Healy Lake Monopole Tower
Environmental Assessment

Southeast Fairbanks Alaska

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Executive Summary

The purpose of this project is to provide affordable, reliable Internet services to residents in Healy Lake Village, Healy Lake, Alaska. Healy Lake Village is a Federally Recognized Tribe. Healy Lake Village is a Tanacross Athabaskan community located in interior Alaska. The Village is located in a remote, subarctic setting in Interior Alaska, which generally is accessed by boat or snowmachine over ice.

The project will provide for microwave broadband by installing a monopole at the project site and assisting households and buildings at the village site to connect to the Internet. The project site is .25 acres on private, cleared farmland near Cummings Road (closest community is Delta Junction). A gravel pad will be installed to avoid vegetation regrowth and provide stability for the monopole. Aside from the monopole, all that will be placed on the site is a Connex for storage of a generator and other materials, and solar panels. There are no utilities as the site will be powered by solar panels. The generator is only there for backup in the event that solar power is insufficient.

The steps of construction are as follows:
1. Using an excavator, dig the hole for the monopole
2. Install the tower
3. Backfill and compaction
4. Install the radio equipment on the tower
5. Lay down the gravel on the pad (gravel truck will be stationed on the street, no need for a staging area)
6. Install the solar panels
7. Put the storage Connex on the site
8. Erect the fence
9. Clean up any debris at the site
10. Assist homeowners and building owners in Healy Lake installing the equipment should include phases of construction and operation/maintenance of the facility.

Fuel will be contained in a 1000-gallon steel tank constructed by Greer Tank and Welding. The tank will have secondary containment in a 110% steel containment vessel, also constructed by Greer Tank and Welding. The Tank and secondary containment will be placed in a watertight shipping container (Connex). A fuel meter will be installed and monitored remotely, via the network. Refueling will be in the fall before snow, and again after breakup in the spring. The fuel company is responsible for drip-free refueling.

As indicated in this document, no impacts on cultural resources, vegetation, fish, birds, wildlife, surface water, groundwater, stormwater, floodplains, wetlands, health, safety, air quality, soils, recreation, or visual resources are anticipated. Positive impacts on environmental justice and socioeconomics for the Village are anticipated.

The proposed action and the no action alternative are the alternatives provided for further evaluation. Alternative siting and construction techniques were considered, but largely for financial reasons, they were not forwarded for evaluation.
1. Background

The service area for the project is Healy Lake, Alaska. Healy Lake Village is a Tanacross Athabaskan community located in interior Alaska. The traditional name for the village is Mendas Cha-ag, which means “body of water, with an outlet” in Tanacross Athabascan. Healy Lake Village lies on the traditional lands of the Mendas Cha-ag people. It is an unincorporated village in the unincorporated borough (county-level government) in the southeast census region of Alaska. Healy Lake is located thirty miles east of Delta Junction, the largest community within one hundred miles, with a population of 958. Healy Lake is surrounded by the 1.81-million-acre Tanana Valley State Forest and that forest is surrounded by forest for hundreds of miles in every direction.

Healy Lake Village is also the name of a federally recognized tribe associated with the village site. There are only 22 residents at the site as of 2022 (according to the Alaska Division of Community and Regional Affairs), but there are many more tribal members in Fairbanks and beyond with ties to the village. All residents are Athabascan Alaska Natives.

The 5-mile-long Healy Lake adjacent to the Village lies on the course of the Healy River, 29 miles east of Delta Junction. Healy Lake falls within the continental climate zone, characterized by extreme temperature differences. The continental climate zone encompasses most of the central part of the state and experiences extremely cold winters and warm summers.

The Village was not permanently inhabited until the mid-1900s. Population peaked in the 1990s and then began declining. Most are over 50. Given the community’s isolation and lack of education and workforce opportunities, the population has dwindled over the years.

The Tanana River provides boat access to Healy Lake at Big Delta. The lake is east of the Richardson Highway; however, there is no direct road access. During the winter, residents drive in on the ice road.

According to Alaska Census Data (2022), the median household income is $11,667, compared to the nationwide average of $69,717, putting the community well below the poverty rate.

While there is a health clinic there, it does not have running water, and is not always staffed. There are no post offices, or police force, in Healy Lake.

The Village Corporation created by the Alaska Native Claims Settlement Act, Mendas Cha-ag Native Corporation, owns most of the land in the Village, and the government of the tribe, Healy Lake Village Council, has very limited rights to land there.

Currently there is limited cell phone and Internet access in the Village. This means that the tribal office often cannot attend to basic business needs, such as sending files, and telehealth visits to health professionals, as well as remote jobs and schooling, are almost impossible.

The school in Healy Lake closed in 2005 due to the State of Alaska’s minimum attendance requirement of at least 10 enrolled students, displacing the last of the families with children to Delta Junction or Fairbanks. Students are unable to successfully home school via Internet or zoom as Internet is based upon Hughes Net which often fails, or doesn’t have the amount of bandwidth needed.
In 2022, the Healy Lake Village Council received a grant from National Telecommunications and Information Administration’s (NTIA) to provide the village site with broadband Internet. The Tribal Broadband Connectivity Program is a nearly $3 billion grant program and part of the Biden-Harris Administration's Internet for All Initiative. The funds are made available from President Biden's Bipartisan Infrastructure Law ($2 billion) and the Consolidated Appropriations Act, 2021 ($980 million). The initiative is consistent with President Biden’s Justice 40 mission to provide 40% of federal funding to environmental justice communities that need it most.

The Council was also able to apply for and obtain an Educational Broadband Service License - WROW795. The Council entered into a contract with Digital Aurora Radio Technologies, LLC (DART), which is a communications company located in Delta Junction, Alaska supporting research and development of emerging communication technologies and solely owns Ax-S-Anywhere, a broadband Internet provider for over 300 residents and small businesses in the area. DART is responsible for providing broadband for this project. DART has handled all aspects of permitting, including registering the Antenna with the Federal Communications Commission (FCC) (see FCC Antenna Structure Registration and Emails in Appendix A).

DART started the company in 2009 to support advanced radio communication research and development. In 2015, when StarBand satellite Internet service shut down, they helped people in the areas close to Healy Lake to get Internet through our wireless network. Soon, they were overwhelmed with requests and decided to start Ax-S-Anywhere. Ax-S-Anywhere is a wireless Internet service provider. Today they cover almost the entire Delta Junction region. In rural remote areas, backhaul is the challenge. Backhaul is the main link back to the Internet. It is like the big electrical transmission lines that bring electricity to communities. DART will backhaul the link across Healy Lake’s network to fiber in Delta Junction. DART will provide a minimum of 100 megabits per second (Mbps) download, and 10 Mbps upload. Once there is a link into the community, it has to be distributed to the houses.

The Village can decide which spectrum it desires including the use of unlicensed (2.4 and 5.8 GHz requires no license by the FCC) or licensed (2.5 GHz equipment made available to tribes in the United States) to reach every home. DART will assemble an equipment kit for each home. The kit will be owned by the community and allow each home to link to the Community Access Point(s) and have WiFi in the home.

Additionally, DART will set up a radius server (controlling who is connected and how much bandwidth they would receive) so that the community network administrator can manage the connections as the community desires. Costs for service (distribution) is completely up to the Village. Essentially, the Village will be its own Internet Service Provider. DART will install the distribution equipment as part of the installation costs. Healy Lake will own and maintain the equipment after it is installed and tested. FCC licensing will be the responsibility of Healy Lake for the 2.5 GHz, or other licensed equipment. DART will be available to assist with this as needed.

The project will serve 22 unserved people who live in 14 individual households; the entire community of Healy Lake. The project will additionally serve the Tribal Government, Healy Lake Village Council, the Healy Lake Clinic with a full time Health Aide, the Healy Lake Village Public Safety Officer, and the Meicey Memorial Library, a fully operating library based in Healy Lake with a small Internet café with three stand-alone computers, Internet, and a printer/scanner.

The total number of Native American/Alaska Native/Native Hawaiian households is 15 full-time year-round households, with 20 households during the summer season. The number reduces significantly in the fall and winter as families must live where their children can go to school, and access Internet. All households, organizations, agencies, and businesses in Healy Lake above lack access to the Internet with
speeds of 25/3 Mbps or greater with latency considerations. 100% of all homes and businesses will be connected.

Of the total fifteen families in the community, two families are at middle class, and thirteen families are below the poverty line based on the Department of Health and Human Service’s Alaskan poverty guidelines. This translates to 86% of all project households living below the poverty level.

The effect of these poverty levels is compounded when considering the average Internet subscription package in Alaska is significantly more expensive than the mainland United States. The following table provides a sample of Internet package pricing in Alaska:

<table>
<thead>
<tr>
<th></th>
<th>AP&amp;T Plans (Min//Max)</th>
<th>Hughes Residential Plans (Min//Max)</th>
<th>Hughes Business Plans (Min//Max)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monthly Cost</strong></td>
<td>$79.95 // $199.95</td>
<td>$49.99 // $129.99</td>
<td>$69.99 // $469.99</td>
</tr>
<tr>
<td><strong>Speed (Down/Up)</strong></td>
<td>4 Mbps/2 Mbps // 8 Mbps/3 Mbps</td>
<td>25 Mbps/3 Mbps</td>
<td>25 Mbps/3 Mbps</td>
</tr>
<tr>
<td><strong>Data Limit</strong></td>
<td>200 GB // 750 GB</td>
<td>10 GB // 50 GB</td>
<td>35 GB // 250 GB</td>
</tr>
<tr>
<td><strong>Installation &amp; Equipment Costs</strong></td>
<td>$100-$200</td>
<td>$1,100</td>
<td></td>
</tr>
<tr>
<td><strong>Overage Fees</strong></td>
<td>$1 per GB over limit</td>
<td>$3 per GB over limit</td>
<td></td>
</tr>
</tbody>
</table>

2. Purpose and Need

The purpose of this project is to provide affordable, reliable Internet connections to the homes and businesses located in the Healy Lake Village and surrounding area. This project would help bridge the digital divide and enable the Village to maintain and potentially increase its population by connecting every home and business to broadband Internet.

Internet is now considered a basic utility (indeed, a basic need) in most American homes, yet the houses and few businesses in Healy Lake Village lack highly functioning Internet. Currently, there is no reliable, high speed (25 Mbps), Internet service available for the Healy Lake area. The tribe’s office’s Internet is intermittent, making it difficult to carry out the business of the tribe. No existing broadband or digital inclusion plans exist at this time. Healy Lake has limited access to cell coverage, and the only option for data is satellite, which is spotty depending on weather, only accessible to limited locations due to homes that are unable to see the satellite due to obstruction. There are no opportunities to work or attend school remotely.

The tribe needs to provide affordable broadband programs for Healy Lake Village for telehealth, remote education, workforce and economic development, and digital inclusion and skills. Installing broadband in each household and business at a cost that is affordable to residents will enable the village to continue to exist and potentially grow, so that it could regain its school and increase business opportunities. This service will allow for remote/virtual education and classroom for students in the Healy Lake area. It will also allow older residents to access training which may improve employment opportunities, as well as...
supporting businesses in the local area and potential economic development. Functioning Internet is also critical for the health of residents, so they can be seen remotely by health professionals.

There are no households or businesses right now that can afford to pay high costs for satellite Internet. Nor can they use Internet from their cell phones, as service is poor. Thus, there is a critical need to provide affordable, reliable Internet to continue the existence of the village and help rebuild the lost population.

In summary, the project and proposed action will allow for the following:

- Increased broadband Internet service for the Healy Lake Village
- Support for new frequencies (2.5 GHz) to improve and expand data coverage
- Facilitating reliable interoperable communications among health and education providers
- Enhancement of economic opportunities and health in Healy Lake Village.

### 3. Description of Project, Affected Environment and Alternatives

#### 3.1. Proposed Action

The project includes the construction of a single a 120-foot direct embedded, freestanding self-support monopole tower and associated equipment as a Transmission and Receiving Site for microwave broadband. Microwave Internet or Wireless Access (WLA) is a fixed wireless broadband connection delivered by high-capacity microwave radio link, which does not require any other infrastructure other than power, and a clear or near line of sight. This site was selected over other sites because it provides the best “line of sight”, meaning that the microwaves can pass between the tower and buildings to be served without obstruction from trees or hills.

The proposed tower site is located at Latitude 63°56'35.66"N, Longitude 144°55'56.01"W (NAD83) along Cummings Road on the edge of a hay/grain field on private property with an access road to the site. The site was cleared in the early 1980s for agricultural purposes. Healy Lake Village has already entered into a lease with the owner. An existing gravel access road will be used for site access for construction and operational maintenance. The area surrounding the proposed Tower is dominated by single-family residences in rural residential / agricultural community in Southeast Fairbanks.

The total ground-disturbance for the area is less than 0.25 acres, and the final site footprint will be approximately 0.25 acres. Figure 1 shows a vicinity map of the tower site and surrounding area, while Figure 2 shows a closeup aerial photo.
Figure 1: Vicinity Map

Figure 2: Healy Lake and Tower Site
As shown in Figure 3, the proposed site will include an 8’ x 20’ equipment shelter, and a 20-panel solar array.

Figure 3: Diagram of the project site

The steps of construction are as follows:
1. Using an excavator, dig the hole for the monopole
2. Install the tower
3. Backfill and compaction
4. Install the radio equipment on the tower
5. Lay down the gravel on the pad (gravel truck will be stationed on the street, no need for a staging area)
6. Install the solar panels
7. Put the storage Connex on the site
8. Erect the fence
9. Clean up any debris at the site
10. Assist homeowners and building owners in Healy Lake installing the equipment

The project site has shallow silty soils (less than one foot) on glacial gravel that are incredibly stable for construction, particularly as there is no permafrost beneath the site (see additional discussion in Section 5.9 Soil Map). The hole will be as small as can possibly be dug with an excavator: 23 feet deep, 6 feet wide, and 6 feet long. The bottom section of the pole will go in the hole, and material from the hole will be placed back around the pole. The hole will be saturated with water to avoid unsettled airspace between small particles that make up the gravel. This way, there will be no need for concrete and the area will not be significantly susceptible to frost heaving. Once the bottom is stable, three more sections will be stacked on top of the base to reach 120 feet. There is no need for pile driving. The gravel material that was removed from the hole will be used to secure the base by water compacting the gravel around the tower base. The topsoil will be returned around the base.

Access point radios and a point-to-point radio will be installed on the tower. The tower has already been registered with the Federal Aviation Administration (FAA) obstruction evaluation system.

A 20’ steel shipping container (Connex) will be placed on pressure treated timbers on the property to hold equipment and fuel, including a diesel-powered generator, fuel tank, battery bank, charging system, electronics rack, and associated equipment. There will be venting and a fire suppression system within the Connex.
There will be no utility connections. There will be a small generator onsite to serve as a backup in the event that solar power fails or is insufficient (likely during the winter). Fuel will be contained in a 1000-gallon steel tank constructed by Greer Tank and Welding. The tank will have secondary containment in a 110% steel containment vessel, also constructed by Greer Tank and Welding. The tank and secondary containment will be placed in a watertight shipping container (Connex). A fuel meter will be installed and monitored remotely, via the network. Refueling will be in the fall before snow, and again after breakup in the spring. The fuel company is responsible for drip-free refueling. The tank will be maintained in this location for the life of the project, which is expected to be 40 years (the typical lifespan of this kind of tower). Given that the lifespan of the tank may be shorter (20 years), it will be replaced when and if needed. At the end of the lifespan of the tower, Healy Lake will evaluate whether the tower should be replaced with a similar construction or whether a better design is available.

A small gravel pad (25ft x 60ft x 6 inches) will be layered over the project site to create a level base for the equipment shelter and solar array, prevent grass from growing, and create a fire break for the equipment. Also, in the unlikely event of a fuel spill, remediation can be accomplished quickly and easily through removal of the gravel.

Holes (4” diameter) will be dug for fence posts and solar panel racks. Posts will be placed on ten-foot centers to support the solar panels next to the tower. Additional solar panels will be installed on the Connex. A chain link fence will be constructed around the gravel pad to deter people and animals from entering the site.

Given the permeability of the gravel and limited rainfall in the area, no stormwater controls will be needed. There is no support office located at the site, so there are no issues regarding construction of a building. DART is the only entity involved in this project. There is no other provider (e.g., AT&T) that will have any role in installation or maintenance. This tower site can be accessed year-round as shown in Figure 4.
Customer Premise Equipment (CPE) will be installed at homes and buildings in Healy Lake Village to provide for Internet connection. As shown in Figure 5, CPE is a radio connected to a small dish antenna that will be pointed towards the tower. Each installation will vary some, but basically it will be installed in the most convenient place to get a line-of-sight link to the tower. In some cases, this will be on the side of the house, and in others up on a small pole (1-7/8” pipe) to clear obstructions. In the home there will be a small power supply (2” x 4.5” plug in box) and a small router that will provide wireless in the home and allow for plugging in up to 4 ethernet cables (for printers, TVs, etc.).
A summary of all the broadband infrastructure the project will use is as follows:

- 120’ direct embedded monopole tower

- 4-Cambium 450 Aps

- The CPE units will be Cambium 450Bs

- Mikrotik Routers

- Individual Equipment Kits. Ethernet Cable with RJ45 connectors, mounting hardware, and EMT conduit for the risers

3.2. **No Action Alternative**

The no action alternative results in no further environmental impact to the area. The status quo would continue in terms of the lack of communication infrastructure for Healy Lake Village. The Village would forfeit its broadband grant and its spectrum license. The impact to the community from the potential loss of employment, education, telehealth, and broadband Internet service would be negative. The population would likely continue to decline and the village site could ultimately be abandoned. This would be inconsistent with the Biden Administration’s efforts to bridge the digital divide, promote environmental justice, and uphold its trust duty to this tribe.

Without the project, essential Internet services in the community would continue to be absent, including needed services for the transportation shop, clinic, library and develop a secure link for telehealth and telemedicine services necessary in our remote location. A private place to participate in telehealth and telemedicine services is essential as people cannot make the flight and 200-mile road trip to Fairbanks for services, specifically mental health services which are exceptionally limited in Fairbanks and the entire State of Alaska.

Living in remote Alaska is challenging during the harsh winters when temperatures can be fifty below
zero, and where light is limited at times to just a few short hours. The depression, and suicide rates in Alaska are high, and in 2021 Healy Lake faced a suicide attempt that brought to light the need for additional resources for those living in Healy Lake. Without the project, there would be no remote medical and mental health treatment directly in the community.

Not having the project would also affect education and job training. Healy Lake Village wishes to provide Native students, college students, healthcare providers, Indian housing providers, tribal program providers, and Native families the tools necessary to utilize broadband technology. The goal is to improve the quality of life in our community and households, spur economic development, create jobs, establish new digital businesses, provide remote learning through digital colleges in communities without access to college campuses, and enhance the largest telehealth program in the country.

As part of our digital inclusion process, Healy Lake would like to train Alaska Native residents and tribal members to build capacity beyond COVID. The plan proposes to provide computers, tablets, laptops, and software set up public computer centers at our anchor institutions (library, tribal office, clinic, school, telehealth/telemedicine facility, safe house) with broadband. The tribe intends to help individual Native people engage in the digital economy for the first time. Without the project, this is not possible.

With the project, Native craftsmen can sell Native handicrafts such as baskets and clothing through Internet channels. People could live in their village while working from home with Internet capacity. Jobs such as medical billing and transcription, customer service, and network marketing can all be possible. Without the project, none of this economic development is possible.

Tribal Members that want to live in their home communities while working from home will have access with Internet capacity. Jobs that offer a livable wage such as medical billing and transcription, customer service, and network marketing can all be done while living in traditional communities through Broadband infrastructure and Internet access. As we move forward, unlicensed spectrum may reach homes that are hard to reach; in that instance, we will go forward with unlicensed spectrum but that will be a decision made as we assess the project with the approval and direction of the Council. As a sovereign tribe, we have the flexibility to use either spectrum.

While the no action is thoroughly evaluated in this EA, it is ultimately not selected since the minimal negative impacts to the environment from the Proposed Action are greatly outweighed by the benefit to socioeconomics, health, and environmental justice.

3.3. Alternatives Considered but Not Brought Forward for Evaluations
Various alternatives for implementing the Proposed Action were considered, but it was determined that the alternatives would not meet the Proposed Action’s purpose and need. Therefore, they were dismissed from further evaluation in this EA. The rationale for dismissing each of these considered alternatives is summarized below.

3.3.1. Fiber Optic Cable
The installation of fiber optic cable was considered, particularly as it could provide a greater level of service for residents (faster download and upload speeds, more data). But fiber optic cable has not been installed from the nearest city (Delta Junction) toward Healy Lake. Laying fiber optic cable underground would entail many miles of plowing, trenching, or directional bore techniques. The footprint would be far greater than 0.25 acres, and would likely impact wetlands and habitat for wildlife. It would also be significantly more expensive, and potentially unaffordable for the project proponent (Healy Lake Village
Council) and future customers. Given this expense, the alternative would not meet the purpose and need of the project and was dismissed.

3.3.2. Tower Design Alternatives
Two forms of alternatives towers were considered for this project included a guyed-type tower, and a free-standing lattice type tower. While the guyed- tower could have been cost-effective (although more expensive than the proposed monopole), according to FCC, based on previous USFWS guidance, it would pose a significant danger to birds, given its height at over 300 feet and the lack of flashing lights (FCC 2021). Thus, it would have a far greater environmental impact than the proposed action and was not considered further.

A free standing, latticed tower design was also considered. But installation is significantly more complicated due to the structural and foundational requirements. Thus, it was not cost-effective compared to the proposed action, and since it did not significantly differ in terms of environmental impacts, it was not considered further.

3.3.3. Alternative Locations
Several locations alternatives were considered for the tower. Line of site testing was used to determine which would work best. Line of sight testing was completed by Healy Lake Village’s contractor DART using a computer program called Link Planner made by Cambium (the company that makes the technology to install on homes). As shown in Figure 6, the tester inputs into Link Planner the location of two points and information regarding the topography at a given site, frequency, power, antenna type, etc. Link Point analyzes the link between the two points in terms of the potential for radio waves to propagate. Problematically, Link Point does not read the topography well in Alaska. DART is able to correct for this by using their own experience of the area combined with information from Google Earth. In this case, DART completed testing by considering the location of the homes in Healy Lake and various test sites.
One test site was located in the village itself on land owned by the village corporation, Mendas Cha-ag, adjacent to the tribal hall and washeteria. This site was not selected because it was potentially culturally inappropriate, and since it was so close to the homes and not elevated above them, there was not a clear line of site (see Figure 7).

Figure 7: Rejected Alternative Location in the Village
Locating a tower within the village was also problematic because the tribe has had a difficult time getting site control (lease or other permission to use land) from the landowner, Mendas Cha-ag corporation. Finally, maintenance to village sites would be problematic because there are times of the year when the village cannot be accessed (before freezeup or during spring melt). Thus, given the technical, logistical political, and legal difficulties of locating a tower in the village, this alternative was dismissed from further consideration.

An additional site several hundred feet to the east of the preferred site was also considered, but the US Army Corps of Engineers suggested moving the site a couple hundred feet to the west to create a greater buffer from the drainage that runs north to south through the field. The decision was made to move the project site as the Corps suggested. Figure 8 shows the previous location on the top, while Figure 9 shows the new (preferred/proposed) location.

Figure 8: Previous location before Corps review
Figure 9: New Preferred/Proposed Location after Corps review
In summary, the proposed action was selected for additional consideration alongside the no-action alternative because other designs (e.g., fiber optic) would be too costly to meet the purpose and need; other types of towers would be too costly or too damaging to birds; and locations within the village site would be infeasible in terms of line of sight, maintenance and site control.

4. Public, Tribal, and Agency Involvement

In this situation, Healy Lake Village, a federally recognized tribe, is the key stakeholder. The Village Council has held public meetings with tribal members to inform them of the potential for Internet and confirm that this is what they want (most recent meeting date: June 16, 2023). While there are other tribes in the region, none are in the vicinity of the project. (Dot Lake is 30 miles away from Healy Lake). Notice of the EA was placed in a newspaper of general circulation to solicit scoping comments, but none were received (see Appendix B). Healy Lake will follow the procedure required to circulate this draft EA for public comments.

This EA was completed in consultation with the Alaska Department of Natural Resources regarding whether any land use permits were needed (none needed), the US Army Corps of Engineers or USACE regarding whether the tower site would be in a wetland (it is not), the Healy Lake Tribe Cultural Office and SHPO as to whether any installations would impact cultural and historical resource (it would not), the Federal Communications Commission to register the tower, and the Federal Aviation Administration to give notice of construction (Appendix C). The project was submitted through USFWS IPAC system for any potential impacts to biological resources, which there were not (Appendix H).

5. Affected Environment and Environmental Consequences

The project site for the tower is located on one fourth of an acre of private farmland near Delta Junction, Alaska, which has a continental, subarctic climate. The area was cleared in the 1980s and is surrounded by farmland with some rural residences. There is no known historical or archeological value, nor are there wetlands. The area is relatively flat with silty soils free of permafrost and minimal vegetation. While there is wildlife habitat in nearby areas, the project site and the adjacent farmland do not provide significant habitat. Each of these resources/aspects will be discussed in more detail further on in this section. Figure 10 provides context of the project area in relation to Healy Lake Village and the surrounding farmland, while Figure 11 shows where in Alaska it is located.
Table 1 summarizes impacts, and the remainder of this section provides more detail.
## Table 1: Summary of Environmental Impacts

<table>
<thead>
<tr>
<th>Resource</th>
<th>Impacts of Proposed Action</th>
<th>Impacts of No Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Use</td>
<td>Very small change to small piece of land on private property, no significant impacts</td>
<td>No impacts</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>No anticipated impacts as all land at issue has already been cleared. Healy Lake Cultural Resources staff had no concerns over project site.</td>
<td>No impacts</td>
</tr>
<tr>
<td>Biological Resources</td>
<td>There is minimal vegetation at site and few animals habituate here as site has long been cleared, no significant impacts, any potential significant harm to birds mitigated by tower design</td>
<td>No impacts</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Minimal occasional emissions from diesel generator, no significant impacts</td>
<td>No impacts</td>
</tr>
<tr>
<td>Water Resources</td>
<td>Will not change surface water, will not touch groundwater, will not produce significant stormwater, no significant impacts</td>
<td>No impacts</td>
</tr>
<tr>
<td>Floodplains/Wetlands</td>
<td>Not located in floodplain or wetland and actions at site will not affect wetlands, potential harm to wetlands or drainage was mitigated by relocating the original project site eastward, no significant impacts</td>
<td>No impacts</td>
</tr>
<tr>
<td>Socioeconomics and Environmental Justice</td>
<td>Internet service will have positive impact that will contribute to jobs, education, and health care in Healy Lake Village and potentially offer Internet for others in surrounding area</td>
<td>Maintain negative status quo</td>
</tr>
<tr>
<td>Noise</td>
<td>Very minor occasional noise from generator, no close neighbors would hear it, no significant impacts</td>
<td>No impacts</td>
</tr>
<tr>
<td>Geology and Soils</td>
<td>Minor initial disturbance of soil during installation and movement of gravel, any displacement to soil mitigated by putting it back in place and covering with gravel, no significant impacts</td>
<td>No impacts</td>
</tr>
<tr>
<td>Aesthetic and Visual Resources</td>
<td>Tower will minimally change landscape in rural, agricultural area, but no more than a cell phone tower would and they already exist on the landscape; CPEs on home will be no bigger than satellite technology, no significant impacts</td>
<td>No impacts</td>
</tr>
<tr>
<td>Human Health and Safety</td>
<td>Potential risk of harm from trespass mitigated by fencing off site, removing low-hanging pegs from tower, and using NO TRESPASSING signs, climb, no anticipated health and safety impacts from tower’s existence, construction, or maintenance; Internet will likely improve health care in the village resulting in positive impacts. Radio Frequency Radiation is not a concern for this project with just one tower.</td>
<td>Maintain negative status quo with lack of access to healthcare in the village</td>
</tr>
</tbody>
</table>

### 5.1. Land Use

This section addresses current land uses that would be potentially affected by the Proposed Action.
There is little infrastructure in the area. There are no public utilities within four miles of the site and no zoning or land use permit requirements. The Alaska Department of Natural Resources determined that no land use permit would be needed (see Appendix D). The Golden Valley Electric Cooperative grid ends more than four miles from the site. The proposed tower site is off Cummings Road, a gravel farm road that is maintained by the Healy Lake Tribe, on the edge of a hay/grain field. The site is fully accessible year-round from the street. Effective July 2023, Healy Lake Village entered into a lease agreement with the property owner, Kent Steele, which specifically authorizes the 120-foot free standing metal tower, equipment container, solar panel array, and fencing. The initial lease term is for 10 years and will automatically be renewed after that.

At the Healy Lake Village site, where CPEs will be installed on buildings, the land use is primarily residential along with some community facilities (tribal office and hall, washeteria, equipment storage).

The tower site will be compatible with the existing uses on surrounding properties (farmland with a few rural residences), and the CPE will be compatible with the residential nature of the village. Since the property will be leased from the private property owner, there would be no significant impacts to loss of farmland. Thus, there are no significant impacts to existing land uses from the proposed action.

**No Action Alternative**: The no-action alternative would have no impact on land use.

5.2. Cultural Resources

This section addresses cultural resources that would be potentially affected by the Proposed Action. Cultural resources include pre-contact and historic sites, buildings, structures, districts, objects, artifacts, or other physical evidence of human activity considered important to a culture or community for scientific, traditional, religious, or other reasons.

The NTIA Environmental Program Officer coordinated the project with the Alaska State Historical Preservation Office (SHPO) and made a Section 106 finding of No Historic Properties Affected. The Alaska SHPO provided their concurrence with a No Historic Properties Affected Section 106 finding on 7/25/2023. See Appendix E for SHPO coordination.

The Healy Lake Tribe Cultural Resources Manager reviewed the proposed tower site and found no significance for cultural and historical concerns (see Appendix F– Letter from Cultural Resources Manager). There are no concerns regarding the buildings and houses at the village site where CPEs will be installed, as all were built in the late 1970s or more recently.

The NTIA Environmental Program Officer input the proposed project into the Tower Construction Notification System (TCNS) and subsequent notifications were sent to the Tribes on May 10, 2023. The TCNS notifies tribes claiming ties to ancestral lands for which the tower is located. Tribal entities receiving notification included:
1. Chalkyitsik Village
2. Village of Dot Lake
3. Northway Village
4. Tanacross Village Council
5. Native Village of Tazlina
6. Native Village of Tetlin

A complete list of contacts is in Appendix G. Northway Village responded with they had no concerns and Dot Lake President contacted NTIA to talk about the siting of the tower. Follow on emails were sent 6/20/2023 to the other Villages for input, yet no responses were received.

In summary, because of the lack of historical or cultural resources at the tower project site or associated with the residents’ houses in the village, there are no significant impacts to cultural and historical resources from the proposed action.

**No Action Alternative:** The no-action alternative would have no impact on cultural and historical resources.

5.3. **Biological Resources**

This section describes biological resources that could potentially be affected by the Proposed Action. Biological resources addressed in this section include vegetation, wildlife and habitat, and protected species.

The climate of this area is continental with average annual temperatures ranging between -32°F and 72°F, and extreme temperatures have been measured from -60 to 99°F. There are some hills in nearby areas ranging in elevation from 300 meters to 1,500 meters (1,000 to 5,000 feet) above sea level, interspersed with lowland areas.

Wildlife resources within Upper Tanana region include large game, such as moose, caribou and Dall sheep, and furbearers, such as snowshoe hare, muskrat and red squirrels. But suitable mammal habitat is limited by the extent to which the area has been cleared for farmland, such that mammals likely to occur at the project site would be squirrels, mice, and/or other small rodents. The tower project site, once complete, would not impact squirrels, mice, and/or other small rodents. Fencing would keep out any larger animals. Aquatic resources in the nearby waters include occasional whitefish, arctic grayling, and Dolly Varden, but the project will not affect these. The wood frog, which requires wetland habitat, is not present at the site. Avian resources include geese, ptarmigan, ducks and grouse. No bald eagles, golden eagles, or birds that might be tempted to nest on the tower frequent this area.

While some towers with bright, non-blinking lights can attract and harm birds, the tower design in the proposed action was selected specifically to avoid harm to birds. Flashing lights pose little danger to birds because they are less likely to attract or confuse birds, and their use can reduce nighttime bird fatalities by as much as 70 percent (American Bird Conservancy, n.d.). It is expected that any harm to birds would be minimal.

The native plants were cleared from the project site and immediately surrounding areas in the early 1980s. Agriculture in the area consists mostly of small grains and grass hay. Other crops grown are potatoes, field peas, and sometimes canola. The habitat type surrounding for the project area (beyond the farmland) is typically birch and white spruce forest. (AP&T 2010) The project will not impact the surrounding crops or other vegetation.

USFWS consultation builder/IPAC was used to assess whether there could be endangered or threatened
species on or near the project site (see Appendix H). Neither of the two federal agencies, the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS), list any species that meet the definition of threatened or endangered under the Endangered Species Act (ESA) in the area. A search through several additional websites, including that for the Alaska Department of Fish and Game, confirmed the absence of listed species in or near the project area. (see USFWS n.d.) Thus, the project will not affect listed species.

In summary, there are no significant impacts to existing vegetation, fish, birds, other wildlife, or listed species from the proposed action.

**No Action Alternative:** The no-action alternative would have no impact on biological resources.

5.4. Air Quality

As directed by the Clean Air Act, the US Environmental Protection Agency establishes National Ambient Air Quality Standards (NAAQS) to protect public health and welfare (see 40 CFR 50). CAA requires states to regulate air pollution emission sources to meet and maintain the NAAQS. The NAAQS establishes maximum acceptable concentrations for criteria pollutants that consist of nitrogen dioxide (NO2), carbon monoxide (CO), sulfur dioxide (SO2), particulate matter with an aerodynamic diameter of 10 microns or less (PM10), particulate matter with an aerodynamic diameter of 2.5 microns or less (PM2.5), ozone, and lead. States are authorized by the CAA to establish their own ambient air quality standards, provided that the state standards are at least equivalent to the NAAQS. The Alaska Ambient Air Quality Standards (AAAQS) are equivalent to or more stringent than the NAAQS. Areas are classified as being “nonattainment” if the air pollution levels exceed the AAAQS. Neither the area around the project site nor the village are part of a nonattainment zone. (Fairbanks n.d.)

During construction, there will be minimal emissions from the excavator for a few days. Equipment used during construction will use well under 600 gallons of diesel per day, and only be on site for four days total. This will occur during summer when there is no need to leave engines running/idling when not in use. Once implementation is complete, a minor source of air pollution may be the periodic use of the diesel generator. The 6 KW Kubota is a Tier 4 certified engine and meets all EPA air quality standards (EPA n.d).

Because the construction and maintenance will result in minimal emissions, there are no significant impacts to air quality from the proposed action.

**No Action Alternative:** The no-action alternative would have no impact on air quality.
5.5. Water Resources

This section describes water resources that would be potentially impacted by the Proposed Action. Water resources include surface water, water quality, groundwater, and stormwater. The project site for the Tower and the village site are both near the Tanana River. The village site is adjacent to Healy Lake. Other nearby water bodies include Healy River, Gerstle River, and Moose Lake. All have good water quality, as of 2022, none have been listed by the State of Alaska as “impaired.” (ADEC 2023)

The depth to groundwater measured at the USGS well closest to the project site is approximately 245 feet. (USGS n.d.) Ground-disturbing activities associated with the Proposed Action Alternative, including subsurface foundation removal and excavation of soils, would not extend to depths that would interfere with groundwater flow or quality.

The Proposed Action Alternative would not involve channeling, diverting, altering, filling, or withdrawing water from surface waterbodies or groundwater; would have no potential to permanently affect water quality in receiving waterbodies; and would not contribute to the further degradation of water quality in downstream waterbodies designated as “impaired” by the State of Alaska.

To manage the quality and quantity of stormwater discharged from construction sites in Alaska, construction activities disturbing 1 or more acres are required to obtain coverage under the 2016 Construction General Permit (CGP) for Storm Water Discharges for Large and Small Construction Activities ( Permit No. AKR100000). Coverage under the permit requires implementation of applicable erosion and sediment control measures to minimize erosion of exposed soils and concentrations of sediments and pollutants in stormwater discharged from the site. Because the proposed action will not disturb one or more acres of land, it is not required to be covered under a permit. The site is flat and has little to no runoff.

Stormwater volumes that would be generated on and discharged from the project site would not be particularly large or unmanageable relative to other construction and demolition projects of similar scale and scope. Therefore, short-term adverse effects on stormwater would be less than significant.

Thus, there are no significant impacts to existing water resources from the proposed action.

No Action Alternative: The no-action alternative would have no impact on water resources.

5.6. Floodplains/Wetlands

The Federal Emergency Management Agency has not mapped the area to determine if it is in a floodplain (see Appendix I). In the unlikely event of a flood, the functions at the project site would not be impaired, as they are all at least 10 feet off the ground. The US Corps of Engineers determined that the site is not in wetlands subject to its jurisdiction and no wetlands permit is required (see Appendix J). The project site is not in a wetland according to the US Fish and Wildlife Service (USFWS) map of wetlands (see Figure 12).
Thus, there are no significant impacts to floodplains or wetlands uses from the proposed action.

**No Action Alternative:** The no-action alternative would have no impact on floodplains or wetlands.
5.7. Socioeconomics and Environmental Justice

This section describes existing socioeconomic conditions and environmental justice for Healy Lake Village. Socioeconomics is the interaction of social and economic factors in a population and environment. It includes the broader population, economic activity, and housing values that could be affected by a proposed action. Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Environmental justice communities of concern (i.e., populations with unusually high concentrations of poverty or meaningfully greater concentrations of minorities) should not bear a disproportionate burden of harmful environmental consequences due to policies, programs, activities, or standards; these communities should be considered in and involved with the environmental decision-making process.

The project site will have little to no impact on the socioeconomic conditions and environmental justice for the area immediately around the tower, since it is not expected to change economic activity or housing values (there are no houses adjacent to the site). Thus, this area is not considered further for socioeconomics and environmental justice.

The Healy Lake Village site is an environmental justice community composed of a minority (Alaska Natives) with most households below the poverty line. As noted in the Healy Lake TBCP proposal: “Population Served: Of the total fifteen families in the community, one family is at the middle-class indicator, two families are at the lower middle class indicator, and twelve families are below the poverty line based on the Department of Health and Human Services Alaskan poverty guidelines. This translates to 86% of all project households living below the poverty level.” Households and buildings currently have extremely limited access to Internet and cellular phone service, reducing opportunities for education and jobs and limited remote healthcare access.

While initially Internet service will only be provided to Healy Lake Village residents, in the future there will likely be opportunities to expand the network to provide services to nearby houses, farms, and camps along Healy Lake.

Thus, it is anticipated that the proposed action will positively impact socioeconomics and environmental justice by improving access to jobs, education, and healthcare for Healy Lake village residents.

**No Action Alternative:** The no-action alternative would preserve the status quo, which does not benefit Healy Lake Village. Effectively, the no action alternative would have a negative impact on the community, as it would not remedy the lack of Internet access, access to healthcare, education, and business opportunities.

5.8. Noise

Based on observations by DART, there is currently minimal noise in the area of the project site, mainly caused by occasional traffic on the road and generators used for the few residences in the area. Houses adjacent to the farmland that is adjacent to the project site rely on generators, which produce a small amount of noise.

During tower installation, there will be a minimal amount of noise for a few days as an excavator digs a hole for the pole and moves gravel on the site. No pile driving will take place. Once installation is complete, the only noise produced by the Proposed Activity will be a diesel generator used to recharge batteries when the solar charger is insufficient to maintain the power levels. It is anticipated (based on
prior similar installations) that the generator will be operational 5% of the time at a 75 to 85 dB level at the site itself, which will not be heard at a distance of a half mile. The generator will be in an insulated shelter inside containment within the shelter. The nearest resident is over ½ mile away, and is the property owner. The next closest resident is more than a mile away. At the village site, there is minimal noise, and CPE will not cause any noise. Thus, there is no significant impact from noise.

No Action Alternative: The no-action alternative would have no impact on noise.

5.9. Geology and Soils
The soil is an alluvial silt over glacial gravel (see Figure 13: Soil Map). Permafrost is known to exist in the surrounding area but not at the project site. The organic layer was removed from the area when the original clearing was done in the early 1980s. The project involves minimal soil disturbance to dig a small hole for the monopole and will not have a significant impact on the existing quality of the soil or the surrounding soils and geologic conditions. This excavation will require the digging of a hole approximately 6’ x 6’ x 23’ deep. The material from the hole will be collected and upon completion of the tower placement, placed around the tower base and water compacted. The 20’ x 50’ area around the tower will be covered with 6” of compacted gravel that will come from an existing gravel pit located on the landowner’s farm.

Figure 13: USDA Soil Map
As indicated above, fuel is stored in double containment in the Connex. The only possibility for contact with the gravel pad would be in the unlikely event of a fuel spill during refilling. If this occurred, the spill would fall on the gravel pad, which could easily be removed and replaced. Thus, there are no significant impacts to geology and soils from the proposed action.

**No Action Alternative:** The no-action alternative would have no impact on soil and geology.

5.10. **Aesthetic and Visual Resources**
The project site is located amid farmland with a few houses in the area and uncleared forest. The proposed tower site is not within sight of any public use areas. Any impairment to aesthetic and visual resources will be minimal and no greater than that of a cell phone tower. Likewise, the CPE equipment in the village will be small in size; and impairment will be minimal and no greater than that of existing satellites on some of the homes. Thus, there are no significant impacts to aesthetic and visual resources.

**No Action Alternative:** The no-action alternative would have no impact on aesthetic and visual resources.

5.11. **Human Health and Safety**
Federal regulatory requirements addressing worker safety, protection, and health are administered and enforced by the Occupational Safety and Health Administration (OSHA). OSHA establishes worker protection standards that must be followed to prevent and minimize potential safety and health risks. In Alaska, state and federal laws and regulations pertaining to worker health and safety are administered and enforced by the Alaska Occupational Safety and Health Section of the Department of Labor and Workforce Development Labor Standards and Safety Division. During construction, OSHA safety standards will be enforced for contractors and their employees. All contractors must comply with the labor standards and protections as required by Healy Lake Village Council’s policies. All compensation will be in accordance with Davis-Bacon prevailing wage levels. Healy Lake Village Council will require contractors, subcontractors, and staff to adhere to applicable Federal, State, and Local Regulations, Codes, and Standards for all work. All contractors and subcontracts will be required to maintain insurance coverage.

Following construction, there would be no threats to human health and safety from either the tower or the CPE equipment. The tower site will be fenced and posted to prevent unauthorized access to the tower. “NO TRESPASSING” signs will be posted. Climbing pegs will be removed from the tower below 10'.

The installation of broadband will likely have a positive impact on the health of residents in the village, since they will be able to access telehealth services. Thus, there are no significant negative impacts to human health and safety from the proposed action.

**No Action Alternative:** The no-action alternative would have no impact on health and safety, but is less desirable than the proposed action, since it would deprive village residents of access to telehealth care.

5.12. **Resources and Impacts Dismissed from Analysis**
The following resources and conditions were considered during the preparation of this EA, but dismissed from analysis for the reasons stated below:
• **Utilities:** There are no utility connections or utilities associated with the tower project site other than solar panels—the tower site is self-contained. The CPE at residents’ houses will not interfere with any other utilities.

• **Infrastructure:** The only existing infrastructure in the area is Cummings Road. The road is periodically maintained by the Tribe and other farmers who reside in the area. The power line ends several miles before the site. There is no other public infrastructure. There will be no impacts to infrastructure as a result of the proposed action.

• **Transportation:** The proposed action will not change the amount of traffic in the area other than an occasional trip to the tower site for maintenance.

• **Waste:** The proposed action will not result in any waste that needs to be hauled away or treated.

• **Cumulative Impacts:** The proposed action will not result in cumulative impacts. It is not part of a larger project, nor have surrounding projects in the area resulted in large, adverse effects to resources.

• **Airspace:** Airspace resources will not be affected by the proposed action; the tower is not high enough to pose a threat to air navigation.

• **Recreation:** The project site does not contain or provide recreational facilities and is far from any recreational opportunities. The fence around the property will divert trespassers.

• **Seismology:** The Proposed Action would be implemented in accordance with applicable engineering considerations and requirements and has no potential to influence existing seismic conditions.

6. **Impact Mitigation**

   The project will adhere/has adhered to the following measures to avoid or mitigate environmental impacts:

   • **Land use:** Ensure that there is permission from landowner for activity at project site (lease in place), ensure village residential and tribal owner consent before installing CPE in village.

   • **Cultural Resources:** Ensure with Healy Lake Tribe, other tribes, and SHPO that there are no cultural resources; if ever such resources are found, resolve adverse effects in accordance with 36 CFR 800.6(c). Healy Lake Tribe has specifically stated that no cultural monitor needs to be present during construction.

   • **Biological Resources:** Tower design selected to avoid attracting birds, fenced area to avoid wildlife coming into project area; Contact Fish and Wildlife Service to determine the most appropriate course of action if ever an active Migratory Bird Treaty-protected bird nest is observed at the project site.

   • **Floodplains/Wetlands:** Project site moved to avoid being in or affecting wetland/drainage system.

   • **Socioeconomics and Environmental Justice:** Ensure open communication with residents regarding the process for getting broadband.

   • **Air Quality and Noise:** Ensure that solar panels are properly maintained to minimize use of generator.

   • **Geology and Soils:** Avoid unnecessary displacement of soils and ensure that soils excavated do not leave the project site and are put back in place, cover with gravel to prevent erosion.

   • **Human Health and Safety:** Adhere to OSHA regulations during implementation, maintain NO
7. Conclusion
This EA evaluated the potential environmental impacts of installing a monopole tower near Delta Junction and installing CPE on houses in Healy Lake Village so that residents can have reliable Internet service and all the educational, economic, and health benefits that come with Internet. The Proposed Action includes making a 6’ x 6’ x 23’ hole, installing a tower, backfilling and securing the tower, spreading gravel at the project site (less than .25 acres), installing solar panels and placing a Connex at the site to house a generator and fuel, and fencing the site off to protect it from trespassers and animals. It also includes installing CPE on houses and buildings in the village to receive the radiowaves projected from the tower.

This EA evaluates impacts from both the Proposed Action Alternative and the No Action Alternative. This analysis finds that the Proposed Action would have no significant adverse impacts on the environment, including land use, cultural resources, biological resources, air quality, water resources, floodplains, wetlands, socioeconomics, environmental justice, noise, soils, aesthetic and visual resources, human health and safety, utilizes, infrastructure, transportation, waste, airspace, recreation, or seismology—if applicable regulatory requirements, and minimization measures are adhered to. Rather, the Proposed Action would have a positive impact on the lives of Healy Lake Village residents, and potentially other nearby residents if they are ultimately able to gain Internet service through the tower. While the no action is thoroughly evaluated in this EA, it is ultimately not selected since the minimal negative impacts to the environment from the Proposed Action are greatly outweighed by the benefit to socioeconomics, health, and environmental justice.

There are no significant adverse impacts on resources requiring preparation of an EIS. Therefore, a finding of no significant impact is the appropriate decision document for the Proposed Action.
References


American Bird Conservancy, Bird Collisions and Communication Towers, https://abcbirds.org/birds-communication-towers/ (no date)

Fairbanks Northstar Borough, Air Quality Boundaries Map https://www.fnsb.gov/338/Program-Boundaries (n.d.)


Appendices

Appendix A: FCC Antenna Structure Registration and Emails
FCC Help Case HD0001137979 Resolution

IT Service Desk <fccprod@servicenowservices.com>  Fri, Mar 10, 2023 at 9:11 AM
Reply-To: IT Service Desk <fccprod@servicenowservices.com>
To: whicks@daradiotech.com

The information you requested from the FCC can be found below in the body of the email.

If you have any questions contact us at

(877) 480-3201.

Thank You!

Case Id: HD0001137979

Summary: Other

Description: I have saved my tower registration file, but I don’t know how to submit it. The file number is A1239559. Can you assist me?

**Please do not reply back to this message. The e-mail address is configured for outgoing e-mail only.**

Good afternoon,

The ASR Team advises: New purpose file number A1239559 has been submitted and received and starts the ~40 day National Notice period on 3/10/2023. Please advise the caller they need to ensure their Local Notice goes out on or before the National Notice starts. Once the National Notice period has completed successfully, the applicant must file the Part 2 certification amendment application to finalize the process and receive a permanent ASR number.


If you have any further questions or need additional information, please submit a help request at https://www.fcc.gov/wireless/available-support-services or call the FCC Licensing Support Center at (877) 480-3201.

Sincerely,

FCC Licensing Support Center
8:00 AM – 6:00 PM EST, M – F

Ref: MSG11076229
FCC Help Case HD0001159095 Resolution

IT Service Desk <fccprod@servicenowservices.com>
Reply-To: IT Service Desk <fccprod@servicenowservices.com>
To: whicks@daradiotech.com

The information you requested from the FCC can be found below in the body of the email.

If you have any questions contact us at

(877) 480-3201.

Thank You!

Case Id: HD0001159095

Summary: Filing Instructions - ASR

Description: We filed the Antenna Structure Application, and did our local notification, but I am not sure what to do next. The 40 day period should have ended today.

**Please do not reply back to this message. The e-mail address is configured for outgoing e-mail only.**

Dear Whit Hicks,

PLEASE NOTE: Per Public Notice DA 15-72, The FCC no longer mails registrations. When you provide an email address on your application, an official copy of your registration will be automatically emailed to you after the application has granted.

When an application is ready to be certified, please follow the instructions listed in this link:

https://mail.google.com/mail/u/1/?a=28d031ad58&view=垩&cid=1&panel=1&permmsgid=msg-f:17658767374868775751500&compose=msg-f:1765876748687757515...12

Healy Lake Tower Environmental Assessment, page 36
For procedures and processing time frames for the Environmental Notification Process, please refer to Public Notice DA 12-731. You may view this public notice at the following website:  http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-12-731A1.pdf

Further information may also be found at the following website:  http://www.fcc.gov/help/environmental-notification-process-registration-antenna-structures-overview

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**Downloading Official Registrations in ASR**

After your application has Granted, you may also download an official copy of the registration from the ASR Dashboard by following the steps below:

1. Go to https://wireless2.fcc.gov/ASRManager/login.faces and log in with your FCC Registration Number (FRN) and Password.
2. On the ASR Dashboard, click the gray Download Official Registration button.
3. Select the registration(s) from the Official Registrations list or search for the registration(s) you want to download by:
   - Entering the registration number, and/or
   - Entering a date range (based on Last Action date of the registration)
4. Click the check box(es) next to the registration number(s).
5. Once the registrations have been selected, click the green Download Selected button.
6. The download will be automatically converted to a PDF file, and you can choose to Open (to print) or Save (to save to a desired folder).

If you have any further questions, or need additional information, please submit a help request at https://www.fcc.gov/wireless/available-support-services or call the FCC Licensing Support Center at (877) 480-3201.

Sincerely,

FCC Licensing Support Center  
8:00 AM – 6:00 PM EST, M - F

Ref:MSG11445375
AFFIDAVIT OF PUBLICATION

UNITED STATES OF AMERICA
STATE OF ALASKA
FOURTH JUDICIAL DISTRICT

Before me, the undersigned, a notary public, this day personally appeared, Michael Paschall who, being first duly sworn according to law, says that he represents TriDelta, Incorporated, publisher of Delta Wind, a newspaper of general circulation published in Delta Junction in said Fourth Judicial District and State of Alaska, and that the advertisement of which the annexed is a true copy, was published in said newspaper on the following day(s):

4/6/2023; 4/13/2023; 4/20/2023; 4/27/2023

and that the rate charged is not in excess of the rate charged private individuals, with the usual discounts.

Subscribed and sworn before me this 5th day of

May, 2023.

Michael R. Paschall

Notary Public in and for the State of Alaska
My commission expires: March 10, 2024
### Appendix C: FAA Notice of Construction

**Notice of Proposed Construction or Alteration - Off Airport**

**Project Name:** DEPT-60078400-23  
**Sponsor:** Digital Aurora Radio Technologies

#### Details for Case: Cummings Road Tower

<table>
<thead>
<tr>
<th>Case Status</th>
<th>Date Accepted</th>
<th>Date Determined</th>
<th>Letters</th>
<th>Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accepted</td>
<td>09/08/2022</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**Construction / Alteration Information**

- **Notice Off:** Construction  
- **Duration:** Permanent
- **If Temporary:**  
  - Number:  
  - Days:  
- **Week Schedule - Start:** 09/08/2022  
- **Week Schedule - End:** 09/09/2022

*For temporary cases does the temporary structure require separate notice to the FAA? If so, include the Notice of Construction Date. If separate notice is required, please ensure it is filed. If it is not filed, please state the reason in the Description of Proposal.*

**State Filing:** Not filed with State

**Structure Details**

- **Latitude:** 63° 57.4' N  
- **Longitude:** 149° 06.70' W  
- **Horizontal Datum:** NAD83  
- **Site Elevation (feet):** 1106 (mean sea level)  
- **Structure Height (AGL):** 120 (mean feet)  
- **Current Height (AGL):**  
- **Minimum Operating Height (AGL):** (mean feet)

*For structural height of a new or reconstructed structure the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum operating height where detailed impacts are identified that require mitigation in a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.*

**Recommended Marking/Lighting:** None

**Proposed Frequency Bands**

- **Low Freq Range:** 54  
- **High Freq Range:** 177  
- **Freq Unit:**  
- **ERP:**  
- **ERP Unit:**

**Structure Summary**

- **Structure Type:** Radio Tower  
- **Structure Name:** Cummings Road Tower  
- **FDE NOTAM:**  
- **NOTAM Number:**  
- **REC Number:**  
- **Other:**

**Nearest City:** Delta Junction  
**Nearest State:** Alaska

**Description of Location:**  
- Description of Proposed: 
- On the Project Summary page upload any certified survey.

---

https://beaaa.faa.gov/beaaas/external/filing/locationAction.jsp?action=showLocationForm&locationID=5376138&raw=0

Healy Lake Tower Environmental Assessment, page 40
Mr. Hicks,

Thanks for reaching out. If the proposed tower is on private land and there is no access across state land needed, then there is most likely no need for an authorization from DNR. I spent some time this morning looking at our online mapping for land ownership and from my review it appears that this project is not located on state land. If the project does not call for any material (gravel, sand, etc.) from a state material site – then a material sale would not be needed. The consultation with DNR Office of History and Archaeology (Judy Bittner) is likely the only DNR coordination or authorization that the project would need from DNR.

Our office was established to assist applicants in coordinating all the necessary authorizations both state and federal – we have historically been used for large oil & gas, mining, and infrastructure efforts – however with the increased federal funding we are working with the Alaska Broadband Office and federal funding agencies in offering our assistance to applicants as needed. It appears to me that you have the bulk of the major permits and authorizations identified for the project – but in the event that you need assistance please feel free to reach out to me!

Thanks,

Ben

Ben White
Large Project Coordinator
Alaska Department of Natural Resources
Office of Project Management & Permitting
907-269-8755 – Office
Appendix E: SHPO Communications

State Historical and Preservation Office

Request for Project Review

Purpose and Scope

Healy Lake Tribal Council has prepared this National Environmental Policy Act (NEPA) Environmental Review (ER) in support of a Department of Commerce, National Telecommunications & Information Administration (NTIA) environmental review of the proposed Healy Lake Tribal Broadband Connectivity Program (TBCP) project. This project will provide Internet access to the tribal members at Healy Lake Village.

Funding for the broadband deployment project is provided through a TBCP grant from the NTIA. The NTIA is responsible for ensuring the project’s compliance with NEPA regulations. As the NTIA is a division of the Department of Commerce (DOC), this broadband deployment project is subject to the DOC NEPA implementing procedures set forth in Department Administrative Order 216-6 (DAO 216-6).

Healy Lake Tribal Council prepared this ER using project design and location details provided by Digital Aurora Radio Technologies, LLC, the authorized representative. Healy Lake Tribal Council also completed research and/or consultation with the Alaska Department of Natural Resource (as required) to further evaluate the potential impacts of the proposed project on the human environment.

Site Summary

The proposed tower site is on private farm land owned by Kent Steele (Mt Hayes Quadrangle, T11S, R14E Section 23, Tract C). The specific location is Latitude 63.570172 N Longitude 144.560704 W. It is not located in a designated wetland, nor on tribal lands. The site was cleared in the 1980’s and has been used for agricultural production since. The soils are shallow to gravel. The direct ground impact will be less than 10’ x 10’ for a bore hole to embed the tower. The project will impact no more than 100’ by 100’ (.22 acres) in the edge of a field (see attached map) for the communications equipment and a solar array. The access is along an existing farm road. There will be some brushing/mulching to clear vegetation for a gravel pad to locate the tower and solar panels. The area will be fenced with 6’ chain-link fencing. The site was selected because it is ideal to serve the Village based on topography, coverage area, and year around access.

Attachment A

(Maps)
Latitude 63.570172 N  Longitude 144.56
Good morning,

Tower project notifications are submitted through the FCC E106 system. Form 620 is used for new tower projects. More information can be found at

http://wireless.fcc.gov/outreach/index.htm?ob=tower_notification. You will need to call the FCC customer support at 1-877-480-3201 to get a FCC Registration Number (FRN) to log into the system and submit the information. The customer support will be able to answer any questions you have about the application. It is a fairly long form to complete but pretty straightforward. I have attached a PFD from the FCC that walks you through the process and includes the contact information if you need assistance. The system will alert our office when all the project information is submitted.

I look forward to receiving your project notification.

Cheers,

Amy Hellmich
Alaska State Historic Preservation Office
Office of History and Archaeology
Direct: (907) 269-8724
amy.hellmich@alaska.gov

Teleworking – Email is the best method of communication.
Good morning,

The Alaska State Historic Preservation Office (AK SHPO) received your correspondence concerning the subject project on July 18, 2023 and additional information on July 24, 2023. Following our review of the documentation provided, we concur with the finding of No Historic Properties Affected. Please note that our office may need to re-evaluate our concurrence if changes are made to the project’s scope or design.

As stipulated in 36 CFR 800.3, other consulting parties such as the local government and Tribes are required to be notified of the undertaking. Additional information provided by the local government, Tribes, or other consulting parties may cause our office to re-evaluate our comments and recommendations. Please note that our response does not end the 30-day review period provided to other consulting parties.

Should unidentified historical or archaeological resources be discovered in the course of the project, work must be interrupted until the resources have been evaluated in terms of the National Register of Historic Places eligibility criteria (36 CFR 60.4), in consultation with our office. Please note that some resources can be deeply buried or underwater, and that fossils are considered cultural resources subject to the Alaska Historic Preservation Act.

This email serves as our office’s official correspondence for the purposes of Section 106. Thank you for the opportunity to review and comment. Please contact me at (907) 269-8724 or amy.hellmich@alaska.gov if you have any questions or we can be of further assistance.

Best regards,

Amy Hellmich

Amy Hellmich
Alaska State Historic Preservation Office
Office of History and Archaeology
Direct: (907) 269-8724
amy.hellmich@alaska.gov
Teleworking – Email is the best method of communication.

Hi Amy,

Yes, since the project is off Healy Lake Village land and on private property, we are seeking SHPO review and concurrence with the 106 finding.

The project site has shallow silty soils (less than one foot) on glacial gravel that are incredibly stable for construction, particularly as there is no permafrost beneath the site. The hole will be as small as can possibly be dug with an excavator: 23
feet deep, 6 feet wide, and 6 feet long. The bottom section of the pole will go in the hole, and material from the hole will be placed back around the pole. The hole will be saturated with water to avoid unsettled airspace between small particles that make up the gravel. This way, there will be no need for concrete and the area will not be significantly susceptible to frost heaving. Once the bottom is stable, three more sections will be stacked on top of the base to reach 120 feet. There is no need for pile driving. The gravel material that was removed from the hole will be used to secure the base by water compacting the gravel around the tower base. The topsoil will be returned around the base.

I believe they need to ensure the pole is secure since they will not be utilizing pile driving and that is why they have to go so wide.

Does that help?

Please let me know if you have any other questions.

Josh Fitzpatrick
Environmental Program Officer
National Telecommunications and Information Administration
Office of Internet Connectivity and Growth
Email: jfitzpatrick@ntia.gov
Phone: 202.834.3123

From: Hellmich, Amy S (DNR) <amy.hellmich@alaska.gov>
Sent: Monday, July 24, 2023 1:47 PM
To: Fitzpatrick, Joshua <jfitzpatrick@ntia.gov>
Subject: RE: Healy Lake Village Broadband Internet Tower Construction

Good morning,

Does this project still require SHPO review?

I did take a look at your documentation and have one question. The documentation stated, “Installing the tower will include excavating a hole 6’ x 6’ x 23’ deep.” I have never heard of a tower construction requiring such a large hole. Is this a typo?

Cheers,

Amy Hellmich
Alaska State Historic Preservation Office
Office of History and Archaeology
Direct: (907) 269-8724
March 20, 2023

Healy Lake Village Council
600 University Avenue Suite 100
Fairbanks Alaska, 99709

Dear Whit,

The area of land you provided for review is not part of an historically important area to the Healy Lake People. The area appears to be farmland, meaning that any artifacts or site materials relevant to that spot will likely be out of context, broken, and scattered near the surface of the soil. Thank you for investigating this spot and finding facilities for the tribe’s Broadband Tower.

Sincerely,

Evelynn Combs
Healy Lake Village Council
Vice President
Cultural Resource Manager
Appendix G: TCNS notification

The National Telecommunications and Information Administration (NTIA) is using a modified version of the Federal Communications Commission’s (FCC) Tower Construction Notification System (TCNS) as a means of expediting its Broadband grant programs. This notice is to inform you that the following authorized parties were sent notification about the application that you submitted to NTIA through TCNS. The information was forwarded to authorized TCNS users by electronic mail and/or regular mail (letter).

Persons who have received the notification that you provided include leaders or their designees of federally-recognized American Indian Tribes, including Alaska Native Villages (collectively “Tribal Nations”), Native Hawaiian Organizations (NHOs), and State Historic Preservation Officers (SHPOs) who have set their geographic preferences on TCNS. For your convenience in identifying the referenced Tribal Nations and NHOs and in making further contacts, the City and State of the Seat of Government for each Tribal Nation and NHO, as well as the designated contact person, is included in the listing below. We note that Tribal Nations may have Section 106 cultural interests in ancestral homelands or other locations that are far removed from their current Seat of Government. Consistent with the FCC's rules as set forth in the NPA, NTIA requires that all Tribal Nations and NHOs listed below are afforded a reasonable opportunity to respond to this notification, consistent with the procedures set forth below.

We note that the review period for all parties begins upon receipt of a full project submittal and notifications that do not provide this serve as information only. If, upon receipt, the Tribal Nation or NHO does not respond within a reasonable time, you should make a reasonable effort at follow-up contact, unless the Tribal Nation or NHO does not respond to a follow-up inquiry, or if a substantive or procedural disagreement arises between you and a Tribal Nation or NHO, you must seek guidance from NTIA. NTIA will follow procedures consistent with those set forth in the FCC’s Second Report and Order released on March 30, 2018 (FCC 18-30).

https://mail.google.com/mail/u/0/?rm=d160712880&view=pt&search=all&permthcid=f17953432313567261275c7Cmsg-f179551546022903355...
1. First Chief Everett Nathaniel - Chaliyitsik Village - (PO Box: 57) - Chaliyitsik, AK - jnathaniel34@hotmail.com - 907-848-8717 - electronic mail and regular mail

2. Tribal Administrator Julian Lillie - Village of Dot Lake - (PO Box: 70494) - Fairbanks, AK - ekmadinda@yahoo.com - 907-452-2695 - regular mail

3. Tribal Administrator Nichol Rallo - Northway Village - (PO Box: 516) - Northway, AK - nicholr@aplakaska.net - 907-550-0299 - regular mail

4. President Herbert Dent - Tanacross Village Council - (PO Box: 76009) - Tanacross, AK - tanacrossvillagecouncil@yahoo.com; jerry.isacci@hotmail.com - 907-883-5024 - electronic mail and regular mail

5. President Gloria Stickwan - Native Village of Tazlina - (PO Box: 87) - Glennallen, AK - proc.mang.tazlina@cominternet.net - 907-322-4375 - electronic mail

6. Vice-President Michael Sam - Native Village of Ttitin - Ttitin Village Council (PO Box: 797) - Tok, AK - mach_z_1000@yahoo.com - 907-324-1234 - electronic mail and regular mail

The information you provided was also forwarded to the additional Tribes and NHOs listed below. These Tribes and NHOs have NOT set their geographic preferences on TCNS, and therefore they are currently receiving tower notifications for the entire United States.

None.

The information you provided was also forwarded to the following SHPOs in the state in which you propose to construct and neighboring states. The information was provided to these SHPOs as a courtesy for their information and planning.

7. SHPO Judith Blittner - Alaska DNR, Ofc. History & Archeology - 550 West 7th Avenue Suite 1310 - Anchorage, AK - ona.revcomp@alaska.gov - 907-269-5700 - electronic mail

TCNS automatically forwards all notifications to all Tribal Nations and SHPOs that have an expressed interest in the geographic area of a proposal. A particular Tribal Nation or SHPO may also set forth policies or procedures within its details box that exclude from review certain facilities (for example, a statement that it does not review collocations with no ground disturbance or that indicates that no response within 30 days indicates no interest in participating in pre-construction review).

Please be advised that the NTIA cannot guarantee that the contact(s) listed above opened and reviewed an electronic or regular mail notification. The following information relating to the proposed project was forwarded to the person(s) listed above.

Notification Received: 05/10/2023

Notification ID: 266688
Project Number: 111212
Applicant: Digital Aurora Radio Technologies, LLC
Applicant Contact: Whit Hicks
Project Type(s): Towers

https://mail.google.com/mail/u/0?ik=d1f6971a7d0&view=pt&search=all&permmsgid=t:179634323136720127547Cmsg-f:1796351546022903365
Region(s) affected by the proposed broadband project:
ALASKA, SOUTHEAST FAIRBANKS

Address or Geographical Location Description: The proposed Tower site is located at Latitude 63.56.36.66 N, Longitude 144.55.56.01 W (NAD83) along Cummings Road.

If you have any questions or comments regarding the content of this notice, please contact NTIA at TCNS@ntia.gov.
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as trust resources) under the U.S. Fish and Wildlife Service’s (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location
Southeast Fairbanks County, Alaska

Local office
Northern Alaska Fish & Wildlife Field Office
(907) 456-0203
(907) 456-0208

https://ipac.earthprotective.gov/location/SK/NK/C/381/14456/7/28/53094/resources
Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act requires Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species\(^1\) and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries\(^2\)).

Species and critical habitats under the sole responsibility of NOAA Fisheries are not shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. **NOAA Fisheries**, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

There are no listed species or critical habitats expected to occur at this location.

## Bald & Golden Eagles

Bald and golden eagles are protected under the **Bald and Golden Eagle Protection Act** and the **Migratory Bird Treaty Act**.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

Additional information can be found using the following links:

- Eagle Management [https://www.fws.gov/program/eagle-management](https://www.fws.gov/program/eagle-management)

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

Please refer to [Alaskas Bird Nesting Season](https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf) for recommendations to minimize impacts to migratory birds, including eagles.

<table>
<thead>
<tr>
<th>NAME</th>
<th>BREEDING SEASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bald Eagle, Haliaeetus leucocephalus</td>
<td>Breeds Feb 1 to Sep 30</td>
</tr>
</tbody>
</table>

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
Golden Eagle  Aquila chrysaetos  
Breed Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, 
but warrants attention because of the Eagle Act or for potential 
susceptibilities in offshore areas from certain types of 
development or activities. 
https://acis.fws.gov/ecp/species/1680

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely 
to be present in your project area. This information can be used to tailor and schedule your 
project activities to avoid or minimize impacts to birds. Please make sure you read and 
understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before 
using or attempting to interpret this report.

Probability of Presence (%) 
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) 
your project overlaps during a particular week of the year. (A year is represented as 12 4- 
week months.) A taller bar indicates a higher probability of species presence. The survey 
effort (see below) can be used to establish a level of confidence in the presence score. One 
can have higher confidence in the presence score if the corresponding survey effort is also 
high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in 
the week where the species was detected divided by the total number of survey events 
for that week. For example, if in week 12 there were 20 survey events and the Spotted 
Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in 
week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of 
presence is calculated. This is the probability of presence divided by the maximum 
probability of presence across all weeks. For example, imagine the probability of 
presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence 
at week 12 (0.25) is the maximum of any week of the year. The relative probability of 
presence on week 12 is 0.05/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical 
conversion so that all possible values fall between 0 and 10, inclusive. This is the 
probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (*)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort (°)**
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data (--)**
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

### Table: Probability of Presence

| SPECIES          | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Bald Eagle       |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Non-BCC         |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Vulnerable      |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Golden Eagle    |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Non-BCC         |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Vulnerable      |     |     |     |     |     |     |     |     |     |     |     |     |     |

**What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?**

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

**What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?**

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid
cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act\(^1\) and the Bald and Golden Eagle Protection Act\(^2\).

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

There are migratory birds in your project area. Please refer to Alaska's Bird Nesting Season for recommendations to minimize impacts to migratory birds, including eagles.

2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern [https://www.fws.gov/program/migratory-birds/species](https://www.fws.gov/program/migratory-birds/species)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date
range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

<table>
<thead>
<tr>
<th>NAME</th>
<th>BREEDING SEASON</th>
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<td>Breeds Feb 1 to Sep 30</td>
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<tr>
<td>Golden Eagle <em>Aquila chrysaetos</em></td>
<td>Breeds Jan 1 to Aug 31</td>
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<td>This is a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</td>
<td></td>
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https://ecos.fws.gov/ecp/species/1680

<table>
<thead>
<tr>
<th>Name</th>
<th>BREEDING SEASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesser Yellowlegs <em>Tringa flavipes</em></td>
<td>Breeds May 1 to Aug 15</td>
</tr>
<tr>
<td>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</td>
<td></td>
</tr>
</tbody>
</table>

https://ecos.fws.gov/ecp/species/9679

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey
effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.05/0.25 = 0.2; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 1, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.
Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

*Nationwide Conservation Measures* describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or *permits* may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does iPAC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS *Birds of Conservation Concern (BCC)* and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of *survey, banding, and citizen science datasets* and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (*Eagle Act* requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource List includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does iPAC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of *survey, banding, and citizen science datasets*.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.
How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

https://pec.ecosphere.fws.gov/location/SRNICC13TRH4VT2X3EM65IA/resources
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does iPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.
Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

PEM1F
PEM1C
PEM1B

FRESHWATER FORESTED/SHRUB WETLAND

PSS1/EM1B
PFO4/1B
PSS4B
PSS1B
PSS1/EM1C
PFO1A
PFO4B
PFO2B
PFO4/2R
PSS1/4B
PSS1A
PSS/EM1B
PFO4/1A
PFO1/SS1A
PSS4/1B
PSS4/2B
PFO1/4B
PSS1/EM1A
PSS/EM1A
PSS1C

FRESHWATER POND

PUBH
A full description for each wetland code can be found at the National Wetlands Inventory website.

NOTE: This initial screening does not replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations
The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the ancillary data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tube/did worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions
Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies.
Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.
Appendix I: FEMA Determination

FEMA Flood Map Service Center: Search By Address

Enter an address, place, or coordinates: cummings road, delta, alaska

Search Results—Products for SOUTHEAST FAIRBANKS

FEMA has not completed a study to determine flood hazard for the selected location; therefore, a flood map has not been published at this time. You can contact your community or the FEMA FIRM for more information about flood risk and flood insurance in your community.

You can select a new location pin by selecting a different location or by entering a new location in the search field above, which may take a minute or more during peak hours to generate a dynamic FIRMette.
Whit Hicks  
Digital Aurora Radio Technologies  
P.O. Box 1306  
Delta Junction, AK 99737  

Dear Mr. Hicks:

This letter is in response to your March 21, 2023, request for a Department of the Army (DA) approved Jurisdictional Determination (JD) for your property. It has been assigned number POA-2023-00153, Tanana River, which should be referred to in all correspondence with us. The project site is located within Latitude 63.950483°, Longitude -144.936864°; in Delta Junction, Alaska.

Based on our review of the information you provided, we have determined the subject property does not contain waters of the United States (U.S.) under the U.S. Army Corps of Engineers (Corps) regulatory jurisdiction Therefore, a DA permit is not required. A copy of the AJD form is enclosed and also available at www.poae.usace.army.mil/Missions/Regulatory/Jurisdictional-Determinations/Jurisdictional-Determination-Archive/ under the above file number. Please contact us if you decide to alter the method, scope, or location of your proposed activity.

This AJD is valid for a period of five (5) years from the date of this letter, unless new information supporting a revision is provided to us before the expiration date.

Enclosed is a Notification of Administrative Appeal Options and Process and Request for Appeal form regarding this approved jurisdictional determination (see section labeled “Approved Jurisdictional Determination”).

Section 404 of the Clean Water Act requires that a DA permit be obtained for the placement or discharge of dredged and/or fill material into waters of the U.S., including wetlands (33 U.S.C. 1344). The Corps defines wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.
Section 10 of the Rivers and Harbors Act of 1899 requires that a DA permit be obtained for structures or work in, or affecting navigable waters of the U.S. (33 U.S.C. 403). Section 10 waters are those waters subject to the ebb and flow of the tide shoreward to the mean high water mark, and/or other waters identified by the Corps, Alaska District.

There appear to be waters of the U.S. near your project area. Therefore, if changes to your activity are necessary, including changes to the location of the work or additional placement of dredged and/or fill material, please notify our office. We will then determine if authorization from the Corps is required for your project in light of those changes.

Nothing in this letter excuses you from compliance with other federal, state, or local statutes, ordinances, or regulations.

Please contact me via email at Amanda.N.Locken@usace.army.mil, by mail at the address above, by phone at (907) 347-6146, if you have questions. For more information about the Regulatory Program, please visit our website at www.poa.usace.army.mil/Missions/Regulatory.

Sincerely,

Amanda Locken
Regulatory Specialist

Enclosures