Questions for Tidal Network

The questions presented regarding the Tidal Network project reflect valid community interests, though they would benefit from additional context regarding the specific nature of this initiative. This is not a commercial experiment by a private internet service provider; it is a federally funded Tribal infrastructure project undertaken by the Central Council of the Tlingit & Haida Indian Tribes of Alaska. Our mandate is not merely to sell internet service, but to construct a permanent public utility infrastructure that ensures the safety, resilience, and economic future of our communities.

For too long, Southeast Alaska has relied on aging, single-point-of-failure networks that leave our people, schools, hospitals, and emergency responders vulnerable. The infrastructure we are building is designed first and foremost for regional resilience for ALL CITIZENS not just Tribal Citizens. These towers provide the critical "middle mile" and "last mile" redundancy required to keep services connected. Furthermore, this infrastructure is an open platform; we are creating capacity that other carriers, public agencies, and emergency services can utilize to improve their own coverage without the cost of building duplicate towers.

The location and specifications of our sites are driven by rigorous engineering and federal mandates to reach unserved households, not by profit margins. We are bringing millions of dollars in federal investment back to Alaska, creating local jobs and solving connectivity gaps. We welcome this dialogue to clarify the technical and operational realities of the project, with the understanding that our commitment to modernizing this region's infrastructure is unwavering.

https://tidalnet.com/faqs/

https://tidalnet.com/wiqs/

1) By what means was it determined that Petersburg was unserved or underserved as a stipulation of the grant requirements.

We determined Petersburg's eligibility through a combination of federal standards, independent technical data, and direct community feedback. Under the Tribal Broadband Connectivity Program, the NTIA explicitly empowers Tribes to "self-certify" unserved areas, recognizing that national maps often fail to reflect on-the-ground realities. To validate this, we utilized third-party testing data from Ookla to prove actual speeds fell below the federal "qualifying broadband" threshold of 25 Mbps download and 3 Mbps upload. Furthermore, our analysis of Census data indicated that approximately 7% of the Petersburg population is unserved or underserved. This data-driven approach, supported by our own surveys of Southeast Alaska residents, ensures we are targeting true coverage gaps and directing federal tax dollars to the specific neighborhoods that private investment has overlooked.

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2) What was the actual process involved in making that determination?

The process began with data analysis where we cross-referenced Census figures which indicated 7% of Petersburg was unserved with third-party speed test data from Ookla (3rd party speed testing) to confirm that actual performance fell below the federal 25/3 Mbps standard and drive testing with our equipment and engineers. We validated these technical findings through a direct survey of Southeast Alaska residents, allowing us to pinpoint specific "weak spots" and service gaps that provider maps often fail to capture. Using this evidence, Tlingit & Haida then exercised its authority under the grant rules to formally "self-certify" in these areas as unserved to the National Telecommunications and Information Administration (NTIA). This recognized legal process allowed us to bypass inaccurate national coverage maps and secure federal approval to direct funding exactly where it is needed most. We also conducted drive testing of signal strength.

3) How many people were considered or contacted?

We considered the entire population of the service area through a comprehensive, two-pronged outreach campaign conducted in the summer of 2021. To ensure no one was missed, we utilized a Universal Residential Mailing List to ensure our members were specifically engaged. This mass outreach allowed us to distribute surveys to thousands of residents, gathering real-world data to validate our Census analysis. By combining direct mailings, we ensured our determination was based on the actual experiences of the whole community rather than just a small sample or theoretical coverage maps. Over 12,000 surveys were sent out. We have also conducted a new survey in 2025 to gather community feedback. We have held public meetings in communities including Petersburg. We are working with Petersburg Indian Association to lease their 2.5Ghz spectrum. We have worked with the City of Petersburg including the planning department, fire, electrical, and harbor master.

https://ccthita-ypojj.formstack.com/forms/tidalnetworkcommunityfeedbacksurvey_copy

4) Given the fixed population of Petersburg, how does Tlingit & Haida Council plan to achieve the license requirements of providing 50% coverage within 4 years and 80% coverage within 8 years to of fixed population without displacing customers from existing internet provider?

The FCC license requirements are based on signal availability rather than subscriber adoption. To meet the 4-year and 8-year milestones, we are only required to ensure our wireless signal physically reaches those percentages of the population, not that those residents switch to our service. By building a tower to reach the community, the broadcast radius will inherently cover a large portion of the town and satisfy the FCC coverage requirement without requiring a single customer to leave their current provider. This allows us to meet our federal obligations by adding a new option for redundancy and competition rather than displacing existing services.

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5) Given that any Petersburg Borough resident is currently served internet access by Starlink, exactly how can Tlingit and Haida/Tidal Network claim that there exists "unserved" in SE Alaska.

While Starlink is a valuable tool (and Tidal Network is a reseller of Starlink for government use), it does not disqualify an area from being "unserved" for infrastructure grants for two key reasons:

Grant Definition of "Reliable Broadband": Federal grant programs (like NTIA TBCP) prioritize "terrestrial" infrastructure (fiber/fixed wireless) over satellite to ensure long-term, scalable capacity. Satellite services are often excluded from the "served" definition in these specific Notices of Funding Opportunity (NOFO).

Affordability & Equipment Cost: "Access" includes affordability. High upfront equipment costs ($599+) and monthly fees for LEO satellite can be prohibitive for many households. Tidal Network's fixed wireless solution offers a lower barrier to entry, ensuring equitable access for all income levels.

 5G towers and Starlink are complementary technologies that work together to create a "hybrid" network, offering far greater reliability than either could provide alone. In Southeast Alaska, dense tree canopies and steep terrain often block the clear view of the sky that Starlink requires, creating "dead zones" for satellite service. Our towers can reach these blocked homes by transmitting signals horizontally under the canopy or around terrain obstacles. Additionally, using both systems creates critical redundancy: towers can offload heavy data traffic to keep satellite speeds fast, while Starlink can provide emergency backhaul connectivity if a physical cable to a tower is ever cut. This multi-technology approach ensures that 911, telehealth, and schools stay online even if one specific path fails.

6) What are the specifications needed for sites chosen for telecommunications towers being erected? Site locations and requirements.....

Sites must be buildable, legally permissible, and safe. They must support required coverage, have access to power and backhaul, allow construction and maintenance access, and meet engineering, environmental, cultural, and zoning requirements. Community impacts such as visibility and proximity are also evaluated. Site selection is a precise engineering process driven by the need to clear dense vegetation and terrain to reach households. Every location is determined by radio frequency (RF) modeling rather than preference, ensuring the tower has the necessary height to provide reliable service. Before any construction begins, sites must pass strict federal environmental (NEPA) and historic preservation reviews, as well as geotechnical surveys to ensure the structure meets national codes for wind, snow, and seismic resilience. We prioritize locations that allow towers to remain under 200 feet to

avoid FAA lighting requirements and always evaluate existing structures for colocation first to minimize new construction.

7) Who is responsible for maintaining and servicing completed towers and what are the plans for dismantling the towers when new technology arrives?

Maintenance: Tidal Network, an enterprise of Tlingit & Haida, retains full ownership and operational responsibility. We employ local and regional technicians to service the equipment.

Decommissioning: Industry standard leases and permits include a removal bond or clause. If the tower becomes obsolete, Tidal Network is responsible for dismantling the structure and restoring the site. However, towers are vertical real estate; as technology evolves (e.g., 6G), we simply swap the antennas on top rather than removing the tower.

8) How would you suggest that local government officials respond to health concerns from community members?

Local government officials should respond to health concerns with a factual, calm, and empathetic approach that prioritizes independent verification. The most effective response is to assure residents that the project adheres to strict Federal Communications Commission (FCC) safety standards, with independent engineering studies confirming that ground-level exposure is typically less than 1% of federal limits lower than what they receive from their own cell phones or Wi-Fi routers. Officials should emphasize that this is a matter of compliance, not opinion, noting that federal law (the Telecommunications Act of 1996) prohibits local governments from blocking infrastructure on health grounds when it meets verified FCC safety guidelines. By focusing on the testing that occurs, officials can validate the community's desire for safety while confirming that those protections are already in place.

A good reference that addresses this issue is published by the FCC:
https://tidalnet.com/wp-content/uploads/2025/11/Local-Government-Officials-Guide-to-Transmitting-Antenna-RF-Emission-Safety-PDF.pdf

https://www.fcc.gov/general/radio-frequency-safety-0

The FCC adopts exposure limits directly from these non-profit scientific organizations. These groups spend years reviewing thousands of peer-reviewed papers to set the "safe" threshold (MPE - Maximum Permissible Exposure).

IEEE (Institute of Electrical and Electronics Engineers) / ANSI:

Specifically, the IEEE C95.1 standard. This is the technical standard for safety levels with respect to human exposure to electric, magnetic, and electromagnetic fields.

NCRP (National Council on Radiation Protection and Measurements):

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The FCC adopted the NCRP's recommended limits for field strength and power density.

ICNIRP (International Commission on Non-Ionizing Radiation Protection):

While European-based, their guidelines largely align with IEEE/FCC limits and are cited by the World Health Organization (WHO) as evidence of safety.

FDA (Food & Drug Administration): The FDA has clearly stated that "the weight of scientific evidence has not linked cell phone radio frequency radiation with any health problems." They actively review animal studies (like the NTP Study) and have concluded that the findings in rats (exposed to massive, whole-body doses) do not apply to humans using cell phones.

National Cancer Institute (NCI): They maintain that there is currently no consistent evidence that non-ionizing radiation increases cancer risk.

9) How would you suggest that local government officials respond to decreased property values due to proximity to towers being built?

While this is a common concern, credible studies on this topic are mixed and often show negligible long-term impact, particularly in rural/semi-rural areas where connectivity is a utility that adds value.

Utility Value: In the modern digital economy, access to high-speed, diverse internet options is often a selling point for homebuyers.

Officials should acknowledge the validity of residents' concerns while pivoting to the reality that reliable broadband is now a critical utility that supports property desirability rather than diminishing it. Independent studies have found no consistent measurable link between tower placement and reduced property values; conversely, the lack of high-speed internet is increasingly seen as a liability by homebuyers who require connectivity for remote work and education. Officials can confidently state that in many markets, modern infrastructure is an amenity that stabilizes home prices, and that the broader economic benefits of connecting the community outweigh subjective aesthetic concerns.

10) What will be the price per month for customers for the new broadband service?

From January to October, introductory rates of $20.26 and then to $89.99 if the promotion is not extended.

Inclusions: This typically includes the necessary in-home equipment (router/receiver).

No Data Caps: Unlike many satellite or cellular plans, our fixed wireless plans are designed without punitive data caps.

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11) What are the chances of frequency interference related to a tower next to the Fire Hall and the general proximity to the new campus of the Petersburg Medical Center?

Zero.

Frequency Separation: Public safety radios (Fire/Police) typically operate on VHF (150 MHz), UHF (450 MHz), or 700/800 MHz bands. Tidal Network operates on 2.5 GHz (2500 MHz). There is a massive physical separation in the spectrum that prevents overlap.

Medical Equipment: Medical telemetry generally uses specific protected bands (like WMTS). 2.5 GHz is a standard commercial Wi-Fi/LTE band used safely in hospitals worldwide without interfering with medical devices.

The chance of harmful interference is non-existent because the tower, emergency responders, and medical equipment all operate in completely different, federally separated "lanes" of the radio spectrum.

Dedicated "Lanes" Prevent Crashes: Just as semi-trucks, airplanes, and trains travel on different paths to avoid collision, wireless signals use specific frequencies. Tidal Network uses the 2.5 GHz licensed band. Fire and EMS typically use VHF, UHF, or 700/800 MHz bands. These are far apart on the spectrum, meaning they physically cannot "talk over" or interfere with one another.

Medical Grade Protection: Modern medical equipment is built to strict FDA and FCC standards that require it to be "immune" to outside radio signals. Furthermore, the 2.5 GHz band is a "clean," licensed frequency, unlike the "noisy" unlicensed Wi-Fi bands where interference is more common.

Strict FCC Engineering: All our equipment is FCC-certified to stay strictly within its assigned lane. We also use high-quality filters and directional antennas that focus energy out toward homes, not down into nearby buildings like the Fire Hall or Medical Center. This setup is standard practice nationwide, where towers safely sit atop hospitals and police stations without issue.

12) The towers appear to have emergency power capabilities. How much fuel is needed and how is the surrounding environment protected from spills.

While we do not have a final tank size selected for every site, yet we adhere to the following:

Fuel Capacity: The generators utilize a sub-base fuel tank (located directly under the generator unit), are 100 gallons of diesel.

Spill Protection: We use UL-142 listed, UCL S601, UL2200 double-walled tanks. This means the inner tank holding the fuel is completely sealed inside a second outer steel tank. If the inner tank were to leak, the outer tank captures the fuel, preventing any release into the environment.