of services provided such as in health care and education
- *Equity*
 - reducing the distance barriers between rural and urban communities by providing access to information, entertainment, education, and other services not otherwise available remote communities
- *Reach:*
 - enabling Alaskans to extend their range electronically to market Native crafts, tourism, and other local assets

Why Broadband?

- **Elearning**
 - Online courses
 - Access to online information
 - Interactive learning
- **Ecommerce**
 - Tourism: websites, customer services
 - Marketing of Alaska products and services
- **Rural Development**
 - Managing rural and Native organizations
 - Apply for grants; filing reports
- **Management, logistics**
 - Managing rural businesses: fisheries, mining, oil and gas
 - Ports and aviation
- **Public services**
 - Public safety
 - Health and social services

Key Findings from ISER's Report “Before Broadband” in SW Alaska

- Internet and mobile phone use is already widespread
- High interest in broadband, but major perceived barrier to adoption is cost
- Community access is important, likely to remain so
- Personal use for entertainment, social media, but also education, ecommerce, accessing government services
- Productivity: Commercial businesses and nonprofit organizations all stated that broadband would be very beneficial in improving their productivity
- Funding and Jobs: Regional nonprofit organizations and Tribal councils said that broadband would help them to access funding and training opportunities...
- Seasonal Employment: Seafood processors and tourist lodges are major employers of seasonal workers who would use broadband to stay in touch with family and friends, and for entertainment
- IT Employment: Concerns among both residents and organizations about needs for digital literacy training and technical support indicate need for more technical support workers
- [See www.iser.uaa.alaska.edu/Publications/2012_11-TERRA.pdf](http://www.iser.uaa.alaska.edu/Publications/2012_11-TERRA.pdf)

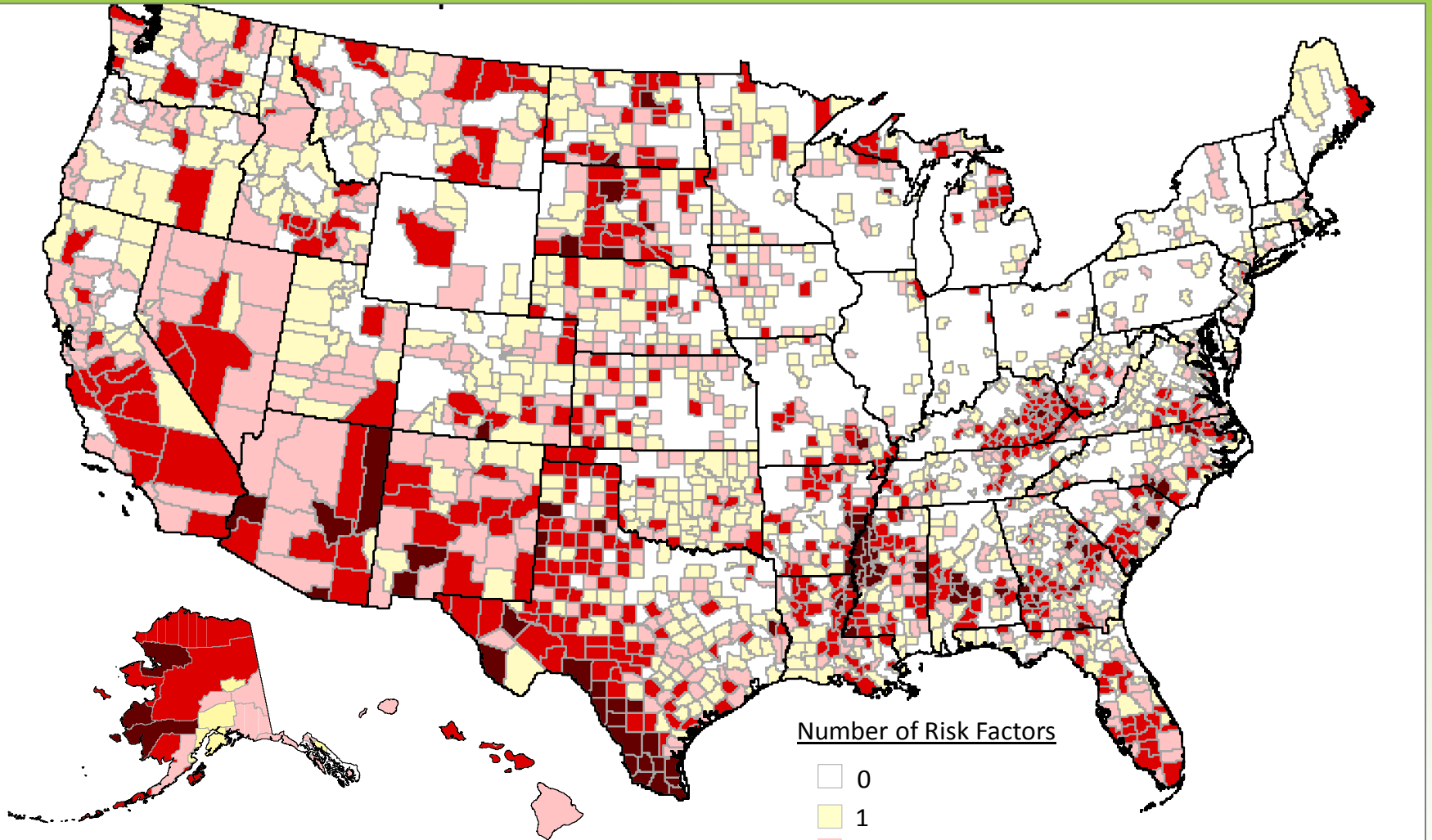
Why Focus on Rural Alaska?

- The vast majority of “unserved” communities are in rural Alaska
- Serving rural Alaska communities poses both technical and financial challenges

Demographics:

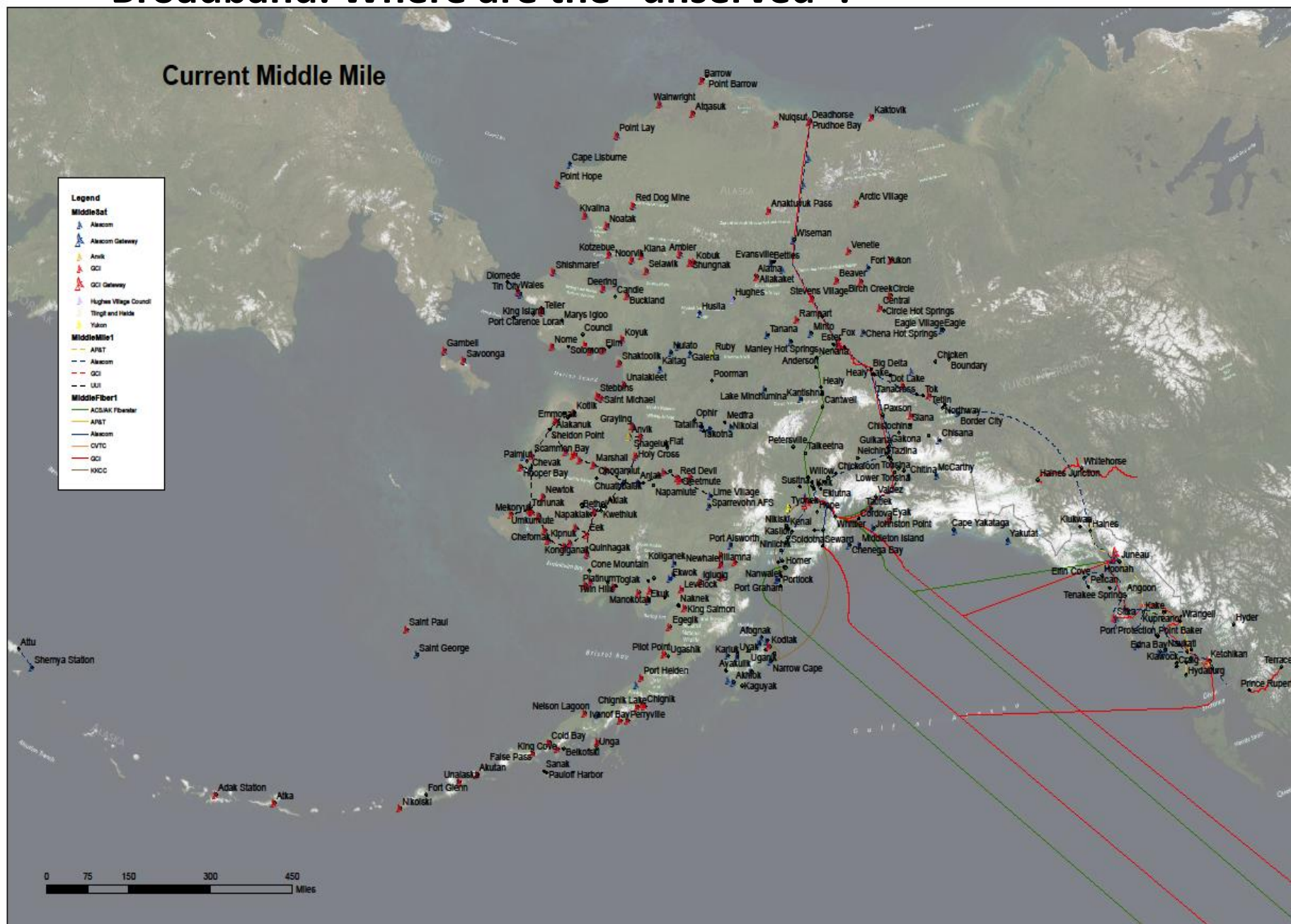
- A young population:
 - Median age in the Wade Hampton Census Area is 22.5
 - in the Northwest Arctic Borough, 25.7
 - in the Bethel Census Area, 26.4
 - in the Nome Census Area, 27.5Young people will need modern skills and job opportunities
- Rural incomes are lower than Alaska average
 - In some rural census areas, half the Alaska average
- Unemployment rates are much higher than urban areas
 - Much employment is seasonal
- High cost of living
- High cost of travel

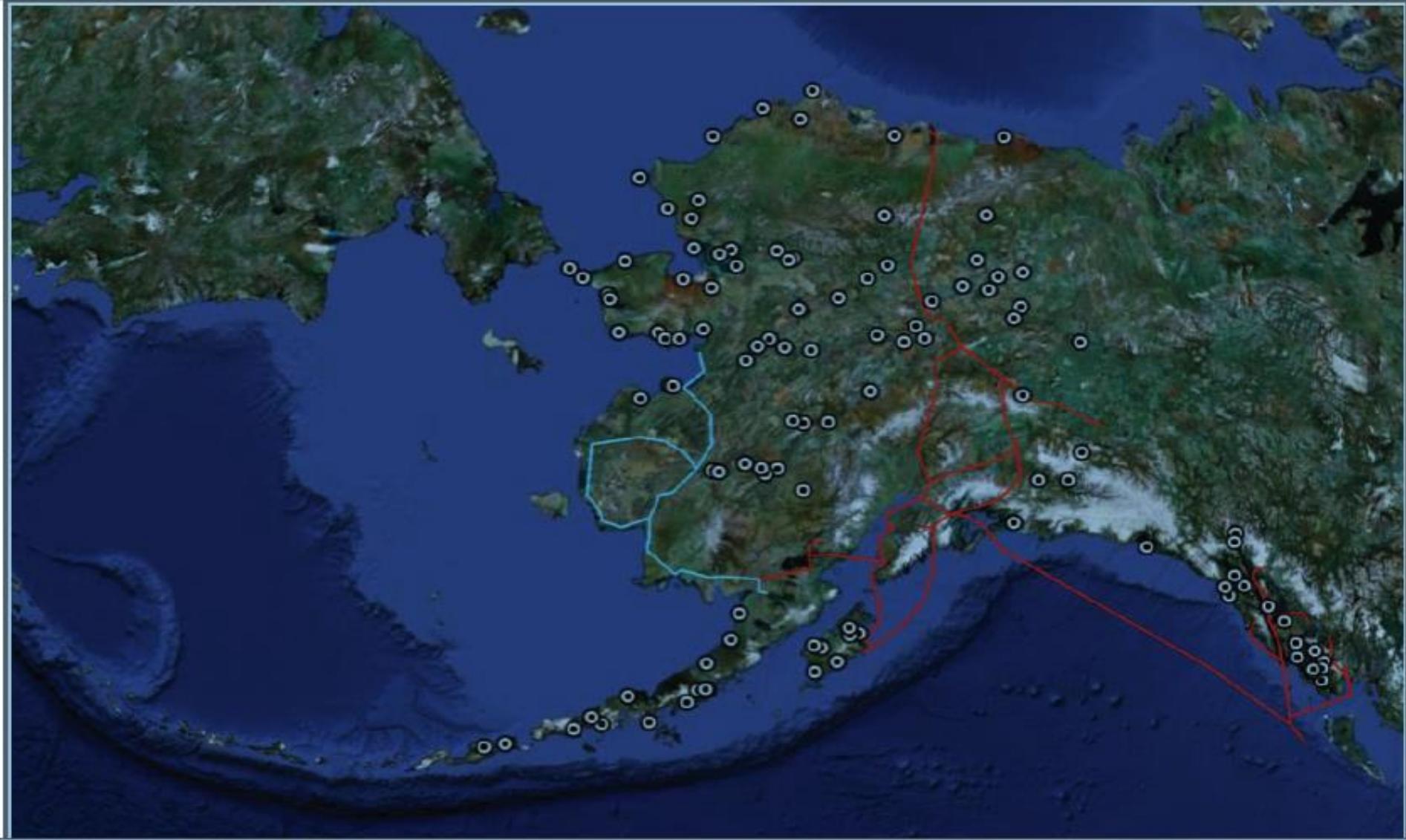
Combined Risk Factor Index



Sources: U.S. Census Bureau 2009 Population Estimates, 2005-2009 American Community Survey, and 2009 SAIPE Estimates; Department of Veterans Affairs; Bureau of Economic Analysis Regional Economic Information System; Analysis and Mapping by RUPRI; AK and HI are not to scale

Broadband: Where are the "unserved"?

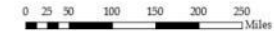




Underserved Broadband Service Inventory for the State of Alaska by Terrestrial, Non-Mobile Broadband Service

Updated October 1, 2013

BETA Version



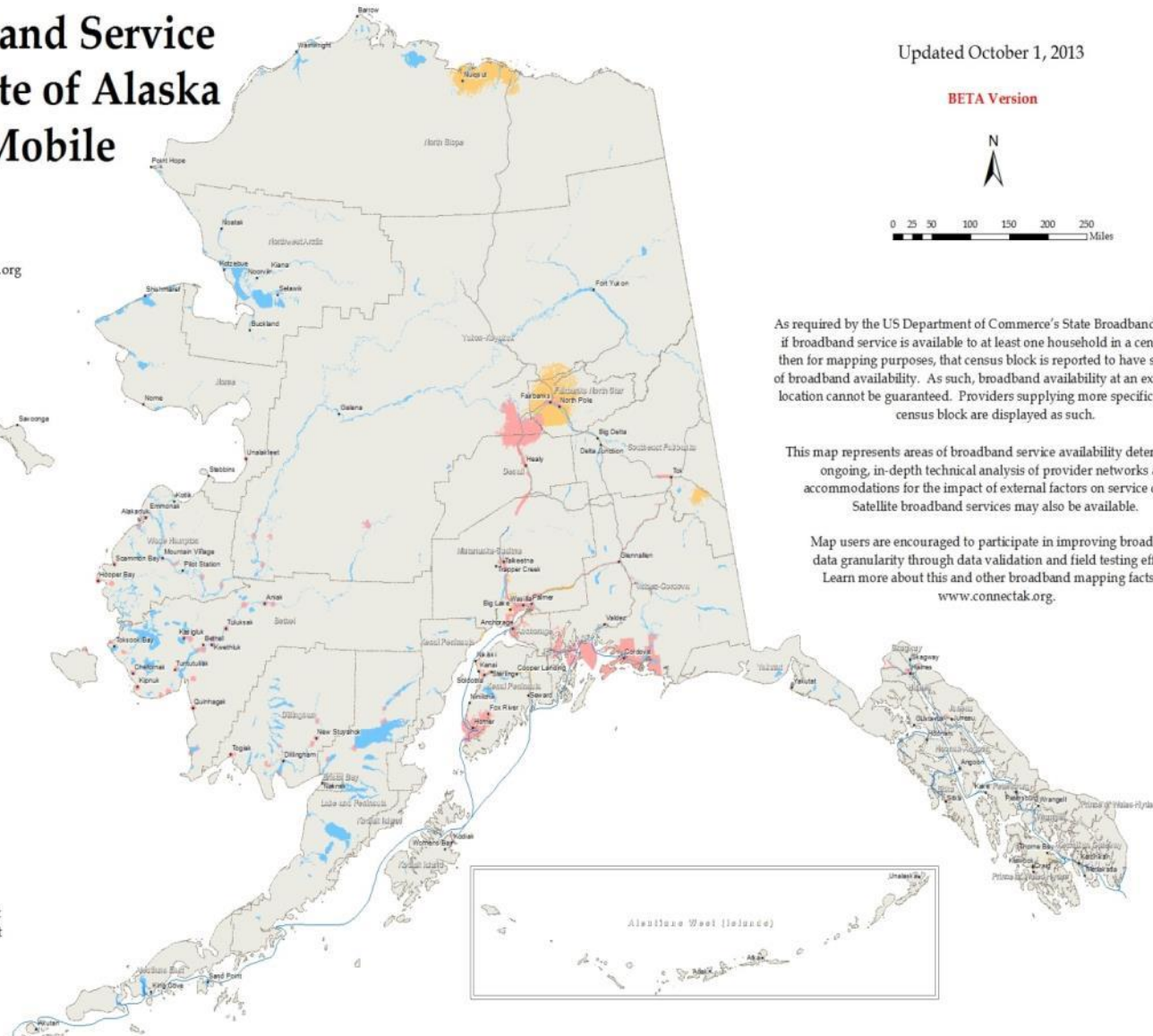
Submit questions or recommended changes to: maps@connectak.org



Symbology

- Populated Place
- Highway
- Secondary Road
- Borough/Census Area Boundary
- Water
- Broadband Service of at least 3 Mbps Download/768 Kbps Upload
- Underserved Area
- Unserved Area

Underserved areas are those where broadband speeds of at least 768 Kbps download/200 Kbps upload are advertised, but do not meet the 3 Mbps download/768 Kbps upload threshold.



As required by the US Department of Commerce's State Broadband Initiative, if broadband service is available to at least one household in a census block, then for mapping purposes, that census block is reported to have some level of broadband availability. As such, broadband availability at an exact address location cannot be guaranteed. Providers supplying more specific data than census block are displayed as such.

This map represents areas of broadband service availability determined by ongoing, in-depth technical analysis of provider networks and accommodations for the impact of external factors on service quality. Satellite broadband services may also be available.

Map users are encouraged to participate in improving broadband data granularity through data validation and field testing efforts. Learn more about this and other broadband mapping facts at www.connectak.org.

Underserved Broadband Service Inventory for the State of Alaska by Terrestrial and Mobile Broadband Service

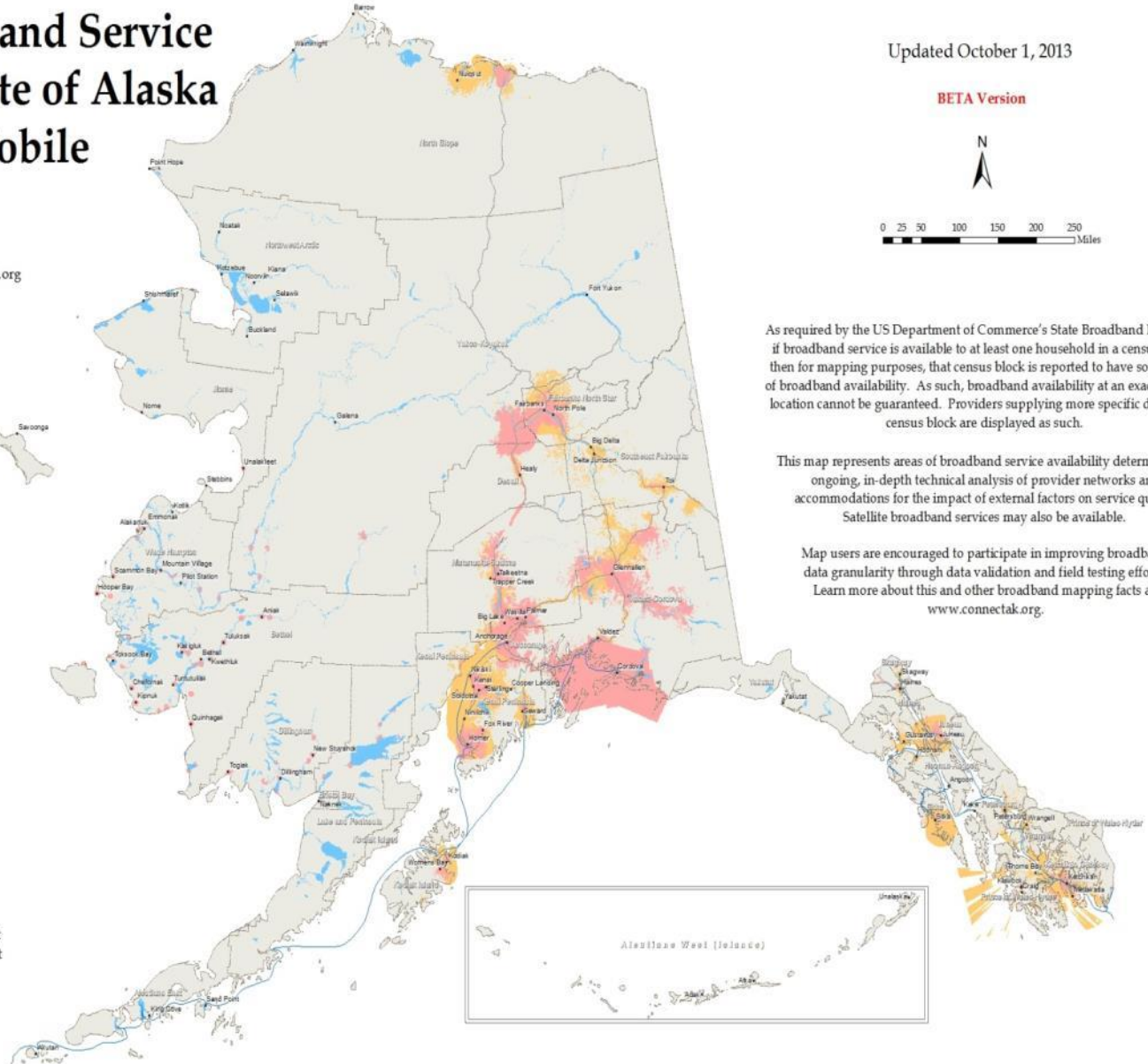
Submit questions or recommended changes to: maps@connectak.org



Symbology

- Populated Place
- Highway
- Secondary Road
- Borough/Census Area Boundary
- Water
- Broadband Service of at Least 3 Mbps Download/768 Kbps Upload
- Underserved Area
- Unserved Area

Underserved areas are those where broadband speeds of at least 768 Kbps download/200 Kbps upload are advertised, but do not meet the 3 Mbps download/768 Kbps upload threshold.



Updated October 1, 2013

BETA Version

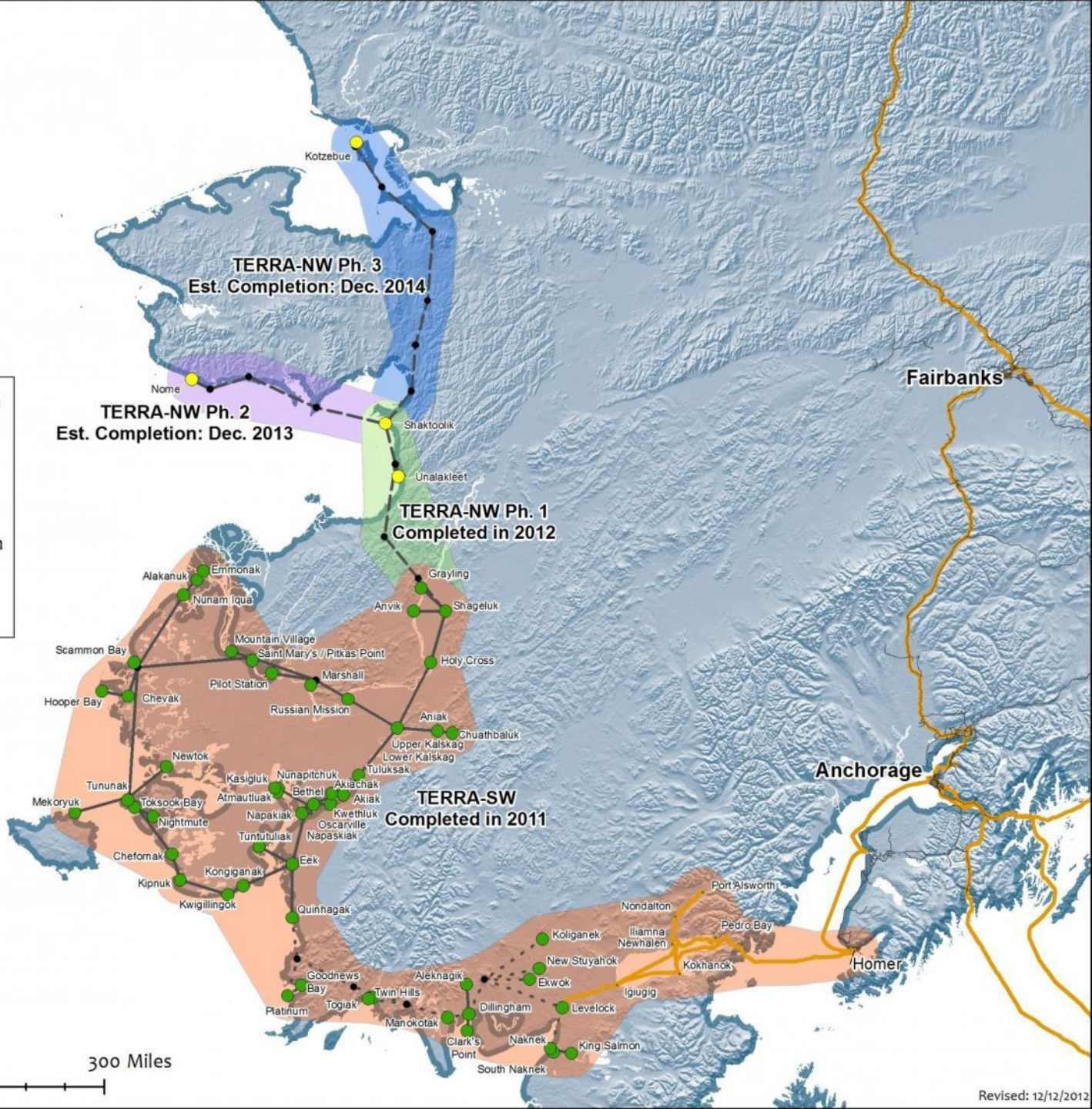


0 25 50 100 150 200 250 Miles

As required by the US Department of Commerce's State Broadband Initiative, if broadband service is available to at least one household in a census block, then for mapping purposes, that census block is reported to have some level of broadband availability. As such, broadband availability at an exact address location cannot be guaranteed. Providers supplying more specific data than census block are displayed as such.

This map represents areas of broadband service availability determined by ongoing, in-depth technical analysis of provider networks and accommodations for the impact of external factors on service quality. Satellite broadband services may also be available.

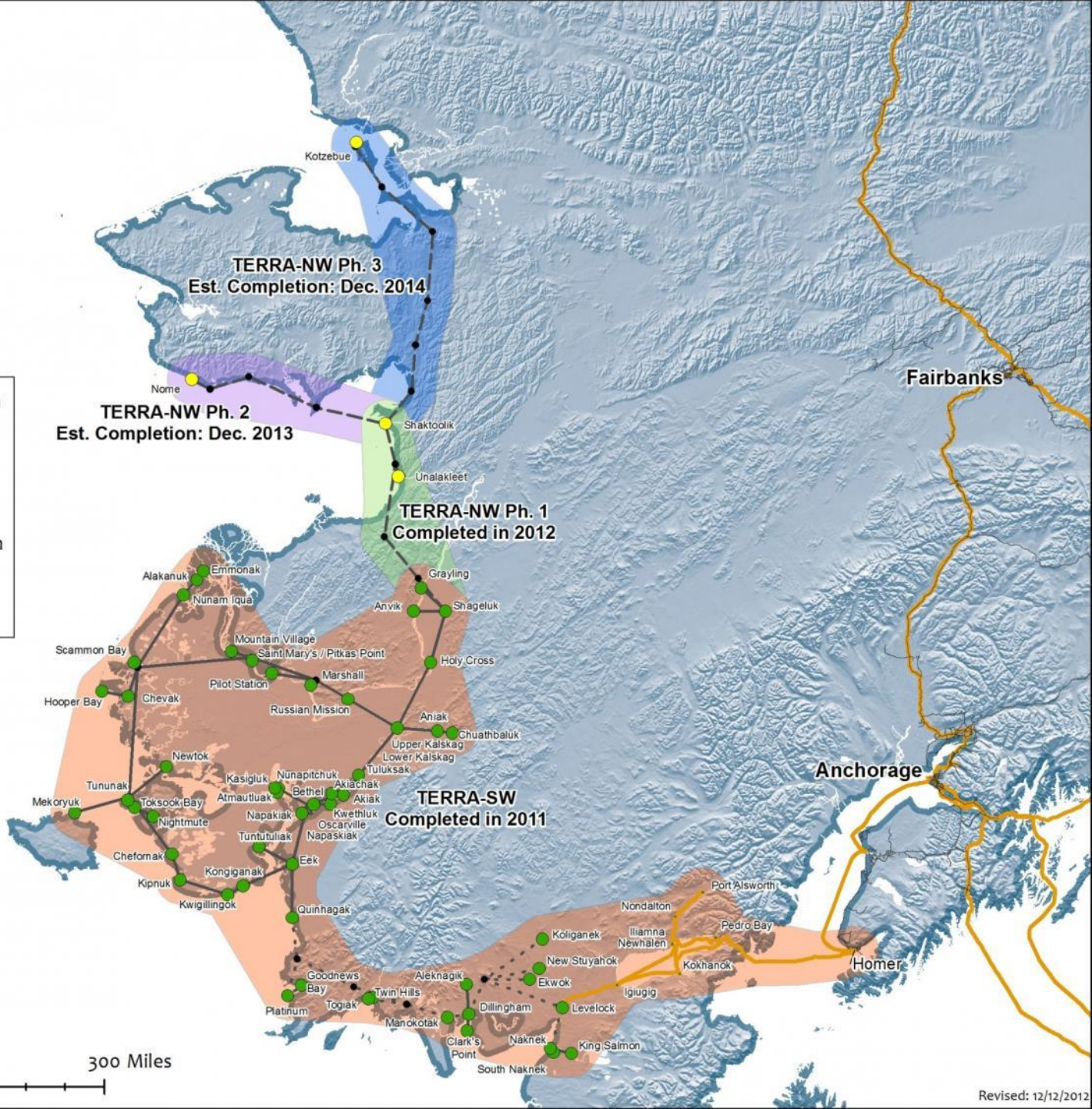
Map users are encouraged to participate in improving broadband data granularity through data validation and field testing efforts. Learn more about this and other broadband mapping facts at www.connectak.org.



- Microwave Site Under Construction
- Existing Microwave Site
- Microwave Repeater
- Existing Microwave Link
- - - Microwave Link Under Construction
- - - Proposed Microwave Link
- ~ Existing GCI Fiber-Optic Network

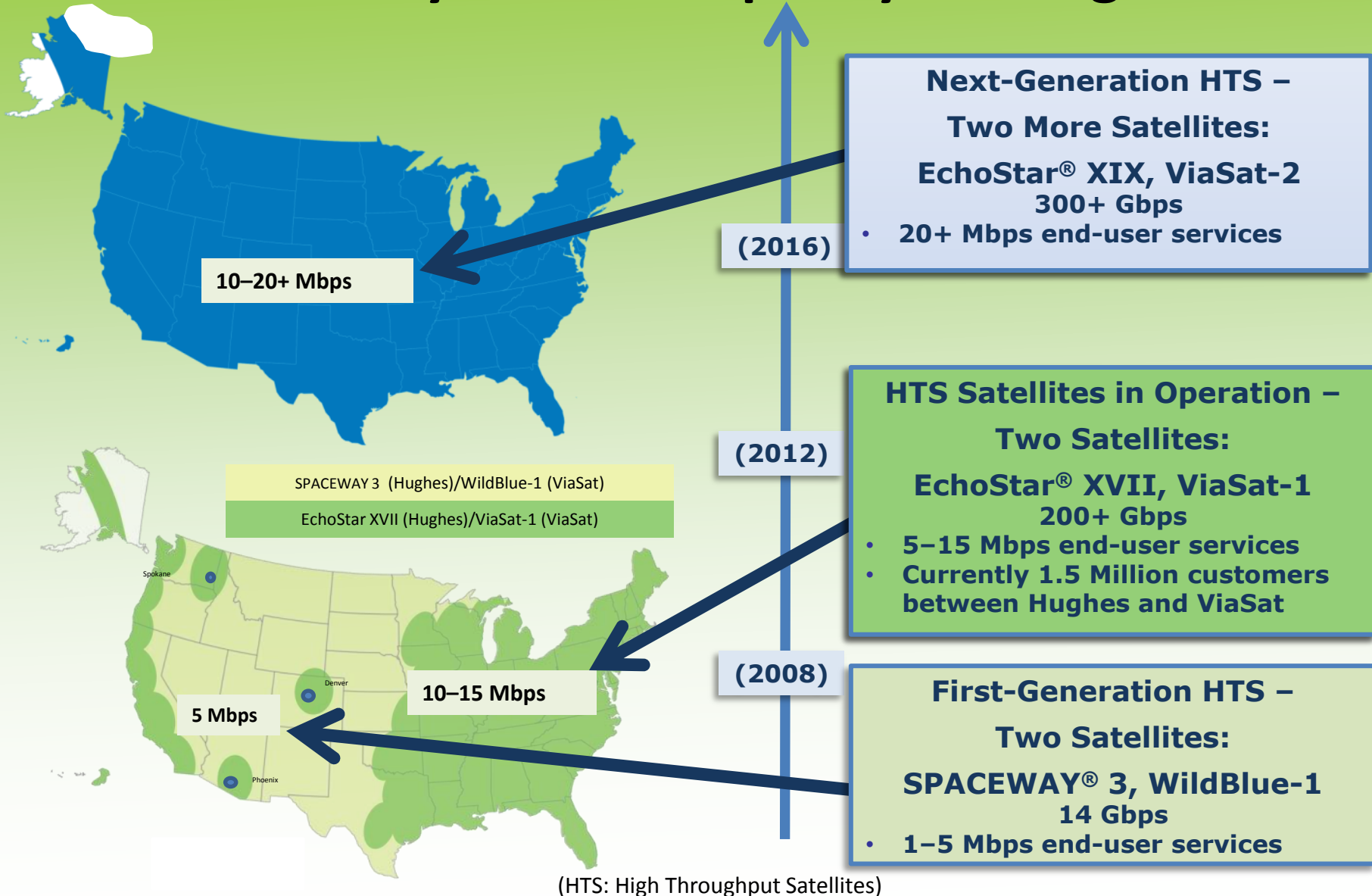


- Microwave Site Under Construction
- Existing Microwave Site
- Microwave Repeater
- Existing Microwave Link
- Microwave Link Under Construction
- Proposed Microwave Link
- Existing GCI Fiber-Optic Network



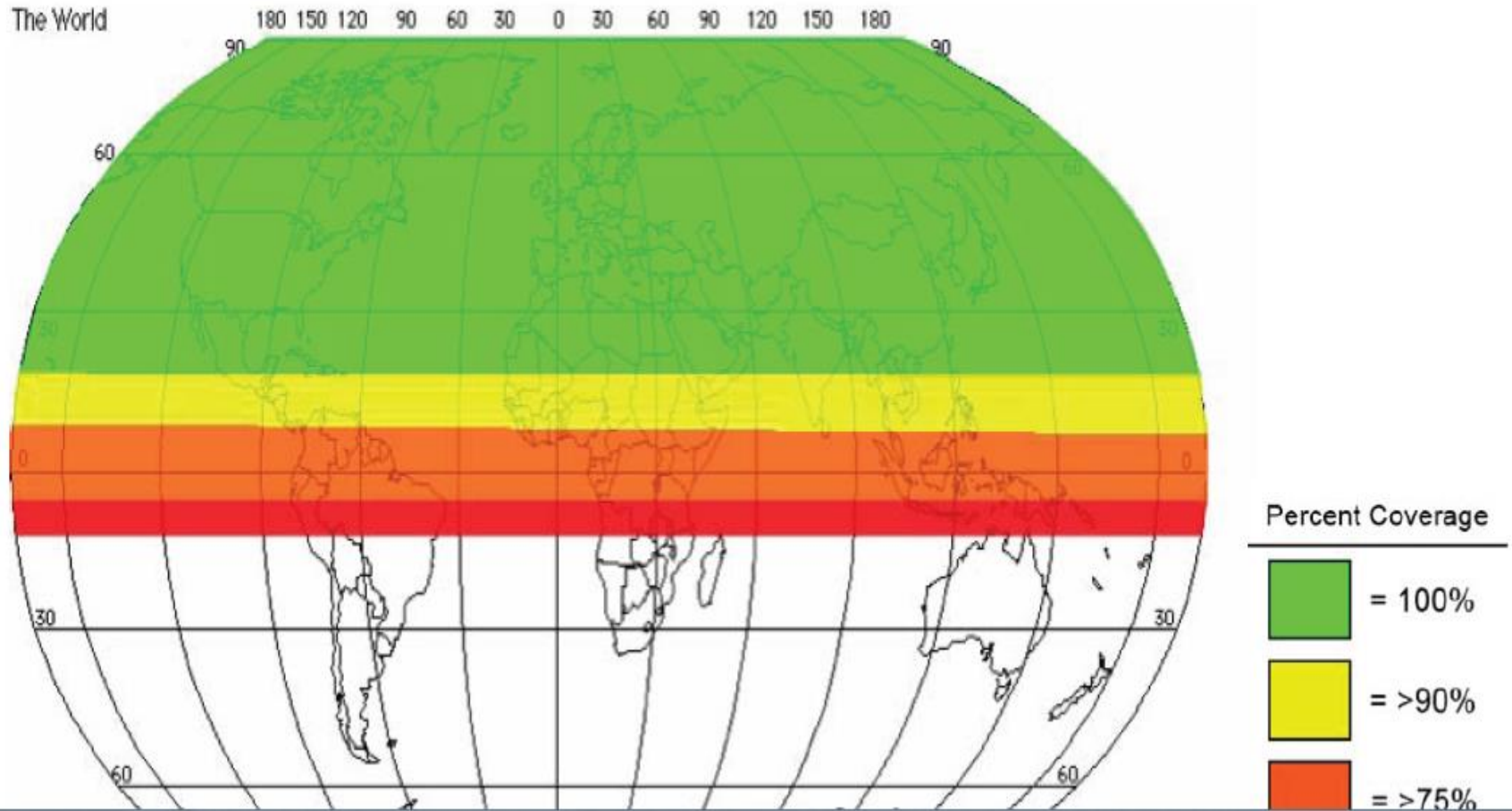
Broadband Satellite Capacity

Available Today – More Capacity Coming in 2016



Possible Polar Satellite System for Alaska/Arctic

Internet Coverage with Four High Earth Orbit Satellites



Arctic Fibre proposed Arctic submarine cable



Alaska Landing Sites:

- Prudhoe Bay, Barrow, Wainwright, Point Hope, Kotzebue, Nome
- Shemya, subject to Federal Government approval
- Unalaska, in evaluation

Carrier's carrier

Quintillion Networks is partner in Alaska

Major Federal Agencies

- **Federal Communications Commission (FCC)**
 - **Funding: primarily opex (operating) support**
 - Universal Service Programs
 - National Broadband Plan
 - Office of Native Affairs and Policy (ONAP)
- **USDA: Rural Utilities Service (RUS)**
 - **Funding: primarily capex (capital) support**
 - Loans for rural telcos
 - Grants for some rural broadband projects
 - Stimulus grants and loans for broadband (e.g. TERRA)
- **National Telecommunications and Information Administration (NTIA)**
 - **Limited funding: primarily planning and projects**
 - Funded State broadband planning grants
 - Some state broadband projects (e.g. BTOP)
 - Studies on “Digital Nation”

Many other federal agencies provide some funding for broadband and/or applications requiring broadband:

Education, electronic health records, public safety, etc.

National Broadband Plan

National Broadband Targets

- Every American should have *affordable access* to robust broadband service, and the means and skills to subscribe if they so choose.
- At least 100 million U.S. homes should have *affordable access* to actual download speeds of at least 100 megabits per second and actual upload speeds of at least 50 megabits per second.
- Every community should have *affordable access* to at least 1 Gbps broadband service to anchor institutions such as schools, hospitals and government buildings.
- See www.broadband.gov/plan/

National Broadband Plan Implementation: Programs for Remote and Tribal Regions

- **Connect America Fund:**
 - **CAF to ultimately replace all High Cost support**
- **CAF Mobility Fund:**
 - **\$300 million for mobile voice and broadband in high cost areas, plus \$500 million/year ongoing support**
 - **Tribal areas: \$50 million capital plus up to \$100 million/year**
- **Remote Areas Fund: \$100 million/year**
- **Broadband Lifeline Pilot Program: \$25 million**

NOTE: These funds available *only* to Eligible Telecom Carriers (ETCs)

Status of These Programs for Alaska

- **Rural Mobility Fund:**
 - Two reverse auctions: 2012 and 2014
 - Bid for lowest subsidy wins
 - GCI and Copper Valley have won subsidies without competition
 - 2014: Alaska carriers won subsidies of \$40 million out of \$49 million total available
- **Remote Areas Fund:**
 - Has not been implemented
 - FCC still taking comments
- **Broadband Lifeline Pilot Program**
 - No carrier from Alaska applied
- **ETCs: no Alaska Native/Tribal entities certified as ETCs**

Office of Native Affairs and Policy (ONAP)

- Established by FCC in 2010
- The National Broadband Plan recommended the creation of a Tribal office within the FCC
- “Charged with bringing the benefits of a modern communications infrastructure to all Native communities by ...ensuring robust government-to-government consultation with federally-recognized Tribal governments and other Native organizations; working with Commissioners, Bureaus, and Offices ... to develop and implement policies for assisting Native communities; and ensuring that Native concerns and voices are considered in all relevant Commission proceedings and initiatives.”
- Government-to-government direct relationship with Tribes
- Outreach, training, consultation, and coordination with Tribal governments and inter-Tribal organizations
- Requirement: Carriers receiving subsidies to serve Tribal lands, *must engage with Tribes*
- National Native Broadband Task Force

National Native Broadband Task Force

- Established by FCC's Office of Native Affairs and Policy (ONAP)
- Task Force has provided recommendations to the Commission on a broad range of topics, including Tribal consultation priorities, continuing reforms to the universal service fund (USF), policies regarding spectrum over Tribal lands, E-rate, and Lifeline and LinkUp on Tribal lands.
- Has had two members from Alaska: from Kawerak (Nome region) and Tanana Chiefs
- Seeking new members due to attrition, need for regional diversification, etc.
- Applicants and Task Force members must submit the required information to the FCC no later than May 15, 2014
- Contact Robert Finley: robert.finley@fcc.gov
- See www.fcc.gov/native

USDA: Rural Utilities Service

Telecommunications Infrastructure Loan Program

- **Makes long-term direct and guaranteed loans to qualified organizations**
- **To financing the improvement, expansion, construction, acquisition, and operation of telephone lines, facilities, or systems to furnish and improve telecommunications service in rural areas.**
- **All facilities financed must be capable of supporting broadband services.**
- **Many borrowers in Alaska including Adak, ASTAC, Bristol Bay, Bush-Tell, Copper Valley, Cordova, OTZ, United Utilities.**

USDA Programs

Community Connect program:

- “serves rural communities where broadband service is least likely to be available, but where it can make a tremendous difference in the quality of life for citizens”
- Eligibility:
 - Incorporated organizations;
 - Indian Tribes or Tribal Organizations
 - State or local units of government; or
 - Cooperatives, private corporations or limited liability companies organized on a for-profit or not-for-profit basis.
- Provides facilities, bandwidth, cost of two years of free connectivity
- Recent Alaska Projects:
 - MTA: Glacier View and Chickaloon
 - St. Paul: Fiber linking all locations in the community: a community intranet
- See http://www.rurdev.usda.gov/utp_commconnect.html

USDA Programs

Distance Learning and Telemedicine Loan and Grant Program

- For entities providing education and medical care via telecommunications including corporations or partnerships, Indian tribes or tribal organizations, state or local units of government, consortia, and private for-profit or not-for profit corporations.
- Currently does not have funding appropriation

Public Television Digital Transition Grant Program

- Eligible: Public television stations which serve rural areas
- Some Alaska stations are being funded

Federal Universal Service Funds

- Funded by surcharges on telephone bills (fixed and mobile)
- Operational support for providers and user subsidies
- Programs include:
 - High Cost Fund for carriers (transitioning to Connect America Fund)
 - Lifeline and Linkup: subsidies for low income subscribers
 - E-rate: schools and libraries
 - Rural Health Care
- See www.usac.org

E-Rate Program

- Former FCC Chairman Reed Hundt in 1993: “... there are thousands of buildings in this country with millions of people in them who have no telephones, no cable television and no reasonable prospect of broadband services. They’re called schools.”
- The Telecommunications Act of 1996 included subsidies for connectivity for schools and libraries
- Average Alaska rural schools subsidy now 74%
- Qualified schools and libraries request competitive bids for services
- Schools and libraries often become “anchor tenants” for communities

Alaska has been very successful in obtaining E-rate support:

- From the inception of the program in 1998 through 2013, Alaska received more than \$450 million in E-rate funds.
- in 2012, Alaska ranked 14th among the states in total E-rate funding with \$45.8 million, while 47th in population.
- In 2013, Alaska received 2.55 percent of the total funds available, although its population was only 0.23 percent of the U.S. total.

Importance of the mentor/facilitator: initially a half-time State Librarian!

Rural Health Care Program

- **Subsidizes difference between cost of rural connectivity (e.g. at rural hospital) and comparable cost in major city, e.g. Anchorage**
- **Subsidy in Alaska is greater than 90 percent**
- **Alaska has been very successful in receiving funds from this program:**
 - **Alaska Commitments 2012: \$47 million**
 - **Commitments 1998-2012: \$319 million**
 - **Highest in absolute amount of funding, not just per capita**

Lifeline and Linkup

- For low income subscribers to provide basic connectivity
- Only voice: now landline and mobile
- \$19.6 million to Alaska carriers for subsidies in 2012
- Total for Alaska from 1998 to 2012: \$167 million
- FCC will review whether broadband should be included in lifeline program

High Cost Fund: Transitioning to Connect America Fund

- Provides support to carriers serving “high cost” areas: most in Alaska
- Largest source of USF funds for Alaska
- Total to Alaska carriers 2012: \$204.9 million
- Total to Alaska 1998-2012: \$1.9 billion
- November 2011: the FCC released the [USF/ICC Transformation Order](#) : includes comprehensive reforms to modernize the High Cost Program and accelerate the build-out of robust broadband networks across the country.
- High Cost Program support will be phased out and Connect America Fund will be phased in
- Connect America Fund is focused on supporting and expanding fixed and mobile broadband availability.
- Size of the Connect America Fund, including legacy high-cost support, is frozen at \$4.5 billion.
- Alaska carriers are challenging the formulas used to calculate their costs.

Connect America Project Funding for Alaska

- **ACS: Alaska (Yukon-Koyukuk Borough):
\$174,000 to reach 316 homes and businesses**
- **Each carrier is obligated to deploy broadband-capable infrastructure to a sufficient number of locations to satisfy its buildout obligations**
- **Deployments must conform with rules including ... the requirement that deployments take place in areas shown on the National Broadband Map as unserved by fixed Internet access with speeds of 3 Mbps downstream and 768 kbps upstream (3 Mbps/768 kbps) or in areas where the National Broadband Map's speed designation was successfully challenged.**

FirstNet

- **First Responder Network Authority (FirstNet)**
- **Federal program under NTIA**
- **FirstNet will provide emergency responders with the first nationwide, high-speed network dedicated to public safety.**
- **Using a nationwide spectrum license, FirstNet will provide a single platform for daily public safety communications. FirstNet will also enable local, state, regional and national emergency responders to communicate at the direction of the incident commander.**
- **FirstNet will be built to public-safety grade standards using Long-Term Evolution (LTE) wireless technology. FirstNet will also support the integration of Land Mobile Radio (LMR) networks.**
- **Funded by the law passed in 2012 and projected proceeds from 2014 spectrum auctions.**
- **Alaska Department of Public Safety has been awarded a \$2 million planning grant (requires 20% match)**
- **See www.firstnet.gov**

Online with Libraries (OWL) Project

“Based in public libraries, but accessible to people who are not in public libraries”

NTIA BTOP Project (Stimulus funding): \$5.35 million

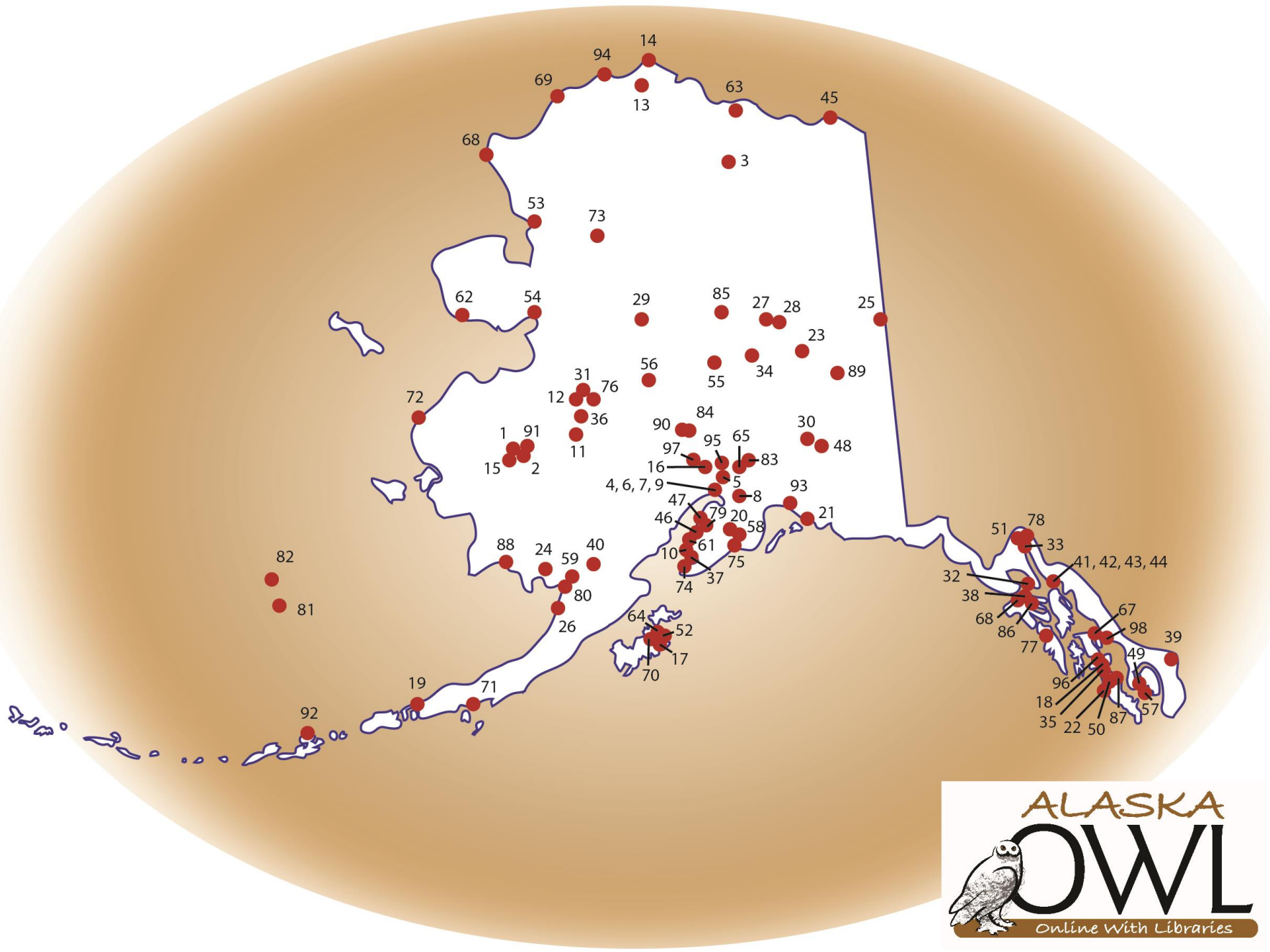
- 97 libraries across the state now have video conferencing
- 67 libraries now have increased bandwidth and new computers in order to support video conferencing
- Minimum broadband speeds defined at 1.5 Mbps symmetrical

Example: Economic Development and Workforce Development:

- Food handlers have used the OWL videoconferencing systems to take their boards and become certified or retain certification.
- Provides job opportunities without travel

See: <http://library.alaska.gov/dev/owl.html>

Contact: sue.sherif@alaska.gov



Bridging the E-Skills Gap

- **NTIA BTOP (Stimulus) Project: \$4.5 million**

VOCATIONAL TECHNICAL EDUCATION: Village Internet Agent Program:

- **Training at AVTEC**
- **Program trained students to install and maintain computer and broadband network equipment in rural Alaska.**
- **Students received a certificate “qualified for employment as Rural Internet Technicians”**

PROFESSIONAL TRAINING:

- **Alaska Native Tribal Health Consortium’s (ANTHC) Telehealth Coordinator Certificate (TCC):**
 - **Partnership between ANTHC and U of Alaska to design and deliver the Telehealth Director’s Certificate.**
- **Alaska State Hospital and Nursing Home Association (ASHNHA):**
 - **Used mediasite equipment from BESG offer training seminars in health management such as a workshop on improving collaboration between the financial and clinical staff at hospitals.**

Rural Internet Technician Locator: <http://www.avtec.edu/RITLocator.htm>



★ Scammon Bay

Hover over the yellow star to view the graduate's contact information.



Siri Goulette

False Pass, AK
Certified Rural Internet Technician
CompTIA A+ Certified
(907) 548-2228
sirielsa@yahoo.com

Manokotak
Dillingham
Port Lions



From the Fall of 2011 to the Spring of 2013, AVTEC graduated 24 Rural Internet Technicians from the Village Internet Agent Program. These graduates were certified to provide PC and network support services to rural Alaska.

This map provides contact information of many of the graduates for anyone needing their services.

More graduates may be added to this map in the future.

Hover over the yellow stars to view the graduate's contact information.

Wales
Kotlik
Scammon Bay
Kipruk
Bethel
Wasilla
Anchorage
Kenai
Seward
Dillingham
Manokotak
Togiak
False Pass
Port Lions
Ketchikan

Alaska State Broadband Planning

- **State broadband funds from NTIA (ARRA funding):**
 - Broadband mapping and data collection
 - Capacity building
 - Technical assistance
 - Applications usage and development
- **State Broadband Task Force**
 - Established February 2011
 - Develop plan “to accelerate deployment, availability and adoption of affordable broadband throughout the state”
 - Draft state broadband plan completed in August 2013
 - Available at www.akbroadbandtaskforce.com
 - Current RFP for community small business and entrepreneurial planning projects
- **Connect Alaska:**
 - responsible for state broadband mapping
 - Digitizing Alaska: project in Metlakatla with Association of Alaska School Boards

See www.connectak.org

Examples of Broadband Task Force Draft Plan Recommendations

- **Adopt an objective of symmetrical 100 Mbps service to home and businesses**
- **Establish an Office of Broadband Policy**
- **Encourage each community to implement its own last-mile solution**
- **Incentivize 24 hour internet access at community centers/meeting places**
- **Establish public-private partnerships with industry innovators and entrepreneurs**
- **Streamline state e-government systems and foster improved user access, ease of use, application development, and deployment**
- **Create training programs for knowledge workers, technicians, and web-based industries**
- **Establish and fund the Alaska Center for e-learning and e-commerce (AkCee)**
- **Create incentives for organizations to provide digital literacy programs that facilitate broadband adoption**
- **Variety of options for state broadband funding**

Regulatory Commission of Alaska (RCA)

- **Broadband Internet Grant**
 - Provided up to 75% of the funding companies require to expand Internet service to communities without it and to keep rates comparable to those in Anchorage, Fairbanks, and Juneau for at least 2 years
 - Used federal grant: No further funding
- **Administers Alaska Universal Service Fund**
 - Surcharge on telephone bills now 9.2% (Jan 2014)
 - Will allow pricing for telephone calls within Alaska to approach prices that apply to out-of-state calls.
 - Network Access Fee paid by each end user will increase to \$3.69 in Anchorage and \$3.75 elsewhere, eventually rising to \$5.75 over four years.
- **Certifies Eligible Telecommunications Carriers (ETCs)**

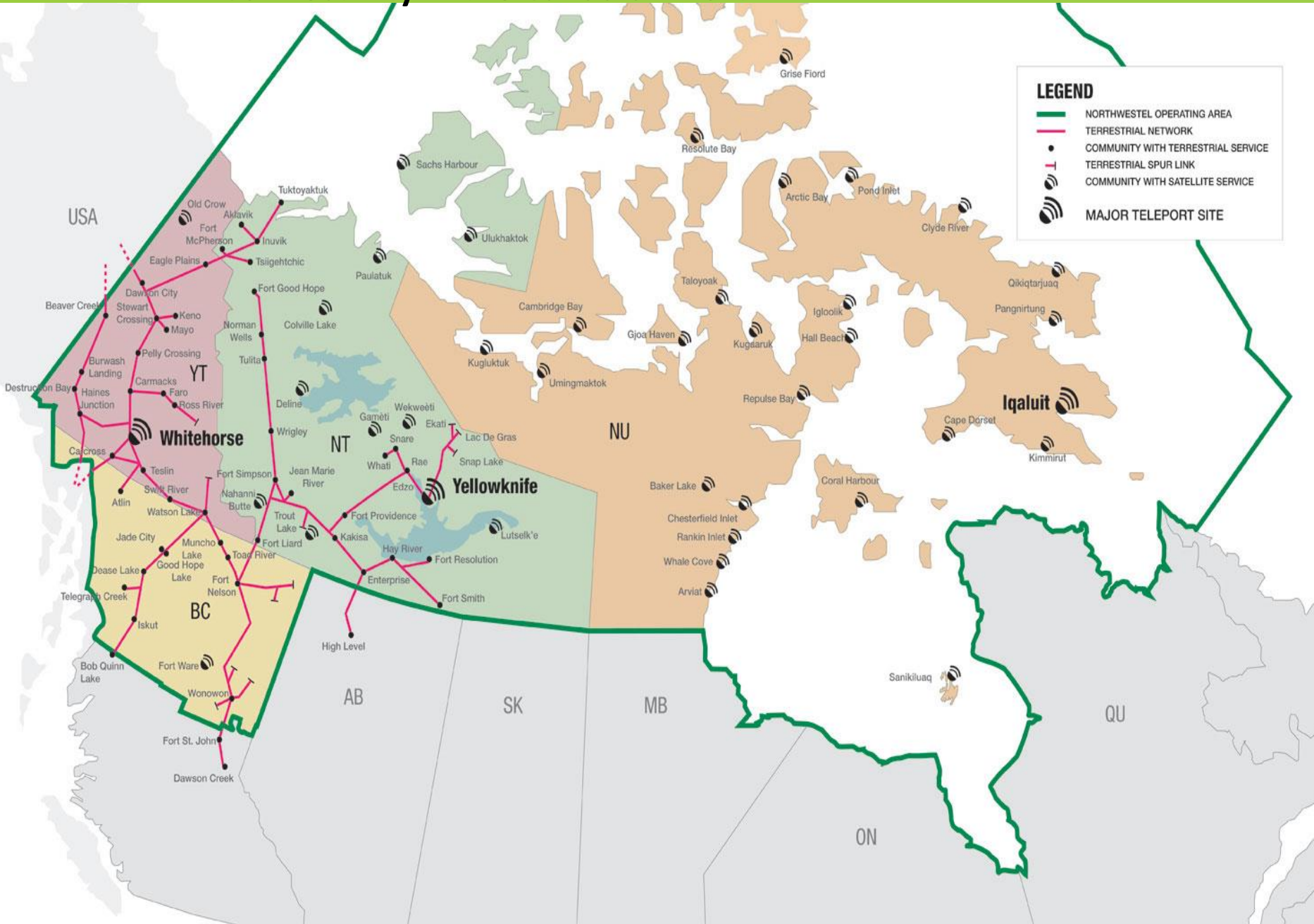
Broadband Infrastructure across the Arctic

- Travel across the North is extremely expensive and time-consuming
- Connectivity is improving, but still many locations without broadband
- Difficult to conduct videoconferences, webinars
- Broadband expensive in the North of Canada and in Greenland

- Alaska Arctic Policy Commission www.akarctic.com
Recommendation: “Conduct a comprehensive Arctic region economic and infrastructure assessment and planning process that integrates local, regional, state and federal planning efforts”
Include telecommunications/broadband?
submit written comments to aapcgovernance@gmail.com by May 15

- Arctic Council:
Canadian chairmanship 2013-2015
U.S. Chairmanship 2015-2017

Connectivity in the Canadian North



LEGEND

- NORTHWESTEL OPERATING AREA
- TERRESTRIAL NETWORK
- COMMUNITY WITH TERRESTRIAL SERVICE
- T — TERRESTRIAL SPUR LINK
- COMMUNITY WITH SATELLITE SERVICE
- MAJOR TELEPORT SITE

Native Communications Activities in Canada



FIRST MILE ▶



Login

K-Net Meeting Places ▶ The First Mile

First Nations INNOVATION

Supported by the SSHRC-funded
First Nations Innovation Project

A (Draft) Policy for
First Nations Innovation

Welcome

Welcome to the First Mile meeting place, a space to learn and share ideas about community-driven technology development. The First Mile project celebrates and supports locally owned and managed First Nations broadband projects. You are invited to explore and contribute. Please contact us with any inquiries, or if you have a 'First Mile' story to share.

Community Stories

Show all Stories

Submit a Story



K'at'l'odeeche First Nation Fiber Optic Construction (2011)

K'at'l'odeeche First Nation - Northwest Territories

Tuesday, 29 October 2013, 05:16 PM

In 2011, Katlodeeche First Nation completed the construction of its local broadband fiber optic network. This short four minute video documents the project. It was shot on location and edited by KFN's IT Project Manager, Lyle Fabian.

*For more information on KFN, visit the [community's website](#).
...read more*



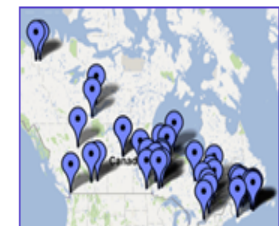
Technology in Wemotaci (en Français)

CRTC Hearings Northwest Modernization Plan

Find us on
Facebook

SUBSCRIBE on YouTube

Google Map



NTIA Presentation: Anne Neville at SWAMC

The Power of Local Planning

- Lots of resources are available
- You don't have to reinvent the wheel
- Opportunity to informally or formally work with your neighbors to share information and strategize about ways to increase access or adoption, or to use technology in new ways
- Local Solutions, Local Victories: “The credit completely goes to these local leaders [on the broadband teams] that actually gauged their local needs and found various sources of support to help them achieve their broadband goals.” – State Broadband Initiative leader

Examples:

- A full toolkit: http://bit.ly/Connecting_Communities_Guide (Southern Rural Development Center)
- University of Wisconsin- Ext community guide: <http://broadband.uwex.edu/wp-content/uploads/2011/03/CAN-Guide-FINAL.pdf>
- Rural Telecommunications Congress Wiki: <http://innovativecommunities.pbworks.com>

Broadband Partners

Essential to New York's Success

- **Federal Government – FCC / USDA / RUS**
 - Partner to Explore Opportunities for Funding
- **State Government**
 - Public Services Commission – Streamline Regulations
 - Department of Transportation/Thruway Authority – Dig Once Policies
- **NYS Legislature / Local Community Government**
 - Explore opportunities in Districts/ Municipalities
- **Provider Community**
 - Public/Private Partnerships to Expand Networks





Governor Cuomo's 2014 State of the State Address

- \$2 billion “Smart Schools” Bond Referendum:
 - A World-class Broadband Network Delivering High Speed Broadband to Meet The Needs Of Education, Public Safety, Healthcare, and Government
 - Enable students’ access to state-of-the-art classrooms
 - Enable Communities access to high-speed Internet
 - Enhanced Economic Development and Job Creation, Furthering New York’s National Leadership And International Competitiveness

“The students get the skills they need to succeed within the 21st century economy, they have access to advanced courses, parents and teachers can communicate and teachers can access the assistance and training that they need.” – Gov. Andrew Cuomo

Resources and Best Practices: Lessons from New York

- National Broadband Plans Make a Difference
<http://www.broadbandcommission.org/documents/reportNBP2013.pdf>
- Inventory Assets – Fiber, Networks
- Broadband has become a necessity – importance of policies and regulation
- Importance of engaging all sectors during planning process – limit siloed programs
- Adoption and utilization – just as important as access.
 - Affordability
 - Digital Literacy
 - Raising Awareness
- Planning for the future



California Broadband Council

- The [California Broadband Council](#) was established by legislation in 2010 to marshal the state's resources to further the objectives of increasing broadband network deployment, and eliminating the Digital Divide by **expanding broadband accessibility, literacy, adoption, and usage**.
- The Council is charged with reviewing implementation of the 2008 Broadband Task Force Report recommendations and improving coordination among state agencies. The Council will help applicants to compete more effectively for federal funds made available through the National Broadband Plan....
- **Working Groups cover:**
 - Identifying state buildings and structures for equipment collocation
 - Addressing local barriers to deployment and adoption
 - Disposition of state surplus computer equipment
 - Tribal broadband funding, deployment and adoption

Lessons from Other States

- **State Broadband Office or equivalent**
- **State Broadband Council**
- **High level state commitment**
- **Public/private collaboration and partnerships**
- **Targeted investments and incentives to contribute to economic development strategies**
- **Support for digital literacy, adoption**
- **Community and regional engagement**

Next Steps for Alaska?

- **Follow-up to Broadband Task Force Report**
- **State broadband or telecommunications office**
- **Outreach to rural and Native organizations**
- **Pursue federal funding and project opportunities**
- **Include telecommunications/broadband in Alaska Arctic Policy Commission work**
- **Include Arctic broadband connectivity as key element of U.S. Arctic Council agenda**
- **Other ???**

Thank you

For further information:

heudson@uaa.alaska.edu

www.iser.uaa.alaska.edu



Stay tuned:

Connecting Alaskans: From Telegraph to Broadband

to be published by the University of Alaska Press