

## COMPATIBILITY DETERMINATION

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**Use:** Rights-Of-Way for Remote Microwave Repeater Installation

**Refuge Name:** Togiak National Wildlife Refuge

**Establishing and Acquisition Authorities:**

Togiak National Wildlife Refuge, encompassing approximately 4,788,000 acres, was established on December 2, 1980 when Congress passed the Alaska National Interest Lands Conservation Act (ANILCA). Former Cape Newenham Refuge, established January, 1969 was incorporated into the present Togiak National Wildlife Refuge in 1980.

Section 702(10) of ANILCA designated approximately 2,270,000 of Togiak Refuge as the Togiak Wilderness under the Wilderness Act, as amended (16 U.S.C. 1131-1136). The purposes for these lands as wilderness are supplemental to the other purposes of Togiak Refuge.

As part of the Togiak Refuge Comprehensive Conservation Plan revision of 2009, the administration of Hagemeister Island was transferred from Alaska Maritime Refuge to Togiak Refuge. Approximately 60,000 acres in size, Hagemeister Island became part of Alaska Maritime Refuge with the passage of ANILCA on December 2, 1980.

**Refuge Purposes:**

Cape Newenham Refuge (now part of Togiak Refuge) was established in 1969 by Public Land Order 4583 "...for the protection of wildlife and their habitat...".

Sections 303(1)(B) and 303(6)(B) of ANILCA set forth the purposes for which Togiak and Alaska Maritime Refuges (including Cape Newenham Refuge) were established and shall be managed, including:

(i) to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to,

[Togiak Refuge] salmonids, marine birds and mammals, migratory birds and large mammals (including their restoration to historic levels);

[Alaska Maritime Refuge] marine mammals, marine birds and other migratory birds, the marine resources upon which they rely, bears, caribou and other mammals;

(ii) to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;

(iii) to provide, in a manner consistent with purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents;

(iv) [Alaska Maritime Refuge] to provide, in a manner consistent with subparagraphs (i) and (ii), a program of national and international scientific research on marine resources; and

(v) to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the refuge.

Supplemental purposes for the Togiak Wilderness Area as defined by the Wilderness Act are:

To secure an enduring resource of wilderness, to protect and preserve the wilderness character of areas within the National Wilderness Resource Preservation System, and to administer this wilderness for the use and enjoyment of the American People in a way that will leave it unimpaired for future use and enjoyment as wilderness (Section 2(a) of the Wilderness Act of 1964).

### **National Wildlife Refuge System Mission:**

The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act, as amended).

**Description of Use:** United Utilities Inc. (UUI), a subsidiary of GCI Inc., has been funded by Rural Utilities Services through the American Recovery and Reinvestment Act (ARRA) to construct a system for providing broadband telecommunications services to the Bristol Bay and Yukon-Kuskokwim regions. The proposed system would be part of a terrestrial hybrid fiber-optic and microwave network between Homer and Quinhagak. As part of this system, UUI has requested rights-of-way for construction of two remote microwave repeater sites on the Togiak NWR.

UUI filed for the ROW permit consistent with the requirements of Title XI of ANILCA. Of the three federal agencies affected by the proposed project, (BLM, National Park Service, and Fish and Wildlife Service), the Fish and Wildlife Service was selected to lead the decision process under NEPA. An Environmental Assessment (EA) was initiated by the Fish and Wildlife Service in order to determine whether an Environmental Impact Statement was necessary. Travis/Peterson Environmental Consulting, Inc. was hired by UUI to prepare the EA for all activities on Federal lands. At the mid-point in the analysis process Travis/Peterson Consulting was replaced by URS Corporation, which completed the preparation of the EA. In addition to the UUI proposal and the no action alternative, a submarine fiber-optic cable alternative (which avoids Togiak Refuge) was analyzed. The David Ross Group compared the economic feasibility of the repeater site and submarine cable alternatives as prescribed by Title XI of ANILCA. Because the no action and submarine cable alternatives did not include actions on the Togiak Refuge, they are not considered in this compatibility determination.

One microwave repeater site would be located on a ridge adjacent to the Kulukak River (T13S, R62W, SM, Section 19 – Kulukak Ridge Repeater) and the second would be located approximately 12 miles northwest of Togiak Village (T12S, R68W, SM, Section 1 – Caribou Ridge Repeater). The ROW request includes an area of approximately 3,500 square feet at Caribou Ridge and 4,000 square feet at Kulukak Mountain, with another 30,000 to 58,000 square feet per site to be temporarily utilized during construction. Each site will consist of a 60' lattice

steel tower with microwave dishes attached, two shelters of approximately 200 square feet to house generators and electronic equipment, and two fuel tanks holding approximately 9,000 gallons of diesel fuel.

Construction of the repeaters would take place in 2011 and each would take approximately 150 days to complete. Both sites would be constructed concurrently. Access for construction would be done exclusively with helicopters of several sizes (Boeing Chinook, Bell UH-1, and Robinson R44). Approximately 110 helicopter trips to each site will be required for construction.

Operations and maintenance will be done exclusively with helicopter. It is expected that annual operations will consist of two scheduled visits per year to maintain generators and electrical equipment, and one period per year for refueling the tanks. Refueling will be done by slinging a 500 gallon tank to the sites and pumping fuel into the storage tanks. Fourteen helicopter flights will be required to complete annual refueling at each site.

**Availability of Resources:** Oversight of this right-of-way permit would require concentrated effort prior to and during the 150 day construction period, a limited amount of staff time annually during the life of the project, and again, a concentrated amount of effort during decommissioning at the end of the project life. Staff time during the construction year would focus on development of mitigation measures, execution of the right-of-way permit with appropriate bonding and other required documents, and field monitoring to assure compliance with provisions of the operations plan and permit. Annual monitoring would focus on compliance with the operations plan and adherence to mitigation measures. During the construction year, staff time to administer this permit is estimated at: management/administration - 100 hours; biology – 20 hours; law enforcement – 160, for a staff cost of \$15,854. Additional costs during the construction year for aircraft, travel, and supply costs are estimated at \$5,000 for a total cost of \$20,854. On an annual basis, staff time to administer this permit is estimated at: management/administration - 10 hours; biology – 5 hours; law enforcement – 24 hours for a staff cost of \$2,180. Additional costs on an annual basis for aircraft, travel, and supply costs are estimated at \$2,000 for a total cost of \$4,180. It is expected that adequate resources are available for administration of this proposed right-of-way permit.

**Anticipated Impacts of the Use:**

The draft EA provides an analysis of the impact of implementing the proposed repeater site project. These impacts are summarized in Chapter 4, *Environmental Consequences*, and are pertinent to this compatibility determination. A total of 17 elements of the physical, biological, and social environment were analyzed, including:

Physical environment: meteorology and air quality, geology and soils, hydrology, and hazardous materials and waste management.

Biological environment: wetlands and vegetation, fish and essential fish habitat, terrestrial mammals, birds, threatened and endangered species.

Social environment: socioeconomics, subsistence, land use, transportation, recreation, noise, visual resources, cultural resources, environmental justice.

The direct, indirect, and cumulative impacts for each project phase (construction, operation, and decommissioning) were evaluated in terms of intensity, duration, and context, and were assigned

one of four impact levels (negligible, minor, moderate, or major). Negligible impact was anticipated for meteorology and air quality, subsistence, transportation, cultural resources, and environmental justice and a positive impact was anticipated for socioeconomics. Construction and operation of the repeater sites was anticipated to entail minor to moderate negative environmental impacts to the remaining 12 elements (Table 1).

**Table 1. Summary of impacts to selected environmental resources.**

Resource	Description of impact	Anticipated impact
Geology and soils	Impacts from topsoil removal/excavation and facility installation would be high in intensity, permanent, common in context, and affecting less than 3 acres.	Minor
Hydrology	Potential fuel spills at repeater sites or while fuel is in transit would be short to long term in duration, local in extent, and high in intensity.	Minor to moderate
Hazardous materials and waste management	Potential risk of fuel spills during fuel transportation would result in impacts expected to be short to long term in duration, local in extent, and high in intensity.	Minor to moderate
Wetlands and vegetation	Potential risk to wetlands and vegetation from fuel spills during transportation would be long lasting but local in area.	Minor
Fish and essential fish habitat	Potential risk to fish and fish habitat from fuel spills during transportation would be of minor intensity, localized in extent, short in duration, and affecting common resources.	Negligible to minor
Wildlife (terrestrial mammals and birds)	Impact to wildlife would result due to loss of habitat, disturbance during construction and operation, mortality due to bird collision with towers, and from results of potential fuel spills. Impacts are expected to involve common resources, would be low or moderate in intensity and temporary to long-duration.	Moderate
Marine life and T&E species	Impacts to marine life, including threatened and endangered marine mammals, include disturbance at barge staging areas and possible fuel spills. Impacts are expected to be of low intensity, temporary, and important in context.	Minor
Land use	The proposed action would require amending the Togiak Refuge CCP from management category Minimal to Intensive, and would change the natural character of the affected lands, causing minor impacts to visitor's opportunity for solitude and ability to participate in primitive and unconfined recreation. The impact would be medium to high in intensity, local to regional in extent, and long-term to permanent.	Minor
Recreation	The proposed action is anticipated to cause disturbance to visitors and recreationists from construction and operation but are considered low in	Minor to moderate

intensity.

Noise	The proposed action is expected to generate noise. The effects would be low intensity, long-duration, and affecting common resources.	Minor
Visual	The proposed action is expected to result in minor long-term impacts to visual resources. Impacts would be of low intensity and may be largely absorbed by the expansiveness of the surrounding landscape.	Minor

In determining management direction for the Togiak NWR, five management categories were available, and include Intensive, Moderate, Minimal, Wilderness, and Wild and Scenic Rivers. The Togiak Refuge Comprehensive Conservation Plan completed in 2009 applied only two of these categories to the Refuge: Minimal and Wilderness. The selection of the Minimal Management category for all the non-wilderness portions of the refuge recognized the natural character of the area, including the proposed tower sites.

Impacts to the natural character of the area resulting from the tower installation and operation will occur in several ways. Installation, scheduled for 150 days during the summer of 2011, will require approximately 110 helicopter flights from Kulukak Bay or Togiak Village to each site. Most of these flights will be with a Robinson R44 helicopter but numerous flights will require a Bell UH-1B, and several will require a Boeing Chinook. Noise from each of the helicopters, but especially the larger two, will alter wildlife patterns and the resulting noise will have a negative effect on subsistence, sport, and commercial users in the respective flight paths. Subsequent year operation of the sites will require 14 refueling flights with a UH-1B each year and several maintenance flights with an R44. In addition, a 9 kW diesel generator will be operating at each site continuously. This combination of noise from operation and maintenance of the sites and the visual occurrence of the tower sites in this otherwise natural environment will have a negative impact on the naturalness of the Togiak Refuge. This will negatively impact both wildlife and visitors to the refuge in the vicinity of the installations or the flight paths used to access the sites.

The installations on Kulukak Mountain and Caribou Ridge will have fixed visual and noise impacts over the life of the project. Mitigation will include painting of the facilities to reduce the contrast with surrounding terrain, and reducing the generator noise by the use of enhanced mufflers.

Maintenance of the facilities – both annual and emergency - will take place exclusively with helicopter. Mitigation can be implemented that separates the scheduled maintenance activities from important wildlife occurrences and visitor use of the refuge. Unscheduled maintenance trips can be mitigated by conducting flights at the minimum 1500' AGL (weather permitting) until over the sites, and by refuge notification prior to departure.

#### **Public Review and Comment:**

The draft compatibility determination was available for public comment from March 8 through April 8, 2011. Electronic distribution was made through a master list maintained by the Division of Conservation and Policy. Additional electronic distribution was made to all holders of special

use permits with the refuge. Public notices of the opportunity to comment were made in the legal section of the Anchorage Daily News (March 16 and March 19) and the Bristol Bay Times (March 28). Public notices also identified the web site at which the draft compatibility determination was available for viewing (<http://alaska.fes.gov/nwr/planning/completed.htm>).

A total of five comments were received - three from individuals, one from United Utilities Incorporated (UUI), and one from the State of Alaska. One commenter stated that the use would be compatible if the monitoring and evaluation took place as identified in the stipulations. Another commenter expressed concern with the project but support for the proposed mitigation measures. A third commenter questioned how the proposed use could be found compatible with the mission or purposes for the refuge. This commenter stated that the project would have an irrevocable impact on the refuge, its wilderness character and wildlife and expressed concern with the visual contrast impact and noise pollution associated with the project. UUI commented in agreement with the draft compatibility determination conclusion and restated earlier commitments to taking all appropriate steps to mitigate any of the potential effects of the proposed repeaters during the construction and operation periods. They commented on the proposed stipulation related to the refueling window and suggested that extending this window into June would allow for safer operations without jeopardizing the project compatibility. The State of Alaska concurred with the overall conclusion of the draft determination.

A complete set of all comments received has been retained as part of the administrative record for the project.

**Determination (check one below):**

Use is Not Compatible

Use is Compatible With Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

1. Prior to September 30, 2011, a plan of annual maintenance, refueling operations, and other planned visits to the sites will be submitted to the refuge for approval. Included in the plan will be the following:
  - a. Annual refueling of the sites will be conducted during the period October 21 through April 1 and May 10 to June 20, to avoid the main concentration of public use taking place on the refuge during the spring, summer and fall.
  - b. The Togiak Refuge will be notified no less than fourteen days prior to commencement of annual refueling operations.
  - c. The Togiak Refuge will be notified no less than two days prior to commencement of recurring maintenance at the sites.
2. No later than January 15 of each year, the permittee will provide a report to the Togiak Refuge that details the previous year's activities at the two sites. This report will include:
  - a. All helicopter flights to each site during the previous year.

- b. The amount of fuel consumed at each site during the previous year (refuel to refuel)
  - c. Any service interruptions during the previous year as a result of these two sites, along with the cause and duration of those service interruptions.
3. All helicopter flights to and from the sites will maintain a minimum altitude of 1500' AGL weather permitting.
4. The permittee's SPCC (Spill Prevention and Countermeasures Control) plan will be incorporated into the conditions of the right-of-way permit.
5. During each year for three years following construction and every five years thereafter, permittee will be required to conduct a survey for invasive species at the two sites. A report on this survey will be provided to the Togiak Refuge office no later than January 15 of each year following the survey.
6. If at any time, another primary and secondary method is put in place to provide the services as detailed in the application for this ROW permit, the two sites will be removed from the refuge within two years.
7. Prior to construction soil tests for petroleum and metals must be conducted to establish baseline values describing the camp and construction footprint, and the permanent footprint to allow for future comparison. A monitoring plan describing proposed sampling, analytes or components measured, quality assurance measures, analysis, vendors, and reporting must be developed by the applicant and approved by the Service. Design may stratify temporarily occupied locations from those areas around the more permanent structures and should include post-construction sampling to facilitate close out of that portion of the project.
8. The Refuge Manager or designee, upon request, shall be afforded the opportunity and logistical support from the nearest commercial transportation site to accompany the permittee for the purpose of inspection and monitoring permittee activities.

**Justification:** The U.S. Fish and Wildlife Service Compatibility Policy (603 FW 2) requires that the refuge manager not permit a new use of a national wildlife refuge unless it is determined that the use is a compatible use. Compatible use is defined as: A proposed or existing wildlife-dependent recreational use or any other use of a national wildlife refuge that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the national wildlife refuge.

The purposes of the Togiak National Wildlife Refuge and the National Wildlife Refuge System mission are detailed above. Table 1 lists the anticipated impacts to selected environmental and social resources as detailed in the environmental assessment.

All refuge purposes warrant evaluation against the compatibility standard. The mission of the National Wildlife Refuge System also warrants evaluation in this compatibility review. This mission requires that the system be administered: *for the conservation, management, and, where*

*appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.*

### Refuge Purposes

The proposed use would not materially interfere with or detract from the Togiak NWR's primary purpose to conserve fish and wildlife populations and habitats in their natural diversity. Although there would be minor habitat fragmentation, and impacts to fish and wildlife populations from helicopter operations and noise from the generators, it does not rise to the level of incompatibility.

The proposed use does not materially interfere with or detract from the Togiak NWR's purpose to fulfill international treaty obligations of the United States with respect to fish and wildlife and their habitats. The loss of migratory bird habitat from this project will be minimal. By locating the sites inland, their impact on coastal migratory birds will be minimized or eliminated. Because towers are no taller than 60' and no guy wires are used, the mortality from bird strikes is expected to be minimized.

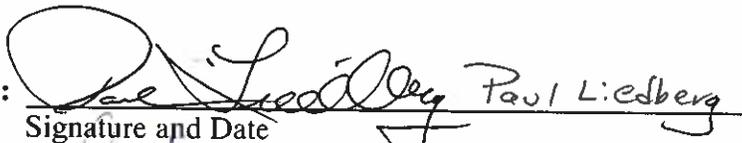
The proposed use does not materially interfere with or detract from the Togiak NWR's purpose to provide the opportunity for continued subsistence uses by local residents. The draft EA evaluated the impact to subsistence (Section 4.4.2) and concluded that the proposal would have effects on subsistence uses of low intensity and long-duration but in a very small area, and affecting resources that are common in context. The summary impact of this proposal on subsistence would be considered negligible.

The proposed use does not materially interfere with or detract from the Togiak NWR's purpose to ensure water quality and necessary water quantity within the refuge. No water use is associated with the project and neither of the sites is located in wetlands. The main impact to water quality would come from the potential release of fuel and/or lubricants during construction or during the annual in-flight jettisoning of fuel to resupply the sites. As stated in the EA (Section 4.2.3.2), given the limited temporal and fuel volume risks, the impact to wetlands of a fuel spill would be considered minor to moderate.

### System Mission

The proposed use does not materially interfere with or detract from the National Wildlife Refuge System Mission of administering lands and waters for the conservation, management, and restoration of fish, wildlife, and plant resources, and their habitats. The project would entail minimal habitat fragmentation. Although impacts to wildlife would occur, it is expected that they would be minimal and that mitigation measures would further reduce anticipated impacts.

Signature (Refuge Manager):

 Paul Liedberg 4/13/2011  
Signature and Date

Concurrence (Regional Chief):

 4/15/2011  
Signature and Date

**Mandatory 10-year Re-evaluation Date:** N/A – Rights-of-Way often are approved for extended periods of time. The National Wildlife Refuge System Administration Act of 1966, as amended, treats Refuge uses that are approved for longer than 10 years differently than other uses. During the life of the permit, only compliance with the terms and conditions of the authorization is to be examined, not the authorization itself. After expiration of the permit, the use is to be re-evaluated for compatibility.