

Environmental Assessment for Kanaryarmiut Field Station Removal



Prepared by the U.S. Fish and Wildlife Service
Alaska Region

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List of Acronyms

ADNR - Alaska Department of Natural Resources
AHRS - Alaska Heritage Resource Survey
AIRFA - American Indian Religious Freedom Act
ANILCA - Alaska National Interests Lands Conservation Act
ANSCA - Alaska Native Claims Settlement Act
ARPA - Archaeological Resources Protection Act
EA - Environmental Assessment
FRA - Fiscal Responsibility Act
IDT - Interdisciplinary team
NAGPRA - Native American Graves Protection and Repatriation Act
NEPA - National Environmental Policy Act
NRHP - National Register of Historic Places
Refuge - Yukon Delta National Wildlife Refuge
Service - U.S. Fish and Wildlife Service
SHPO - State Historic Preservation Office

Chapter 1: Introduction, Purpose, and Need

1.1 Introduction

This Environmental Assessment (EA) is being prepared to evaluate the effects of a refuge management project being proposed by the Yukon Delta National Wildlife Refuge (Refuge) and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 CFR 1500-1509) and Department of the Interior (43 CFR 46; 516 DM 8) and U.S. Fish and Wildlife Service (Service) (550 FW 3) regulations and policies. NEPA requires examination of the effects of proposed actions on the natural and human environment. This EA has been written in accordance with the Council on Environmental Quality (CEQ) issued a final rule, NEPA Implementing Regulations Revisions Phase 2 (CEQ Phase 2 NEPA regulations) published May 1, 2024, revising its regulations for implementing the NEPA, including to address amendments to NEPA made by the Fiscal Responsibility Act (FRA) of 2023.

Yukon Delta National Wildlife Refuge (Refuge) was established in 1980 through the Alaska National Interests Lands Conservation Act (ANILCA) and encompasses over 26 million acres of lands and waters on the Yukon-Kuskokwim delta. The Refuge included all federal lands on the Yukon-Kuskokwim Delta and incorporates previously established Clarence Rhode National Wildlife Range established in 1961, Hazen Bay Migratory Waterfowl Refuge established in 1937, and Nunivak Island Reservation established in 1929.

ANILCA Section 303 (7)(b) sets forth these purposes of the Yukon Delta National Wildlife Refuge:

- (i) To conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, shorebirds, seabirds, whistling swans, emperor, white-fronted and Canada geese, black brant and other migratory birds, salmon, muskox, and marine 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 the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence use by local residents; and
- (iv) To insure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quality within the Refuge.

1.2 Background

The Kanaryarmiut Field Station has been a highly utilized remote field station for the Refuge since the early 1980's. This field site is located within dense shorebird nesting habitats, within accessible distance to the coast for waterfowl and shorebird studies, had easy access by boat via the river, but was also situated on a large freshwater lake that maintained enough depth so float planes could easily access it. Planes landed at this lake throughout the summer to deploy camps, re-fuel, and stage gear going to other locations. Typhoon Merbok impacted this region in September of 2022 and flooded the landscape and drastically changed this remote camp location. Flooding inundated the field camp and eroded the embankment that separated the freshwater lake to the northeast of the field station and the tidally influenced Kuyungsik River channel to the west. Once the storm surge began to recede, erosion increased and further channelized a path for surface flow to drain the freshwater lake. The lake is now influenced by the ebb and flow of the tide and is hydrologically connected the channel to the west. The newly formed channel continues to erode rapidly and all the

existing structures at the field camp are at risk of falling into the river. In addition to the risk of asset loss, the lake is no longer suitable for safe and reliable float plane landings. Since the former lake is now subject to the ebb and flow of tide the area does not maintain a constant level, which renders it unsafe and unusable to land on with a float plane. The three Avgas tanks along the lakeshore are no longer usable for refueling, as they are too far from any location a plane can access to be useful and may be in danger of going into the lake with erosion as well.

1.3 Proposed Action

The Refuge proposes to disassemble/demolish and remove all structures from the Kanaryarmiut Field Station located at latitude: 61.3614013°, longitude: -165.1279485° within Section 30, Township 015 North, Range 088 West of the Seward Meridian. The list of structures include; the cabin, maintenance shed, storage shed, all associated infrastructure and boardwalks and the ABG fuel tanks. Demolition equipment would be a combination of hand and mechanized tools (e.g., chainsaws, reciprocating saws). All gear, appliances, and structural materials would be sorted into piles raised above the ground for subsequent transport by aircraft, boat or snowmachines pulling sleds. Destinations of materials would include the Old Chevak field station, the Chevak dump, Chevak, and/or the Refuge HQ in Bethel.

The maintenance and storage sheds would be relocated to Old Chevak Field Station located at latitude: 61.431066°, longitude: -165.451197 within Section 32, Township 16 North, Range 090 West of the Seward Meridian. The sheds would be transported to Old Chevak and staged for reconstruction on a post and pad-style or triodetic foundation above the ground for additional storage. These structures would be disassembled into the largest portable sections possible for transportation. The fuel tanks would be taken to and surplused to the Traditional Council of Chevak by helicopter and the remaining usable building materials from the other buildings and infrastructure would be repurposed and utilized by local residents. There are numerous subsistence fish and berry camps along the Kashunuk river and subsistence users would take and use the majority of the materials. The materials not repurposed would be disposed of by Refuge staff. Travel between Chevak and the two field camps would be done on snowmachine, by boat, or by fixed-wing aircraft. Travel across land would be mostly on established winter trails via snowmachines pulling single or tandem siglin sleds staged in Chevak. Boating travel would also be from Chevak and would head west along the Ninglikfak river, south along the coast of Hooper Bay, then back east along the Keoklevik River to the Kashunuk and Aphrewn rivers where the Kanaryarmiut field station is located. Air transport would utilize ski, float, or wheel gear depending on conditions.



Figure 1: Vicinity map of the Kanaryamiut Field Station prior to Typhoon Merbok and all structures to be removed from the proposed action



Figure 2: Vicinity map of the Old Chevak Field Station and location for proposed building relocation



Figure 3 (left): Image taken on September 12, 2022 of the Kanaryarmiut Field station

Figure 4 (right): Image taken on July 1, 2023 of the Kanaryarmiut Field station

1.4 Purpose and Need for the Proposed Action

The purpose of the proposed action is to prevent the structures at the Kanaryarmiut field station from falling into the adjacent waters due to rapid erosion and to replace the lost field capacity by reconstructing storage buildings at Old Chevak. The need for the proposed action is the result shoreline damage caused by typhoon Merbok storm surge.

1.5 Scoping and Issues

This draft EA was prepared in accordance with NEPA (42 USC 4321), and 40 CFR 1500-1508. During the internal scoping process, an interdisciplinary team (IDT) reviewed the proposed action and assessed any potential issues. The IDT determined which issues required further detailed analysis or which issues did not need additional review. The findings from the IDT are outlined in table 1 below. Resources issues identified for further analysis will be described in detail in chapter 3 and effects analyzed in chapter 4.

Issue	Further analysis required	Rational
Subsistence	Yes	<p>The Kanaryarmiut Field Station has a public use facility that is occasionally utilized by subsistence users. The proposed action would remove the public use facility. The terrestrial subsistence uses include berry picking, egg gathering, and hunting. Aquatic subsistence uses consists of fish camps on the main stem of the Aphrewn River and fish camps past the field station.</p> <p>The old church at Old Chevak used to be used as a public use facility by subsistence users, but in 2012 a new cabin was built approx. ¼ mile away that has been used since. No affect to subsistence uses will occur at</p>

		Old Chevak,
Cultural Resources	Yes	There are known cultural resources within the vicinity of both the Kanaryarmiut and Old Chevak Field Stations. Further analysis is necessary to determine potential effects of the proposed action.
Migratory Birds and other avian species	Yes	The Refuge serves as important nesting and rearing habitat for a host of migratory bird species. The field camps are situated near nesting migratory bird habitat.
Visitor Use	Yes	Removing the public use cabin from the field station would reduce the developed visitor use facility capacity of the area.
Threatened and Endangered Species – Spectacled Eider	Yes	Kanaryarmiut Field Station is outside of the critical habitat on the Yukon Delta. No nesting Spectacled Eiders have been found near the field station since its inception, nor have eider broods been detected near Kanaryarmiut Field Station.
Threatened and Endangered Species – Wood Bison	No	Wood Bison are not currently on the Refuge, however in (2016?), one wood bison roamed from the release site near Holy Cross and wandered across the refuge down to Quinihagak.
Threatened and Endangered Species – Steller’s Eider	No	The last detected nesting Steller’s Eider on the Yukon Delta was in 2015 right on the coast on the Tutakoke River. No Steller’s Eiders have been detected inland near Kanaryarmiut or Old Chevak Field Stations, and Steller’s Eiders are considered non-existent breeding on the Refuge.
Wetlands	No	The project site contains palustrine emergent and scrub shrub wetland vegetation. The areas where the proposed work would occur are previously disturbed from the construction and operation of the field camps. No impacts to wetlands would occur from the proposed action.
Viewshed	No	The field camp serves as a landmark in the area however removal of the field station would restore the site to it prior natural viewshed prior to construction.
Soundscape	No	The proposed action would cause increased noise from helicopter operations, boat and snowmachine use. These activities are not uncommon on the Refuge however they would be concentrated during the duration of the project. These impacts would be negligible to the soundscape of the area.
Invasive species	No	There is a possibility to spread invasive species however no more than other management activities

		conducted by the Refuge. The refuge staff utilize best management practices to lessen the potential to spread invasive species.
Fish and aquatic species	No	The project site is located adjacent to the Aphrewn River that contains chinook salmon (<i>Oncorhynchus tshawytscha</i>), chum salmon (<i>O. keta</i>), pink Salomon (<i>O. gorbuscha</i>), inconnu (<i>Stenodus leucichthys</i>), and other whitefish (<i>Prosopium sp.</i> And <i>Coregonus sp.</i>). Other resident species of fish and aquatic life could be present in the effected environment. Impacts to fish and aquatic species would be negligible and limited to boat traffic on the river system.
Wildlife	No	Game species such as moose (<i>Alces alces</i>) are known to occupy the area as are various furbearer such as red fox (<i>Vulpes vulpes</i>). The effect from the proposed action would include increased human presence and elevated noise levels during operation. These effects are negligible and would not differ from current season operations on the site.
Vegetation	No	The Kanaryarmiut and Old Chevak field stations have been disturbed over the 30 years of operation and construction of the site. The work proposed would cause direct impacts to vegetation around the camp. The impacts would be similar to normal operation of the field station and effects would be negligible. Once removed the areas would be able to revegetate naturally. Clearing of vegetation is not proposed in this action.
Soils	No	Disassembly and removal of the structure would cause compaction and increased risk for erosion along streambanks during and after operations. The field camps have been impacted over the past 30 years of operation and the proposed action would not disturb soils any further. The structures themselves have created compaction of native soils and additional compaction of would not occur from the proposed action. No ground disturbance is proposed for this action.
Snow Pack	No	Operation of snowmachines for transport of workers and materials would compact snow resources. Refuge staff would utilize existing trail infrastructure as much a possible further minimizing effects to the existing snowpack. These impacts would be negligible.

Table 1. Analysis of issues identified during the internal scoping process

Chapter 2: Alternatives

Alternative A – Kanaryarmiut Field Camp Removal

Under the Proposed Action Alternative, The Refuge would disassemble/demolish and remove all structures from the Kanaryarmiut camp including; the cabin, maintenance shed, storage shed, all associated infrastructure and boardwalks and the ABG fuel tanks. Demolition equipment would be a combination of hand and mechanized tools (e.g., chainsaws, reciprocating saws). All gear, appliances, and structural materials would be sorted into piles raised above the ground for subsequent transport. Destinations of materials would include the Old Chevak field camp, the Chevak dump, Chevak, and/or the Refuge Head Quarters in Bethel. The maintenance shed and storage shed would be relocated to Old Chevak and reconstructed on a post and pad-style or triodetic foundation above the ground for additional storage. The fuel tanks would be transported Chevak by helicopter and the remaining usable building materials from the other buildings and infrastructure would be repurposed and utilized by local residents. Travel between Chevak and the two field camps would be done on snowmachine, by boat, or by fixed-wing aircraft.

Alternative B – Existing Conditions [No Action Alternative]

Under the No Action Alternative, the Refuge would not disassemble the Kanaryarmiut Field Station and all structures would remain unaltered. No new structures would be installed at Old Chevak Field Station.

Chapter 3: Affected Environment and Environmental Impacts

3.1 Introduction

This section describes the existing environmental and socioeconomic settings in the action area along with the environmental consequences of the action on each affected resource. This EA includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than minimal and therefore considered a potentially impacted resource or are otherwise considered important as related to the proposed action. Any resources that will not be more than minimally impacted by the action and have been identified as not otherwise important as related to the proposed action have been dismissed from further analyses.

As such, those resources will not be further analyzed in this EA. This chapter assesses the direct, indirect, and cumulative impacts to the affected environment from each alternative outlined in chapter 3. This EA is a stand-alone NEPA document to assess the impacts from the proposed action. Impacts to resources identified during the scoping process that are identified in section 1.5 (table 1) are further discussed below.

3.2 Subsistence

3.2.1 *Affected Environment*

Subsistence practices in the Kanaryarmiut and Old Chevak area are similar to each other due to the proximity of the two sites. Due to high costs of living and a limited cash economy, subsistence foods are essential to the residence of the area. Many of the subsistence users access the Kashunak river (which both sites are located on) through a network of sloughs in the spring, summer and fall using watercrafts and, in the spring, and winter primarily with snowmobiles. The harvest of terrestrial and aquatic species is dependent on the seasonal the availability of those species.

In the early spring, before the arrival of waterfowl, ptarmigan are hunted throughout this area. During the breakup of the ice within the rivers and sloughs, the spring migration of waterfowl brings the opportunity for the waterfowl hunting and the gathering of eggs from various species of birds. Occasionally, in the spring, subsistence users have the opportunity to hunt seals and the beluga whale enter the Kushunak river in the spring and are a highly prized food source. Summer fish camps are scattered throughout the Kashunak area, where families spend most of the summer. Salmon species (Chinook, Chum and Coho) are the primary target and are an important subsistence food source for these users. In the latter half of the summer berry picking and the gathering of wild edible greens are harvested throughout the area. In fall, additional opportunities to hunt seals (bearded, ringed, and harbor) occur and waterfowl are hunted before they migrate out before freeze up. Whitefish species such as humpback whitefish and Bering cisco are harvested with either regular gillnets or when the river ices over under the ice gillnets. Autumn also bring moose hunting in the area, a relatively new practice due to moose moving from the Yukon drainage into these areas due to high numbers of moose on the Yukon River. Winter subsistence activities are primarily aquatic, under ice nets are and jigging with rod and reel are used to pursue whitefish species, pike and burbot. Subsistence users also use traps to harvest blackfish from small sloughs that connect lakes and Ptarmigan hunting continues throughout the winter months. (USFWS 1988, USACE 2018, John and Carl 2017)

3.2.2 *Environmental Impacts*

Alternative A - Proposed Action

Direct Effects

Potential impacts to subsistence practices with the proposed action are limited. Removal of the public cabin will limit some users from conducting subsistence practices from Kanagyagak Field Station.

Indirect Effects

Acoustical impacts could affect individual family fish camps around the field camps and in route to the sites. Increased boat and snowmobile traffic may displace some animals from normal habitat but this effect would be minimal. These effects could be negligible to and would not differ from normal field camp operation at either site.

Cumulative Effects

The proposed action would not substantially add to the cumulative effects to subsistence. Indirect impacts from the proposed action are negligible and would only be short term. Similar actions are not reasonably foreseeable and would not cumulatively affect subsistence activities more than the individual project.

Alternative B - No Action

Under this alternative the public use cabin would become operational due to erosion. The impacts to subsistence users at the Kanaryamiut Field Station would still occur due to the loss of visitor use capacity. Indirect acoustical effects would not occur however this effect would be representative of the baseline noise from other visitor activities and Refuge operations in the area.

3.3 Cultural Resources

3.3.1 Affected Environment

This section addresses known and expected cultural resources in the project area incorporating information from the following sources: Alaska Department of Natural Resources (ADNR), Office of History and Archaeology, Alaska Heritage Resource Survey (AHRS), and internal U.S. Fish and Wildlife Service files. The relevant legal authorities for evaluating the effects on cultural resources are NEPA and Section 106 of the NHPA and its implementing regulations in 36 CFR 800.3. Federal agencies are encouraged to coordinate compliance with Section 106 with any steps taken to meet the requirements of NEPA and should consider their Section 106 responsibilities as early as possible in the NEPA process (36 CFR 800.8(a)(1)). AHRS and other pertinent data were reviewed for this EA in June of 2024.

Cultural Context

The Cup'ik (or Yup'ik) people of Chevak, Alaska are the closest primary users of the project area and have been in the Yukon and Kuskokwim Deltas for 1,000s of years. There is a rich cultural context in the region with archaeological data dating back to ~10,500 BP at the Spein Mountain site associated with the Paleo-Arctic tradition containing microblades, larger blades, and bifacial knives (Ackerman 2001). This is followed by the Northern Archaic tradition (~6,600-4,200 BP) during which time cultures in the area began to resemble those from the North American boreal forests with a particular emphasis on notched projectile points (Anderson 1984). This is followed by the Arctic Small Tool tradition (~4,000-3,000 BP and continues to include microblades as well as specialized burins and small bifaces that were presumably used as end and side blade inserts on bone and antler harpoon points along with ground-stone technology. Next is the Norton tradition (~2,500-1,100 BP) which is widespread and has a high representation of archaeological sites. The distinguishing characteristic is an association with the appearance of pottery that was fiber-tempered and linear-stamped. Microblades became scarce and there was a reliance on larger lanceolate projectile points, oil lamps, and the presence of slate tools. According to Shaw (1983), the Norton tradition peoples were the first intensive occupants of the Delta proper. The later Thule tradition began ~1,000 BP and is characterized with an emphasis on the use of ground slate for stone tool manufacture, ulus, knives, and projectile points. The pottery of this period differs from that of the Norton tradition and there are many organic implements of which harpoon and dart heads were manufactured of bone or ivory.

At the time of contact the Yukon-Kuskokwim Delta region was occupied by members of five to six groups of central Alaskan Yup'ik speakers (U.S Fish and Wildlife Service 1988). They made their home in this region for centuries and practiced a subsistence lifestyle in settlements ranging from a few families up to a few hundred individuals in semi-subterranean houses. During this period the Yup'ik living along the Bering Sea coast and surrounding areas often engaged in conflict with the more northern riverine Yup'ik (Nelson 1983). Russians began exploring the area in the early 1800s and an outpost was established in the middle Kuskokwim in 1832 called Kolomakov Redoubt. During this time the first Russian Orthodox church north of the Alaska Peninsula was established in 1837 and missionaries began to penetrate the area also fueling Russian fur trading (Damas 1984). When Alaska was transferred to the United States in 1867 the Russian occupancy ended. The Yup'ik continued traditional subsistence activities and by the 1960s nearly all males from the surrounding communities were involved in the fishing industry.

Previous Cultural Resource Surveys in the Project Area

This specific region of the Yukon-Kuskokwim Delta can be generally characterized as having had very little archaeological research conducted. This is primarily due to the extreme remoteness and logistic difficulties in conducting research in such an inaccessible area. E. W. Nelson collected ethnographic materials and some archaeological specimens while traversing the Yukon-Kuskokwim Delta in 1878 & 1879. Wendell Oswald conducted excavations in the region during the 1950s; however, he increasingly focused his research on ethnography and historical archaeology. Don Dumond conducted extensive excavations in Naknek region in the 1960s. Robert Ackerman and Robert Shaw both conducted research during the 1970s and 1980s within this region of the Kuskokwim Delta.

The vast majority of cultural resource inventories and surveys were conducted in response to the passage of the Alaska Native Claims Settlement Act (ANCSA) in 1971. This entitled regional Native corporations to select up to one half million acres of cemetery and village sites, known as 14(h)(1) sites, which were identified in surveys by various Bureau of Indian Affairs (BIA) cultural resource consultants. These few studies, plus the field notes of U.S. Fish and Wildlife Service archaeologists, created a modest inventory of archaeological sites in the southwestern region east of the Kuskokwim River around the community of Napaskiak. The sites in this area consist mostly of villages, cold weather and summer camps, and associated graves. Such sites are generally located along rivers and other waterways. Due to the confidential and sensitive nature of the location of archaeological sites no map is provided in this EA.

There are three known cultural resources within a 1 by 1-mile buffer of the project area where the sheds are being deconstructed: 1) XHB-00030, recorded in 1977, consists of two house pits and a wood box burial and has not been evaluated for the NRHP and has likely eroded away as the site is plotted in the middle of the Kuyungsik River; 2) XHB-00031 consists of two temporary tent camps, scattered litter and possible graves which has not been evaluated for the NRHP and; 3) XHB-00032 a midden mound and well defined house pit which has also not been evaluated for the NRHP.

There are two known cultural resources within a 1 by 1-mile buffer of the project area where the sheds would be reconstructed: 1) XHB-00008, the Old Village of Chevak, which is represented by house pits, grave box burials, cache pits, and a U.S. Fish and Wildlife Service Field Camp which has not been evaluated for the NRHP; and 2) XHB-00096, Old Chevak Church-Misson of Saint John the Baptist, a structure that has been used extensively since 1952 as a field camp for scientific research. The church was determined eligible for listing on the NRHP in 1996.

3.3.2 *Environmental Impacts*

Alternative A - Proposed Action

In general, the threshold of what is considered a significant impact to cultural resources is when an activity may alter, directly or indirectly, any of the characteristics that qualifies a cultural resource for inclusion in the NRHP in a manner that would diminish the property's integrity. Significant impacts may include foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative.

Direct Effects

Potential impacts associated with the proposed action are limited. The removal of the sheds at the Kanagayak Field Station would be done with hand tools in an active U.S. Fish and Wildlife Service camp. Direct impacts include potential ground disturbance in the area and through transport to the new construction location. The reconstruction of the sheds at the Chevak Field Camp in the boundary of a known precontact site with multiple features could directly impact the integrity of the site through ground disturbance and the placement of the sheds (e.g., compaction). Lastly, the Old

Chevak Church, eligible for listing on the NRHP, is near the reconstruction area and the presence of the sheds may impact the setting of the cultural resource.

Indirect Effects

Indirect impacts on cultural resources could include increased access and potential removal, trampling, or dislocation of cultural resources and culturally sensitive areas by personnel and visitors; complete or partial destruction of a site from erosion, thawing permafrost, and thermokarsting; the loss of traditional meaning, identity, association, or importance of a resource; effects on beliefs and traditional religious practices; or neglect of a resource that causes its deterioration.

Mitigation of Impacts

To mitigate impacts to cultural resources the sheds at the Kanagayak Field Camp project area would be removed with hand tools with limited to no ground disturbance occurring. The transport of these materials to the new site would be done by aircraft, boat, or snow machines pulling sleds all of which would reduce indirect impacts on the landscape (e.g., erosion) that may contain cultural resources. With the reconstruction of the sheds in the boundary of a known archaeological site an area was chosen, based on site maps, where no cultural features are present that has been used for tent pads for past researchers near a board walk. The sheds would be placed on the surface of the landscape on wooden blocks that would not alter the landscape. With the Old Chevak Church being utilized as a research facility since 1952 the addition of two structures would carry on the ongoing character of its use in an area that has had many temporary structures throughout the camp's history.

Cumulative Effects

Past, present, and reasonably foreseeable activities with this project may have the potential to increase cultural resource impacts. Past and present actions that have affected cultural resources are past federal government decision-making (e.g., lack of funds for proactive cultural resource inventories), increased recreation and tourism, scientific research, natural processes (e.g., typhoons), and climate change. These types of effects include destruction or possible disturbance of undocumented cultural resources. The action alternative has minimal potential to create cumulative effects on cultural resources.

Alternative B - No Action

This alternative would not result in potential direct or indirect impacts on cultural resources because no activities would occur in the project area. Existing activities that could affect cultural resources would include people using Refuge lands and waters that could lead to purposeful or inadvertent damage to or unauthorized collection of cultural resources. Additionally, natural processes, such as erosion, would continue to affect cultural resource sites under this alternative. The impacts of climate change would continue affecting archaeological resources and may expose artifacts and features that could lead to unauthorized collection.

3.4 Migratory birds and Other Avian Species

3.4.1 Affected Environment

The Yukon-Kuskokwim delta is an important breeding and migratory habitat for various migratory and shore bird species. The Refuge comprises complexes of tidally influenced and freshwater wetlands and waterways that these species use for nesting and brood rearing habitat. Additionally, the Refuge serves as a migratory corridor for other species moving south from nesting areas in the Arctic. Most migratory bird nesting habitat is located near the coastline and consists of various tidal and wetland habitats. (USFWS 1988) The Kanaryarmiut and Old Chevak Field Stations are situated within the range of migratory bird habitat, but both field stations are located relatively far inland.

Nesting and rearing habitat is not present in the direct footprint at either field site, and no observations of migratory bird occupation have been reported in the 40 years of field camp operations.

Although studies on Birds of Conservation Concern, such as Bar-tailed Godwit (*Limosa lapponica*), Black Turnstone (*Arenaria melanocephala*), and Northern Alaska Dunlin (*Calidris alpina arctica*), have been conducted from Kanaryarmiut field station, the nesting areas are not at the field sites themselves. No shorebirds are known to nest at the camp locations. The preferred nesting habitat for shorebirds is located outside a 100m buffer around the entire camp, with the most likely nesting area for migratory shorebirds or waterfowl being to the southwest of camp. Other migratory birds that may be affected are other passerines such as savannah sparrow (*Passerculus sandwichensis*) or Lapland Longspur (*Calcarius lapponicus*). Both species have a conservation status of “least concern”. They are sometimes seen coming out from under the walkways, but nesting has never been confirmed.

A pair of common ravens (*Corvus corax*) utilize the large cabin fuel tank to nest on every year, and most years, the refuge obtains a permit to remove the nest because the ravens also create damage to the side and eaves of the cabin. Ravens are only in the area because nesting structures (the cabin) and year-round food sources (dumps in Chevak and Hooper Bay) are provided. Removing the structure would not negatively affect the raven population.

3.4.2 *Environmental Impacts*

Alternative A - Proposed Action

Direct Effects

The proposed action does occur within the range of migratory bird habitat however, the proposed action does not impact any habitat. Coupled with the Refuge biologist observations that no migratory birds have utilized either location of the past 40 years of field operations the proposed action would not have and direct effects on migratory birds or their habitat.

Indirect Effects

Acoustical impacts would affect individuals around the field camps and in route to the sites. These effects would be negligible to migratory birds and would not differ from normal field camp operation at either site.

Cumulative Effects

The proposed action would not add to the cumulative effects on migratory birds and other avian species. There are no proposed actions or reasonably foreseeable projects of similar scope and scale that would cumulatively impact these species.

Alternative B - No Action

Migratory birds and other avian species would not be directly impacted if the camps were left in place. However, field camp operations involving aircraft, motorboats, and other mechanized equipment would still cause indirect effects, which would have a negligible impact on these species.

3.5 Visitor Use

3.5.1 Affected Environment

The Kanaryarmiut Field Station is situated in a remote portion of the Refuge that sees minimal visitation use days each year. Visitors to this area are primarily engaged in subsistence activities, and section 3.2 outlines the impacts on subsistence use and resources. Non-subsistence visitor use is almost non-existent, and typically involves using the public use cabin as a safety shelter or the maintenance shop while we are present to fix boat motor parts. The public use cabin at the field station is rarely utilized by anyone other than residents of neighboring villages engaged in subsistence activities. Visitor use usually coincides with Refuge personnel being present at the camp and local people coming to visit and talk.

3.5.2 Environmental Impacts

Alternative A - Proposed Action

Direct Effects

Removal of the public use cabin at Kanaryarmiut Field Station would result in a reduction of capacity for visitor use in developed facilities at the station. However, there's no evidence that non-subsistence visitors have ever used the remote public use cabin. Therefore, the effect of removing the facility on visitor use would be negligible. Despite the removal of the public use cabin, the area would remain open to visitor use access.

Indirect Effects

Acoustical impacts from operations could impact Refuge visitors. These effects would be minimal and not exceed normal baseline effects from normal visitor use and Refuge operations.

Cumulative Effects

The proposed action is not expected to have a significant cumulative impact on visitor use on the Refuge. Furthermore, there are no other projects that are currently being considered or expected to be proposed that would have a similar effect on visitor use in the project area or within the Refuge.

Alternative B - No Action

Visitor capacity will still be impacted from shoreline erosion at the site under the no action alternative, and the cabin will become unsafe for visitors. At the current rate of erosion, the cabin would fall into the water in a matter of years. Ultimately, the cabin will collapse into the adjacent waterway and the facility would no longer be useable for Refuge visitors.

3.6 Threatened and Endangered Species – Spectacled Eider

3.6.1 Affected Environment

Spectacled Eiders (*Somateria fischeri*) are a threatened species sea duck that spend most of the year at sea and return to coastal habitats during spring throughout the arctic coastal plane and western Alaska as well as in Russia to nest and rear their young. Spectacled Eiders nest within 15 km of the coastline roughly between mid-May and the end of June. Breeding habitat typically consists of freshwater shallow ponds with emergent vegetation fringes. (Stehn 1993 and Kistchinski 1974) The Kanaryarmiut and Old Chevak Field Stations are situated within the known range of the Spectacled Eider however, these camps are situated inland of the coastal habitat and outside of the designated critical habitat on the Yukon-Kuskokwim Delta. (USFWS 2001) No nesting Spectacled Eiders have been found near the field station, nor have eider broods been detected near Kanaryarmiut Field Station. (J. Fischer pers. comm, K. Sowl pers. comm, B. Daniels pers. obs).

3.6.2 *Environmental Impacts*

Alternative A - Proposed Action Alternative

Direct Effects

Although the proposed action occurs within the range of the Spectacled Eider the project would not have direct effects to the species or its habitat.

Indirect Effects

Indirect effects from operation of op, motorboats and other mechanized equipment may disturb individuals within the effective distance of those acoustical impacts. The effects from these operations would be negligible and would not disturb the baseline acoustical environment and more than normal operation of either field station. Helicopters are not permitted to be used on the coastal zone (Spectacled Eider Critical Habitat Area) between May 15 and July 15 during nest initiation, nesting, and brood rearing. Kanaryarmiut and Old Chevak are both outside the critical nesting habitat, and the limited time helicopters are used in this area would not cause disturbance to nesting and brood-rearing Spectacled Eiders.

Cumulative Effects

The proposed action would not have a significant cumulative effect on Spectacled Eiders. The indirect impacts from the proposed action would be insignificant and would only have a short-term effect. It is unlikely that similar actions will occur in the foreseeable future, and even if they did, they would not cumulatively affect the species more than the individual project.

Alternative B - No Action

Spectacled eiders or its critical habitat would not be directly affected if the camps were left in place. However, field camp operations would still cause indirect effects from aircraft, motorboats, and other mechanized equipment. These effects would have a negligible impact on the species.

Chapter 4: Consultation and Coordination

4.1 List of Sources, Agencies and Persons Consulted

4.1.1 Tribal Consultation

Consultation with the Chevak Traditional Council was initiated on January 22, 2024. The Refuge met with the Traditional Council on February 21, 2024, in Chevak and discussions are ongoing. Consultation has resulted in a beneficial exchange of materials proposed to be removed from Kanartarmiut Field Station.

4.1.2 Endangered Species Act Section 7 Consultation

The Refuge initiated informal consultation with the US Fish and Wildlife Service on July 9, 2024, and consultation is ongoing. The Refuge determined the proposed action may affect but not likely to adversely affect Spectacled Eiders. A copy of the concurrence letter will be included with the final EA.

4.1.3 *National Historic Preservation Act Section 106 Consultation*

The U.S. Fish and Wildlife Service is required to consider the effects of agency undertakings on cultural resources that may be eligible for listing and those sites that have been listed in the National Register of Historic Places (NRHP). The criteria for listing in the NRHP refers to the qualities of significance in American history, architecture, archeology, and culture. Once a site has been evaluated for its NRHP significance management activities are generally focused on those determined to be eligible for listing on the NRHP. Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, requires the federal agencies to determine if federally funded, permitted, or licensed activities would affect significant cultural resources. An undertaking is any project that can result in changes to the character or qualities of a site that make it eligible for the NRHP. For most projects, consideration of the effects of an undertaking on cultural resources proceeds in sequential steps of inventory, evaluation, and determinations of effect. Consultation with the State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (ACHP), and interested parties occurs during these various phases to assist in identification and evaluation efforts and to find ways to mitigate impacts if adverse effects are anticipated. For large complex projects or classes of undertakings where effects cannot be fully determined in advance of the undertaking, the implementing regulations for Section 106 allow agencies to develop programmatic procedures and to implement phased compliance programs (36 CFR 800.13(a) of the NHPA).

Standards and guidelines for the management of cultural resources on U.S. Fish and Wildlife Service lands are primarily based on Federal Legislation; the most important being:

National Historic Preservation Act (NHPA), Native American Graves Protection and Repatriation Act (NAGPRA), American Indian Religious Freedom Act (AIRFA), Archaeological Resources Protection Act (ARPA), Executive Order 13007, and Executive Order 11593

The Refuge consulted with the Alaska SHPO in June of 2024 about the project activities and is awaiting their response. A Section 106 finding of no adverse effect to historic properties per 36 CFR 800.5(b) of the NHPA was proposed. The Yukon Delta National Wildlife Refuge is in ongoing consultation with the village of Chevak, Alaska on the project.

4.2 Public Outreach and Comment

Publishment of this draft EA initiates a 15-day public comment period. Comments can be submitted by email at yukondelta@fws.gov, or mailed to the address below. The Service is requesting substantive comments from the public regarding the proposed action and the Service's assessment of the potential impact in the draft Environmental Assessment. Project information may be obtained from the Refuge <https://www.fws.gov/refuge/yukon-delta> by emailing a specific information request yukondelta@fws.gov, or by mailing a letter requesting specific information to:

Yukon Delta National Wildlife Refuge

ATTN: Kanaryarmiut Field Station Draft EA

807 Eddie Hoffman State Highway

Bethel, AK 99559

4.3 ANILCA Requirements

A draft ANILCA Section 810 analysis is included with this document for public review located in Appendix A. The analysis will be finalized with the final EA.

4.4 List of Preparers

Name	Title	Office
Spencer Rearden	Refuge Manager	Yukon Delta National Wildlife Refuge
Ed Davis	Assistant Refuge Manager	Yukon Delta National Wildlife Refuge
Bryan Daniels	Waterfowl Biologist	Yukon Delta National Wildlife Refuge
Aaron Moses	Refuge Subsistence Coordinator	Yukon Delta National Wildlife Refuge
Jacob Adams	Archeologist	Division of Visitor Services – Regional Office
Nic Lucore	Conservation Planner	Division of Natural Resources – Regional Office

Chapter 5: References

- USFWS. 1988 Yukon Delta National Wildlife Refuge Comprehensive Conservation Plan. U.S. Fish and Wildlife Service, Record of Decision, Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plan. Internet website: <https://ecos.fws.gov/ServCat/Reference/Profile/33991>
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- USFWS. 2001. Endangered and Threatened Wildlife and Plants; Final Determination of Critical Habitat for the Spectacled Eider, Federal Register Vol.66 No.25, 9146-9185 Washington D.C.: US Fish and Wildlife Service, Department of the Interior.
- Ackerman, Robert E. 2001. Spein Mountain: A Mesa Complex Site In Southwestern Alaska. *Arctic Anthropology* Vol. 38, No. 2, pp. 81-97.
- Anderson, Douglas D. 1984. Prehistory of North Alaska. In *Handbook of North American Indians*, Vol. 5, Arctic, William C. Sturtevant, gen. ed., David Damas, vol, ed. Smithsonian Institution, Washington.
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- Nelson, Edward W. 1983 (1899). *The Eskimo About Bering Strait*. Classics of Smithsonian Anthropology.
- Shaw, Robert D. 1983. *The Archaeology of the Manokinak Site: A Study of the Cultural Transition Between Late Norton Tradition and Historic Eskimo*. Published by Ann Arbor, Mich.
- John, Bernice and Frieda Carl (John and Carl). 2017. Notes from conversation on subsistence practices, at NVC offices, 23 March 2017.
- USACE. 2018. Final Environmental Impact Statement Mertarvik Infrastructure Development Nelson Island, Alaska

Appendix A
ANILCA Section 810 Summary Evaluation

ANILCA SECTION 810 Summary Evaluation

I. INTRODUCTION

This section was prepared to comply with Title VIII, Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA). It summarizes the evaluations of potential restrictions to subsistence activities which could result from the demolition and removal of all structures from the Kanaryarmiut Field Station and reconstruction of the maintenance and storage sheds at the Old Chevak Field Station.

II. THE EVALUATION PROCESS

ANILCA Section 810 of ANILCA requires the U.S. Fish and Wildlife Service (Service) to determine “whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands”, it must evaluate the effect of such use, occupancy, or disposition on subsistence uses and needs. If the refuge determines that significant restrictions are to occur, they must follow the section 810 notice and hearing requirements. The Refuge may proceed with an action that would significantly restrict subsistence uses only if it first determines:

- Such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands,
- The proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and
- Reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions."
- Gives notice to the appropriate State agency and the appropriate local committees and regional councils established pursuant to section 805;
- Gives notice of, and holds, a hearing in the vicinity of the area involved; and

The evaluation and findings required by section 810 are considered in this analysis. Determining that significant restrictions to subsistence uses from the may result in any of the alternatives in the assessment, the following factors were considered:

- A reduction in subsistence uses due to factors such as direct impacts on the resource, adverse impacts on habitat, or increased competition for the resources.
- A reduction in the subsistence uses due to changes in availability of resources caused by an alteration in their distribution, migration, or location.
- A reduction in subsistence uses due to limitations on the access to harvestable resources such as physical or legal barriers.

III. PROPOSED ACTION ON FEDERAL LANDS

The Refuge proposes to disassemble/demolish and remove all structures from the Kanaryarmiut Field Station located at latitude: 61.3614013°, longitude: -165.1279485° within Section 30, Township 015 North, Range 088 West of the Seward Meridian. The list of structures include the cabin, maintenance shed, storage shed, all associated infrastructure and boardwalks and the ABG fuel tanks. Demolition equipment would be a combination of hand and mechanized tools (e.g., chainsaws, reciprocating saws). All gear, appliances, and structural materials would be sorted into piles raised above the ground for subsequent transport by aircraft, boat or snowmachines pulling sleds. Destinations of materials would include the Old Chevak field station, the Chevak dump, Chevak, and/or the Refuge HQ in Bethel.

The maintenance and storage sheds would be relocated to Old Chevak Field Station located at latitude: 61.431066°, longitude: -165.451197 within Section 32, Township 16 North, Range 090 West of the Seward Maridian. The sheds would be transported to Old Chevak and staged for reconstruction on a post and pad-style or triodetic foundation above the ground for additional storage. These structures would be disassembled in into the largest portable sections possible for transportation. The fuel tanks would be taken to and surplussed to the Traditional Council of Chevak by helicopter and the remaining usable building materials from the other buildings and infrastructure would be repurposed and utilized by local residents. There are numerous subsistence fish and berry camps along the Kashunuk river and subsistence users would take and use the majority of the materials. The materials not repurposed would be disposed of by Refuge staff. Travel between Chevak and the two field camps would be done on snowmachine, by boat, or by fixed-wing aircraft. Travel across land would be mostly on established winter trails via snowmachines pulling single or tandem siglin sleds staged in Chevak. Boating travel would also be from Chevak and would head west along the Ninglikfak river, south along the coast of Hooper Bay, then back east along the Keoklevik River to the Kashunuk and Aphrewn rivers where the Kanaryarmiut field station is located. Air transport would utilize ski, float, or wheel gear depending on conditions.

IV. AFFECTED ENVIRONMENT

Subsistence practices in the Kanaryarmiut and Old Chevak area are similar to each other due to the proximity of the two sites. Many of the subsistence users access the Kashunak river (which both sites are located on) through a network of sloughs in the spring, summer and fall using watercrafts and in the spring and winter primarily with snowmobiles. The harvest of terrestrial and aquatic

species are determined by the availability of the species through different times of the year. Complete list of species present and subsistence uses within the area can be seen on Yukon Delta NWR CCP (USFWS 1988, USACE 2018) and also similar subsistence practices covered in the Mertarvik Infrastructure Development EIS.

V. SUBSISTENCE USES AND NEEDS EVALUATION

To determine the potential impact on existing subsistence activities, three evaluation criteria were analyzed relative to existing subsistence resources that could be impacted. The evaluation criteria are as follows:

1. The potential to reduce important subsistence fish and wildlife populations by (a) reductions in numbers, (b) redistribution of subsistence resources, or (c) habitat losses;
2. What affect the action might have on subsistence fisher or hunter access; and
3. The potential for the action to increase fisher or hunter competition for subsistence resources.

The potential to reduce populations:

1. The proposed actions are not expected to cause a significant decline of wildlife species in the affected areas.
2. The proposed actions are not expected to cause a significant displacement of subsistence resources in the affected areas.

The effect on subsistence access:

The proposed actions are not expected to significantly restrict current subsistence use patterns. Boat and plane traffic may increase but no substantial restrictions occur within the area.

The potential to increase competition:

The proposed actions are not expected to significantly restrict or increase competition for subsistence resources on federal public lands within the affected area.

VI. AVAILABILITY OF OTHER LANDS

No alternatives were identified that would reduce or eliminate the use of FWS public lands needed for subsistence purposes.

VII. ALTERNATIVES CONSIDERED

No alternatives were identified that would reduce FWS lands for subsistence purposes.

VIII. FINDINGS

No proposed or foreseen significant restrictions to subsistence uses and needs is envisioned for this project. Acoustical impacts could affect individual family fish camps around the field camps and in route to the sites. Increased boat and snowmobile traffic may displace some animals from normal habitat but this effect would be minimal. These effects could be negligible to and would not differ from normal field camp operation at either site. Under this alternative the public use cabin would become in

operational due to erosion. The impacts to subsistence users at the Kanaryamiut Field Station would still occur due to the loss of visitor use capacity. Indirect acoustical effects would not occur however this effect would be representative of the baseline noise from other visitor activities and Refuge operations in the area.

Supporting Documents:

USFWS. 1988 Yukon Delta National Wildlife Refuge Comprehensive Conservation Plan. U.S. Fish and Wildlife Service, Record of Decision, Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plan. Internet website:
<https://ecos.fws.gov/ServCat/Reference/Profile/33991>

USACE. 2018. Final Environmental Impact Statement Mertarvik Infrastructure Development Nelson Island, Alaska