

Central Council of Tlingit and Haida Indian Tribes of Alaska

Chris Cropley

Director Tidal Network

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Tidal

NETWORK

CONNECTING COMMUNITY

T I D A L N E T W O R K

Enhancing the broadband landscape of Southeast Alaska through collaboration.

Provide the most broadband coverage to the most people, for the lowest cost.

Provide service to *everyone*, not just Tribal Citizens.

Tidal Network started in 2021 to defend 2.5Ghz.

Applied for NTIA TBCP and was awarded \$49.8 million in November 2022.

Plans for over 20 communities in Southeast Alaska.

Tlingit & Haida's Tidal Network Progress

Sitka Tribe of Alaska - Wireless spectrum and RF design.

Kake Tribal - deliver Broadband services to their subscribers.

Pelican Community Coincul - Installed Starlink to serve Tribal citizen households.

Wrangell -Cell on Wheels, Tower leases and New tower sites.

Used to defend wireless spectrum.

Contributing to the development of a model for optimizing broadband expansion throughout SE Alaska.



Broadband to provide access to your services
with infrastructure we are building with your
services

Shipping

Carriers (Cordova Tel, APT, ACS, GCI, Starlink)

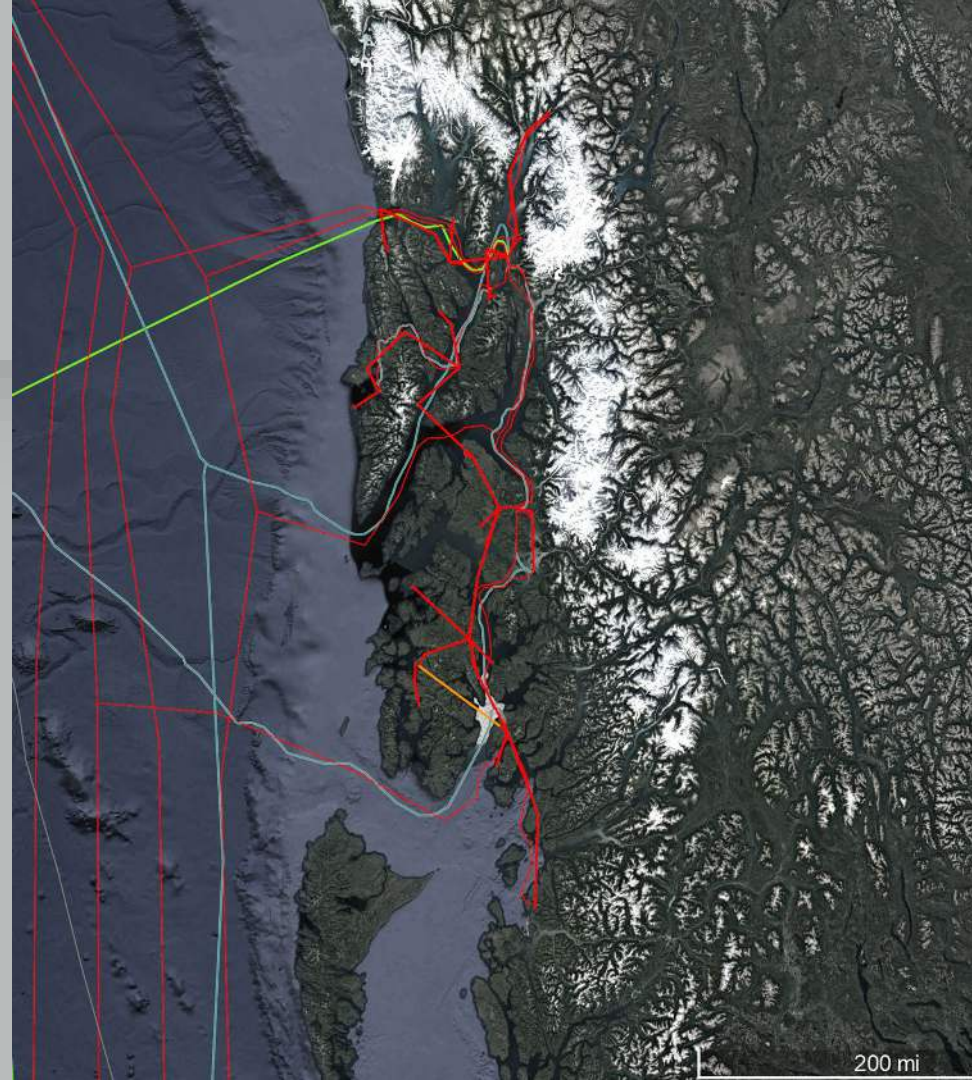
Storage

Tower leasing

Construction

Realtors

Permitting and Environmental



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ALASKA POWER & TELEPHONE FIBER OPTIC INITIATIVES

September, 2023



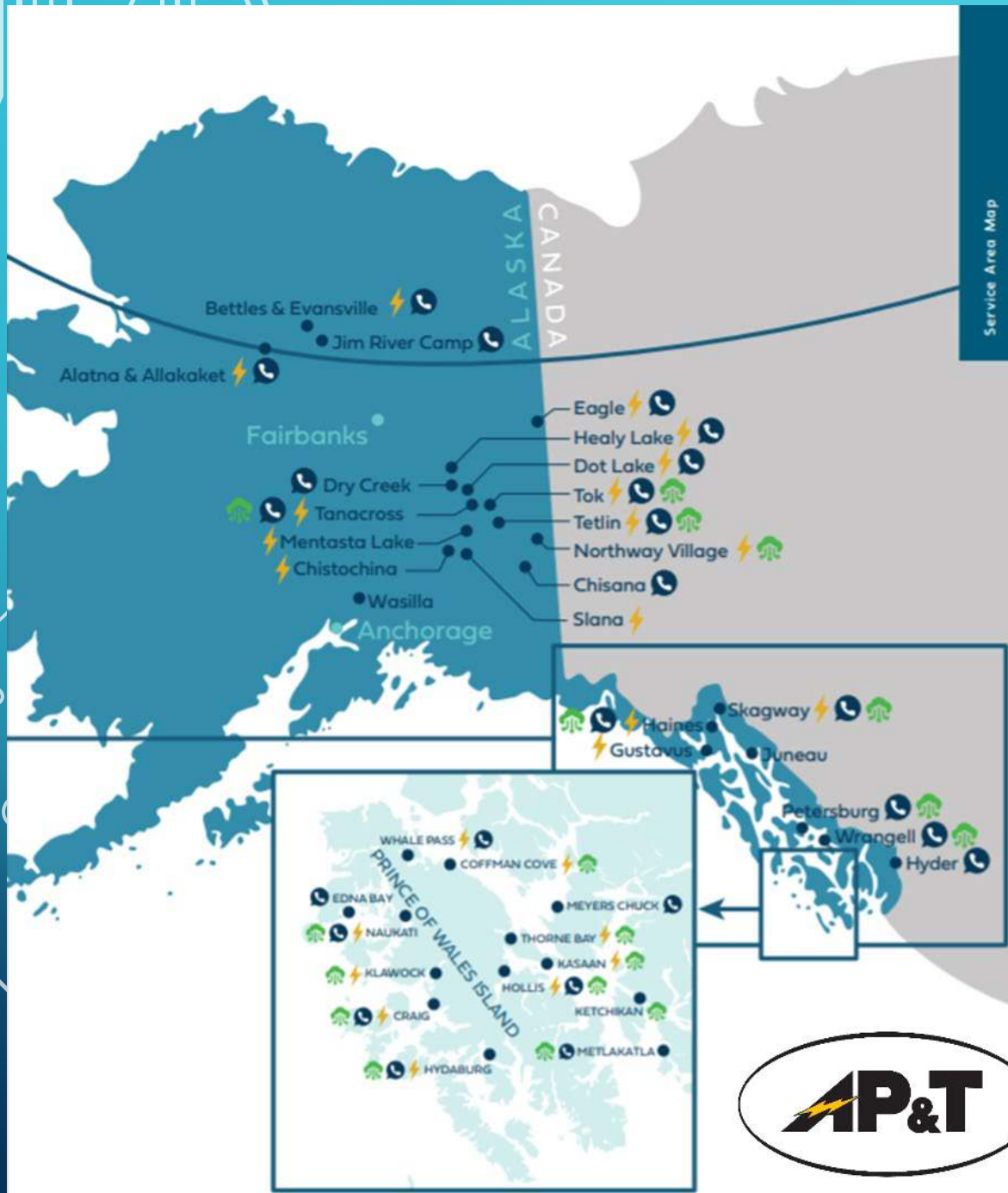
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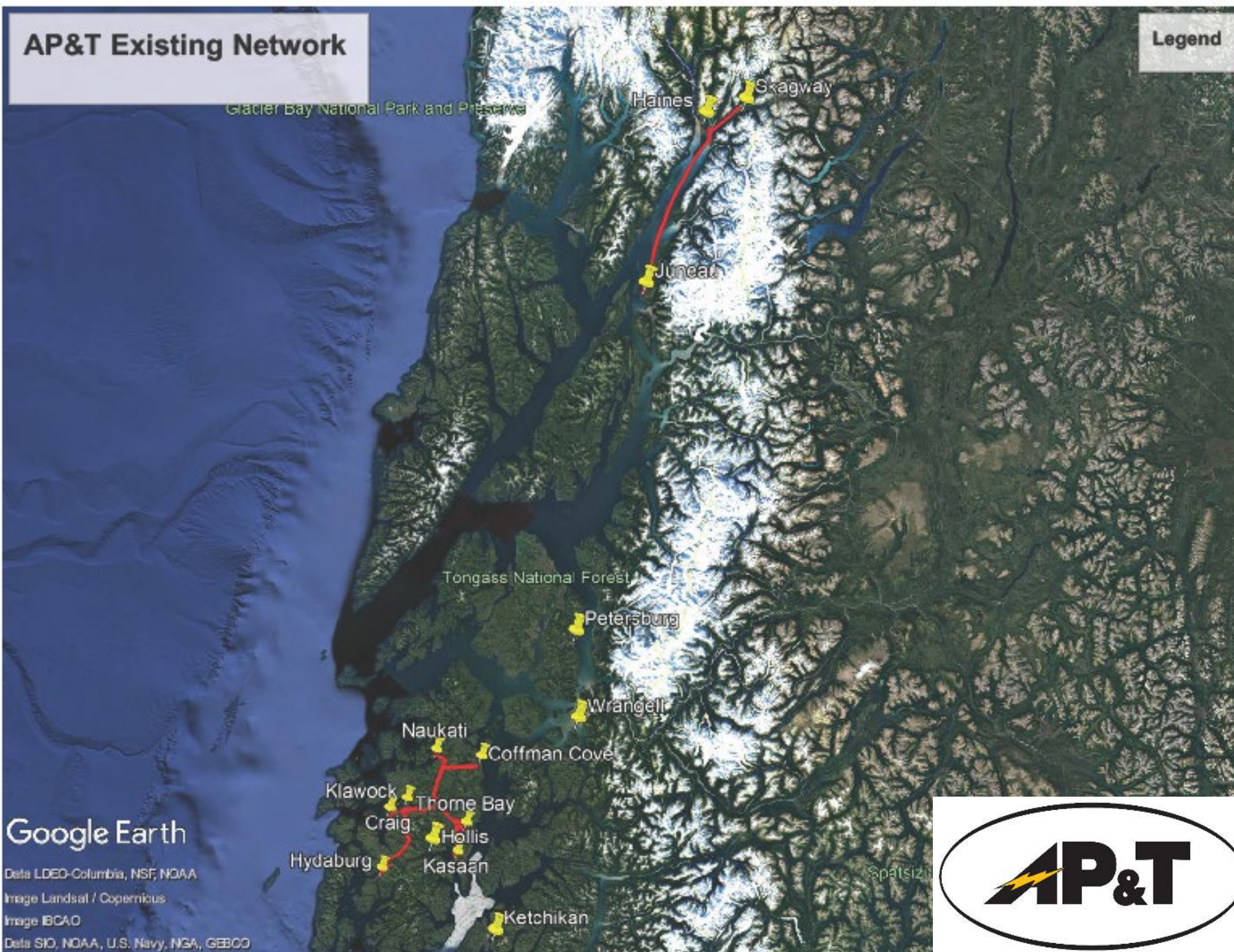
AP&T

SERVING RURAL ALASKA SINCE 1957

- Serves 40 rural Alaskan communities in SE AK and remote areas of the interior, spanning 1,100 miles from end to end.
- Small business with ~130 employees providing power, telephone, and telecom services
- Subcontractors play a key role in the success of AP&T's projects and operations. Significantly overlap with supply chains for forestry and mining... and AP&T still buys a lot of fuel!
- Serves remote communities in the Tongass National Forest region, which has been subject to significant economic shifts resulting from changes in federal land management policy
- 75% hydropower-based generation company-wide. (Higher percentages in SE AK communities.)
- Employee Stock Ownership Program (ESOP)
- Shares trade in the OTC market: "APTL"
- www.aptalaska.com for additional company details



AP&T Existing Network



AP&T NETWORK PRE-OCT. 2022

- **Lynn Canal Fiber** – subsea fiber optic cable between Juneau, Haines and Skagway.
- **Southeast Alaska Microwave Network (SAMN)** - spans SE Alaska from Skagway to Metlakatla.
- **Some terrestrial fiber on Prince of Wales Island.**
- **Existing fiber to the home in certain locations.** (Ex: Skagway, Haines)
- **Additional FTTH under development!**





RECONNECT ROUND 2 PROJECT: “SEALINK”

(Green)

- **SEALink cable system – subsea fiber optic cable interconnecting Juneau, Petersburg, and Coffman Cove. (Completed late October, 2022)**
- **Fiber to the home installations in Coffman Cove and Kasaan. (2023-2024)**
- **Provides a platform supporting continued improvement of services.**



Google Earth

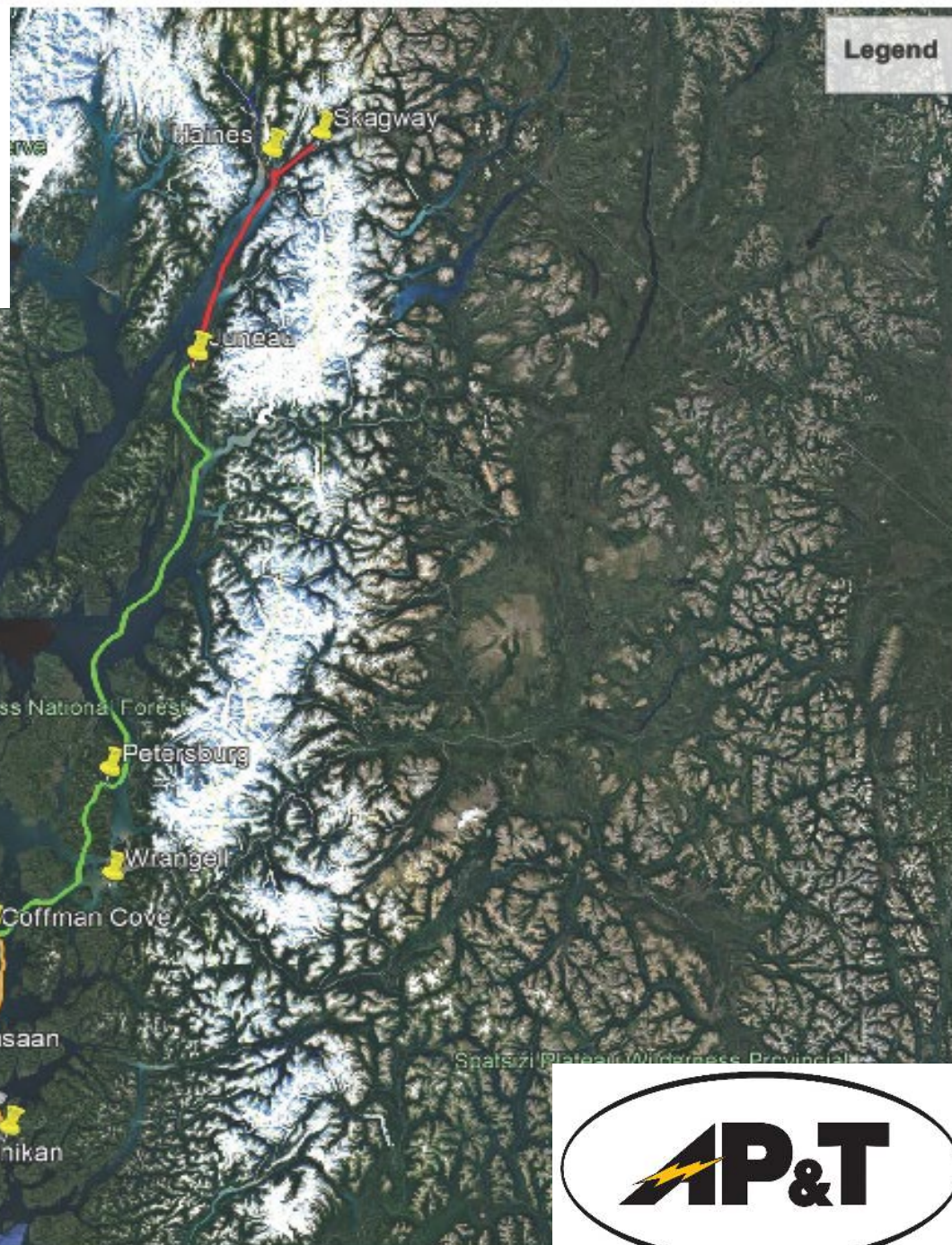
Data: IDEO-Columbia, NSF, NOAA

Image: Landsat / Copernicus

Image: IBCAO

Data: SID, NOAA, U.S. Navy, NGA, GEBCO

SEALink (South)



RECONNECT ROUND 3: “SEALINK SOUTH”

(Orange)

- Fiber to the home in Klawock, Craig, and Hollis.
- Subsea fiber interconnecting Coffman Cove, Hollis, and Ketchikan. (2025)
- Work scheduled to occur through 2027.



Google Earth

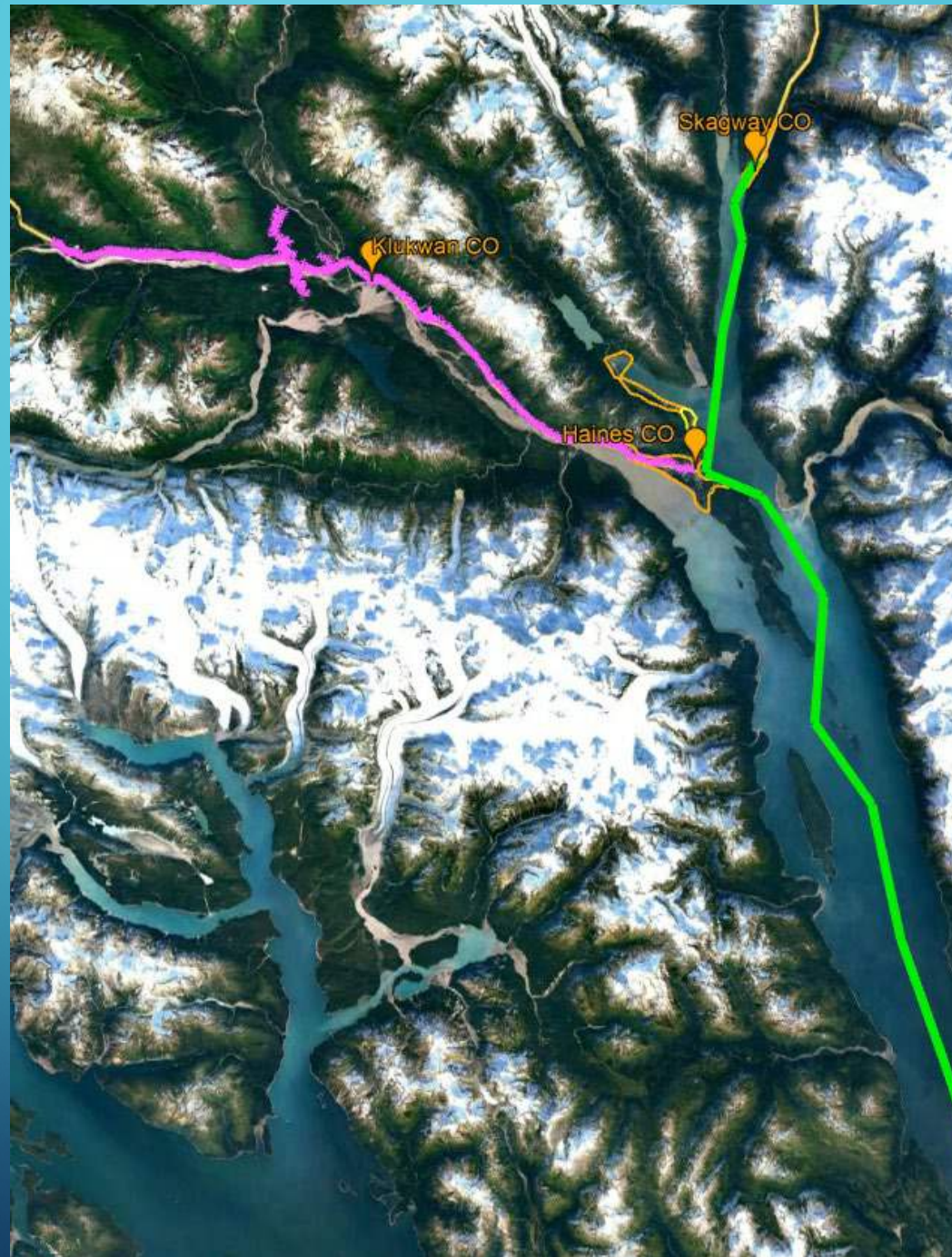
Data: LDEO-Columbia, NSF, NOAA

Image: Landsat / Copernicus

Image: IBCAO

Data: SIO, NOAA, U.S. Navy, NGA, GEBCO

Klukwan-Skagway Fiber

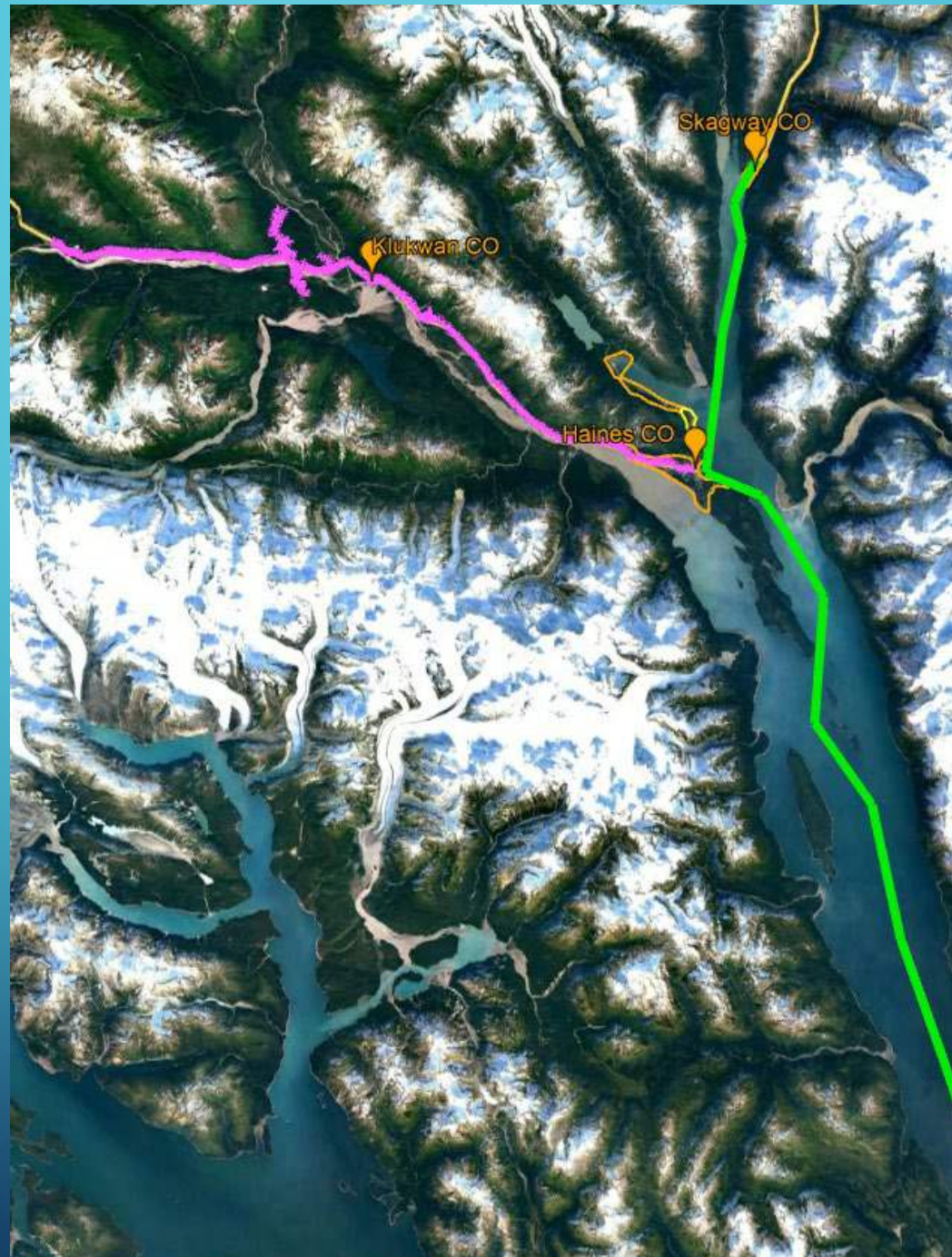


RECONNECT ROUND 3: “KLUKWAN- SKAGWAY FIBER”

(Purple)

- Fiber from Haines to outlying communities, including Klukwan.
- Fiber to the home in areas outlying Skagway (Dyea)
- Work scheduled to occur through 2027
- Schedule depends on agency permitting timeline (ex: NPS, USFS)

**Skagway Traditional Council
NTIA Tribal Broadband
Connectivity Program**



**SKAGWAY
TRADITIONAL
COUNCIL**
TRIBAL BROADBAND
CONNECTIVITY PROGRAM

- Working with AP&T, Skagway Traditional Council received a grant of ~\$2m for free (pre-paid) fiber-fed service for its tribal members for 5 years.
- The program has been active for several months.
- AP&T developed an approach that can be replicated in other communities, and is willing to help other tribes replicate this success.

ReConnect Round 4



RECONNECT ROUND 4 REQUESTS: HYDABURG, WHALE PASS, THORNE BAY

- These funding requests were not successful. However, AP&T is evaluating what might make them more competitive in the future.
- Transport fiber to Whale Pass. (Former Tongass logging community)
- Fiber to the home in the Alaska Native village of Hydaburg, and former the Tongass logging communities of Thorne Bay and Whale Pass.
- Work would occur through 2028.
- Development of a pole line to Whale Pass will help support a potential future electrical intertie allowing this diesel generation-reliant community to use surpluses of locally available hydropower.





KEY CHALLENGES

- **Uneven Availability of Service.** Some communities will receive high-speed services before others, potentially creating disparities. AP&T is working to develop solutions that bring all of its customers to the same level of service, where reasonably possible. AP&T's ability to develop and sustain infrastructure in rural communities depends upon external support for capital investment, and long-term operational costs.
- **Interplay of Federal Programs.** Different federal programs can cause conflicts, or have unexpected impacts to one-another. Using one program may mean you cannot use another, making it important to optimize outcomes for your customers.
- **Multiple Projects Competing for the Same Resources.** As more broadband projects come online, fueled by funding sources like BEAD, TBCP, and ReConnect, there will be increased competition for the same labor, equipment, and materials.
- **Agency Coordination.** It is essential that government agencies coordinate as closely as possible to achieve rural broadband policy objectives. This is particularly important given that the USFS and NPS are key landowners. Some agencies do not have broadband development as a priority.
- **Workforce Needs.** Key skillsets can be hard to fill. This has included field technicians, engineering resources, and even grant-writers. It can take years to develop these skills, and oftentimes the needs are temporary in nature, making "workforce development" difficult. However, it is hard to develop a long-term workforce for short term projects.
- **Supply Chain.** Lead times of certain items are very long. AP&T must order key items very far in advance. This is particularly true of "Buy American"—compliant items.
- **Inflation.** Inflation continues to cause significant increases to labor, equipment, and materials prices.
- **Weather Windows.** AP&T has a compressed construction season due to winter weather. Late fall / early winter storms also pose challenges to marine operations. If AP&T does not receive a permit or environmental approval in time, work may slip until the next season.
- **Permitting Timelines / Unknowns.** Most of SE Alaska is under government ownership. Permitting requirements are complex, particularly when federal funds are involved, or, when a project must cross federal lands. Agencies face significant backlogs. Some agencies do not have broadband development as a priority.
- **Buy American.** Many US suppliers do not have the legal and administrative resources required to confirm Buy American requirements and certify compliance. (Ex: subcomponents in equipment.) This can make it difficult to deal with small businesses, rural contractors, etc. (USDA Buy American includes various non-US countries.)



THANKS FROM AP&T!

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September, 2023

SEALink
AP&T





BEAD & DIGITAL EQUITY ACT PROGRAMS

KEY STAKEHOLDER OPPORTUNITIES



SEPTEMBER 2023

BEAD Program will provide ~\$42.45B for infrastructure planning and implementation

Funding pool
\$42.45B

A program to get all Americans online by funding partnerships between states or territories, communities, and stakeholders to build infrastructure where we need it and increase adoption of high-speed internet.

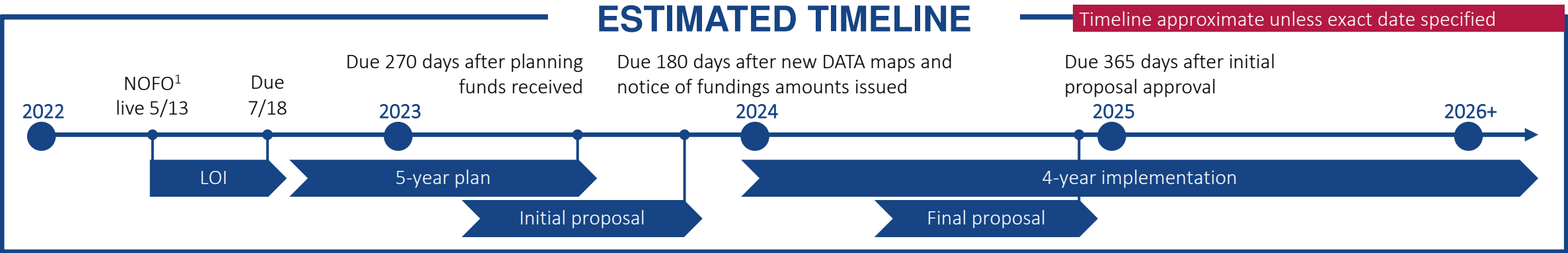
PROGRAM HIGHLIGHTS

Entities eligible to apply for this program include:

- All 50 States
- The District of Columbia and Puerto Rico
- Other Territories: U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands

Example eligible uses of funds include:

☆ Planning for deployment of Internet
☆ Deploying or upgrading Internet
☆ Installing Internet in multi-tenant buildings
☆ Implementing adoption and digital equity programs
☆ Workforce and job training



1. Notice of Funding Opportunity (NOFO), available [here](#).

BEAD to prioritize complete coverage of unserved locations and underserved locations (where funding permits)



Complete coverage of **unserved locations** (incl. by deploying Wi-Fi to multi-family buildings)



Complete coverage of **underserved locations** (where funding permits)



NTIA urges use of remaining funds for **Community Anchor Institutions (CAIs)** before other eligible uses

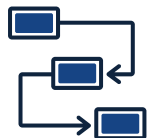
Note: If an Eligible Entity has a plan to deploy service to all unserved and underserved locations within its jurisdiction, it may pursue non-deployment initiatives before or while deployment projects are underway

3

State Challenge Process | The eligible entity must conduct a process for stakeholders to challenge if a location is eligible for funds



First, each Eligible Entity must develop and describe in the Initial Proposal, a process to challenge its determination of whether a particular location or CAI¹ is eligible for grant funds



Second, the Eligible Entity shall conduct the challenge process (once approved by the Assistant Secretary) before allocating grant funds received from BEAD for the deployment of broadband networks



Third, after resolving each challenge and at least **60 days before allocating funds** for deployment, an Eligible Entity must **provide public notice of the final classification** of each unserved location, underserved location, or eligible community anchor institution



Fourth, NTIA has discretionary authority to reverse the determination of an Eligible Entity with respect to the eligibility of a particular location or community anchor institution

1. Community Anchor Institution

Subgrantee Selection | When selecting among proposals, Eligible Entities must use an approved process with certain criteria

Process must first assess which locations have one or more proposals that meet two criteria:

1. Satisfy subgrantee requirements
2. Priority Broadband Projects

Priority Broadband Projects are projects that will rely entirely on **fiber-optic technology** to reach end-user premises

Except that an Eligible Entity may disqualify any project that **surpasses the Extremely High Cost Per Location Threshold**

Primary criteria must account for **≥75%** of the total selection criteria available in choosing between proposals

Priority Broadband Projects

If there is **only one** priority project proposal for an area, that proposal is the default winner unless a waiver granted

If there is **more than one** priority proposal, run competition, affording benefits to the following factors:

- ★ Minimal BEAD Program outlay
- ★ Affordability
- ★ Fair labor practices
- ☆ Speed to deployment
- ☆ Workforce development
- ☆ Open access
- ☆ Local and Tribal coordination

Non-priority projects

If there is **only one** project proposal for an area, that proposal is the default winner unless a waiver granted

If there is **more than one** proposal, run competition, affording benefits to the following factors:

- ★ Minimal BEAD Program outlay
- ★ Affordability
- ★ Fair labor practices
- ☆ Speed to deployment
- ☆ Speed and tech capabilities
- ☆ Workforce development
- ☆ Open access
- ☆ Local and Tribal coordination

Digital Equity Act created three programs to promote digital equity and inclusion

Funding pool
\$2.75B

Three programs that provide funding to promote digital inclusion and advance equity for all. They aim to ensure that all communities can access and use affordable, reliable high-speed Internet to meet their needs and improve their lives.

PROGRAMS HIGHLIGHTS

The Digital Equity Act created three programs:

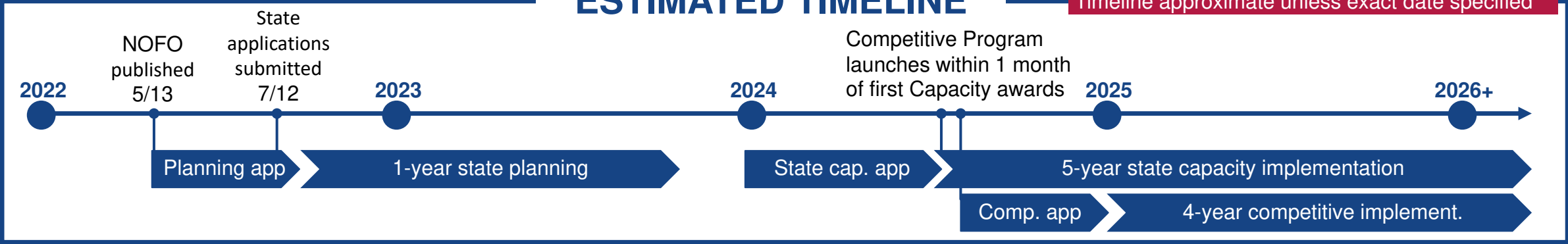
State Planning \$60M formula funding program to develop digital equity plans	State Capacity \$1.44B formula funding program to implement plans & promote digital inclusion	Competitive \$1.25B to implement digital equity and inclusion activities
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Example eligible uses of funds across three programs include:

☆ Developing digital equity plans; states must develop a plan to be eligible for state capacity grants	☆ Making awards to other entities to help make digital equity plans	☆ Improving accessibility and inclusivity of public resources
☆ Implementing digital equity plans and related activities	☆ Providing digital literacy and digital skills education	☆ Facilitating the adoption of high-speed Internet

ESTIMATED TIMELINE

Timeline approximate unless exact date specified



Programs' funds can be used for different purposes



Uses of State Planning Grant funds

- **Developing** State Digital Equity **Plans**
- **Making subgrants** to other entities, such as community anchor institutions, municipalities, Indian Tribes, nonprofits, and other organizations, that help develop the Digital Equity Plan



Uses of State Capacity and Competitive Grant funds

- **Updating and implementing** State Digital Equity **Plans** (Capacity)
- Pursuing **digital inclusion activities**
- Facilitating **adoption** of high-speed Internet
- Implementing **training and workforce development programs**
- Making **equipment and software** for high-speed Internet services available
- Constructing or upgrading **public access computer centers**

State Planning and Capacity funds will be allocated proportionally based on the State's population, share of members of covered populations, and relative lack of availability and adoption among residents

NTIA and the U.S. Census Bureau have collaborated to create the Digital Equity Act Population Viewer, which shows covered population totals for each state and other inputs into the funding formula

Additional resources

- 1 Visit the InternetForAll.gov for additional information on federal funding programs
- 2 Engage with your State or territory regarding their plans to improve high-speed Internet access and achieve digital equity
- 3 Submit questions to tsachtleben@ntia.gov
- 4 Attend future NTIA webinars and events



State of Broadband

September 21, 2023
Southeast Conference



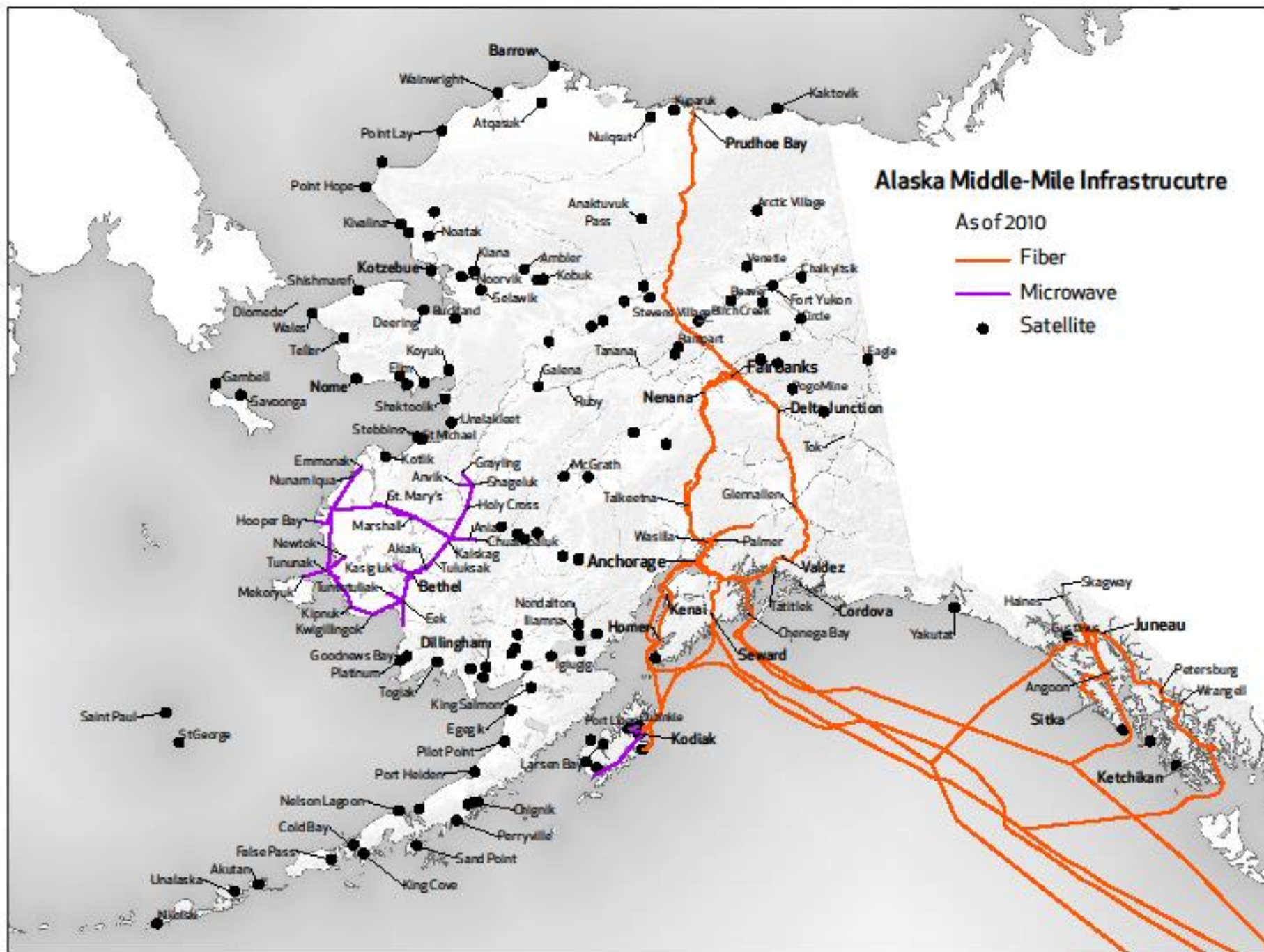


Momentum 2017-2022

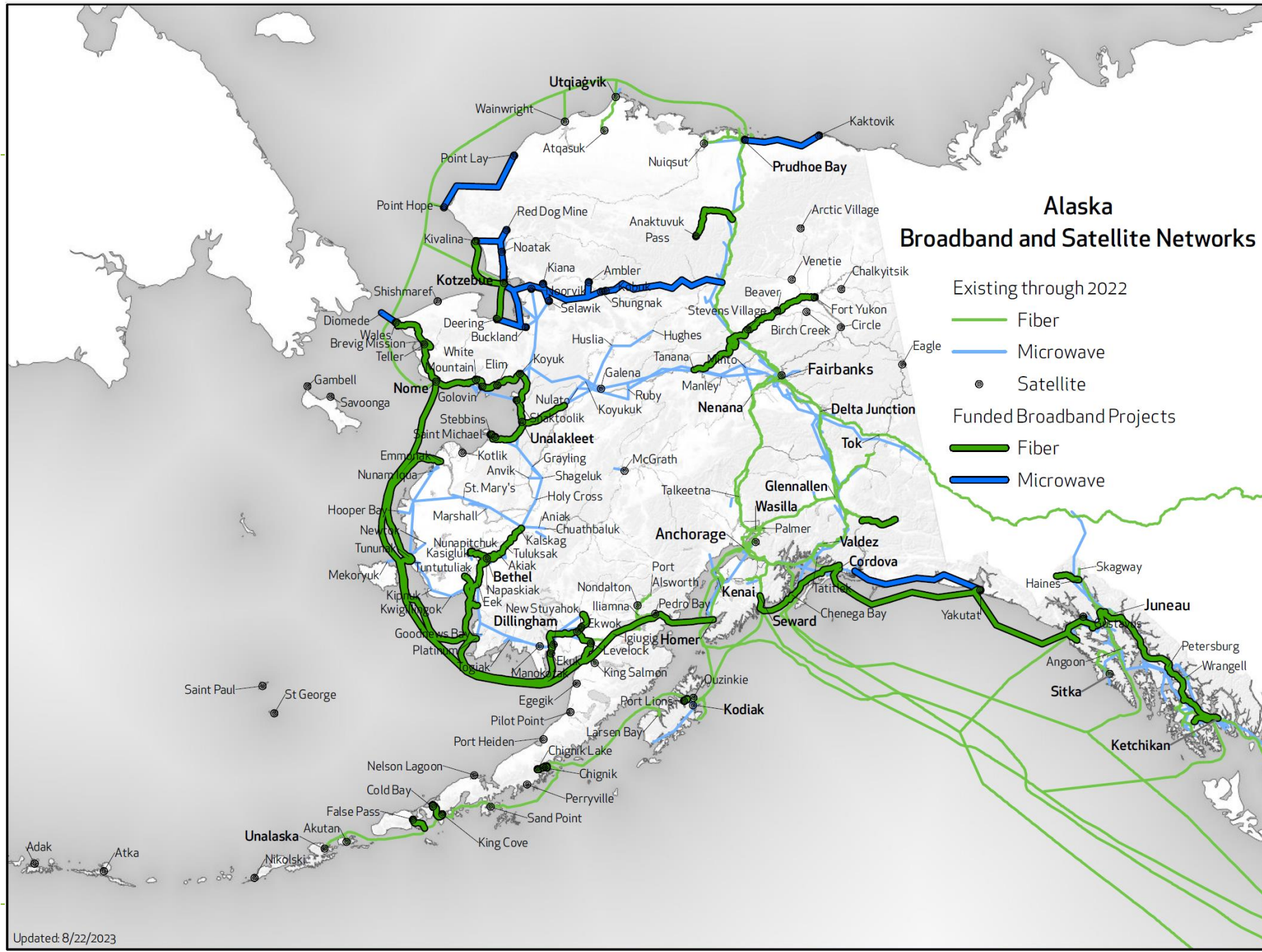
- ▶ 70,000+ locations upgraded/deployed
- ▶ 50,000 Alaskans improved wireless service
- ▶ \$1.7B capex



Middle Mile 2010



Middle Mile 2023



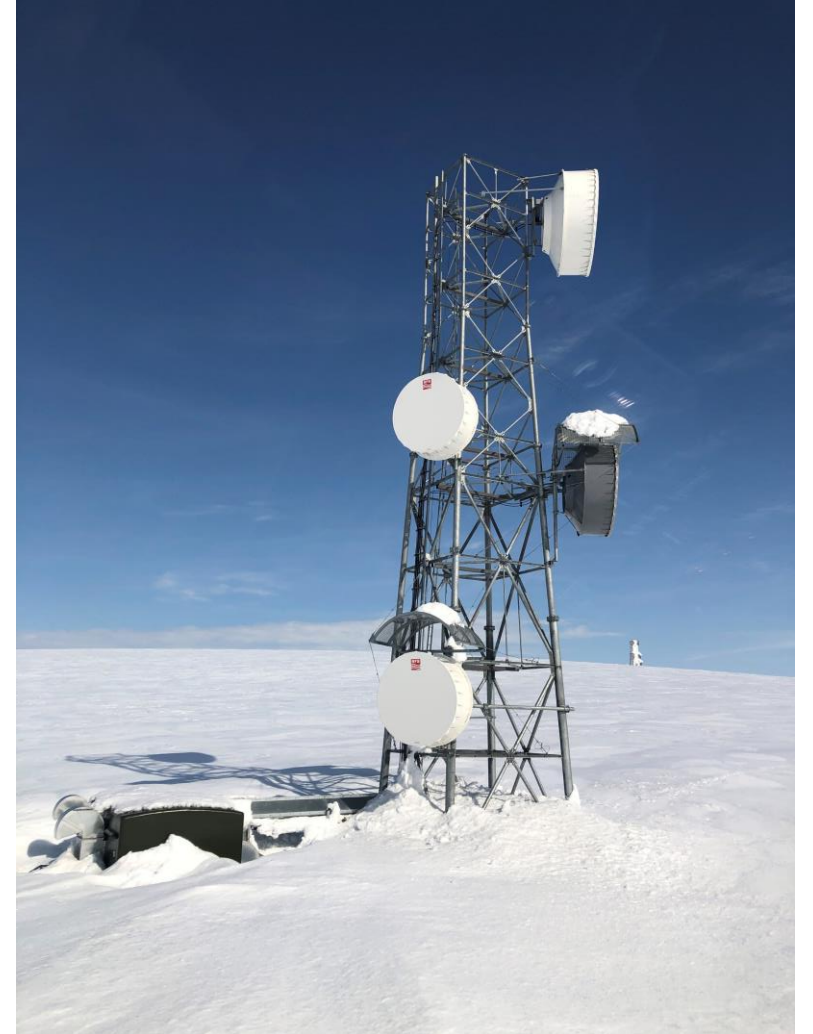
What's new?

- ▶ ReConnect
- ▶ Tribal Broadband Connectivity
- ▶ Enabling Middle Mile
- ▶ Broadband Equity Access & Deployment (BEAD)



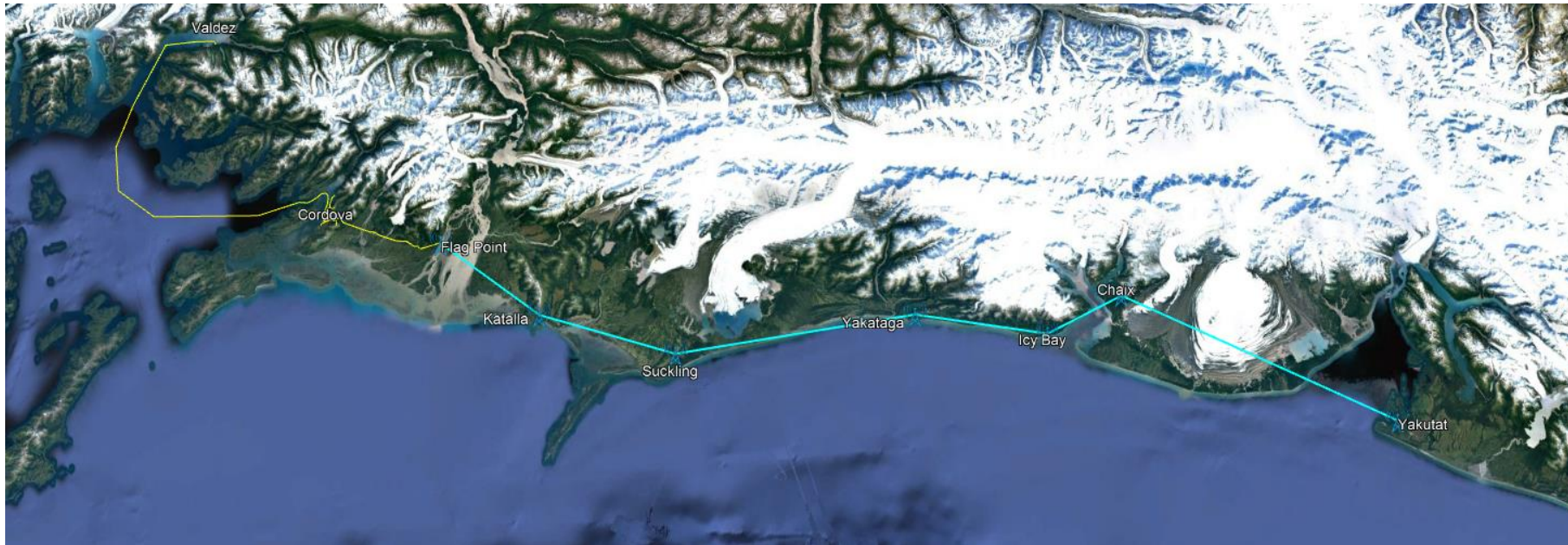
ReConnect Grant Program

- ▶ \$576M grants, \$65M matching
- ▶ 22 Alaska awards
- ▶ Fiber and microwave technologies
- ▶ Round 5 in 2024



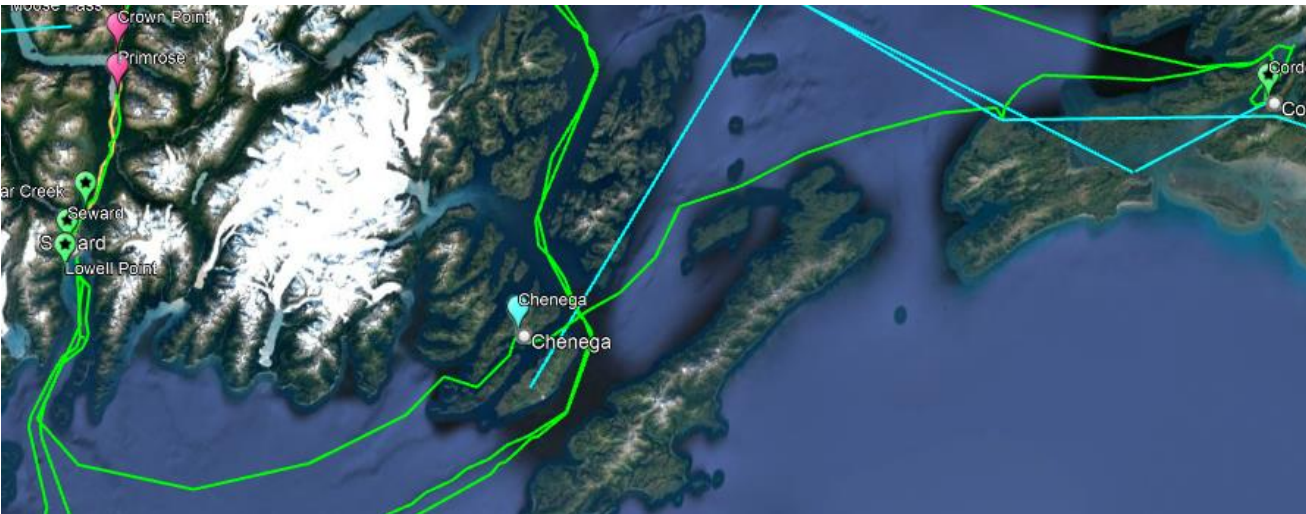
ReConnect - NICEY

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



ReConnect – FISH West

- ▶ \$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.



CORDOVA TELECOM COOPERATIVE

ReConnect – FISH South

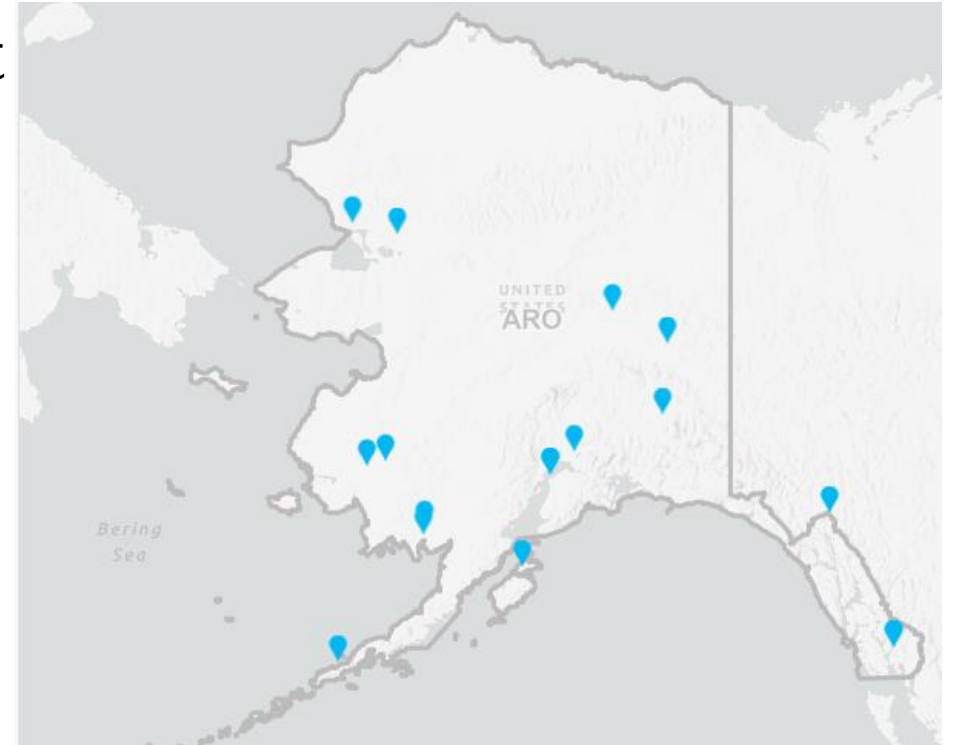
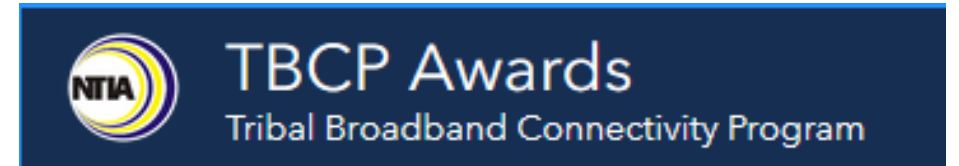


- ▶ \$34.9M grant
- ▶ \$11.65 match
- ▶ Subsea Fiber/FTTH
- ▶ Cordova-Yakutat-Pelican-Juneau
- ▶ Cordova Telecom Cooperative



Tribal Broadband Connectivity Program

- ▶ \$1B first round, \$2B added from Bipartisan Infrastructure Law
- ▶ 2 categories, adoption & deployment
- ▶ Round 1
 - ▶ \$383M deployment grants
 - ▶ \$58M use & adoption, planning
- ▶ Round 2 application window open



Enabling Middle Mile Program

- ▶ NTIA
- ▶ \$1B nationwide
- ▶ “Encourage the expansion and extension of middle mile infrastructure to reduce the cost of connecting unserved and underserved areas ... and to promote broadband connection resiliency”



Enabling Middle Mile – Nome to Homer

- ▶ \$88M grant
- ▶ Subsea/terrestrial fiber
- ▶ Quintillion
- ▶ “Nome to Homer Express”
- ▶ Nome, Emmonak, Naknek, King Salmon, Igiugig, Homer



Ketchikan Public Utilities

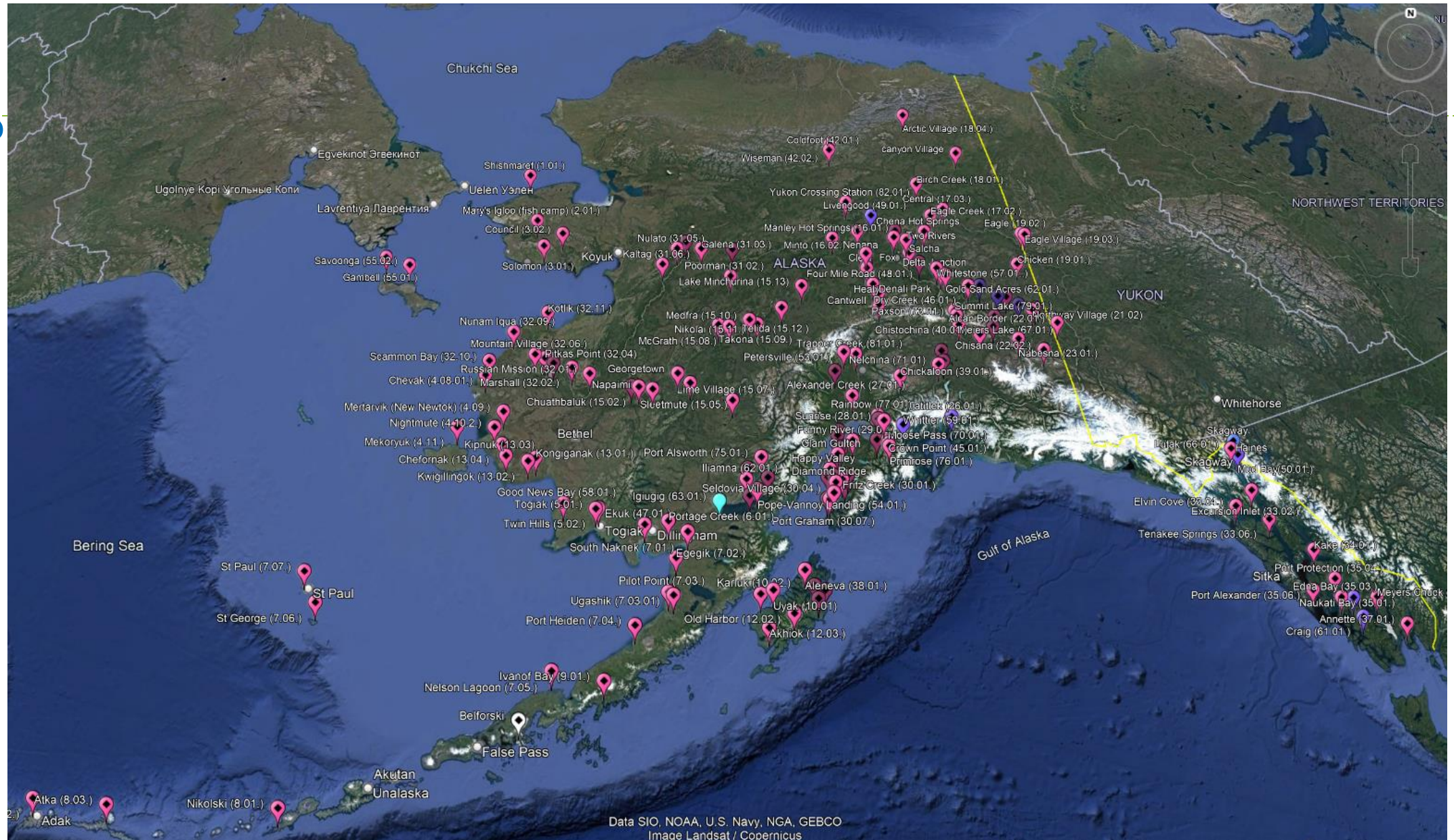


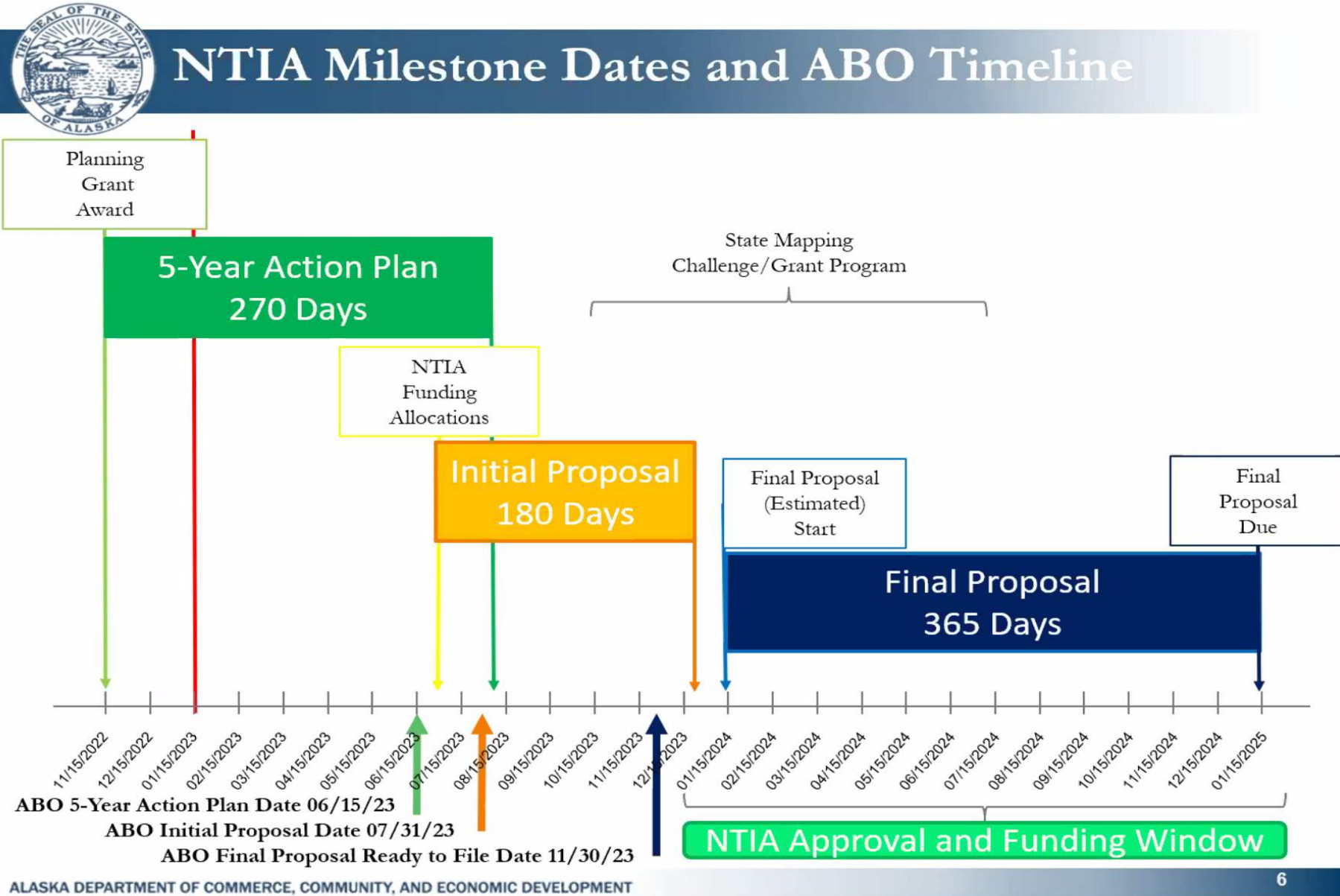
Broadband Equity, Access & Deployment (BEAD)

- ▶ \$42.5B Nationwide - \$1B to Alaska
- ▶ Alaska Office of Broadband
 - ▶ Grants for broadband deployment
 - ▶ Priority 1 = Unserved <25/3Mbps
 - ▶ Priority 2 = Underserved <100/20Mbps
 - ▶ Priority 3 = Anchor institutions
 - ▶ Adoption & access
- ▶ Requires detailed planning
- ▶ Favors fiber
- ▶ Projects must deliver 100/20Mbps minimum service, scalable to 1GB



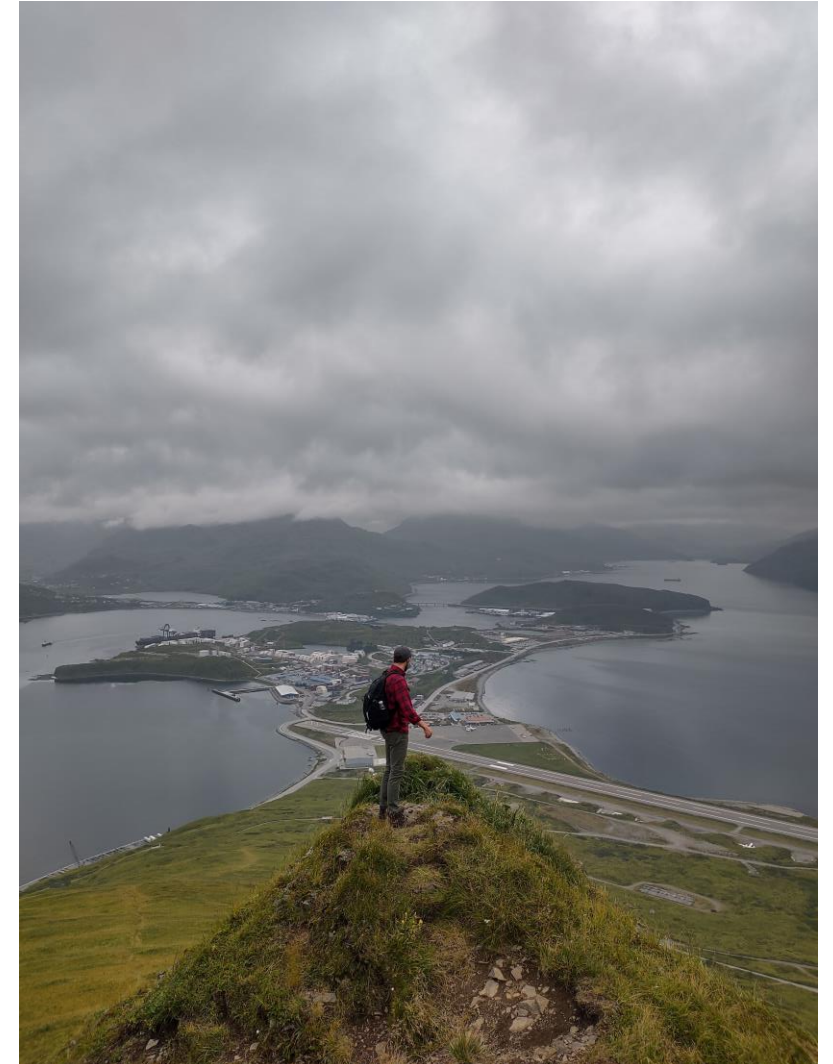
BEAD Priority





What's Next?

- ▶ ~\$2B grants 2020-2026
- ▶ Coordination
 - ▶ Simultaneous grant programs
- ▶ Implementation
 - ▶ Permitting, supply chain, workforce
- ▶ Sustainability?



Contact

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