



Broadband Projects in Alaska: Impacts for Education

April 21, 2023
House Education Committee



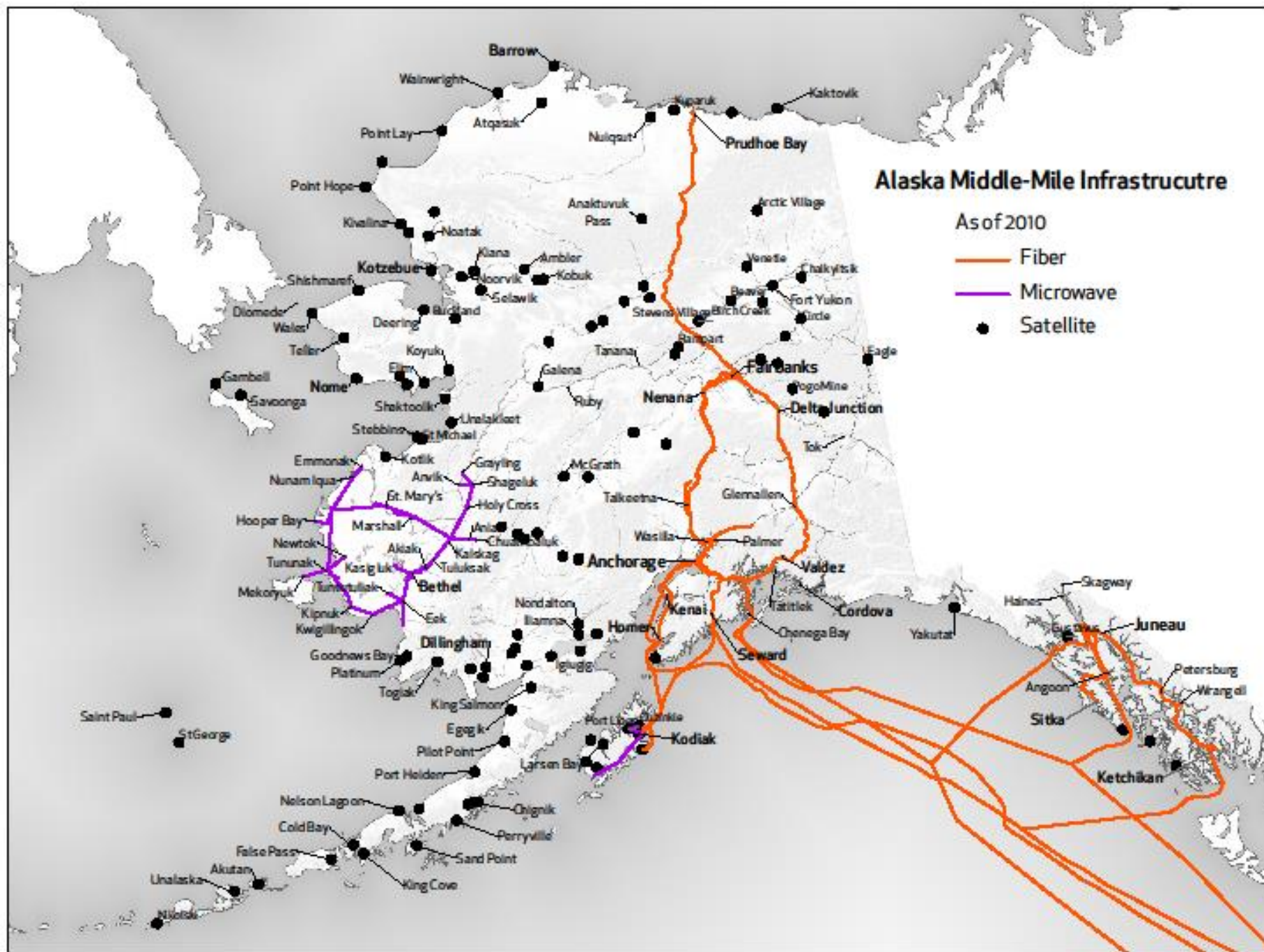


Momentum 2017-2022

- ▶ 70,000+ locations upgraded/deployed
- ▶ 115,000 Alaskans improved wireless service
- ▶ \$1.7B capex



Middle Mile 2010



Supporting Broadband Access

- ▶ Federal
 - ▶ Universal Service Fund (E-rate, RHC, AK Plan)
 - ▶ ReConnect/Community Connect
 - ▶ Tribal Broadband Connectivity
 - ▶ Broadband Equity Access & Deployment (BEAD)
 - ▶ Enabling Middle Mile
- ▶ State
 - ▶ Alaska Universal Service Fund
 - ▶ School BAG



Education Support

▶ E-Rate

- ▶ Federal funds help schools and libraries with costs of broadband service
- ▶ Alaska schools qualify for 60-90% support of their broadband bill
- ▶ Support based on the number of students receiving free and reduced lunch
- ▶ Strict rules including a rigorous competitive bid process for services

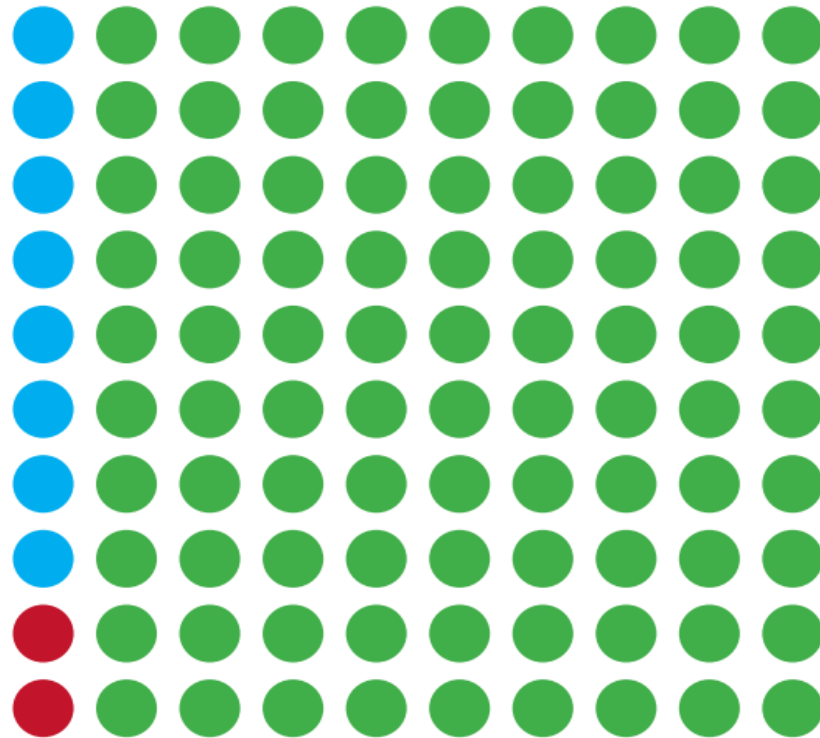


School BAG

- ▶ Leverages federal e-rate funds
- ▶ 2014 BAG provides matching funds to ensure small schools have 10Mbps
- ▶ 2020 BAG legislation increases supported speed to 25Mbps
- ▶ Directly supports 152 schools



Leveraging up to 90%



This example assumes the following:

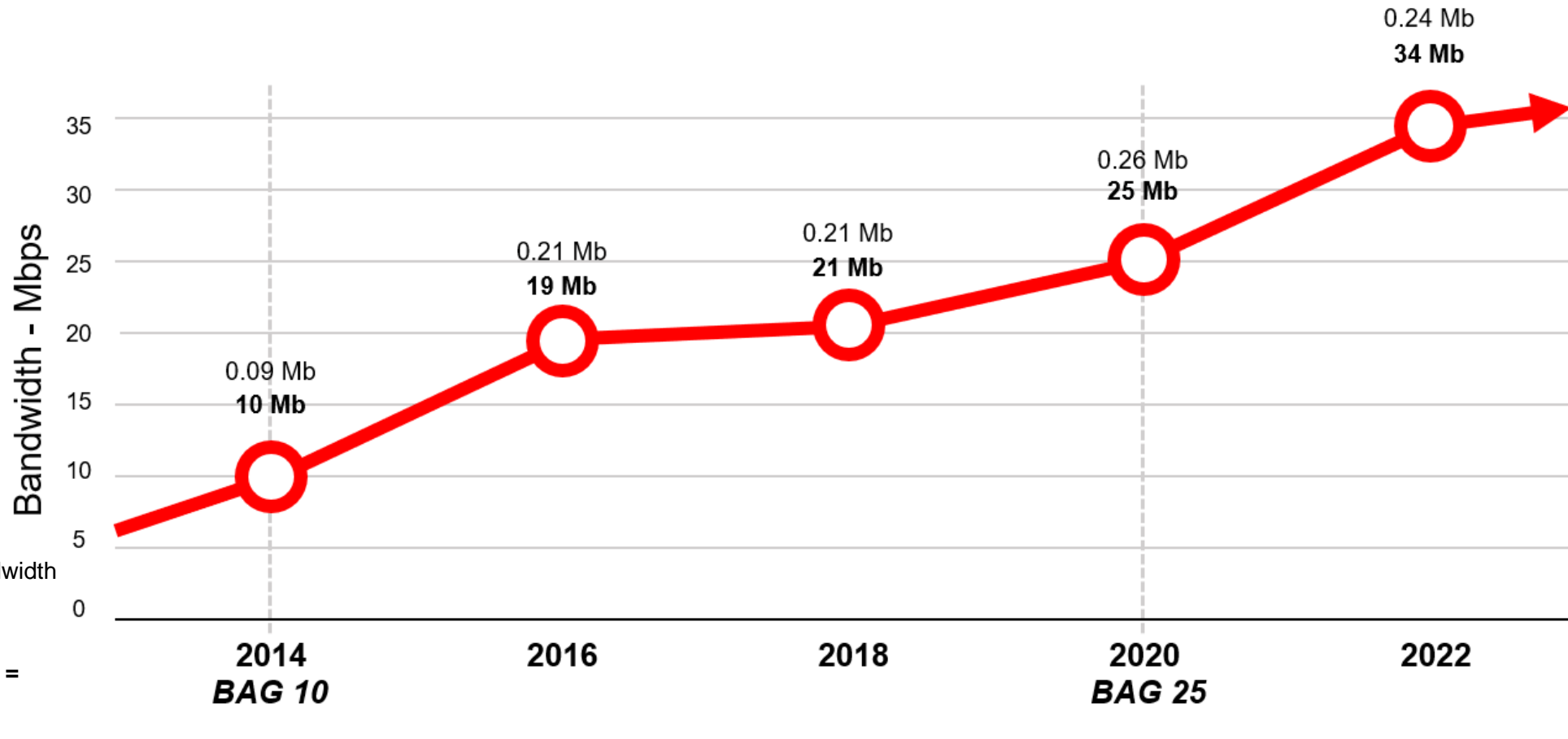
School has a budget of \$1,000 and qualifies for 90% of E-Rate.

School Budget	\$1,000
BAG	\$4,000
E-Rate (90%)	\$45,000
Purchasing Power	\$50,000

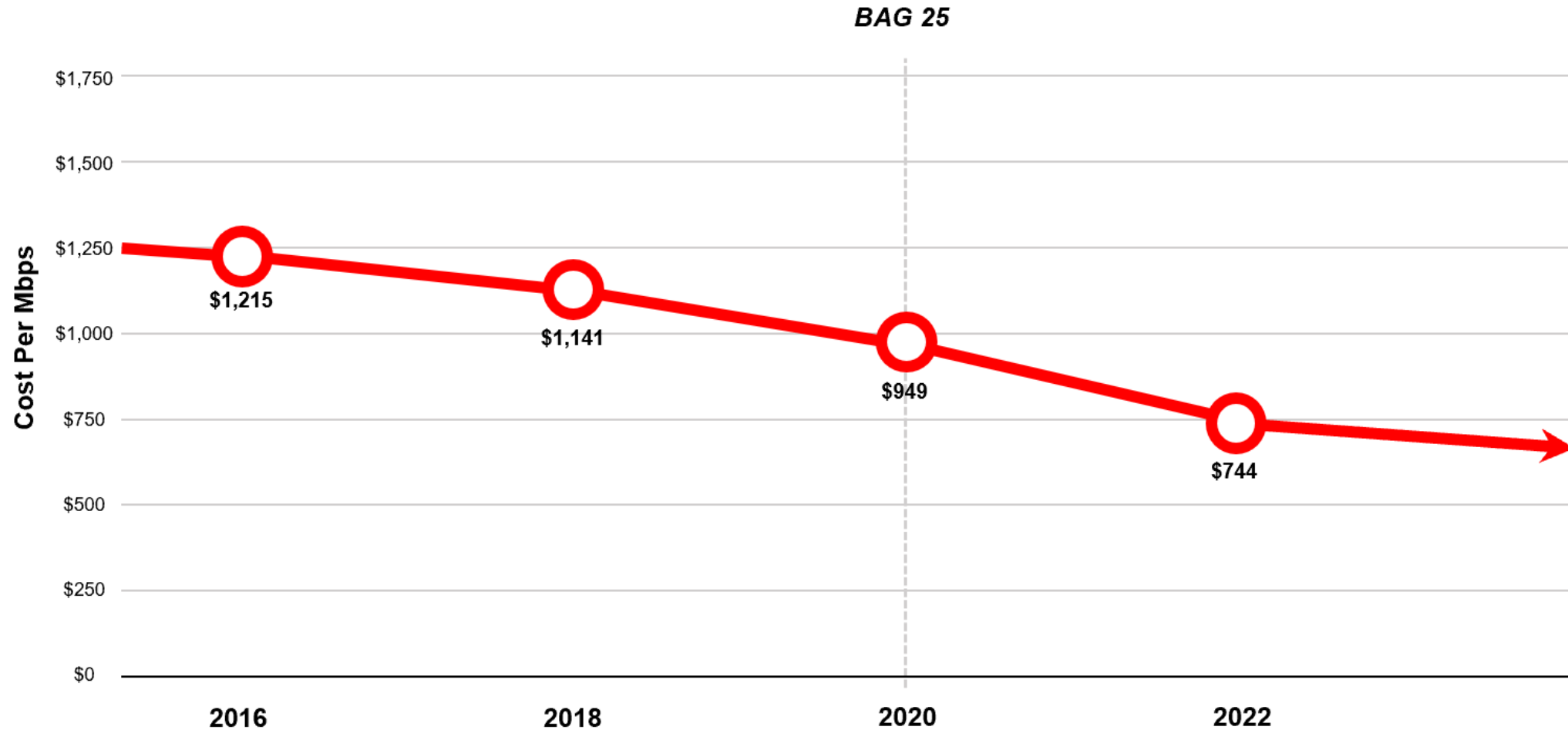
Each circle represents 1 MB of Internet, and who pays.

- School
- Alaska BAG
- Federal E-Rate

Rural School Speeds Tripled



Decreasing Cost of Connectivity

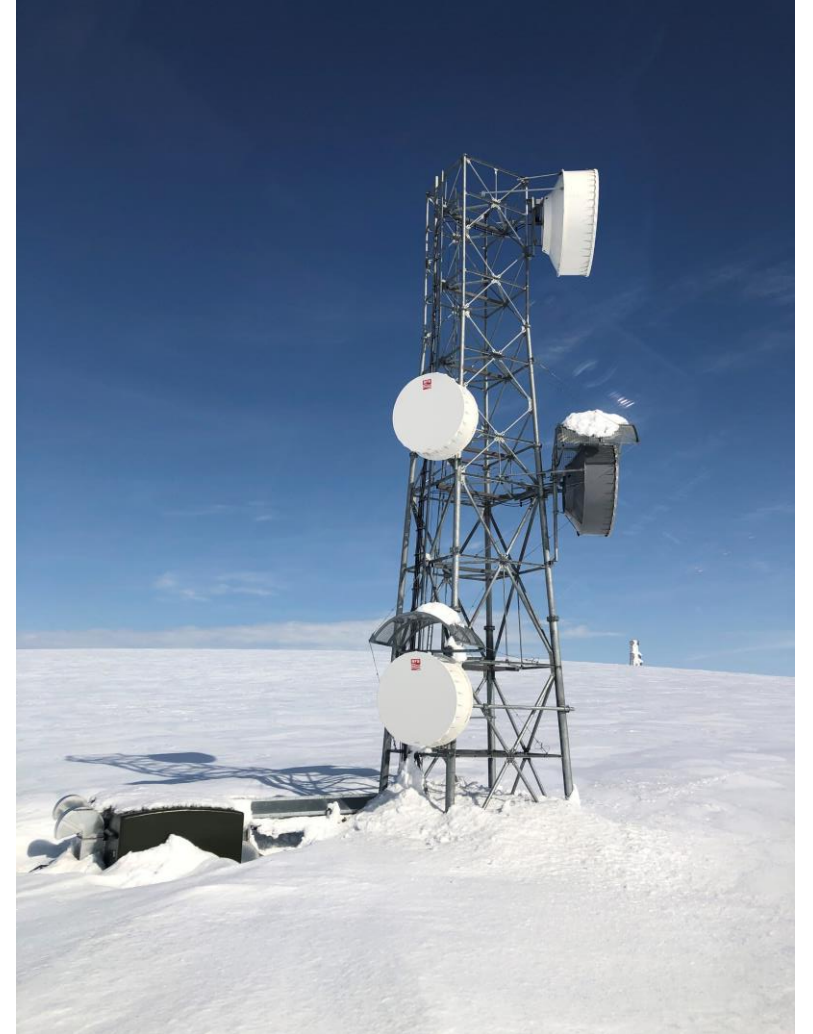


Source: opendata.usac.org 471 Line Item Dataset

Average price per Mbps for all Alaska schools

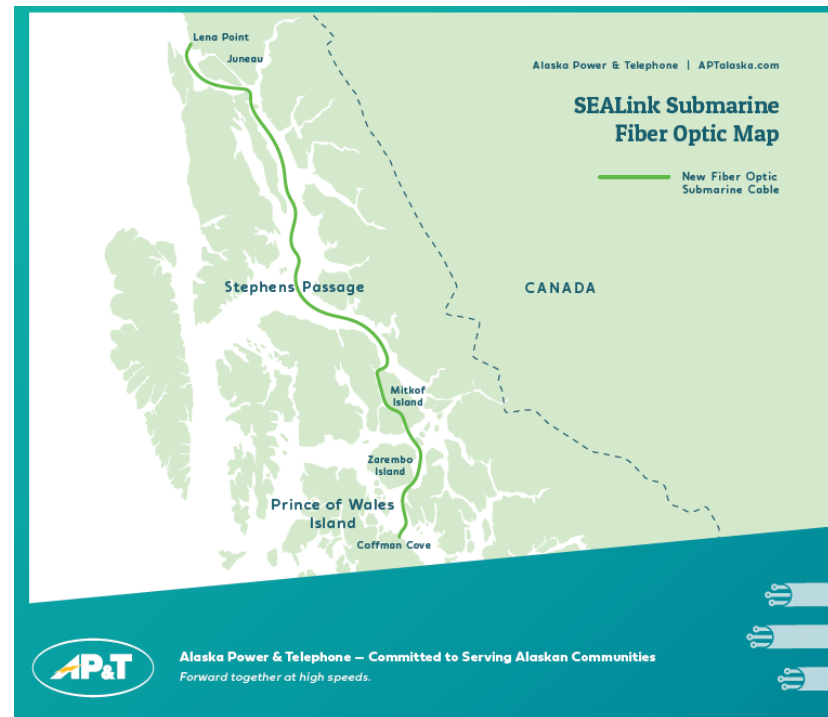
ReConnect Grant Program

- ▶ Loans and grants to provide funds for the costs of construction, improvement, or acquisition of facilities and equipment needed to provide broadband service in eligible rural areas.
- ▶ 14 Alaska awards
- ▶ \$305M grants, \$53M matching
- ▶ 5,000+ households in rural Alaska
- ▶ Fiber and microwave technologies
- ▶ Round 4 awards pending



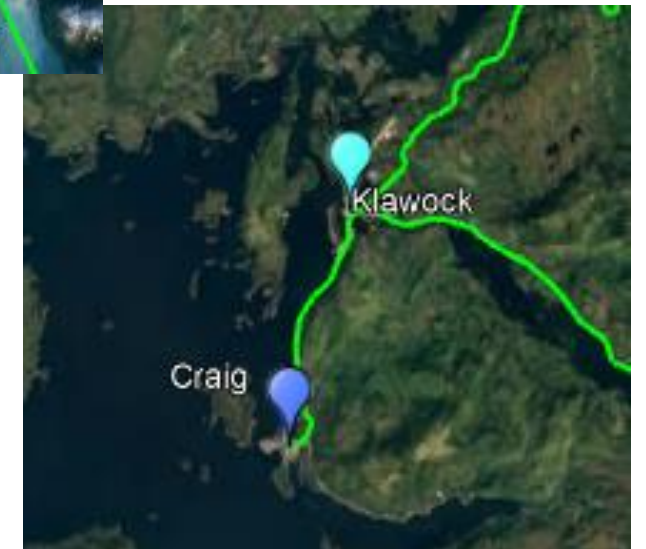
ReConnect - SEALink

- ▶ Alaska Power & Telephone
- ▶ \$21M grant/\$7M match
- ▶ 214 mile undersea cable



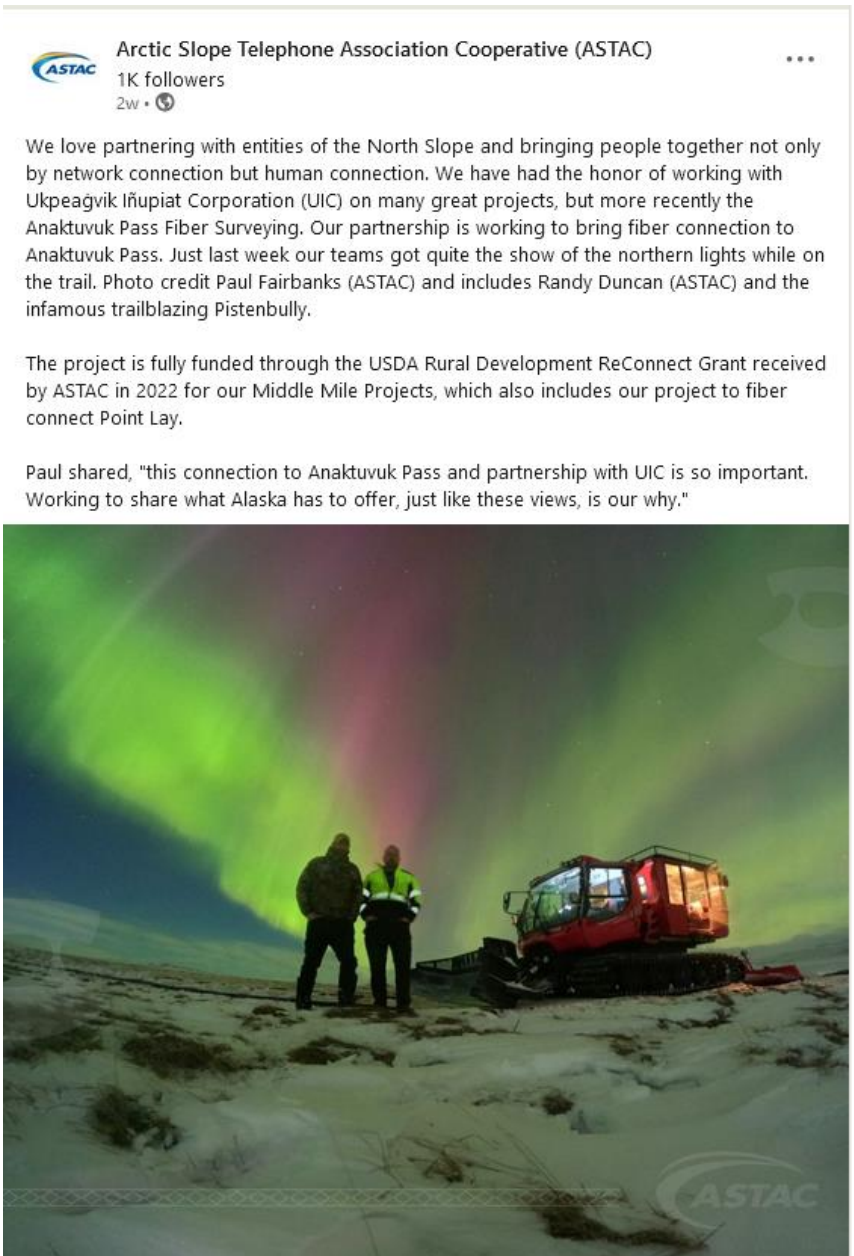
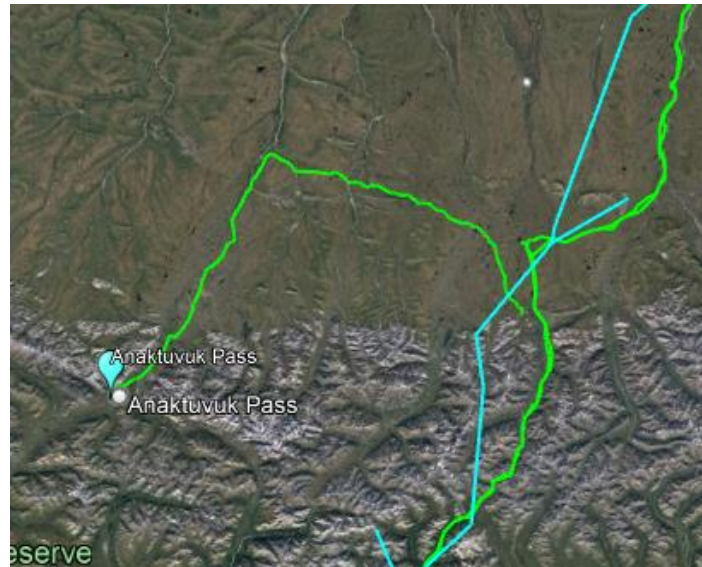
ReConnect - Southeast

- ▶ Alaska Power & Telephone
 - ▶ \$33M grant, \$11M match
 - ▶ Fiber project to serve Klukwan and Skagway
- ▶ \$29M grant, \$9.8M match
- ▶ Fiber project to serve Klawock, Craig, and Hyder



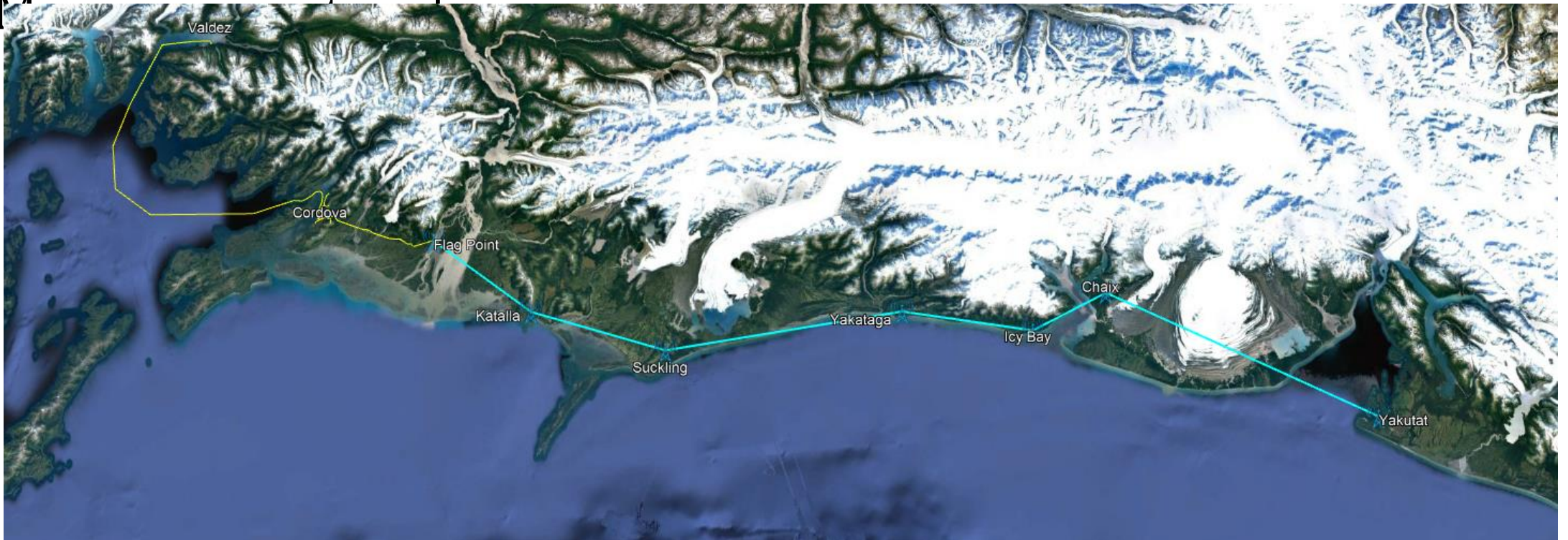
ReConnect Anaktuvuk Pass & Point Lay

- ▶ ASTAC
- ▶ \$31M for fiber project to Anaktuvuk Pass and Point Lay
- ▶ Replace satellite backhaul with fiber



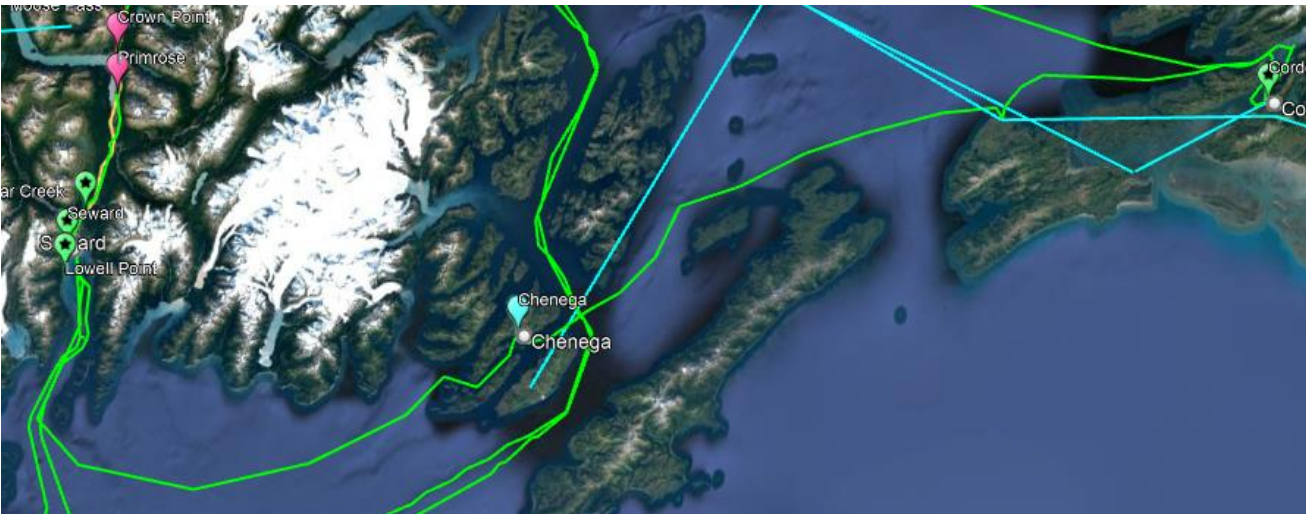
ReConnect - NICEY

- ▶ Cordova Telecom
- ▶ “New Internet Connection for Everyone in Yakutat”
- ▶ \$18.9M grant/\$6M match
- ▶ Project Overview



ReConnect – FISH in AK

- ▶ \$21M grant, \$7M match
- ▶ Fiber project to Eyak & Valdez-Cordova census area.
- ▶ Subsea fiber Cordova-Seward
- ▶ Village of Chenega



CTC Awarded \$21.4M by USDA

RECONNECT ROUND 3 GRANT

Cordova to Invest \$28.5 Million in Fiber Infrastructure

- **Fiber Internet Serving Homes in Alaska - "FISH in AK."**
- **Deliver fiber to every home in Cordova.**
- **Submarine line from Cordova to Seward.**

"In the past four years, CTC has secured over \$42 million in USDA funding to upgrade our network for highspeed fiber-based broadband services. The opportunity to accelerate Cordova's fiber network deployment and protect our communications with a secondary submarine line will significantly improve the quality of life, education, healthcare, and communications for our entire community."

-CTC CEO Jeremiah Beckett.



ReConnect - Teller

- ▶ Mukluk Telephone dba Fastwyre Broadband
- ▶ \$4.1M grant/\$1.4M match
- ▶ Fiber to the home
- ▶ Microwave & fiber middle mile
- ▶ Brevig Mission & Teller
- ▶ Mukluk Telephone

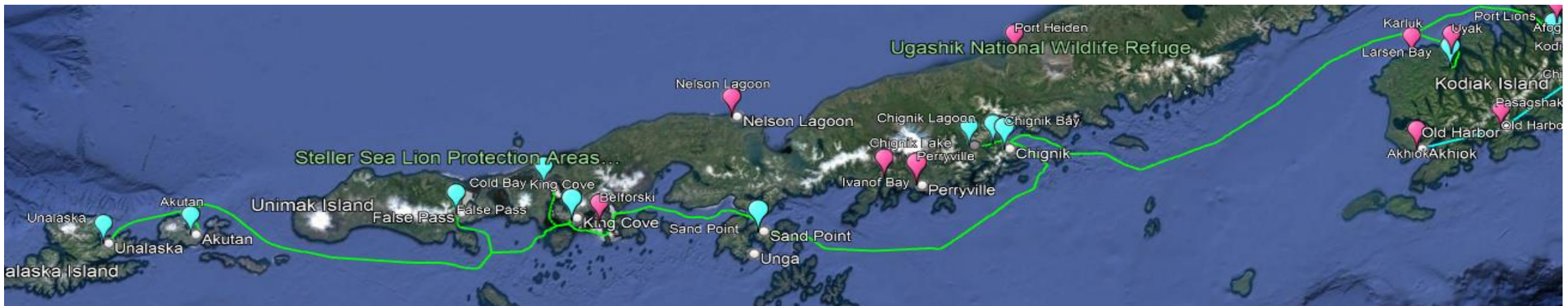
Fastwyre
Broadband



ReConnect - Aleutians Fiber



- ▶ \$25M grant + \$45M GCI capital
- ▶ 800 miles fiber optic subsea cable
- ▶ Fiber to the premises in six communities
- ▶ 2,000 Mbps speeds (2 GB)
- ▶ Unalaska launched in 2022. King Cove, Sand Point in 2023



ReConnect – Airraq Phase II



- ▶ \$31M grant
- ▶ Fiber to the premises & 2,000 Mbps speeds (2 GB)
- ▶ Leverages AIRRAQ Phase I BNC fiber project
- ▶ Combined projects will connect 10,000 Alaskans
- ▶ Airraq is Yup'ik for “string that tells a story”



ReConnect - Tanana Chiefs Conference

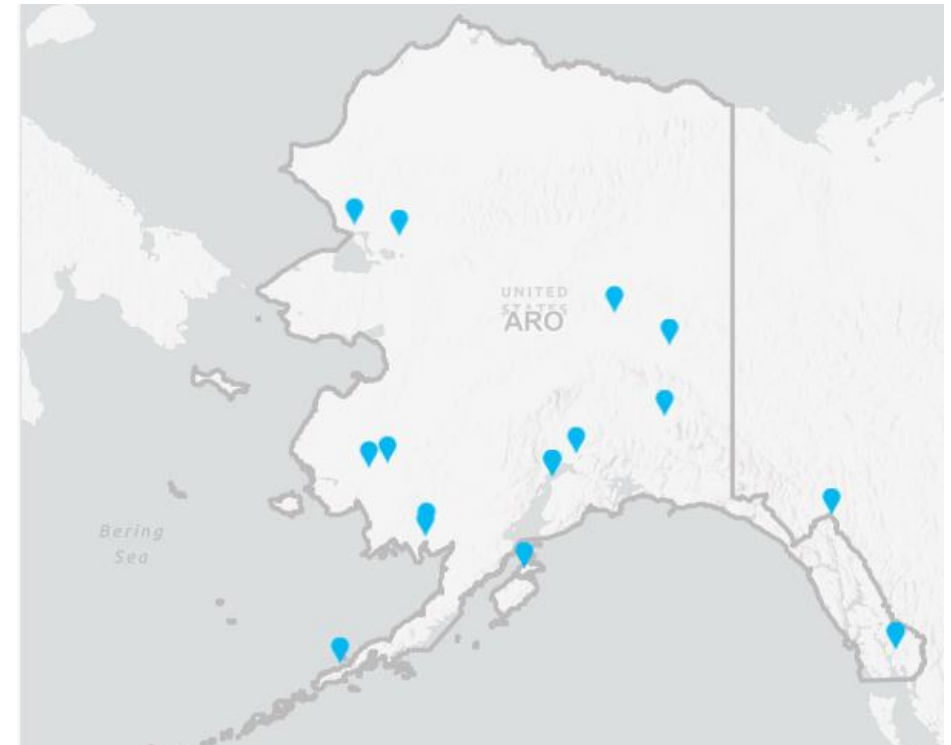
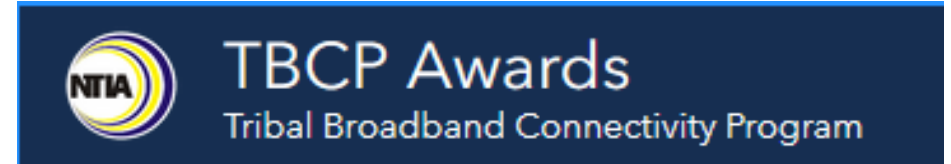
- ▶ \$30.3M
- ▶ Fiber network
- ▶ Huslia, Alatna, and Allakaket Alaska Native Village Statistical Areas as well as the socially vulnerable communities of the Yukon-Koyukuk Census Area.



Tanana
Chiefs
Conference

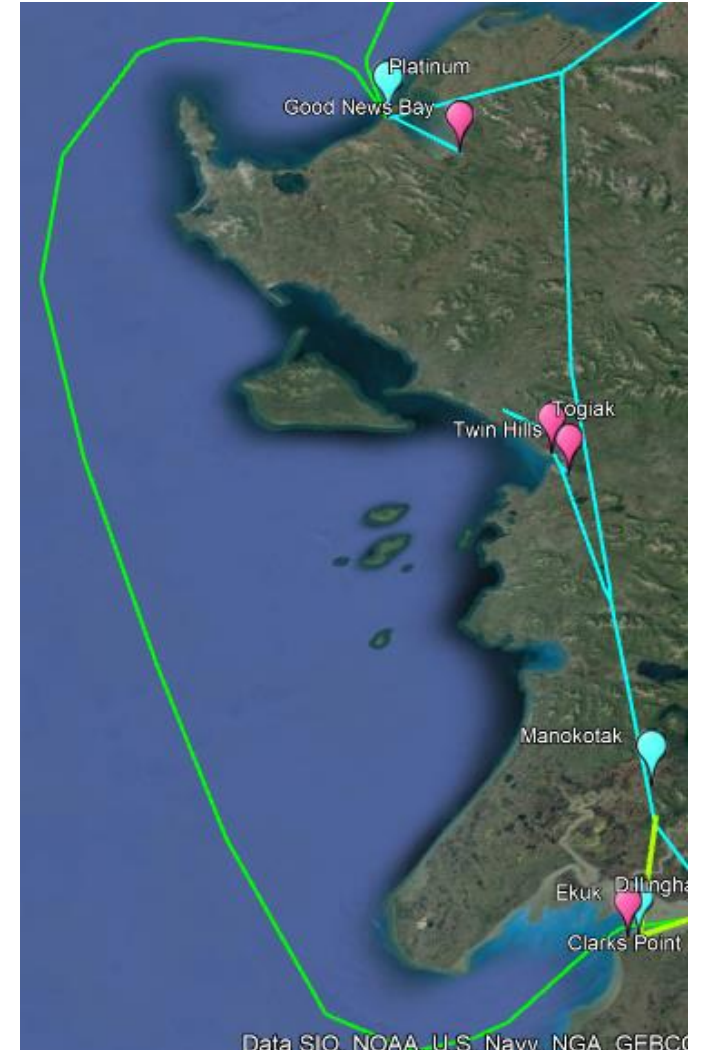
Tribal Broadband Connectivity Program

- ▶ \$1B first round, \$2B added from Bipartisan Infrastructure Law
- ▶ 2 categories, adoption & deployment
- ▶ Applications under review and curing, rolling basis awards
- ▶ \$272M deployment projects



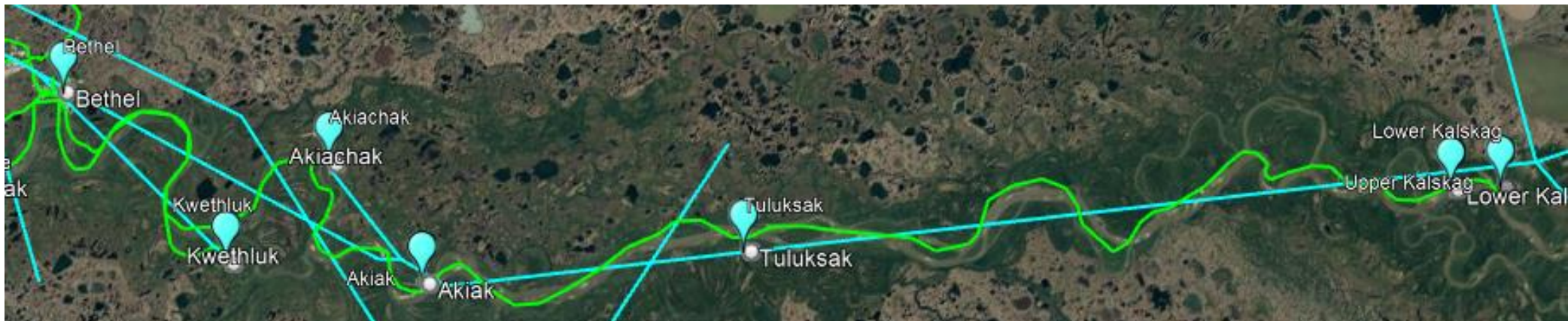
TBCP – Bethel Native Corporation

- ▶ \$42M to Bethel Native Corporation in partnership w/GCI
- ▶ 400 mile subsea and terrestrial fiber connecting 5 communities
- ▶ Fiber to the premises & 2,000 Mbps speeds (2 GB)
- ▶ Leverages Nushugak Cooperative fiber project
- ▶ AIRRAQ – Yup'ik for string that tells the story



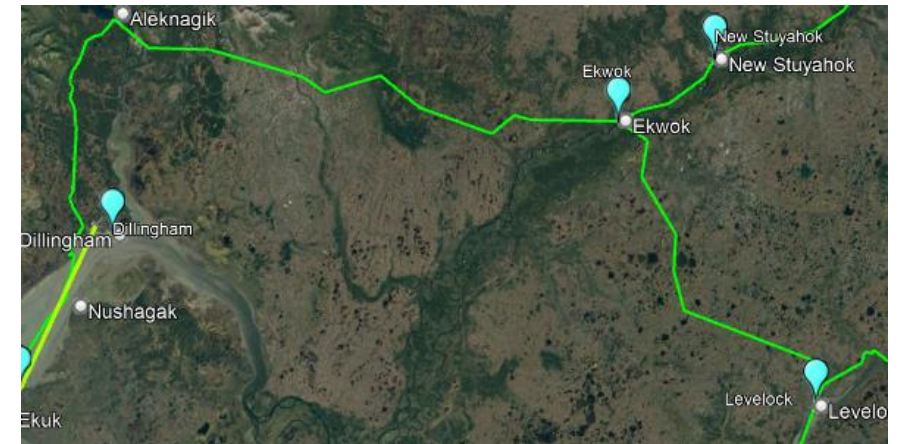
TBCP - Calista

- ▶ \$52.5M to Calista in collaboration with Alaska Communications to bring fiber to 10 villages
- ▶ Alaska Fiber Optic Project
- ▶ 180-mile middle mile fiber



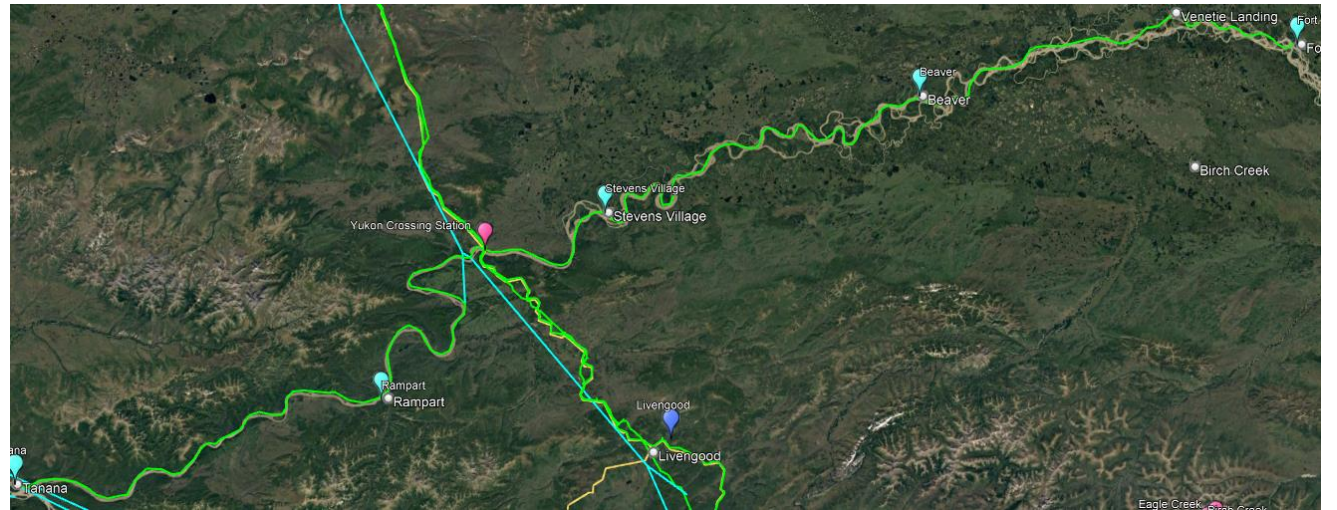
TBCP – Choggiung, Limited

- ▶ \$29.5M to Choggiung in collaboration with Nushagak Cooperative to deploy fiber to the home
- ▶ 100Mbps service
- ▶ 77-mile fiber



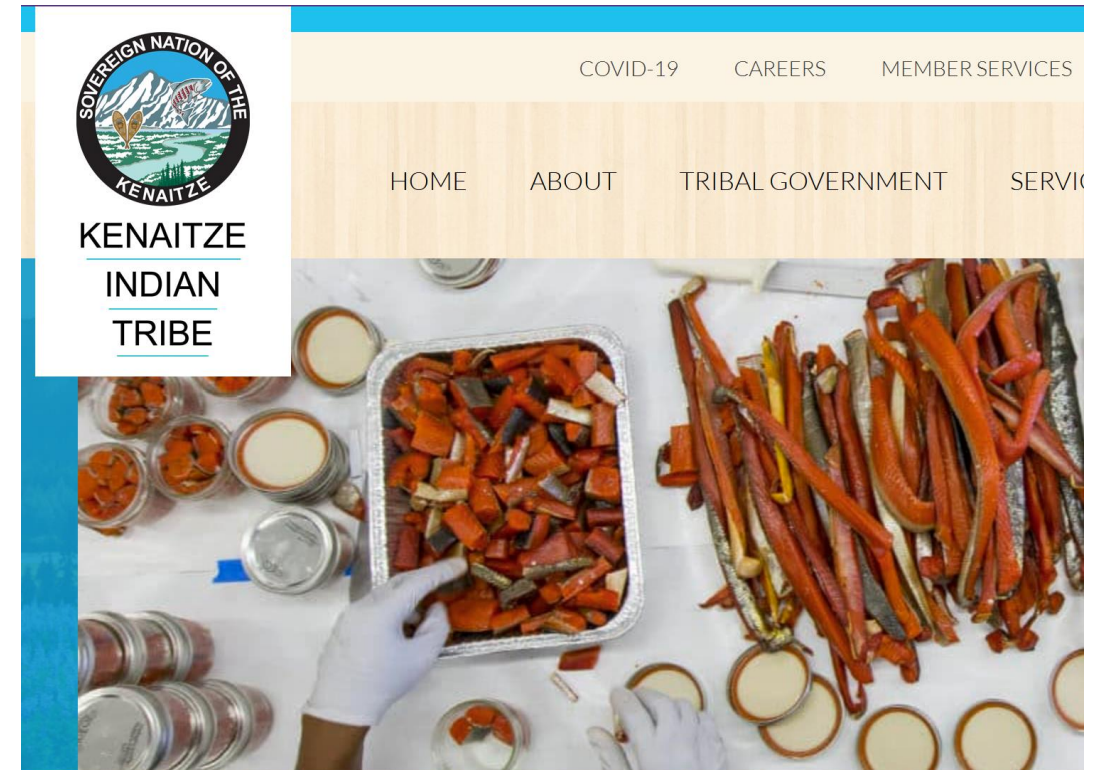
TBCP – Doyon

- ▶ \$50.7M to Doyon in collaboration with Alaska Communications to bring fiber to Fort Yukon, Beaver, Stevens Village, Rampart, and Tanana
- ▶ Alaska Fiber Optic Project
- ▶ 1GB service
- ▶ 5 villages



TBCP – Kenaitze Indian Tribe

- ▶ \$7M to deploy fiber to the home
- ▶ Minimum 336Mbps service



TBCP – Metlakatla Power & Light

- ▶ \$10.5M to deploy fiber to the home
- ▶ 2 mile undersea cable
- ▶ 1,000Mbps (1GB)



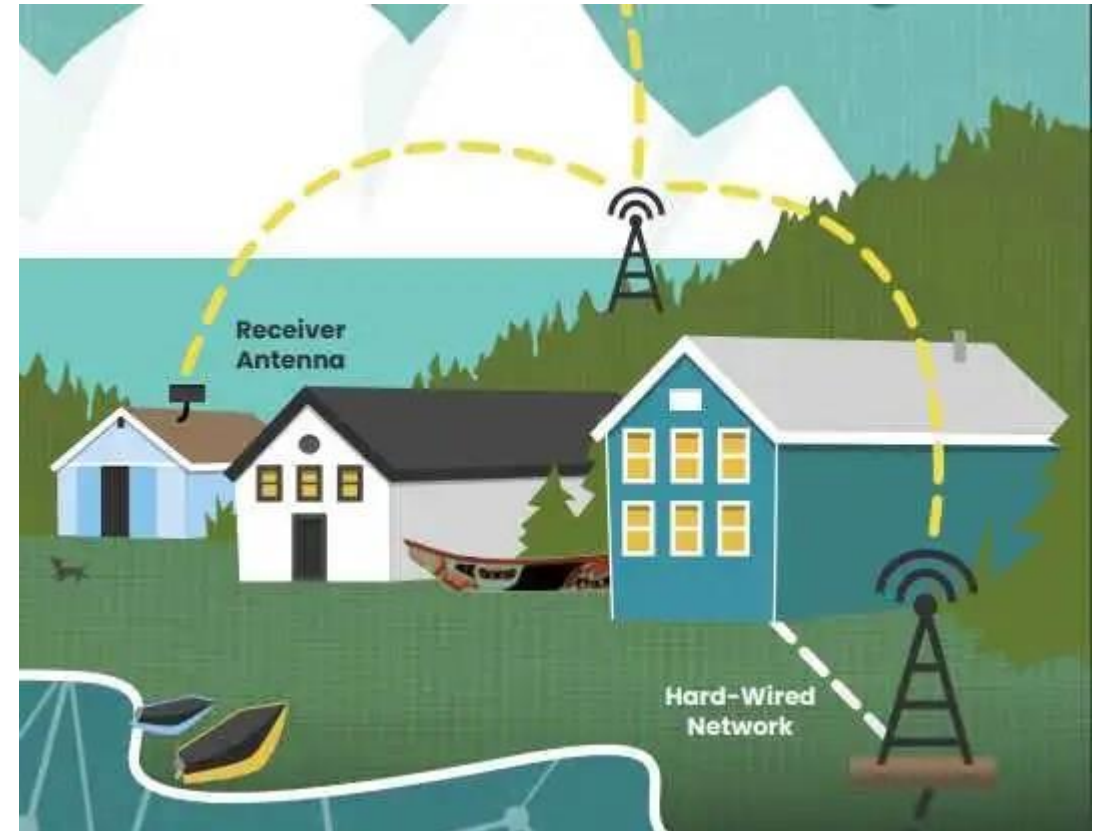
TBCP – Native Village of Port Lions

- ▶ \$29.3M to NVPL in collaboration with GCI
- ▶ Leverages GCI's \$70M Aleutian Fiber project
- ▶ Fiber to the premises & 2,000 Mbps speeds (2 GB)
- ▶ Will connect Chignik Lagoon, Chignik Lake, Cold Bay, False Pass, Ouzinkie and Port Lions



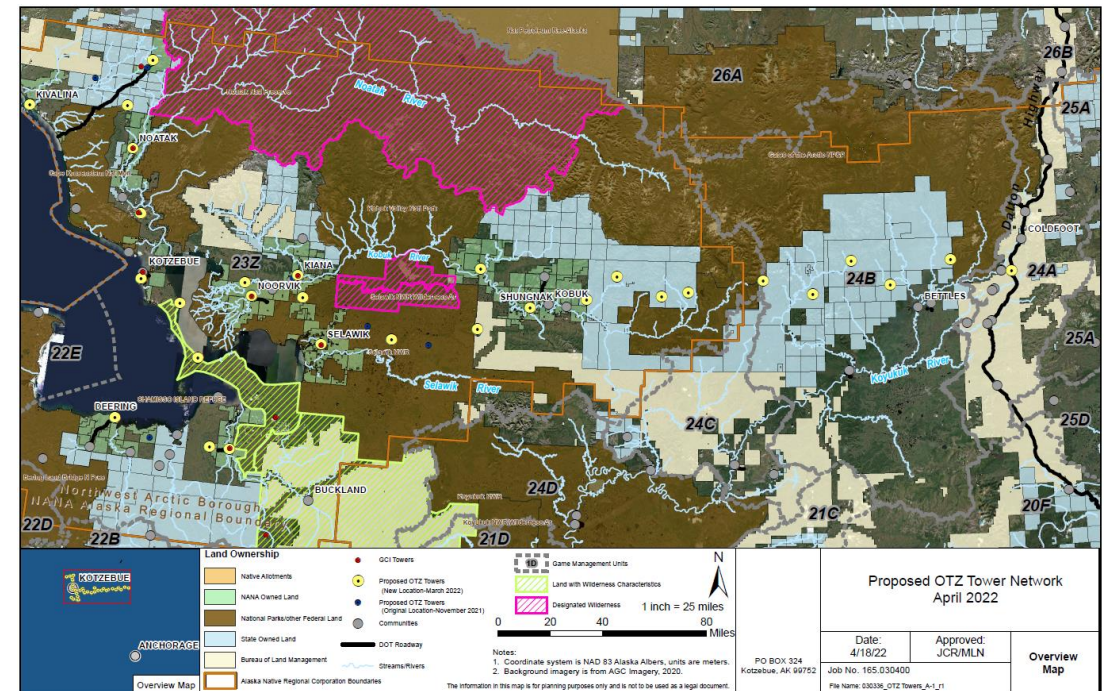
TBCP –Tlingit & Haida

- ▶ \$49.9M to deploy fixed wireless and LEO service
- ▶ Minimum speed 25/3



OTZ Telephone Cooperative

- ▶ \$30M loan
- ▶ 30 towers
- ▶ Fixed & mobile service
- ▶ 100Mbps



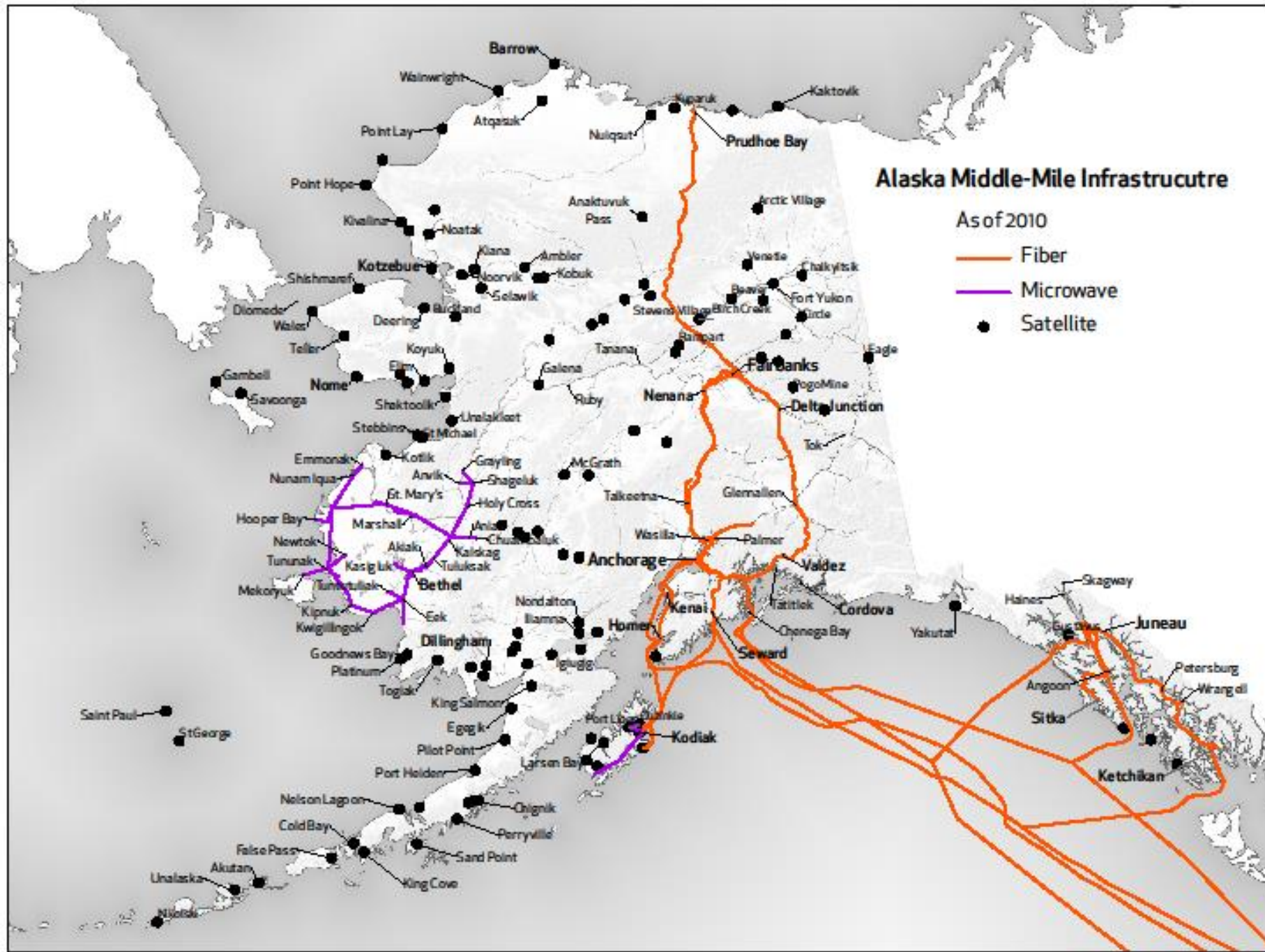
Alcan ONE – Matanuska Telecom Association



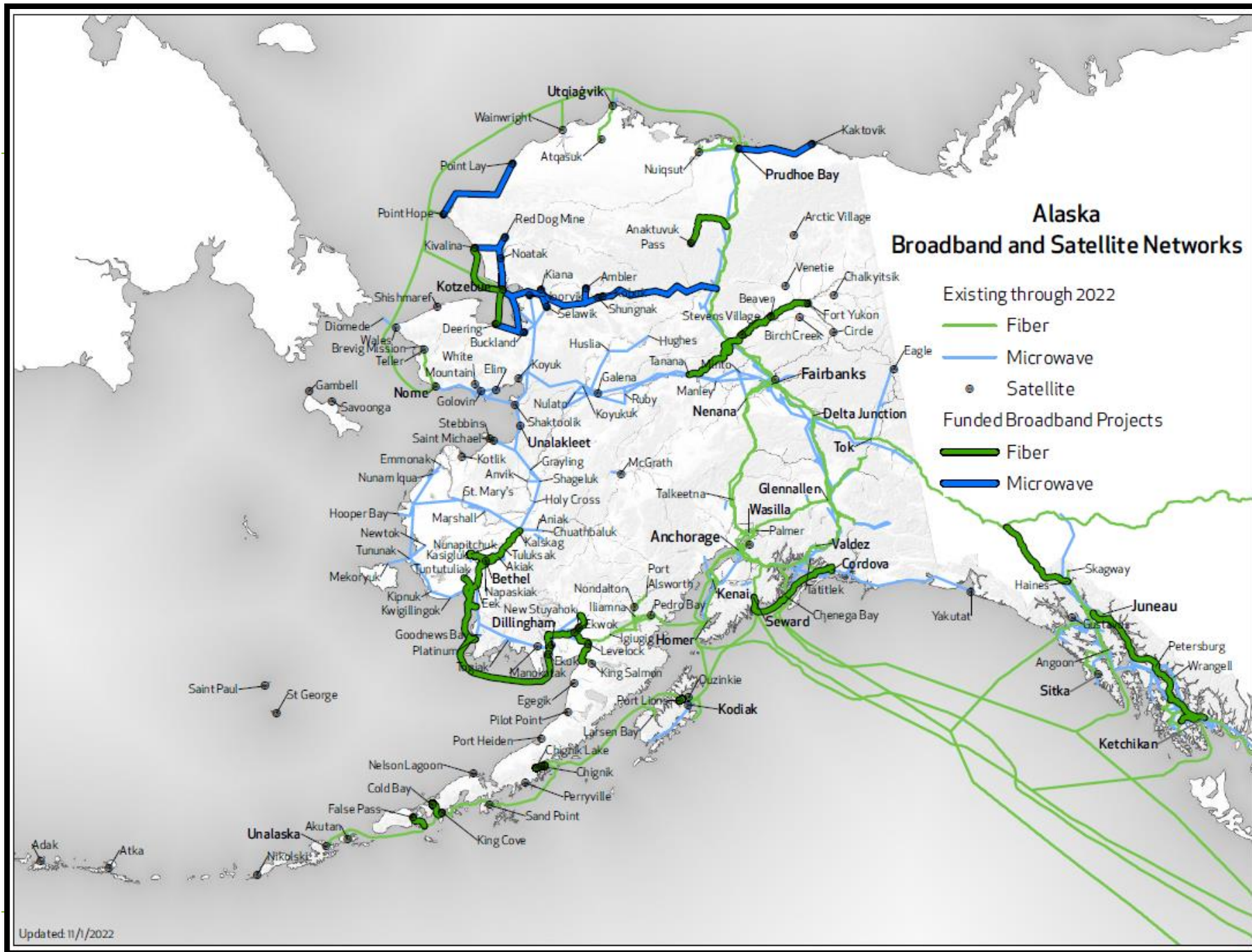
Ketchikan Public Utilities



Middle Mile 2010



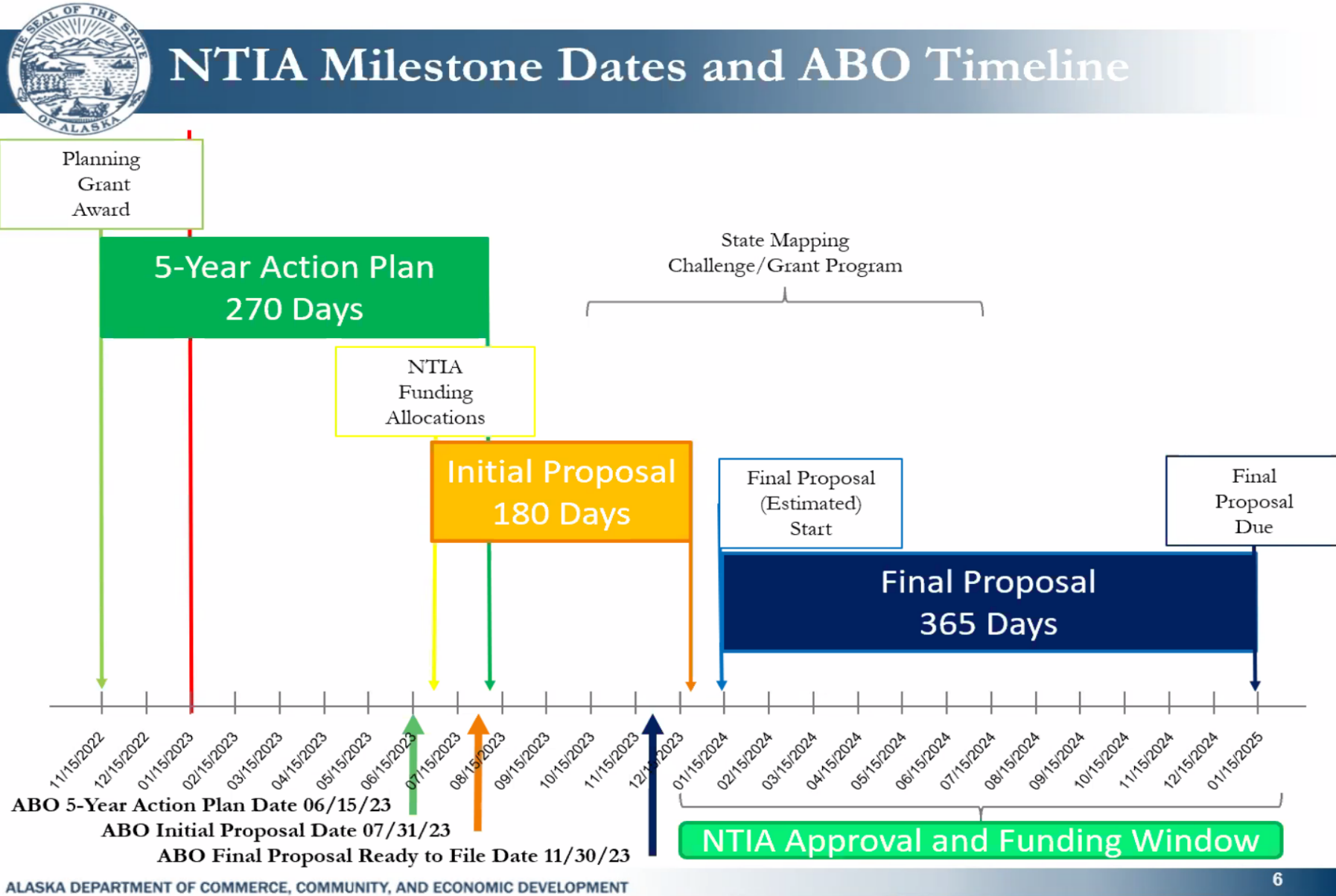
Middle Mile 2023



Broadband Equity, Access & Deployment (BEAD)

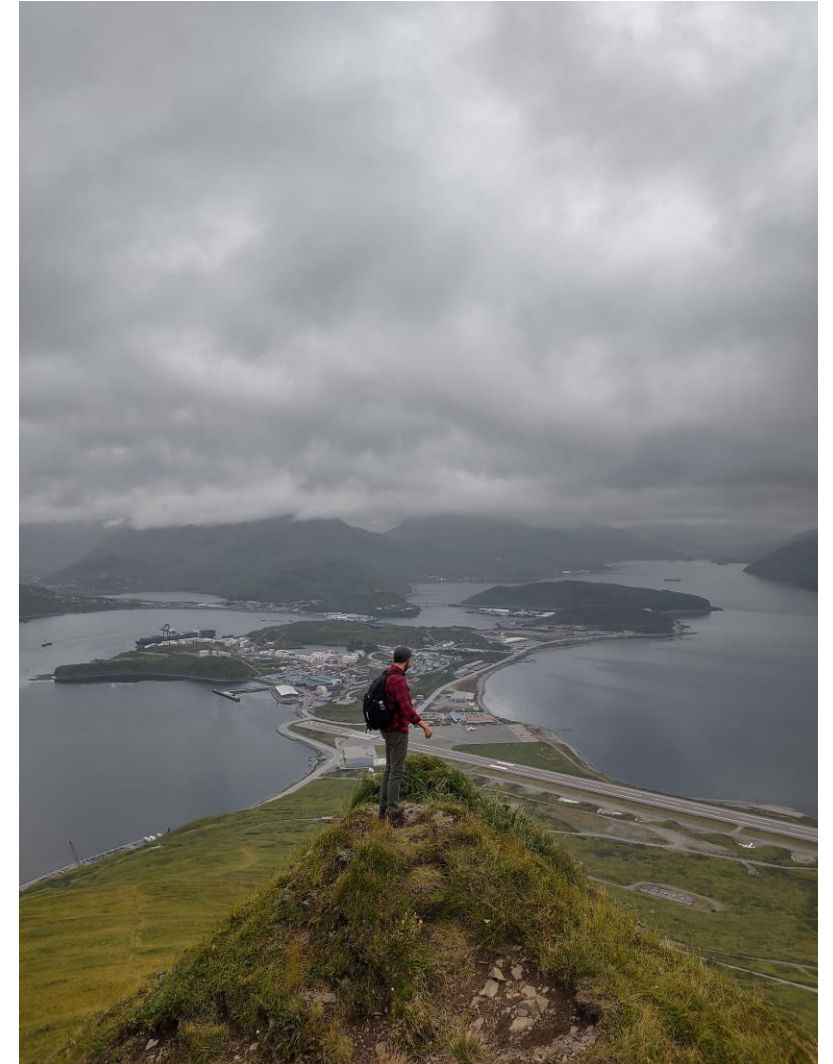
- ▶ \$42.5B Nationwide
- ▶ NTIA funds directly to Alaska Office of Broadband
 - ▶ Allocation depends on new FCC maps
 - ▶ Grants for broadband deployment
 - ▶ Priority 1 = Unserved <25/3Mbps
 - ▶ Priority 2 = Underserved <100/20Mbps
 - ▶ Priority 3 = Anchor institutions
 - ▶ Adoption & access
 - ▶ Requires 5-year plan
 - ▶ Delivers 100/20Mbps minimum service, scalable
 - ▶ Collaboration with local and statewide entities





What's Next?

- ▶ Grant opportunities
 - ▶ Collaboration
- ▶ State Office of Broadband
 - ▶ Engagement
 - ▶ Planning
- ▶ Implementation
 - ▶ Permitting, supply chain, workforce
- ▶ Sustainability



Contact

Christine O'Connor

Executive Director

ococonnor@alaskatel.org

(907) 570-6944 mobile

