

ALASKA POWER & TELEPHONE FIBER OPTIC INITIATIVES

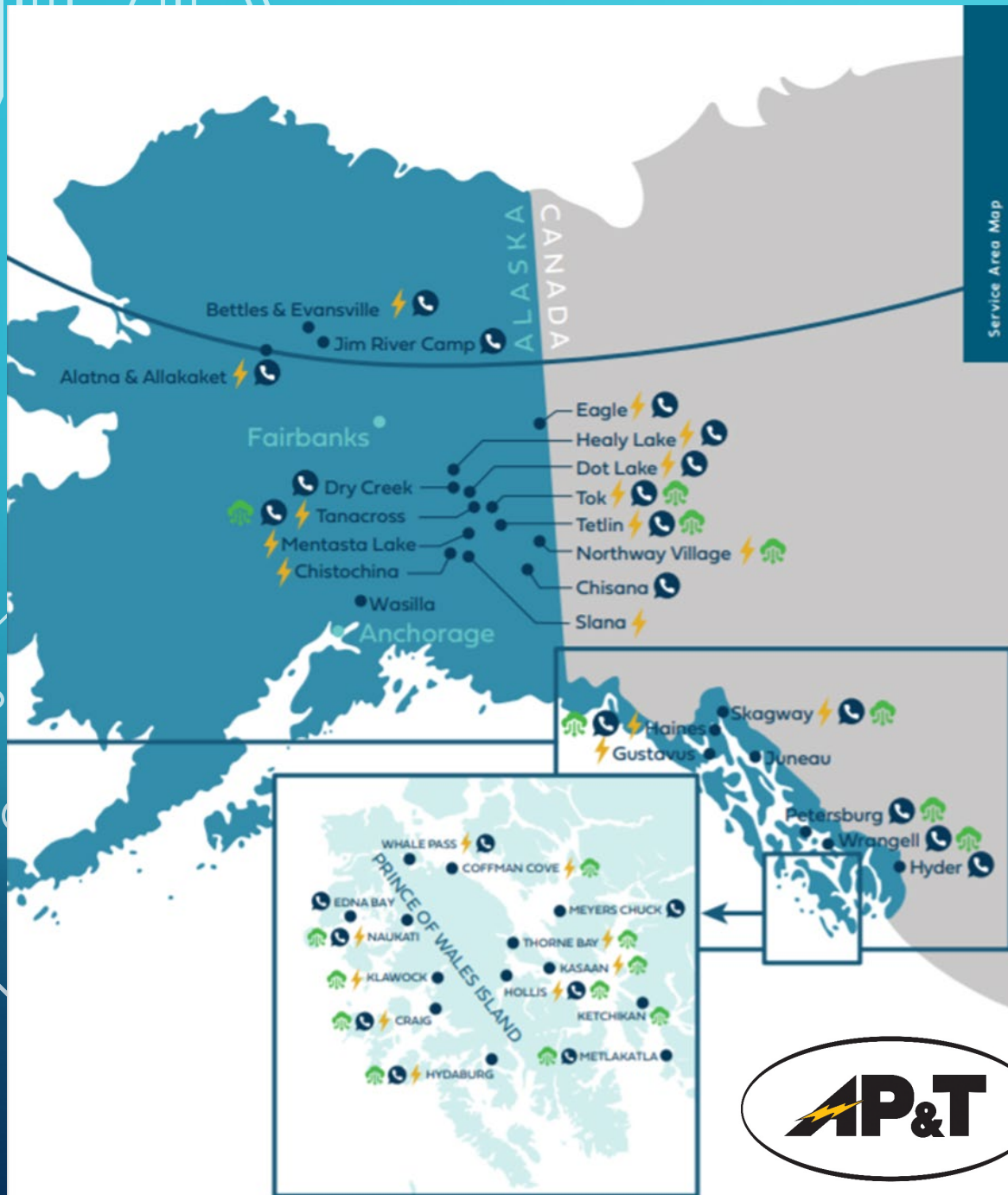


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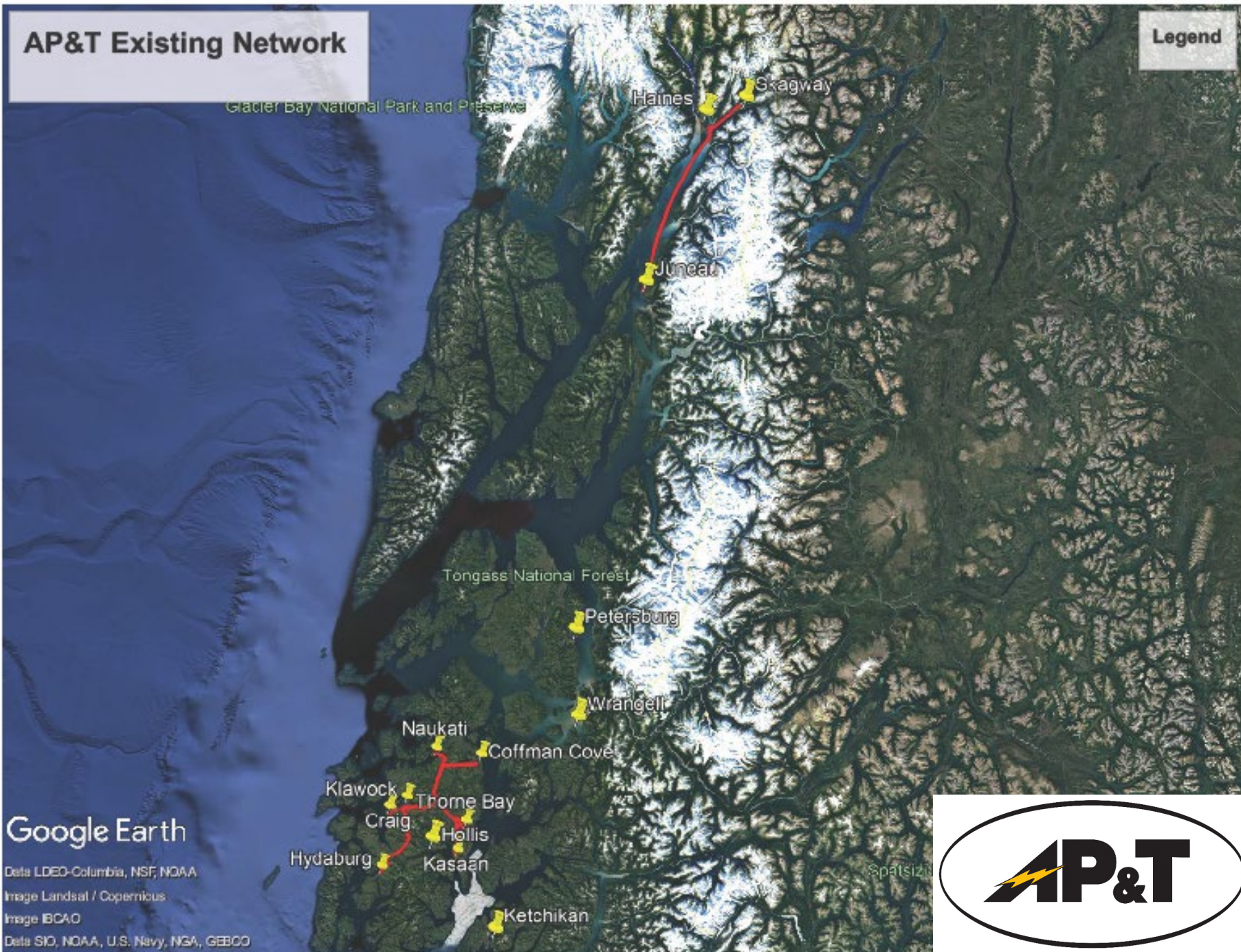
AP&T

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

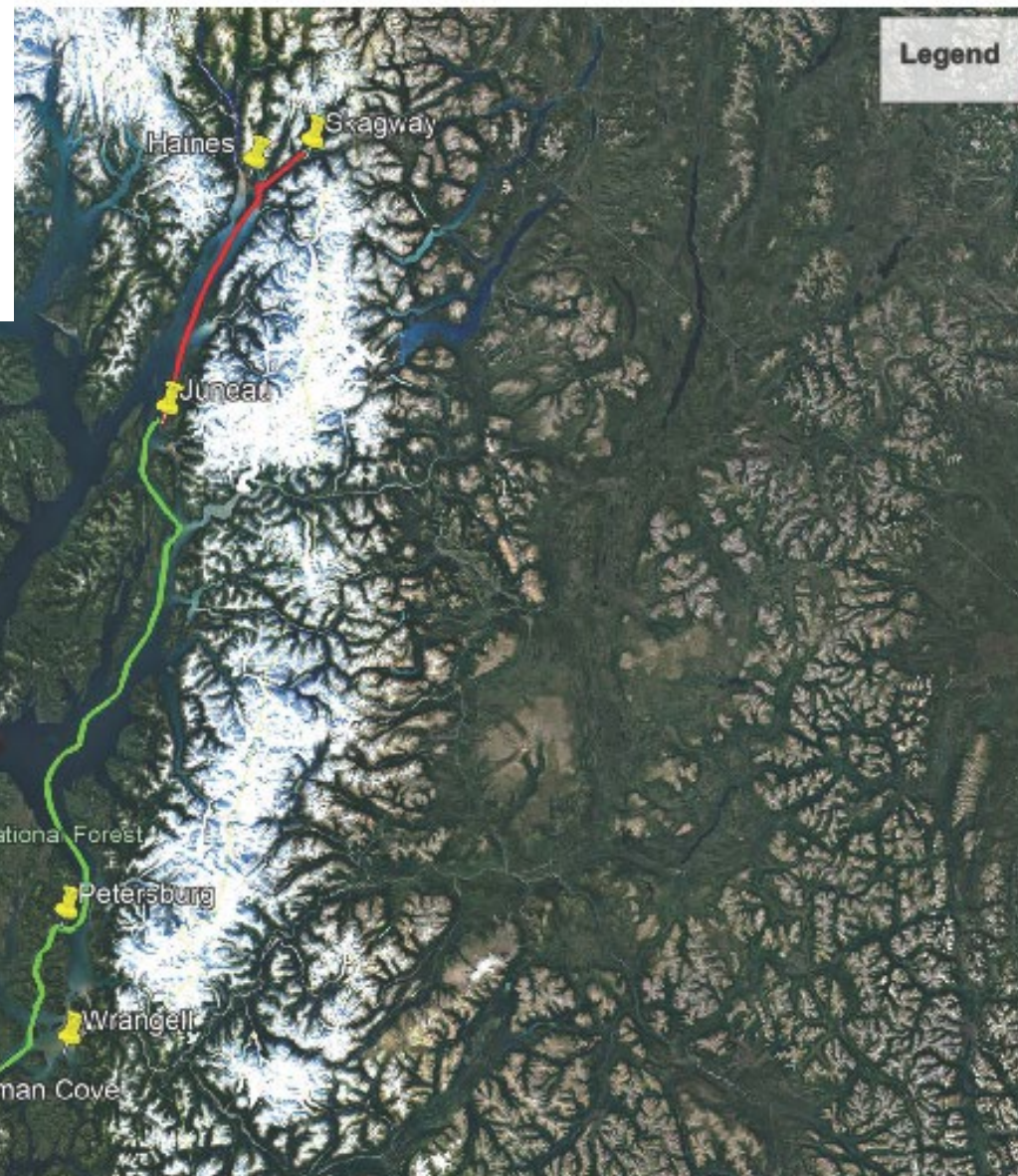
AP&T Existing Network



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!**

SEALink



Google Earth

Data LDEO-Columbia, NSF, NOAA

Image Landsat / Copernicus

Image IBCAO

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

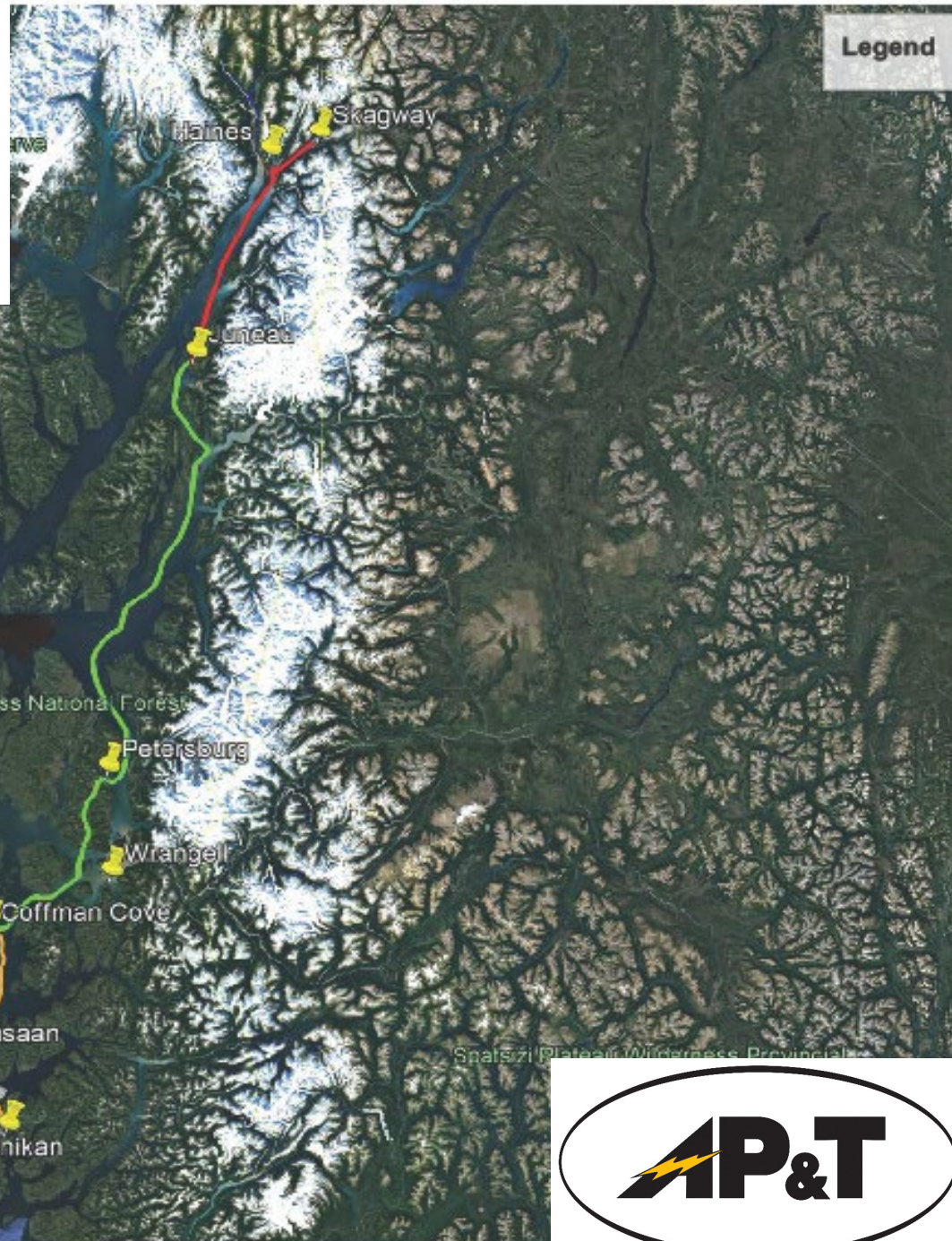


RECONNECT ROUND 2 PROJECT: “SEALINK”

(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.**

SEALink (South)



RECONNECT ROUND 3: “SEALINK SOUTH”

(Orange)

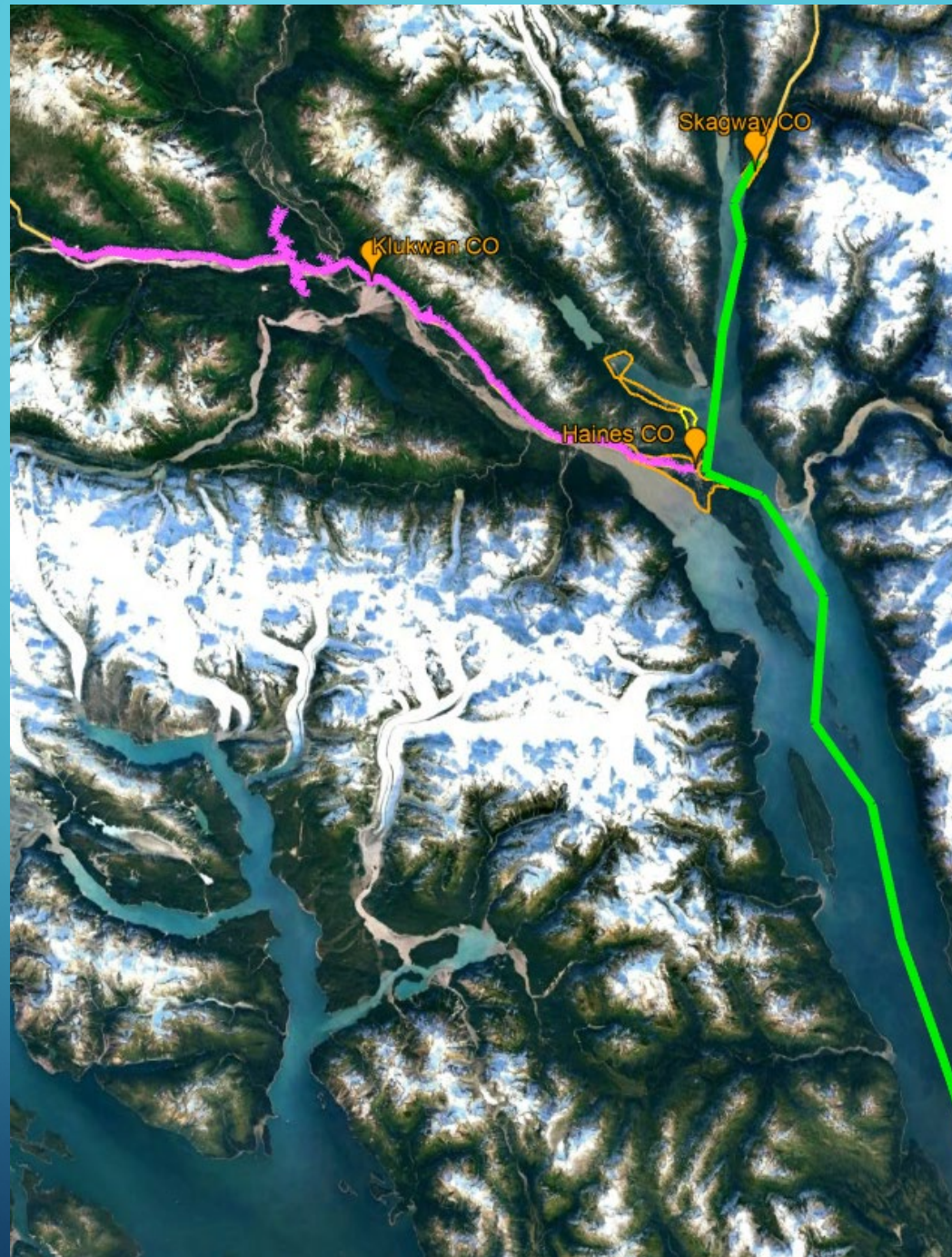
- Fiber to the home in Klawock, Craig, and Hollis.
- Subsea fiber interconnecting Coffman Cove, Hollis, and Ketchikan. (2025)
- Work scheduled to occur through 2027.

Google Earth

Data LDEO-Columbia, NSF, NOAA
Image Landsat / Copernicus
Image IBCAO
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Klukwan- Skagway Fiber

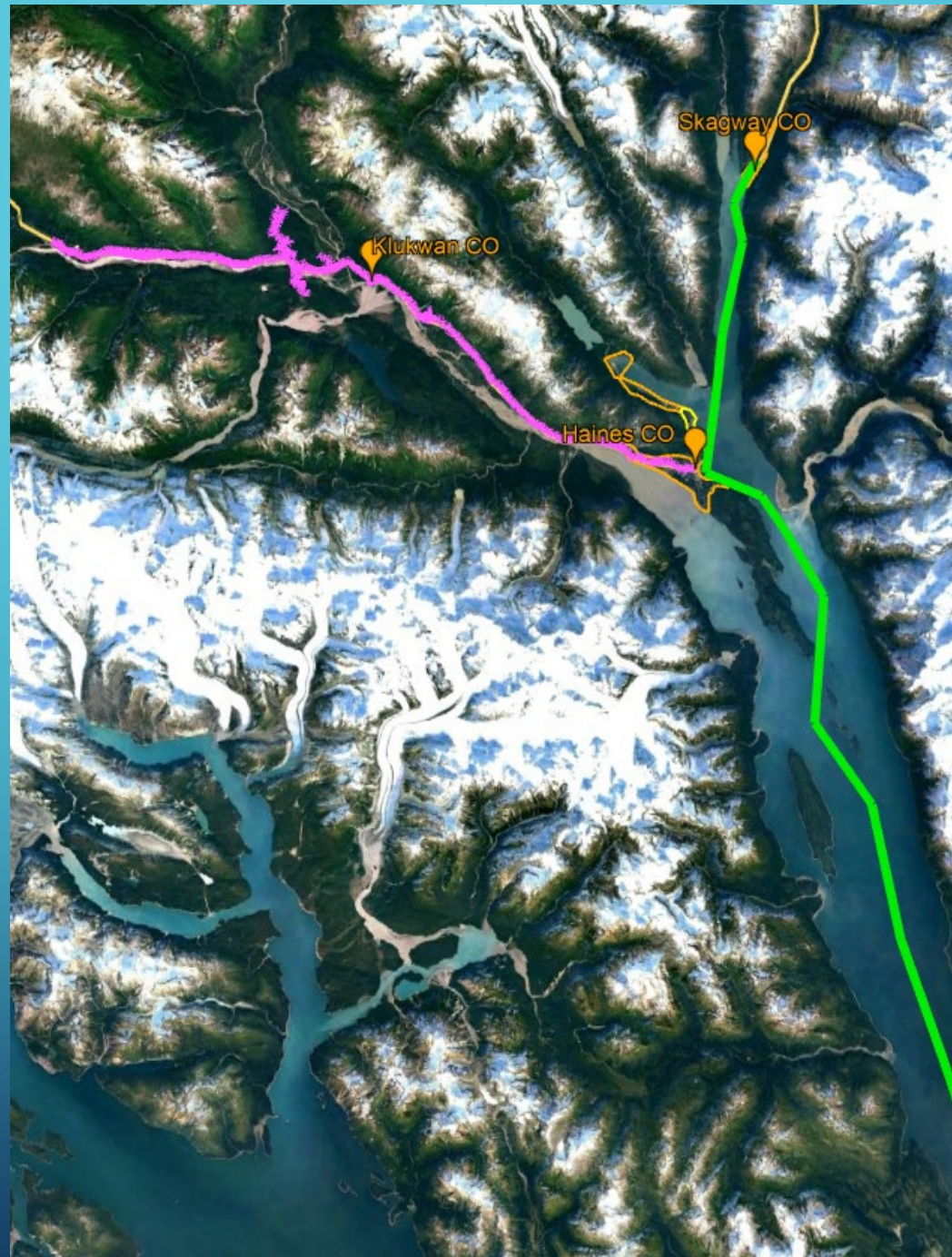


RECONNECT ROUND 3: “KLUKWAN- SKAGWAY FIBER”

(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**



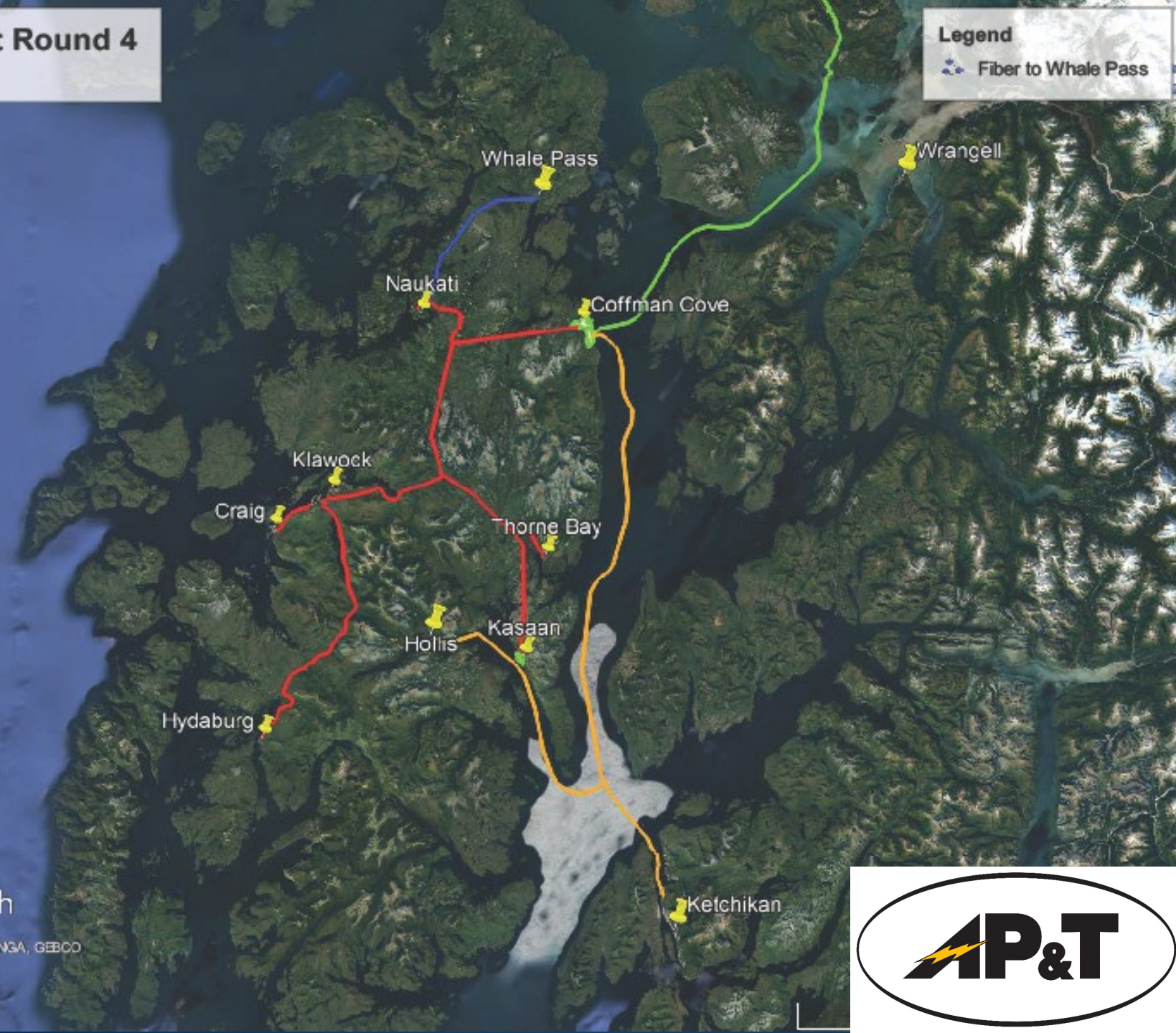
**SKAGWAY
TRADITIONAL
COUNCIL**
TRIBAL BROADBAND
CONNECTIVITY PROGRAM

- 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

Legend

Fiber to Whale Pass



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.

Google Earth

Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat / Copernicus
Image BCOAO
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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

